A SITE PLAN FOR

LOT 4E OF LABOURE CENTER

PART OF LOT 4 OF WILLIAM H. ERKER SUBDIVISION, PLAT BOOK 40 PAGE 150, IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

SITE IMPROVEMENT PLANS

94 HWY D 64 RIVER MISSOURI ' N. T. S.

LOCATOR MAP

LABOURE' 4E, L.L.C. PROPERTY OWNER

35 N. CENTRAL AVE. SUITE 400

ST. LOUIS, MO 63105 C-2 EXISTING ZONING

0.6 SITE ACREAGE

SITE ADDRESS

4581 STATE HIGHWAY K

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TITLE SHEET

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SEWER MEASUREMENTS

The existing sewer lengths, sizes, flowlines, depths of structures and sewers and locations with respect to existing or proposed easements have been measured. The results of those measurements are shown on this set of Final Measurement plans. Since the wye locations have been plotted from information provided by the sewer contractor or other sources, I disclaim any responsibility for that specific information.

All public sewers are located within designated existing or proposed easements.

P.E./L.S. DATE

> J. R. GRIMES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. J. R. GRIMES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

> > Y MINNER

6 03/16/06 PER SEWER LOCATION COORDINATION

5\ 01/09/06 PER MODOT COMMENTS

JAMES L

WHISLER

NUMBER

PE-2005001060,

4\ 12/22/05 PER CITY OF O'FALLON COMMENTS

3\ 12/20/05 PER P.W.S.D.#2 COMMENTS

2\ 12/06/05 PER FIRE MARSHALL COMMENTS

CITY FILE #704.02 12/02/05 PER CITY OF O'FALLON COMMENTS

LOT 4E OF LABOURE' CENTER TITLE SHEET

J. R. GRIMIES

CONSULTING ENGINEERS, INC.

12300 OLD TESSON ROAD SUITE 300D ST. LOUIS, MO. 63128 PH. (314) 849-6100 FAX (314) 849-6010

LEGEND

UTILITY POLE

LIGHT STANDARD

TELEPHONE BOX

FIRE HYDRANT

WATER VALVE

WATER LINE

GAS METER GAS VALVE

STREET SIGN

BOLLARD OR POST

SANITARY SEWER

STORM DRAIN GRATE INLET

STORM DRAIN AREA INLET

SANITARY SEWER MANHOLE

FENCE: CHAIN LINK OR WIRE

MINOR CONTOUR INTERVAL

MAJOR CONTOUR INTERVAL

TREE W/APPROXIMATE DIAMETER SIZE

FOUND SURVEY MONUMENT AS NOTED

SET SURVEY MONUMENT AS NOTED

FENCE: WOOD CONSTRUCTION

STORM DRAIN MANHOLE

FLARED END SECTION

STORM SEWER

GAS DRIP GAS LINE

MAILBOX

GUARDRAIL

SWALE

SPOT ELEVATION

BUSH OR SHRUB

ELECTRIC MANHOLE

TELEPHONE MANHOLE

OVERHEAD ELECTRIC LINE

UNDERGROUND ELECTRIC LINE

UNDERGROUND TELEPHONE LINE

ELECTRIC BOX ELECTRIC METER

GUY WIRE

PROPOSED

0 0 0 0

----513-----

----510-----

× 101.50

0

C.O. . D.S.

--

EXISTING

-----------NAME AND ADDRESS OFFI ADDRESS OF THE PARTY.

___ x ___ 0 0 0 0 0 -----

-----510----×101.5 C.O. O D.S.

-

PREPARED FOR:

UTILITY EASEMENT

CLEAN-OUT/DOWN-SPOUT

Call Before you DIG TOLL FREE -800-344-7483 SSOURI ONE-CALL SYSTEM INC.

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities.

The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & 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

Call Before you DIG TOLL FREE -314-340-4100 MoDot UNDERGROUND FACILITY LOCATE

FIBER OPTICS MAY BE PRESENT

FLOOD NOTE

NOTE: THE ENTIRE SURVEYED TRACT AS SHOWN HEREON LIES WITHIN FLOOD ZONE X: AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP 29183C0430 E. EFFECTIVE DATE: AUGUST 2, 1996

BENCHMARK:

RM 57: (548.01 PER FLOOD INSURANCE MAP COMMUNITY PANEL NO. 29183C 0430 E) -CHISELED SQUARE ON SOUTHWEST END OF SOUTH HEADWALL OF CULVERT LOCATED AT JUNCTION OF U.S. HIGHWAY 40 AND COUNTY HIGHWAY K

LABOURE' 4E, L.L.C. 35 N. CENTRAL, STE 400 ST. LOUIS, MO 63105 PH: (314) 863-6061 FAX: (314) 863-6146

Prevention Act, Chapter 319, RSMO.

JSK 10/31/05 LJM 10/31/05

Lot 4E of Laboure Center As builts -1/12

GENERAL NOTES:

- . THE UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, OR LOCATION OF THESE OR OTHER UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFYING THE ACTUAL LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.
- 2. ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.
- 3. ALL MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF O'FALLON AND/OR OSHA.
- 4. ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION ONTROL DEVICES AND/OR SEEDING AND MULCHING AS REQUIRED BY THE CITY OF O'FALLON.
- 5. GRADING CONTRACTOR SHALL INSTALL SILTATION CONTROL PRIOR TO STARTING THE GRADING. ADDITIONAL SILTATION CONTROL DEVICES SHALL BE INSTALLED IF REQUIRED BY THE CITY OF O'FALLON.
- 6. ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- 7. GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD
- AND DEBRIS AT ALL TIMES. 8. PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS.
- 9. ALL STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE
- 10. NO GRADE SHALL EXCEED A 3:1 SLOPE.
- 11. DEVELOPMENT SHALL COMPLY WITH ALL APPROPRIATE CITY OF O'FALLON "C-2" ZONING GUIDELINES UNLESS OTHERWISE APPROVED.
- 12. ALL HANDICAP RAMPS, SIGNS, SYMBOLS, STRIPING, SIDEWALKS, AND ACCESSIBLE PARKING PLACES SHALL COMPLY WITH ADAAG STANDARDS. IF ANY CONFLICT OCCURS THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER. HANDICAP CURB RAMPS NOT TO PROJECT INTO
- 13. ALL UTILITIES, PUBLIC AND PRIVATE, SHALL BE LOCATED UNDERGROUND AND BE FUNCTIONING AND AVAILABLE FOR USE PRIOR TO OCCUPANCY OF THE PROPOSED BUILDING.
- 14. ROOFTOP MECHANICAL UNITS WILL BE SCREENED BY A PARAPET WALL
- 15. NO TREES PRESENTLY LOCATED ON THIS LOT. A LANDSCAPE PLAN WILL BE REQUIRED.
- 16. ALL LANDSCAPE AREAS WITHIN THIS DEVELOPMENT REQUIRED TO BE IRRIGATED.
- SITE LIGHTING AS SHOWN ON THIS PLAN IS FOR PRESENTATION ONLY. EXACT LOCATIONS WILL DEPEND ON DESIGN BY QUALIFIED LIGHTING CONSULTANT.
- WALL PACK LIGHTING SHALL NOT BE USED ON THIS BUILDING ON ELEVATIONS THAT ARE VISIBLE FROM THE PUBLIC RIGHT-OF-WAY. DO TO THE NATURE OF THIS BUILDING LAYOUT IT IS PROPOSED THAT WALL PACK LIGHTING BE ALLOWED IN THE INTERIOR LOADING
- 19. DEVELOPER MUST SUPPLY THE CITY OF O'FALLON CONTSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING. THE SOIL REPORT WILL BE REQUIRED CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR
 - 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 AASHTO

 I-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF

 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST ASSISTO T-99

 METHOD C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON

 DOCUMENT.
 - 5. CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT, SPECIFIC GRAWTY.
 - NATURAL MOISTURE CONTENT.
 - LIQUID LIMIT. PLASTIC LIMIT.
- INSPECTOR THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE. BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION
- 20. ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, 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 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 MOSSTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BECUBAITTED TO THE CITY OF O'FALLON PRIOR TO THE COMPACTION. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.
- 21. ALL PAYING TO BE IN ACCORADANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY CITY OF O'FALLON ORDINANCES.
- 22. ALL JOINTS TO BE CASKETED O-RING TYPE.
- 23. ALL GRADED AREAS THAT ARE TO REMAIN BARE FOR OVER 2 WEEKS ARE TO BE SEEDED AND MULCHED.
- 24. ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND ANY NECESSARY CORRECTIONS MADE WITHIN 24 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INOR OF RAIN OR MORE.
- 25. ALL STORM SEWER INLETS TO HAVE MARKING (SEE DETAIL, SHEET C8).
- 26. BRICK SHALL NOT TO BE USED IN THE CONSTRUCTION OF ANY STORM SEWERS STRUCTURES.
- 27. INSTALLATION OF LANDSCAPING AND ORNAMENTAL ENTRANCE MONUMENT OR IDENTIFICATION TOWAGE CONSTRUCTION IF PROPOSED, SHALL BE REVIEWED BY THE CITY OF O'FALLON FOR SIGHT DISTANCE CONSIDERATIONS AND APPROVED PRIOR TO INSTALLATION OR CONSTRUCTION
- GRANULAR FILL IS TO BE PROVIDED AROUND ALL SANITARY LINES WITHIN 10 FT. OF THE EDGE OF PAVEMENT CURB AND IN THE 1 TO 1 SHEAR PLANE OF THE ROAD.
- 29. LIGHTING VALUES WILL BE REVIEWED ON SIRE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
- 30. ALL SIGN LOCATIONS AND SIZES MUST BE APPROVED SEPARATELY THROUGH THE PLANNING DIVISION, SIGN LOCATIONS SHOWN ON PLANS.
- ALL SIGN POSTS AND BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBON RUSTBOND PENTRATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT, AS APPROVED BY THE CITY AND MODOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE
- 32. TRAFFIC CONTROL TO BE PER MODOT OR MUTCD, WHICHEVER IS MOST STRINGENT. 33. ALL CORROGATED METAL PIPE (CMP) TO BE CORROGATED STEEL M-36, 16 GAUGE ASPHALT POLYMER, OR ALUMINIZED COATING, A MINIMUM OF 18 CSP.

