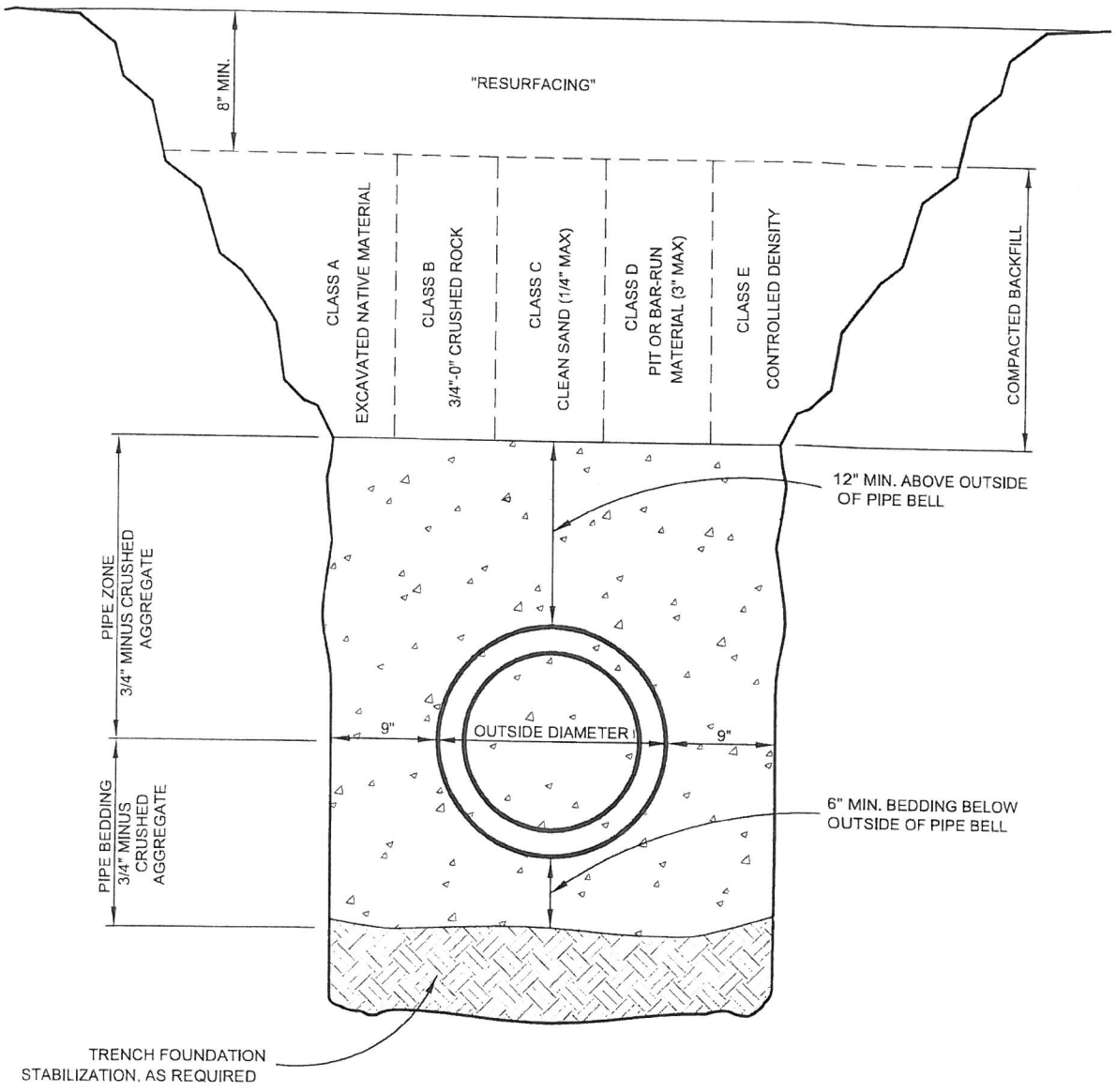
THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



TRENCH BACKFILL BEDDING AND PIPE ZONE

City of West Linn

DATE:	JULY 2008
DRAWING NO.	WL-200
FILE NO.	

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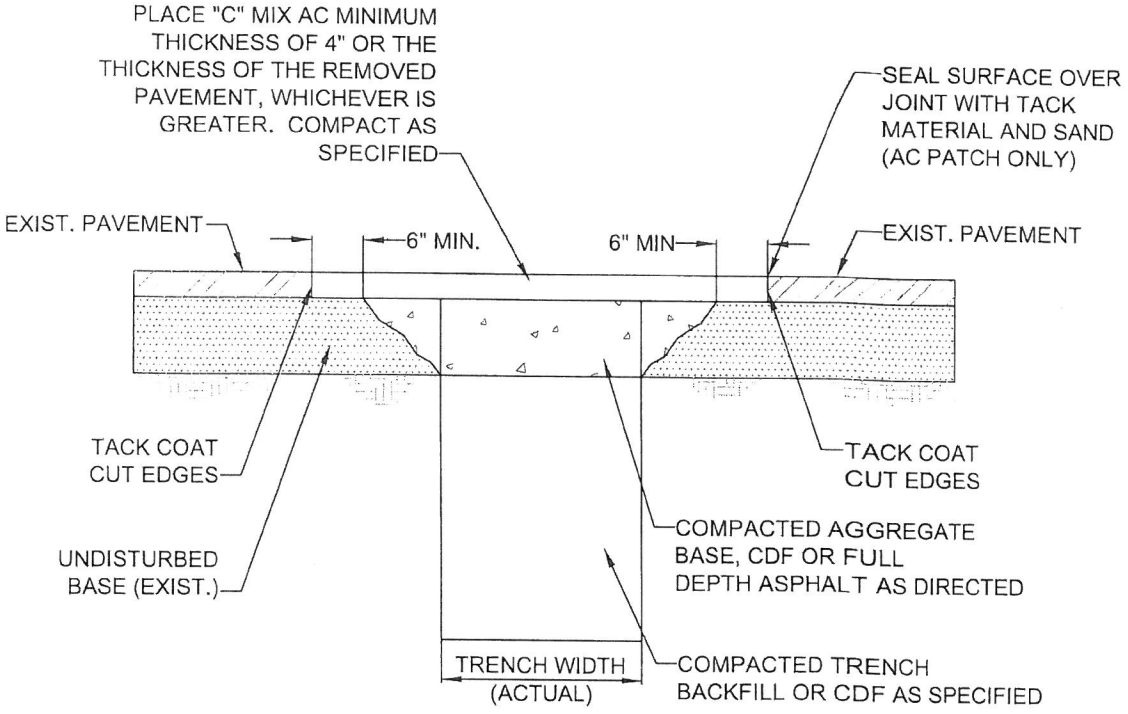

