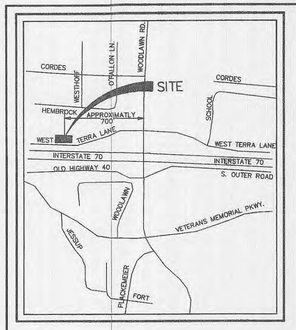
A SET OF CONSTRUCTION PLANS FOR LOT 2 OF
SAHA TERRACE
A TRACT OF LAND BEING PART OF
FRACTIONAL SECTION 29, TOWNSHIP 47 NORTH,
RANGE 3 EAST OF THE FIFTH PRINCIPAL
MERIDIAN, ST. CHARLES COUNTY, MISSOURI



PRINCIPLES & STANDARDS:

1. All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33 %). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.

2. Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run-off waters. The design to be approved by the Designated Official. Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.

3. Where natural vegetation is removed during grading, vegetation shall be reestablished in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible during the next seeding period after grading has been completed.

4. 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 the City Engineer's recommendations. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.

5. Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less that 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock rip rap or concrete or other suitable materials as approved by the City Engineer. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps.

6. The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run-off water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted with the approval of the City Engineer.

7. Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed stream bank erosion control measures and shall be approved by the City Engineer. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.

8. All lots shall be seeded and mulched at the minimum rates defined in Appendix A or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

VEGETATIVE ESTABLISHMENT
For Urban Development Sites
APPENDIX A

Seeding Rates:

Permanent:
Tall Fescue – 30 lbs./ac.
Smooth Brome – 20 lbs./ac.
Combined Fescue @ 15 lbs./ac. and Brome @ 10 lbs./ac.

Temporary:
Wheat or Rye – 150 lbs./ac. (3.5 lbs. per square foot)
Oats – 120 lbs./ac. (2.75 lbs. per square foot)

Seeding Periods:
Fescue or Brome – March 1 to June 1
August 1 to October 1
Wheat or Rye – March 15 to November 1
Oats – March 15 to September 15

Mulch Rates:
100 lbs. per 1,000 sq. feet (4,356 lbs. per acre)

Fertilizer Rates:
Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

GRADING QUANTITIES:

820 C.Y. CUT (INCLUDES SUBGRADES)
820 C.Y. FILL (INCLUDES 15% SHRINKAGE AND BASEMENT AREA OF OLD HOUSE)

BALANCED

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

GENERAL NOTES

1. 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 or construction of the improvements.

2. All filled places under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 90% of the 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 tests shall be verified by a soils engineer concurrent with grading and backfilling operations. All filled places in proposed roads shall be compacted from the bottom up. All test shall be verified by a soil engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in the 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 curbes shall be submitted to The City of O'Fallon prior to the placement of fill. Proof talling may be required to verify soil stability at the descretion of The City of O'Fallon.

3. No area shall be cleared without the permission of the Project Engineer.

4. The City of O'Fallon shall be notified 48 hours prior to construction for coordination and inspection.

5. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.

6. All construction and materials shall conform to the current construction standards of the City of O'Fallon.

7. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.

8. 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 of control 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 the 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 silts or mud on new or existing pavement or 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 the City of O'Fallon and/or MODOT.

9. Erosion control systems shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties and ditches.

10. All building mounted lights shall be pointed downward and fully screened to prevent light from spilling over onto adjacent properties.

11. All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.

12. All sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved "Americans with 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. Ensure at least one 8' wide handicap access aisle is provided and curb ramps do not project into handicap access aisles.

13. Brick shall not be used in the construction of storm or sanitary sewer structures.

14. The Contractor shall ensure all storm and sanitary sewer joint shall be gasketed O-Ring Type.

15. Lighting values will be reviewed on the site prior to the final occupancy inspection. Corrections will need to be made if not in compliance with City standards.

16. All proposed fencing requires a separate permit through the Planning Division.

17. All sign post and backs and bracket arms shall be painted black using Carboline Rustbond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by the City of O'Fallon and MoDOT). Sign designating street names shall be on the opposite side of the street from traffic control signs.

18. All utilities shown are existing unless otherwise noted. All new utility line shall be located underground.

19. All erosion control systems shall be inspected and necessary corrections shall be made within 24 hours of any rainstorm resulting in one-half inch of rain or more.

