

BOULDER COUNTY TRANSPORTATION DEPARTMENT

ENGINEERING DIVISION

100% PLANS OF PROPOSED
GOLD RUN ROAD
1602 GOLD RUN ROAD TO SALINA JUNCTION
BOULDER COUNTY
 BOULDER COUNTY PROJECT NO. 4043.SEPT12C38
 AND RD-089-000

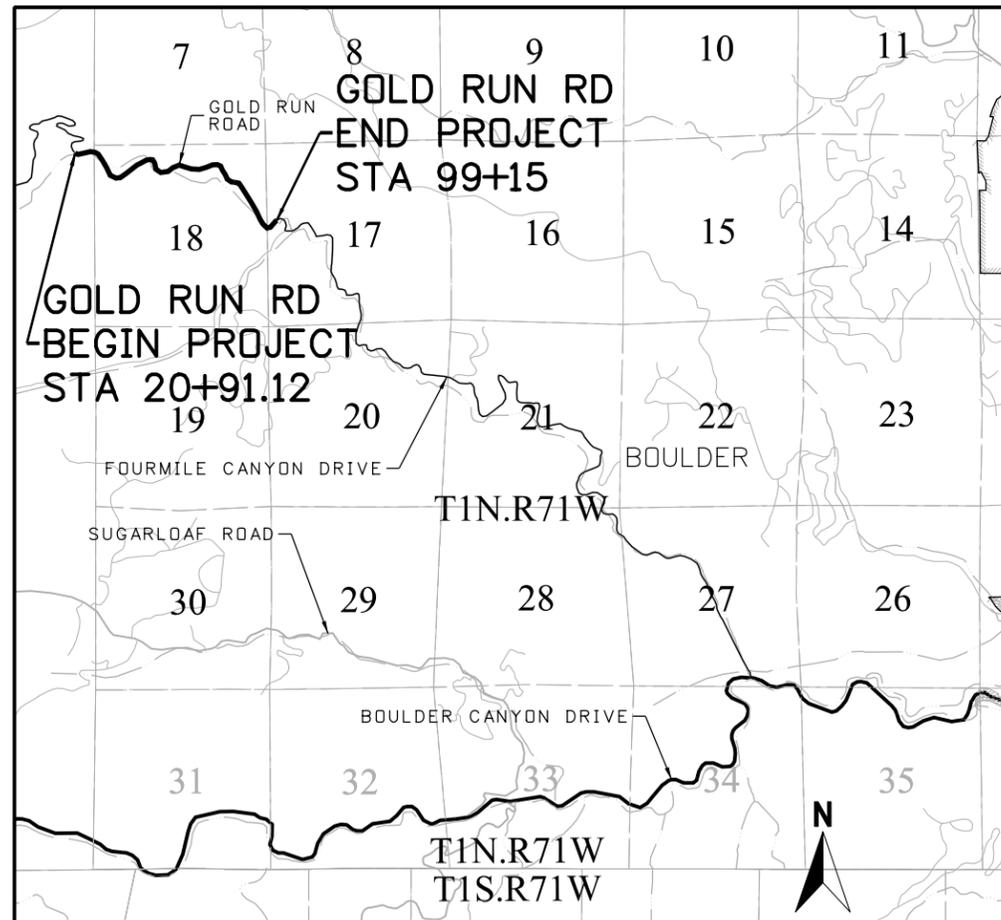
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TABULATION OF LENGTH & DESIGN DATA

STATION	FEET	
	ROADWAY	STRUCTURE
BEGIN GOLD RUN RD CONSTRUCTION STA 20+91.12		
END GOLD RUN RD CONSTRUCTION STA 99+15	7823.88	251
TOTAL	7823.88	251.00
SUMMARY OF PROJECT LENGTH	FEET	MILES
ROADWAY PAVED LENGTH	3065.00	0.58
ROADWAY GRAVEL LENGTH	4758.88	0.90
ROADWAY (NET LENGTH)	7823.88	1.48
MAJOR STRUCTURE (NET LENGTH)	251.00	0.10
PROJECT GROSS LENGTH	8074.88	1.58

DESIGN DATA	GOLD RUN RD
ROADWAY CLASSIFICATION	TOWNSITE (209')
EXISTING SURFACE TYPE	PAVED & GRAVEL
MINIMUM RADIUS OF CURVE	88'
MAXIMUM GRADE	15.93%
MINIMUM S.S.D HORIZONTAL	30'
MINIMUM S.S.D VERTICAL	99'
MAXIMUM DESIGN SPEED	15 MPH
CLEAR ZONE DISTANCE	0' TO 7'
MAXIMUM SUPERELEVATION	3.4%



PROJECT LOCATION MAP



APPROVED FOR CONSTRUCTION

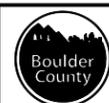
MICHAEL A. THOMAS, P.E. DATE
 COUNTY ENGINEER

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

NO.	DATE	REVISION DESCRIPTION:



BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION
Michael Baker
 INTERNATIONAL

DESIGNED: JVV
 CAD: SMP
 CHECKED: BCA
 DATE: 12/23/16

GOLD RUN ROAD
 TITLE SHEET
 PROJECT NO: 4043.SEPT12C38 SHEET NO: 1

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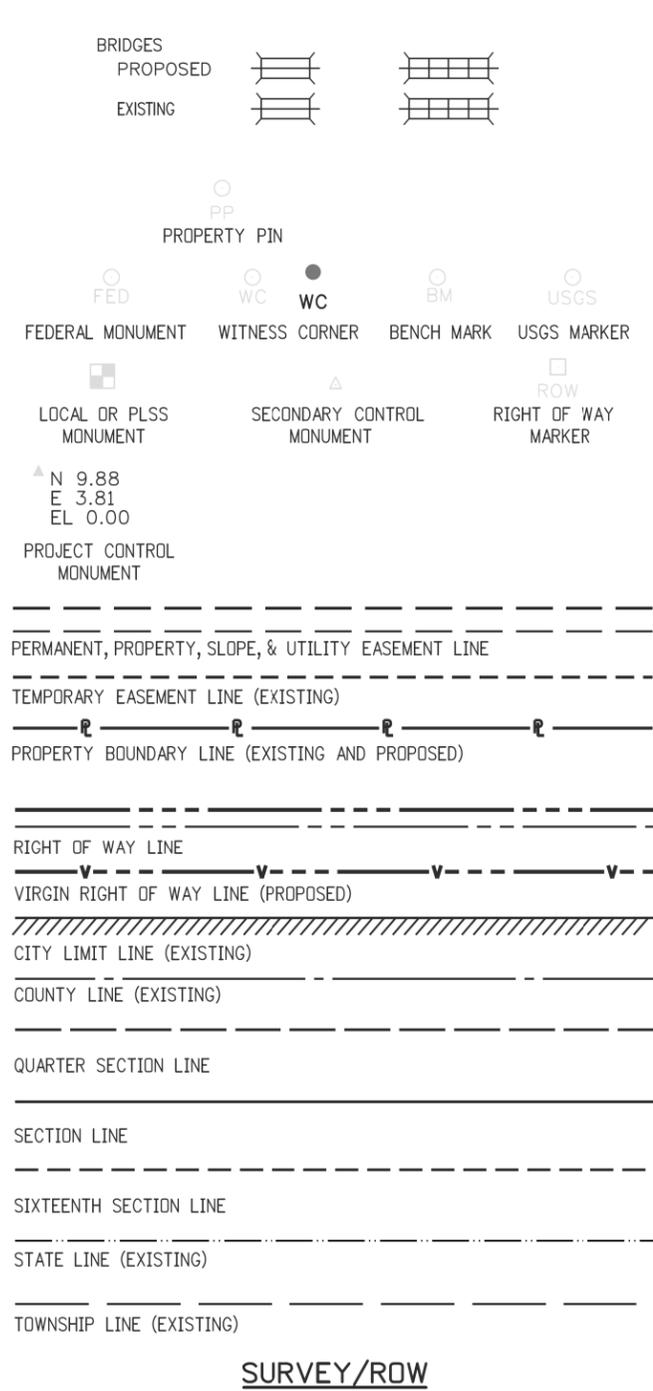
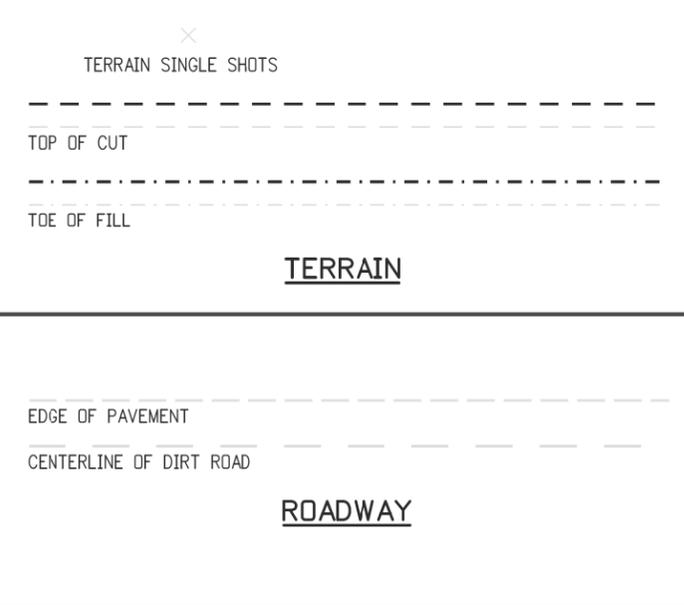
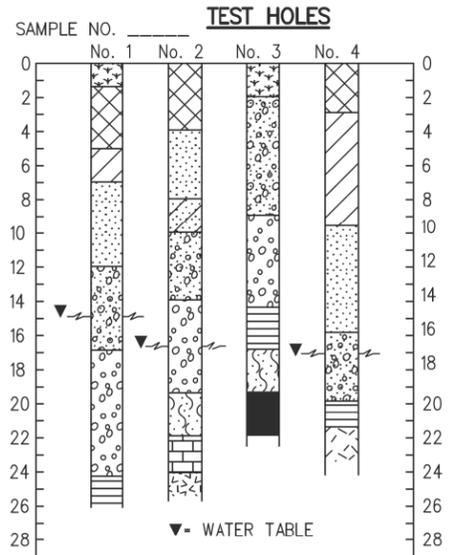
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COLORADO
DEPARTMENT OF TRANSPORTATION
M&S STANDARDS PLANS LIST
 July 04, 2012
 Revised on April 30, 2015

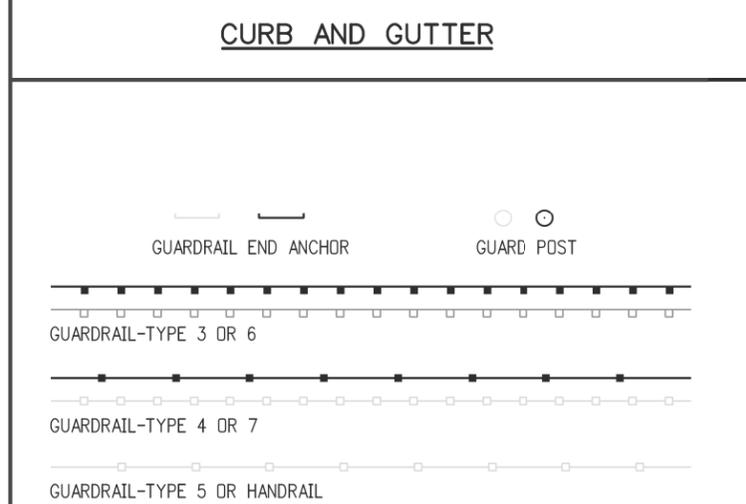
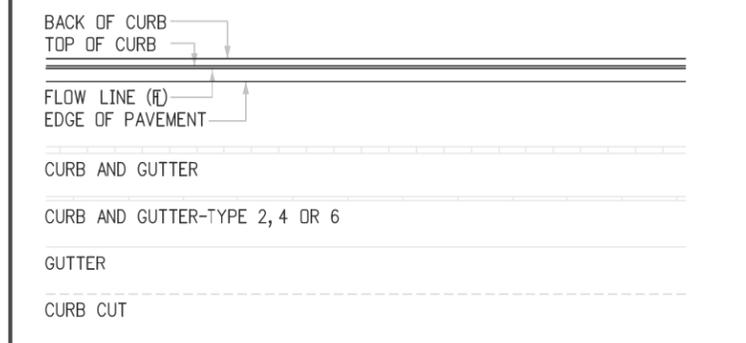
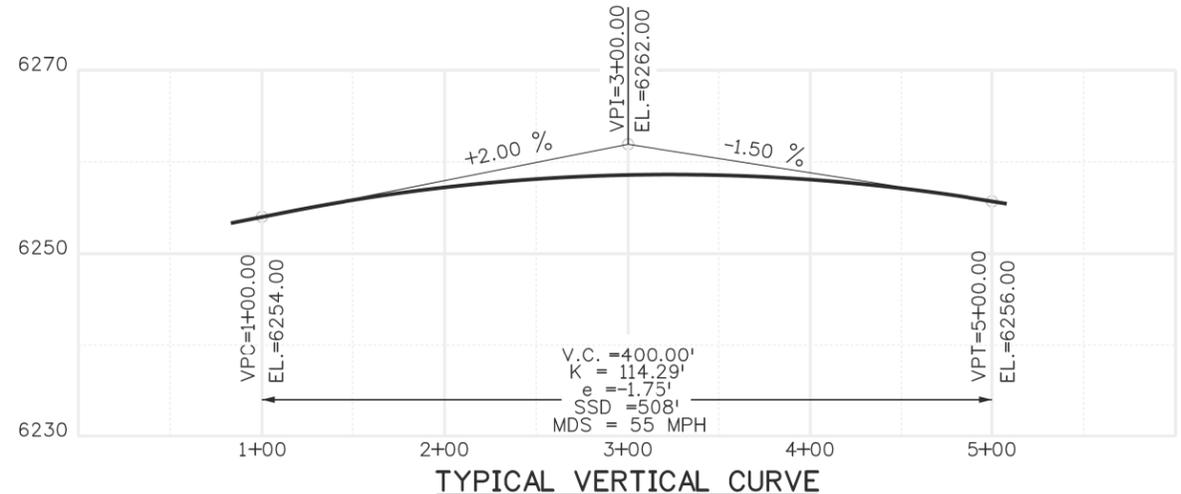
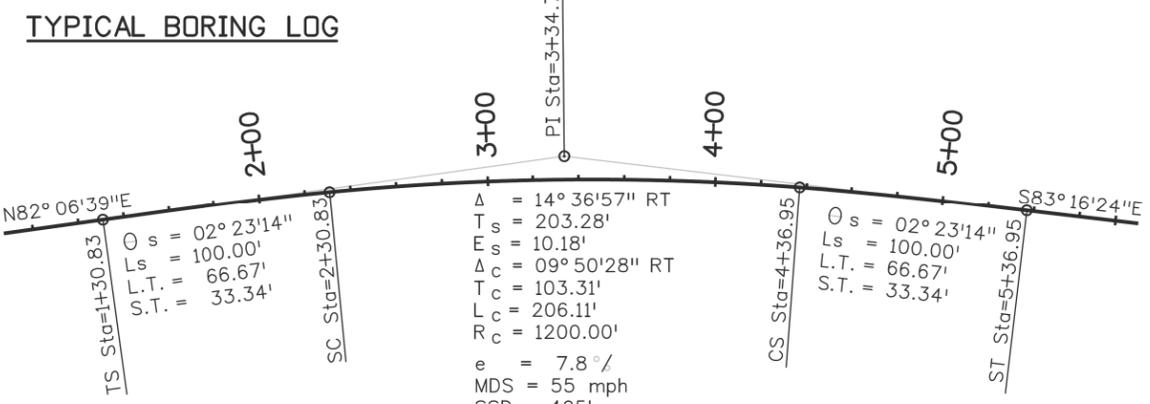
ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

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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:



- GENERAL NOTES**
- 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).
 - 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.
 - GUARDRAIL, CURB AND GUTTER, ETC., ARE REPRESENTED BY A SYMBOL WITH TYPE GIVEN BY NOTE.



