

BOULDER COUNTY TRANSPORTATION DEPARTMENT

ENGINEERING DIVISION

CONSTRUCTION BID PLANS FOR THE PROPOSED SALINA JUNCTION CULVERT CONSTRUCTION

BOULDER COUNTY

BOULDER COUNTY PROJECT NO. 4011.SEPT12C38

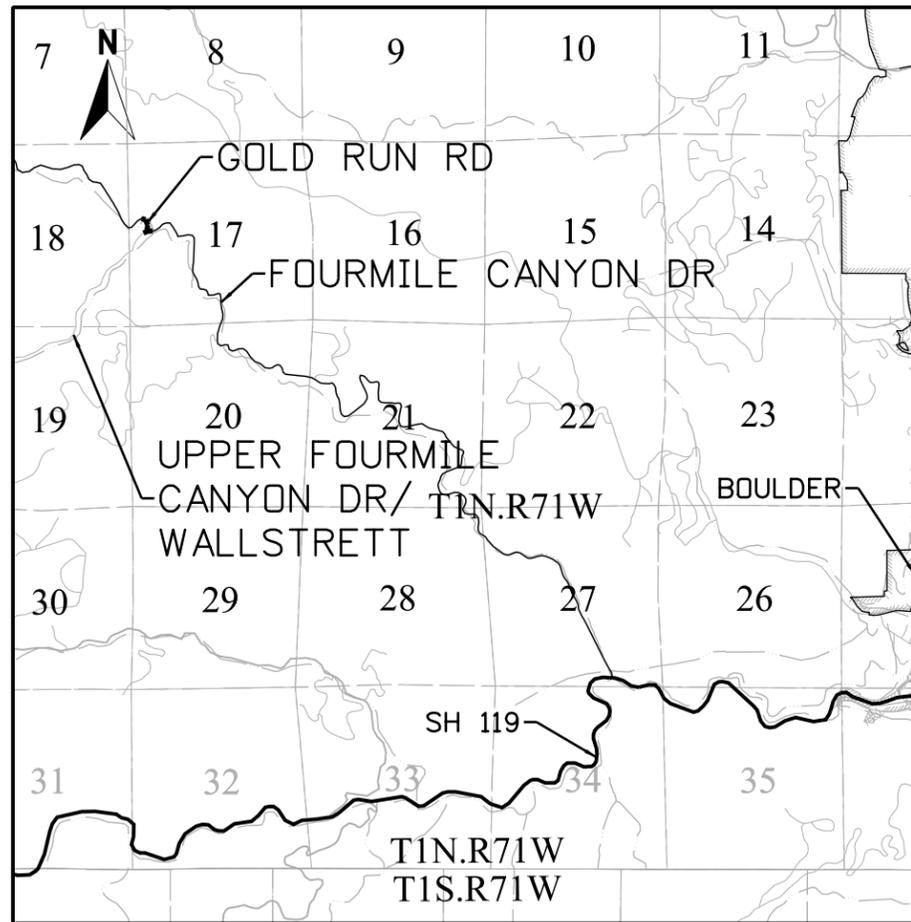
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RIGHT OF WAY	
	RIGHT OF WAY PLANS (FOR INFORMATION ONLY)

TABULATION OF LENGTH & DESIGN DATA

STATION	FEET	
	ROADWAY	STRUCTURE
BEGIN GOLD RUN RD CONSTRUCTION STA 98+91.0		
END GOLD RUN RD CONSTRUCTION STA 104+89.51	598.51	
BEGIN FOURMILE CANYON DR CONSTRUCTION STA 800+09.00		
END FOURMILE CANYON DR CONSTRUCTION STA 1+00.00 (TEMPORAY FOURMILE)	312.13	
TOTAL	910.64	
SUMMARY OF PROJECT LENGTH	FEET	MILES
ROADWAY (NET LENGTH)	910.64	0.18
MAJOR STRUCTURE (NET LENGTH)	0.00	0.00
PROJECT GROSS LENGTH	910.64	0.18

DESIGN DATA	GOLD RUN	FOURMILE
ROADWAY CLASSIFICATION	COLLECTOR	LOCAL/COLLECTOR
EXISTING SURFACE TYPE	PAVED	PAVED
MINIMUM RADIUS OF CURVE	50'	80'
MAXIMUM GRADE	13.96%	3.25%
MINIMUM S.S.D HORIZONTAL	42'	62'
MINIMUM S.S.D. VERTICAL	99'	128'
MAXIMUM DESIGN SPEED	25 MPH	25 MPH
CLEAR ZONE DISTANCE	0' TO 3'	0.5' TO 5'
MAXIMUM SUPERELEVATION	4%	4%



PROJECT LOCATION MAP



BID 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: KLL CAD: MEM CHECKED: JPZ DATE: 07/31/15

SALINA JUNCTION
TITLE SHEET

PROJECT NO: 4011.SEPT12C38 SHEET NO: 1

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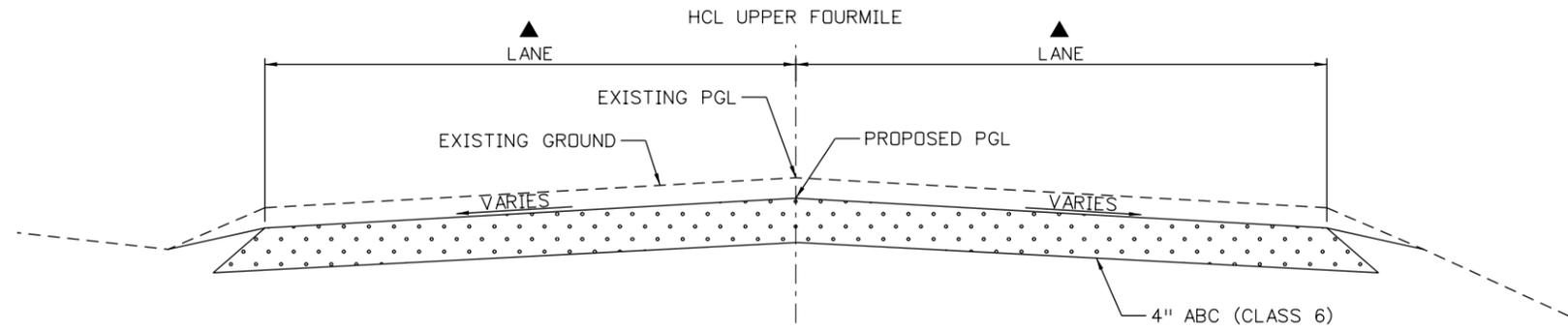
PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER
M-100-1		STANDARD SYMBOLS (3 SHEETS).....	1-3
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COLORADO
DEPARTMENT OF TRANSPORTATION
M&S STANDARDS PLANS LIST
 July 04, 2012
 Revised on December 17, 2014

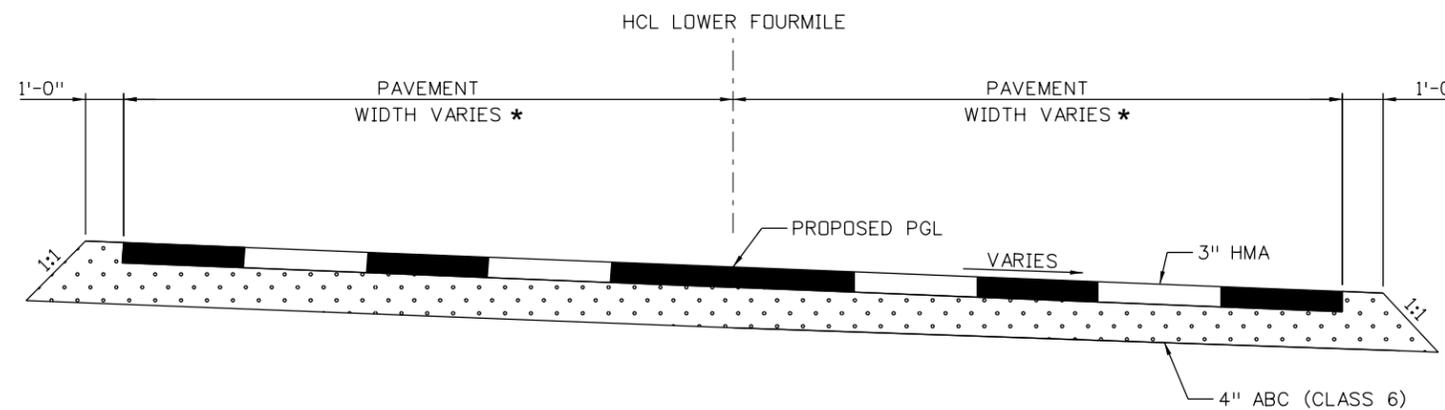
ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.



