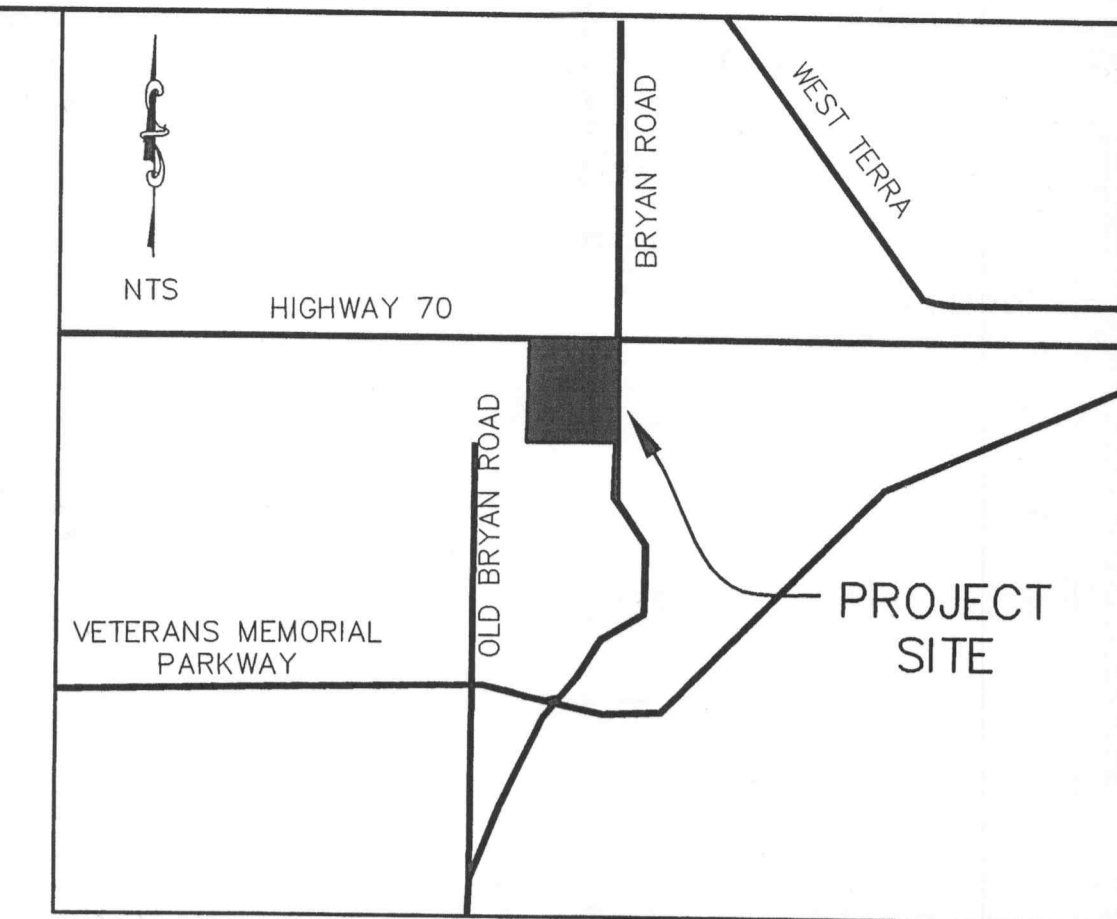


ABBREVIATIONS

- AI - Area Inlet
- B/B - Back to Back
- CB - Catch Basin
- CI - Curb Inlet
- CMP - Corrugated Metal Pipe
- CTV - Cable Television
- ChB - Chord Bearing
- Conc - Concrete
- DB - Dead Book
- DCB - Double Catch Basin
- DFL(N) - Drop FL from North
- DIP - Ductile Iron Pipe
- E - Electric
- F/F - Face to Face
- FES - Flared End Section
- FF - Finish Floor
- GI - Grate Inlet
- Gr MH - Grate Manhole
- L - Length of Curve
- MH - Manhole
- N/F - Now or Formerly
- OHE - Overhead Electric
- OHE&T - Overhead Electric & Telephone
- PB - Plat Book
- PG - Page
- PL - Property Line
- PVC - Polyvinyl Chloride Pipe
- R - Radius
- R/W - Right of Way
- RCP - Reinforced Concrete Pipe
- TBR - To Be Removed
- TBR&R - To Be Removed & Replaced
- TBRel - To Be Relocated
- Typ - Typical
- UGE - Underground Electric
- UGFO - Underground Fiber Optic
- UGT - Underground Telephone
- UIP - Use In Place / Use in Place
- VCP - Vitrified Clay Pipe
- W - Water Service