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

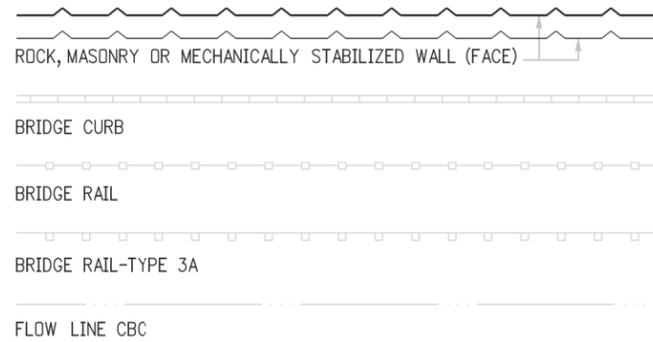
NO.	DATE	REVISION DESCRIPTION:

BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION
Michael Baker INTERNATIONAL

DESIGNED: JWM CAD: JWM CHECKED: JAT DATE: 12/23/16

GOLD RUN ROAD STANDARD SYMBOLS (SHEET 1 OF 2)
PROJECT NO: 4043.SEPT12C38 SHEET NO: 3

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STRUCTURE



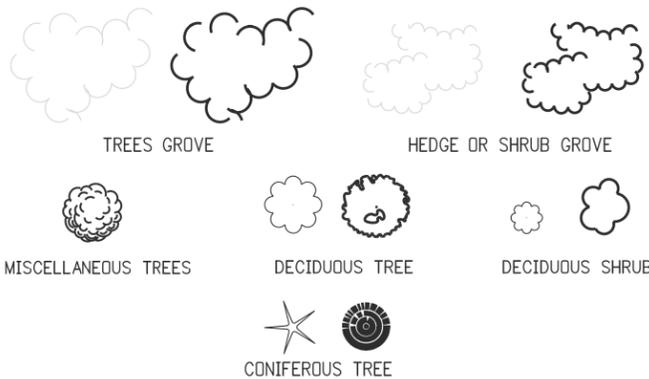
LIGHT STANDARD



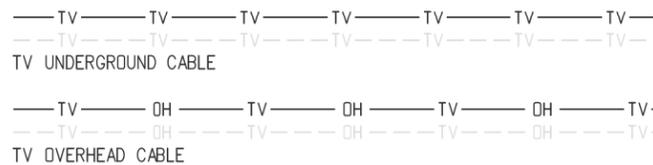
MISCELLANEOUS BUILDING STRUCTURE (PRIMARY)

LIGHTING

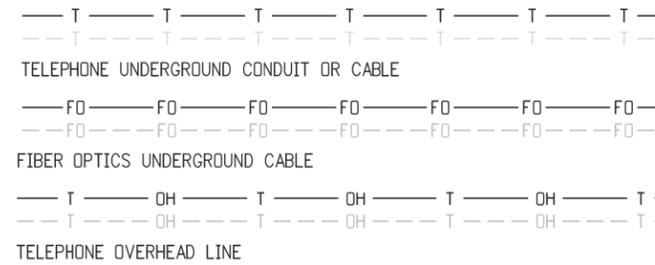
BUILDING STRUCTURES



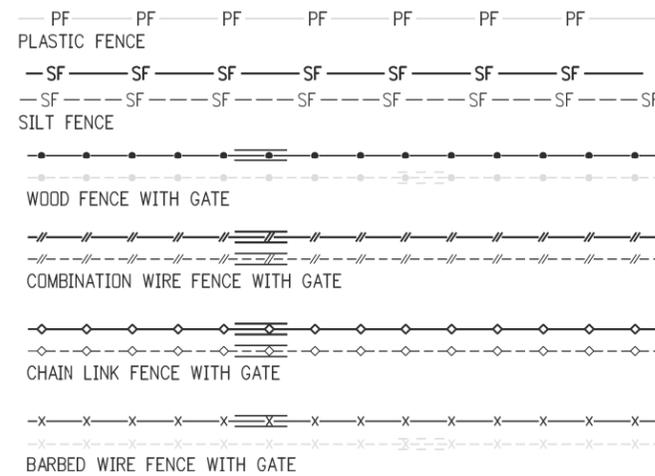
LANDSCAPING



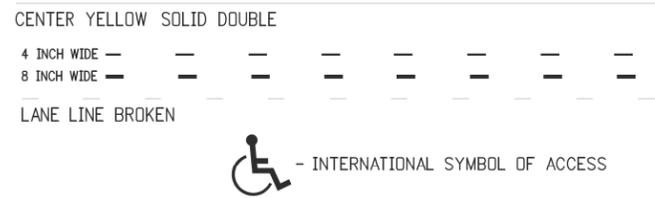
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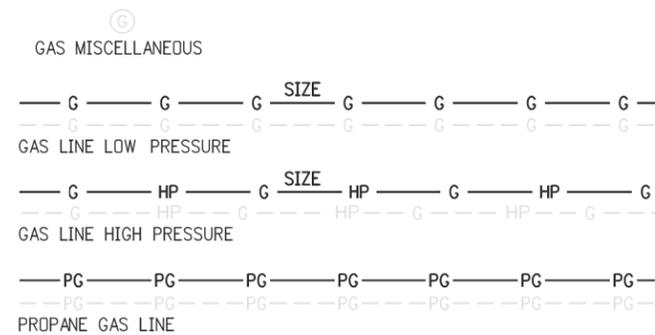
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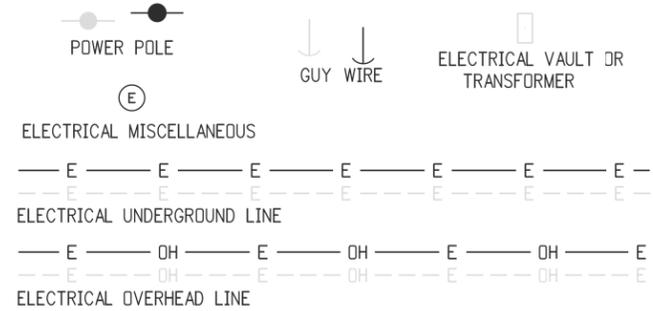
FENCE



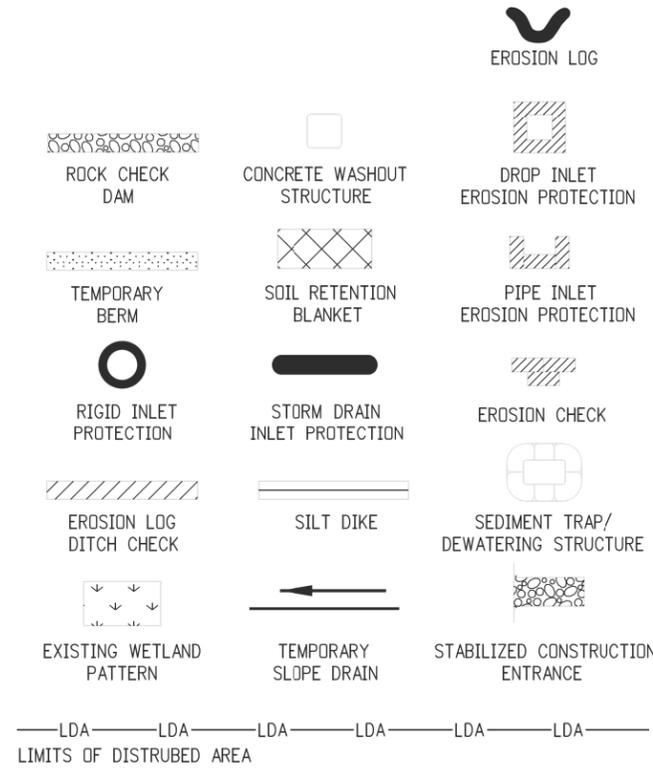
TRAFFIC STRIPING



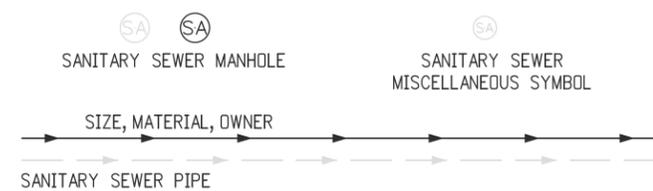
GAS



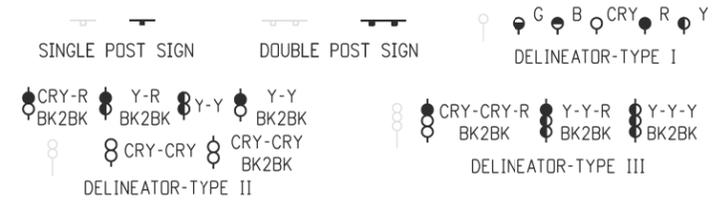
ELECTRICAL



SANITARY SEWER



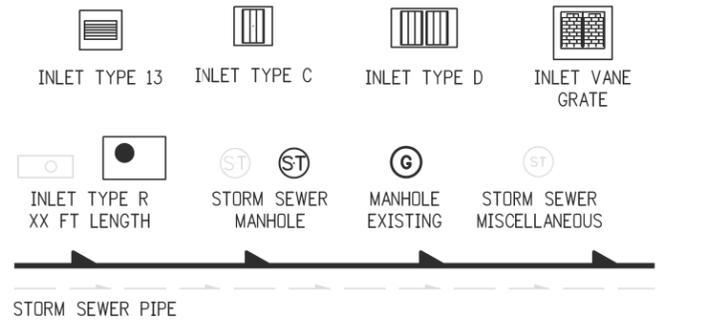
PIPES



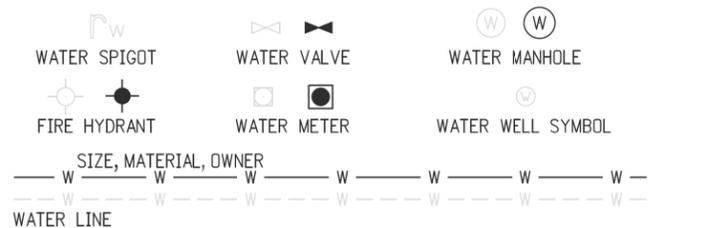
TRAFFIC CONTROL



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

 DESIGNED: **JWM** CAD: **JWM** CHECKED: **JAT** DATE: **12/23/16**

GOLD RUN ROAD STANDARD SYMBOLS (SHEET 2 OF 2)
 PROJECT NO: 4043.SEPT12C38 SHEET NO: 4

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GENERAL NOTES:

- 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 REPORT AND THE PAVEMENT INVESTIGATION REPORT FOR TASK ORDER 2 "FINAL PAVEMENT INVESTIGATION REPORT, TASK ORDER 2, 1602 GOLD RUN ROAD TO SALINA JUNCTION, BOULDER COUNTY, COLORADO, YEH PROJECT NO.: 213-241, TASK ORDER 2, APRIL 5, 2016" AND "DRAFT FINAL GEOTECHNICAL INVESTIGATION REPORT, TASK ORDER 2, 1628 GOLD RUN ROAD TO SALINA JUNCTION, BOULDER COUNTY, COLORADO, YEH PROJECT NO.: 213-241, TASK ORDER 2, APRIL 12, 2016". THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS.
- THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOB SITE CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROTECTION OF ALL PROPERTY WITHIN THE CONSTRUCTION LIMITS. SAFETY IS STRESSED. ANY OPERATION OR SITUATION THAT THREATENS THE SAFETY OF WORKERS OR THE PUBLIC, INCLUDING IMPROPER TRAFFIC CONTROL, SHALL CAUSE THE SUSPENSION OF WORK UNTIL CORRECTIONS ARE MADE. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION (1-800-922-1987 OR 811). THE CONTRACTOR SHALL NOTIFY APPLICABLE UTILITY COMPANIES TO OBTAIN FIELD LOCATES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- PUBLIC AND PRIVATE UTILITIES 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 AND/OR LOCATING ALL EXISTING UTILITIES AND SUBSTRUCTURES WITHIN THE CONSTRUCTION LIMITS, PROTECTING, AND PARTICIPATING IN THE RESOLUTION OF ANY CONFLICTS THAT ARISE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- DAMAGE TO PUBLIC AND PRIVATE UTILITIES AND SUBSTRUCTURES RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL DOCUMENT THE CONDITION OF ALL EXISTING UTILITIES (VISIBLE FACILITIES) WITH THE ENGINEER AND APPLICABLE UTILITY REPRESENTATIVES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. ALL EXISTING UTILITY FACILITIES TO REMAIN IN PLACE WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED BY THE CONTRACTOR.
- 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.
- 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 PROJECT SPECIAL PROVISIONS; THE CDOT STANDARD PLANS M&S STANDARDS DATED JULY, 2012 AND REVISED; AND THE BOULDER COUNTY MULTIMODAL 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.

GENERAL NOTES CONT'D:

- IF CONTRACTOR FINDS A DISCREPANCY IN THE DESIGN, THE CONTRACTOR SHALL CONTACT ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH CONSTRUCTION. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE ENGINEER. IF CONTRACTOR PROCEEDS WITHOUT GETTING CLARIFICATION, CONTRACTOR PROCEEDS AT HIS OWN RISK.
- UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL CONTAIN ALL WORK ACTIVITIES WITHIN THE RIGHT OF WAY AND TEMPORARY AND PERMANENT EASEMENTS AS SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT CONTRACTOR'S OWN EXPENSE.
- THE DECISION TO BRACE, SHORE OR SHEET PILE FOR STRUCTURE EXCAVATION SHALL BE ENTIRELY THE CONTRACTOR'S RESPONSIBILITY. 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 OBTAIN, AT HIS EXPENSE, ALL PERMITS REQUIRED TO PERFORM THE PROPOSED WORK PRIOR TO CONSTRUCTION. THE FLOODPLAIN DEVELOPMENT PERMIT WILL BE OBTAINED BY THE COUNTY.
- STATIONING LATH WILL BE REMOVED AS DIRECTED AND AT NO ADDITIONAL COST TO THE PROJECT.
- 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
- THE CONTRACTOR SHALL REMOVE DEBRIS AS NEEDED FOR CONSTRUCTION OF THE PROJECT.
- 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.
- THE CONTRACTOR SHALL KEEP ALL EQUIPMENT OPERATION AT A MINIMUM 10 FEET FROM EXISTING OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL CONTACT AND COORDINATE CONSTRUCTION OPERATIONS WITH THE UTILITY OWNER PRIOR TO CONSTRUCTION IF THE 10 FOOT CLEARANCE CANNOT BE MET. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER TO ARRANGE ANY NECESSARY POLE PROTECTION OR STABILIZATION. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH BOULDER COUNTY AT LEAST 72 HOURS 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.

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, SHOULDERS LINES OR MEDIAN LINES, EXCEPT WHERE STATED IN THE PLANS.
- PRIOR TO PLACING HOT MIX ASPHALT, THE PAVED SURFACE SHALL BE SWEEPED AND CLEANED.

PAVEMENT CONSTRUCTION NOTES CONT'D:

- 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

EARTHWORK/GRADING:

- 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.
- 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 INCLUDE IT 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. REMAINING EXISTING DRAINAGE FACILITIES SHALL REMAIN AND BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.

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DRAINAGE NOTES CONT'D:

6. 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.
7. THE INFORMATION PROVIDED ON THE DRAINAGE PLAN SET REPRESENTS THE FINAL STORM DRAIN SYSTEM AND CULVERTS.
8. OTHER UTILITIES MAY BE CROSSED OR OTHERWISE IMPACT STORM SEWER 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.
9. THE DECISION TO BRACE, SHORE, AND/OR SHEET PILE EXCAVATIONS SHALL BE ENTIRELY THE CONTRACTOR'S RESPONSIBILITY. ALL WORK SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
10. 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.

