

A CONSTRUCTION PLAN FOR "LIBERTY INDUSTRIAL PARK"

A TRACT OF LAND IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 24, TOWNSHIP 47 NORTH, RANGE 3 EAST, OF THE FIFTH PRINCIPAL MERIDIAN, ST. CHARLES COUNTY, MISSOURI

RECEIVED
JUL 18 2003
CITY OF OTTAWA, MO

PREPARED FOR: BILL DAVIS
2209 DROSTE ROAD
ST. CHARLES, MO 63301
(636) 949-0680

DECLARER OF RESPONSIBILITY
I hereby certify that the documents intended to be submitted by me and are intended to be submitted by me and I am duly qualified to do so. I am duly qualified to do so. I am duly qualified to do so.



REVISIONS

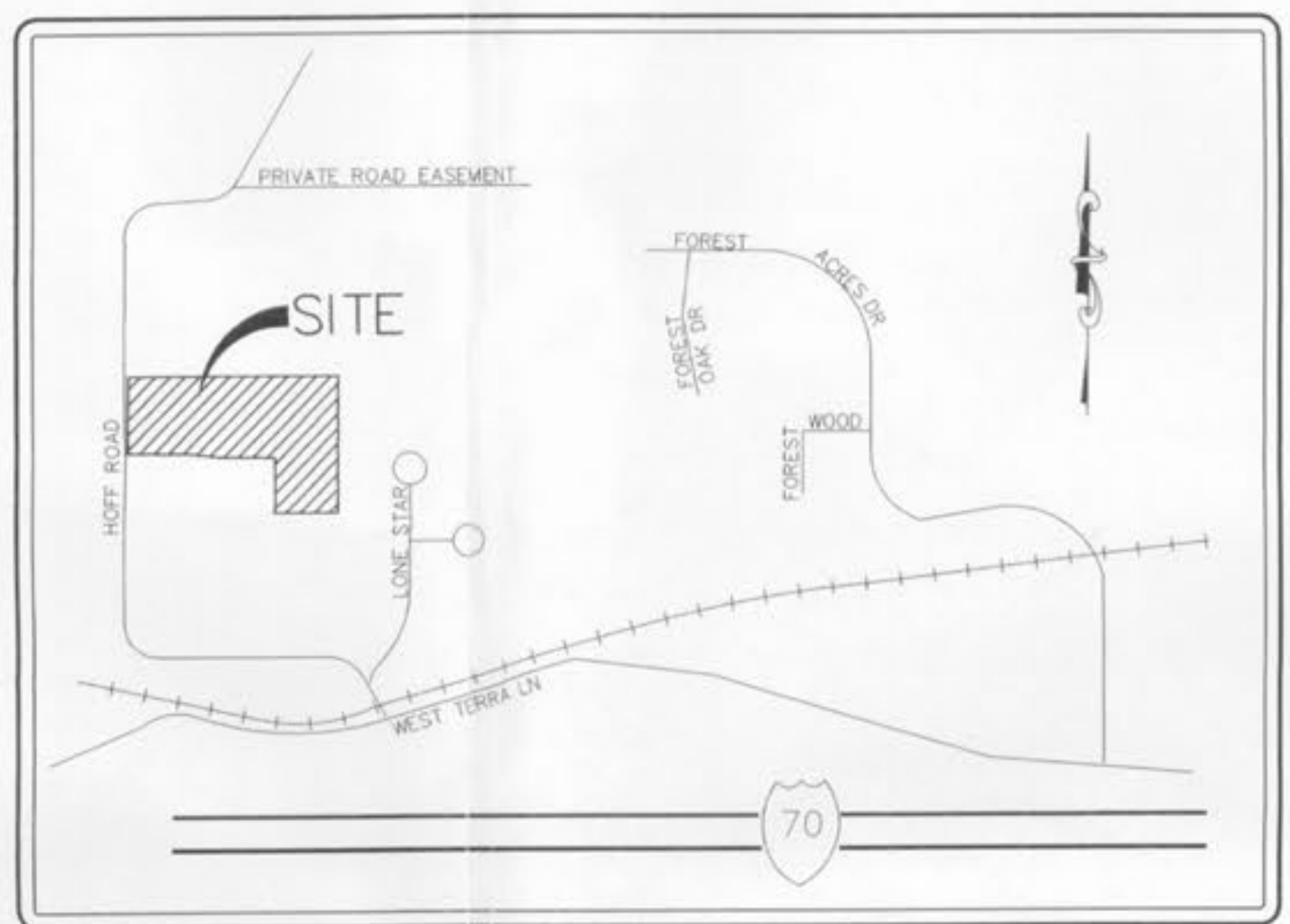
DATE	REVISION
6-19-03	REVISED PER CITY
7-18-03	CITY COMMENTS



