

CONSTRUCTION PLANS FOR  
**BLUE RIVER 2016 CISTERNS**  
 LOCATED IN THE  
 TOWN OF BLUE RIVER  
 SUMMIT COUNTY, COLORADO  
 MAY 2016



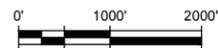
**INDEX OF DRAWINGS**

SHEET NO.	DRAWING NO.	TITLE
1	G-1	COVER
2	G-2	GENERAL NOTES
3	G-3	CISTERN DETAILS
4	C-1	DAVIS CT. CISTERN PLAN
5	C-2	S.H. 9 & CROWN DR. CISTERN PLAN
6	C-3	TRAFFIC CONTROL NOTES
7	C-4	TRAFFIC CONTROL PLAN
8	C-5	INDIANA CREEK CISTERN PLAN
9	C-6	WILDERNESS DR. CISTERN PLAN

**LEGEND**

	TREES
---	PROPOSED PERMANENT EASEMENT
—5275—	PROPOSED MAJOR CONTOUR
—	PROPOSED MINOR CONTOUR
—	CONSTRUCTION LIMITS
—5275—	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	EXISTING PROPERTY
---	EXISTING ROW
-x-x-x-x-	EXISTING FENCE
---	EXISTING EASEMENT LINE
—3"w—	EXISTING 3" WATERLINE

**VICINITY MAP**



**TOWN OF BLUE RIVER**  
 DRAWING REVIEW  
 REVIEW IS FOR GENERAL COMPLIANCE WITH  
 TOWN STANDARDS. NO RESPONSIBILITY IS  
 ASSUMED FOR CORRECTNESS OF DESIGN.

BY: \_\_\_\_\_ DATE: \_\_\_\_\_



PLOTTED: 5/13/2016 9:39:54 AM  
 NAME: P:\11-008.15.2016 CISTERNS - TOWN OF BLUE RIVER\CAD\DRAWINGS\11-008.15\_CVR.DWG

DESIGNED: WAM  DRAWN: MAB  CHECKED: ALR	PROJECT NO. 11-008.15	<b>SHEET REVISIONS</b>				 <b>MULLER</b> ENGINEERING COMPANY <small>777 S. WADSWORTH BLVD. 4-100          LAKEWOOD, COLORADO 80226</small>	 <b>TOWN OF BLUE RIVER</b>	BLUE RIVER 2016 CISTERNS	DATE MAY 2016																	
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	DESCRIPTION			BY																		
NO.	DATE	DESCRIPTION	BY																							

**GENERAL NOTES:**

- PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE TOWN ENGINEER 24 HOURS ADVANCED NOTICE. PHONE (303) 988-4939.
- THE TOWN OF BLUE RIVER SHALL NOT BE RESPONSIBLE FOR OPERATION, MAINTENANCE OR REPAIR OF STORM DRAINAGE FACILITIES LOCATED ON PRIVATE PROPERTY.
- THE CONTRACTOR SHALL MAINTAIN ONE (1) SET OF "REDLINED" PRINTS OF THE CONSTRUCTION PLANS. THE "REDLINED" PRINTS SHALL BE KEPT CURRENT TO ACCURATELY REPRESENT THE DIMENSIONS AND LOCATIONS OF ALL WORK PERFORMED BY THE CONTRACTOR. PRIOR TO FINAL PAYMENT, THE CONTRACTOR MUST PRESENT THE "REDLINED" PRINTS TO THE TOWN ENGINEER FOR PREPARATION OF A SET OF REPRODUCIBLE "RECORD DRAWINGS" WHICH SHALL BE SUBMITTED TO THE TOWN WITHIN 30 DAYS OF CONSTRUCTION ACCEPTANCE OF THE PROJECT BY THE TOWN ENGINEER.
- THE CONTRACTOR SHALL PERFORM ALL WORK ACCORDING TO ALL TOWN, COUNTY, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS. IN PARTICULAR, THE TRENCHING AND OPEN EXCAVATION OPERATIONS SHALL COMPLY WITH ALL CURRENT O.S.H.A. REGULATORY REQUIREMENTS.
- ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY". FOR INFORMATION, CONTACT THE COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION, WQCD-PE-B2, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, CO 80222-1530. ATTENTION: PERMITS AND ENFORCEMENT SECTION. PHONE (303) 692-3590.
- ALL TRAFFIC CONTROL DEVICES, STRIPING AND SIGNING MUST BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE TYPE, SIZE, LOCATION, AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES, BOTH HORIZONTALLY AND VERTICALLY.
- PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO COORDINATE SCHEDULES.
- PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION THAT WILL AFFECT TRAFFIC SIGNS OF ANY TYPE, THE CONTRACTOR SHALL CONTACT THE TOWN ENGINEER. PHONE (303) 988-4939.
- THE CONTRACTOR SHALL PROVIDE AND IMPLEMENT A "TRAFFIC CONTROL PLAN" RELATED TO ALL CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
- ALL ROAD CONSTRUCTION IN AREAS DESIGNATED AS WILD FIRE HAZARD AREAS SHALL BE DONE IN ACCORDANCE WITH THE CONSTRUCTION CRITERIA AS ESTABLISHED IN THE WILD FIRE HAZARD AREA MITIGATION REGULATIONS IN FORCE AT THE TIME OF FINAL APPROVAL.
- DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE ENGINEER FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.
- IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
- UPON COMPLETION OF CONSTRUCTION, THE SITE SHALL BE CLEANED AND RESTORED TO A CONDITION EQUAL TO, OR BETTER THAN, THAT WHICH EXISTED BEFORE CONSTRUCTION, OR TO THE GRADES AND CONDITION AS REQUIRED BY THESE PLANS.
- CONSTRUCTION FENCE SHALL BE PLACED AROUND THE SITE TO PROTECT EXCAVATION. FOR BIDDING PURPOSES, IT IS ASSUMED THAT TWO SITES WILL BE ACTIVE AT THE SAME TIME. THE QUANTITIES IN THE TAB REPRESENT THIS.
- SEDIMENT CONTROL LOG SHALL BE PLACED ON DOWNSTREAM SIDE OF SITE TO TRAP ANY SEDIMENT FROM TRANSPORT. IT IS ASSUMED THAT TWO SITES WILL BE ACTIVE AT THE SAME TIME. THE QUANTITIES IN THE TAB REPRESENT THIS.

