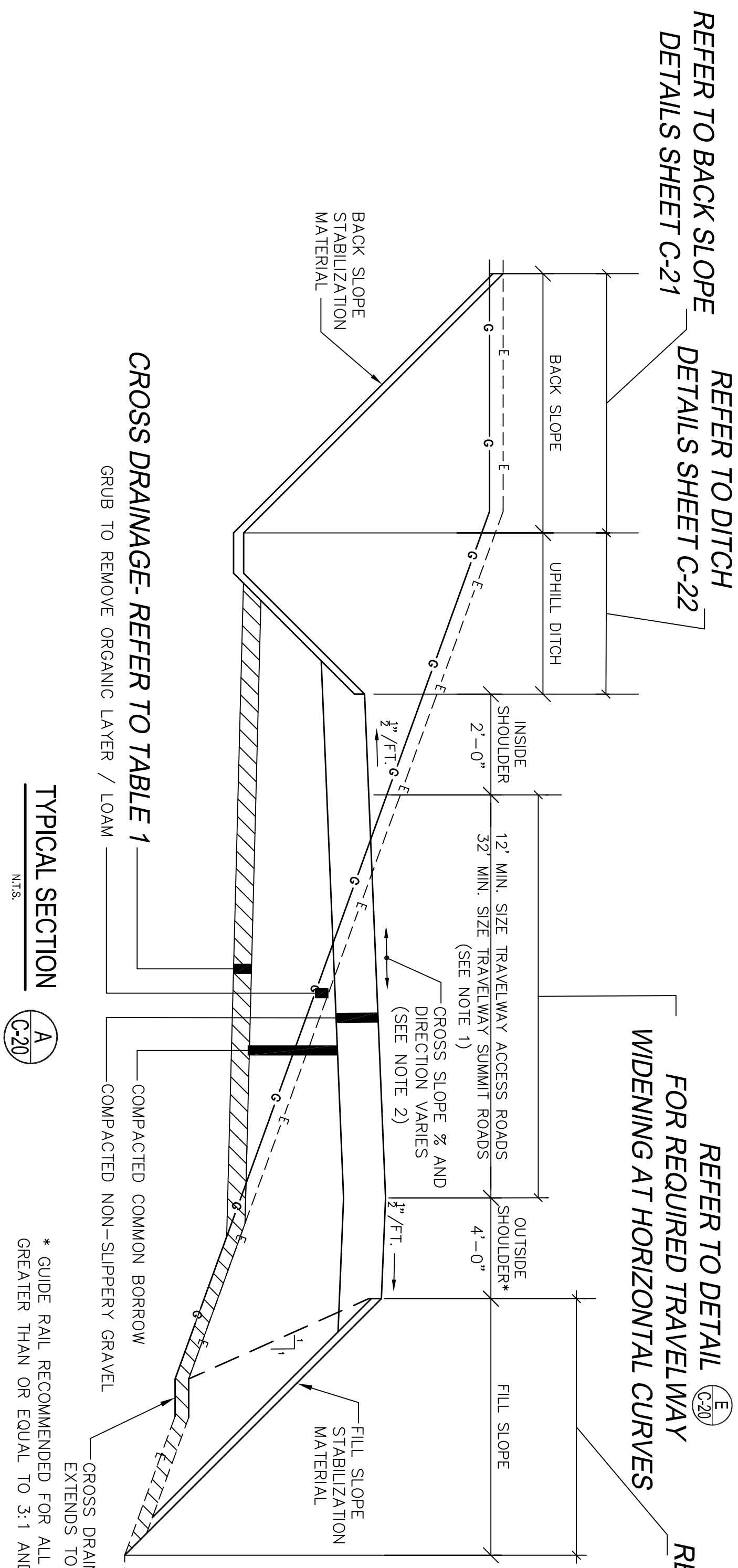


PRELIMINARY NOT FOR CONSTRUCTION

REFER TO BACK SLOPE
DETAILS SHEET C-21

REFER TO DITCH
DETAILS SHEET C-22

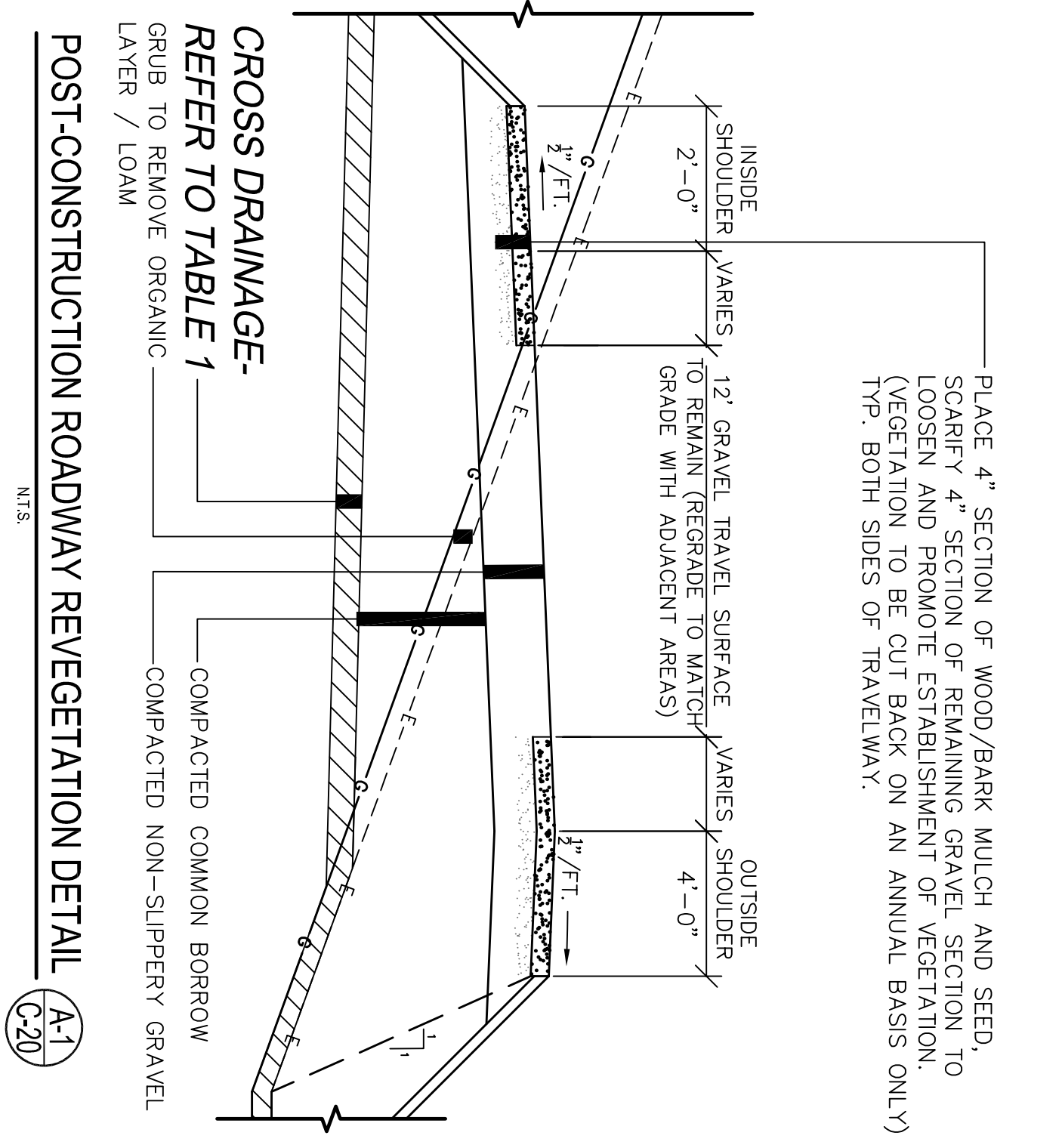


REFER TO DETAIL (E) FOR REQUIRED TRAVELWAY WIDENING AT HORIZONTAL CURVES

REFER TO FILL SLOPE DETAILS SHEET C-24

- NOTES:
1. A 32' FOOT TRAVELWAY FOR SUMMIT ROADS IS REQUIRED EXCEPT AS NOTED ON PLAN VIEWS.
 2. CROSS SLOPE FOR ACCESS ROADS IS 1/2' / FOOT. CROSS SLOPE FOR SUMMIT ROADS AFTER CRANE ASSEMBLY PAD IS 1/2' / FOOT MAXIMUM. DIRECTION OF CROSS SLOPE IS TOWARD INSIDE DITCH EXCEPT AS NOTED ON DRAWINGS B-1 AND B-2.
 3. REFER TO DETAIL A-1 ON THIS SHEET FOR POST-CONSTRUCTION SURFACE TREATMENT OF ACCESS AND SUMMIT ROADS.

* GUIDE RAIL RECOMMENDED FOR ALL AREAS WITH FILL SLOPE GREATER THAN OR EQUAL TO 3:1 AND HEIGHT OVER 4'-0"



PLACE 4" SECTION OF WOOD/BARK MULCH AND SEED. SCARIFY 4" SECTION OF REMAINING GRAVEL. SECTION TO LOOSEN AND PROMOTE ESTABLISHMENT OF VEGETATION. (VEGETATION TO BE CUT BACK ON AN ANNUAL BASIS ONLY) TOP, BOTH SIDES OF TRAVELWAY.

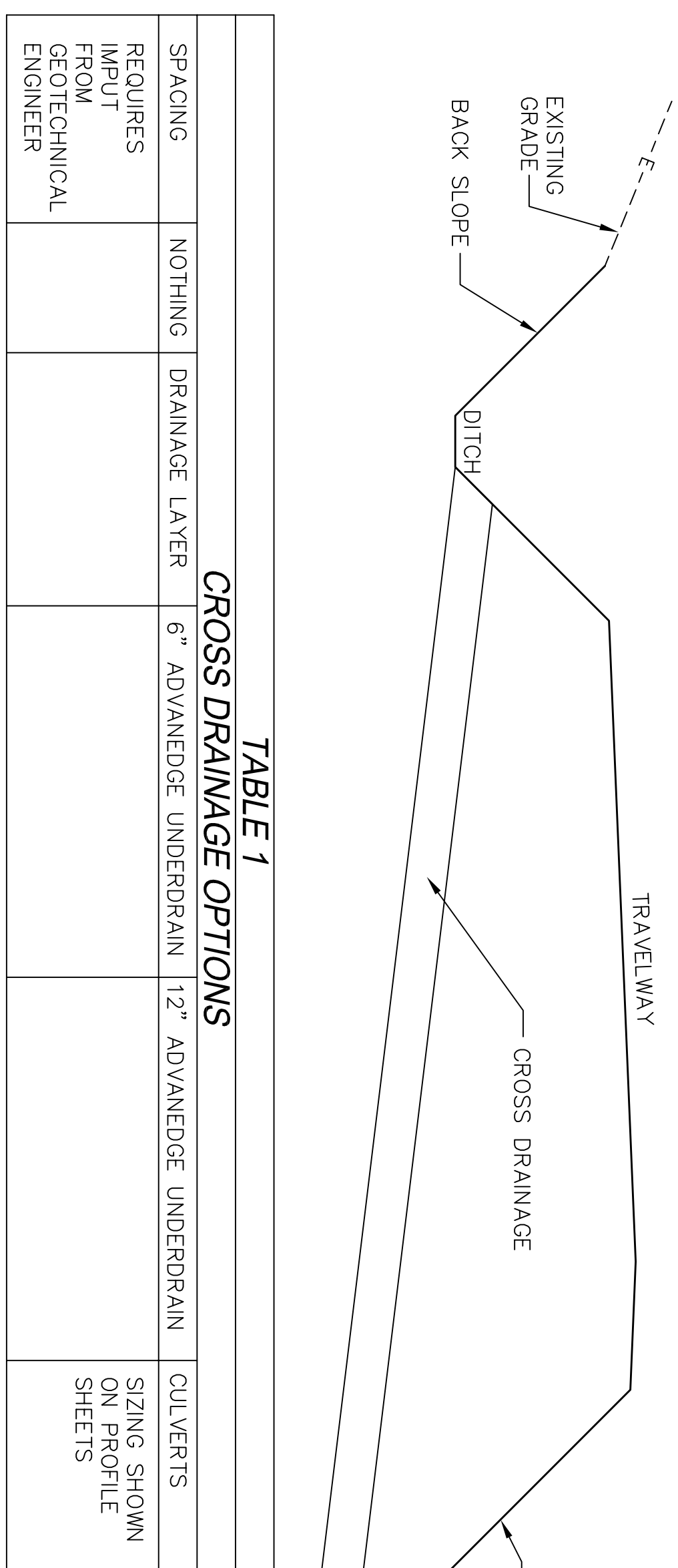
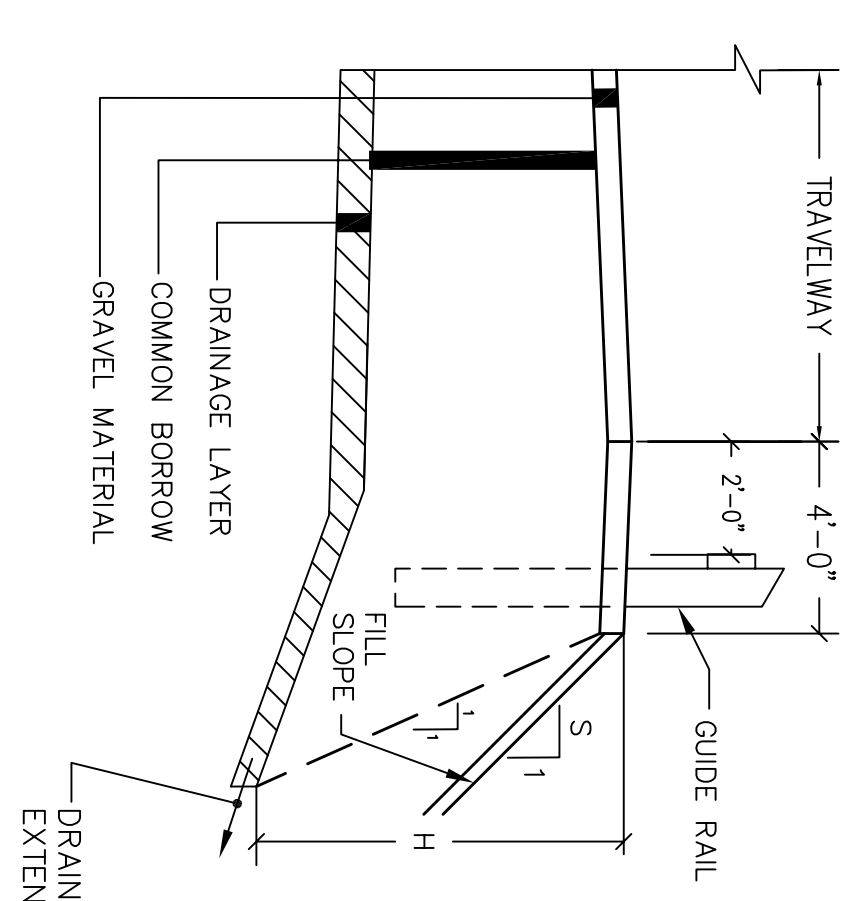


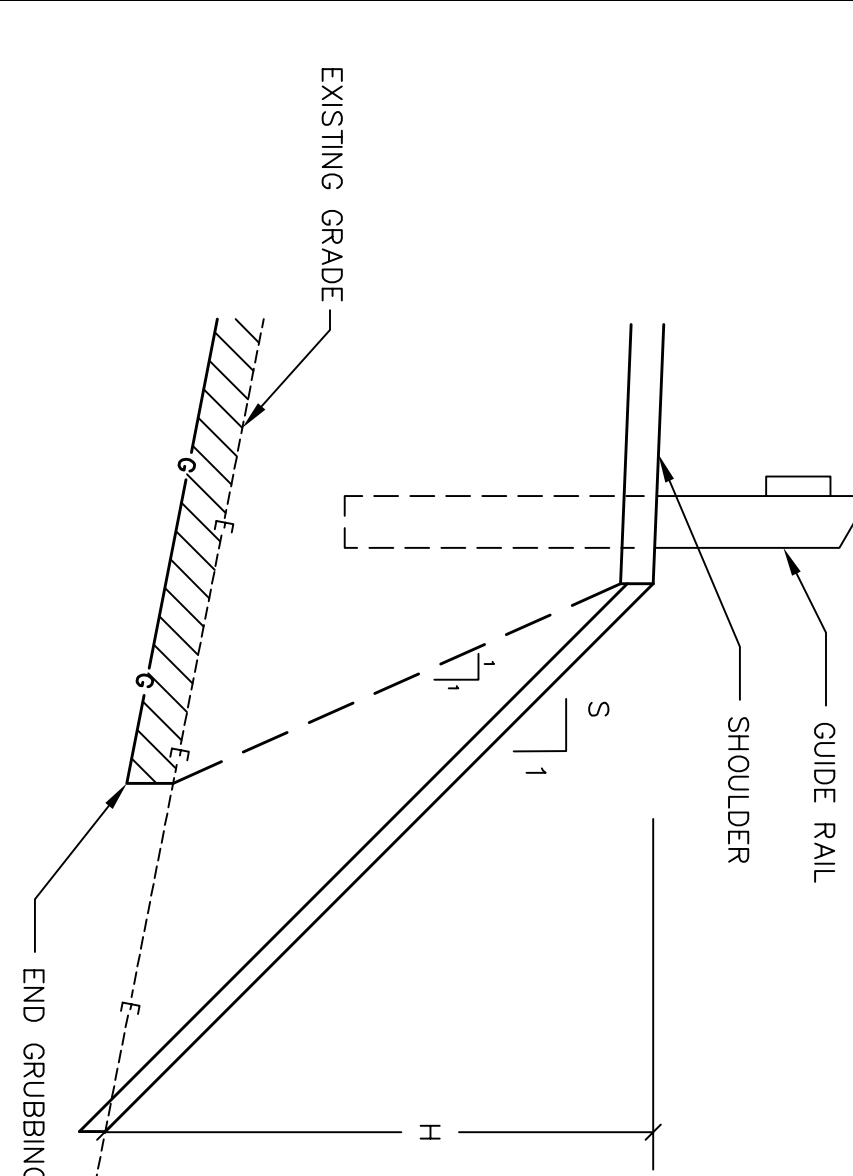
TABLE 1
CROSS DRAINAGE OPTIONS

SPACING	NOTHING	DRAINAGE LAYER	6" ADVANCED UNDERDRAIN	12" ADVANCED UNDERDRAIN	CULVERTS
REQUIRES INPUT FROM GEOTECHNICAL ENGINEER					SIZING SHOWN ON PROFILE SHEETS

CROSS DRAINAGE (B) C-20, N.T.S.



OUTSIDE SHOULDER DETAIL (C) C-20, N.T.S.

