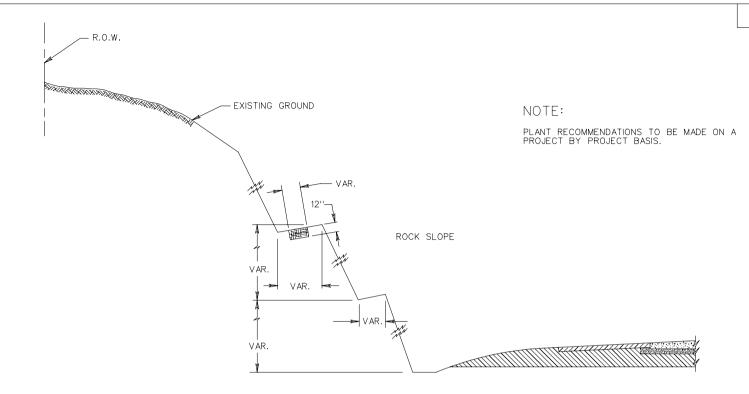
# SECTION 1200

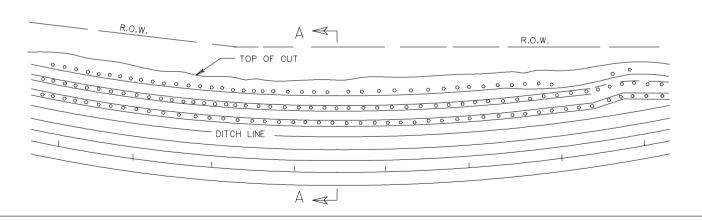
# LANDSCAPE





#### SECTION A-A

THIS SECTION IS TO BE USED AS A GUIDE ONLY. EACH ROCK CUT SHOULD RECEIVE INDIVIDUAL INVESTIGATION.

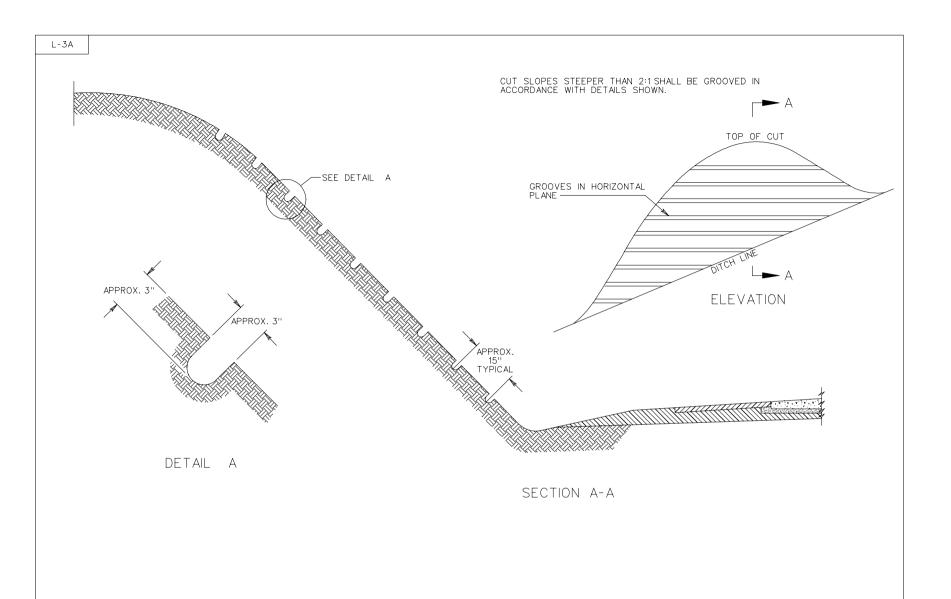


SPECIFICATION REFERENCE

NONE

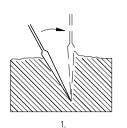
TYPICAL METHOD FOR BENCH PLANTING ON ROCK CUT SECTION

VIRGINIA DEPARTMENT OF TRANSPORTATION

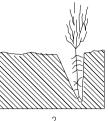


303

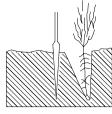
#### PLANTING WITH BAR



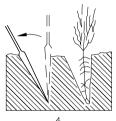
INSERT BAR AT ANGLE SHOWN. PUSH FORWARD TO UPRIGHT POSITION.



