

**GENERAL**

1. Lined foot measurements shown on the plans are horizontal measurements; not slope measurements. All payments shall be made on horizontal measurements.
2. No geological information is shown on these plans.
3. The utility locations shown on these plans are taken from utility company records and are approximate only. They do not constitute actual field locations. The contractor shall verify the location and depth of all utilities prior to construction.
4. The contractor shall adhere to the provisions of the Senate Bill Number 583, 78th General Assembly, which requires the contractor to obtain a permit from the State Department of Transportation for any excavation or public right-of-way do so only after giving notice to and obtaining information from utility companies. State law requires 48 hours advance notice. The names and telephone numbers of utility companies, even if only remotely involved with this project are provided. Prior to commencement of work, the contractor shall notify all those companies which have facilities in the near vicinity of the construction to be performed.
5. All waste material resulting from the project shall be disposed of off-site by the contractor.
6. All excavation shall be undisturbed. No separate payment will be made for rock excavation.
7. The contractor shall control the erosion and siltation during all phases construction, and he shall keep the streets clean of mud and debris.
8. All manholes, catch basins, utility valves and meter pits to be adjusted or rebuilt to grade as required. All existing utilities shall be adjusted as required.
9. Subgrade soil for all concrete structures, regardless of the type or location, shall be firm, dense and thoroughly compacted and consolidated; shall be free from muck and mud, and shall be sufficiently stable to remain firm and intact under the feet of the workmen or machinery engaged in subgrade surfacing, laying reinforcing steel, and depositing concrete thereon. In all cases where subsoil is muddy or works into mud or muck during such operation, a seal course of either concrete or rock shall be placed below subgrade to provide a firm base for working and for piling the floor slab.
11. The contractor is responsible for providing all surveying that may be required.
12. Easements indicated on these drawings will be provided for on the final plat and property dimensions. Easements outside the platted area will be provided for by separate documents prior to issuance of a construction permit.

**STREETS & STORM SEWER**

1. All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813.

# CIVIL PLANS FOR

## LOT 7 OF

### I-470 BUSINESS AND TECHNOLOGY CENTER

#### SECTION 20, TOWNSHIP 48, RANGE 31

#### LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**DEVELOPER:**  
**BLUE SPRINGS SAFETY STORAGE LLC**  
 1120 NW EAGLE RIDGE BLVD.  
 GRAN VALLEY, MISSOURI 64029  
 Ph.# 816-229-8115