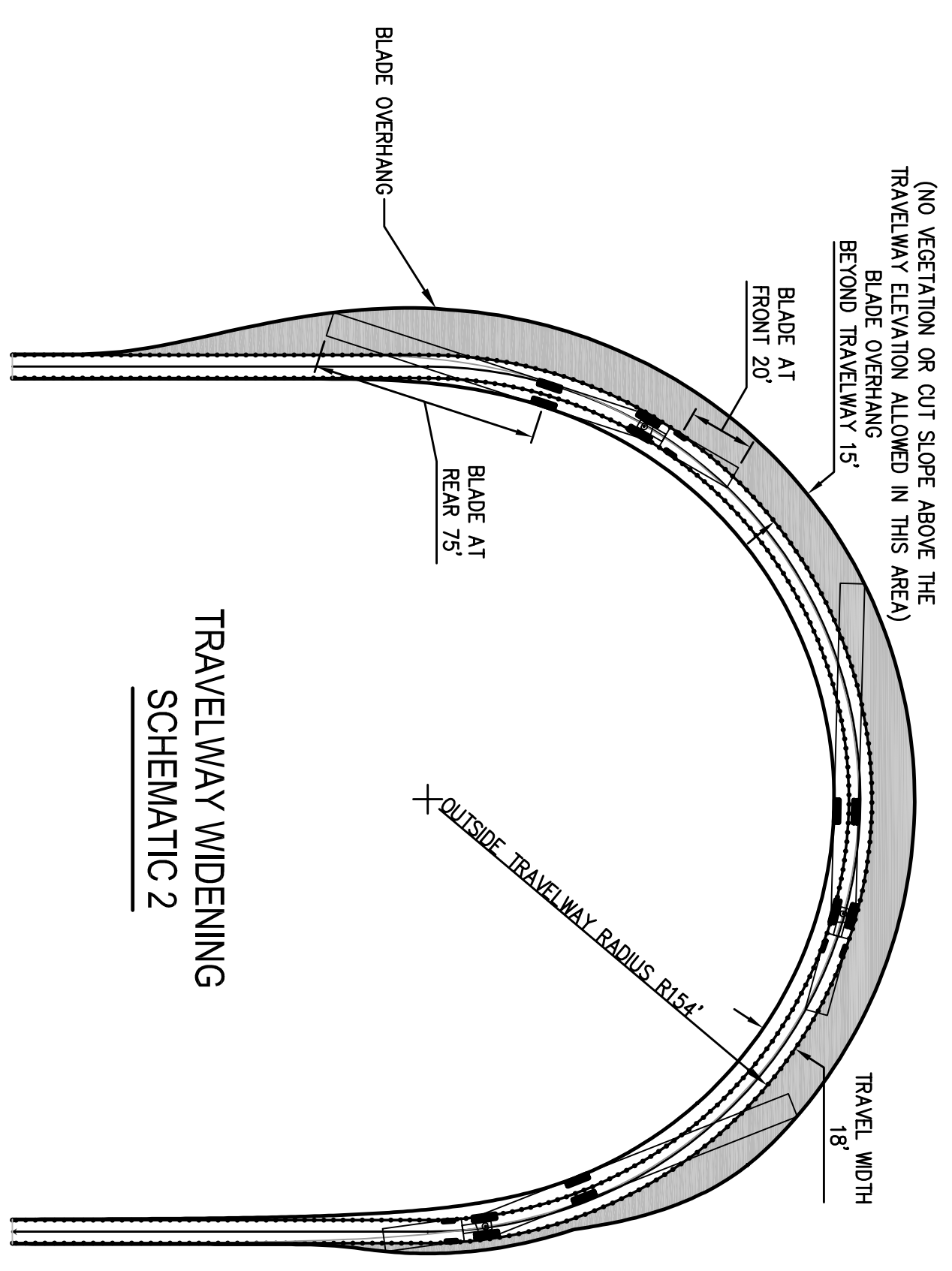
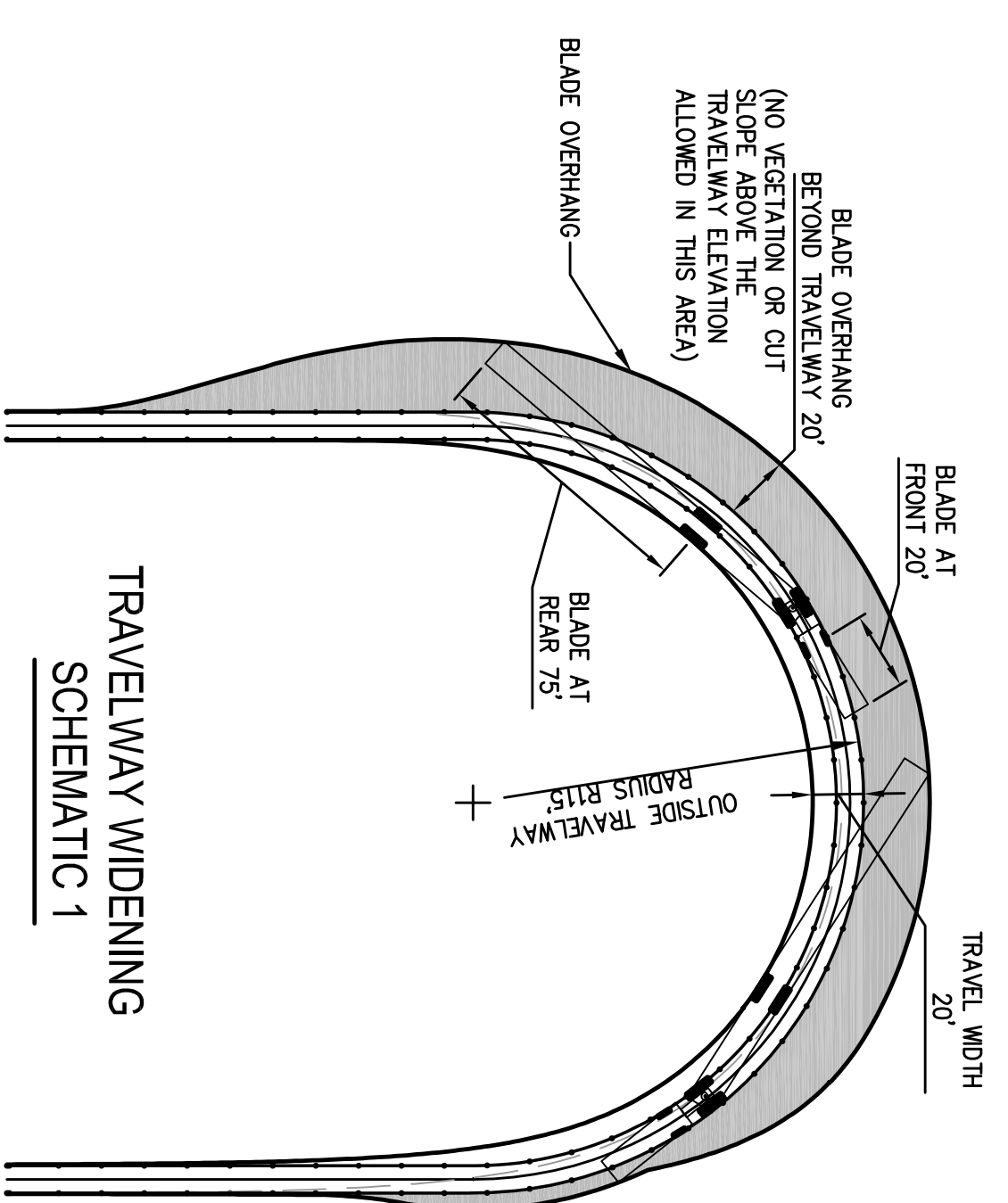


FILL SLOPE DETAIL (SEE SHEET C-24) (D) C-20, N.T.S.

CURVE TRAVELWAY WIDENING TABLE

OUTSIDE CURVE RADIUS (ft)	TRAVELWAY WIDTH (ft)
115	20
154	18
200-300	16
300+	12

- NOTES:
1. A WB-50 VEHICLE WAS USED AS THE DESIGN VEHICLE FOR THESE SCHEMATICS.
 2. TRAVELWAY WIDENING DIMENSIONS SHOWN ON THIS SHEET REQUIRE REVIEW BY VESTAS. TRANSPORTATION GUIDELINES FROM VESTAS FOR THE V90 WERE NOT AVAILABLE AT THE TIME THESE DETAILS WERE PREPARED.

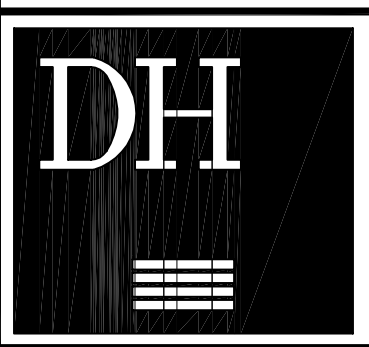


ROADWAY DETAILS

DRAWN:	KEW/JCS	DATE:	AUGUST 2005
DESIGNED:	DDA	SCALE:	N.T.S.
CHECKED:	WGH	JOB NO.:	1708.06
FILE NAME:	1708.06-DET		

NO.	DATE	REVISIONS
4	12.15.05	REVISED PROJECT TITLE, ADDED DETAIL A-1
3	10.31.05	REISSUED TO CLIENT FOR REVIEW
2	08.12.05	ISSUED TO CLIENT FOR REVIEW
1	12.05.03	SUBMITTED TO CLIENT