NOTES:

1. ALL EXISTING AC OR PCC PAVEMENT SHALL BE SAWCUT TO NEAT, STRAIGHT LINES PRIOR TO REPAVING.
2. CONCRETE PAVEMENT SHALL BE REPLACED WITH CONCRETE TO A MINIMUM THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER.
3. IF EXISTING BASE MATERIAL IS CTB OR ATB, THEN REPLACEMENT BASE MATERIAL SHALL MATCH EXISTING.
4. ALL UTILITIES SHALL HAVE A MINIMUM COVER OF 36".
5. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-180 OR AS SPECIFIED IN THE CONTRACT DOCUMENTS.
6. ALL TRENCH BACKFILL AND PATCHING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF WEST LINN.
7. APPROVED CDF SHALL BE USED OR 3/4 - 0" GRAVEL BACKFILL SHALL BE PLACED AND COMPACTED IN 12" MAXIMUM LIFTS. IF 3/4-0" GRAVEL BACKFILL IS USED, COMPACTION TESTING BY A CERTIFIED TESTING COMPANY IS REQUIRED AT DEPTH INTERVALS AS SPECIFIED BY THE CITY ENGINEER.
8. T-CUT MAY BE ENLARGED AT THE DISCRETION OF THE CITY ENGINEER OR CITY INSPECTOR DUE TO SITE CONDITIONS OR PROJECT REQUIREMENTS.
9. ALL CUT EDGES SHALL BE SAND SEALED.
10. COMPACTED BACKFILL OR CDF MUST EXTEND 2 FEET OUTSIDE OF PAVEMENT SURFACE.

STREET T-CUT

City of West Linn

DATE: JULY 2008

DRAWING NO. WL-203

FILE NO.

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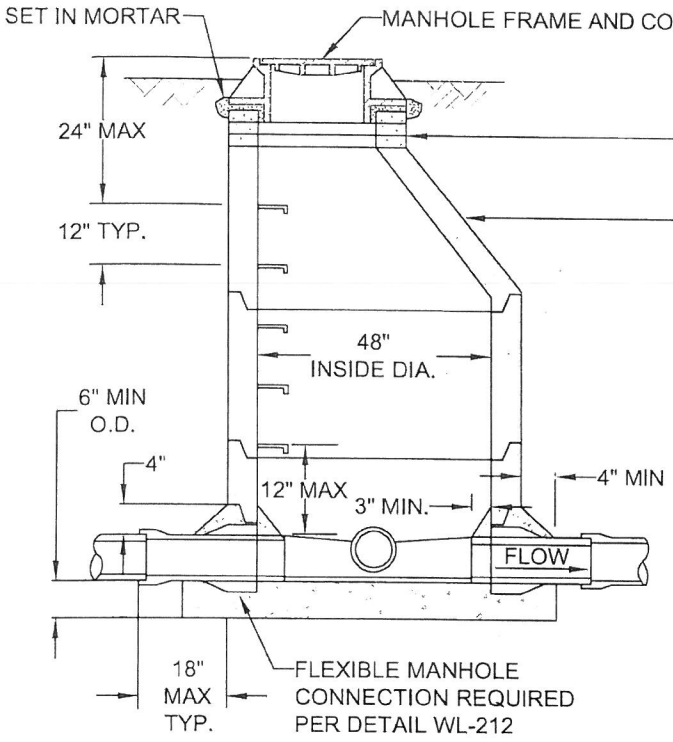


NOTE:

MANHOLE LID TO BE 1' ABOVE FINISH GRADE IN UNPAVED EASEMENTS.

GRADE RINGS - VARIABLE, MAX. 3 LAYERS, 12" MAX

SLOPE OF PRECAST ECCENTRIC CONE SHALL FACE DOWN GRADE

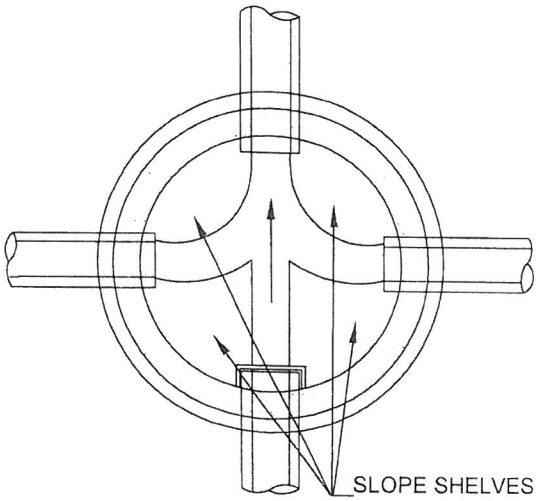
PRECAST SECTIONS AND POURED CONCRETE BASES SHALL CONFORM TO CITY STANDARD SPECIFICATIONS.

ALL JOINTS SHALL BE SEALED WITH WITH PREFORMED PLASTIC OR RUBBER RING TO FORM A WATER TIGHT SEAL.

LOCATE STEPS ON UPSTREAM SIDE OF MANHOLE.

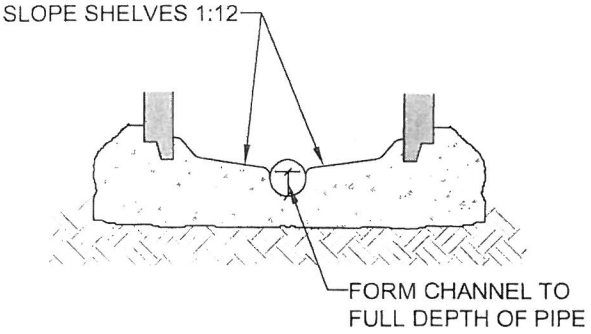
NOTE:

POLYETHYLENE STEPS/IRON REINFORCEMENT 8" x 12" WIDE, 2" DROP, EMBEDDED 3", ON 12" CENTERS (TYPICAL)



PLAN

MANHOLES SHALL HAVE A 12" MIN. 24" MAX. BOTTOM RISER, TO BE BEDDED IN THE CONCRETE AS THE BASE TAKES ITS INITIAL SET.



