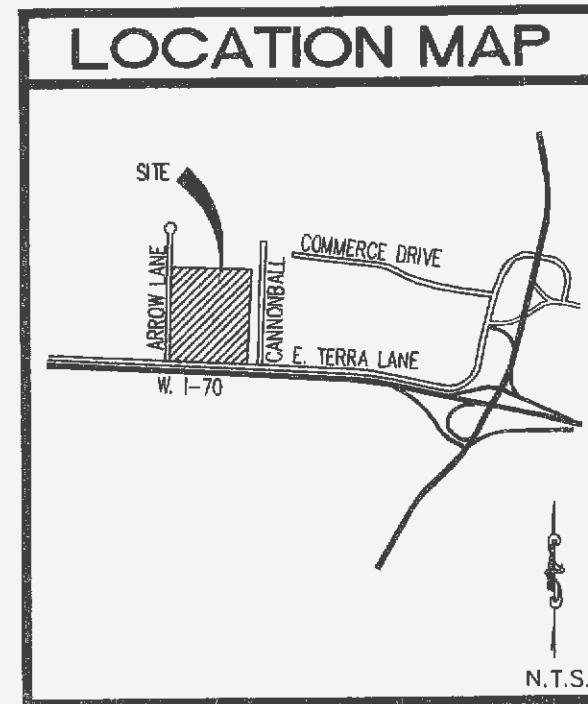


**GENERAL NOTES:**

- 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.
- The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The contractor shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/ or siltation fabric fences (possible methods are detailed in the plan). Control shall commence with grading and be maintained throughout the project until acceptance of the work by the Owner and/or the City of O'Fallon and/or MoDOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and depositing of silt. The Owner and/or the City of O'Fallon and/or MoDOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silt or mud on new or existing pavement shall be removed immediately. Any depositing of silts or mud in new or existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or City of O'Fallon and/or MoDOT.
- No area shall be cleared without permission of the developer.
- Owner/Developer assumes full responsibility as to the performance of the grading operation and assurance that all properties and County and State roads will be adequately protected.
- Soil preparation and re-vegetation shall be performed according to Appendix A of the Model Sediment and Erosion Control Regulations for Urban Development.
- 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 operations period after grading has been completed. Refer to Appendix A of St. Charles Soil and Water Conservation District - Model Sediment and Erosion Control Regulations.
- Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any man-made structures. The unsuitable material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Soils Engineer shall approve the discing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory rollers or high speed impact type drum rollers acceptable to the Soils Engineer. The rollers shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- Developer must supply City construction inspectors with soils reports prior to or during site soil testing. The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals. The City of O'Fallon shall be provided a copy of the final site compaction results.
- The Soils Engineer shall notify the Contractor of rejections of a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
- All Areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted to at least 85 percent of the maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D1557). Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
- The sequence of operation in the fill areas will be: fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture contents during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture contents during the filling operation in the remaining areas are from 2% to 8% above the optimum moisture content.
- The surface of the fill shall be finished so that it will not impound water. If at the end of a days work it would appear that there may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- All cut and fill slopes should be a maximum of 33% slope (3:1) after grading.
- All fill placed under the proposed storm and sanitary sewer, proposed roads, paved areas and/or trench backfills within and off the road right-of-way shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All fill placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in fill areas is to correspond to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon. All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proof rolling and compaction.
- Rip rap shown at flared ends will be evaluated in the field after installation for effectiveness and field modified if necessary to reduce erosion on and off-site.
- Soft soil in the bottom and banks of any existing or former pond site should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.
- Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to The City of O'Fallon.
- Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- If straw bales or silt fences are destroyed by heavy rains, vandalism, etc., they are to be replaced immediately by contractor.
- When grading operations are completed or suspended for more than fourteen (14) 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 the Designated Official's recommendation. Refer to Appendix A of St. Charles Soil and Water Conservation District - Model Sediment and Erosion Control Regulations. All finished grades (areas not to be disturbed by improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1000 square feet when seeded.
- All existing trash and debris on-site must be removed and disposed of off-site.
- Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
- The total yardage of this project is based on a 15%± shrinkage factor.
- The shrinkage factor is subject to change, due to soil conditions (types and moisture content), weather conditions, and the percentage of compaction actually achieved at the time of the year grading is performed. As a result, adjustments in final grade may be required. If adjustments need to be made, the contractor shall contact St. Charles Engineering and Surveying prior to completion of the grading.
- Earth quantities were obtained from surveyed topography.
- The vertical grading tolerance shall be plus or minus 0.2 feet for all rough grading.
- The Contractor shall prevent all storm/surface water, mud or construction debris from entering the existing sanitary sewer system.
- The most stringent of the above requirements shall apply.
- No slopes shall be steeper than 3 (horizontal) to 1 (vertical).
- All paving to be in accordance with St. Charles County Standards and specifications except as modified by the City of O'Fallon ordinances.
- Ensure sidewalks; curb ramps, ramp and accessible parking spaces shall be constructed in accordance with the current approved "American Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, construction materials, specifications and signage. If any conflict occurs between the above information and the plans, the ADAAG guidelines shall take precedence and the contractor prior to any construction shall notify the Project Engineer.
- Brick shall not be used in the construction of the storm sewers or sanitary sewer structures.
- All joints shall be gasketed O-ring type.
- Contractor to provide 5/8" diameter trash bar for all inlets.
- Lighting values will be reviewed on-site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City Standards.
- All proposed fencing requires a separate permit through the "Planning and Development Division".
- All sign post and backs and bracket arms shall be painted black using Carboline Rustbond Penetration Sealer SG and Carboline 133 HB paint (or equivalent as approved by the City and MoDOT). Signs designating street name shall be on the opposite side of the street from traffic control signs.
- Ensure graded areas that are to remain bare for over 2 weeks are seeded and mulched.
- Ensure all erosion control systems are inspected and necessary corrections made within 24 hours of any rainstorm resulting on one-half inch of rain or more.
- All paving shall be in accordance with St Charles County Standards and specifications except as modified by the City of O'Fallon ordinances.
- All new curbing shall match the existing curbing.