**TREE PROTECTION NOTES:**

- EXISTING TREES NOTED FOR PROTECTION AND PRESERVATION SHALL NOT BE REMOVED.
- ALL PROTECTED EXISTING TREES SHALL BE PRUNED ACCORDING TO THE MOST CURRENT STANDARDS AND GUIDELINES DEVELOPED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA).
- PRIOR TO AND DURING CONSTRUCTION, BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED EXISTING TREES WITH SUCH BARRIERS TO BE OF ORANGE FENCING A MINIMUM OF FOUR (4) FEET IN HEIGHT, SECURED WITH METAL T-POSTS, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ONE-HALF (1/2) OF THE DRIP LINE, WHICHEVER IS GREATER. THE SPACING OF STAKES SHALL BE TEN (10) FEET. THERE SHALL BE NO STORAGE OR MOVEMENT OF EQUIPMENT, MATERIAL, DEBRIS, OR FILL WITHIN THE FENCED TREE PROTECTION ZONE.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL, OR THE STORAGE OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL, OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE, WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
- NO DAMAGING ATTACHMENT, WIRES, SIGNS, OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.

**WETLAND PROTECTION NOTES:**

- THE CONTRACTOR SHALL EMPLOY EROSION CONTROL MEASURES WHICH MUST REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETE AND DISTURBED AREAS ARE A MINIMUM OF 80% REVEGETATED.
- ORANGE CONSTRUCTION FENCING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF WORK. THE FENCING SHALL BE INSTALLED TO DELINEATE THE WETLAND BOUNDARY AND PREVENT INADVERTENT DAMAGE TO WETLANDS.
- STORMWATER AND SNOW MELT SHALL BE DIVERTED AWAY FROM CULVERTS DURING MAINTENANCE OPERATION. THIS WILL FURTHER PROTECT THE WATER QUALITY OF THE BLUE RIVER.
- IF A TEMPORARY INTRUSION ONTO WETLANDS IS UNAVOIDABLE, VEGETATION SHOULD BE TRIMMED TO NEAR GROUND LEVEL PRIOR TO PLACEMENT OF PROTECTIVE MATS.

**SUMMIT COUNTY STANDARD NOTES FOR CONSTRUCTION PLANS:**

- ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH ALL CURRENTLY APPLICABLE STANDARDS IN THE "SUMMIT COUNTY LAND USE AND DEVELOPMENT CODE."
- LOCATIONS OF EXISTING UTILITIES SHOWN IN PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES ACCORDING TO THE REQUIREMENTS OF THE UTILITY OWNER.
- THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF APPROVED CONSTRUCTION PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND THE TOWN OF BLUE RIVER.
- ONSITE GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND EROSION CONTROL PLAN. ANY IMPORT OR EXPORT OF MATERIAL SHALL BE FROM A PRE-APPROVED SOURCE / DESTINATION. GRADING ON THIS SITE OR ANY OTHER SITE MUST COMPLY WITH ALL DEVELOPMENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, GRADING PERMITS, STATE OF COLORADO WATER QUALITY/DISCHARGE PERMITS, NEPA REVIEW, TIMBER HARVEST PERMITS, ACOE PERMITS AND REQUIREMENTS, FLOOD PLAINS, DESIGNATED DRAINAGE WAYS, ETC.
- PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 811 BEFORE YOU DIG.