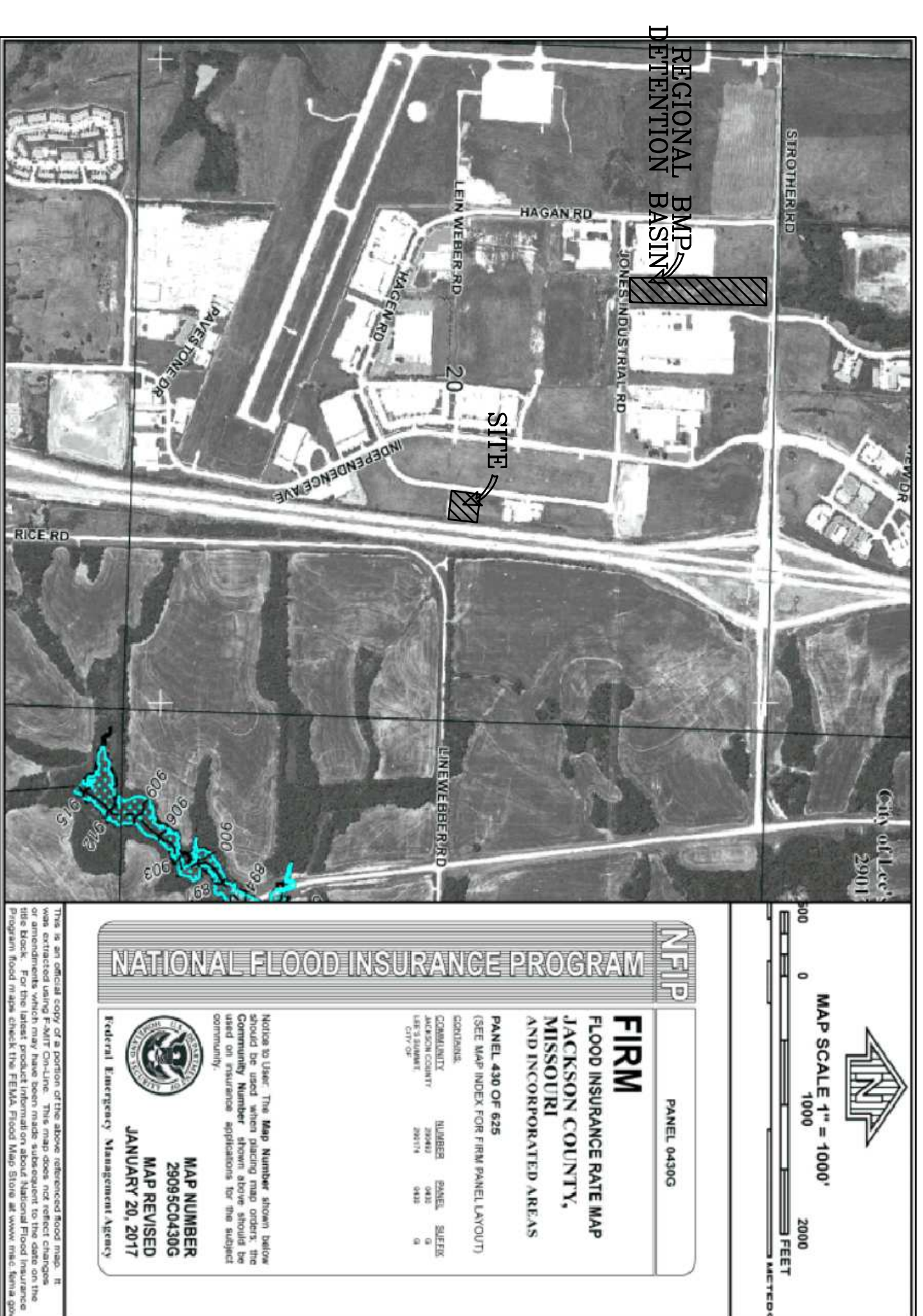
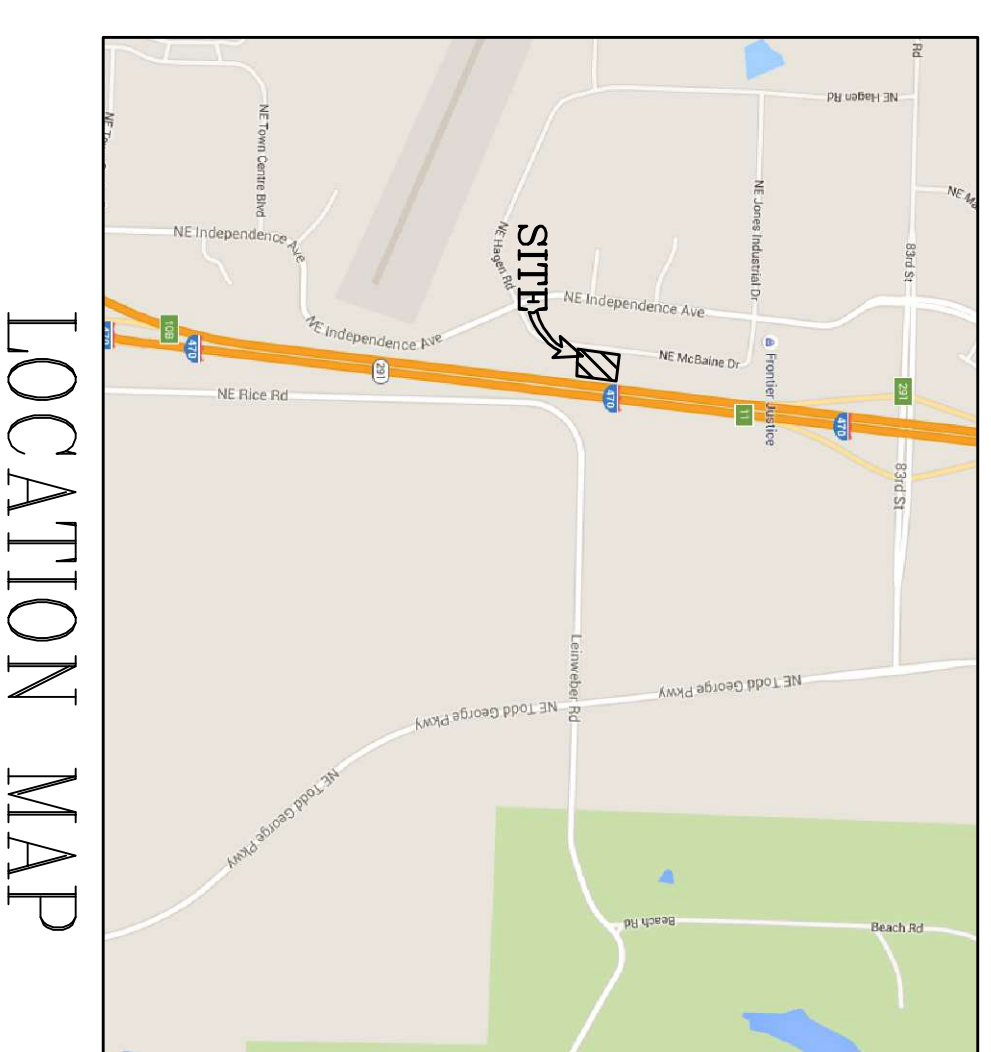
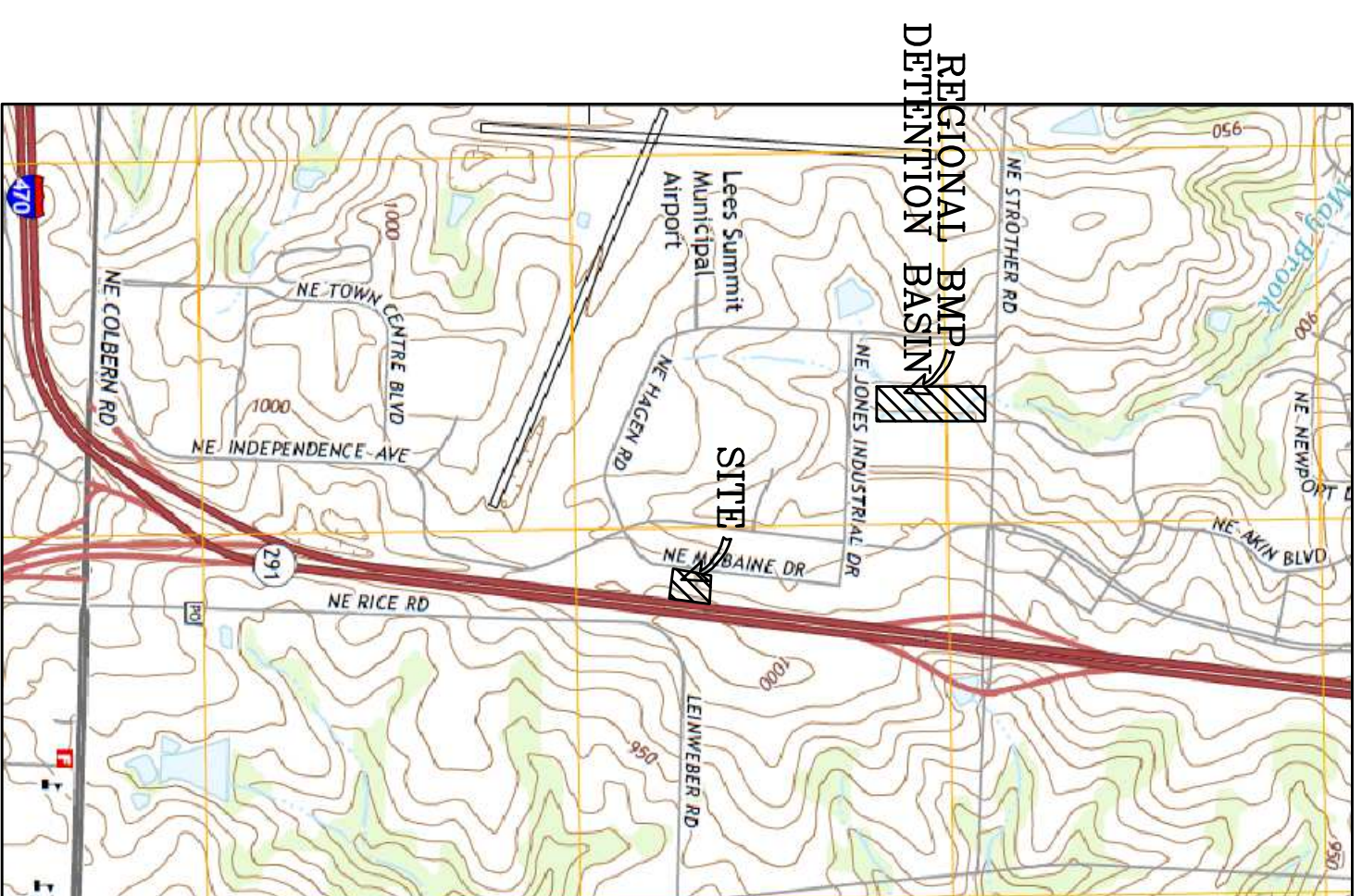
**LEGAL DESCRIPTION:**  
 LOT 7 OF "I-470 BUSINESS AND TECHNOLOGY CENTER LOTS 1 THRU 22 AND TRACTS A AND B" A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**SHEET INDEX**