20. All graded areas that are to remain bare for over 2 weeks shall be seeded and mulched per DNR requirements.

21. Prior to Construction Site Plan approval, a photometric lighting plan in accordance with the city of O'Fallon's Exterior Lighting Standards shall be submitted for review and approval for all proposed exterior lighting.

22. All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All other trench backfills may be earth material (free of large clods or stones).

23. No grading will begin prior to approval of a Grading Plan by the City of O'Fallon. backfills shall be water jetted.

24. All grades shall be within 0.2 feet of those shown on the Grading Plan.

25. Proposed building will comply with current American Disability Act requirements.

26. See architectural drawing for all building dimensions, service connections, details, etc.

27. All dimensions are to back of curb unless otherwise noted.

28. The developer shall comply with article 26 Performance Standards.

GENERAL NOTES (CONT.)

30. The developer shall conform with the current comprehensive plan for the City of O'Fallon.

31. All outside trash containers, hvac units, electric, telephone and gas meters, satellite dishes, and rooftop mechanical apparatus shall be thoroughly screened with materialsand/or landscaping to conceal the visibility of such items from the views of Rights-Of-Way and/or adjacent properties as reviewed and approved by The Planning Division.

32. All signage to be approved by seperate permit.

33. All construction methods and practices to conform with OSHA and City of O'Fallon standards.

GRADING NOTES:

1. All areas shall be allowed to drain. All low points shall be provided with temporary ditches.

2. A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare over the winter without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silting up existing downstream storm drainage system.

3. Any existing trash and debris currently on this property must be removed and disposed of off-site.

4. Soft soil in the bottom and banks of any existing or former pond sites or tributaries 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.

5. 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.

6. Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.

7. All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted in accordance with the specifications given below. 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.

8. 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 succeading 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.

9. All siltation control devices shall be inspected by the contractor after any rain of 1/2" or more with any appreciable accumulation of mud to be removed and siltation measures repaired where necessary.

10. No slope shall be steeper than 3(Horizontal):1(Vertical). All slopes shall be sodded or seeded and mulched.

11. Any contaminated soil encountered during excavation shall be hauled and placed as directed by the owners.

12. Developer shall be responsible for any soils investigation necessary for developing this site.

13. 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 an off site.

14. Developer must supply City Construction inspectors with soil reports prior to or during site and soil testing.

LANDSCAPE LEGEND

QTY. (15) ~ INDICATES PROPOSED EVERGREEN SHRUB (mugho pines, yews, junipers, hollies, boxwoods)

QTY. (19) ~ INDICATES PROPOSED SPRUCE TREE. Min. 8' in height

QTY. (8) ~ INDICATES PROPOSED HARDWOOD TREE (ashes, oaks, maples, birches, sweet gum) Min. 2" in caliper

LANDSCAPING AS DEPICTED IS SUBJECT TO FINAL DESIGN BY A QUALIFIED LANDSCAPE DESIGNER

USGS REFERENCE BENCHMARK:

RM 66: ELEV = 481.74
CUT CROSS ON THE WEST BOLT OF A FIRE HYDRANT AT THE NORTHEAST CORNER OF MILL POND DRIVE AND SPRING HILL DRIVE

USGS SITE BENCHMARK:

ELEV 596.06 = OLD IRON PIPE AT NORTHEAST CORNER OF SITE.

LEGEND

- —UTILITY POLE
- —IRON PIPE
- —SANITARY MANHOLE
- —SAN— —SANITARY SEWER
- —STM— —STORM SEWER
- —OW— —OVERHEAD ELECTRIC
- —CMP— —CORRUGATED METAL PIPE
- —RCP— —REINFORCED CONCRETE PIPE
- —VCP— — VITRIFIED CLAY PIPE LINE
- —BOLLARDS
- —GAS METER
- —SIGN
- —W— —WATER LINE
- —G— —GAS LINE

DEVELOPMENT NOTES

1. Area of Tract: Total area = 0.555 Acres: 24,180sq.ft.
2. Zoning: C-2 PUD (City of O'Fallon)
3. Proposed Use: Transmission Shop
   As a conditions of Final Plan approval, this site may only be used for the proposed transmission repair facility unless a new Area Plan and Final Plan for the site is reviewed and approved by the City.
4. Area of Proposed Building: 4,000 sq.ft.
5. Site setbacks:
   25' front yard
   0' side yard
   10' rear yard
6. Site is served by:

