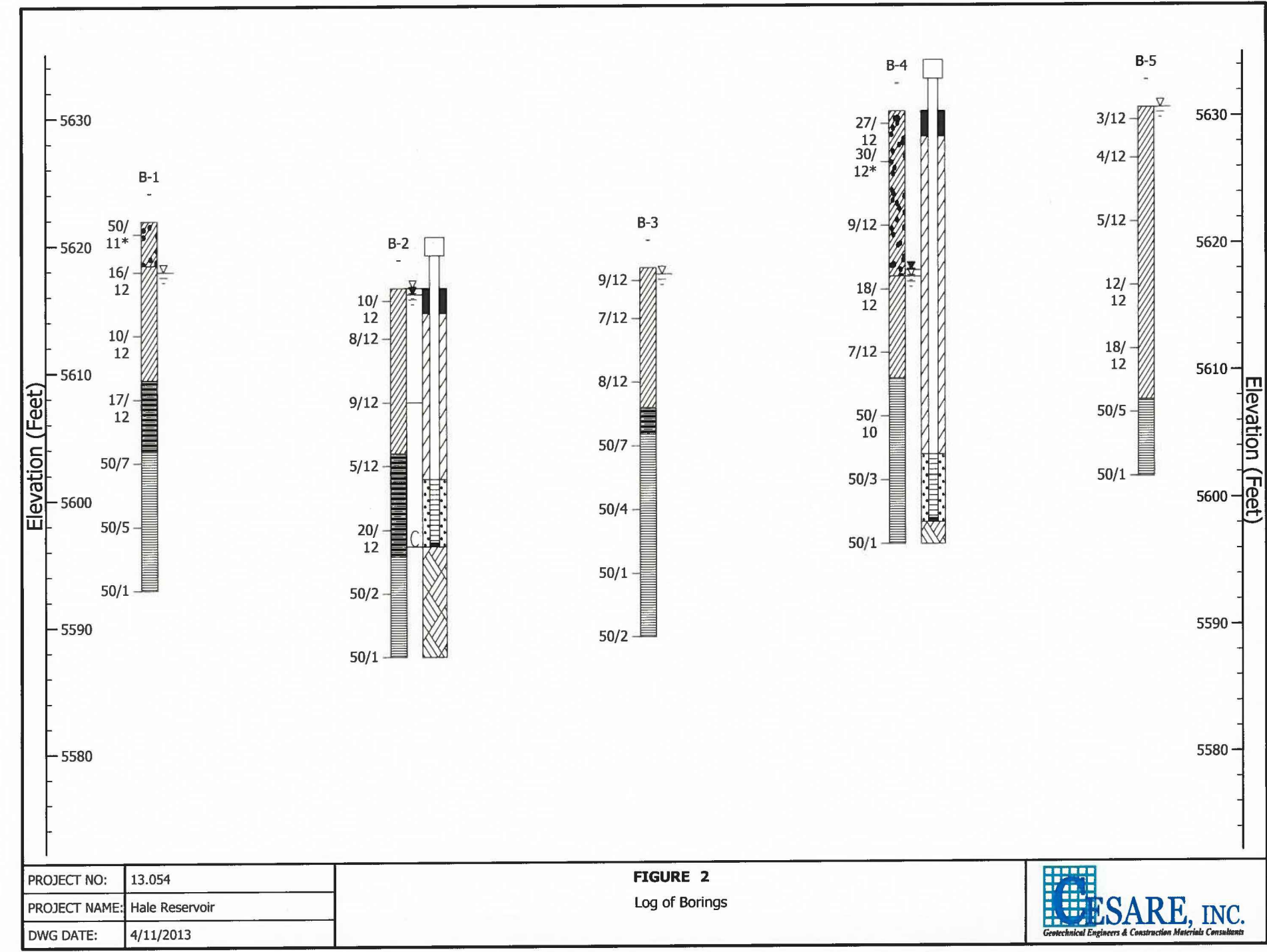
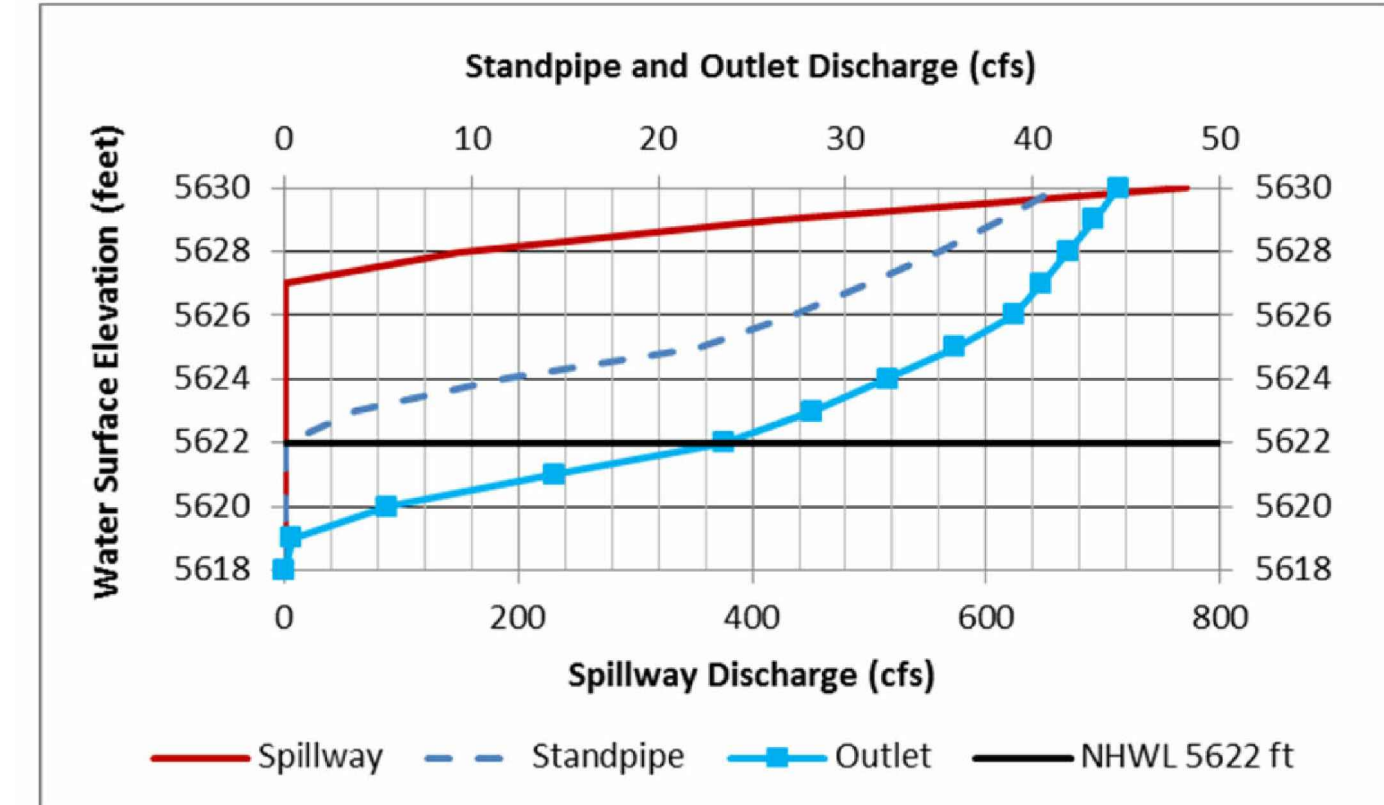


CESARE, INC. Geotechnical Engineers of Construction Material Consultant			
FIGURE 1 Site Plan and Exploratory Boring Locations			
PROJECT NO:	13.054	PROJECT NAME:	Hale Dam and Reservoir
DRAWN BY:	MAP	CHECKED BY:	DRD
DWG DATE:	03.5.13	REV. DATE:	-



- Notes:**
- Exploratory borings were drilled on March 5, 2013 using a 4-inch diameter continuous flight auger with a track mounted CME-45 drill rig.
 - Water was encountered in all borings at the time of drilling. Borings B-1, B-3 and B-5 were backfilled immediately after drilling for safety purposes. Boring B-3 was backfilled with bentonite grout.
 - Piezometers were placed in Borings B-2 down to a depth of 20.5 feet and Boring B-4 down to a depth of 33.5 feet.
 - Original boring locations were determined by Applegate, Inc. Accessibility to some of the locations was not possible with the track drill rig, thus these borings were drilled as close to the original locations as possible.
 - Elevations and locations were surveyed by Clark Land Surveying, Inc.
 - 50/11 indicates 50 blows with a 140-pound hammer falling 30 inches were required to drive a modified California barrel sampler 11 inches. * indicates a rock was encountered in the sampler, blow counts may not be indicative of actual conditions.
 - These logs are subject to limitations, conclusions, and recommendations in this report.



Elevation	Stage	Discharge (cfs)		
		Outlet	Standpipe	Spillway
5618	0	0	0	0
5619	10	0.4	0	0
5620	11	6	0	0
5621	12	14	0	0
5622	13	23	0	0
5623	14	28	4	0
5624	15	32	12	0
5625	16	36	22	0
5626	17	39	27	0
5627	18	40	31	0
5628	19	42	35	149
5629	20	43	38	420
5630	21	45	41	772

	ELEVATION (ft)	AREA (ac.)	STORAGE (ac-ft)
Dead Storage	5,609	7.5	0.0
	5,610	7.7	7.6
	5,611	8.0	15.5
	5,612	8.2	23.6
	5,613	8.4	31.9
	5,614	8.6	40.4
	5,615	8.9	49.2
	5,616	9.1	58.1
	5,617	9.4	67.4
	5,618	9.6	76.9
5,618.74	9.8	84.0	
Active Storage	5,619	9.8	86.6
	5,620	10.1	96.5
	5,621	10.3	106.7
Flood Storage	5,622	11.4	117.6
	5,623	12.3	129.4
	5,624	12.9	142.1
	5,625	13.5	155.3
	5,626	14.2	169.1
5,627	14.4	183.4	
Free-board	5,628	14.7	198.0
	5,629	15.0	212.9
	5,630	15.4	228.1

SHEET INDEX

- Cover Sheet
- General Notes, Geotechnical and Curves
- Construction By-pass and Excavation Plan
- Site Plan
- Dam Plan and Profile
- Outlet Plan and Profile
- Inlet Details
- Outlet Conduit and Outlet Structure Details
- Spillway Plan and Profile
- Spillway Details
- Toe Drain Plan and Details
- Toe Drain Profiles
- Erosion and Stormwater Quality Control Plan
- Erosion and Stormwater Quality Control Details

GENERAL NOTES:

- THESE CONSTRUCTION DRAWINGS AND ASSOCIATED TECHNICAL SPECIFICATIONS SHALL NOT BE MATERIALLY CHANGED WITHOUT PRIOR WRITTEN APPROVAL OF THE STATE ENGINEER IN ACCORDANCE WITH RULE 9.1.8.
- THIS PROJECT CANNOT BE CONSIDERED AS HAVING BEEN COMPLETED UNTIL THE STATE ENGINEER HAS APPROVED THE SAME IN WRITING.
- STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS.
- IF THE CONTRACTOR FINDS ANY CONFLICTS IN THE SET OF PLANS OR IS UNCLEAR ABOUT THE CONSTRUCTION PROCEDURE, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY, AND CLARIFICATION REQUESTED IN WRITING.
- THE CONTRACTOR SHALL MAINTAIN WORK AREAS ON AND OFF SITE, AND SHALL KEEP THEM FREE FROM ENVIRONMENTAL POLLUTION THAT WOULD BE IN VIOLATION OF FEDERAL, STATE, OR LOCAL REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND SHALL MAINTAIN ALL WORK IN CONFORMANCE WITH APPLICABLE SAFETY STANDARDS.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A SET OF MARKED DRAWINGS TO BE USED IN PREPARATION OF RECORD DRAWINGS.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER TO SCHEDULE CONSTRUCTION SURVEYING.
- HALE RESERVOIR HAS BEEN DESIGN TO MEET "FULL SPECTRUM" 72-HR DISCHARGE OF TRIBUTARY EXCESS URBAN RUNOFF VOLUME IN ACCORDANCE WITH DENVER URBAN DRAINAGE DESIGN STANDARDS AS SPECIFIED BY CITY CODE.

Orifice flow for standpipe discharge: $Q(cfs) = D^2 * \frac{\pi}{4} * C_d * \sqrt{2 * g * h}$

D=standpipe diameter (2.0 feet)
 C_d =coefficient of discharge (0.6)
 g=gravitational acceleration (32 ft/sec²)
 h=height of water above top of standpipe

Weir flow for spillway (broad-crested weir): $Q(cfs) = C_s * W * H^{1.5}$

C_s =spillway coefficient (3.3 ft^{0.5}/sec)
 W=width of weir (45 feet)
 H=height of water above weir crest

Pipe flow for outlet: $Q = A * V = \sqrt{(\Delta z - H_f) * 2 * g}$

$A = D^2 * \frac{\pi}{4}$
 D = outlet pipe diameter (2 feet)
 Δz = Reservoir water level - Downstream outlet invert
 H_f = total head loss (minor losses, trash rack loss, friction losses)
 g = gravitational acceleration (32 ft/sec²)

KEY TO SYMBOLS

Symbol	Description	Symbol	Description
Strata symbols			
	FILL- CLAY, sandy with gravel, stiff to hard, fine to coarse grained (sand), low to medium plasticity, slightly moist to wet, brown [CL; A-6].		Depth to caving
	CLAY, with sand to sandy, soft to very stiff, medium to high plasticity, fine to medium grained (sand), moist to wet, slightly calcareous in upper 4 feet, root structures in upper 2 feet, brown [CL-CH; A-6 to A-7-6].	Monitor Well Details	
	WEATHERED CLAYSTONE, with thin layers of SANDSTONE, weathered, medium to high plasticity, fine grained (sandstone), moist to wet, slightly micaceous, grey to brown [CH; A-7-6].		covered riser
	CLAYSTONE, with thin layers of SANDSTONE, hard to very hard, medium to high plasticity, fine grained (sandstone), moist to wet, slightly micaceous, grey to dark grey [CH; A-7 6]		bentonite slurry
Misc. Symbols			
	slotted pipe w/ sand		assorted cuttings
	endcap on pipe packed in sand		Water table during drilling
	no pipe, filler material		Water table one day after drilling

Applegate Group, Inc.
 Water Resource Advisors for the West
 1400 West 121st Ave., Suite 100
 Denver, CO 80234
 (303) 452-4611
 Fax: (303) 452-2759
 email: info@applegategroup.com Website: www.applegategroup.com