SITE GRADING SPECIFICATIONS:

SECTION 02110 - SITE CLEARING

PART 1 - GENERAL

SUMMARY

This Section includes the following: Removing above—grade improvements.

Removing below-grade improvements.

PROJECT CONDITIONS

Traffic: Conduct site-clearing operations to ensure minimum interference with the roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements indicated to remain in place.

Improvements on Adjoining Property. Authority for performing removal and alteration work on property adjoining Owner's property will be obtained by Owner prior to award of contract.

Extent of work on adjacent property is indicated on Drawings.

EXISTING SERVICES

General: Indicated locations are approximate; determine exact locations before commencing

Arrange and pay for disconnecting, removing, capping, and plugging utility services. Notify affected utility companies in advance and obtain approval before starting this Work.

Place markers to Indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

PART 2 -EXECUTION

SITE CLEARING

General: Remove trees, shrubs, grass, and other vegetation, improvements, or obstructions, as required, to permit installation of new construction. Remove similar items elsewhere on site or premises as specifically indicated. The owner will identify any trees & shrubs to remain.

Trees indicated to remain shall have minor roots and branches cut in a clean and careful manner where such roots and branches obstruct installation of new construction.

Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to prevent damage to root system.

Removal of Improvements: Remove existing above—grade and below—grade improvements as

DISPOSAL OF WASTE MATERIALS

Burning on Owner's Property. Burning is not permitted on Owner's property.

indicated and as necessary to facilitate new construction.

Removal from Owner's Property: Remove waste materials and unsuitable or excess topsoil from Owner's property.

EARTHWORK

PART 1 - GENERAL

SUMMARY

This Section includes the following:

Preparing and grading subgrades for slabs-on-grade, walks, pavements, and landscaping. Excavating and backfilling for buildings and structures.

Drainage and moisture-control fill course for slabs-on-grade.

Subbase course for walks and pavements.

Subsurface drainage backfill for walls and trenches.

Excavating and backfilling trenches within construction limits. Excavating and backfilling for underground mechanical and electrical utilities and

appurtenances. DEFINITIONS

Excavation: consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed.

Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

Borrow: Soil material obtained off site when sufficient approved soil material is not available from excavations.

Subbase Course: The layer placed between the subgrade and surface pavement or walk.

Drainage Fill: Course of washed granular material placed under slab-on-grade to cut off upward capillary flow of pore water toward slab. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or

dimensions without direction by the owner. Unauthorized excavation, as well as remedial work

directed by the owner, shall be at the Contractor's expense. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and

electrical appurtenances, or other man-made stationary features constructed above or below Utilities include on-site underground pipes, conduits, ducts, cables, and underground services

within building lines.

Codes and Standards: Perform earthwork complying with requirements of authorities with jurisdiction.

Testing and Inspection Service: Owner will employ a qualified independent geotechnical engineering testing agency to classify proposed on-site and borrow soils to verify that soils comply with specified requirements and to perform required field and laboratory testing.

Existing Utilities: Do not interrupt existing utilities serving facilities occupied by the Owner or others except when permitted in writing by the owner and then only after acceptable temporary utility services have been provided.

PART 2 - PRODUCTS

SOIL MATERIALS

General: Provide approved borrow soil materials from off site when sufficient approved soil materials are not available from excavations.

Satisfactory Soil Materials: ASTM D 2487 soil classification groups GW, GP, GM, SW< SP, and SM: free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.

Backfill and Fill Materials: Satisfactory soil materials.

Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, ASTM D 2940, with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

Bedding Material: Subbase materials with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate grading size 57, with 100 percent passing a 1 1/2-inch sieve and not more than 5 percent passing a No. 8 sieve.

Detectable Warning Tape: Polyethylene film warning tape encosing a metallic core, 6 inches wide and 4 mils thick minimum, continuously inscribed with a description of the utility shall be installed in trench above all water mains as installed for this development.

PART 3 - EXECUTION

PREPARATION

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork

Provide erosion and sedimentation control measures.

DEWATERING

Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

Protect subgrades and foundation soils from softening and damage by rain or water accumulation and from freezing temperatures or frost.

Explosives: Do not use explosives.

Unclassified Excavation: Excavation is unclassified and includes excavation to required subgrade elevations regardless of character of materials and obstructions encountered.

Excavate for structures, pavements, and walks to indicated elevations and dimensions. Widen excavations to permit placing and removing concrete formwork, installing services and other construction, and for inspections. Trim subgrades to required lines and grades to leave solid base to receive other work.

Excavate utility trenches to indicated slopes, lines, depths, and invert elevations of uniform widths to provide a maximum 12 inches of working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than the top of pipe or

Excavate and shape trench subgrade to provide uniform bearing and continuous support for pipe and conduit. Where encountering rock or other unyielding bearing surface, carry trench excavation 6 inches below invert elevation to receive bedding course.

Approval of Subgrade: When Geotechnical Engineer determines that unforeseen unsatisfactory

soil is present, continue excavation and replace with compacted backfill or fill material as directed. Payment will be made according to the Contract provisions for changes in the work. The construction site is to be maintained so that the following conditions can be avoided, but If they occur, then the Contractor shall be responsible to Reconstruct subgrades damaged by freezing temperatures, frost, rain, occumulated water, or construction activities.

Fill unauthorized excavation under foundations or wall footings by extending indicated bottom elevation of concrete foundation or footing to excavation bottom, without altering required top elevation. Fill unauthorized excavations under other construction as directed by Geotechnical

Store excavated and borrow soil materials acceptable for backfill and fill in shaped, graded, drained, and covered stockpiles. Locate stockpiles away from edge of excavations and outside drip line of remaining trees.

BACKFILLING

Backfill excavations promptly following acceptance of affected work below final grade.

Utility Trench Backfill: Place, compact, and shape bedding course to provide continuous support for pipes and conduits over rock and other unyielding bearing surfaces and to fill unauthorized excavations.

Place and compact initial backfill of satisfactory soil material or subbase material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit. Place and compact final backfill of satisfactory soil material to final subgrade.

Coordinate backfilling with utilities testing.

Install warning tape directly above water lines, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

FIII Preparation: Plow strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing surface.

When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface to depth required, pulverize, moisture-condition or gerate soil, and recompact to required density.

2 percent of optimum moisture content before compaction. Remove and replace, or scarlfy and air dry, satisfactory soil material that is too wet to compact to specified density.

Uniformly moisten or cerate subgrade and each subsequent fill or backfill layer to within

COMPACTION Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers. Place evenly alongside structures and utilities

to required elevations. Compact soil to not less than the following percentages of maximum dry density according to

Modified AASHTO T-180 Compaction Test: Under structures, building slabs, steps, and pavements, compact the top 12 inches below subgrade and each layer of backfill or fill material to 95 percent.

Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material to 90 percent. Under walkways, compact the top 6 inches below subgrade and each layer of backfill or fill

GRADING

Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated. Grade lawns, walks, and unpaved subgrades to tolerances of plus or minus 0.10 foot and pavements and areas within building lines to plus or minus 1/2 inch.

SUBBASE AND BASE COURSES

Sub base: Under pavements and walks, place sub base course material on prepared subgrades and compact at optimum moisture content to required grades, lines, cross sections, and

lease 12 inches wide of acceptable soil materials and compact simultaneously with each subbase laver.

Place shoulders along edges of sub base to prevent lateral movement. Construct shoulders at

Under slabs-on-grade, place drainage fill on prepared subgrade and compact to required cross

FIELD QUALITY CONTROL (BY GENERAL CONTRACTOR)

Allow testing agency to inspect and test each subgrade and each fill or backfill layer. Do not proceed until test results for previously completed work verify compliance with requirements.

Perform field in-place density tests according to ASTM D 1556 (sand cone method), ASTM D 2167 (rubber balloon method), ASTM D 2922 (nuclear method) or ASTM D 2937 (drive cylinder method), as applicable.

Footing Subgrades: Test each soil stratum to verify design bearing capacities.

Paved Areas and Building Slabs: At subgrade and at each compacted fill and backfill layer, perform at least one field in-place density test for every 2,000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.

Foundation Wall Backfill: At each compacted backfill layer, perform at least one field in-place density test for each 100 feet or less of wall length, but in no case fewer than two tests.

Trench Backfill: In each compacted initial and final backfill layer, perform at least one field in-place density test for each 150 feet or less of trench, but in no case fewer than two tests. When testing agency reports that subgrade, fills, or backfills are below specified density, scarify and moisten or aerate, or remove and replace soil to the depth required, recompact, and

Repair and reestablish grades where completed or partially completed surfaces become eroded, rutted, settled, or lose compaction.

Settling: Where settling occurs during the project correction period, remove finished surfacing,

backfill with additional approved material, compact, and reconstruct surfacing.

retest until obtaining required density.

Transport surplus satisfactory soil to designated stockpiles on the Owner's property. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the

trash, and debris, and legally dispose of it off the Owner's property.

EARTHWORK NOTES:

BULK CUT. 738 C.Y. + CUBIC YARD

BULK FILL 667 C.Y. (w/15% SHRINKAGE)+ CUBIC YARD

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 MATERIALS AND LABOR.

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 J. R. GRIMES CONSULTING ENGINEERS.

ALL QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO MOVE REQUIRED QUINATITY OF MATERIALS TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

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 REMOVAL OF

VEGETATIVE ESTABLISHMENT FOR URBAN DEVELOPMENT SITES

GRADED AREAS THAT ARE TO REMAIN BARE FOR OVER 6 MONTHS SHALL BE SEEDED AND MULCHED AS DESCRIBED BELOW.

UNSUITABLE MATERIAL WHICH MUST BE REMOVED FROM SITE.

SEEDING RATES:

PERMANENT: TALL FESCUE - 30 lbs./ac.

SMOOTH BROME - 20 lbs./ac. COMBINED FESCUE @ 15 lbs./ac. AND BROME @ 10 lbs./ac.

FESCUE OR BROME - MARCH 1 TO JUNE 1

TEMPORARY: WHEAT OR RYE - 150 lbs./oc. (3.5 lbs. PER SQUARE FOOT) - 120 lbs./oc. (2.75 lbs. PER SQUARE FOOT)

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) FERTILIZER RATES: NITROGEN 30 lbs./ac.