C100	CIVIL PLANS COVER SHEET
C200	SITE LAYOUT
C201	SITE LANDSCAPING PLAN
C210	SITE DETAIL SHEET
C211	CITY DETAILS
C300	SITE GRADING PLAN & ESC PLAN
C302	SITE ESC DETAILS
C400	PRIVATE STORM IMPROVEMENT PLAN
C401	STORM DRAINAGE PLAN & CALCULATIONS
C402	PRIVATE STORM LINE 1
C403	STORM DETAILS
C700	UTILITY PLAN

**SITE DATA TABLE:**  
 1. NO IMPROVEMENTS ARE PROPOSED WITH THESE PLANS

**NOTES:**  
 1. CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTORS 48 HOURS PRIOR TO ANY LAND DISTURBANCE WORK. CALL (816)969-1200



- △ NONE THIS SHEET 1-1-17-22
- △ 1-10-23- REVISED SHEETS C100, C200, C210, ADDED C211, C300
- △ C200 ADDED TEMP ASPHALT CURB TO NORTH
- △ C210 ADDED TEMPORARY ASPHALT CURB
- △ C211 ADDED THIS SHEET- CITY DETAILS
- △ C300 ADDED DETAILS VIEW AND GRADES FOR CITY ADA RAMPS
- △ 6-22-23 - REVISED SHEETS C100, C200, C300, C400, C401, C402, AND C700
- △ C200 REMOVED REAR ACCESS ROAD
- △ RELOCATED TRASH ENCLOSURE
- △ REVISIED PARKING ALONG FRONT OF BUILDING
- △ ALL OTHER SHEETS REVISED TO REFLECT CHANGES

△ 12-12-23 - MOVED TO ONE ACCESS DRIVE. NONE THIS SHEET

**BEFORE YOU DIG - DRILL - BLAST**



call  
 1-800-344-7483 (MISSOURI)  
 1-800-344-7233 (KANSAS)

**UTILITIES**

**LEE'S SUMMIT PUBLIC WORKS**  
 220 SE GREEN STREET  
 LEE'S SUMMIT, MISSOURI 64063  
 (816) 969-1800

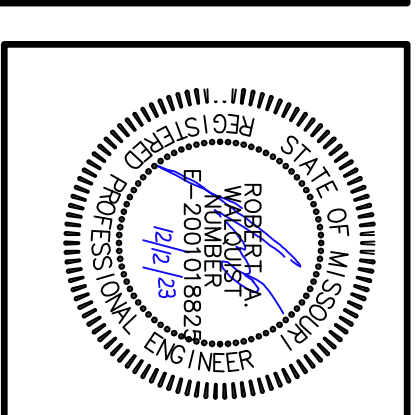
**MO GAS ENERGY**  
 P.O. BOX 219255  
 KANSAS CITY, MO 64141  
 (816) 756-5252

**KANSAS CITY POWER & LIGHT CO.**  
 P.O. BOX 219330  
 KANSAS CITY, MO 64121-9330  
 (816) 471-5275

**TELEPHONE COMPANY**  
 CENTURY LINK  
 P.O. BOX 2961  
 PHOENIX, AZ 85062  
 (800) 788-3600

## CIVIL PLANS COVER SHEET

PROJECT CONTACTS: ROBERT WALQUIST, P.E.  
 821 NE COLUMBUS ST.  
 LEE'S SUMMIT, MISSOURI 64063  
 Phone: (816) 550-5675



# LOT 7 OF I-470 B & T CENTER

## LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**Quist Engineering, Inc**  
 Civil Engineering for Residential & Commercial Site Development  
 821 NE Columbus St.  
 Lee's Summit, Missouri 64063  
 Phone: (816) 550-5675  
 email: rwalquist@quistengineering.com

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SHEET NO.  
**C100**

JOB NO.  
 E21-318



LINE LEGEND

PROPOSED	EXISTING
ST	ST
SM	SM
WTR	WTR
EBL	EBL
Storm Line	Storm Line
Sanitary Line	Sanitary Line
Water Line	Water Line
Building Line	Building Line
Easement Line	Easement Line
4' Sidewalk	4' Sidewalk
2' Curb	2' Curb
Contour	Contour
Tree Line	Tree Line
Fence Line	Fence Line
Gas Line	Gas Line
Overhead Telephone Line	Overhead Telephone Line
Underground Telephone Line	Underground Telephone Line
Overhead Electrical Line	Overhead Electrical Line
Underground Electrical Line	Underground Electrical Line