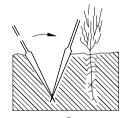
REMOVE BAR. PLACE SEEDLING AT CORRECT



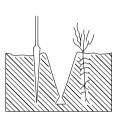
INSERT BAR 2 INCHES TOWARD PLANTER FROM SEEDLING.



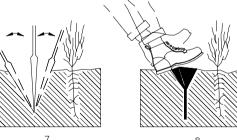
PULL HANDLE OF BAR TOWARD PLANTER FIRMING SOIL AT BOTTOM OF ROOTS.



PUSH HANDLE OF BAR FORWARD FROM PLANTER FIRMING SOIL AT TOP OF ROOTS.



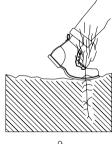
INSERT BAR 2 INCHES FROM LAST HOLE.



PUSH FORWARD THEN PULL BACKWARD FILLING HOLE.

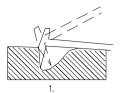


FILL IN LAST HOLE BY STAMPING WITH THE FEET.

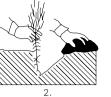


FIRM SOIL AROUND SEEDLING WITH THE

#### PLANTING WITH MATTOCK



INSERT MATTOCK. LIFT HANDLE AND PULL.



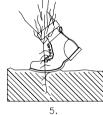
PLACE SEEDLING ALONG STRAIGHT SIDE AT CORRECT DEPTH.



FILL IN AND PACK SOIL TO BOTTOM OF ROOTS.

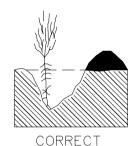


FINISH FILLING IN SOIL. FIRM WITH HEEL.

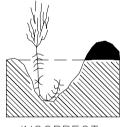


FIRM AROUND SEEDLING WITH FEET.

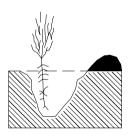
#### CORRECT AND INCORRECT DEPTHS



AT SAME DEPTH OR  $\frac{1}{2}$ " DEEPER THAN IT GREW IN NURSERY.



INCORRECT TOO DEEP. ROOTS BENT.



INCORRECT TOO SHALLOW, ROOTS EXPOSED.



WATER.



HANDLING SEEDLING

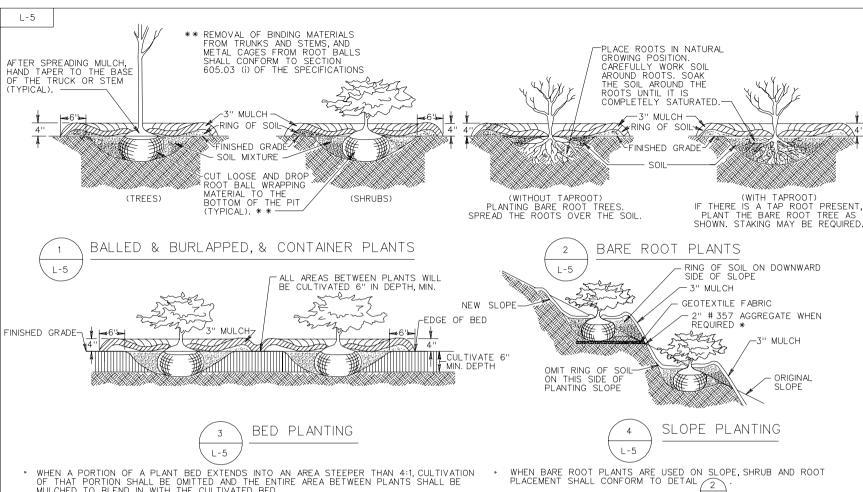
IN

FIELD.



**SPECIFICATION** REFERENCE

METHOD OF PLANTING FOREST TREE SEEDLINGS



- MULCHED TO BLEND IN WITH THE CULTIVATED BED.
- PLANTING BEDS (CULTIVATED AND NON-CULTIVATED) SHALL BE CUT TO A MAXIMUM 4" IN HEIGHT BY MOWING, AND SHALL AFTERWARDS BE TREATED WITH HERBICIDE AS APPROVED AND DIRECTED BY THE ENGINEER AT LEAST 2 WEEKS PRIOR TO CULTIVATION PLANTING. OR MULCHING.
- WHEN BARE ROOT PLANTS ARE USED IN BEDS. SHRUB AND ROOT PLACEMENT SHALL CONFORM TO DETAIL 2
- SFM FOLLOWING BED DESIGNATION STANDS FOR SQUARE FEET OF MULCH AT THE INDICATED QUANTITY.

