PANERA BREAD BAKERY - CAFE

OAKVIEW - LOT 2 FINAL DEVELOPMENT PLANS

1410 NE DOUGLAS ST.

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI 64086 NE 1/4 OF SEC. 31-48-31

PROJECT LOCATION

LOCATION MAP

NOT TO SCALE

CONTACTS

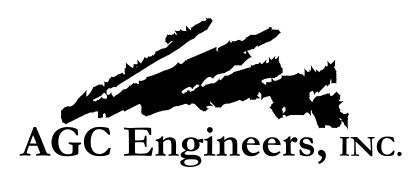
ENGINEERING

Engineering Primary Ronald L. Cowger, PE

Engineering Alternate Art Akin, PE

DEVELOPER STAR DEVELOPMENT, INC.

TIM HARRIS, PRESIDENT 244 W. MILL STREET, SUITE 101 LIBERTY, MISSOURI, 64068 (816) 781.3322



405 S. Leonard St., Suite D Liberty, Missouri 64068 www.agcengineers.com 816.781.4200 fax 792.3666

REVISION	DATE
UPDATED SHEETS 7, 11 AND 16 DUE TO MEP / ARCH COORDINATION	9-6-22
FOR REVIEW PER CITY COMMENTS	8-8-22
FOR REVIEW PER CITY COMMENTS	7-25-22
FOR REVIEW PER CITY COMMENTS DATED 6-5-2020 & PROJECT PLACED ON HOLD DUE TO COVID	6-29-22
FOR REVIEW	5-21-20
	UPDATED SHEETS 7, 11 AND 16 DUE TO MEP / ARCH COORDINATION FOR REVIEW PER CITY COMMENTS FOR REVIEW PER CITY COMMENTS FOR REVIEW PER CITY COMMENTS DATED 6-5-2020 & PROJECT PLACED ON HOLD DUE TO COVID

SHEET LIST TABLE **SHEET NUMBER** SHEET TITLE COVER GENERAL NOTES & LEGEND **EXISTING CONDITIONS** 3**A** FINAL PLAT SITE PLAN **GRADING & EROSION CONTROL PLAN** GRADING PLAN - CUT & FILL UTILITY PLAN SPOT ELEVATION PLAN SPOT ELEVATION PLAN CALCULATIONS UTILITY PLAN & PROFILES 12 13 DETAILS DETAILS 14 DETAILS LANDSCAPE PLAN

SEE ADDITIONAL PLANS PREPARED BY LK ARCHITECTS (WICHITA, KS.)

McLAUGHLIN MUELLER, INC. HAS SOLE RESPONSIBILITY FOR SHEET 3 AND VSR DESIGN HAS SOLE RESPONSIBILITY FOR SHEET

ENGINEER'S CERTIFICATION:

I hereby certify that this project has been designed, and these plans prepared, to meet or exceed the design criteria of City of Lee's Summit, Missouri, in current usage, except as indicated below.

South parking stalls encroach 4' within the 20' parking setback - 2020 PDP approval included Allow curb & gutter for parking to encroach into the 20' setback along NW Douglas Street by no more than 2 feet and along NW Victoria Drive by no more than 6 feet.

I have not been retained to coordinate as-built drawings for this project.



Ronald L. Cowger, PE AGC Engineers, Inc.

Date

NOTE:

LEGAL DESCRIPTION

FLOOD NOTE

DATED 1/20/2017

PERMITS WEBSITE.

UTILITIES AND

CITY OF LEE'S SUMMIT

PUBLIC WORKS

WATER UTILITIES

EVERGY

SPIRE

TELEPHONE

CABLE COMCAST

PUBLIC AGENCIES

LOT 2 OF THE FINAL PLAT OF OAKVIEW -LOTS 1-5, A REPLAT OF LOT 2, "MINOR PLAT, POLYTAINERS ADDITION, LOTS 1 AND 2" AND PART OF

NE DOUGLAS STREET ALL IN THE NE 1/4 OF SEC. 31-48-31 IN THE CITY

THIS PROPERTY DOES NOT LIE WITHIN A FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP 29095C0409G AND 29095C0417G.

THERE WAS NO OIL OR GAS WELLS LOCATED ON PROPERTY PER MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS

REFERENCE SHEET 4 FOR VERTICAL AND HORIZONTAL CONTROL POINTS IN THE PRIVATE DRIVE IMMEDIATELY WEST OF THE SITE.

Mark Schaufler

Ron Dejarnette

Brent Jones

Marty Loper

Mark Manion

Barbara Brown

BENCHMARK AND HORIZONTAL DATA

OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

OIL AND GAS WELL NOTE

Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.

(816) 969-1800

(816) 969-1900

(816) 347-4316

(816) 399-9633

(816) 275-1550

(816) 325-6516

(816) 795-2255

RELEASED FOR CONSTRUCTION As Noted on Plans Review

Lee's Summit, Missouri

09/14/2022

DATE:

8-8-22 FOR PERMIT FOR CONSTRUCTION 9-6-22

PLANS CONFORMING TO CONSTRUCTION RECORDS

STATUS

GENERAL PROJECT NOTES:

- 1. The Contractor shall, at a minimum, have the following document(s) at the job site at all times:
- Signed approved plans,
 Contract Documents and Project Specifications,
 Standard Specifications (Kansas City Metro Chapter-APWA)
 Storm Water Pollution Plan (SWPPP)
 All required permits
- 2. The Contractor shall reference the City of Lee's Summit Design Criteria, Standard Specifications, Standard Details, Approved Products Lists found at the following website https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure
- 3. This Project shall be constructed in accordance with these Plans, City of Lee's Summit criteria and specifications (listed above), and their absence the Kansas City Metro Chapter of American Public Works Association (most current version) "APWA".
- All work required to complete the project and that is not specifically itemized in the Contractor's proposal shall be considered subsidiary to other work itemized in the proposal.
- 5. All materials and workmanship associated with this project shall be subject to inspection by the City of Lee's Summit and the Owner. The City and/or Owner reserves the right to accept or reject any such materials and workmanship that does not conform to the Standards and Technical Specifications.
- 6. RESERVED
- 7 The Contractor shall notify the Engineer immediately of any discrepancies in the Plans.
- 8. By use of these Plans the Contractor agrees that he shall be solely responsible for the safety and protection of the construction workers and the public.
- 9. Contractor is to obtain the necessary permits for all construction activities.
- 10. Contractor shall be responsible for determining the exact locations of all underground utilities or appurtenances prior to commencing construction. Existing underground utilities shown on the drawings are for reference only, and their accuracy and completeness are not guaranteed. Contractor shall be responsible for repair or replacement of all underground utilities damaged during construction.
- 11. RESERVED
- 12. It shall be the responsibility of the Contractor to control erosion and siltation during all phases of construction.
- 13. Any sidewalk, curb & gutter or pavement disturbed, damaged or destroyed during construction shall be replaced by Contractor at no additional cost to Owner.
- 14. Modified curb shall be used at all locations where pavement drains away from curb.
- 15. The Contractor shall contact the City's Development Services Engineeringing Inspection to schedulea pre-construction meeting with a field engineering inspector prior to any land disturbance work at (816) 969-1200.
- 16. Contractor shall be responsible to install pavement joints on all concrete pavement, slabs, and / or sidewalk. At a minimum, an expansion joint shall
 - be provided along all interfaces of
 - Building to sidewalk
 Building to concrete pavement
 - 3. Sidewalk to concrete pavement
- Contractor shall submit a joint plan to the Engineer for review.

GRADING NOTES:

- 1. Erosion protection shall be in place prior to any land disturbance.
- 2. Contours shown are to finished grade.
- 3. The construction area shall be cleared, grubbed, and stripped of topsoil and organic matter from all areas. Excess topsoil shall be stockpiled separately from compactable material. Stripping existing topsoil and organic matter shall be to a minimum depth of six (6) inches.
- 4. Areas to receive fill shall be striped of top soil and other organic material, scarified, and the top eight (8) inch depth compacted to 98% standard proctor density prior to the placement of any fill material. Any unsuitable areas shall be undercut and replaced with suitable material before any fill material can be placed.
- 5. Fill material shall be made in lifts not to exceed nine (9) inches depth compacted to 98% standard proctor density (per ASTM D-698) with a moisture content -3% and +2% optimum moisture. Contractor shall provide (at his/her sole cost) an independent geotechnical report certifying compaction at a sample interval of one (1) sample per 5000 square feet per lift or more frequent if required/recommended by the geotechnical firm. Geotechnical firm shall be approved by Owner prior to beginning fill operations. Fill material may include rock from on-site excavation if carefully placed so that large stones are well disturbed and voids are completely filled with smaller stones, earth, sand or gravel to furnish a solid embankment. No rock larger than three (3) inches in any dimension nor any shale shall be placed in the top 12 inches of embankment.
- 6. In all areas of excavation, if unsuitable soil conditions are encountered, a qualified Geotechnical engineer shall recommend to the Owner on the methods of undercutting and replacement of property compacted, approved fill material.
- 7. All slopes are to be 3:1 or flatter unless otherwise indicated.
- 8. All slopes and areas disturbed by construction shall be graded smooth and a minimum four (4) inches of topsoil applied. If adequate topsoil is not available on-site, the Contractor shall provide topsoil, approved by the Owner, as needed. Any areas disturbed for any reason shall be corrected by the Contractor at no additional cost to the Owner prior to final acceptance of the project.
- All disturbed areas shall be seeded, fertilized and mulched or sodded in accordance with the standards and specifications adopted by the reviewing governing agency and good engineering practices.

EROSION CONTROL NOTES:

- Control of sediment is a very dynamic (ever changing) process. These plans are provided as a basis of
 anticipated erosion control measures. The Contractor shall modified add or delete with the Owner's
 permission the erosion control measure shown to prevent the migration of sediment off of the Owner's
 property and/or into jurisdictional waters/waterways.
- 2. Any sediment deposited on public streets shall be removed immediately by Contractor at his sole expense.
- 3. Stockpile excavation materials away from existing channels and grade to drain to adequate erosion control measures.
- 4. Remove silt build up in temporary sediment basins (if applicable), inlet protection devices and/or silt fence until site is completely stabilized. Verify grade prior to final seeding, lining or rip-rap installation.
- 5. All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Kansas City Metro Chapter of American Public Works Association. Seeding/Sodding shall be completed within 14 days after completing the work, in any area. If this is outside of the recommended seeding period, erosion control measures or other similarly effective measure shall remain and be maintained by Contractor until such time that the areas can be seeded and a stand of grass established per Missouri DNR or MoDOT Section 805.4
- 6. When sediment deposits reach approximately one-half the height of the BMP, the sediment shall be removed or a second BMP shall be installed. All costs associated with this work, including related incidents, shall be the Contractor's responsibility and shall be included in the bid for the proposed work.
- 7. Contractor shall perform BMP inspection once a week and after each rainfall event, and provide Owner a copy of report within 48 hrs. Faulty or inadequate erosion control measures shall be remediated or modified the same day of inspection so as to minimize the risk of sediment discharge from the Owner's property or jurisdictional waters/waterways.
- 8. Contractor shall protect and maintain erosion control measures until a complete stand of grass as defined by Missouri DNR has been established.
- 9. Concrete Washout Areas will be determined onsite by the Job Superintendent.
- 10. At a minimum the following permits/approvals shall be posted on site or as required by the permit terms and conditions:
 - City of Lee's Summit Land Disturbance Permit.
- 11. Permanent fertilizing, seeding (Type "A") and mulch shall be in accordance with Kansas City Metro Chapter of American Public Works Association. Final acceptance per MoDOT Sections 805.4
- 12. The Contractor shall install Erosion Control Blanket (ECB) on all slopes with 3:1 slope or greater. ECB shall be Landlok CS2 or approved equal.
- 13. Provide temporary silt fencing at all pipe entrances until all site seeding and sodding has been established.
- 14. Immediately remove sediments or other materials tracked onto public roadways.
- 15. Provide and maintain stabilized roadway construction entrance (or entrances as may be required).
- 16. Coordinate site grading with existing and proposed utilities.
- 17. Stock pile waste excavation materials away from existing channels and grade to drain.
- 18. Remove silt build up in basin and verify grade prior to final seeding, lining or rip-rap installation and clean up.
- 19. All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Standards and Specifications adopted by the City of Lee's Summit, MoDOT, MoDNR or other governing agency and good engineering practices.
- 20. Silt fences, whether straw bales or filter fabric, require maintenance to preserve their effectiveness. All silt fences shall be inspected immediately after each heavy rainstorm and at least daily during prolonged rainfall. Any required repairs shall be made immediately. When sediment deposits reach approximately one-half the height of the silt fence, the sediment shall be removed or a second silt fence shall be installed. All costs associated with this work, including related incidentals, shall be the contractor's responsibility and shall be included in the bid for the proposed work.

WATER NOTES:

- Reference MEP Plans to confirm fire protection main size (if required), domestic water and meter sizes. If a discrepancy exists between the Plans contact the Engineer prior to ordering material.
- 2. Domestic water shall be 2-inch "k" copper conforming to the latest federal specifications or cross-linked polyethylene (PEX) meeting current City Code.
- 3. Minimum cover for water lines shall be 42 inches.
- ${\bf 4.\ lnstall\ fittings\ as\ required\ maximum\ pipe\ deflection\ per\ manufacturers\ recommendations.}$
- 5. Install 2-inch water meter at property line (on private property side).
- All water service installation, including back-flow devices, are subject to field verification and approval by City inspector.

REFERENCE DOCUMENTS & DRAWINGS:

- Contractor shall reference the following documents prior to beginning Work
- SWPPP and Missouri DNR Land Disturbance Permit
 Architectural Plans (including but not limited to MER)
- 2. Architectural Plans (including but not limited to MEP and Structural Plans)3. Standard drawings and work details supplied by Panera
- 4. Landlord Work Order list from Star Development Corp

STORM NOTES:

- 1. All HDPE pipe shall be Water-Tight
- 2. All High Density Polyethylene (HDPE) pipe shall conform to AASHTO M294 Type S. Acceptable pipe must come from a Plastic Pipe Institute (PPI) certified manufacturer and have passed the PPI 3rd Party Certification testing. Each individual section of pipe shall be marked in accordance with AASHTO M294 and shall be affixed with the PPI Certification label. HDPE pipe shall be joined with water tight joints meeting the requirements of AASHTO M294 Paragraph 7.9.3.
- 3. Pipe lengths are from inside face to inside face.
- 4. End sections for HDPE pipe shall be metal with concrete toe wall unless noted otherwise.

ELECTRIC:

- 1. Contractor to coordinate with Evergy Electric for electrical service.
- Contractor to coordinate with Evergy Electric for location of transformer pad and transformer if required.

GAS:

1. Contractor to coordinate with Spire for gas service, and location of meter.

TELEPHONE:

1. Site contractor to install PVC conduit(s) for use by telephone company. Site contractor to coordinate with telephone company for installation of service and location of proposed pedestals, etc. Telephone conduit shall have a minimum cover of 30". Site contractor shall coordinate location with telephone company representative and locate PVC crossings as necessary. See building plans for entrance locations.