SYMBOL LEGEND

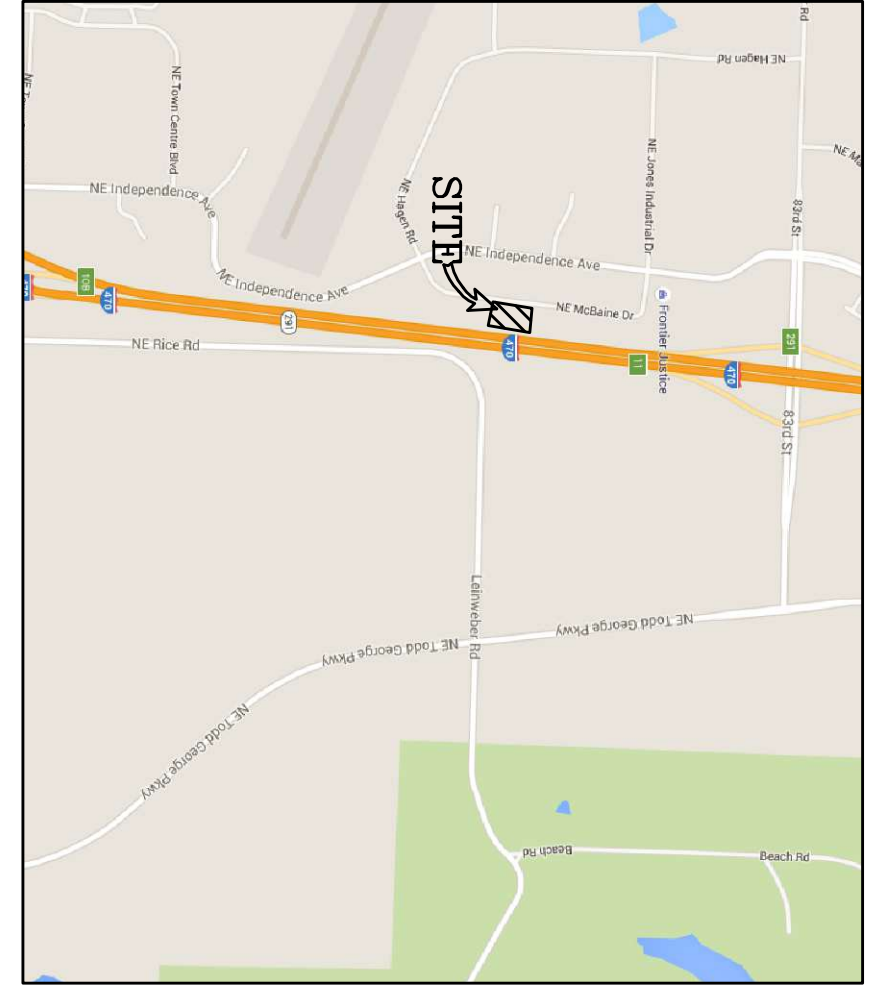
PROPOSED	EXISTING
MH	MHO
CL	CL
JB	JB
F	F
FES	FESA
FH	FH
BO	BO
WV	WV
WM	WM
Manhole	Manhole
Curb Inlet	Curb Inlet
Junction Box	Junction Box
Field Inlet	Field Inlet
Flood End Section	Flood End Section
Fire Hydrant	Fire Hydrant
Blow Off	Blow Off
Water Valve	Water Valve
Water Meter	Water Meter
Straddle	Straddle
Utility Pole	Utility Pole
Guy Wire	Guy Wire
Electric Transformer	Electric Transformer
Telephone Pedestal	Telephone Pedestal
Cable Pedestal	Cable Pedestal
Clean Out	Clean Out

**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**  
FLOOD INSURANCE RATE MAP  
JACKSON COUNTY, MISSOURI  
UNINSURED AREAS  
MAILED MAY 08 2017  
MAP NUMBER  
MAP NUMBER  
MAP NUMBER  
JANUARY 20, 2017

MAP SCALE 1" = 100'