LEGEND

- Area Light (w/ 120V Recept.)
 - Connection (Proposed)
 - Fire Hydrant
 - Concrete
 - Doorway Entrance
 - Drainage Flow
 - Swale
 - Water Meter Or Valve
 - Gas Meter Or Valve
 - Utility Pole w/ Guy Wires
 - Handicap Parking Space
 - Direction Of Traffic
- Existing**
- Contour (495)
 - Spot Elevation (500.00)
 - Sanitary Sewer
 - Storm Sewer
 - Utility Service (E, T, G, etc.)
- Proposed**
- Contour (495)
 - Spot Elevation (500) or (500)
 - Sanitary Sewer
 - Storm Sewer
 - Utility Service (E, T, G, etc.)



LOCATION MAP
 WUNNENBERG'S 2004
 ST. CHARLES COUNTY STREET GUIDE
 PG 45, UU-16

U-GAS STL, INC
895 BOLGER CT
FENTON, MO 63026
(636) 343-9770

RIGHT-OF-WAY GRADING PLANS

PHILLIPS 66
879 BRYAN ROAD
O'FALLON, MO 63366

SHEET INDEX:

1. COVER SHEET
2. GRADING & UTILITY PLAN
3. DRAINAGE AREA MAP
- 4.-5. STORM SEWER PROFILES
6. CONSTRUCTION DETAILS

General Construction Notes

1. All existing on-site structures, sidewalks, concrete or asphalt surfaces, curbing, utility poles, sewer structures, utility services, fences, trees, shrubs, and debris noted for removal on the drawings shall be demolished and removed from the site and properly disposed of all in a manner approved by the regulating governmental agencies.
2. Contractor shall be responsible for determining the amount of removals, demolition, clearing and grubbing, stripping of vegetation, pavement breaking, and haul off.
3. Contractor shall obtain all necessary state and local permits required for hauling and disposal of demolition, clearing, and non-suitable materials from the project site. Hauling methods and conditions of the permit shall be strictly adhered to.
4. Contractor shall preserve and protect all existing improvements (which are not to be removed) within the project limits or adjacent thereto from damage as a result of his activities in the performance of work.
5. Underground facilities, structures and utilities have been plotted from available surveys, records and information and, therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, location or depth of these facilities, structures and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures and utilities, either shown or not shown on these plans. The underground facilities, structures and utilities shall be located in the field prior to any grading, excavation or construction of improvements. Should the actual location, size or depth or any underground facilities, structures or utilities differ from those indicated on these plans, the Contractor shall immediately notify Clayton Engineering prior to proceeding with the installation of any proposed improvements in the area where the difference exists. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.
6. Contractor to verify location and flow line of all existing utilities prior to connection. All connections to be made in accordance with local codes and/or utility companies requirements.
7. Contractor to notify Engineer as soon as possible if conditions on ground differ from those shown on plans.
8. The original of these drawings are on file at the office of The Clayton Engineering Company. Any modifications to these drawings shall release said Clayton Engineering Company, the Engineer and/or the Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications.
9. Project Benchmark: - NAVD 1929 Top of iron pipe with cap 320-D at northeast corner of Quiktrip property, Elevation = 624.15' (adopted from survey by Clayton Engineering Company).
10. All grading shall be within 0.2 feet more or less of the contours shown on the grading plan, unless otherwise directed by the Owner or Engineer.
11. Grading quantities shown on the plans are for permitting purposes only for public review agencies and shall not be used for Bid quantities. The Contractor shall calculate his own quantities for Bidding.