**SUMMIT COUNTY, COLORADO EROSION/SEDIMENTATION CONTROL (ESC) NOTES:**

- THE MOST EFFECTIVE ESC BEST MANAGEMENT PRACTICE (BMP) IS NON-DISTURBANCE. GIVEN THAT LAND DEVELOPMENT INVARIABLY INVOLVES EARTH DISTURBING ACTIVITIES, THE FIRST STEP IN RESPONSIBLE STEWARDSHIP IS TO LIMIT THE AMOUNT OF DISTURBANCE REQUIRED FOR SITE DEVELOPMENT. AFTER ALL DESIGN AND PLANNING CONSIDERATIONS HAVE BEEN EVALUATED AND A MINIMAL AMOUNT OF DISTURBANCE AS DESIGNED UPON, THE ATTACHED DETAILS AND NOTES SHALL BE APPLIED WHEREVER THEY MAY BE APPROPRIATE TO PREVENT EROSION AND/OR SEDIMENT DISCHARGE ON/FROM YOUR PROJECT SITE.
- EROSION CONTROL BMP'S AS SHOWN HEREON AND INDICATED ON YOUR SITE PLAN MUST BE INSTALLED AND APPROVED PRIOR TO ISSUANCE OF A GRADING PERMIT, INCLUDING YOUR VEHICLE TRACKING CONTROL PAD AND CONCRETE WASHOUT AREA.
- THE CONTRACTOR SHALL NOT DO ANY CLEARING AND GRUBBING OR EARTHWORK BEFORE THE EROSION CONTROL INSTALLATIONS HAVE BEEN APPROVED BY THE TOWN ENGINEER.
- EROSION CONTROL: CONTROLLING POLLUTION, EROSION, RUN-OFF, AND RELATED DAMAGE MAY REQUIRE THE CONTRACTOR TO PERFORM TEMPORARY WORK ITEMS INCLUDING BUT NOT LIMITED TO:
  - INSTALLING DITCHES, BERMS, CULVERTS, AND OTHER MEASURES TO CONTROL SURFACE WATER.
  - BUILDING DAMS, SETTING BASINS, ENERGY DISSIPATERS, AND OTHER MEASURES, TO CONTROL DOWNSTREAM FLOWS.
  - CONTROLLING GROUNDWATER FOUND DURING CONSTRUCTION.
  - COVERING OR OTHERWISE PROTECTING SLOPES UNTIL PERMANENT EROSION CONTROL MEASURES ARE WORKING.
- THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TEMPORARY WATER POLLUTION CONTROL IN ALL SOURCES OF MATERIAL, DISPOSAL SITES, AND HAUL ROADS. NO STORM WATER, GROUND WATER, OR WATER OF ANY KIND SHALL BE PUMPED, DRAINED, OR OTHERWISE DISPERSED INTO DOWNSTREAM WATERS WITHOUT APPROPRIATE CONTROLS AND REQUIRED PERMITS.
- APPROVAL OF THE ESC PLAN DOES NOT CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM, DRAINAGE, GRADING, OR UTILITY DESIGN ELEMENTS SHOWN ON THE ESC PLAN.
- THE EROSION/SEDIMENTATION CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT & MAINTAIN THESE ESC MEASURES DAILY, & SHALL MAINTAIN & UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF THE SITE, OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES, SUCH AS DRY WELLS, CULVERTS, OR GRAVEL GALLERIES.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY & ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE. THESE MUST BE INSPECTED AND APPROVED ALONG WITH OTHER BMP'S USED AT YOUR SITE, AND SHALL BE REMOVED BEFORE PLACING ROAD SURFACE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, INSPECTION AND MAINTENANCE OF ALL TEMPORARY EROSION CONTROL MEASURES.
- SEDIMENT BARRIERS SHALL BE INSPECTED, CLEANED AND REPAIRED AFTER EACH RUNOFF EVENT. REMOVE ALL SEDIMENT AND DEPOSIT ON SITE AFTER SEDIMENT BARRIERS ARE NO LONGER REQUIRED.
- CONTRACTOR SHALL NOT REMOVE TEMPORARY ESC MEASURES UNTIL 30 DAYS AFTER THE SITE IS STABILIZED. ALL DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED EITHER THROUGH REVEGETATION, RIP-RAP, PAVING, OR OTHER PRE-APPROVED METHOD(S).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DIRT, MUD AND OTHER CONSTRUCTION DEBRIS WHICH MAY ACCUMULATE ON PAVED STREETS ADJACENT TO THE SITE AS A RESULT OF CONSTRUCTION ACTIVITY. CLEANING SHALL BE ON AN "AS NEEDED" BASIS USING WATER UNDER PRESSURE. SWEEPING AND WATER SHALL BE USED WHEN WATER PRESSURE ALONE WILL NOT WASH THE CONSTRUCTION DEBRIS FROM THE STREET.
- GEOTEXTILE FABRIC IS TO BE PLACED ON RIMS OF DRYWELLS, CATCH BASINS, & INLETS UNTIL SUCH TIME THE VEGETATION ON THE SITE IS ESTABLISHED & THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.