**TYPICAL SECTION - UPPER FOURMILE CANYON DR./WALLSTREET
ABC TIE-IN**

NTS
UPPER FOURMILE STA 800+09.00 TO STA 800+46.71

HCL	STATION		▲
	FROM	TO	
UPPER FOURMILE	800+09.00	800+46.71	EXISTING TO PROPOSED FOURMILE WIDTH



TYPICAL SECTION - LOWER FOURMILE PAVEMENT TIE IN

NTS
LOWER FOURMILE STA 0+00.00 TO STA 1+00.00

* FOR PAVEMENT WIDTH REFER TO HCL LOWER FOURMILE RT EOP
AND HCL LOWER FOURMILE LT EOP ON GEOMETRIC LAYOUT SHEETS.

NOTES:

1. SUPERELEVATION VARIES, SEE PROFILE SHEETS.
2. SEE TYPICAL SECTIONS ROADWAY SHEET (3 OF 3) FOR END CONDITIONS.

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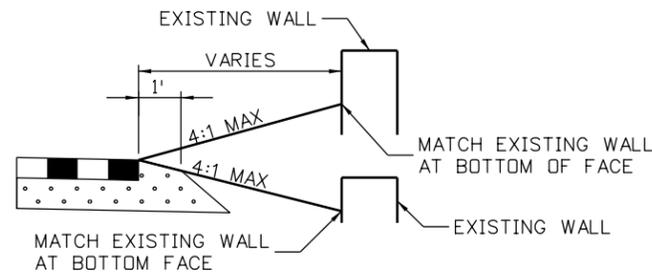
<p>CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES</p>	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	<p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p>	DESIGNED:	CAD:	CHECKED:	DATE:	<p align="center">SALINA JUNCTION TYPICAL SECTIONS ROADWAY (2 OF 3)</p>	
								KLL	EAV		JPZ

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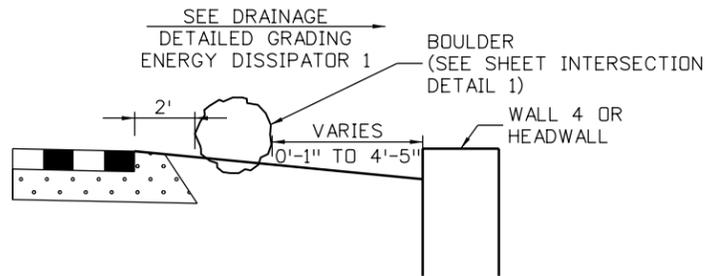
HCL	STATION		OFFSET	SIDE TREATMENT
	FROM	TO		
GOLD RUN	98+91.00	99+55.00	RT	DETAIL G - 4:1 SLOPE
GOLD RUN	99+55.00	99+65.00	RT	DETAIL G - TRANSITION 4:1 TO 6:1 SLOPE
GOLD RUN	99+65.00	100+47.00	RT	DETAIL G - 6:1 SLOPE
GOLD RUN	100+47.00	100+57.00	RT	DETAIL G TO DETAIL D TRANSITION
GOLD RUN	100+57.00	101+16.00	RT	DETAIL D - 10% SLOPE
GOLD RUN	101+16.00	101+45.00	RT	DETAIL D - 0.5H:1V SLOPE
GOLD RUN	101+45.00	102+30.00	RT	DETAIL D - 10% SLOPE
GOLD RUN	102+30.00	102+40.00	RT	DETAIL D - TRANSITION 10% TO 2% SLOPE
GOLD RUN	102+40.00	102+44.00	RT	DETAIL INLET - 2% SLOPE
GOLD RUN	102+44.00	102+54.00	RT	INLET TO DETAIL G TRANSITION
GOLD RUN	102+54.00	102+85.00	RT	DETAIL G - 2% SLOPE
GOLD RUN	102+85.00	102+95.00	RT	DETAIL G - TRANSITION 2% TO 4:1 SLOPE
GOLD RUN	102+95.00	103+26.58	RT	DETAIL G - 4:1 SLOPE
GOLD RUN	103+26.58	103+36.58	RT	DETAIL G - TRANSITION 4:1 TO EX. WALL TIE IN SLOPE
GOLD RUN	103+36.58	104+16.64	RT	DETAIL A
GOLD RUN	104+16.64	104+36.71	RT	DETAIL A - TRANSITION EX. WALL TIE IN SLOPE TO 10%
GOLD RUN	98+91.00	100+35.00	LT	DETAIL G - 4:1 SLOPE
GOLD RUN	100+35.00	100+60.00	LT	SEE INTERSECTION DETAIL SHEETS
GOLD RUN	100+60.00	100+85.00	LT	DETAIL G - 4:1 SLOPE
GOLD RUN	100+85.00	101+00.00	LT	DETAIL G - TRANSITION 4:1 TO EX. TOP OF CHANNEL TIE IN SLOPE
GOLD RUN	101+00.00	101+34.00	LT	DETAIL G - EX. TOP OF CHANNEL TIE IN, SLOPE
GOLD RUN	101+34.00	101+56.68	LT	DRAINAGE DETAILED GRADING RIPRAP EMBANKMENT
GOLD RUN	101+56.68	103+36.58	LT	TYPICAL SECTIONS CHANNEL
GOLD RUN	103+36.58	103+69.08	LT	DETAIL E
GOLD RUN	103+69.08	103+96.10	LT	DETAIL F
GOLD RUN	103+96.10	104+16.64	LT	DETAIL E
GOLD RUN	104+16.64	104+36.71	LT	SEE INTERSECTION DETAIL SHEETS
GOLD RUN	104+36.71	104+89.57	RT/LT	SEE INTERSECTION DETAIL SHEETS
UPPER FOURMILE	800+09.00	802+21.13	LT	SEE INTERSECTION DETAIL SHEETS
UPPER FOURMILE	800+09.00	800+85.00	RT	DETAIL G - 1% SLOPE
UPPER FOURMILE	800+85.00	801+14.00	RT	SEE INTERSECTION DETAIL SHEETS
UPPER FOURMILE	801+14.00	801+80.00	RT	DETAIL B
UPPER FOURMILE	801+80.00	802+21.13	RT	DETAIL C
LOWER FOURMILE	00+00.00	0+10.00	RT	DETAIL G - 6:1 SLOPE
LOWER FOURMILE	0+10.00	0+20.00	RT	DETAIL G - 6:1 SLOPE
LOWER FOURMILE	0+20.00	1+00.00	RT	DETAIL G - TRANSITION 6:1 TO 4:1 SLOPE
LOWER FOURMILE	00+00.00	0+14.00	LT	SEE INTERSECTION DETAIL SHEETS

NOTES:

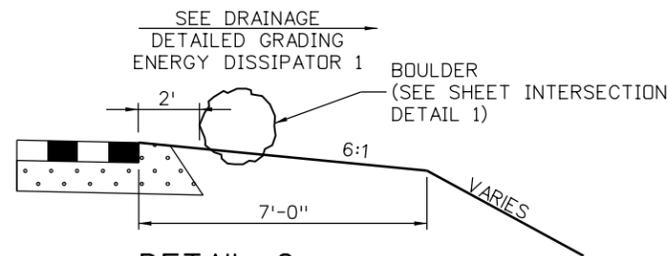
1. SUPERELEVATION VARIES, SEE PROFILE SHEETS.
2. SEE SHEET TYPICAL SECTIONS ROADWAY 1 AND 2 FOR ADDITIONAL DETAILS.



