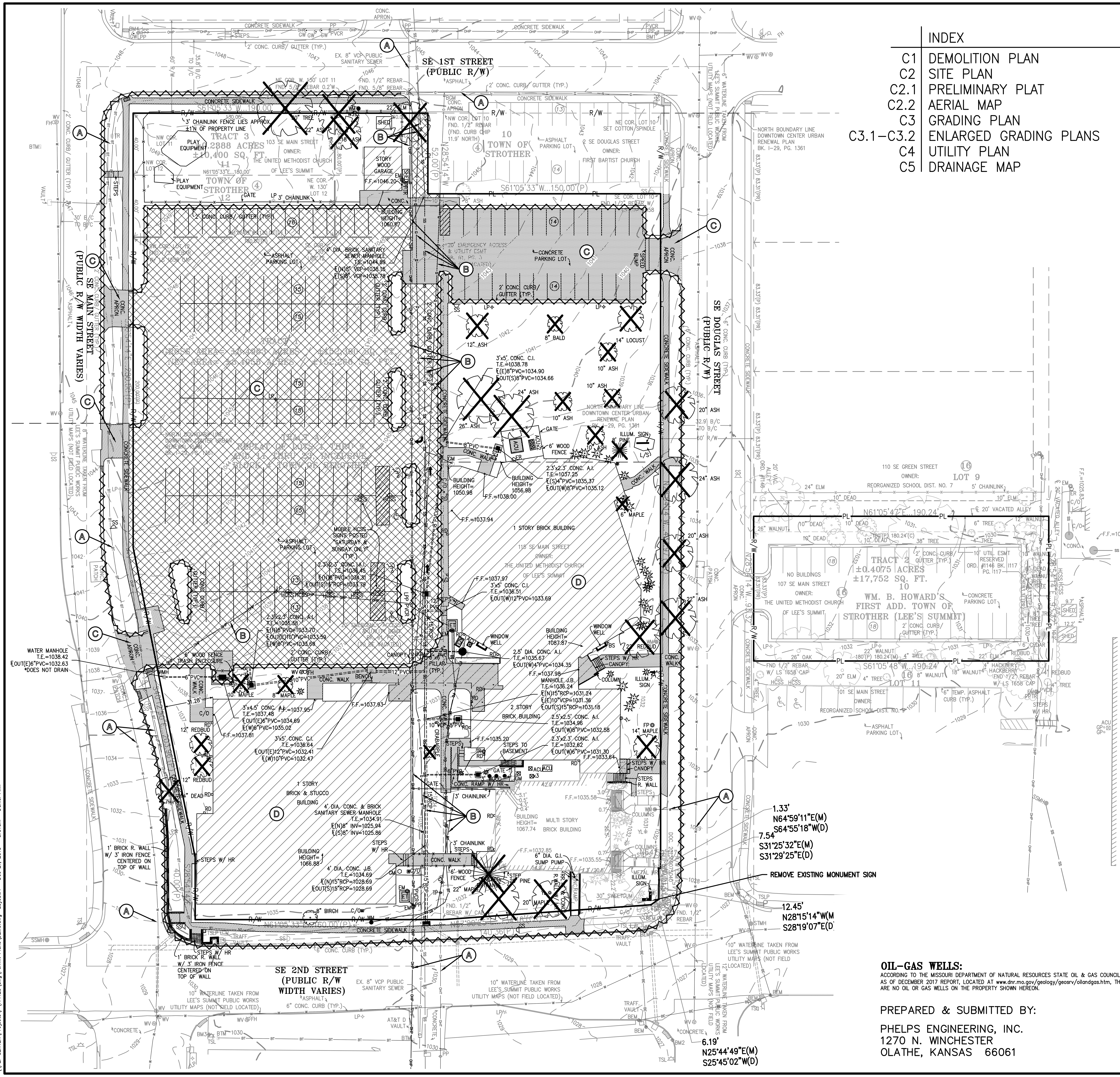

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C1	DEMOLITION PLAN
C2	SITE PLAN
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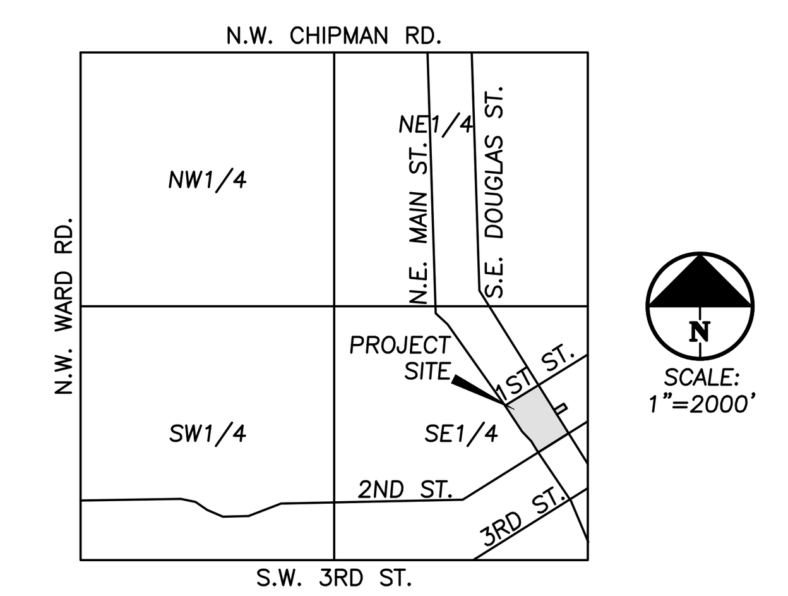
C2.2	AERIAL MAP
C3	GRADING PLAN
C3.1–C3.2	ENLARGED GRADING PLANS
C4	UTILITY PLAN
C5	DRAINAGE MAP

811 Know what's **below.** **Call** before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.



VICINITY MAP
SEC. 6–T47N–R31W

DEMOLITION KEY NOTES:

(A) ALL UTILITIES SERVING STRUCTURES IMMEDIATELY SURROUNDING THE DEMOLITION BOUNDARY SHALL REMAIN IN SERVICE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DAMAGE TO SUCH UTILITIES. TYPICAL LOCATION.

(B) THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND GAS LINES, WATER LINES, SANITARY AND STORM SEWER SERVICE LINES AND THEIR APPURTENANCES. APPURTENANCES INCLUDE, BUT NOT LIMITED TO, ALL PIPES, MANHOLES, JUNCTION BOXES, CATCH BASINS, YARD INLETS, FLUMES AND METER PITS. THE UTILITY SERVICES SHALL BE DISCONNECTED ALONG THE PROJECT BOUNDARY LINE TO THE EXISTING BUILDING TO BE DEMOLISHED.
THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND/OVERHEAD ELECTRICAL SERVICES, TELEPHONE AND CABLE SERVICE LINES AND THEIR APPURTENANCES WITHIN THE PROJECT BOUNDARY. THE UTILITY SERVICES SHALL BE DISCONNECTED ALONG THE PROJECT BOUNDARY. TYPICAL LOCATION.

(C) THE CONTRACTOR SHALL REMOVE EXISTING DRIVE ENTRANCE, EXISTING CONCRETE PARKING LOT, & EXISTING ASPHALT PARKING LOT. REMOVE EXISTING ASPHALT, CONCRETE, AND THE SUB-BASE GRAVEL TO THE NATURAL SOIL ELEVATION.

(D) THE CONTRACTOR SHALL REMOVE ALL PRE-EXISTING STRUCTURES, FOUNDATIONS, FOOTINGS, PIERS, WATER WELLS, SEPTIC TANKS, LATERAL LINES, BURIED DEBRIS, MISCELLANEOUS CONCRETE, ETC. WHICH MAY BE ENCOUNTERED DURING DEMOLITION ACTIVITIES. THE CONTRACTOR SHALL DISPOSE OF THESE MATERIALS IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES.

SHADED AREAS INDICATE MAIN STRUCTURES AND OUTBUILDINGS TO BE DEMOLISHED. IN ADDITION TO SHADED DEMOLITION AREAS, ALL MISCELLANEOUS CONCRETE, STONE STRUCTURES, OUTBUILDINGS, PRIVATE SIDEWALKS, RETAINING WALLS, SIGNS, PATIOS, FOUNDATION WALLS AND FOOTINGS ASSOCIATED WITH THE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS. TYPICAL LOCATION.

THE CONTRACTOR SHALL BE REQUIRED TO BACKFILL ALL EXCAVATIONS/DEPRESSIONS CREATED BY THE REMOVAL OF STRUCTURES, FOUNDATIONS, FOOTINGS, PAVING, SEPTIC TANKS, WELLS, PIPES, TREE ROOTS, DEBRIS AND UTILITY STRUCTURES, ETC. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GROUND ELEVATIONS ON ALL SIDES OF THE EXCAVATION.

