SITE IMPROVEMENT PLANS
FOR
SKILLED CARE EXPANSION

DATE: 01/29/08

ABBREVIATIONS

AI	– Area Inlet	Gr MH	– Grate Manhole
AI	– Area Inlet	L	– Length of Curve
Asph Lot	– Asphalt Lot	Lt	– Street Light
B/B	– Back to Back	MH	– Manhole
Brk	– Break	MH	– Manhole
C-Pvmt	– Concrete Pavement	MHTD R/W Mrkr	– MHTD R/W Marker
CB	– Catch Basin	N/F	– Now or Formerly
CB	– Catch Basin	Nail	– Set 60d Nail
CI	– Curb Inlet	OHE	– Overhead Electric
CMP	– Corrugated Metal Pipe	OHE&T	– Overhead Eclectic & Telephone
CO	– Cleanout	OS	– Outfall Structure
CP	– Concrete Pipe	PB	– Plat Book
CTV	– Cable Television	PG	– Page
ChB	– Chord Bearing	PL	– Property Line
Conc	– Concrete	PVC	– Polyvinyl Chloride Pipe
Cor	– Corner	R	– Radius
DB	– Deed Book	R/W	– Right of Way
DCB	– Double Catch Basin	RCP	– Reinforced Concrete Pipe
DCB	– Double Catch Basin	Roll Cb	– Rolled Curb
DFL(N)	– Drop FL from North	SS	– Side Station
DIP	– Ductile Iron Pipe	San MH	– Sanitary Manhole
Ditch	– Ravine/Ditch	Sig Box IG	– Signal Control Box–Inground
E	– Electric	Sm	– Small
E.	– Edge	T JB	– Telephone Junction Box
F/F	– Face to Face	TB	– Top of Bank
FES	– Flared End Section	TBR	– To Be Removed
FF	– Finish Floor	TBR&R	– To Be Removed & Replaced
FH	– Fire Hydrant	TBRel	– To Be Relocated
FL	– Flowline	TC	– Top Curb
FL 12"	– Flowline 12 In	TS	– Toe of Slope
FL 18"	– Flowline 18 In	Trans Pad	– Transformer Pad
FL 48	– Flowline 48 In	Typ	– Typical
FS	– FS Station	UGE	– Underground Electric
Fd C IP	– Found Capped Iron Pipe	UGFO	– Underground Fiber Optic
Fd Cross	– Found Cross	UGT	– Underground Telephone
Fd IP	– Found Iron Pipe	UIP	– Use In Place
Fen	– Privacy Fence	VCP	– Vitrified Clay Pipe
GI	– Grate Inlet	W	– Water Service
GI	– Grate Inlet	WV	– Water Valve

General Construction Notes

1. Any disturbed off site property (e.g. bushes, fences, mailboxes, etc.) shall be replaced, in kind, at the developer's expense.
2. All existing on-site structures, sidewalks, concrete or asphalt surfaces, curbing, utility poles, sewer structures, utility services, fences, trees, shrubs, and debris noted for removal on the drawings shall be demolished and removed from the site and properly disposed of all in a manner approved by the regulating governmental agencies.
3. Contractor shall be responsible for determining the amount of removals, demolition, clearing and grubbing, stripping of vegetation, pavement breaking, and hard off.
4. Contractor shall be responsible for coordinating and providing all services and fees necessary to obtain the required building demolition permits and for fees by the various utilities associated with the disconnection and termination of their services.
5. Contractor shall obtain all necessary state and local permits required for hauling and disposal of demolition, clearing, and non-suitable materials from the project site. Hauling methods and conditions of the permit shall be strictly adhered to.
6. Contractor shall preserve and protect from damage all existing improvements that are not to be removed within the project limits or adjacent thereto as a result of their activities in the performance of work.
7. At areas of existing west and south drive where construction traffic is permitted, all asphalt concrete curbs, and sidewalk removed for construction or access or otherwise damaged during construction are to be replaced and re-striped for parking to match existing conditions. See specification book, volume 1
8. Contractor is to locate all existing underground components and utilities, (ie. Power, sewer, lawn irrigation, etc.) Any damage to existing utilities, light fixtures, etc. must be repaired or replaced and remain operational during construction.
9. Any rock or gravel used onsite for temporary parking or temporary access shall be coordinated with owner for location. The rock shall be removed upon completion of the project.