SANITARY NOTES:

- 1. All sanitary stub lines shall be laid on 2.00% grade unless approved otherwise.
- The Contractor shall install and properly maintain a mechanical plug at all connection points with existing lines until such time that the new line is tested and approved.
- 3. Where sanitary sewer lines are to be installed over and across water lines, a minimum of 24 inches of clearance shall be provided. Where clearance is not provided, construct sanitary sewer line of ductile iron pipe for a distance of at least 10 feet in each direction from crossing, with no joint within 6 feet of crossing.
- Performance testing in accordance with APWA Section 2508. Witness and acceptance by City is required before placing in service.
- All service lines shall be PVC (SDR 26) conforming to ASTM D 1764 and F1336 and having a cell classification of 12454B or 12364B as defined in ASTM D 1784 with Push-On joints.
- All pre-cast manholes shall meet or exceed standards and specifications as set forth in ASTM C-478.
- 7. All PVC pipe shall meet or exceed standards and specifications as set forth in ASTM
- D-3034.
- 8. All proposed and existing street crossings shall be tamped granular backfill (Type 3) from the bottom of the trench to a point that is 15" below the finished grade of the street. All existing street crossings shall be filled with flowable fill per detail STR-011.
- 9. Mandrel testing is required and shall be performed in accordance with APWA 2508.5, at a minimum of 30 days after installation.
- 10. All inspection of sanitary sewer construction shall be performed by the City of Lee's
- 11. It is the responsibility of the contractor to have sanitary sewer lines air tested and sanitary sewer manholes vacuum tested for new construction and modifications to existing. Contractor shall provide city with test results upon completion of construction.
- 12. Areas with less than three (3) feet of depth from existing grade to proposed top of pipe shall be filled to an elevation of three (3) feet above the proposed top of pipe, compacted to 95% density +/-2% prior to trenching or laying of any pipe.
- 13. Sanitary sewer piping material shall be as follows:

0 to 15' depth; SDR-35 PVC 15' to 22' depth; SDR-26 PVC 22' to 30' depth; SDR-21 PVC greater than 30' depth; D.I.P. 6" service laterals; SDR-35 PVC at 2.0% minimum

City approval and City observation of installation.

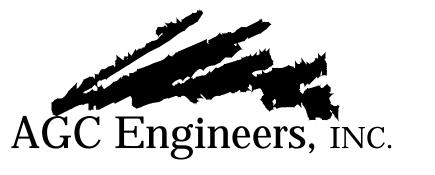
- All manholes, catch basins, utility valves, and meter pits shall be adjusted or rebuilt to grade as required.
- Service lines shall be extended a minimum of 1 foot past the house side of all utility easements.

16. Insert Tee's or Saddles for service lines are not allowed except in special cases with prior

LEGEND

	<u>EXISTING</u>	PRO	POSED		
	SET MONUMENT AS NOTED STAMPED LS 1999141096		SANITARY STRUCTURE	D/E	DRAINAGE EASEMENT
0	FOUND 1/2" REBAR LS 1989			GM	GAS METER
0	FOUND MONUMENT AS NOTED	SAN	— SANITARY SEWER	WM	WATER METER
(M)	MEASURED DISTANCE			E/E	ELECTRIC EASEMENT
(M)	CONTROL POINT		STORM STRUCTURE	U/E	UTILITY EASEMENT
⊕ (——	DOWN GUY			B/L	BUILDING LINE SETBACK
	FIRE HYDRANT		STORM SEWER	MH R	MANHOLE RADIUS OR RAMP (as it relates to sidewalks
①			_	L	LANDING (as it relates to sidewalks)
∲- `®PP	LIGHT POLE	•••	WATER WE	S/W or SW	SIDEWALK
`	POWER POLE	W	— WATERLINE	AC	AIR CONDITIONER
0	POST	14/14		MEP	MECHANICAL, ELECTRICAL & PLUMBING
	MANHOLE	WM •	WATER METER	WSD	WATER SERVICES DEPARTMENT
\otimes	WATER VALVE	_		D.S.	DOWN SPOUT
/L	BUILDING LINE		FIRE LIVERANT ACCENTIVE	TC	TOP OF CURB
)/E	DRAINAGE EASEMENT	-60	FIRE HYDRANT ASSEMBLY	G	GROUND
HP-	AERIAL UTILITY			Р	PAVEMENT
/E	SANITARY SEWER EASEMENT		— GAS LINE	LP HP	LOW POINT HIGH POINT
J/E	UTILITY EASEMENT	•		111	THOST TOTAL
JGG-	UNDERGROUND GAS				
JGP-	UNDERGROUND POWER	co $_{\circ}$	CLEANOUT		RELEASED FOR
JGT-	UNDERGROUND TELEPHONE				CONSTRUCTION As Noted on Plans Review
JGW-	UNDERGROUND WATER	(13)	PARKING COUNT		Development Services Department Lee's Summit, Missouri 09/14/2022
		 780	— CONTOUR		

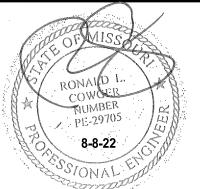
BY	REVISION	DATE
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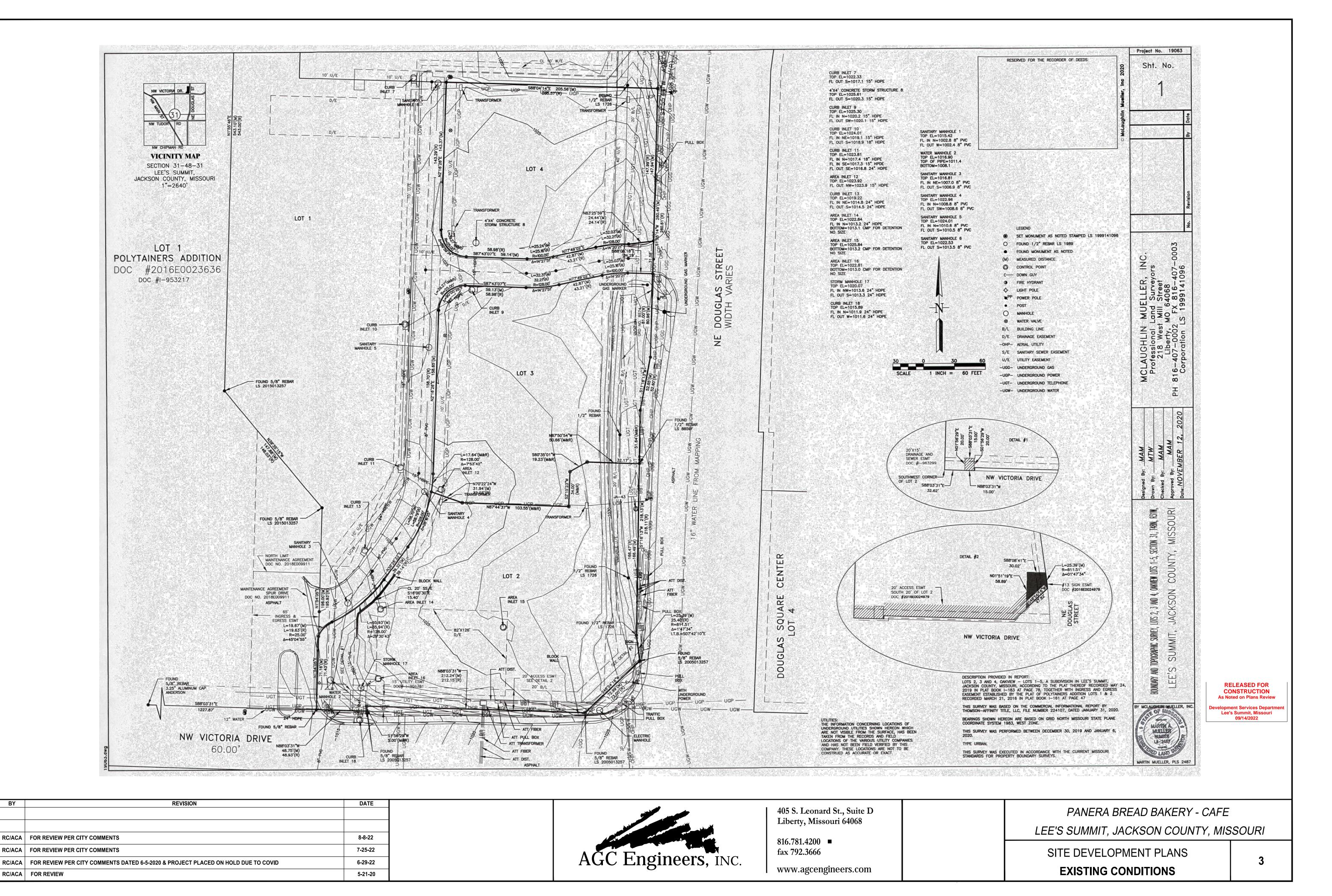
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PANERA BREAD BAKERY - CAFE LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS

GENERAL NOTES & LEGEND

LIGHT POLE (SITE PARKING)



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6-29-22

5-21-20

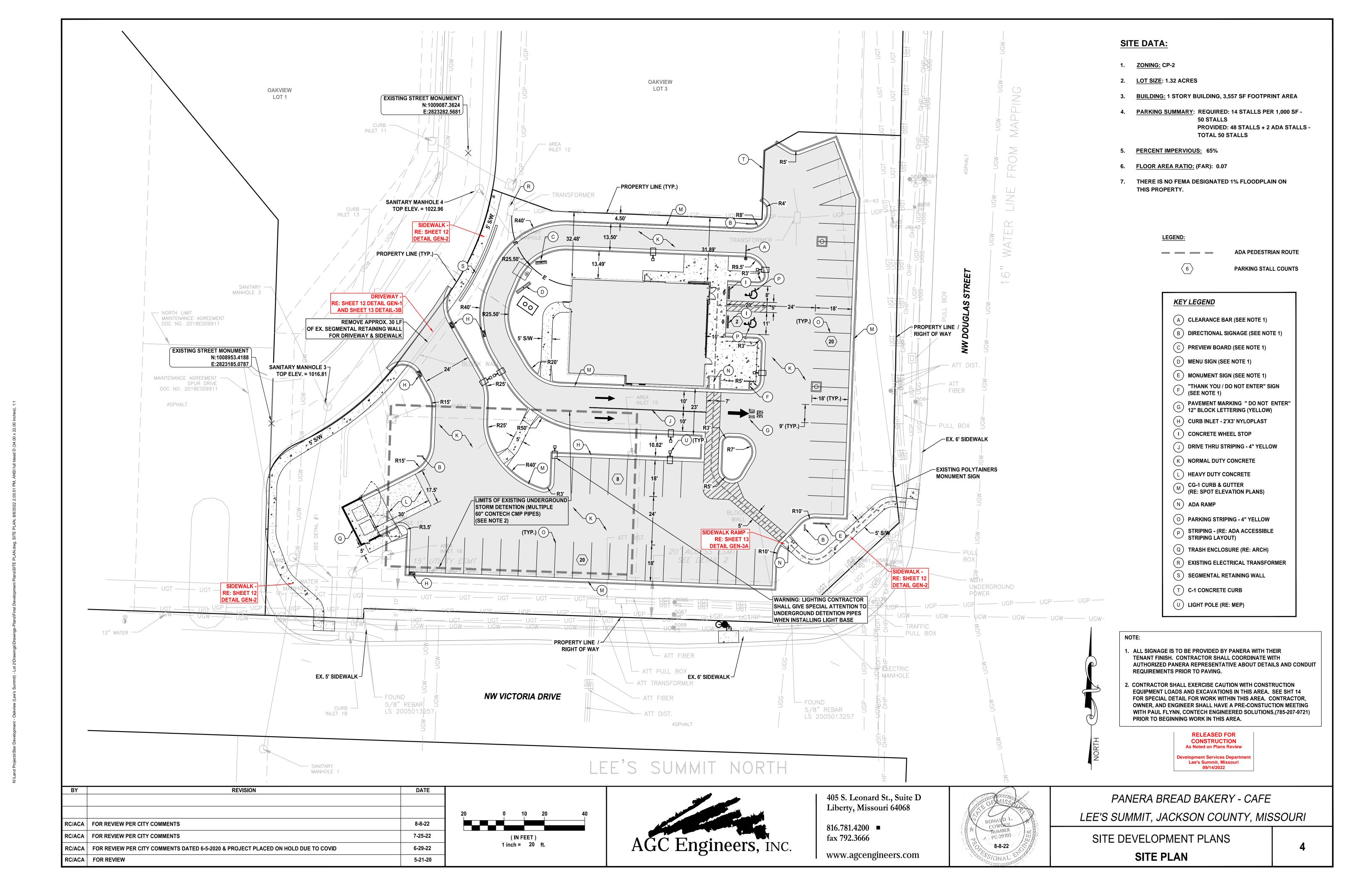
RC/ACA | FOR REVIEW PER CITY COMMENTS DATED 6-5-2020 & PROJECT PLACED ON HOLD DUE TO COVID