# IMPROVEMENT PLANS FOR TRUE MANUFACTURING

## A TRACT OF LAND BEING PART OF SECTION 27 OF TOWNSHIP 47 NORTH; RANGE 3 EAST ST CHARLES COUNTY, MISSOURI



### SHEET INDEX

COVER SHEET	1
DEMOLITION PLAN	2
FLAT and GRADING PLAN	3

REVISIONS  
 8/25/05  
 ENGINEERING

## LEGEND

<p>⊕ SANITARY STRUCTURE</p> <p>⊕ STORM STRUCTURE</p> <p>⊕ TEST HOLE</p> <p>⊕ POWER POLE</p> <p>⊕ LIGHT STANDARD</p> <p>⊕ C.I. CURB INLET</p> <p>⊕ D.C.I. DOUBLE CURB INLET</p> <p>⊕ G.I. GRATE INLET (EXISTING)</p> <p>⊕ A.I. AREA INLET (EXISTING)</p> <p>⊕ D.A.I. DOUBLE AREA INLET</p> <p>⊕ F.E. FLARED END SECTION</p> <p>⊕ E.P. END PIPE</p> <p>⊕ E.D. ENERGY DISSIPATOR</p> <p>⊕ M.H. MANHOLE</p> <p>⊕ R.C.P. REINFORCED CONCRETE PIPE</p> <p>⊕ C.M.P. CORRUGATED METAL PIPE</p> <p>⊕ C.I.P. CAST IRON PIPE</p> <p>⊕ PVC POLYVINYL CHLORIDE</p> <p>⊕ VCP VITRIFIED CLAY PIPE</p> <p>⊕ GUY WIRE</p> <p>⊕ SIGN</p> <p>⊕ POST</p> <p>⊕ WATER METER</p> <p>⊕ WATER VALVE</p> <p>⊕ WATER SHUT OFF</p> <p>⊕ GAS VALVE</p>	<p>C.O. CLEAN OUT</p> <p>T.B.R. TO BE REMOVED</p> <p>T.B.R.&amp;R. TO BE REMOVED &amp; RELOCATED</p> <p>T.B.P. TO BE PROTECTED</p> <p>T.B.A. TO BE ABANDONED</p> <p>B.C. BASE OF CURB</p> <p>T.C. TOP OF CURB</p> <p>T.W. TOP OF WALL</p> <p>TYP. TYPICAL</p> <p>U.N.O. UNLESS NOTED OTHERWISE</p> <p>U.I.P. USE IN PLACE</p> <p>— 572 — EXISTING CONTOUR</p> <p>— 578 — PROPOSED CONTOUR</p> <p>— TREE LINE — TREE LINE</p> <p>— 8" PIPE — SAN. SEWER (EXISTING)</p> <p>— SAN. SEWER (PROPOSED)</p> <p>— STORM DRAIN (EXISTING)</p> <p>— STORM DRAIN (PROPOSED)</p> <p>□ PHONE BOX</p> <p>⊕ IRON PIPE</p> <p>⊕ WATER LINE, SIZE</p> <p>⊕ HYDRANT</p> <p>⊕ CONCRETE PAVEMENT</p> <p>⊕ PLACED RIP-RAP W/UNDERLAIN FABRIC</p> <p>⊕ SWALE</p>
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**DEVELOPMENT NOTES:**

