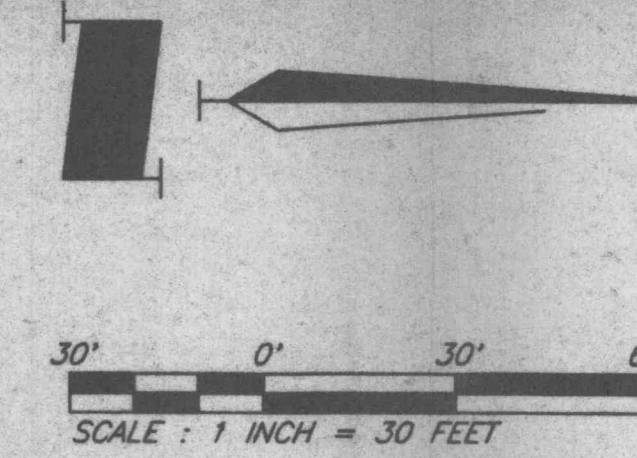


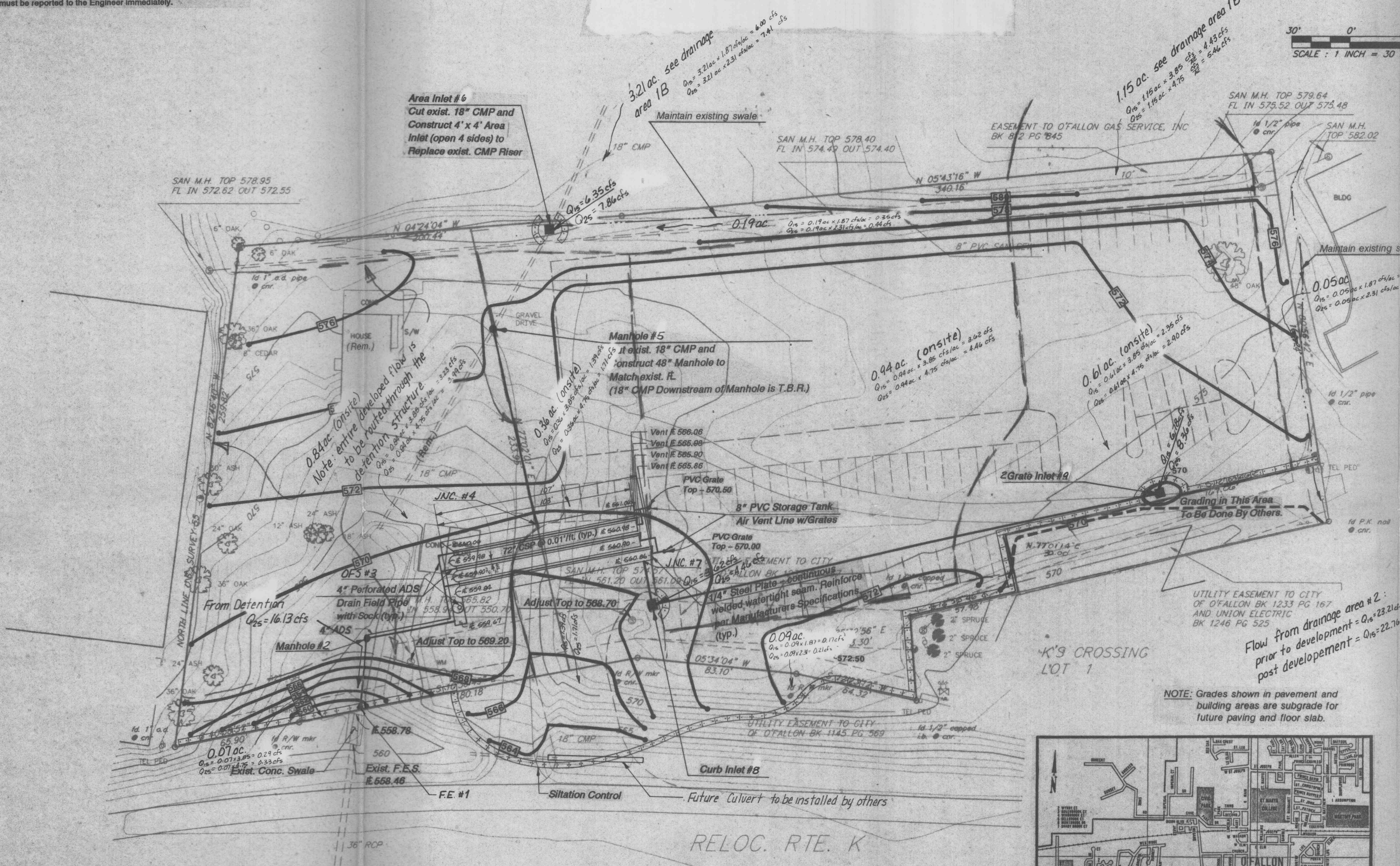
**NOTE:**

Existing underground and overhead utilities and drainage structures have been plotted from available information and their locations must be considered approximate only. It is the responsibility of the contractor to notify the utility companies and to verify the locations of existing utilities before actual construction begins. Any discrepancies noted must be reported to the Engineer immediately.