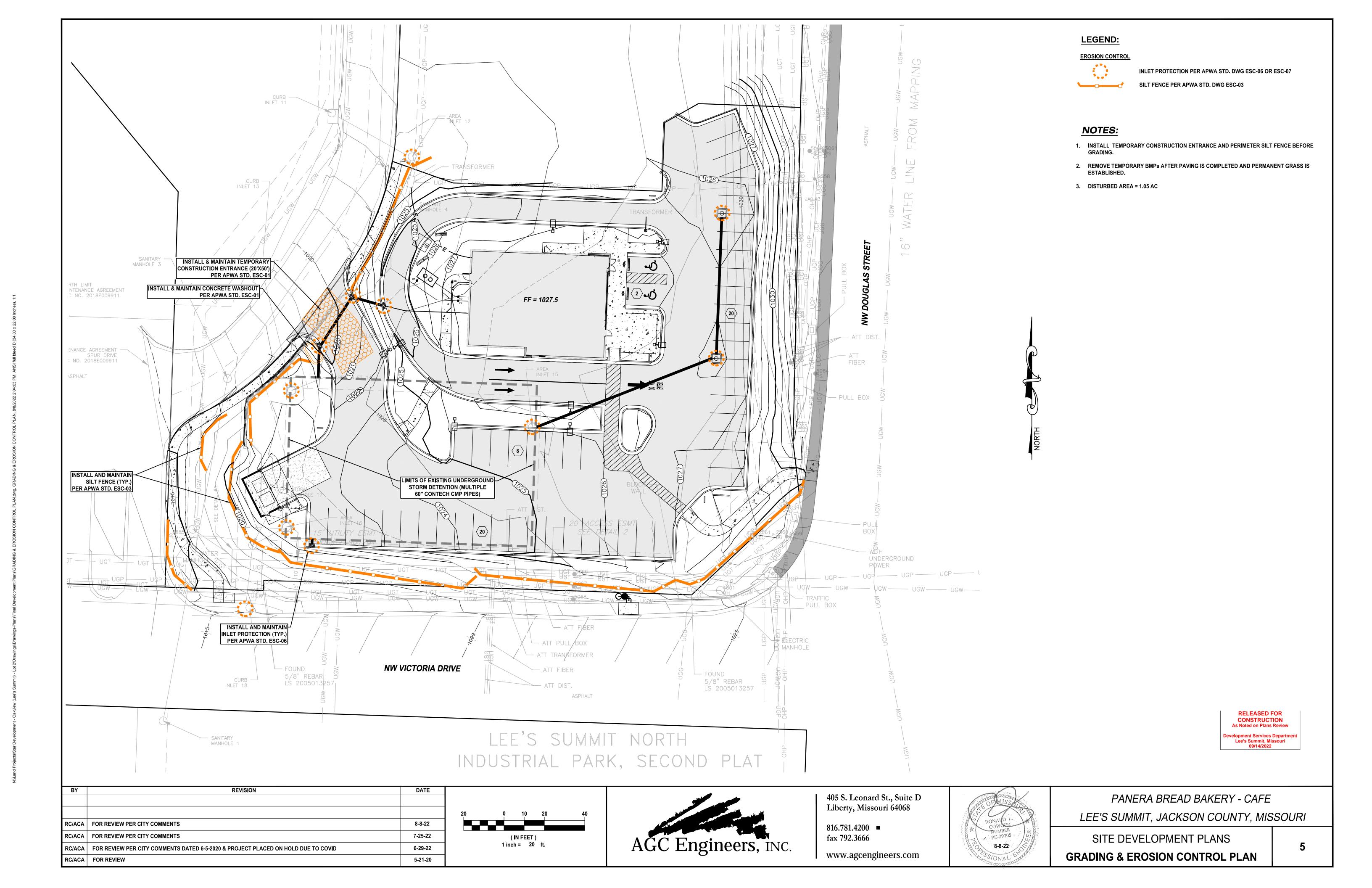
RC/ACA | FOR REVIEW

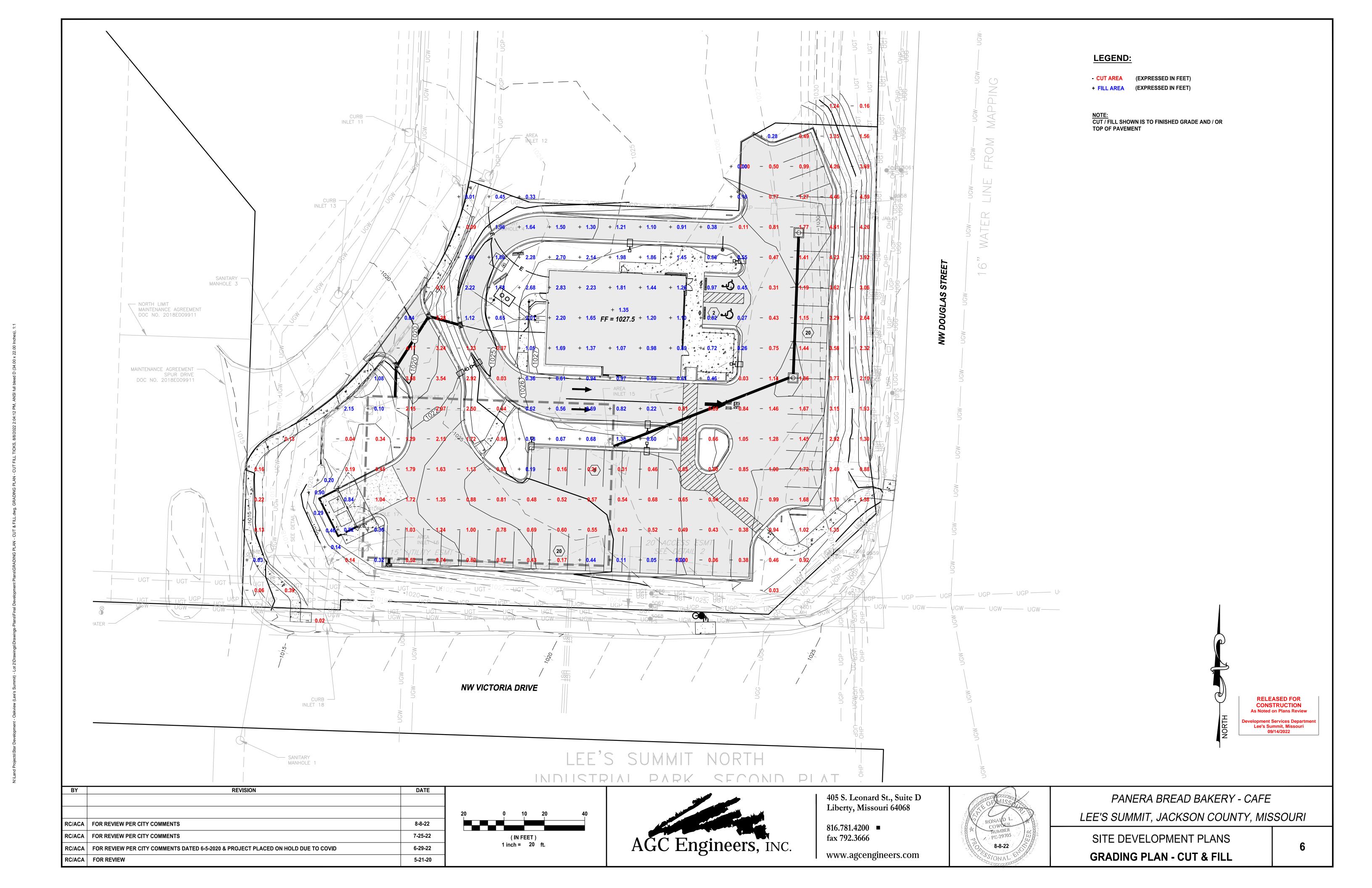
3A

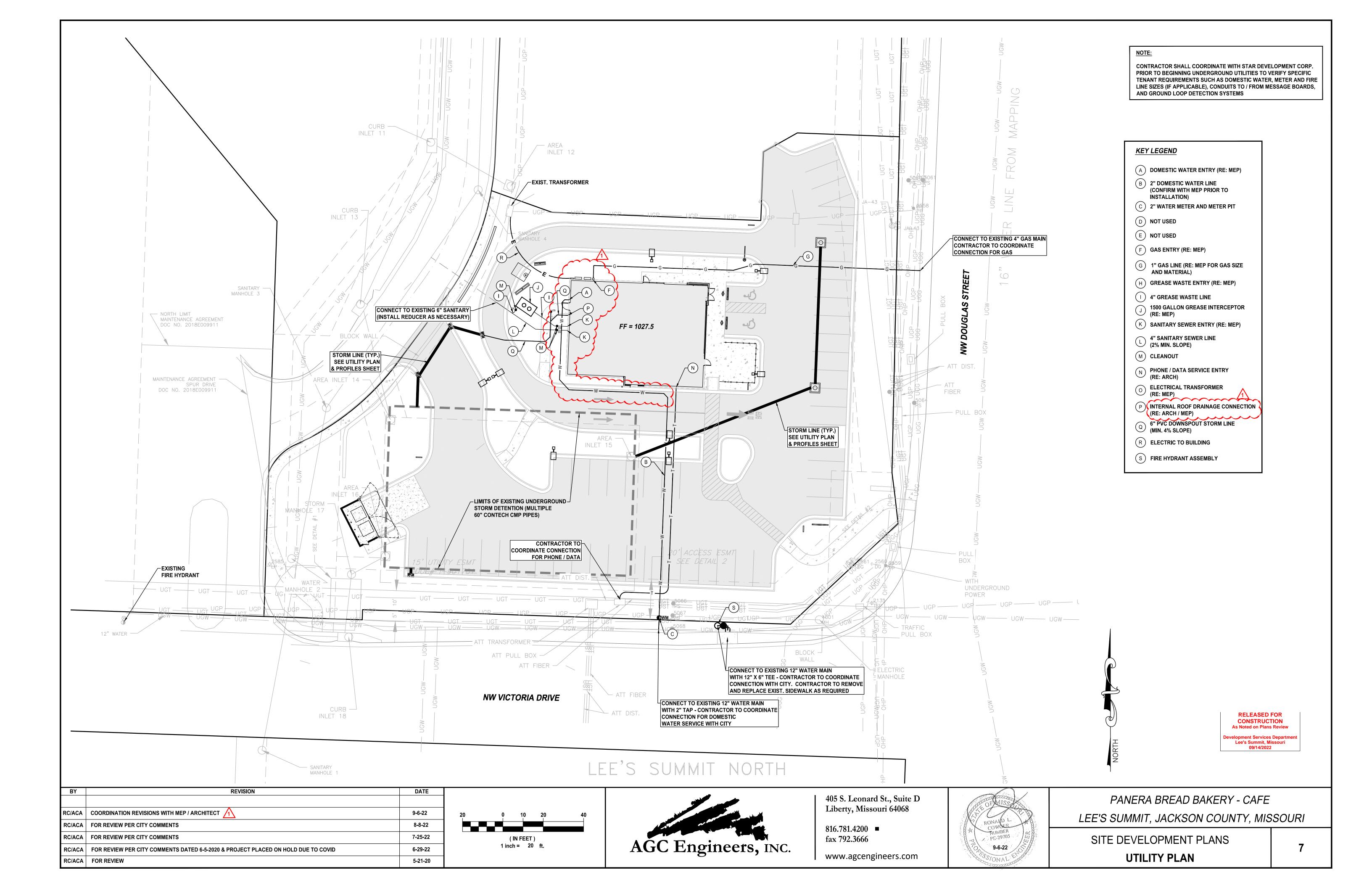
FINAL PLAT

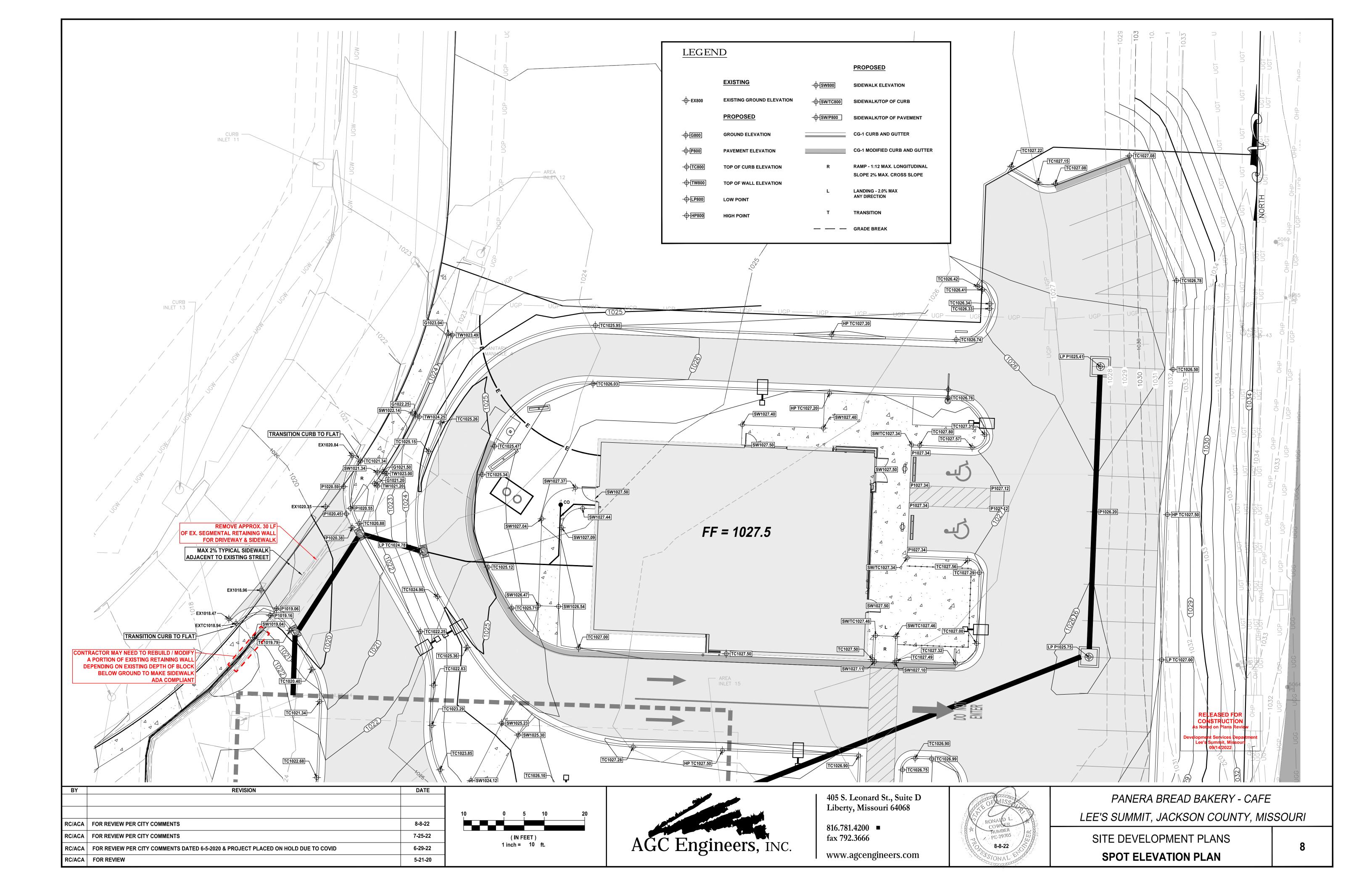
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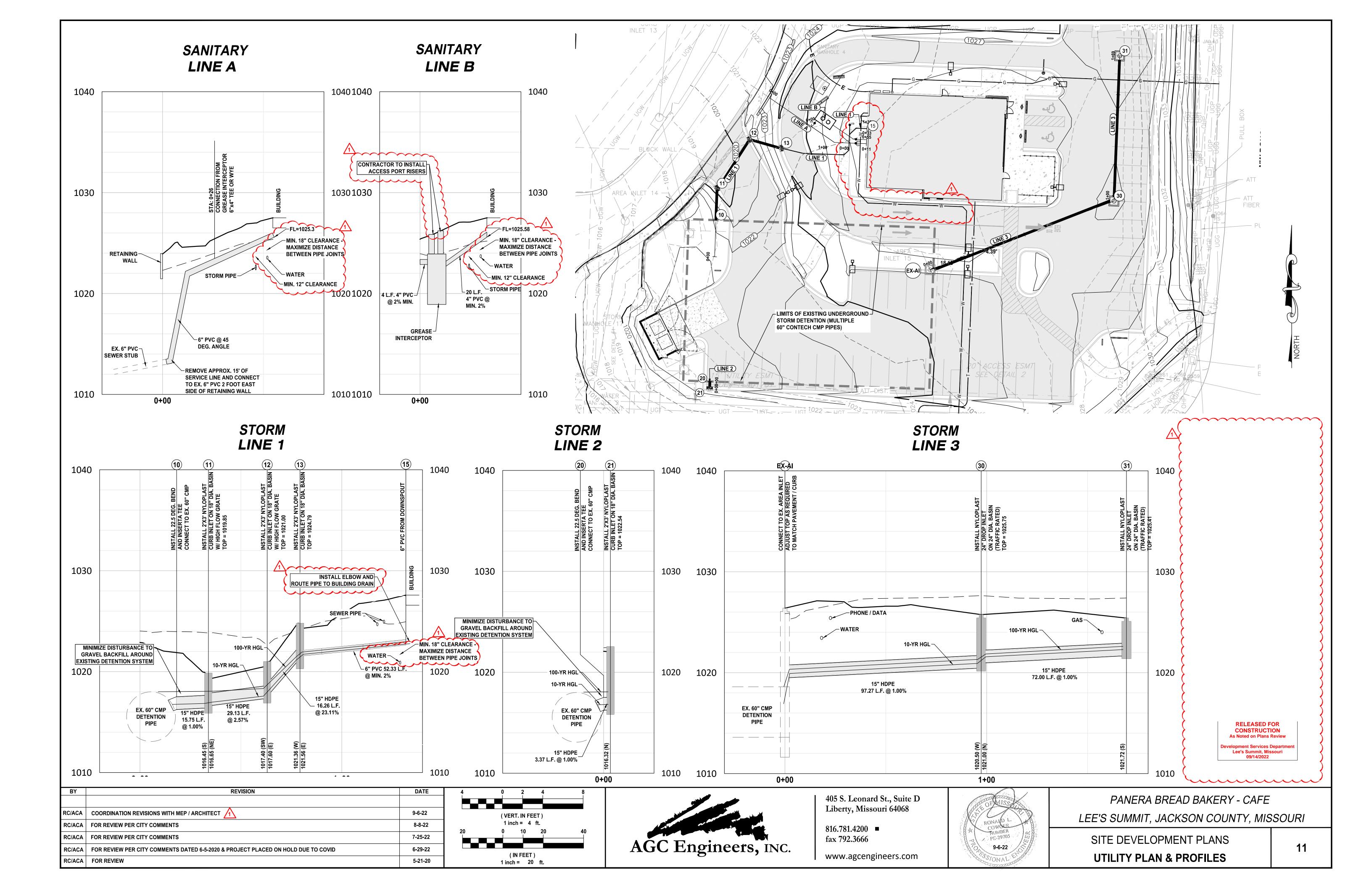