REDINGTON WIND FARM PROJECT
REDINGTON MOUNTAIN WINDPOWER, LLC



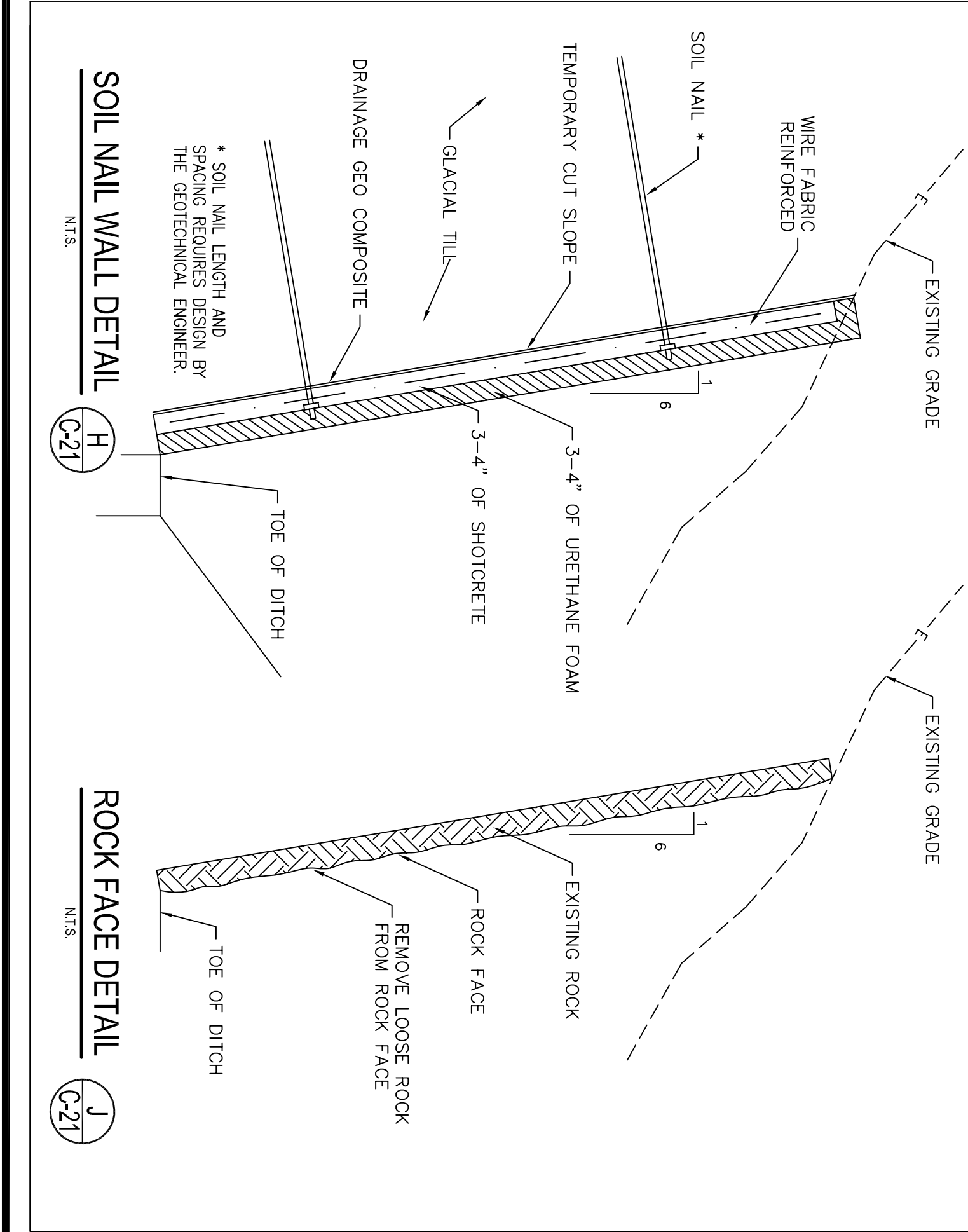
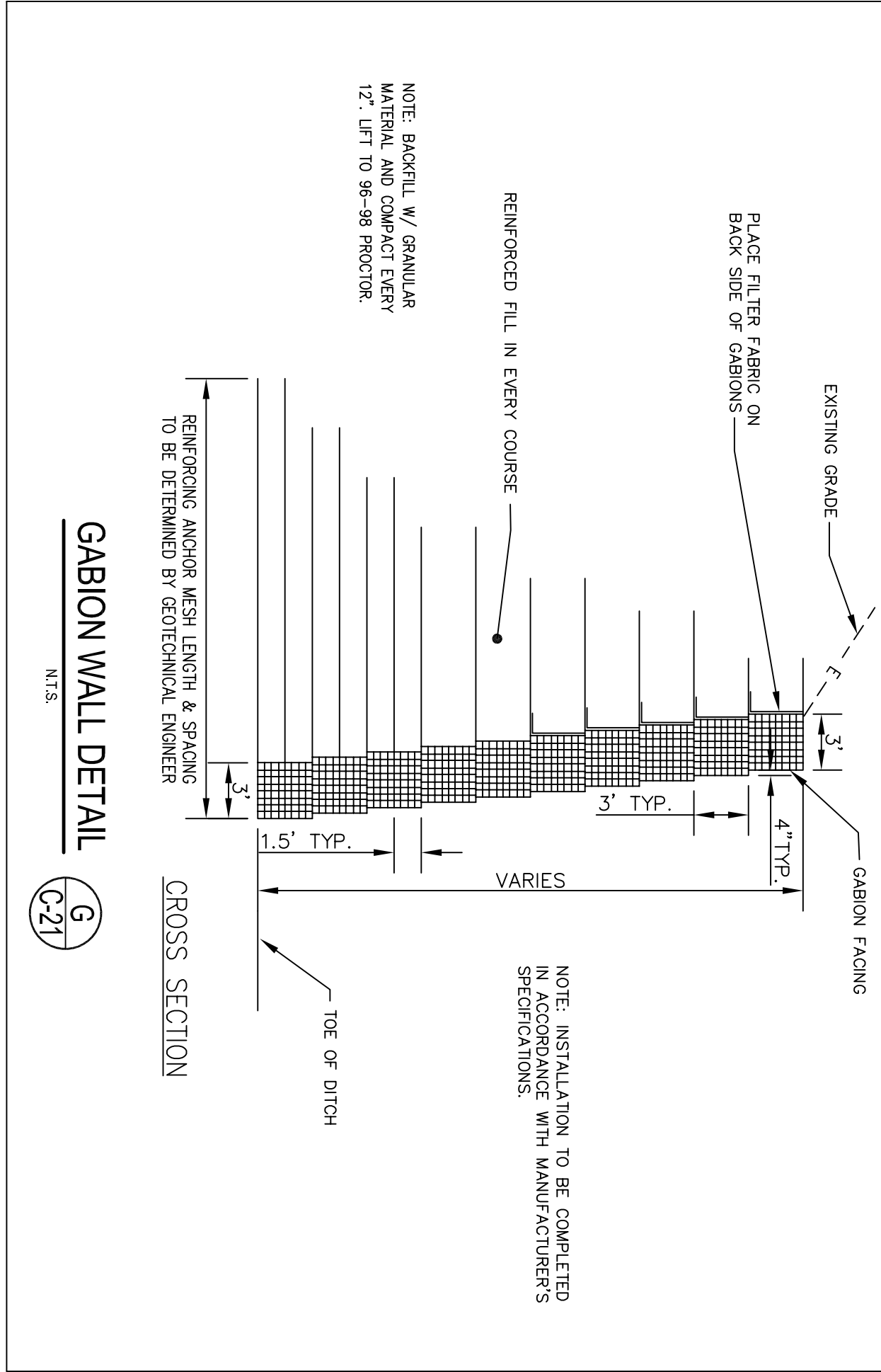
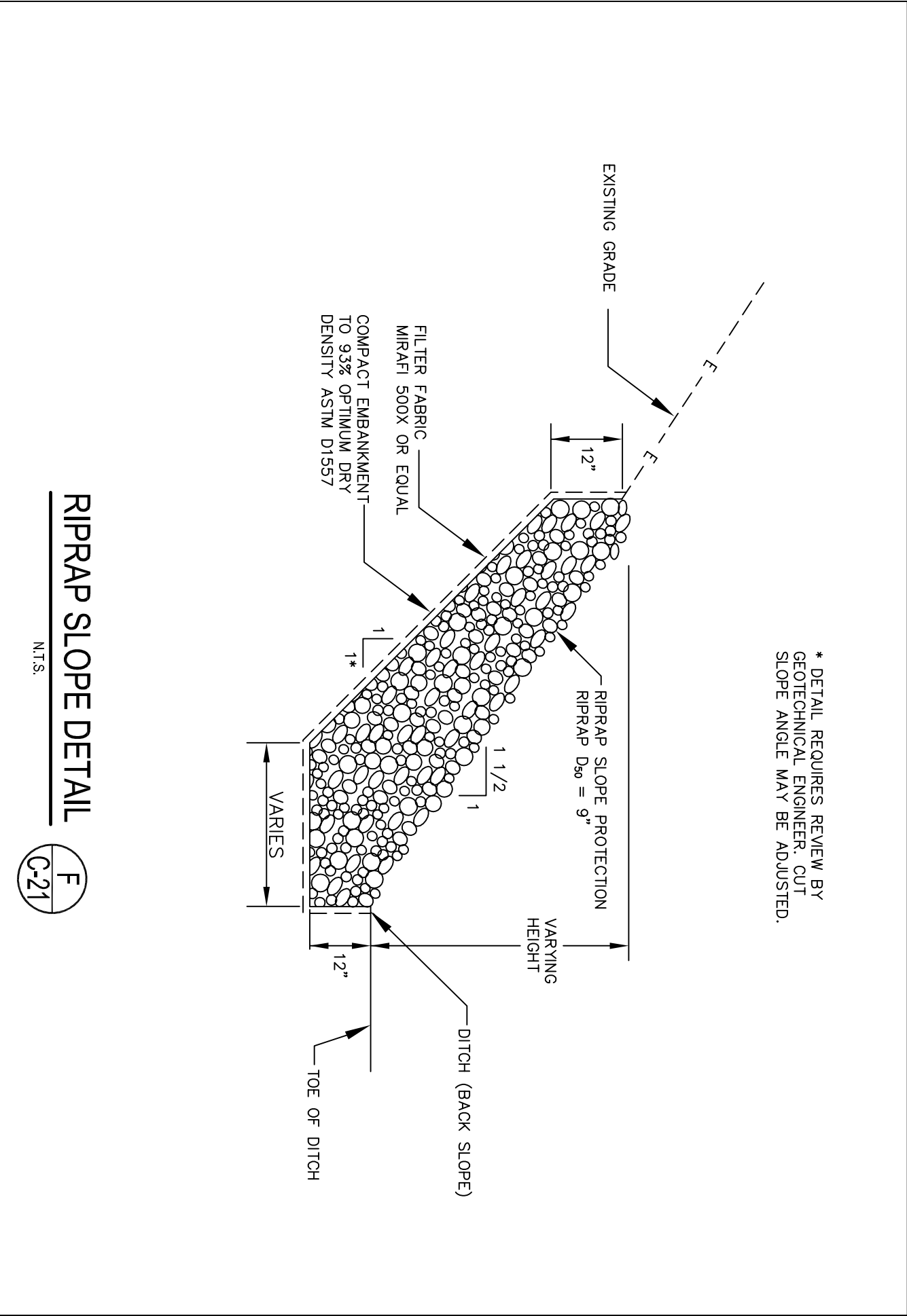
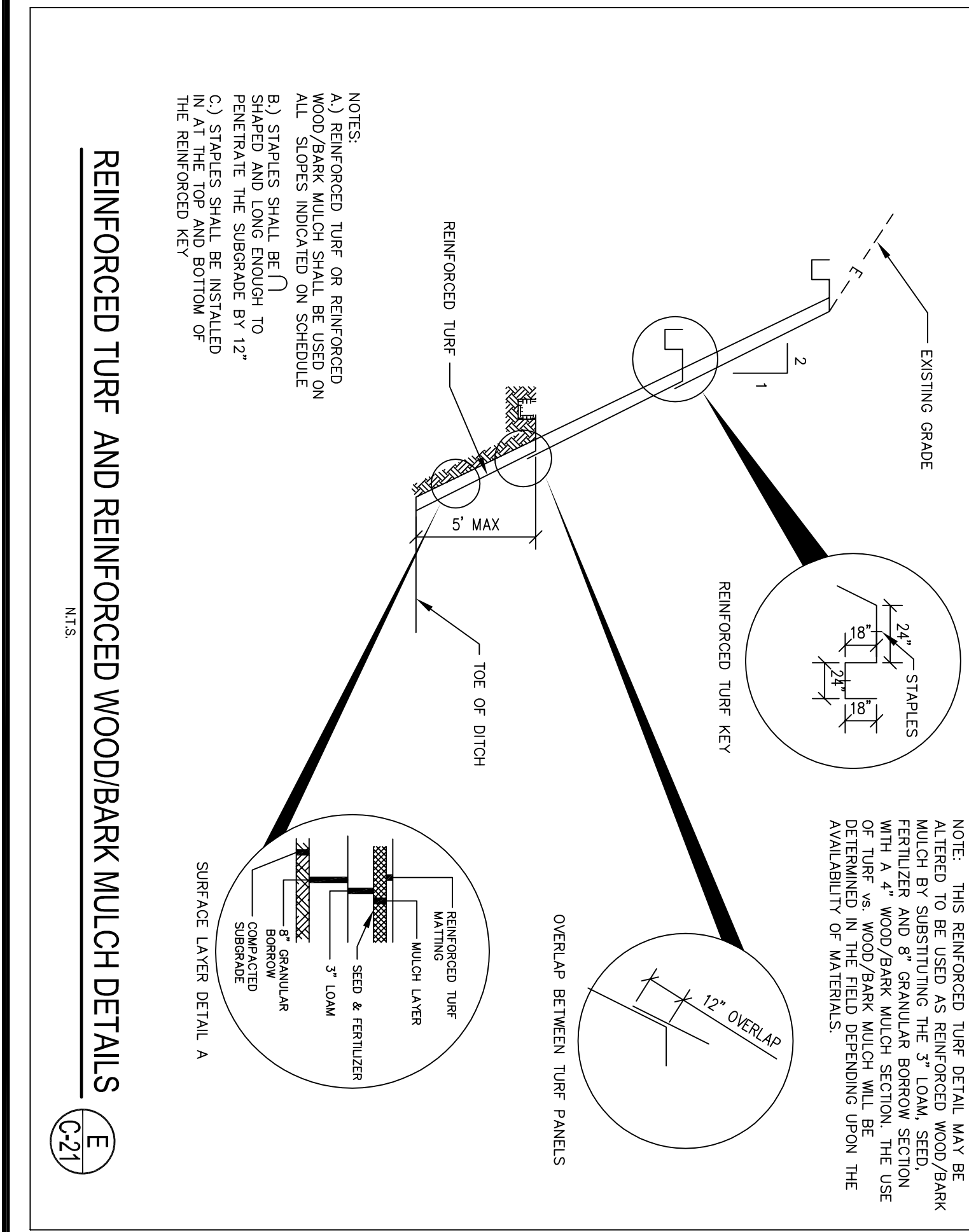
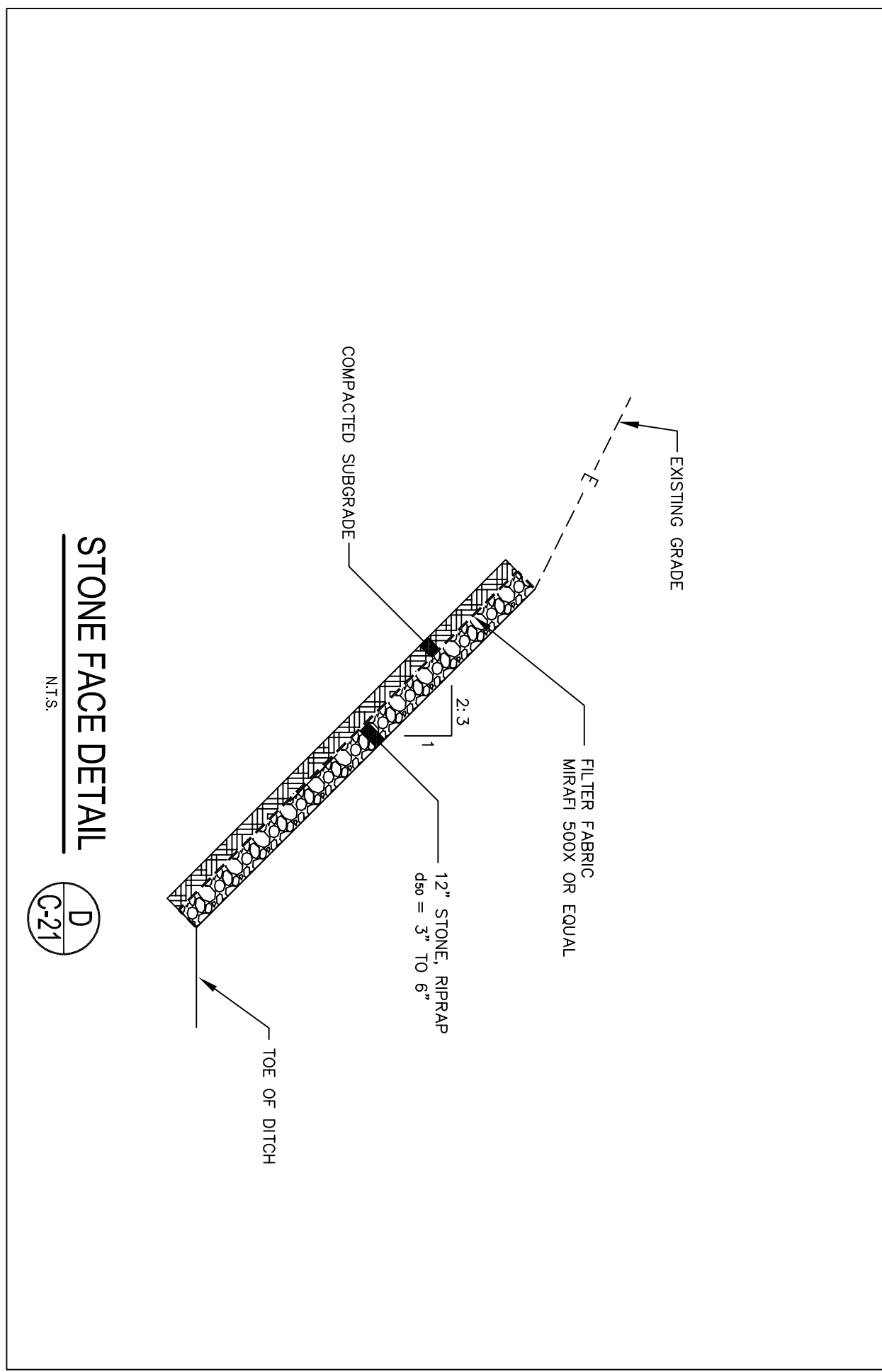
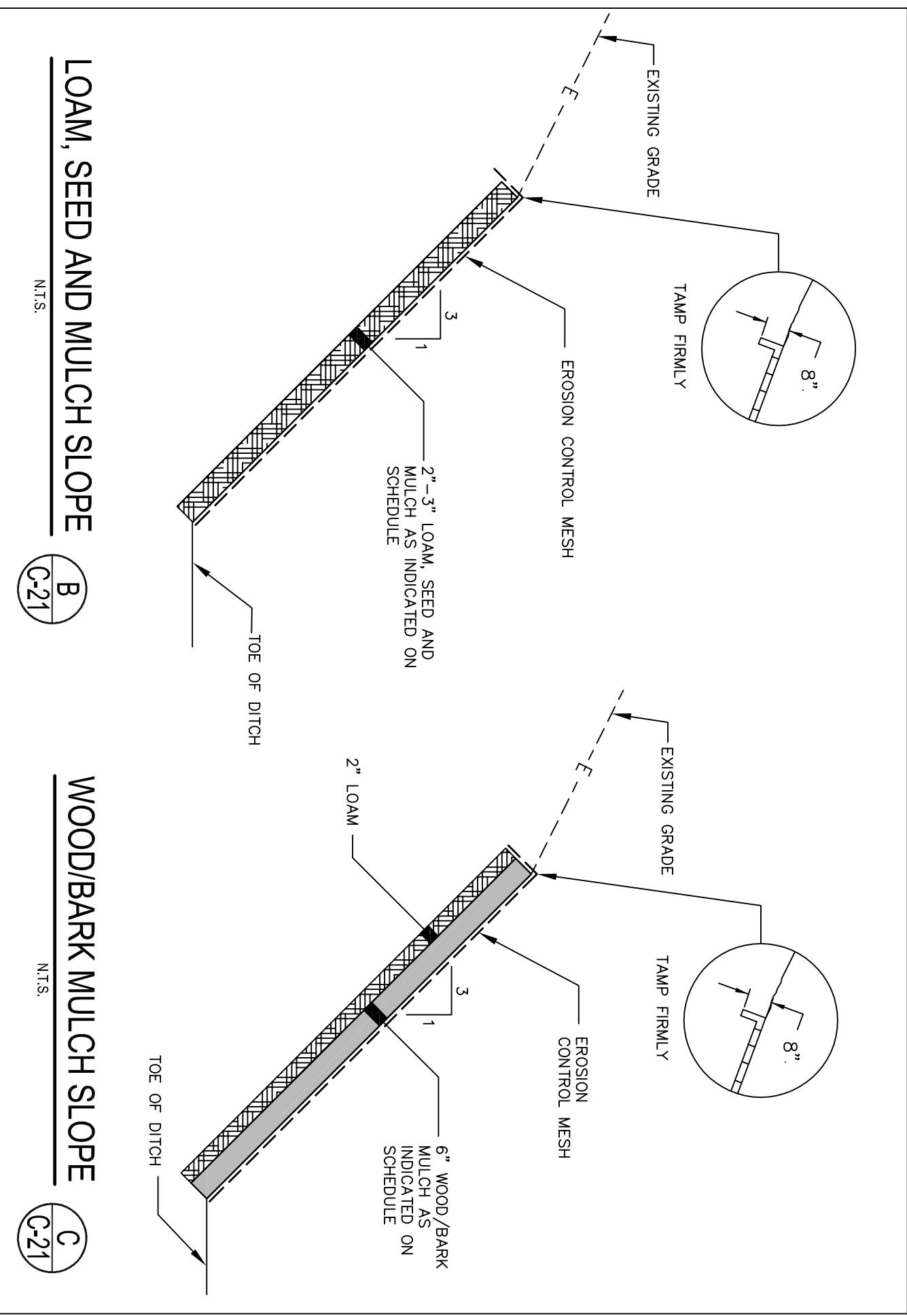
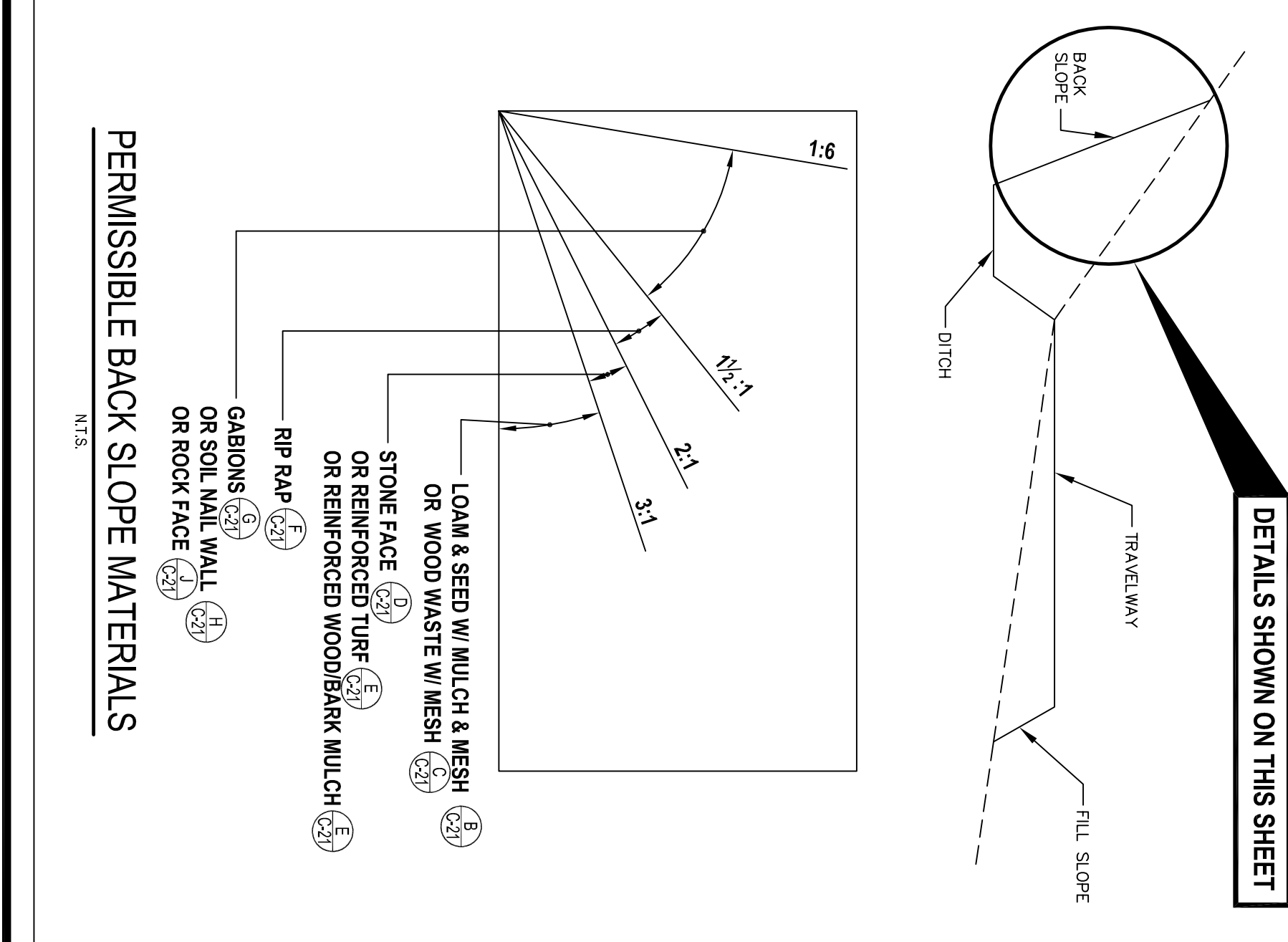
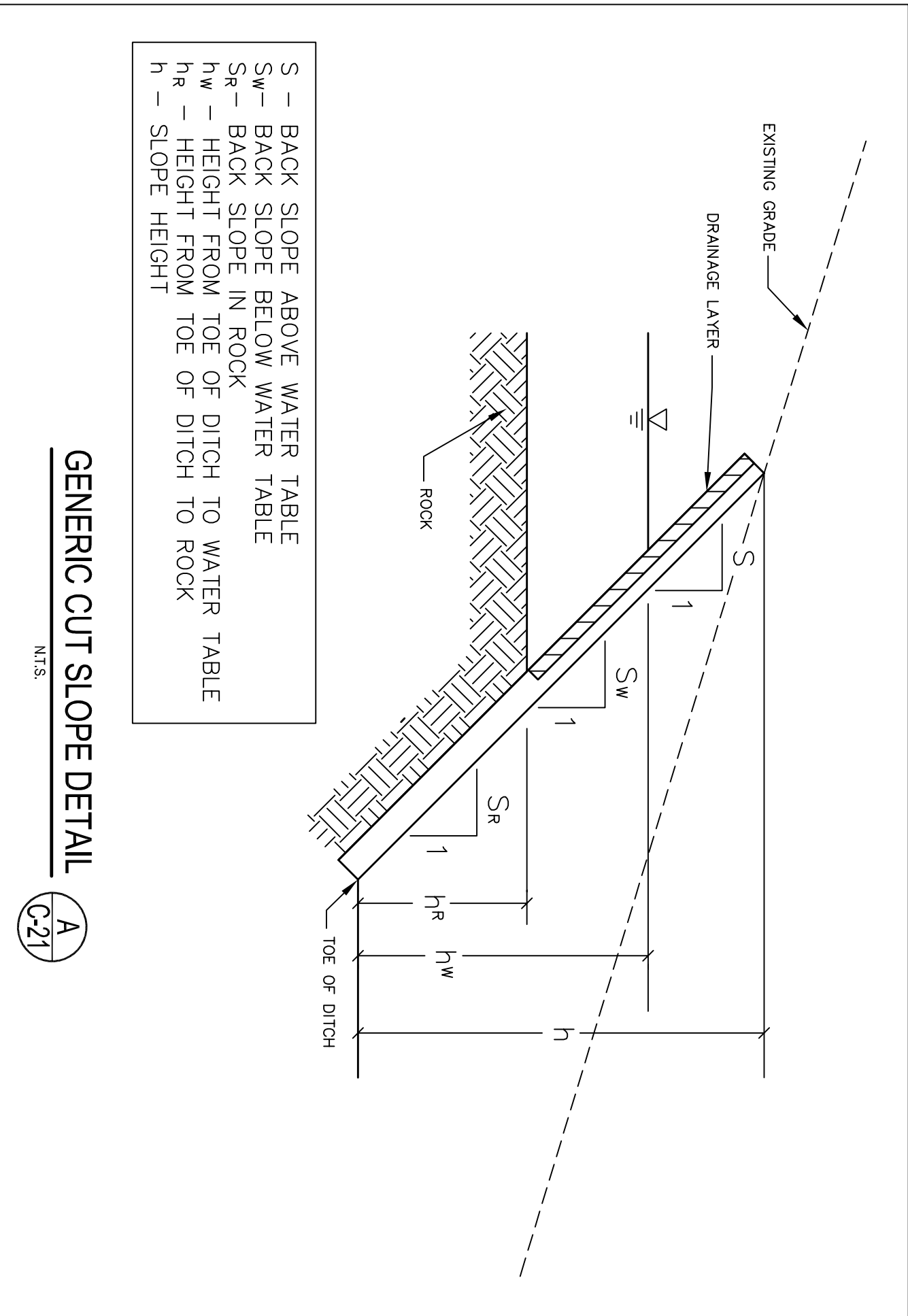
DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207.775.1121
WWW.DHAI@DELUCAHOFFMAN.COM