CONSTRUCTION PLANS
GENERAL NOTES, GEOTECHNICAL and CURVES

CROSS CREEK METRO DISTRICT HALE RESERVOIR

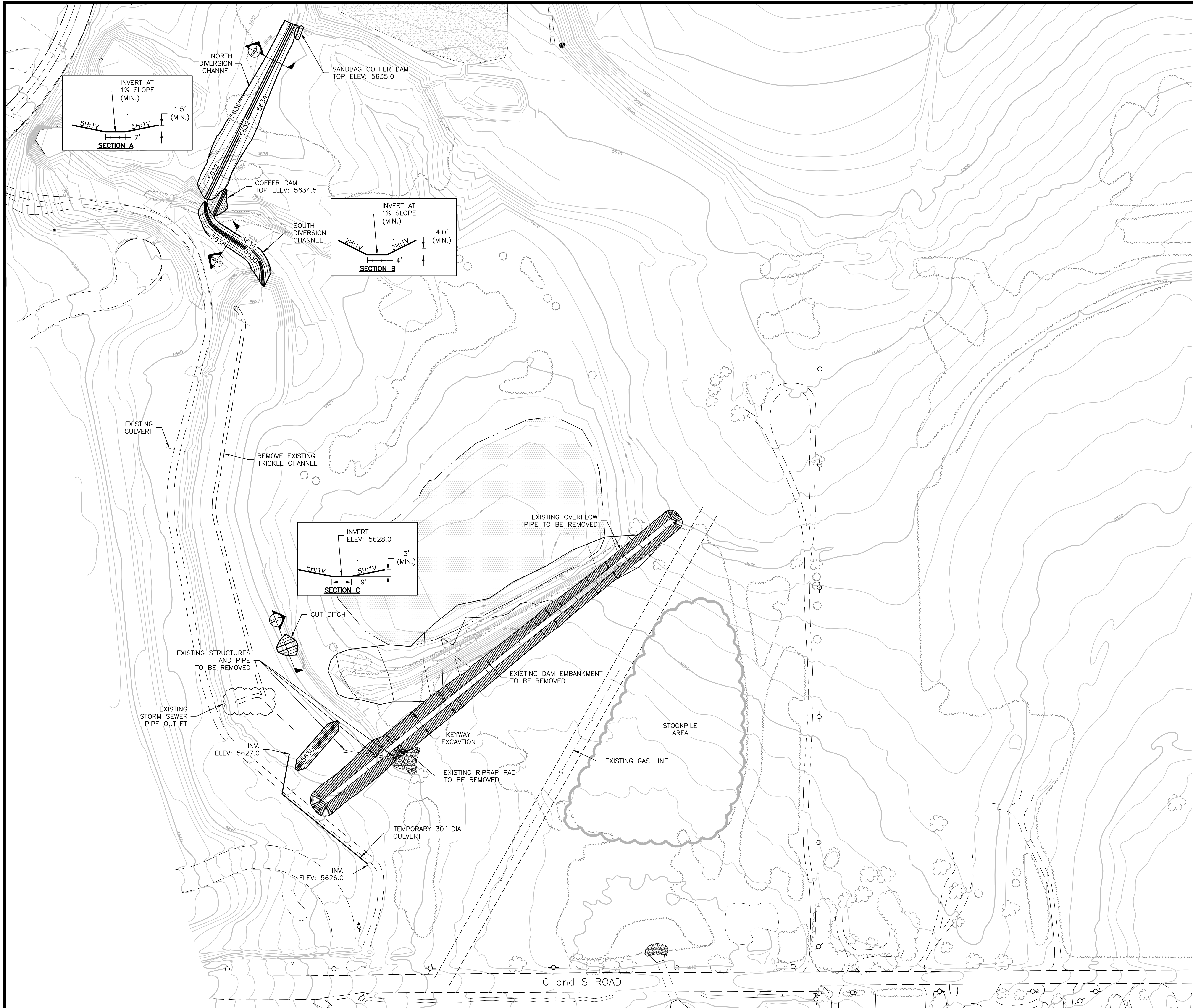
NO	DATE	BY	CHK'D	DESCRIPTION

Date: 10/28/13
 Job No: 12-130
 Drawn: LD
 Design: CH/SS
 Checked:
 Scale: N/A

Sheet: **2**
 Of: **14**

Filing No. C-

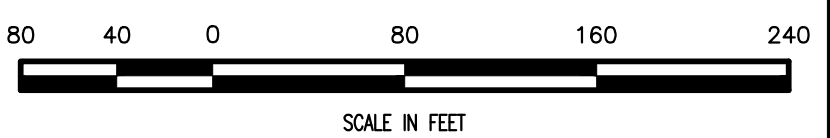
File Date: 10/31/13 2:21 PM; Plotted: 11/14/13 10:54 AM; Drawing Path: N:\1113 Cross Creek - Hale Reservoir\Drawings\Plan Set\Construction Plans\Boring Monitors - Cross CR - Notes.rvt



**PRELIMINARY
NOT FOR
CONSTRUCTION**



Scale 1" = 80'
2' CONTOUR INTERVAL



**CONSTRUCTION PLANS
CONSTRUCTION BY-PASS
and EXCAVATION PLAN**

**CROSS CREEK
METRO DISTRICT
HALE RESERVOIR**

REVISIONS	
NO	DATE BY CHK'D

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: 1" = 80'

Sheet: **3**
Of: **14**

Filing No. **C-**

Plot Date: 10/29/13 12:58pm, Plotted by: jsc, Drawing: Drawing Path: \\N:\113 Cross Creek - Hale Reservoir\Drawings\Plan-56\Construction Plans\Drawing Name: Hale Reservoir - Cross Creek - Construction



6" DIA. GATED IRRIGATION PIPE (SEE FLOW SPREADER DETAIL, SHT 8)

EXISTING STORM SEWER PIPE OUTLET TO BE CUT BACK TO MATCH SLOPE ELEV: 5625

N: 10312.22
E: 14365.46

N: 10292.96
E: 14381.40

EMERGENCY SPILLWAY RUNDOWN CHANNEL (SEE DETAILS, SHT 10)

BOTTOM OF RESERVOIR ELEV: 5609.00

NORMAL WATER SURFACE ELEV: 5622.0

ASSUMED 30' GAS LINE EASEMENT

GAS LINE POTHOLED ELEV: 5613.36

GAS LINE POTHOLED ELEV: 5609.72

OUTLET STRUCTURE (SEE DETAIL, SHT 8)

OUTFALL CHANNEL (SEE DETAIL, SHT 8)

SITE AND CONSTRUCTION ACCESS

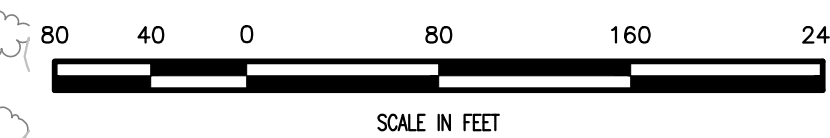
GAS LINE POTHOLED ELEV: 5611.19

C and S ROAD

**PRELIMINARY
NOT FOR
CONSTRUCTION**



Scale 1" = 80'
2' CONTOUR INTERVAL



Applegate Group, Inc.
Water Resource Advisors for the West
1400 West 121st Ave., Suite 100
Denver, CO 80234
(303) 452-4611
Fax: (303) 452-2759
email: info@applegatgroup.com Website: www.applegatgroup.com

CONSTRUCTION PLANS
SITE PLAN

**CROSS CREEK METRO DISTRICT
HALE RESERVOIR**

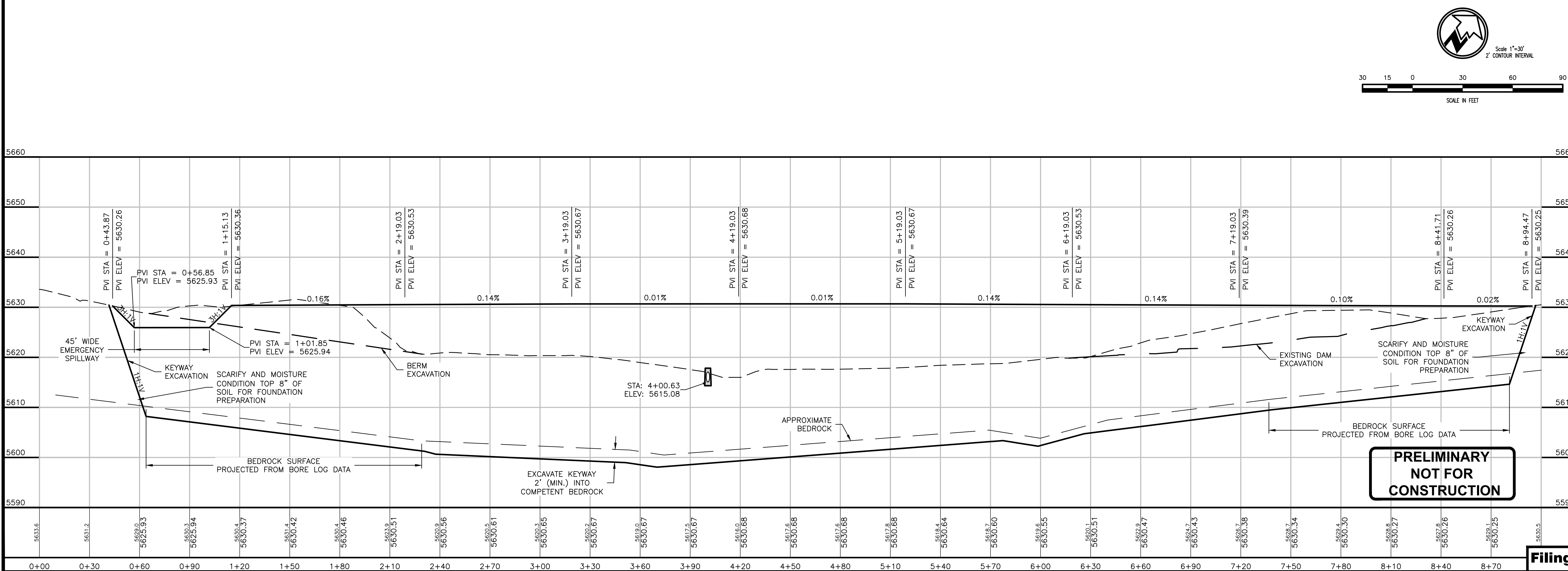
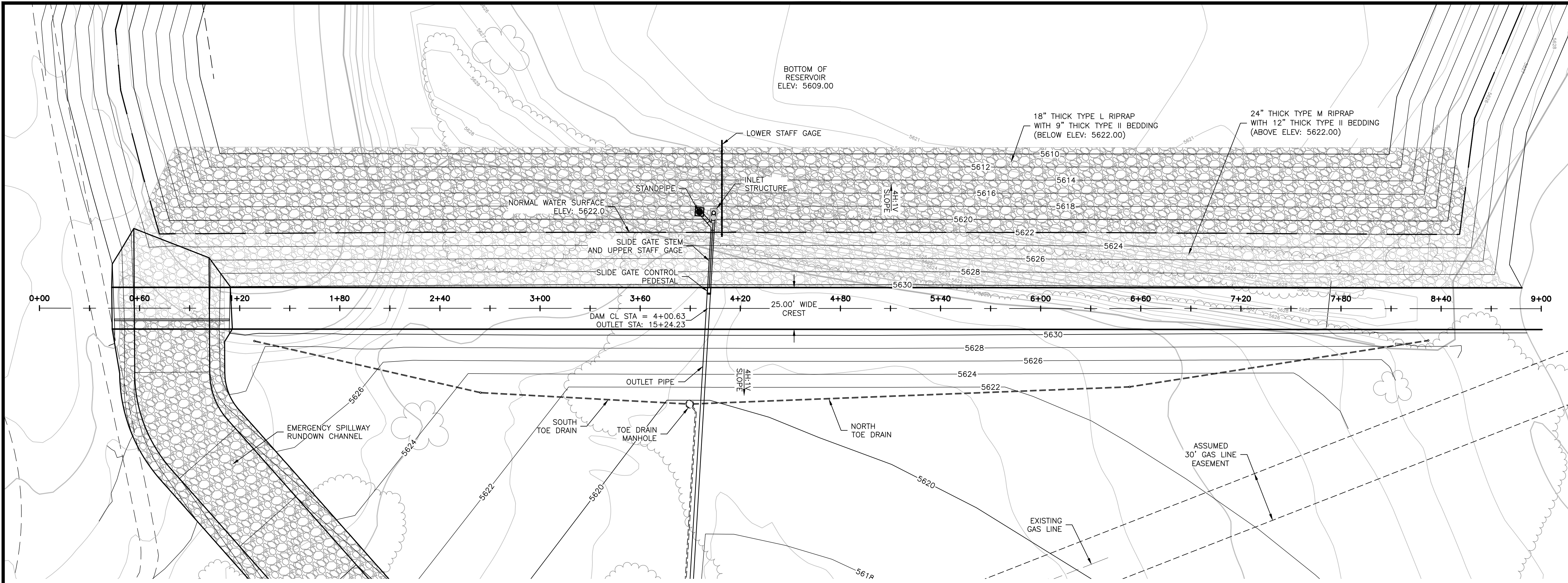
NO	DATE	BY	CHK'D	DESCRIPTION

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: 1" = 80'

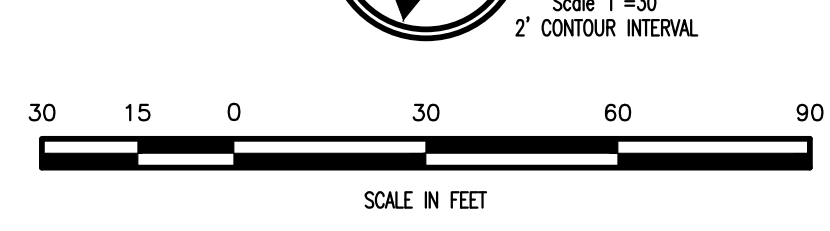
Sheet: **4**
Of: **14**

Filing No. **C-**

Plot Date: 10/29/13 12:58pm, Plotted by: jsc, Drawing: Drawing Path: \\N:\113 Cross Creek - Hale Reservoir\Drawings\Plan\Site\Construction Plans\Drawing Name: Hale Reservoir - Cross Ck - Site Plan.dwg



**PRELIMINARY
NOT FOR
CONSTRUCTION**



Applegate Group, Inc.
Water Resource Advisors for the West
1400 West 131st Ave., Suite 100
Denver, CO 80234
(303) 452-4611
Fax: (303) 452-2759
email: info@applegatengroup.com Website: www.applegatengroup.com