NOTE:

CHANNELS MUST BE ABLE TO PASS A 7"X30" CYLINDER INTO PIPES. SHELF SHALL NOT BE BELOW THE TOP OF THE PIPE.

STANDARD MANHOLE FOR LESS THAN 36" PIPE

City of West Linn

DATE: JULY 2008

DRAWING NO. WL-207

FILE NO.

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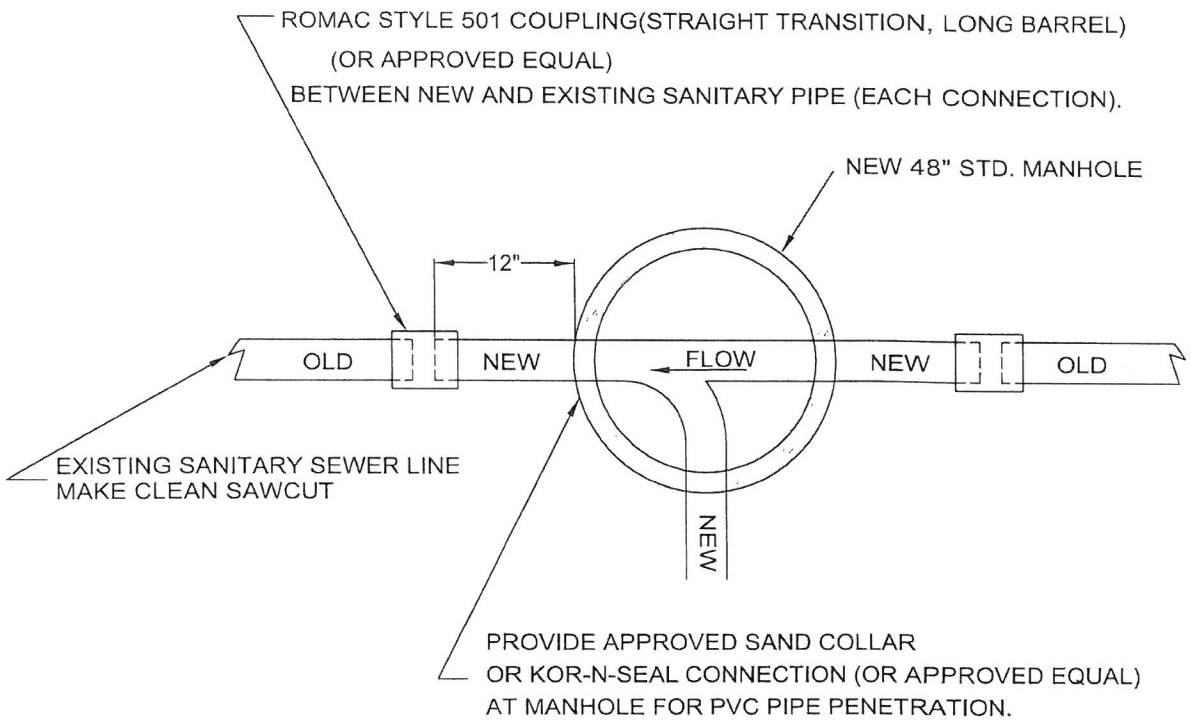


NEW PVC (ASTM 3034, SDR 35) PIPE
PIPE MATCHING EXISTING SANITARY SEWER LINE SIZE

(TYPICAL CONNECTION, MULTIPLE CONNECTIONS MAY EXIST)

NEW MANHOLE TO EXISTING NON-PVC SEWER LINE CONNECTION

City of West Linn

DATE: JULY 2008

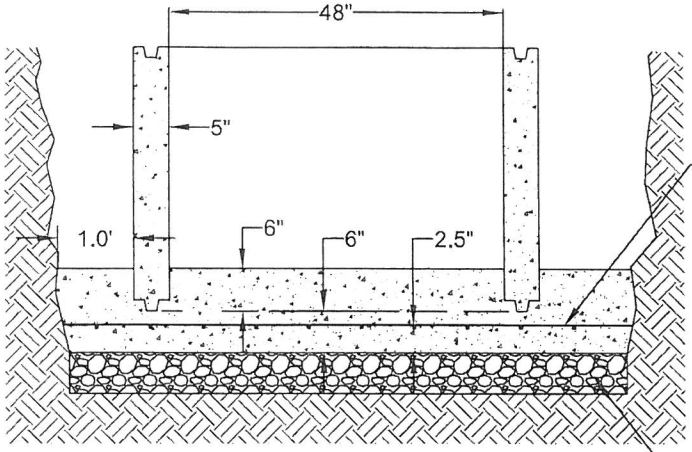
DRAWING NO. WL-210B

FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.

NOTE:

PIPE CONNECTIONS MUST HAVE FLEXIBLE CONNECTIONS

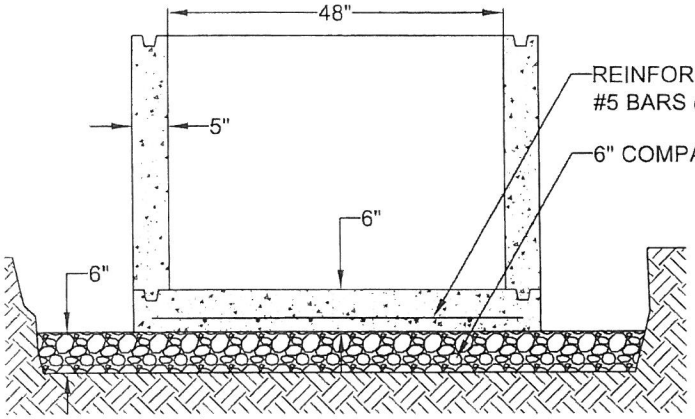


REINFORCING SHALL BE #5 BARS @ 12" O.C. E.W. REINFORCING TO EXTEND 1'-0" BEYOND VERTICAL MANHOLE WALLS

NOTE:
CONCRETE TO EXTEND 12" OUTSIDE OF MANHOLE WALL AND 6" ABOVE THE BOTTOM OF THE BASE SECTION

6" COMPACTED CRUSHED ROCK BASE

POURED IN PLACE MANHOLE BASE



REINFORCING SHALL BE #5 BARS @ 12" O.C.E.W.