SITE / PAVING NOTES:

1. Site addresses shown are on South Outer 364, O'Fallon, Missouri 63304.
2. Area of Tract = 24.44 Acres
3. Existing Zoning C-O Office District w/CUP
4. Proposed Uses: Phase 1-Skilled Nursing Facility, Phase 2–Independent/Assisted Living Housing, Phase 3-Expansion of Skilled Nursing Facility, Phase 4-Outparcel.
5. Dimensions shown on plan are to back of curb, unless otherwise noted.
6. All entrances and service drives shall be 4" Type C asphalt concrete pavement on 8" Type 1 aggregate base. Stabilization fabric such as Mirafi 600X shall be used between earth subgrade and aggregate base course on all asphalt pavement. The 4" Type C asphaltic concrete pavement shall be installed in two 2 1/2" & 1 1/2" thick lifts. The last lift shall be installed immediately prior to completion of improvements.
7. Concrete slabs shall be constructed of 8" Portland cement concrete pavement with 4" Type 1 aggregate base.
8. Sidewalks shown on plan shall be constructed on a minimum of four (4") inches of Type 1 aggregate base course.
9. Paint used for pavement striping shall be Sherwin-Williams "Pro-Mar" Traffic Marking Paint, Series B29.Y.2 or Glidden Traffic Paint #63228. Color of paint shall be white.
10. Traffic signage shown shall conform to standards established by the Federal Highway Administration in their "Manual on Uniform Traffic Control Devices" or MoDOT, whichever is more stringent. Signs installed in concrete pavement shall be installed using 3" diameter by 12" long sleeves and non-shrink grout.
11. Site paving contractor shall be responsible for furnishing and installing traffic control and informational signage, and pavement striping.
12. All curb shall be vertical concrete curb unless otherwise noted. Curb radii shall be 5 feet unless otherwise noted.
13. Contractor shall guarantee paving for one year after final completion of construction against settlement, low spots or raveling out of surface. Make any repairs necessary during guarantee period to maintain paving in original condition, including cost of repainting within required areas. Repairs shall include but not be limited to removing defective paving and replacing with new paving. (No overlays will be allowed).
14. All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.
15. See Architectural drawings for all building dimensions, service connections, fence details, special pavement sections and pavement jointing patterns, etc.
16. Site is served by the following:
    Duckett Creek Sanitary District
    Ameren U.E. Electric Co.
    St. Charles Gas Co.
    Public Water Supply District No. 2 of St. Charles
    Verizon Telephone Co.
    Fort Zumwalt School District
    O'Fallon Fire Protection District
    City of O'Fallon
    Contractor shall contact all agencies for utility locates prior to construction.
17. Parking Required:
    Skilled Nursing Facility 1 Space per 3 beds 240/3=80
    1 Space per 2 employees 79/2=40
    Total Required (Phase 1) 120
    Total Provided (Phase 1) 136
    Independent/Assisted Living 1 Space per unit=163
    Total Required (Phase 2) 163
    Total Provided (Phase 2) 203
    Total Handicap Spaces Required = 9
    Total Handicap Spaces Provided = 10
18. Site Coverage Calculations.
    Building Coverage 20%
    Pavement Coverage 24%
    Total Site Coverage 44%
    Green Space 56%
19. Sidewalks, curb ramps, ramp 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 a 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 Engineer.
20. Sign locations and sizes must be approved separately through the Planning Division.
21. All proposed fencing requires a separate permit through the Planning Division.
22. All light poles to be located within landscaped islands.
23. 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 City and MoDOT). Signs designating street name shall be on the opposite side of the street from traffic control signs.