CONSTRUCTION PLANS
DAM PLAN and PROFILE
STA: 0+00 to 8+70

**CROSS CREEK
METRO DISTRICT
HALE RESERVOIR**

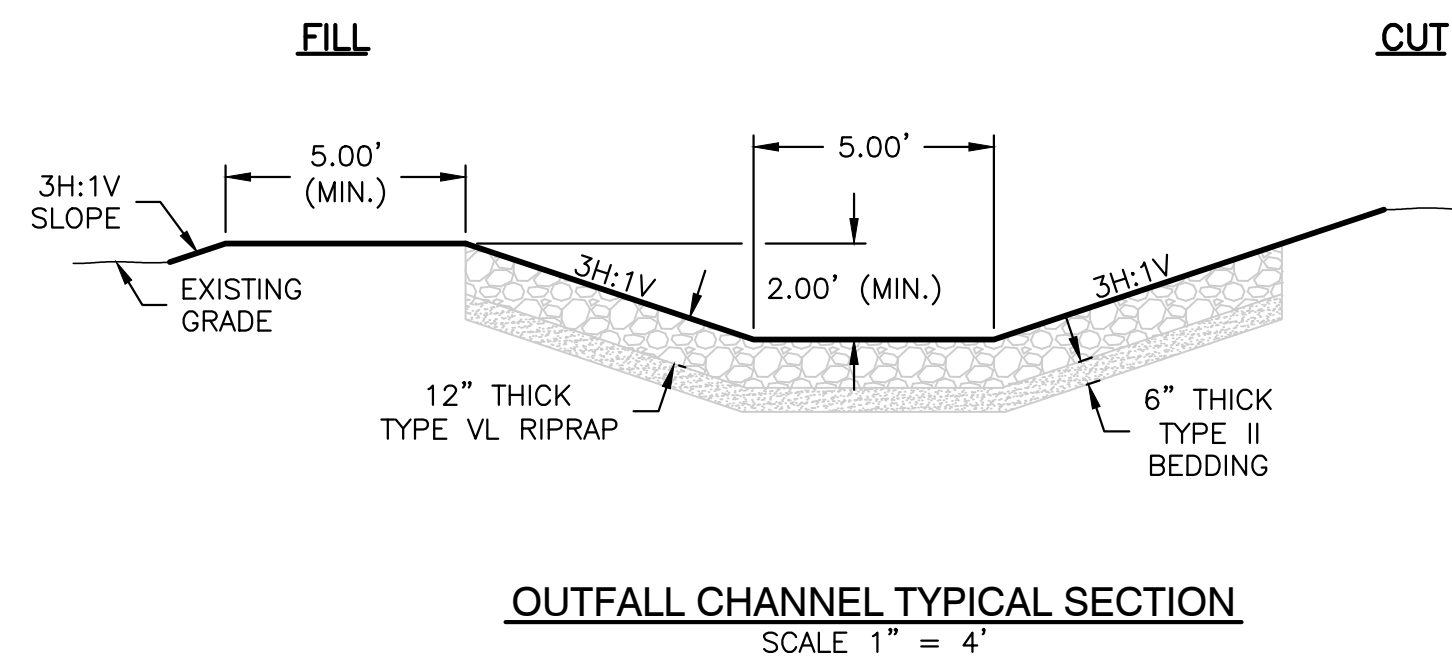
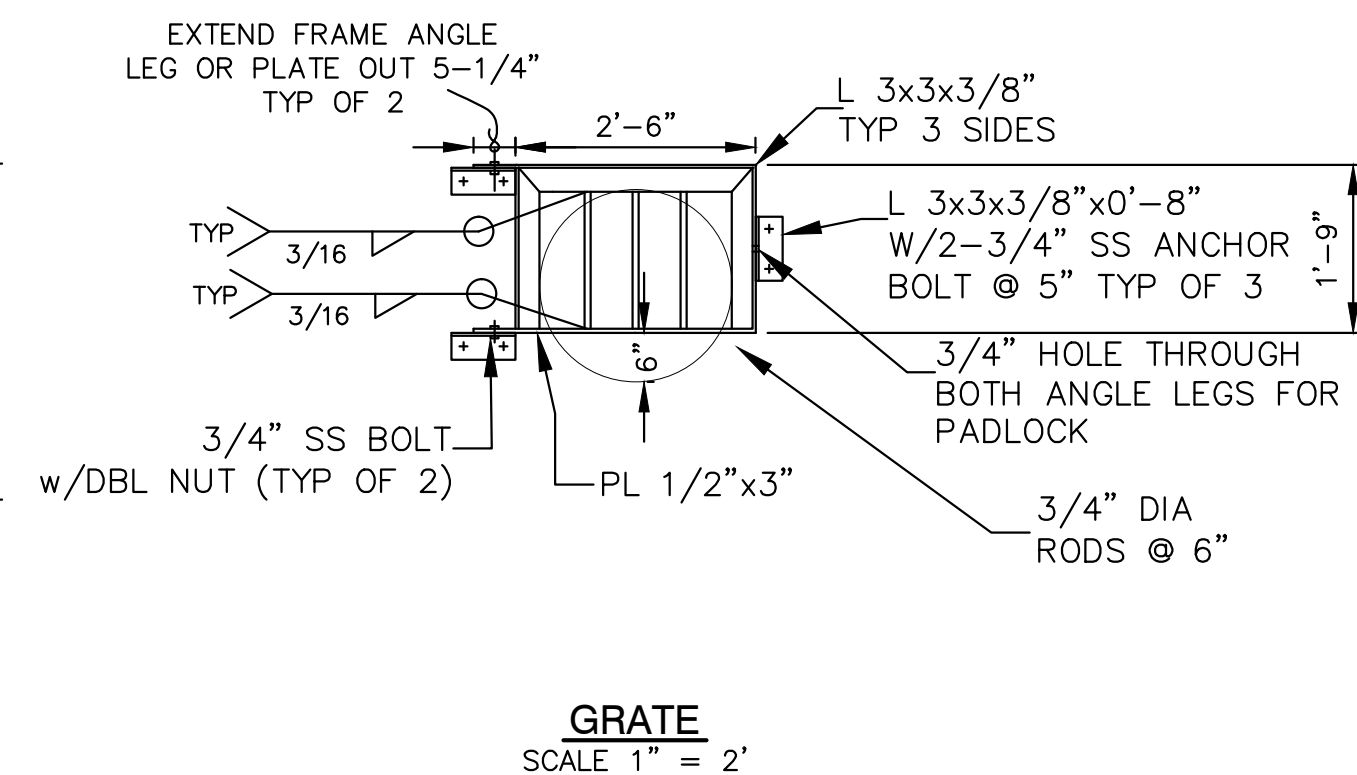
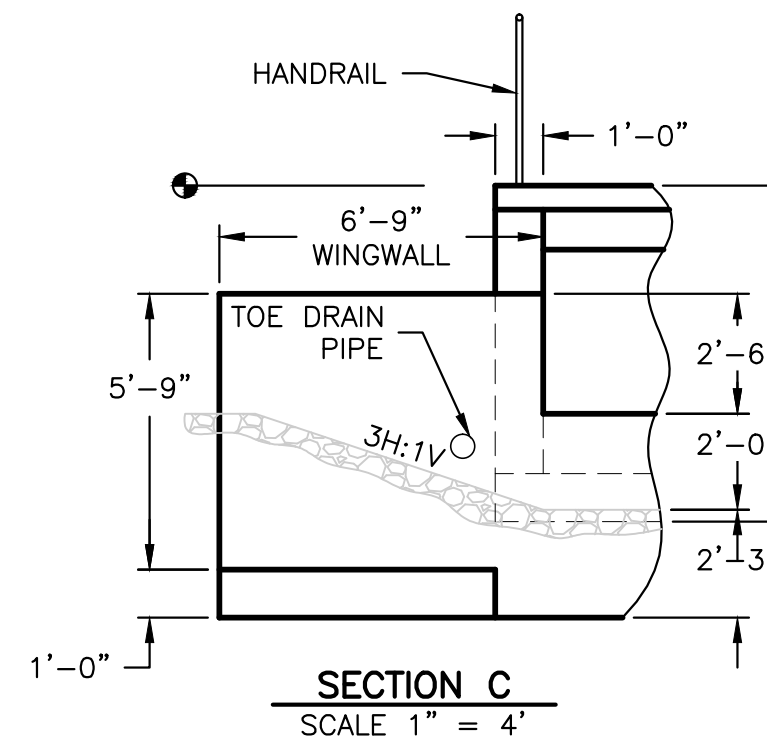
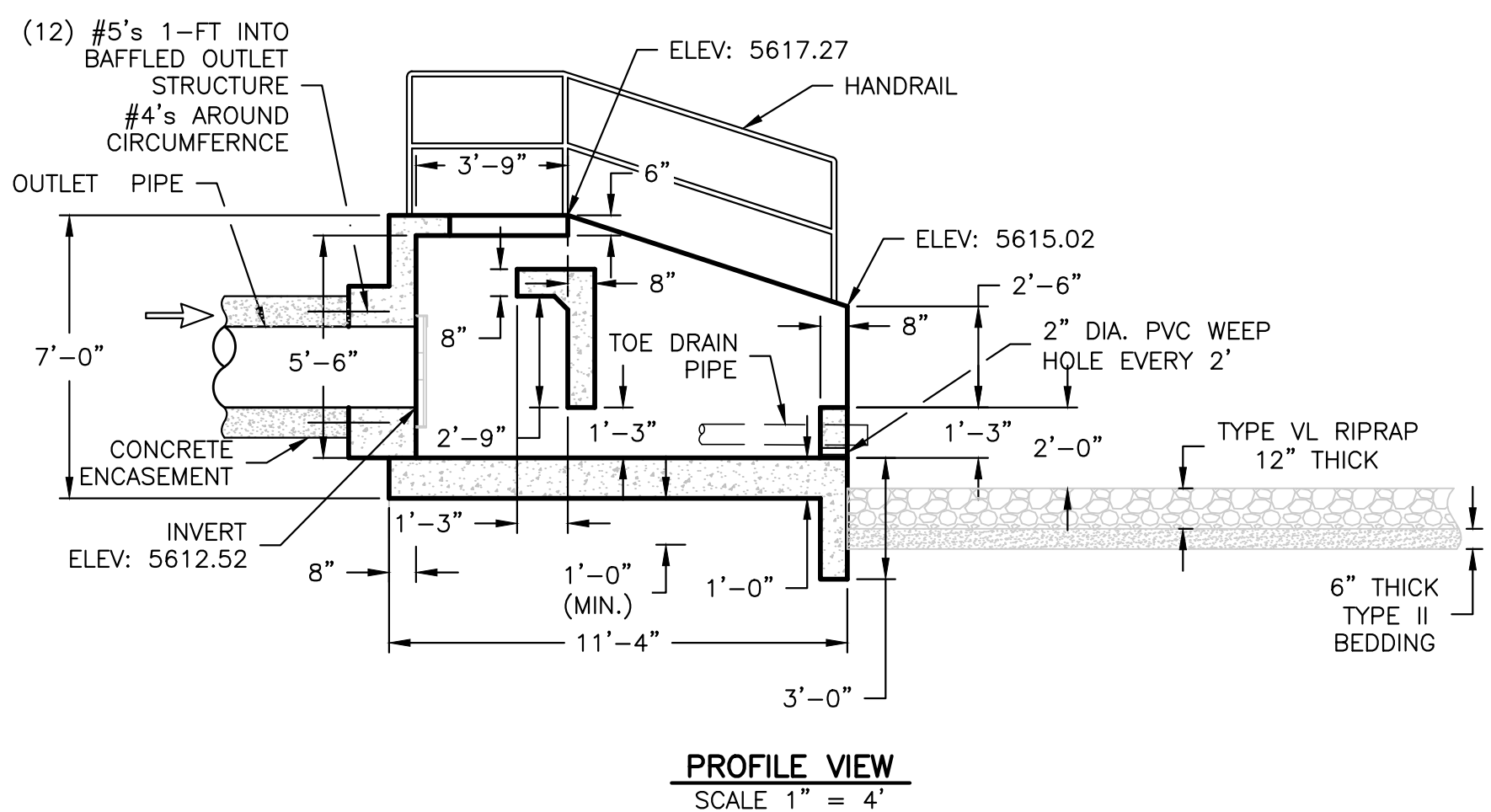
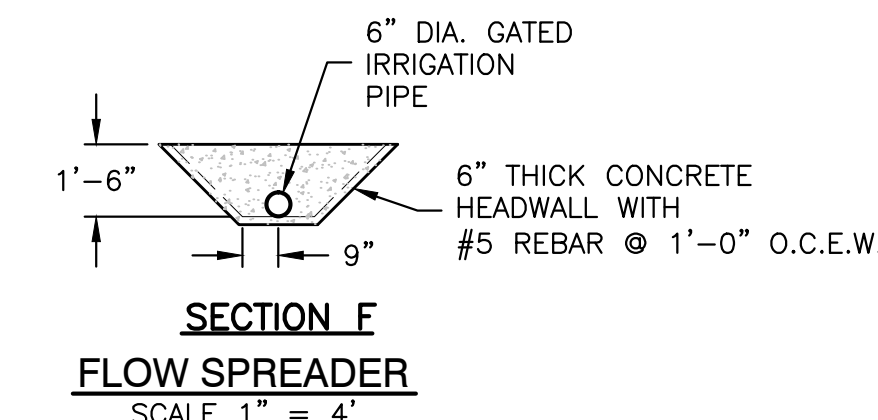
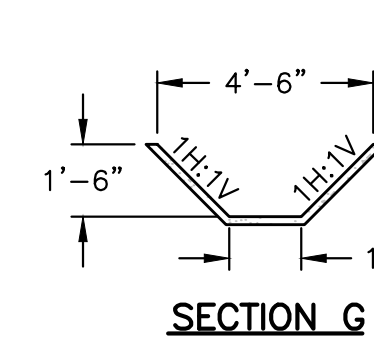
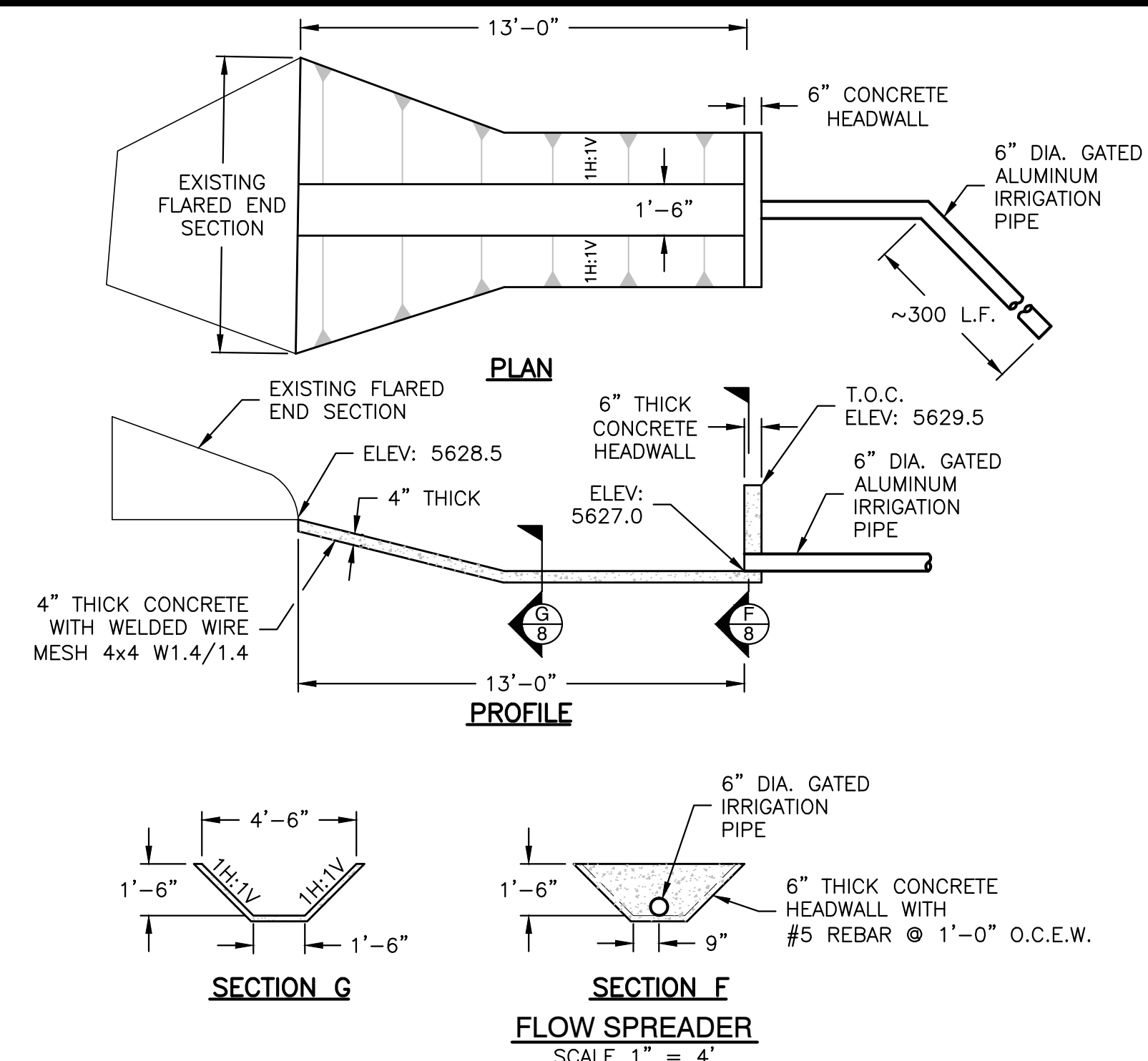
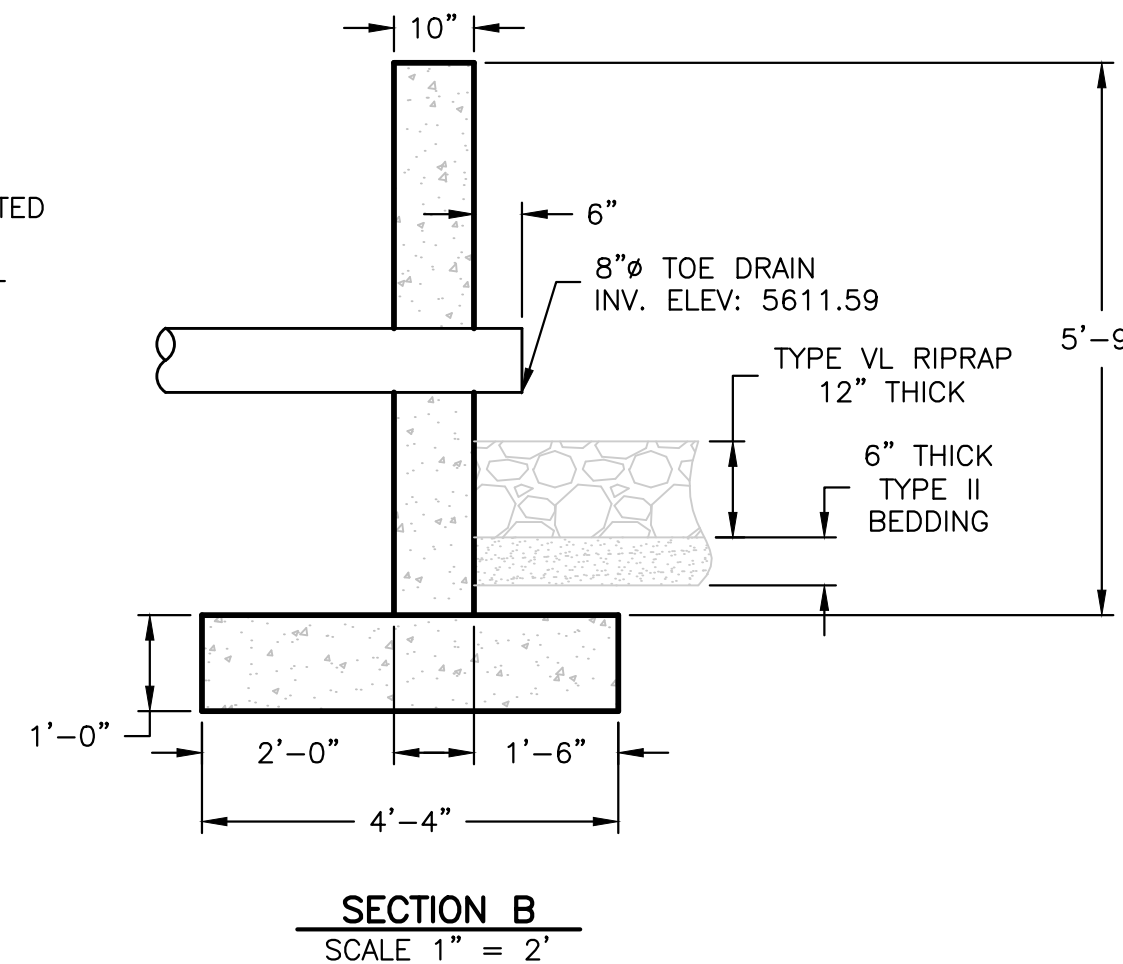
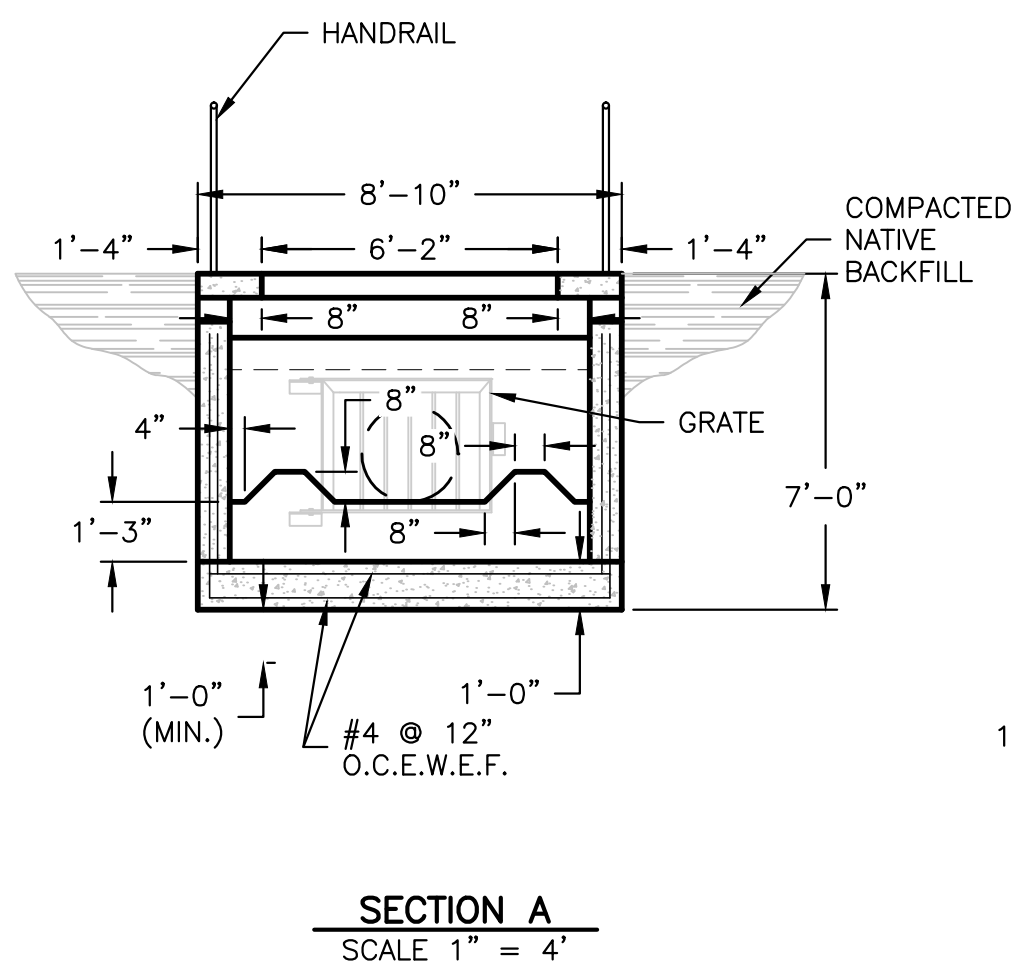
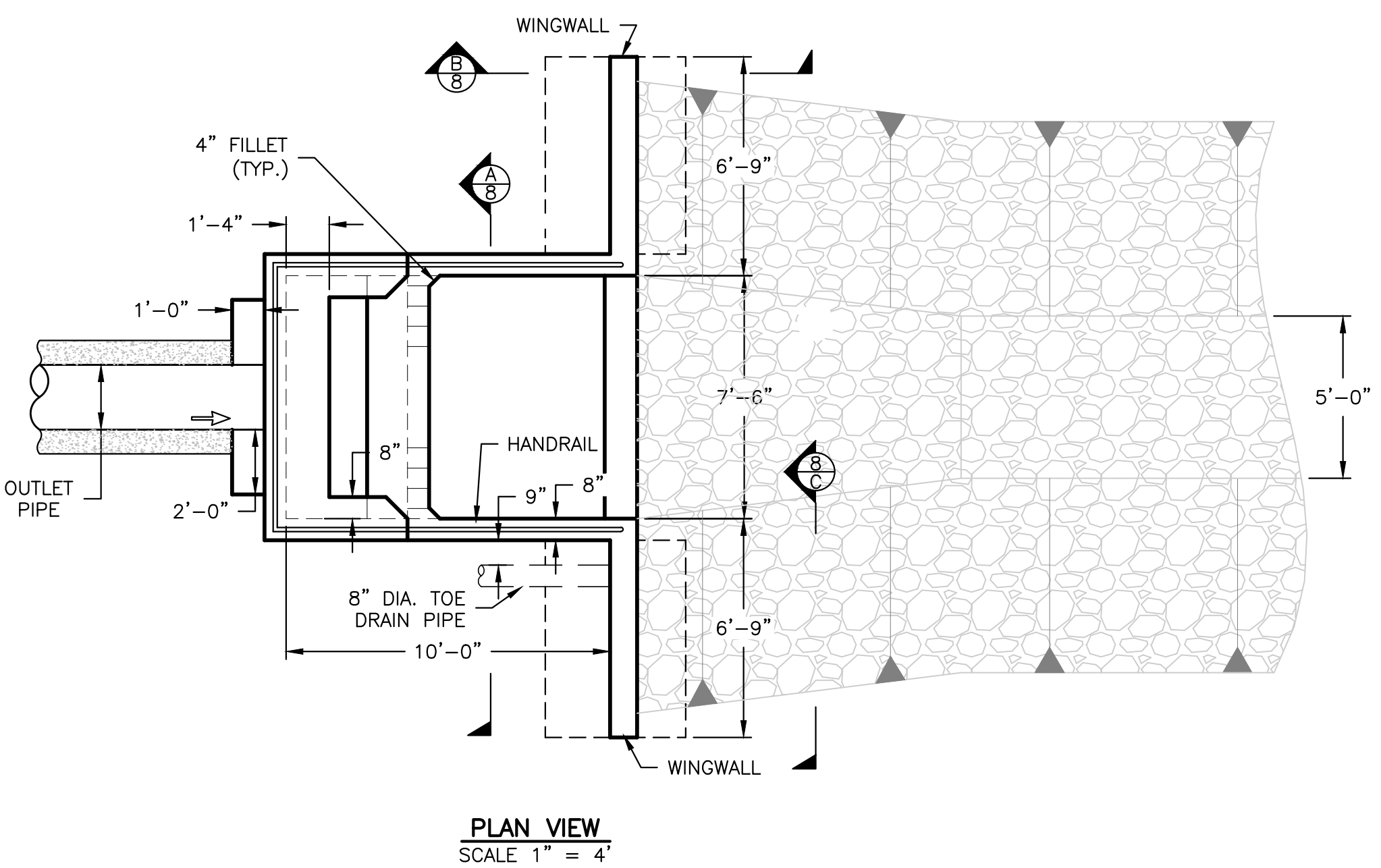
REVISIONS		DESCRIPTION
NO	DATE	BY

