

BOULDER COUNTY TRANSPORTATION DEPARTMENT

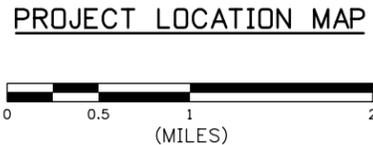
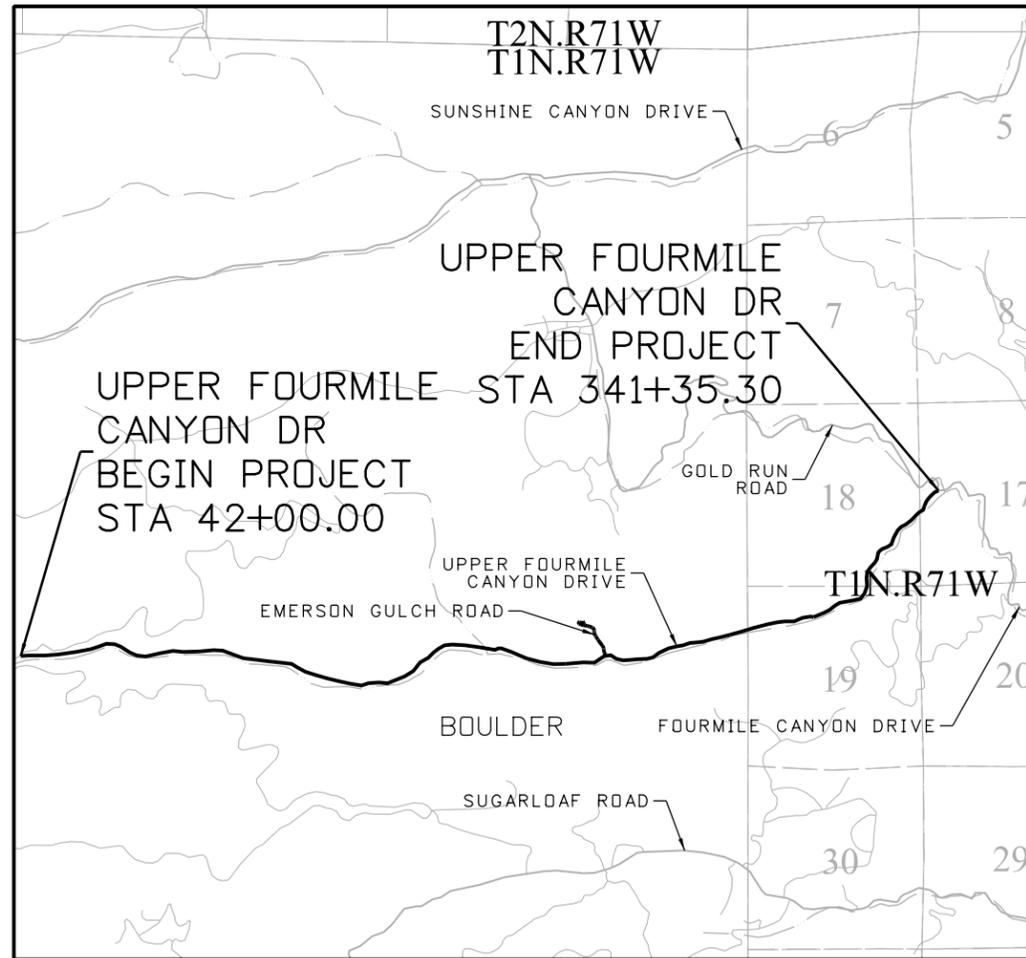
ENGINEERING DIVISION

100% PLANS OF PROPOSED UPPER FOURMILE CANYON DRIVE CONSTRUCTION SUNSET TO SALINA JUNCTION BOULDER COUNTY BOULDER COUNTY PROJECT NO. 4041.SEPT12C37 RD-118-000

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TABULATION OF LENGTH & DESIGN DATA		
STATION	FEET	
	ROADWAY	STRUCTURE
BEGIN UPPER FOURMILE CANYON DR CONSTRUCTION STA 42+00.00 (HCL UPPER FOURMILE)		
END UPPER FOURMILE CANYON DR CONSTRUCTION STA 341+35.30 (HCL UPPER FOURMILE)	29,935.30	
TOTAL	29,935.30	
SUMMARY OF PROJECT LENGTH	FEET	MILES
ROADWAY (NET LENGTH)	29,935.30	5.67
MAJOR STRUCTURE (NET LENGTH)	0.00	0.00
PROJECT GROSS LENGTH	29,935.30	5.67

DESIGN DATA	FOURMILE	EMERSON
ROADWAY CLASSIFICATION	LOCAL	LOCAL
EXISTING SURFACE TYPE	UNPAVED & PAVED	UNPAVED
MINIMUM RADIUS OF CURVE	145.00'	20.00'
MAXIMUM GRADE	8.88%	EXISTING
MINIMUM S.S.D. HORIZONTAL	EXISTING	EXISTING
MINIMUM S.S.D. VERTICAL	EXISTING	EXISTING
DESIGN SPEED	20 MPH	15 MPH
CLEAR ZONE DISTANCE	EXISTING	EXISTING
MAXIMUM SUPERELEVATION (emax)	2%	2%



100% SET	CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 10%;">DATE</th> <th style="width: 85%;">REVISION DESCRIPTION:</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	REVISION DESCRIPTION:										BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED: MEM CAD: EAV CHECKED: DTW DATE: 10/12/16	UPPER FOURMILE CANYON DRIVE TITLE SHEET PROJECT NO: 4041.SEPT12C37 SHEET NO: 1
NO.	DATE	REVISION DESCRIPTION:															

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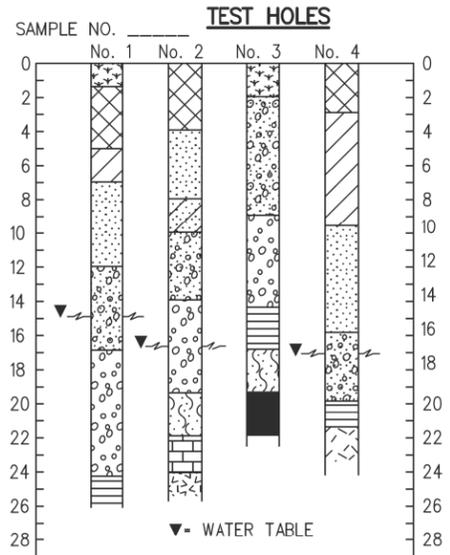
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S-614-40A	<input type="checkbox"/>	ALTERNATIVE TRAFFIC SIGNAL INSTALLATION DETAILS (4 SHEETS) (REVISED ON JUNE 17, 2016)	189-192
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COLORADO
DEPARTMENT OF TRANSPORTATION
M&S STANDARDS PLANS LIST
 July 04, 2012
 Revised on June 24, 2016

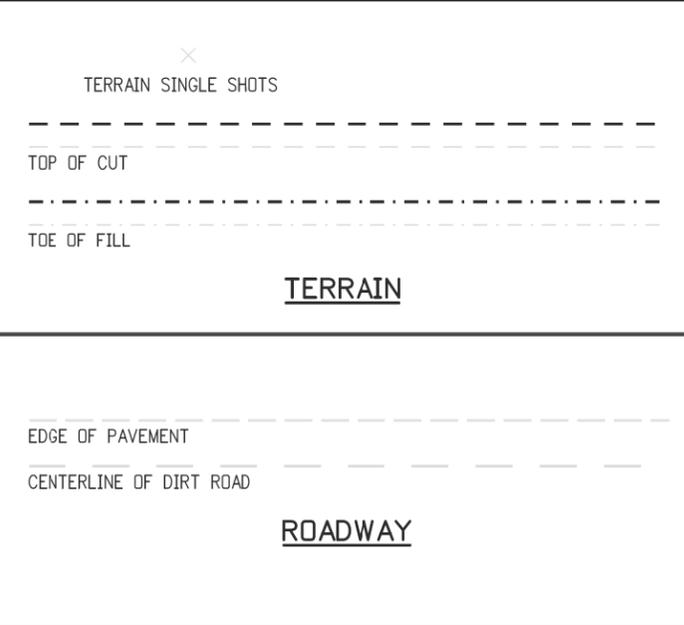
ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

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- LEGEND**
- TOPSOIL
 - OVERBURDEN
 - CLAY
 - SILT
 - SAND
 - GRAVEL
 - SHALE
 - LIMESTONE
 - SANDSTONE
 - SOLID ROCK (IGNEOUS)
 - SOLID ROCK (METAMORPHIC)
 - COAL
 - SANDY CLAY
- COMPOSITE MATERIALS ARE REPRESENTED BY COMBINATIONS OF THE ABOVE SYMBOLS, SUCH AS:

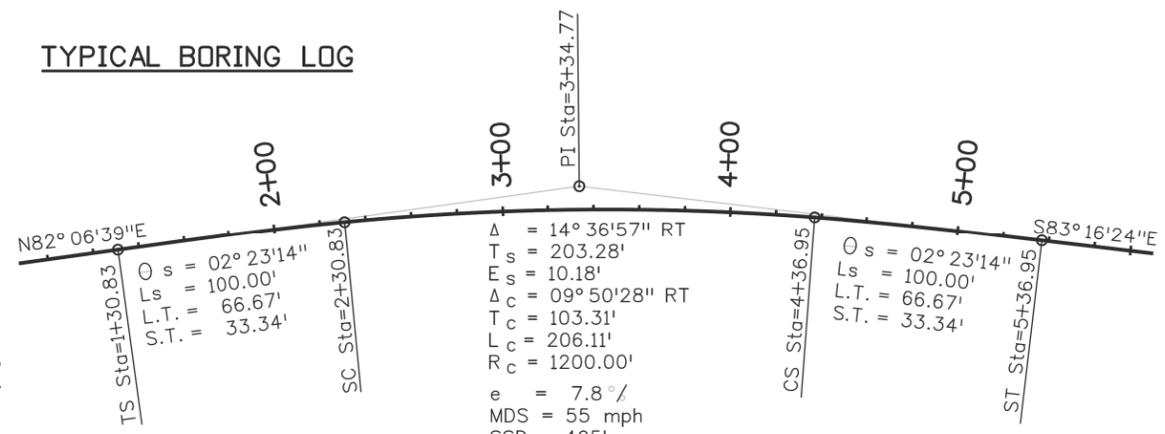


TYPICAL BORING LOG

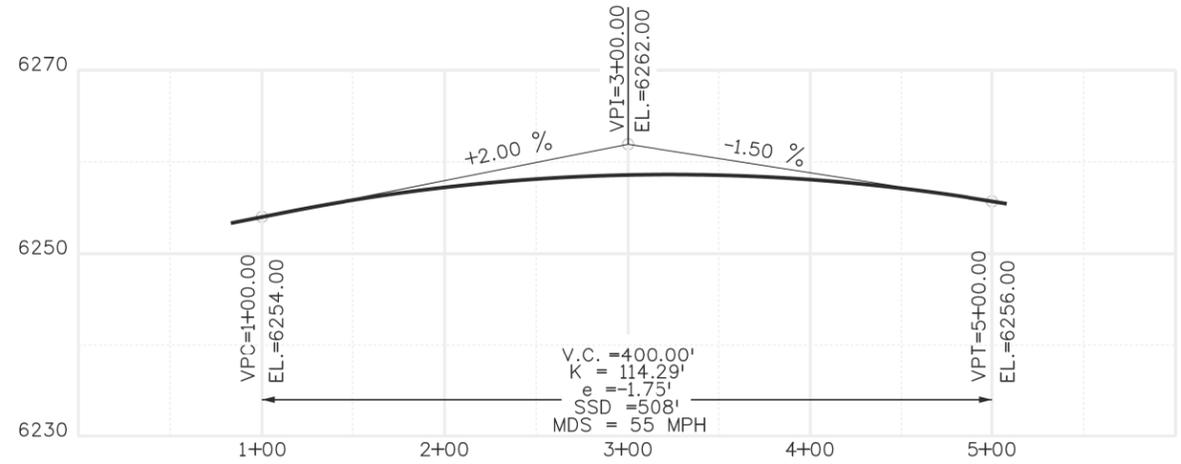


- BRIDGES**
- PROPOSED
 - EXISTING
- PROPERTY PIN**
- FED
 - WC
 - WC
 - BM
 - USGS
- FEDERAL MONUMENT** **WITNESS CORNER** **BENCH MARK** **USGS MARKER**
- LOCAL OR PLSS MONUMENT
 - SECONDARY CONTROL MONUMENT
 - RIGHT OF WAY MARKER
- PROJECT CONTROL MONUMENT**
- ROW**
- N 9.88
 - E 3.81
 - EL 0.00

- GENERAL NOTES**
1. EXISTING FEATURES SHOWN AS SCREENED WEIGHT (LIGHT GRAY SCALE), EXCEPT AS NOTED WITH THE WORD (EXISTING). PROPOSED OR NEW FEATURES SHOWN AS FULL WEIGHT WITHOUT SCREENING, EXCEPT AS NOTED WITH THE WORD (PROPOSED).
 2. THESE SYMBOLS ARE INTENDED TO EXPLAIN THE VARIOUS TOPOGRAPHIC FEATURES INVOLVED ON THE DESIGN PLAN SHEETS WHICH ARE PREPARED AT VARIOUS SCALES. NOTES ARE ADDED WHERE NECESSARY TO CLARIFY THE SYMBOL. A LEGEND IS PROVIDED IN THE PLANS FOR SYMBOLS NOT SHOWN ON THE STANDARD SYMBOLS SHEETS.
 3. GUARDRAIL, CURB AND GUTTER, ETC., ARE REPRESENTED BY A SYMBOL WITH TYPE GIVEN BY NOTE.



TYPICAL HORIZONTAL CURVE



TYPICAL VERTICAL CURVE

- PERMANENT, PROPERTY, SLOPE, & UTILITY EASEMENT LINE
- TEMPORARY EASEMENT LINE (EXISTING)
- PROPERTY BOUNDARY LINE (EXISTING AND PROPOSED)
- RIGHT OF WAY LINE
- VIRGIN RIGHT OF WAY LINE (PROPOSED)
- CITY LIMIT LINE (EXISTING)
- COUNTY LINE (EXISTING)
- QUARTER SECTION LINE
- SECTION LINE
- SIXTEENTH SECTION LINE
- STATE LINE (EXISTING)
- TOWNSHIP LINE (EXISTING)

SURVEY/ROW

- BACK OF CURB
- TOP OF CURB
- FLOW LINE (FL)
- EDGE OF PAVEMENT
- CURB AND GUTTER
- CURB AND GUTTER-TYPE 2, 4 OR 6
- GUTTER
- CURB CUT

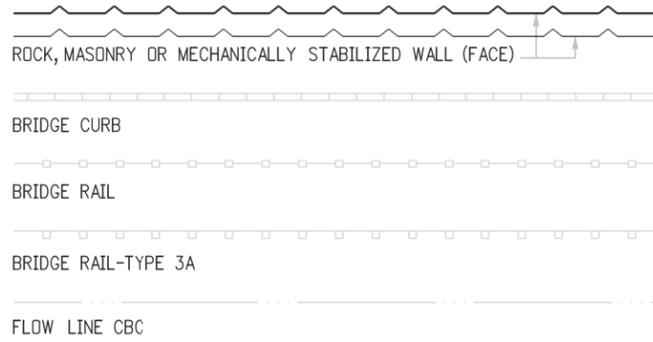
CURB AND GUTTER

- GUARDRAIL END ANCHOR
- GUARD POST
- GUARDRAIL-TYPE 3 OR 6
- GUARDRAIL-TYPE 4 OR 7
- GUARDRAIL-TYPE 5 OR HANDRAIL

GUARDRAIL

100% SET		CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES		REVISIONS:	NO. DATE	REVISION DESCRIPTION:		BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION				UPPER FOURMILE CANYON DRIVE STANDARD SYMBOLS (SHEET 1 OF 2)	
		DESIGNED:	CAD:	CHECKED:	DATE:	MEM		EAV	DTW	10/12/16	PROJECT NO: 4041.SEPT12C37	SHEET NO: 3	

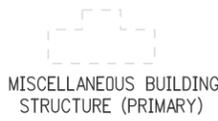
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STRUCTURE



