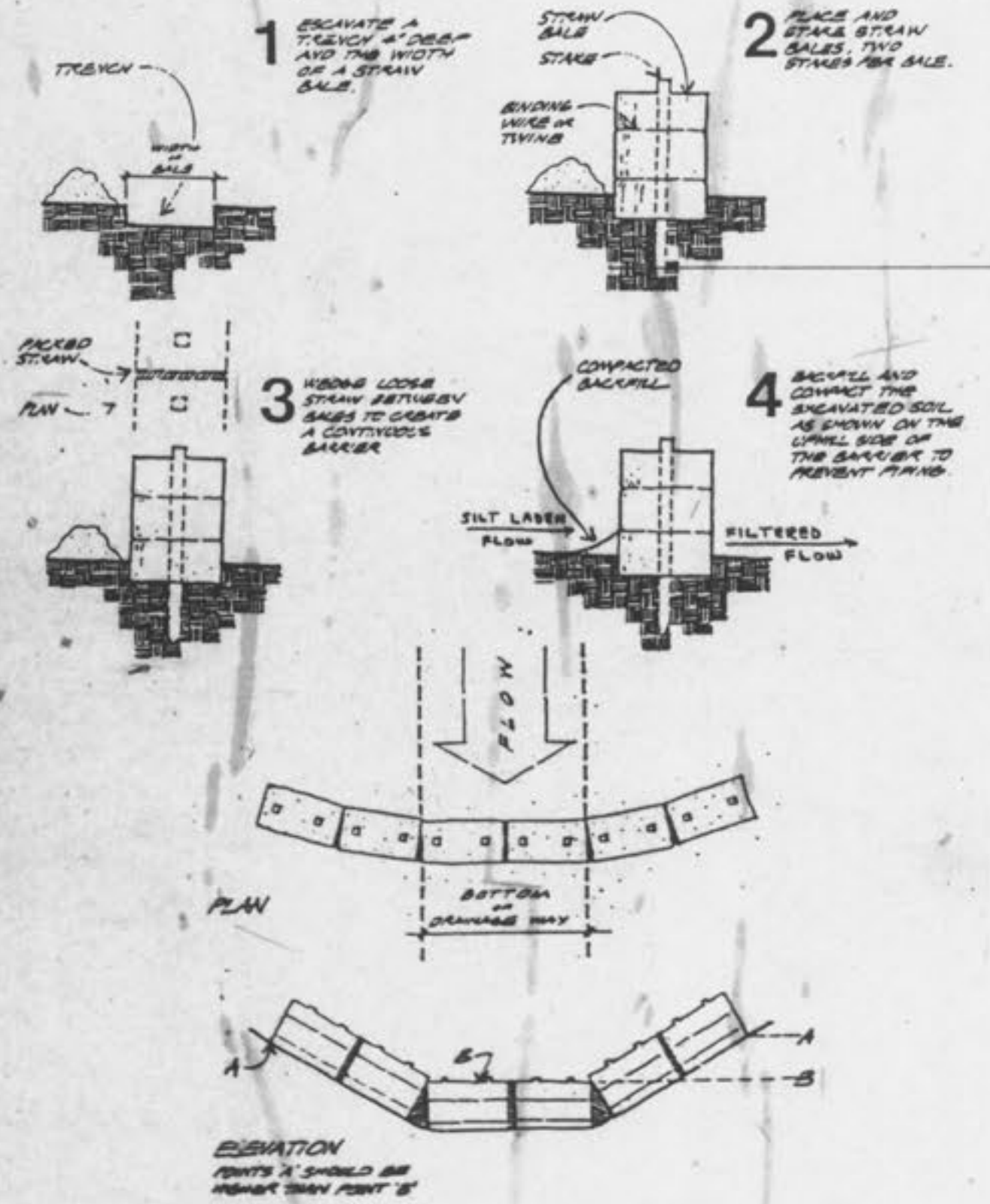


STRAW BALE BARRIERS
 For Urban Development Sites
APPENDIX C

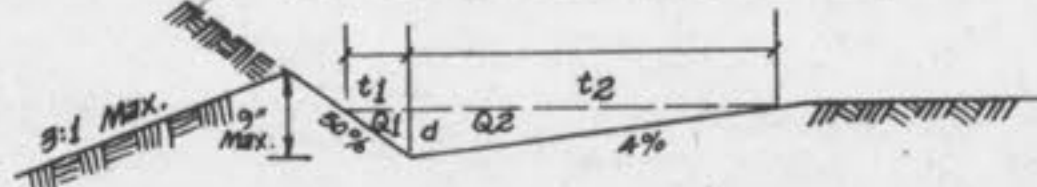