6" COMPACTED CRUSHED ROCK

PRECAST MANHOLE BASE

NOTE:

USE 3300 PSI CONCRETE FOR EITHER MANHOLE BASE.
CONCRETE SHALL CONFORM TO SECTION 205. PRECAST MANHOLES SHALL CONFORM TO ASTM C478.

MANHOLE BASE

City of West Linn

DATE: JULY 2008

DRAWING NO. WL-211

FILE NO.

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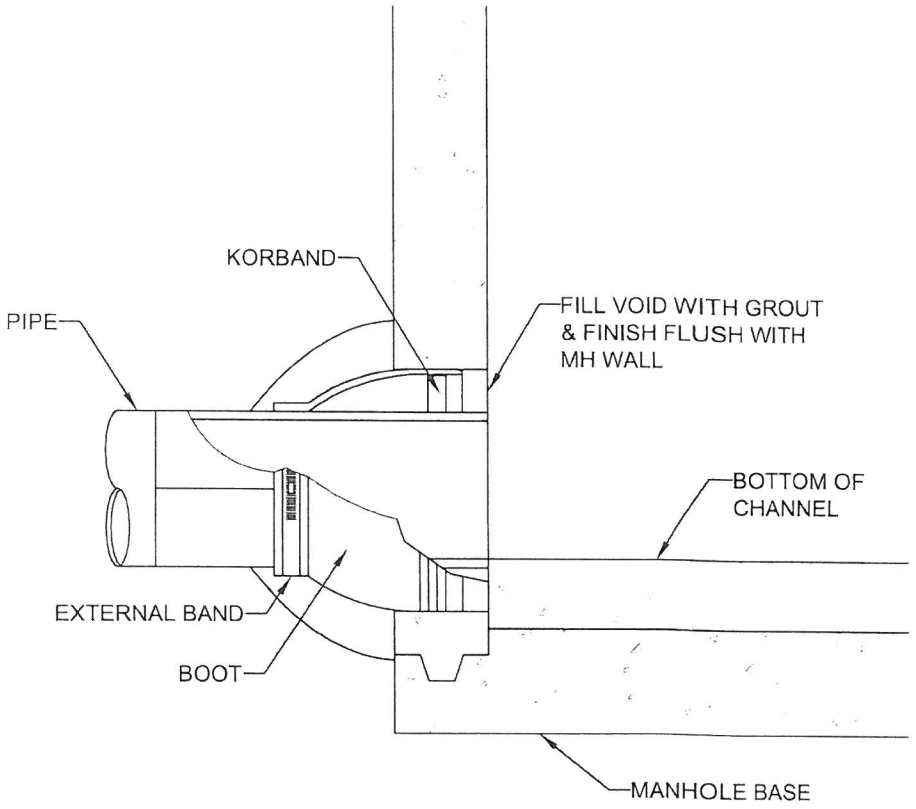

FLEXIBLE MANHOLE CONNECTION
(KOR-N-SEAL OR APPROVED EQUAL)

FLEXIBLE MANHOLE CONNECTION

City of West Linn

DATE: JULY 2008

DRAWING NO. WL-212

FILE NO.

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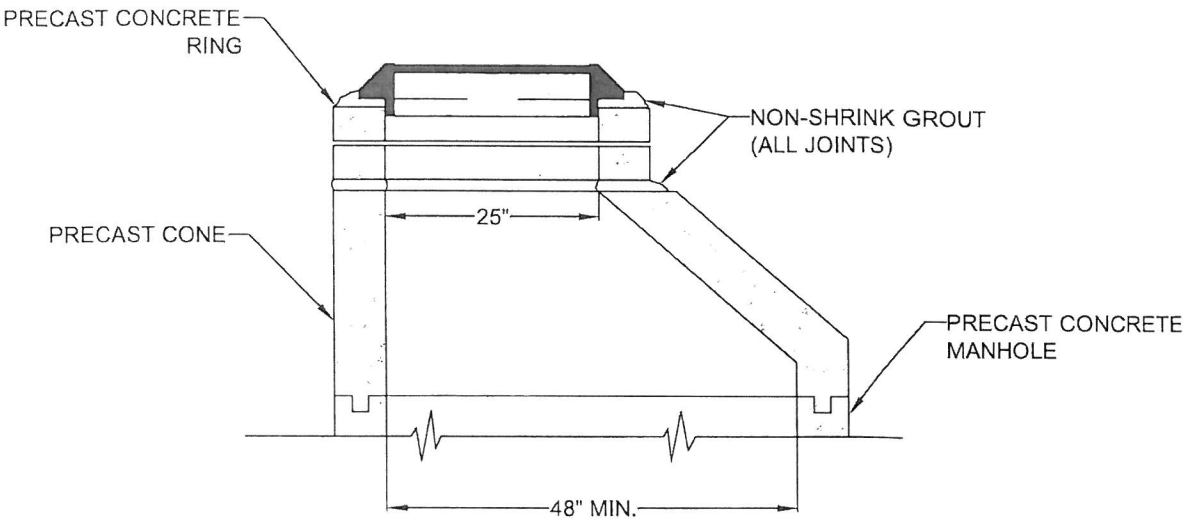

PRECAST RING EXTENSION FOR TYPICAL MANHOLE

PRECAST RING EXTENSION

City of West Linn

DATE:	JULY 2008
DRAWING NO.	WL-213
FILE NO.	

