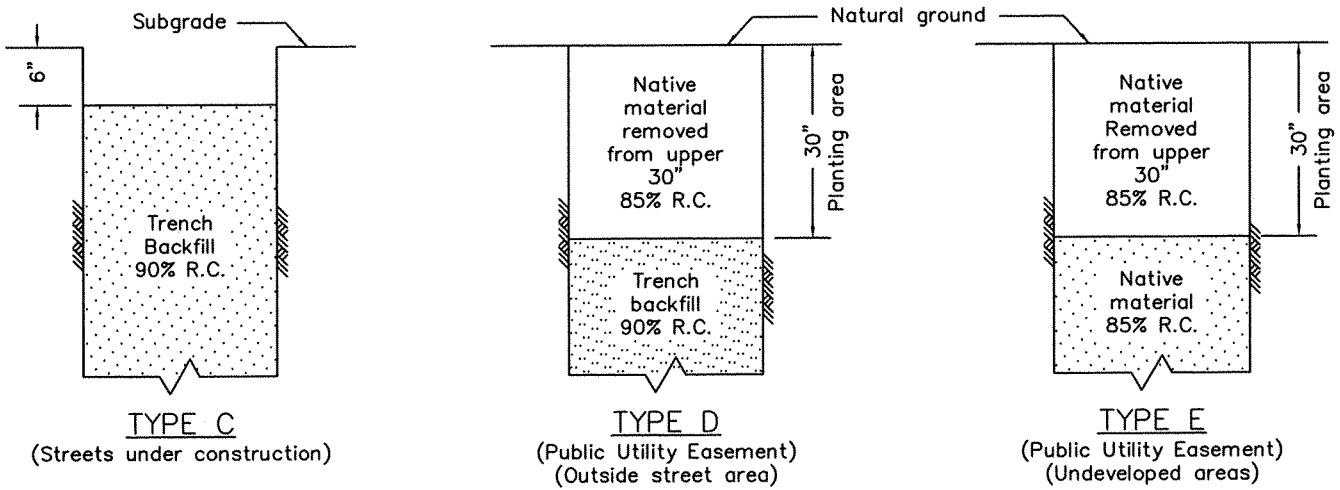
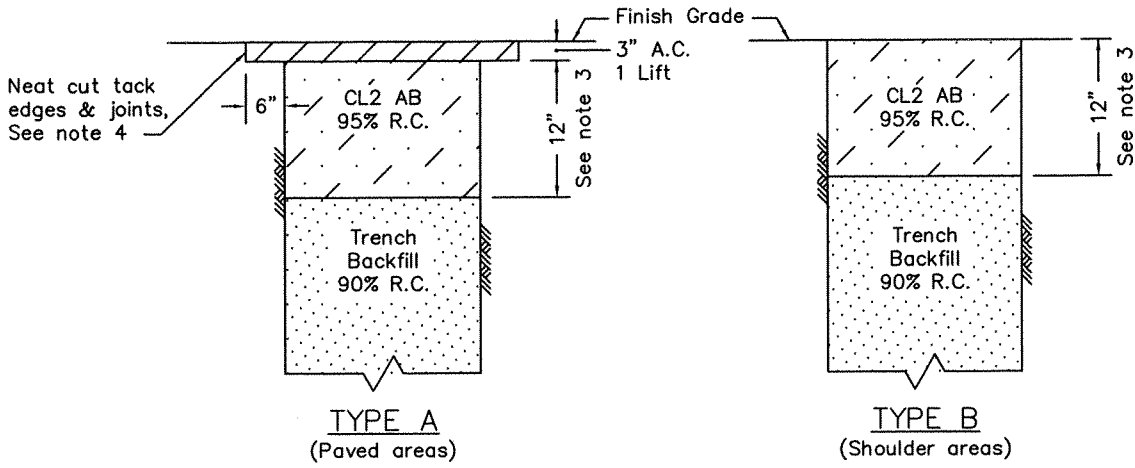
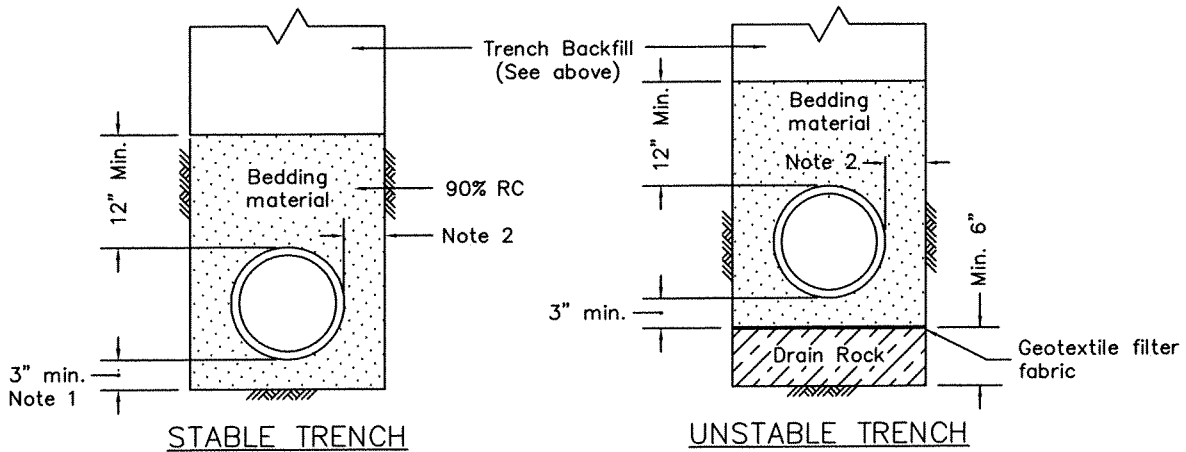