- ON SLOPES STEEPER THAN 3:1, THE FRONT CENTER OF THE PIT SHALL BE MODIFIED WHEN REQUIRED \* TO INCLUDE A "V" CUT THE FULL DEPTH OF THE PIT. THE PIT SHALL BE DUG 2" DEEPER THAN SHOWN ON THE SUMMARY SHEET AND BACKFILLED WITH 2" OF #357 AGGREGATE, DAYLIGHTED TO THE SLOPE FACE, AND COVERED WITH GEOTEXTILE FABRIC PRIOR TO BACKFILLING WITH SOIL MIXTURE.
- \* SEE NOTE FOR PIT DRAINAGE MODIFICATION FOR SLOPE PLANTING SHEET 1201.06.

#### GENERAL NOTES:

- 1. SEE LANDSCAPE SUMMARY SHEET FOR PIT SIZES.
- ROOT BALL SHALL BE POSITIONED LEVEL WITH FINISHED GRADE. SOIL MIXTURE SHALL TAPER ONTO BUT NOT OVER TOP OF THE ROOT BALL. MULCH SHALL EXTEND AT THE PROPER DEPTH OVER THE ENTIRE ROOT BALL AND PLANTING PIT, AND SHALL BE HAND TAPERED TO THE BASE OF ALL TRUNKS AND STEMS AFTER SPREADING.
- 3. THIS RULE SHALL GOVERN WITH THE FOLLOWING EXCEPTIONS:
- A. SLOPE PLANTINGS SEE SLOPE PLANTING DETAILS B. INCLUSION OF PIT DRAINAGE SYSTEM - POSITION TOP OF ROOT BALL THE SAME AS FINISHED GRADE.
- C. TREE GRATE PLANTING SEE TREE GRATE PLANTING DETAILS IN PLANS.

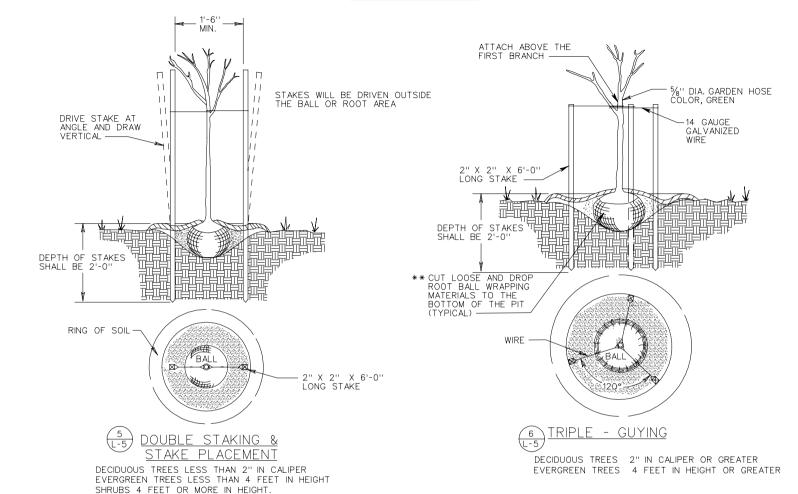
# PLANTING DETAILS

VIRGINIA DEPARTMENT OF TRANSPORTATION

**SPECIFICATION** REFERENCE

> 245 203

#### STAKING, GUYING



GENERAL NOTES

- ALL DECIDUOUS TREES OVER 4 FT. IN HEIGHT AND ALL EVERGREEN TREES OVER 4 FT. IN HEIGHT OR TALLER SHALL BE STAKED AND GUYED WITH 3 STAKES AS SHOWN.
- 2. MULTIPLE STEMMED DECIDUOUS TREES 4 FT. IN HEIGHT SHALL BE STAKED WITH 3 STAKES IN SUCH A MANNER AS TO STABILIZE 3 MAINSTEMS.
- 3. THE WOOD STAKES SHALL BE 2"X2"X6'-0" LONG DRESSED HARDWOOD AND DECAY RESISTANT.