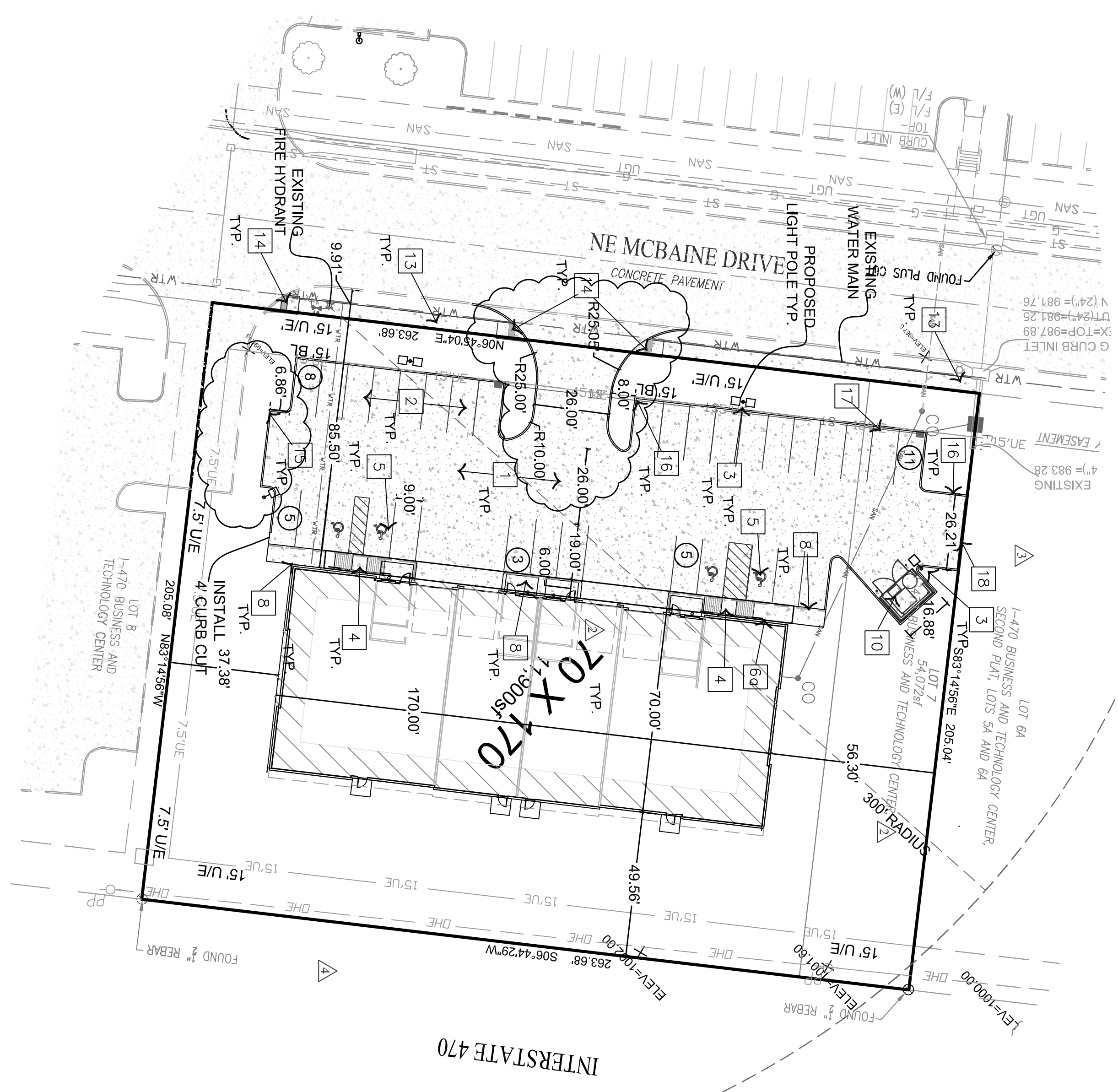
2000  
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# FINAL DEVELOPMENT PLAN FOR LOT 7 OF "I-470 BUSINESS AND TECHNOLOGY CENTER" LOTS 1 THRU 22 AND TRACTS A AND B, SECTION 20, TOWNSHIP 48, RANGE 31 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DEVELOPER:  
**BLUE SPRINGS SAFETY STORAGE LLC**  
1120 NW EAGLE RIDGE BLVD.  
GRAN VALLEY, MISSOURI 64029  
Ph.# 816-229-8115

LEGAL DESCRIPTION:  
LOT 7 THRU 22 BUSINESS AND TECHNOLOGY CENTER  
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



PLAN NOTES:

- HEAVY CONCRETE PAVEMENT RE: SEE SHEET C210
- LIGHT CONCRETE PAVEMENT RE: SEE SHEET C210
- 30' LIGHT POLE RE: SEE MEP SHEETS
- ACCESSIBILITY RAMP RE: SEE SHEET C210
- PAINT ACCESSIBLE PARKING SYMBOLS ACCORDING TO APWA PAVEMENT MARKING STANDARDS. RE: SEE SHEET C210
- INSTALL ACCESSIBLE PARKING SIGN TYPE "B" RE: SEE SHEET C210
- INSTALL RESPONSIBLE PARKING SIGN RE: SEE SHEET C210
- STRIPE PAVING WITH 4" WIDE STRIPE & PAINT ACCORDING TO APWA PAVEMENT MARKING STANDARDS CURB WALK RE: SEE SHEET C210
- SITE SIDEWALK RE: SEE SHEET C210
- RASH ENCLOSURE RE: SEE ARCHITECTURAL PLANS
- MODULAR RETAINING WALL RE: SEE SHEET C210
- SITE MONUMENT SIGN RE: SEE ARCHITECTURAL PLANS
- CITY SIDEWALK RE: SEE CITY DETAILS
- CITY ADA RAMP RE: SEE CITY DETAILS
- STRAIGHT BACK CURB (C-1) DRY RE: SEE CITY DETAIL
- STRAIGHT BACK CURB (C-1) MET RE: SEE CITY DETAIL
- CONCRETE FLAME RE: SEE SHEET C210
- TEMPORARY ASPHALT CURB RE: SEE SHEET C210

GENERAL NOTES:

- CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- PERFORM TEMPORARY EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT IMPROVEMENTS ARE IN PLACE.
- ALL PARKING STALLS SHALL BE MARKED AND PAINTED ACCORDING TO RESPONSIVE STANDARDS.
- CONSTRUCT ALL SIGNMAKS WITH 2" MINIMUM CROSS SECTION W/ 1/2" MINIMUM SPACING FROM BUILDING UNLESS OTHERWISE SHOWN ON PLANS.
- PLACE EXPANSION JOINTS IN SIGNMAKS AT 50' MAX. SPACING, AT ALL DIRECTION CHANGES AND WHEN ADJACENT TO BUILDINGS. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

UTILITY NOTES:

- SANITARY SEWER CONTRACTOR SHALL USE EXISTING SEWER STUB AND EXISTING SEWER STUBS SHALL BE LOCATED AND CAPED PER CITY REQUIREMENTS
  - STORM SYSTEM ALL STORM SEWER WILL GATHERED IN A PRIVATE SYSTEM AND THEN CONNECTED TO A PUBLIC SYSTEM AT AN EXISTING INLET.
- DEVELOPMENT NOTES:
- TOTAL LOT AREA = 54,072sf = 1.24ac
  - TOTAL BUILDING FOOTAGE = 11,900sf
  - ESTIMATED 15% OFFICE = 1,785sf
  - PARKING STALLS REQUIRED STALL = 4 PER 1,000sf OFFICE (1,785 / 1,000) X 4 = 28 STALLS (10,115 / 1,000) X 1 = 11 STALLS (TOTAL REQUIRED = 19)

PROPOSED STALLS

STANDARD	STALLS	AREA
STANDARD 19'x9' STALLS	28	252 SF
ADA 19'x9' STALL WITH CURB	3	27 SF
TOTAL	31	279 SF

PERVIOUS VS IMPERVIOUS CALCULATIONS

PERVIOUS SURFACES	AREA
IMPERVIOUS SURFACES	54,072 SF
BUILDINGS, PORCHES, DRIVES, PARKING, WALKSMISC.	34,150SF 27,407 SF
TOTAL	34,150SF 27,407 SF

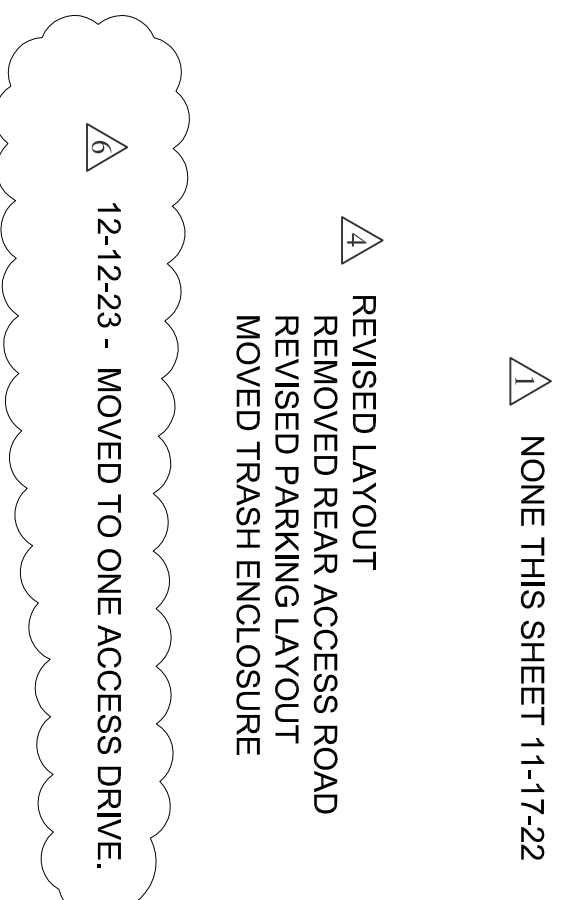
CALCULATIONS

PERVIOUS	IMPERVIOUS
37%	63%
49%	51%
PERVIOUS (GREEN)	