TRENCH BACKFILL AND SURFACING



PIPE BEDDING



NOTES:

1. 1/4 Pipe O.D. min. when excavation is in rocky ground.
2. Pipe diameter 18" or less: 6" min., 9" max.
Pipe diameter greater than 18": 6" min., 12" max.
3. The street structural section shall be 3" A.C. on 12" A.B. or as shown on plans.
4. Neatly cut pavement six inches from edge of trench after trench is backfilled.
5. Relative compaction is designated RC.

CITY OF SANTA ROSA

STANDARD TRENCH DETAIL

SCALE: None

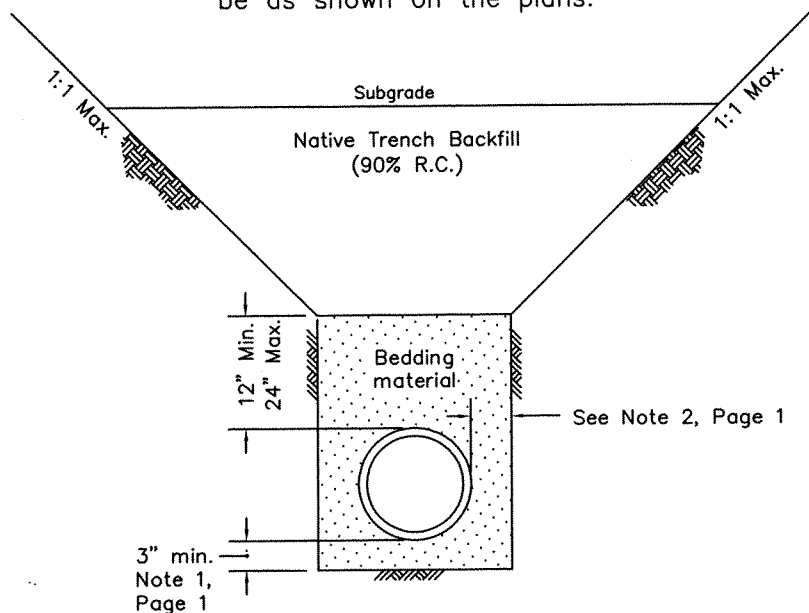
Date: JAN 2004

DWN: SCA
CHK:

APPROVED
Mabresq

FILE NO.
STD.- 215A

Street structural section shall be as shown on the plans.