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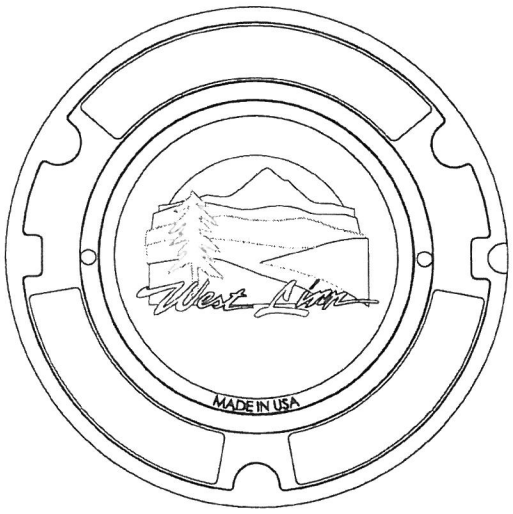

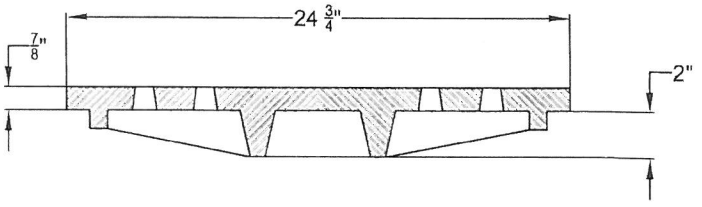

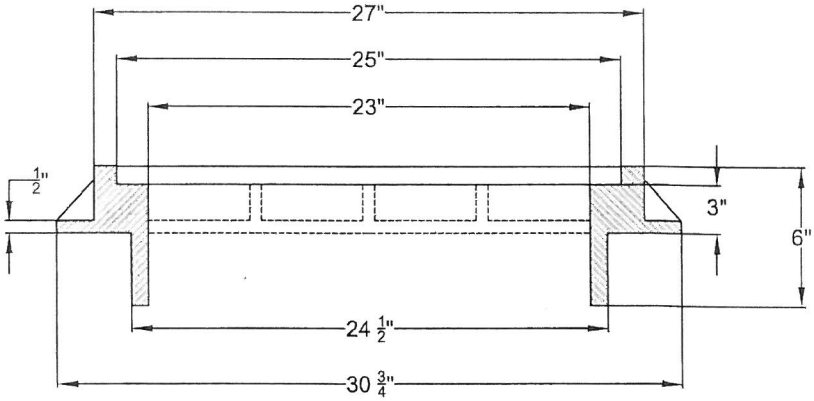

NOTES:

1. COVER AND FRAME TO BE MACHINED FOR TRUE BEARING
2. MATERIAL SHALL BE GRAY CAST IRON A.S.T.M. A-48 CLASS 30
3. 2 HOLE LID FOR SANITARY SEWER
4. 16 HOLE LID FOR STORM SEWER

SUBURBAN MANHOLE FRAME AND COVER 3" DEPTH

City of West Linn

DATE: JULY 2008

DRAWING NO. WL-300

FILE NO.

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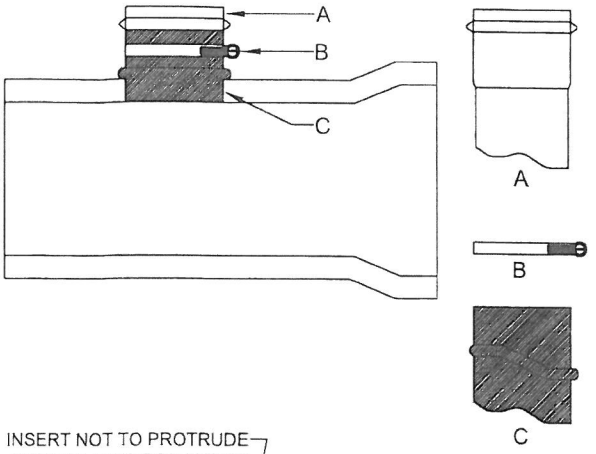
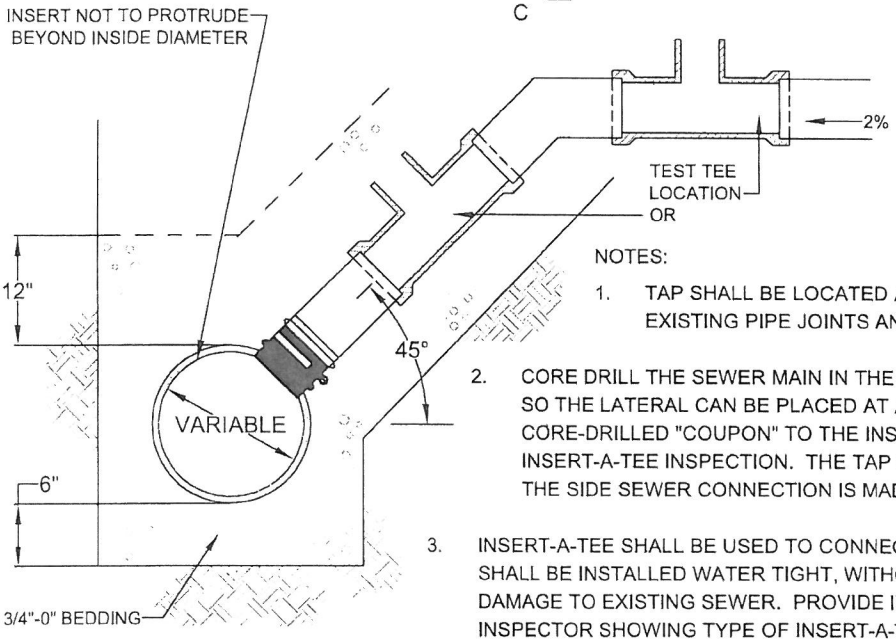


A. PVC HUB SHALL CONFORM TO ASTM 3034, SDR 35 DRIVE INTO CENTER OF RUBBER SLEEVE AFTER SLEEVE IS PLACED IN HOLE.

B. STAINLESS STEEL BAND SECURES UPPER HALF OF RUBBER SLEEVE TO THE PVC HUB. STAINLESS STEEL BAND SHALL BE 300 SERIES, 9/16" BAND WIDTH, CADMIUM PLATED CARBON STEEL, AND ATTACHED WITH HEX HEAD SLOTTED SCREW.

C. COMPLETE RUBBER SLEEVE INCLUDES A MOLDED SEGMENT THAT HOLDS IT IN PLACE.



NOTES:

1. TAP SHALL BE LOCATED A MINIMUM OF 12" FROM EXISTING PIPE JOINTS AND 12" FROM OTHER TAPS.

2. CORE DRILL THE SEWER MAIN IN THE UPPER QUARANT OF THE PIPE SO THE LATERAL CAN BE PLACED AT A 45° ANGLE AND PRESENT THE CORE-DRILLED "COUPON" TO THE INSPECTOR AT TIME OF THE INSERT-A-TEE INSPECTION. THE TAP SHALL BE INSPECTED BEFORE THE SIDE SEWER CONNECTION IS MADE.