Placement and Construction of a Straw Bale Barrier

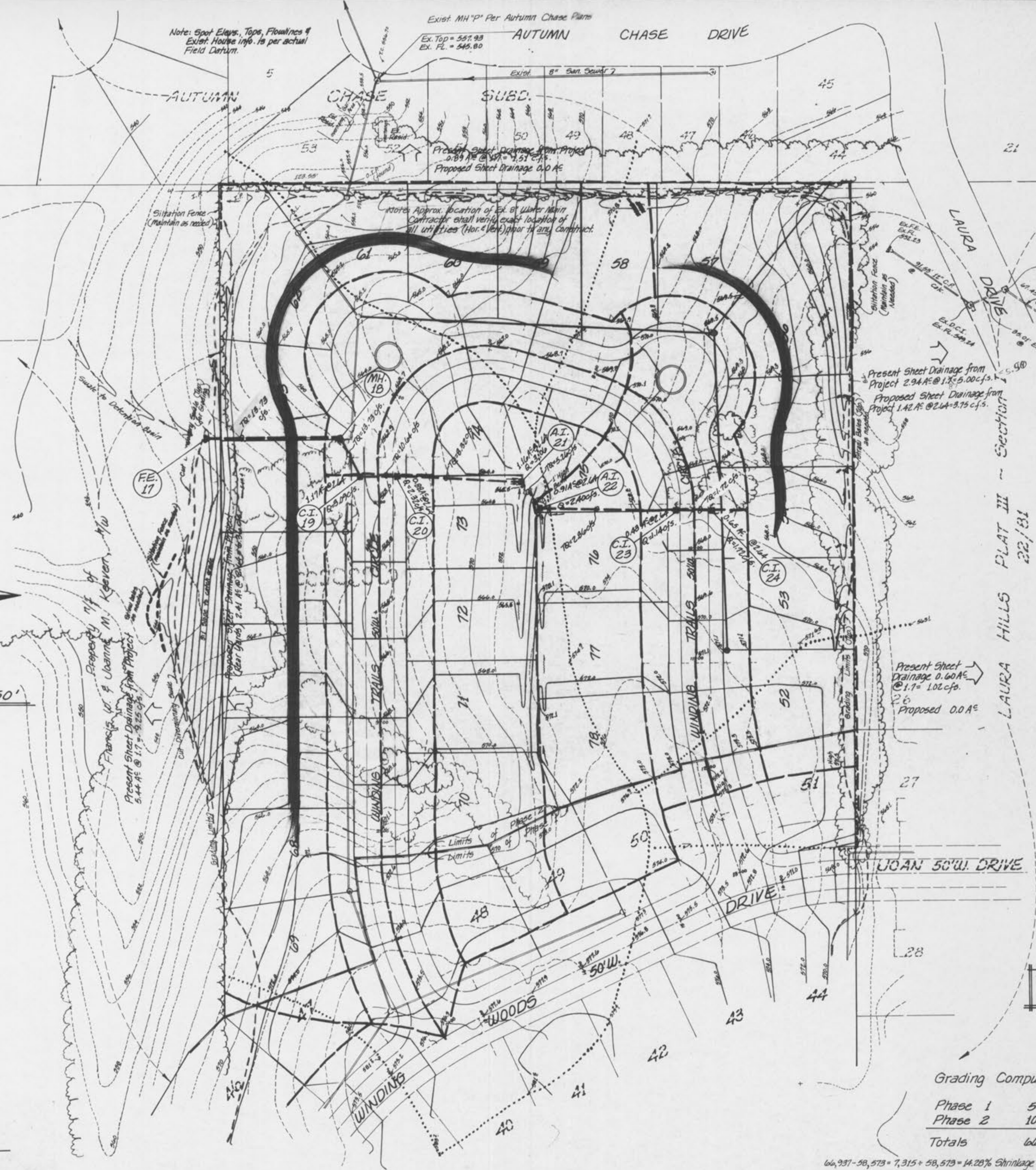
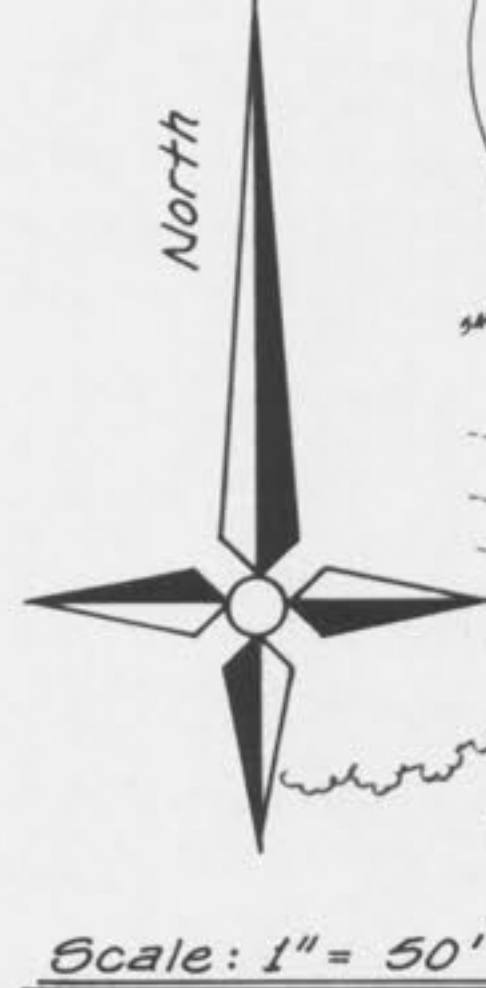
GENERAL NOTES

- Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor, and shall be located prior to any grading and/or construction of improvements.
- Contractor shall be responsible for the protection of all adjacent properties and roadway from siltation and erosion. Methods of controlling erosion and siltation shall not be limited to those shown on these plans.
- All cut and fill slopes should be a maximum of 33% slope (3:1) after grading.
- All construction and materials shall conform to St. Charles City Standards.
- Contractor assumes full responsibility as to the performance of grading operation and assurance that all properties and roads will be adequately protected.
- If bales are destroyed by heavy rains, vandalism, etc., they are to be replaced immediately by Contractor.
- Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible or during the next seeding period after grading has been completed.
- When grading operations are completed or suspended for more than 30 days, permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided according to Designated Official's recommendation.
- All existing improvements disturbed during construction shall be repaired or replaced in kind.
- All fill shall be compacted to 90 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D 1557)".

TYPICAL BERM & SWALE



Swale Drainage: Grass Swale $n = 0.050$ Find d and S for $Q = 4.00$ cfs. Max.
 $Q = Q_1 + Q_2$ $V = 5$ fps. Max.
 $Q = 0.56 \left(\frac{2}{3} \right)^{1/2} \left(\frac{1}{2} \right)^{1/2} d^{3/2} + 0.56 \left(\frac{2}{3} \right)^{1/2} \left(\frac{1}{2} \right)^{1/2} d^{3/2}$ $d = 0.5$ ft. Max.
 $Q = AV$
 $V = \frac{Q}{A} = \frac{Q}{d(t_1 + t_2)} \quad V = \frac{2Q}{d(t_1 + t_2)}$



TOTAL BID YARDAGE
 66,937 cu. yds.

Grading Computations

	Cut	Fill
Phase 1	56,479 cu. yds.	19,361 cu. yds.
Phase 2	10,458 cu. yds.	39,192 cu. yds.
Totals	66,937 cu. yds.	58,553 cu. yds.

Balance: $66,937 - 58,553 = 7,384$ cu. yds. (for Shrinkage)
 $7,384 \times 114.28\% = 8,440$ cu. yds.
 Balance: $8,440 - 7,384 = 1,056$ cu. yds.