# DRAINAGE AREA MAP

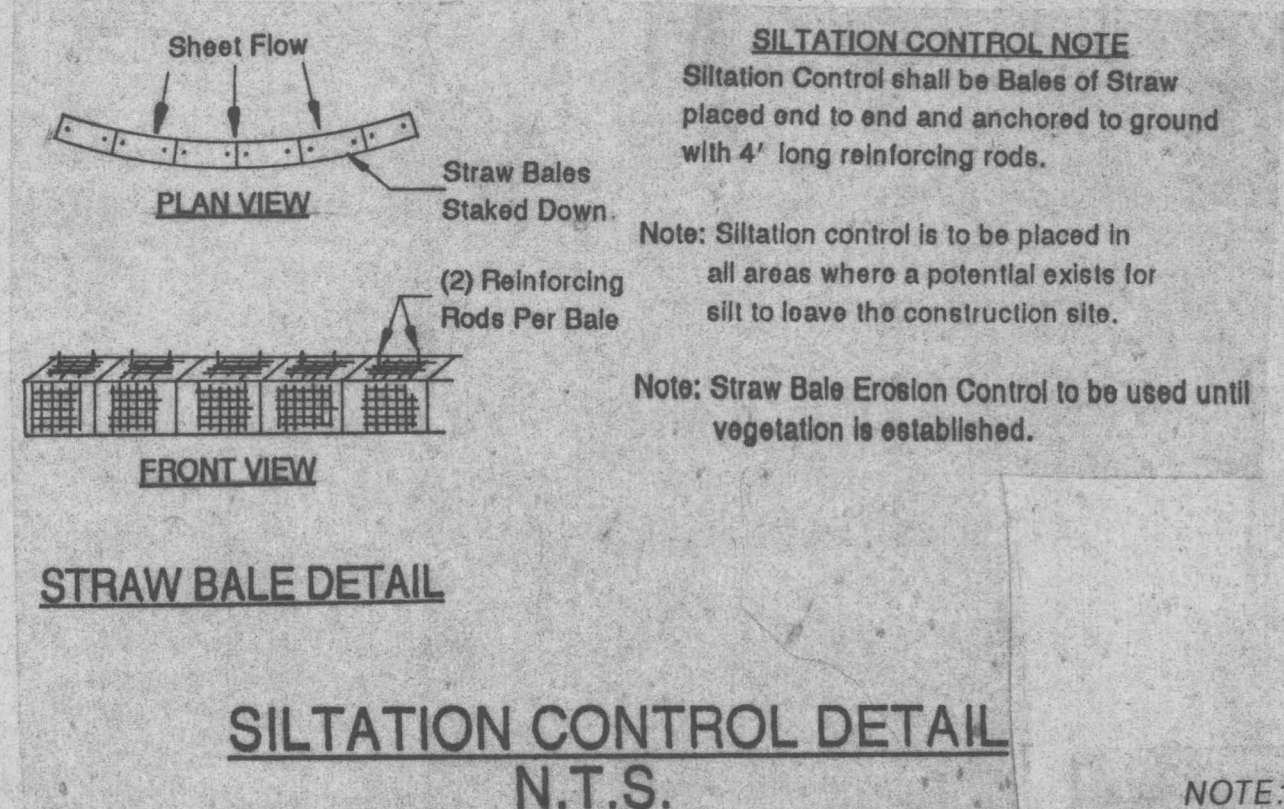