LEGEND

Symbol	Description
—PL—	PROPERTY LINE
— — —	LOT LINE
— —R/W— —	RIGHT-OF-WAY
	REMOVE EXISTING CURB & GUTTER
	EXISTING BUILDING TO BE REMOVED
	EXISTING ASPHALT PAVEMENT TO BE REMOVED
	EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
	EXISTING TREE TO REMAIN
	REMOVE TREE
LP	EXISTING LIGHT POLE
—W—	EXISTING WATER LINE
—G—	EXISTING GAS LINE
—BE—	EXISTING BURIED ELECTRIC
—BT—	EXISTING BURIED TELEPHONE
—SS—	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING FIRE HYDRANT

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS AS OF DECEMBER 2017 REPORT, LOCATED AT www.dnr.mo.gov/geology/geosrv/oilandgas.htm, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

PREPARED & SUBMITTED BY:

PHELPS ENGINEERING, INC.
1270 N. WINCHESTER
OLATHE, KANSAS 66061

SCALE: 1"=30'
0' 30' 60'

STATE OF MISSOURI — JUDD DAVID CLAUSSEN — NUMBER PE-29850 — PROFESSIONAL ENGINEER — 12/21/18

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
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PLANNING
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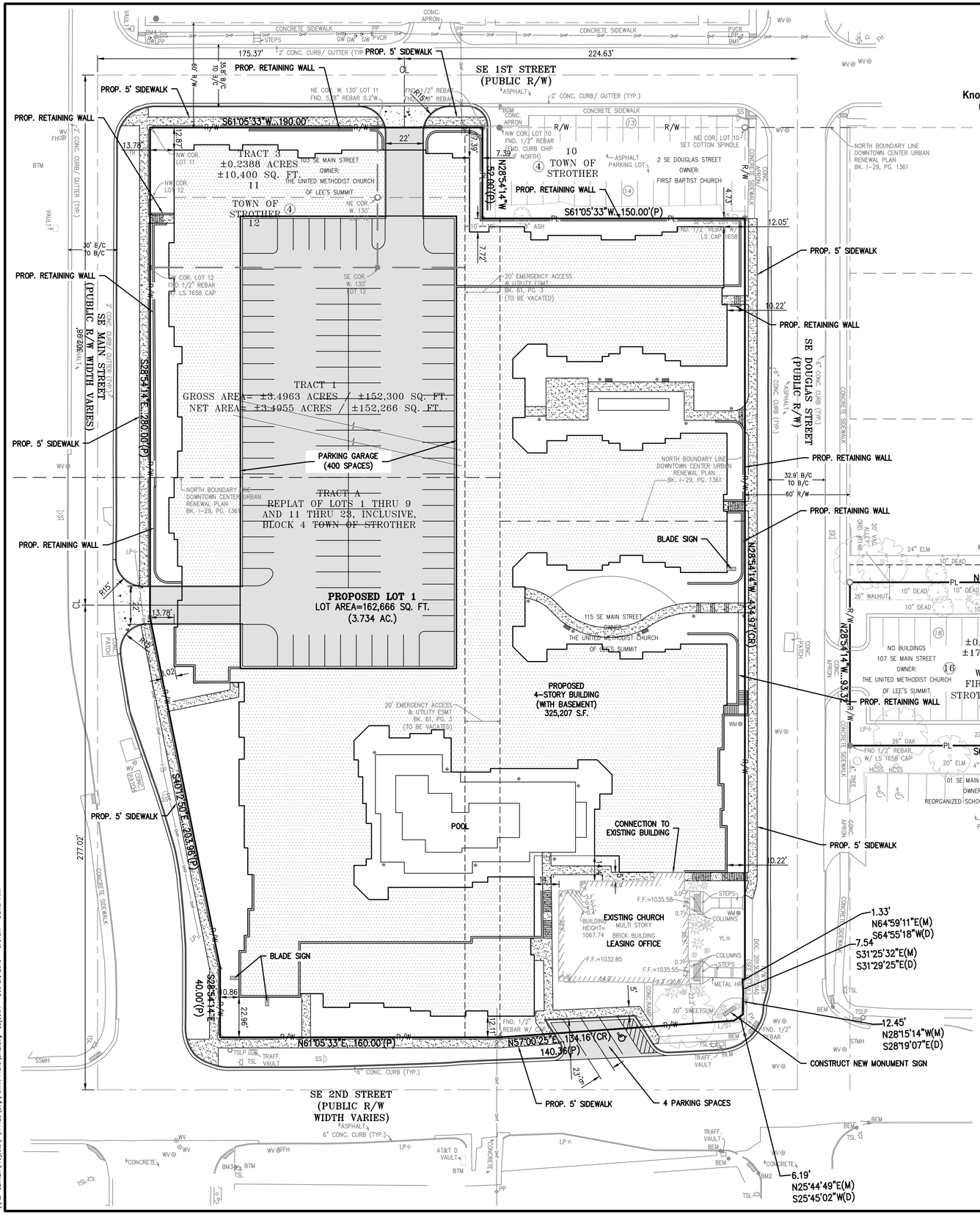
IMPLEMENTATION
PEI

DEMOLITION PLAN
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 171125
DATE: 12-21-18 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007005058

SHEET
C1



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UTILITY NOTES:
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DEED LEGAL DESCRIPTION:

TRACT 1:
TRACT A, REPLAT OF LOTS 1 THRU 9 AND 11 THRU 23, INCLUSIVE, BLOCK 4, TOWN OF STROTHER, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

TRACT 2:
LOT 10, BLOCK 16, WM. B. HOWARD'S FIRST ADDITION TO THE TOWN OF STROTHER, NOW THE CITY OF LEE'S SUMMIT, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, TOGETHER WITH THE SOUTHEASTERLY HALF OF THE VACATED ALLEY LYING NORTHWESTERLY AND ADJOINING AND ALSO TOGETHER WITH THE SOUTHWESTERLY HALF OF THE VACATED ALLEY LYING NORTHEASTERLY AND ADJOINING.

TRACT 3:
THE WEST 130 FEET OF LOTS 11 AND 12, BLOCK 4, CITY OF LEE'S SUMMIT, FORMERLY THE TOWN OF STROTHER, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

FLOOD NOTE:

THE SUBJECT 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. 29095C0417G, AND DATED JANUARY 20, 2017.

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- RETAINING WALL
- FENCE
- LIGHT POLE

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Lee's Summit Technical Specifications and Municipal Code.
   C) 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 shall prevail.

2. 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.

3. 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 the bid for the work.

4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.

5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.

6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.

7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.

8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.

9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.

10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.

11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet kansas city materials metro board (kcmmb) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.

2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.

2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.

3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.

5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

SITE DATA

Site Area – Lot 1	162,666 S.F./3.734 Ac.
Site Area – Tract 2	17,752 S.F./0.408 Ac.
Zoning – Existing	Planned Central Business
Zoning – Proposed	Planned Central Business
Existing Land Use:	Church
Proposed Land Use:	Apartments
Impervious (Existing)	114,837 S.F. (70.6%)
Impervious (Proposed)	124,154 S.F. (76.3%)

BUILDING DATA

Existing Church/Leasing Office	4,328 S.F.
Proposed Multi-Family (4 Story w/ Basements)	325,207 S.F.
Total Building S.F.	329,535 S.F.
Studio Units	3
One Bedroom Units	170
Two Bedroom Units	105
Total Units	278
Lot 1 – Floor Area Ratio (FAR)	2.03
Lot 1 – Total Units / Acre	74.5

PARKING SUMMARY

City Parking Required:	
1 Space per Studio Unit	3 Spaces
1.5 Spaces per One Bedroom Unit	255 Spaces
1.5 Spaces per Two Bedroom Unit	158 Spaces
Total Parking without Visitors	416 Spaces
0.5 Spaces per Unit for Visitors	139 Spaces
Total Parking Required	555 Spaces
Parking Provided:	
Garage Parking	400 Spaces
Street Parking	4 Spaces
Tract 2 Off-Site	36 Spaces
Total Parking Provided	440 Spaces

STATE OF MISSOURI — JUDD DAVID CLAUSSEN — NUMBER PE-29850 — 12/21/18 — PROFESSIONAL ENGINEER

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SITE PLAN
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO.: 171125
DATE: 12-21-18 DRAWN: SNH
CHECKED: DAF APPROVED: JDC
CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS-82
KANSAS ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007020128
ENGINEERING-2007025038

