Canaan Valley State Park Resort

Ski Area Improvements Project

Contract 5

ENLARGED

SEDIMENT AND EROSION

CONTROL PLAN

DESIGNED BY

D-C2

CIVIL ENGINEERING / SITE DEVELOPMENT

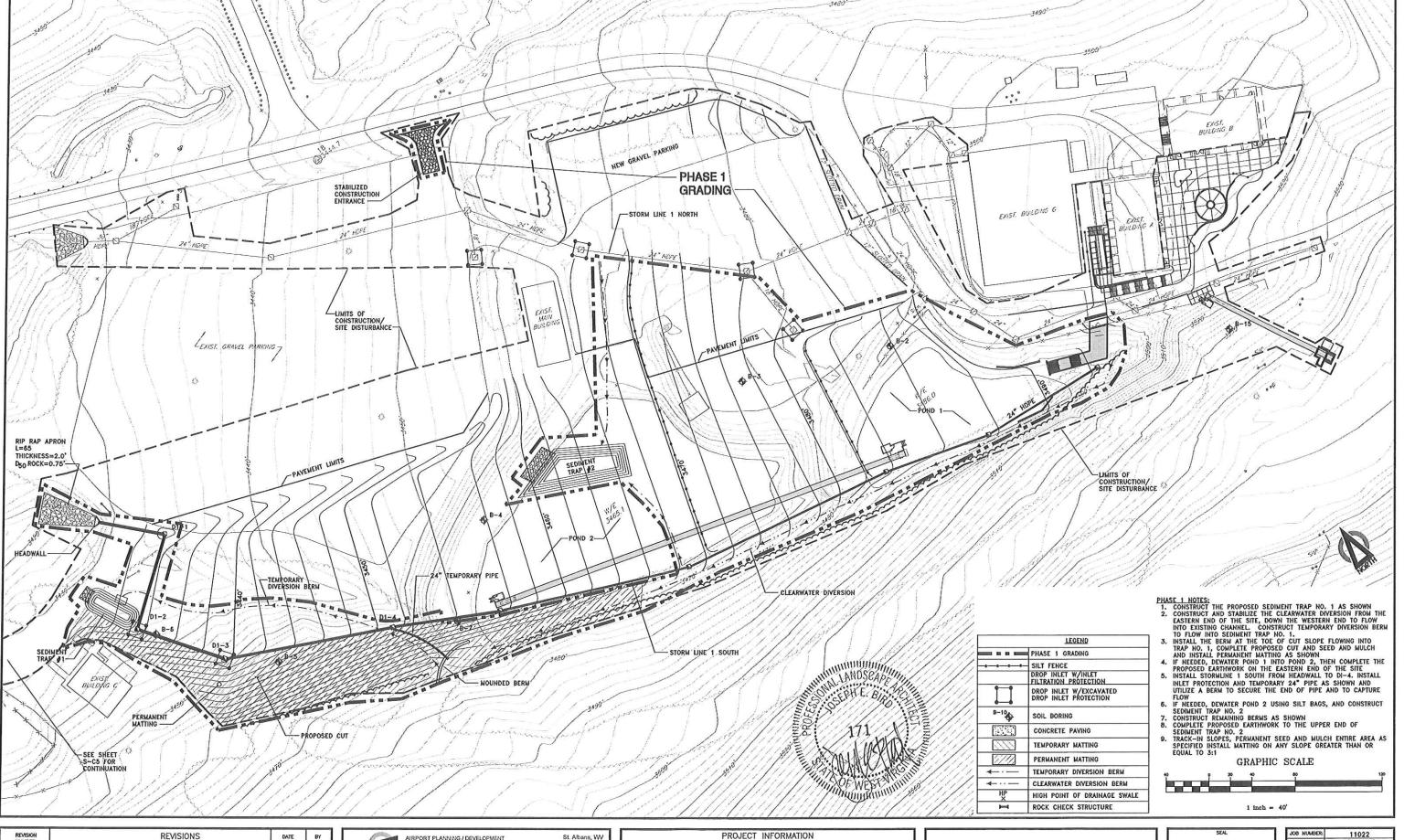
Martinsburg, WV (304) 260-1222

www.chaptech.com

Chapman ENVIRONMENTAL ENGINEERING

Technical LANDSCAPE ARCHITECTURE

Group surveying



REVISED SEDIMENT AND EROSION CONTROL MEASURES 2/3/2012 Group surveying

AIRPORT PLANNING / DEVELOPMENT ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT Chapman ENVIRONMENTAL ENGINEERING Technical LANDSCAPE ARCHITECTURE