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: 1" = 30' H / 10' V

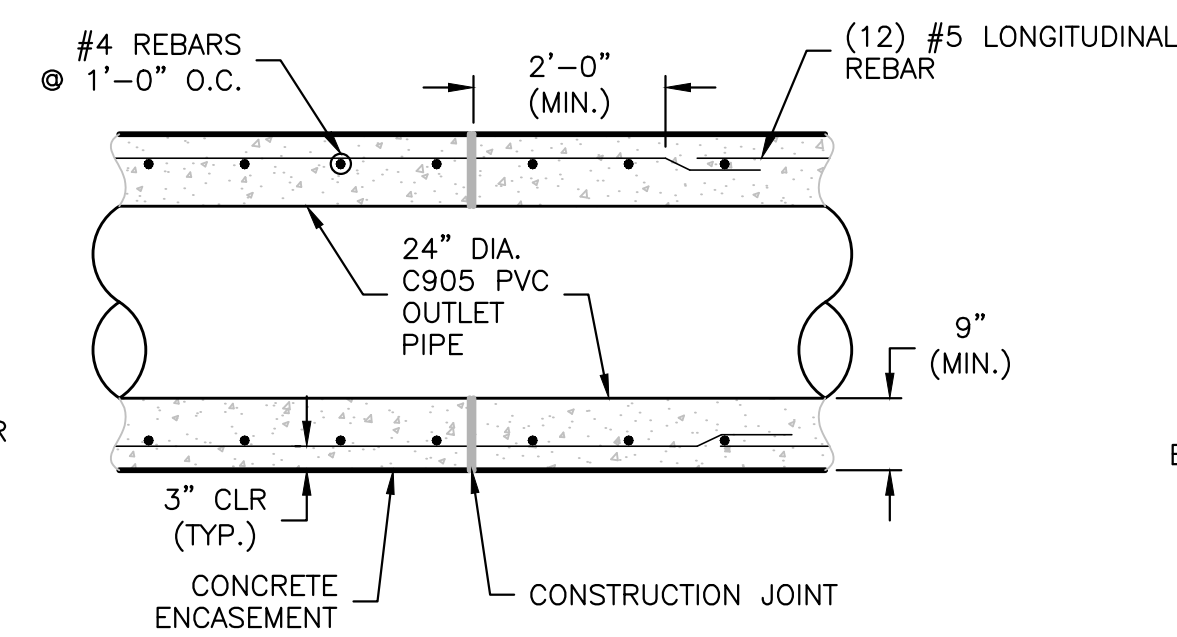
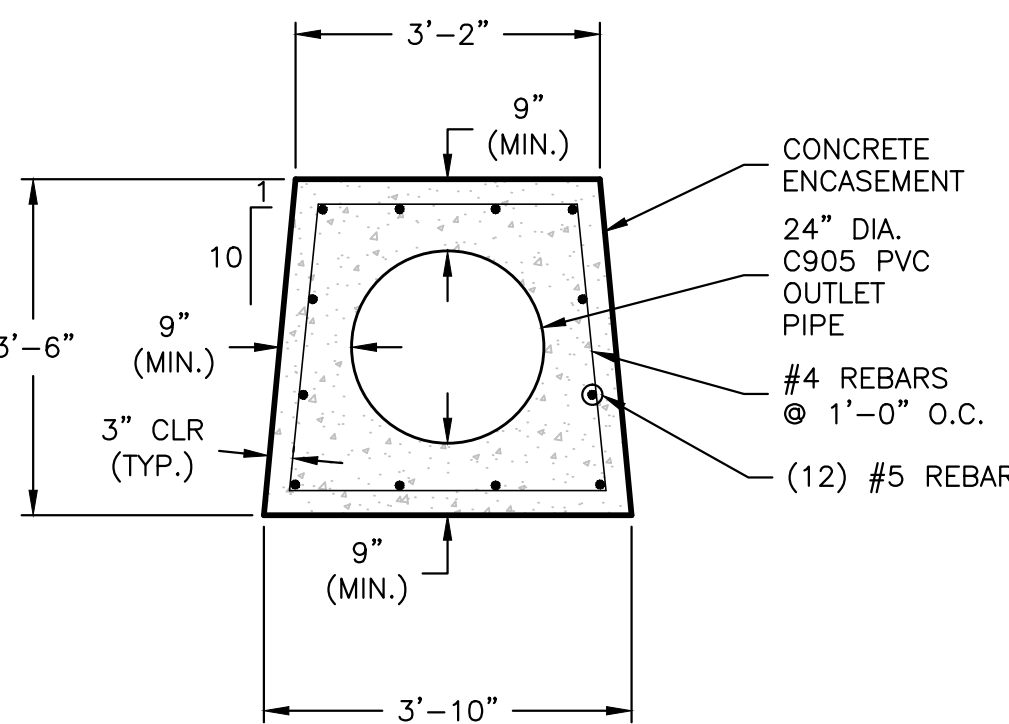
Sheet: **5**