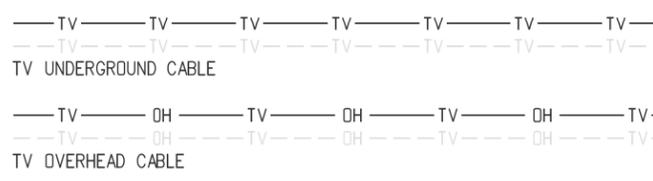
LIGHTING



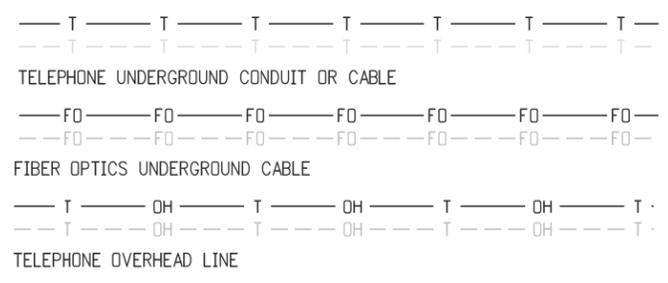
BUILDING STRUCTURES



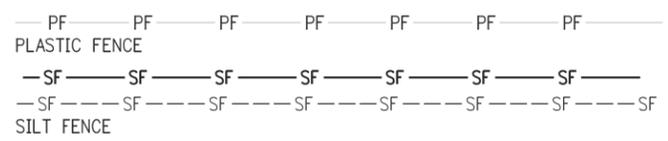
LANDSCAPING



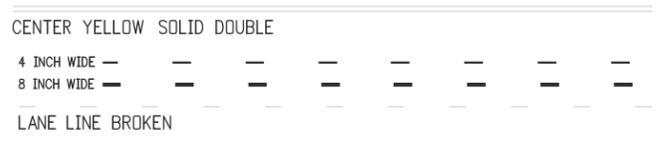
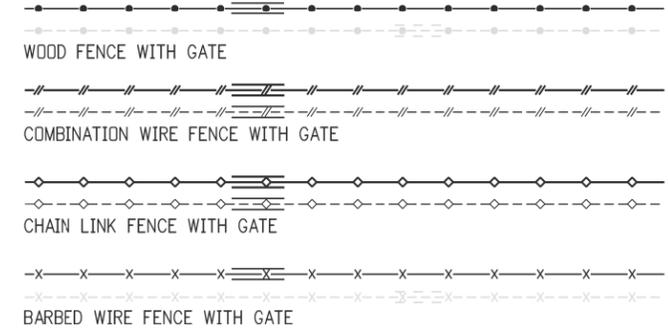
TELEVISION



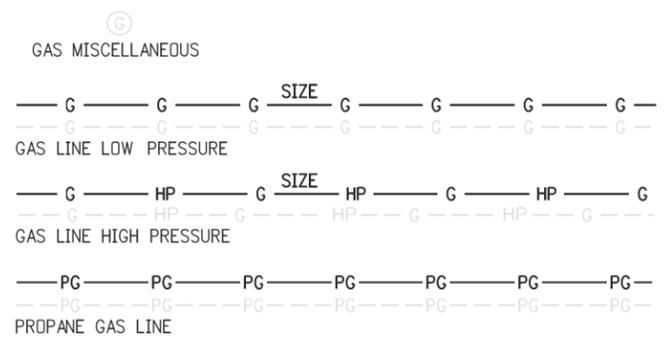
TELEPHONE



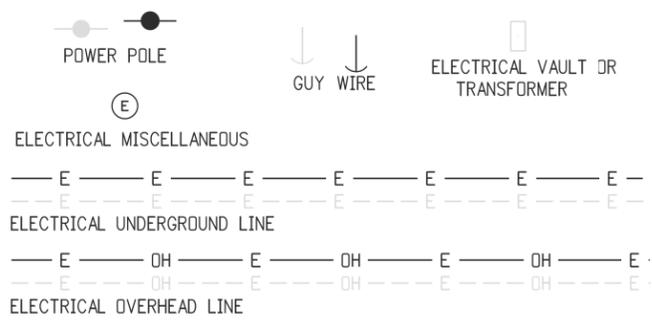
FENCE



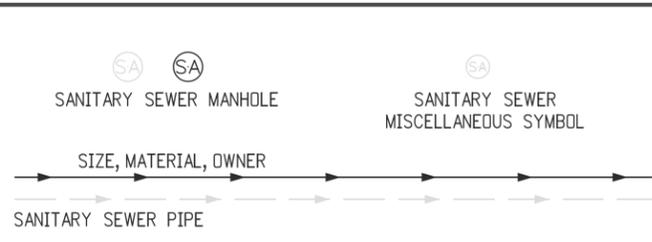
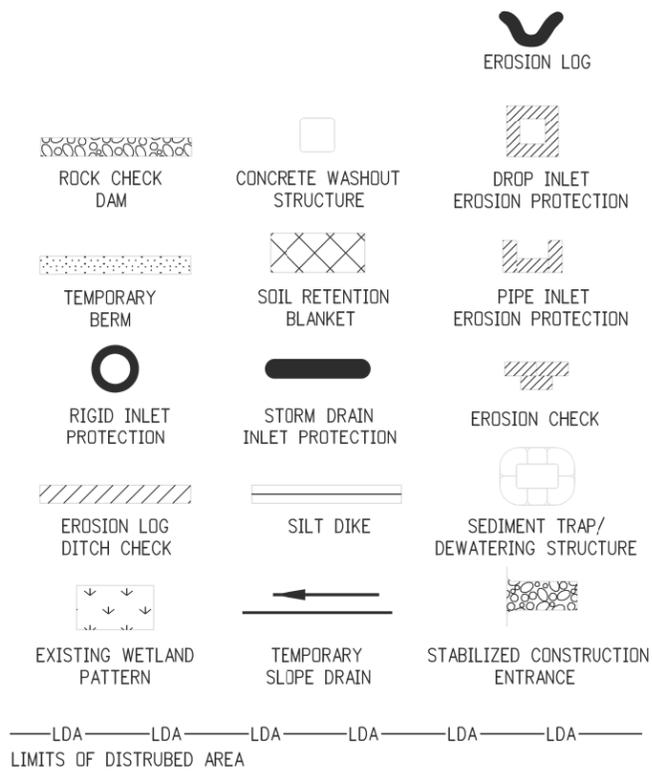
TRAFFIC STRIPING



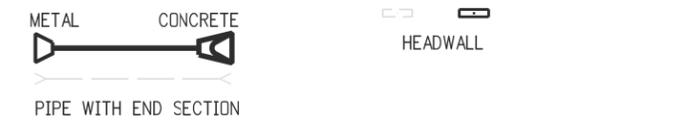
GAS



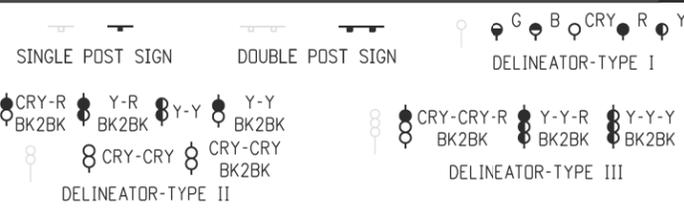
ELECTRICAL



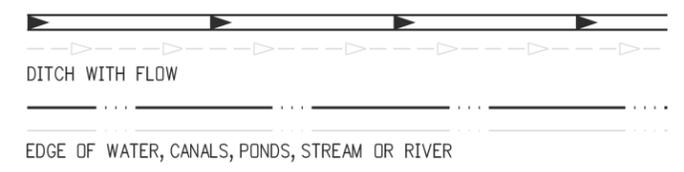
SANITARY SEWER



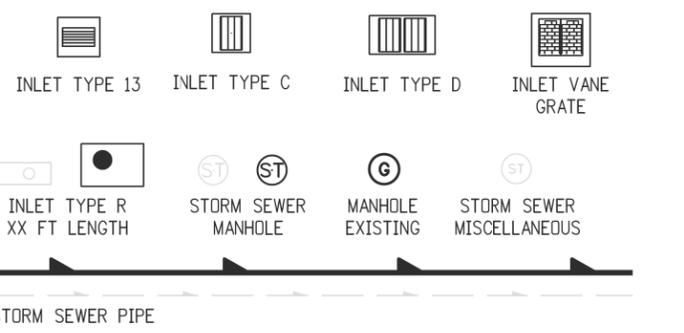
PIPES



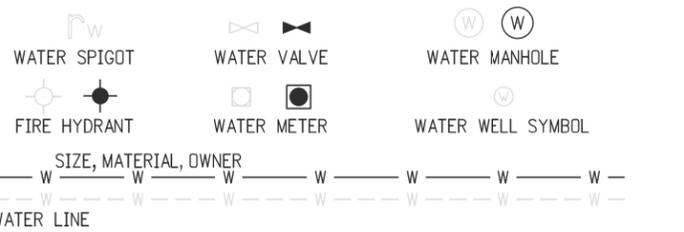
TRAFFIC CONTROL



DITCHES AND WATERWAY



STORM SEWER



WATER

100% SET

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

REVISIONS:	NO.	DATE	REVISION DESCRIPTION:

BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION
Michael Baker INTERNATIONAL
 DESIGNED: **MEM** CAD: **EAV** CHECKED: **DTW** DATE: **10/12/16**

UPPER FOURMILE CANYON DRIVE
STANDARD SYMBOLS
(SHEET 2 OF 2)
 PROJECT NO: 4041.SEPT12C37 SHEET NO: 4

GENERAL NOTES:

- THE INTENT OF THIS CONTRACT IS TO RESTORE THE AREA AFFECTED BY THE 2013 FLOOD TO PRE-FLOOD CONDITIONS AND AS MODIFIED BY THESE PLANS.
- PROJECT BENCHMARK: ALL ELEVATIONS SHOWN ON THESE PLANS ARE REFERENCED TO THE PROJECT BENCHMARKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING THE PROJECT BENCHMARKS AND OTHER SURVEY MONUMENTS. DAMAGED MONUMENTS SHALL BE REESTABLISHED AND REPLACED BY THE LICENSED LAND SURVEYOR AT THE EXPENSE OF THE PARTY RESPONSIBLE FOR THE DAMAGE.
- GEOTECHNICAL INFORMATION FOR THIS PROJECT IS BASED UPON THE GEOTECHNICAL INVESTIGATION REPORT BY YEH AND ASSOCIATES, DATED JULY 8, 2014. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS.
- FOR PLAN QUANTITIES OF PAVEMENT MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:
 HOT MIX ASPHALT.....@ 110 LBS./SQ.YD./INCH
 AGGREGATE BASE COURSE CLASS 6.....@ 133 LBS./CU.FT.
 TACK COAT DILUTED EMULSIFIED ASPHALT.....@ 0.10 GALS/SQ.YD. (DILUTED)
- BOULDER COUNTY SHALL OBTAIN THE BOULDER COUNTY FLOODPLAIN DEVELOPMENT PERMIT. THE CONTRACTOR SHALL OBTAIN, AT THEIR EXPENSE, ALL OTHER PERMITS REQUIRED TO PERFORM THE PROPOSED WORK PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2011; AND AS SUBSEQUENTLY REVISED; THE CDDT STANDARD PLANS M&S STANDARDS DATED JULY, 2012 AND REVISED; AND THE BOULDER COUNTY MULTI-MODAL TRANSPORTATION STANDARDS; AND THE BOULDER COUNTY STORM DRAINAGE CRITERIA MANUAL.
- THE CONTRACTOR SHALL HAVE: ONE (1) SIGNED COPY OF THE PLANS ACCEPTED BY THE BOULDER COUNTY ENGINEER, ONE (1) COPY OF THE CONSTRUCTION SPECIFICATIONS FOR THE PROJECT, ONE (1) COPY OF THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD PLANS (M&S STANDARDS), AND ONE (1) COPY OF THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AT THE JOB SITE AT ALL TIMES.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH BOULDER COUNTY AT LEAST 2 WEEKS PRIOR TO START OF CONSTRUCTION. THOSE IN ATTENDANCE SHALL INCLUDE ENGINEER, CONTRACTOR AND ANY OTHER AFFECTED AGENCIES. CONSTRUCTION PLANS WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING.
- CONTRACTORS NEED TO USE THE DESIGN PLANS IN CONJUNCTION WITH THE DIGITAL TERRAIN MODEL (DTM). IN THE EVENT OF A CONFLICT, DESIGN PLANS SHALL ALWAYS GOVERN OVER DATA FROM THE DTM.
- IN THE EVENT THE CONTRACTOR ALLOWS, AUTHORIZES, APPROVES OR CONSTRUCTS ITEMS THAT DIFFER FROM THE APPROVED PLANS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, WITHOUT WRITTEN APPROVAL BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LIABILITY ARISING FROM SUCH CHANGES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, AND ANY OTHER NEEDED ACTION TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOB SITE CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROTECTION OF PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED ONLY TO WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER, THE ENGINEER AND BOULDER COUNTY HARMLESS FOR ANY AND ALL LIABILITY, IN CONNECTION WITH THE PERFORMANCE OF WORK, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER OR BOULDER COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IN THE EVENT OF A DISCREPANCY BETWEEN CRITERIA PRIOR TO CONSTRUCTION.

GENERAL NOTES CONT'D:

- UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL CONTAIN ALL WORK WITHIN THE RIGHT OF WAY AND TEMPORARY OR PERMANENT EASEMENTS AS SHOWN ON THE PLANS AND CROSS SECTIONS (ROW SHOWN ON PLANS IS APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD). ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT CONTRACTOR'S OWN EXPENSE. CONSTRUCTION ACTIVITIES IN ADDITION TO NORMAL CONSTRUCTION SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, THE DECISION TO BRACE, SHORE AND/OR SHEET PILE FOR STRUCTURE EXCAVATION SHALL BE ENTIRELY THE CONTRACTOR'S RESPONSIBILITY AND WILL BE INCLUDED IN THE COST OF LABOR. HOWEVER, IF THE ENGINEER IS OF THE OPINION THAT AT ANY POINT THE TRENCH WALLS ARE NOT PROPERLY SUPPORTED; THE ENGINEER MAY ORDER THE PLACEMENT OF ADDITIONAL SUPPORTS BY AND AT THE EXPENSE OF THE CONTRACTOR. COMPLIANCE WITH SUCH ORDER SHALL NOT RELIEVE OR RELEASE THE CONTRACTOR FROM RESPONSIBILITIES FOR THE SAFETY OF THE WORK. ALL WORK SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL OSHA REGULATIONS. THE CONTRACTOR SHALL TAKE NOTE THAT EXISTING UTILITIES NEAR THE PROPOSED EXCAVATION SHALL BE PROTECTED DURING CONSTRUCTION. TEMPORARY SHORING IS RECOMMENDED TO LIMIT TRENCH WIDTH AND POTENTIAL DAMAGE TO EXISTING UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCEPTANCE AND CONTROL OF ALL SURFACE AND SUBSURFACE DRAINAGE AND GROUNDWATER ENTERING THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DEWATERING IF NEEDED AT NO ADDITIONAL COSTS TO THE PROJECT. DEWATERING METHODS SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION DEWATERING PERMIT FOR ALL CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT (1-800-922-1987) OR 811 FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY OTHER APPLICABLE UTILITY COMPANIES AS WELL TO OBTAIN FIELD LOCATES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS WERE TAKEN FROM THE RECORDS OF THE CONTROLLING AGENCIES OR FROM AGENCY MARKINGS IN THE FIELD. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR COMPLETENESS OR ACCURACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND/OR LOCATION OF ALL UNDERGROUND UTILITIES AND PARTICIPATE IN THE RESOLUTION OF ANY CONFLICTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY USING EVERY REASONABLE MEANS, INCLUDING FIELD LOCATION OF THE UTILITY. REPAIR OF DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DOCUMENT THE CONDITION OF EXISTING UTILITIES (VISIBLE FACILITIES) WITH THE ENGINEER AND UTILITY REPRESENTATIVES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR MUST KEEP ALL EQUIPMENT OPERATION A MINIMUM OF 10 FEET FROM EXISTING OVERHEAD ELECTRIC LINES. IF THIS IS NOT FEASIBLE, OR CONDITIONS WARRANT ADDITIONAL PROTECTION OR POLE STABILIZATION, THE CONTRACTOR MUST CONTACT THE UTILITY OWNER TO ARRANGE PROTECTIVE COVERING AND POLE STABILIZATION. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
- ALL EXISTING UTILITY FACILITIES TO REMAIN IN PLACE WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED BY THE CONTRACTOR.
- THE SULFATE EXPOSURE CLASS FOR THIS PROJECT IS CLASS 0. SEE SECTION 601 - STRUCTURAL CONCRETE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC OR PRIVATE STREETS OF MUD AND DEBRIS, DUE TO CONSTRUCTION ACTIVITIES, ON A DAILY BASIS OR AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.
- IT IS ANTICIPATED THAT ONE (1) LUMP SUM (LS) ITEM 625 CONSTRUCTION SURVEYING SHALL BE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH SPECIFICATIONS 625 AND 629. ALONG WITH OTHER DUTIES SPECIFIED IN THE PLANS AND SPECIFICATIONS, THE SURVEYOR SHALL STAKE ALL EASEMENTS AND BOULDER COUNTY RIGHT OF WAY FIRST.