St. Albans, WV (304) 727-5501 Buckhannon, WV (304) 472-8914 Martinsburg, WV (304) 260-1222 www.chaptech.com

WV Division of Natural Resources Parks and Recreation Canaan Valley State Park Resort Ski Area Improvements Project Contract 5

SKI SCHOOL / BEGINNER SLOPE SEDIMENT AND EROSION CONTROL PHASE 1



	EET NO.	REVISION
CHECKED BY:	JEB	
DESIGNED BY:	RDD	
DRAWN BY:	FLB	
DATE:	MAY 2011	
SCALE:	1" = 40'	
JOB NUMBER:	11022	

Parks and Recreation

Canaan Valley State Park Resort

Ski Area Improvements Project

Contract 5

DRAWN BY:

DESIGNED BY

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S-C1B

SEDIMENT AND EROSION CONTROL

PHASE 2

Buckhannon, WV (304) 472-8914

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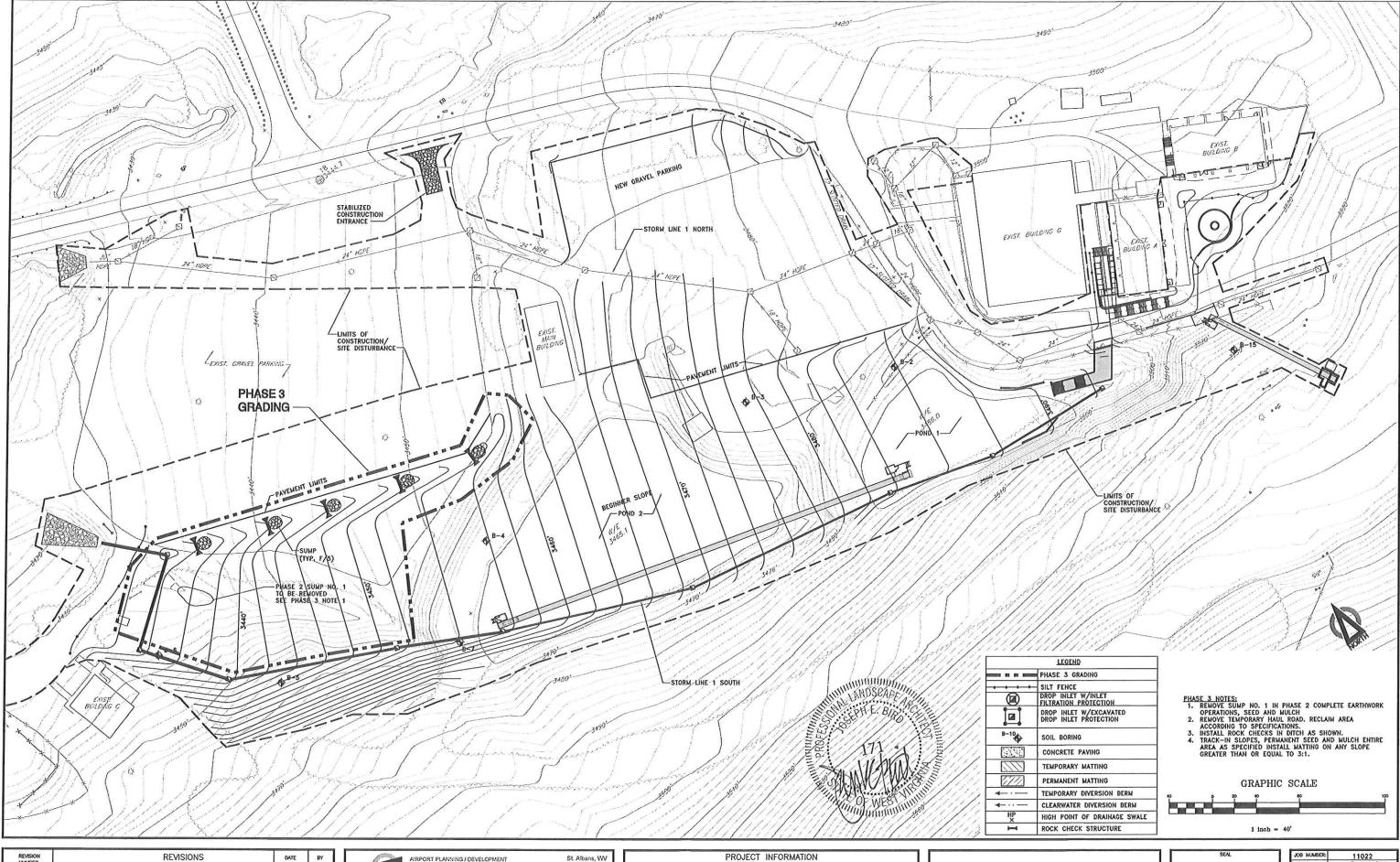
Group SURVEYING