Of: **14**
Filing No. **C**

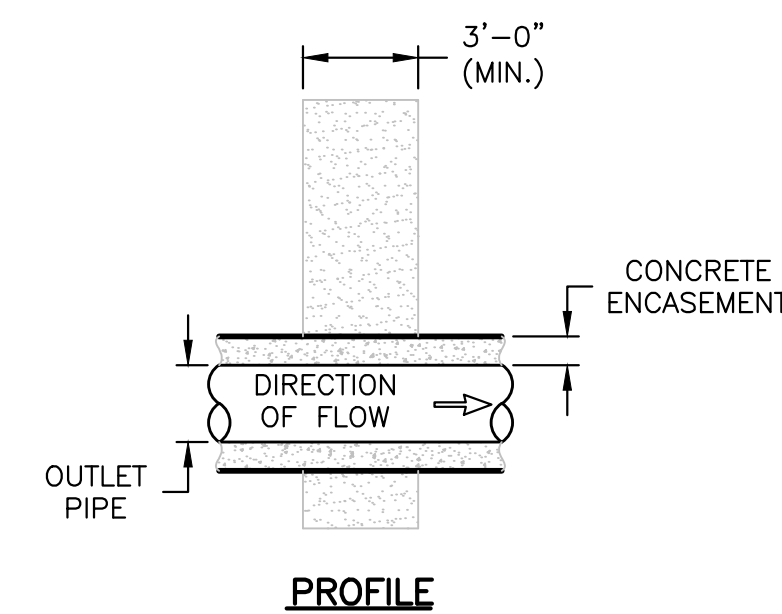
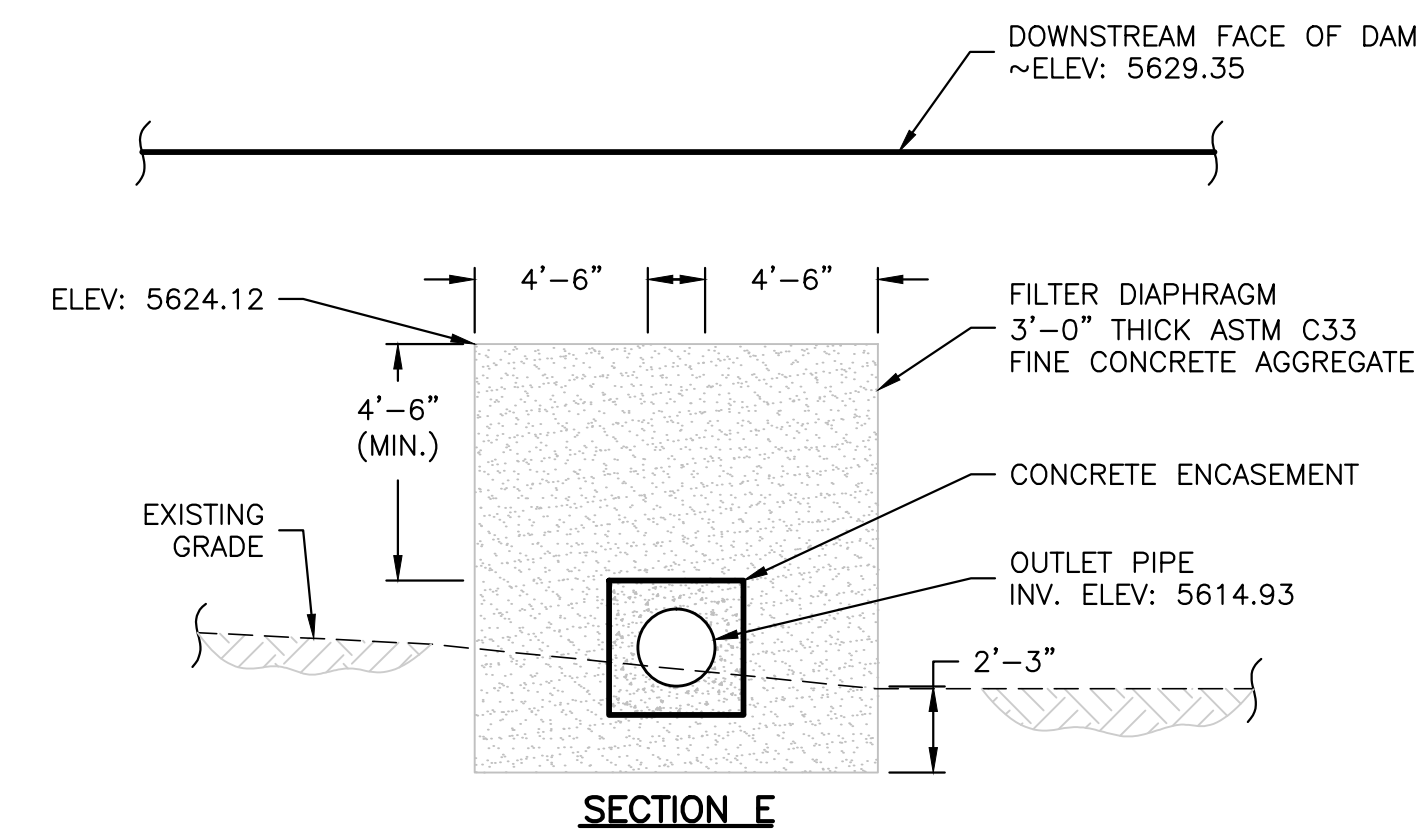
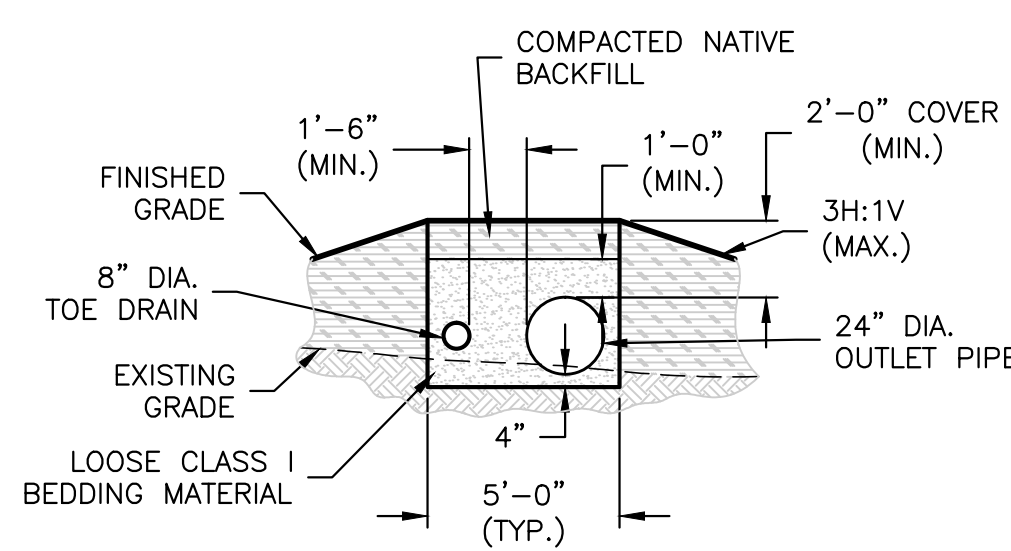
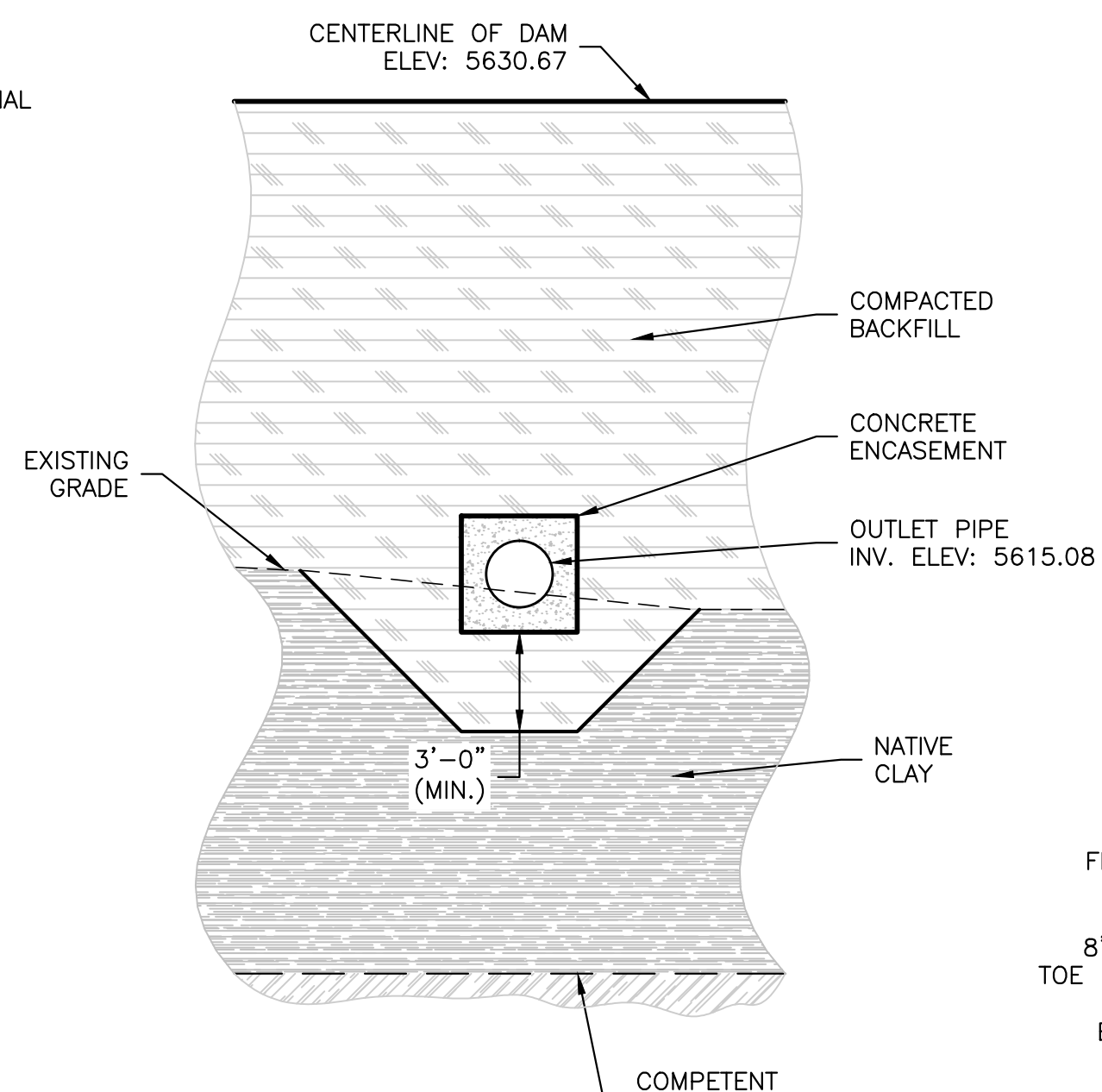
Plot Date: 10/29/13 12:58pm, Plotted by: jsc, Drawing: Drawing Path: N:\113 Cross Creek - Hale Reservoir\Drawings\Plan\5a\Construction\Plans\Drawing - Hale Reservoir - Cross Creek - Dam - RFP.dwg



BAFFLED OUTLET STRUCTURE
SCALE 1" = 4'



OUTLET PIPE CONCRETE ENCASUREMENT
SCALE 1" = 2'



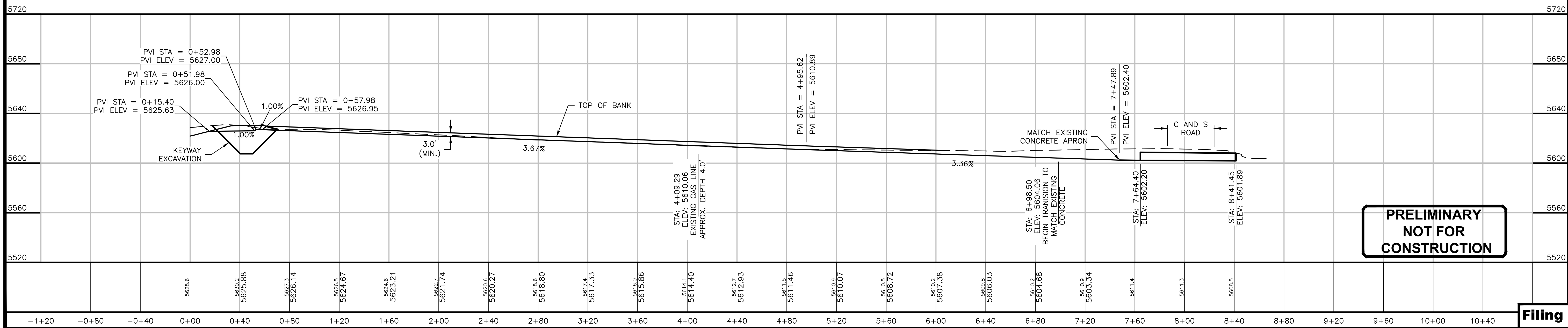
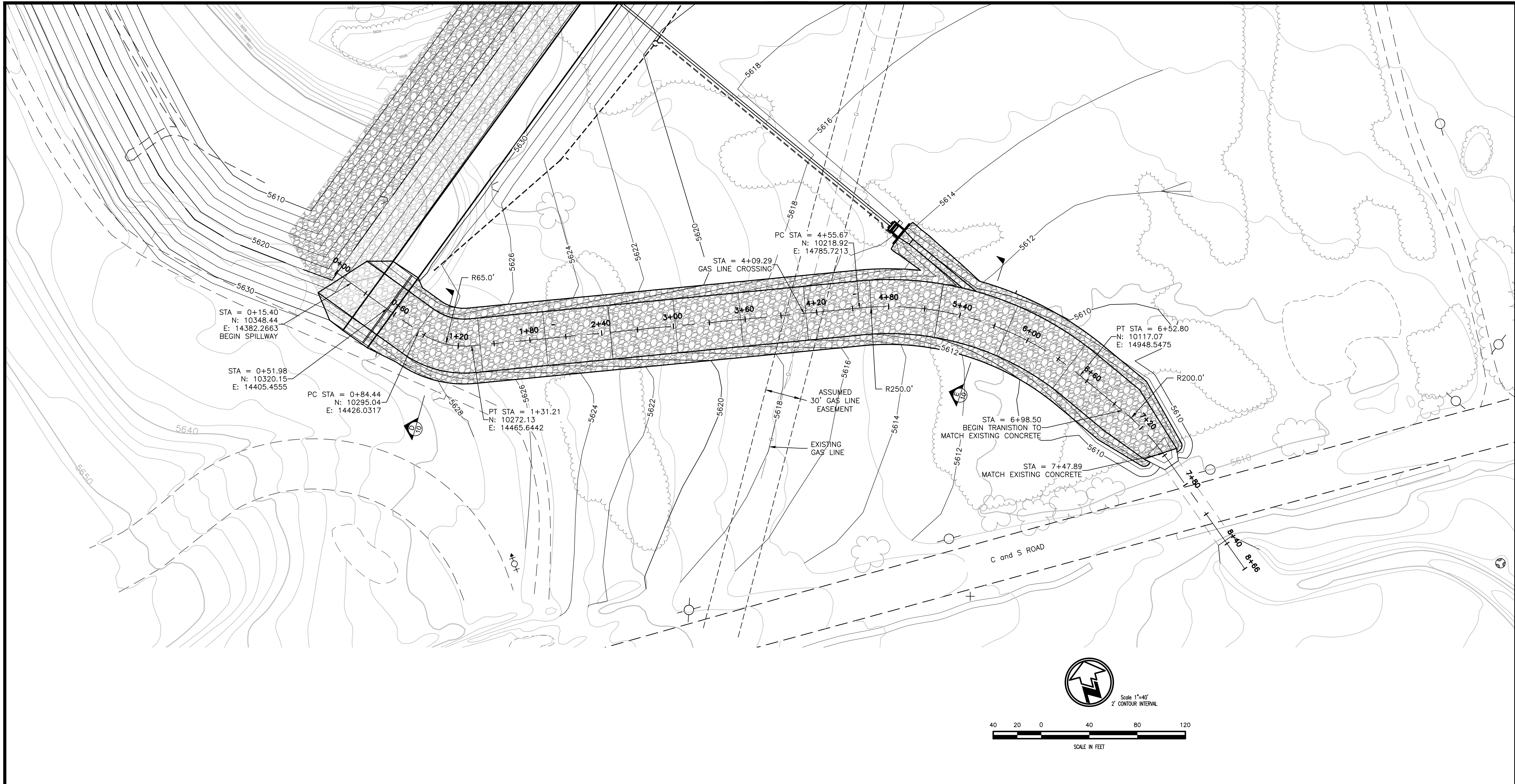
FILTER DIAPHRAGM
SCALE 1" = 5'

- NOTE:
- CONCRETE ENCASUREMENT SHALL BE CAST IN 15FT SECTIONS ALTERNATING AS SHOWN WITH #1 SECTIONS CAST FIRST, FOLLOWED BY #2 SECTIONS.
 - CONTRACTOR SHALL ENSURE PIPE DOES NOT FLOAT DURING CONCRETE PLACEMENT.

SEQUENCING
NOT TO SCALE

NO.	DATE	BY	CHK'D	DESCRIPTION

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: As Noted

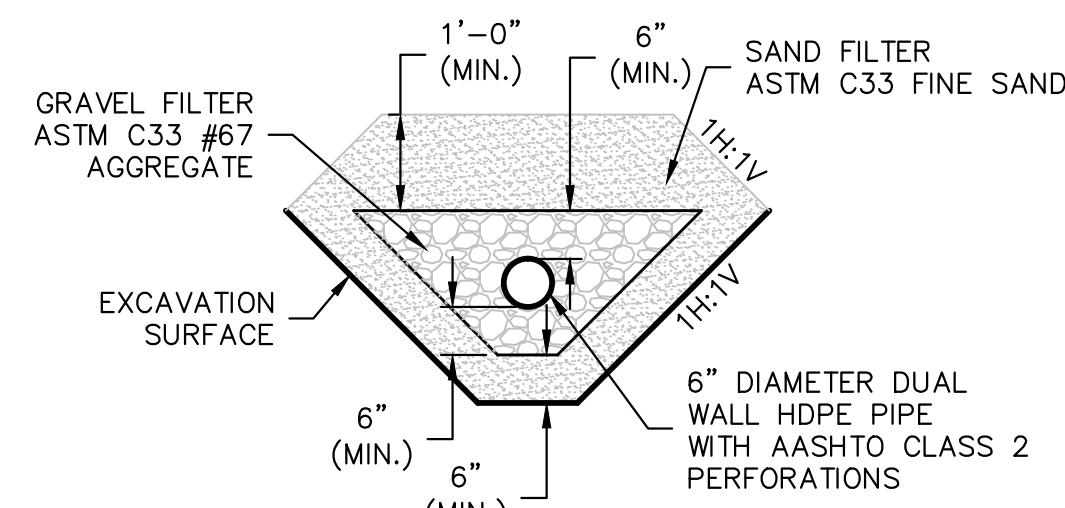
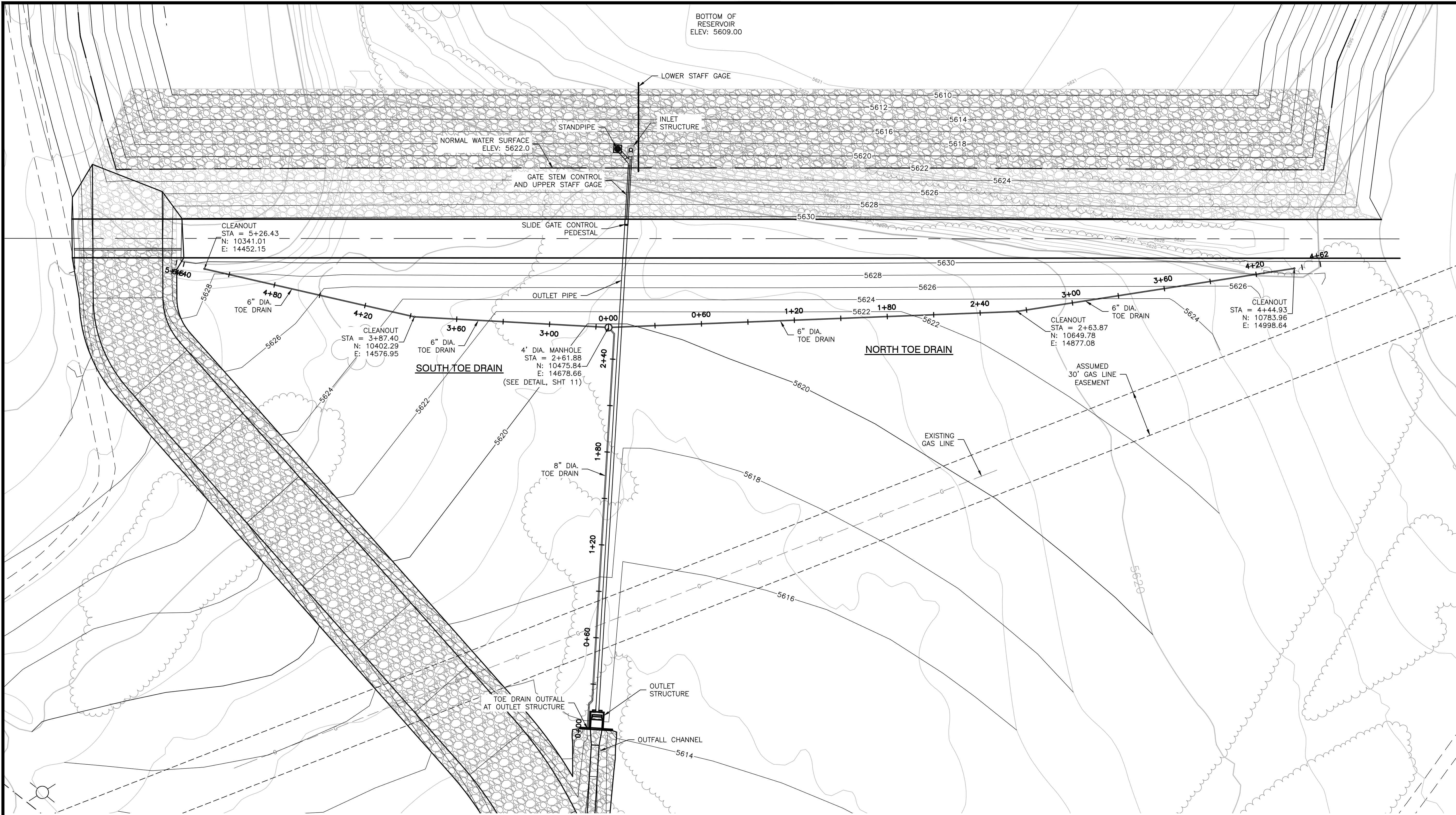