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DESIGNED:	WAM
DRAWN:	MAB
CHECKED:	ALR

PROJECT NO. 11-008.15

SHEET REVISIONS			
NO.	DATE	DESCRIPTION	BY



**TOWN OF BLUE RIVER**

BLUE RIVER 2016 CISTERS

**GENERAL NOTES**

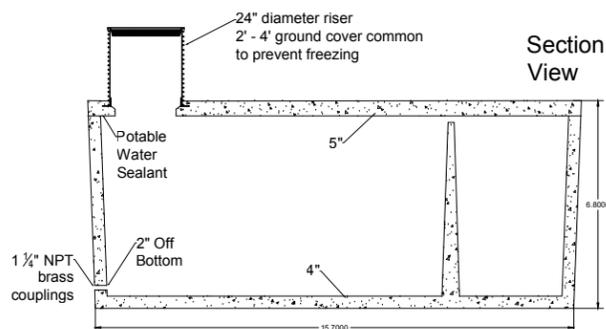
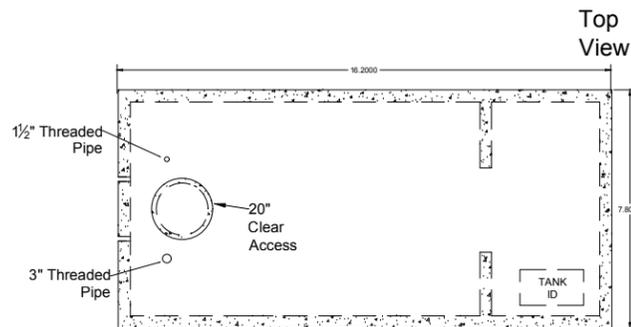
DATE	MAY 2016
DRAWING NO.	G-2
SHEET NO.	2 OF 9

**Item #  
2600T-CIS**

**2600 Gallon Top Seam  
Potable Water Cistern**

**DESIGN NOTES**

- Meets or exceeds ASTM C-913 spec for water structure
- Top surface area 87.75 ft<sup>2</sup>
- f'c @ 28 days; concrete = 6,000 PSI Min.
- Installation:**
- Tank to be set on 5" min. sand bed or pea gravel
- Tank to be backfilled uniformly on all sides in lifts less than 24" and mechanically compacted
- Excavated material may be used for backfill, provided large stones are removed
- Excavation should be dewatered and tank filled with water prior to being put in service for installation with water table less than 2' below grade
- Durable stainless steel NPT threaded 3" fill line and 1 1/2" universal on top
- Two 1 1/4" brass NPT universal low entries
- Lightweight sealed lid
- Secondary safety screen available with PVC riser
- Concrete riser available



ALLOWABLE BURY (Based on Water Table)	
WATER TABLE	ALLOWABLE EARTH FILL
0' - 0"	3' - 0"
1' - 0"	3' - 0"
2' - 0"	4' - 0"
3' - 0"	4' - 0"
DRY	4' - 0"

Digging Specs	Dimensions			Net Capacity	Net Weight		
	Length	Width	Height		Lid	Tank	Total
15' Long x 8' Wide 2' to 4' Cover Standard	162"	78"	68"	2598 gal	5420 lbs	14760 lbs	20180 lbs