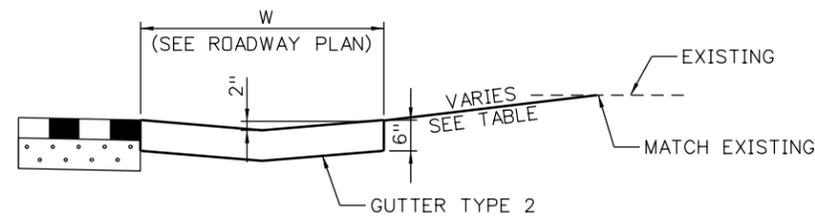
DETAIL A
NTS



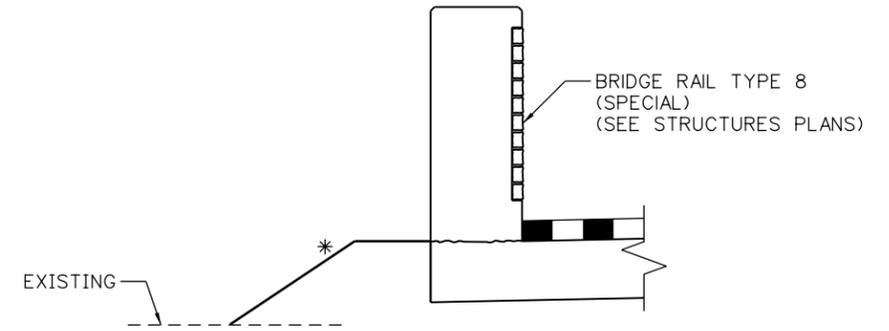
DETAIL B
NTS



DETAIL C
NTS

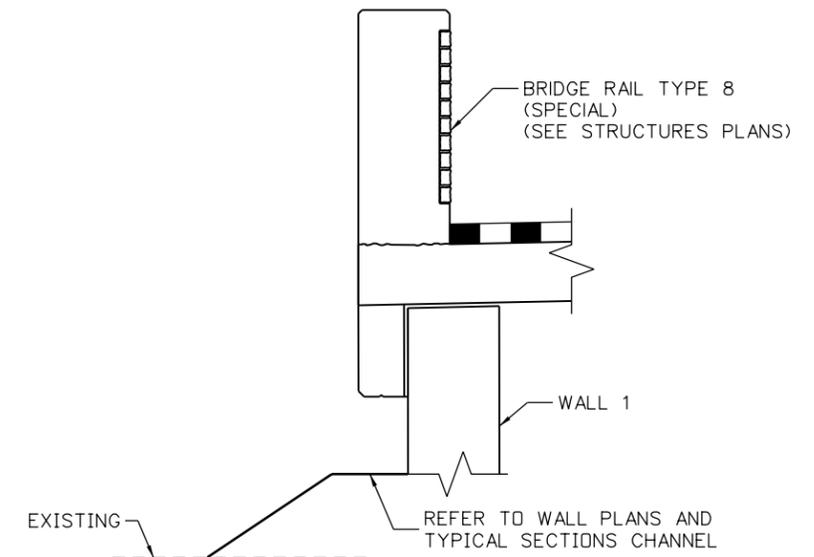


DETAIL D
NTS

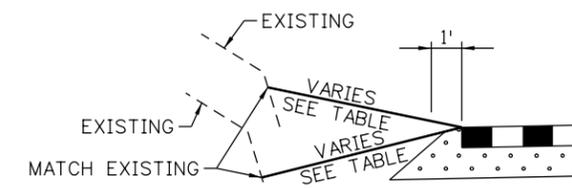


*		
103+36.58	103+69.08	REFER TO TYPICAL SECTIONS CHANNEL
103+96.10	104+16.64	REFER TO INTERSECTION DETAIL 1

DETAIL E
NTS

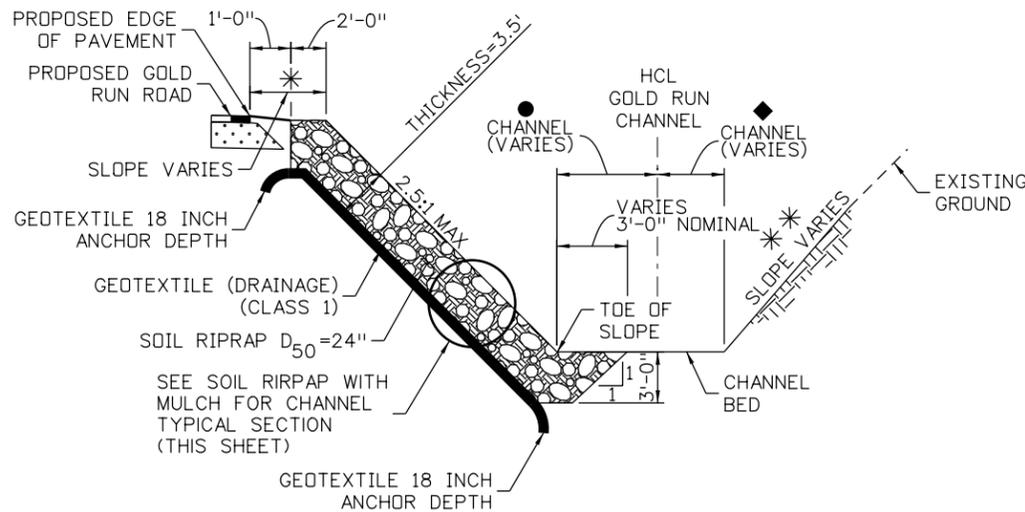


DETAIL F
NTS



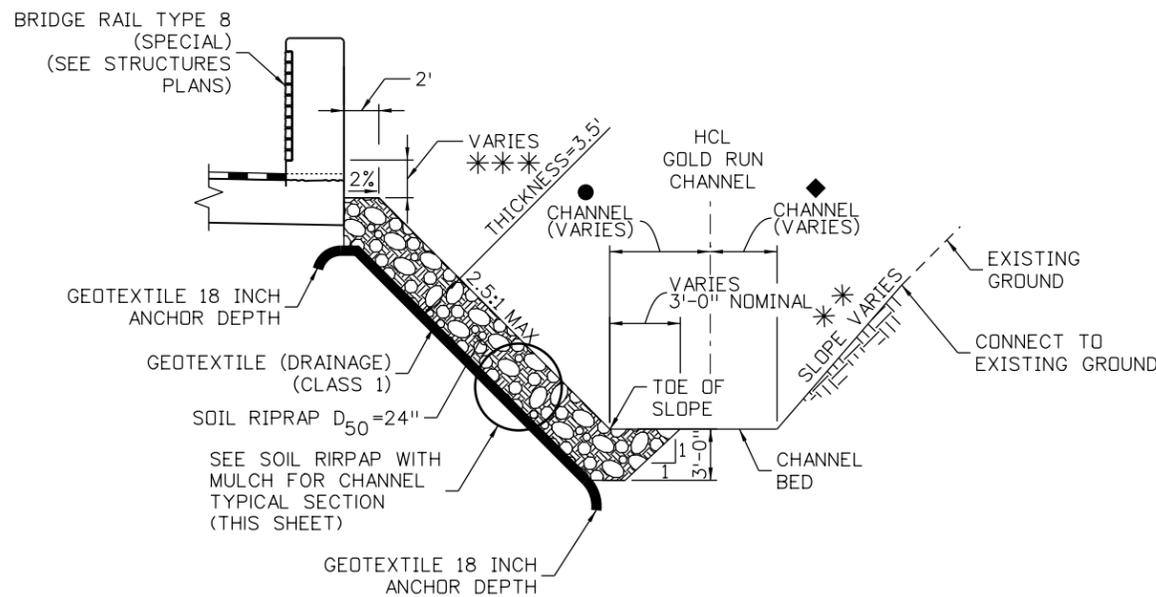
DETAIL G
NTS

<p>CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES</p>	NO.	DATE	REVISION DESCRIPTION:	<p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p>	DESIGNED:	CAD:	CHECKED:	DATE:	<p>SALINA JUNCTION TYPICAL SECTIONS ROADWAY (3 OF 3)</p>
						RGK	RGK	JPZ	



GOLD RUN CHANNEL

NTS
STA 52+28.04 TO STA 54+37.21



GOLD RUN CHANNEL

NTS
STA 51+97.14 TO STA 52+28.04

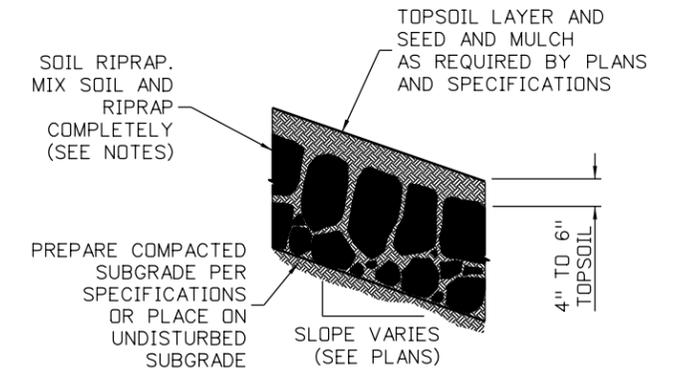
EDGE OF PAVEMENT TO CHANNEL BREAKPOINT					
GOLD RUN STATION		GOLD RUN CHANNEL STATION			
FROM	TO	FROM	TO		
103+36.58	103+30.58	52+28.03	52+36.26	*	
103+30.58	102+82.92	52+36.26	53+10.53	2%	
102+82.92	102+72.85	53+10.53	53+26.12	TRANSITION FROM 2% TO MAINTENANCE ACCESS POINT 102 (SEE DRAINAGE DETAILED GRADING)	
102+72.85	102+63.85	53+26.12	53+39.50	MAINTENANCE ACCESS GRADING, SEE DRAINAGE DETAILED GRADING SHEETS	
102+63.85	102+49.75	53+39.50	53+55.09	TRANSITION FROM MAINTENANCE ACCESS POINT 103 TO 6:1	
102+49.75	101+56.68	53+55.09	54+37.21	6:1	