THE WIRE TIES SHALL BE 14 GAUGE GALVANIZED WIRE, AND BE PROVIDED WITH A ONE FOOT PIECE OF GREEN RUBBER HOSE PLACED TO PREVENT INJURY TO THE BARK. THERE SHOULD BE A 1" - 3" SWAY IN THE TREE (THE WIRES SHOULD NOT BE PULLED TIGHT) FOR BEST ESTABLISHMENT. OTHER ANCHORING METHODS AND MATERIALS MAY BE APPROVED FOR USE BY THE ENGINEER.

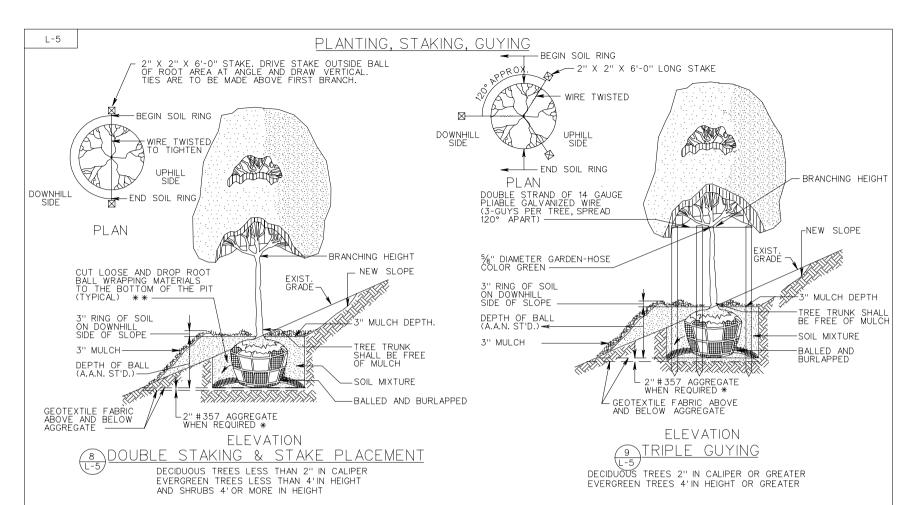
\*\* REMOVAL OF BINDING MATERIALS FROM TRUNKS AND STEMS, AND METAL CAGES FROM ROOT BALLS SHALL CONFORMTO THE CURRENT ROAD & BRIDGE SPECS.

SPECIFICATION REFERENCE
605

244

# PLANTING DETAILS

VIRGINIA DEPARTMENT OF TRANSPORTATION



## GENERAL NOTES

- 1. ALL DECIDUOUS TREES 2" IN CALIPER OR MORE AND ALL EVERGREEN TREES OVER 4'IN HEIGHT SHALL BE STAKED OR GUYED AS SHOWN.
- 2. MULTIPLE STEMED DECIDUOUS TREES OVER 4'IN HEIGHT SHALL BE STAKED WITH 3 STAKES IN SUCH A MATTER AS TO STABILIZE 3 MAINSTEMS
- 3. THE WOOD STAKES SHALL BE CONSTRUCTION GRADE, ROUGH OR DRESSED, OF SOUND HARDWOOD, DECAY RESISTANT, AND OF THE SIZE INDICATED IN THE DETAILS.
- 4. THE WIRE TIES SHALL BE 14 GAUGE GALVANIZED WIRE OR OTHER APPROVED MATERIAL AND BE PROVIDED WITH A 1'PIECE OF GREEN RUBBER HOSE PLACED TO PREVENT INJURY TO THE BARK. THERE SHOULD BE A 1'' 3'' SWAY IN THE TREE (THE WIRES SHOULD NOT BE PULLED TIGHT) FOR BEST ESTABLISHMENT. OTHER ANCHORING METHODS AND MATERIALS MAY BE APPROVED FOR USED BY THE ENGINEER.
- 5. ON SLOPES STEEPER THAN 3:1, THE FRONT CENTER OF THE PIT SHALL BE MODIFIED WHEN REQUIRED \*TO INCLUDE A "V" CUT THE FULL DEPTH OFTHE PIT. THE PIT SHALL BE DUG 2" DEEPER THAN SHOWN IN THE SUMMARY SHEET AND BACKFILLED WITH 2" OF #357 AGGRGATE DAYLIGHTED TO THE SLOPE FACE, AND COVERED WITH GEOTEXTILE FABRIC PRIOR TO BACK- FILLING WITH SOIL MIXTURE.