**PRELIMINARY
NOT FOR
CONSTRUCTION**

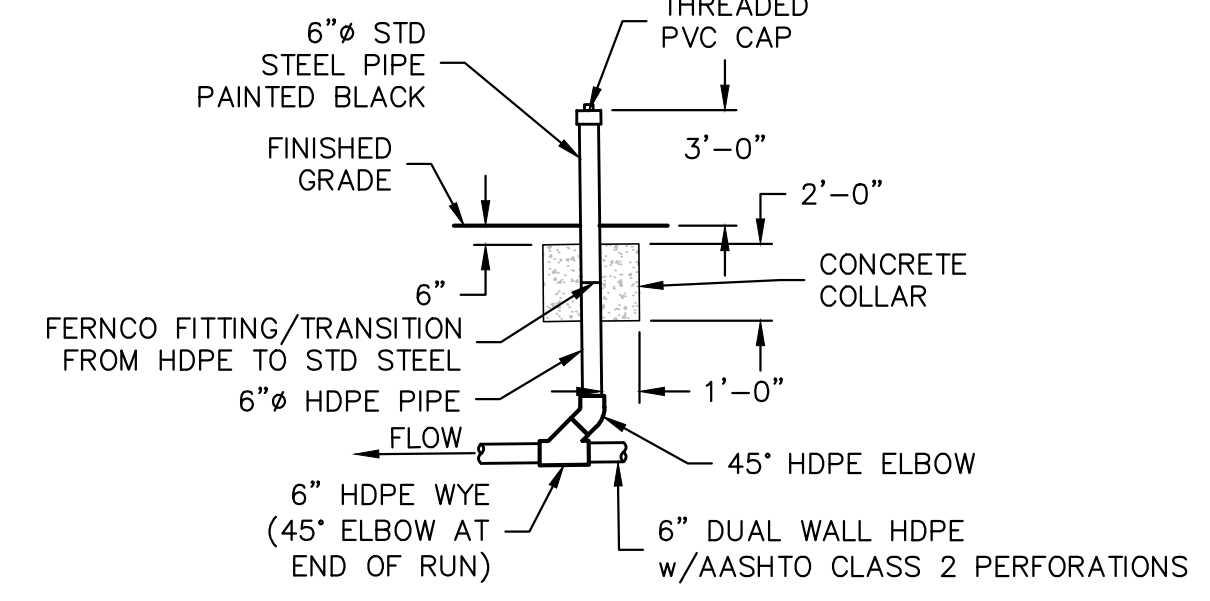
NO	DATE	BY	CHK'D	DESCRIPTION

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: 1" = 40' H&V

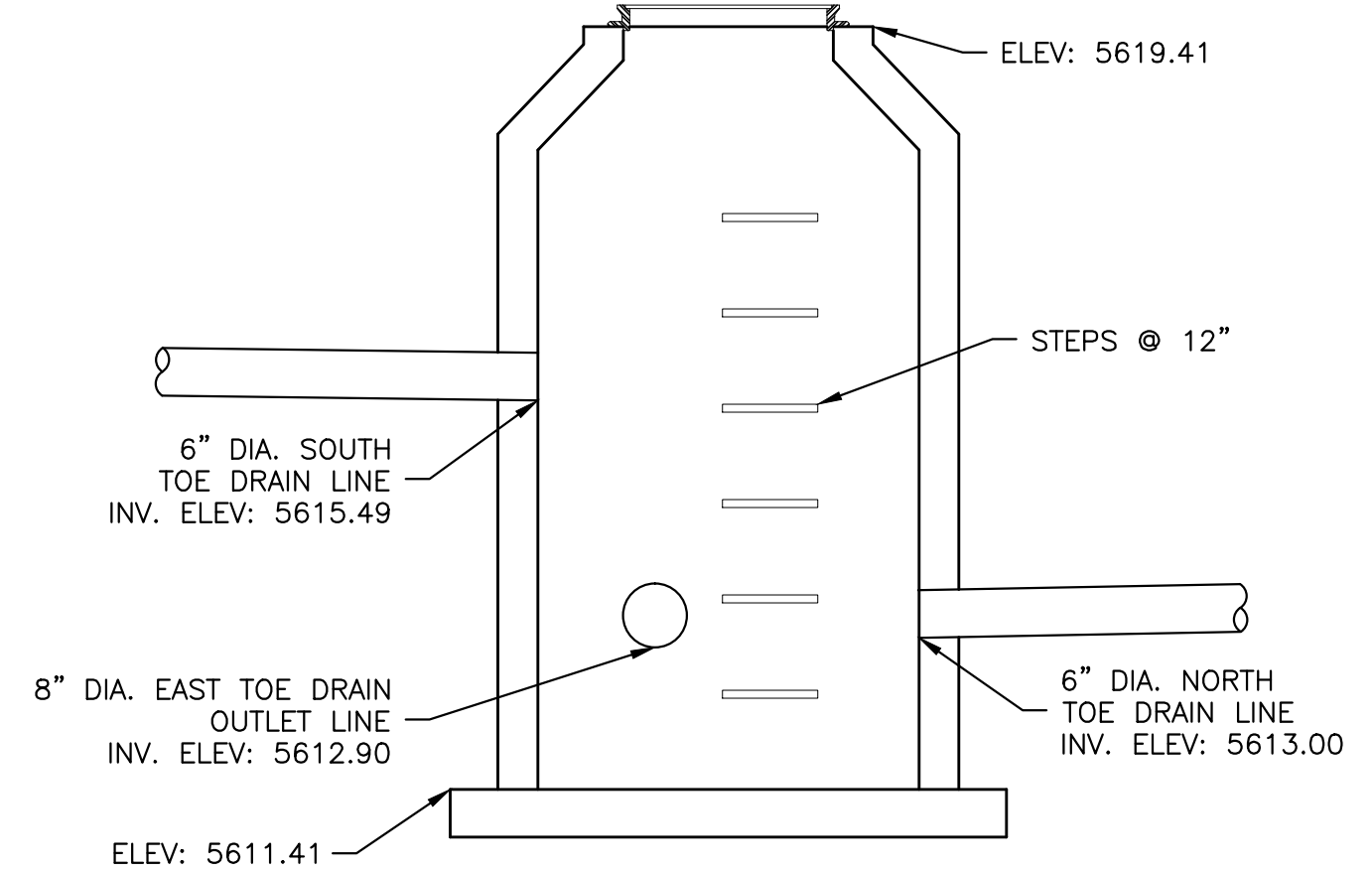
Plot Date: 10/29/13 12:53pm, Plotted by: jae Drawing: Drawing Path: N:\1113 Cross Creek - Hale Reservoir\Drawings\Plan_S&P\Construction Plans\Drawing Name: Hale Reservoir - Cross Creek - TO Spillway - P&P.dwg



TYPICAL TOE DRAIN SECTION
SCALE 1" = 2'

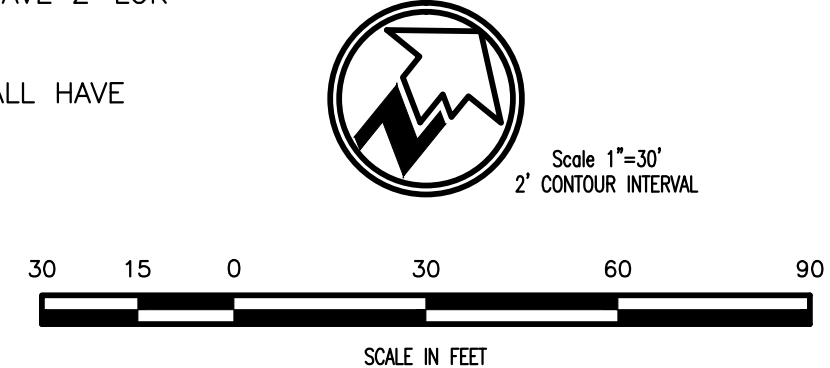


TYPICAL CLEANOUT DETAIL
SCALE 1" = 5'



TOE DRAIN MANHOLE DETAIL
SCALE 1" = 2'

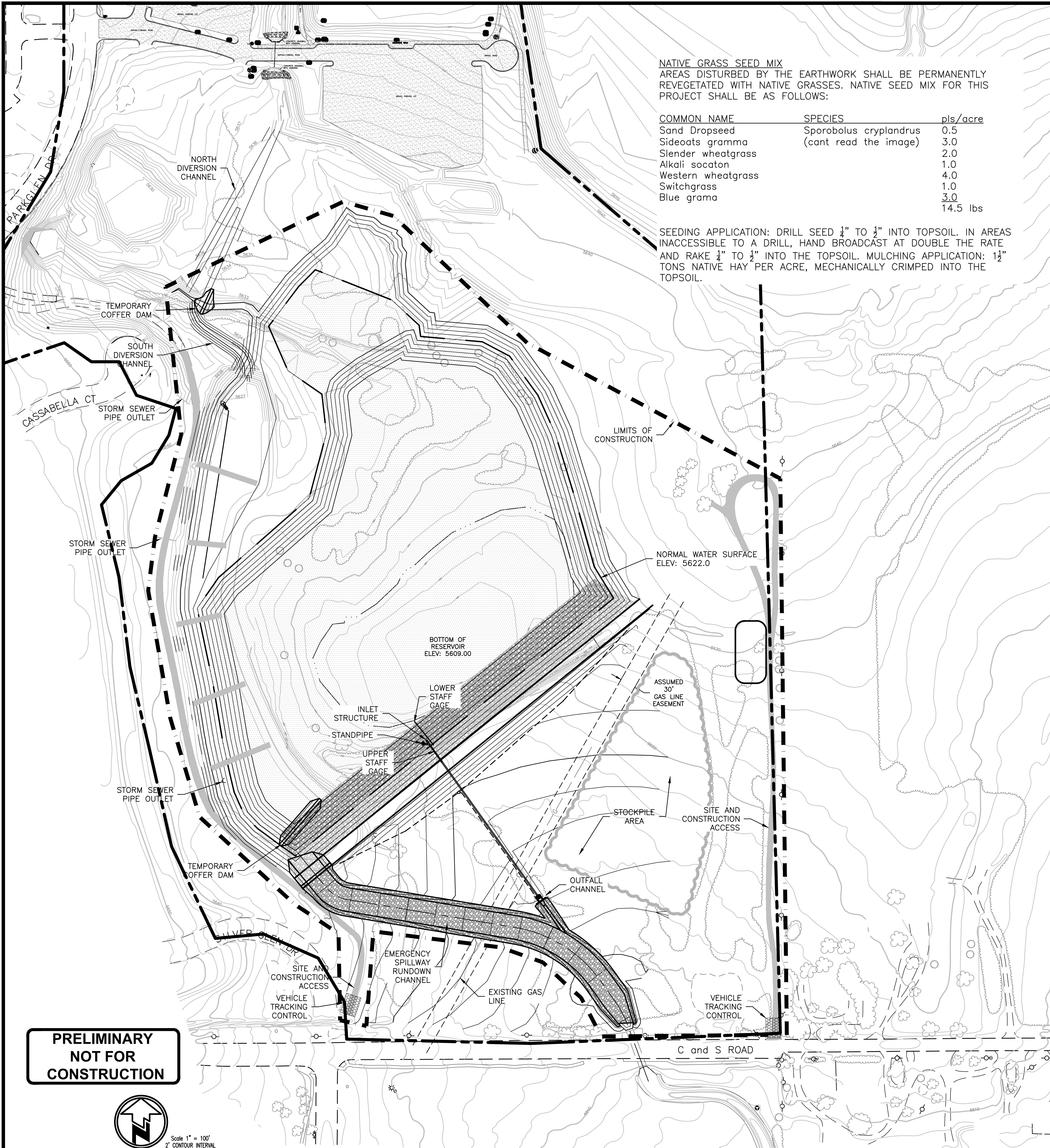
- NOTES:
- MANHOLE ECCENTRIC CONE TO BE ORIENTED TOWARD DAM CREST.
 - 6" PIPE OPENING SHALL HAVE Z-LOCK C107-6 GASKET.
 - 8" DIA. PIPE OPENING SHALL HAVE Z-LOCK C107-8 GASKET.



**PRELIMINARY
NOT FOR
CONSTRUCTION**

NO	DATE	BY	CHK'D	REVISIONS	DESCRIPTION

Date: 10/28/13
Job No: 12-130
Drawn: LD
Design: CH/SS
Checked:
Scale: 1" = 30' H/ 10' V



NATIVE GRASS SEED MIX
 AREAS DISTURBED BY THE EARTHWORK SHALL BE PERMANENTLY REVEGETATED WITH NATIVE GRASSES. NATIVE SEED MIX FOR THIS PROJECT SHALL BE AS FOLLOWS:

COMMON NAME	SPECIES	pls/acre
Sand Dropseed	Sporobolus crylandrus	0.5
Sideoats gramma	(cant read the image)	3.0
Slender wheatgrass		2.0
Alkali socrat		1.0
Western wheatgrass		4.0
Switchgrass		1.0
Blue grama		3.0
		14.5 lbs

SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/2" TO 1" INTO THE TOPSOIL. MULCHING APPLICATION: 1 1/2" TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

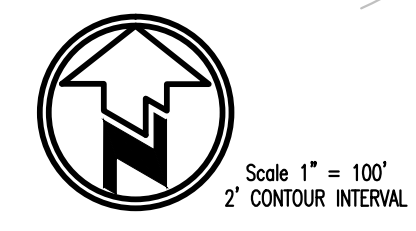
GRADING/EROSION CONTROL NOTES:

- ALL GRADING AND EROSION CONTROL SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY OF FOUNTAIN MUNICIPAL CODE SECTIONS 12.04.160 AND 12.10.
- ALL FILL AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE ENGINEER'S RECOMMENDATIONS.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPs SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- EROSION CONTROL SHALL CONSIST OF SILT FENCES, FIBER ROLLS, ROCK SOCKS, CHECK DAMS AND HAY BALES ETC. AS SHOWN ON THE DRAWING, AND TOPSOIL WITH GRASS SEED WHICH WILL BE WATERED UNTIL VEGETATION HAS BEEN REESTABLISHED.
- EROSION CONTROL STRAW BALES, FIBER ROLLS OR SILT FENCES SHALL BE PLACED AT THE TOE AND DRAINAGE OUTFALL POINTS OF ALL SLOPES 4:1 OR STEEPER TO PREVENT SILTATION ON STREETS. REFER TO STORM WATER MANAGEMENT PLAN FOR DETAIL AND LOCATION OF EROSION CONTROL MEASURES.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL, COUNTY AND STATE REGULATIONS PERTAINING TO GRADING, DUST AND EROSION.
- NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
- TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS.
- AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/DEVELOPER SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
- ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPs IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORMWATER QUALITY CONTROL PLAN APPROVED BY THE CITY OF FOUNTAIN, IF REQUIRED.
- ALL EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION.
- ALL EARTH DISTURBANCE SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- ALL EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS.
- SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE.
- TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS PRESCRIBED IN THE MANUAL, AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER CONTROL PLANS APPROVED BY THE CITY OF FOUNTAIN, IF REQUIRED.
- ANY STREET OR DRAINAGE FACILITY WHICH HAS HAD EROSION SEDIMENT DEPOSITED IN IT DUE TO CONSTRUCTION, GRADING, OR OTHER DEVELOPMENT ACTIVITY, MUST BE CLEANED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR, DEVELOPER, HOMEOWNER, OR WHOEVER IS RESPONSIBLE FOR THE CONSTRUCTION, GRADING, OR LAND DEVELOPMENT ACTIVITY. IF THE FACILITY IS NOT CLEANED IMMEDIATELY OR WITHIN A RESPONSIBLE PERIOD OF TIME AFTER NOTIFICATION BY THE CITY, THE CITY MAY PERFORM THE WORK OR HAVE THE WORK DONE AND BILL THE CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THAT VEHICLE TRACKING CONTROL IS IN PLACE, FUNCTIONAL, AND MAINTAINED THROUGHOUT THE CONSTRUCTION PHASE OF THIS PROJECT.
- INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33USC 1344), REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO CITY OF FOUNTAIN REQUIREMENTS. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION CONCRETE WASH OUT SITES MUST INCORPORATE IMPERVIOUS LINED CONTAINMENT. CONCRETE TRUCKS SHALL NOT BE ALLOWED TO DUMP OUT REMNANT CONCRETE OR WASH OUT EQUIPMENT DIRECTLY ONTO GROUND OR PAVED SURFACES WITHOUT LINED CONTAINMENT.
- FIBER ROLL EROSION CONTROL MAY BE UTILIZED IN LIEU OF SILT FENCING OR STRAW BALE DAMS.