CHANNEL BACKSLOPE		
GOLD RUN CHANNEL STATION		**
FROM	TO	
52+00.00	52+38.00	SLOPE VARIES TIE TO BACK EDGE OF EXISTING
52+38.00	52+62.00	.25:1V CATCH UP TO EXISTING
52+62.00	53+51.00	SLOPE VARIES TIE TO BACK EDGE OF EXISTING
53+51.00	54+31.00	.25:1V CATCH UP TO EXISTING
54+31.00	54+37.21	SLOPE VARIES TIE TO BACK EDGE OF EXISTING

CHANNEL BOTTOM WIDTH		
GOLD RUN CHANNEL STATION		◆
FROM	TO	
51+97.14	52+07.33	4.0'
52+07.33	52+35.33	4.0' - 2.5'
52+35.33	54+37.21	2.5'

CHANNEL BOTTOM WIDTH		
GOLD RUN CHANNEL STATION		●
FROM	TO	
51+97.14	52+07.33	4.0'
52+07.33	52+35.33	4.0' - 5.5'
52+35.33	53+75.33	5.5'
53+75.33	54+00.33	5.5' - 2.5'
54+00.33	54+37.21	2.5'

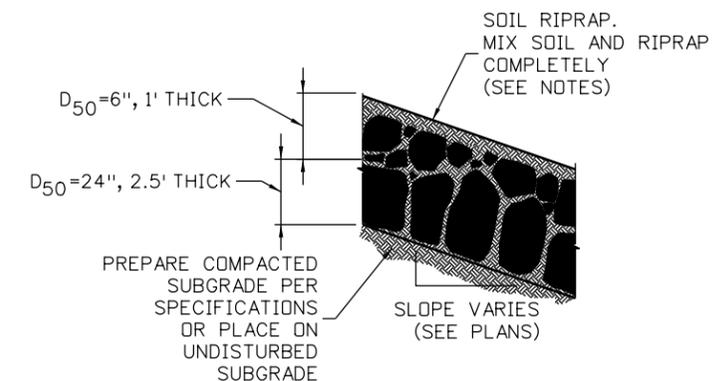
CHANNEL BREAK POINT AT MOMENT SLAB					
GOLD RUN STATION		GOLD RUN CHANNEL STATION			
FROM	TO	FROM	TO		
103+96.03	103+69.08	51+68.75	51+89.98	***	
103+69.08	103+43.90	51+89.98	52+18.61	CATCH POINT TRANSITIONS FROM BACK BOTTOM OF MOMENT SLAB TO BACK OF MOMENT SLAB AT EOP ELEVATION	
103+43.90	103+36.58	52+18.61	52+28.03	BACK OF MOMENT SLAB AT EOP	



TYPICAL SECTION SOIL RIPRAP WITH MULCH FOR CHANNEL
NTS

NOTES:

- SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE DRAINAGE PLANS FOR ACTUAL LOCATIONS AND LIMITS.
- MIX UNIFORMLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY VOLUME PRIOR TO PLACEMENT.
- PLACE RIPRAP-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE DESIGN RIPRAP TOP GRADE.
- CRIMP OR TACKIFY MULCH OR AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- SEE STORMWATER MANAGEMENT PLAN 2 FOR SEEDING MIXTURE AND DETAILS.
- BENCH RIPRAP AS NECESSARY TO MATCH EXISTING GRADE AND PLACE STONE-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN THICKNESS AND GRADE. COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE FINISHED GRADE.



TYPICAL SECTION SOIL RIPRAP WITH MULCH FOR MAINTENANCE ACCESS PATH
NTS

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GENERAL NOTES:

1. 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.
2. GEOTECHNICAL INFORMATION FOR THIS PROJECT IS BASED UPON THE GEOTECHNICAL INVESTIGATION REPORT SALINA JUNCTION, FOURMILE CANYON DRIVE AND GOLD RUN, BY YEH AND ASSOCIATES, DATED OCTOBER 3, 2014 AND THE DRAFT PAVEMENT INVESTIGATION REPORT, FOURMILE CANYON REPAIRS, TASK ORDER 3, BY YEH & ASSOCIATES, DATED JANUARY 27, 2015. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS.
3. IN THE EVENT THE CONTRACTOR ALLOWS, AUTHORIZES, APPROVES OR CONSTRUCTS ITEMS THAT DIFFER FROM THE APPROVED PLANS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, WITHOUT WRITTEN APPROVAL BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LIABILITY ARISING FROM SUCH CHANGES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, AND ANY OTHER NEEDED ACTION TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO FOR LOCATION OF UNDERGROUND GAS, ELECTRIC AND COMMUNICATION UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION (1-800-922-1987) OR 811 THE CONTRACTOR SHALL NOTIFY OTHER APPLICABLE UTILITY COMPANIES AS WELL TO OBTAIN FIELD LOCATES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
6. LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS WERE TAKEN FROM THE RECORDS OF THE CONTROLLING AGENCIES OR FROM AGENCY MARKINGS IN THE FIELD. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR COMPLETENESS OR ACCURACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND/OR LOCATION OF ALL UNDERGROUND UTILITIES AND PARTICIPATE IN THE RESOLUTION OF ANY CONFLICTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOB SITE CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROTECTION OF PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED ONLY TO WORKING HOURS. THE CONTRACTOR SHALL DEFEND INDEMNIFY AND HOLD THE OWNER, THE ENGINEER AND THE GOVERNING JURISDICTION HARMLESS FOR ANY AND ALL LIABILITY, IN CONNECTION WITH THE PERFORMANCE OF WORK, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER OR THE GOVERNING JURISDICTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC OR PRIVATE STREETS OF MUD AND DEBRIS, DUE TO CONSTRUCTION ACTIVITIES, ON A DAILY BASIS OR AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2011; AND AS SUBSEQUENTLY REVISED; THE CDDT STANDARD PLANS M&S STANDARDS DATED JULY, 2012 AND REVISED; AND THE BOULDER COUNTY MULTI-MODAL TRANSPORTATION STANDARDS; AND THE BOULDER COUNTY STORM DRAINAGE CRITERIA MANUAL.
10. 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.
11. CONTRACTORS MAY USE DIGITAL TERRAIN MODEL (DTM) DATA IN CONJUNCTION WITH THE DESIGN PLANS. IN THE EVENT OF A CONFLICT, DESIGN PLANS SHALL ALWAYS TRUMP DATA FROM THE DTM.
12. CONTRACTOR TO CONTACT ENGINEER IN THE EVENT OF A DISCREPANCY TO CONSTRUCTION.