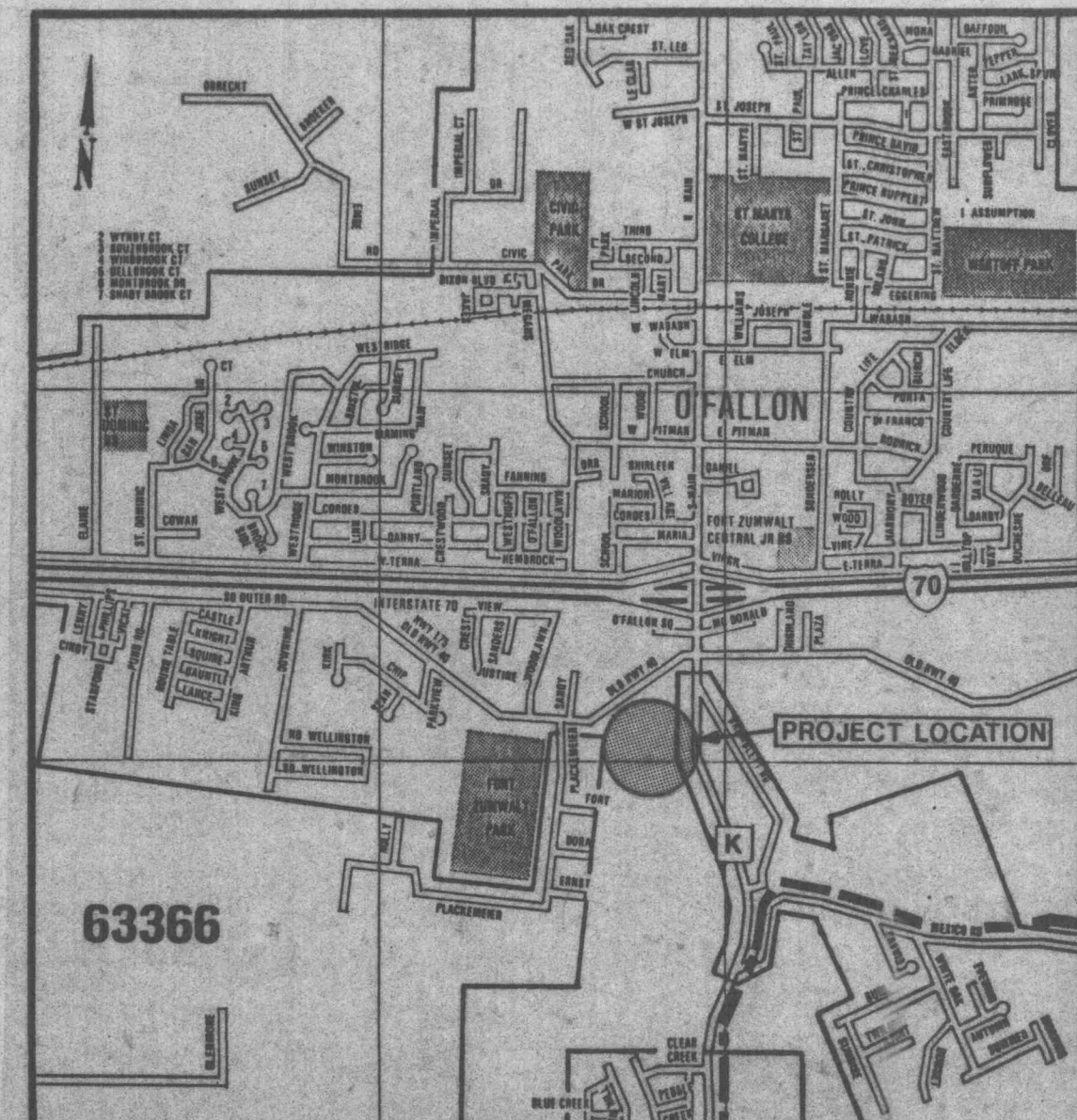