SHEET
C2

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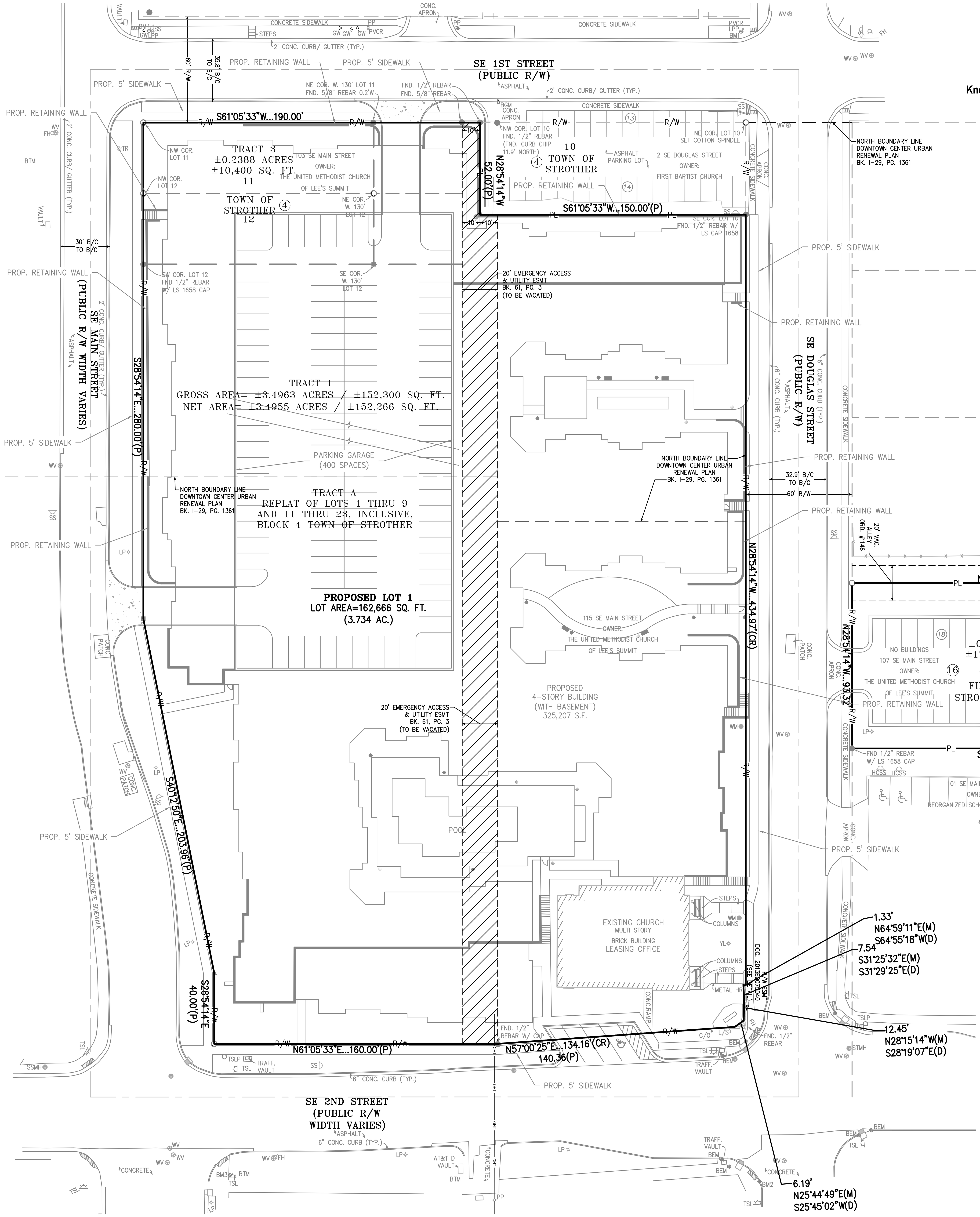

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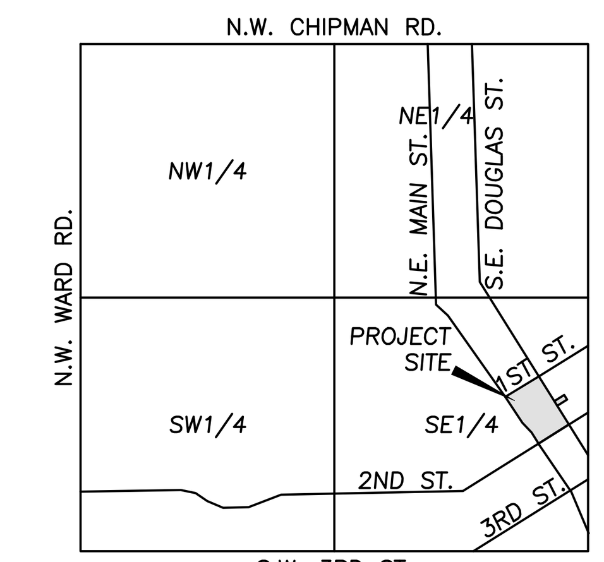

VICINITY MAP
SEC. 6-T47N-R31W

SCALE: 1"=2000'

DEED LEGAL DESCRIPTION:

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TRACT A, REPLAT OF LOTS 1 THRU 9 AND 11 THRU 23, INCLUSIVE, BLOCK 4, TOWN OF STROTHER, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

TRACT 2:
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TRACT 3:
THE WEST 130 FEET OF LOTS 11 AND 12, BLOCK 4, CITY OF LEE'S SUMMIT, FORMERLY THE TOWN OF STROTHER, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

PROPOSED LOT 1 LEGAL DESCRIPTION:

A resurvey and replat of Tract A, REPLAT OF LOTS 1 THRU 9 AND 11 THRU 23, INCLUSIVE, BLOCK 4, TOWN OF STROTHER and the West 130 feet of Lots 11 and 12, Block 4, TOWN OF STROTHER, all being platted subdivisions of land in the City of Lee's Summit, Jackson County, Missouri, containing 3.734 acres, more or less of replatted land.

LEGEND

—PL—	PROPERTY LINE
— —	LOT LINE
—R/W—	RIGHT-OF-WAY
(hatched)	EASEMENTS TO BE VACATED

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29850
PROFESSIONAL ENGINEER
12/21/18

PHELPS ENGINEERING, INC.
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PEI
PLANNING
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IMPLEMENTATION

PRELIMINARY PLAT
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 171125
DATE: 12-21-18 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

SHEET
C2.1

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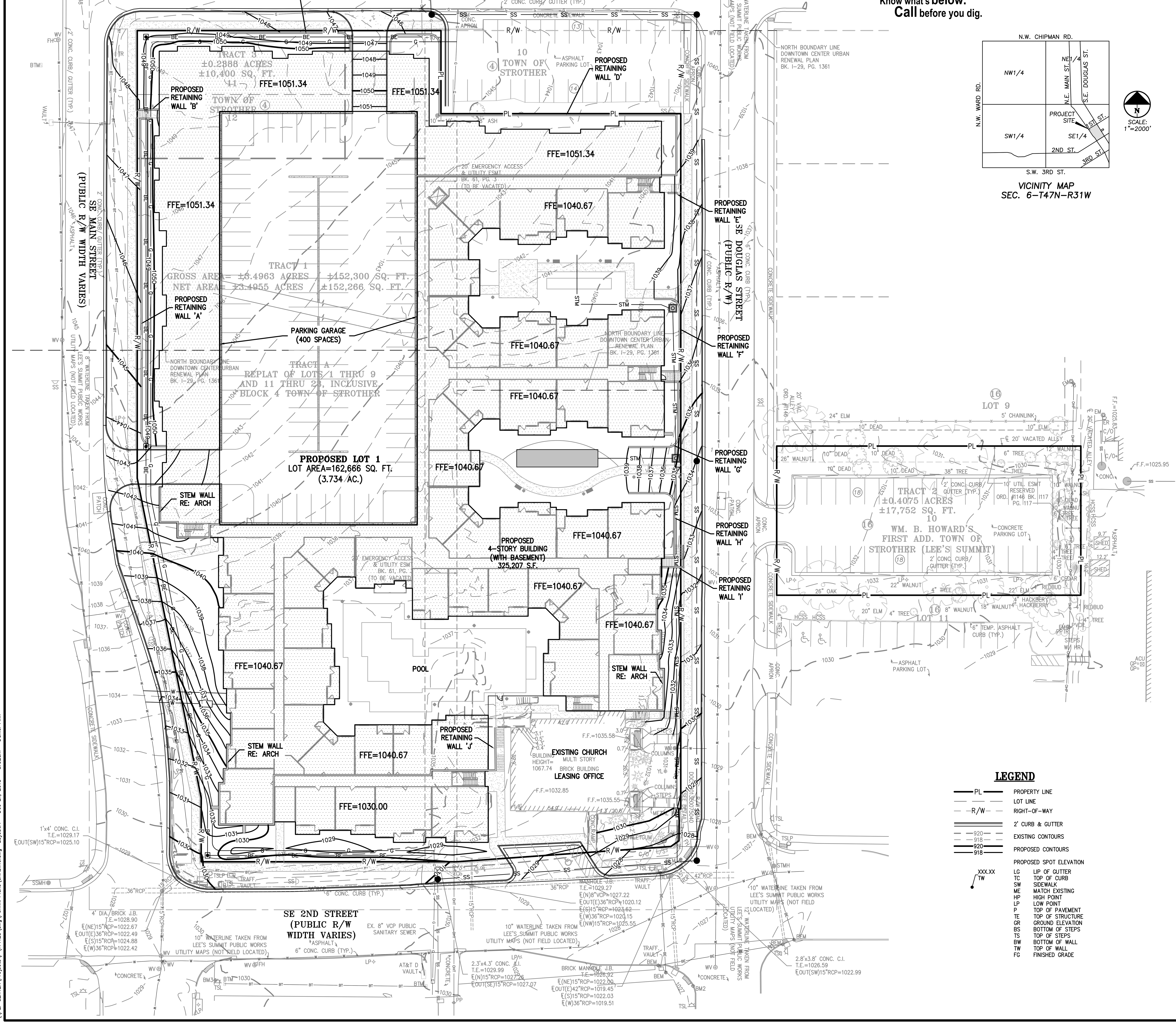