SIGNING AND PAVEMENT MARKING NOTES

1. SIGN POSTS SHALL BE 2 X 2 X 10 (14 GAUGE) GALVANIZED PERFORATED SQUARE STEEL TUBING.
2. SIGN POST BASES SHALL BE 2 X 2 (12 GAUGE, 3 IN LENGTH) GALVANIZED PERFORATED SQUARE STEEL TUBING.
3. 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.
4. SIGN POST LOCATIONS SHALL BE APPROVED BY THE ENGINEER AND ROAD MAINTENANCE SIGN SHOP REPRESENTATIVE PRIOR TO INSTALLATION.
5. POST LOCATIONS IN CONCRETE MEDIAN OR ISLANDS SHALL HAVE 6 PVC INSTALLED PRIOR TO POURING CONCRETE.
6. THICKNESS OF ALL SIGN PANELS SHALL BE .100
7. FINAL PAVEMENT STRIPING SHALL BE EPOXY PER CDOT STANDARD SPECIFICATIONS.
8. ALL STOP LINES, CROSSWALKS AND PAVEMENT MARKING SYMBOLS SHALL BE WHITE, PREFORMED THERMOPLASTIC, PREMARK OR EQUIVALENT.
9. STOP LINES SHALL BE 2 WIDE; CROSSWALKS SHALL BE 2 X 9, UNLESS OTHERWISE NOTED.
10. PAVEMENT MARKING ARROWS SHALL BE ELONGATED.
11. BICYCLE DETECTOR PAVEMENT MARKINGS SHALL BE PER MUTCD FIG. 9C-7 B WITH HELMETED BICYCLE SYMBOL.
12. PAVEMENT MARKINGS FOR BIKE LANES SHALL BE PER MUTCD FIG. 9C-3 B WITH HELMETED BICYCLE SYMBOL.
13. 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:

1. 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^{5/32} 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.
2. 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.
3. 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.
4. 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.
5. THE FOLLOWING WEED MANAGEMENT STRATEGIES WILL BE IMPLEMENTED:
 - A. 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.
 - B. 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.

ENVIRONMENTAL NOTES (CONT'D):

- C. FERTILIZER WILL NOT BE USED IN SEEDED AREAS BECAUSE IT CAN ENHANCE THE GROWTH OF NOXIOUS WEEDS AT THE EXPENSE OF DESIRED VEGETATION.
- D. TOPSOIL WILL NOT BE IMPORTED DUE TO THE POTENTIAL FOR SPREAD OF NOXIOUS WEEDS.
- D. 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.
6. 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:
 - A. 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 RINSATE AS A SOLID WASTE IN ACCORDANCE WITH LOCAL, COUNTY, STATE, OR FEDERAL REGULATIONS, OR
 - B. 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.
 - C. 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.
7. 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 PREBLE^{5/32}S MEADOW JUMPING MOUSE, UTE LADIES^{5/32}-TRESSES, COLORADO BUTTERFLY PLANT, AND OTHER BIOLOGICAL RESOURCES.
 - A. THE USFWS WILL BE CONTACTED BY TELEPHONE AT (303) 236-4773, IF ANY LISTED SPECIES ARE ENCOUNTERED DURING CONSTRUCTION.
 - B. 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).
 - C. 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.
 - D. 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.

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ENVIRONMENTAL NOTES (CONT'D):

- E. 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.
- 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 ONSITE 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 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. MINE TAILINGS EXIST THROUGHOUT THE PROJECT SITE. IN THE EVENT THAT MINE TAILINGS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY BOULDER COUNTY AND REFERENCE COLORADO DIVISION OF MINING RECLAMATION AND SAFETY PROCEDURES FOR MANAGING HAZARDOUS MATERIALS.

ENVIRONMENTAL NOTES (CONT'D):

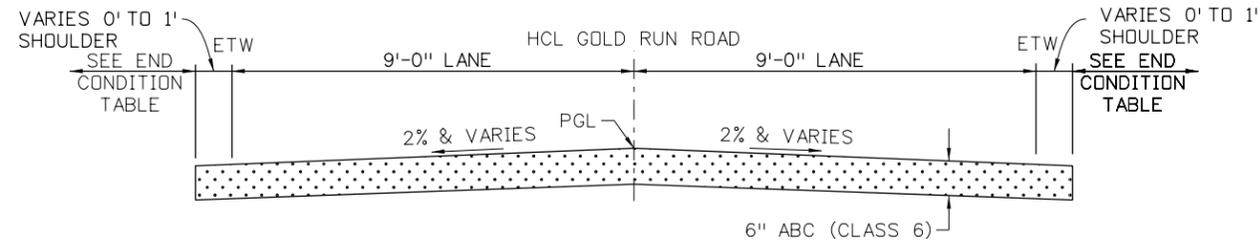
- 16. IF PALEONTOLOGICAL (E.G., ANIMAL BONES OR FOSSILS) RESOURCES ARE DISCOVERED OR UNCOVERED DURING CONSTRUCTION, WORK WILL STOP IMMEDIATELY AND THE ENGINEER NOTIFIED SO FURTHER ACTIONS MAY BE TAKEN, INCLUDING RETAINING A CERTIFIED PALEONTOLOGIST. I
- 17. IF ANY ARCHAEOLOGICAL RESOURCES ARE FOUND (E.G., 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.
- 18. 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.
- 19. ALL EQUIPMENT SHALL BE CLEANED AND FREE OF CONTAMINANTS PRIOR TO WORK IN AND ADJACENT TO ANY SURFACE WATER WITHIN THE PROJECT AREA.
- 20. IN ORDER TO COMPLY WITH SENATE BILL 40 (SB40), 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 FISH AND WILDLIFE AND THEIR HABITATS.
 - A. TREES REMOVE DURING CONSTRUCTION WITHIN THE RIPARIAN AREA SHALL BE REPLACED AT A 1:1 RATIO BASED ON A STEM COUNT OF ALL TREES WITH A DBH OF TWO INCHES OR GREATER. SHRUBS REMOVED DURING CONSTRUCTION WITHIN THE RIPARIAN AREA SHALL BE REPLACED BASED ON THEIR PRE-CONSTRUCTION AREAL COVERAGE.
 - B. TREE BOLES WITH 12 INCH OR GREATER DIAMETER DBH SHOULD, WHENEVER POSSIBLE, BE RETAINED AND USED IN STREAM BANK RESTORATION WORK AND MAINTAINING RIPARIAN HETEROGENEITY. BY EXCAVATING, ARMORING AND BACKFILLING TREE TRUNKS SHOULD BE TIED BACK INTO THE BANK WITH PORTIONS OF THE BOLE PLACED AT OR BELOW NORMAL HIGH-WATER SO THAT THE BOLE REMAINS WETTED THROUGHOUT THE YEAR. TREE BOLES SHOULD BE LEFT IN THE RIPARIAN ZONE TO ADD ROUGHNESS WHEN POSSIBLE. THE BOLE CAN BE BUCKED INTO SHORT THREE TO FOUR FOOT SECTIONS LEFT END TO END IN ORDER TO CONTINUE TO LOOK WHOLE, WHICH WILL PROVIDE HABITAT BENEFITS OF AN INTACT DOWNED TREE, BUT IN A FLOOD WILL BREAK INTO SHORT LOGS, FACILITATING DOWNSTREAM MOVEMENT WITH LESS TOTAL ENERGY AND LESS LIKELY TO BLOCK AND CLOG THE FLOW.
 - C. STREAM CROSSING STRUCTURES, INCLUDING ROCK VEINS, SHALL NOT DEGRADE THE STREAM OR FISH HABITAT OR BLOCK FISH MOVEMENT, INCLUDING CONSTRICTING STREAM FLOWS THAT INCREASE WATER VELOCITIES, NOR SHALL SUCH STRUCTURES UNNECESSARILY WIDEN STREAMS AND THEREBY DECREASE WATER VELOCITIES AND INCREASE SEDIMENT DEPOSITION. PLACEMENT OF ROCK VEIN BOULDERS WITHOUT INTERSTITIAL SPACE OR GAPS CONSTITUTES A BARRIER TO JUVENILE SALMONID/TROUT MIGRATION SO GAPS OF 3 INCHES OR GREATER SHOULD BE LEFT BETWEEN ADJACENT BOULDERS.

ENVIRONMENTAL NOTES (CONT'D):

- D. INSTALL CULVERT SYSTEMS THAT DO NOT IMPEDE SALMONID/TROUT MIGRATIONS. TO PRESERVE STREAM LONGITUDINAL CONNECTIVITY CULVERTS WITH ANY ASSOCIATED DROP FEATURES MUST NOT EXCEED 12 INCHES (6 INCHES IS OPTIMAL; 12 INCHES IS THE MAXIMUM ALLOWED DROP).
- E. RIPRAP ABOVE THE ORDINARY HIGH WATER MARK (OHWM) WITHIN STREAMSIDE AREAS SHALL HAVE 6 INCHES OF FILTER MATERIAL (I.E. SAND), FOLLOWED BY AT LEAST 18 INCHES OF SOIL RIPRAP AND A MINIMUM OF 4 INCHES OF CLEAN TOPSOIL AND REVEGETATED AS SPECIFIED BY THE APPROVED PROJECT DESIGN PLAN. WHERE APPROPRIATE, STREAMSIDE AREAS AT THE OHWM SHOULD BE REVEGETATED WITH BRUSH LAYER CUTTINGS AND/OR CONTAINERIZED PLANTINGS OR OTHER ACCEPTABLE BIOENGINEERING METHOD OF PLANTING NATIVE RIPARIAN SPECIES. SUPPLEMENTAL WATERING MAY BE NEEDED UNTIL THE PLANTINGS HAVE BECOME ESTABLISHED.
- F. WASTE CONCRETE IS NOT ACCEPTABLE FOR ANY PROJECT, AND SHALL NOT BE USED TO STABILIZE CHANNEL BANKS FOR NEW CONSTRUCTION. SUCH MATERIAL DOES NOT MEET CURRENT SPECIFICATIONS FOR RIPRAP MATERIAL AND IT MAY CAUSE WATER QUALITY PROBLEMS. PREFERENCE SHALL BE GIVEN TO BIOENGINEERING SOLUTIONS FOR STREAM STABILIZATION PROJECTS AND FOR IMPROVING STREAM AND RIPARIAN HABITAT VALUES.
- G. RIPRAP MATERIALS USED BELOW THE OHWM SHALL BE DURABLE ANGULAR ROCK FREE OF ORGANIC MATERIAL, POLLUTION, AND ERODIBLE MATERIAL SUCH AS DIRT AND GRAVEL. ROUNDED RIVER COBBLE OR STONE IS NOT ACCEPTABLE AS RIPRAP. USE OF GROUTED RIPRAP IS DISCOURAGED EXCEPT WHERE NO OTHER PRACTICABLE SOLUTION EXISTS TO ADDRESS THE PROBLEM.

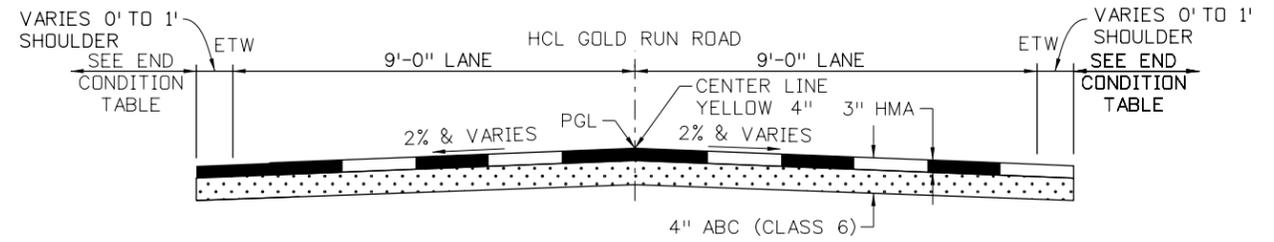
100% SET	 CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION 	DESIGNED:	CAD:	CHECKED:	DATE:	GOLD RUN ROAD GENERAL NOTES (SHEET 3 OF 3) PROJECT NO: 4043.SEPT12C38 SHEET NO: 7
						SMP JVV BCA 12/23/16				

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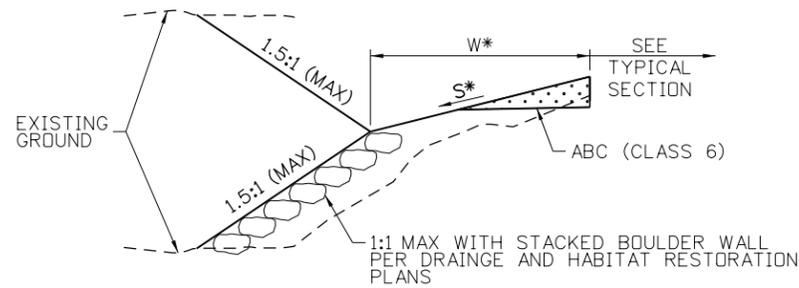
UNPAVED TYPICAL SECTION - GOLD RUN ROAD

NTS
20+91.12 TO 68+50.00



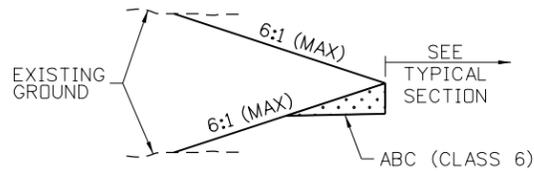
PAVED TYPICAL SECTION - GOLD RUN ROAD

NTS
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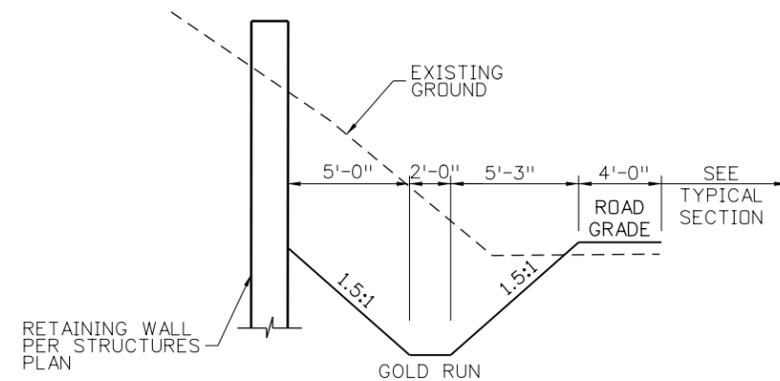
DETAIL A

STD CUT/FILL CONDITION
NOTE: 4:1 FORESLOPE MAY END AT EXISTING GROUND WHERE EXISTING SLOPES ARE NO STEEPER THAN 4:1 IN A FILL CONDITION
*W, WIDTH, & S, SLOPE, PER TYPICAL SECTION END CONDITON TABLE



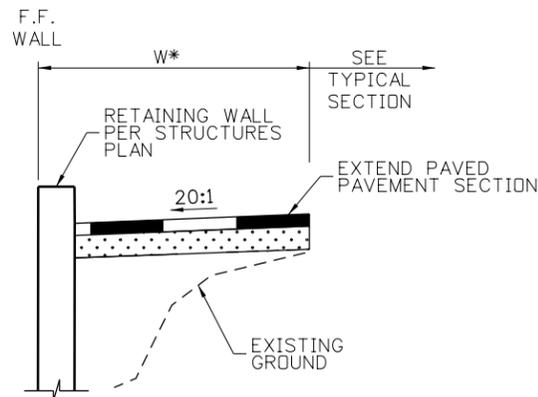
DETAIL B

6:1 (CUT/FILL)



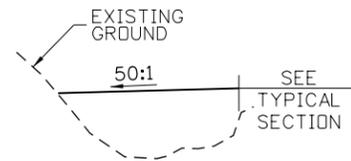
DETAIL C

GOLD RUN CHANNEL SECTION WITH CUT WALL



DETAIL D

*W PER STRUCTURES PLANS



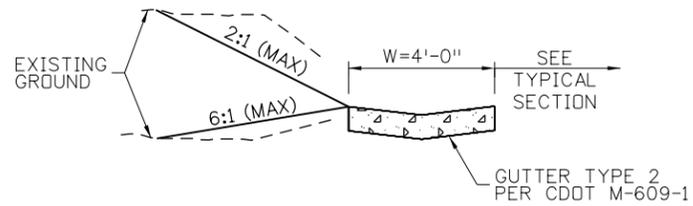
DETAIL E

FILL SECTION

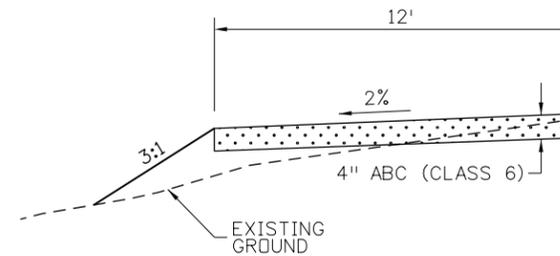
NOTES:

1. SEE END CONDITION STATION LIMITS ON SHEET 3 OF 3.
2. ROADWAY SUPERELEVATION VARIES, SEE PROFILE SHEETS.
3. SEE DRAINAGE PLANS FOR ROADSIDE DITCH LOCATION.
4. SEE STRUCTURAL SHEETS FOR RETAINING WALL DETAILS.
5. ALL DETAILS SHOWN NTS.