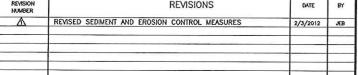
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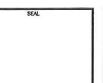


ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT Chapman ENVIRONMENTAL ENGINEERING Technical LANDSCAPE ARCHITECTURE

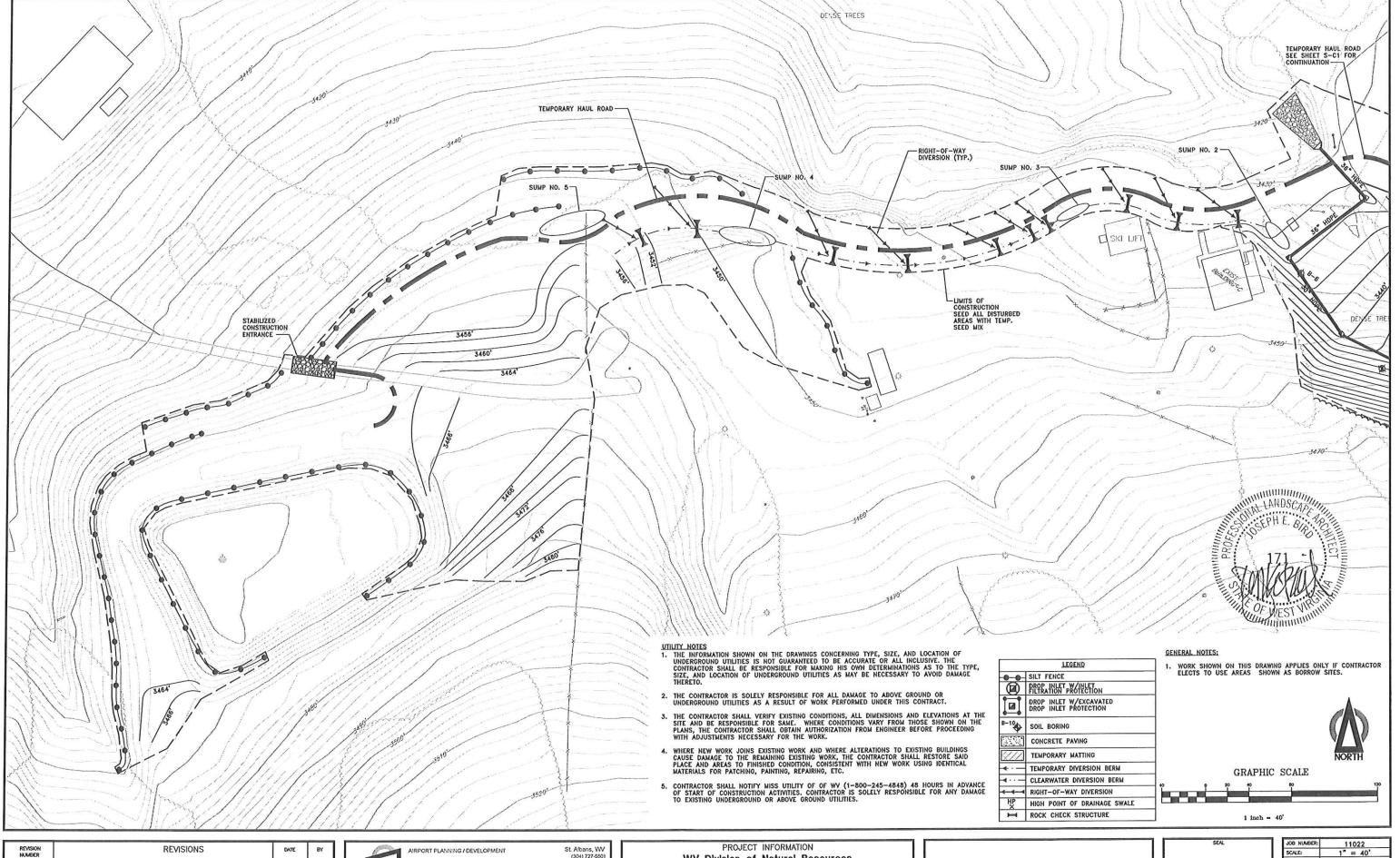
St. Albans, WV (304) 727-5501 Buckhannon, WV (304) 472-8914 Martinsburg, WV (304) 260-1222 www.chaptech.com