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LEGEND

PL	PROPERTY LINE
	LOT LINE
R/W	RIGHT-OF-WAY
	2' CURB & GUTTER
920 / 918	EXISTING CONTOURS
920 / 918	PROPOSED CONTOURS
XXX.XX TW	PROPOSED SPOT ELEVATION

- LG LIP OF GUTTER
- TC TOP OF CURB
- SW SIDEWALK
- ME MATCH EXISTING
- HP HIGH POINT
- LP LOW POINT
- P TOP OF PAVEMENT
- TE TOP OF STRUCTURE
- GR GROUND ELEVATION
- BS BOTTOM OF STEPS
- TS TOP OF STEPS
- BW BOTTOM OF WALL
- TW TOP OF WALL
- FG FINISHED GRADE

SITE GRADING NOTES:

1. 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.

3. 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.

4. 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.

5. 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.

6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.

7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and 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 fill.

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.

14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA 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.

FLOOD NOTE:

THE SUBJECT 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. 29095C0417G, AND DATED JANUARY 20, 2017.

WATERSHED NOTE:

THIS PROPERTY IS PART OF THE LITTLE BLUE RIVER WATERSHED.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS.

BM 1. RAILROAD SPIKE IN POWER POLE AT NORTHWEST QUADRANT OF 1ST STREET AND DOUGLAS STREET. ELEVATION =1043.06

BM 2. SQUARE CUT ON BACK OF CURB AT THE SOUTHWEST QUADRANT OF 2ND STREET AND DOUGLAS STREET. ELEVATION =1026.56

BM 3. SQUARE CUT ON THE NORTHWEST CORNER OF SIGNAL POLE BASE AT SOUTHEAST QUADRANT OF 2ND STREET AND MAIN STREET. ELEVATION =1029.82

BM 4. RAILROAD SPIKE IN POWER POLE AT NORTHEAST QUADRANT OF 1ST STREET AND MAIN STREET. ELEVATION =1049.87

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com
PLANNING
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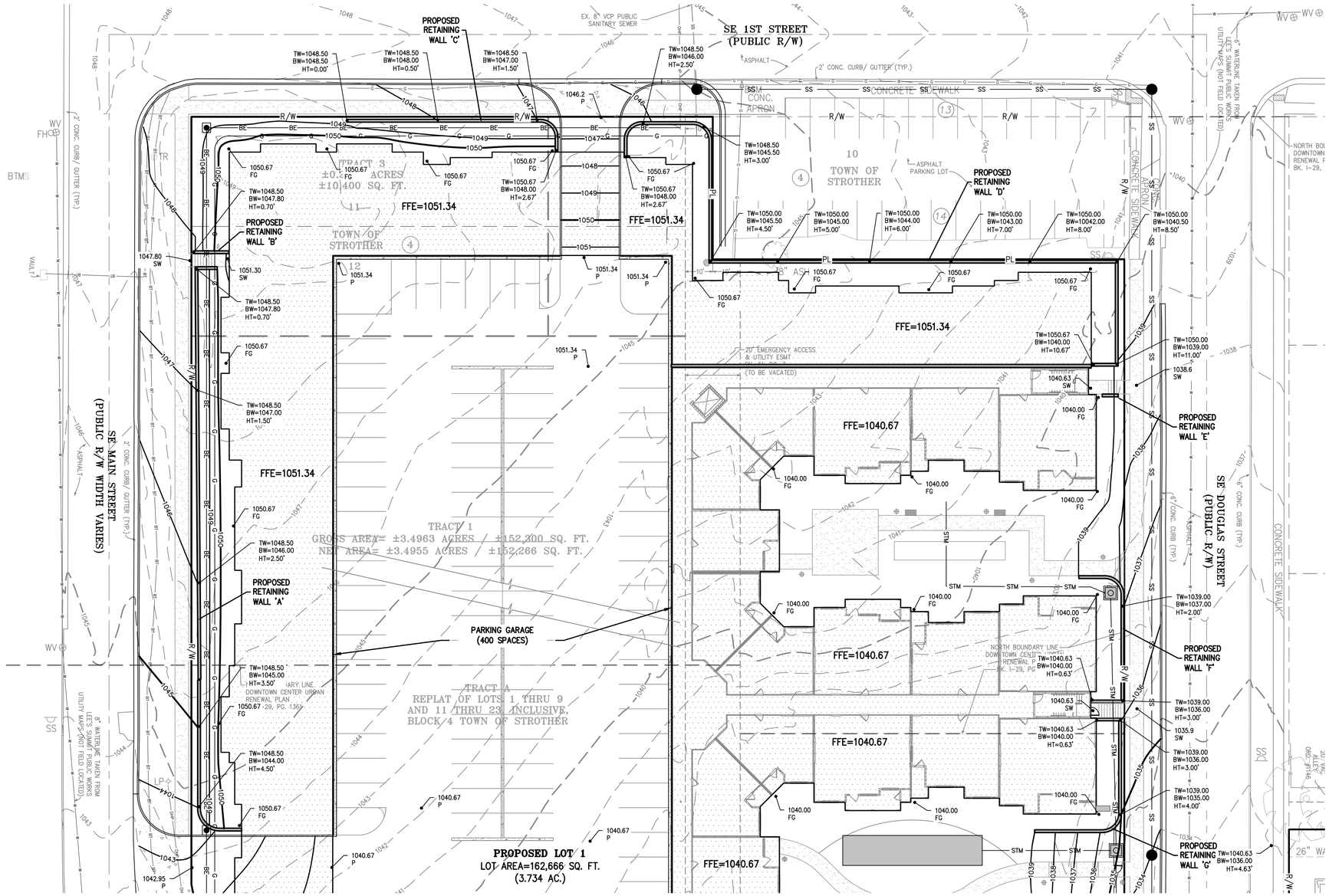
IMPLEMENTATION

GRADING PLAN
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 171125
DATE:12-21-18 DRAWN: SNH
CHECKED: DAF APPROVED: JDC

SHEET
C3



LEGEND

PL	PROPERTY LINE
	LOT LINE
R/W	RIGHT-OF-WAY
	2' CURB & GUTTER
920	EXISTING CONTOURS
918	
920	PROPOSED CONTOURS
918	

PROPOSED SPOT ELEVATION

XXX.XX / TW

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL
FG	FINISHED GRADE

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

811 Know what's below. Call before you dig.

SCALE: 1"=20'
0' 20' 40'

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29850
2/21/18
PROFESSIONAL ENGINEER

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ENLARGED GRADING PLAN
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No.	Date	Revisions:	By	App.