- \* PIT DRAINAGE MODIFICATION FOR SLOPE PLANTING (WHEN REQUIRED)
- \*\* REMOVAL OF BINDING MATERIALS FROM TRUNK AND STEMS, AND METAL CAGES FROM ROOT BALLS SHALL CONFORM TO SECTION 605.03 (1) OF THE SPECS.
- A. PRIOR TO THE PLANTING ON A SLOPE THE CONTRACTOR SHALL TEST NO MORE THAN 3 PITS FOR PERCOLATION.
- B. PERCOLATION TEST SHALL CONSIST OF FILLING THE PIT WITH APPROXIMATELY 6" OF WATER. THE ENGINEER SHALL DETERMINE IF PIT DRAINAGE IS REQUIRED.
- C. PAYMENT FOR AGGREGATE, GEOTEXTILE FABRIC, AND PIT MODIFICATION WILL BE MADE IN ACCORD-ANCE WITH THE ROAD AND BRIDGE SPECS.

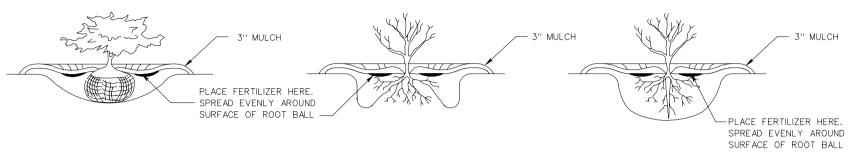
SLOPE PLANTING DETAILS

VIRGINIA DEPARTMENT OF TRANSPORTATION

203 245 605

SPECIFICATION

## FERTILIZER PLACEMENT



BALLED & BURLAPPED & CONTAINER PLANTS

BARE ROOT PLANTS
WITHOUT TAPROOT

BARE ROOT PLANTS WITH TAPROOT

#### FERTILIZER MATERIALS

FERTILIZER MATERIALS SHALL CONFORM TO THE SECTION 244.02 (d) OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

THE FOLLOWING INFORMATION SHALL BE SHOWN ON A TAG ATTACHED TO FERTILIZER BAG:

- 1. THE NAME AND ADDRESS OF MANUFACTURER
- 2. NAME OF MATERIAL
- 3. NUMBER OF NET POUNDS OF READY MIXED MATERIALS IN THE PACKAGE
- 4. CHEMICAL COMPOSITION AND ANALYSIS
- 5. GUARANTEED ANALYSIS (VA. DEPARTMENT OF AGRICULTURE)

#### MULCHING MATERIALS

BARK-SHALL BE DOUBLE SHREDDED HARDWOOD BARK, DISEASE FREE, BROWN IN COLOR AND SHALL CONFORM TO THE NATIONAL BARK AND SOIL PRODUCER ASSOC. STANDARDS FOR CLASSIFICATION, PARTICLE SIZE, PERCENTAGE WOOD CONTENT, MOISTURE RETENTION AND PH RATING. OTHER MULCH MATERIAL MAY BE USED WITH APPROVAL FROM THE ENGINEER.

#### FERTILIZER RATES

- 2 OUNCES PER VINE AND GROUND COVER UP TO ONE GALLON CONTAINER.
- 8 OUNCES PER SHRUB BARE ROOT OR ONE GALLON CONTAINER.
- 16 OUNCES PER SHRUB, BALLED AND BURLAPPED OR 2 THROUGH FIVE GALLON CONTAINER.
- 24 OUNCES PER TREE UNDER 2" CALIPER (INCLUDES MULTI-STEMMED AND EVERGREEN TREES UNDER 8")
- 32 OUNCES PER TREE OVER 2" CALIPER (INCLUDES MULTI-STEMMED AND EVERGREEN TREES OVER 8'IN HEIGHT)

THE FERTILIZER SHALL BE APPLIED AS A SURFACE APPLICATION. SPREAD EVENLY OVER TOP OF THE ROOT BALL AND PLANT PIT SOIL PRIOR TO MULCHING.

FERTILIZER SHALL NOT BE MIXED WITH THE SOIL MIXTURE.