PHOSPHATE 30 lbs./oc.

POTASSIUM 30 lbs./ac.

OTHERWISE NOTED

EVALUATION OF QUARRIED ROCK.

LIME 600 lbs./ac. ENM* * ENM = EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE

STORM SEWER NOTES:

- 1.) ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORM SEWERS TO
- MEET REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF O'FALLON 2.) ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE ONLY. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH CITY OF
- O'FALLON STANDARDS. 3.) ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III PIPES UNLESS
- 4.) CONTRACTOR TO START LAYING PIPE AT DOWNSTREAM MANHOLE AND WORK UPSTREAM.
- 5.) BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER
- 6.) PROVIDE 5/8" DIAMETER TRASH BAR FOR ALL INLETS. 7.) 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 THE MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST (ASTM D1557)" ALL TEST SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS, THE COMPACTED FILL SHALL BE FREE OF
- ROLLING AND COMPACTION. 8.) ALL JOINTS SHALL BE GASKETED O-RINGS.
- 9.) ALL CORROGATED METAL PIPE (CMP) TO BE CORROGATED STEEL M-36, 16 GAUGE ASPHALT POLYMER, OR ALUMINIZED COATING, A MINIMUM OF 18

RUTTING AND SHALL BE NON-YEILDING AND NON PUMPING DURING PROOF

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 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 RECONSTRUCTION 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 THE MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST (ASTM D1557)" ALL TEST 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-YEILDING 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 SEWER CONTRACTOR.

UTILITIES ON THE RECORD PLAT. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF THE DUCKETT CREEK SANITARY DISTRICT.

EASEMENTS SHALL BE PROVIDED FOR ALL SANITARY SEWERS, STORM SEWERS AND ALL

THE DUCKETT CREEK SANITARY DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION FOR COORDINATION 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 CRS-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" TO 1" GRANULAR STONE BEDDING UNIFORMLY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO THE SPRINGLINE OF PIPE. IMMEDIATE BACKFILL OVER THE PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR

"MINUS" STONE FROM SPRINGLINE OF PIPE TO 6 INCHED 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 CREEK CROSSINGS SHALL BE GROUTED RIP-RAP AS DIRECTED BY THE DISTRICT

ALL PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH MANHOLES. NO FLAT INVERT STRUCTURES ARE ALLOWED.

INSPECTORS. (ALL GROUT SHALL BE HIGH SLUMP READY-MIX CONCRETE). BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.

LOCK-TYPE COVERS ARE REQUIRED.

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 ROADWAY ARE THE RESPONSIBILITY OF THE DEVELOPER. 'TYPE N' LOCK-TYPE COVER AND LOCKING DEVICE (LOCK-LUG) SHALL BE USED WHERE

SILTATION MAINTENANCE NOTES:

CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND

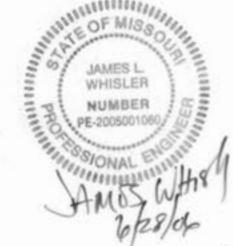
SILTATION CONTROL BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

UNDERCUTTING BENEATH BALES OR FENCE. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES OR FENCE SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER SILTATION CONTROL BARRIER IS

NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED. ALL EXPOSED SLOPES WHETHER TEMPORARY OR PERMANENT SHALL BE SEEDED PER SPECIFICATIONS IMMEDIATELY UPON COMPLETION. ALL FLOWLINES OF DIVERSION DITCHES AND SWALES SHALL BE PROTECTED AS NEEDED.

THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION CONTROL 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 SILTATION CONTROL DETAILED IN THE PLAN), CONTROL SHALL COMMENCE WITH THE GRADING AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER AND/OR THE CITY OF O'FALLON AND/OR MODOT MAY AT THEIR OPTION DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT OR IN NEW OR EXISTING SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER AND/OR THE CITY OF O'FALLON



4\ 12/22/05 PER CITY OF O'FALLON COMMENTS 1 12/02/05 PER CITY OF O'FALLON COMMENTS

AND/OR MoDOT.

CITY FILE #704.02 LOT 4E OF LABOURE' CENTER

GENERAL NOTES 12300 OLD TESSON ROAD SUITE 300D

J. R. GRIMIES CONSULTING ENGINEERS, INC.

CHECKED BY:

DRAWN BY: DATE:

ST. LOUIS, MO. 63128 PH. (314) 849-6100 FAX (314) 849-6010

Lot 4E of Laboure Center As builts -2/12

ST. LOUIS, MO 63105 PH: (314) 863-6061 FAX: (314) 863-6146

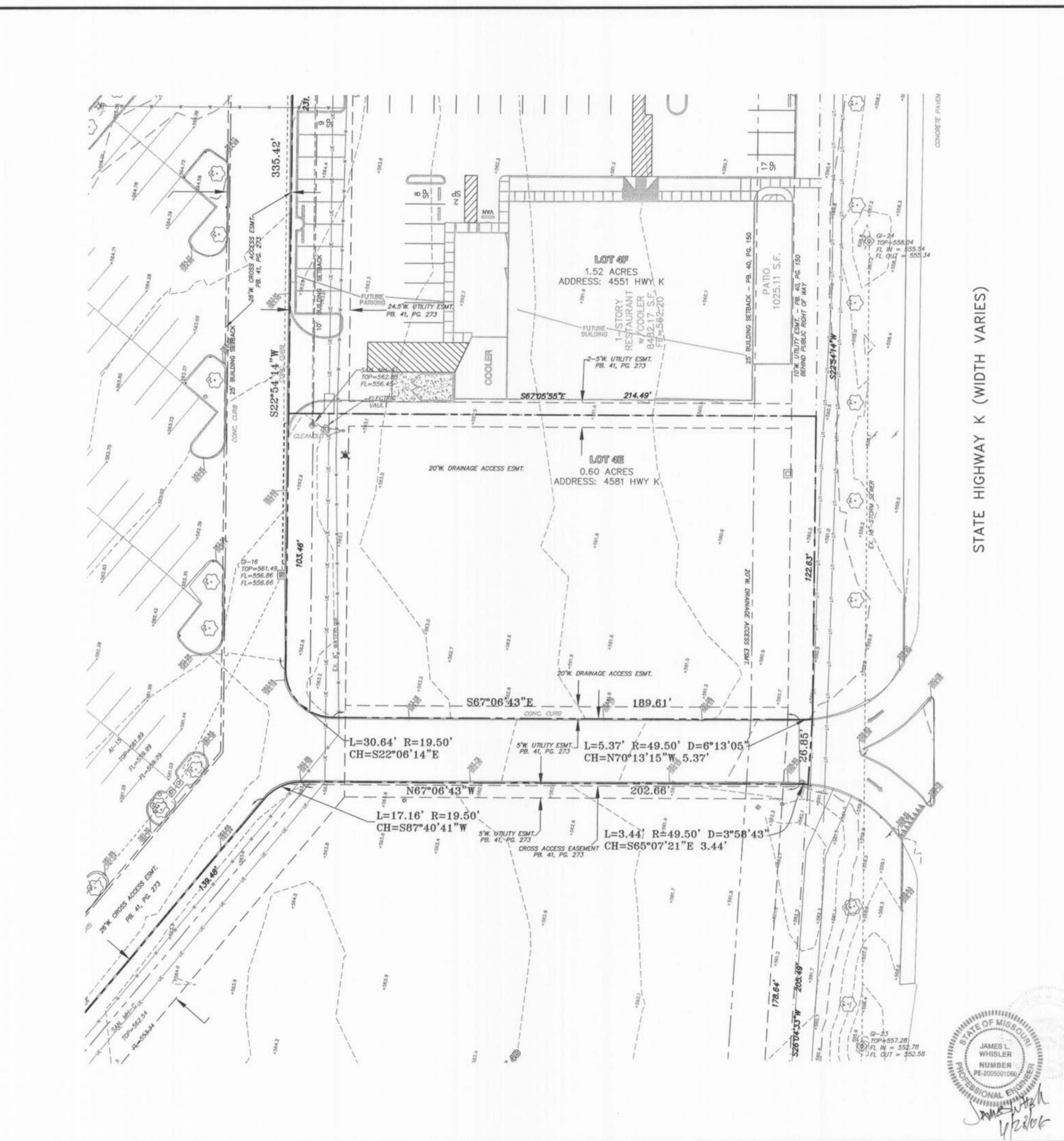
LABOURE' 4E, L.L.C.

35 N. CENTRAL, STE 400

PREPARED FOR:

Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil,

10/31/05 10/31/05 LJM

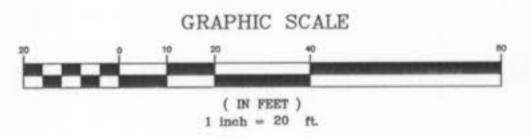


PREPARED FOR:

LABOURE' 4E, L.L.C.