TYPE F
(New Streets Under Construction)

Notes:

1. Rocks exceeding 6" shall not be permitted within the trench section.
2. The maximum depth of native backfill material shall not exceed 10 feet, unless the street is excavated a uniform depth from face of curb to face of curb.
3. Embankment construction methods shall be used. All slopes must be keyed-in a minimum of one foot as the trench is backfilled.
4. The minimum equipment required for compaction of native fill shall consist of a sheepsfoot vibratory roller with a minimum drum width of 48", a minimum gross weight of 4600 lbs., or must meet approval of the City Engineer.
5. The contractor shall be responsible for coordinating with the private soils engineer and the City inspector 48 hours prior to excavation.
6. The private soils engineer shall provide testing and observations on a full time basis during all native backfilling operations. The private soils engineer is responsible for the verification of all native backfill work including compaction.

CITY OF SANTA ROSA	
STANDARD TRENCH DETAIL	
SCALE: None	Date: JAN 2004
DWN: SCA	APPROVED
CHK: <i>Mabrig</i>	FILE NO. STD.- 215B

MATERIAL SPECIFICATIONS

DRAIN ROCK may be used as bedding for slopes less than 8%. It shall contain 100% crushed particles and shall conform to the following grading:

1-1/2"	1"	1/2"	#4
100	95-100	0-30	0-4

When drain rock is used as bedding it shall be separated from the trench backfill by a geotextile, Mirafi 140 NC or equal.

PIPE BEDDING and TRENCH BACKFILL shall be free of asphaltic material

PIPE BEDDING for slopes less than or equal to 8% shall have a minimum sand equivalent value of 30 and shall conform to the following grading:

1"	3/4"	3/8"	#4	#200
100	90-100	65-100	30-100	0-15

Pipe bedding for slopes greater than 8% shall have a minimum sand equivalent of 30 and shall conform to the following grading:

100	90-100	65-100	30-100	10-100	0-15
1"	3/4"	3/8"	#4	#30	#200

TRENCH BACKFILL shall conform to the following grading and have a minimum sand equivalent value of 25 when mechanically compacted, or a minimum sand equivalent value of 40 when jetted

3"	#4	#30
100	40-100	10-100

AGGREGATE BASE shall conform to the requirements of Section 26 of the Standard Specifications of the City of Santa Rosa, Class 2 aggregate base. Asphalt concrete shall conform to the requirements of Section 39 of the Standard Specifications of the City of Santa Rosa.

COMPACTION REQUIREMENTS (as shown on Sheet 1, 2 and in the following modifications)