C-20

SHEET

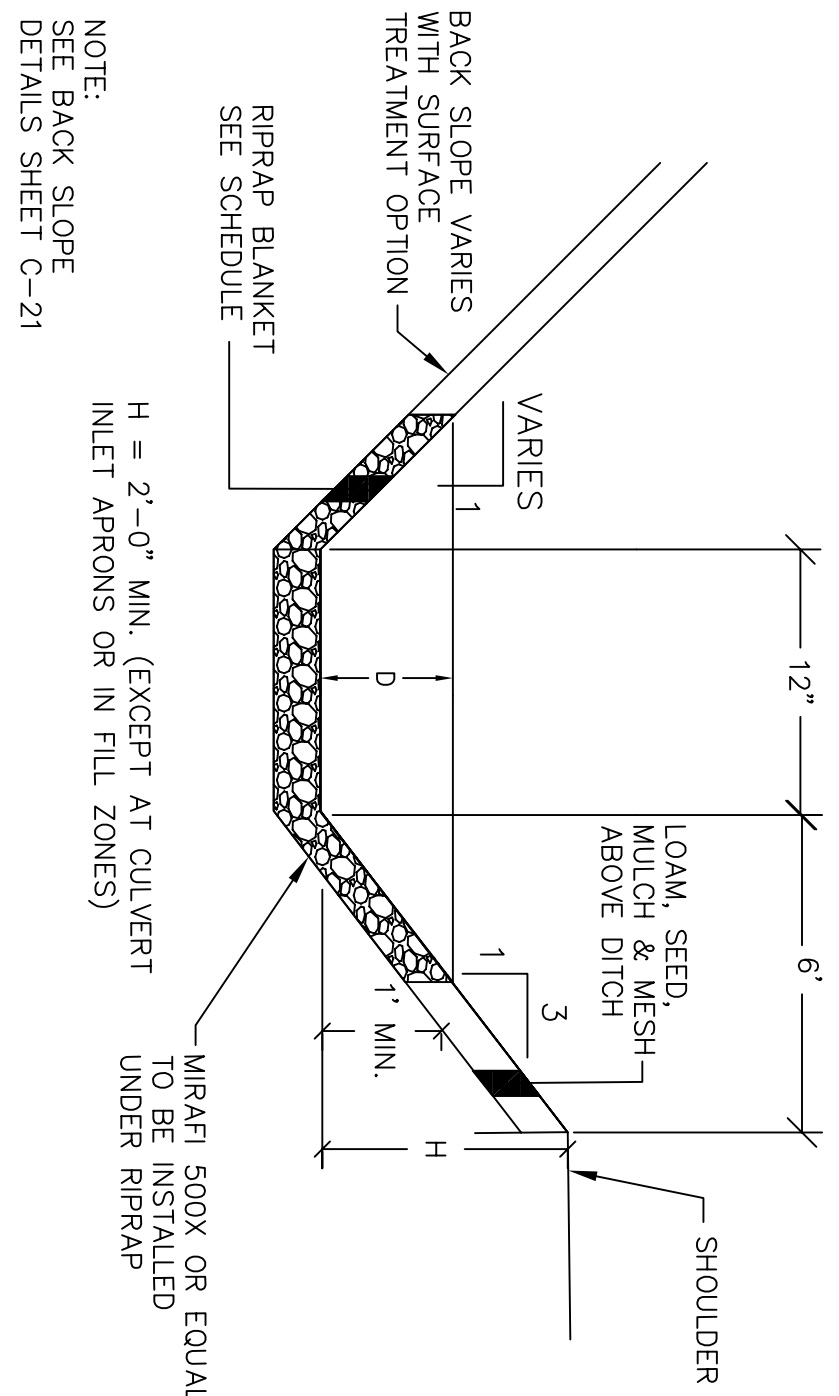
PRELIMINARY NOT FOR CONSTRUCTION

CONDITION	Sr	Sw	S	LOAM SEED AND LOAM SEED MULCH AND MESH	WOOD/BARK MULCH AND MESH	STONE FACE	REINFORCED TURF OR REINFORCED WOOD/BARK MULCH	GRIPAP	GABIONS	EXPOSED ROCK
ABOVE WATER TABLE AND ROCK	NA	NA	1:1	X	X	X	X	X	X	X
ABOVE WATER TABLE W/ ROCK	NA	NA	3:1	X	X	X	X	X	X	X
BELOW WATER TABLE ABOVE ROCK	NA	NA	1:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	3:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	1:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	3:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	1:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	3:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	1:1	X	X	X	X	X	X	X
BELOW WATER TABLE AND ROCK	NA	NA	3:1	X	X	X	X	X	X	X



<p>REDINGTON WIND FARM PROJECT REDINGTON MOUNTAIN WINDPOWER, LLC</p> <p>DeLuca-Hoffman Associates, Inc. 778 MAIN STREET, SUITE 8 SOUTH PORTLAND, ME 04106 207.775.1121 WWW.DHAI@DELUCAHOFFMAN.COM</p>	BACK SLOPE DETAILS				
	DRAWN:	KEW/JCS	DATE:	AUGUST 2005	
	DESIGNED:	DDA	SCALE:	N.T.S.	
	CHECKED:	WGH	JOB NO.:	1708.06	
	FILE NAME:	1708.06-DET			
	NO.	DATE	REVISIONS		
	4	12.15.05	REVISED PROJECT TITLE		
	3	10.31.05	ADDED REINFORCED WOOD/BARK MULCH DETAILS		
	2	08.12.05	ISSUED TO CLIENT FOR REVIEW		
	1	12.05.03	SUBMITTED TO CLIENT.		

PRELIMINARY NOT FOR CONSTRUCTION



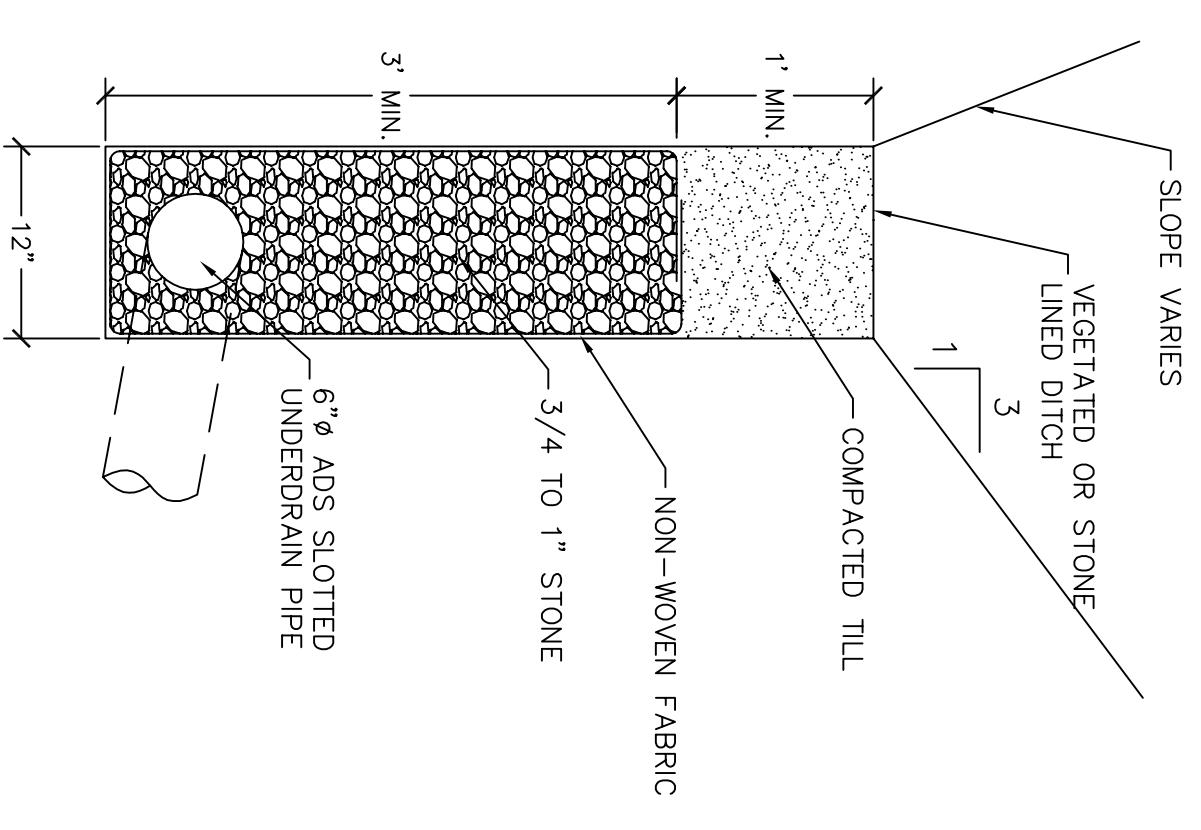
UPHILL DITCH DETAIL
NTS
A
C-22

TABLE 2
ACCEPTABLE DITCH LINING RIPRAP MATERIAL SIZE, DEPTH & THICKNESS

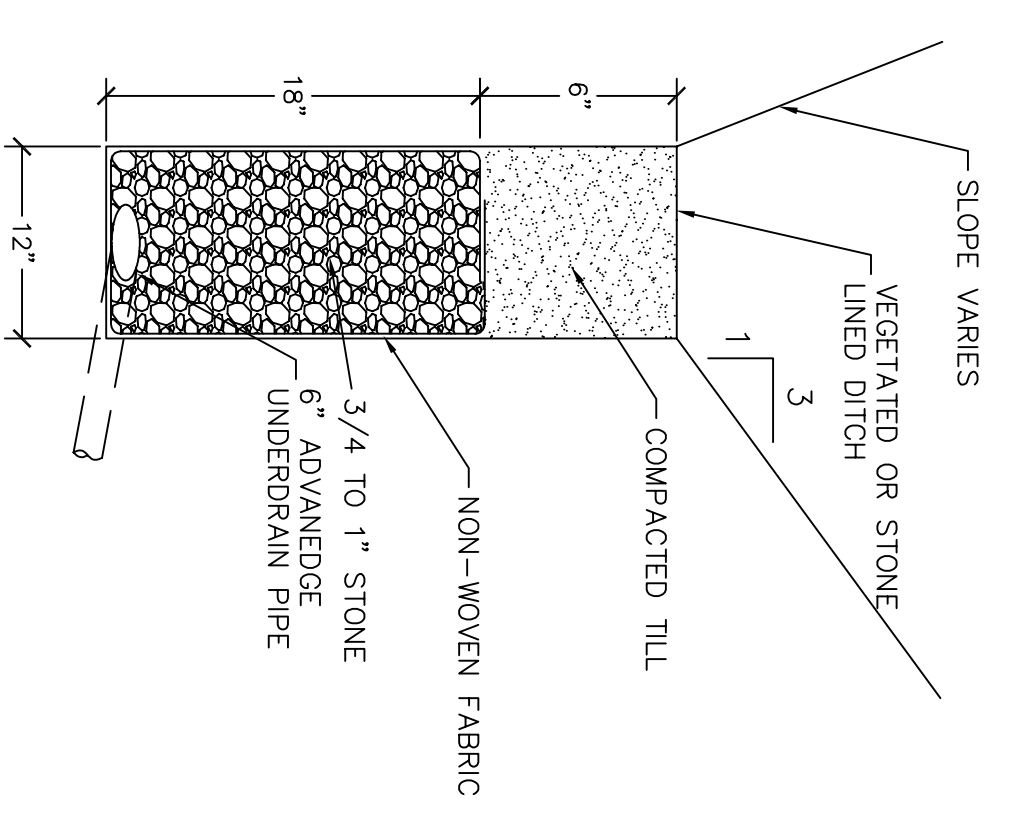
CULVERT SIZE BELOW DITCH	DITCH GRADIENT 0-5%	5-10%	10-15%	15-20%	20-25%	25-30%	30-36%
12"	11"	3"	7"	3"	7"	6"	14"
18"	15"	3"	7"	6"	14"	6"	14"
24"	19"	6"	14"	6"	14"	9"	21"
30"	24"	6"	14"	9"	21"	9"	21"
36"	24"	6"	14"	9"	21"	12"	27"

NOTE: IF 15" CULVERTS ARE USED THEY WILL MATCH RIPRAP REQUIREMENTS FOR THE 18" CULVERTS

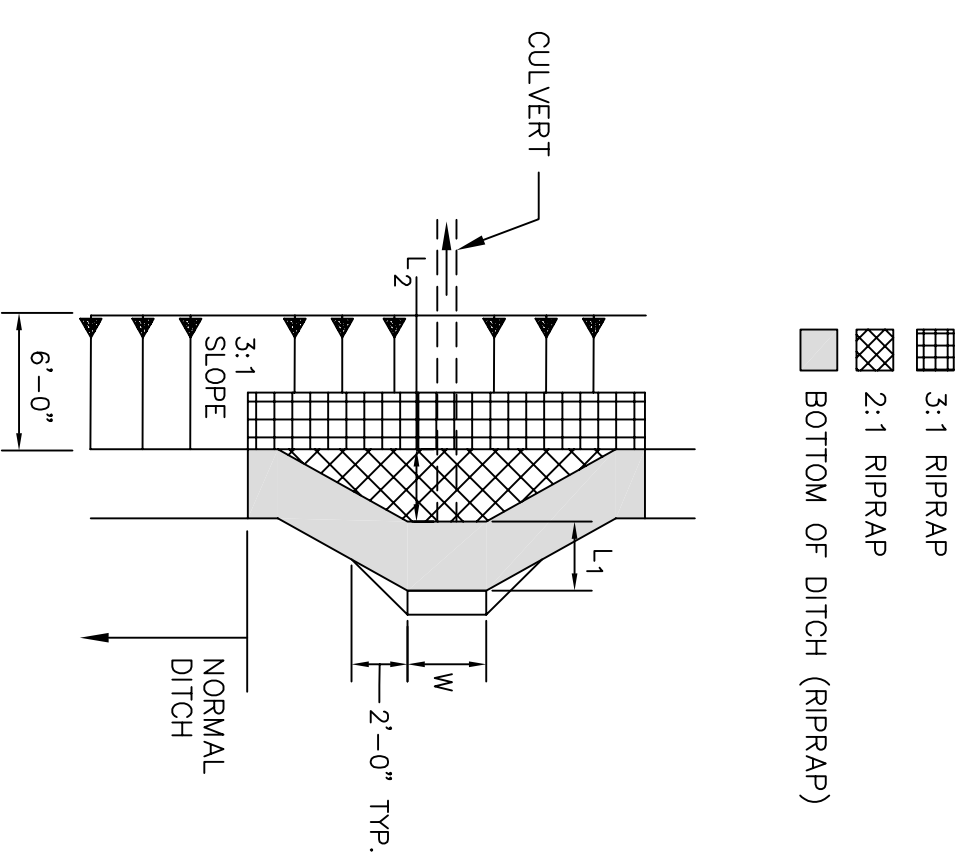
UPHILL DITCH TREATMENT OPTIONS
NTS



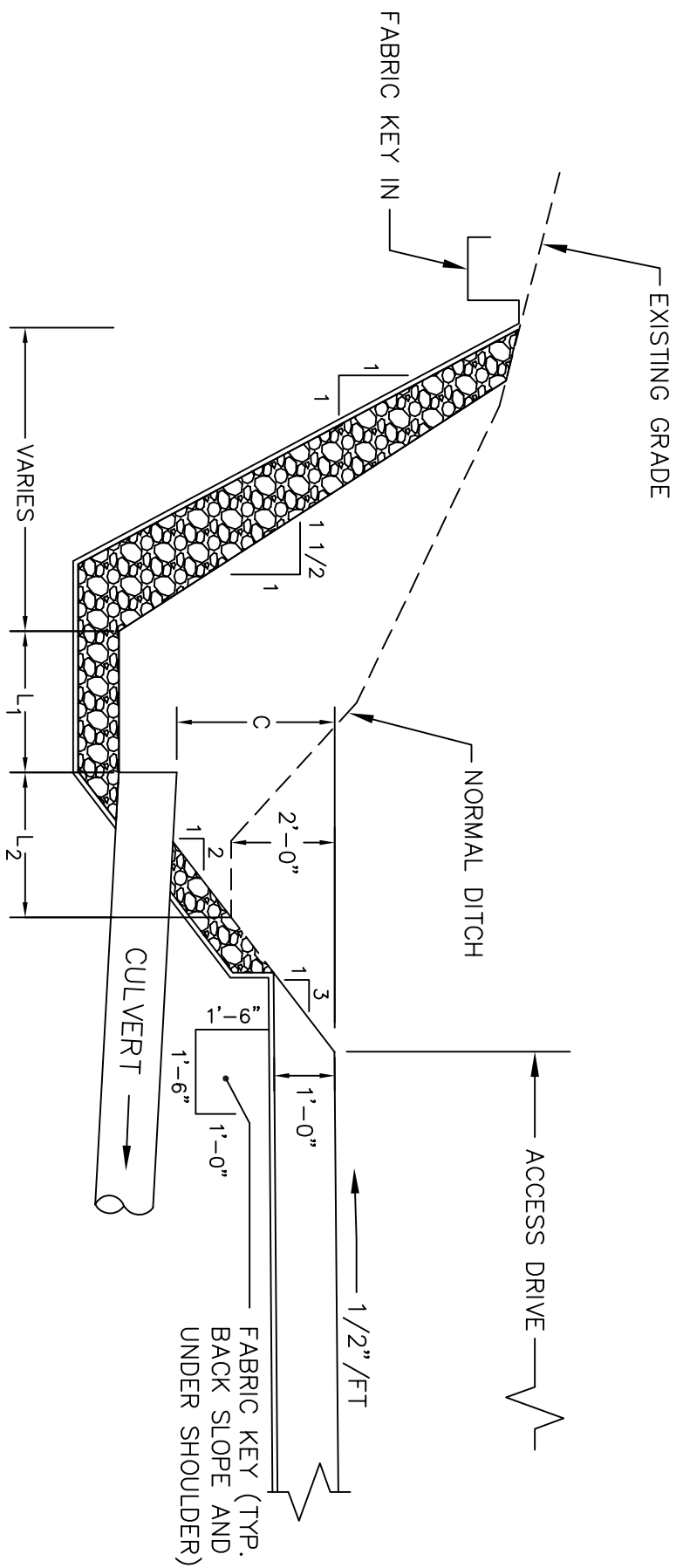
DITCH WITH 6" DIA UNDERDRAIN
NTS
C
C-22



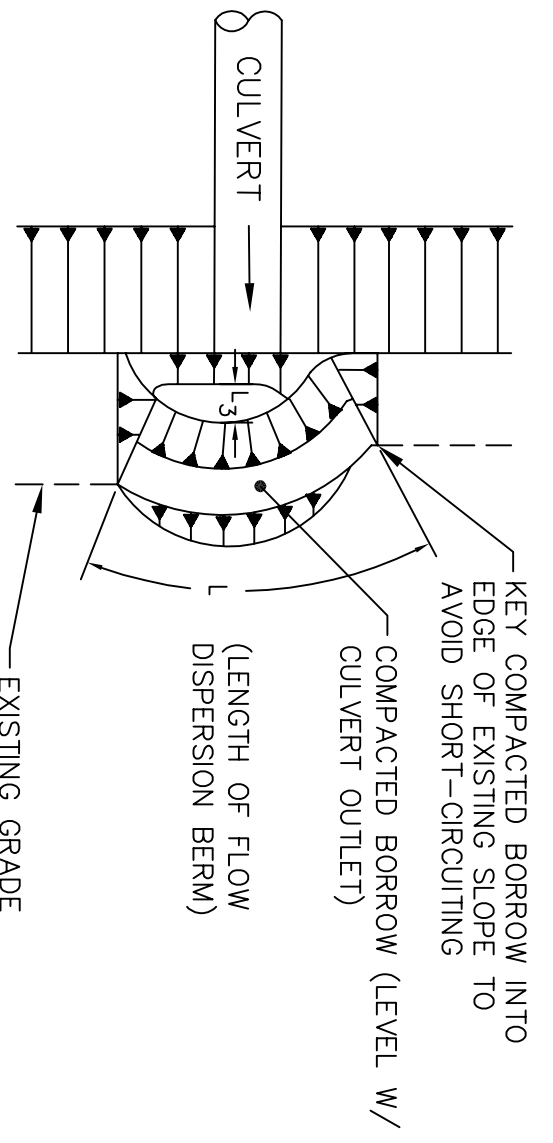
DITCH WITH 6" ADVANEDGE UNDERDRAIN
NTS
E
C-22