ENGINEERING
PLANNING
SURVEYING
1052 South Cloverleaf Drive
St. Peters, MO. 63376-6445
636-928-5552
FAX 928-1718

5-22-03
DATE
00-11060A
PROJECT NUMBER
1 OF 8
SHEET OF
11060ACON.DWG
FILE NAME
ALJ
DRAWN
ALJ
DESIGNED CHECKED

Bldg. Inspector



LOCATION MAP
NOT TO SCALE

DEVELOPMENT NOTES

- Area of Tract: 18,936 Acres
Lot 1 Area: 1,539 Acres
Lot 2 Area: 1,304 Acres
Lot 3 Area: 1,304 Acres
Lot 4 Area: 1,304 Acres
Lot 5 Area: 1,304 Acres
- Existing Zoning: I-2 Heavy Industrial
- Proposed Use: Office/Warehouse
- Area of Proposed Buildings: 111,600 sq. ft.
- The required height and building setbacks are as follows:
Minimum Front Yard: 30 feet
Minimum Side Yard: 25 feet
Minimum Rear Yard: 50 feet
Maximum Height of Building: 50 feet
- Site is served by:
City of O'Fallon Sewer: 636-281-2858
Amsen/IE Company: 636-639-8312
Laclede Gas Company: 636-946-8937
City of O'Fallon Water: 636-281-2858
Century Tel Telephone Company: 636-332-3011
O'Fallon Fire Protection District: 636-272-3493
Fort Zumwalt School District: 636-272-6620
- According to the Flood Insurance Rate Map of St. Charles County, (Community Parcel number 280315 0240 E dated August 2, 1996) this property lies within zone X. Zone X is defined as an area outside the 500 year Flood Plain Limits.
- Parking Required: As Approved on Preliminary Plan (1 space per 400 s.f. office space plus 1 space per employee)
Lot 1: 2,730 sq. ft. / 400 sq. ft. = 6.82
10 Employees = 10 Spaces
Total Parking Required: 17 spaces
Total Parking Provided: 18 spaces (including 1 handicap space)
Lot 2: 2,320 sq. ft. / 400 sq. ft. = 5.8
5 Employees = 5 Spaces
Total Parking Required: 11 spaces
Total Parking Provided: 15 spaces (including 1 handicap space)
Lot 3: 1,500 sq. ft. / 400 sq. ft. = 3.75
5 Employees = 5 Spaces
Total Parking Required: 9 spaces
Total Parking Provided: 16 spaces (including 1 handicap space)
Lot 4: 1,500 sq. ft. / 400 sq. ft. = 3.75
5 Employees = 5 Spaces
Total Parking Required: 9 spaces
Total Parking Provided: 16 spaces (including 1 handicap space)
Lot 5: 2,400 sq. ft. / 400 sq. ft. = 6
5 Employees = 5 Spaces
Total Parking Required: 11 spaces
Total Parking Provided: 11 spaces (including 1 handicap space)
- Landscape Required:
76 (sq.) x 270 = 20,520 S.F.
20,520 sq. ft. x 0.06 (6%) = 1,231.20
Total Interior Landscape Required: 1,231.20 S.F.
Total Interior Landscape Provided: 5,109.65 S.F.
519.76 LF. / 40 L.F. = 12.99 = 13
Total Street Trees Required: 13 Trees
Total Street Trees Provided: 13 Trees
- Site Coverage Calculations:
Building = 111,600 sq. ft.
Pavement = 122,619.53 sq. ft.
Green Space = 63,952.22 sq. ft.