**Water & Wastewater**

- Systems
- Products
- Service

**(719) 395-6764**

**Fax: (719) 395-3727**

**Website: www.valleyprecast.com**

**Email: frontdesk@valleyprecast.com**

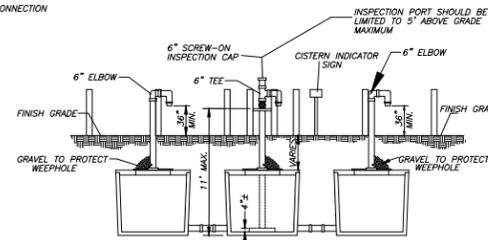
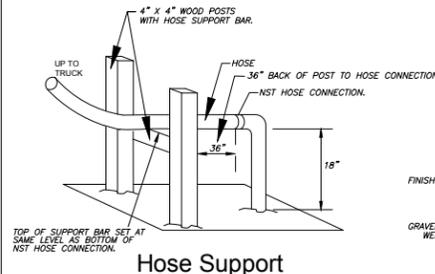
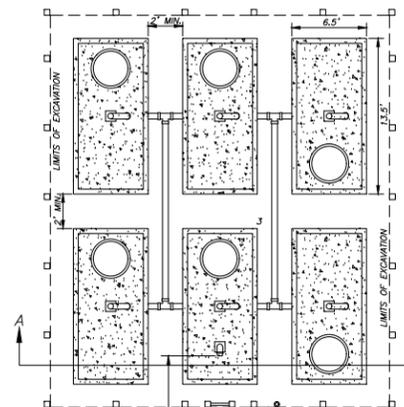
28005 Co. Rd. 317  
P.O. Box 925  
Buena Vista, CO 81211

**Item #  
Fire-CIS**

**Fire Protection Cistern**

**DESIGN NOTES**

- Great source of available water year round
- Meets or exceeds ASTM C-913 spec for water structure
- Engineered drawings available by request
- Can be added onto for future expansion
- Includes:
  - \*Tanks and delivery
  - \*All Sch 40 and 80 piping installed at your site
  - \*Sign
- Support posts and T posts done by others



**Water & Wastewater**

- Systems
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- Service

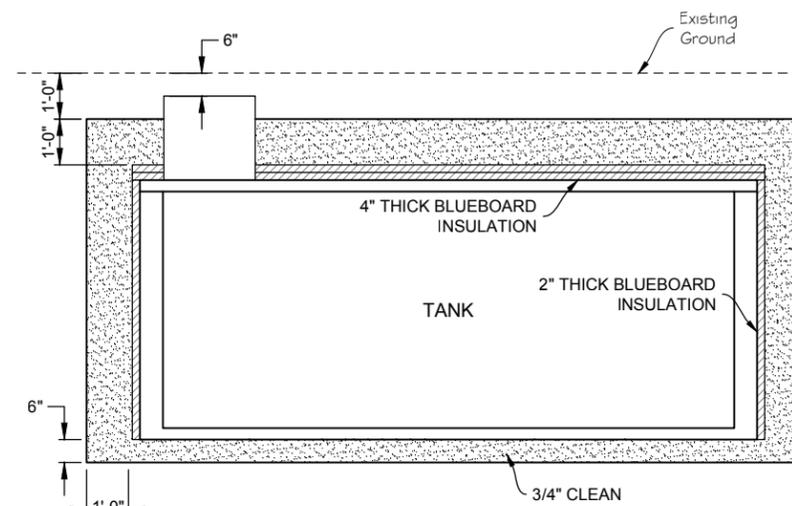
**(719) 395-6764**

**Fax: (719) 395-3727**

**Website: www.valleyprecast.com**

**Email: frontdesk@valleyprecast.com**

28005 Co. Rd. 317  
P.O. Box 925  
Buena Vista, CO 81211



**INSTALLATION DETAIL**

N.T.S.

**NOTES:**

1. BACKFILL BETWEEN THE TANKS SHALL BE 3/4" CLEAN OR APPROVED MATERIAL. OUTSIDE OF THE TANKS AND ABOVE THE TANKS CAN BE BACKFILLED WITH NATIVE MATERIALS.
2. ALL EXCESS MATERIAL SHALL BE DISPOSED OF OFFSITE.
3. ALL MATERIALS SHALL BE BACKFILLED TO A 90% STANDARD PROCTOR.

PLOTTED: 5/13/2016 9:40:18 AM  
NAME: P:11-008.15.2016 CISTERN - TOWN OF BLUE RIVER CAD(DRAWINGS)11-008.15\_DETAILS.DWG

PREPARED UNDER THE SUPERVISION OF	DESIGNED: WAM
	DRAWN: MAB
	CHECKED: ALR

PROJECT NO. 11-008.15

SHEET REVISIONS			
NO.	DATE	DESCRIPTION	BY



**MULLER ENGINEERING COMPANY**  
777 S. WADSWORTH BLVD. 4-100  
LAKEWOOD, COLORADO 80226



**TOWN OF BLUE RIVER**

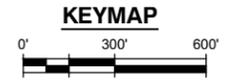
BLUE RIVER 2016 CISTERNS

**CISTERN DETAILS**

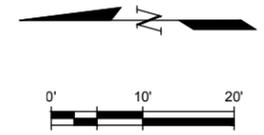
DATE  
MAY 2016

DRAWING NO.  
G-3

SHEET NO.  
3 OF 9



- NOTE:**
1. PLACE CISTERN IN CLEARING ON TOWN OF BLUE RIVER PROPERTY.
  2. CISTERN LOCATION SHOWN IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BASED ON SITE CONDITIONS.