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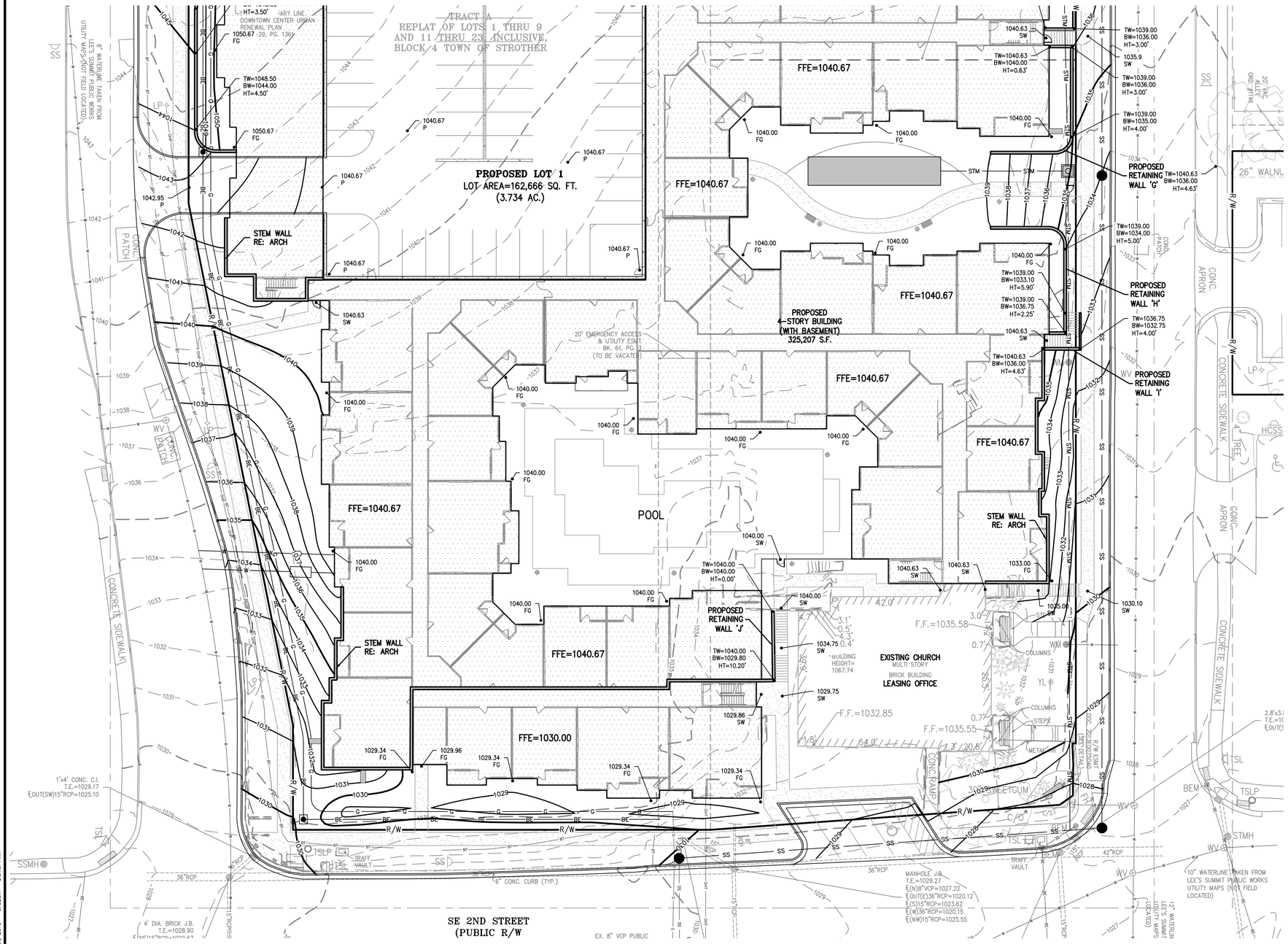
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING – LS-82
MISSOURI ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING–2007001128
ENGINEERING–2007000358

SHEET
C3.1

\\PEI-SERVER\Projects\V1\171125\dwg\Permit Plans\GRADING.dwg Layout:2 Dec 21, 2018 - 8:52am Daniel Finn



LEGEND

PL	PROPERTY LINE
	LOT LINE
R/W	RIGHT-OF-WAY
	2' CURB & GUTTER
920 / 918	EXISTING CONTOURS
920 / 918	PROPOSED CONTOURS
XXX.XX TW	PROPOSED SPOT ELEVATION

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL
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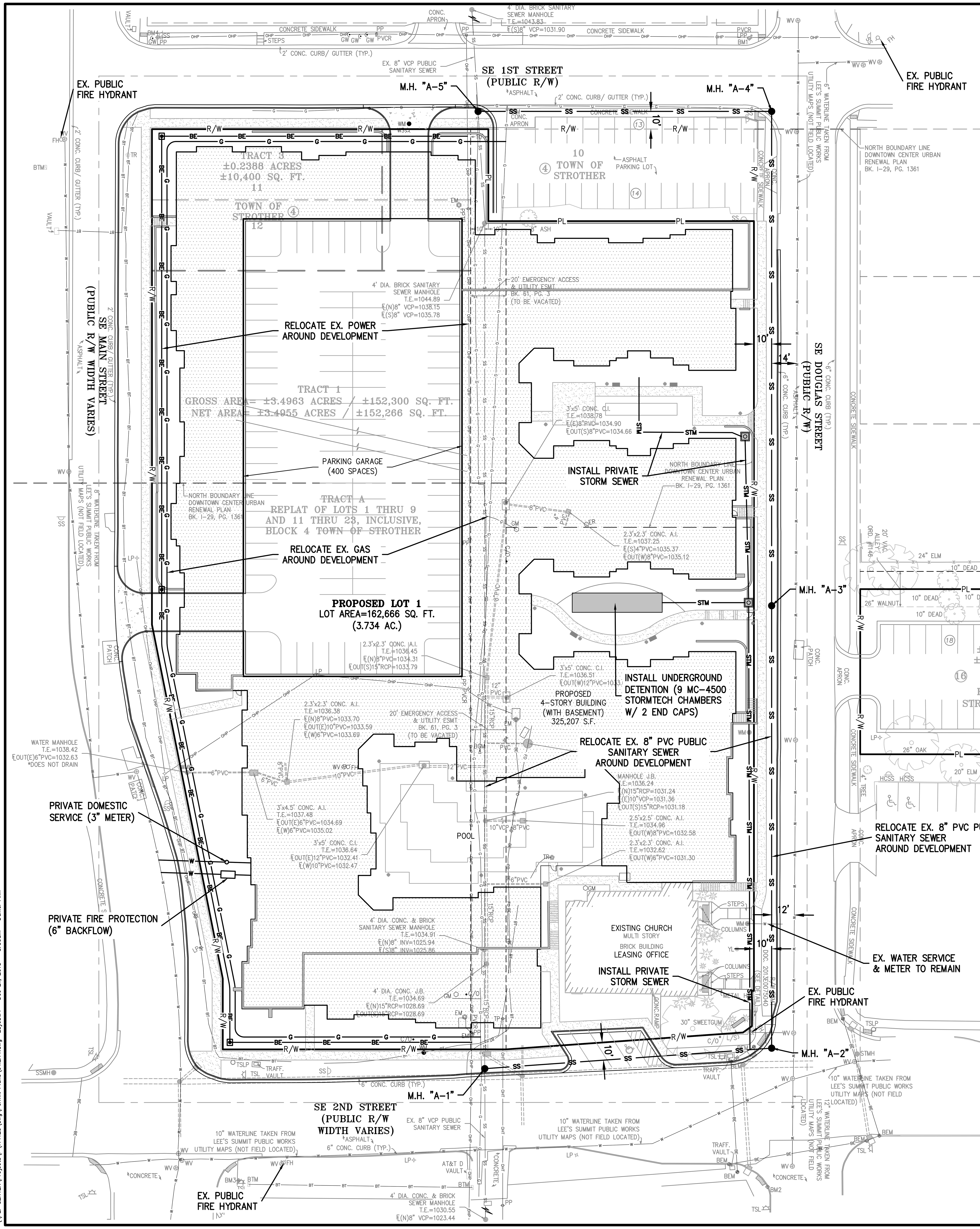
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007002593

SHEET
C3.2



UTILITY COMPANIES:

MISSOURI GAS ENERGY	(816) 969–2218
LUCAS WALLS (LUCAS.WALLS@SUG.COM)	
3025 SOUTHEAST CLOVER DRIVE	
LEE'S SUMMIT, MO 64082	
KANSAS CITY POWER & LIGHT CO.	(816) 347–4339
PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM)	
RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM)	(816) 347–4316
1300 HAMBLEN ROAD	
LEE'S SUMMIT, MO 64081	
SEWER & WATER (CITY OF LEE'S SUMMIT)	(816) 969–1800
GENE WILLIAMS (PUBLICWORKS@CITYOFLS.NET)	
220 SE GREEN STREET	
LEE'S SUMMIT, MO 64063	
WATER (CITY OF LEE'S SUMMIT)	(816) 969–1240
MIKE WEISENBORN (PUBLICWORKS@CITYOFLS.NET)	
220 SE GREEN STREET	
LEE'S SUMMIT, MO 64063	
AT&T (913) 383–4929	
MR. CLAYTON ANSPAUGH (CA4089@ATT.COM)	(913) 383–4849–FAX
9444 NALL AVENUE	
OVERLAND PARK, KANSAS 66207	
GOOGLE FIBER	
BLUEBIRD	
TIMEWARNER	