35 N. CENTRAL, STE 400
ST. LOUIS, MO 63105
PH: (314) 863-6061
FAX: (314) 863-6146





5 01/09/06 PER MODOT COMMENTS

CITY FILE #704.02

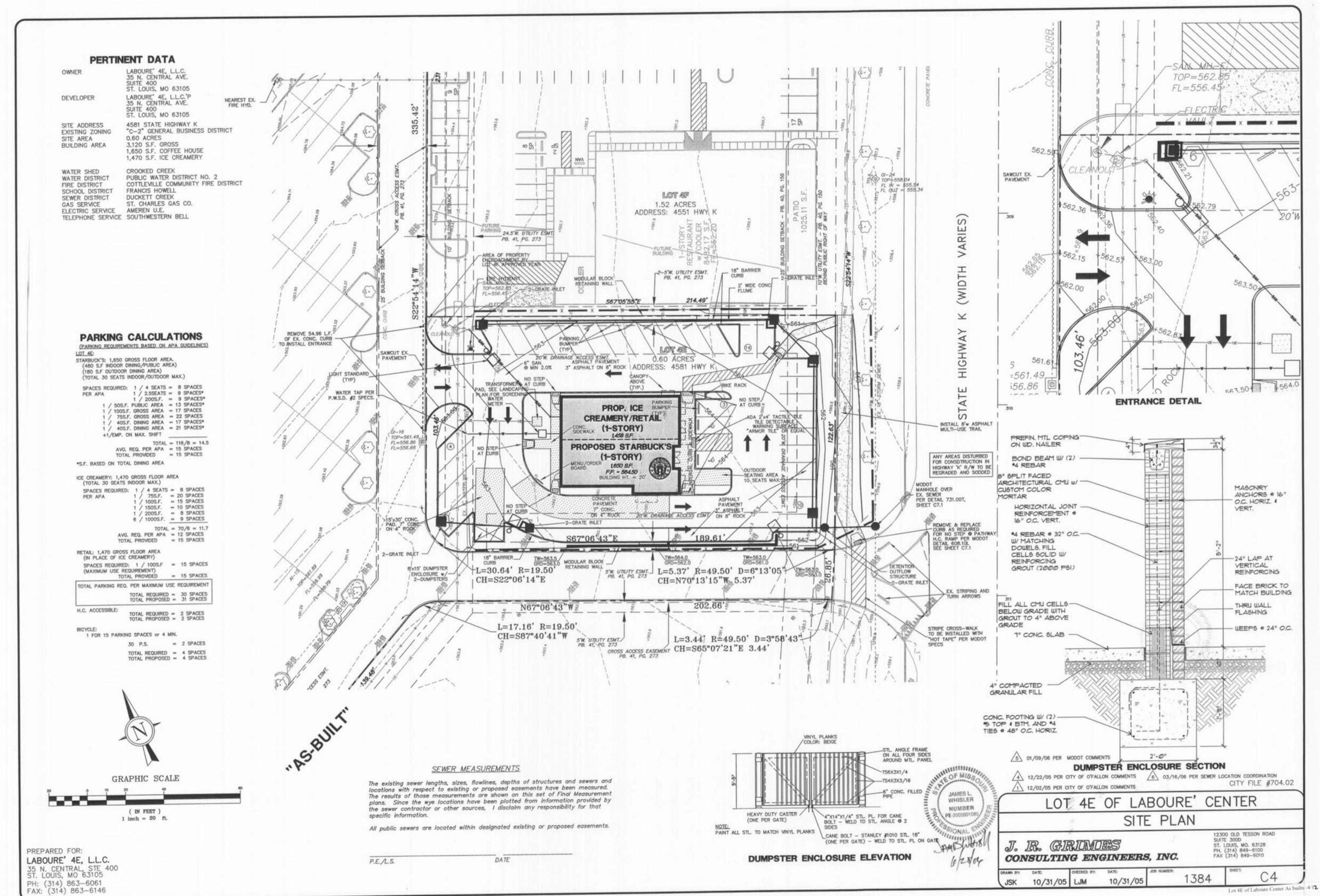
LOT 4E OF LABOURE' CENTER EXISTING SITE PLAN

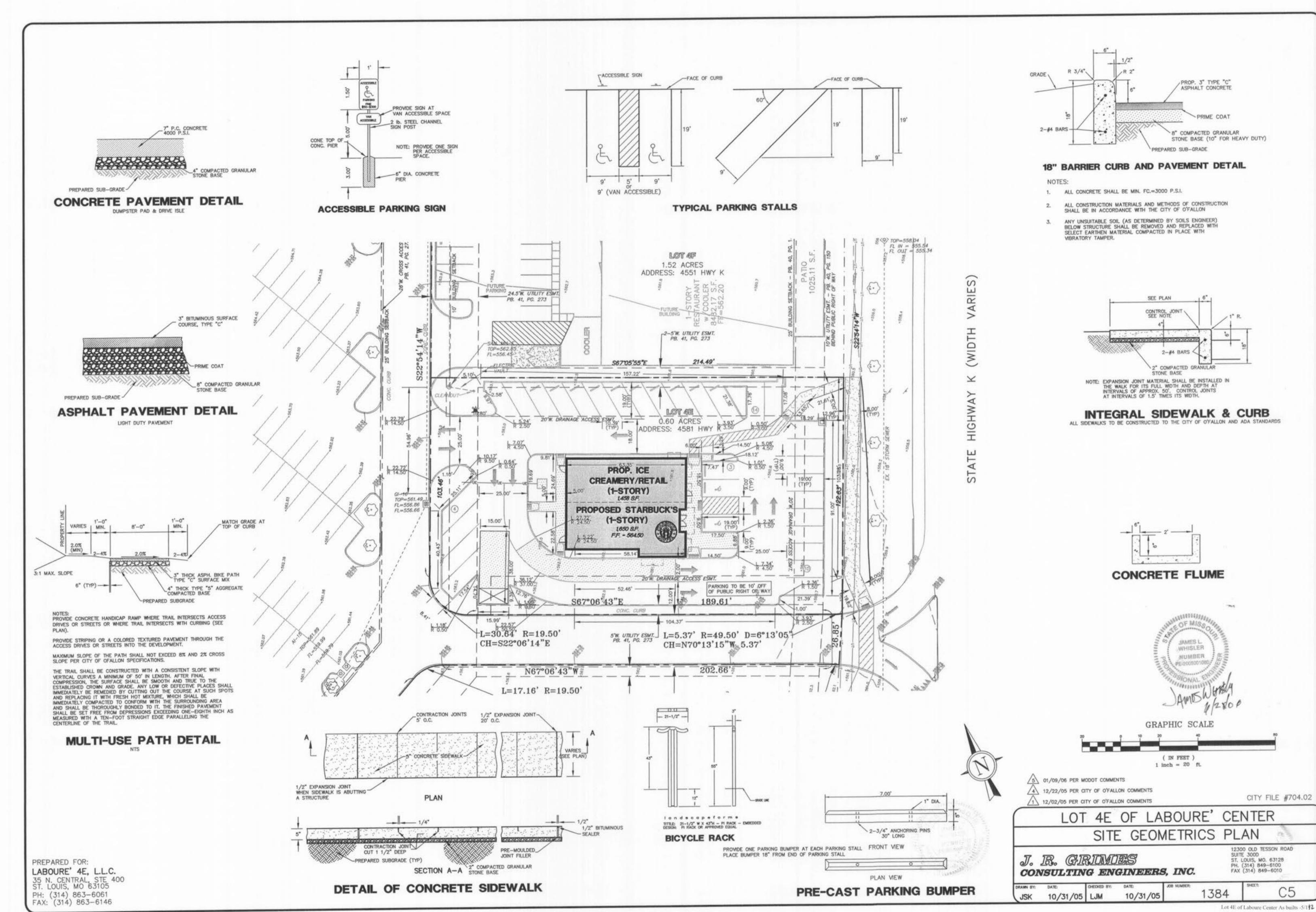
J. IR. GIRIUMUES

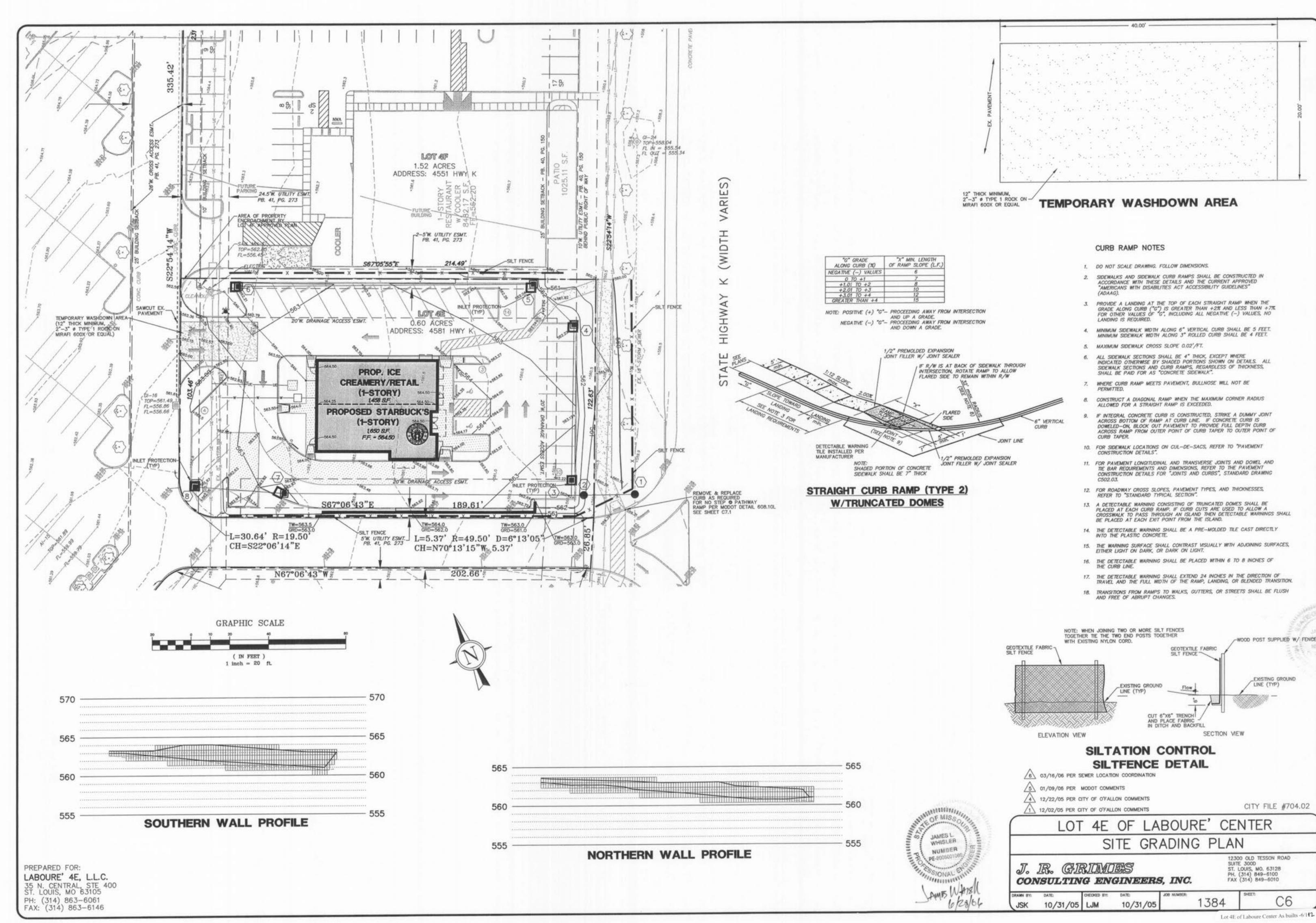
12300 OLD TESSON ROAD SUITE 3000 ST. LOUIS, MO. 63128 PH. (314) 849-6100 FAX (314) 849-6010