City of O'Fallon Water	636-281-2858
AmerenUE Company	1-800-55-ASKUE
Laclede Gas Company	636-946-8937
City of O'Fallon Sewer	636-281-2858
Century Tel Telephone Company	636-332-7318
O'Fallon Fire Department	636-272-3493

7. ACCORDING TO THE FLOOD INSURANCE RATE MAP OF CITY OF O'FALLON, MISSOURI, (COMMUNITY – PANEL NUMBER 290316 0237 E, DATED AUGUST 2, 1996). THIS TRACT LIES WITHIN ZONE X . ZONE X IS DEFINED AS NOT BEING A FLOOD HAZARD AREA.
8. Parking Required: 1 space for each 500 sq. ft. of floor space
   4,000 s.f. / 500 = 8.0 spaces required
   Total Parking Required: 8.0 spaces
   Total Parking Provided: 27 spaces (including 2 handicap space)
9. Site Coverage Calculations:
   Building = 4,000 sq.ft. ~ 16.5%
   Pavement = 13,084 sq.ft. ~ 54.1%
   Green Space = 6750 sq.ft. ~ 29.4%
10. Detention Calcs: New impervious = 0.40Acres
    0.40(3.54 – 1.7) = 0.74c.f.s.
    * No detention is proposed for Lot 2(increased runoff less than 1 c.f.s.)
    * Owner will make the required one time contribution to the storm water detention fund of $1,000 per acre.
11. All site lighting shown is for presentation only and exact locations will depend on a lighting layout by a qualified lighting consultant. All lighting on the site shall be shielded and directed away from the residential units to the North. Light standards shall not exceed 20' tall. Said lighting plan to be provided by others.
12. Landscape Required:
    27 spaces x 270 x 0.06= 437 S.F.
    Total Interior Landscape Required: 437 S.F.
    Total Interior Landscape Provided: 471 S.F.
    291 L.F. / 40 L.F. = 7.27 ~ 8
    Total Street Trees Required: 8 Trees
    Total Street Trees Provided: 8 Trees
13. Per the Tree Preservation Ordinance, 15 trees per acre shall be preserved or replaced. 1.419 acres x 15 = 21.3 trees to be replaced.
    29 trees provided.
14. All outside mechanical units shall be screened from public view per city standards.
15. All necessary utilities will be functioning at the time the project is ready for occupancy.
16. Owner proposes that water and sanitary sewer service will be provided to Lot 1 from the existing services which are to the north of Lot 1 in the Danny Lane right-of-way.
17. The hours of operation shall be limited to between 7:30 A.M. and 6:00 P.M. Monday thru Friday and between 8:00 A.M. and 1:00 P.M. Saturdays. Trash pick-up shall be limited to the hours of operation.
18. No vehicles or vehicle parts shall be worked on outside of the main building.
19. No storage of any vehicle parts or products, temporary or otherwise, is permitted outside of the main building.
20. The impounding, storage, or sale of vehicles is prohibited on the site.
21. Access to the site shall only be from West Terra Lane.
22. All proposed fencing requires a separate permit through the planning division.
23. Oil Interceptor to be located inside of Building. See Plumbing Plans for details.
24. When electric service is established all ground mount transformers shall be screened from view per City requirements except for access points on transformer.

SHEET INDEX

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BUILDING
2-9-05 GK
APPROVED

O'FALLON FILE NUMBER: 2903

Bldg. Inspector

PREPARED FOR:
SUKUMAR SAHA
1824 TOPPING ROAD
ST. LOUIS, MO 63131
(314) 966-1234

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
CLIFF D. LO
M. HEITMANN
NUMBER
E-28813
REGISTERED PROFESSIONAL ENGINEER

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REVISIONS

09-06-04	MoDot Comments
09-10-04	City Comments
10-16-04	Fire Dept.Comments
11-16-04	City Comments
02-01-05	City Comments

BAX
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07-16-04 *DATE*
03-12398 *PROJECT NUMBER*
1 OF 7 *SHEET OF*
12398CON.DWG *FILE NAME*
CF/KLW *DRAWN*
LDW CLH *DESIGNED CHECKED*

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