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 pre-construction 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 proof-rolling 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 plat.
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 in the construction of sanitary or storm sewers.
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 GRADING NOTES:

1. Underground facilities, structures and utilities have been plotted from available surveys, records and information, and, therefore, do not necessarily reflect the actual existence, non-existence, size, type, depth, number or location of these facilities, structures and utilities. The contractor shall be responsible for verifying the actual location of all underground facilities, structures and utilities, either shown or not shown on these plans. The underground facilities, structures and utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.
2. Contractor to notify Engineer as soon as possible if conditions on ground differ from those shown on plans.
3. Contractor shall be responsible for determining the amount of excavation and fill needed to bring the site to the proposed grades.
4. Prior to mass grading, the construction area shall be cleared of trees and vegetation. Topsoil shall be stockpiled for later distribution in landscaped areas.
5. Areas disturbed by grading operations shall be protected by seeding and mulching as soon as possible.
6. A fast germinating annual such as rye grasses or sudan grasses shall be seeded in graded areas within one week of rough grading the site.
7. The upper 8" of landscaped berms and garden areas shall be graded using stockpiled topsoil. This work shall be performed immediately after rough grading the site.
8. Grading shall be performed to proposed grades shown within a tolerance of +0.10 foot. Grades shown are finish grades. Contractor shall deduct 1.0 foot for pavement areas and 0.67' for building slabs and sidewalk.
9. No slope shall exceed 3 horizontal to 1 vertical.
10. All grading and excavation work shall adhere to the recommendations of the geotechnical engineer as described in the "Exploration of Subsurface Conditions and Foundation Recommendations" prepared by Shannon & Wilson for Delmar Gardens dated September, 2001.
11. Curb heights are 6" above pavement except where noted by specific top of curb (TC) and top of pavement (TP) spot elevations. Curb heights at handicap paving stalls to be transitioned to zero.
12. Grading is limited to the project site, except along the north property line where grading should extend into Missouri Dept. of Transportation right of way for Page Avenue sufficient to provide the specified elevations along the property line.
13. Cut areas shall be scarified to a depth of 8", compacted, and proof rolled with a fully-loaded tandem axle truck immediately prior to placing additional fill or placing aggregate base course. Proof rolling will be for the purpose of locating any soft areas requiring further remediation. Fill material shall be spread in horizontal layers not to exceed 8", loose measure, and compacted to 92% of maximum dry density as determined by AASHTO Modified Proctor Test (ASTM D1557).
14. Site Benchmark Elevation: 544.92' (USGS)
    Top of sanitary manhole, 40 feet northwest of rear lot corner 46B/47B, Twin Chimneys "Lindenwood Village II" per Duckett Creek as-builts.
15. MoDOT Benchmark Elevation: 582.41
    Spike in 0, 35' Rt. of exist. Sta. 172+50 @ P.E. to house mailbox #669/8 O. 70 mi. N.W. junction route "K" & "N" along Route "N".
16. By graphic plotting only, a portion of this property is in Zone "X" (an area defined as being subject to a 500 year flood) of Flood Insurance Rate Map, Community Panel Number 19183C0240E and 29183C023E, effective date: August 2, 1996. The balance of the site is outside of the 500 year floodplain. The portion within the 500 year floodplain is proposed to be filled.
17. Developer must supply City construction inspectors with soil reports prior to or during site soil testing. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City: Maximum dry density, optimum moisture content, maximum and minimum allowable moisture content, curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the "Modified ASSHTO T-180 Compaction Test" (ASTM D1157) or from a minimum of 95% as determined by the "Standard Proctor Test ASSHTO T99, Method C" (ASTM D698). Proctor type must be designated on document, curve must have at least 5 density points with moisture content and sample locations listed on document, specific gravity, natural moisture content, liquid limit, plastic limit. Be advised that if this information is not provided to the City's Construction Inspector, the City will not allow grading or construction activities to proceed on any project site.
18. Graded areas that are to remain bare for over 2 weeks are seeded and mulched.
19. Trees, organic debris, rubble, foundations and other deleterious material shall be removed for the site and disposed in compliance with all applicable laws and regulations. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.
20. All fill placed under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 95% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 100% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All fill placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Moisture content of the soil in 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 curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'Fallon.
21. All filled places outside of proposed pavement or utilities shall be compacted to 85% 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 AASHOT T-99.