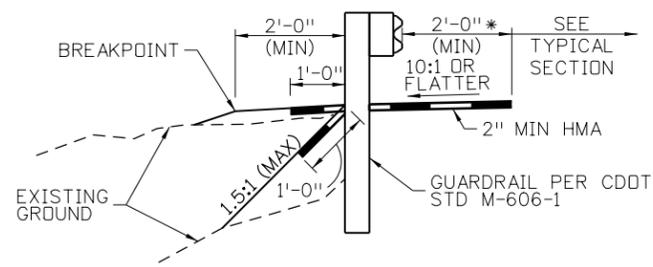
100% SET	CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES	NO.	DATE	REVISION DESCRIPTION:	BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION	DESIGNED:	CAD:	CHECKED:	DATE:	GOLD RUN ROAD TYPICAL SECTIONS (SHEET 1 OF 3)
						Michael Baker INTERNATIONAL	JJV	SMP	BCA	



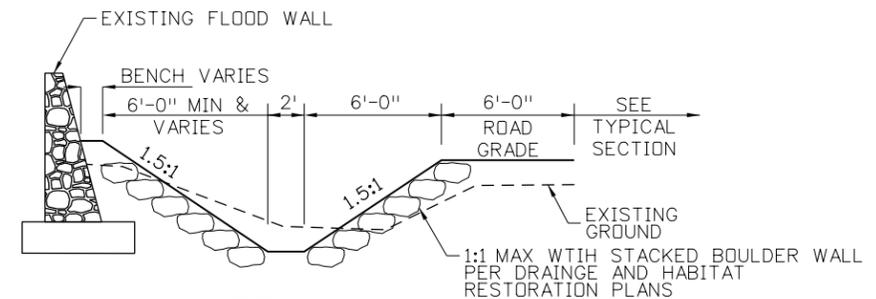
DETAIL F
GUTTER TYPE 2



DETAIL G
FIRE DEPARTMENT
PULLOUT



DETAIL H
GUARDRAIL LAYOUT AND TYPE PER ROADWAY PLANS
*1.5' MIN STA 93+63.33 TO 93+75.17 (RED BARN)



DETAIL I

NOTES:

1. SEE END CONDITION STATION LIMITS ON SHEET 3 OF 3.
2. ROADWAY SUPERELEVATION VARIES, SEE PROFILE SHEETS.
3. SEE DRAINAGE PLANS FOR ROADSIDE DITCH LOCATION.
4. SEE STRUCTURAL SHEETS FOR RETAINING WALL DETAILS.
5. ALL DETAILS SHOWN NTS.

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100% SET	 <small>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</small>	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION 	DESIGNED:	CAD:	CHECKED:	DATE:	GOLD RUN ROAD TYPICAL SECTIONS (SHEET 2 OF 3) <small>PROJECT NO: 4043.SEPT12C38 SHEET NO: 9</small>
							JVV	SMP	BCA	12/23/16	

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GOLD RUN ROAD END CONDITION TABLE					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
20+91.12	21+27.58	LT	-	UNPAVED	DRIVEWAY
21+27.58	21+43.38	LT	-	UNPAVED	ROADSIDE DITCH
21+43.38	21+65.90	LT	-	UNPAVED	DRIVEWAY
21+65.90	22+30.00	LT	B	UNPAVED	-
22+30.00	26+85.96	LT	-	UNPAVED	ROADSIDE DITCH
26+85.96	27+20.19	LT	-	UNPAVED	DRIVEWAY
27+20.19	28+34.78	LT	-	UNPAVED	ROADSIDE DITCH
28+34.78	28+62.75	LT	-	UNPAVED	DRIVEWAY
28+62.75	29+22.08	LT	-	UNPAVED	ROADSIDE DITCH
29+22.08	29+51.26	LT	-	UNPAVED	DRIVEWAY
29+51.26	30+77.95	LT	-	UNPAVED	ROADSIDE DTICH
30+77.95	31+04.00	LT	-	UNPAVED	DRIVEWAY
31+04.00	31+73.12	LT	-	UNPAVED	ROADSIDE DITCH
31+73.12	31+99.99	LT	-	UNPAVED	HEADWALL / WINGWALL
31+99.99	36+60.00	LT	B	UNPAVED	-
36+60.00	41+60.00	LT	A	UNPAVED	W = 3' , S = 6:1
41+60.00	43+59.89	LT	A	UNPAVED	W = 3' , S = 20:1
43+59.89	44+31.06	LT	-	UNPAVED	DRIVEWAY / CULVERT
44+31.06	45+15.25	LT	A	UNPAVED	W = 4' , S = 50:1
45+15.25	45+90.10	LT	C	UNPAVED	RETAINING WALL R-1
45+90.10	46+44.10	LT	-	UNPAVED	DRIVEWAY / CULVERT
46+44.10	46+76.95	LT	H	UNPAVED	GUARDRAIL
46+76.95	48+21.66	LT	A	UNPAVED	W = 5' , S = 6:1
48+21.66	48+48.23	LT	-	UNPAVED	HEADWALL / WINGWALL
48+48.23	56+37.73	LT	-	UNPAVED	ROADSIDE DITCH
56+37.73	56+59.96	LT	-	UNPAVED	HEADWALL / WINGWALL
56+59.96	57+65.00	LT	A	UNPAVED	W = 7' , S = 20:1
57+65.00	58+50.00	LT	B	UNPAVED	-
58+50.00	60+88.00	LT	I	UNPAVED	-
60+88.00	61+03.00	LT	-	UNPAVED	HEADWALL / WINGWALL
61+03.00	62+97.00	LT	-	UNPAVED	ROADSIDE DITCH
62+97.00	63+28.58	LT	-	UNPAVED	DRIVEWAY
63+28.58	71+17.14	LT	-	PAVED	ROADSIDE DITCH
71+17.14	71+37.13	LT	-	PAVED	HEADWALL / WINGWALL
71+37.13	71+79.14	LT	INGRAM	PAVED	INGRAM GULCH DWY
71+79.14	75+71.51	LT	-	PAVED	ROADSIDE DITCH
75+71.51	76+10.45	LT	-	PAVED	DRIVEWAY
76+10.45	76+50.75	LT	-	PAVED	ROADSIDE DITCH
76+50.75	76+71.41	LT	-	PAVED	HEADWALL / WINGWALL
76+71.41	77+15.29	LT	-	PAVED	FIRE STATION DWY
77+15.29	77+32.71	LT	B	PAVED	-

GOLD RUN ROAD END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
77+32.71	77+60.77	LT	-	PAVED	DRIVEWAY
77+60.77	78+24.00	LT	-	PAVED	ROADSIDE DITCH
78+24.00	78+60.00	LT	B	PAVED	-
78+60.00	78+78.76	LT	-	PAVED	SEE DRAINAGE GRADING
78+78.76	79+02.08	LT	-	PAVED	DRIVEWAY
79+02.08	79+19.13	LT	-	PAVED	ROADSIDE DITCH
79+19.13	79+37.33	LT	-	PAVED	DRIVEWAY
79+37.33	82+48.45	LT	-	PAVED	ROADSIDE DITCH
82+48.45	82+72.59	LT	-	PAVED	HEADWALL / WINGWALL
82+72.59	83+32.05	LT	-	PAVED	ROADSIDE DITCH
83+32.05	83+81.92	LT	F	PAVED	GUTTER
83+81.92	84+20.00	LT	-	PAVED	ROADSIDE DITCH
84+20.00	84+23.22	LT	B	PAVED	EX. HEADWALL
84+23.22	84+68.16	LT	-	PAVED	DRIVEWAY
84+68.16	86+85.00	LT	A	PAVED	W = 4' , S = 20:1
86+85.00	87+30.00	LT	B	PAVED	-
87+30.00	88+72.94	LT	-	PAVED	ROADSIDE DITCH
88+72.94	88+89.78	LT	-	PAVED	HEADWALL / WINGWALL
88+89.78	89+24.62	LT	-	PAVED	DRIVEWAY
89+24.62	90+51.47	LT	-	PAVED	ROADSIDE DITCH
90+51.47	90+72.43	LT	-	PAVED	DRIVEWAY
90+72.43	93+48.79	LT	-	PAVED	ROADSIDE DITCH
93+48.79	93+86.60	LT	F	PAVED	GUTTER / DRIVEWAY
93+86.60	99+15.00	LT	-	PAVED	ROADSIDE DITCH
20+91.12	22+28.49	RT	A	UNPAVED	W = 4' , S = 6:1
22+28.49	22+51.18	RT	F	UNPAVED	DRIVEWAY WITH GUTTER
22+51.18	23+36.32	RT	-	UNPAVED	ROADSIDE DITCH
23+36.32	23+63.18	RT	F	UNPAVED	DRIVEWAY WITH GUTTER
23+63.18	30+52.32	RT	A	UNPAVED	W = 1' , S = 6:1
30+52.32	30+62.00	RT	-	UNPAVED	HEADWALL / WINGWALL
30+62.00	31+14.00	RT	-	UNPAVED	SEE DRAINAGE GRADING
31+14.00	48+50.00	RT	-	UNPAVED	ROADSIDE DITCH
48+50.00	49+03.00	RT	-	UNPAVED	HEADWALL / WINGWALL
49+03.00	51+57.00	RT	A	UNPAVED	W = 3' , S = 6:1
51+57.00	51+96.00	RT	-	UNPAVED	DRIVEWAY
51+96.00	54+65.00	RT	A	UNPAVED	W = 3' , S = 6:1
54+65.00	55+12.15	RT	B	UNPAVED	-
55+12.15	55+50.23	RT	H	UNPAVED	GUARDRAIL
55+50.23	55+70.00	RT	-	UNPAVED	HEADWALL / WINGWALL
55+70.00	56+30.00	RT	E	UNPAVED	-
56+30.00	57+90.00	RT	A	UNPAVED	W = 4' , S = 6:1

GOLD RUN ROAD END CONDITION TABLE (CONTINUED)					
STATION		SIDE	DETAIL	ROAD SECTION	NOTES
FROM	TO				
57+90.00	58+30.00	RT	E	UNPAVED	-
58+30.00	59+90.00	RT	-	UNPAVED	ROADSIDE DITCH
59+90.00	61+42.64	RT	B	UNPAVED	-
61+42.64	61+77.36	RT	-	UNPAVED	DRIVEWAY
61+77.36	62+30.00	RT	-	UNPAVED	HEADWALL / WINGWALL
62+30.00	69+00.00	RT	A	UNPAVED	W = 4' , S = 6:1
69+00.00	69+30.00	RT	B	PAVED	-
69+30.00	70+44.00	RT	A	PAVED	W = 3' , S = 6:1
70+44.00	71+04.00	RT	D	PAVED	RETAINING WALL 2
71+04.00	71+73.00	RT	-	PAVED	DRIVEWAY / CULVERT
71+73.00	72+33.00	RT	D	PAVED	RETAINING WALL 3
72+33.00	75+50.00	RT	B	PAVED	-
75+50.00	78+00.00	RT	G	PAVED	TURNOUT
78+00.00	78+90.00	RT	B	PAVED	-
78+90.00	81+55.00	RT	A	PAVED	W = 5' , S = 6:1
81+55.00	82+55.00	RT	G	PAVED	TURNOUT
82+55.00	83+16.00	RT	A	PAVED	W = 5' , S = 4:1
83+16.00	83+57.82	RT	H	PAVED	GUARDRAIL
83+57.82	84+03.00	RT	-	PAVED	DRIVEWAY
84+03.00	86+88.95	RT	-	PAVED	ROADSIDE DITCH
86+88.95	87+52.53	RT	F	PAVED	DRIVEWAY WITH GUTTER
87+52.53	87+87.78	RT	H	PAVED	GUARDRAIL
87+87.78	89+00.00	RT	D	PAVED	RETAINING WALL 4
89+00.00	89+70.00	RT	A	PAVED	W = 7' , S = 20:1
89+70.00	90+85.00	RT	-	PAVED	DRIVEWAY / CULVERT
90+85.00	91+00.00	RT	B	PAVED	-
91+00.00	91+78.00	RT	-	PAVED	DRIVEWAY / CULVERT
91+78.00	92+55.00	RT	-	PAVED	DRIVEWAY / CULVERT
92+55.00	93+02.04	RT	B	PAVED	-
93+02.04	93+23.72	RT	H	PAVED	GUARDRAIL / WINGWALL
93+23.72	93+53.35	RT	-	PAVED	DRIVEWAY
93+53.35	93+71.17	RT	H	PAVED	GUARDRAIL
93+71.17	94+06.35	RT	B	PAVED	-
94+06.35	94+44.75	RT	-	PAVED	DRIVEWAY
94+44.75	94+58.70	RT	B	PAVED	-
94+58.70	94+80.85	RT	H	PAVED	GUARDRAIL
94+80.85	95+60.00	RT	A	PAVED	W = 4' , S = 20:1
95+60.00	95+93.95	RT	-	PAVED	DRIVEWAY / CULVERT
95+93.95	96+11.58	RT	H	PAVED	GUARDRAIL
96+11.58	99+15.00	RT	A	PAVED	W = 6' , S = 20:1

NOTES:

1. ALL DETAILS PER TYPICAL SECTION SHEETS.
2. SEE DRAINAGE PLANS FOR ROADSIDE DITCH DETAILS AND HEADWALL / WINGWALL DETAILS.
3. SEE STRUCTURAL SHEETS FOR RETAINING WALL DETAILS.
4. SEE CONSTRUCTION DETAIL SHEET FOR DRIVEWAY DETAILS.