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UTILITY NOTES:

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 design engineer. No pipes shall be laid until direction is received from the design engineer.*
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 sewer pipe.*
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 Summit, Missouri.*
7. *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 requirements of the City of Lee's Summit, Missouri and the Jackson County Unified Wastewater District.*
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 the bid for the work.*
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 points prior to installation of utility line.*
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.*
13. *Water lines shall be as follows (unless otherwise shown on plans):*

– Pipe sizes less than 3–inches that are installed below grade and outside building shall comply with the following:

1. *Seamless Copper Tubing: Type "K" soft copper, ASTM B88.*
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.*
   - *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*
2. *Ductile Iron Water Pipe: AWWA C151, thickness class 50.*
   - *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*

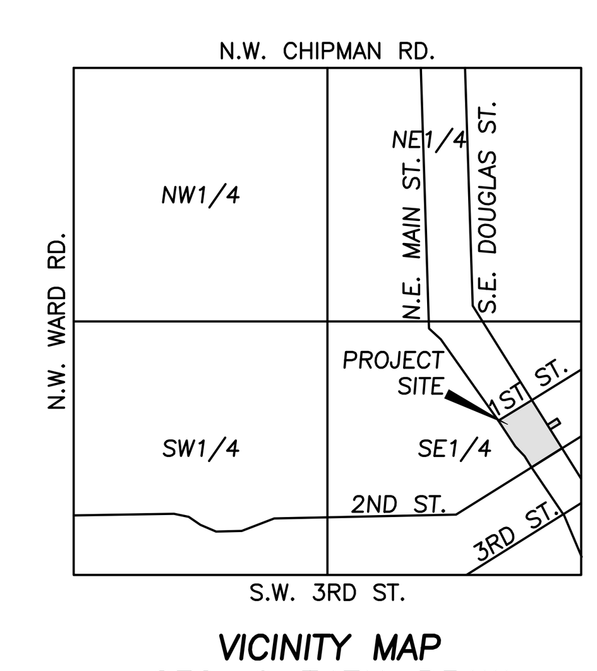
– Polyvinyl Chloride (PVC) Water Pipe may be used for Pipe sizes 4–inches Through 12–inches that are installed below grade and outside building shall comply with the following:

1 Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
- *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 imprinted with "Water Service" in large letters.*

15. *Minimum trench width shall be 2 feet.*
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 the sewer line is required.*
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).*
19. *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.*
20. *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.*
21. *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 paving.*
22. *When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.*

LEGEND

—PL—	PROPERTY LINE
— — —	LOT LINE
– –R/W– –	RIGHT–OF–WAY
—G—	EXISTING GAS LINE
—BE—	EXISTING BURIED ELECTRIC LINE
—OHP—	EXISTING OVERHEAD POWER LINE
—SS—	EXISTING SANITARY SEWER LINE
=======	EXISTING STORM SEWER LINE
—BT—	EXISTING BURIED TELEPHONE LINE
—W—	EXISTING WATER LINE
—G—	PROPOSED GAS LINE
—BE—	PROPOSED BURIED ELECTRIC LINE
—SS—	PROPOSED SANITARY SEWER LINE
▬▬▬	PROPOSED STORM SEWER LINE
—BT—	PROPOSED BURIED TELEPHONE LINE
—W—	PROPOSED WATER LINE



VICINITY MAP
SEC. 6–T47N–R31W

SCALE: 1"=30'
0' 30' 60'

STATE OF MISSOURI
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UTILITY PLAN
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

No.	Date	Revisions:	By	App.

PROJECT NO. 171125
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CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007005058

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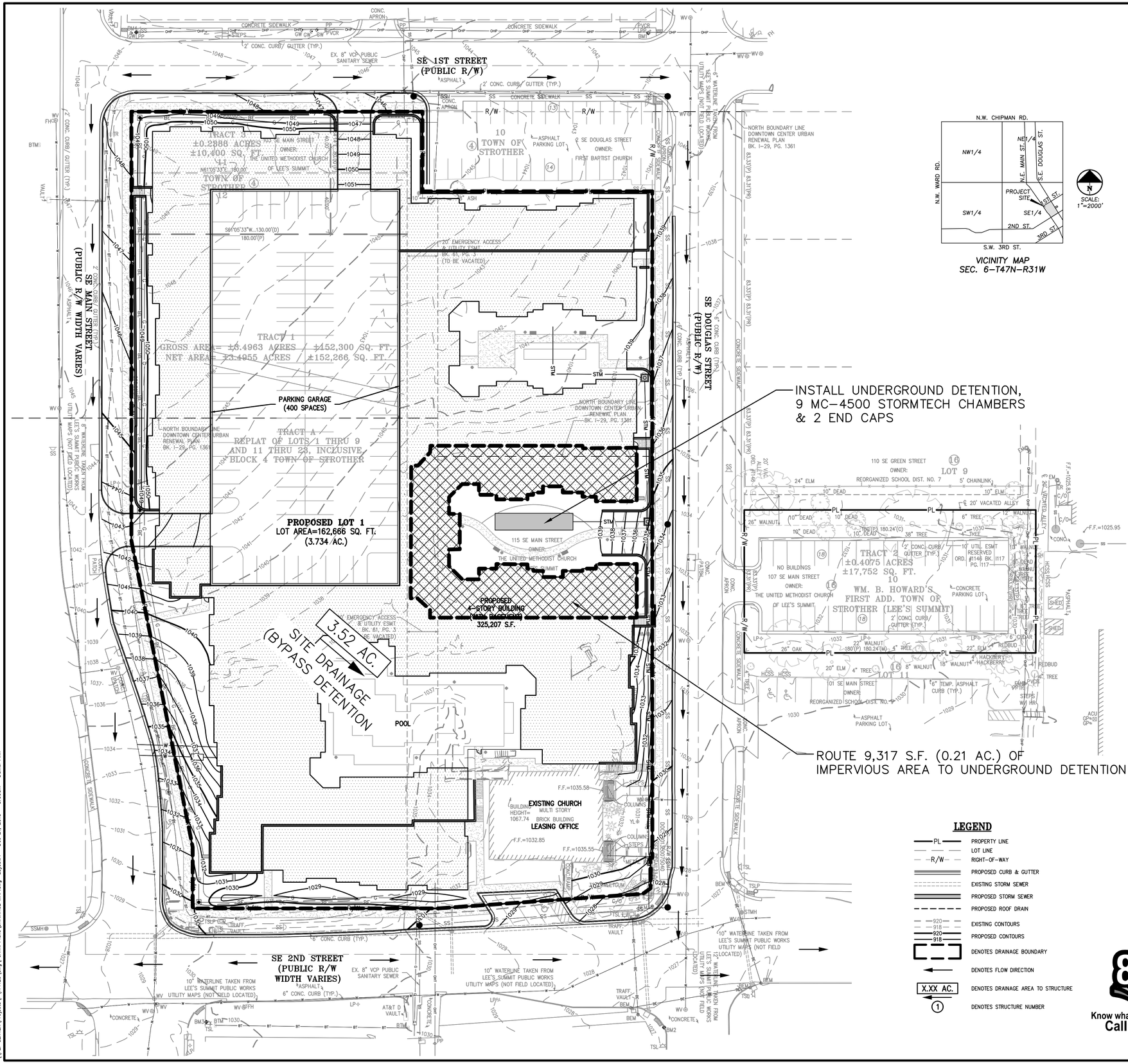

VICINITY MAP
SEC. 6–T47N–R31W

FLOOD NOTE:
THE SUBJECT 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. 29095C0417G, AND DATED JANUARY 20, 2017.

WATERSHED NOTE:
THIS PROPERTY IS PART OF THE LITTLE BLUE RIVER WATERSHED.