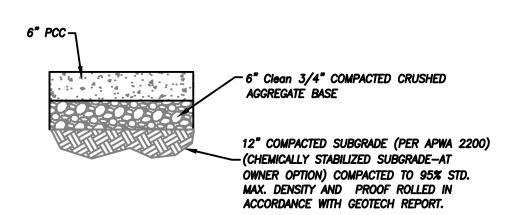






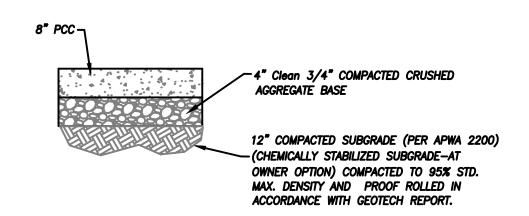


1/2" EXPANSION – JOINT MATERIAL



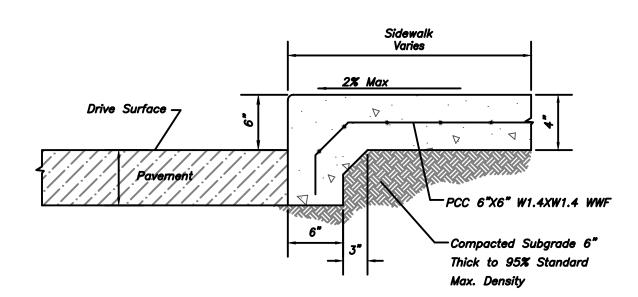
NORMAL DUTY CONCRETE SECTION

NOT TO SCALE



HEAVY DUTY CONCRETE SECTION

NOT TO SCALE



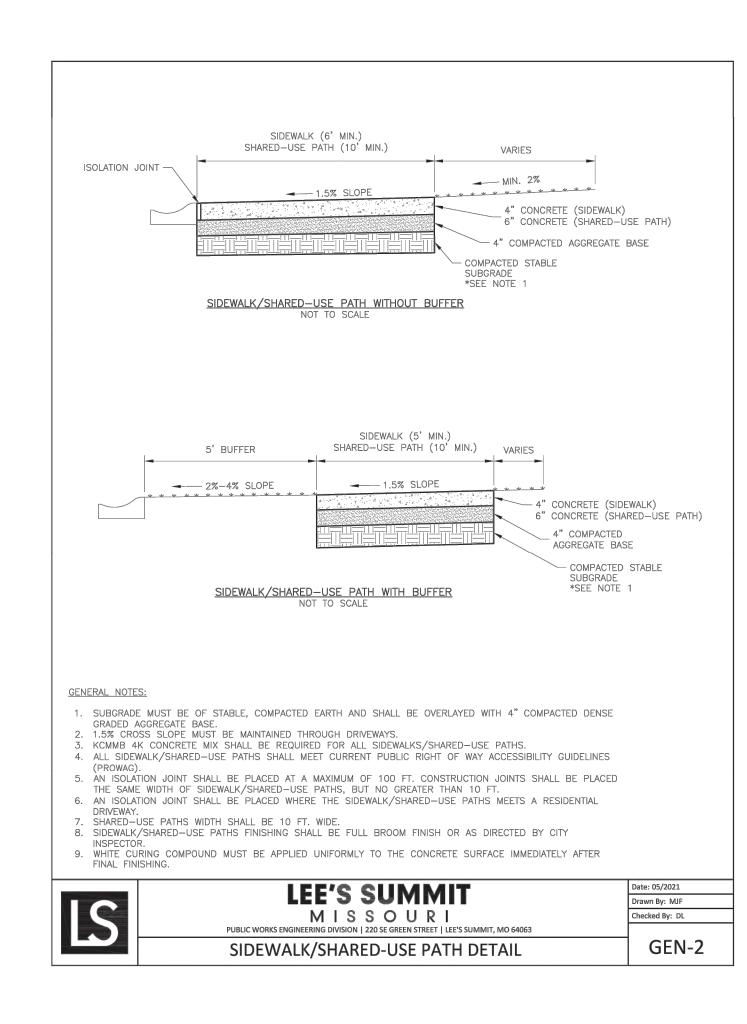
INTEGRAL SIDEWALK / CURB DETAIL

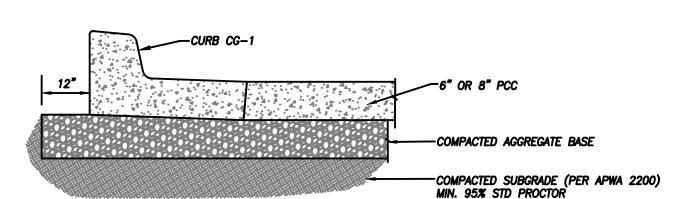
LUBRICATE ONE END

SMOOTH DOWEL,

MIN 18" LONG

NOT TO SCALE



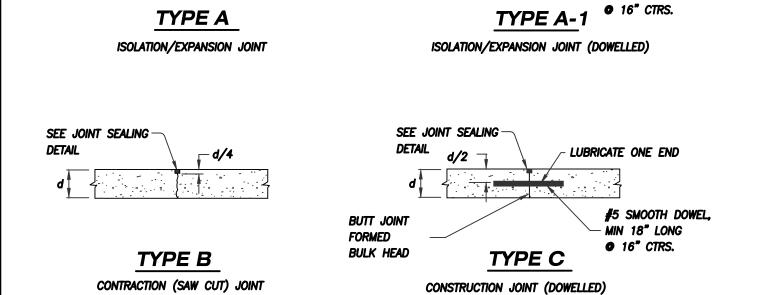


- EXTEND BASE SECTION 12" BEHIND CURB

CURB & GUTTER BASE SECTION

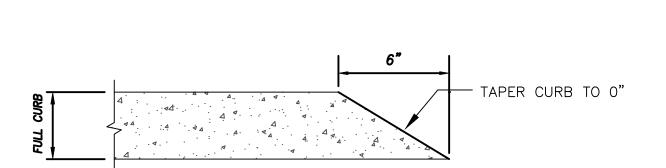
- SEE PAVEMENT SECTIONS FOR TYPE & THICKNESS

NOT TO SCALE



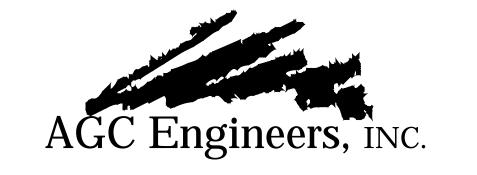
1/2" EXPANSION JOINT MATERIAL

CONCRETE JOINT DETAILS NOT TO SCALE



CURB TERMINATION DETAIL NOT TO SCALE

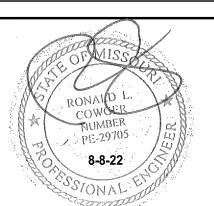
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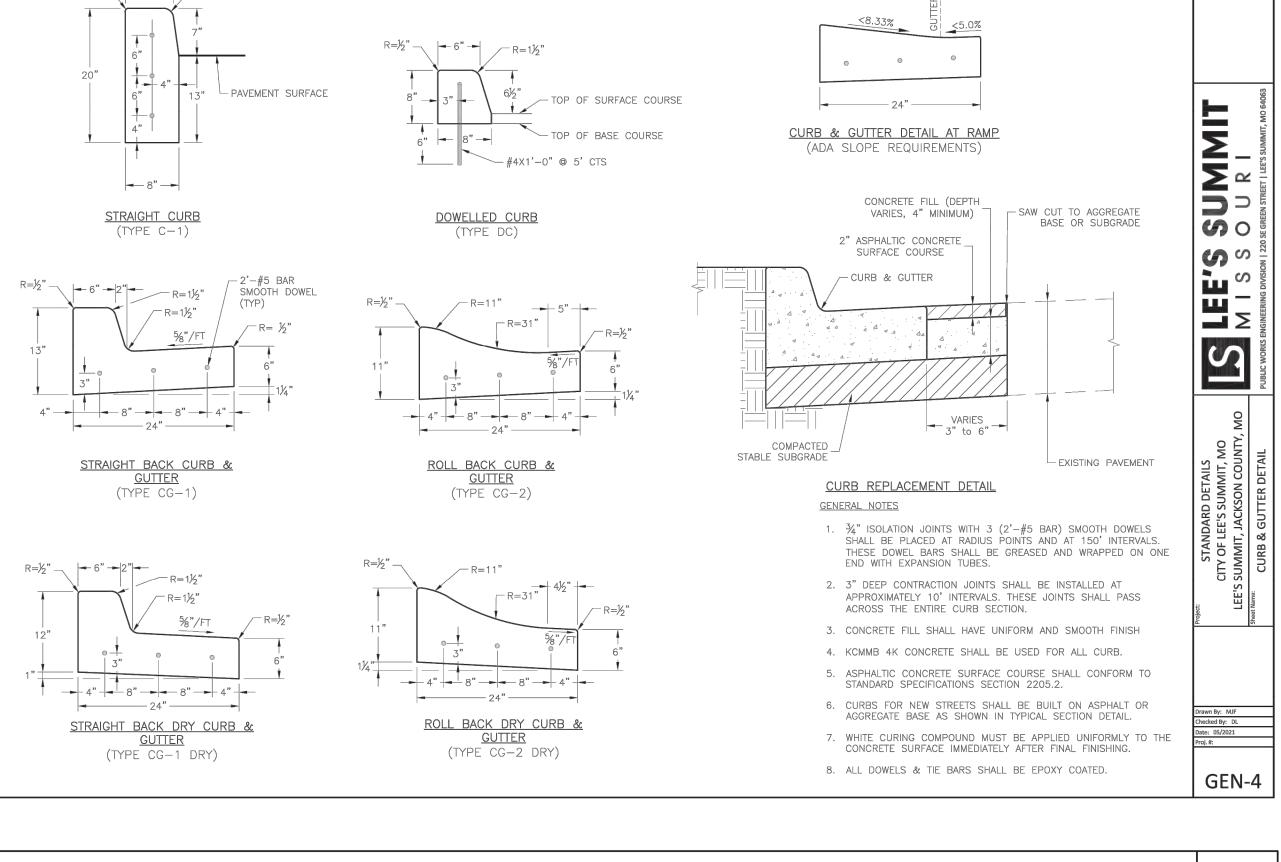
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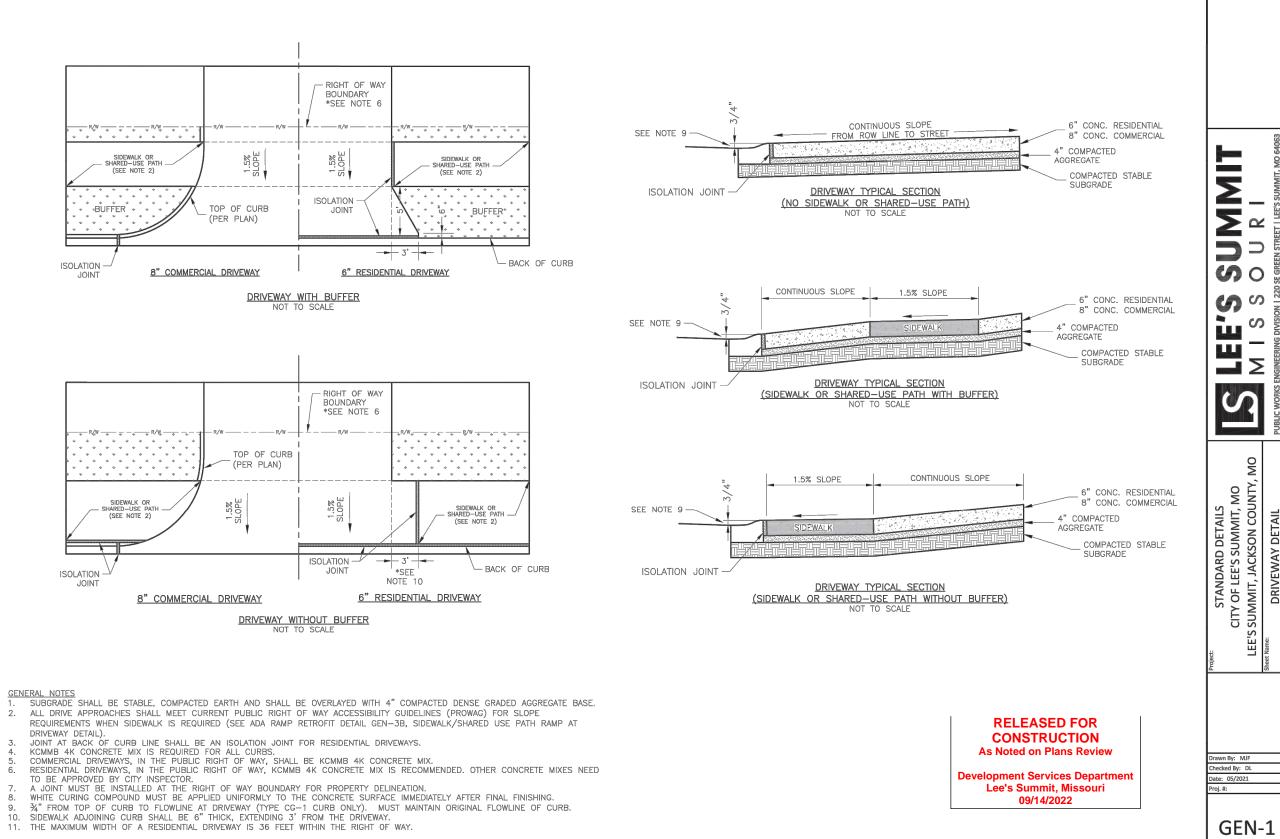