## APPROVED MULCHES

TYPE

DEPTH

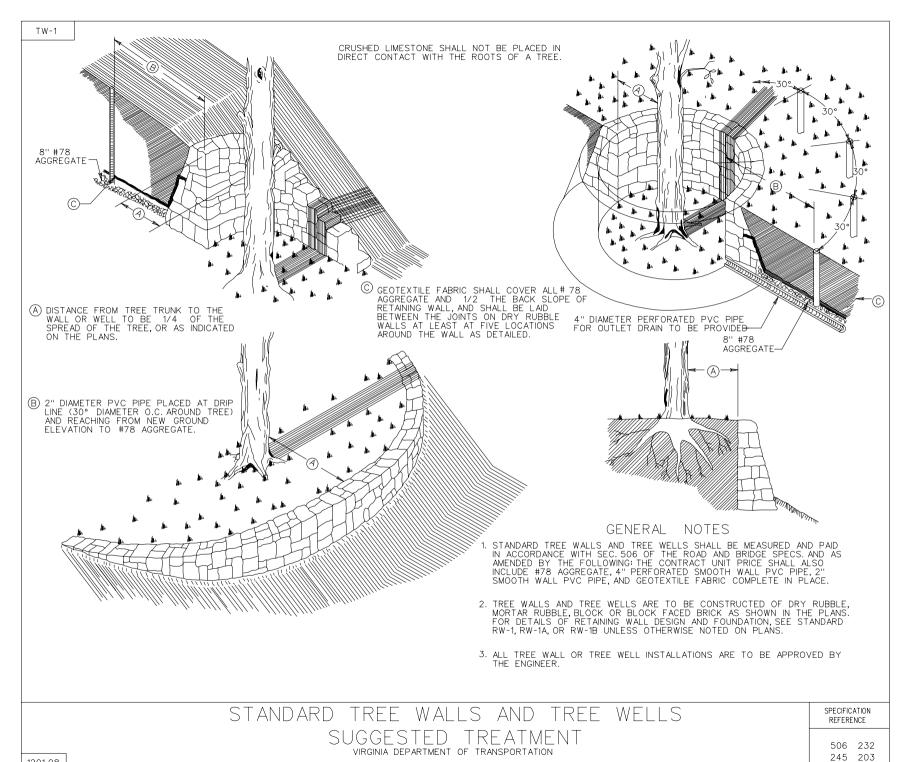
DOUBLE SHREDDED HARDWOOD BARK

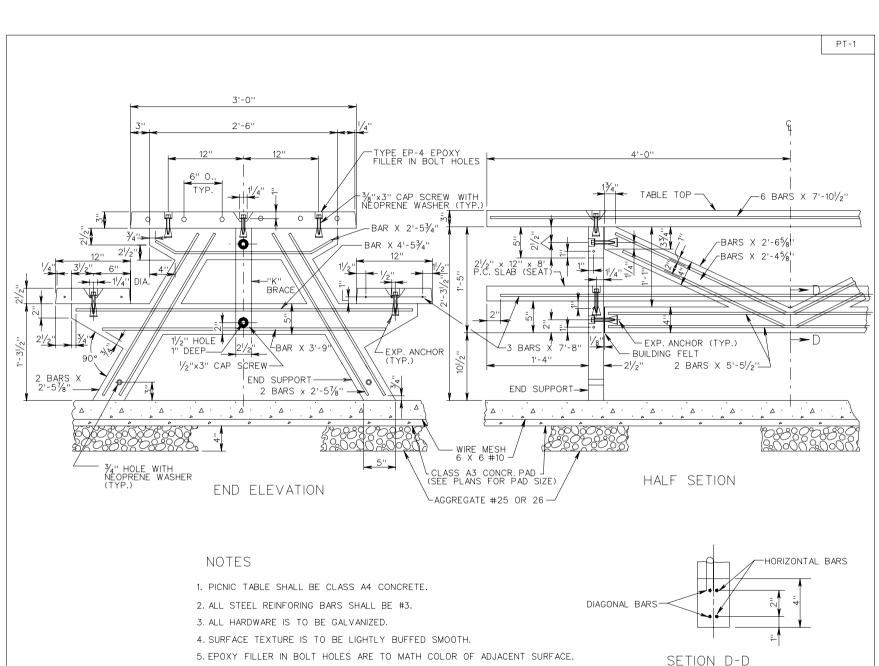
3''

	SPECIFICATION REFERENCE
605 244	

FERTILIZER AND MULCH

VIRGINIA DEPARTMENT OF TRANSPORTATION





6. MEASUREMENT AND PAYMENT OFF PREAST CONRETE PICNIC TABLE, WITH PAD, WILL BE PAID FOR ON AN EACH BASIS, WHICH COST SHALL INCLUDE PRICE OF CONRETE PICNIC TABLE, PAD, AND AGGREGATE, COMPLETE IN PLACE.