WV Division of Natural Resources Parks and Recreation Canaan Valley State Park Resort Ski Area Improvements Project Contract 5

SKI SCHOOL / BEGINNER SLOPE SEDIMENT AND EROSION CONTROL PHASE 3



es	C1C	REVISION
CHECKED BY:	JEB	
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DATE:	MAY 2011	
SCALE:	1" = 40'	
JOB NUMBER:	11022	



Δ 2/3/2012 JEB Chapman Group surveying

ENVIRONMENTAL ENGINEERING Technical LANDSCAPE ARCHITECTURE

ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT

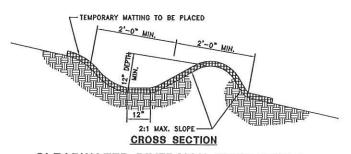
(304) 727-550 Buckhannon, WV (304) 472-6914 Martinsburg, WV (304) 260-1222

WV Division of Natural Resources Parks and Recreation Canaan Valley State Park Resort Ski Area improvements Project Contract 5 www.chaptech.com

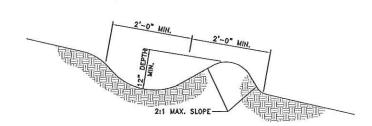
BORROW AREA SEDIMENT AND EROSION CONTROL SITE PLAN



JOB NUMBER:	11022	
SCALE:	1" = 40'	
DATE:	MAY 2011	
DRAWN BY:	FLB	
DESIGNED BY:	RDD	
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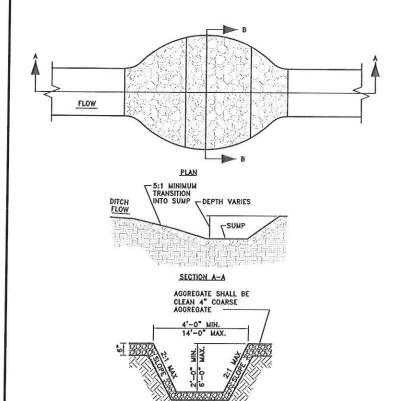


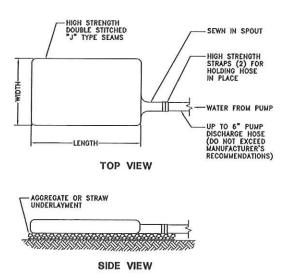
CLEARWATER DIVERSION BERM DETAIL



CROSS SECTION

TEMPORARY DIVERSION DITCH DETAIL





DEWATERING BAG

SECTION A

VARIES

FLOW

PROFILE

ROCK CHECK STRUCTURE

0'-6" MIN. OF COARSE ROCK PLACED IN CHANNEL FLOW LINE—

SECTION B

B

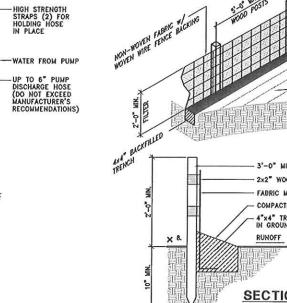
PLACE DOWNSTREAM STRUCTURE SUCH THAT TOP IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION OF THE UPSTREAM

(304) 727-550

(304) 472-891

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6" MIH



PERSPECTIVE 3'-0" MIN. FENCE POST 5'-0" c/c SPACING 2x2" WOOD POST ATTACHED TO FABRIC POSTS SHALL BE CONSTRUCTED OF 2x2" HARDWOOD 3'-0" LONG. COMPACTED BACKFILL 4"x4" TRENCH - EMBED FILTER FABRIC IN GROUND 4" MIN. RUNOFF X 8. EQUAL.

- 1. WOVEN WIRE FENCE & FILTER FABRIC TO BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES.
- 2. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- AS NEEDED AND INSPECTED FOR DAMAGE AFTER IT RAINS.
- 5. FENCE SHALL BE WOVEN WIRE, 14 GA., 6x6" MAX. MESH OPENING.
- 6. FILTER FABRIC SHALL BE NON-WOYEN "MIRAFI 100X", "EXXON GTF 180", OR
- APPROVED PREFABRICATED UNITS INCLUDE "GEOFAB", "ENVIROFENCE", OR APPROVED EQUAL.
- 8. HYDROSEED A 6'-O" STRIP ON EACH SIDE OF SILT FENCE WITH TEMPORARY SEED MIX AS PER SPECIFICATIONS.