3. INSERT-A-TEE SHALL BE USED TO CONNECT LATERAL TO MAIN. TAP SHALL BE INSTALLED WATER TIGHT, WITHOUT PROTRUSION INTO OR DAMAGE TO EXISTING SEWER. PROVIDE INSERT-A-TEE PACKAGING TO INSPECTOR SHOWING TYPE OF INSERT-A-TEE INSTALLED.

4. LATERAL SHALL BE 4" (FOR STANDARD SINGLE FAMILY HOMES) GREEN ASTM3034 AND PLACE AT 2% SLOPE TO THE PROPERTY LINE. PLACE A TEST TEE WITHIN 3 FEET OF THE TAP.

5. PLACE GREEN TRACER WIRE OVER CENTERLINE OF SERVICE LATERAL.

6. COMPACT 6" OF 3/4-0" ROCK UNDER THE PIPE. HAUNCH WELL UNDER LATERAL.

7. ONCE APPROVED BY CITY INSPECTOR, PLACE 12" OF 3/4"-ROCK ABOVE THE TOP OF THE PIPE.

8. BACKFILL ABOVE THE PIPE ZONE (ABOVE 12" OF ROCK) SHALL BE CDF (DELIVER CDF RECEIPT TO THE ENGINEERING DEPT). ALTERNATELY, 3/4-0" GRAVEL BACKFILL MAY BE USED. COMPACTION TESTING BY A CERTIFIED TESTING AGENCY MUST OCCUR IN LIFTS AS SPECIFIED BY THE CITY INSPECTOR (DELIVER TEST RESULTS TO THE ENGINEERING DEPT). CITY RESERVES THE RIGHT TO FURTHER SPECIFY BACKFILL BASED ON SITE CONDITIONS.

9. T.V. INSPECTION OF THE LATERAL AND/OR MAIN MAY BE REQUIRED FOLLOWING BACKFILL, PRIOR TO FINAL APPROVAL.

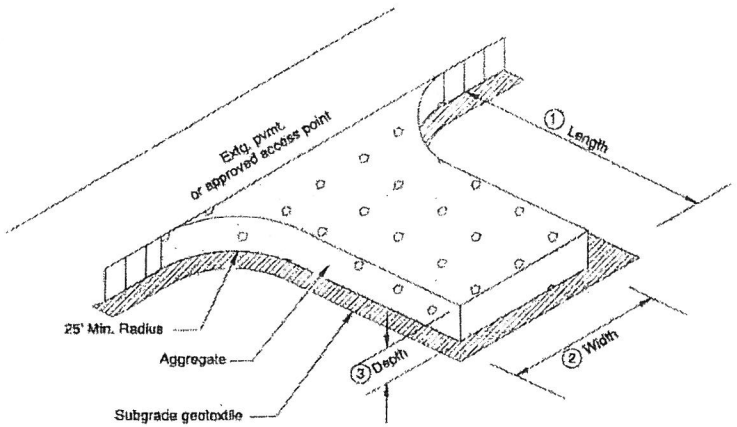
10. 4" MAXIMUM TAP FOR 8" MAIN (CUT IN TEE TO BE USED FOR 6" LATERAL ON 8" MAIN).

11. ALL CONNECTIONS SHALL BE MADE WITH HARD FITTINGS, INCLUDING TRANSITIONS BETWEEN DISSIMILAR MATERIALS.

SEWER SERVICE TAP TO EXISTING SEWER FOR HOUSE LATERALS

CITY OF West Linn

DATE:	JULY 2008
DRAWING NO.	WL-303
FILE NO.	



Notes:

① Length:
50' min. - for less than 1 acre exposed soil
100' min. - for greater than 1 acre exposed soil

② Width:
20' - or width of extg. approach, whichever is greater.

③ Depth:
8" min

NOTE: This plan is not a legal engineering document but an electronic duplicate. The original signed by the engineer and approved for publication is kept on file at the Oregon Department of Transportation. A copy may be obtained upon request.

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

CONSTRUCTION ENTRANCES

2002

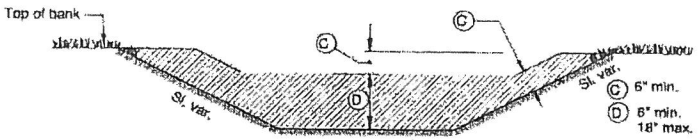
REVISIONS	
DATE	DESCRIPTION

Effective Date: November 1, 2007 - May 31, 2008

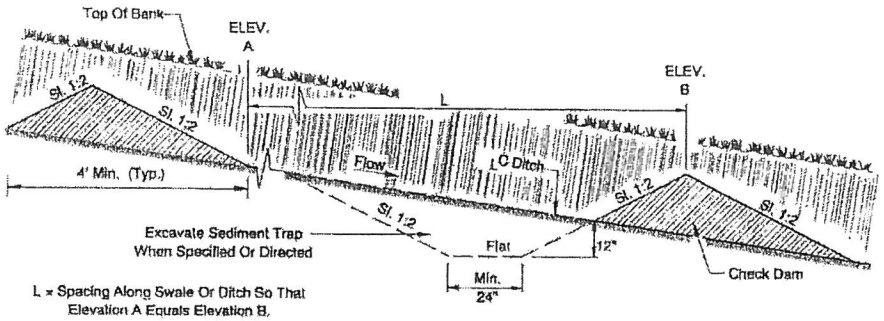
rd1000

rd1000.dgn 12-6-02

rd1000



DITCH X-SECTION
AT CHECK DAM



L = Spacing Along Swale Or Ditch So That
Elevation A Equals Elevation B.