GENERAL NOTES CONT'D:

- STATIONING LATH WILL BE REMOVED AS DIRECTED AND AT NO ADDITIONAL COST TO THE PROJECT.
- IT IS ANTICIPATED THAT PUBLIC INFORMATION SERVICES WILL BE REQUIRED FOR THIS PROJECT AND BE PROVIDED BY THE COUNTY.
- THE FOLLOWING ITEMS ARE REQUIRED:

ITEM NO. 201-00000 CLEARING AND GRUBBING	1 (LUMP SUM)
ITEM NO. 203-01100 PROOF ROLLING	20 (HOUR)
ITEM NO. 203-01597 POTHOLING	20 (HOUR)
ITEM NO. 217-00020 HERBICIDE TREATMENT	16 (HOUR)
ITEM NO. 240-00000 WILDLIFE BIOLOGIST	10 (HOUR)
ITEM NO. 240-00010 REMOVAL OF NESTS	20 (HOUR)
ITEM NO. 620-00002 FIELD OFFICE (CLASS 2)	1 (EACH)
ITEM NO. 620-00020 SANITARY FACILITY	1 (EACH)
ITEM NO. 626-00000 MOBILIZATION	1 (LUMP SUM)
ITEM NO. 626-01000 PUBLIC INFORMATION SERVICES	1 (LUMP SUM)

MAINTENANCE OF THE SANITARY FACILITY SHALL INCLUDE CLEANING AT LEAST TWICE A WEEK.

NOTE: ALL ITEMS LISTED AND DESCRIBED HEREIN AS REQUIRED FOR THE COMPLETION OF THE PROJECT SHALL BE PLACED AS DIRECTED BY THE PROJECT ENGINEER.

- THE CONTRACTOR SHALL REMOVE DEBRIS AS NEEDED FOR CONSTRUCTION OF THE PROJECT. ALL WORK ASSOCIATED WITH THIS CONSTRUCTION ACTIVITY WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CLEARING AND GRUBBING IN ITEM 201.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE EXISTING VEGETATION INSIDE AND OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR SHALL FENCE ALL VEGETATION TO BE UNDISTURBED PRIOR TO COMMENCING WORK. ANY COST INCURRED FOR DAMAGE OF SUCH MATERIAL DUE TO CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PAVEMENT CONSTRUCTION NOTES:

- DILUTED EMULSIFIED ASPHALT FOR THE TACK COAT SHALL CONSIST OF 1 PART WATER AND 1 PART EMULSIFIED ASPHALT. RATES OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION. TACK COAT SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CONSTRUCTION.
- ANY LAYER OF HOT MIX ASPHALT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.
- ASPHALT JOINTS SHALL FALL ON LANE LINES, SHOULDER LINES OR MEDIAN LINES, EXCEPT WHERE STATED IN THE PLANS.
- PRIOR TO PLACING HOT MIX ASPHALT, THE PAVED SURFACE SHALL BE SWEEPED AND CLEANED. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE HOT MIX ASPHALT PAVEMENT ITEMS.
- THE CONTRACTOR MAY USE AN EXPOSED LONGITUDINAL JOINT FOR A MAXIMUM OF 1 DAY. THE JOINT SHALL CONSIST OF A VERTICAL FACE 1 INCH DEEP, AND AT THE BOTTOM OF THE VERTICAL FACE, A 3:1 SLOPE TO EXISTING PAVEMENT (OR SUBGRADE). THE MAXIMUM DEPTH OF THE 3:1 SLOPE SHALL BE 2 INCHES. AT THE END OF THE FOLLOWING DAY, PLACEMENT OF THE HMA ON THE ADJACENT LANE IS REQUIRED.
- THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER:
 - A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH
 - SHORT SKI OR SHOE
 - 1500 FEET OF CONTROL LINE AND STAKES
- EMULSIFIED ASPHALT, IF REQUIRED, WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.

mary.monks 11/26/16 10:11:20 AM 10/11/2016 pwr:\DCPW\APP1\br.mbakercorp.com\prowod\Documents\Projects\okewood\Office\Boulder_County_Emergency_Transportation\10108_Sheet_Files\10_General_Sheets\UGN\UFL_GND1.dgn

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE GENERAL NOTES (1 OF 3)
							MEM	EAV	DTW	10/12/16	

EARTHWORK/GRADING NOTES:

- DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
BASES OF CUTS AND FILLS - 1 FOOT
FULL DEPTH OF ALL EMBANKMENTS ON THIS PROJECT.
- 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.
- GRADING WILL BE INSPECTED BY AN OWNER'S REPRESENTATIVE DURING ALL EXCAVATIONS TO EVALUATE CHANGING CONDITIONS.
- TYPE OF COMPACTION FOR THIS PROJECT WILL BE AASHTO T-180. WATER FOR COMPACTION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.

DRAINAGE NOTES:

- ALL PIPE LENGTHS ARE GIVEN AND PAID FOR IN THE HORIZONTAL DIMENSION, AND HAVE BEEN ROUNDED TO THE NEAREST FOOT. THE CONTRACTOR SHALL SUPPLY THE ADDITIONAL LENGTH OF PIPE TO ACCOUNT FOR SLOPES AND INCLUDED IN THE COST OF THE WORK. THE PIPE LENGTHS PROVIDED DO NOT INCLUDE THE LENGTH OF FLARED END SECTIONS.
- ALL DOWNSTREAM CONCRETE FLARED END SECTIONS MUST BE INSTALLED WITH JOINT FASTENERS. IN ADDITION, JOINT FASTENERS SHALL BE INSTALLED ON ALL PIPE JOINTS WITHIN 15- FEET OF THE DOWNSTREAM END OF ALL CULVERTS.
- ALL PIPE MATERIAL SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE SPECIFIED. STRENGTH CLASS OF ALL RCP SHALL BE IN ACCORDANCE WITH CDOT M-603-2 AND SECTION 706.02 OF THE STANDARD SPECIFICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING AND DIVERSION INCLUDING, BUT NOT LIMITED TO, LIVE STREAM FLOW AND GROUNDWATER. THE CONTRACTOR SHALL OBTAIN THE APPLICABLE DEWATERING PERMIT FOR CONSTRUCTION AT THE SITE. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK. THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
- THE CONTRACTOR IS REQUIRED TO KEEP EXISTING CULVERTS FUNCTIONAL AND MAINTAIN PROPER STORMWATER CONVEYANCE UNTIL THE PROPOSED DRAINAGE FACILITIES ARE CONSTRUCTED AND FUNCTIONING PROPERLY. EXISTING CULVERT LOCATIONS FOR REMOVAL AND/OR ABANDONMENT ARE CALLED OUT ON THE PLANS. EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SHOP DRAWINGS FOR ALL NON CDOT/BOULDER COUNTY STANDARD DRAINAGE STRUCTURES FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE STRUCTURE.
- THE INFORMATION PROVIDED ON THE DRAINAGE PLAN SET REPRESENTS THE FINAL STORM DRAIN SYSTEM AND CULVERTS.
- OTHER UTILITIES MAY BE CROSSED OR OTHERWISE IMPACT DRAINAGE CONSTRUCTION. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. UNLESS NOTED OTHERWISE, PROTECTION OF EXISTING UTILITIES, INCLUDING INCIDENTAL SHORING, WILL NOT BE MEASURED OR PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- CONCRETE TOE WALLS SHALL BE REQUIRED AS INDICATED IN THE PLANS. TOE WALLS WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING PIPE SIZES, LENGTHS AND LOCATIONS PRIOR TO ORDERING AND DELIVERY OF THE PIPE MATERIAL TO THE SITE.

SIGNING & PAVEMENT MARKING NOTES:

POSTS:

- SIGN POSTS SHALL BE 2"x2"x10' (14 GAUGE) GALVANIZED PERFORATED SQUARE STEEL TUBING.
- SIGN POST BASES SHALL BE 2 1/4" x 2 1/4" (12 GAUGE, 3' IN LENGTH) GALVANIZED PERFORATED SQUARE STEEL TUBING.
- BASES SHALL BE INCLUDED IN THE COST FOR SIGN POSTS. TOP OF BASES SHALL BE 3"± ABOVE FINISHED GRADE. THE SIGN POST SHALL BE INSTALLED 4" IN TO THE BASE AND BOLTED BOTH WAYS.

SIGNING & PAVEMENT MARKING NOTES CONT'D:

- SIGN POST LOCATIONS SHALL BE APPROVED BY THE ENGINEER AND ROAD MAINTENANCE SIGN SHOP REPRESENTATIVE PRIOR TO INSTALLATION.
- POST LOCATIONS IN CONCRETE MEDIAN OR ISLANDS SHALL HAVE 6" PVC INSTALLED PRIOR TO POURING CONCRETE.

SIGNS:

- THICKNESS OF ALL SIGN PANELS SHALL BE 0.100".

PAVEMENT MARKINGS:

- FINAL PAVEMENT STRIPING SHALL BE EPOXY PER CDOT STANDARD SPECIFICATIONS.
- ALL STOP LINES, CROSSWALKS AND PAVEMENT MARKING SYMBOLS SHALL BE WHITE, PREFORMED THERMOPLASTIC, PREMARK OR EQUIVALENT.
- STOP LINES SHALL BE 2' WIDE; CROSSWALKS SHALL BE 2' x 9', UNLESS OTHERWISE NOTED.
- PAVEMENT MARKING ARROWS SHALL BE ELONGATED.
- BICYCLE DETECTOR PAVEMENT MARKINGS SHALL BE PER MUTCD FIG. 9C-7 B WITH HELMETED BICYCLE SYMBOL.
- PAVEMENT MARKINGS FOR BIKE LANES SHALL BE PER MUTCD FIG. 9C-3 B WITH HELMETED BICYCLE SYMBOL.
- PREFORMED THERMOPLASTIC INSTALLATION ON CONCRETE SHALL HAVE THE CONCRETE CURE REMOVED PRIOR TO INSTALLATION OR A BONDING AGENT APPLIED TO THE CONCRETE BEFORE INSTALLATION. INSTALLATION SHALL FOLLOW THE MANUFACTURER S SPECIFICATIONS.

ENVIRONMENTAL NOTES:

- THE CONTRACTOR SHALL COMPLY WITH THE MIGRATORY BIRD TREATY ACT (MBTA) AND THE BALD AND GOLDEN EAGLE PROTECTION ACT (BGEPA), AT ALL TIMES, INCLUDING CONDUCTING PRE-CONSTRUCTION SURVEYS FOR NESTING BIRDS SET FORTH BY U.S. FISH AND WILDLIFE SERVICE (USFWS). THE CONTRACTOR SHALL SCHEDULE WORK TO AVOID TAKING (PURSUE, HUNT, TAKE, CAPTURE OR KILL; ATTEMPT TO TAKE, CAPTURE, KILL OR POSSESS) MIGRATORY BIRDS PROTECTED BY THE MBTA AND BGEPA. THE INCIDENTAL TAKING OF A MIGRATORY BIRD SHALL BE REPORTED TO USFWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PENALTIES LEVIED BY THE USFWS FOR THE TAKING OF A MIGRATORY BIRD. THE CONTRACTOR SHALL RETAIN A QUALIFIED WILDLIFE BIOLOGIST, WITH A MINIMUM OF THREE YEARS' EXPERIENCE CONDUCTING MIGRATORY BIRD SURVEYS, TO IMPLEMENT THE REQUIREMENTS OF THE MBTA AND BGEPA. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION OF THE BIOLOGIST'S EDUCATION AND EXPERIENCE TO THE ENGINEER FOR ACCEPTANCE PRIOR TO COMMENCEMENT OF ANY ASSOCIATED WORK. A BIOLOGIST WITH LESS EXPERIENCE MAY BE USED BY THE CONTRACTOR SUBJECT TO THE ACCEPTANCE OF THE ENGINEER BASED ON REVIEW OF THE BIOLOGIST'S QUALIFICATIONS. DOCUMENTATION OF THE NEST SURVEYS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- THE WILDLIFE BIOLOGIST RETAINED BY THE CONTRACTOR SHALL COMPLETE RAPTOR NEST SURVEYS TO EVALUATE THE PRESENCE OF ACTIVE RAPTOR NESTS WITHIN THE STUDY AREA. IF AN ACTIVE NEST IS LOCATED IN OR NEAR THE STUDY AREA, THE USFWS AND CPW SHALL BE CONTACTED REGARDING USE OF SEASONAL BUFFERS TO PREVENT DISTURBANCE TO NESTING BIRDS DURING CONSTRUCTION.
- TREE TRIMMING AND/OR REMOVAL ACTIVITIES SHALL BE TIMED TO AVOID THE BREEDING SEASON AND TO AVOID IMPACTS TO ACTIVE BIRD NESTS. IF REQUIRED, TREES SHALL BE CLEARED PRIOR TO FEBRUARY 15 OR AFTER AUGUST 31 TO PREVENT RAPTORS (AND OTHER BIRDS) FROM NESTING ON-SITE AND TO AVOID THE TAKING OF, OR DISTURBANCE TO, ACTIVE NESTS DURING THE BREEDING SEASON. WHERE WORK IS TO BE COMPLETED DURING THE NESTING SEASON, MIGRATORY BIRD SURVEYS WILL BE REQUIRED.
- CLEARING AND GRUBBING OF VEGETATION THAT MAY DISTURB GROUND NESTING BIRDS SHALL BE COMPLETED BEFORE BIRDS BEGIN TO NEST OR AFTER THE YOUNG HAVE FLEDGED. IF WORK ACTIVITIES ARE PLANNED BETWEEN APRIL 1 AND AUGUST 3, VEGETATION SHALL BE REMOVED AND/OR TRIMMED TO A HEIGHT OF SIX (6) INCHES OR LESS PRIOR TO APRIL 1. ONCE VEGETATION HAS BEEN REMOVED AND/OR TRIMMED, APPROPRIATE MEASURES, I.E., REPEATED MOWING/TRIMMING, SHALL BE IMPLEMENTED TO ASSURE VEGETATION DOES NOT GROW TO MORE THAN SIX (6) INCHES. FAILURE TO MAINTAIN VEGETATION HEIGHT OF SIX (6) INCHES OR LESS MAY POSTPONE PROJECT CONSTRUCTION.
- THE FOLLOWING WEED MANAGEMENT STRATEGIES WILL BE IMPLEMENTED:
 - VEHICLES SHALL BE INSPECTED BEFORE THEY ARE USED FOR CONSTRUCTION TO ENSURE THAT THEY ARE FREE OF SOIL AND DEBRIS CAPABLE OF TRANSPORTING NOXIOUS WEED SEEDS OR ROOTS. HEAVY CONSTRUCTION EQUIPMENT SHALL BE CLEANED AND POWER WASHED PRIOR TO USE ON THE PROJECT SITE AND BEFORE LEAVING THE SITE.

ENVIRONMENTAL NOTES CONT'D:

- MATERIAL FOR EROSION BALES, MULCHING, OR COMPOST SHALL CONSIST OF CERTIFIED WEED-FREE MATERIAL. COLORADO CERTIFIED WEED-FREE STRAW IS IDENTIFIED BY BLUE AND ORANGE TWINE BINDING THE BALES (CDOT STANDARD SPECIFICATIONS, PAGE 190). MATERIALS FOR MULCHING SHALL CONSIST OF CERTIFIED WEED-FREE STRAW OF OATS, BARLEY, WHEAT OR TRITICALE CERTIFIED UNDER THE CDA WEED-FREE FORAGE CERTIFICATION PROGRAM (CDOT STANDARD SPECIFICATIONS, PAGE 231). IN ADDITION, CERTIFIED WEED-FREE STRAW SHALL BE FREE OF CHEATGRASS.
 - FERTILIZER WILL NOT BE USED IN SEEDED AREAS BECAUSE IT CAN ENHANCE THE GROWTH OF NOXIOUS WEEDS AT THE EXPENSE OF DESIRED VEGETATION.
 - TOPSOIL WILL NOT BE IMPORTED DUE TO THE POTENTIAL FOR SPREAD OF NOXIOUS WEEDS.
 - ADDITIONALLY THE PROJECT PROPONENT SHALL WORK WITH THE COUNTY WEED COORDINATOR (STEVE SAUER 303-678-6110) TO DEVELOP A LONG TERM PLAN FOR SUPPRESSING NOXIOUS WEEDS THAT MAY SPROUT AT THE CONSTRUCTION SITE.
- AQUATIC INVASIVE SPECIES MAY BE SPREAD BY CONSTRUCTION EQUIPMENT. SPECIFIC BMPS DEVELOPED BY CPW SHALL BE OBSERVED WHERE PRACTICABLE TO MINIMIZE THE RISK OF SPREADING OF NEW ZEALAND MUD SNAILS, ZEBRA MUSSELS, QUAGGA MUSSELS, WHIRLING DISEASE, AND ANY OTHER AQUATIC INVASIVE SPECIES. SPECIFICALLY, IF HEAVY EQUIPMENT IS USED THAT WAS PREVIOUSLY WORKING IN ANOTHER STREAM, RIVER, LAKE, POND, OR WETLAND ONE OF THE FOLLOWING PROCEDURES WILL BE NECESSARY:
 - REMOVE ALL MUD AND DEBRIS FROM EQUIPMENT (TRACKS, TURRETS, BUCKETS, DRAGS, TEETH, ETC.) AND SPRAY/SOAK EQUIPMENT WITH A SOLUTION OF COMMERCIAL GRADE QUATERNARY AMMONIUM DISINFECTANT COMPOUND CONTAINING AT LEAST 8.0% ACTIVE INGREDIENT DILUTED IN SOLUTION TO ACHIEVE AT LEAST 0.8% CONCENTRATION (ROUGHLY 12 OUNCES OF PRODUCT PER GALLON OF WATER). SPECIFICALLY, A 1:15 SOLUTION OF QUAT 4 OR SUPER HDQ NEUTRAL INSTITUTIONAL CLEANER AND WATER, CAN BE USED FOR EFFECTIVE TREATMENT. TREATED EQUIPMENT SHOULD BE KEPT MOIST FOR AT LEAST 10 MINUTES, MANAGING RINSE AS A SOLID WASTE IN ACCORDANCE WITH LOCAL, COUNTY, STATE, OR FEDERAL REGULATIONS, OR
 - REMOVE ALL MUD AND DEBRIS FROM EQUIPMENT (TRACKS, TURRETS, BUCKETS, DRAGS, TEETH, ETC.) AND SPRAY/SOAK EQUIPMENT WITH WATER HOTTER THAN 140 DEGREES FAHRENHEIT FOR AT LEAST 10 MINUTES.
 - CLEAN HAND TOOLS, BOOTS, AND ANY OTHER EQUIPMENT THAT WILL BE USED IN THE WATER WITH ONE OF THE ABOVE OPTIONS AS WELL. DO NOT MOVE WATER FROM ONE WATER BODY TO ANOTHER. BE SURE EQUIPMENT IS DRY BEFORE USE.
 - IN ORDER TO COMPLY WITH THE ENDANGERED SPECIES ACT (ESA), THE FOLLOWING CONSERVATION MEASURES SHALL BE IMPLEMENTED FOR THE DURATION OF THE PROJECT TO PREVENT AND OFFSET ANY AFFECTS THE PROPOSED ACTION MAY HAVE ON FEDERALLY LISTED PREBLE⁹/₃₂S MEADOW JUMPING MOUSE, UTE LADIES⁹/₃₂-TRESSES, COLORADO BUTTERFLY PLANT, AND OTHER BIOLOGICAL RESOURCES.
 - THE USFWS WILL BE CONTACTED BY TELEPHONE AT (303) 236-4773, IF ANY LISTED SPECIES ARE ENCOUNTERED DURING CONSTRUCTION.
 - VEGETATION WILL NOT BE REMOVED OR DISTURBED DURING THIS PROJECT, EXCEPT FOR AREAS WITHIN THE PLANNED LIMITS OF DISTURBANCE. THESE AREAS SHALL BE RESEEDED IN ACCORDANCE WITH THE STORMWATER MANAGEMENT PLAN (SWMP).
 - EQUIPMENT WILL BE OPERATED AND MAINTAINED WITHIN PLANNED LIMITS OF DISTURBANCE. THE STAGING AREA SHALL BE LOCATED WITHIN AREAS WHICH HAVE BEEN SEVERELY DISTURBED BY THE FLOODING. AT THE END OF THE PROJECT, GROUND WITHIN THE CONSTRUCTION FOOTPRINT SHALL BE PREPARED, COVERED WITH TOPSOIL, AND RESEEDED.
 - WASTE SHALL BE PROMPTLY REMOVED IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS TO MINIMIZE SITE DISTURBANCE AND AVOID ATTRACTING PREDATORS. THE CONTRACTOR SHALL COVER EXPOSED HOLES OR PILES OF LOOSE DIRT WITH BOARDS, TARPS, OR OTHER MATERIALS TO PREVENT ENTRAPMENT.
 - THE CONTRACTOR SHALL USE THE NATIVE SEED MIX PROVIDED BY BOULDER COUNTY AND USE ONLY WEED FREE CERTIFIED MATERIALS, INCLUDING GRAVEL, SAND, TOP SOIL, SEED AND MULCH. CONSTRUCTION SHALL BE COMPLETED BEFORE ANY RESTORATION/SEEDING EFFORTS BEGIN. RIPRAP BEING INSTALLED TO PROTECT THE CREEK SHALL BE COVERED WITH SOIL AND REVEGETATED WITH A NATIVE SEED MIX TO IMPROVE THE RIPARIAN HABITAT.

100% SET



CALL UTILITY NOTIFICATION CENTER OF COLORADO
CALL 2-BUSINESS DAYS IN
ADVANCE BEFORE YOU DIG, GRADE,
OR EXCAVATE FOR THE MARKING
OF UNDERGROUND MEMBER
UTILITIES

NO.	DATE	REVISION DESCRIPTION:



BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION
Michael Baker
INTERNATIONAL

DESIGNED:	CAD:	CHECKED:	DATE:
MEM	EAV	DTW	10/12/16

UPPER FOURMILE CANYON DRIVE
GENERAL NOTES
(2 OF 3)

PROJECT NO: 4041.5EPT12C37 SHEET NO: 6

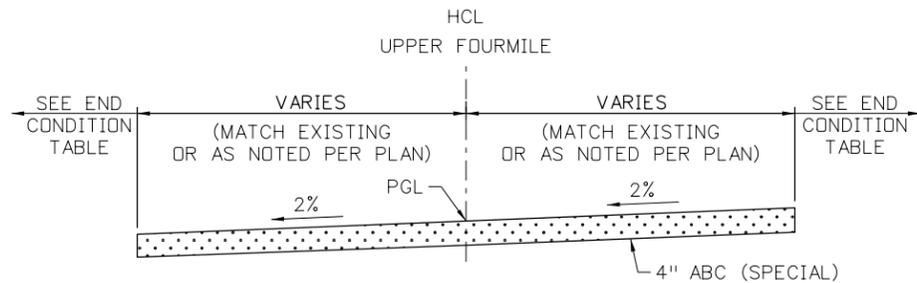
ENVIRONMENTAL NOTES CONT'D:

8. WATER-RELATED ACTIVITIES/USE IN THE SOUTH PLATTE RIVER BASIN MAY AFFECT LISTED SPECIES IN NEBRASKA AND THESE ACTIVITIES/USES ARE SUBJECT TO THE PROVISIONS OF THE ESA. THEREFORE, THE CONTRACTOR SHALL NOT USE ON-SITE SOURCES OF WATER FOR ANY CONSTRUCTION ACTIVITY, INCLUDING STORING OR USING ON-SITE WATER FOR DUST ABATEMENT, SOIL COMPACTION, CONCRETE MIXING, OR OTHER ACTIVITIES.
9. THE CONTRACTOR SHALL ENSURE THAT NO MATERIALS, EQUIPMENT, OR VEHICLES ARE STAGED OR PARKED NEAR WETLANDS OR DRAINAGE AREAS, UNLESS SPECIFICALLY ALLOWED AS NOTED IN THE PLANS.
10. THE CONTRACTOR SHALL NOT PARK ANY VEHICLES OR EQUIPMENT IN, OR DISTURB ANY AREAS NOT APPROVED BY THE ENGINEER; THE CONTRACTOR SHALL ADHERE TO THE CONSTRUCTION LIMITS AS NOTED IN THE PLANS AND DEMARCATATE THE WORK AREA TO PREVENT GROUND DISTURBANCE OUTSIDE THOSE PRESCRIBED AREAS.
11. THE CONTRACTOR SHALL REMOVE IN A TIMELY MANNER ALL SEDIMENT, MUD, DEBRIS, OR OTHER POTENTIAL POLLUTANTS WHICH MAY BE DISCHARGED TO, OR ACCUMULATE IN, THE FLOW LINES AND PUBLIC RIGHT-OF-WAYS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
12. ALL EROSION/SEDIMENT CONTROL AND STORMWATER RESPONSIBILITIES SHALL BE IMPLEMENTED AS STATED IN THE SWMP. BIODEGRADABLE HYDRAULIC FLUID SHALL BE USED WHEN WORKING IN OR ADJACENT TO SURFACE WATER AS SPECIFIED BY THE BOULDER COUNTY STORMWATER DRAINAGE CRITERIA.
13. ORANGE PLASTIC FENCING WILL BE USED TO DEFINE NO-WORK AREAS AND TO PROTECT ADJACENT RIPARIAN AREAS AND ENVIRONMENTAL AREAS OF CONCERN.
14. CONTAMINATED MATERIAL, INCLUDING ASBESTOS-CONTAINING SOIL AND PETROLEUM-IMPACTED SOIL AND/OR GROUNDWATER MAY BE ENCOUNTERED DURING PROJECT ACTIVITIES IN THIS AREA. WORKERS SHALL BE ALERT DURING EXCAVATIONS FOR VISUAL AND OLFACTORY SIGNS OF PETROLEUM CONTAMINATION. IF SOIL AND/OR GROUNDWATER CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION, WORK WILL STOP IMMEDIATELY AND THE PROCEDURES OUTLINED IN THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) SPECIFICATION 250 AND SUBSECTION 107.25 SHALL BE FOLLOWED. IN THE EVENT THAT SUSPECT ACMS ARE ENCOUNTERED (I.E., DEBRIS WITH BUILDING MATERIALS), WORKERS MUST FOLLOW CDOT SPECIFICATION 250.07 - ASBESTOS -CONTAINING MATERIAL MANAGEMENT AND THE CDOT ASBESTOS-CONTAMINATED SOIL MANAGEMENT STANDARD OPERATING PROCEDURE.
15. IF PALEONTOLOGICAL (E.G., ANIMAL BONES OR FOSSILS) RESOURCES ARE DISCOVERED OR UNCOVERED DURING CONSTRUCTION, WORK WILL STOP IMMEDIATELY AND THE ENGINEER NOTIFIED SO FURTHER ACTIONS MAY BE TAKEN, INCLUDING RETAINING A CERTIFIED PALEONTOLOGIST.
16. IF ANY ARCHAEOLOGICAL RESOURCES ARE FOUND (E.G., ARTIFACTS SUCH AS, BUT NOT LIMITED TO, HISTORIC TRASH LIKE BOTTLES, DISHWARE, HOUSEHOLD OR MINING ITEMS, ETC.; PREHISTORIC STONE TOOLS SUCH AS PROJECTILE POINTS OR OTHER FLAKED STONE ITEMS; OR FEATURES SUCH AS BUILDING FOUNDATIONS, TRAILS, WAGON ROADS, RAILROAD GRADES, STONE WALL REMAINS, MINE ADITS, OR PROSPECT PITS; OR PREHISTORIC FEATURES LIKE HEARTHES, ETC.), WORK WILL BE IMMEDIATELY HALTED IN THE VICINITY OF THE FIND, THE ENGINEER NOTIFIED, AND A CERTIFIED ARCHEOLOGIST WILL BE PROMPTLY NOTIFIED.
17. IF BONES OF POTENTIAL HUMAN ORIGIN ARE DISCOVERED DURING CONSTRUCTION, GROUND-DISTURBING WORK MUST BE STOPPED IN THE VICINITY OF THE DISCOVERY, AND THE COUNTY CORONER, THE COUNTY SHERIFF, THE COLORADO STATE HISTORIC PRESERVATION OFFICER (SHPO), AND THE COLORADO STATE ARCHAEOLOGIST WILL BE PROMPTLY NOTIFIED. WORK CANNOT RESUME IN THE VICINITY OF THE FIND UNTIL CLEARANCE IS GRANTED.
18. ALL EQUIPMENT SHALL BE CLEANED AND FREE OF CONTAMINANTS PRIOR TO WORK IN AND ADJACENT TO FOURMILE CREEK.

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 5%;">DATE</th> <th style="width: 90%;">REVISION DESCRIPTION:</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	REVISION DESCRIPTION:										 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED:</td> <td>CAD:</td> <td>CHECKED:</td> <td>DATE:</td> </tr> <tr> <td style="text-align: center;">MEM</td> <td style="text-align: center;">EAV</td> <td style="text-align: center;">DTW</td> <td style="text-align: center;">10/12/16</td> </tr> </table>	DESIGNED:	CAD:	CHECKED:	DATE:	MEM	EAV	DTW	10/12/16	UPPER FOURMILE CANYON DRIVE GENERAL NOTES (3 OF 3) PROJECT NO: 4041.SEPT12C37 SHEET NO: 7
NO.	DATE	REVISION DESCRIPTION:																							
DESIGNED:	CAD:	CHECKED:	DATE:																						
MEM	EAV	DTW	10/12/16																						

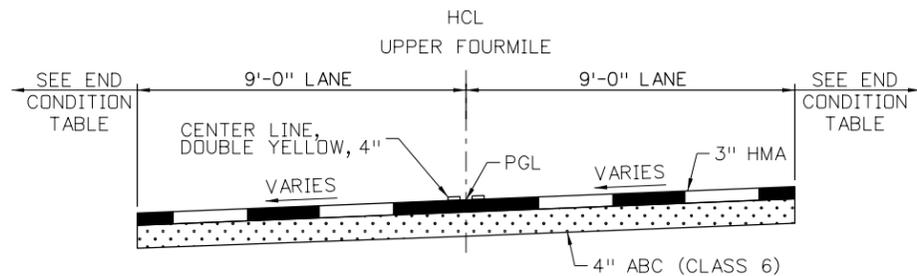
mary.monks 11:27:14 AM 10/11/2016 pm \\DCP\WAPP\lbr.mbakercorp.com\p\p\p\Documents\Projects\Lakewood\Office\Boulder\County_Emergency_Transportation\T01\08_Sheet_L_Files\B_General_Sheets\BGN\UFM_GND3.dgn

mary.monks 5/20/12 PM 10/12/2016 p:\1\DDP\WAP\lbr.mbakercorp.com\p\prod\Documents\Projects\Lakewood\Office\Boulder\County_Emergency_Transportation\101\08_Sheet_Files\YD_General_Sheets\DN\UFLM_Typical01.dgn



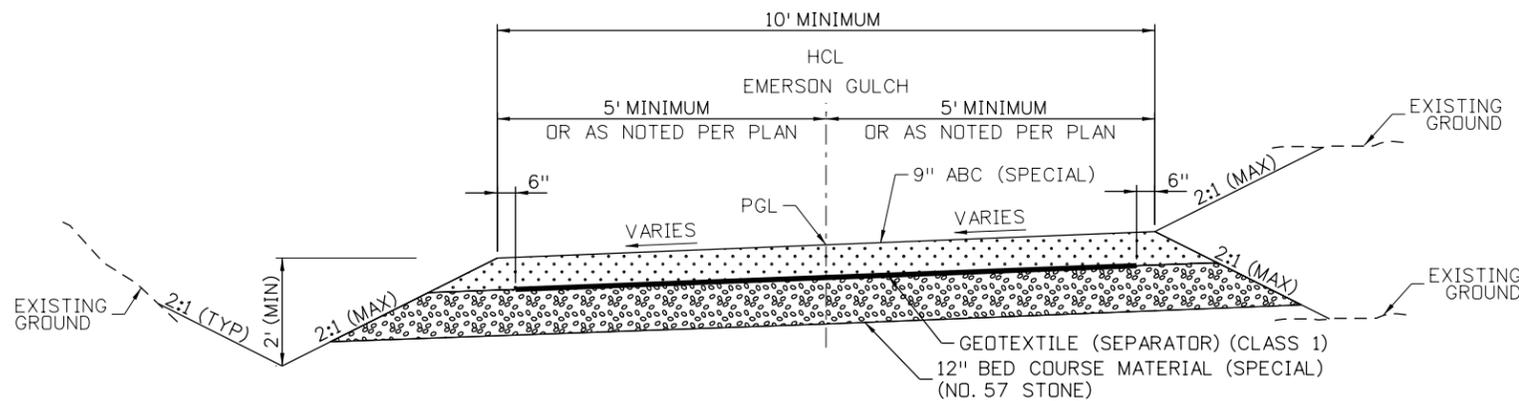
TYPICAL SECTION - UPPER FOURMILE CANYON DR

NTS
STA 42+00 TO STA 258+20
STA 281+40 TO STA 320+20



TYPICAL SECTION - UPPER FOURMILE CANYON DR

NTS
STA 258+20 TO STA 281+40
STA 320+20 TO STA 341+35

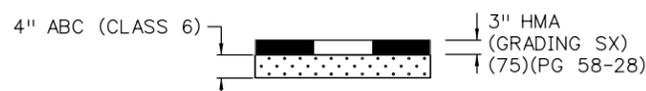


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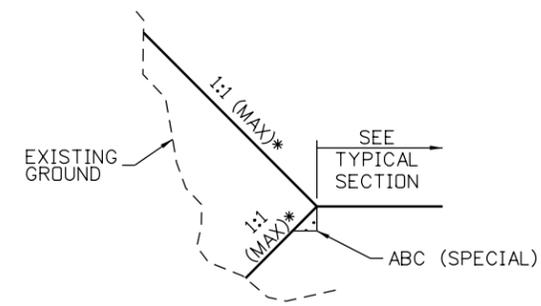
NTS
STA 10+09 TO STA 23+92

NOTES:

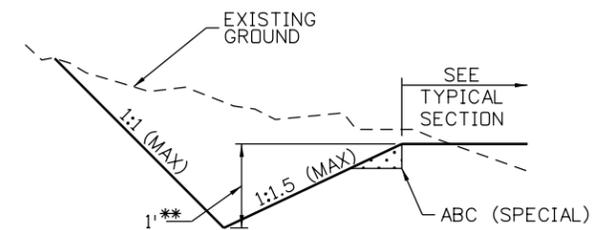
1. SEE END CONDITION DETAILS ON SHEETS 3 AND 4.
2. ROADWAY SUPERELEVATION VARIES, SEE PROFILE SHEETS.
- * SIDE SLOPE SHALL TIE INTO EXISTING GROUND AS QUICKLY AS POSSIBLE OR AS DIRECTED BY THE ENGINEER, GRADE TO DRAIN.
- ** DIMENSION IS CONSTANT UNLESS OTHERWISE NOTED IN PLAN SHEETS.