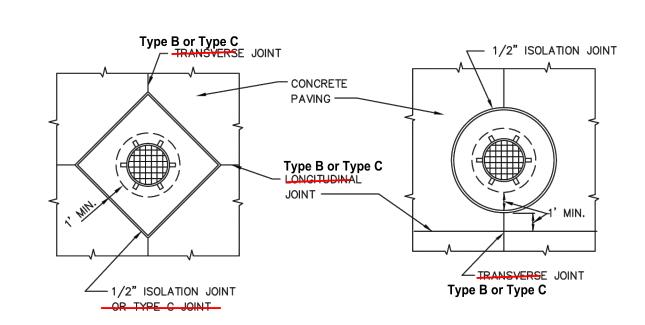
PANERA BREAD BAKERY - CAFE

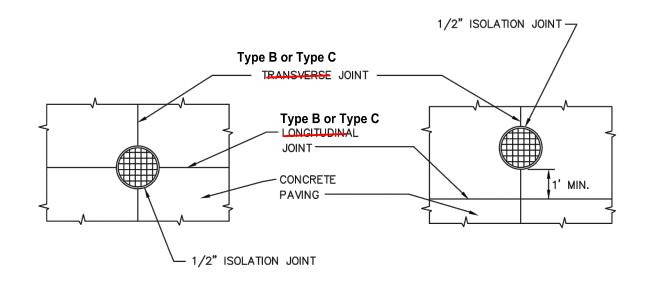
SITE DEVELOPMENT PLANS **DETAILS**

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

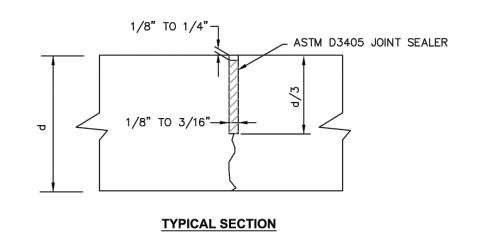








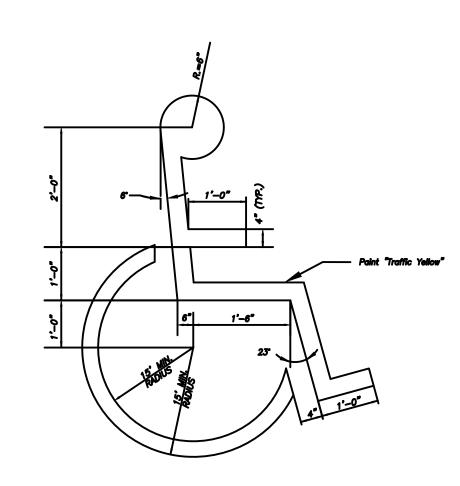
CONCRETE PAVING ISOLATION JOINTS



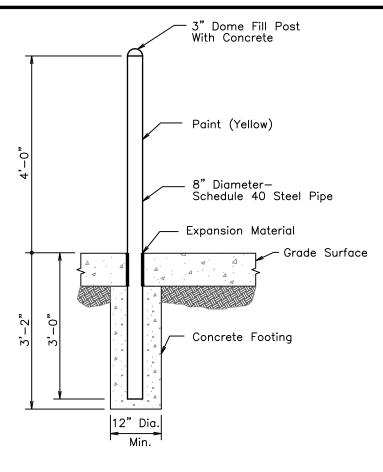
1. JOINT SEALING MATERIAL SHALL CONFORM TO ASTM D3405 AND SHALL BE APPLIED IN ACCORDANCE WITH MATERIAL MANUFACTURER'S RECOMMENDATIONS.

2. d = DEPTH OF SLAB

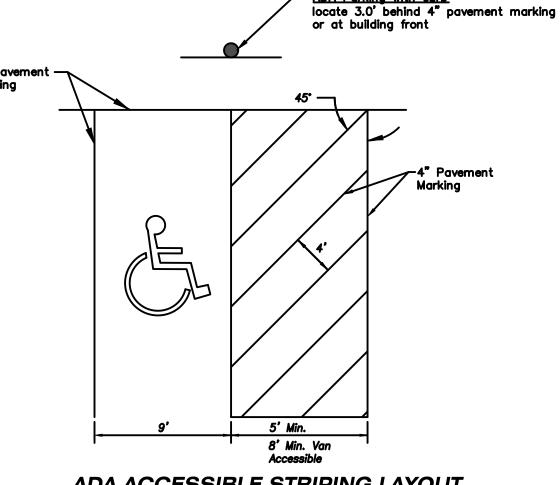
CONCRETE PAVING JOINT SEALING



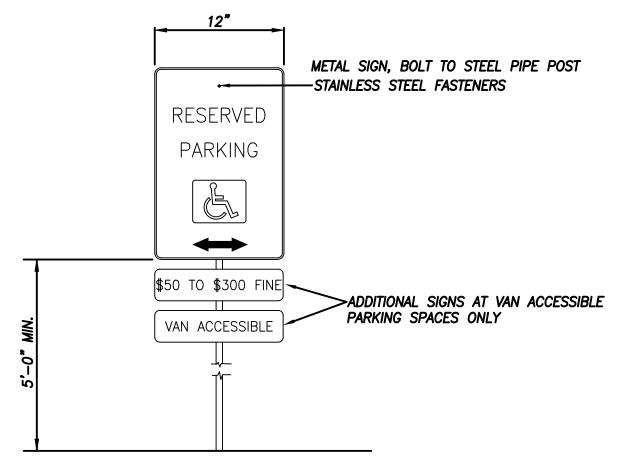
ACCESSIBLE PARKING SYMBOL NOT TO SCALE



BOLLARD NOT TO SCALE







NOTE:

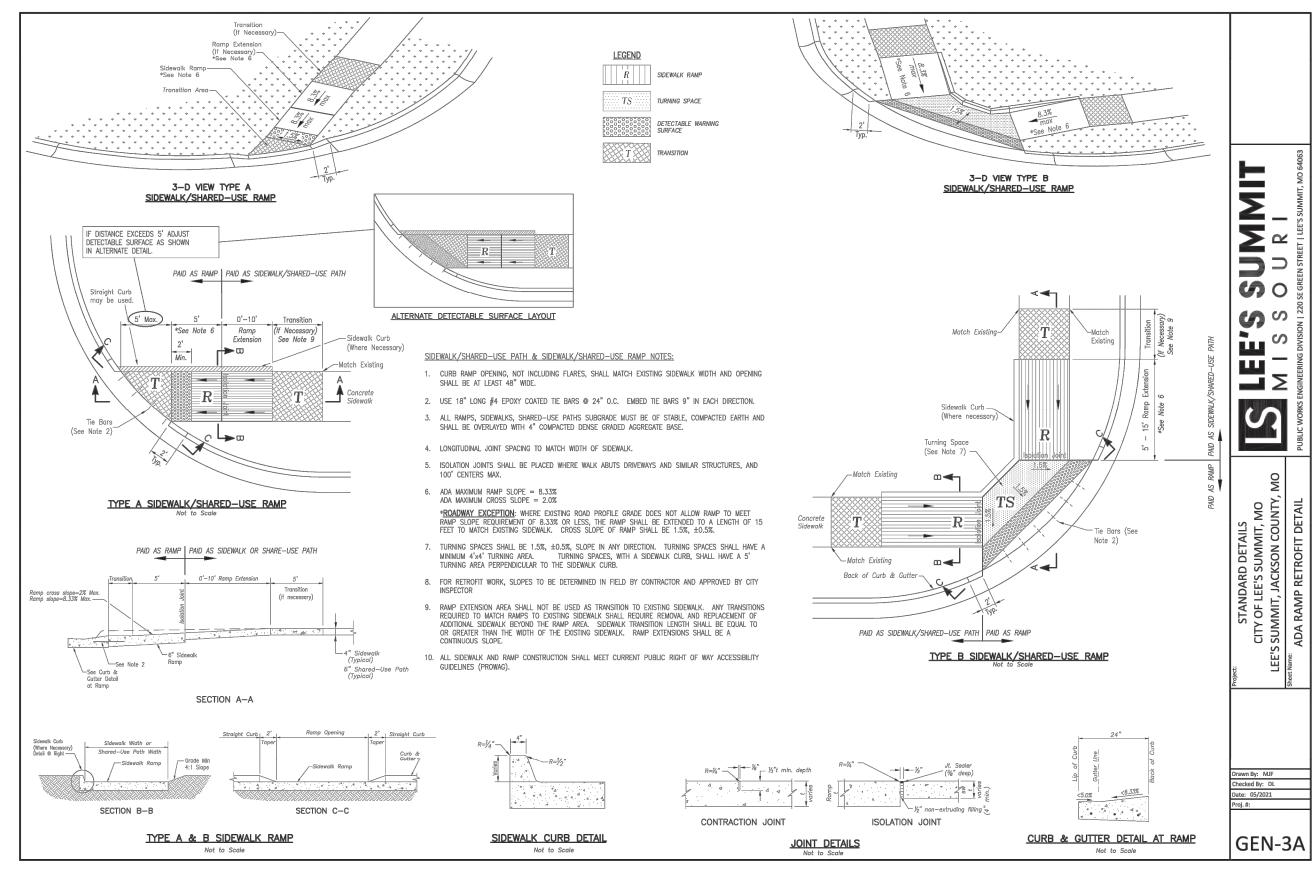
1. ACCESSIBLE PARKING SIGNS SHALL MEET THE REQUIREMENTS SET FORTH IN THE US DEPARTMENT OF JUSTICE 2010 [ADA] STANDARDS: Titles II and III.

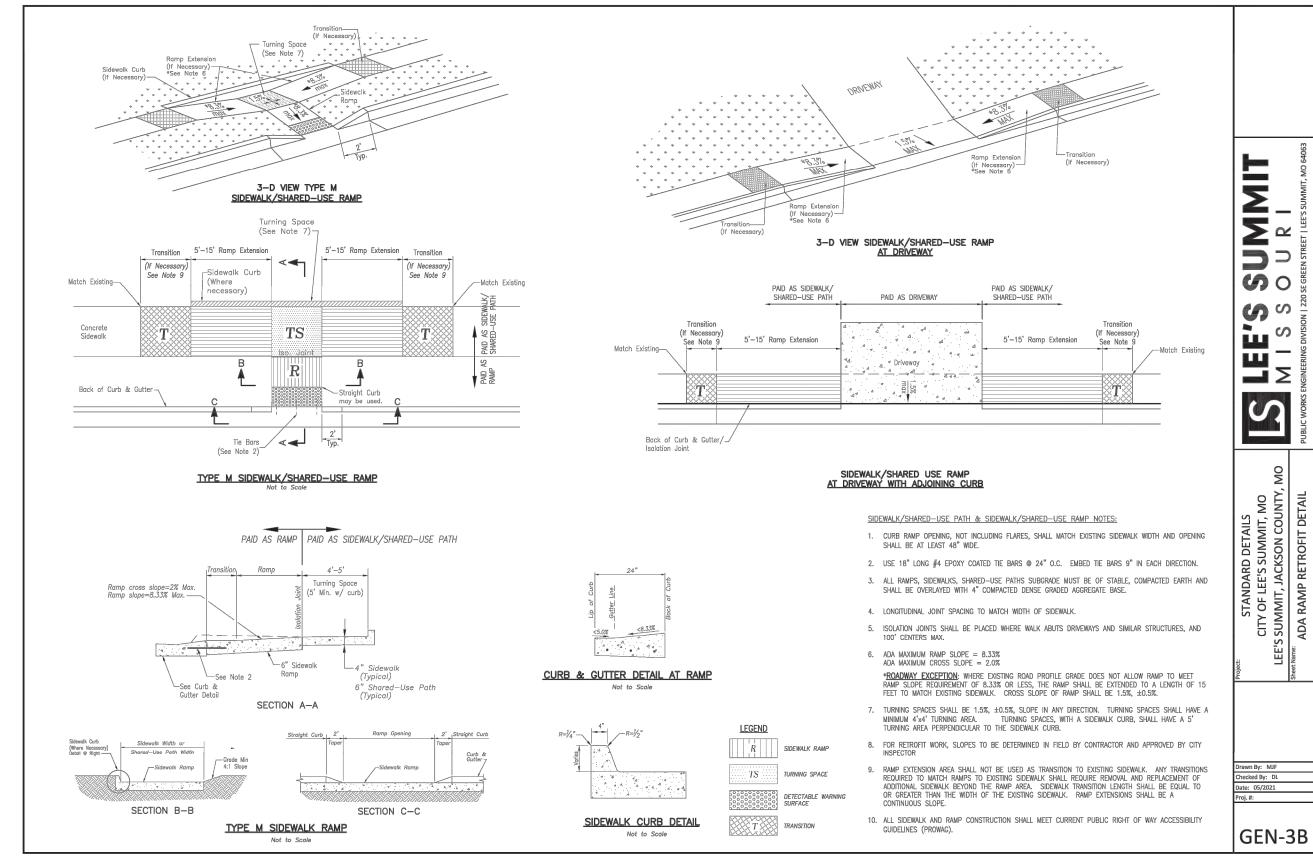
2. PROVIDE SIGN AT THE HEAD OF EACH HANDICAPPED ACCESSIBLE PARKING STALL.