SHEET INDEX:

C-1 COVER SHEET
C-2 DEMOLITION PLAN
C-3 SITE PAVING PLAN
C-4 GRADING SEWER PLAN
C-5 UTILITY PLAN
C-6 PAVING DETAILS
C-7 UTILITY DETAILS
C-8 STORMWATER POLLUTION PREVENTION PLAN
C-9 STORMWATER POLLUTION DETAILS
C-10 PROPOSED DRAINAGE AREA MAP

LEGEND

- Area Light (w/ 120V Recpt.)
- Connection (Proposed)
- Fire Hydrant
- Concrete
- Doorway Entrance
- Drainage Flow
- Swale
- Water Meter Or Valve
- Gas Meter Or Valve
- Utility Pole w/ Guy Wires
- Handicap Parking Space
- Direction Of Traffic

Existing		Proposed
500	Contour	(495)
+ 500.00	Spot Elevation	(TBR) or (500)
	Sanitary Sewer	
	Storm Sewer	
E	Utility Service (E, T, G, etc.)	(E)

GENERAL SEWER NOTES

1. All sewer construction and materials to be in accordance with the Metropolitan St. Louis Sewer District *Standard Construction Specifications for Sewer and Drainage Facilities, 2000* as adopted, in part or whole, by the City of O'Fallon, Missouri for storm sewers.
2. Contractor to verify horizontal and vertical location and flow line of all existing utilities prior to connection. All connections to be made in accordance with local codes and/or utility companies requirements.
3. The developer is advised that utility companies will require compensation for relocation of their utility facilities within the public road right-of-way. Utility relocation cost shall be considered the developer's responsibility. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of road improvements.
4. Sewers shall be constructed starting at the most downstream end and proceeding upstream. Contractor shall verify the flowline elevation of the downstream structure prior to beginning construction and notify Engineer of any and all discrepancies.
5. The sewer contractor shall coordinate his work with that of the grading contractor so that the overall site work can be completed in the shortest possible time. The sewer contractor shall conduct and phase his work such that drainage and siltation control is maintained at all times.
6. Public and private storm sewer pipe 12" and larger shall be reinforced concrete or ductile iron pipe unless otherwise noted on profiles. Private storm sewer smaller than 12" shall be polyvinyl chloride with solid or double wall corrugations with smooth interior equal to "Ultra-Rib" manufactured by Uponor ETI; or "A-2000" as manufactured by Contech; or ductile iron pipe; or "Sure-Lok F477" as manufactured by Hancor. Other pipe and piping systems will be considered on a case-by-case basis and subject to approval by the Engineer. Sanitary sewer and service laterals are to be polyvinyl chloride, ductile iron pipe, or approved equals acceptable to the Duckett Creek Sewer District. Sanitary service laterals shall be laid on a minimum slope of 2%. Storm drains shall be laid on a minimum slope of 1%. Storm or sanitary pipe which cross under proposed or future buildings shall be ductile iron or concrete encased.
7. Joints for concrete pipe shall be gasketed o-rings meeting ASTM C-443 with a main sealing surface of no less than 3 inches.
8. Sewer structures shall be constructed within 0.10 feet of design elevations for both top and flowline. The top elevation shall be checked by the sewer contractor and adjusted prior to paving operations. Construction exceeding this tolerance is subject to rejection and reconstruction.
9. Top of curb inlets shall be set flush with top of curb where 6" vertical curbs are installed. Top elevations on grates inlets are to the center of the grate. Sewer wyes shall be 8" x 8" x 6" unless otherwise noted. Sewer service lateral tailstake elevations to be at a point located five feet outside of the building wall.