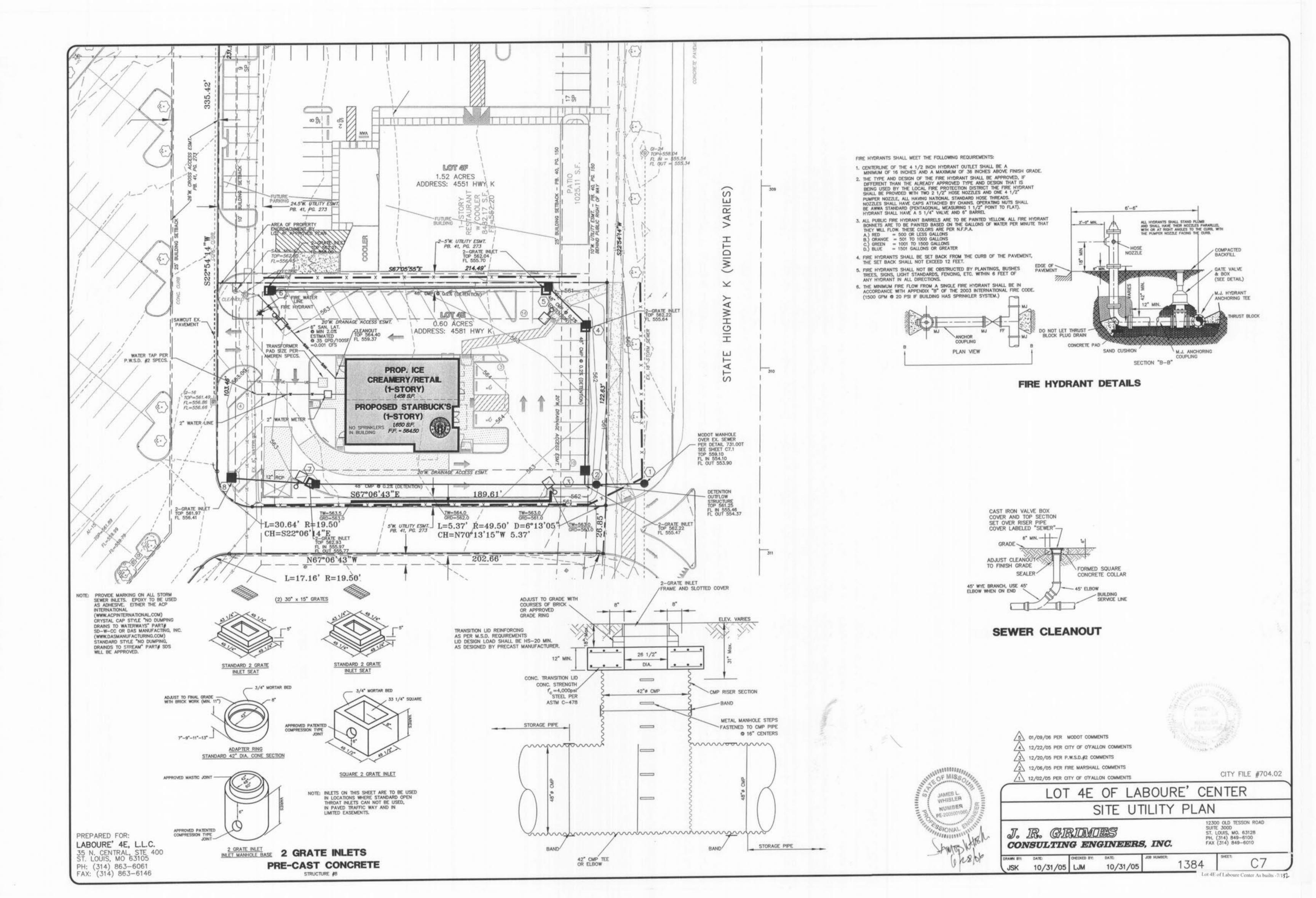
CONSULTING ENGINEERS, INC. 1384 JSK 10/31/05 LJM

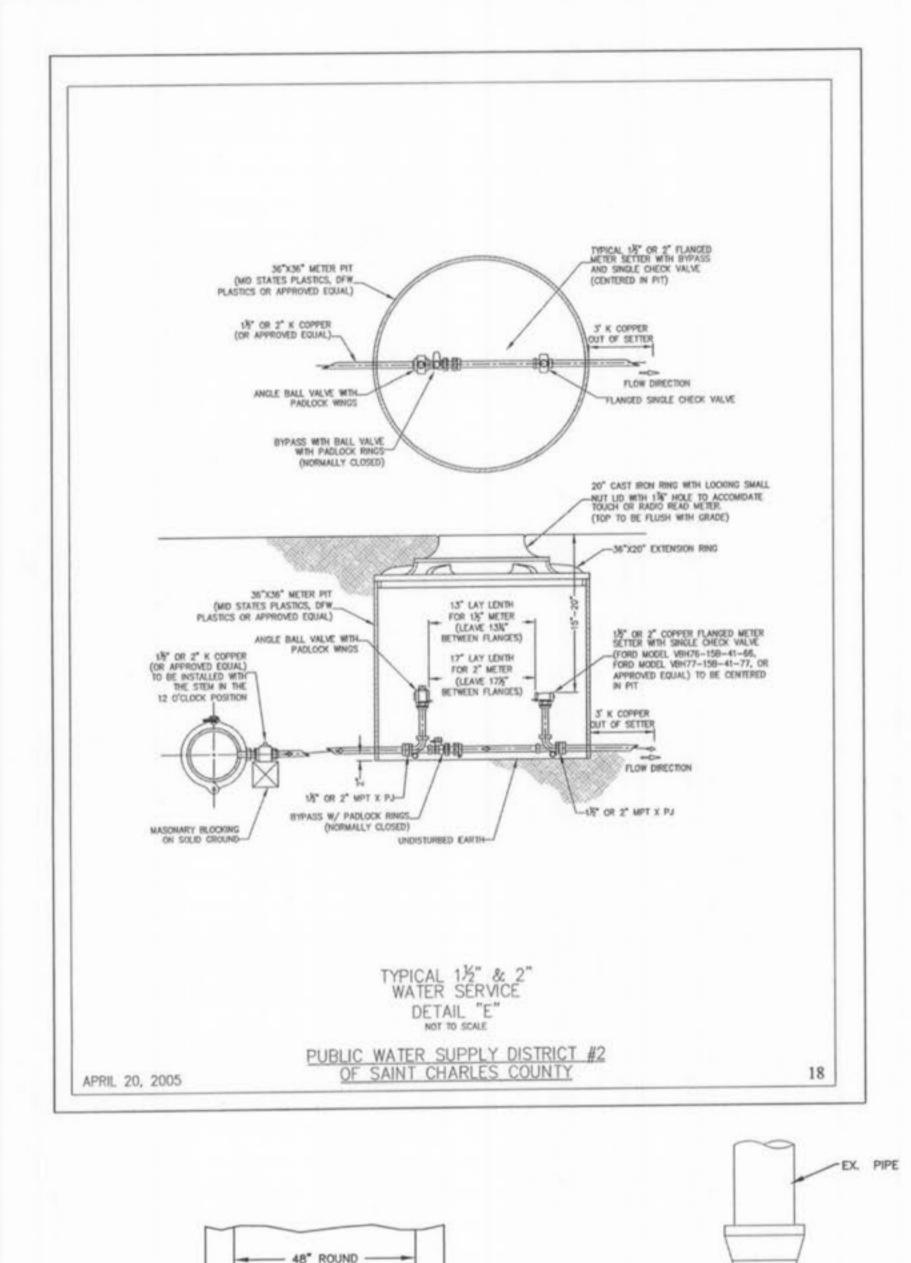
Lot 4E of Laboure Center As builts -3/12