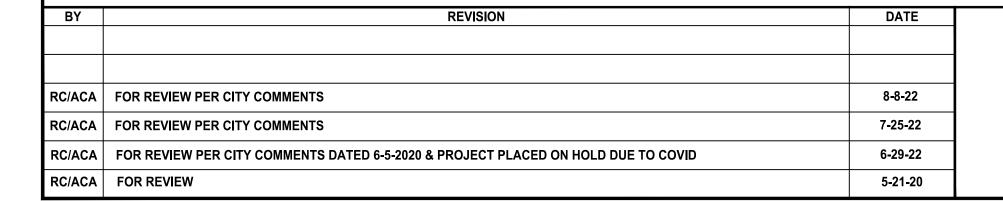
HANDICAP SIGN

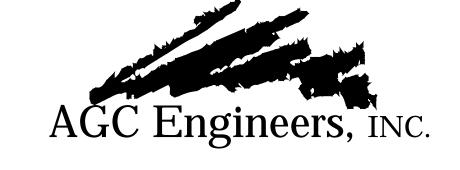
NOT TO SCALE

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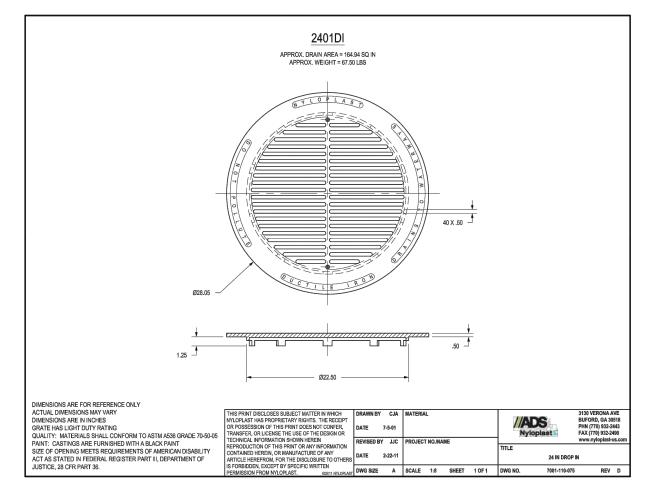
816.781.4200

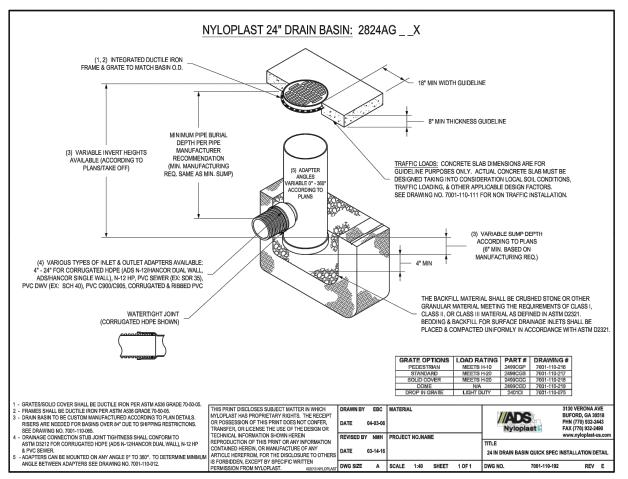
fax 792.3666 www.agcengineers.com



PANERA BREAD BAKERY - CAFE LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS **DETAILS**





AT PRELIMINARY ---THIS WILL BE IN SIDEWALK / PAVEMENT -UTILITY INSPECTION NEEDS TO BE FLUSH FOR ADA PEDESTRIAN TO BE LOWERED TO TRAFFIC, USE CAST IRON LID DETAIL FINAL GRADE AT TIME OF PLUMBER'S TIE-IN NON-PAVED AREAS 18" x 18" x 6" CONCRETE COLLAR; (2) #4 BARS CONTINUOUS AND (4) #4 NEENAH R-1970 -BARS DIAGONAL RING AND COVER OR APPROVED EQUAL - ¾" EXPANSION JOINT AROUND CAP IN PAVED AREAS FLUSH WITH SLAB SEWER BRANCH WYE 6" SANITARY LATERAL **→** FLOW - MINIMUM SLOPE

CLEAN-OUT DETAIL

NOT TO SCALE

TRENCH BACKFILL: TRENCH BACKFILL:
MoDOT TYPE 1 ROCK 4' JOB EXCAVATED MATERIAL COMPACTED BACK-OF-CURB TO TO 95% OF MAX. 4' BACK-OF-CURB. MIN 15"-MAX MIN 15"-MAX 24" PLUS O.D. OF PIPE 24" PLUS O.D. OF PIPE **UNDER PAVEMENT OUTSIDE PAVEMENT**

> EMBEDMENT AND BACKFILL FOR SANITARY SEWERS NOT TO SCALE

COMPACTED TRENCH -BACKFILL 95% OF STANDARD PROCTOR. UNDER PAVEMENT OR FUTURE PAVEMENT USE COMPACTED GRANULAR BACKFILL — UNDISTURBED TRENCH WALL (TYP.) BEDDING & BACKFILL MINIMUM RECOMMENDED COVER 12" (24" FOR 60" PIPE)* SURFACE LIVE LOADING CONDITION H25 (FLEXIBLE PAVEMENT) 12" (24" FOR 60" PIPÉ) H25 (RIGID PAVEMENT) E80 RAILWAY

1. <u>FOUNDATION</u>: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY—FLOW APPLICATIONS," LATEST EDITION: AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING WOVEN

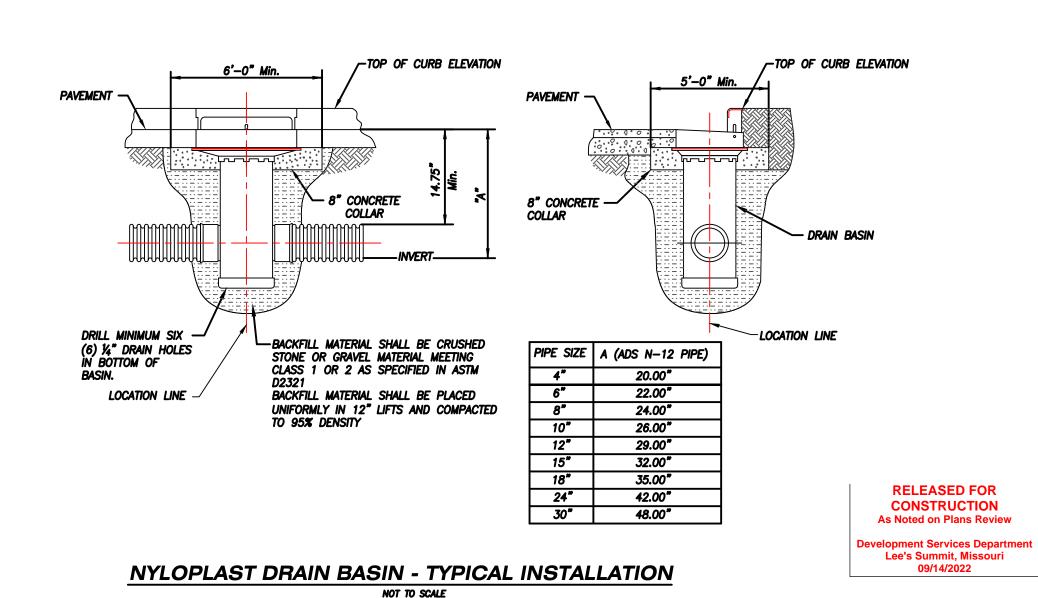
2. <u>BEDDING</u>: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4"; FOR 4"-24" DIA. HDPE; 6" FOR 30"-60" DIA. HDPE.

3. <u>Haunching and Initial Backfill</u>: Suitable Material Shall be class I, II or III and Installed as required in ASTM D2321, latest edition.

4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS: MIN. RECOMMENDED <u>TRENCH WIDTH</u> HEAVY CONSTRUCTION 48" 5. <u>MINIMUM COVER</u>: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS
ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM
*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION THE TOP OF THE PIPE TO THE GROUND SURFACE.

> HDPE (HIGH DENSITY POLYETHYLENE) PIPE INSTALLATION DETAIL

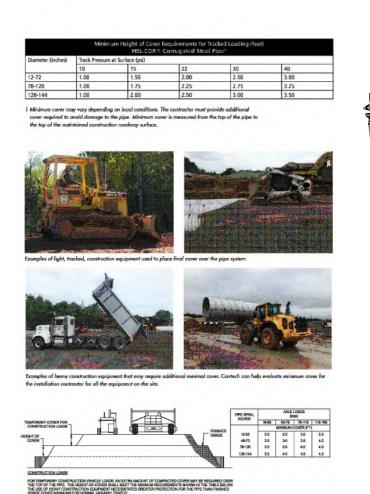
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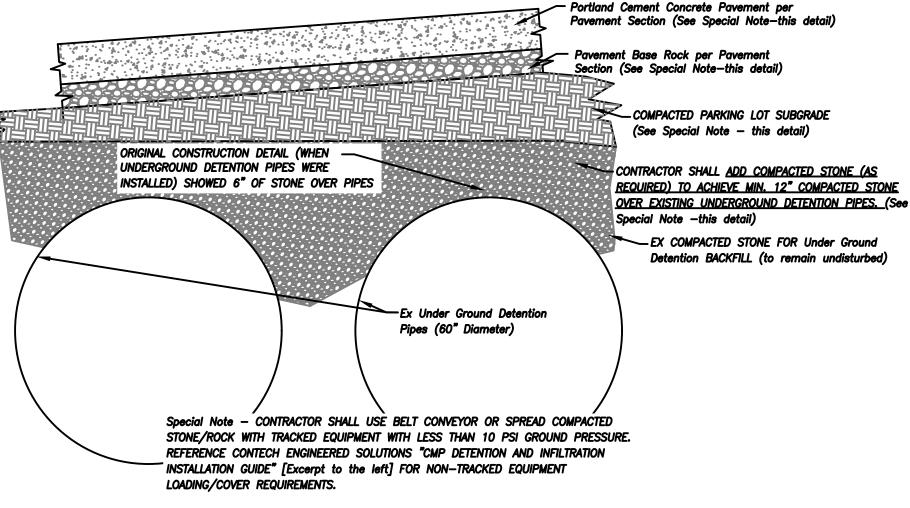


CMP Detention and Infiltration Installation Guide) Final Cover Placement and Construction Loading

(taken from Contech Engineered Solutions

Construction loads often exceed design highway loading. During construction, keep heavy construction equipment that exceeds legt highway loads off the pipe. Light construction equipment on tracks such as a D-3 dozer for lighter weight may cross over the pipe when a minimum of 12° of compacted backfill is over pipe. When construction equipment that exceeds legal highway loads must cross over pipe, an additional thickness of compacted fill, beyond that required for planned cover is required. Since construction equipment varies from job to job, it is best to address equipment varies from job to job, it is best to address equipment varies.

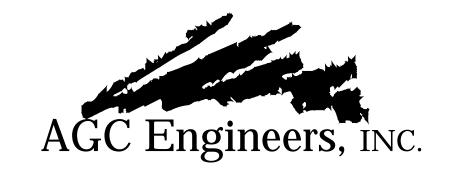




SPECIAL DETAIL FOR WORK OVER UNDERGROUND DETENTION AREA

ntact Paul Flynn, Contech Engineered Solutions at 785–207–9721 prior to beginning work.

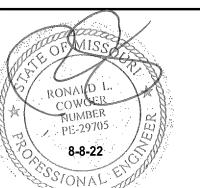
BY REVISION DATE 8-8-22 RC/ACA | FOR REVIEW PER CITY COMMENTS 7-25-22 RC/ACA | FOR REVIEW PER CITY COMMENTS 6-29-22 RC/ACA FOR REVIEW PER CITY COMMENTS DATED 6-5-2020 & PROJECT PLACED ON HOLD DUE TO COVID RC/ACA | FOR REVIEW 5-21-20



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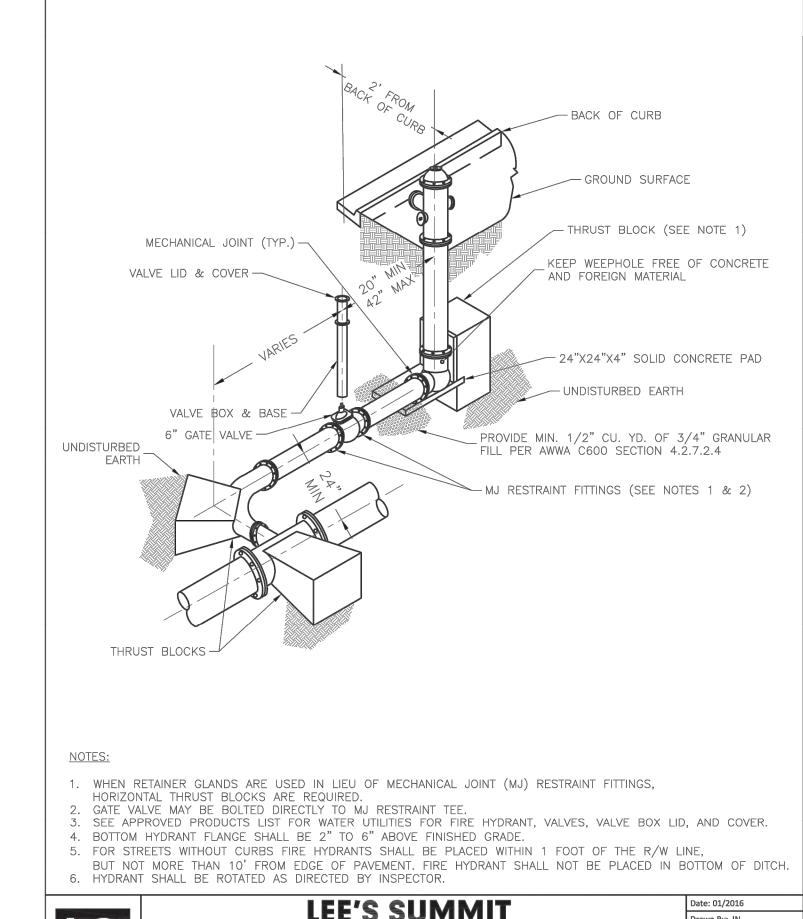
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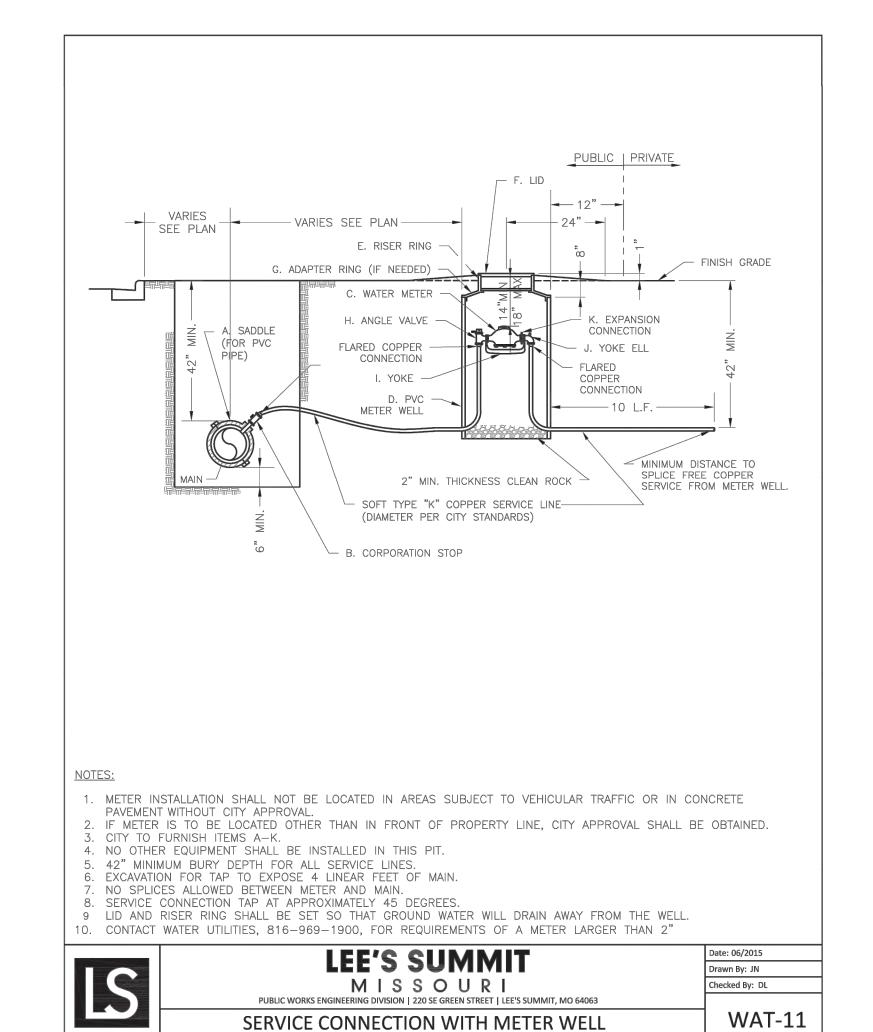