10. All sewers shall be bedded and backfilled to one foot over top of pipe with ¾" minus or clean crusher-run limestone compacted in 8" lifts to 90% of maximum dry density, as determined by the modified AASHTO Compaction Test T-180 (Current A.S.T.M. Specification D-1557), and verified by a Geotechnical Engineer prior to backfilling pipe. Compaction by jetting will only be permitted in landscaped areas.
11. Sewer Contractor shall keep as accurate record of as-built conditions to record any variance from the plans and to indicate the actual "constructed" conditions with particular reference to work which will be subsequently concealed. The Sewer Contractor shall document the location of service wyes, cleanout locations, and service lateral lengths and provide engineer with a copy of this information for incorporating in the sewer as-built drawings. Final payment will be withheld until this information is provided.
12. The Geotechnical Engineer will verify that all compressible material has been removed prior to fill placement and that all fill, under sanitary and storm sewers lines constructed above original grade, has been compacted to a minimum of 90% of AASHTO Modified Proctor test.
13. Adjustment of Manhole and Inlet Structures to grade.
    a. Structures may be raised using courses of brick or approved grade ring(s), provided the total adjustment of the structure does not exceed 12-inches (including existing rings or courses of brick). Structures which will exceed the maximum of 12 inches, the transition section of the structure shall be removed and the bottom section raised using the same material as the existing structure.
    b. Structures may be lowered by removing the transition section and lowering the existing bottom section by saw-cutting the existing cast-in place concrete, removing the required courses of brick, or removing the precast riser section as appropriate.
14. Maintenance of storm sewers designated as "public" shall be the responsibility of the City of O'Fallon. Maintenance of sanitary sewers designated as "public" shall be the responsibility of the Duckett Creek Sanitary District.
15. All storm sewer inlets adjacent to paved areas shall be constructed with subgrade drains. Inlets surrounded by pavement shall be constructed with four subgrade drains. Inlets along curb shall be constructed with three subgrade drains. Immediately prior to paving, ten (10') foot long sections of slotted pipe shall be installed in these drains, extending out underneath the pavement in a radial fashion, along the bottom of the aggregate base course. Pipes shall be wrapped in geotextile filter fabric and backfilled with ¾" clean stone.
16. 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 and off site.
17. Developer must supply City construction inspectors with soils reports prior to or during site soil testing. The soil report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
    - Maximum dry density
    - Optimum moisture content
    - Maximum and minimum allowable moisture content
    - Curve must be plotted to show density from a minimum of 95% Compaction and above as determined by the "Modified ASSHTO T-180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 100% as determined by the "Standard Proctor Test AASHTO T-9, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
    - Specific gravity
    - Natural moisture content
    - Liquid limit
    - Plastic limit
18. Connections at all storm structures to be made with A-lock joint or equal.
19. Provide 5/8" diameter trash bar for all inlets.
20. All sanitary laterals and sanitary mains crossing under pavement must have the proper rock backfill and to required compaction.
21. Depths to hydraulic grade are acceptable. (1'/sill, 2'/top AI).