LEGEND

- PL — PROPERTY LINE
- LOT LINE
- R/W — RIGHT-OF-WAY
- PROPOSED CURB & GUTTER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED ROOF DRAIN
- 920 — EXISTING CONTOURS
- 918 — PROPOSED CONTOURS
- DENOTES DRAINAGE BOUNDARY
- DENOTES FLOW DIRECTION
- X.XX AC. — DENOTES DRAINAGE AREA TO STRUCTURE
- (1) — DENOTES STRUCTURE NUMBER

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0' 30' 60'

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DRAINAGE MAP
DOWNTOWN LEE'S SUMMIT APARTMENTS
115 S.E. MAIN STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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ENGINEERING - E-391
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ENGINEERING—2007002598

SHEET
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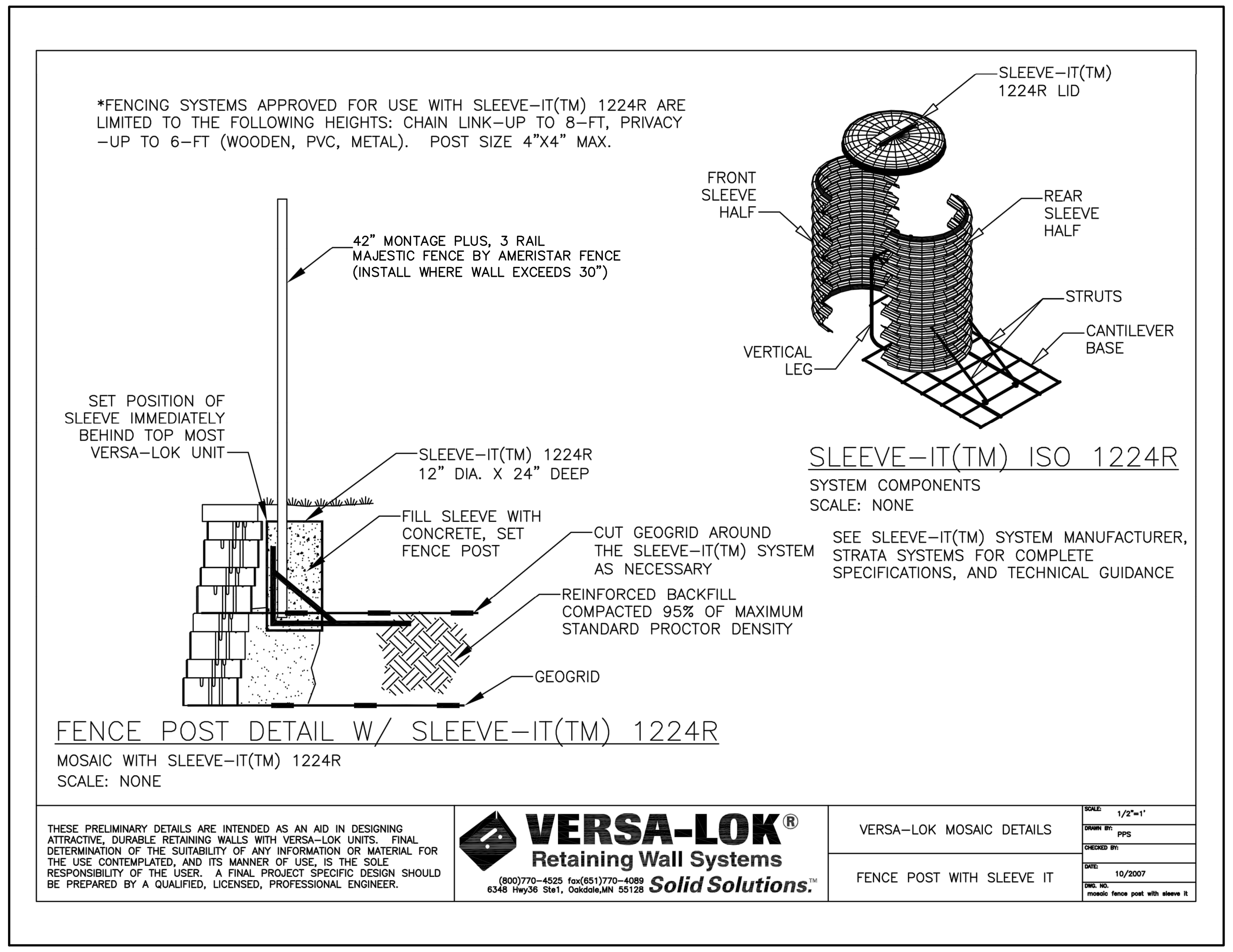
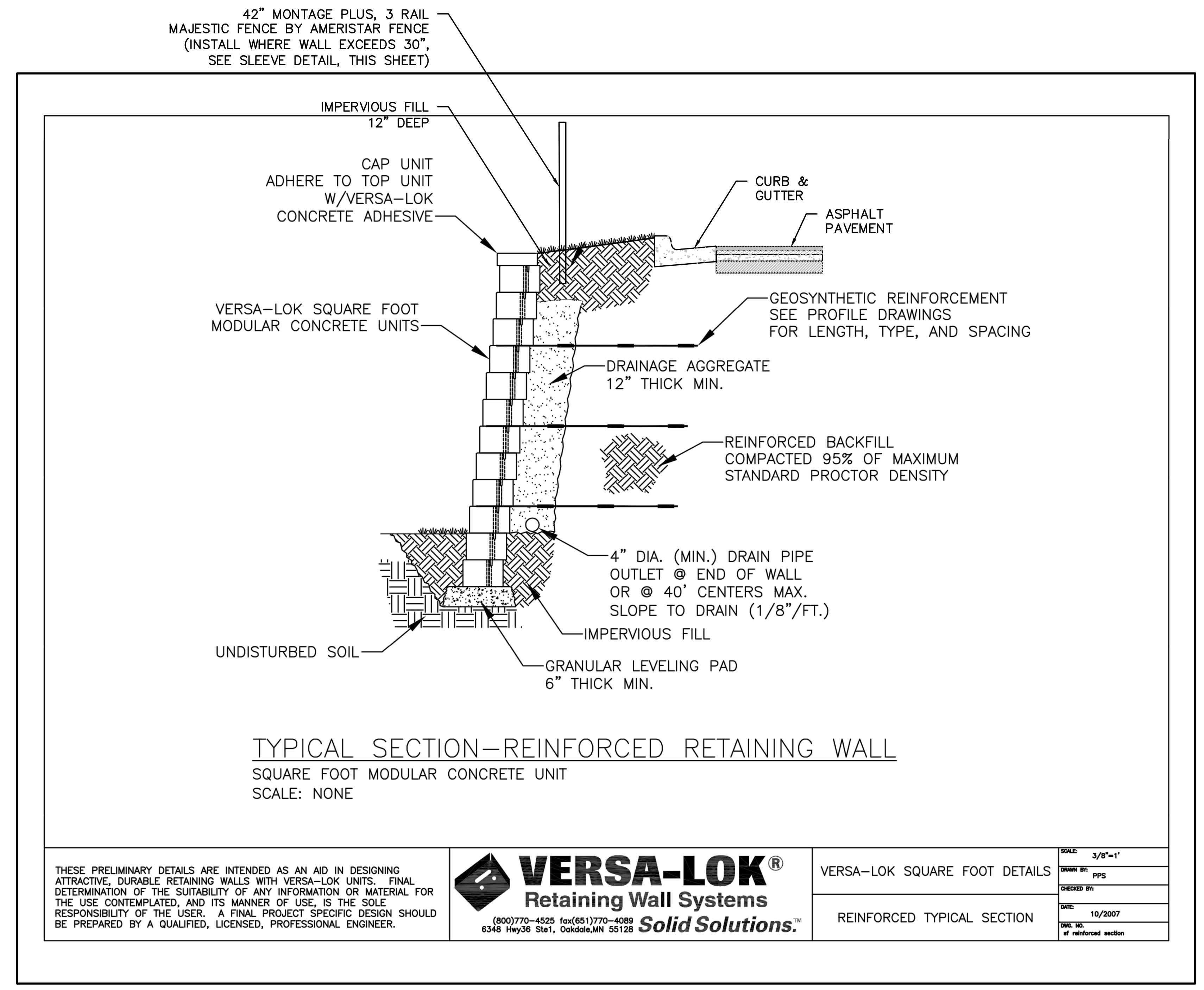
\\PEI-SERVER\Projects\P\171125\dwg\Permit Plans\DRAINAGE MAP.dwg Layout:1 Dec 21, 2018 - 8:53am Daniel Finn



