

GENERAL NOTES PERTINENT TO ALL CONSTRUCTION OPERATIONS

- Underground utilities shown on these plans have been plotted from available records and information, and their locations shall be considered approximately only. The verification of the actual location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor(s), and the verification of the actual location shall be performed prior to beginning work.
- Easements and right-of-ways will be provided for streets, sanitary sewers, storm sewers, water mains and private utilities on the subdivision plat (record plat) for location and size of easements and right-of-ways.
- All construction shall be performed in accordance with the specifications, ordinances, rules, regulations, guidelines and/or policies of the local governing jurisdictional authority.

GRADING NOTES

- I. GENERAL**
- No area shall be cleared without authorization from the project engineer.
 - All grading work performed shall be within a 0.2 foot tolerance of the grades shown on the grading plan.
 - A Geotechnical Engineer shall be employed by the owner and be on site during grading 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.
 - Before the grading begins, the owner shall employ a competent, licensed surveyor to establish all lines and operation.
 - The contractor shall notify the Geotechnical Engineer at least two days in advance of the start of the grading.
 - Erosion control measures shall not be limited to that shown on grading plans. Contractor shall take all additional and/or necessary measures in order to prevent sediment from entering waterways or leaving property limits.

II. SPECIFICATIONS

- Site preparation includes the clearing 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 burned (after securing permits) and/or properly disposed of off site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Geotechnical 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 Geotechnical Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- Observation and Testing: The Geotechnical 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 or fill. Interim reports showing fill quality will be made to the owner at regular intervals.
- The Geotechnical Engineer shall notify the contractor of rejection of a lift of fill or portion thereof. The contractor shall rework the rejected portion of the fill and obtain notification from the Geotechnical Engineer of its acceptance prior to the placement of additional fill.
- Placing and Compaction of 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 dry density as determined from the modified Proctor compaction test (ASTM-D-1557). Natural slopes steeper than 1 vertical to 5 horizontal to receive fill will have horizontal benches, with minimum widths of 12 feet and maximum height of 5 feet, cut into the slopes before the placement of any fill. 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 Geotechnical Engineer shall be responsible for determining the acceptability of the soils placed. Any unacceptable soils placed shall be removed at the contractors 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 in the remaining areas are from 2 to 8 percent above the optimum moisture control.
- The surface of the fill shall be finished so that it will not impound water. If at the end of a day's work, it would appear that there may be rain prior to the next working day, the surface shall be finished smooth for any reason, it shall be scarified before proceeding with the placement ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
- All fills shall be compacted to 90% of the maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D-1557).
- Fills in rear yard areas only shall be compacted, but the compaction criteria may be reduced to 88% at maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D-1557).

REQUIRED NOTES FROM THE "MODEL SEDIMENT & EROSION CONTROL REGULATIONS"

- All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33%).
- Temporary siltation control measures (structural) 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.
- 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 recommendation.
- 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.
- All lots shall be seeded and mulched at the minimum rates defined in Appendix "A" of the Model Sediment & Erosion Control Regulations 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.

All filled places under proposed storm and sanitary sewer lines and/or paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D-1557). All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations.

All filled places in proposed and existing St. Charles County roads (highways) shall be compacted from the bottom of the fill up to 90 percent maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D-1557). Paved areas in cuts shall meet the same compaction requirements. All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations.

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, Missouri.

All trash and debris on-site, either existing or from construction must be removed and disposed of off-site.

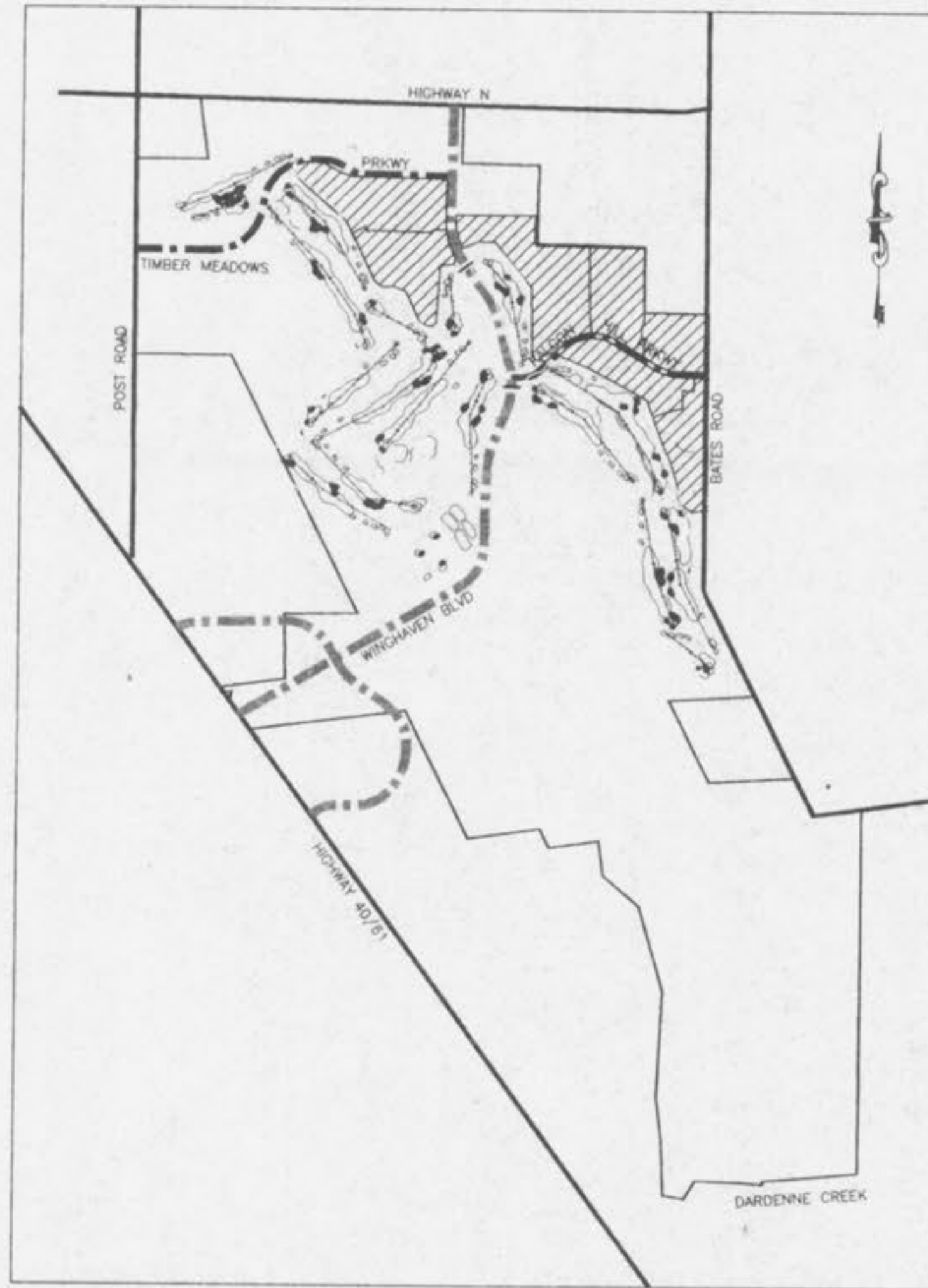
Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.