GENERAL NOTES CONT'D:

13. FOR PRELIMINARY PLAN QUANTITIES OF MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:
 HOT MIX ASPHALT.....@ 110 LBS./SQ.YD./INCH
 AGGREGATE BASE COURSE CLASS 6.....@ 133 LBS./CU.FT.
 TACK COAT DILUTED EMULSIFIED ASPHALT@ 0.10 GALS/SQ.YD. (DILUTED)
14. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL CONTAIN ALL WORK WITHIN THE RIGHT OF WAY AND TEMPORARY EASEMENTS AS SHOWN ON THE PLANS AND CROSS SECTIONS (ROW SHOWN ON PLANS IS APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD). ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT CONTRACTOR'S OWN EXPENSE. CONSTRUCTION ACTIVITIES IN ADDITION TO NORMAL CONSTRUCTION SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
15. 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.
16. 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.
17. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY USING EVERY REASONABLE MEANS, INCLUDING FIELD LOCATION OF THE UTILITY. REPAIR OF DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DOCUMENT THE CONDITION OF EXISTING UTILITIES (VISIBLE FACILITIES) WITH THE ENGINEER AND UTILITY REPRESENTATIVES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
18. ALL EXISTING UTILITY FACILITIES TO REMAIN IN PLACE WITHIN THE CONSTRUCTION LIMITS SHALL BE PROTECTED BY THE CONTRACTOR.
19. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS REQUIRED TO PERFORM THE PROPOSED WORK PRIOR TO CONSTRUCTION.
20. STATIONING LATH WILL BE REMOVED AS DIRECTED AND AT NO ADDITIONAL COST TO THE PROJECT.
22. IT IS ESTIMATED THAT 8 HOURS OF BLADING WILL BE REQUIRED FOR THIS PROJECT.
23. IT IS ANTICIPATED THAT PUBLIC INFORMATION SERVICES WILL BE REQUIRED FOR THIS PROJECT.
24. IT IS ANTICIPATED THAT CONSTRUCTION SURVEYING WILL BE REQUIRED FOR THIS PROJECT.
25. IT IS ANTICIPATED THAT MOBILIZATION WILL BE REQUIRED FOR THIS PROJECT.
26. IT IS ESTIMATED THAT 1 SANITARY FACILITY WILL BE REQUIRED FOR THIS PROJECT.
27. IT IS ESTIMATED THAT 8 HOURS OF PROOF ROLLING WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.
28. IT IS ESTIMATED THAT 0.73 ACRES OF CLEARING AND GRUBBING WILL BE REQUIRED FOR THIS PROJECT AND PAID FOR AS ONE LUMP SUM.
29. IT IS ESTIMATED THAT 4 HOURS OF HERBICIDE APPLICATION WILL BE REQUIRED FOR THIS PROJECT.
30. IT IS ESTIMATED THAT 8 HOURS OF WILDLIFE BIOLOGIST WILL BE REQUIRED FOR THE PROJECT.
31. IT IS ESTIMATED THAT 8 HOURS OF REMOVAL OF NESTS WILL BE REQUIRED FOR THE PROJECT
32. 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.

GENERAL NOTES CONT'D:

33. THE CONTRACTOR SHALL REMOVE DEBRIS AS NEEDED FOR CONSTRUCTION OF THE PROJECT. ALL WORK ASSOCIATED WITH THIS CONSTRUCTION ACTIVITY WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CLEARING AND GRUBBING IN ITEM 201.
34. 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.
35. THE CONTRACTOR MUST KEEP ALL EQUIPMENT OPERATION A MINIMUM OF 10 FEET FROM EXISTING OVERHEAD ELECTRIC LINES. IF THIS IS NOT FEASIBLE, OR CONDITIONS WARRANT ADDITIONAL PROTECTION OR POLE STABILIZATION, THE CONTRACTOR MUST CONTACT THE UTILITY OWNER TO ARRANGE PROTECTIVE COVERING AND POLE STABILIZATION. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.

PAVEMENT CONSTRUCTION NOTES:

1. 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.
2. 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.
3. ASPHALT JOINTS SHALL FALL ON LANE LINES, SHOULDERS LINES OR MEDIAN LINES, EXCEPT WHERE STATED IN THE PLANS.
4. PRIOR TO PLACING HOT MIX ASPHALT, THE PAVED SURFACE SHALL BE SWEEPED AND CLEANED. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE HOT MIX ASPHALT PAVEMENT ITEM.
5. 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.
6. THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER:
 A. A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH
 B. SHORT SKI OR SHOE
 C. 1500 FEET OF CONTROL LINE AND STAKES

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 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:	SALINA JUNCTION GENERAL NOTES (1 OF 2)	PROJECT NO: 4011.SEPT12C38	SHEET NO: 7
						JLW JLW JPZ 07/31/15						

EARTHWORK/GRADING:

1. 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.
2. EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.
3. GRADING WILL BE INSPECTED BY AN OWNER'S REPRESENTATIVE DURING ALL EXCAVATIONS TO EVALUATE CHANGING CONDITIONS.
4. 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:

1. REFERENCE POINTS FOR INSTALLATION OF DRAINAGE FEATURES ARE DETAILED ON THE DRAINAGE DETAILS SHEET.
2. THE DEFINITION OF PIPE LENGTHS CALLED OUT IN THE DRAINAGE PLANS ARE DETAILED ON THE DRAINAGE DETAILS SHEET.
3. PIPE MATERIAL WILL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED ON THE PLANS. STRENGTH CLASS OF ALL RCP SHALL BE IN ACCORDANCE WITH CDOT M-603-2 AND SECTION 706.02 OF THE STANDARD SPECIFICATIONS.
4. THE CONTRACTOR IS REQUIRED TO KEEP EXISTING CULVERTS FUNCTIONAL AND MAINTAIN PROPER STORMWATER CONVEYANCE UNTIL PROPOSED DRAINAGE FACILITIES ARE CONSTRUCTED AND FUNCTIONING PROPERLY. REMOVAL OR ABANDONMENT OF THE EXISTING STORM DRAIN SYSTEMS SHALL BE AT THE DISCRETION OF THE CONTRACTOR IN ACCORDANCE WITH CONSTRUCTION PHASING.
5. SIGNED AND SEALED SHOP DRAWINGS FOR ALL NON CDOT STANDARD DRAINAGE STRUCTURES ARE REQUIRED.
6. INFORMATION SHOWN REPRESENTS THE FINAL STORM DRAIN SYSTEM AND CULVERTS. PHASING OF INSTALLATION AND INSTALLATION METHODS TO ACCOMMODATE CONSTRUCTION SCHEDULES IS AT THE DISCRETION OF THE CONTRACTOR.
7. UNLESS OTHERWISE NOTED, EXISTING DRAINAGE FACILITIES SHALL REMAIN AND BE PROTECTED IN PLACE.

SIGNING AND PAVEMENT MARKING NOTES

1. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE INSTALLED AS INDICATED IN THE ROADWAY SITE PLANS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CDOT STANDARDS AND SPECIFICATIONS.
2. POST LENGTHS ARE PROVIDED FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT POST LENGTHS NECESSARY TO MEET SPECIFIED PANEL HEIGHTS.
3. THE LOCATION OF SIGNS IS APPROXIMATE. THE FINAL LOCATION OF THE SIGNS IS TO BE APPROVED BY THE ENGINEER.
4. ANY DAMAGE DONE TO THE EXISTING UTILITIES DURING THE PLACEMENT OF THE SIGNS IS THE RESPONSIBILITY OF THE CONTRACTOR.

ENVIRONMENTAL NOTES:

1. IF AN ACTIVE NEST CONTAINING EGGS OR YOUNG BIRDS IS FOUND, ALL WORK THAT COULD RESULT IN ABANDONMENT OR DESTRUCTION OF THE NEST WILL BE AVOIDED UNTIL THE YOUNG HAVE FLEDGED OR THE NEST IS UNOCCUPIED AS DETERMINED BY A QUALIFIED BIOLOGIST. TREE TRIMMING AND/OR REMOVAL ACTIVITIES SHALL BE COMPLETED BEFORE BIRDS BEGIN TO NEST OR AFTER THE YOUNG HAVE FLEDGED. IN COLORADO, MOST NESTING AND REARING ACTIVITIES OCCUR BETWEEN APRIL 1 AND AUGUST 31, HOWEVER, SINCE SOME BIRDS NEST AS EARLY AS FEBRUARY 15, A NESTING BIRD SURVEY SHALL BE CONDUCTED BY A QUALIFIED BIOLOGIST BEFORE ANY TREE TRIMMING OR REMOVAL ACTIVITIES BEGIN. THE CONTRACTOR SHALL FOLLOW THE PROVISIONS OF THE MIGRATORY BIRD TREATY ACT (MBTA) THROUGHOUT THE DURATION OF CONSTRUCTION. IF CONSTRUCTION RELATED ACTIVITIES OCCUR BETWEEN FEBRUARY 15 AND AUGUST 31 THEN A PRE-CONSTRUCTION SURVEY FOR NESTING BIRDS MUST BE COMPLETED BY A QUALIFIED BIOLOGIST. NO CONSTRUCTION ACTIVITIES WILL OCCUR WITHIN 50 FEET OF AN ACTIVE NEST UNTIL THE NEST BECOMES INACTIVE OR THE YOUNG HAVE FLEDGED. A PRE-CONSTRUCTION SURVEY FOR NESTING RAPTORS MUST BE COMPLETED WITHIN A HALF MILE BUFFER OF THE PROJECT LIMITS. IF ANY NESTING RAPTORS OCCUR WITHIN THE BUFFER AREA, THEN CPW "RECOMMENDED BUFFER ZONES AND SEASONAL RESTRICTIONS FOR COLORADO RAPTORS" GUIDELINES SHOULD BE FOLLOWED. CPW MAY REDUCE THE BUFFER REQUIREMENTS BASED ON CONDITIONS OF THE STUDY AREA AND TYPE OF WORK BEING DONE, BUT MUST BE CONSULTED FOR APPROVAL PRIOR TO CONSTRUCTION WITHIN THE RECOMMENDED BUFFER ZONE OF AN ACTIVE NEST.
2. REMOVAL OF EXISTING TREES AND VEGETATION DURING CONSTRUCTION WILL BE LIMITED. ACCESS ROUTES, STAGING AREAS, ETC. WILL BE LOCATED WITHIN PREVIOUSLY DISTURBED AREAS TO THE EXTENT POSSIBLE. DISTURBED AREAS WILL BE RESTORED USING NATIVE PLANT MATERIALS.
3. FOLLOW REGIONAL STORMWATER GUIDELINES AND DESIGN BEST MANAGEMENT PRACTICES (BMPs) TO CONTROL CONTAMINATION, EROSION, AND SEDIMENTATION DURING AND AFTER CONSTRUCTION.
4. AVOID SPREADING NOXIOUS WEEDS BY MINIMIZING SOIL DISTURBANCE TO THE MAXIMUM EXTENT POSSIBLE, CLEANING CONSTRUCTION EQUIPMENT, AND RE-SEEDING OF ALL DISTURBED SOIL WITH A CERTIFIED WEED-FREE SEED MIX. USE NATIVE, WEED-FREE SEEDS, PLANTS, AND MULCH TO RE-VEGETATE ALL AREAS OF DISTURBANCE.
5. THE CONTRACTOR WILL TAKE APPROPRIATE MEASURES TO PREVENT, MINIMIZE, AND CONTROL THE SPILL OF HAZARDOUS MATERIALS IN THE CONSTRUCTION AREA. THE USE OF CONSTRUCTION EQUIPMENT WITHIN SENSITIVE AREAS WILL BE MINIMIZED OR ELIMINATED. ALL CONSTRUCTION MATERIALS USED FOR THIS PROJECT WILL BE REMOVED AS SOON AS THE WORK SCHEDULE PERMITS. ANY UNANTICIPATED HAZARDOUS MATERIALS AND/OR PETROLEUM CONTAMINATION ENCOUNTERED DURING CONSTRUCTION WILL BE HANDLED ACCORDING TO APPLICABLE FEDERAL AND STATE REGULATIONS FOR HANDLING EMERGENCY DISCOVERY OF HAZARDOUS MATERIALS.
6. ONCE CONSTRUCTION BEGINS, IF ANY SUBSURFACE ARCHAEOLOGICAL MATERIALS ARE ENCOUNTERED (E.G., ARTIFACTS SUCH AS (BUT NOT LIMITED TO) HISTORIC TRASH SUCH AS BOTTLES, DISHWARE, HOUSEHOLD OR MINING ITEMS, ETC; PREHISTORIC STONE TOOLS SUCH AS PROJECTILE POINTS OR OTHER FLAKED STONE ITEMS; OR HISTORIC OR PREHISTORIC FEATURES, SUCH AS FOUNDATIONS, STONE WALL REMAINS, MINE ADITS OR PROSPECT PITS, HEARTHES, ETC.), WORK SHOULD BE IMMEDIATELY HALTED IN THE VICINITY OF THE FIND, AND A QUALIFIED PROFESSIONAL ARCHAEOLOGIST SHOULD BE PROMPTLY NOTIFIED TO EXAMINE THE ARTIFACTS AND FEATURE. THE SITE OF THE FIND SHOULD BE SECURED AND WORK SHOULD NOT RESUME UNTIL THE DISCOVERY CAN BE EVALUATED AND/OR REMOVED BY A QUALIFIED ARCHAEOLOGIST. IF BONES OF POTENTIAL HUMAN ORIGIN ARE ENCOUNTERED DURING CONSTRUCTION, GROUND-DISTURBING WORK MUST BE STOPPED IN THE VICINITY OF THE DISCOVERY, AND THE BOULDER COUNTY SHERIFF AND CORONER, AND THE COLORADO STATE ARCHAEOLOGIST SHOULD BE PROMPTLY NOTIFIED. WORK CANNOT RESUME NEAR HUMAN REMAINS UNTIL CLEARANCE IS GRANTED.
7. ONCE CONSTRUCTION BEGINS, IF ANY SUBSURFACE PALEONTOLOGICAL MATERIALS ARE ENCOUNTERED (E.G., VERTEBRATE, INVERTEBRATE, OR PLANT FOSSILS), WORK SHOULD BE HALTED IMMEDIATELY IN THE VICINITY OF THE FIND, AND A QUALIFIED PROFESSIONAL PALEONTOLOGIST SHOULD BE PROMPTLY NOTIFIED TO EXAMINE THE ARTIFACTS OR FEATURE. THE SITE OF THE FIND SHOULD BE SECURED AND WORK SHOULD NOT RESUME UNTIL THE DISCOVERY CAN BE EVALUATED AND/OR REMOVED BY A QUALIFIED PALEONTOLOGIST. IF WARRANTED, ADDITIONAL PALEONTOLOGIST TESTING OR DATA RECOVERY MAY BE NECESSARY BEFORE WORK CAN BE RESUMED IN THE VICINITY OF THE FIND.
8. LOCATE ACCESS ROUTES, STAGING AREAS, AND WORK AREAS WITHIN PREVIOUSLY DISTURBED OR MODIFIED AREAS WHEN FEASIBLE.

ENVIRONMENTAL NOTES CONT'D:

9. TEMPORARY LIGHTING WILL BE USED WITH DIRECTIONAL SHIELDING TO FOCUS THE LIGHTING ONTO THE DRIVING SURFACE OR PROJECT CONSTRUCTION AREA. ALL PERMANENT LIGHTING MUST BE DARK-SKY COMPLIANT. LIGHTING WILL BE LIMITED TO THE EXTENT NECESSARY TO MEET SAFETY REQUIREMENTS.

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 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:	SALINA JUNCTION GENERAL NOTES (2 OF 2)	PROJECT NO: 4011.SEPT12C38	SHEET NO: 8
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			240-00010	Removal of Nest	HOUR	8						8	
			304-06007	Aggregate Base Course (Class 6)	CY	231						231	
			403-34721	Hot Mix Asphalt (Grading SX) (75) (PG 58-28)	TDN	290				11		301	
			420-00102	Geotextile (Erosion Control) (Class 1)	SY			959				959	
			420-00511	Asphalt Reinforcement Geogrid	SY					130		130	
			506-00212	Riprap (12 Inch)	CY			226				226	
			506-00406	Soil Riprap (6 Inch)	CY			8				8	
			506-00412	Soil Riprap (12 Inch)	CY			64				64	
			506-00424	Soil Riprap (24 Inch)	CY			678				678	
			507-00000	Concrete Slope and Ditch Paving	CY					11		11	
			515-00120	Waterproofing (Membrane)	SY					65		65	
			601-03000	Concrete Class D	CY					26		26	
			601-03030	Concrete Class D (Box Culvert)	CY					139		139	
			601-03050	Concrete Class D (Wall)	CY					87		87	
			601-40005	Cut Stone Veneer	SF					1349		1349	
			601-40301	Structural Concrete Coating	SF					475		475	
			601-40302	Structural Concrete Coating (Anti-Graffiti)	SF					475		475	

 <p>CALL UTILITY NOTIFICATION CENTER OF COLORADO CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES</p>	NO.	DATE	REVISION DESCRIPTION:	 <p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p>	 <p>DESIGNED: KLL CAD: MEM CHECKED: JPZ DATE: 07/31/15</p>	<p>SALINA JUNCTION SUMMARY OF APPROXIMATE QUANTITIES (1 OF 2)</p>	<p>PROJECT NO: 4011.SEPT12C38 SHEET NO: 9</p>

