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C1 SITE PLAN C2 GRADING PLAN C3 ENLARGED GRADING PLAN C4 UTILITY PLAN C5 EROSION CONTROL PLAN C6 EROSION CONTROL DETAILS C7-C10 STANDARD DETAILS L1-L2 LANDSCAPE PLANS	95 ENGINEERING, INC. 270 N. Winchester athe, Kansas 66061 (913) 393-1155 Fax (913) 393-1166 nhelosendineering.com	veying - LS-82 Engineering - E-391 Xveying-2007001128 Engineering-20070056
 ALL OF LOT 4, RAINTREE LAKE VILLAGE, A SUBIDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI. NET AREA= ±0.9546 ACRES / ±41,581 SQ.FT. MET AREA= ±0.9546 ACRES / ±41,581 SQ.FT. SITE PLAN NOTES: All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference: All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual, the Design and Construction Manual shall prevail. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing ogencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and his sub-contractor documents. The cost for all permits, bonds and insurance required by the contract and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance required by the contract of the work. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall be accounted work. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall be accounted work. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvemen	PHELPS PHELPS PLANNING 12 ENGINEERING OIA IMPLEMENTATION F	CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVE CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVE
and federal regulations.	Scooter's Kiosk Drive-Thru MO 150 Hwy & SW Regatta Dr Lee's Summit, MO 64082	SITE PLAN
FLOOD NOTE: THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0407F, AND DATED SEPTEMBER 29, 2006. KEY NOTES: TRUCT 2' TYPE CG-1 CURB & GUTTER (TYPICAL, RE: CITY DARD DETAIL GEN-4). TRUCT PRIVATE CONCRETE SIDEWALK (TYPICAL). LI SCREENED TRASH ENCLOSURE WITH CONCRETE WENT (RE: ARCH PLANS). CONSTRUCT PUBLIC CONCRETE SIDEWALK (RE: LEE'S SUMMIT STANDARD DETAIL GEN-2).	reedom Enterprises, LLC 501 College Blvd, Suite 170 1 eawood KS 66211	



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SITE GRADING NOTES:

- CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses. 2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or
- building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
- TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
- Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
- SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be 6. proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
- PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and 7. pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural
- 8. EARTHWORK:

A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.

D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.

E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.

- 9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
- 10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
- 11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
- 12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
- 13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA 14. or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

EARTHWORK COMPUTATIONS BY PHELPS ENGINEERING, INC. ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTORS BY THEIR CHOSEN METHOD PRIOR TO PLACING BID. ALL EARTHWORK SHALL BE CONSIDERED UNCLASSIFIED. 15% WAS ADDED INTO RAW FILL QUANTITY TO ACCOUNT FOR SHRINKAGE.

Earthwork Summary Scooter's - Lee's Summit 7/21/2017

Raw Excavation	868 Cu. Yds.	
In Place Compaction (+15%)	-82 Cu. Yds.	
Pavement Adjustment	499 Cu. Yds.	(assume 12" of additional excavation)
Building Adjustment	17 Cu. Yds.	(assume 12" of additional excavation)
On Site Net	1,301 Cu. Yds.	-













- 1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
- 2. The construction of storm sewers on this project shall conform to the requirements of the City of Lee's Summit, Missouri Technical Specifications and Design Criteria.
- 3. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the
- 4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
- 5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sever
- 6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City of Lee's
- The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. The contractor shall refer to the architectural plans for specific locations and elevations of the service lines of the building connection. All work shall conform to the requirement of the City of Lee's Summit, Missouri.
- 8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in
- 9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
- 10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection
- 11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
- 12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.

- 2. Fittings: Wrought copper (95_5 Tin Antimony solder joint), ASME B 16.22.
- Gray Cast Iron Water Pipe or Ductile Iron Water Pipe may be used for Pipe sizes 3–inches Through 48–inches that are installed below grade and outside building shall comply with the following: 1. Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
 - b. Elastomeric gaskets and lubricant: ASTM F477.
 - c. Cement Mortar Lining, AWWA C104
- a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111. b. Elastomeric gaskets and lubricant: ASTM F477.
- c. Cement Mortar Lining, AWWA C104
- Polyvinyl Chloride (PVC) Water Pipe may be used for Pipe sizes 4-inches Through 12-inches that are installed below grade and outside building shall comply with the following: 1 Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as
- a. Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes. b. Pipe joints: Integrally molded bell ends, ASTM D3139.
- c. Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering impri with "Water Service" in large letters.
- 16. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
- 17. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above

18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).

All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.