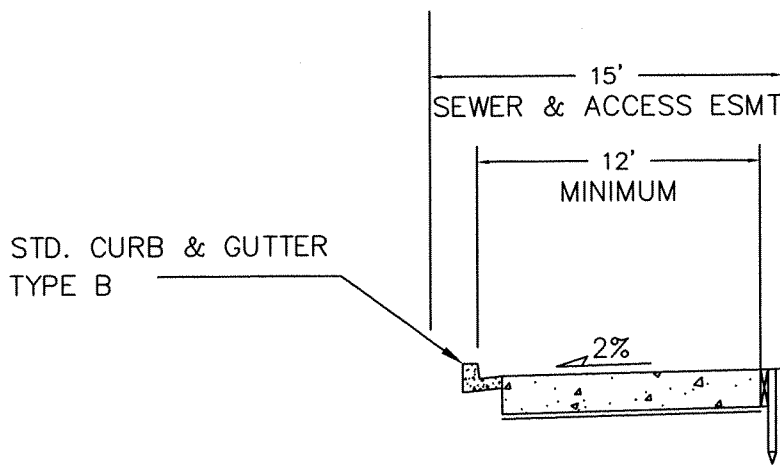
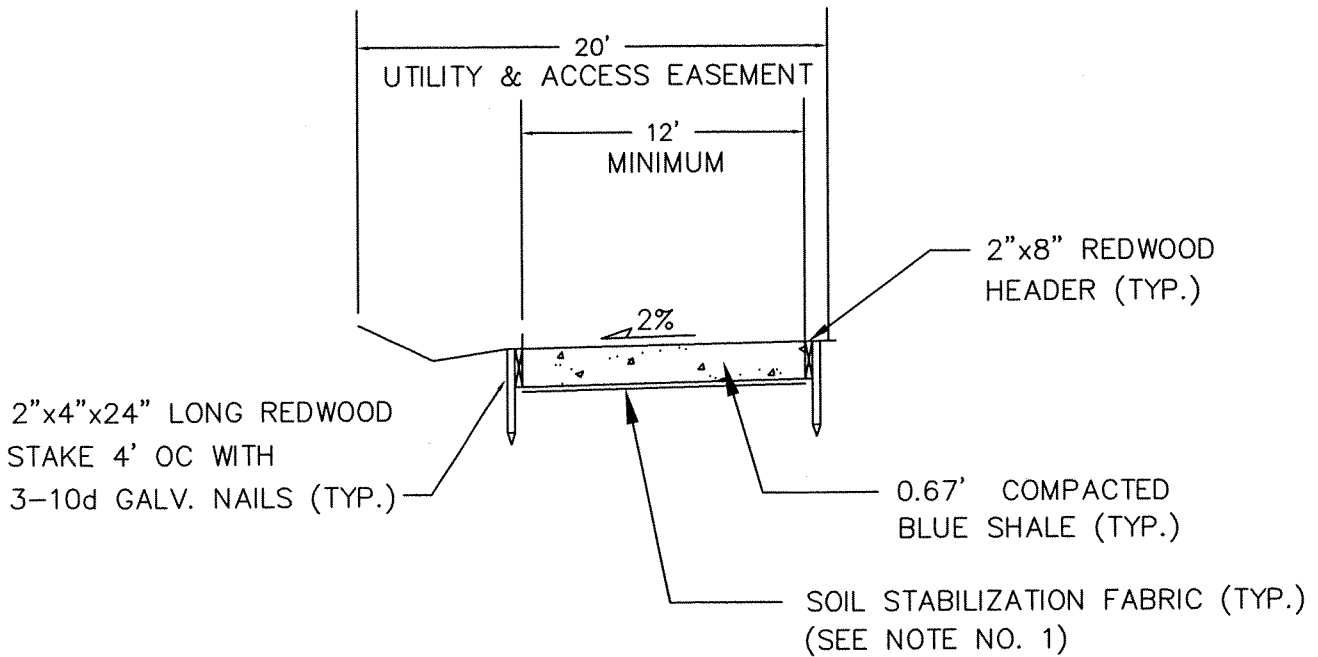
DRAIN ROCK shall be consolidated with a surface vibrator.

PIPE BEDDING material used to grade the trench shall be consolidated with a surface vibrator when it is placed over drain rock or when depth is greater than 6"

TRENCH BACKFILL may be compacted by jetting in lifts not greater than 10 feet when soil conditions permit water to drain quickly, as determined by the City Engineer. Jetting will not be permitted within 2 feet of finished grade. When compaction is obtained by jetting, the upper surface of trench backfill shall be thoroughly wheel-rolled with suitable construction equipment. Trench backfill shall be compacted to 90% relative compaction prior to placing base rock or subgrade material over the trench.

NATIVE MATERIAL may not be compacted by jetting.

CITY OF SANTA ROSA		
STANDARD TRENCH DETAIL		
SCALE: None	Date: JAN 2004	
DWN: SCA	APPROVED	FILE NO.
CHK:	<i>Mabrera</i>	STD.-215C



1. SOIL STABILIZATION FABRIC SHALL BE MIRAFI 500-X OR EQUAL.
2. ALL ACCESS ROADS HAVING A GRADE OVER 10% SHALL BE PAVED WITH 6 INCHES OF CLASS II AGGREGATE BASE AND 2 INCHES OF ASPHALT CONCRETE FOR THAT PORTION OVER 10%.
3. ALL ACCESS ROADS HAVING A CURVE WITH A RADIUS OF LESS THAN 100 FEET SHALL BE INCREASED IN WIDTH TO 20 FEET WITH A MINIMUM INSIDE RADIUS OF 20 FEET.
4. A HAMMERHEAD TURNAROUND MAYBE REQUIRED AT THE END OF THE UTILITY ACCESS ROAD AT THE DISCRETION OF THE UTILITIES DEPARTMENT.
5. THE SUBGRADE SHALL BE COMPACTED TO 95% RC.

CITY OF SANTA ROSA
UTILITY ACCESS
ROAD

Scale: NONE

Date: JAN 2004

DWN. DIT
CHK.

APPROVED

M. Labron

FILE NO.
STD.- 216