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:	GOLD RUN ROAD TYPICAL SECTIONS (SHEET 3 OF 3)	PROJECT NO: 4043.SEPT12C38	SHEET NO: 10
								JJV	JJV	BCA	12/23/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		HABITAT RESTORATION							PROJECT TOTALS			
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.							PLAN	AS CONST.	
201-00000	CLEARING AND GRUBBING	LS	1																	1	
202-00001	REMOVAL OF STRUCTURE	EACH						1												1	
202-00001	REMOVAL OF STRUCTURE (EXISTING PED BRIDGE - 1007 GOLD RU	EACH	1																	1	
202-00010	REMOVAL OF TREE	EACH	368																	368	
202-00010	REMOVAL OF TREE (POTENTIAL)	EACH	128																	128	
202-00035	REMOVAL OF PIPE	LF			984															984	
202-00090	REMOVAL OF DELINEATOR	EACH	59																	59	
202-00220	REMOVAL OF ASPHALT MAT	SY	6,166																	6,166	
202-01000	REMOVAL OF WOOD FENCE (POST)	LF	1																	1	
202-01130	REMOVAL OF GUARDRAIL TYPE 3	LF	39																	39	
202-04001	PLUG CULVERT	EACH	1																	1	
203-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	6,364																	6,364	
203-00010	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CY	3,451		4,645															8,096	
203-00100	MUCK EXCAVATION	CY	150																	150	
203-00400	ROCK EXCAVATION	CY	50																	50	
203-01500	BLADING	HOUR	20																	20	
203-01510	BACKHOE	HOUR	10																	10	
203-01550	DOZING	HOUR	20																	20	
203-01594	COMBINATION LOADER	HOUR	10																	10	
206-00000	STRUCTURE EXCAVATION	CY			7,021		189													7,210	
206-00100	STRUCTURE BACKFILL (CLASS 1)	CY			2,614															2,614	
206-00200	STRUCTURE BACKFILL (CLASS 2)	CY					84													84	
206-00510	FILTER MATERIAL (CLASS A)	CY			167															167	
206-01781	SHORING (AREA 1)	LS					1													1	
206-01782	SHORING (AREA 2)	LS					1													1	
206-01783	SHORING (AREA 3)	LS					1													1	
206-01784	SHORING (AREA 4)	LS					1													1	
206-01785	SHORING (AREA 5)	LS					1													1	
206-01786	SHORING (AREA 6)	LS					1													1	
206-01787	SHORING (AREA 7)	LS					1													1	
206-01788	SHORING (AREA 8)	LS					1													1	
207-00205	TOPSOIL	CY							2,211											2,211	
207-00210	STOCKPILE TOPSOIL	CY							2,630											2,630	
208-00002	EROSION LOG (12 INCH)	LF							1,800											1,800	
208-00020	SILT FENCE	LF							5,660											5,660	
208-00041	ROCK CHECK DAM	EACH							30											30	
208-00045	CONCRETE WASHOUT STRUCTURE	EACH							6											6	
208-00070	VEHICLE TRACKING PAD	EACH							6											6	
208-00103	REMOVAL AND DISPOSAL OF SEDIMENT (LABOR)	HOUR							20											20	
208-00105	REMOVAL AND DISPOSAL OF SEDIMENT (EQUIPMENT)	HOUR							20											20	
208-00106	SWEEPING (SEDIMENT REMOVAL)	HOUR							10											10	
208-00207	EROSION CONTROL MANAGER (ECM)	DAY							80											80	
208-00301	TEMPORARY DIVERSION	LF							678											678	
210-00001	RESET STRUCTURE	EACH	2																	2	
210-00010	RESET MAILBOX STRUCTURE	EACH	35																	35	
210-00810	RESET GROUND SIGN	EACH	28																	28	
210-01000	RESET WOOD FENCE	LF	32																	32	
211-03005	DEWATERING	LS	1																	1	

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								JVV	SMP	BAA	12/23/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		HABITAT RESTORATION		PROJECT TOTALS	
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.			PLAN	AS CONST.
212-00006	SEEDING (NATIVE)	ACRE							3					3
212-00009	SEEDING (TEMPORARY)	ACRE							0.30					0
212-00032	SOIL CONDITIONING	ACRE							3					3
213-00004	MULCHING (WEED FREE STRAW)	ACRE							3					3
213-00061	MULCH TACKIFIER	LB							600					600
216-00201	SOIL RETENTION BLANKET (STRAW-COCONUT) (BIODEGRADABLE CLAS	SY							877					877
216-00303	TURF REINFORCEMENT MAT (CLASS 3)	SY							1,760					1,760
217-00020	HERBICIDE TREATMENT	HOUR							20					20
240-00000	WILDLIFE BIOLOGIST	HOUR							25					25
240-00010	REMOVAL OF NESTS	HOUR							30					30
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	2,446											2,446
403-33821	HOT MIX ASPHALT (GRADING S) (100) (PG 58-28)	TON	1,233											1,233
420-00102	GEOTEXTILE (EROSION CONTROL) (CLASS 1)	SY			4,334									4,334
503-00024	DRILLED CAISSON (24 INCH)	LF					584							584
504-06315	GROUND NAIL (15 FOOT)	EACH					38							38
504-08050	STONE LANDSCAPE WALL	SF			150									150
506-00030	GROUTED RIPRAP (SPECIAL)	CY			32									32
506-00209	RIPRAP (9 INCH)	CY			101									101
506-00212	RIPRAP (12 INCH)	CY			10									10
506-00218	RIPRAP (18 INCH)	CY			12									12
506-00406	SOIL RIPRAP (6 INCH)	CY			118									118
506-00409	SOIL RIPRAP (9 INCH)	CY			912									912
506-00412	SOIL RIPRAP (12 INCH)	CY			1,021									1,021
506-00418	SOIL RIPRAP (18 INCH)	CY			1,294									1,294
506-00424	SOIL RIPRAP (24 INCH)	CY			137									137
506-XXXXX	EARTHWORK, EXCAVATION, AND FILL ON-SITE	CY								3,477				3,477
506-XXXXX	ROCK CROSS VANE	EACH								1				1
506-XXXXX	TOE WOOD W/ SOIL WRAPPED LIFT	LF								173				173
506-XXXXX	CONVERGING BOULDER CLUSTER	EACH								5				5
506-XXXXX	BOULDER BANK PROTECTION	LF								553				553
506-XXXXX	BOULDER WALL (1:1 SLOPE)	LF								2,659				2,659
506-XXXXX	ROCK STEP POOL	EACH								23				23
506-XXXXX	ROOT WADS	LF								169				169
506-XXXXX	REVEGETATION - ZONE A	ACRE								0.69				1
506-XXXXX	REVEGETATION - ZONE B	ACRE								0.46				0
506-XXXXX	REVEGETATION - ZONE C	ACRE								0.77				1
506-XXXXX	REVEGETATION - RIPARIAN SEEDING & MULCH	ACRE								4				4
506-XXXXX	REVEGETATION - ROOT WADS	LF								169				169
506-XXXXX	REVEGETATION - SOIL LIFTS	LF								173				173
506-XXXXX	CONSTRUCTION SURVEYING	MILE								0.64				1
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					47,014							47,014
601-01000	CONCRETE CLASS B	CY			464									464
601-03000	CONCRETE CLASS D	CY			24									24
601-03050	CONCRETE CLASS D (WALL)	CY					62.5							63
601-40005	CUT STONE VENEER	SF			5,863		2,645							8,508

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							JVV	SMP	BAA	12/23/16			

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CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		SWMP		HABITAT RESTORATION		PROJECT TOTALS		
			PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	
601-40008	CUT STONE VENEER (REPAIR)	SF			45									45	
601-40301	STRUCTURAL CONCRETE COATING	SF					355							355	
601-40302	STRUCTURAL CONCRETE COATING (ANTI-GRAFFITI)	SF					355							355	
602-00000	REINFORCING STEEL	LB			43,205		12,221							55,426	
603-01185	18 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			405									405	
603-01245	24 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			55									55	
603-01305	30 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			55									55	
603-01365	36 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			22									22	
603-01425	42 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			113									113	
603-01485	48 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	LF			56									56	
603-02180	23X14 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF			14									14	
603-02245	30X19 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE I	LF			77									77	
603-02720	91X58 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF			54									54	
603-02780	98X63 INCH REINFORCED CONCRETE PIPE ELLIPTICAL	LF			272									272	
603-05018	18 INCH REINFORCED CONCRETE END SECTION	EACH			25									25	
603-05024	24 INCH REINFORCED CONCRETE END SECTION	EACH			4									4	
603-05030	30 INCH REINFORCED CONCRETE END SECTION	EACH			3									3	
603-05036	36 INCH REINFORCED CONCRETE END SECTION	EACH			2									2	
603-05042	42 INCH REINFORCED CONCRETE END SECTION	EACH			2									2	
603-05048	48 INCH REINFORCED CONCRETE END SECTION	EACH			2									2	
603-05118	23X14 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			2									2	
603-05124	30X19 INCH REINFORCED CONCRETE END SECTION ELLIPTICAL	EACH			4									4	
603-70704	7X4 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			24									24	
603-70804	8X4 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			61									61	
603-70805	8X5 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			229									229	
603-70806	8X6 FOOT CONCRETE BOX CULVERT (PRECAST)	LF			66									66	
606-00301	GUARDRAIL TYPE 3 (6-3 POST SPACING)	LF	44											44	
606-01385	TRANSITION TYPE 3J	EACH	1											1	
606-01390	END ANCHORAGE TYPE 3K	EACH	13											13	
606-02005	END ANCHORAGE (FLARED)	EACH	3											3	
607-11525	FENCE (PLASTIC)	LF						535						535	
609-23000	GUTTER (SPECIAL)	LF	16											16	
609-24004	GUTTER TYPE 2 (4 FOOT)	LF	183											183	
612-00001	DELINEATOR (TYPE I)	EACH	310											310	
612-00003	DELINEATOR (TYPE III)	EACH	38											38	
613-01302	3 INCH ELECTRICAL CONDUIT (PLASTIC) (INSTALL ONLY)	LF			180									180	
614-00011	SIGN PANEL (CLASS I)	SF	85											85	
614-00216	STEEL SIGN POST (2X2 INCH TUBING)	LF	364											364	
619-50481	6 INCH PLASTIC PIPE (INSTALL ONLY)	LF			180									180	
620-00002	FIELD OFFICE (CLASS 2)	EACH	2											2	
620-00020	SANITARY FACILITY	EACH	4											4	
625-00000	CONSTRUCTION SURVEYING	LS	1											1	
626-00000	MOBILIZATION	LS	1											1	
626-01000	PUBLIC INFORMATION SERVICES	LS	1											1	
627-00001	PAVEMENT MARKING PAINT	GAL	21											21	
630-99997	TRAFFIC CONTROL (SUGGESTED PHASING)	LS	1											1	
641-10000	SHOTCRETE	SY	86											86	

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								JJV	SMP	BAA	12/23/16			

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: Fire Department Pullouts

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

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

Stationing	Left Interval	Center Interval	Right Interval
-	-	-	-

- 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): _____

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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>	<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;"> <thead> <tr> <th>DESIGNED:</th> <th>CAD:</th> <th>CHECKED:</th> <th>DATE:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">SMP</td> <td style="text-align: center;">JVJ</td> <td style="text-align: center;">BCA</td> <td style="text-align: center;">12/23/16</td> </tr> </tbody> </table>	DESIGNED:	CAD:	CHECKED:	DATE:	SMP	JVJ	BCA	12/23/16	<p>GOLD RUN ROAD SURVEY TABULATIONS</p> <p>PROJECT NO: 4043.SEPT12C38 SHEET NO: 14</p>
NO.	DATE	REVISION DESCRIPTION:																							
DESIGNED:	CAD:	CHECKED:	DATE:																						
SMP	JVJ	BCA	12/23/16																						

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SUMMARY OF ROADWAY EARTHWORK QUANTITIES	
EMBANKMENT MATERIAL (COMPLETE IN PLACE) CUBIC YARDS	
ROADWAY - REGULAR EMBANKMENT	6,364
REPLACEMENT OF MUCK	150
TOTAL	6,514
MUCK EXCAVATION CUBIC YARDS	
AS DIRECTED BY THE ENGINEER	150
TOTAL	150
FOR INFORMATION ONLY	
UNCLASSIFIED EXCAVATION CUBIC YARDS	
ROADWAY	3,451
TOTAL	3,451
COMPACTION (AASHTO T180) CUBIC YARDS	
TOTAL EMBANKMENT (NET)	6,514
TOTAL	6,514
EARTHWORK QUANTITIES BALANCE	
UNCLASSIFIED EXCAVATION CUBIC YARDS	
TOTAL UNCLASSIFIED EXCAVATION	3,451
TOTAL FROM CONTRACTORS SOURCE	3,063
EMBANKMENT (NET)	
TOTAL	6,514

TABULATION OF REMOVALS, RESETS, AND ADJUSTMENTS											
ALIGNMENT	STATION TO STATION	202-00220	202-01130	210-00810	210-00010	-	202-00001	202-00001	210-00001	210-01000	REMARKS
		REMOVAL OF ASPHALT MAT	REMOVAL OF GUARDRAIL	RESET GROUND SIGN	RESET MAILBOX STRUCTURE	RESET/RELOCATE POWER POLES (BY OTHERS)	REMOVAL OF STRUCTURE (EXISTING ROCK WALL)	REMOVAL OF PEDESTRIAN BRIDGE	RESET STRUCTURE	RESET / REMOVAL OF WOOD FENCE	
		SY	LF	EA	EA	EA	EA	EA	EA	LF	
GOLD RUN ROAD	20+91.12 TO 99+15.00	6,166	39	28	35	11	1	1	2	33	
TOTALS		6,166	39	28	35	11	1	1	2	33	

TABULATION OF SURFACING QUANTITIES					
ALIGNMENT	STATION TO STATION	403-33821		304-06007	
		HOT MIX ASPHALT	AGGREGATE BASE COURSE (CLASS 6)	NOTES	
		TON	CY		
GOLD RUN ROAD	20+91.12 TO 99+15.00	1078	2361	ROADWAY	
GOLD RUN ROAD	20+91.12 TO 68+50.00	-	44	UNPAVED DRIVEWAYS 4" ABC	
GOLD RUN ROAD	68+50.00 TO 99+15.00	115	-	PAVED DRIVEWAYS 3" HMA	
GOLD RUN ROAD	74+50.00 TO 78+00.00	-	30	PULLOUT 4" ABC	
GOLD RUN ROAD	81+55.00 TO 82+55.00	-	12	PULLOUT 4" ABC	
GOLD RUN ROAD	20+91.12 TO 99+15.00	40	-	GUARDRAIL 2" HMA	
TOTALS		1233	2446		

TABULATION OF GUARDRAIL							
ALIGNMENT	STATION TO STATION	SIDE	606-00301	606-01390	606-02005	606-01385	NOTES
			GUARDRAIL TYPE 3 (6-3 POST SPACING)	END ANCHORAGE TYPE 3K	END ANCHORAGE (FLARED)	TRANSITION TYPE 3J	
			LF	EACH	EACH	EACH	
GOLD RUN ROAD	46+40.00 TO 46+80.00	LT	12.5	2	-	-	
GOLD RUN ROAD	55+10.00 TO 55+50.00	RT	-	1	1	-	
GOLD RUN ROAD	83+20.00 TO 83+60.00	RT	-	1	1	-	
GOLD RUN ROAD	87+50.00 TO 87+85.00	RT	-	1	1	-	
GOLD RUN ROAD	93+00.00 TO 93+25.00	RT	6.25	2	-	-	
GOLD RUN ROAD	93+50.00 TO 93+75.00	RT	-	2	-	1	
GOLD RUN ROAD	94+60.00 TO 94+80.00	RT	12.5	2	-	-	
GOLD RUN ROAD	95+85.00 TO 96+25.00	RT	12.5	2	-	-	
TOTALS			43.75	13	3	1	

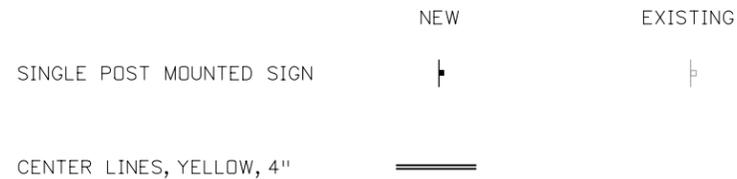
TABULATION OF UTILITIES				
ALIGNMENT	STATION TO STATION	613-01302	619-50481	NOTES
		3 INCH ELECTRICAL CONDUIT (PLASTIC) (INSTALL ONLY)	6 INCH PLASTIC PIPE (INSTALL ONLY)	
		LF	LF	
GOLD RUN ROAD	76+68.67 TO 77+68.33	180	180	
TOTALS		180	180	

NOTES:

- SEE TREE INVENTORY PLANS FOR TREE IMPACT QUANTITIES

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:	GOLD RUN ROAD ROADWAY TABULATIONS (SHEET 1 OF 4) PROJECT NO: 4043.SEPT12C38 SHEET NO: 15
							JVV	JVV	BCA	12/23/16	

PAVEMENT SIGNING AND MARKING LEGEND



TABULATION OF PAVEMENT MARKINGS										
ALIGNMENT	STATION		MARKING TYPE	PAVEMENT MARKINGS						DESCRIPTION
				627-00001						
	DBL YELLOW SOLID 4 IN			WHITE SOLID 4 IN						
	LF	SF		GAL	LF	SF	GAL			
GOLD RUN ROAD	68+50	99+15	CENTER	3065	2043	20.4				
			TOTAL (GAL)			21			0	ROUNDED UP TO NEXT FULL GALLON

