1. 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

2. The grading contractor shall perform a complete grading and

3. The Contractor shall notify the Soils Engineer at least two

days in advance of the start of the grading operation.

4. All areas shall be allowed to drain. All low points shall be

sediment control basins and/or straw bales should be

5. A sediment control plan that includes monitored and maintained

implemented as soon as possible. No graded area is to be

building or structure which is scheduled to be razed for this

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

bushes, shrubs, and weeds; the grubbing and removal of roots

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.

impact type drum rollers acceptable to the Soils Engineer. The

allowed to remain bare without being seeded and mulched.

Care should be exercised to prevent soil from damaging

adjacent property and silting up existing downstream

6. Debris and foundation material from any existing on-site

must be removed and properly disposed of off-site.

right-of-way locations or on any storm sewer locations.

9. Site preparation includes the clearance of all stumps, trees,

and other surface obstructions from the site; and the

10. Compaction equipment shall consist of tamping rollers,

pneumatic-tired rollers, vibratory roller, or high speed

layered fill without proper blending of successive fill

roller shall be designed so as to avoid the creation of a

11. The Soils Engineer shall observe and test the placement of the

fill to verify that specifications are met. A series of fill

reports showing fill quality will be made to the Owner at

12. The Soils Engineer shall notify the Contractor of rejection of

rework the rejected portion of fill and obtain notification

from the Soils Engineer of its acceptance prior to the

13. All areas to receive fill shall be scarified to a depth of not

The fill shall be loosely placed in horizontal layers not

be responsible for determining the acceptability of soils

14. The sequence of operation in the fill areas will be fill,

15. The surface of the fill shall be finished so that it will not

Fill and backfill should be compacted to the criteria

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.

exceeding 8 inches in thickness and compacted in accordance

placed. Any unacceptable soils placed shall be removed at the

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

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

continue when the temperature is such as to permit the layer

Moisture content must be within 2 percent below or 4 percent

above optimum moisture content if fill is deeper than 10 feet.

MINIMUM

90%

90%

88%

88%

90%

90%

PERCENT COMPACTION

not be placed on frozen ground, nor shall filling operations

operation in the remaining areas are from 2 to 8 percent above

with the specifications given below. The Soils Engineer shall

less than 6 inches and then compacted in accordance with the

a lift of fill or portion thereof. The Contractor shall

density tests will be determined on each lift of fill. Interim

demolition and removal of any man-made structures. The

development must be disposed of off-site.

compaction operation as shown on the plans, stated in these notes, or reasonably implied there from, all in accordance

with the plans and notes as interpreted by the Geotechnical

grading and backfilling operations.

provided with temporary ditches.

storm drainage system.

regular intervals.

placement of additional fill.

Contractor's expense.

the optimum moisture control.

under placement to freeze.

specified in the following table:

Fill other than building areas

Natural subgrade

Pavement subgrade

Pavement base course

CATEGORY

Fill in building areas below footings

Fill under slabs, walks, and pavement

by modified Proctor Test (ASTM-D-1557).

A TRACT OF LAND BEING PART OF "DARDENNE FARMS PLAT THREE" A SUBDIVISION ACCORDING TO THE PLAT THERETO RECORDED IN PLAT BOOK 27, PAGE 77 OF THE ST. CHARLES COUNTY RECORDS, PART OF U.S. SURVEY 67, PART OF FRACTIONAL SECTION 9, AND PART OF SECTION 4, TOWNSHIP 46 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

## GENERAL NOTES

Charge V

- 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
- 2. All manhole tops & flowlines built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
- 3. 8" P.V.C. sanitary sewer pipe shall meet the following standards. A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- All trash and debris on site, either existing or from construction, All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% maximum density as determined 8. Soft soil in the bottom and banks of any existing or former pond by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All filled places within public roadways shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test AASHTO T-99, Method C" (A.S.T.M.-D-698).
  - 5. 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). All trench backfills shall be water jetted.
  - All sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
  - 7. No area shall be cleared without the permission of the Project
  - 8. All P.V.C. sanitary sewer is to be SDR-35 or equal with clean 1/2" to 1" granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to the springline of the pipe. Immediate backfill over pipe shall consist of same size "clean" or minus stone from springline of pipe to 6" above the top of pipe.
  - 9. All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
  - Easements shall be provided for sanitary sewers, and all utilities on the Record Plat. See Record Plat for location and size of
  - 11. Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
  - 12. A 25' building line shall be established along all Public Rights-Of-Way.
  - All water lines shall be laid at least 10 feet horizontally, from any sanitary sewer, storm sewer, or manhole. 18" vertical clearance from outside of pipe to outside of pipe shall be maintained wherever water lines must cross sanitary sewers, laterals, or storm drains the water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally, of any sewer or drain it crosses.
  - 18. All PVC water pipe shall conform to A.S.T.M.-D-2241, SDR 21 Standard Specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water, with approved joint.
  - 19. Water lines, valves, sleeves, meters, and fittings shall meet all specifications and installation requirements of Public Water Supply District No. 2 of St. Charles County.
  - 20. All water hydrants and valves shall be ductile iron and installed in accordance with plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. Specification CC-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. Specification C-111.
  - 21. All sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)E.
  - 22. Brick will not be used in the construction of sanitary sewer manholes.
  - 23. All pipes shall have positive drainage through manholes. No flat base structures are allowed. 24. The City of O'Fallon and Ducket Creek Sanitary District shall be notified
  - 48 hours prior to construction for coordination and inspection. 25. Gas, water and other underground utilities shall not conflict with the
  - depth or horizontal location of existing or proposed sanitary or storm sewers, including house laterals.
  - 26. All existing site improvements disturbed, damaged or destroyed shall be 51. City approval of the construction site plans does not mean that single family and repaired or replaced to closely match pre-construction conditions.
  - Measured as a percent of the maximum dry density as determined 27. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
    - 28. All construction and materials shall conform to the current construction standards of the City of O'Fallon and Ducket Creek Sanitary District.
    - 29. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.