MoDOT does not participate in the Dig-Rite program.
MoDOT Utilities (314) 340-4100
* Fiber Optics may be present.

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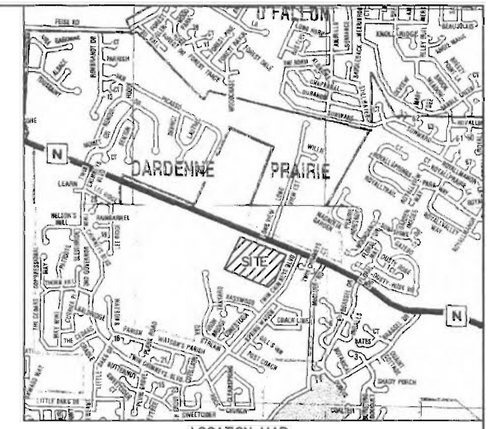
MISSOURI ONE-CALL SYSTEM INC.

Underground facilities, structures and utilities have been plotted from available surveys, records and information, and therefore, do not necessarily reflect the actual existence, non-existence, size, type, number of, or location of these facilities, structures, and utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, and utilities, either shown or not shown on these plans. The underground facilities, structures, and utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.

OWNER INFORMATION:

DELMAR GARDENS ENTERPRISES
14805 North Outer 40 Road, Suite 300
Chesterfield, MO 63017

Contact Name: Ron Dierker
636-733-7000 v
636-733-7010 f



LOCATION MAP
NO SCALE

UTILITY CONSTRUCTION NOTES:

1. All proposed utilities will be located underground.
2. Lighting values will be reviewed on site prior to the final occupancy inspection. Corrections will need to be made if found not to be in compliance with City standards.
3. Electric contractor shall set a new transformer pad in the location shown; shall install conduits and cable between utility pole and transformer pad and between transformer pad and buildings; shall install meter base at transformer all in accordance with Ameren UE's "Specification for Developer Installed Commercial Underground Distribution Facilities" latest revision.
4. Water main, fire and domestic services shall be installed in accordance with standard details and specifications required by the PS Water District #2. New services shall be installed, pressure tested, disinfected and put in service either prior to or at the same time old service is disconnected. New water main and services shall be Class 52 ductile iron pipe conforming to AWWA C-151, C110, and C-111.
5. All water mains to be private. Private hydrants to be painted red in color per Public Water District #2 requirements. Meter and detector vaults to be installed in green space.
6. Grease Trap shall be 1200 gallon, minimum and rated for H-20 loading.
7. Water main, service laterals, and appurtenances shall be located not less than ten feet from storm and sanitary sewer mains, laterals, and appurtenances. Crossings shall be close to right angle and (sewer and water pipe) joints spaced such that they are not less than nine feet from the center of the crossing.
8. In that the water main alignment affects the location of other utilities, sewers, and easements; contractor's failure to construct the mains and appurtenances in the location shown on the plans shall be subject to rejection and the requirement that the water improvements be removed and reconstructed in the proper alignment at contractor's expense.
9. Horizontal and vertical alignment of storm and sanitary sewers shall take precedence over natural gas, electric, telephone and water related improvements.
10. In order to provide frost protection and to coordinate with sewers and utilities, the private water main shall be installed with 42" cover over the top of the pipe. Water mains shall be flushed, pressure and leakage tested, and disinfected prior to being placed in use.
11. Contractor is responsible for determining what bends, tees, reducers, etc. are necessary to complete the project in accordance with PS Water District #2's Standard Specifications for Installation of Water Facilities, Water Main Installation Details. Be advised, purchasing incorrect fittings and/or insufficient number of fittings may cause significant construction delays.
12. Thrust blocks shall be installed at all horizontal and vertical bends and at all tees. Thrust blocks shall bear against undisturbed earth. If undisturbed earth is non-existent or if thrust block will be disturbed by the installation of other utilities and excavation, water main fittings shall be restrained by mechanical means.
13. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public road right-of-way. Utility relocation cost shall be considered the developer's responsibility. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of road improvements.
14. Contractor shall install a 4" PVC pipe to drain the water meter pit into the adjacent gravity storm sewer system.
15. Estimated Sanitary Flow: 15,000 gallons per day.
16. All HVAC and mechanical units on site shall be properly screened as required by City Code. Rooftop units shall be screened by a parapet wall that extends around the entire perimeter of the building; the parapet shall have a minimum height that is at least as tall as the tallest unit mounted on the roof; ground mounted HVAC and mechanical units shall be screened by fencing, vegetation, or some other means (approved by the Planning and Zoning Commission) that has a minimum height that is at least as tall as the tallest unit being screened.

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The signed and sealed original of this drawing is on file at the offices of The Clayton Engineering Company, Inc. The signed and sealed original is the official document and shall take precedence over any digital version.

			BID SET

REVISIONS

CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: _____ DATE: 3-4-08
PROFESSIONAL ENGINEER'S SEAL INDICATES RESPONSIBILITY FOR DESIGN

PLANNING AND ZONING DEPARTMENT
FILE NO. 5001-04
APPROVED DECEMBER 7, 2006

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MICHAEL JAMES VELLOFF NUMBER E-20061018952 MISSOURI

COVER SHEET
SKILLED CARE EXPANSION
Highway N and Twin Chimneys Boulevard O'Fallon, Missouri 63366
Prepared for:
DELMAR GARDENS ENTERPRISES, INC.
14805 North Outer 40
Chesterfield, MO 63017
636-733-7000

the clayton engineering company, inc.
ENGINEERS • SURVEYORS • PLANNERS
11920 WESTLINE INDUSTRIAL DRIVE
ST. LOUIS, MISSOURI 63146
(314) 892-8888 FAX: (314) 892-8688
clayton-engineering.com

Designed	RKF
Drawn	RKF
Checked	MJV
Date	01/29/08
Project Number	00228.11
Sheet Number	C-1 of 10

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