SPECIFICATION REFERENCE

# PRECAST CONRETE PICNIC TABLE

VIRGINIA DEPARTMENT OF TRANSPORTATION

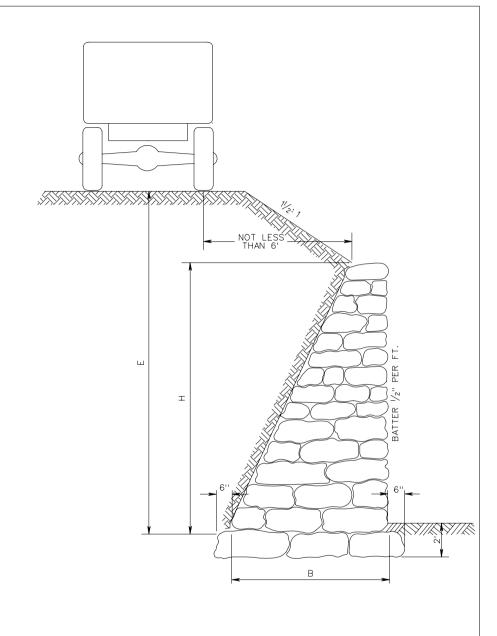
<u>Е</u> Н	FOR UNLOADED WALLS	FOR LOADED WALLS
1.0	B = 0.50 H	B = 0.66 H
1.1	B = 0.57 H	B = 0.67 H
1.2	B = 0.61 H	B = 0.68 H
1.3	B = 0.64 H	B = 0.69 H
1.4	B = 0.66 H	B = 0.70 H
1.5	B = 0.67 H	B = 0.71 H
1.6	B = 0.69 H	B = 0.72 H
1.7	B = 0.70 H	B = 0.73 H
1.8	B = 0.71 H	B = 0.74 H
2.0	B = 0.73 H	B = 0.75 H
2.5	B = 0.75 H	B = 0.76 H
3.0	B = 0.77 H	B = 0.77 H

TOP THICKNESS FOR UNLOADED WALLS ARE TO BE 0.15 H WITH A MINIMUM THICKNESS OF 2 FT.

TOP THICKNESS FOR LOADED WALLS ARE TO BE 0.20 H WITH A MINIMUM THICKNESS OF 2.5 FT.

MINIMUM THICKNESS OF BASE = TOP THICKNESS

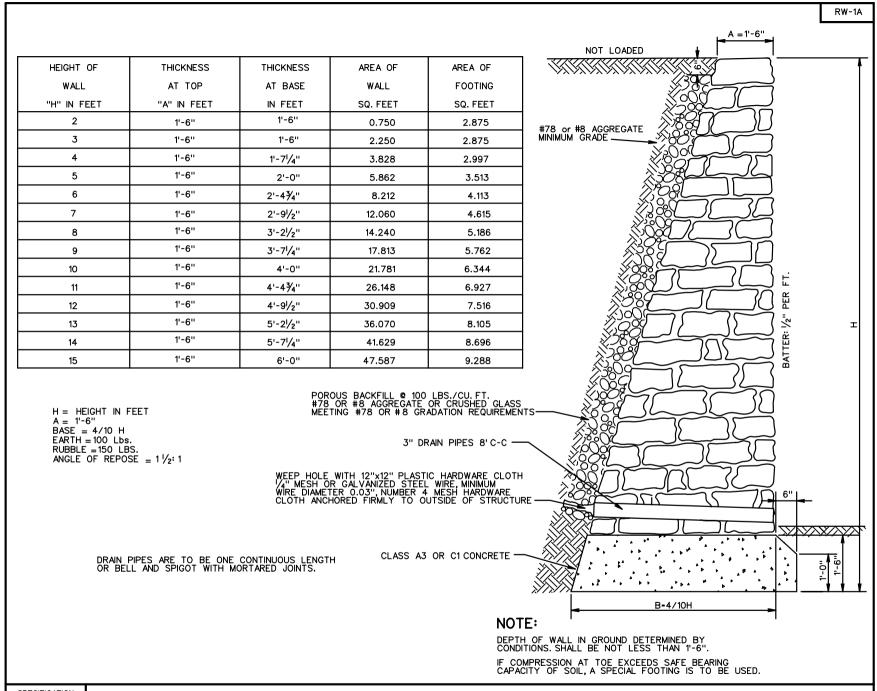
MAXIMUM HEIGHT OF WALL (H) IS TO BE 8 FT.