28. All construction and materials shall conform to the current construction standards of the City of O'Fallon and Ducket Creek Sanitary District.

29. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under povement areas.

30. All existing areas disturbed during construction of the off-site sanitary sewer line shall be seeded and mulched to prevent erosion. 31. All sanitary sewer laterals shall be a minimum of 4" in diameter per

City of O'Fallon. 32. No flushing hydrants or water meters shall be located in driveways and or walkways.

33. Concrete pipe for storm sewers shall be Class III, A.S.T.M. C-76 with a minimum diameter of 12" except in the R.O.W. it shall be 15".

34. The ADS N-12 pipe shall have a smooth interior wall.

35. Concrete pipe joints shall be MSD type "A" approved compression—type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe, using flexible, watertight, rubber-type gaskets (A.S.T.M.-C-443). Band-type gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.

36. When HDPE pipe is used, City of O'Fallon specifications or manufacturers specifications, which ever are more stringent, shall be followed.

37. The use of High Density Polyethylene Corrugated pipe, ADS N-12 or equal will be permitted as an acceptable alternative to reinforced concrete pipe, ADS N-12 HC shall be used for all ADS pipe greater than 36". Pipe shall meet A.S.T.M.-D-2321 and A.A.S.H.T.O. M-294-291.

38. All flared end sections and inlet structures will be concrete.

39. All storm sewer pipe installed in the Public Right-of-Way shall be Reinforced concrete Class III pipe.

40. All concrete pipe or ADS N-12 pipe shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer.

41. All Fire Hydrants and Water Meters shall not be located in driveways and/or sidewalks.

 All creek crossings shall be grouted rip-rap as directed by District inspectors. (All grout shall be high slump ready—mix concrete.)

43. Existing sanitary sewer service shall not be interrupted.

44. Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission—type couplings will not be allowed.

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

No slopes shall exceed 3(H): 1(V).

47. Driveway locations shall not interfere with the sidewalk handicap ramps in the cul-de-sacs.

48. No parking on one side of Fallon parkway per City of O'Fallon requirements. City of O'Fallon to verify locations.

49. Developer must supply City construction inspectors with soil reports prior to or during site soil testing if reports have been prepared for the project. 50. All storm inlets must be installed with a 5/8" trash bar.

building setbacks as required by the Zoning Code. 52. All signposts, sign backs and bracket arms shall be painted black using Carboline Rustbound penetrating sealer SG and Carboline 133 HB paint

(or equivalent as approved by the City). 53. Proposed rip rap pads will be evaluated for effectiveness at reducing erosion in the creek area, additional pad area may be required where erosion is observed.

two family dwellings units can be constructed on the lots without meeting the

54. 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 electric which will be overhead. acceptance of the work by the owner and/or the City of O'Fallon. The contractors responsibilites include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of O'Fallon may at their option direct the contractor in 18 Additional lighting may be required by the City of O'Fallon. his methods as deemed fit to protect property and improvements. Any 19. The following lots are susceptible to street movement: 594, 595, 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 City of O'Fallon.

> VEGETATIVE ESTABLISHMENT For Urban Development Sites APPENDIX A

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) - 120 lbs./ac. (2.75 lbs. per square foot) Fescue or Brome - March 1 to June 1 August 1 to October 1 Wheat or Rye - March 15 to November 1 March 15 to September 15 Mulch Rates: 100 lbs. per 1,000 sq. feet (4,356 lbs. per acre)

Seeding Rates:

Tall Fescue - 30 lbs./ac.