Soft soils in the bottom of banks of any existing or former pond sites, tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to used as fill. None of this material should be placed in proposed public right-of-way locations or any storm sewer location.

No building permits, except for those on the display plat, will be issued by the City of O'Fallon until construction plans are approved and the final plat is recorded.

A GRADING PLAN FOR WINGHAVEN PHASE I (RESIDENTIAL)

PART OF U.S. SURVEY NO. 1669 AND PART OF SECTIONS 11 & 12
TOWNSHIP 46 NORTH, RANGE 2 EAST
CITY OF O'FALLON, MISSOURI



LOCATION MAP

EXISTING	LEGEND	PROPOSED
---+500---	STRUCTURES	---+(500)---
500	SPOT ELEVATION	---(500)---
-----	CONTOURS	
-----	BUILDING LINE	
-----	PROPERTY LINE	
-----	CENTER LINE	
-----	SWALE	
-----	STORM SEWER	
-----	SANITARY SEWER	
---4" G---	GAS MAIN	---(4" G)---
---6" W---	WATER MAIN	---(6" W)---
---OT---	OVERHEAD TELEPHONE	---(OT)---
---FO---	FIBER OPTIC	---(FO)---
---CATV---	CABLE TELEVISION	---(CATV)---
---OE---	OVERHEAD ELECTRIC	---(OE)---
---UE---	UNDERGROUND ELECTRIC	---(UE)---
---UT---	UNDERGROUND TELEPHONE	---(UT)---
FL 510.00	FLOW LINE ELEVATION	FL 510.00
INV 520.00	INVERT ELEVATION	INV 520.00
G 515.00	FLOW LINE ELEV. AT GUTTER	G 515.00
TC 515.50	TOP OF CURB ELEV.	TC 515.50
CI [] AI	CURB INLET/AREA INLET	CI [] AI
[] GI	GRATED INLET	[] GI
○ MH	MANHOLE	○ MH
△ FES	FLARED END SECTION	△ FES
DCI [] DAI	DOUBLE CURB INLET/AREA INLET	DCI [] DAI
CO	CLEANOUT	CO
WVWM	WATER VALVE OR METER	WVWM
GVGM	GAS VALVE OR METER	GVGM
FH	FIRE HYDRANT W/VALVE	FH
UP-PP	UTILITY OR POWER POLE	UP-PP
---	GUY WIRE	---
○ L	LIGHT STANDARD	○ L
TB TP	TELEPHONE BOX OR PEDESTAL	TB TP
□ SB	SIGNAL BOX	□ SB
H	SIGNS (NOTE TYPE OF SIGN)	H
⊕	HANDICAPPED	⊕
B-1	BENCHMARK	B-1
⊕	SOIL BORING	⊕
---	RAILROAD	---
---	FENCE (NOTE TYPE OF FENCE)	---
---	STRAW BALE BARRIER OR SYNTHETIC FILTER BARRIER TO BE REMOVED	---
12' +	TREE	12' +
(A)	SANITARY SEWER STRUCTURES	(B)
(1)	STORM SEWER STRUCTURES	(2)

ELEVATION REFERENCE MARK:
RM36 ELEV. 501.92 - CHISELED SQUARE ON TOP OF SOUTHWEST WINGWALL AT EAST END OF WESTBOUND U.S. HIGHWAY 40 BRIDGE OVER DARDENNE CREEK

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APPROVED
5/12/98
Jan Culler

DEVELOPER:
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A GRADING PLAN FOR WINGHAVEN PHASE I
PART OF U.S. SURVEY NO. 1669
AND PART OF SECTIONS 11 & 12
TOWNSHIP 46 NORTH, RANGE 2 EAST
CITY OF O'FALLON, MISSOURI

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St. Charles, Missouri

KdG

DISCLAIMER OF RESPONSIBILITY
I hereby certify that the documents attached 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.

NO.	DATE	PER	FINAL PLAN
1	04/08/98	PER	FINAL PLAN
2	04/20/98	CITY	COMMENTS

PROJECT NO. 970231 CONTRACT NO. 0002&0004
DRAWN FPB CHECKED SYE
DATE 10/31/97

COVER SHEET
SHEET 1 OF 25
C2