12. All fills are to be left with a temporary lip (berm) at the top of the slope at the end of each day's operations.
13. Any trees, brush, organic topsoil and other objectionable material remaining shall be removed and disposed of at an off-site location. Additional suitable fill material as needed shall be brought onto the site. Areas which are to be filled shall be compacted to a minimum density of 90% maximum density as determined by the Modified AASHTO Compaction Test, T-180-74 (ASTM D-1557) in the building area and 85% in other areas, or as set forth in a Geotechnical Engineer's investigative written report setting forth the grading specifications and requirements.
14. Before filling, the Contractor shall thoroughly clean out and remove all objectionable material, organic material, rubbish and debris. Existing concrete and asphalt paving shall be broken up to a maximum dimension of 6 inches in size, and may be mixed with sufficient excavated soil to eliminate voids and disposed of in fill areas on the site.
15. Broken asphalt or concrete shall not be placed in building areas or utility trenches.
16. During the excavation for footings, if any unsuitable soil is uncovered, the Contractor shall remove it and deepen the footings as necessary to build on natural, undisturbed soil or properly compacted fill.
17. Provide adequate off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driveway conditions.
18. All storm water shall be discharged at an adequate natural discharge point.
19. Interim storm water drainage controls in the form of siltation control measures are required.
20. The developer is required to provide adequate storm water systems in accordance with City of O'Fallon and Missouri Department of Transportation.
21. All disturbed earth areas within right-of-way shall be seeded and mulched.
22. Additional siltation control shall be installed as required by City of O'Fallon and Missouri Department of Transportation.
23. All offsite property owners shall be given notice 48 hours in advance of any work.
24. Any disturbed offsite property (i.e. bushes, fences, mailboxes, etc.) shall be replaced, in kind, at the developer's expense.
25. Contractor shall keep the roadway pavement clean and free of mud, rock and debris at all times during hauling operations. A wash station consisting of a rock area connected to the temporary driveway and a water service line or water truck will normally be required for removal of mud from trucks leaving the site. Other methods of mud control must be submitted to the Department for consideration and approval prior to their use under these conditions.
26. Damage to offsite streets and downstream properties due to soil erosion or siltation shall be prevented by erecting silt barriers or basins, or by utilizing similar devices to effect soil stabilization prior to the start of any grading operations.
27. All protective measures shall be installed down slope of every location where the original ground is to be disturbed.
28. Storm water pipes, outlets and channels shall be protected by silt barriers and kept free of waste and silt at all times prior to final surface stabilization and paving.
29. No slope shall be greater than 3:1 max.
30. Slopes steeper than 5 to 1 and all swales shall be protected by sodding or paving upon completion of construction or compaction. All other areas disturbed by grading operations to be protected by seeding and mulching as soon as possible.
31. Inspection of, and necessary repairs made, to the erosion and silt control measures must be made daily and/or following periods of precipitation.
32. Joints for concrete pipe shall be rubber gasketed meeting ASTM C-443 with a main sealing surface of no less than 3 inches.
33. All fill under storm or sanitary lines constructed above original grade shall be compacted to 90% of maximum dry density as determined by the modified AASHTO Compaction Test T 180 (Current A.S.T.M. Specification D-1557), and verified by a Geotechnical Engineer prior to installing pipe.
34. Location and elevation of field inlets, manholes and culvert pipes to be verified by Engineer after stakeout and prior to construction.
35. All materials and methods of construction for sewers to meet the 2000 requirements of the Metropolitan St. Louis Sewer District, City of O'Fallon, and Missouri Department of Transportation.
36. All sewer construction and materials to be in accordance with the Metropolitan St. Louis Sewer District Standard Construction Specifications for Sewers and Drainage Facilities, 2000 and Missouri Department of Transportation.
37. The developer is advised that utility companies will require compensation for relocation of their utility facilities within the public right-of-way. Utility relocation cost shall be considered the developer's responsibility. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of road improvements.

PROPERTY OWNERS:

JOHN M FLAVAN
 450 S GULFVIEW BLVD 1206
 CLEARWATER FLORIDA 34630

DEVELOPER:

U-GAS STL, INC.
 895 BADGER CT.
 FENTON, MO. 63026

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 ENGINEERING DEPARTMENT

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMO.

The signed and sealed original of this drawing is on file at the offices of The Clayton Engineering Company, Inc. The signed and sealed original is the official document and shall take precedence over any digital version.

2	10-05-05	SLH	REVISED PER CITY OF O'FALLON COMMENTS	
1	08-16-05	SLH	REVISED PER MODOT COMMENTS	
REVISIONS				
the clayton engineering company, inc. ENGINEERS • SURVEYORS • PLANNERS 11920 WESTLINE INDUSTRIAL DRIVE ST. LOUIS, MISSOURI 63146 (314) 692-8888 FAX: (314) 692-8688 clayton-engineering.com				
Designed	SWQ	Project Number	04221	
Drawn	SLH	Sheet Number		
Checked	MJV			
Date	07/05/05			
		1	of 6	

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