PANERA BREAD BAKERY - CAFE LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS **DETAILS**

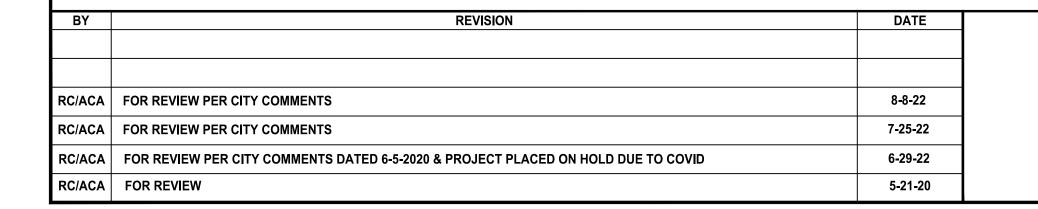


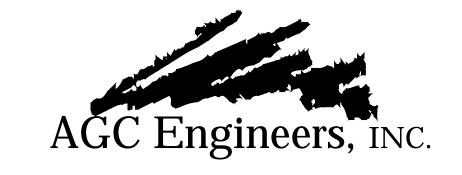
LS	LEE'S SUMMII	Date: 01/2016 Drawn By: JN Checked By: DL
	PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Circled by. DE
	HYDRANT WITH 90 DEGREE BEND	WAT-8



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CONSTRUCTION
As Noted on Plans Review

Development Services Department Lee's Summit, Missouri
09/14/2022

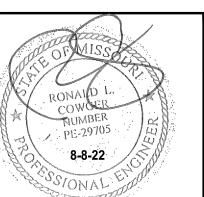




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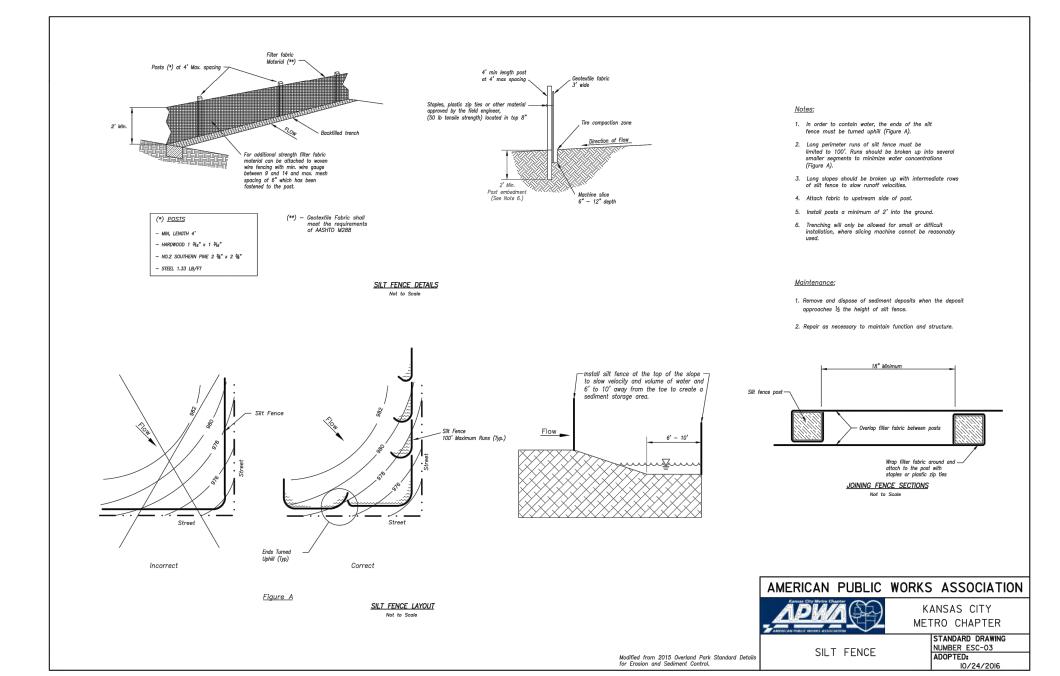
816.781.4200 **•** fax 792.3666

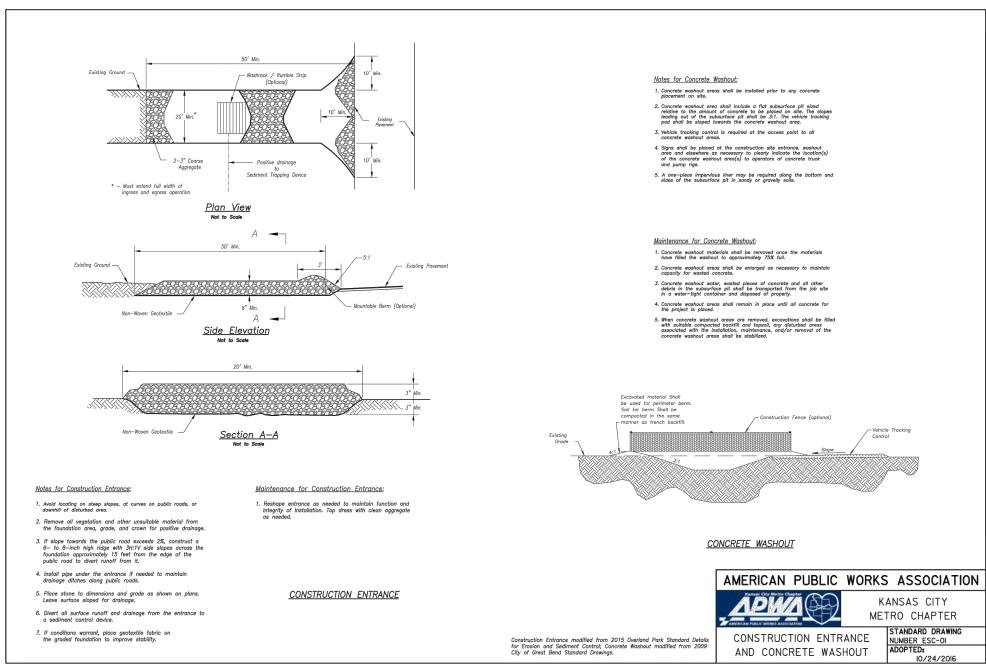
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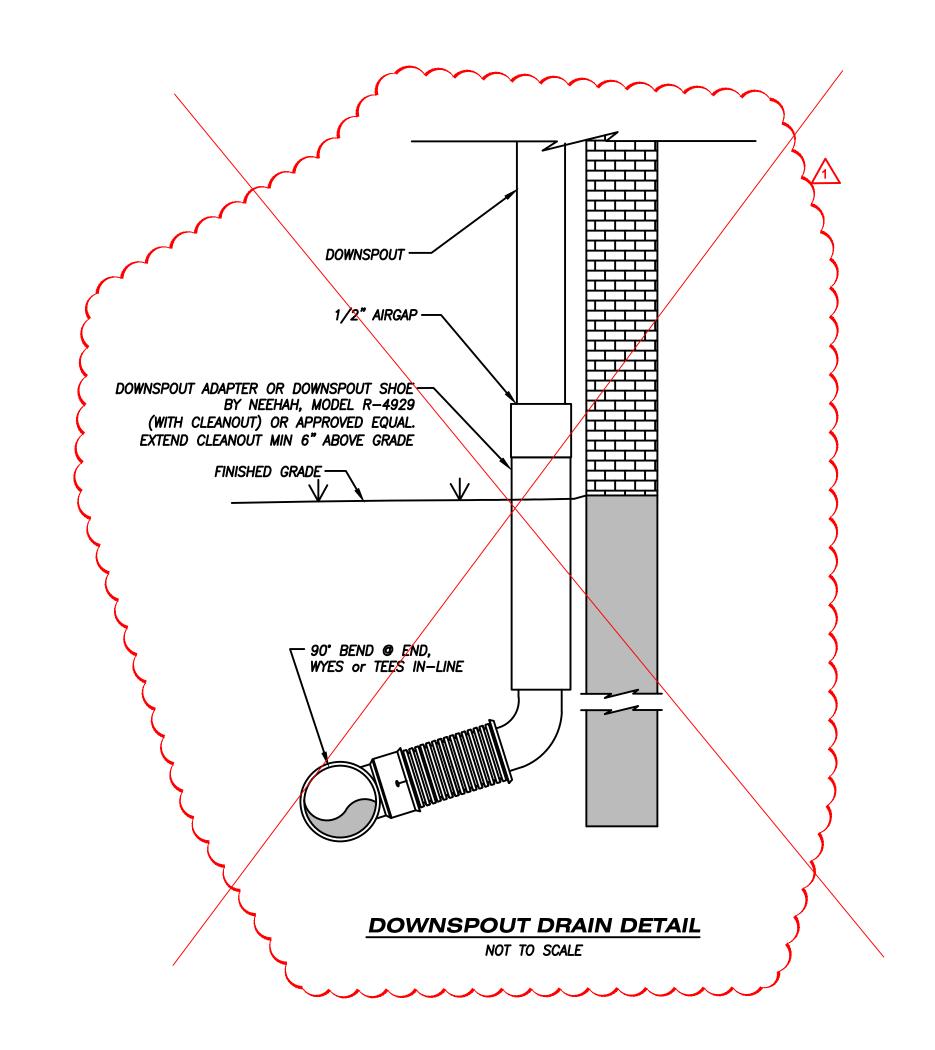


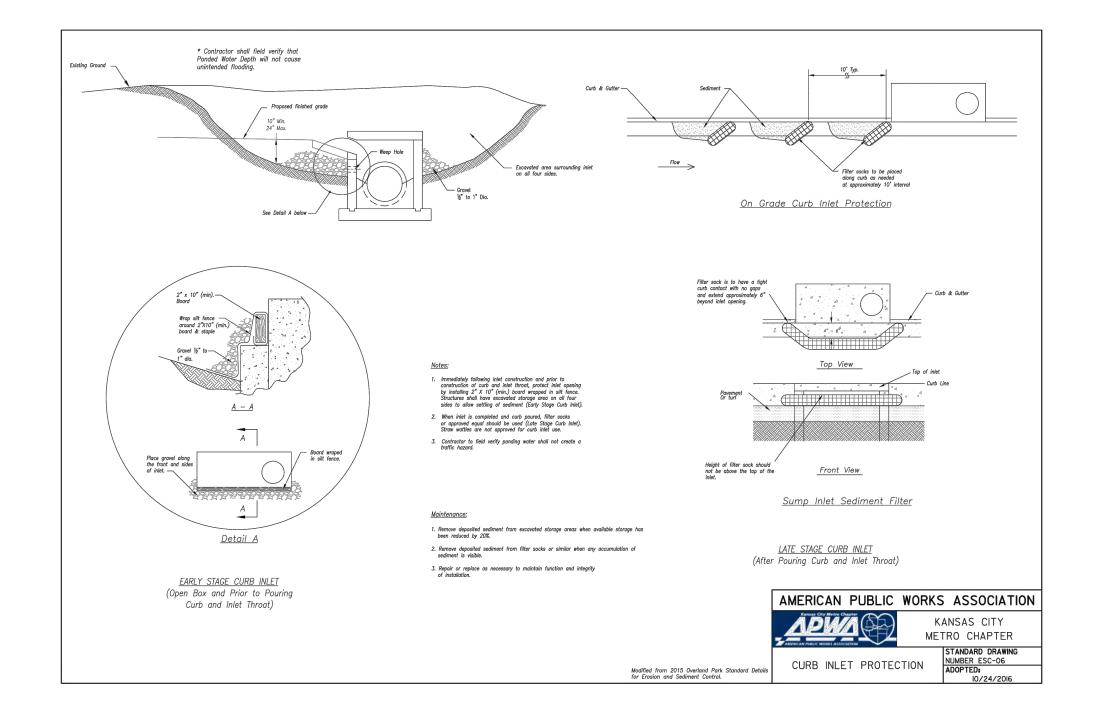
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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS **DETAILS**





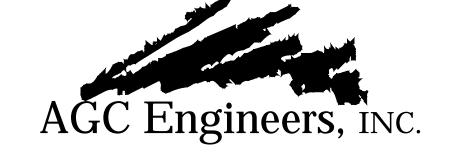




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Development Services Department
Lee's Summit, Missouri
09/14/2022

BY	REVISION	DATE
RC/ACA	COORDINATION REVISIONS WITH MEP / ARCHITECT	9-6-22
RC/ACA	FOR REVIEW PER CITY COMMENTS	8-8-22
RC/ACA	FOR REVIEW PER CITY COMMENTS	7-25-22
RC/ACA	FOR REVIEW PER CITY COMMENTS DATED 6-5-2020 & PROJECT PLACED ON HOLD DUE TO COVID	6-29-22
RC/ACA	FOR REVIEW	5-21-20



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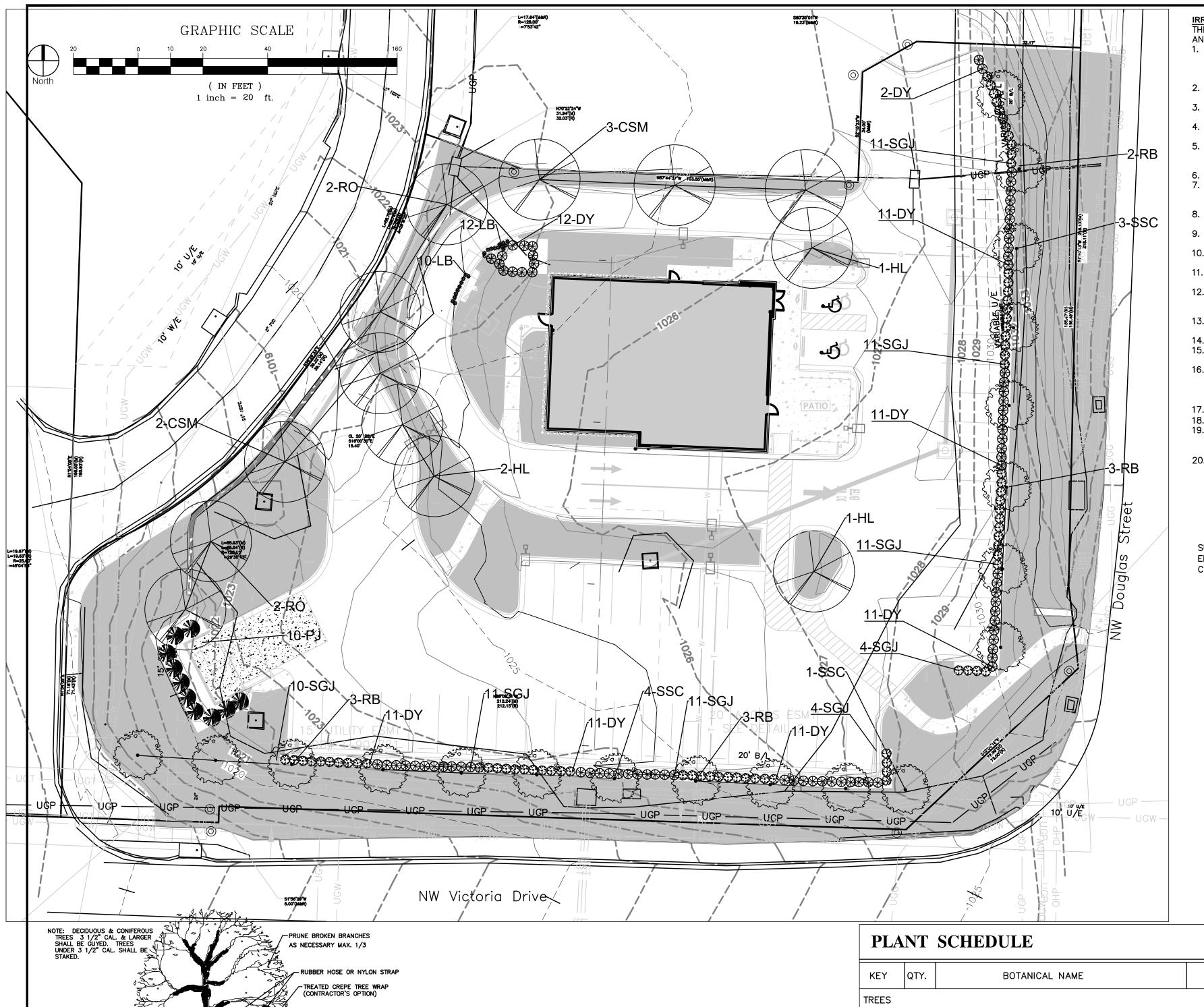
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PANERA BREAD BAKERY - CAFE
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE DEVELOPMENT PLANS **DETAILS**



MULCH (SETTLED DEPTH)

-STEEL FENCE POSTS OR 2"x2" WOOD STAKES (3) REQ'D. PER TREE

FLUORESCENT FLAGGING 3" GALV. TURNBUCKLE

SCARIFY SOIL ON SIDES-

DUCKBILL DEADMAN OR — ACCEPTABLE EQUIVALENT

& BOTTOM OF PIT

VSR

VSR

4" EARTH SAUCER-

FINISHED GRADE

PLACE ROOTBALL ON UNEXCAVATED OR— COMPACTED SETTING BED. EXCAVATE DEEPER AROUND PERIMETER.