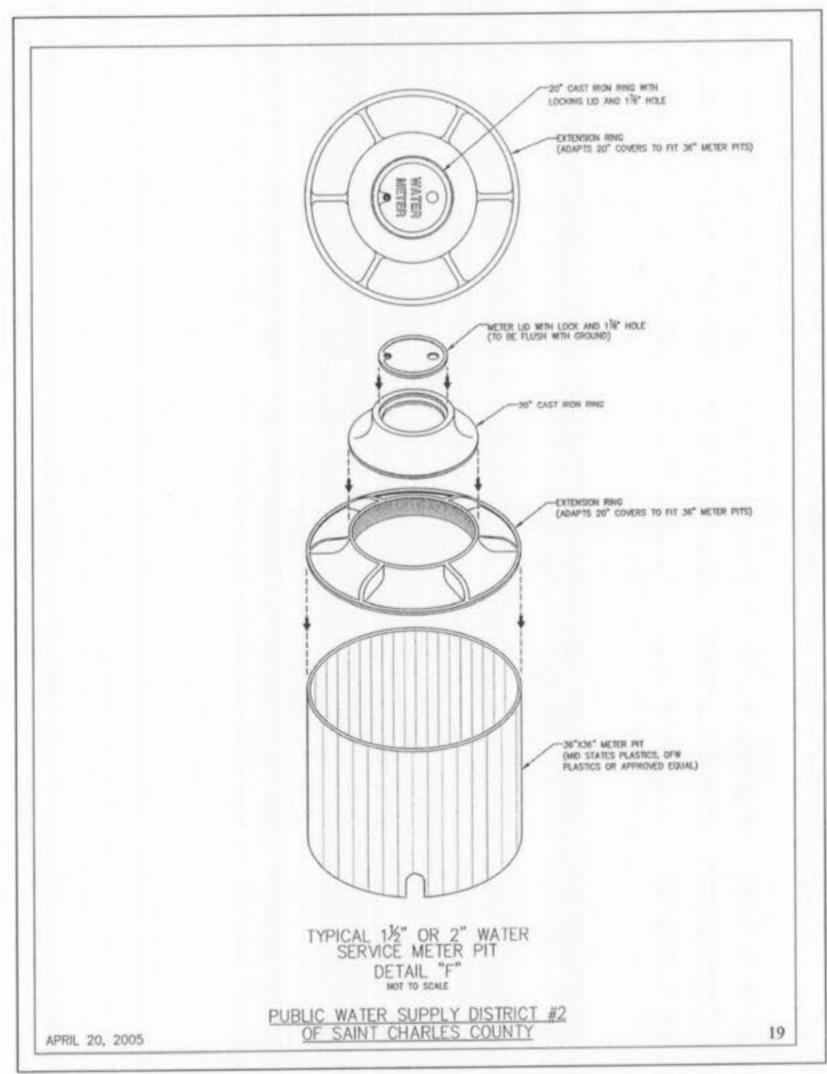


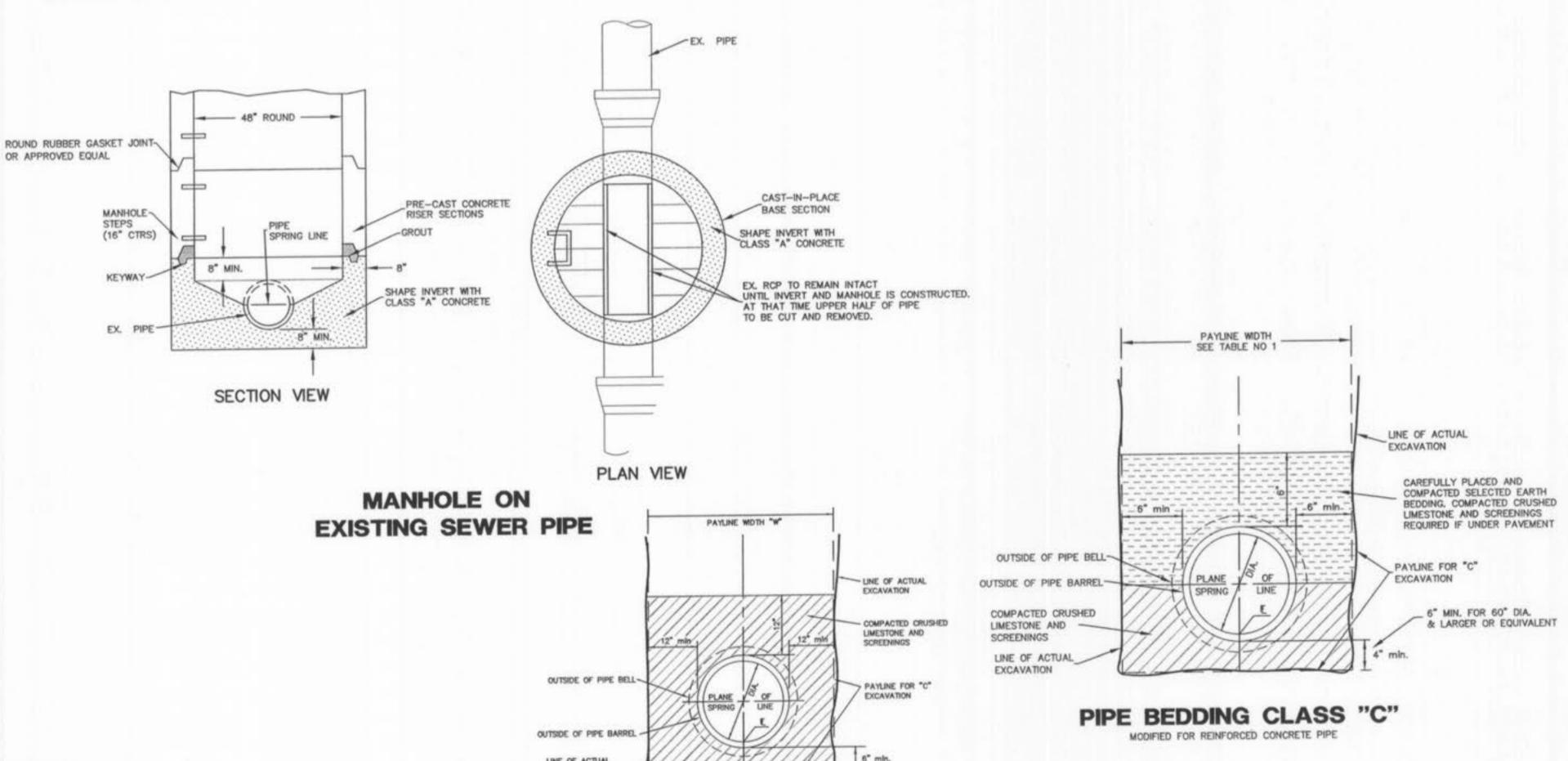
PREPARED FOR:

LABOURE' 4E, L.L.C.

PH: (314) 863-6061 FAX: (314) 863-6146

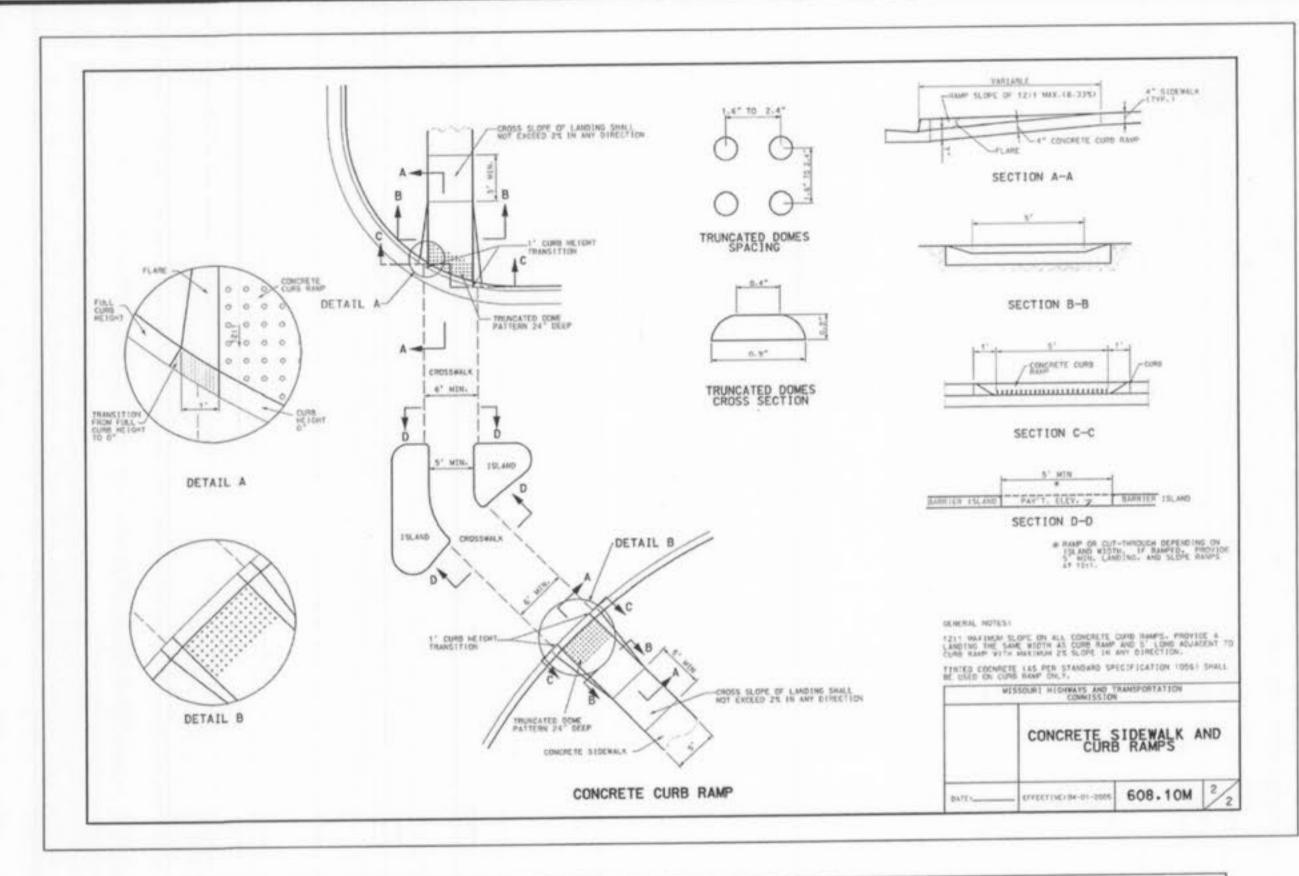
35 N. CENTRAL, STE 400 ST. LOUIS, MO 63105