SILT FENCE DETAIL SCALE: NONE ITEM P-156

FILTER FABRIC (EXXON GTF 180 OR EQUAL) PLAN

INLET

ISOMETRIC VIEW FILTER FABRIC (EXXON GTF 180 OR

-2x4 WOOD POST, MAX. 18" ABOVE GRADE BURY FILTER FABRIC MIN. 6" INTO COMPACTED SUBGRADE LANDSCAP

SECTION A-A

INLET INFILTRATION PROTECTION

SEDIMENT AND EROSION CONTROL NOTES

A. GENERAL NOTES

- 1. IN ORDER TO PREVENT AND TO PROVIDE FOR ABATEMENT AND CONTROL OF ANY ENVIRONMENTAL POLLUTION ARISING FROM THEIR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL COMEN'S WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONCERNING ENVIRONMENTAL POLLUTION CONTROL AND ABATEMENT, AS WELL AS SPECIFIC REQUIREMENTS AND CONDITIONS OF ANY NECESSARY PERMITS FOR CONSTRUCTION OBTAINED BY THE OWNER.
- 2. ALL SEDIMENT AND EROSION CONTROL MEASURES ARE SUBJECT TO INSPECTION AND CHANGES BY THE WYDEP.
- 3. LIMIT THE AMOUNT OF TOTAL DISTURBANCE ON SITE TO A MINIMUM.
- 4. CONTRACTOR IS RESPONSIBLE TO KEEP A RECORD OF WHEN CONSTRUCTION ACTIVITIES HAVE BEGUN AND HAVE EITHER TEMPORARILY OR PERMANENTLY CEASED AND WHEN SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INITIATED, INSPECTED, MAINTAINED,
- 5. REVEGETATION ALL WORK AREAS THAT ARE COMPLETELY FINISHED WILL BE SEEDED 5. REVEGETATION — ALL WORK AREAS THAT ARE COMPLETELY FINISHED WILL BE SEEDED AND MULCHED WITHIN SEVEN (7) DAYS OF COMPLETING CONSTRUCTION FOR THAT SPECIFIC AREA. AREAS THAT ARE TO BE RE-ENTERED WILL BE SEEDED AND MULCHED WITHIN TWO (2) WEEKS, PERMANENT VEGETATIVE COVER SHOULD BE COMPATIBLE WITH ADJACENT LAND AND/OR RESTORED TO ORIGINAL CONDITION. ALL AREAS WHERE TEMPORARY SEEDING OR MULCHING HAS BEEN APPLIED WILL BE PERMANENTLY SEEDED AND MULCHED IMMEDIATELY AFTER FINAL GRADING TO ESTABLISH VEGETATIVE COVER COMPATIBLE WITH ADJACENT LAND
- 6. WASTE AREAS THROUGH OBTAINING A NPDES STORMWATER SITE REGISTRATION PERMIT FROM WYDEP, THE ENGINEER HAS INCLUDED APPROXIMATELY 0.5 ACRES TO BE USED BY THE CONTRACTORS FOR WASTE SITES. THE CONTRACTORS WILL DETERMINE THE EXACT LOCATIONS OF EACH SITE WHICH WILL THEN BE ADDED TO THE PERMIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE EROSION AND SEDIMENT CONTROLS AT EACH SITE INCLUDING, BUT NOT LIMITED TO, SILT FENCE, DYVERSION DITCHES, ROCK CHECK STRUCTURES, ETC. AS APPROPRIATE, AND THE RECLAMATION THEREOF ONCE CONSTRUCTION IS COMPLETE.
- 7. OTHER CONSTRUCTION PRACTICES ANY WATER PUMPED FROM EXCAVATED AREAS SHALL NOT BE DISCHARGED DIRECTLY INTO ANY WATERCOURSE. ADEQUATE PROVISIONS MUST BE TAKEN TO PREVENT SEDIMENT AND EROSION FROM ENTERING THE WATERCOURSE.
- 8. ALL SLOPES EQUAL TO OR GREATER THAN 3:1 SHALL BE TEMPORARY MATTED.
- 9. OTHER CONSTRUCTION PRACTICES ANY WATER PUMPED FROM EXCAVATED AREAS SHALL NOT BE DISCHARGED DIRECTLY INTO ANY WATERCOURSE. ADEQUATE PROVISIONS MUST BE TAKEN TO PREVENT SEDIMENT AND EROSION FROM ENTERING THE WATERCOURSE.
- 10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORABILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.
- 11. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH DAY_AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS CONDITIONS ALLOW.
- 12. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G., THE TOTAL THE FERROD THAT CONSTRUCTION ACTIVITY IS TEMPORABILY HALTED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH DAY AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORABILY CEASED.
- 13. AREAS WHERE THE SEED HAS FAILED TO GERMINATE ADEQUATELY (UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70%) WITHIN 30 DAYS AFTER SEEDING AND MULCHING MUST BE RESEEDED IMMEDIATELY, OR AS SOON AS WEATHER CONDITIONS ALLOW.