Permanent:

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

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

## REFERENCE BENCHMARK

R.M. #74 - ELEV.=493.07 (U.S.G.S. DATUM) CHISELED SQUARE ON TOP OF EAST CONCRETE HEADWALL OF BIRDIE HILLS ROAD BRIDGE OVER TRIBUTARY NO. 2 (APPROXIMATELY 500 FEET SOUTH OF EISENHOWER DRIVE)

## SITE BENCHMARK

OLD CROSS CL-CL CHRISTINA MARIE DRIVE AND JACQUELINE CIRCLE KENSINGTON PLACE SUBDIVISION

-800-DIG-RITE



98.44 Acres (Total Site) 14.70 Acres (Plat Seven) 22.25 Acres (Plat Eight) 23.81 Acres (Plat Nine) R-1 (City of O'Fallon) Single Family Homes

29 Lots (Plat Seven)

43 Lots (Plat Eight) 61 Lots (Plat Nine) 5. The proposed height and lot setbacks are as follows: Minimum Front Yard: 25 feet Minimum Side Yard: 6 feet Minimum Rear Yard:

1. Area of plat:

2. Proposed Zoning:

4. Number of Lots Proposed:

3. Proposed Use:

25 feet 10,000 square feet Minimum Lot Area: Maximum Height of Building: 2 1/2 stories or 35 feet 6. Current Owner & Developer of Property:

TJC Development, Inc. 631 Avondale Drive St. Peters, MO 63376 7. Site is served by: Duckett Creek Sanitary District AmerenUE

St. Charles Gas Company St. Charles County Public Water District No. 2 Verizon Telephone Company Fort Zumwalt School District O'Fallon Fire Protection District

8. Flood Plain exists on this site per F.I.R.M. #29183 C 0239E, dated Aug. 2, 1996. See plan for limits of the 100 Year Flood Plain and the 100 Year Floodway. 9. Topographic information is per aerial topography by Walker &

Associates and field topography by Bax. Engineering Co. Inc. Boundary information is per Bax Engineering during June, 1999. All local streets will be constructed to City of O'Fallon standards. Streets will consist of 26 foot wide concrete pavement with integral rolled curb centered in a 50 foot right-of-way.

Minimum radius shall be 150 feet. 12. All cul-de-sacs and bubbles will have pavement radii of 42 feet with right-of-way radii of 54 feet. Street intersections shall have a minimum rounding radius of 25 feet with pavement radii

 Minimum street grades shall be 1%. 14. A 4 foot wide concrete sidewalk shall be constructed on one side of streets where indicated.

15. All homes shall have a minimum of 2 off-street parking places with 2-car garages.

16. All utilities must be located underground. Except for 3 phase

17. The developer realizes that they will comply with current Tree Preservation Ordinance Number 1689 and provide landscaping as set forth in Article 23 of the City of O'Fallon Zoning Ordinances. 596, 597, 598, 599, 600, 601, 604, 605, 607, 687, 688, 689, 690, 692, 699, 705, 706, 707, 708, 709, 716, 720, 721.

Calculations in accordance to the Tree Preservation Ordinance: (For Entire Development) Existing trees

15.92 acres x 20% 3.18 acres Saved trees 2.92 acres Trees removed 13.15 acres

Trees Replaced - 0.26 acres x 15 Trees/acre=4 Trees

(Street Tree Requirements for 72 Lots) 1 Tree per lot & 2 per corner lot = 86 Trees 21. Detention for this development to be provided by Retention

Basins "A" and "B". 22. Corner lots along Fallon Parkway (Collector Road) shall have driveway access to secondary streets only.

23. Parking will not be allowed on the north side of O'Fallon Parkway. 24. All proposed fencing requires a separate permit through the Planning Division. Fencing is not proposed in these plans.

25. All proposed signs must be approved separately through the Planning Division. 26. All existing creeks and streams will have an associated storm

water easement that will be provided on the Record Plat. 27. Sidewalks, curb ramps, and accessible parking spaces shall be constructed in accordance with the current approved "American with Disabilities Act Accessibility Guidelines" (ADAAC) along with the required grades, construction materials, specifications and signage. If any conflict occurs between the above information and the plans the ADAAC guidelines shall take precedence and the contractor prior to any construction shall notify the Project

28. Written verification of compliance with the construction plans shall be required by the Developer per section 405.120 of City of O'Fallon Code.

29. Street trees to have a minimum of 2" caliper per O'Fallon standards. Species to be selected by homebuilder from O'fallon Tree Planting Guide. Street trees to be maintained by the Home Owner's Association per subdivision C.C. & R.'s. 30. Where ground is disturbed within the 60' wide drainage easement

permanent hardy vegetation shall be established. SHEET INDEX

PAVEMENT DETAILS

CONSTRUCTION DETAILS

WATER DETAILS

COVER SHEET SITE PLANS 2 - 3GRADING PLANS 4-56-7 WATER PLANS 8-9 STREET PROFILES WARPING DETAILS 11-12 SANITARY SEWER PROFILES 13-14 STORM SEWER PROFILES 15-16 DRAINAGE AREA MAPS

17-18

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20-23

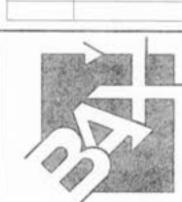
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SCLANER OF RESPONSESSITY hereby specify that the documenté estandes o be outsesticated by my seal are limited to his sheet, and I hereby disclaim any respon-bility for el atter throwings. Specifications.



Box Engineering Company, In: All Rights Reserved REVISIONS 7/3/03 CITY COMMENTS 7/23/03 D.C.S.D. COMMENTS 8/8/03 CITY COMMENTS



ENGINEERING PLANNING SURVEYING

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

05-12-03 95-7230S PROJECT NUMBER SHEET OF FILE NAME: DRAWN DESIGNED CHECKED