CULVERT INLET PLAN VIEW
NTS



CULVERT INLET SECTION VIEW
NTS
D
C-22

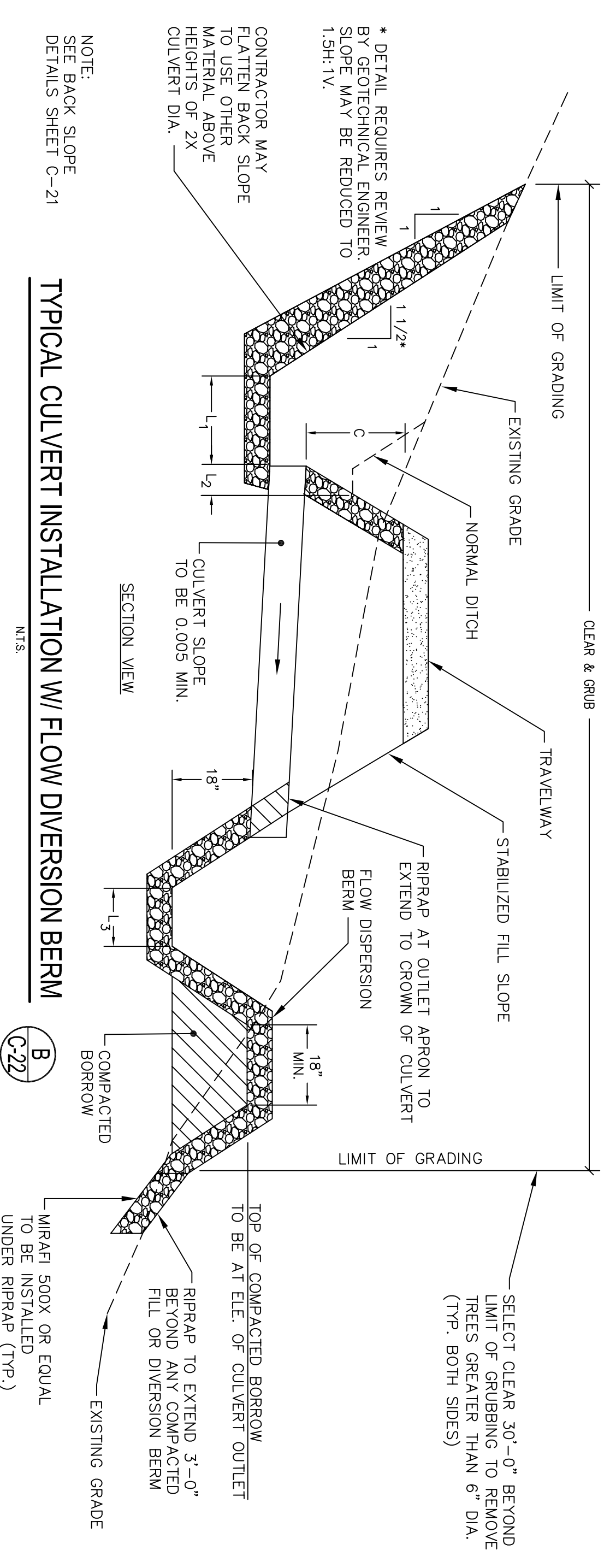


FLOW DISPERSION BERM PLAN VIEW
NTS
G
C-22

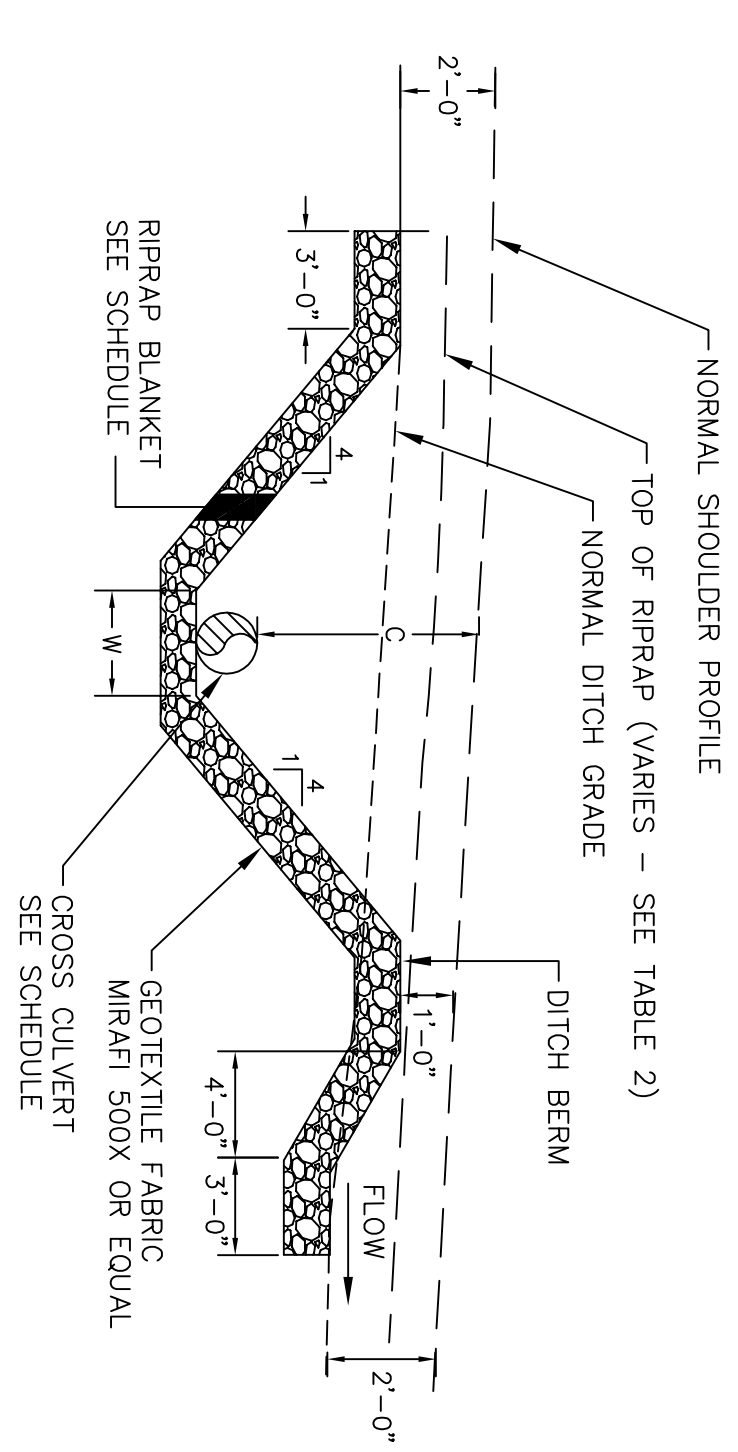
DIMENSIONAL SCHEDULE FOR CULVERT INLETS AND FLOW DISPERSION BERMS

CULVERT DIAMETER	RIPRAP BLANKET D ₅₀ THICKNESS	W	C	L ₁	L ₂	L ₃	L
12"	6"	14"	2'	36"	2'	4'	8'
18"	6"	14"	4'	30"	4'	4'	10'
24"	6"	14"	6'	24"	6'	5'	15'
30"	12"	27"	8'	24"	8'	5'	20'
36"	12"	27"	8'	24"	8'	6'	20'

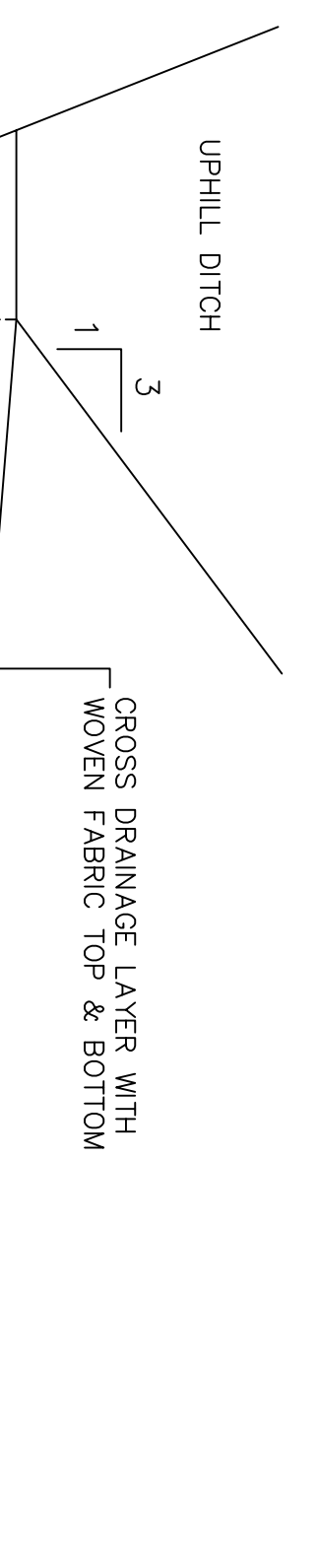
NOTE: IF 15" CULVERTS ARE USED THEY WILL MATCH RIPRAP REQUIREMENTS FOR THE 18" CULVERTS



TYPICAL CULVERT INSTALLATION W/ FLOW DISPERSION BERM
NTS
B
C-22

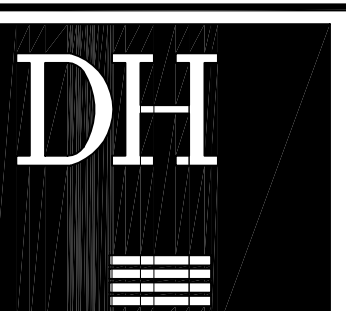


CULVERT INLET END SECTION VIEW W/ DOWN GRADIENT DITCH BERM
NTS
E
C-22



DITCH CONNECTED TO CROSS DRAINAGE LAYER
NTS
H
C-22

REDINGTON WIND FARM PROJECT
REDINGTON MOUNTAIN WINDPOWER, LLC



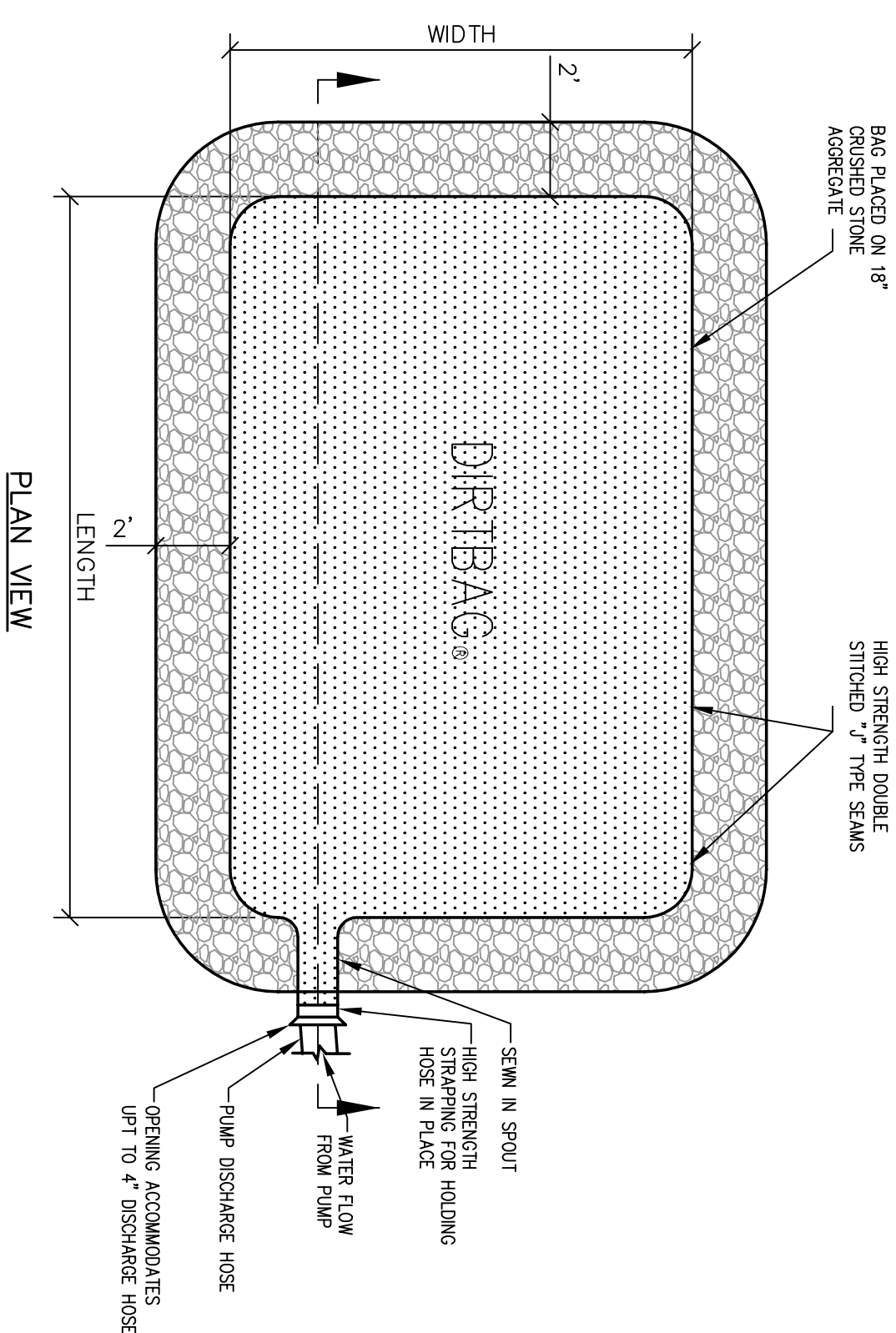
DeLuca-Hoffman Associates, Inc.
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SOUTH PORTLAND, ME 04106
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WWW.DHAI@DELUCAHOFFMAN.COM

DITCH DETAILS

DRAWN:	KEW/JCS	DATE:	AUGUST 2005
DESIGNED:	DDA	SCALE:	N.T.S.
CHECKED:	WGH	JOB NO.	1708.06
FILE NAME:	1708.06-DET		

NO.	DATE	REVISIONS
5	12.15.05	REVISED PROJECT TITLE
4	10.31.05	ADDED DETAIL NUMBER REFERENCES
3	08.23.05	UPDATED PER CLIENT COMMENTS
2	08.12.05	ISSUED TO CLIENT FOR REVIEW
1	12.05.03	SUBMITTED TO CLIENT.

PRELIMINARY NOT FOR CONSTRUCTION

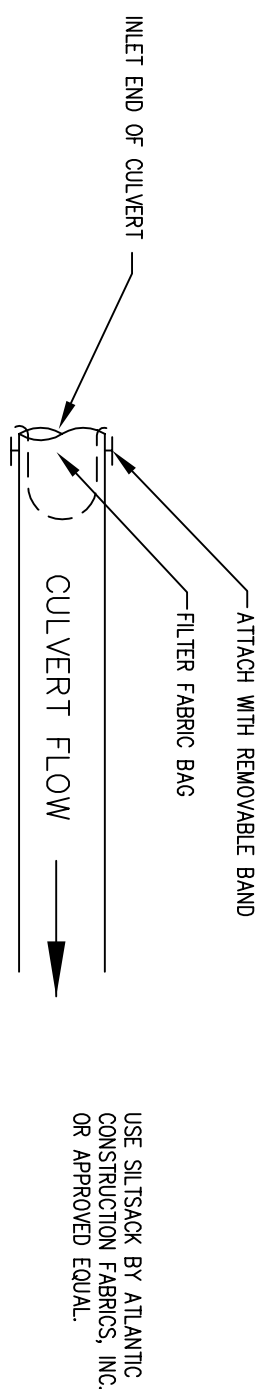


NOTE: LOCATION OF DIRTBAGS TO BE SELECTED BY THE CONTRACTOR BUT SHALL NOT BE SITED IN THE CRITICAL AREAS.

DIRTBAG DETAIL

N.T.S.

(A)
C-23



SILT SACK DETAIL

N.T.S.

(B)
C-23

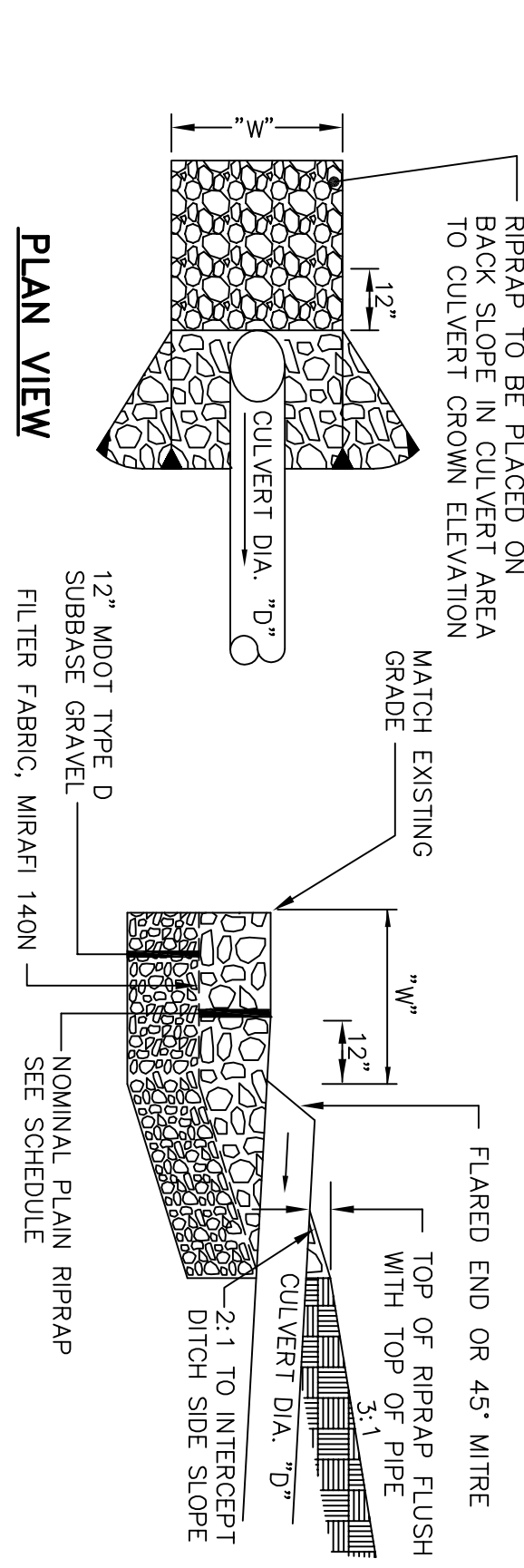
NOTE: 1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:

- A. MOISTURE CONTENT - 30-60%
- B. pH - 5.0-8.0
- C. SCREEN SIZE - 100% LESS THAN 3" MAX, 70% LESS THAN 1"
- D. NO LESS THAN 40% ORGANIC MATERIAL (GRT WEIGHT) BY LOSS OF IGNITION
- E. NO STONES LARGER THAN 2" IN DIAMETER
- F. NO STONES LARGER THAN 2" IN DIAMETER
- G. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
- H. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED TOGETHER WITH SILTATION FENCE. AT THE TOP OF SHALLOW SLOPES, ON FROZEN GROUND, LEAVE OUT CORNERS, VERY ROUNDED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
- I. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SOIL THAT THE NATIVE PLANT CAN BE SEEN BELOW.