DRY RUBBLE RETAINING WALLS

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE



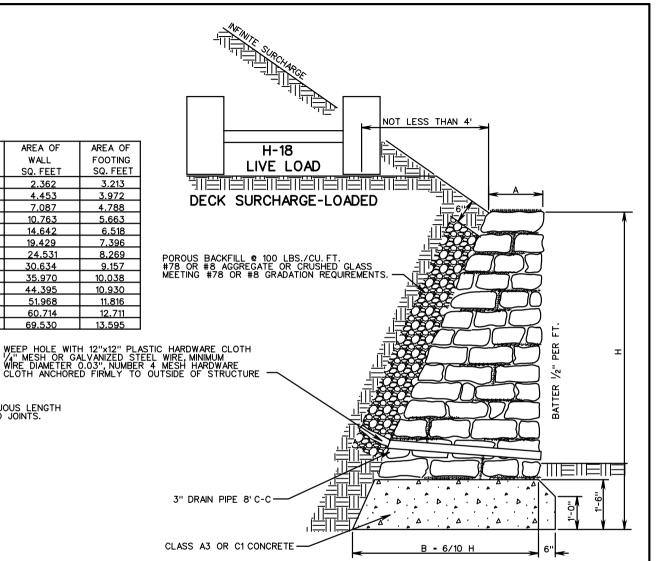
SPECIFICATION REFERENCE

# MORTAR RUBBLE RETAINING WALL-LEVEL BACKFILL

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV 8/07 1201.11

HEIGHT OF	THICKNESS	THICKNESS	AREA OF	AREA OF
WALL	AT TOP	AT BASE	WALL	FOOTING
"H" IN FEET	"A" IN FEET	IN FEET	SQ. FEET	SQ. FEET
3	1'-6''	1'-95/8''	2.362	3.213
4	1'-6''	2'-47/8"	4.453	3.972
5	1'-6''	3'-0"	7.087	4.788
6	1'-8''	3'-71/4"	10.763	5.663
7	1'-8''	4'-23/8''	14.642	6.518
8	1'-9''	4'-95%''	19.429	7.396
9	1'-9''	5'-47/8"	24.531	8.269
10	1'-10''	6'-0"	30.634	9.157
11	1'-10''	6'-71/4"	35.970	10.038
12	1'-11"	7'-23/8"	44.395	10.930
13	1'-11''	7'-95/a''	51.968	11.816
14	2'-0"	8'-47%''	60.714	12.711
15	2'-0"	9'-0"	69.530	13.595



DRAIN PIPES ARE TO BE ONE CONTINUOUS LENGTH OR BELL AND SPIGOT WITH MORTARED JOINTS.

H = HEIGHT IN FEET

BASE = 6/10 H

WT. EARTH =100 LBS./CU. FT.

WT. RUBBLE = 150 LBS./CU. FT.

ANGLE OF REPOSE =  $1\frac{1}{2}$ : 1

#### NOTE:

IF COMPRESSION AT TOE EXCEEDS SAFE BEARING CAPACITY OF SOIL, A SPECIAL FOOTING IS TO BE USED.

DEPTH OF WALL IN GROUND SHALL BE DETERMINED BY CONDITIONS. SHALL BE NOT LESS THAN 1'-6".

# MORTAR RUBBLE RETAINING WALL INFINITE SURCHARGE AND DECK SURCHARGE - LOADED

SPECIFICATION REFERENCE

506

REV 8/07 1201.12

VIRGINIA DEPARTMENT OF TRANSPORTATION