- All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
- Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to







1. Seamless Copper Tubing: Type "K" soft copper, ASTM B88.













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PLANT SCHEDULE

	<u>QTY</u>	BOTANICAL NAME / COMMON NAME	<u>CONT</u>	<u>CAL</u>	<u>SIZE</u>
) }	3	Acer campestre / Hedge Maple	B & B	3" cal.	
	1	Acer rubrum `Red Pointe` / Red Pointe Red Maple	B & B	3" cal.	
	1	Chionanthus virginicus / White Fringetree	B & B	3" cal.	
	4	Juniperus virginiana `Canaertii` / Canaerti Juniper	B & B		8` hgt.
	4	Juniperus virginiana `Hillspire` / Hillspire Juniper	B & B		8` hgt.
	1	Koelreuteria paniculata / Golden Rain Tree	B & B	3" cal.	
)	2	Quercus bicolor / Swamp White Oak	B & B	3" cal.	
	1	Quercus phellos / Willow Oak	B & B	3" cal.	
	<u>QTY</u>	BOTANICAL NAME / COMMON NAME	<u>CONT</u>		
	7	Hydrangea paniculata `Little Lime` / Little Lime Hydrangea	5 gal		
	46	Juniperus chinensis `Sea Green` / Sea Green Juniper 30" hgt. & sp.	5 gal		
	10	Juniperus virginiana `Grey Owl` / Grey Owl Juniper 24" sp.	3 gal		
	5	Rhus aromatica `Gro-Low` / Gro-Low Fragrant Sumac 18"-24" sp.	3 gal		
	7	Rhus copallina latifolia `Prairie Flame` TM / Dwarf Sumac 18"-24" hgt.	3 gal		

SEE SHEET L2 FOR NOTES AND DETAILS







Oppermann LandDesign, LLC Land Planning 🌞 Landscape Architecture 18990 West 117th Street Olathe, Kansas 66061 oppermannlanddesign.com 913.894.9407

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10/16/2017

Utility Note:

Utilities shown on plan are diagramatic and some may be missing. Before starting any construction call appropriate locating service. In Missouri call 1-800-DIG-RITE (344-7483). to have utilities located.

Transplant Additives:

1. Apply a commercial transplant additive (approved by the Landscape Architect) to all trees, shrubs and groundcover at rates recommended by the manufacturer during the planting. This item shall be <u>subsidiary</u> to other planting items.

2. Transplant additive shall be Plant Health Care Inc., "Mycor Tree Saver" mycorrizal fungal transplant innoculant or equivilent equal containing the appropriate species of mycorrhizal fungi and bacteria, fungi stimulant, water retaining agents, mineral & organic nutrients and inert ingredients.

3. Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockpiled for inspection by the Landscape Architect prior to disposal).

4. Number of transplant additive packets per tree, shrub or grouncover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soil next to the rootball. Do not place mix in the bottom of the planting pit.

5. Furnishing and application of transplant additive shall be <u>subsidiary</u> to the planting operations.



General Landscape Notes:

starting any work. Landscape Architect.

manufacturer's instructions. and soil test results.

wav. on plan as Rock Mulch.



1. Contractor shall verify the existence and location of all utilities before

- 2. Contractor shall verify all landscape material quantities and shall report any discrepancies to the Landscape Architect prior to installation. 3. Contractor shall make no substitutions without the approval of the
- 4. Contractor shall stake layout plan in the field and shall have the layout approved by the Landscape Architect before proceeding with the installation.
- 5. All shrub beds within lawn areas shall receive a trenched edge. 6. Typical tree mulch beds shall be mulched with 3" of dyed brown mulch
- over a felt type soil separator fabric. (See note 21.) 7. All shrub beds shall be treated with the pre-emergent herbicide
- Pre M 60 DG (granular) or an approved equal in accordance with the 8. All disturbed areas shall be fertilized, sodded with a Turf-Type
- Tall Fescue grass seed blend including public ROW as noted on plan. 9. Fertilizer for lawn, trees and container stock areas shall be a balanced fertilizer applied at rates per manufacturers recommendations
- 10. Contractor shall warranty all landscape work and plant material for a period of one year from date of acceptance of the work by the Owner. 11. Any plant material which dies during the one year warranty period shall be replaced by the Contractor during normal planting seasons. 12. Contractor shall be responsible for maintenance of the plants until
- completion of the job and acceptance by the Owner. After initial acceptance, maintenance shall be by the owner. 13. All plant names on the plant list conform to the Standardized Plant
- Names prepared by the American Joint Committee on Horticultural Nomenclature or to names generally accepted in the nursery trade. 14. All plant material shall be specimen quality stock as determined in the "American Standards For Nursery Stock" published by The American Association of Nurseryman, free of plant diseases and pest, of typical growth of the species and having a healthy, normal root system. 15. Sizes indicated on the plant list are the minimum, acceptable size. In no case will sizes less than the specified sizes be accepted. 16. Plants shall not be pruned prior to delivery to the site or after installation except for those branches that have been damaged in some
- 17. Plants shall not have name tags removed prior to final inspection. 18. Contractor shall be responsible for weed control on the project during and after construction until the project is turned over to the owner. 19. All plantings shall receive a commercial transplant additive per manufacturers recommended rates and instructions for application. 20. Successful landscape bidder shall be responsible for the design of an irrigation system to be approved by the Owner prior to construction. 21. Kansas Washed River Gravel 3" deep shall be placed where labeled

CENTER OF SHRUB

. 1/2 TOPSOIL 1/2 EXISTING SOIL

3" DYED BROWN SHREDDED – HARDWOOD OR ROCK MULCH AS LABELED ON PLAN OVER NON WOVEN WEED BARRIER

- FINISHED GRADE

TRENCHED EDGE

SHRUB BED & PARKING SETBACK DETAIL

NO SCALE

SCARIFY SOIL IN BOTTOM OF PIT



Landscape Plan Scooter's

Lee's Summit, Missouri



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