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DESIGNED:	WAM
DRAWN:	MAB
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PROJECT NO. 11-008.15

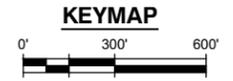
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**MULLER ENGINEERING COMPANY**  
777 S. WADSWORTH BLVD. 4-100  
LAKEWOOD, COLORADO 80226



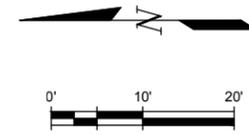
**TOWN OF BLUE RIVER**

BLUE RIVER 2016 CISTERNS	DATE MAY 2016
<b>DAVIS CT. CISTERN PLAN</b>	DRAWING NO. C-1
	SHEET NO. 4 OF 9



**NOTE:**

1. VENT AND FILL PIPE SHALL BE INSTALLED OUTSIDE OF THE CLEAR ZONE.
2. CISTERN LOCATION SHOWN IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BASED ON SITE CONDITIONS.



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**TOWN OF BLUE RIVER**

DATE	MAY 2016
DRAWING NO.	C-2
SHEET NO.	5 OF 9

**CONSTRUCTION TRAFFIC CONTROL NOTES**

1. THE CONTRACTOR SHALL SUBMIT TO CDOT FOR REVIEW AND APPROVAL, A METHOD OF HANDLING TRAFFIC (MHT) CONFORMING TO CDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND M&S STANDARDS TWO WEEKS PRIOR TO RELATED CONSTRUCTION ACTIVITY.
2. ALL CONSTRUCTION TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, AND APPLICABLE STANDARDS IN THE 2011 COLORADO DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE JULY 2012 COLORADO DEPARTMENT OF TRANSPORTATION STANDARD PLANS M&S STANDARDS.
3. REFER TO CDOT M&S STANDARD PLAN S-630-1, REVISED DECEMBER 08, 2014, CASE 11 FOR SIGNS AND DEVICES THAT WILL BE REQUIRED TO IMPLEMENT LANES CLOSURES AND SHOULDER WORK. ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED IN ACCORDANCE WITH THE CONSTRUCTION TRAFFIC CONTROL PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, AND CDOT M&S STANDARD PLAN S-630-1.
4. THE CONTRACTOR SHALL BEAR RESPONSIBILITY AND EXPENSE FOR MAINTAINING ADEQUATE DRAINAGE AND SAFE DRIVING CONDITIONS AT ALL TIMES. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF RELATED WORK.
5. APPROPRIATE ADVANCE WARNING SIGNS SHALL BE PLACED AS NEEDED. THESE SHALL BE SHOWN IN THE MHT TO BE APPROVED BY THE ENGINEER.
6. 11' MINIMUM WIDTH FOR LANES SHALL BE MAINTAINED AT ALL TIMES, UNLESS APPROVED BY THE ENGINEER.
7. A MINIMUM SHOULDER WIDTH OF 2 FEET SHALL BE PROVIDED BETWEEN THE CHANNELIZING DEVICE AND EDGE OF TRAVEL LANE AT ALL TIMES, UNLESS APPROVED BY THE ENGINEER.
8. SLOPES WITHIN THE CLEAR ZONE SHALL BE 3:1 OR FLATTER UNLESS PROTECTED BY CONCRETE BARRIER (TEMPORARY). CONCRETE BARRIER (TEMPORARY) SHALL HAVE BOTH ENDS PROTECTED WITH AN IMPACT ATTENUATOR (TEMPORARY).
9. EXISTING SIGNS IN CONFLICT WITH THE TEMPORARY LANES SHALL BE COVERED OR RESET AS CONDITIONS REQUIRE FOR EACH CONSTRUCTION PHASE AND AS DIRECTED BY THE ENGINEER. MASKING OF EXISTING SIGNS, INCLUDING THE COVERING MATERIALS AND FASTENING DEVICES, WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONSTRUCTION TRAFFIC SIGNS.