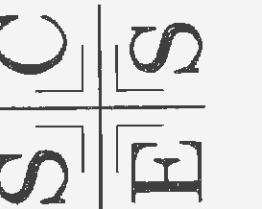
- Owner/ Prepared for: True Manufacturing Company
- Area of Tract = 28.82± Acres
- Zoning - I-1 (Light Industrial)
- Proposed Use - Industrial
- Parking Calculations:  
46 Parking Spaces Provided
- Pavement shall be seal coated and restriped.
- Utilities St. Charles Industrial Center  
-Water: City of O'Fallon  
-Sanitary: City of O'Fallon  
-Electric: Ameren UE  
-Gas: St. Charles Gas Company  
-School: Fort Zumwalt  
-Fire: Central County Fire & Rescue
- According to FIRM Map Panel Number 29183C0241 E Dated April 2, 1996. This Parcel is not in the 100 year floodplain.
- All Watermain Construction must meet the current standards and specifications of the City of O'Fallon for hydrants.
- All sign locations and sizes must be approved separately through the Planning Division.
- All utilities shall be located underground, including electric.
- Landscaping will meet all the requirements of the City of O'Fallon.
- All spot elevations are top of pavement unless otherwise noted.
- All proposed fencing requires a separate permit through the Planning Department.

9-7-05  
**APPROVED**

8/10/05  
 8/25/05  
 REVISE PLANS PER CITY ENG. COMMENTS  
 REVISE PLANS PER CITY ENG. COMMENTS

IMPROVEMENT PLANS FOR  
**TRUE MANUFACTURING**  
 A TRACT OF LAND BEING PART OF SECTION 27 OF  
 TOWNSHIP 47 NORTH; RANGE 3 EAST  
 ST CHARLES COUNTY, MISSOURI

**ST. CHARLES ENGINEERING & SURVEYING, INC.**  
 801 S. FIFTH STREET, SUITE 202  
 ST. CHARLES, MO 63801  
 TEL: (636) 947-0807 FAX: (636) 947-2448



**CLIENT**

**True Manufacturing Company**  
**St. Charles Industrial Center**  
**P.O. Box 970**  
**O'Fallon, Missouri 63366**  
**(636) 240-2400**

**ENGINEERS AUTHENTICATION**

The responsibility for the professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically excludes revisions after this date unless reauthenticated.

SITE BENCHMARK: RM 69 Elevation =  
 456.02 Chissled "L" on top of wingwall  
 in northeast corner of Old Highway 79,  
 bridge over Belleau Creek.

Call BEFORE you DIG  
 TOLL FREE  
 1-800-344-7483  
 MISSOURI ONE-CALL SYSTEM, INC.

**ORDER NO.**  
 05-0299  
**DATE**  
 7/12/05  
**1**

File