INDEX			CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	ROADWAY		DRAINAGE		STRUCTURES		PROJECT TOTALS	
BOOK	PAGE	SHEET				PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
			602-00020	Reinforcing Steel (Epoxy Coated)	LB					47,331		47,331	
			603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place)	LF			27				27	
			603-05018	18 Inch Reinforced Concrete End Section	EACH			1				1	
			604-13005	Inlet Type 13 (5 Foot)	EACH			1				1	
			606-99997	Boulder Barrier	EACH	12						12	
			606-10805	Bridge Rail Type 8 (Special)	LF					102		102	
			609-20010	Curb Type 2 (Section B)	LF			4				4	
			609-24002	Gutter Type 2 (2 Foot)	LF			267				267	
			614-00011	Sign Panel (Class I)	SF	81.25						81.25	
			614-01502	Steel Sign Support (2-Inch Round)(Post & Socket)	LF	114						114	
			620-00020	Sanitary Facility	EACH	1						1	
			621-99999	Temporary Stream Crossing	LS					1		1	
			625-00000	Construction Surveying	L S	1						1	
			626-00000	Mobilization	L S	1						1	
			626-01000	Public Information Services	L S	1						1	
			627-00001	Pavement Marking Paint	GAL	10						10	
			630-99999	Traffic Control	LS	1						1	

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 <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>	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 <p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p>	 <p>Michael Baker INTERNATIONAL</p>	DESIGNED:	CAD:	CHECKED:	DATE:	<p>SALINA JUNCTION SUMMARY OF APPROXIMATE QUANTITIES (2 OF 2)</p>	<p>PROJECT NO: 4011.SEPT12C38 SHEET NO: 10</p>
								KLL	MEM	JPZ		

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

<input checked="" type="checkbox"/> Horizontal Control	Plans	Format *
<input checked="" type="checkbox"/> Vertical Control	Plans	
<input checked="" type="checkbox"/> Roadway Alignment	Plans	
<input type="checkbox"/> Original Terrain Data		
<input type="checkbox"/> 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

- | | |
|---|--|
| <input type="checkbox"/> Landscaping | <input type="checkbox"/> Major Reconstruction |
| <input type="checkbox"/> Signalization | <input type="checkbox"/> New Roadway Construction |
| <input type="checkbox"/> Safety Improvement | <input type="checkbox"/> Bridge Replacement |
| <input type="checkbox"/> Asphalt Overlay | <input type="checkbox"/> Bridge Widening |
| <input type="checkbox"/> Concrete Overlay | <input type="checkbox"/> New Bridge |
| <input type="checkbox"/> Minor Widening | <input checked="" type="checkbox"/> Other: <u>Flood Recovery and Restoration</u> |

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	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

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

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

- 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
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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

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

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

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

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
 - Structure Excavation limits (Section 206)
 - Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
 - Piling locations and cut off elevations (Section 502)
 - Caisson locations and elevations (Section 503)
 - Footing locations, alignment, and elevations
 - Abutment/Pier locations, alignment, and elevations
 - Wingwall skew angles/offsets
 - Structural concrete form locations
 - Substructure As-constructed survey required for Bridges (Subsection 601.12) and Overhead signs (S-614-50)
 - Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
 - Deck grades at Girder 10th or "n" th point locations and elevations
 - Slope and Ditch Paving (Section 507)
 - Other: Retaining Walls, Moment Slab

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

- Delineators (Section 612)
 - Temporary
 - Permanent

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

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

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

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

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

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

GENERAL NOTES:

- Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDDT Survey Manual.
- Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
- The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer 3 days prior to the Presurvey Conference - Construction Survey.
- Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
- The Contractor shall furnish an As Staked (or GPS/RTS Construction Machine Control) Earthwork Quantity report to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDDT Survey Manual. A printed copy of the As Staked (or GPS/RTS Construction Machine Control) Earthwork data report and a computer disk with that information on it, in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
- Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
- The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
- The Contractor shall coordinate construction staking on the project with any utility work.
- Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
- The Contractor's surveyor shall submit the following fieldbooks to the Engineer:
 - Horizontal Control (Primary & Secondary)
 - Vertical Control (i.e. Benchmarks)
 - Property Pin Ties
 - Horizontal Alignment
 - Grading
 - Slope Staking
 - Minor Structures
 - Major Structures
 - One fieldbook for each work category shown on this sheet
 - Other Fieldbook(s): _____

 <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>	REVISIONS:	NO.	DATE	REVISION DESCRIPTION:	 <p>BOULDER COUNTY TRANSPORTATION DEPARTMENT ENGINEERING DIVISION</p> <p>Michael Baker INTERNATIONAL</p>	DESIGNED:	CAD:	CHECKED:	DATE:	<p>SALINA JUNCTION SURVEY TABULATION SHEET</p>
							JLW	JLW	JPZ	

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SUMMARY OF EARTHWORK QUANTITIES	
UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)(SPECIAL) FOR ROADWAY	CUBIC YARDS 2,897
TOTAL	2,897
STRUCTURE EXCAVATION (SPECIAL) CULVERT, WALLS, MOMENT SLAB	CUBIC YARDS 970
TOTAL	970
MUCK EXCAVATION AS DIRECTED BY THE ENGINEER	CUBIC YARDS 150
TOTAL	150
FOR INFORMATION ONLY	
UNCLASSIFIED EXCAVATION UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)(SPECIAL) STRUCTURE EXCAVATION (SPECIAL) MUCK EXCAVATION	CUBIC YARDS 2,897 970 150
TOTAL	4,017
COMPACTION (AASHTO T180) TOTAL EMBANKMENT (NET)	CUBIC YARDS 129
TOTAL	129
EARTHWORK QUANTITIES BALANCE	
UNCLASSIFIED EXCAVATION TOTAL UNCLASSIFIED EXCAVATION TOTAL EXCESS EXCAVATION	CUBIC YARDS 4,017 3,875
EMBANKMENT (NET) TIMES COMPACTION FACTOR (1.10) TOTAL	142

TABULATION OF REMOVALS, RESETS AND ADJUSTMENTS						
STATION TO STATION	REMOVAL OF ASPHALT MAT	REMOVAL OF TREES	REMOVAL OF DELINEATORS	RESET DELINEATORS	RESET SIGN	REMARKS
	SY	EA	EA	EA	EA	
99+15.00 TO 104+89.51	1058	2	4	2	0	
800+46.71 TO 1+00.00	754	5	0	0	0	
101+79.00	0	0	0	0	1	
104+44.00	0	0	0	0	1	
TOTALS	1812	7	4	2	2	

TABULATION OF SURFACING QUANTITIES						
LOCATION	STATION TO STATION		HOT MIX ASPHALT (GRADING SX) (75) (PG 58-28)	AGGREGATE BASE COURSE (CLASS 6)	NOTES	
			TON	CY		
GOLD RUN RD TIE IN	98+91.00	TO	99+15.00	0	2	
GOLD RUN RD	99+15.00	TO	104+36.71	177	128	
UPPER FOURMILE CANYON DR/WALLSTREET	800+09.00	TO	802+21.13	74	70	INCLUDES INTERSECTION
FOURMILE CANYON DR	0+00.00	TO	1+00.00	39	31	
TOTALS			290	231		

TABULATION OF BARRIER					
LOCATION	STATION TO STATION		Boulder Barrier	NOTES	
			EACH		
UPPER FOURMILE CANYON DR/WALLSTREET	801+14.72	TO	802+21.13	12	
TOTALS			12		

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PAVEMENT SIGNING AND MARKING LEGEND

	NEW	EXISTING
SINGLE POST MOUNTED SIGN		
EDGE LINE, WHITE, 4"	———	
CENTER LINE, YELLOW, 4"	=====	

TABULATION OF PAVEMENT MARKINGS										
LOCATION	STATION		MARKING TYPE	PAVEMENT MARKINGS						DESCRIPTION
				DBL YELLOW SOLID 4 IN			WHITE SOLID 4 IN			
	FROM	TO		LF	SF	GAL	LF	SF	GAL	
GOLD RUN RD	99+15	104+60	CENTER	545	363	3.6				
UPPER FOURMILE CANYON DR/WALLSTREET	800+47	801+51	CENTER	104	69	0.7				
UPPER FOURMILE CANYON DR/WALLSTREET	802+00	802+21	CENTER	21	14	0.1				
UPPER FOURMILE CANYON DR/WALLSTREET	802+03	802+21	EDGE				23	8	0.1	
			TOTAL (GAL)			5			5	ROUNDED UP TO NEXT FULL 5 GALLONS