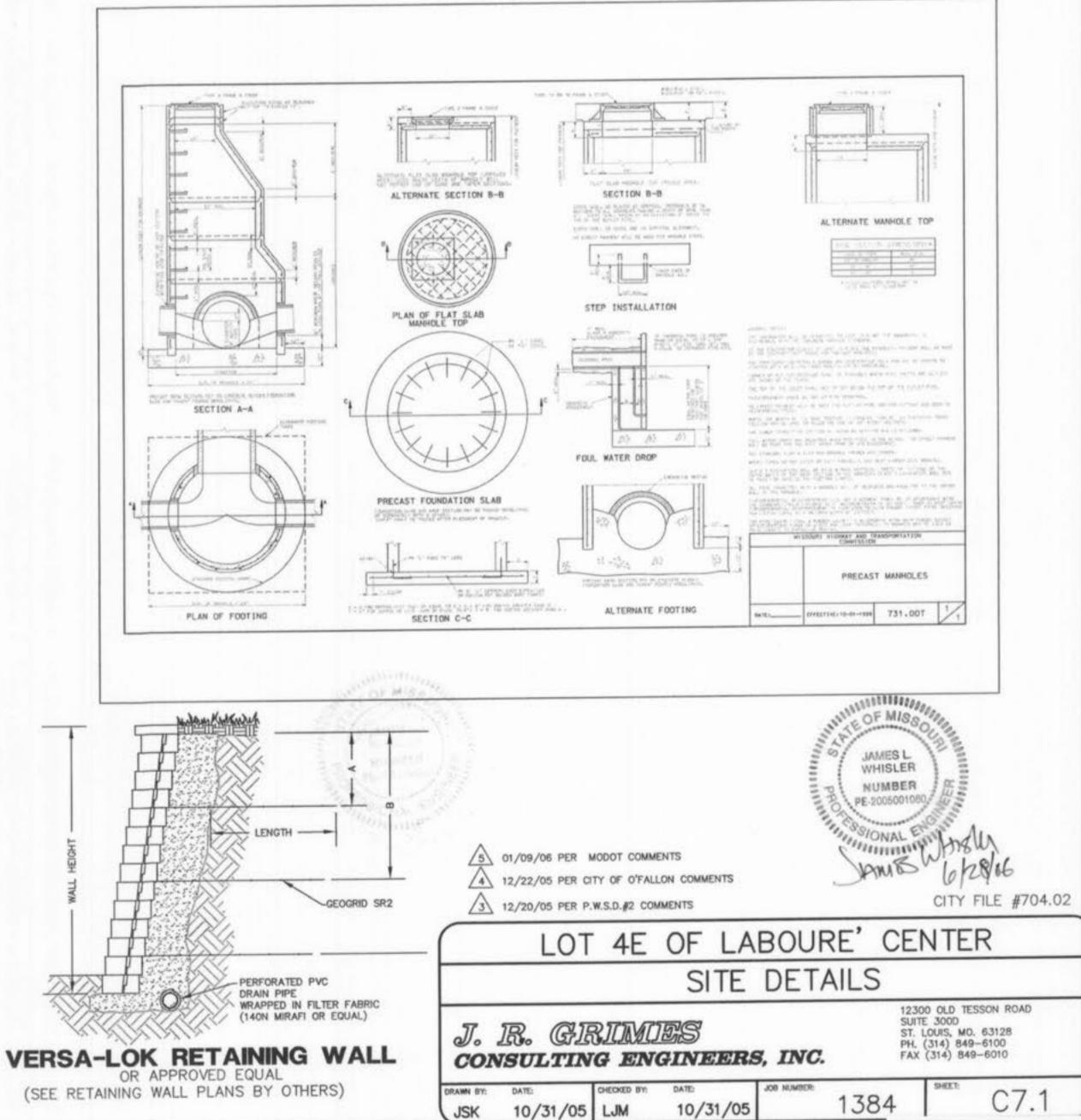




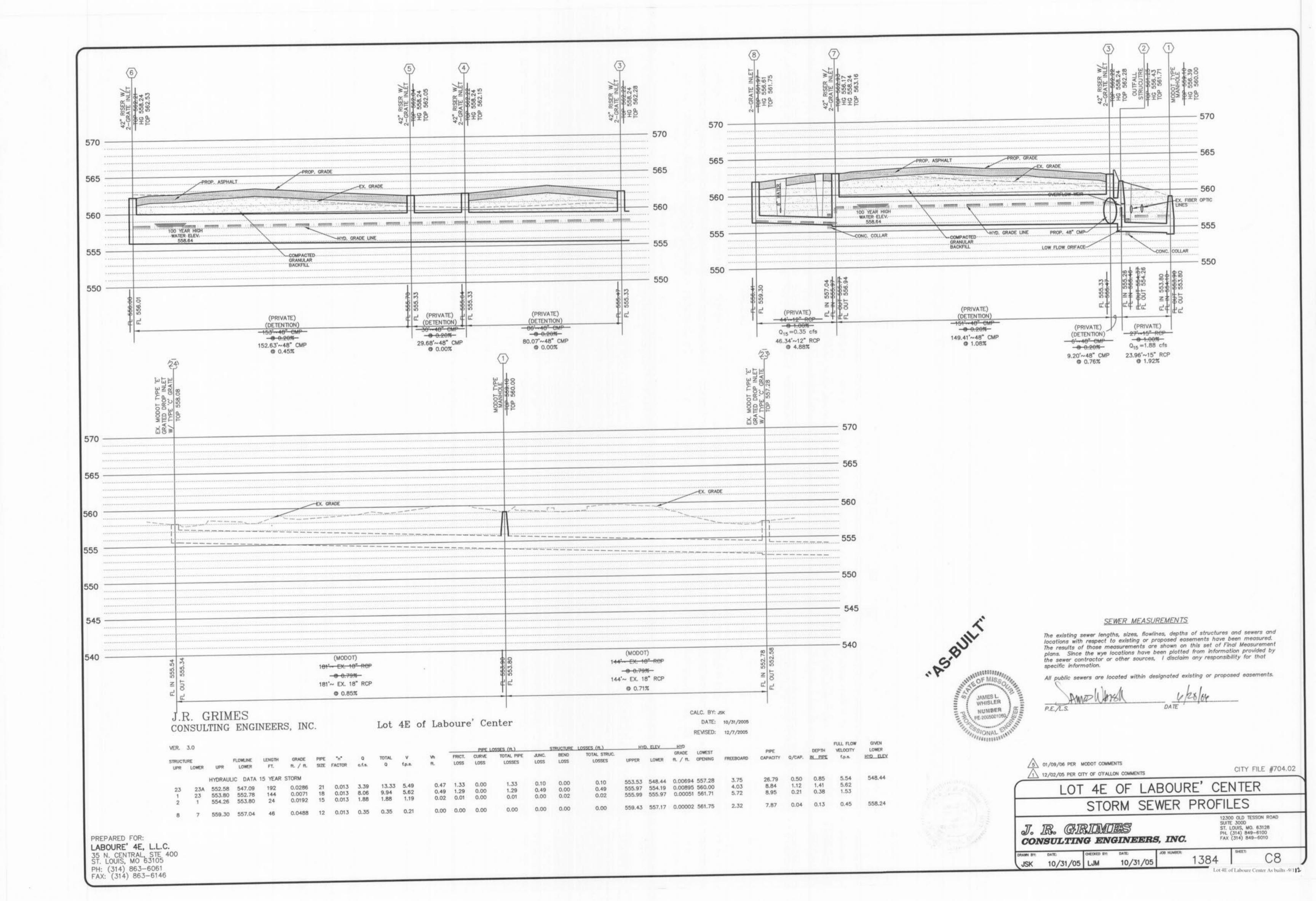
PIPE BEDDING

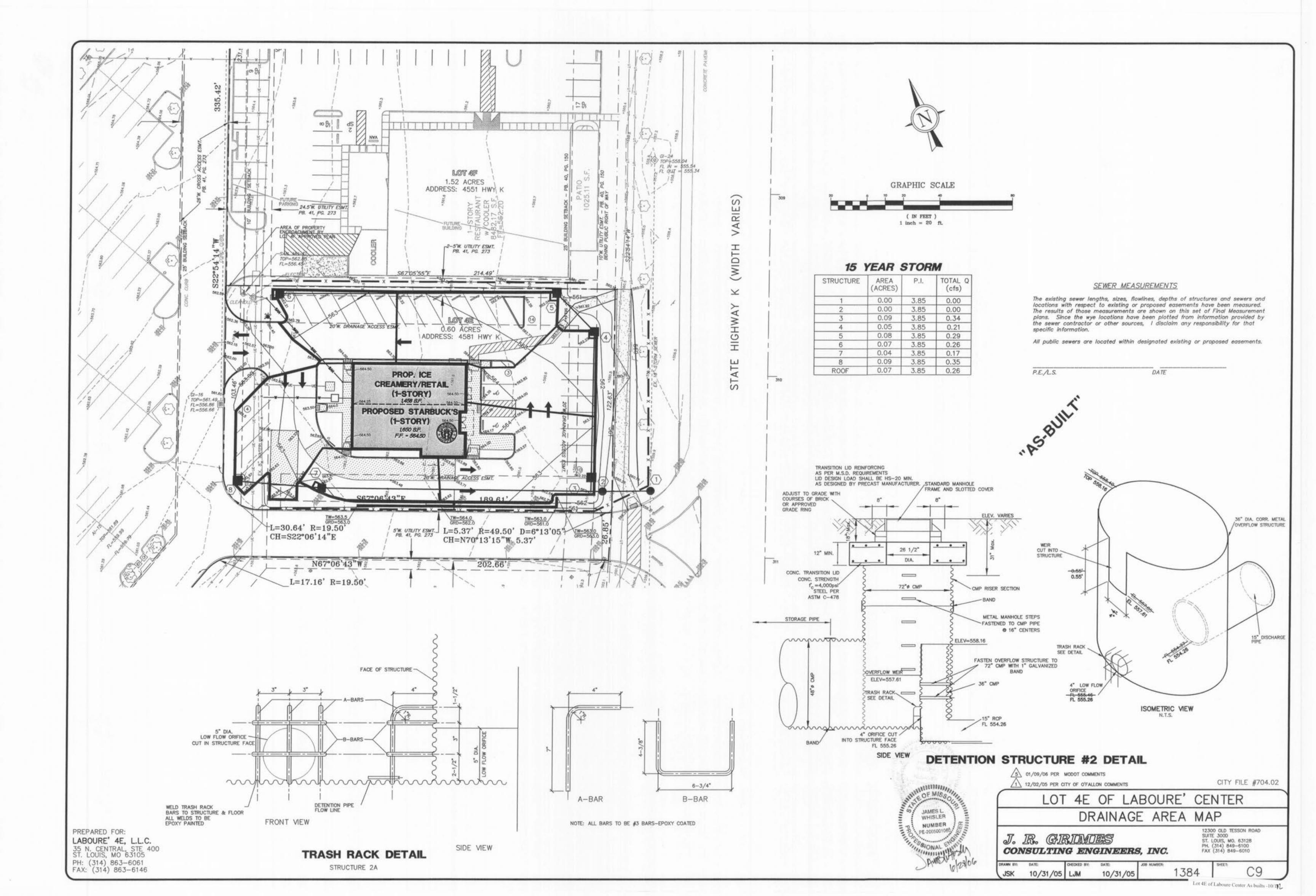
PVC & CPP PIPE

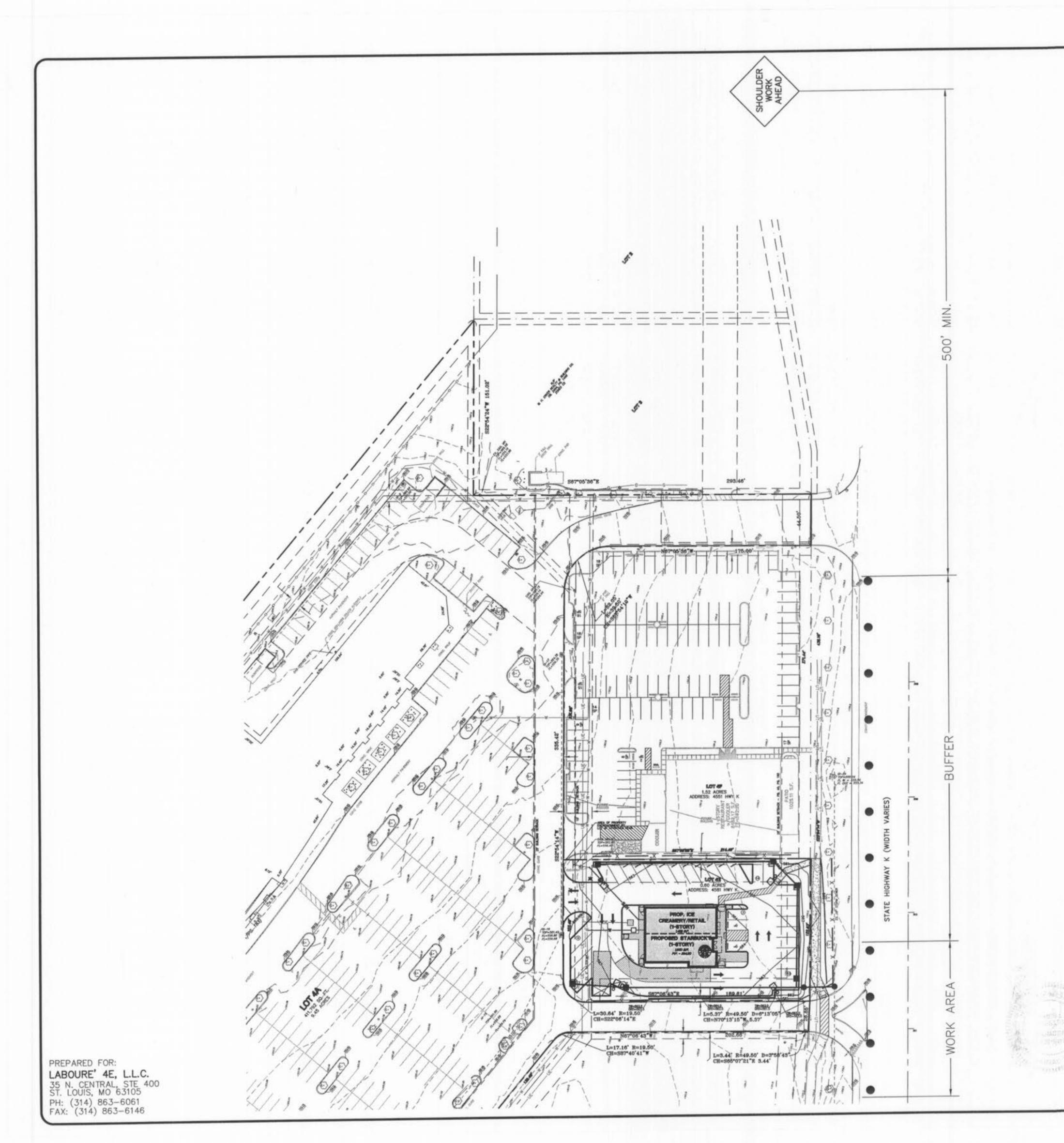




Lot 4E of Laboure Center As builts -8/1/2-









SPEED	SIGN SPACING (fL)		TAPER LENGTH (ft.)		OPTIONAL	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder (T1)	Lane ² (T2)	BUFFER LENGTH (ft.) (B)	Tapers	Buffer/ Work Areas
0-35	200		70	-	120	35	50
40-45	350	-	150		220	40	100
50-55	500	*	185		335	50	100
60-70	1000		235		550	60	100

TYPE ROADWAY	SIGN	MAXIMUM WORK ZONE LENGTH (L)	
URBAN	1' Portable 7' Post	1 Mi.	
RURAL UNDIVIDED	1' Portable 5' Post	3 ML	



Roll-Ahead Space

In addition to shoulder work, this typical application is applicable to work beyond shoulder where vehicles and equipment are parked on the shoulder.

A protective vehicle shall be used while work is in progress.

The protective vehicle should be equipped with a TMA and positioned at least 150 ft. in advance of the work space.

If encroachment onto driving surface occurs and there is not 10 ft. of driving surface available for the lane of traffic, that traffic lane shall be closed. Refer to appropriate lane closure typical applications.

If an arrow panel is used for an operation on the shoulder, the caution mode shall be displayed.

For short duration or mobile operations, signs, channelization devices and protective vehicles may be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used. However, if limited sight distance exists in a stationary operation or workers are on foot, a protective vehicle should be used. This protective vehicle should be equipped