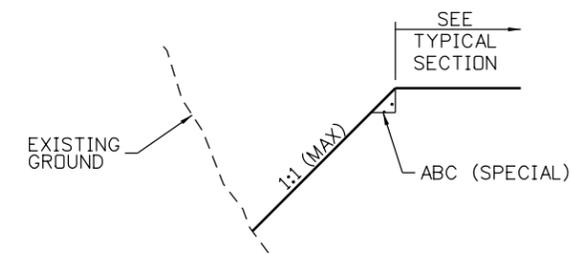
PAVEMENT DETAIL



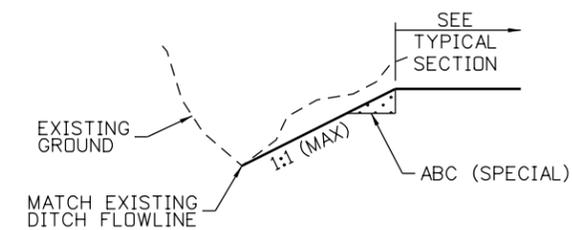
DETAIL A



DETAIL B



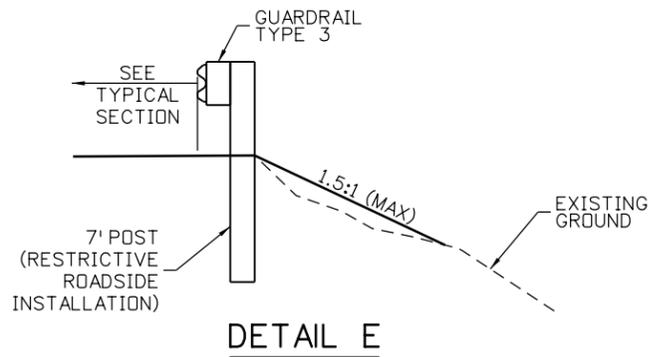
DETAIL C



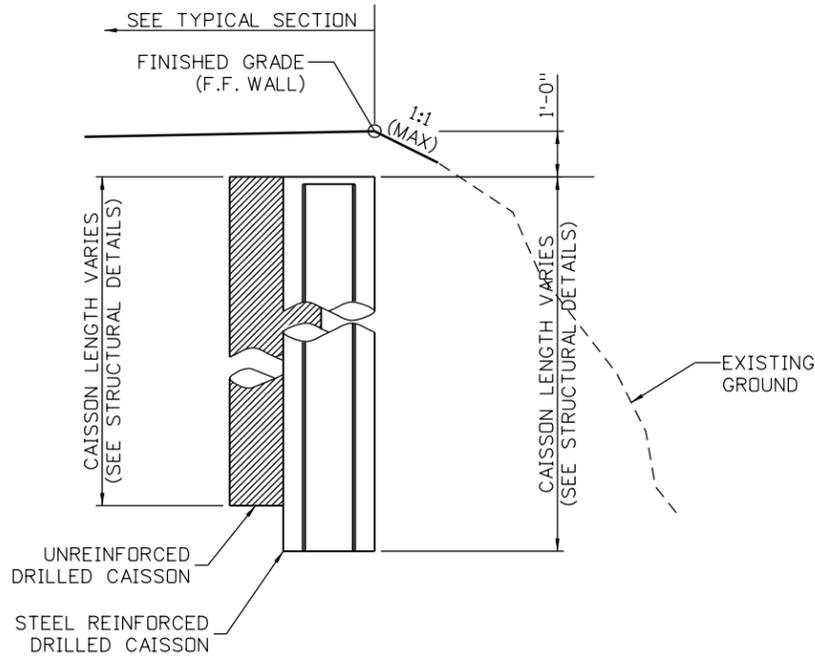
DETAIL D

100% SET		CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES				NO.	DATE	REVISION DESCRIPTION:		BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION				UPPER FOURMILE CANYON DRIVE TYPICAL SECTIONS (1 OF 4)	
		DESIGNED:	CAD:	CHECKED:	DATE:	REVISIONS:	NO.	DATE		INTERNATIONAL	MEM	MEM	DTW	10/12/16	PROJECT NO: 4041.SEP12C37

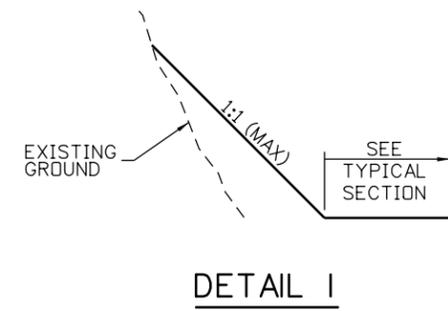
mary.monks 11/27/16 AM 10:11/2016 pwr \NDCPWAPP1\BKR\mbaker.corp.com\p\prod\Documents\Projects\Lakewood\Office\Boulder\County\Emergency_Transportation\101\08_Sheet_1\Files\10_General_Sheets\DWG\LIFL_Typicals02.dgn



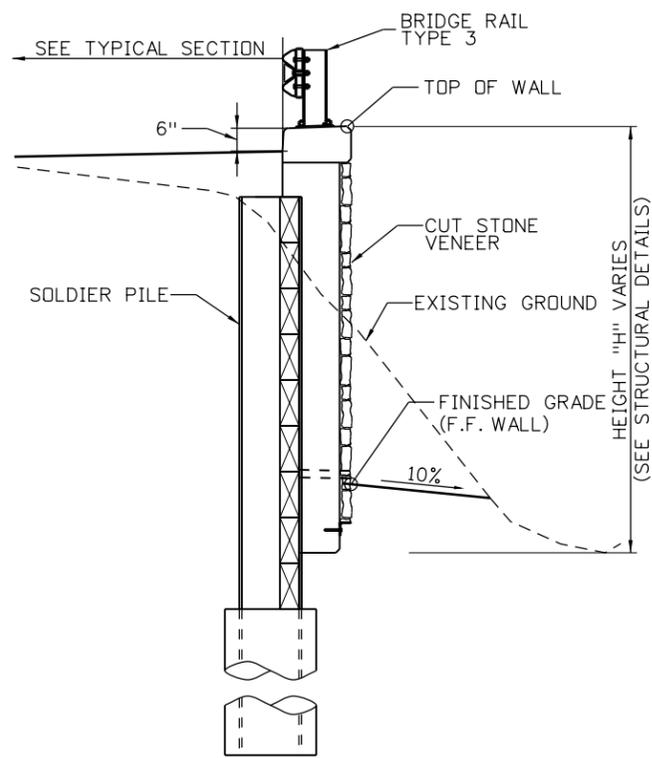
DETAIL E



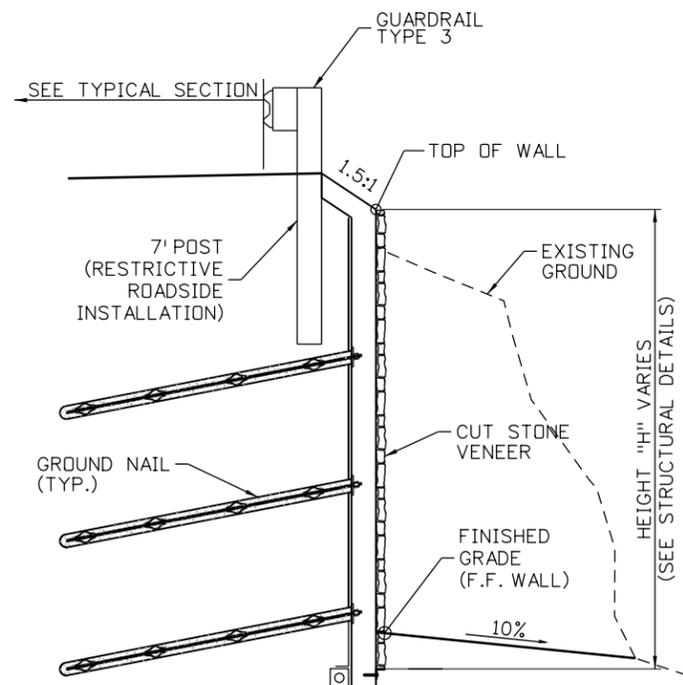
**TANGENT PILE WALL
DETAIL G**



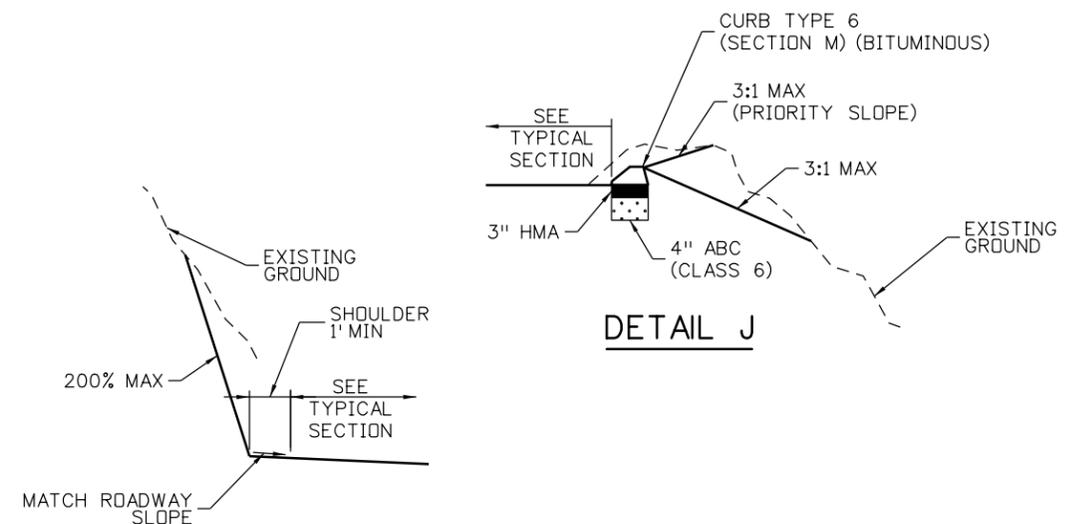
DETAIL I



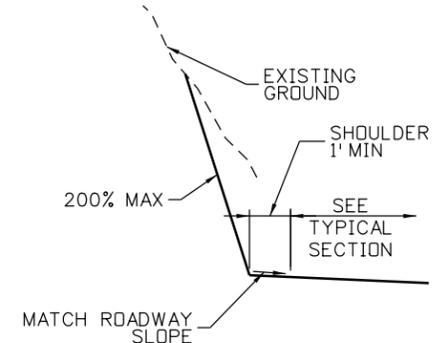
**SOLDIER PILE WALL
DETAIL F**



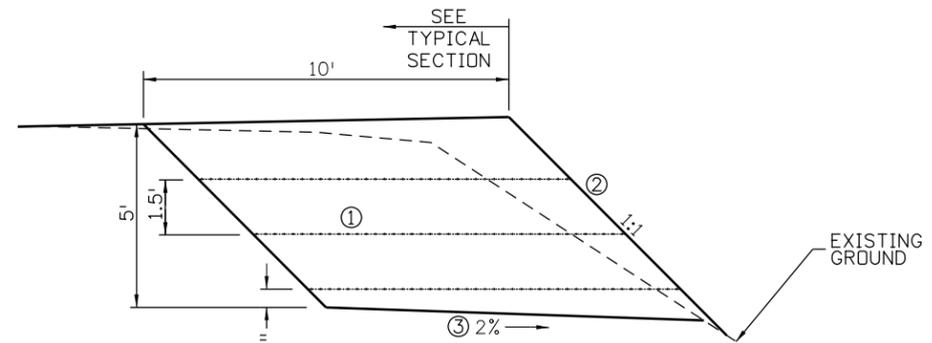
**GROUND NAIL WALL
DETAIL H**



DETAIL J



DETAIL K



DETAIL L

- DETAIL L NOTES:**
- ① 3 LAYERS OF GEOGRID REINFORCEMENT
T_{ULT} = 2,000 LB/FT, T_{AL} = 1,000 LB/FT.
 - ② TURF REINFORCEMENT PER BOULDER COUNTY.
 - ③ GRADE BOTTOM OF EXCAVATION TO SLOPE 2% OUTWARD, THEN PLACE A 6 INCH LEVELING COURSE, BACKFILL WITH MATERIAL MEETING CDDT CLASS 1 STRUCTURE BACKFILL.

NOTES:

- 1. SEE END CONDITION DETAIL STATION LIMITS ON SHEETS 3 AND 4.
- 2. SEE STRUCTURAL SHEETS FOR RETAINING WALL DETAILS.
- * SIDE SLOPE SHALL TIE INTO EXISTING GROUND AS QUICKLY AS POSSIBLE OR AS DIRECTED BY THE ENGINEER, GRADE TO DRAIN.
- ** DIMENSION IS CONSTANT UNLESS OTHERWISE NOTED IN PLAN SHEETS.

100% SET

CALL UTILITY NOTIFICATION CENTER OF COLORADO

 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NO.	DATE	REVISION DESCRIPTION:



**BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION**

 DESIGNED: MEM CAD: MEM CHECKED: DTW DATE: 10/12/16

UPPER FOURMILE CANYON DRIVE
**TYPICAL SECTIONS
(2 OF 4)**
 PROJECT NO: 4041.SEPT12C37 SHEET NO: 9

mary.monks 11/25/14 AM 10:11/2016 p.w.\VDP\WAP\lbr.mbakercorp.com\papr\Documents\Projects\Lakewood\Office\Boulder_County_Emergency_Transportation\T01\08_Sheet_L_Files\General_Sheets\DN\UFM_Typical03.dgn

UPPER FOURMILE END CONDITION TABLE					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
42+00.00	44+93.00	LT	-	UNPAVED	NO SURVEY
44+93.00	45+18.00	LT	B	UNPAVED	
45+18.00	45+48.00	LT	C	UNPAVED	
45+48.00	45+80.00	LT	D	UNPAVED	
45+80.00	49+13.00	LT	B	UNPAVED	
49+13.00	51+20.00	LT	C	UNPAVED	
51+20.00	52+65.00	LT	D	UNPAVED	
52+65.00	60+75.00	LT	C	UNPAVED	
60+75.00	61+45.00	LT	B	UNPAVED	
61+45.00	62+00.00	LT	C	UNPAVED	
62+00.00	62+25.00	LT	B	UNPAVED	
62+25.00	62+75.00	LT	C	UNPAVED	
62+75.00	62+90.00	LT	B	UNPAVED	
62+90.00	64+45.00	LT	C	UNPAVED	
64+45.00	65+65.00	LT	D	UNPAVED	
65+65.00	65+90.00	LT	B	UNPAVED	
65+90.00	66+58.00	LT	C	UNPAVED	
66+58.00	117+95.00	LT	-	UNPAVED	NO SURVEY
117+95.00	118+25.00	LT	B	UNPAVED	
118+25.00	151+50.00	LT	C	UNPAVED	
151+50.00	124+10.00	LT	B	UNPAVED	
124+10.00	124+34.00	LT	D	UNPAVED	
124+34.00	124+76.00	LT	-	UNPAVED	HEADWALL GRADING
124+76.00	124+85.00	LT	D	UNPAVED	
124+85.00	128+00.00	LT	C	UNPAVED	
128+00.00	128+42.00	LT	D	UNPAVED	
128+42.00	131+00.00	LT	C	UNPAVED	
131+00.00	131+25.00	LT	B	UNPAVED	
131+25.00	134+95.00	LT	C	UNPAVED	
134+95.00	135+30.00	LT	B	UNPAVED	
135+30.00	138+00.00	LT	C	UNPAVED	
138+00.00	139+50.00	LT	D	UNPAVED	
139+50.00	140+60.00	LT	C	UNPAVED	
140+60.00	142+15.00	LT	D	UNPAVED	
142+15.00	142+80.00	LT	B	UNPAVED	
142+80.00	148+60.00	LT	C	UNPAVED	
148+60.00	150+05.00	LT	B	UNPAVED	
150+05.00	150+34.00	LT	-	UNPAVED	HEADWALL GRADING
150+34.00	152+05.00	LT	D	UNPAVED	
152+05.00	156+15.00	LT	C	UNPAVED	
156+15.00	156+60.00	LT	B	UNPAVED	
156+60.00	162+25.00	LT	C	UNPAVED	
162+25.00	162+75.00	LT	B	UNPAVED	
162+75.00	163+60.00	LT	C	UNPAVED	
163+60.00	163+95.00	LT	B	UNPAVED	
163+95.00	165+45.00	LT	C	UNPAVED	
165+45.00	166+45.00	LT	B	UNPAVED	
166+45.00	167+20.00	LT	C	UNPAVED	
167+20.00	169+75.00	LT	D	UNPAVED	
169+75.00	172+00.00	LT	C	UNPAVED	
172+00.00	172+60.00	LT	B	UNPAVED	
172+60.00	179+00.00	LT	C	UNPAVED	
179+00.00	182+20.00	LT	B	UNPAVED	
182+20.00	184+35.00	LT	C	UNPAVED	
184+35.00	184+77.00	LT	B	UNPAVED	