WOOD WASTE COMPOST/BARK FILTER BERM DETAIL

N.T.S.

(C)
C-23

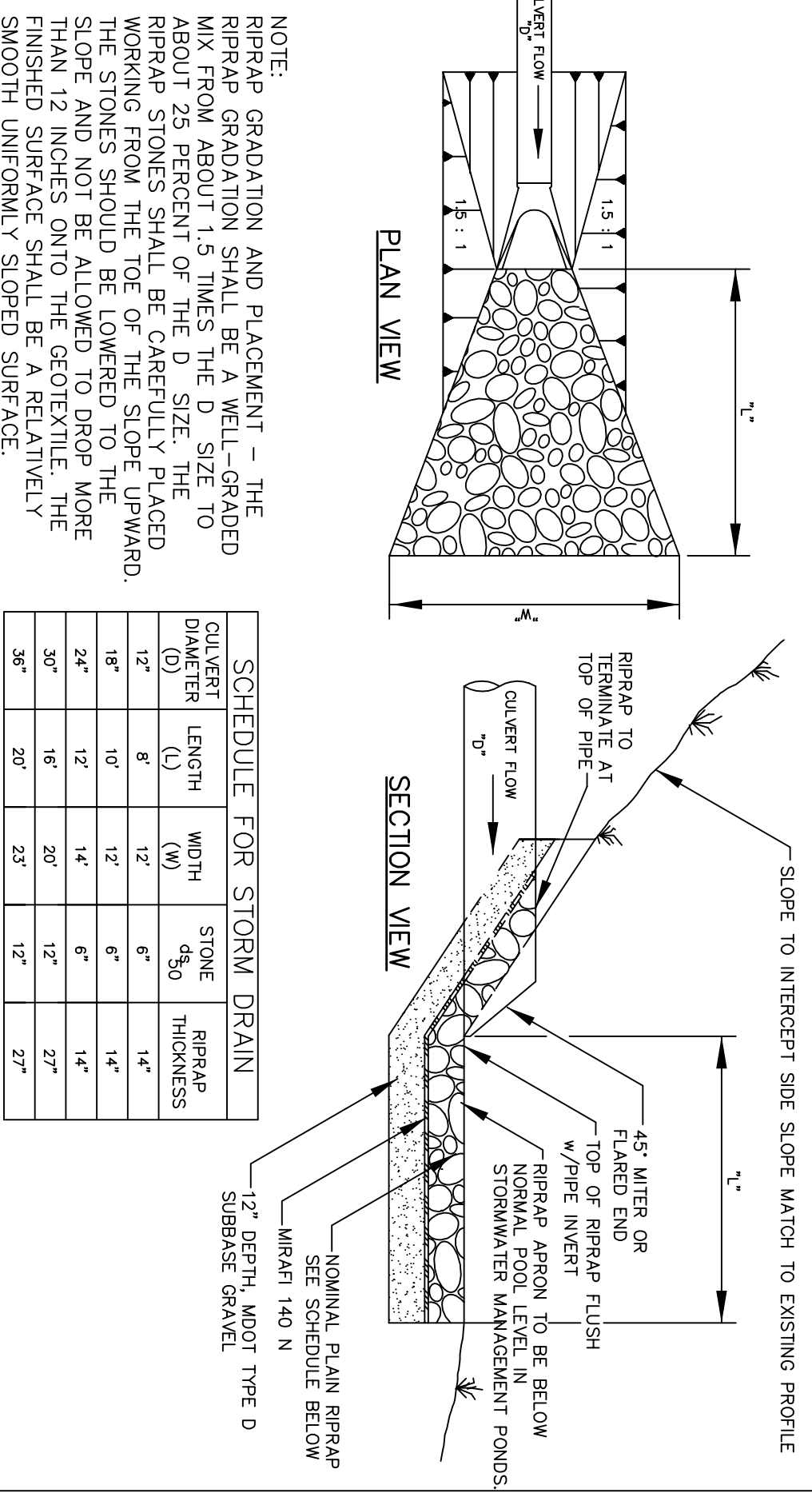


NOTE: RIPRAP GRADATION AND PLACEMENT - THE RIPRAP SHALL BE WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORM, SLOPED SURFACE.

PIPE/CULVERT INLET APRON IN FILL AREAS

N.T.S.

(D)
C-23



NOTE: RIPRAP GRADATION AND PLACEMENT - THE RIPRAP GRADATION SHALL BE A WELL-GRADED MIX FROM ABOUT 1.5 TIMES THE D SIZE TO ABOUT 25 PERCENT OF THE D SIZE. THE RIPRAP STONES SHALL BE CAREFULLY PLACED WORKING FROM THE TOE OF THE SLOPE UPWARD. THE STONES SHOULD BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12 INCHES ONTO THE GEOTEXTILE. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH UNIFORM, SLOPED SURFACE.

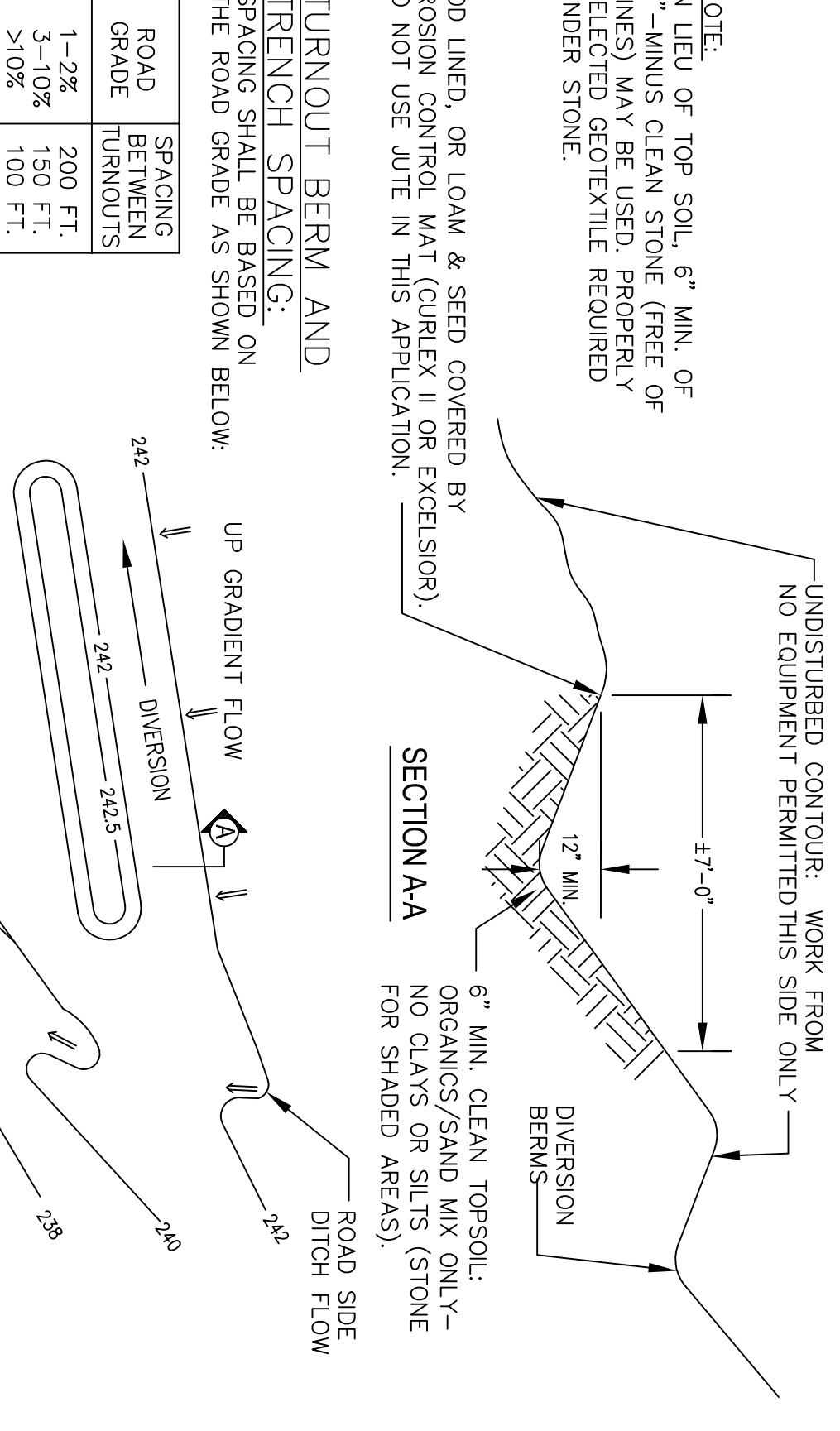
SCHEDULE FOR STORM DRAIN

CULVERT DIAMETER (D)	CULVERT LENGTH (L)	WIDTH (W)	STONE THICKNESS	RIPPRAP THICKNESS
12"	10'	12"	6"	14"
18"	10'	12"	6"	14"
24"	12'	14"	6"	14"
30"	16'	20"	12"	27"
36"	20'	23"	12"	27"

PIPE/CULVERT OUTLET APRON W/O/D DISPERSION BERM

N.T.S.

(E)
C-23



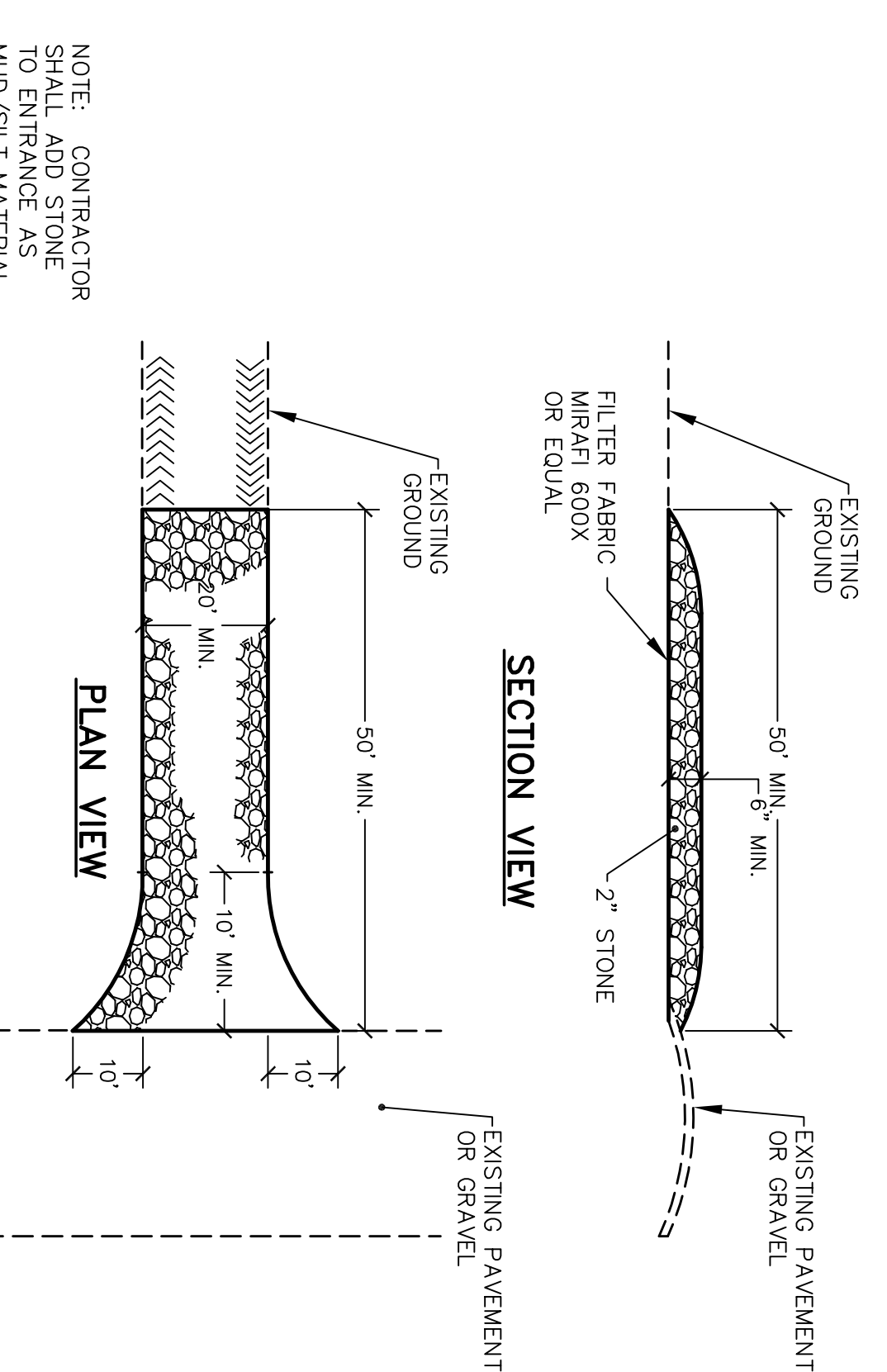
TURNOUT BERM AND TRENCH SPACING

ROAD BETWEEN GRADE TURNOUTS	SPACING
1-2%	200 FT.
3-10%	150 FT.
>10%	100 FT.

ROAD DITCH TURN OUT LEVEL SPREADER

N.T.S.

(F)
C-23

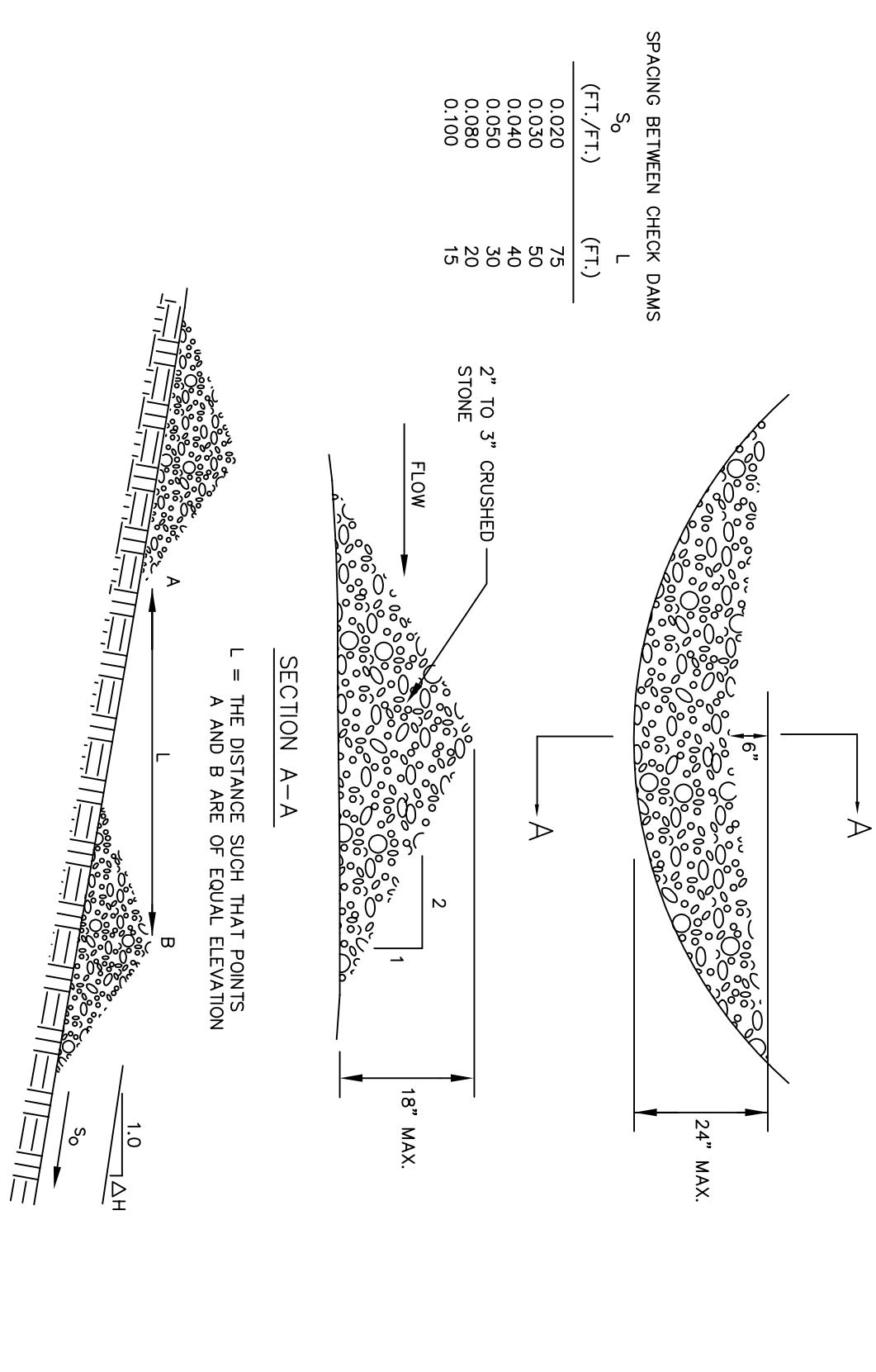


NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

(G)
C-23



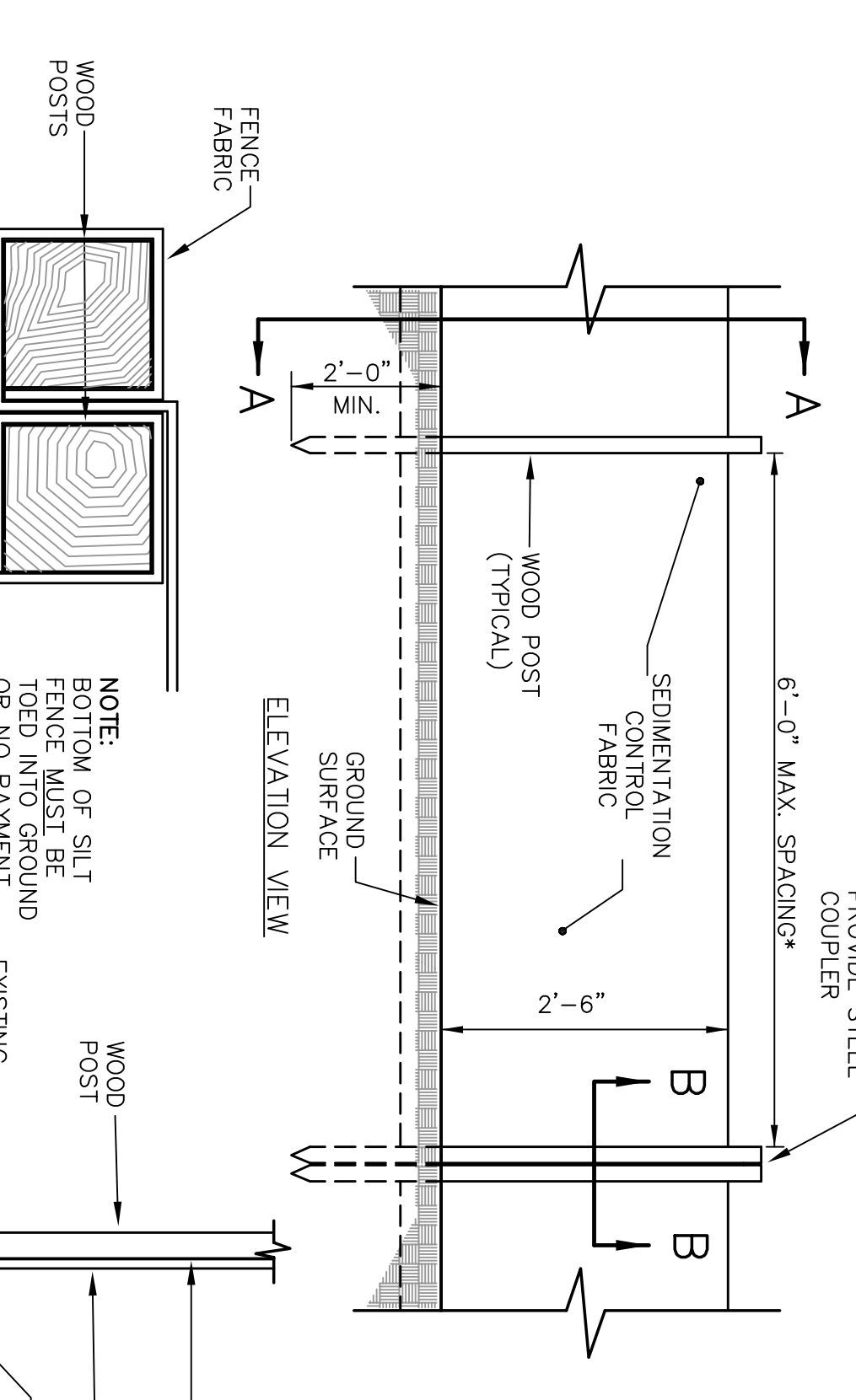
SPACING BETWEEN CHECK DAMS

S ₀ (FT/7.71)	(T ₁)
0.020	75
0.040	40
0.060	30
0.080	25
0.100	15

STONE CHECK DAM

N.T.S.