**TABULATION OF CONSTRUCTION TRAFFIC CONTROL ITEMS**

ITEM NO.	ITEM	UNIT	TOTALS
630-00007	TRAFFIC CONTROL INSPECTION	DAY	4
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	10
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EA	13
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EA	4
630-80343	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)	EA	4
630-80360	DRUM CHANNELIZING DEVICE	EA	10
630-80370	CONCRETE BARRIER (TEMPORARY)	LF	140
630-85010	IMPACT ATTENUATOR (TEMPORARY)	EA	2

**SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL SIGNS**

SIGN CODE	LEGEND	DIMENSION W x H	PANEL SIZE		
			A	B	C
G20-5	WORK ZONE	36 x 24	4		
R2-1 (55)	SPEED LIMIT (55)	36 x 48		4	
R2-6p	FINES DOUBLE	36 x 24	2		
R52-6a	BEGIN/FINES/DOUBLE/IN WORK/ZONE	48 x 60			2
R52-6b	END/FINES/DOUBLE/IN WORK/ZONE	48 x 60			2
W16-2a	1500 FEET	24 x 12	1		
W20-1	ROAD/WORK/AHEAD	36 x 36	3		
W21-5	SHOULDER WORK	36 x 36	2		
W21-5a(R)	RIGHT SHOULDER CLOSED	36 x 36	1		
<b>TOTALS</b>			<b>13</b>	<b>4</b>	<b>4</b>

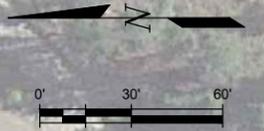
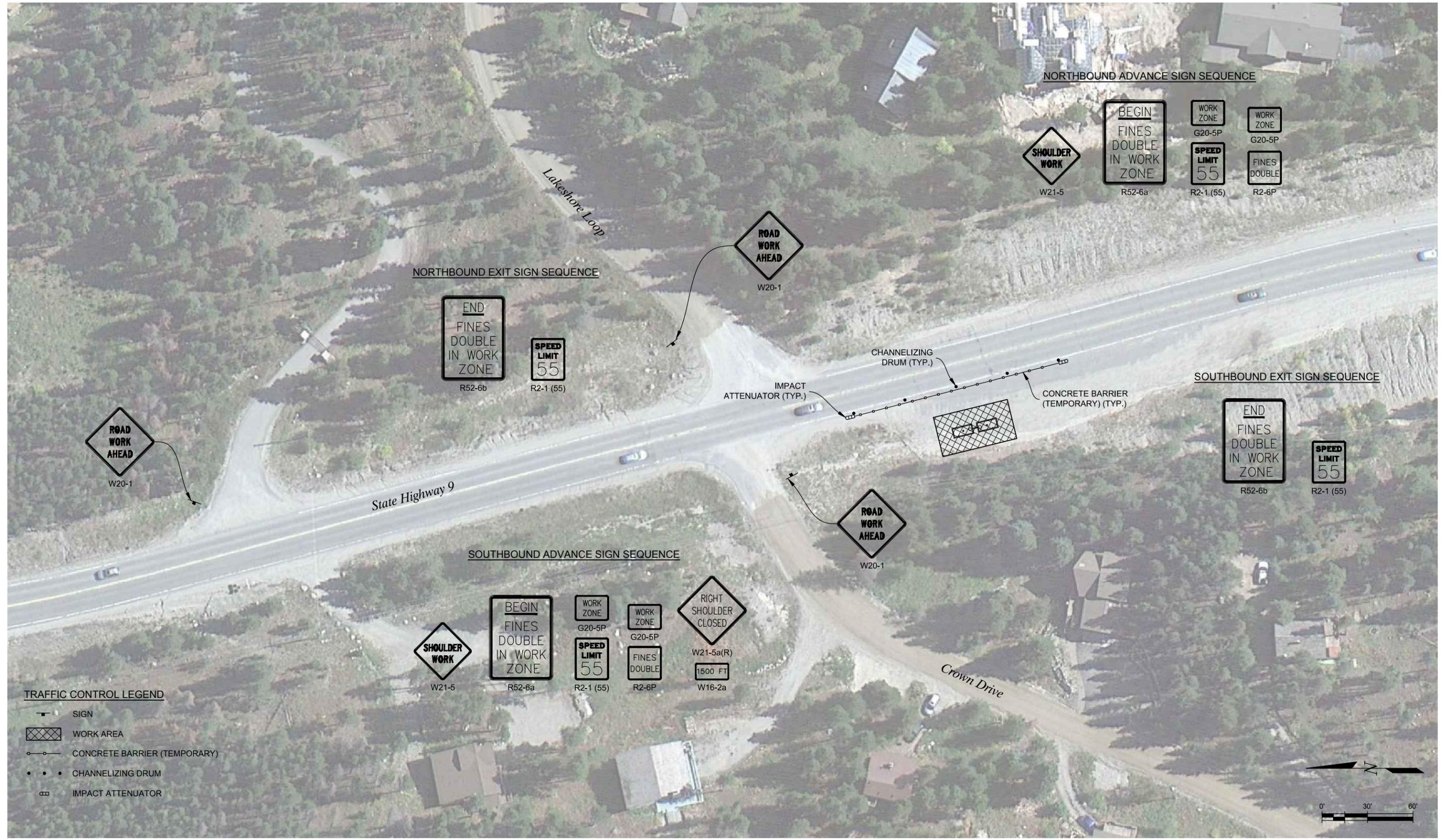
**TRAFFIC CONTROL DESIGN CRITERIA**