UPPER FOURMILE END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
184+77.00	185+05.00	LT	-	UNPAVED	DRIVEWAY
185+05.00	185+37.00	LT	-	UNPAVED	HEADWALL GRADING
185+37.00	186+50.00	LT	B	UNPAVED	
186+50.00	189+50.00	LT	C	UNPAVED	
189+50.00	189+79.00	LT	B	UNPAVED	
189+79.00	189+99.00	LT	-	UNPAVED	HEADWALL GRADING
189+99.00	190+35.00	LT	D	UNPAVED	
190+35.00	197+75.00	LT	C	UNPAVED	
197+75.00	200+15.00	LT	D	UNPAVED	
200+15.00	200+35.00	LT	-	UNPAVED	HEADWALL GRADING
200+35.00	204+80.00	LT	C	UNPAVED	
204+80.00	205+41.00	LT	D	UNPAVED	
205+41.00	209+30.00	LT	C	UNPAVED	
209+30.00	209+90.00	LT	D	UNPAVED	
209+90.00	211+75.00	LT	C	UNPAVED	
211+75.00	212+05.00	LT	B	UNPAVED	
212+05.00	212+20.00	LT	-	UNPAVED	DRIVEWAY
212+20.00	214+65.00	LT	D	UNPAVED	
214+65.00	219+11.00	LT	C	UNPAVED	
219+11.00	219+31.00	LT	-	UNPAVED	DRIVEWAY
219+31.00	220+50.00	LT	C	UNPAVED	
220+50.00	221+45.00	LT	D	UNPAVED	
221+45.00	222+15.00	LT	-	UNPAVED	EMERSON GULCH INTERSECTION
222+15.00	223+60.00	LT	D	UNPAVED	
223+60.00	236+20.00	LT	C	UNPAVED	
236+20.00	236+58.00	LT	-	UNPAVED	HEADWALL GRADING
236+58.00	240+90.00	LT	D	UNPAVED	
240+90.00	242+50.00	LT	C	UNPAVED	
242+50.00	244+30.00	LT	B	UNPAVED	
244+30.00	247+05.00	LT	C	UNPAVED	
247+05.00	247+45.00	LT	-	UNPAVED	END SECTION GRADING
247+45.00	248+20.00	LT	D	UNPAVED	
248+20.00	250+85.00	LT	C	UNPAVED	
250+85.00	253+30.00	LT	D	UNPAVED	
253+30.00	254+10.00	LT	B	UNPAVED	
254+10.00	254+30.00	LT	D	UNPAVED	
254+30.00	255+65.00	LT	C	UNPAVED	
255+65.00	258+20.00	LT	D	UNPAVED	
258+20.00	261+00.00	LT	D	PAVED	
261+00.00	261+30.00	LT	B	PAVED	
261+30.00	262+20.00	LT	D	PAVED	
262+20.00	262+44.00	LT	-	PAVED	END SECTION GRADING
262+44.00	263+98.75	LT	C	PAVED	
263+98.75	264+29.54	LT	-	PAVED	NANCY MINE ROAD
264+29.54	264+85.92	LT	C	PAVED	
264+85.92	264+98.69	LT	-	PAVED	DRIVEWAY
264+98.69	266+33.62	LT	B	PAVED	
266+33.62	266+45.81	LT	-	PAVED	HEADWALL GRADING
266+45.81	266+81.12	LT	B	PAVED	
266+81.12	267+34.78	LT	-	PAVED	DRIVEWAY
267+34.78	267+59.40	LT	B	PAVED	
267+59.40	267+88.08	LT	-	PAVED	HEADWALL GRADING
267+88.08	271+20.73	LT	A	PAVED	
271+20.73	271+38.31	LT	-	PAVED	DRIVEWAY
271+38.31	275+07.74	LT	A	PAVED	

UPPER FOURMILE END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
275+07.74	275+27.13	LT	-	PAVED	DRIVEWAY
275+27.13	275+67.55	LT	I	PAVED	
275+67.55	276+46.07	LT	-	PAVED	DRIVEWAY
276+46.07	276+61.90	LT	E	PAVED	
276+61.90	276+96.57	LT	-	PAVED	DRIVEWAY
276+96.57	278+48.00	LT	I	PAVED	
278+48.00	278+67.50	LT	K	PAVED	
278+67.50	279+08.00	LT	-	PAVED	DRIVEWAY
279+08.00	280+71.66	LT	I	PAVED	
280+71.66	281+15.77	LT	-	PAVED	DRIVEWAY
281+15.77	281+40.00	LT	A	PAVED	
281+40.00	287+39.00	LT	C	UNPAVED	
287+39.00	287+70.00	LT	D	UNPAVED	
287+70.00	288+00.00	LT	-	UNPAVED	MELVINA HILL ROAD
288+00.00	289+20.00	LT	D	UNPAVED	
289+20.00	291+20.00	LT	C	UNPAVED	
291+20.00	291+60.00	LT	B	UNPAVED	
291+60.00	301+50.00	LT	C	UNPAVED	
301+50.00	302+20.00	LT	B	UNPAVED	
302+20.00	303+60.00	LT	C	UNPAVED	
303+60.00	304+30.00	LT	D	UNPAVED	
304+30.00	306+05.00	LT	C	UNPAVED	
306+05.00	307+00.00	LT	B	UNPAVED	
307+00.00	308+40.00	LT	C	UNPAVED	
308+40.00	309+45.00	LT	D	UNPAVED	
309+45.00	315+80.00	LT	C	UNPAVED	
315+80.00	317+20.00	LT	B	UNPAVED	
317+20.00	320+20.00	LT	C	UNPAVED	
320+20.00	322+05.00	LT	C	PAVED	
322+05.00	323+00.00	LT	I	PAVED	
323+00.00	323+20.00	LT	K	PAVED	
323+20.00	323+33.35	LT	I	PAVED	
323+33.35	333+20.00	LT	C	PAVED	
333+20.00	333+55.00	LT	-	PAVED	END SECTION GRADING
333+55.00	334+15.00	LT	-	PAVED	DRIVEWAY
334+15.00	335+74.00	LT	C	PAVED	
335+74.00	325+96.96	LT	-	PAVED	DRIVEWAY
325+96.96	326+34.24	LT	C	PAVED	
326+34.24	336+50.00	LT	K	PAVED	
336+50.00	337+00.00	LT	C	PAVED	PARKING AREA
337+00.00	337+25.00	LT	A	PAVED	
337+25.00	338+95.00	LT	C	PAVED	PARKING AREA
338+95.00	339+35.00	LT	C	PAVED	
339+35.00	340+54.70	LT	I	PAVED	
340+54.70	340+88.17	LT	-	PAVED	DRIVEWAY
340+88.17	341+35.30	LT	C	PAVED	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE TYPICAL SECTIONS (3 OF 4)	PROJECT NO: 4041.SEPT12C37	SHEET NO: 10
								MEM	MEM	DTW	10/12/16			

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UPPER FOURMILE END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
42+00.00	44+93.00	RT	A	UNPAVED	NO SURVEY
44+93.00	51+20.00	RT	A	UNPAVED	
51+20.00	51+23.38	RT	C	UNPAVED	
51+23.38	51+60.77	RT	E	UNPAVED	
51+60.77	52+31.37	RT	F	UNPAVED	
52+31.37	52+85.00	RT	C	UNPAVED	
52+85.00	66+58.00	RT	A	UNPAVED	
66+58.00	117+95.00	RT	A	UNPAVED	NO SURVEY
117+95.00	124+10.00	RT	A	UNPAVED	
124+10.00	125+26.00	RT	-	UNPAVED	STREAM RESTORATION GRADING
125+26.00	137+20.00	RT	A	UNPAVED	
137+20.00	137+62.20	RT	C	UNPAVED	
137+62.20	138+00.00	RT	E	UNPAVED	
138+00.00	139+20.10	RT	F	UNPAVED	
139+20.10	140+00.00	RT	C	UNPAVED	
140+00.00	150+05.00	RT	A	UNPAVED	
150+05.00	150+34.00	RT	-	UNPAVED	HEADWALL GRADING
150+34.00	150+41.34	RT	C	UNPAVED	
150+41.34	151+63.28	RT	G	UNPAVED	
151+63.28	151+80.00	RT	C	UNPAVED	
151+80.00	167+00.00	RT	A	UNPAVED	
167+00.00	168+06.15	RT	C	UNPAVED	
168+06.15	169+70.18	RT	G	UNPAVED	
169+70.18	169+81.03	RT	C	UNPAVED	
169+81.03	169+99.41	RT	-	UNPAVED	DRIVEWAY
169+99.41	170+40.00	RT	C	UNPAVED	
170+40.00	179+75.00	RT	A	UNPAVED	
179+75.00	179+85.00	RT	C	UNPAVED	
179+85.00	181+70.13	RT	G	UNPAVED	
181+70.13	181+90.00	RT	C	UNPAVED	
181+90.00	184+40.00	RT	A	UNPAVED	
184+40.00	185+22.00	RT	C	UNPAVED	
185+22.00	185+47.00	RT	-	UNPAVED	HEADWALL GRADING
185+47.00	186+00.00	RT	C	UNPAVED	
186+00.00	189+25.00	RT	A	UNPAVED	
189+25.00	190+60.00	RT	C	UNPAVED	
190+60.00	197+42.65	RT	A	UNPAVED	
197+42.65	197+80.00	RT	E	UNPAVED	
197+80.00	200+50.00	RT	F	UNPAVED	
200+50.00	200+77.75	RT	E	UNPAVED	
200+77.75	201+00.00	RT	C	UNPAVED	
201+00.00	204+35.00	RT	A	UNPAVED	
204+35.00	204+88.84	RT	E	UNPAVED	

UPPER FOURMILE END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
204+88.84	205+31.09	RT	H	UNPAVED	
205+31.09	205+50.00	RT	E	UNPAVED	
205+50.00	209+00.00	RT	A	UNPAVED	
209+00.00	210+05.00	RT	C	UNPAVED	
210+05.00	212+21.88	RT	A	UNPAVED	
212+21.88	212+40.00	RT	I	UNPAVED	
212+40.00	213+40.88	RT	C	UNPAVED	
213+40.88	213+67.03	RT	-	UNPAVED	DRIVEWAY
213+67.03	217+40.00	RT	A	UNPAVED	
217+40.00	217+50.00	RT	C	UNPAVED	
217+50.00	219+00.00	RT	-	UNPAVED	STREAM RESTORATION GRADING
219+00.00	220+89.61	RT	C	UNPAVED	
220+89.61	222+26.85	RT	E	UNPAVED	STREAM RESTORATION GRADING
222+26.85	223+60.00	RT	-	UNPAVED	STREAM RESTORATION GRADING
223+60.00	236+20.00	RT	A	UNPAVED	
236+20.00	236+70.00	RT	-	UNPAVED	HEADWALL GRADING
236+70.00	241+00.00	RT	C	UNPAVED	
241+00.00	246+60.22	RT	A	UNPAVED	
246+60.22	247+27.22	RT	G	UNPAVED	
247+27.22	248+20.41	RT	C	UNPAVED	
248+20.41	250+85.01	RT	A	UNPAVED	
250+85.01	250+85.51	RT	G	UNPAVED	
250+85.51	255+90.20	RT	C	UNPAVED	
255+90.20	257+82.60	RT	G	UNPAVED	
257+82.60	258+20.00	RT	C	UNPAVED	
258+20.00	260+83.15	RT	C	PAVED	
260+83.15	261+13.49	RT	-	PAVED	ALPINE GULCH ROAD
261+13.49	263+96.35	RT	A	PAVED	
263+96.35	264+15.39	RT	-	PAVED	DRIVEWAY
264+15.39	266+31.44	RT	A	PAVED	
266+31.44	266+50.00	RT	-	PAVED	END SECTION GRADING
266+50.00	267+55.00	RT	C	PAVED	
267+55.00	267+95.00	RT	-	PAVED	HEADWALL GRADING
267+95.00	268+30.00	RT	B	PAVED	
268+30.00	268+55.58	RT	C	PAVED	
268+55.58	269+20.98	RT	-	PAVED	DRIVEWAY
269+20.98	270+55.99	RT	C	PAVED	
270+55.99	270+88.30	RT	-	PAVED	DRIVEWAY
270+88.30	272+30.00	RT	C	PAVED	
272+30.00	276+10.00	RT	J	PAVED	
276+10.00	279+40.00	RT	C	PAVED	
279+40.00	279+85.00	RT	B	PAVED	0.5' DITCH DEPTH
279+85.00	281+40.00	RT	C	PAVED	

UPPER FOURMILE END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
281+40.00	282+10.00	RT	C	UNPAVED	
282+10.00	283+65.00	RT	A	UNPAVED	
283+65.00	284+60.00	RT	-	UNPAVED	STREAM RESTORATION GRADING
284+60.00	287+28.64	RT	A	UNPAVED	
287+28.64	289+12.95	RT	E	UNPAVED	
289+12.95	303+60.00	RT	A	UNPAVED	
303+60.00	304+30.00	RT	-	UNPAVED	STREAM RESTORATION GRADING
304+30.00	308+40.00	RT	A	UNPAVED	
308+40.00	309+45.00	RT	L	UNPAVED	
309+45.00	320+20.00	RT	A	UNPAVED	
320+20.00	321+20.00	RT	A	PAVED	
321+20.00	326+27.42	RT	C	PAVED	
326+27.42	326+43.84	RT	-	PAVED	DRIVEWAY
326+43.84	330+41.59	RT	C	PAVED	
330+41.59	330+59.10	RT	-	PAVED	DRIVEWAY
330+59.10	333+20.00	RT	C	PAVED	
333+20.00	333+60.00	RT	-	PAVED	END SECTION GRADING
333+60.00	341+25.00	RT	C	PAVED	
341+25.00	341+35.30	RT	A	PAVED	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE TYPICAL SECTIONS (4 OF 4) PROJECT NO: 4041.SEPT12C37 SHEET NO: 11
							MEM	MEM	DTW	10/12/16	