LANDSCAPE LEGEND

QTY	INDICATES PROPOSED HARDWOOD TREE (ashes, oaks, maples, birches, sweet gums) minimum 2" caliper
21	
18	INDICATES PROPOSED EVERGREEN TREES (pines) minimum 6 ft. height
35	
35	INDICATES PROPOSED EVERGREEN SHRUBS (magnolia pines, yews, junipers, hollies, boxwood) Permanent vegetation should be left intact. Variations will include designed streambank erosion control measures. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
27	

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

GRADING QUANTITIES:
32,640 C.Y. CUT (INCLUDES SUBGRADE)
32,640 C.Y. FILL (INCLUDES 15% SHRINKAGE & UPGRADE)
= SITE BALANCE

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

U.S.G.S. BENCHMARKS

ORIGINAL REFERENCE BENCHMARK - RM46 ELEV. 469.17 "CHISELED SQUARE" ON TOP OF ABUTMENT AT SOUTHWEST CORNER OF HOFF ROAD BRIDGE OVER PERDUE CREEK. THIS BENCHMARK HAS BEEN REPLACED FROM NEW BRIDGE CONSTRUCTION AT THIS TIME.

SITE BENCHMARK ELEV.=569.20 OLD IRON ROD AT THE NORTHWEST CORNER OF PROPERTY CONVEYED TO PERMAN HOLDINGS, INC., DEED BOOK 2349, PAGE 545, ST. CHARLES COUNTY RECORDS.



CALL BEFORE
YOU DIG!
1-800-DIG-RITE

GRADING NOTES

- A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
- The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied therefrom, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
- The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- 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 without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silt up existing downstream storm drainage system.
- 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.
- All trash and debris on site, either existing or from construction, must be removed and properly disposed of off-site.
- Soft soil in the bottom and banks of any existing or former pond sites or tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer locations.
- 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 material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly disc'd 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 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.
- 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 Soils Engineer shall notify the Contractor of rejection 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 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 suitability 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 percent 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.
- Fill and backfill shall be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building areas below footings	90%
Fill under slabs, walks, and pavement	90%
Fill other than building areas	90%
Natural subgrade	90%
Pavement subgrade	90%
Pavement base course	92%

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).

Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

All site construction shall conform to the design recommendations as outlined above pending a future soils analysis/report.

PRINCIPALS & STANDARDS

- 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 designed 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 City Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.
- 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, stacked straw bales or other approved measures to remove sediment from run-off waters. Temporary siltation control measures shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent tree grasses shall be established as soon as possible 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.

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.

- Provisions shall be made to accommodate the increased runoff caused by changed soil and surface conditions during and after grading. Uninterrupted 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 than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap or concrete or other suitable materials. Detention basins, ditches or any other appropriate structures shall be constructed to prevent velocities above 5 fps.
- The adjoining ground in 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 ditches, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted.
- Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways setback a minimum of 25 feet from the top of the existing streambank. 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. Variations will include designed streambank erosion control measures. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- All lots shall be seeded and mulched 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.
- The sediment control plan should be implemented before grading begins. This should follow the guidelines in the model sediment and erosion control regulations by St. Charles soil and water conservation district.
- Whichever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties, and ditches.
- Erosion control shall not be limited to what is shown on the plan. Whichever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties, and ditches.
- All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in one-half inch of rain or more.
- No graded area is to remain bare for over 6 months without being seeded and mulched.

VEGETATIVE ESTABLISHMENT For Urban Development Sites APPENDIX A

Seeding Rates:	
Permanent:	
Tall Fescue	30 lbs./ac.
Smooth Brome	20 lbs./ac.
Combined Fescue & 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
Wheat or Rye	August 1 to October 1
Oats	March 15 to November 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.