(H)
C-23



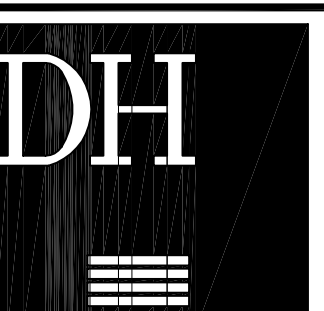
NOTE: *THE SILT FENCE SHOULD HAVE A MINIMUM STAKING OF 6" UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT A MINIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".

SILTATION FENCE DETAIL

N.T.S.

(I)
C-23

REDINGTON WIND FARM PROJECT
REDINGTON MOUNTAIN WINDPOWER, LLC



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WWW.DHAI@DELUCAHOFFMAN.COM

EROSION CONTROL DETAILS

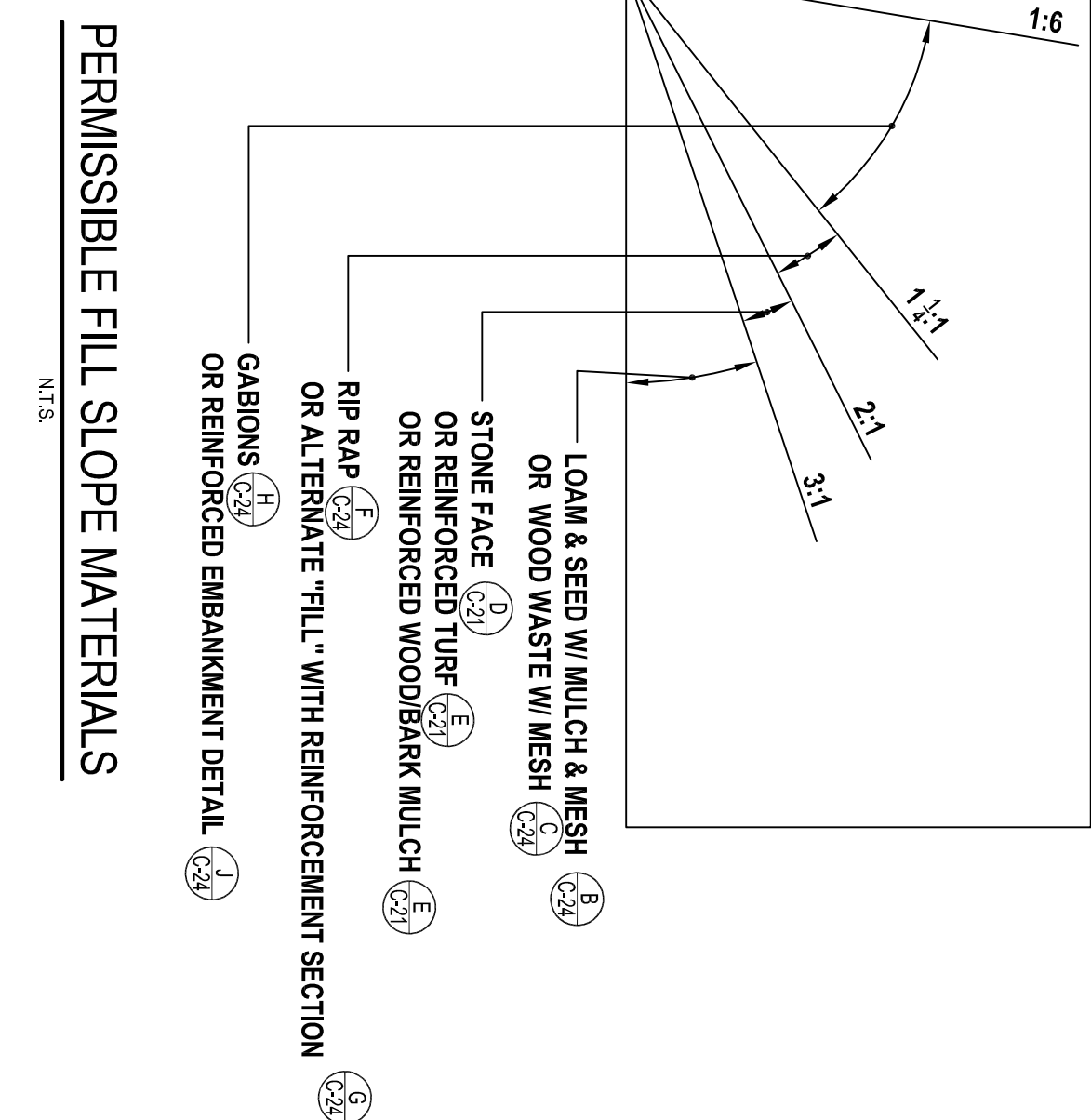
DRAWN:	KEW/JCS	DATE:	AUGUST 2005
DESIGNED:	DDA	SCALE:	N.T.S.
CHECKED:	WGH	JOB NO.:	1708.06
FILE NAME:	1708.06-DET		

NO.	DATE	REVISIONS
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1	12.05.03	SUBMITTED TO CLIENT.

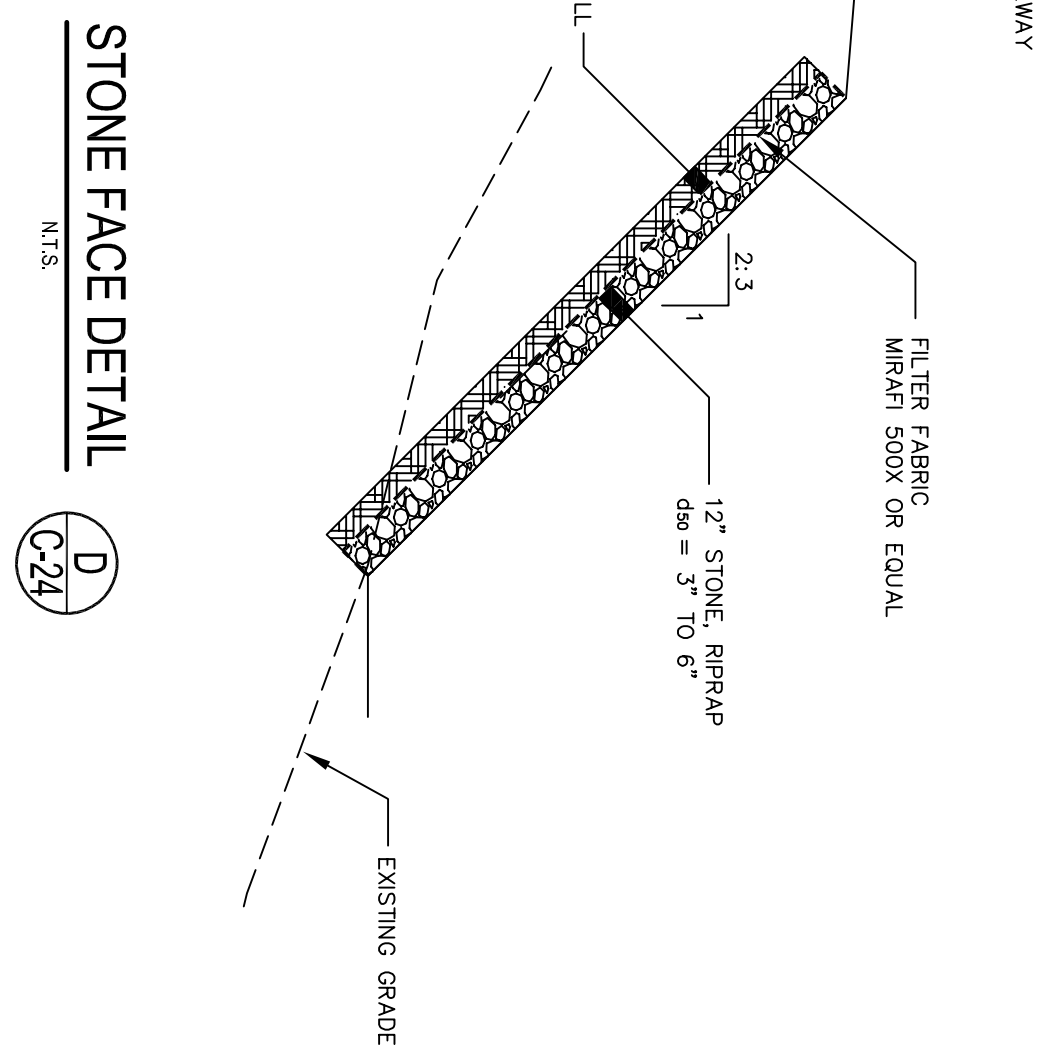
C-23

SHEET

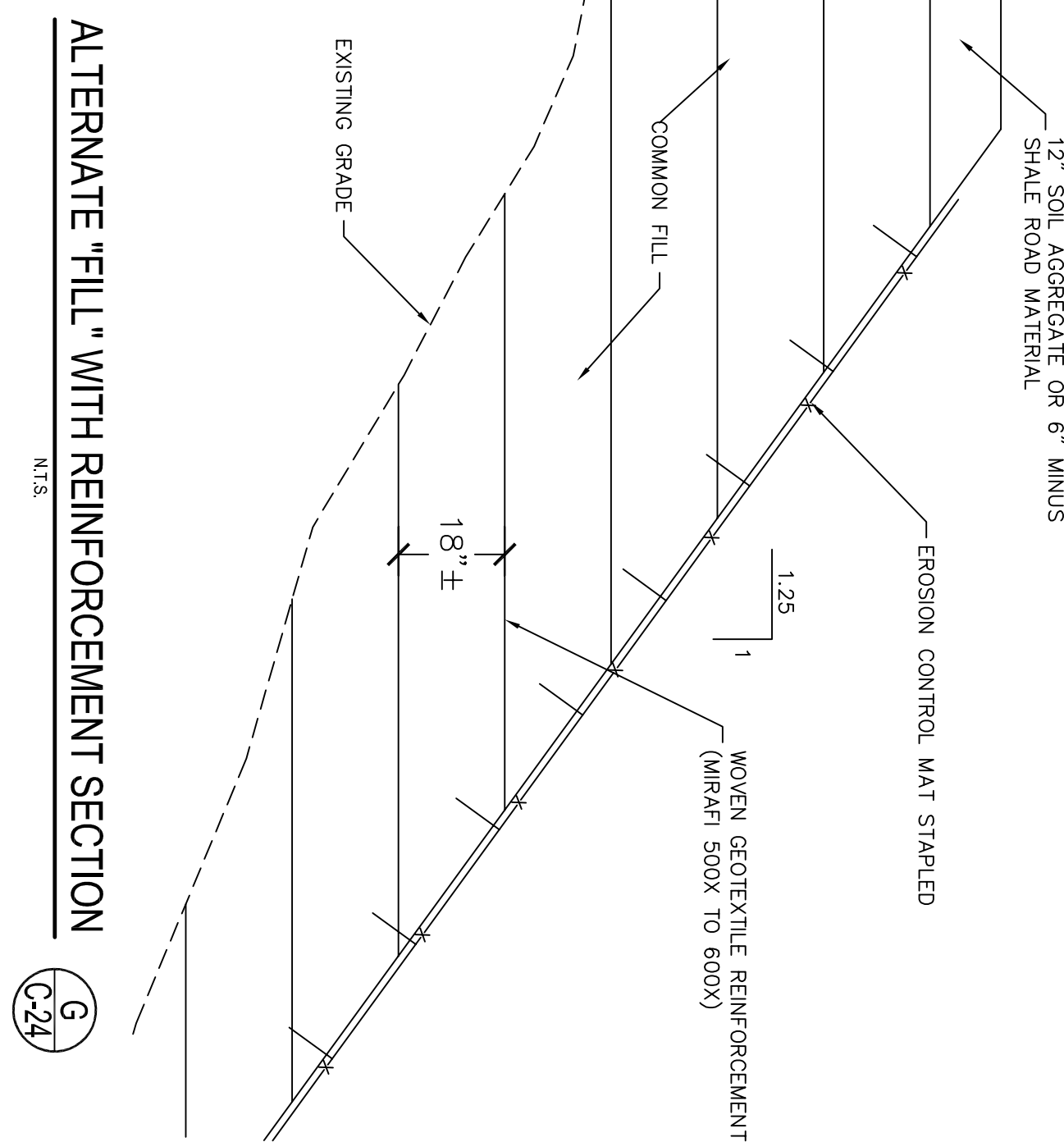
PRELIMINARY NOT FOR CONSTRUCTION



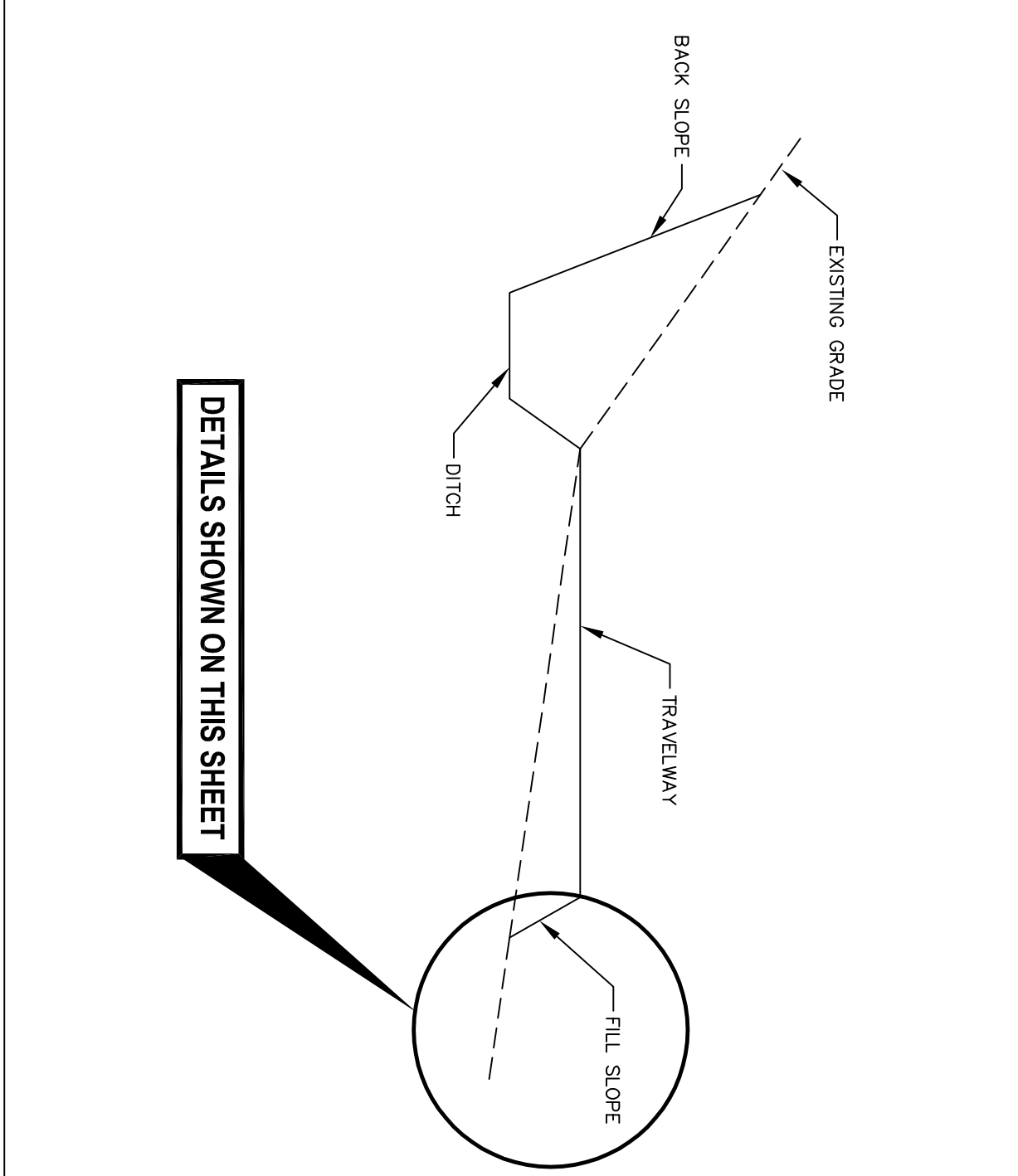
PERMISSIBLE FILL SLOPE MATERIALS
N.T.S.