TABULATION OF SIGNS

SIGN NO.	ALIGNMENT	STATION	SIDE	DIRECTION	SIGN CODE	SIGN PANEL SIZE			BACKGROUND COLOR	LEGEND	SIGN PANEL	STEEL SIGN SUPPORT (2-INCH ROUND) (POST AND SOCKET)		REMARKS
						CLASS 1	614-000216							
							NUMBER OF POSTS	POST LENGTH						
								LF						
1	GOLD RUN	21+50	RT	SB	CUSTOM	30		30	YELLOW	"WINDING ROADS NEXT MILE & HALF"	6.25	1	12	
2	GOLD RUN	21+50	RT	SB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
3	GOLD RUN	21+60	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
4	GOLD RUN	21+85	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	12	
5	GOLD RUN	30+45	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
6	GOLD RUN	32+05	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
7	GOLD RUN	32+90	RT	SB	W1-1L	30		30	YELLOW	TURN	6.25	1	12	
8	GOLD RUN	32+90	RT	SB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
9	GOLD RUN	37+95	LT	NB	W1-1R	30		30	YELLOW	TURN	6.25	1	12	
10	GOLD RUN	37+95	LT	NB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
11	GOLD RUN	43+60	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50			
12	GOLD RUN	44+35	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
13	GOLD RUN	45+00	RT	SB	W1-1L	30		30	YELLOW	TURN	6.25	1	12	
14	GOLD RUN	45+00	RT	SB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
15	GOLD RUN	45+90	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
16	GOLD RUN	47+70	LT	NB	W1-1R	30		30	YELLOW	TURN	6.25	1	12	
17	GOLD RUN	47+70	LT	NB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
18	GOLD RUN	48+20	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
19	GOLD RUN	48+40	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
20	GOLD RUN	48+55	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
21	GOLD RUN	51+55	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
22	GOLD RUN	56+45	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
23	GOLD RUN	56+65	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
24	GOLD RUN	61+05	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
25	GOLD RUN	62+10	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
TOTAL SIGNS 1-25											50.00	19	176	

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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:	GOLD RUN ROAD ROADWAY TABULATIONS (SHEET 2 OF 4)	PROJECT NO: 4043.SEPT12C38	SHEET NO: 16
								JVV	JVV	BCA	12/23/16			

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TABULATION OF SIGNS

SIGN NO.	ALIGNMENT	STATION	SIDE	DIRECTION	SIGN CODE	SIGN PANEL SIZE			BACKGROUND COLOR	LEGEND	SIGN PANEL	STEEL SIGN SUPPORT (2-INCH ROUND) (POST AND SOCKET)		REMARKS
						614-00011	614-000216							
						CLASS 1	NUMBER OF POSTS	POST LENGTH						
						SF		LF						
W"	x	H"												
26	GOLD RUN	67+65	RT	SB	W1-11	30		30	YELLOW	HAIRPIN CURVE	6.25	1	12	
27	GOLD RUN	67+65	RT	SB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
28	GOLD RUN	70+40	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
29	GOLD RUN	71+20	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
30	GOLD RUN	71+35	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
31	GOLD RUN	72+05	RT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
32	GOLD RUN	73+20	LT	NB	W1-11	30		30	YELLOW	HAIRPIN CURVE	6.25	1	12	
33	GOLD RUN	73+20	LT	NB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
34	GOLD RUN	76+75	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
35	GOLD RUN	82+75	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
36	GOLD RUN	84+20	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
37	GOLD RUN	89+95	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
38	GOLD RUN	91+05	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
39	GOLD RUN	91+90	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
40	GOLD RUN	98+90	LT	NB	CUSTOM	30		30	YELLOW	"WINDING ROADS NEXT MILE & HALF"	6.25	1	12	
41	GOLD RUN	98+90	LT	NB	W13-1P	18		18	YELLOW	15 MPH ADVISORY	2.25			MOUNT WITH SIGN ABOVE
42	GOLD RUN	46+15	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
43	GOLD RUN	49+05	RT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
44	GOLD RUN	76+48	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
45	GOLD RUN	82+45	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
46	GOLD RUN	88+70	LT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
47	GOLD RUN	88+95	LT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
48	GOLD RUN	91+65	RT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
49	GOLD RUN	92+45	RT	NB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
50	GOLD RUN	95+45	RT	SB	OM2-1V	6		12	WHITE	OBJECT MARKER	0.50	1	8	
TOTAL SIGNS 1-25											50.00	19.00	176.00	
TOTAL SIGNS 26-50											35.00	22.00	188.00	
GRAND TOTAL											85.00	41.00	364.00	

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 	DESIGNED:	CAD:	CHECKED:	DATE:	GOLD RUN ROAD ROADWAY TABULATIONS (SHEET 3 OF 4) PROJECT NO: 4043.SEPT12C38 SHEET NO: 17
							SMP	JVV	BCA	12/23/16	

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TABULATION OF DELINEATORS							
LOCATION	SIDE	202-00090	612-00001		612-00003		REMARKS
		REMOVAL OF DELINEATOR	DELINEATOR (TYPE I)		DELINEATOR (TYPE III)		
		EACH	C	G	Y	G	
		EACH	EACH	EACH	EACH		
GOLD RUN ROAD		59					
20+91 TO 21+59	LT/RT		2				
21+60 TO 22+87	LT/RT		10				40' MAX SPACING
22+88 TO 23+94	LT/RT		2				
23+94 TO 27+77	LT/RT		16				53' MAX SPACING
26+82	LT				1		
27+30	RT				1		
27+78 TO 29+54	LT/RT		2				
29+13	RT				1		
29+18	LT				1		
29+56 TO 30+36	LT/RT		4				55' MAX SPACING
30+36	LT				1		
30+80 TO 31+36	LT/RT		2				
31+37 TO 32+63	LT/RT		8				55' MAX SPACING
32+64 TO 34+37	LT/RT		6				
34+49	RT				1		
34+60	LT				1		
34+38 TO 36+45	LT/RT		18				26' MAX SPACING
36+46 TO 37+97	LT/RT		2				
37+98 TO 41+28	LT/RT		8				114' MAX SPACING
41+29 TO 44+01	LT/RT		3				
42+42	RT				1		
42+58	LT				1		
44+02 TO 45+08	LT/RT		7				50' MAX SPACING
45+09 TO 45+71	LT/RT		2				
45+72 TO 47+18	LT/RT		12				20' MAX SPACING
47+19 TO 47+92	LT/RT		2				
47+93 TO 51+82	LT/RT		20				42' MAX SPACING
52+88	LT				1		
52+90	RT				1		
51+83 TO 55+42	LT/RT		4				
55+43 TO 57+44	LT/RT		13				29' MAX SPACING
57+45 TO 59+43	LT/RT		10				37' MAX SPACING
57+75	RT				1		
SUBTOTALS		59	153		12		

TABULATION OF DELINEATORS							
LOCATION	SIDE	202-00090	612-00001		612-00003		REMARKS
		REMOVAL OF DELINEATOR	DELINEATOR (TYPE I)		DELINEATOR (TYPE III)		
		EACH	C	G	Y	G	
		EACH	EACH	EACH	EACH		
57+98		LT			1		
59+44 TO 60+84	LT/RT		4				64' MAX SPACING
59+75	RT				1		
59+86	LT				1		
60+85 TO 62+85	LT/RT		8				66' MAX SPACING
62+86 TO 66+08	LT/RT		6				
62+98	RT				1		
63+00	LT				1		
66+09 TO 68+14	LT/RT		10				46' MAX SPACING
68+15 TO 69+06	LT/RT		2				
69+00	RT				1		
69+06	LT				1		
69+07 TO 70+88	LT/RT		12				31' MAX SPACING
70+89 TO 71+05	LT/RT		2				
71+06 TO 71+84	LT/RT		4				18' MAX SPACING
71+77	LT				1		
71+85 TO 73+17	LT/RT		4				
73+18 TO 75+19	LT/RT		16				30' MAX SPACING
75+20 TO 77+35	RT		2				
75+58	LT				1		
75+75	RT				1		
76+73	RT				1		
77+36 TO 80+53	LT/RT		13				43' MAX SPACING
78+15	RT				1		
78+18	LT				1		
78+70	LT				1		
79+03	RT				1		
79+07	LT				1		
79+22	LT				1		
80+54 TO 81+66	LT/RT		3				
81+67 TO 82+74	LT/RT		4				43' MAX SPACING
82+55	RT				1		
82+75 TO 85+50	LT/RT		3				
85+51 TO 86+02	LT/RT		4				54' MAX SPACING
SUBTOTALS		0	97		18		

TABULATION OF DELINEATORS CONT'D							
LOCATION	SIDE	202-00090	612-00001		612-00003		REMARKS
		REMOVAL OF DELINEATOR	DELINEATOR (TYPE I)		DELINEATOR (TYPE III)		
		EACH	C	G	Y	G	
		EACH	EACH	EACH	EACH		
86+46		RT			1		
86+64		LT			1		
86+88 TO 87+47	LT/RT		4				54' MAX SPACING
88+29 TO 88+94	LT/RT		4				48' MAX SPACING
88+94	RT				1		
88+95 TO 90+30	LT/RT		2				
90+31 TO 92+12	LT/RT		7				47' MAX SPACING
90+49	LT				1		
90+67	RT				1		
91+82	LT				1		
92+13 TO 92+88	LT/RT		2				
92+89 TO 93+69	LT/RT		4				18' MAX SPACING
93+70 TO 94+18	LT/RT		2				
94+19 TO 95+10	LT/RT		8				27' MAX SPACING
95+58 TO 96+55	LT/RT		9				20' MAX SPACING
96+56 TO 97+13	LT/RT		2				
97+14 TO 98+84	LT/RT		14				31' MAX SPACING
98+72	LT				1		
98+72	RT				1		
98+85 TO 99+15	LT/RT		2				
SUBTOTALS		0	60		8		
TOTALS		59	310		38		

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: SMP	CAD: JVV	CHECKED: BCA	DATE: 12/23/16
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GOLD RUN ROAD ROADWAY TABULATIONS (SHEET 4 OF 4)
 PROJECT NO: 4043.SEPT12C38 SHEET NO: 18

jessica.wray 11:01:44 AM 12/22/2016 p:\V\DCP\WAPP1.bkr.mbakercorp.com\p\road\Documents\Projects\Lakewood\Office\Boulder_County_Emergency_Transportation\102\08_Sheet_L_Files\10_General_Sheets\UGN\T02_Drainage Tab 2.dgn

TABULATION OF DRAINAGE STRUCTURES

ID	LOCATION	STATION-OFFSET	LINE		PIPE INVERT ELEVATIONS		GRADE (%)	REMOVAL OF PIPE	PLUG CULVERT	REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)				23X14 INCH REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)	30X19 INCH REINFORCED CONCRETE PIPE ELLIPTICAL (COMPLETE IN PLACE)	REINFORCED CONCRETE END SECTION						FILTER MATERIAL (CLASS A)	GEOTEXTILE (EROSION CONTROL) (CLASS 1)	RIPRAP				TOPSOIL	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)				
			FROM UPPER	TO LOWER	UPPER	LOWER				18 INCH	24 INCH	30 INCH	36 INCH			18 INCH	24 INCH	30 INCH	36 INCH	23X14 IN	30X19 IN			CY	SY	CY				CY	CY		
			LF	EACH	LF					LF	LF	EACH						CY	SY	CY				CY	CY								
P-102	GOLD RUN ROAD	29+18.52	18" RCES	18" RCES	7320.80	7320.24	2.00	28		28						2							9	5					5				
P-103	GOLD RUN ROAD	30+45.46	24" RCES	24" RCES	7307.05	7306.96	0.32	79			29						2						13			7		3	10				
P-104	GOLD RUN ROAD	34+54.38	36" RCES	36" RCES	7263.70	7262.62	5.00	48					22						2				29	15					15				
P-105	GOLD RUN ROAD	42+52.58	30" RCES	30" RCES	7175.46	7174.75	3.00				24								2			3		7					10				
P-108	GOLD RUN ROAD	52+88.54	18" RCES	18" RCES	7055.19	7054.25	3.00	38		31						2							9	5					5				
P-157	GOLD RUN ROAD	57+93.36	18" RCES	18" RCES	7008.54	7005.82	8.20			33						2							53	5		22		8	35				
P-110	GOLD RUN ROAD	59+81.70	18" RCES	18" RCES	6986.25	6985.95	1.00	50		30						2					1				4				5				
P-114	GOLD RUN ROAD	62+97.84	18" RCES	18" RCES	6959.15	6958.21	4.00			24						2						9	5						5				
P-115	GOLD RUN ROAD	69+03.24	30" x 19" RCES	30" x 19" RCES	6904.84	6903.77	4.00							27						2			9	5					5				
P-118	GOLD RUN ROAD	71+71.48	30" x 19" RCES	30" x 19" RCES	6886.05	6882.79	6.50							50						2			28		6	10		4	20				
P-119	GOLD RUN ROAD	75+65.41	18" RCES	18" RCES	6849.92	6847.67	5.95	29		38						2							9	5					5				
P-120	GOLD RUN ROAD	76+70.94	HEADWALL EE	18" RCES	6838.26	6837.54	2.00		1	36						1						9	5						5				
P-121	GOLD RUN ROAD	78+16.72	18" RCES	18" RCES	6824.60	6823.91	3.00	40		23						2						9	5						5				
P-122	GOLD RUN ROAD	78+89.17, 16.41' LT	18" RCES	18" RCES	6818.33	6817.46	4.50	20		19						2																	
P-123	GOLD RUN ROAD	79+16.48	18" RCES	18" RCES	6815.12	6814.25	3.00			29						2							35	5		13		5	23				
P-124	GOLD RUN ROAD	82+63.47	HEADWALL T	30" RCES	6783.22	6782.60	2.00					31							1				13	7					7				
P-125	GOLD RUN ROAD	83+61.07, 113.13' LT	23" x 14" RCES	23" x 14" RCES	6797.42	6796.33	8.05						14							2			14				19	3	22				
P-126	GOLD RUN ROAD	86+55.09	24" RCES	24" RCES	6750.17	6749.40	3.00				26						2						14	7					7				
P-127	GOLD RUN ROAD	88+94.03	HEADWALL Q	18" RCES	6735.55	6734.44	3.40	41		33						1							9	5					5				
P-128	GOLD RUN ROAD	90+57.60	18" RCES	18" RCES	6721.60	6719.50	8.00	21		26						2							9	5					5				
P-129	GOLD RUN ROAD	91+85.95	18" RCES	WINGWALL A1	6710.45	6708.64	5.50			33						1																	
P-131	GOLD RUN ROAD	98+73.96	18" RCES	18" RCES	6650.36	6649.69	3.00	40		22						2							5	3					3				
TOTAL:								434	1	405	55	55	22	14	77	25	4	3	2	2	4	4	285	94	10	52	19	23	202				

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: JLW	CAD: EMR	CHECKED: SLS	DATE: 12/23/16
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GOLD RUN ROAD
DRAINAGE TABULATIONS
(SHEET 2 OF 4)

PROJECT NO: 4043.SEPT12C38 SHEET NO: 20

jessica.wray 11/10/18 AM 12/22/2016 pm-1\DCPWAPP1\Bkr.mbakercorp.com\prowod\Documents\Projects\Lakewood\Office\Boulder_County_Emergency_Transportation\102\08_Sheet\Files\10_General Sheets\06N\T02_Drainage Tab 3.dgn