CITY COMMENTS

CITY COMMENTS

2 to 3 x ROOT BALL

TREE PLANTING
NOT TO SCALE

FINAL DEVELOPMENT PLAN FOR CITY REVIEW

PLACE IN UNDISTURBED SOIL

PLANT WITH TOP OF BALL FLUSH

TOP 1/3 OF ROOT BALL AND REMOVE ALL WIRE.

REVISION

OR 1"-2" ABOVE FINISHED GRADE.

TRUNK FLARE MUST BE VISIBLE. DO NOT PLACE SOIL ON TOP OF BALL.

HARDWOOD MULCH (SETTLED DEPTH)

1/2 EXISTING SOIL, 1/2 TOPSOIL

IF SHRUB IS B&B, REMOVE BURLAP AND ROPE FROM TOP 1/3 OF BALL ALL OF STEEL BASKET.

SHRUB PLANTING

--

8.8.2022

7.22.2022

6.29.2022

IRRIGATION PERFORMANCE SPECIFICATION:
THE FOLLOWING CRITERIA SHALL BE CONSIDERED MINIMUM STANDARDS FOR DESIGN

- AND INSTALLATION OF LANDSCAPE IRRIGATION SYSTEM: GENERAL - IRRIGATION SYSTEM TO INCLUDE DRIP IRRIGATION OF SHRUB BEDS ADJACENT TO BUILDINGS, SPRAY HEADS IN THE PARKING ISLANDS, AND ROTORS AROUND THE PERIMETER OF THE PARKING LOTS. HEADS SHALL THROW AWAY FROM BUILDING AND AVOID SPRAYING OVER SIDEWALKS.
- IRRIGATION SYSTEM SHALL CONFORM TO ALL INDUSTRY STANDARDS AND ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING DESIGN AND INSTALLATION.
- WATER LINE TYPE, SIZE LOCATION, PRESSURE AND FLOW SHALL BE FIELD VERIFIED PRIOR TO SYSTEM DESIGN AND INSTALLATION.
- ALL MATERIALS SHALL BE FROM NEW STOCK FREE OF DEFECTS AND CARRY A MINIMUM ONE YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN SUCH A WAY THAT ALL SYSTEM COMPONENTS OPERATE WITHIN THE GUIDELINES ESTABLISHED BY THE MANUFACTURER.
- LAWN AREA AND SHRUB BEDS SHALL BE ON SEPARATE CIRCUITS. PROVIDE WATER TAP, METER SET, METER VAULT AND ALL OTHER OPERATIONS NECESSARY TO PROVIDE WATER FOR IRRIGATION SHALL CONFORM TO LOCAL WATER GOVERNING AUTHORITY GUIDELINES AND STANDARDS.
- BACKFLOW PREVENTION SHALL BE PROVIDED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IRRIGATION CONTROLLER TO BE LOCATED IN UTILITY ROOM INSIDE BUILDING, AS
- IDENTIFIED BY OWNER. 10. IRRIGATION CONTROLLER STATIONS SHALL BE LABELED TO CORRESPOND WITH
- THE CIRCUIT IT CONTROLS. CONTRACTOR SHALL PROVIDE TO THE OWNER WRITTEN OPERATION INFORMATION
- FOR ALL SYSTEM COMPONENTS. 12. CONTRACTOR SHALL PROVIDE TO THE OWNER ALL KEYS, ACCESS TOOLS, WRENCHES AND ADJUSTING TOOLS NECESSARY TO GAIN ACCESS, ADJUST AND
- CONTROL THE SYSTEM. 13. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- 14. AN AUTOMATIC RAIN SHUT-OFF OR MOISTURE DEVICE SHALL BE INSTALLED. 15. INSTALL SCHEDULE 40 PVC SLEEVES UNDER ALL CURBS, PAVING AND
- SIDEWALKS. SLEEVES TO BE TWICE THE SIZE OF THE LINE IT HOUSES. 16. INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN TO ALLOW GRAVITY DRAINING OF MAIN DURING WINTER MONTHS. PROVIDE QUICK COUPLERS AT MULTIPLE LOCATIONS TO ALLOW FOR EASY "BLOWING OUT"
- 17. ZONES OR NOZZLES SHALL BE DESIGNED WITH MATCHED PRECIPITATION RATES. 18. MINIMUM LATERAL DEPTH IS 15" AND MAIN DEPTH IS 18".
- 19. SUBMIT DESIGN DRAWING WITH BID TO ALLOW OWNER TO EVALUATE SYSTEM. INCLUDE CUT SHEETS OF ALL COMPONENTS AND ZONE TABLE ILLUSTRATING FLOWS AND ANTICIPATED PRESSURE AT FURTHEST HEAD.
- 20. AN "AS-BUILT" SCALED DRAWING SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - AS CONSTRUCTED LOCATION OF ALL COMPONENTS • COMPONENT NAME, MANUFACTURER, MODEL INFORMATION, SIZE AND
- PIPE SIZE AND QUANTITY

OF LATERAL AND MAIN LINES.

- INDICATION OF SPRINKLER HEAD SPRAY PATTERN
- CIRCUIT IDENTIFICATION SYSTEM DETAILED METHOD OF WINTERIZING SYSTEM

SUBMIT AS-BUILT DRAWING IN FULL SIZE DRAWING FORM AS WELL AS PDF ELECTRONIC FORMAT. (SCANNING FULL SIZE COPY OF PLAN IS ACCEPTABLE IF IT CAN BE PRINTED TO SCALE)

> **RELEASED FOR CONSTRUCTION** As Noted on Plans Review

> Lee's Summit, Missouri 09/14/2022

> > SIZE/REMARKS

2" CAL. B&B

6' HT. B&B

2 GAL. min. 18" HT.

2 GAL. min. 18" HT.

1 GAL

LANDSCAPING NOTES:

- 1. LOCATE ALL UTILITIES BEFORE LANDSCAPE CONSTRUCTION BEGINS.
- NOTIFY OWNER REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES. 3. ALL EXTERIOR GROUND WITHIN THE LIMITS OF THE CONTRACT, EXCEPT FOR SURFACES OCCUPIED BY BUILDINGS, STRUCTURES, PAVING, AND AS DIRECTED ON THE DRAWINGS AS UNDISTURBED, SHALL BE FILLED WITH SIX INCHES
- 4. ALL DISTURBED AREAS NOT DESIGNATED FOR OTHER PLANTING SHALL BE SODDED. SOD SHALL CONSIST OF 90% TURF TYPE TALL FESCUE 10% BLUEGRASS.
- 5. WEED MAT SHALL BE USED UNDER ALL PLANTING AREAS NOT TO BE SODDED OR AS DIRECTED ON THE DRAWINGS. THE MAT SHALL BE COVERED WITH MULCH AND SECURED IN-PLACE BY A SOIL ANCHOR.
- 6. QUANTITIES INDICATED IN PLANT LIST ARE FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PLANT QUANTITIES AS ON THE PLAN.
- 7. SHREDDED HARDWOOD MULCH SHALL BE USED AS THREE INCH (3") TOP DRESSING IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF SAUCER OR
- LANDSCAPE ISLAND (SEE PLANTING DETAILS). 8. PROVIDE STEEL EDGING AROUND ALL SHRUB AND GROUNDCOVER BEDS. STEEL EDGING SHALL BE 1/8" x 4" WITH CLIPS AND REBAR STAKES FIVE
- FEET(5') ON CENTER. 9. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME-RELEASE FERTILIZER(3-4 SLOW-RELEASE TABLETS/PELLETS).
- 10. IF LEANING OCCURS WITHIN ONE YEAR, TREES SHALL BE RE-STAKED (SEE PLANTING DETAILS).
- 11. CONTRACTOR SHALL STAKE ALL PLANT MATERIALS PRIOR TO INSTALLATION FOR THE PURPOSE OF DETERMINING CONFLICTS WITH ROCK, UTILITIES, ETC. NO PLANTS CAN BE PLANTED DIRECTLY ON ROCK OR UTILITIES. NOTIFY ARCHITECT/ENGINEER/OWNER AT ONCE IF ANY CONFLICTS OCCUR. CONTRACTOR WILL BE REQUIRED TO ADJUST PLANT LOCATIONS AT NO ADDITIONAL COST.
- 12. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL SOD UNTIL ROOTS HAVE KNOTTED INTO SOIL AND OWNER HAS OCCUPIED THE BUILDING.
- 13. PROVIDE "GATOR" BAGS ON ALL TREES. REFILL AS NECESSARY UNTIL OWNER OCCUPIES THE BUILDING.
- 14. PROVIDE ROLLED EROSION CONTROL MAT, NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL OVER ALL NATIVE GRASS SEEDED AREAS.
- 15. 12" GRAVEL MOW STRIP PROVIDE AND INSTALL: 1/4" x 5" STEEL EDGING (SURE-LOC OR EQ.). ANCHOR IN PLACE WITH STAKES PER MANUFACTURER. PROVIDE AND INSTALL HEAVY DUTY WEED BARRIER FABRIC UNDER GRAVEL. PROVIDE AND INSTALL 3" DEPTH OF 1"-2" MULTI-COLORED WASHED RIVER GRAVEL, SUBMIT COLOR SAMPLE TO OWNER FOR APPROVAL.

LANDSCAPE WORKSHEET

	ORDINANCE REQUIRMENT	REQUIRED FOR THIS SITE	PROPOSED (EXISTING AND NEW LANDSCAPE)
8.720.A.1 Street Frontage Trees (NW Douglas)	1 tree per 30 feet of street frontage	229 ft. of street frontage /30= 8 trees required	8 trees
8.720.A.2 Street Frontage Green Strip (NW Douglas)	20 feet	20 feet	20 feet
8.720.A.3 Street Frontage Shrubs (NW Douglas)	1 shrub per 20 feet of street frontage	229 ft. of street frontage /20= 12 shrubs required	16 shrubs
8.720.A.1 Street Frontage Trees (NW Victoria)	1 tree per 30 feet of street frontage	297 ft. of street frontage /30= 10 trees required	10 new trees *
8.720.A.2 Street Frontage Green Strip (NW Victoria)	20 feet	20 feet	20 feet
8.720.A.3 Street Frontage Shrubs (NW Victoria)	1 shrub per 20 feet of street frontage	297 ft. of street frontage/20= 15 shrubs required	15 shrubs
8.790.B.1 Open Yard Shrubs	2 shrubs per 5000 sq. ft. of total lot area excluding building footprint.	23,300 sq. ft./5000 x 2=10 shrubs.	12 shrubs
8.790.B.2 Open Groundcover	Open area not covered with other materials shall be covered with sod.		Sod
8.790.B.3 Open Yard Trees	1 tree per 5000 sq. ft. of total lot area excluding building and parking.	23,300 sq. ft./5000=5 trees.	5
8.810.A Parking Lot Landscape Islands	5% of entire parking area (spaces, aisles & drives); 1 island at end of every parking bay, min. 9' wide	25,153 sq.ft. of parking area x .05 = 1,257 sq.ft. of landscape parking lot islands required	1,714 sq.ft.
8.820 Screening of Parking Lot, NW Douglas	12 shrubs per 40 linear feet (must be 2.5 feet tall; berms may be combined with shrubs)	229 linear feet/40 x 12 69 shrubs required	69 shrubs
8.820 Screening of Parking Lot, NW Victoria.	12 shrubs per 40 linear feet (must be 2.5 feet tall; berms may be combined with shrubs)	240 linear feet/40 x 12 72 shrubs required	72 shrubs
* CITY ONLY ALLOWS ORNAME	ENTAL TREES IN PUBLIC FASEMENTS.	ALL TREES TO SATISFY STREET F	RONTAGE REQUIREMENT

* CITY ONLY ALLOWS ORNAMENTAL TREES IN PUBLIC EASEMENTS. ALL TREES TO SATISFY STREET FRONTAGE REQUIREMENT ARE ORNAMENTALS.

ACER SACHARUM 'AUTUMN SPLENDOR

GLEDITISA TRIACANTHOS 'SKYLINE'

CERCIS CANADENSIS 'OKLAHOMA'

JUNIPEROUS CHINENSIS 'PERFECTA'

JUNIPEROUS CHINENSIS 'SEA GREEN'

22 | PENNISETUM ALOPECURIODES 'LITTLE BUNNY'

TAXUS x MEDIA 'DENSIFORMIS'

MALUS SP. 'SPRING SNOW'

QUERCUS RUBRA

SHRUBS/GRASSES/GROUNDCOVER

CSM

HL

RO

RB

SSC

405 S. Leonard St., Suite D Liberty, Missouri 64068

816.781.4200 fax 792.3666

COMMON NAME

CADDO SUGAR MAPLE

SKYLINE HONEYLOCUST

OKLAHOMA REDBUD

PERFECTA JUNIPER

SEA GREEN JUNIPER

DENSIFORMIS YEW

SPRING SNOW CRABAPPLE

LITTLE BUNNY FOUNTAIN GRASS

RED OAK

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PANERA BREAD BAKERY - CAFE

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

FINAL DEVELOPMENT PLANS LANDSCAPE PLAN

L100