with a TMA and truck mounted flashing arrow panel and positioned at least 150 ft. in advance of the work space or work vehicle, as applicable. If a protective vehicle is used, a vehicle mounted sign shall be mounted at a recommended height of 48 in. above the road surface.

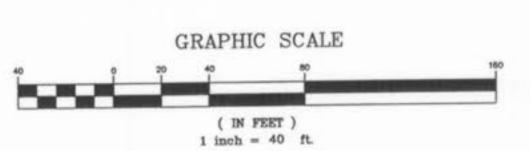
For work beyond shoulder, where vehicles and equipment are parked on the shoulder, the protective vehicle may be eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Additional warning signs shall be erected at each intersection with another state highway within the work zone. Upon the discretion of the supervisor, additional warning signs may be erected at other intersections within the work zone.

Other appropriate signs may be used in lieu of SHOULDER WORK AHEAD sign.

TA-2





5 01/09/06 PER MODOT COMMENTS

WHISLER

CITY FILE #704.02

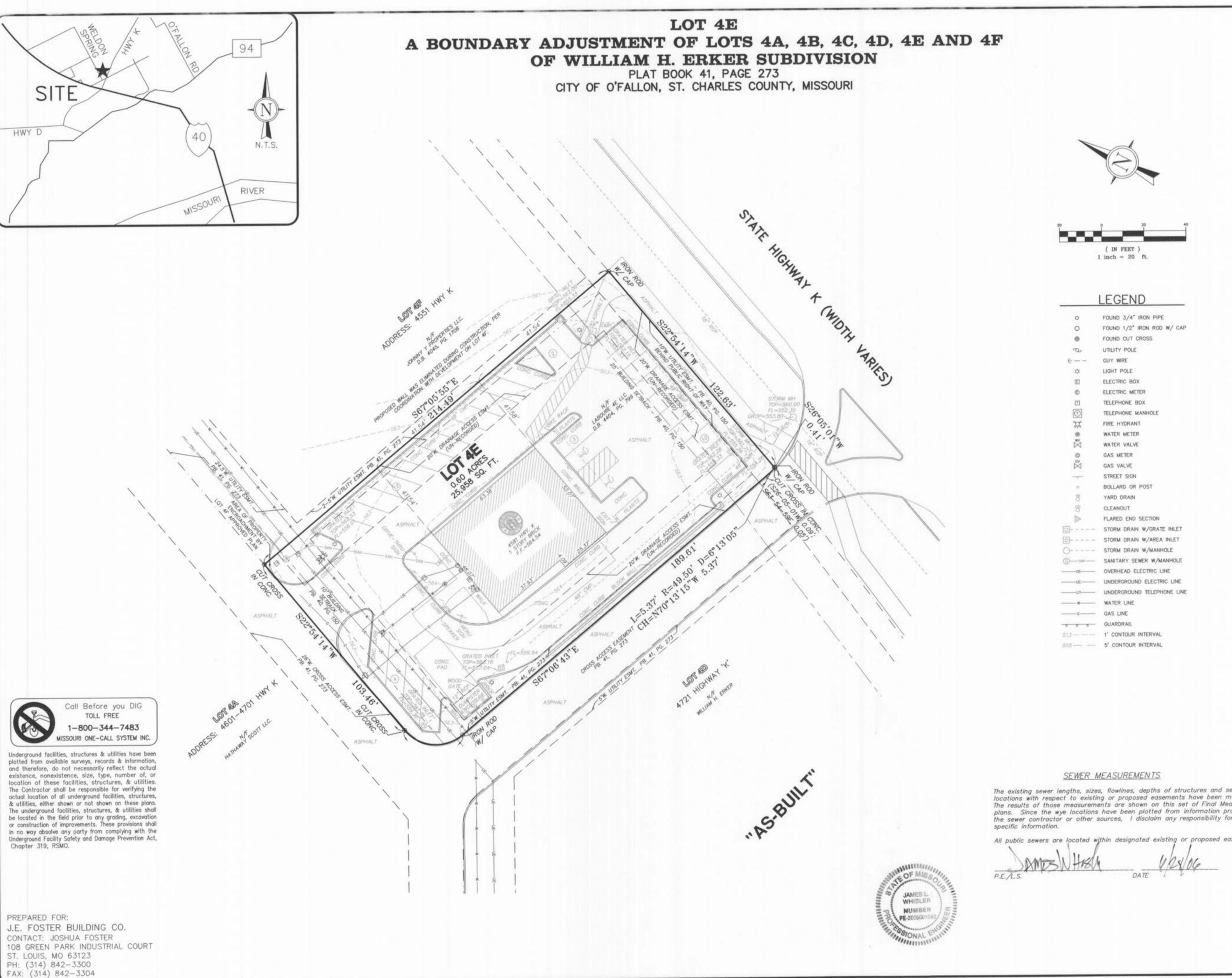
LOT 4E OF LABOURE' CENTER TRAFFIC CONTROL PLAN

J. R. GRIMIES

12300 OLD TESSON ROAD SUITE 300D ST. LOUIS, MO. 63128 PH. (314) 849-6100 FAX (314) 849-6010

JSK 10/31/05 LJM

CONSULTING ENGINEERS, INC.



The existing sewer lengths, sizes, flowlines, depths of structures and sewers and locations with respect to existing or proposed easements have been measured. The results of those measurements are shown on this set of Final Measurement plans. Since the wye locations have been plotted from information provided by the sewer contractor or other sources, I disclaim any responsibility for that

All public sewers are located within designated existing or proposed easements.

JOB NUMBER: 1384C

DRAWN BY: R.C.S. 06/27/06

CHECKED BY: E.E.G. 06/27/06

OF