*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE–IT(TM) 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK–UP TO 8–FT, PRIVACY –UP TO 6–FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.
42" MONTAGE PLUS, 3 RAIL MAJESTIC FENCE BY AMERISTAR FENCE (INSTALL WHERE WALL EXCEEDS 30")
SET POSITION OF SLEEVE IMMEDIATELY BEHIND TOP MOST VERSA–LOK UNIT
SLEEVE–IT(TM) 1224R 12" DIA. X 24" DEEP
FILL SLEEVE WITH CONCRETE, SET FENCE POST
CUT GEOGRID AROUND THE SLEEVE–IT(TM) SYSTEM AS NECESSARY
REINFORCED BACKFILL COMPACTED 95% OF MAXIMUM STANDARD PROCTOR DENSITY
GEOGRID
FENCE POST DETAIL W/ SLEEVE–IT(TM) 1224R
MOSAIC WITH SLEEVE–IT(TM) 1224R
SCALE: NONE
SLEEVE–IT(TM) 1224R LID
FRONT SLEEVE HALF
REAR SLEEVE HALF
STRUTS
CANTILEVER BASE
VERTICAL LEG
SLEEVE–IT(TM) ISO 1224R
SYSTEM COMPONENTS
SCALE: NONE
SEE SLEEVE–IT(TM) SYSTEM MANUFACTURER, STRATA SYSTEMS FOR COMPLETE SPECIFICATIONS, AND TECHNICAL GUIDANCE
THESE PRELIMINARY DETAILS ARE INTENDED AS AN AID IN DESIGNING ATTRACTIVE, DURABLE RETAINING WALLS WITH VERSA–LOK UNITS. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, AND ITS MANNER OF USE, IS THE SOLE RESPONSIBILITY OF THE USER. A FINAL PROJECT SPECIFIC DESIGN SHOULD BE PREPARED BY A QUALIFIED, LICENSED, PROFESSIONAL ENGINEER.
VERSA-LOK®
Retaining Wall Systems
Solid Solutions.
VERSA–LOK MOSAIC DETAILS
FENCE POST WITH SLEEVE IT
10/2007



42" MONTAGE PLUS, 3 RAIL MAJESTIC FENCE BY AMERISTAR FENCE (INSTALL WHERE WALL EXCEEDS 30". SEE SLEEVE DETAIL, THIS SHEET)
IMPERVIOUS FILL 12" DEEP
CAP UNIT ADHERE TO TOP UNIT W/VERSA–LOK CONCRETE ADHESIVE
CURB & GUTTER
ASPHALT PAVEMENT
VERSA–LOK SQUARE FOOT MODULAR CONCRETE UNITS
GEOSYNTHETIC REINFORCEMENT SEE PROFILE DRAWINGS FOR LENGTH, TYPE, AND SPACING
DRAINAGE AGGREGATE 12" THICK MIN.
REINFORCED BACKFILL COMPACTED 95% OF MAXIMUM STANDARD PROCTOR DENSITY
4" DIA. (MIN.) DRAIN PIPE OUTLET @ END OF WALL OR @ 40' CENTERS MAX. SLOPE TO DRAIN (1/8"/FT.)
IMPERVIOUS FILL
UNDISTURBED SOIL
GRANULAR LEVELING PAD 6" THICK MIN.
TYPICAL SECTION–REINFORCED RETAINING WALL
SQUARE FOOT MODULAR CONCRETE UNIT
SCALE: NONE
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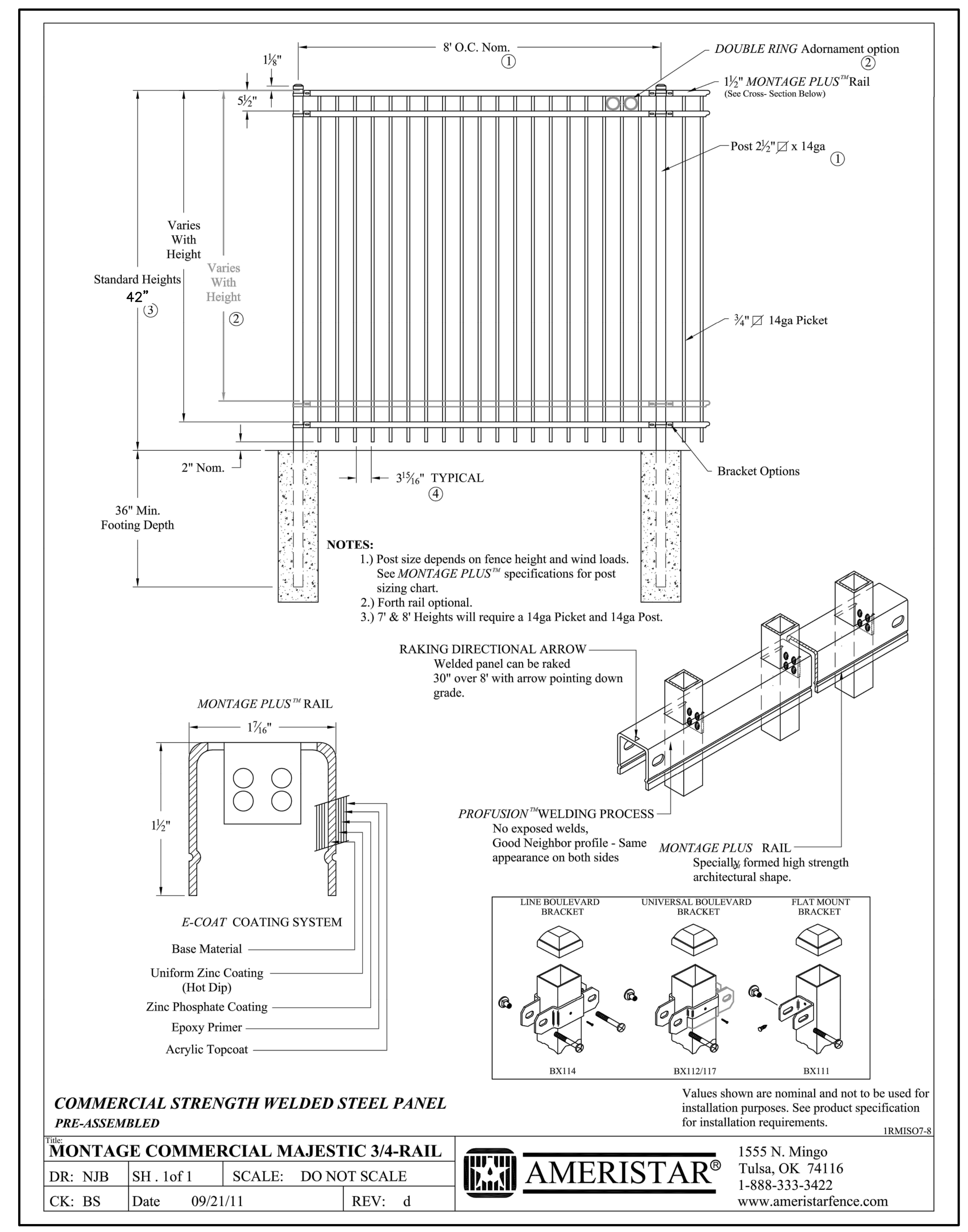
VERSA-LOK®
Retaining Wall Systems
Solid Solutions.
VERSA–LOK SQUARE FOOT DETAILS
REINFORCED TYPICAL SECTION
3/8"=1'
10/2007



8' O.C. Nom.
DOUBLE RING Adornament option
1½" MONTAGE PLUS™ Rail (See Cross- Section Below)
Post 2½" x 14ga
Varies With Height
Standard Heights 42"
¾" 14ga Picket
2" Nom.
3 15/16" TYPICAL
Bracket Options
36" Min. Footing Depth
NOTES:
1.) Post size depends on fence height and wind loads. See MONTAGE PLUS™ specifications for post sizing chart.
2.) Forth rail optional.
3.) 7' & 8' Heights will require a 14ga Picket and 14ga Post.
RAKING DIRECTIONAL ARROW
Welded panel can be raked 30" over 8' with arrow pointing down grade.
MONTAGE PLUS™ RAIL
E-COAT COATING SYSTEM
Base Material
Uniform Zinc Coating (Hot Dip)
Zinc Phosphate Coating
Epoxy Primer
Acrylic Topcoat
PROFUSION™ WELDING PROCESS
No exposed welds.
Good Neighbor profile - Same appearance on both sides
MONTAGE PLUS RAIL
Specially formed high strength architectural shape.
LINE BOULEVARD BRACKET
UNIVERSAL BOULEVARD BRACKET
FLAT MOUNT BRACKET
BX114
BX112/117
BX111
COMMERCIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.
MONTAGE COMMERCIAL MAJESTIC 3/4-RAIL
DR: NJB
SH. 1of 1
SCALE: DO NOT SCALE
CK: BS
Date 09/21/11
REV: d
AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com

JUDD DAVID CLAUSSEN
NUMBER PE-29850
12/21/18
PROFESSIONAL ENGINEER — STATE OF MISSOURI

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PLANNING
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STANDARD DETAILS

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