DITCH PROFILE SECTION
WITH CHECK DAMS

Note:
When bid item is "Check Dams" the following materials may be used, as appropriate to meet the functional requirements of the control.
Type 1. aggregate
Type 2. straw bales with aggregate weir
Type 3. biofilter bags
Type 4. sand bags
Type 5. prefab. check dam system

CHECK DAM
Approximate Spacing

Ditch Grade	D = Dimension 6"	12"	18"
6%	**	15' O.C.	25' O.C.
5%	**	20'	30'
4%	**	25'	40'
3%	15'	30	50'
2%	25'	50'	80'

** Not Allowed

Notes:

(1) Type 2 only - - - -
Entrench bales and aggr. a min. of 4" into the soil. Toe of last bale is highest water control point.

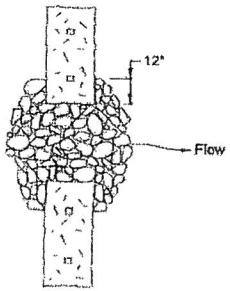
(2) Type 2 only - - - -
Place bales so wire/twine binding matl. is not in contact with the soil.

(3) Type 2 or 3 - - - -
Drive 2 stakes min. per bale or bag flush with top and into undisturbed ground a min. of 4". Stakes may be omitted if placed over paved surfaces.

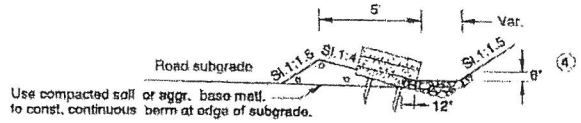
(4) Type 2, 3 or 4 - - - -
Const. top of aggr. a min. of 6" lower than the toe of last bale or bag.

(5) Type 2 or 4 - - - -
Tightly abut or overlap ends of bales or bags at each joint.

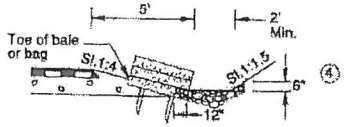
(6) Type 3 - - - -
Overlap bags 6" min. at each joint.



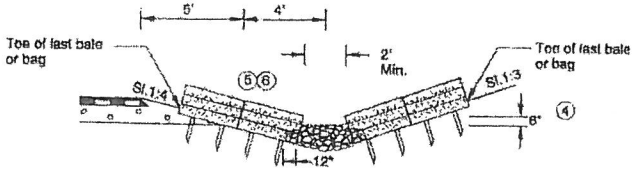
TOP VIEW
TYPE 2, 3 & 4



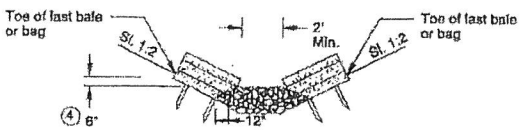
SUBGRADE SECTION



STEEP BACKSLOPE SECTION



VARIABLE BACKSLOPE SECTION - 1:3 TO 1:6



FLAT BOTTOM DITCH SECTION
CHECK DAM
TYPE 2, 3 & 4

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NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

CHECK DAMS

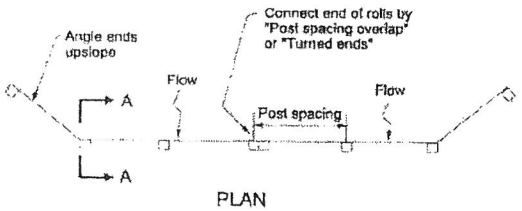
2002

REVISIONS	
DATE	DESCRIPTION
12-02	REVISE NOTE

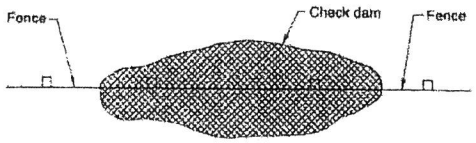
rd1005.dgn 12-6-02

Effective Date: November 1, 2007 - May 31, 2008

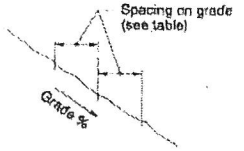
rd1005

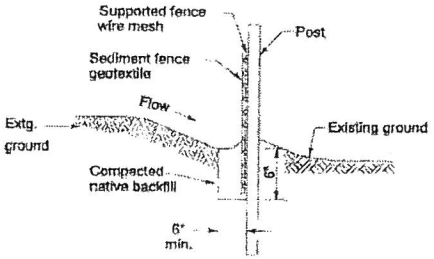


PLAN

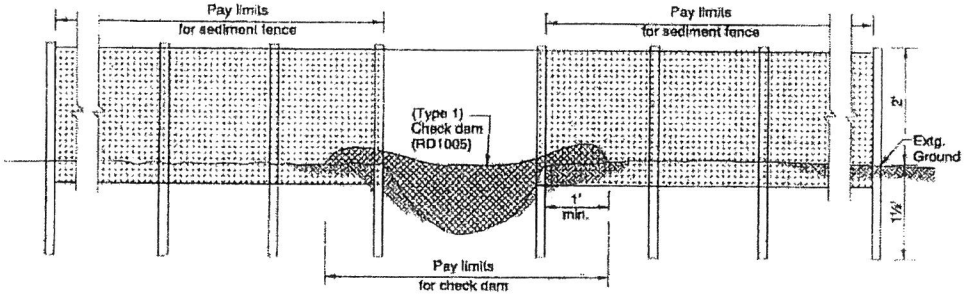


PLAN VIEW AT DITCH SECTION





SECTION A-A



ELEVATION VIEW AT DITCH SECTION OR LOW AREAS

TABLE 1

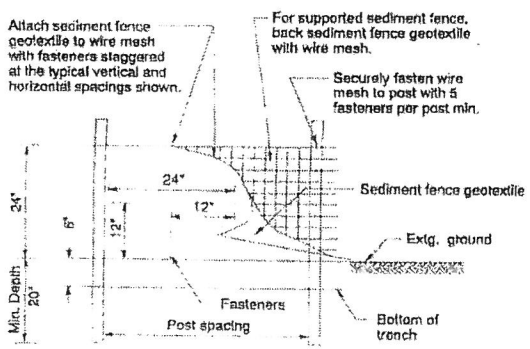
FENCE SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS	
GRADE	MAXIMUM SPACING ON GRADE
Grade < 10%	300'
10% ≤ Grade < 15%	150'
15% ≤ Grade < 20%	100'
20% ≤ Grade < 30%	50'
30% ≤ Grade	25'

TABLE 2

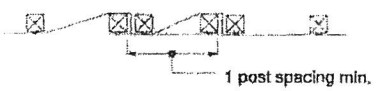
POST SPACING	
4'	Supported Sediment Fence
6'	Unsupported Sediment Fence with Geotextile elongation *less than 50%
4'	Unsupported Sediment Fence with Geotextile elongation *more than 50%

* Geotextile grab elongation value as documented by "Level B" manufacturer's documentation (See Standard Specifications).