TABULATION OF DRAINAGE STRUCTURES

ID	LOCATION	STATION-OFFSET	GEOTEXTILE (EROSION CONTROL)(CLASS 1)	RIPRAP					GUTTER TYPE 2 (4 FOOT)	GUTTER (SPECIAL)	TOPSOIL	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CUT STONE VENEER (REPAIR)	DESCRIPTION
				SOIL RIPRAP (6 INCH)	SOIL RIPRAP (9 INCH)	SOIL RIPRAP (12 INCH)	SOIL RIPRAP (18 INCH)	SOIL RIPRAP (24 INCH)						
				SY	CY									
CH-100	GOLD RUN ROAD	23+35.22, 10.19' LT to 26+86.10, 36.10' LT	160		80					27	107			
CH-100AL	GOLD RUN ROAD	21+94.51, 10.50' LT to 23+35.22, 10.19' LT	52		26					9	35			
CH-102A	GOLD RUN ROAD	28+62.01, 13.00' LT to 29+19.86, 21.13' LT	54		27					9	36			
CH-102B	GOLD RUN ROAD	27+22.25, 16.00' LT to 28+44.95, 13.00' LT	97		49					17	66			
CH-103	GOLD RUN ROAD	29+44.47, 16.00' LT to 30+50.62, 24.60' LT	43			29				8	37			
CH-104AB	GOLD RUN ROAD	31+14.16, 10.42' RT to 32+70.00, 15.10' RT	61		31					11	42			
CH-104R	GOLD RUN ROAD	32+70.00, 15.10' RT to 34+58.80, 19.03' RT	166				166			28	194			
CH-105	GOLD RUN ROAD	38+01.98, 13.00' RT to 42+59.71, 21.32' RT	655				655			110	765			
CH-106	GOLD RUN ROAD	87+59.69, 32.06' RT to 87+88.97, 35.78' RT	22			15				4	19			
CH-108	GOLD RUN ROAD	48+79.34, 16.82' LT to 52+89.83, 10.00' LT	242			161				41	202			
CH-109	GOLD RUN ROAD	52+95.48, 18.10' LT to 56+45.98, 37.67' LT	171				171			29	200			
CH-110	GOLD RUN ROAD	58+29.72, 16.00' RT to 59+83.03, 22.42' RT	118		59					20	79			
CH-114	GOLD RUN ROAD	61+42.35, 15.50' LT to 63+09.70, 15.37' LT	132	44						22	66			
CH-115	GOLD RUN ROAD	64+99.94, 13.38' LT to 69+12.56, 18.13' LT	467			312				78	390			
CH-115AF	GOLD RUN ROAD	63+26.58, 11.00' LT to 64+99.94, 13.38' LT	27			18				5	23			
CH-116	GOLD RUN ROAD	69+25.04, 11.00' LT to 71+06.41, 11.00' LT	74		37					13	50			
CH-119	GOLD RUN ROAD	71+89.17, 13.83' LT to 75+62.08, 21.83' LT	272			136				46	182			
CH-120	GOLD RUN ROAD	76+06.22, 15.61' LT to 76+70.16, 20.00' LT	65	22						11	33			
CH-121	GOLD RUN ROAD	77+96.35, 16.89' LT to 78+22.8, 22.75' LT	31			21				6	27			
CH-122	GOLD RUN ROAD	78+56.95, 15.50' LT to 78+74.59, 18.43' LT	35		18					6	24			
CH-124	GOLD RUN ROAD	79+39.59, 15.35' LT to 82+72.85, 17.53' LT	124				124			21	145			
CH-125	GOLD RUN ROAD	83+68.89, 110.91' LT to 83+62.28, 13.99' LT	61				81			11	92			
CH-125B	GOLD RUN ROAD	83+58.99, 12.00' LT to 84+40, 11.00' LT	28				37			5	42			
CH-125F	GOLD RUN ROAD	82+73.23, 19.70' LT to 83+32.05, 12.00' LT	54	18						9	27			
CH-126	GOLD RUN ROAD	85+99.93, 12.00' RT to 86+56.79, 19.19' RT	38			25				7	32			
CH-126Q	GOLD RUN ROAD	83+98.63, 11.00' RT to 85+99.93, 12.00' RT	40		20					7	27			
CH-127	GOLD RUN ROAD	87+25.72, 11.00' LT to 88+87.76, 17.02' LT	40		20					7	27			
CH-128	GOLD RUN ROAD	90+27.44, 12.76' LT to 90+56.32, 19.69' LT	27		14					5	19			

TABULATION OF DRAINAGE STRUCTURES

ID	LOCATION	STATION-OFFSET	GEOTEXTILE (EROSION CONTROL)(CLASS 1)	RIPRAP					GUTTER TYPE 2 (4 FOOT)	GUTTER (SPECIAL)	TOPSOIL	UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)	CUT STONE VENEER (REPAIR)	DESCRIPTION
				SOIL RIPRAP (6 INCH)	SOIL RIPRAP (9 INCH)	SOIL RIPRAP (12 INCH)	SOIL RIPRAP (18 INCH)	SOIL RIPRAP (24 INCH)						
				SY	CY									
CH-129	GOLD RUN ROAD	91+41.92, 18.96' LT to 91+83.22, 22.45' LT	40		20						7	27		
CH-131	GOLD RUN ROAD	96+80.00, 12.66' LT to 98+78.95, 19.42' LT	144			96					24	120		
CH-131AV	GOLD RUN ROAD	92+90.07, 8.99' LT to 93+48.79, 18.04' LT	18		9						3	12		
CH-131Z	GOLD RUN ROAD	93+84.21, 13.66' LT to 96+80.00, 12.66' LT	98		49						17	66		
CH-133	GOLD RUN ROAD	21+14.26, 14.01' LT to 21+48.63, 15.92' LT	28	10							5	15		
CH-142	GOLD RUN ROAD	48+45.00, 25.39' RT to 48+77.38, 29.26' RT												
CH-142AW	GOLD RUN ROAD	42+68.23, 10.15' RT to 47+55.88, 24.93' RT	172		86						29	115		
CH-159	GOLD RUN ROAD	22+46.66, 11.39' RT to 23+40.32, 11.00' RT	51	17							9	26		
CH-159A	GOLD RUN ROAD	23+59.13, 11.00' RT to 23+80.76, 15.48' RT	20	7							4	11		
GUTTER 102	GOLD RUN ROAD	28+44.95, 13.00' LT to 28+62.01, 13.00' LT							17					
GUTTER 106	GOLD RUN ROAD	87+31.00, 25.22' RT to 87+70.28, 40.39' RT							43				25	
GUTTER 125	GOLD RUN ROAD	83+32.05, 12.00' LT to 83+58.99, 12.00' LT							27				20	
GUTTER 131	GOLD RUN ROAD	93+48.79, 18.04' LT to 93+84.11, 13.68' LT							32					
GUTTER 133A	GOLD RUN ROAD	21+48.63, 15.92' LT to 21+61.27, 15.30' LT							13					
GUTTER 133B	GOLD RUN ROAD	20+95.27, 12.51' LT to 21+14.26, 14.01' LT							19					
GUTTER 159A	GOLD RUN ROAD	23+40.32, 11.00' RT to 23+59.13, 11.00' RT							19					
GUTTER 159B	GOLD RUN ROAD	22+32.88, 11.21' RT to 22+46.66, 11.39' RT							13					
GUTTER 45	GOLD RUN ROAD	45+53.31, 41.57' LT to 45+53.83, 25.35' LT							16					
TOTAL:			3927	118	681	677	1116	118	183	16	670	3380	45	

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: **JLW** CAD: **EMR** CHECKED: **SLS** DATE: **12/23/16**

GOLD RUN ROAD DRAINAGE TABULATIONS (SHEET 3 OF 4)

PROJECT NO: 4043.SEPT12C38 SHEET NO: 21

jessica.wray 11/02/22 AM 12:22/2016 p:\DCFW\AP1\lkr.mbakercorp.com\pmprod\Documents\Projects\LakeWood_Office\Boulder_County_Emergency_Transportation\102\08_Sheet_L_Files\10_General_Sheets\08\T02_Drainage_Tab_4.dgn

TABULATION OF DRAINAGE STRUCTURES

STATION	HEADWALL	WINGWALL	STRUCTURE EXCAVATION		SHORING (AREA 1) - (AREA 8)								CONCRETE CLASS B		CUT STONE VENEER		REINFORCING STEEL		DESCRIPTION
			CY	CY	LS	LS	LS	LS	LS	LS	LS	LS	CY	SF	LB	LB			
31+00	HEADWALL A	WINGWALL A1	21	14									4	31	281				
			8	11									3	80	411				
	HEADWALL B	WINGWALL A2	20	13									3	27	260				
		WINGWALL B1	54	42									8	95	739				
		WINGWALL B2	10	11									3	80	411				
44+00	HEADWALL CC	WINGWALL CC1	118	70									12	111	1,135				
			17	11									3	80	411				
	HEADWALL DD	WINGWALL CC2	50	36									8	108	599				
		WINGWALL DD1	85	51									10	99	770				
		WINGWALL DD2	17	11									3	80	411				
46+25	HEADWALL C	WINGWALL DD2	35	32									7	75	524				
		WINGWALL C1	44	30								1	7	60	436				
	HEADWALL D	WINGWALL C2	16	7									2	38	312				
		WINGWALL D1	81	53									10	106	674				
		WINGWALL D2	31	23	1								5	52	397				
48+50	HEADWALL E	WINGWALL D1	13	7									2	71	312				
		WINGWALL D2	43	32									7	71	511				
	HEADWALL F	WINGWALL E1	45	28									6	56	441				
		WINGWALL E2	14	10									3	73	378				
		WINGWALL F1	44	41									8	65	675				
51+75	HEADWALL FF	WINGWALL F2	58	32									6	59	517				
		WINGWALL FF1	22	16									5	105	464				
	HEADWALL GG	WINGWALL FF2	8	7									4	32	276				
		WINGWALL GG1	38	27								1	6	65	415				
		WINGWALL GG2	19	19									5	42	343				
56+00	HEADWALL G	WINGWALL GG1	4	7									2	38	312				
		WINGWALL GG2	31	21									5	43	361				
	HEADWALL H	WINGWALL G1	37	28									6	66	457				
		WINGWALL G2	8	8									2	38	324				
		WINGWALL H1	22	13									4	37	276				
61+00	HEADWALL K	WINGWALL H2	52	35									7	67	598				
		WINGWALL K1	26	24									5	53	393				
	HEADWALL L	WINGWALL K2	24	12									4	87	432				
		WINGWALL L1	65	33									6	57	515				
		WINGWALL L2	1,968	35									7	68	598				
71+00	HEADWALL M	WINGWALL L1	769	10									3	68	385				
		WINGWALL L2	978	18									4	28	358				
	HEADWALL N	WINGWALL K1	26	24									5	53	393				
		WINGWALL K2	24	12									2	87	432				
		WINGWALL K1	52	35									7	67	598				
71+25	HEADWALL O	WINGWALL K2	65	33									6	57	515				
		WINGWALL L1	769	10									3	68	385				
	HEADWALL P	WINGWALL L2	978	18									4	28	358				
		WINGWALL M1	15	9									3	15	192				
		WINGWALL N1	13	8									2	42	318				
76+75	HEADWALL EE	WINGWALL N2	7	7									1	29	291				
		WINGWALL EE1	19	10									3	27	242				
	HEADWALL EE	WINGWALL EE2	16	10									3	16	205				
		WINGWALL EE1	7	5									1	18	113				
		WINGWALL EE2	31	21									5	37	322				

TABULATION OF DRAINAGE STRUCTURES

STATION	HEADWALL	WINGWALL	STRUCTURE EXCAVATION		SHORING (AREA 1) - (AREA 8)								CONCRETE CLASS B		CUT STONE VENEER		REINFORCING STEEL		DESCRIPTION			
			CY	CY	LS	LS	LS	LS	LS	LS	LS	LS	CY	SF	LB	LB						
78+00	HEADWALL HH	WINGWALL HH1	47	49										9	110	868						
			8	11										3	76	464						
	HEADWALL JJ	WINGWALL HH2	104	135										20	216	2,383						
		WINGWALL JJ1	58	68										10	80	1,059						
		WINGWALL JJ2	23	23										3	62	435						
89+00	HEADWALL Q	WINGWALL Q1	13	7										2	12	175						
			9	6										2	32	150						
	HEADWALL U	WINGWALL Q2	19	12										3	20	230						
		WINGWALL U1	38	26										6	58	436						
		WINGWALL U2	7	9										3	59	388						
90+00	HEADWALL V	WINGWALL U2	23	23										6	76	475						
		WINGWALL V1	40	24										6	62	435						
	HEADWALL W	WINGWALL V2	19	9										3	59	388						
		WINGWALL W1	50	29										7	92	513						
		WINGWALL W2	42	20										5	51	372						
91+50	HEADWALL X	WINGWALL W2	9	9										2	50	350						
		WINGWALL X1	27	17										5	52	351						
	HEADWALL Y	WINGWALL X2	27	19										5	38	334						
		WINGWALL Y1	6	8										2	40	330						
		WINGWALL Y2	29	20										4	30	347						
92+25	HEADWALL Z	WINGWALL Y1	66	22										5	56	392						
		WINGWALL Y2	18	9										2	50	350						
	HEADWALL AA	WINGWALL Y2	61	34										7	64	535						
		WINGWALL Z1	58	25										6	59	414						
		WINGWALL Z2	17	9										2	50	350						
93+50	HEADWALL BB	WINGWALL AA1	62	26										6	61	414						
		WINGWALL AA2	40	25										5	45	410						
	HEADWALL CC	WINGWALL AA1	14	9										2	50	350						
		WINGWALL AA2	59	51										9	90	742						
		WINGWALL BB1	44	27										7	79	474						
95+75	HEADWALL RR	WINGWALL BB2	15	8										2	45	344						
		WINGWALL R1	22	18										4	27	317						
	HEADWALL SS	WINGWALL R2	27	31										7	88	516						
		WINGWALL S1	17	9										2	50	350						
		WINGWALL S2	66	39										8	84	580						
TOTAL			6,67	2,138	1	1	1	1	1	1	1	1	1	1	1	1	1	1	464	5,778	42,485	

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				GOLD RUN ROAD DRAINAGE TABULATIONS (SHEET 4 OF 4)	
		DESIGNED:	CAD:	CHECKED:	DATE:	Michael Baker INTERNATIONAL			JLW	EMR	DLT	12/23/16	PROJECT NO: 4043.SEPT12C38	SHEET NO: 22				



**BOULDER COUNTY
TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION**

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

LUND
PARTNERSHIP
12265 W. Bayaud Avenue, Suite 130
Lakewood, Colorado 80228
P:303.989.1461 F: 303.989.4094
CIVIL ENGINEERING
& SURVEYING

Survey Control Diagram		
Title Sheet		
Project Number:	4043.SEPT12C38	
Project Location:	Gold Run Road	
Boulder County, Colorado		
Last Modified Date	Subset	Sheet No.
12-15-2015	1.01 to 1.03	1.01

BOULDER COUNTY TRANSPORTATION ENGINEERING DIVISION

SURVEY CONTROL DIAGRAM

Gold Run Road

Sections 17 & 18, Township 1 North, Range 71 West and
Sections 12 & 13, Township 1 North, Range 72 West,
of the 6th Principal Meridian, County of Boulder

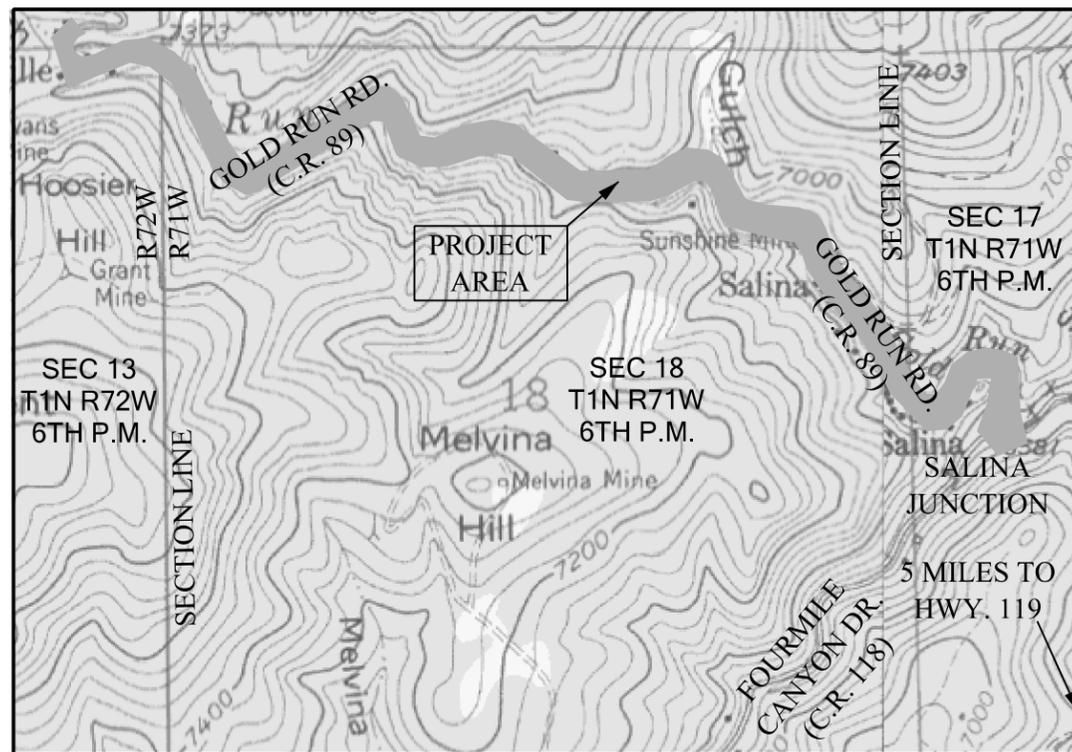
SHEET NO.	INDEX OF SHEETS
1.01	(1) Title Sheet
1.02	(1) Monument Coordinate Tables
1.03	(1) Plan Sheet
(3) Total Sheets	

SYMBOL LEGEND

▲ PROJECT CONTROL MONUMENT
 ▲ HIGH ACCURACY REFERENCE NETWORK CONTROL MONUMENT

General Notes:

1. This Survey Control Diagram is not a boundary survey of the adjoining property, and is prepared for Boulder County Transportation Engineering Division purposes only.
2. This survey control diagram is subject to change and may not be the most current set. It is the user's responsibility to verify with Boulder County Transportation Engineering Division that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
3. Date of field work to establish control points performed on or about August of 2014.