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		STREAM RESTORATION		PROJECT TOTALS		
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.			
201-00000	CLEARING AND GRUBBING	L S	1											1	
202-00010	REMOVAL OF TREE	EACH	221											221	
202-00027	REMOVAL OF RIPRAP	SY			65									65	
202-00035	REMOVAL OF PIPE	LF			407									407	
202-00220	REMOVAL OF ASPHALT MAT	SY	4,197											4,197	
202-04002	CLEAN CULVERT	EACH			9									9	
203-00010	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	13,433											13,433	
203-00100	MUCK EXCAVATION	CY	500											500	
203-01100	PROOF ROLLING	hour	20											20	
203-01500	BLADING	hour						15						15	
203-01510	BACKHOE	hour						5						5	
203-01550	DOZING	hour						15						15	
203-01594	COMBINATION LOADER	hour						10						10	
203-01597	POTHOLING	hour						20						20	
203-02330	LABORER	hour						15						15	
206-00000	STRUCTURE EXCAVATION	CY			1,345		317							1,662	
206-00100	STRUCTURE BACKFILL (CLASS 1)	CY	203		426									629	
206-00200	STRUCTURE BACKFILL (CLASS 2)	CY					42							42	
206-00360	MECHANICAL REINFORCEMENT OF SOIL	CY	203											203	
206-00510	FILTER MATERIAL (CLASS A)	CY			120									120	
206-01001	BED COURSE MATERIAL (SPECIAL)	CY	815											815	
207-00205	TOPSOIL	CY			163			5,700						5,863	
207-00210	STOCKPILE TOPSOIL	CY						5,700						5,700	
208-00002	EROSION LOG TYPE 1 (12 INCH)	LF						8,440						8,440	
208-00020	SILT FENCE	LF						10,140						10,140	
208-00035	AGGREGATE BAG	LF						160						160	
208-00041	ROCK CHECK DAM	EACH						20						20	
208-00045	CONCRETE WASHOUT STRUCTURE	EACH						10						10	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE SUMMARY OF QUANTITIES (1 OF 5)	PROJECT NO: 4041.SEP12C37	SHEET NO: 12
								DTW	BMM	DTW	10/12/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		STREAM RESTORATION		PROJECT TOTALS		
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	
208-00070	VEHICLE TRACKING PAD	EACH							6					6	
208-00106	SWEEPING (SEDIMENT REMOVAL)	HOURL							12					12	
208-00107	REMOVAL OF TRASH	HOURL							8					8	
208-00207	EROSION CONTROL MANAGEMENT	DAY							100					100	
210-00010	RESET MAILBOX STRUCTURE	EACH	19											19	
210-00090	RESET DELINEATOR	EACH	136											136	
210-00810	RESET GROUND SIGN	EACH	13											13	
210-00815	RESET SIGN PANEL	EACH	2											2	
210-01000	RESET FENCE	LF	117											117	
211-03005	DEWATERING	L S				1								1	
212-00006	SEEDING (NATIVE)	ACRE							10.60					10.60	
212-00032	SOIL CONDITIONING	ACRE							10.60					10.60	
213-00004	MULCHING (WEED FREE STRAW)	ACRE							10.60					10.60	
213-00061	MULCH TACKIFIER	LB							2,120					2,120	
214-00225	DECIDUOUS TREE (2.5 INCH CALIPER)	EACH	112											112	
214-00506	EVERGREEN TREE (6 FOOT) (BALL AND BURLAP)	EACH	91											91	
216-00021	SOIL RETENTION BLANKET (CLASS 1)	SY							4,680					4,680	
216-00303	TURF REINFORCEMENT MAT (CLASS 3)	SY							275					275	
217-00020	HERBICIDE TREATMENT	HOURL							32					32	
240-00000	WILDLIFE BIOLOGIST	HOURL	10											10	
240-00010	REMOVAL OF NESTS	HOURL	20											20	
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	991											991	
304-09000	AGGREGATE BASE COURSE (SPECIAL)	CY	6,241											6,241	
403-34721	HOT MIX ASPHALT (GRADING SX) (75) (PG 58-28)	TON	1,472											1,472	
420-00102	GEOTEXTILE (EROSION CONTROL) (CLASS 1)	SY			1,355									1,355	
420-00132	GEOTEXTILE (SEPARATOR) (CLASS 1)	SY	1,571											1,571	
503-00024	DRILLED CAISSON (24 INCH)	LF					8,574							8,574	
504-06315	GROUND NAIL (15 FOOT)	EACH					17							17	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE SUMMARY OF QUANTITIES (2 OF 5)	PROJECT NO: 4041.SEPT12C37	SHEET NO: 13
								DTW	BMM	DTW	10/12/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		STREAM RESTORATION		PROJECT TOTALS			
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.		
506-00036	GRouted RIPRAP (36 INCH) (SPECIAL)	CY			380										380	
506-00209	RIPRAP (9 INCH)	CY			140										140	
506-00212	RIPRAP (12 INCH)	CY			69										69	
506-00224	RIPRAP (24 INCH)	CY			319										319	
506-00409	SOIL RIPRAP (9 INCH)	CY			132										132	
506-00412	SOIL RIPRAP (12 INCH)	CY			395										395	
506-00424	SOIL RIPRAP (24 INCH)	CY			720										720	
506-XXXXX	EARTHWORK, EXCAVATION, AND FILL ON-SITE	CY	1,560								14,038				15,598	
506-XXXXX	BOULDER J-HOOK	EACH									12				12	
506-XXXXX	LOG J-HOOK	EACH									18				18	
506-XXXXX	ROCK CROSS VANE	EACH									2				2	
506-XXXXX	CONVERGING BOULDER CLUSTER	EACH									34				34	
506-XXXXX	ROOT WAD	LF									540				540	
506-XXXXX	ROCK STEP POOL	LF									18				18	
506-XXXXX	ROCK AND LOG STEP POOL	EACH									7				7	
506-XXXXX	TOE WOOD W/ SOIL WRAPPED LIFT	LF									1,332				1,332	
506-XXXXX	BOULDER BANK PROTECTION	LF			8						3,529				3,537	
506-XXXXX	REVEGETATION - ZONE A	ACRE									2				2	
506-XXXXX	REVEGETATION - ZONE B	ACRE									5				5	
506-XXXXX	REVEGETATION - ZONE C	ACRE									4				4	
506-XXXXX	REVEGETATION - RIPARIAN SEEDING & MULCH	ACRE									11				11	
506-XXXXX	REVEGETATION - ROOT WADS	LF									540				540	
506-XXXXX	REVEGETATION - SOIL LIFTS	LF									1,332				1,332	
506-XXXXX	CONSTRUCTION SURVEYING	MILE									3.38				3.38	
506-XXXXX	MOBILIZATION	LS									1				1	
506-XXXXX	WATER CONTROL, DEWATERING, EROSION/SEDIMENT CONTROL	LS									1				1	
506-XXXXX	TRAFFIC CONTROL	LS									1				1	
509-00000	STRUCTURAL STEEL	LB						449,330							449,330	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE SUMMARY OF QUANTITIES (3 OF 5)	PROJECT NO: 4041.SEPT12C37	SHEET NO: 14
								DTW	BMM	DTW	10/12/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		STREAM RESTORATION		PROJECT TOTALS			
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.		
601-01000	CONCRETE CLASS B	CY			108										108	
601-03050	CONCRETE CLASS D (WALL)	CY					112								112	
601-40005	CUT STONE VENEER	SF			676		3,200								3,876	
601-40301	STRUCTURAL CONCRETE COATING	SF					4,848								4,848	
601-40302	STRUCTURAL CONCRETE COATING (ANTI-GRAFFITI)	SF					4,848								4,848	
602-00000	REINFORCING STEEL	LB			12,676		141,563								154,239	
603-01245	24 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			58										58	
603-01305	30 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			20										20	
603-01605	60 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			27										27	
603-02245	30X19 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			135										135	
603-02305	38X24 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			63										63	
603-02365	45X29 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			175										175	
603-02425	53X34 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			111										111	
603-02485	60X38 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			36										36	
603-02545	68X43 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	LF			28										28	
603-05024	24 INCH REINFORCED CONCRETE END SECTION	EACH			2										2	
603-05030	30 INCH REINFORCED CONCRETE END SECTION	EACH			1										1	
603-05060	60 INCH REINFORCED CONCRETE END SECTION	EACH			2										2	
603-05124	30X19 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			5										5	
603-05130	38X24 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			2										2	
603-05136	45X29 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			2										2	
603-05142	53X34 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			1										1	
603-05148	60X38 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			2										2	
603-05154	68X43 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			1										1	
603-70804	8X4 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			46										46	
603-71204	12X4 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			39										39	
604-00505	INLET TYPE D (5 FOOT)	EACH			1										1	
606-00301	GUARDRAIL TYPE 3 (6-3 POST SPACING)	LF	263												263	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE SUMMARY OF QUANTITIES (4 OF 5)	PROJECT NO: 4041.SEP12C37	SHEET NO: 15
								DTW	BMM	DTW	10/12/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		STREAM RESTORATION		PROJECT TOTALS		
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	
606-01340	END ANCHORAGE TYPE 3D	EACH	4											4	
606-01390	END ANCHORAGE TYPE 3K	EACH	3											3	
606-01395	TRANSITION TYPE 3L	EACH	4											4	
606-02003	END ANCHORAGE (NONFLARED)	EACH	3											3	
606-10325	BRIDGE RAIL TYPE 3	LF					459							459	
607-11525	FENCE (PLASTIC)	LF							850					850	
609-60011	CURB TYPE 6 (SECTION M)	LF	380											380	
612-00001	DELINEATOR (TYPE I)	EACH	20											20	
612-00003	DELINEATOR (TYPE III)	EACH	45											45	
614-00011	SIGN PANEL (CLASS I)	SF	129											129	
614-00216	STEEL SIGN POST (2X2 INCH TUBING)	LF	198											198	
620-00002	FIELD OFFICE (CLASS 2)	EACH	1											1	
620-00020	SANITARY FACILITY	EACH	1											1	
625-00000	CONSTRUCTION SURVEYING	L S	1											1	
626-00000	MOBILIZATION	L S	1											1	
626-01000	PUBLIC INFORMATION SERVICES	LS	1											1	
627-00005	EPDXY PAVEMENT MARKING	GAL	94											94	
630-XXXXX	TRAFFIC CONTROL	LS	1											1	
630-XXXXX	PORTABLE MESSAGE SIGN PANEL	EACH	4											4	
630-00000	FLAGGING	HOURL	2,080											2,080	
630-00007	TRAFFIC CONTROL INSPECTION	DAY	130											130	
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	260											260	
630-80370	CONCRETE BARRIER (TEMPORARY)	LF	2,400											2,400	
641-10000	SHOTCRETE	SY					12							12	
700-XXXXX	F/A MINE WASTE MANAGEMENT	F A	1											1	
700-XXXXX	F/A UNIFORMED TRAFFIC CONTROL	F A	1											1	
700-70010	F/A MINOR CONTRACT REVISIONS	F A	1											1	
700-70380	F/A EROSION CONTROL	F A							1					1	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE SUMMARY OF QUANTITIES (5 OF 5)	PROJECT NO: 4041.SEP12C37	SHEET NO: 16
								DTW	BMM	DTW	10/12/16			

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SUMMARY OF EARTHWORK QUANTITIES	
UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CUBIC YARDS
ROADWAY - UPPER FOURMILE CANYON DRIVE	10,769
ROADWAY - EMERSON GULCH ROAD	606
DRAINAGE STRUCTURES (FROM TAB)	2,058
TOTAL FOR PAY QUANTITY	13,433
MUCK EXCAVATION	500
FOR INFORMATION ONLY	
EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CUBIC YARDS
ROADWAY - UPPER FOURMILE CANYON DRIVE	3,669
ROADWAY - EMERSON GULCH ROAD	641
STRUCTURE BACKFILL (FROM TABS)	671
TOTAL	4,981
ROADWAY QUANTITIES BALANCE:	CUBIC YARDS
EMBANKMENT MATERIAL (COMPACTION FACTOR) = 1.15	5,728
UNCLASSIFIED EXCAVATION	13,433
APPROXIMATE EXCESS MATERIAL	7,705

NOTES:

- EARTHWORK QUANTITIES ARE APPROXIMATE IN THE AREAS WHERE NO DESIGN SURVEY EXISTS (STA 42+00 TO 44+90 AND STA 66+55 TO 117+95).

TABULATION OF SURFACING							
LOCATION			403-34721	304-06007	304-09000	206-01001	420-00132
			HOT MIX ASPHALT (GRADING SX) (75) (PG 58-28)	AGGREGATE BASE COURSE (CLASS 6)	AGGREGATE BASE COURSE (SPECIAL)	BED COURSE MATERIAL (SPECIAL)	GEOTEXTILE (SEPARATOR) (CLASS 1)
			TON	CY	CY	CY	SY
UPPER FOURMILE							
42+00	TO	258+20			4,843		
258+20	TO	281+40	774	521	32		
281+40	TO	320+20			849		
320+20	TO	341+35	698	470	19		
EMERSON GULCH							
10+09	TO	23+92			498	815	1,571
TOTALS			1,472	991	6,241	815	1,571

NOTES:

- QUANTITIES INCLUDE DRIVEWAYS.
- DRIVEWAYS ARE SURFACED WITH 4" ABC (SPECIAL) UNLESS OTHERWISE INDICATED ON THE PLANS.

TABULATION OF ROADWAY REMOVALS AND RESETS					
LOCATION		SIDE	202-00220	210-00010	210-01000
			REMOVAL OF ASPHALT MAT	RESET MAILBOX STRUCTURE	RESET FENCE
			SY	EACH	LF
UPPER FOURMILE					
170+16		RT		1	
185+58		LT		2	
213+16		RT		1	
219+36		LT		1	
222+20		LT		2	
258+42	TO	261+92	LT/RT	658	
260+00	TO	261+14	LT		117
264+66		LT		2	
264+86	TO	267+34	LT/RT	336	
266+79		LT		1	
267+68	TO	281+45	LT/RT	2,046	
268+32		LT		1	
275+13		RT		2	
275+96		LT		1	
281+14		LT		1	
287+60		LT		1	
318+53		LT		2	
326+25		RT		1	
334+94	TO	341+35	LT/RT	1,157	
TOTALS			4,197	19	117

NOTES:

- SEE DRAINAGE TABULATIONS FOR DRAINAGE RELATED REMOVALS AND RESETS.
- SEE TABULATION OF SIGNS FOR SIGN REMOVAL AND RESET QUANTITIES.
- SEE TREE INVENTORY PLANS FOR THE TREE REMOVAL TABULATIONS.

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TABULATION OF GUARDRAIL						
LOCATION	SIDE	606-00301	606-01340	606-01390	606-01395	606-02003
		GUARDRAIL TYPE 3 (6-3 POST SPACING)	END ANCHORAGE TYPE 3D	END ANCHORAGE TYPE 3K	TRANSITION TYPE 3L	END ANCHORAGE (NONFLARED)
		LF	EACH	EACH	EACH	EACH
UPPER FOURMILE						
51+35.77	RT			1		
51+35.77 TO 51+30.77	RT				1	
137+74.75	RT			1		
137+74.75 TO 138+00.00	RT				1	
197+55.15	RT			1		
197+55.15 TO 197+80.00	RT				1	
200+50.00 TO 200+75.34	RT				1	
200+75.34	RT		1			
204+88.48	RT					1
204+88.48 TO 205+38.84	RT	50.00				
205+38.84	RT		1			
221+45.50	RT					1
221+45.50 TO 222+23.56	RT	75.00				
222+23.56	RT		1			
287+81.09	RT					1
287+81.09 TO 289+17.31	RT	137.50				
289+17.31	RT		1			
TOTAL		262.50	4	3	4	3

TABULATION OF CURB				
LOCATION	SIDE	609-60011		
		CURB TYPE 6 (SECTION M)		
		LF		
UPPER FOURMILE				
272+30 TO 276+10	RT			380
TOTAL				380

TABULATION OF PAVEMENT MARKINGS					
LOCATION	MARKING TYPE	627-00005 EPOXY PAVEMENT MARKING			
		DOUBLE YELLOW SOLID 4 IN			
		LF	GAL		
UPPER FOURMILE					
258+20 TO 281+40	CENTER LINES	2320	49		
320+20 TO 341+35	CENTER LINES	2115	45		
TOTAL			94		

NOTES:

1. BRIDGE RAIL TYPE 3 IS TABULATED IN THE STRUCTURES PLANS.

TABULATION OF SIGNS												
LOCATION	OFFSET	DIRECTION	210-00810	210-00815	SIGN CODE	SIGN PANEL SIZE			LEGEND	614-00011	614-00216	REMARKS
			RESET GROUND SIGN (EACH)	RESET SIGN PANEL (EACH)		W"	X	H"		SIGN PANEL (CLASS I)	STEEL SIGN POST (2 X 2 INCH TUBING)	
										SF	LF	
UPPER FOURMILE												
51+21	RT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
52+35	RT	WB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
124+36	LT	EB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
124+75	LT	WB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
137+60	RT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
139+24	RT	WB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
150+08	LT	EB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
150+08	RT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
150+32	LT	WB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
150+33	RT	WB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
185+11	LT	EB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
185+20	RT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
185+33	LT	WB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
185+42	RT	WB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
189+78	LT	WB			OM3-L	12	x	36	OBJECT MARKER	3.00	7.00	
189+99	LT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
197+39	RT	EB			OM3-R	12	x	36	OBJECT MARKER	3.00	7.00	
SUBTOTAL			0	0						51.00	119.00	

NOTES:

1. SEE ROADWAY TABULATIONS SHEET 3 FOR CONTINUATION OF TABULATION OF SIGNS.

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS: NO. DATE REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED: MEM	CAD: EAV	CHECKED: DTW	DATE: 10/12/16	UPPER FOURMILE CANYON DRIVE ROADWAY TABULATIONS (2 OF 4) PROJECT NO: 4041.SEPT12C37 SHEET NO: 18

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TABULATION OF DELINEATORS								
LOCATION	SIDE	210-00090	612-00001			612-00003		REMARKS
		RESET DELINEATOR	DELINEATOR (TYPE I)			DELINEATOR (TYPE III)		
		EACH	CRYSTAL EACH	GREEN EACH	BLUE EACH	YELLOW EACH	GREEN EACH	
UPPER FOURMILE								
42+00 TO 341+35	LT/RT	136						
51+22	RT						1	
52+32	RT			1				
124+65	RT					1		
124+77	RT					1		
137+61	RT						1	
139+21	RT			1				
150+40	RT					1		
151+64	RT					1		
168+05	RT					1		
169+72	RT					1		
179+84	RT					1		
181+71	RT					1		
189+89	RT					1		
197+41	RT						1	
200+81	RT			1				
204+32	RT						1	
205+44	RT			1				
211+89	LT					1		EXISTING PIPE
211+97	RT					1		EXISTING PIPE
220+86	RT						1	
221+51	RT					1		
222+00	RT					1		
222+25	RT			1				
233+01	RT					1		EXISTING PIPE
233+02	LT					1		EXISTING PIPE
243+78	LT					1		EXISTING PIPE
243+83	RT					1		EXISTING PIPE
246+60	RT					1		
247+27	LT					1		
247+50	RT					1		
247+71	RT					1		
250+84	RT					1		
251+87	RT					1		
253+89	LT					1		
253+89	RT					1		
255+89	RT					1		
257+84	RT					1		
	SUBTOTALS	136	0	5	12	15	5	

TABULATION OF DELINEATORS (CONTINUED)								
LOCATION	SIDE	210-00090	612-00001			612-00003		REMARKS
		RESET DELINEATOR	DELINEATOR (TYPE I)			DELINEATOR (TYPE III)		
		EACH	CRYSTAL EACH	GREEN EACH	BLUE EACH	YELLOW EACH	GREEN EACH	
259+38	LT						1	EXISTING PIPE
259+50	RT						1	EXISTING PIPE
262+39	LT						1	
263+12	RT						1	
266+40	RT						1	
278+33	LT						1	
278+49	RT						1	
286+47	RT						1	EXISTING PIPE
286+48	LT						1	EXISTING PIPE
287+26	RT							1
289+18	RT			1				
290+97	RT						1	EXISTING PIPE
291+08	LT						1	EXISTING PIPE
304+48	RT						1	EXISTING PIPE
304+51	LT						1	EXISTING PIPE
308+39	RT							1
309+46	RT							1
316+69	RT						1	EXISTING PIPE
316+74	LT						1	EXISTING PIPE
325+94	LT						1	EXISTING PIPE
326+05	RT						1	EXISTING PIPE
333+40	LT						1	
333+40	RT						1	
341+05	RT						1	EXISTING PIPE
341+09	LT						1	EXISTING PIPE
EMERSON GULCH								
17+43	RT						1	
17+63	LT						1	
17+98	LT						1	
	SUBTOTALS	0	0	1	2	24	1	
	TOTALS	136		20		45		

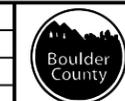
NOTES:
 1. EXISTING DELINEATORS SHALL BE RESET AS DIRECTED BY THE ENGINEER.