B. SEQUENCE OF EVENTS

- 1. INSTALL TEMPORARY SEDIMENT CONTROL DEVICES, AS NEEDED IN THE WORK AREA, PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- 2. ALL TEMPORARY EARTHWORK STOCKPILES EXPECTED TO BE LEFT OPEN FOR MORE THAN SEVEN (7) DAYS SHALL BE TRACKED-IN AND TEMPORARILY SEEDED.
- 3. ALL PAYED SURFACES (CONCRETE, ASPHALT, RIP RAP, ETC.) SHALL BE INSTALLED AS SOON AS POSSIBLE UPON COMPLETION OF CONSTRUCTION.
- 4. REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ONCE PERMANENT VEGETATION HAS BECOME ESTABLISHED AND APPROVED BY WYDEP.

C. VEGETATIVE CONTROL (TEMPORARY AND PERMANENT)

1. EXISTING VEGETATION SHALL BE PRESERVED WHERE FEASIBLE.

D. STRUCTURAL CONTROLS

- 1. DIVERT WATER FROM UNDISTURBED UP SLOPE AREAS AROUND THE DISTURBED
- 2. REMOVE SEDIMENT FROM STORM RUNOFF BEFORE IT LEAVES THE DISTURBED AREA USING APPROPRIATE MEANS.
- 3. EXISTING DROP INLETS WITHIN THE DISTURBED AREA SHALL BE PROTECTED BY INSTALLING INLET PROTECTION. IF IT IS THE OPINION OF THE ENGINEER THAT THIS OPTION IS NOT SUITABLE, THE CONTRACTOR SHALL FURNISH AND INSTALL AN INSIDE THE INLET SEDIMENT CONTROL DEVICE, SUCH AS THE SILTSACK AS MANUFACTURED BY ACF ENVIRONMENTAL, INC. OF RICHMOND, VA., OR EQUAL.

1. INSPECT ALL SEDIMENT AND EROSION CONTROL DEVICES ON A REGULAR BASIS, AT LEAST ONCE PER EVERY SEVEN (7) DAYS, AND WITHIN 24 HOURS OF AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES PER 24 HOUR PERIOD. ANY REPAIRS OR MAINTENANCE MUST BE MADE IMMEDIATELY.

F. NPDES PERMIT VIOLATIONS/FINES

1. ANY FINE INCURRED BY THE OWNER FOR NPDES PERMIT VIOLATIONS DUE TO THE ACTIONS OR INACTION OF THE CONTRACTOR, WILL BE PAID BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. FAILURE OF THE CONTRACTOR TO PAY ANY SUCH FINES IN A TIMELY MANNER WILL RESULT IN THE OWNER WITHHOLDING SUCH FUNDS FROM THE

NUMBER	REVISIONS	DATE	BY
Δ	REVISED SEDIMENT AND EROSION CONTROL MEASURES	2/3/2012	JEB

SUMP DETAIL

Chapman Group SURVEYING

AIRPORT PLANNING / DEVELOPMEN ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT ENVIRONMENTAL ENGINEERING Technical LANDSCAPE ARCHITECTURE

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.

MAXIMUM DISTANCE = 300

2'-0" MAX

PROJECT INFORMATION WV Division of Natural Resources Parks and Recreation Canaan Valley State Park Resort Ski Area Improvements Project Contract 5

SEDIMENT AND EROSION CONTROL SITE DETAILS

EAL	JOB NUMBER:	11022
	SCALE:	AS NOTED
	DATE:	MAY 2011
	DRAWN BY:	LDA
	DESIGNED BY:	RDD
	CHECKED BY:	JEB
	SHEE	T NO. IRE

S-C6