TABULATION OF SIGNS

SIGN NO.	LOCATION	STATION	DIRECTION	SIGN CODE	SIGN PANEL SIZE			BACKGROUND COLOR	LEGEND	SIGN PANEL	STEEL SIGN SUPPORT (2-INCH ROUND) (POST AND SOCKET)		REMARKS	
					W"	x	H"				CLASS I	NUMBER OF POSTS		POST LENGTH
														LF
1	GOLD RUN	100+15	SB	W1-1R	30		30	YELLOW	CURVE RIGHT	6.25	1	12		
2	GOLD RUN	100+15	SB	W13-1P	18		18	YELLOW	10 MPH	2.25			MOUNT WITH SIGN 1	
3	GOLD RUN	101+15	NB	W1-1L	30		30	YELLOW	CURVE LEFT	6.25	1	12		
4	GOLD RUN	101+15	NB	W13-1P	18		18	YELLOW	10 MPH	2.25			MOUNT WITH SIGN 3	
5	GOLD RUN	101+50	NB	W11-3	30		30	YELLOW	DEER CROSSING	6.25	1	11		
6	GOLD RUN	101+79	SB	W3-2	-		-	-	YIELD AHEAD	-			RESET EXISTING SIGN	
7	GOLD RUN	103+00	NB	R2-1	24		30	WHITE	SPEED LIMIT 20	5.00	1	13		
8	GOLD RUN	103+55	NB	W11-2	30		30	YELLOW	PEDESTRIAN CROSSING	6.25	1	12		
9	GOLD RUN	103+55	NB	W7-3aP	24		18	YELLOW	NEXT 2 MILES	3.00			MOUNT WITH SIGN 8	
10	GOLD RUN	104+44	SB	R1-2	-		-	-	YIELD	-			RESET EXISTING SIGN	
11	UPPER FOURMILE	108+13	EB	W1-10R	36		36	YELLOW	CURVE RIGHT/INTERSECTION	9.00	1	11		
12	LOWER FOURMILE	0+06	WB	W1-10L	36		36	YELLOW	CURVE LEFT/INTERSECTION	9.00	1	11		
13	GOLD RUN	103+30	SB	OM3-R	12		36	YELLOW	OBJECT MARKER	3.00	1	8		
14	GOLD RUN	103+00	NB	SPECIAL	30		30	WHITE	CHAIN REQUIREMENTS	6.25			MOUNT WITH SIGN 7	
15	UPPER FOURMILE	801+64	WB	N/A	-		-	-	DIRECTIONAL SIGN	-			EXISTING SIGN - PROTECT IN PLACE	
16	UPPER FOURMILE	800+76	EB	W11-2	30		30	YELLOW	PEDESTRIAN CROSSING	6.25	1	12		
17	UPPER FOURMILE	800+76	EB	W16-9P	24		12	YELLOW	AHEAD	2.00			MOUNT WITH SIGN 16	
18	LOWER FOURMILE	0+46	WB	W11-2	30		30	YELLOW	PEDESTRIAN CROSSING	6.25	1	12		
19	LOWER FOURMILE	0+46	wB	W16-9P	24		12	YELLOW	AHEAD	2.00			MOUNT WITH SIGN 18	
TOTAL									81.25	10	114			

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

NO.	DATE	REVISION DESCRIPTION:

BOULDER COUNTY TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION

Michael Baker
 INTERNATIONAL

DESIGNED:	CAD:	CHECKED:	DATE:
KLL	MEM	JPZ	07/31/15

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TABULATION OF DRAINAGE STRUCTURES

ID	LOCATION	HCL	STATION-OFFSET	INLET TYPE 13 (5 FOOT)		LINE		PIPE INVERT ELEVATIONS		GRADE (%)	18 INCH REINFORCED CONCRETE PIPE		REMOVAL OF PIPE	SOIL RIPRAP (6 INCH)	SOIL RIPRAP (12 INCH)	SOIL RIPRAP (24 INCH)	RIPRAP (12 INCH)	GUTTER TYPE 2 (2 FOOT)	CURB TYPE 2 (SECTION B)	GRANULAR BEDDING TYPE II (CLASS A)	GEOTEXTILE (EROSION CONTROL) (CLASS 1)	DESCRIPTION
				EA	FROM UPPER	TO	UPPER	LOWER	LF		EA	LF										
GUTTER	GOLD RUN RD	GOLD RUN	100+57.00 to 102+40.00, 9' RT															175	4			
RIPRAP	GOLD RUN CHANNEL	GOLD RUN CHANNEL	51+89.98 to 54+61.17, LT											8		678						643
IN1	GOLD RUN RD	GOLD RUN	102+42.11, RT	1	TYPE 13 INLET	18" FES	6615.19	6614.59	2.23	27	1											
EXISTING PIPE	GOLD RUN RD	GOLD RUN to LOWER FOURMILE	104+40.63, 16.73' LT to 0+16.25, 31.98' RT										142									42" CMP
RIPRAP	FOURMILE CANYON DR	UPPER FOURMILE to LOWER FOURMILE	801+12.51 to 0+09.56, RT											64		226				73	316	
GUTTER	FOURMILE CANYON DR	UPPER FOURMILE	800+26.25, 12.59' LT to 801+16.00, 9.00' LT															92				
TOTAL				1							27	1	142	8	64	678	226	267	4	73	959	

CALL UTILITY NOTIFICATION CENTER OF COLORADO
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REVISIONS:	NO.	DATE	REVISION DESCRIPTION:

 **BOULDER COUNTY TRANSPORTATION DEPARTMENT**
ENGINEERING DIVISION
 **Michael Baker INTERNATIONAL**

DESIGNED: MEM	CAD: MEM	CHECKED: JPZ	DATE: 07/31/15
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**SALINA JUNCTION
DRAINAGE STRUCTURE
TABULATION SHEET**

PROJECT NO: 4011.SEPT12C38 SHEET NO: **14**

BOULDER COUNTY EMERGENCY RESPONSE
CONTROL DIAGRAM - TASK ORDER 3

A PARCEL OF LAND IN SECTIONS 17, 18 20, 21, 28 & 27,
 TOWNSHIP 1 NORTH, RANGE 71 WEST AND OF THE 6TH P.M.,
 COUNTY OF BOULDER, STATE OF COLORADO.

- SHEET 1 OF 1 -

DEA CP-301



DEA CP-302



DEA CP-303
 "BOULDER 267"



DEA CP-304



DEA CP-305



GROUND COORDINATE TABLE:

PT #	NORTHING	EASTING	ELEV.	DESCRIPTION
301	260918.86	37998.29	6498.1	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
302	257914.18	40324.93	6370.5	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
303	256805.77	43418.89	6233.4	2" BRASS CAP IN 4" CONCRETE POST "BOULDER 267"
304	254795.59	45583.99	6018.9	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP
305	249657.54	50020.78	5760.7	#5 REBAR W/ 1-1/4" ORANGE PLASTIC CAP

NOTES:

- 1.) The basis of coordinates for this map is the North America Datum of 1983-2011 (NAD 83 (2011)) U.S. Survey Feet, based locally upon the David Evans and Associates, Inc. Control Point DEA CP 302 for ground coordinate scale factor determination.
- 2.) The basis of elevations for this map is the North American Vertical Datum of 1988 (NAVD 88), based locally upon the CP 302. Elevations computed from a NGS OPUS Solution Report using a four (4) hour occupation data set at DEA CP 302.
- 3.) To modify ground control to Colorado State Plane North Zone; add 1,000,000 feet to North coordinate, add 3,000,000 feet to East coordinate and multiply by 1/csf (combined scale factor = 1/1.000328515 = 0.999671593).
- 4.) Fieldwork for control was completed November 2013.
- 5.) Set 18" long #5 rebar with 1-1/4" outside diameter orange plastic cap marked "DEA INC" at all control points unless otherwise noted, see Ground Coordinate Table above.

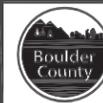
NOTICE:

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



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	CALL UTILITY NOTIFICATION CENTER OF COLORADO			REVISIONS: NO. DATE DESCRIPTION
	CALL 2--BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES			



**BOULDER COUNTY TRANSPORTATION DEPARTMENT
 ENGINEERING DIVISION**

DESIGNED: MK	CAD: MK	CHECKED: TB	DATE: 11/26/13
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EMERGENCY RESPONSE
CONTROL DIAGRAM TO_3

PROJECT NO: **RS-1108-00** SHEET NO: **15**

Baker