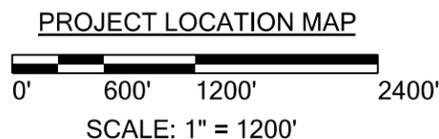


BASIS OF BEARINGS: Bearings used in the calculation of coordinates are based on a line connecting project control point 5 (being a set 2" diameter aluminum cap on #5 rebar stamped "LPI 5"), and project control point 6 (being a set 2" diameter aluminum cap on #5 rebar stamped "LPI 6"), having a GRID bearing of S 70°55'23" E a distance of 2,713.40 feet, as obtained from a global positioning system (GPS) survey based on the Colorado High Accuracy Reference Network CHARN). Said grid bearing is NAD 83 (2011) Colorado State Plane North Zone 501.

BASIS OF ELEVATIONS: Project elevations are GPS derived using First Order Class II NGS monument designated as "X 438", PID: LL1137, being the top of a 5/8" stainless steel rod without sleeve, encased in a 5" PVC with Logo lid surrounded by concrete, said monument having a published NAVD 88 elevation of 5289.64 feet.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane North Zone (0501) NAD '83 (2011) Epoch 2010.00 coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.000373101. The Northings were then truncated by 1,000,000 and the Eastings were truncated by 3,000,000.

Project Coordinates Northing US Survey Feet =
 (State Plane Coordinate Northing x 1.000373101) -1,000,000.00
 Project Coordinates Easting US Survey Feet =
 (State Plane Coordinate Easting x 1.000373101) -3,000,000.00



NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

**SURVEYOR STATEMENT
(SURVEY CONTROL DIAGRAM)**

I, James A. Daley, a professional land surveyor licensed in the State of Colorado, do hereby state to the Boulder County Transportation Engineering Division that this Survey Control Diagram was prepared, and the field survey it represents was performed under my responsible charge for and on behalf of The Lund Partnership, Inc., and based upon my knowledge, information and belief is in accordance with applicable standards of practice. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 37044



**BOULDER COUNTY
TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION**

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials



Survey Control Diagram		
Monument Coordinate Tables		
Project Number:	4043.SEPT12C38	
Project Location:	Gold Run Road	
Boulder County, Colorado		
Last Modified Date	Subset	Sheet No.
12-15-2015	1.01 to 1.03	1.02

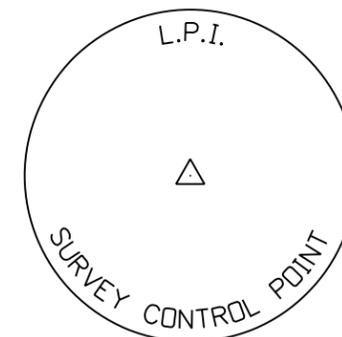
GEODETTIC CONTROL TABLE (HELD FIXED - U.S. SURVEY FEET)

POINT NO.	GEODETTIC COORDINATES - NAD 83 (2011)		ELLIPSOID HEIGHT	MAPPING ANGLE	COLORADO STATE PLANE NORTH ZONE (501)		POINT NO.	PROJECT COORDINATES		NAVD 88 ELEVATION	DESCRIPTION
	LATITUDE	LONGITUDE			NORTHING	EASTING		NORTHING	EASTING		
5	40° 03' 27.36763" N	105° 23' 35.43892" W	7404.47	0°04'08.5"	1263847.85	3029901.43	5	264319.39	31031.89	7451.48	SET 2" ALUMINUM CAP ON #5 REBAR STAMPED "LPI SURVEY CONTROL POINT 5"
6	40° 03' 18.57476" N	105° 23' 02.48572" W	6962.13	0°04'29.8"	1262961.34	3032464.86	6	263432.55	33596.27	7009.50	SET 2" ALUMINUM CAP ON #5 REBAR STAMPED "LPI SURVEY CONTROL POINT 6"
7 *	40° 03' 05.79906" N	105° 22' 21.15548" W	6588.50	0°04'56.5"	1261673.01	3035680.45	7	262143.74	36813.06	6636.32	SET 2" ALUMINUM CAP ON #5 REBAR STAMPED "LPI SURVEY CONTROL POINT 7"
101 *	40° 03' 02.24087" N	105° 22' 19.08407" W	6584.05	0°04'57.8"	1261313.19	3035842.04	101	261783.79	36974.72	6631.90	FOUND ORANGE PLASTIC CAP ON #5 REBAR MARKED "DEA INC. 101"
DSRC *	39° 59' 29.13021" N	105° 15' 39.67502" W	5436.96	0°09'15.9"	1239813.43	3066959.21	DSRC	240276.01	68103.49	N/A	NGS CONTINUOUSLY OPERATING REFERENCE STATION
X438 *	40° 02' 11.39082" N	105° 14' 05.37354" W	5237.12	0°10'16.8"	1256252.94	3074249.59	X438	256721.65	75396.59	5289.64	FOUND SMOOTH STAINLESS STEEL ROD IN NGS MONUMENT BOX STAMPED "X 438"

* = POINT NOT SHOWN GRAPHICALLY ON PLAN SHEET

PROJECT CONTROL POINT TABULATION (PROJECT SPECIFIC COORDINATES - U.S. SURVEY FEET)

POINT NO.	NORTHING	EASTING	NAVD 88 ELEVATION	DESCRIPTION
8	261858.19	36522.36	6677.16	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
9	261782.02	36356.67	6691.21	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
10	261873.78	36220.02	6706.10	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
11	262045.18	36166.06	6718.44	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
12	262240.73	35900.97	6745.22	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
13	262546.68	35693.51	6772.58	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
14	262707.28	35534.50	6793.59	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
15	263015.02	35387.68	6824.12	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
16	263061.53	34950.74	6868.08	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
17	263359.31	34858.85	6891.76	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
18	263352.42	34636.18	6908.89	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
19	263235.09	34513.31	6922.32	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
20	263261.53	33964.92	6970.40	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
21	263568.61	33440.09	7032.45	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
22	263459.64	33013.27	7072.85	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
23	263550.37	32814.45	7097.92	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
24	263830.79	32695.49	7139.09	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
25	263731.19	32415.58	7171.49	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
26	263545.48	32093.08	7207.77	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
27	263285.59	31810.71	7254.46	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
28	263347.26	31665.94	7271.25	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
29	263630.73	31495.58	7303.24	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
30	263844.98	31421.38	7326.96	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
31	264052.36	31275.45	7344.03	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
32	264116.40	31016.96	7365.05	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
33	264038.01	30661.26	7392.47	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
34	264211.34	30578.02	7413.48	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP
35	264283.04	30733.88	7426.64	SET 18" LONG # 5 REBAR WITH PUNCH MARK IN TOP



TYPICAL L.P.I. CONTROL CAP
2" DIAMETER ALUMINUM CAP ON #5 REBAR



BOULDER COUNTY
TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION

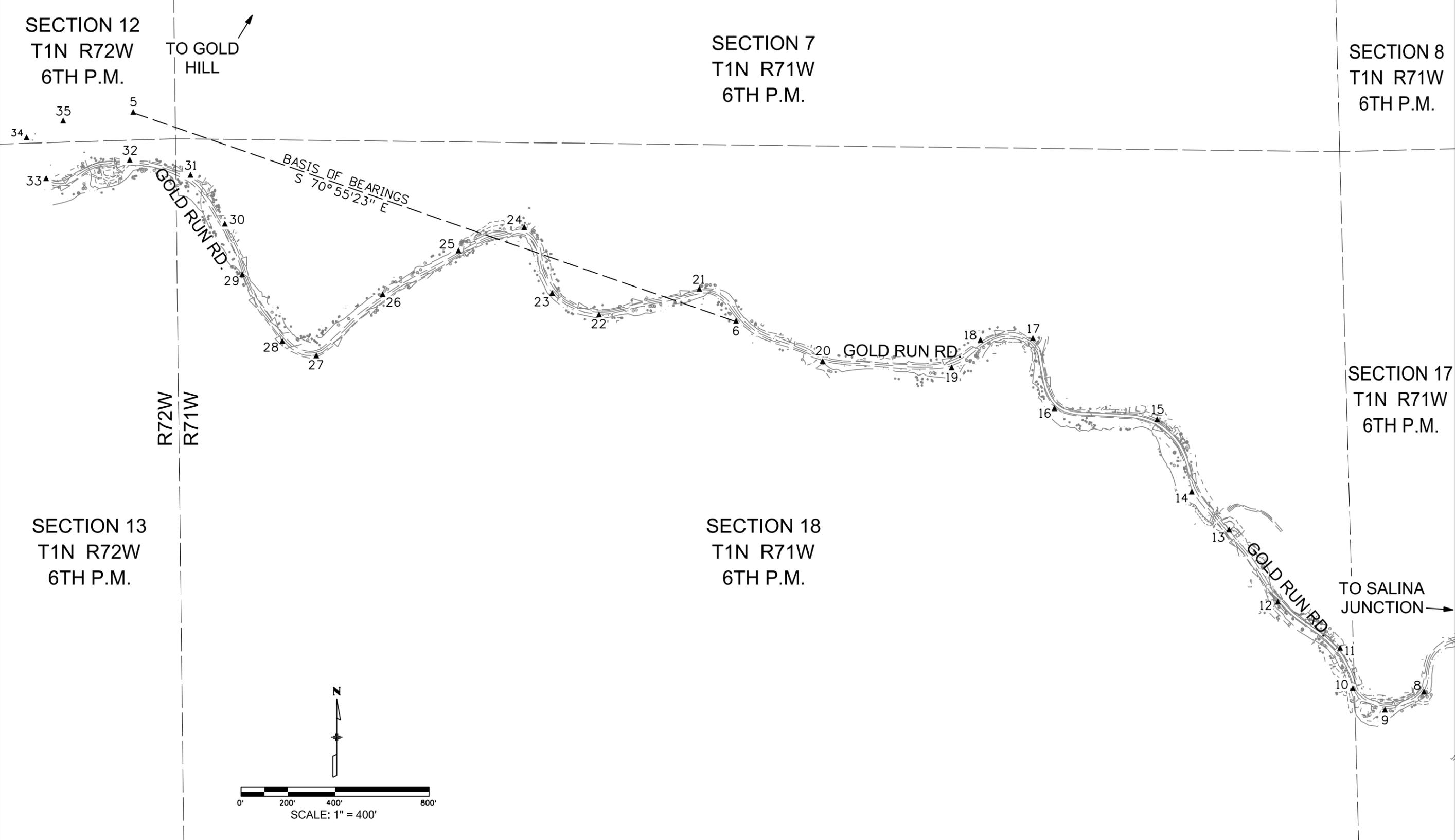
Sheet Revisions		
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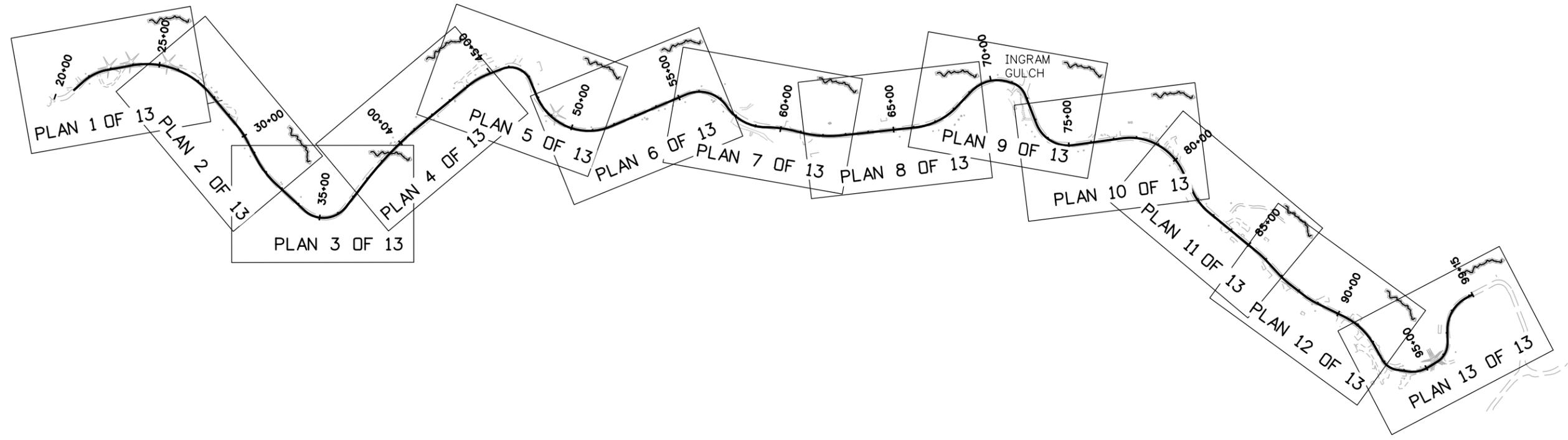


Survey Control Diagram		
Plan Sheet		
Project Number:	4043.SEPT12C38	
Project Location:	Gold Run Road	
Boulder County, Colorado		
Last Modified Date	Subset	Sheet No.
12-15-2015	1.01 to 1.03	1.03

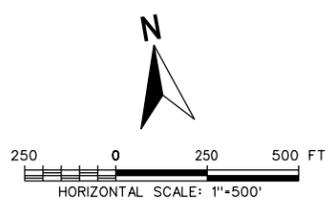


NOTES:

1. SHEET NUMBERING APPLIES TO REMOVALS, ROADWAY, AND DRAINAGE PLANS.



jessica.wray 11:05:54 AM 12/22/2016 p:\DCFW\APP1\Lkr.mbakercorp.com\p\prod\Documents\Projects\Lakewood\Office\Boulder\County_Emergency_Transportation\102\08_Sheet_L_Files\10_General_Sheets\10GN\PI-01



100% SET	 <small>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</small>	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION Michael Baker INTERNATIONAL	DESIGNED:	CAD:	CHECKED:	DATE:	GOLD RUN ROAD PLAN INDEX <small>PROJECT NO: 4043.SEPT12C38 SHEET NO: 26</small>
							JVV	SMP	BCA	12/23/16	