<b>GBA</b> GEORGE BUTLER ASSOCIATES, INC. Engineers / Architects / Landscape Architects / Planners Kansas City, Mo. / Lenexa, Mo. / Olathe, Mo. / Overland Park, Mo. / Shawnee, Mo. / Olathe, Mo. / Olathe, Mo.	
DATE:	DESIGN BY: JCP/MCV
DRAWN BY: JCP/JMG	PROJECT NO.: 6216/6326
SHEET NO.	TOTAL SHEETS
4	4
REVISIONS	BY DATE



- Total area of property = 2.8943 Acres
- Present Zoning C-2, General Business
- Temporary Facilities: Light, Power, Water, and Toilet Facilities shall be provided by the General Contractor.
- Protection: Each contractor shall protect his excavations: All excavations shall be kept free of water and lighted barricades maintained.
- Clean-Up: The General Contractor shall remove all debris from site and building broom cleaned. Tools, equipment, and scaffolding not in active use shall be removed.
- Topsoil, sod, and debris is to be removed from area of new construction. This includes existing concrete foundation and walks.
- Excavate to produce an undisturbed soil bearing surface at required levels. Remove all soft spots in subgrade and fill with compacted granular fill.
- Remove existing foundations that interfere with new work.
- Fill soils shall not contain organic material, vegetation, rubbish, cinders or frozen materials. Horizontal fills may be clay or granular fill. Remove all unacceptable or excess excavated material from site.
- All existing underground utilities and services that are to remain are to be protected throughout construction.
- Clayey Material: Deposit fill in 8" lifts, breakdown oversized lumps and mix to secure a uniform moisture content and compaction. After each lift has been spread and sprinkled if required, roll or tamp that lift uniformly over its entire area. Compact clayey fill to not less than 95% of maximum density at optimum moisture as determined by compaction tests.
- Granular Material: Deposit fill in 1' lifts and compact as specified for clayey materials. Pudding of granular material will not be permitted. Compact granular fill to not less than 95% of maximum density as determined by compaction tests.
- Under slabs on grade, construct a leveling course over leveled and compacted subgrade. Use sand, stone screenings or pea gravel compacted with hand or mechanical tamper. Continue compaction until no further reduction in leveling course is apparent as tamper is advanced.
- Flow from drainage area # 2: prior to development =  $Q_{15} = 23.21 \text{ cfs}$ ,  $Q_{10} = 28.04 \text{ cfs}$ ,  $Q_{5} = 28.04 \text{ cfs}$
- All construction and materials required shall conform to the City of O'Fallon standards.
- All reinforced concrete pipe to be Class II in yards. Class III shall be used under pavement.
- All corrugated steel pipe shall be asphalt, polymer or aluminized coated, 16 gauge shall be installed in yards, 14 gauge under pavement up to 42". 48" and above shall be 14 gauge in yards and 12 gauge under pavement. Corrugations shall be 2 2/3" x 1/2" up to 42" and 3" x 1" for 48" and above or equivalent for arch pipe.
- All storm and sanitary trench backfills shall be water jetted. Granular fill, compacted will be used under paved areas.
- All filled places under buildings, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills shall be compacted to 95% of maximum density as determined by the "Modified A.A.S.H.O. T-180 Compaction Test" (ASTM D-1557). All tests will be verified by a Soils Engineer.
- 72" CSP Detention Pipes shall be backfilled with 1" clean limestone, compacted (except as noted on details). Fill shall be carefully placed, beginning at the upper ends working toward the manifold pipe to provide uniform lateral support.
- The 1/2" steel weir plate, sluice gate, all welds, and other metal surfaces not coated with an approved coating shall be coated with Thesec 46H-413 HI-BUILD TNEHE-TAR, or approved equal. Surface preparation and application shall strictly adhere to the manufacturers specifications.

NOTE: Grades shown in pavement and building areas are subgrade for future paving and floor slab.



**OWNER/DEVELOPER:** O'Fallon True Value Hardware  
513 South Main Street  
O'Fallon, Mo. 63366  
Attn: Mr. Don Schappe & Mr. Fred Pund

**BENCHMARKS:** "T" Chisled on SW cor. sidewalk at South entrance Commerce Bank Elev. 568.77

Chisled "T" on edge walk South of the SE cor. of building (O'Fallon Health Center) Elev. 571.85

NOTE: THIS SHEET IS TO BE USED FOR DRAINAGE AREA PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.