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	 Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE ROADWAY TABULATIONS (4 OF 4)	PROJECT NO: 4041.SEPT12C37	SHEET NO: 20
								MEM	EAV	DTW	10/12/16			

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TABULATION OF DRAINAGE STRUCTURES

ID	LOCATION	STATION-OFFSET	LINE		PIPE INVERT ELEVATIONS		GRADE (%)	REMOVAL OF RIPRAP SY	REMOVAL OF PIPE LF	CLEAN CULVERT EA	UNCLASSIFIED EXCAVATION CY	STRUCTURE EXCAVATION CY	STRUCTURE BACKFILL (CLASS 1) CY	FILTER MATERIAL (CLASS A) CY	TOPSOIL CY	GEOTEXTILE (EROSION CONTROL) (CLASS 1) SY	RIPRAP (9 INCH) CY	RIPRAP (12 INCH) CY	RIPRAP (24 INCH) CY	GROUTED RIPRAP (36 INCH) (SPECIAL) CY	SOIL RIPRAP (9 INCH) CY	SOIL RIPRAP (12 INCH) CY	SOIL RIPRAP (24 INCH) CY	CONCRETE CLASS B (WALL) CY	CUT STONE VENEER SF		
			FROM UPPER	TO LOWER	UPPER	LOWER																					
P-UFM-100	UPPER FOURMILE	124+62.85	HEADWALL A	2-45" x 29" RCES	7408.20	7407.80	0.87		29		34	39	13	5	3	24	14				12			11			
EX-UFM-148	UPPER FOURMILE	148+63.83	PIPE END	PIPE END					31																		
P-UFM-101	UPPER FOURMILE	150+20.17	HEADWALL B	HEADWALL C	7316.25	7315.26	4.00				19	60	27	3	2	14	7				7			18			
P-UFM-102	UPPER FOURMILE	185+26.15	HEADWALL D	HEADWALL E	7187.73	7184.53	8.21		40		133	503	124	17	12	53		34				70		15	203		
P-UFM-103	UPPER FOURMILE	189+88.87	HEADWALL F	53" x 34" RCES	7172.56	7171.44	3.31				28	20	9	6	1	10	16				5			5			
P-UFM-104	UPPER FOURMILE	200+28.37	HEADWALL G	RETAINING WALL 9	7127.73	7125.81	7.07				12	35	15	2	1	6	6				3			7			
EX-UFM-211	UPPER FOURMILE	211+92.60	PIPE END	PIPE END						1																	
P-UFM-105	UPPER FOURMILE	221+51.55	HEADWALL H	24" RCES	7044.50	7042.50	6.92		40		13	13	5	2	1	8	6				4			3			
P-UFM-106	UPPER FOURMILE	221+99.16	HEADWALL I	68" x 43" RCES	7041.50	7040.37	4.05		40		61	25	9	0		46		61	380					5			
EX-UFM-233	UPPER FOURMILE	233+01.92	PIPE END	PIPE END						1																	
P-UFM-107	UPPER FOURMILE	236+38.74	HEADWALL J	HEADWALL K	7175.00	7173.60	3.04		40		86	553	181	12	6	65		35				33		22	360		
EX-UFM-243	UPPER FOURMILE	243+79.23, 2.35' RT	PIPE END	PIPE END						1																	
P-UFM-108	UPPER FOURMILE	247+45.73	38" x 24" RCES	38" x 24" RCES	6931.53	6926.00	8.77	65	40		26			4	2	16	12				8						
P-UFM-109	UPPER FOURMILE	253+89.11	60" RCES	60" RCES	6902.91	6902.39	2.00		39		70			11	5	44	32				22						
D-UFM-110L	UPPER FOURMILE	258+19.46 TO 262+42.59 LT									341			49	438							292					
EX-UFM-259	UPPER FOURMILE	259+45.16	PIPE END	PIPE END						1																	
P-UFM-110	UPPER FOURMILE	262+72.09	30" x 19" RCES	30" x 19" RCES	6865.56	6863.64	2.51		23		10			3			7										
D-UFM-111L	UPPER FOURMILE	265+00.01 TO 266+45.49 LT									59				11	96					48						
P-UFM-111	UPPER FOURMILE	266+40.00	HEADWALL L	24" RCES	6854.62	6853.90	2.50				10	12	5	3			7							2			
P-UFM-112	UPPER FOURMILE	267+76.19	HEADWALL M	HEADWALL N	6851.20	6850.57	2.25		31		31	53	19	5	3	20	13				10			12			
RP-UFM-113	UPPER FOURMILE	276+09.85 RT									13			5	2						6						
P-UFM-114	UPPER FOURMILE	278+43.48	IN-UFM-114	30" x 19" RCES	6812.30	6811.02	3.93				10			3			7										
EX-UFM-286	UPPER FOURMILE	286+47.77	PIPE END	PIPE END						1																	
EX-UFM-291	UPPER FOURMILE	291+01.49	PIPE END	PIPE END						1																	
EX-UFM-304	UPPER FOURMILE	304+49.07	PIPE END	PIPE END						1																	
EX-UFM-316	UPPER FOURMILE	316+72.51	PIPE END	PIPE END						1																	
EX-UFM-325	UPPER FOURMILE	325+99.41	PIPE END	PIPE END						1																	
P-UFM-113	UPPER FOURMILE	333+40.25	30" x 19" RCES	30" x 19" RCES	6615.72	6615.21	2.00				27			5	2	14	13				7						
D-UFM-106R	EMERSON GULCH	10+24.2 TO 12+24.54 RT									147				12	103							137				
P-EGR-100	EMERSON GULCH	12+54.43, 13.90' RT	HEADWALL O	HEADWALL P	7084.92	7082.70	8.22		28		50	20	10	6				44					4	45			
D-EGR-100R	EMERSON GULCH	12+58.67 TO 15+99.89 RT									317				25	103							290				
P-EGR-101	EMERSON GULCH	17+56.02	60" x 38" RCES	60" x 38" RCES	7167.84	7164.17	10.20		26		228			26		74		202									
P-EGR-102	EMERSON GULCH	17+97.59	HEADWALL Q	30" RCES	7175.20	7174.30	4.54				14	13	8	2				12					5	68			
D-EGR-102R	EMERSON GULCH	18+74.52 TO 23+54.48 RT									225				18	156							207				
D-EGR-101L	EMERSON GULCH	22+42.02 TO 23+36.23 LT									94				8	65							86				
TOTAL									65	407	9	2,058	1,345	426	120	163	1,355	140	69	319	380	132	395	720	108	676	

100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	UPPER FOURMILE CANYON DRIVE DRAINAGE TABULATIONS (SHEET 1 OF 2) PROJECT NO: 4041.SEP12C37 SHEET NO: 21
							JAM	EMR	JPZ	10/12/16	

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

- Format *
- Horizontal Control Plans
 - Vertical Control Plans
 - Roadway Alignment Plans
 - Original Terrain Data
 - Other: _____

* Specify the information format, i.e., 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: Flood Recovery and Restoration

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: Seeding Boundaries

- 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	Y	N	Y	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

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

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

- 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: _____

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

- 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: _____

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

- 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: _____

- 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: Retaining Walls, Moment Slab

- 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 3 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): _____

mary.monks 11/29/53 AM 10/11/2016 p.m. \NCPWP\BPI\br.mbakarcorp.com\pmprod\Documents\Projects\Lakewood\Office\Boulder_County\Emergency_Transportation\01\08_Sheet_Files\YD_General_Sheets\UGN\UFLN_Tab_Survey.dgn

100% SET	<p>CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES</p>	<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REVISION DESCRIPTION:</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	REVISION DESCRIPTION:										<p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p> <p>Michael Baker INTERNATIONAL</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED: DEA</td> <td>CAD: DEA</td> <td>CHECKED: DTW</td> <td>DATE: 10/12/16</td> </tr> </table>	DESIGNED: DEA	CAD: DEA	CHECKED: DTW	DATE: 10/12/16	<p>UPPER FOURMILE CANYON DRIVE SURVEY TABULATION</p> <p>PROJECT NO: 4041.SEPT12C37 SHEET NO: 23</p>
NO.	DATE	REVISION DESCRIPTION:																			
DESIGNED: DEA	CAD: DEA	CHECKED: DTW	DATE: 10/12/16																		

CONTROL DIAGRAM - TASK ORDER 1

A PARCEL OF LAND IN SECTIONS 17, 18 & 19, TOWNSHIP 1 NORTH, RANGE 71 WEST AND SECTIONS 21, 22, 23 & 24, TOWNSHIP 1 NORTH, RANGE 72 WEST OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO.

- SHEET 1 OF 1 -

DEA CP-101 

DEA CP-102 

DEA CP-103 

DEA CP-107 

DEA CP-106 

DEA CP-105 

DEA CP-104 

GROUND COORDINATE TABLE:

PT #	NORTHING	EASTING	ELEV.	DESCRIPTION
101	261783.79	36974.73	6631.9	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
102	258761.96	34659.17	6736.8	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
103	257798.11	31262.07	6863.0	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
104	256690.26	26485.44	7075.7	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
105	256656.41	21945.65	7262.6	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
106	256739.56	17285.07	7443.4	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
107	256847.51	10921.26	7694.9	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP

NOTES:

- 1.) The basis of coordinates for this map is the North America Datum of 1983-2011 (NAD 83 (2011)) U.S. Survey Feet, based locally upon the David Evans and Associates, Inc. Control Point DEA CP 104 for ground coordinate scale factor determination.
- 2.) The basis of elevations for this map is the North American Vertical Datum of 1988 (NAVD 88), based locally upon the CP 107. Elevations computed from a NGS OPUS Solution Report using a four (4) hour occupation data set at DEA CP 107.
- 3.) To modify ground control to Colorado State Plane North Zone; add 1,000,000 feet to North coordinate, add 3,000,000 feet to East coordinate and multiply by 1/csf (combined scale factor = $1/1.000373101 = 0.999627038$).
- 4.) Fieldwork for control was completed November 2013.
- 5.) Set 18" long #5 rebar with 1-1/4" outside diameter orange plastic cap marked "DEA INC" at all control points unless otherwise noted, see Ground Coordinate Table above.

NOTICE:

According to Colorado law you MUST commence any legal action based upon any defect in this survey within three years after you first discovered 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.

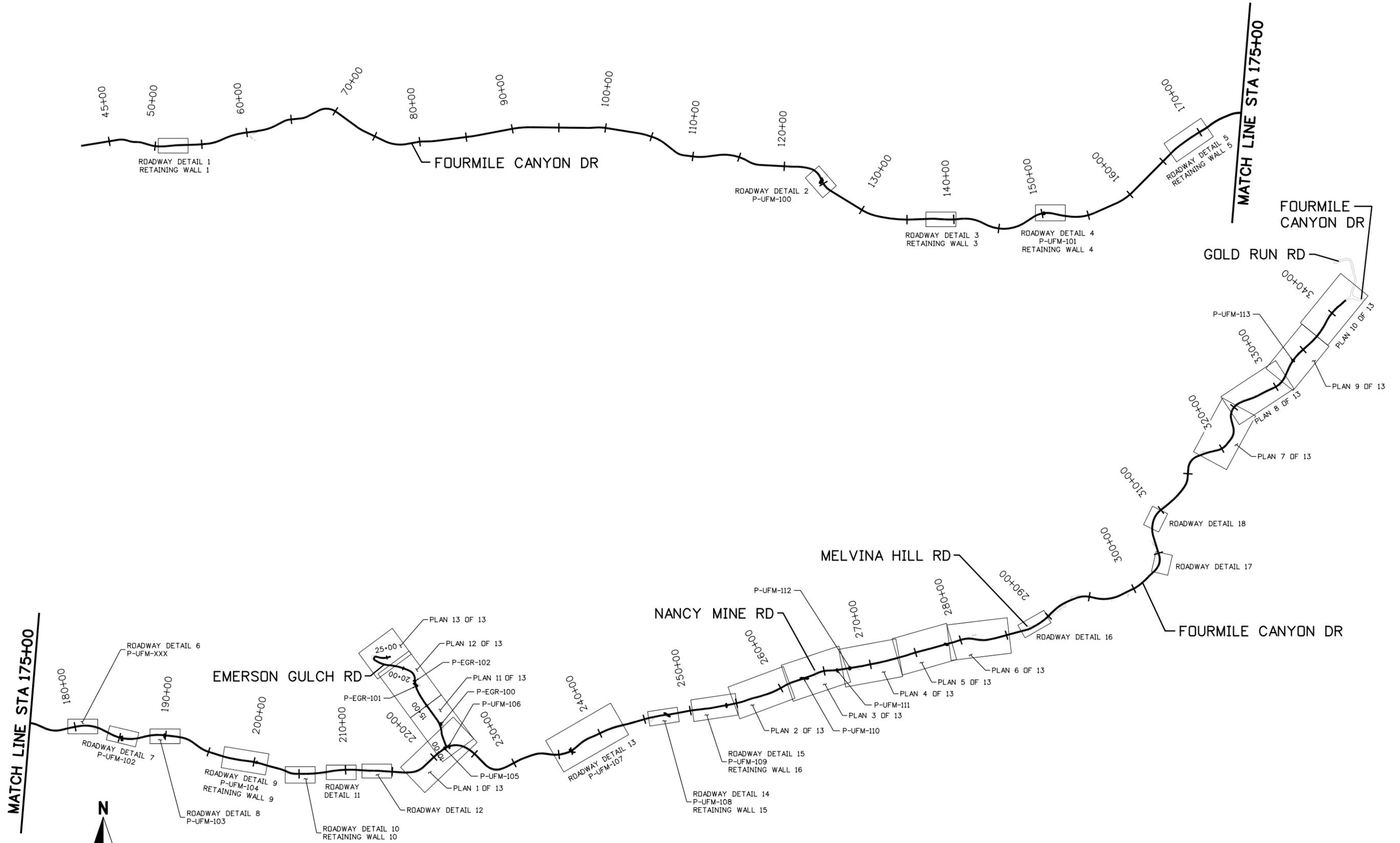


100% SET	 <p>CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES</p>	NO.	DATE	REVISION DESCRIPTION:	 <p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p> <p>Michael Baker INTERNATIONAL</p>	DESIGNED: DEA	CAD: DEA	CHECKED:	DATE: 10/12/16	<p>UPPER FOURMILE CANYON DRIVE SURVEY CONTROL DIAGRAM</p> <p>PROJECT NO: 4041.SEPT12C37 SHEET NO: 24</p>
		REVISIONS:								

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NOTES:

1. PLAN NUMBERING APPLIES TO REMOVAL & UTILITY IMPACTS, ROADWAY AND DRAINAGE PLANS.



100% SET

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NO.	DATE	REVISION DESCRIPTION:

BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION

Michael Baker INTERNATIONAL

DESIGNED: **MEM** CAD: **EAV** CHECKED: **DTW** DATE: **10/12/16**

UPPER FOURMILE CANYON DRIVE
PLAN INDEX

PROJECT NO: 4041.SEPT12C37 SHEET NO: 25

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