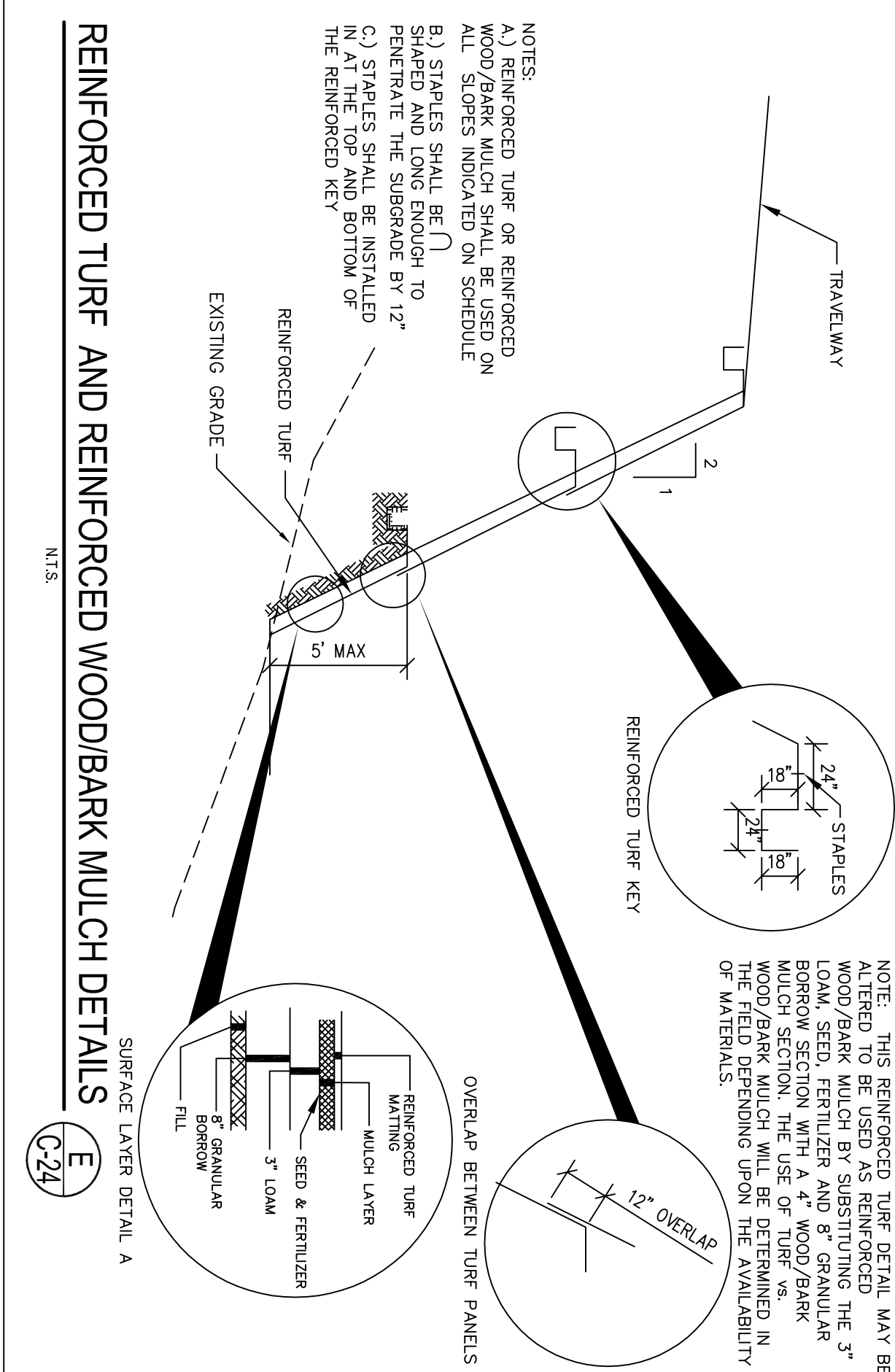
STONE FACE DETAIL
N.T.S.



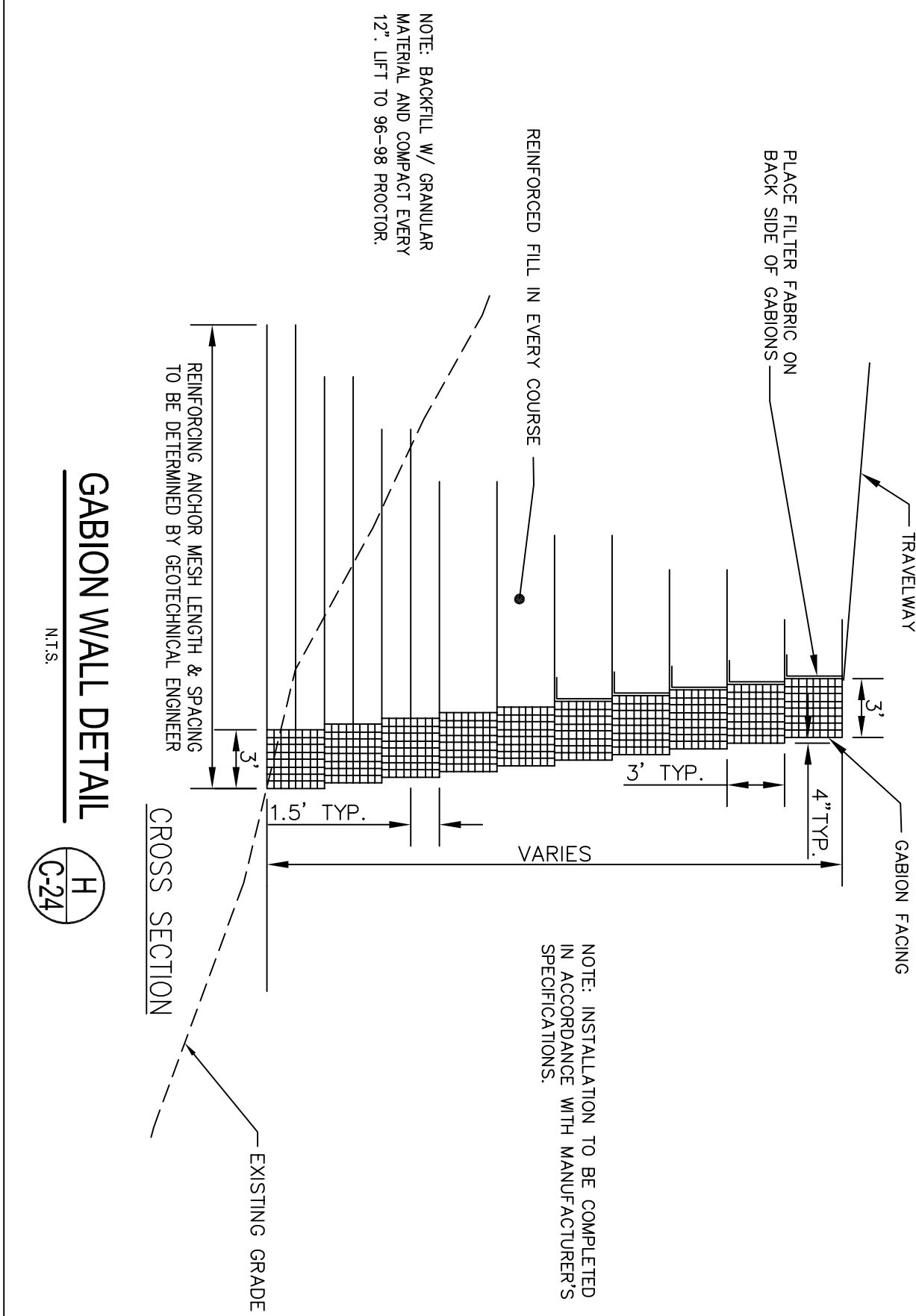
ALTERNATE "FILL" WITH REINFORCEMENT SECTION
N.T.S.



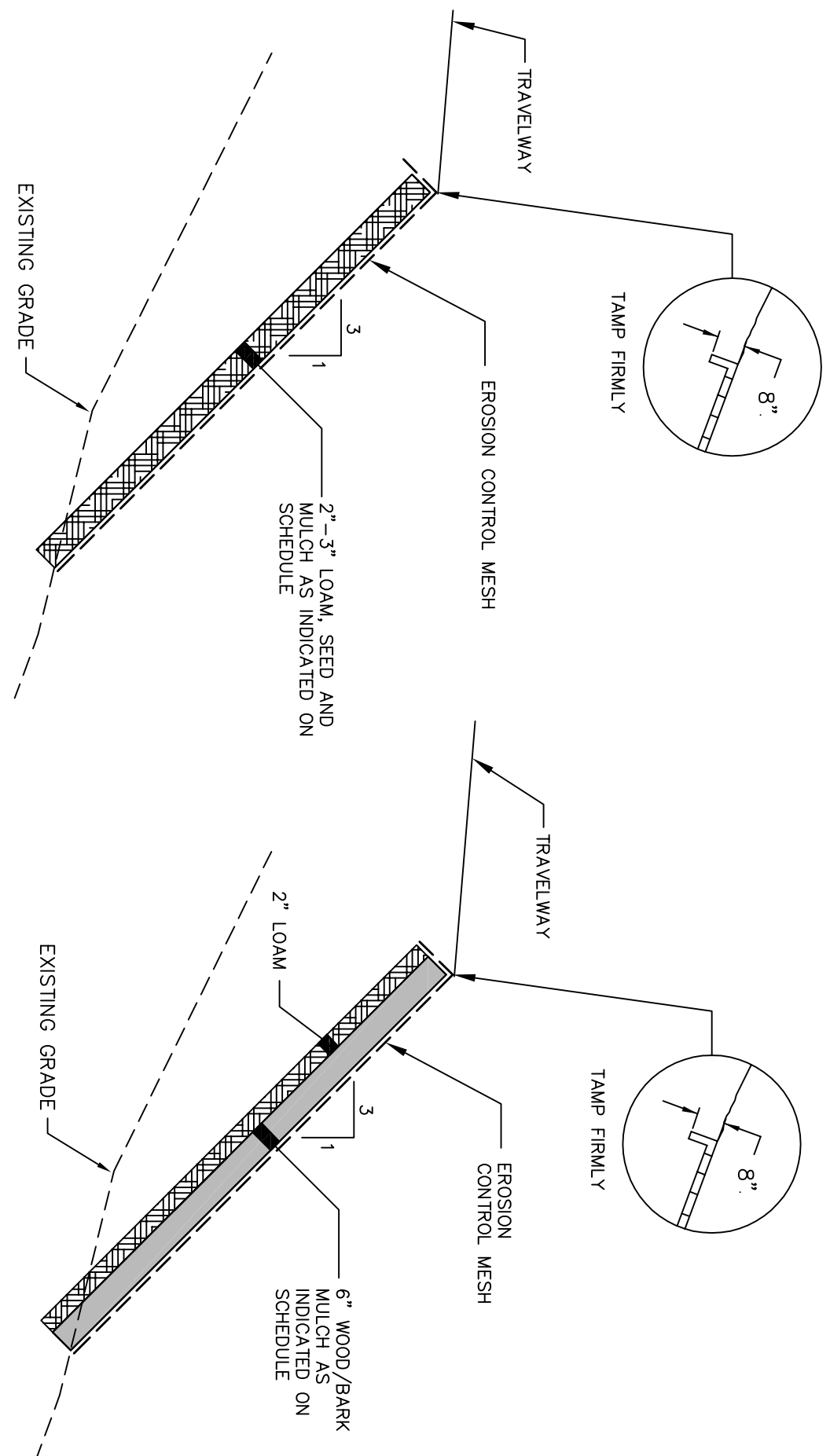
DETAILS SHOWN ON THIS SHEET



REINFORCED TURF AND REINFORCED WOOD/BARK MULCH DETAILS
N.T.S.

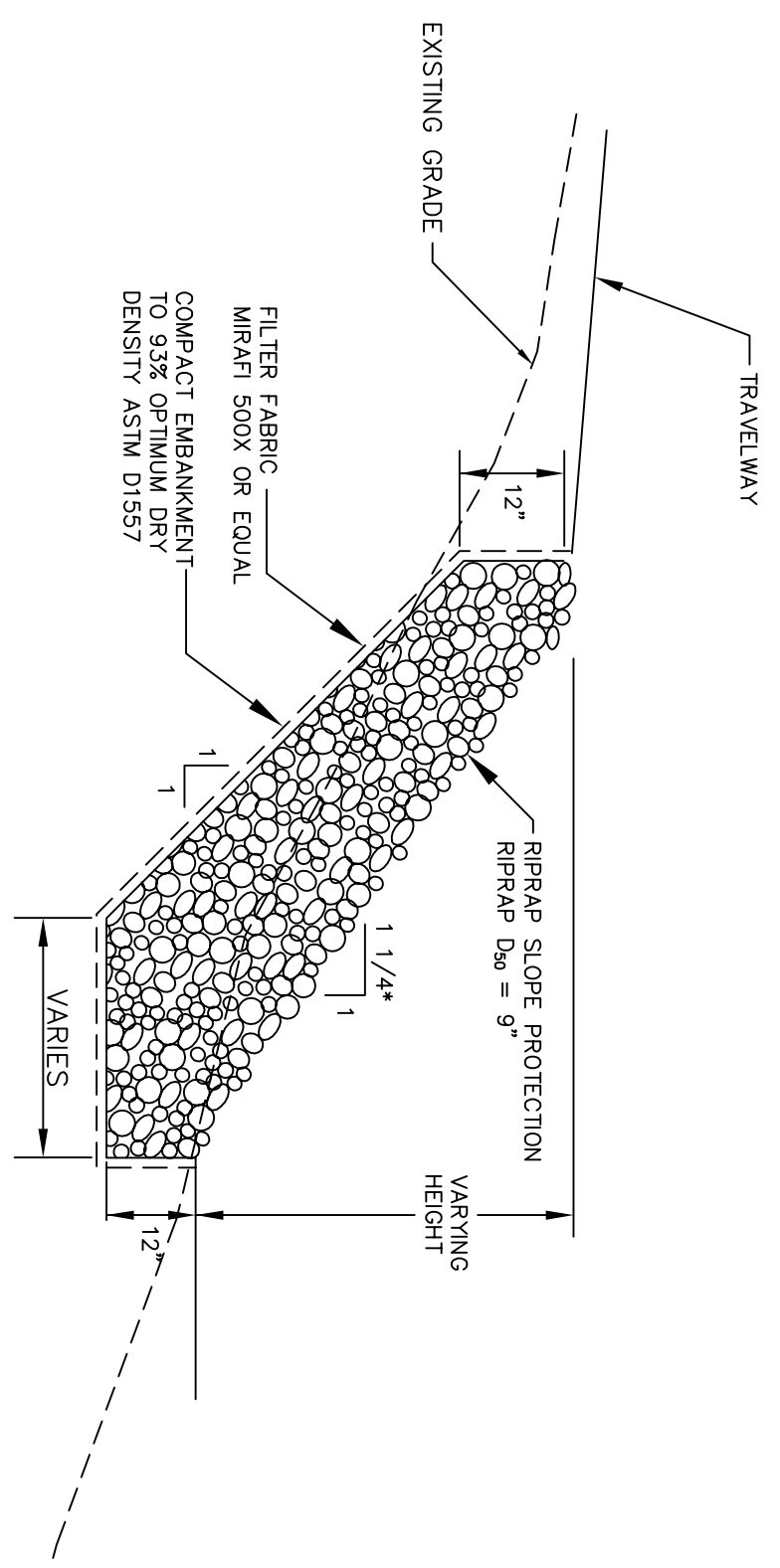


GABION WALL DETAIL
N.T.S.

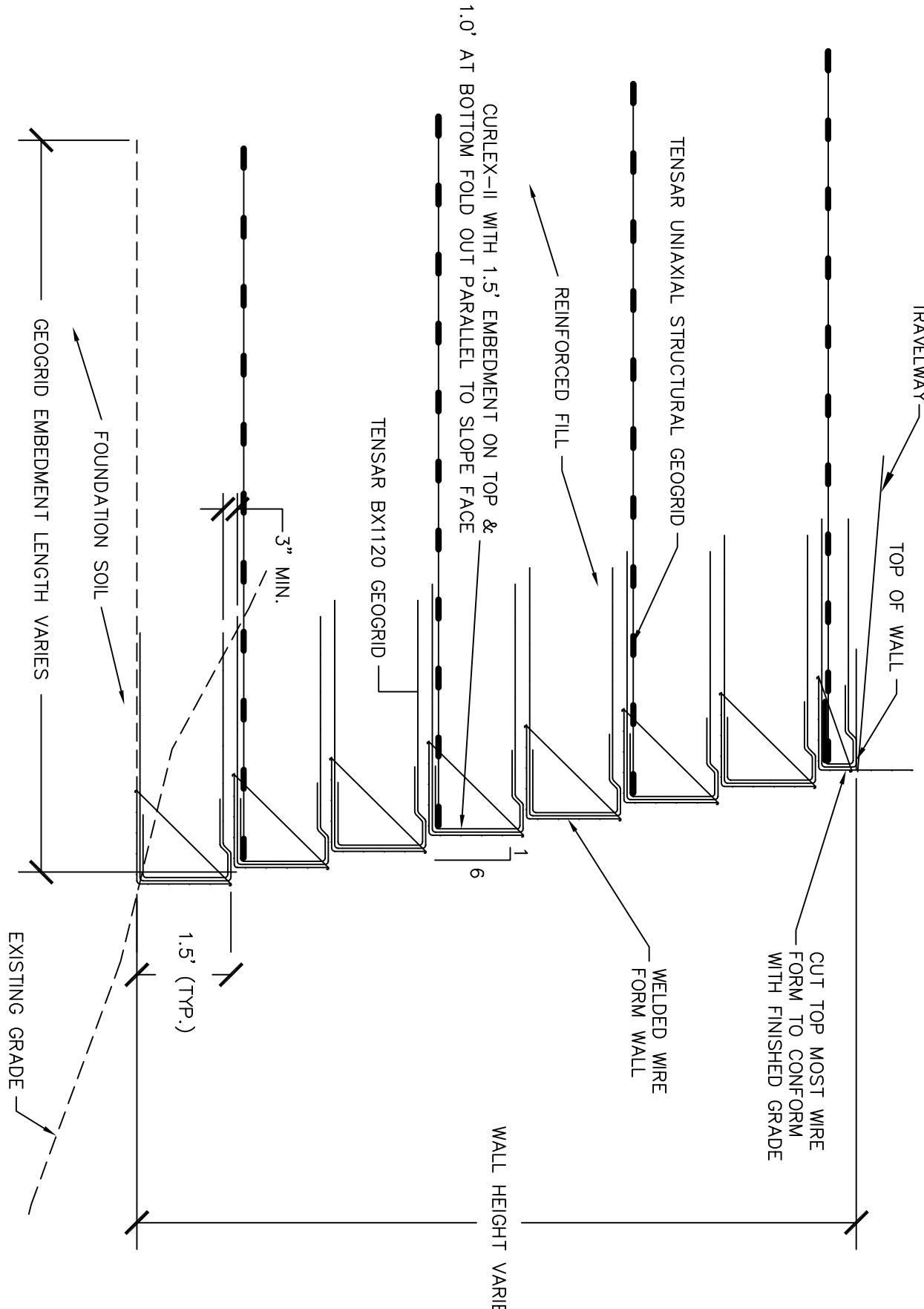


LOAM, SEED AND MULCH SLOPE
N.T.S.

WOODBARK MULCH SLOPE
N.T.S.



RIPRAP SLOPE DETAIL
N.T.S.



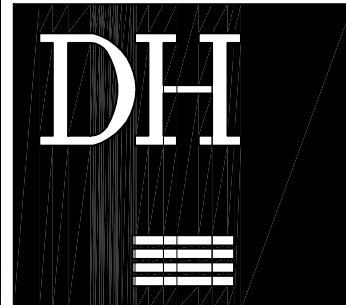
REINFORCED EMBANKMENT DETAIL
N.T.S.

* DETAIL REQUIRES REVIEW BY GEOTECHNICAL ENGINEER. SLOPE MAY BE REDUCED TO 1.5H:1V.

NOTE: THIS REINFORCED TURF DETAIL MAY BE ALTERED TO BE USED AS REINFORCED WOOD/BARK MULCH BY SUBSTITUTING THE 3" BARK MULCH WITH WOOD/BARK MULCH SECTION. THE USE OF TURF VS. WOOD/BARK MULCH WILL BE DETERMINED IN CONSULTATION WITH THE AVAILABILITY OF MATERIALS.

NOTE: INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

REDINGTON WIND FARM PROJECT
REDINGTON MOUNTAIN WINDPOWER, LLC



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FILL SLOPE DETAILS

DRAWN:	KEW/JCS	DATE:	AUGUST 2005
DESIGNED:	DDA	SCALE:	N.T.S.
CHECKED:	WGH	JOB NO.	1708.06
FILE NAME:	1708.06-DET		

NO.	DATE	REVISIONS
4	12.15.05	REVISED PROJECT TITLE
3	10.31.05	ADDED REINFORCED WOOD/BARK MULCH DETAIL
2	08.12.05	ISSUED TO CLIENT FOR REVIEW
1	12.05.03	SUBMITTED TO CLIENT.