

EARTHWORK NOTES

BULK CUT= 19,000 ± CUBIC YARDS
 BULK FILL= 22,500 ± CUBIC YARDS (unadjusted)
 10" BUILDING SUBGRADE AND SLAB
 11" FOR ALL PMT. AREAS
 NO SHRINKAGE
 THE ABOVE QUANTITIES DO NOT INCLUDE TOPSOIL MATERIAL.

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL.

THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS LESS THAN TWENTY-FOUR INCHES IN DIAMETER, STANDARD MANHOLES; PROCESS OR TRANSFER PIPING; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO UNSUITABLE MATERIAL WHICH MUST BE REMOVED FROM SITE.

THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities have been plotted from available information and therefore location 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 improvements.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- All fill including places under proposed storm and sanitary sewer lines and 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 D1557). All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proofrolling and compaction.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plot.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
- All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- All creek crossings shall be grouted rip-rap as directed by District Inspectors. (All grout shall be high slump ready-mix concrete).
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.

GENERAL NOTES

- BOUNDARY AND TOPOGRAPHIC SURVEY BY STOCK & ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY SURVEY AND RECORD INFORMATION. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO GRADE SHALL EXCEED 3:1 SLOPE.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE ARE UNDERGROUND.
- ALL EXTERNAL UTILITY EQUIPMENT SHALL BE SCREENED.
- HANDICAP STALL LOCATIONS ARE TO BE DETERMINED AND COORDINATED WITH THE CITY OF FALLON.
- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOILS REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
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- ALL FILLS PLACED UNDER PROPOSED STORM AND SANITARY SEWER AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST ASHTO T-99.
- ALL LOW PLACES WHETHER ON-SITE OR OFF-SITE SHOULD BE GRADED TO ALLOW DRAINAGE. THIS CAN BE ACCOMPLISHED WITH TEMPORARY DITCHES. ANY OFF-SITE DRAINAGE EASEMENTS WILL BE ACQUIRED BEFORE GRADING BEGINS.
- THIS SITE IS LOCATED IN ZONE "X". TAKEN FROM F.I.R.M. NO. 29189C0120H - 8/2/96.
- COVERAGE CALCULATIONS:
 SITE AREA (EXCLUDING LOTS 1-5) 8.66 ACRES ±

BUILDING A:	21,805 S.F.
BUILDING B:	38,286 S.F.
TOTAL BUILDING AREA:	60,091 S.F.
PARKING:	
BUILDING A:	● 5.5 / 1,000 sf 120 P.S.
BUILDING B:	● 5.5 / 1,000 sf 211 S.F.
TOTAL PARKING REQUIRED:	331 P.S.
TOTAL PARKING PROVIDED:	331 P.S.
PARKING RATIO PROVIDED:	8.27 / 1,000 S.F. (+0 P.S.)
PARKING STALL SIZE	9' x 19'
AISLE WIDTH	25'
LOT COVERAGE:	
TOTAL SITE AREA:	377,231 S.F.
BUILDING:	60,091 S.F. (16%)
PAVEMENT:	193,612 S.F. (51%)
EX LAKE	25,846 S.F. (7%)
TOTAL SITE LANDSCAPE AREA:	97,682 S.F. (26%)
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INTERIOR PARKING LANDSCAPE AREA:	22,220 S.F. (11.5%)
INTERIOR PAVEMENT	

RETAINING WALL NOTES:

- ALL CONSTRUCTION SHALL BE PER THE MANUFACTURERS RECOMMENDATION.
- SHOP DRAWINGS BEARING THE SEAL OF A REGISTERED ENGINEER IN THE STATE OF MISSOURI TO BE SUPPLIED TO THIS ENGINEER FOR APPROVAL.
- TYPE OF WALL SELECTED TO BE COORDINATED BY OWNER, CONTRACTOR, AND ENGINEER.
- TW= TOP OF RETAINING WALL, BW= GRADE AT BASE OF WALL.
- RETAINING WALL DESIGN SHALL BE SUBMITTED TO THE GOVERNING AGENCY.
- THE WALL ELEVATION INFORMATION IS FOR CONCEPT ONLY. ACTUAL DESIGN OF RETAINING WALL SHALL BE BY A LICENSED PROFESSIONAL ENGINEER & SUBMITTED TO STOCK AND ASSOCIATES FOR GENERAL COMPLIANCE W/ GRADING PLAN.
- REFER TO GEOTECHNICAL REPORT BY MIDWEST TESTING, DATED 11/12/02, FOR WALL DESIGN CRITERIA.
- RETAINING WALL DESIGN/BUILD CONTRACTOR TO SUBMIT SEPARATE DESIGN DRAWINGS TO O'FALLON FOR APPROVAL OF THE RETAINING WALLS PRIOR TO CONSTRUCTION.

ST. LOUIS COUNTY PROJ. 03/19/03

GENERAL NOTES:

- Do not scale drawing. Follow dimensions.
- Material shall be either zinc-coated steel, aluminum-coated steel, aluminum alloy, or vinyl-coated steel fencing.
- Weights of materials shown in table are for steel. Sizes shown are applicable for all materials.
- Post shall be used at sharp breaks in vertical grade or at approximate 500 centers on straight runs or as directed by the engineer.
- Drilled holes in solid rock shall provide a diameter of not less than one inch greater than the maximum transverse dimension of the post section.
- Alternate for Top Rail and Brace (A) may be 1/2" x 3/8" x 10' x 100' at 1.55 pounds per foot (tolerance -5% + no limit).
- Concrete for footings shall be Class B. A quick setting polyethylene film may be used in lieu of concrete for line post or line post may be driven as shown on the plans.
- Gate slope and the direction of swing shall be as shown on the plans.
- For description of materials and installation requirements refer to Standard Drawing C60711 entitled "Chain-Link Fence".

LEGEND:

- (A) Fabric
- (B) End Corner or Post Post
- (C) Line Post
- (D) Gate Post
- (E) Top Rail & Brace
- (F) Truss Rod
- (G) Gate Frame
- (H) Stretcher Bar - 1/4" x 3/4" Pl.
- (I) Stretcher Bar Band
- (J) End or Corner Clamp
- (K) Post Top - other than Line Post
- (L) Fabric Ties
- (M) Line Post Taps
- (N) 1/2" Fabric Height or as recommended by Mfg.
- (O) Expansion Sleeve

ST. LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC CLAYTON, MISSOURI

CHAIN-LINK FENCE

APPROVED: *George M. Stock* DIRECTOR
 DATE: JAN 11 1999

DRAWING C607.10

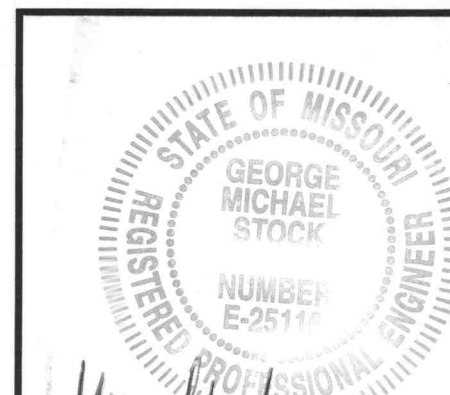
- FENCE NOTES:**
- CHAIN LINK FENCE TO BE BLACK VINYL COATED.
 - MAX. HT. 48".

03/19/03 O'FALLON COMMENTS
 01/08/03 DCSD COMMENTS

LAKESIDE SHOPPES SPECIFICATION SHEET

STOCK & ASSOCIATES CONSULTING ENGINEERS, INC.

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