ELEVATION

TURNED ENDS
1½ Turns



POST SPACING OVERLAP

GEOTEXTILE END CONNECTIONS

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SEDIMENT FENCE, SUPPORTED
SEDIMENT FENCE, UNSUPPORTED

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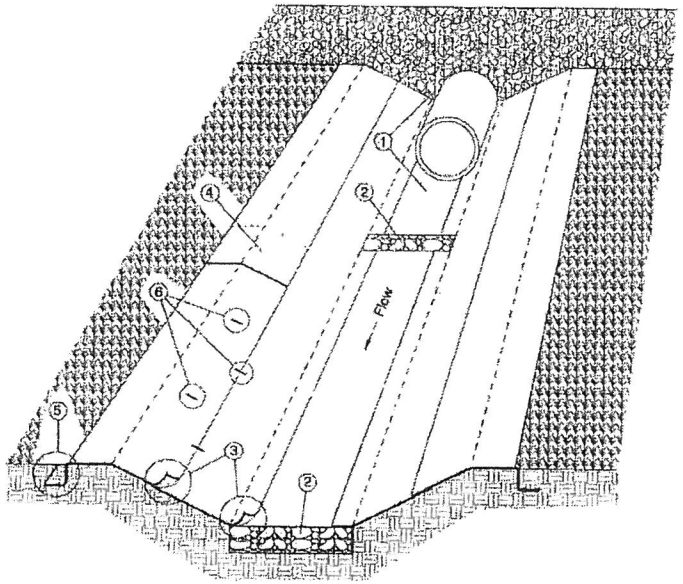
REVISIONS	
DATE	DESCRIPTION
12-02	REVISE NOTE
04-05	REVISE TABLE 2

erd1040.dgn 04-04-05

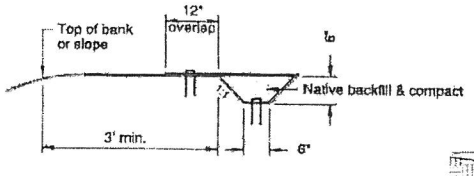
rd1040

Effective Date: November 1, 2007 - May 31, 2008

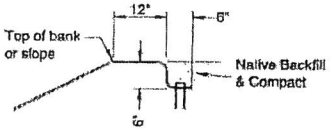
erd1055.dgn 12-9-02



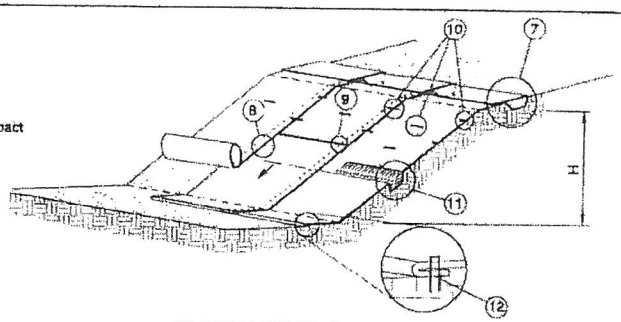
CHANNEL APPLICATION



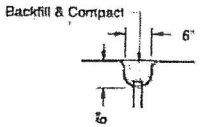
(TRENCH, H > 3')
FIGURE A1



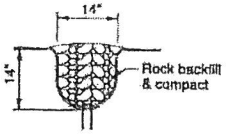
(TRENCH, H ≤ 3')
FIGURE A2



SLOPE APPLICATION



(CHECK SLOT, SLOPE)
FIGURE A3



(CHECK SLOT, CHANNEL)
FIGURE A4

All applications

All information shown is minimum criteria for matting installation. All manufacturer's recommendations which are more stringent must be applied.

Channel application:

(1) Install mat in center of channel, in the direction of water flow. Anchor upstream end of mat with check slot (Fig. B1 & A4). Backfill check slot with rock. For culvert outfalls, place mat under pipe 12" minimum upstream from pipe outlet.

(2) Construct check slots across channel bottom at 50' spacings and at the end of each mat (Fig. A4). Fasten mat at bottom of check slot (Fig. A4 & B1). Backfill check slot with rock.

(3) Overlap side channel mat edges 6" over the center channel mat and fasten edges 12" O.C. (Fig. B2). Continue overlap and stapling pattern for each additional side mat.

(4) Lap upstream mat end 12" over beginning edge of downstream mat. fasten 12" O.C. (Fig. B3).

(5) Anchor top edge of side channel mats in trench and fasten 12" O.C. (Fig. A2 & B1)

(6) Fasten mat interior at 24" O.C. staggered spacing.

Slope application:

(7) Anchor matting at top of slope (Fig. A1 & A2) Fasten in trench and at overlap 12" O.C. (Fig. B1)

(8) Overlap mat edges 6" and fasten (Fig. B2). Install matting so edge overlaps are shingled away from prevailing winds. Fasten edges 24" O.C.

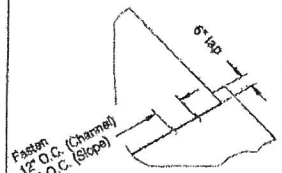
(9) Overlap mat ends 12", upper mat over lower mat, and fasten (Fig. B3).

(10) Stagger alternate rows of fasteners placed at 24" O.C.

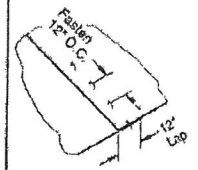
(11) Construct check slot when specified or as recommended by the manufacturer (Fig A3). Fasten mat in bottom of check slot (Fig. A3 & B1)

(12) Extend mat 24" beyond toe of slope; fold mat back under 4" and fasten (Fig. B1)

(BEGINNING EDGE)
FIGURE B1



(EDGE LAPS)
FIGURE B2



(END LAPS)
FIGURE B3

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OREGON STANDARD DRAWINGS

MATTING

2002

REVISIONS	
DATE	DESCRIPTION

rd1055

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