NOTES:

- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE OR PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.
- THIS PLAN IS PRELIMINARY AND FOR PERMITTING USE ONLY, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION AND STORMWATER QUALITY CONTROL MEASURES ARE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AND ARE MAINTAINED IN COMPLIANCE WITH CITY EROSION AND STORMWATER CONTROL PERMIT.
- SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF DISTURBANCE. CONTRACTOR SHALL LIMIT DISTURBANCE TO MINIMUM PRACTICABLE AREA.
- SEEDING SHALL BE PER SECTION 32 92 00 - SITE RECLAMATION.

**PRELIMINARY
NOT FOR
CONSTRUCTION**



Applegate Group, Inc.
 Water Resource Advisors for the West
 1400 West 121st Ave., Suite 100
 Denver, CO 80234
 (303) 452-4611
 Fax: (303) 452-2759
 email: info@applegatgroup.com Website: www.applegatgroup.com

**CONSTRUCTION PLANS
EROSION AND STORMWATER
QUALITY CONTROL PLAN**

**CROSS CREEK
METRO DISTRICT
HALE RESERVOIR**

NO	DATE	BY	CHK'D	DESCRIPTION
				REVISIONS

Date: 10/28/13
 Job No: 12-130
 Drawn: LD
 Design: CH/SS
 Checked:
 Scale: 1" = 100'

Sheet: **13**
 Of: **14**

Filing No. C-

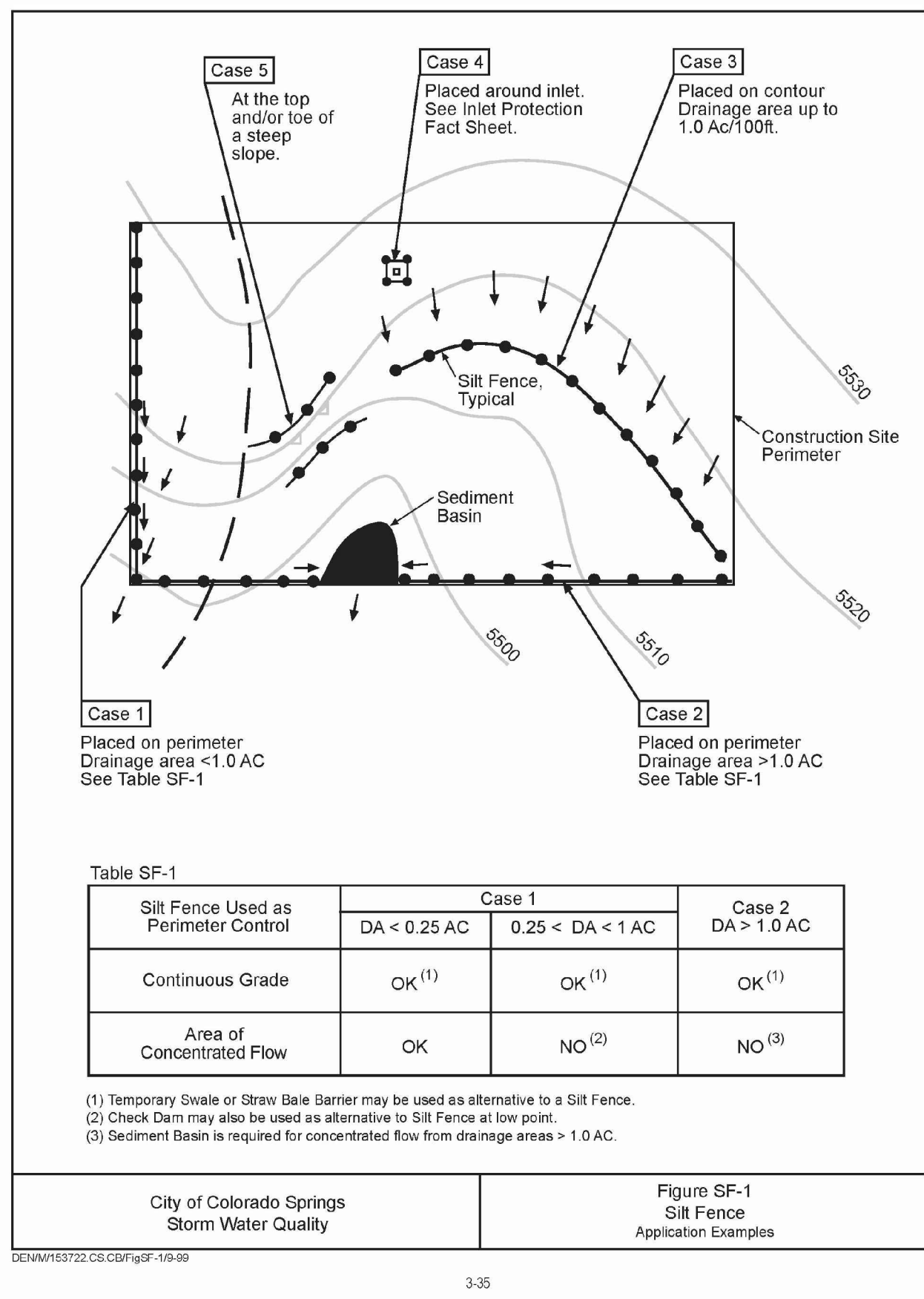
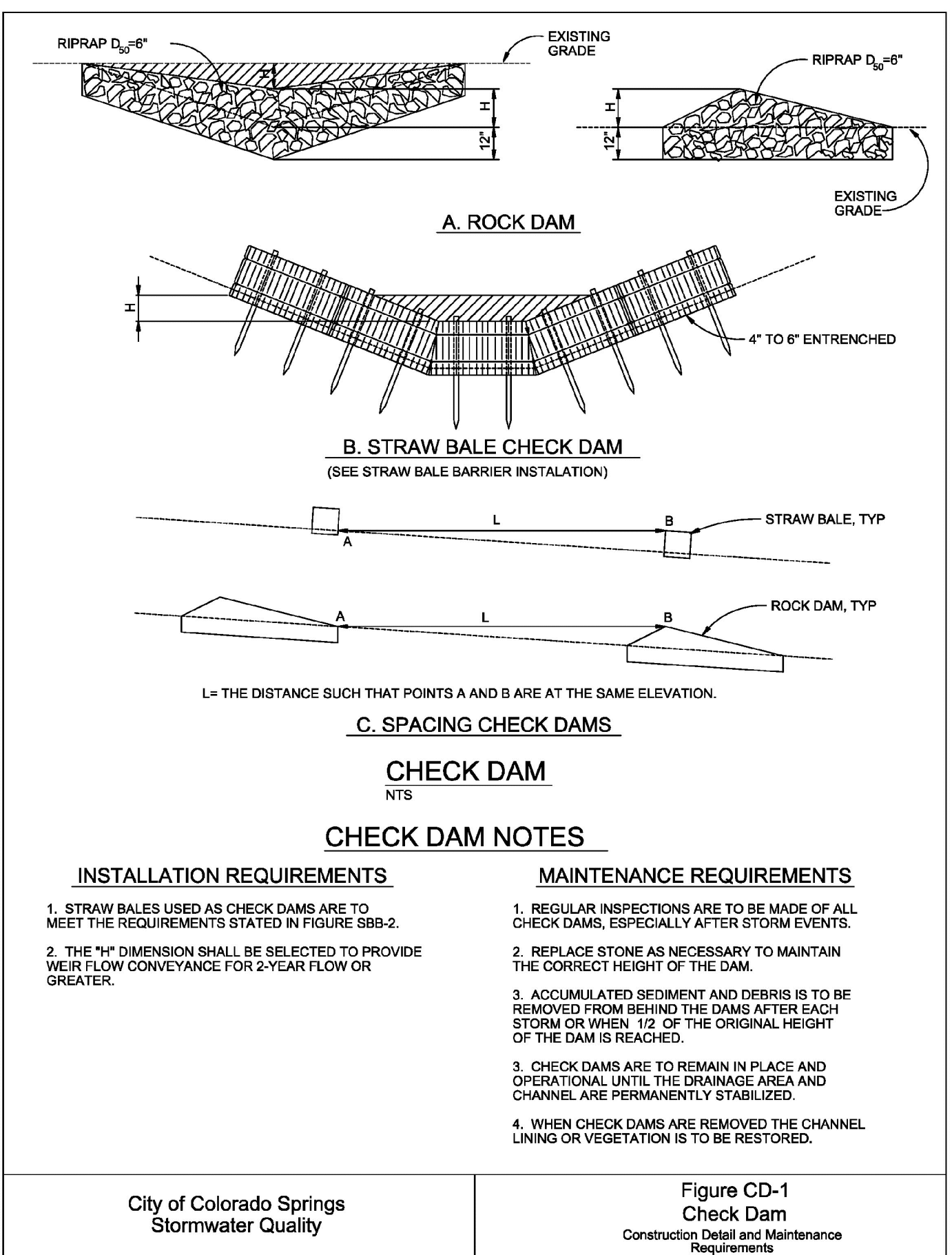


Table SF-1

Silt Fence Used as Perimeter Control	Case 1		Case 2
	DA < 0.25 AC	0.25 < DA < 1 AC	
Continuous Grade	OK ⁽¹⁾	OK ⁽¹⁾	OK ⁽¹⁾
Area of Concentrated Flow	OK	NO ⁽²⁾	NO ⁽³⁾

(1) Temporary Dials or Straw Bale Barrier may be used as alternative to a Silt Fence.
 (2) Check Dam may also be used as alternative to Silt Fence at low point.
 (3) Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.