MINIMUM DESIGN SPEED	55 MPH
POSTED SPEED	55 MPH
MINIMUM LANE WIDTH	11'
MINIMUM SHOULDER WIDTH	2'
MINIMUM CLEAR ZONE	20'

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PREPARED UNDER THE SUPERVISION OF DESIGNED: DKH DRAWN: MAB CHECKED: ALR	PROJECT NO. 11-008.15	<b>SHEET REVISIONS</b>	 MULLER ENGINEERING COMPANY 777 S. WADSWORTH BLVD. 4-100 LAKEWOOD, COLORADO 80226	 <b>TOWN OF BLUE RIVER</b>	BLUE RIVER 2016 CISTERNS	DATE MAY 2016																								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			NO.	DATE	DESCRIPTION	BY																						
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 DESIGNED: DKH  
 DRAWN: MAB  
 CHECKED: ALR

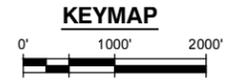
PROJECT NO. 11-008.15

SHEET REVISIONS			
NO.	DATE	DESCRIPTION	BY

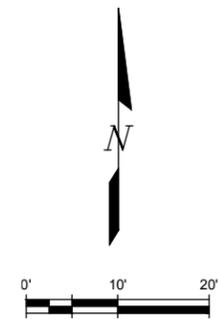


TOWN OF BLUE RIVER

BLUE RIVER 2016 CISTERN	DATE MAY 2016
TRAFFIC CONTROL PLAN	DRAWING NO. C-4
	SHEET NO. 7 OF 9



**NOTE:**  
 1. CISTERN LOCATION SHOWN IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BASED ON SITE CONDITIONS.



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PREPARED UNDER THE SUPERVISION OF	DESIGNED: WAM
	DRAWN: MAB
	CHECKED: ALR

PROJECT NO. 11-008.15

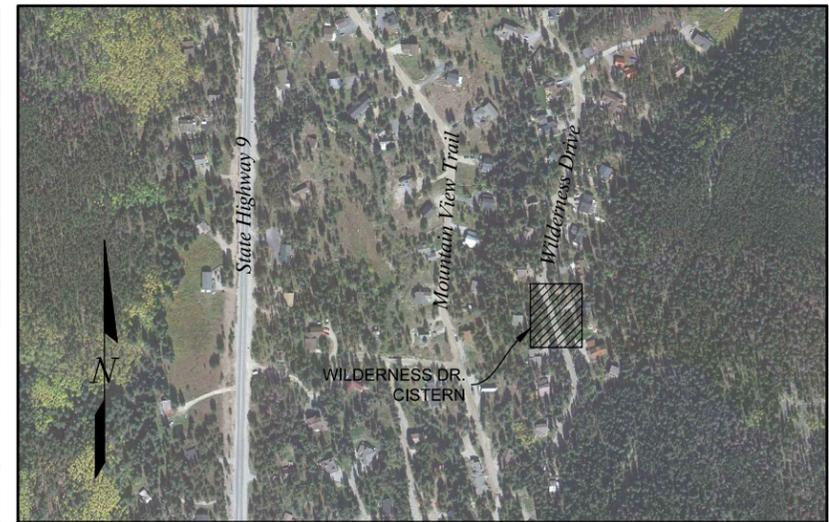
SHEET REVISIONS			
NO.	DATE	DESCRIPTION	BY

**MULLER ENGINEERING COMPANY**  
 777 S. WADSWORTH BLVD. 4-100  
 LAKEWOOD, COLORADO 80226

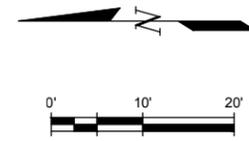


**TOWN OF BLUE RIVER**

BLUE RIVER 2016 CISTERNS	DATE MAY 2016
<b>INDIANA CREEK CISTERN PLAN</b>	DRAWING NO. C-5
	SHEET NO. 8 OF 9



- NOTE:**
- EASEMENT LOCATION SHALL BE DETERMINED PRIOR TO CONSTRUCTION.
  - CISTERN LOCATION SHOWN IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BASED ON SITE CONDITIONS.



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	DRAWN: MAB
	CHECKED: ALR

PROJECT NO. 11-008.15
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SHEET REVISIONS			
NO.	DATE	DESCRIPTION	BY



TOWN OF BLUE RIVER

BLUE RIVER 2016 CISTERNS	DATE MAY 2016
WILDERNESS DR. CISTERN PLAN	DRAWING NO. C-6
	SHEET NO. 9 OF 9