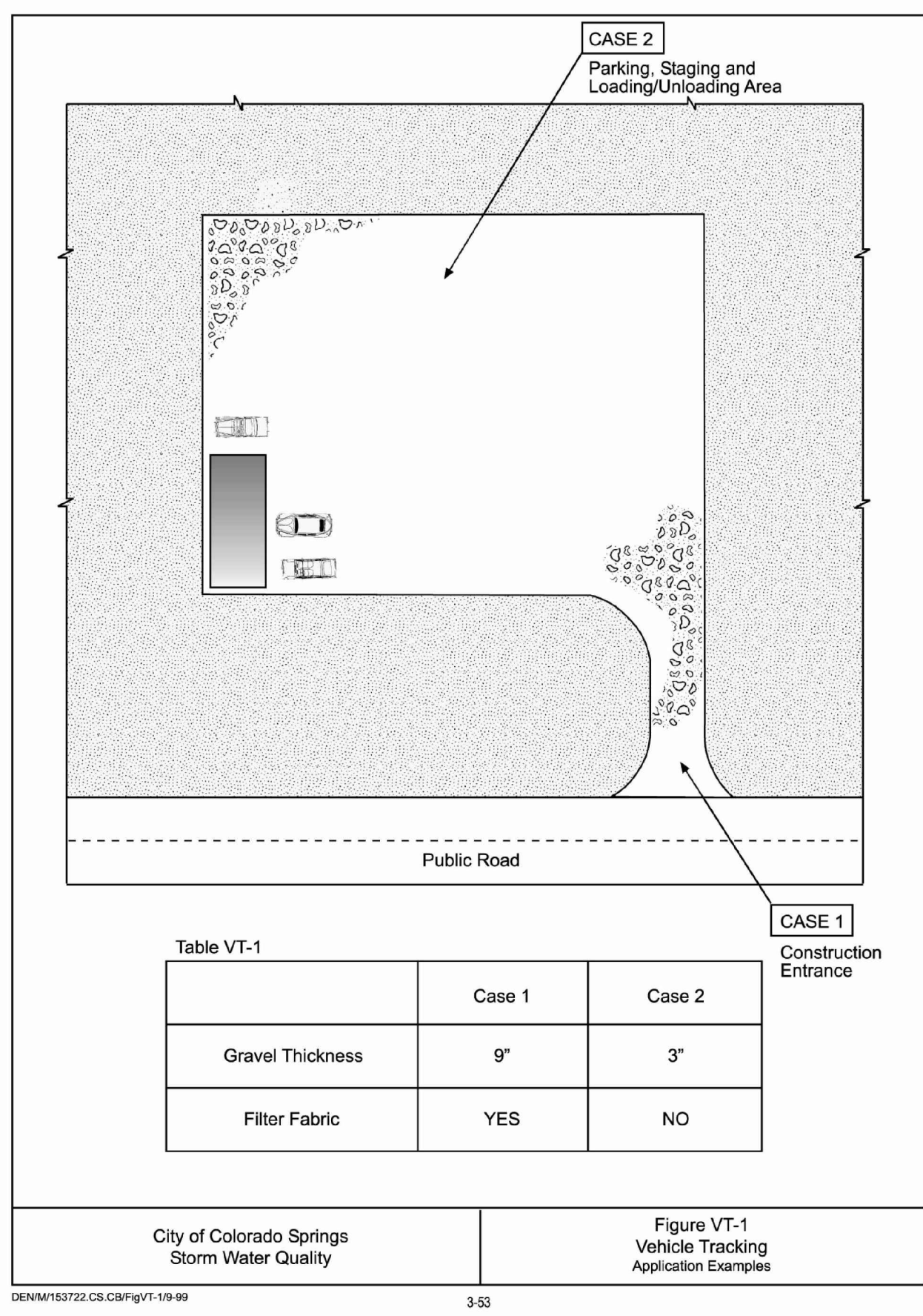
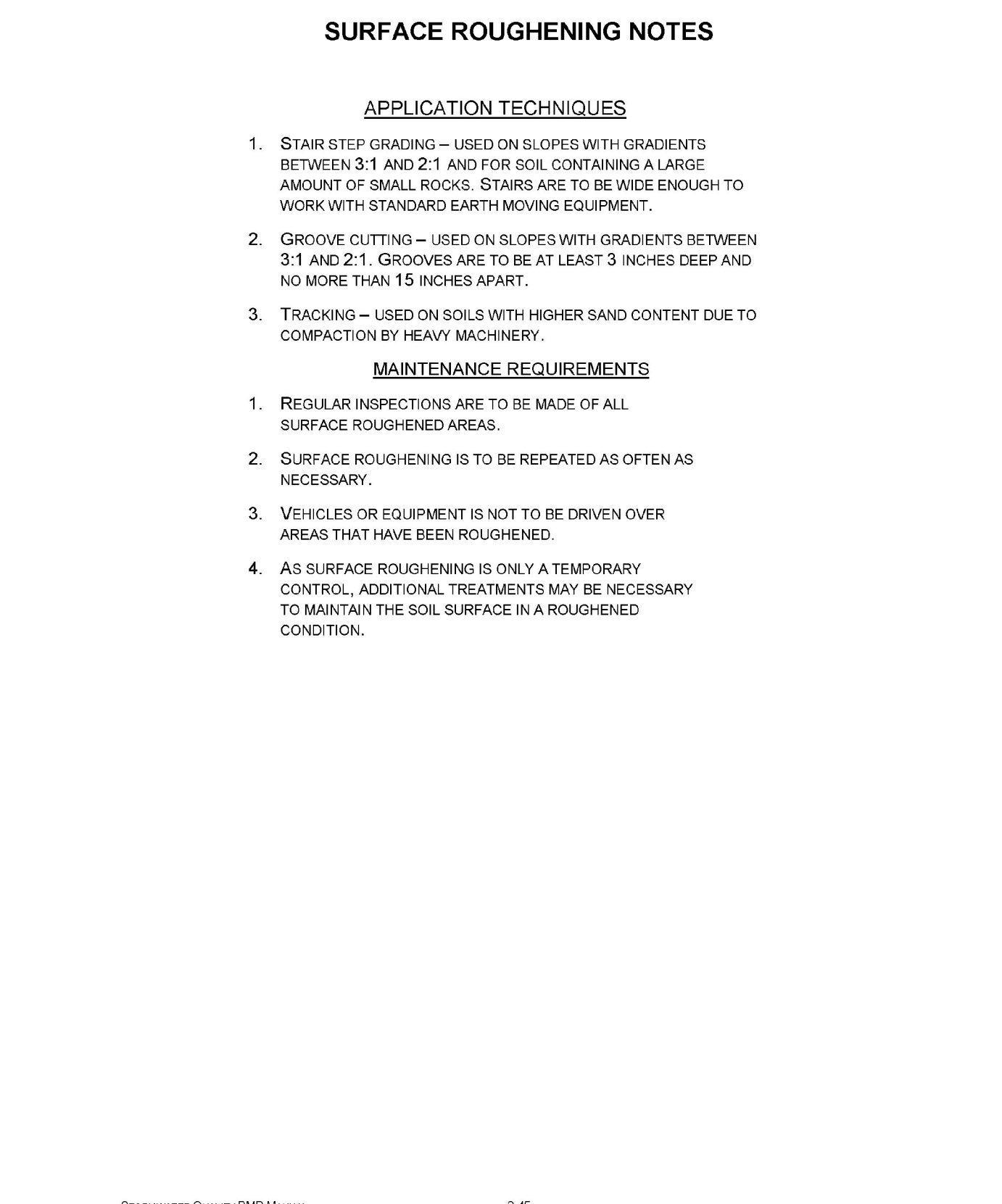
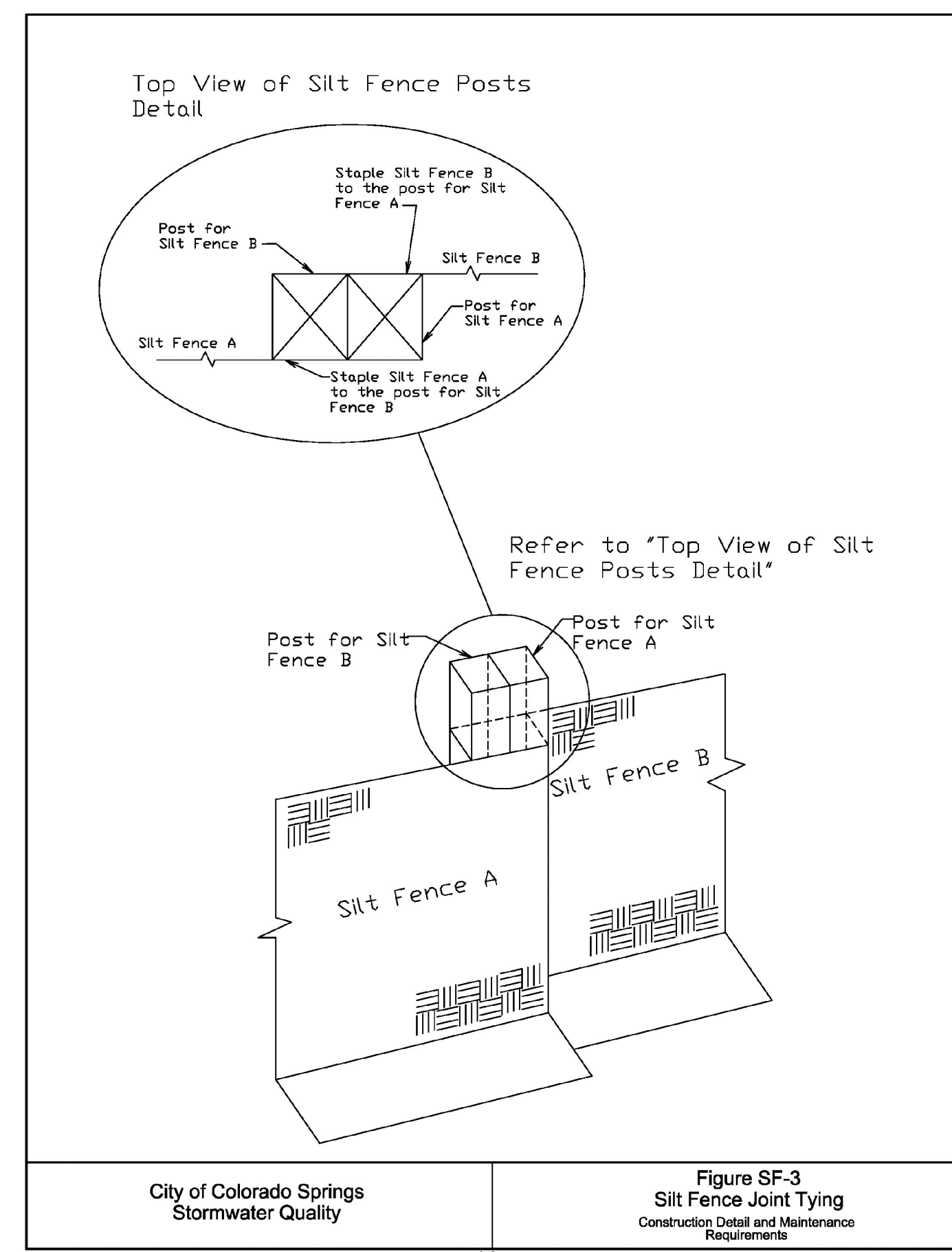
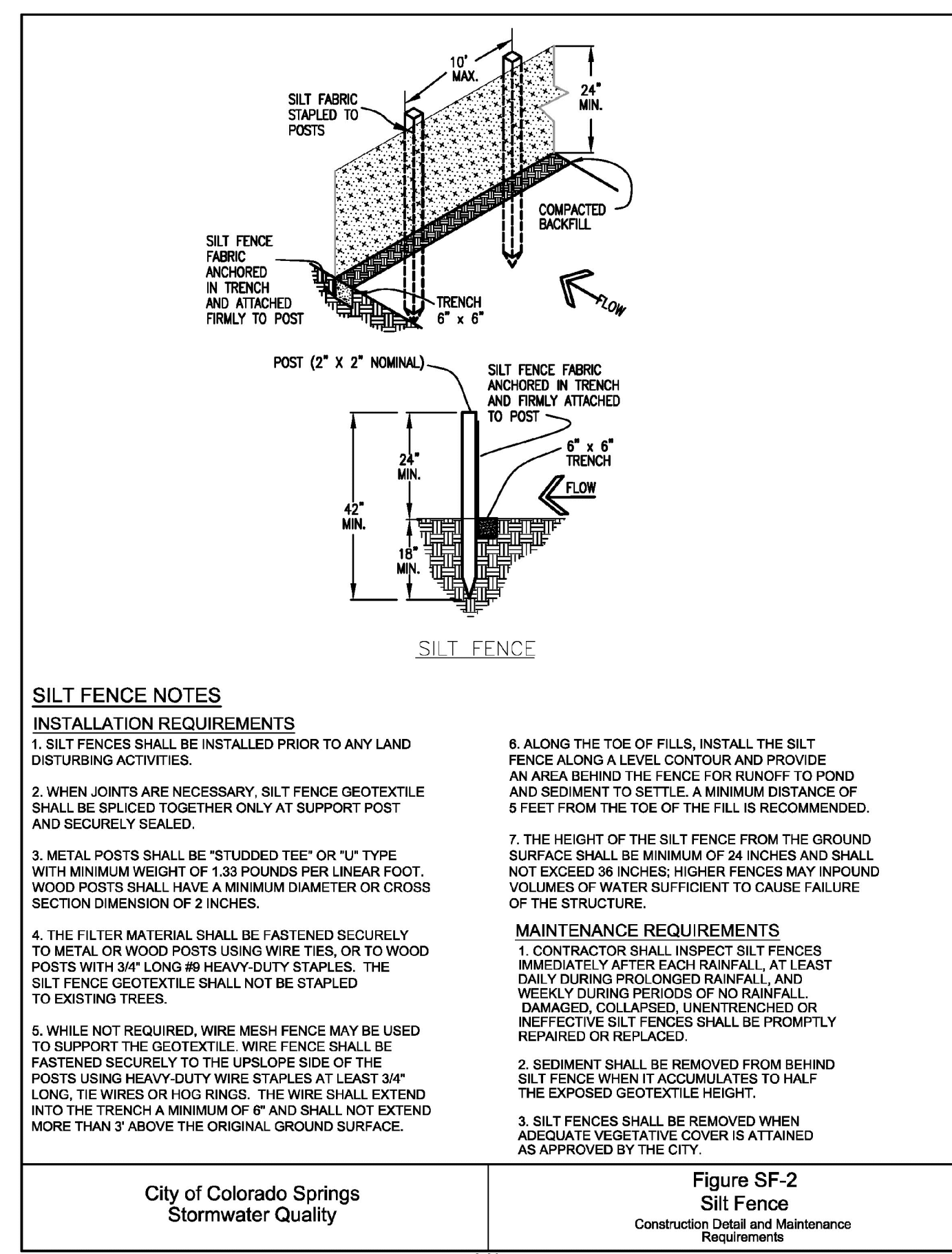
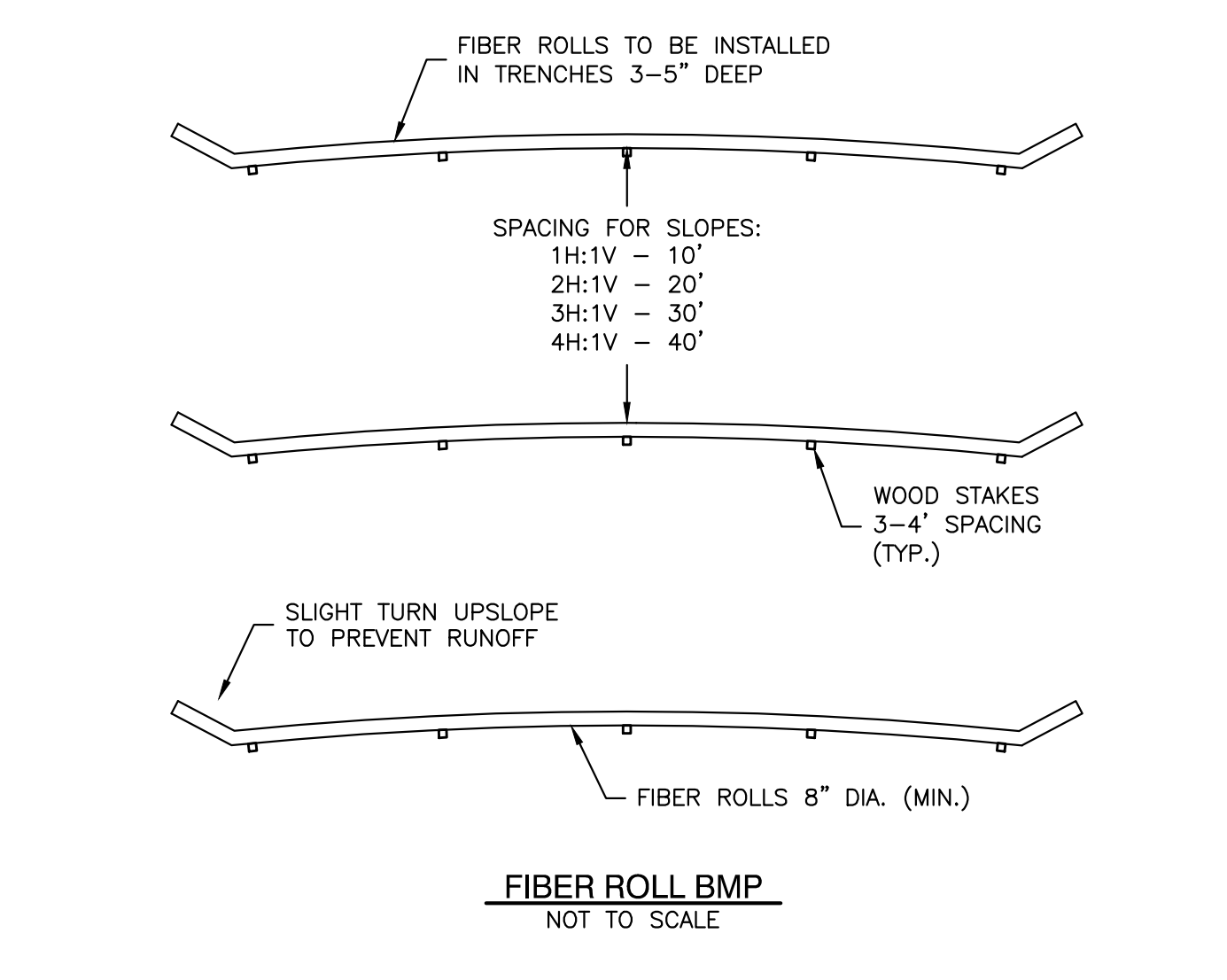
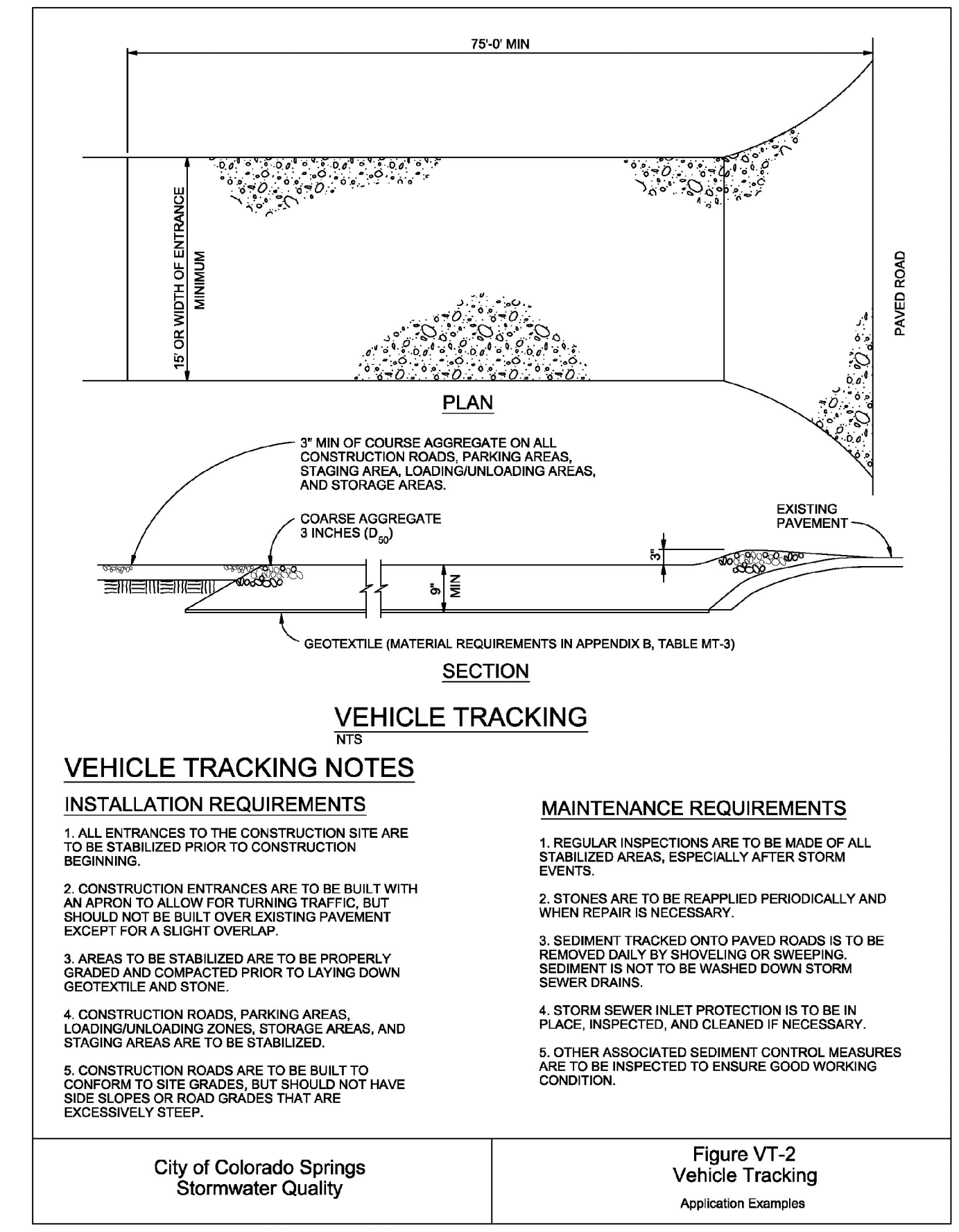


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO



PRELIMINARY NOT FOR CONSTRUCTION

Applegate Group, Inc.
Water Resource Advisors for the West
1400 West 121st Ave., Suite 100
Denver, CO 80234
(303) 452-6611
Fax: (303) 452-2759
email: info@applegategroup.com Website: www.applegategroup.com

CONSTRUCTION PLANS

EROSION AND STORMWATER QUALITY CONTROL DETAILS

CROSS CREEK METRO DISTRICT HALE RESERVOIR

NO	DATE	BY	CHK'D	DESCRIPTION

Date: 10/28/13
 Job No: 12-130
 Drawn: LD
 Design: CH/SS
 Checked: AS
 Scale: AS NOTED

Sheet: **14**
 Of: **14**

Filing No. C-