PUBLIC IMPROVEMENTS

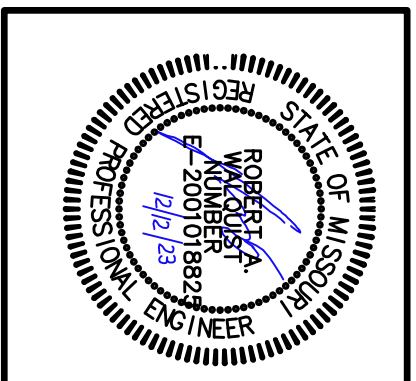
- CITY SANITARY MAIN "NONE"
- CITY SIDEWALK = "NONE"
- CITY ADA RAMPS = 3

OIL AND GAS WELL NOTE:  
1. NO OIL OR GAS WELL WHERE ON RECORD OR OBSERVED ON THE PROPERTY



1" = 30'

## FINAL DEVELOPMENT PLAN



# LOT 7 OF I-470 B & T CENTER LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**Quist Engineering, Inc**  
Civil Engineering for Residential & Commercial Site Development  
821 NE Columbus St.  
Lee's Summit, Missouri 64063  
Phone: (816) 550-5675  
email: rwaquist@quistengineering.com

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**C200**

JOB NO.  
E21-318



# LANDSCAPING PLAN

**Section 14.070. Installation of plant materials**  
 Plant materials, as required by the provisions of this Article, shall be installed by the date specified on the approved landscaping and buffer plan. The Director may allow one (1) planting season in a twelve (12)-month period in which the installation of plant materials shall be completed.  
 Buffers, if required, shall be installed before a certificate of occupancy permit is granted; except where the weather is not suitable for planting and escrow provisions are made in accordance with guidelines of the Department.

**Section 14.080. Maintenance of required plant materials**  
 A. The owner, tenant and their agent, if any, shall be jointly responsible for the maintenance in good condition of the plant materials to meet the minimum requirements of this Article for landscaping, buffer or tree replanting. The plant materials shall be kept free from refuse and debris.  
 B. Plants that are not in sound growing condition or are dead shall be removed and replaced with a plant of a species or variety as determined by the Director.  
 C. Other landscape materials shall be maintained in proper repair and shall be kept clear of refuse and debris.

**PERVIOUS VS IMPERVIOUS CALCULATIONS**  
 LOT SIZE 54,072 SF  
 IMPERVIOUS SURFACES 54,072 SF  
 BUILDINGS, PORCHES, DRIVES, PARKING, WALKWAYS 34,150SF 27,407 SF  
 TOTAL 34,150SF 27,407 SF  
 CALCULATIONS  
 I = 63% 51% IMPERVIOUS  
 P = 37% 49% PERVIOUS (GREEN)

1. UDC SECTION 14. LANDSCAPING, BUFFERS AND TREE PROTECTION PLAN REQUIREMENTS  
 A. TREE PROTECTION: THIS SITE HAS NO TREES TO BE REMOVED.  
 B. BUFFERS: WE HAVE SHOWN A 15' LANDSCAPING BUFFER ON CITY STREET FRONTAGE.  
 C. STREET TREES & SHRUBS: THIS SITE HAS A TOTAL OF 264 L.F. OF CITY ROW FRONTAGE  
 1. REQUIRED TREES 264 / 30 = 9  
 2. REQUIRED SHRUBS 264 / 20 = 13  
 D. OPEN YARD AREA: (TOTAL REMAINING YARD AFTER FULL DEVELOPMENT = 14,001sf)  
 1. REQUIRED 1 TREES PER 5,000sf OF REMAINING YARD = 3  
 2. REQUIRED 2 SHRUBS PER 5,000sf OF REMAINING YARD = 6

TOTAL LANDSCAPING REQUIRED  
 TREES = 12  
 SHRUBS = 19

- E. PROPOSED TREES & SHRUBS:  
 1. TREES ALONG THE ROW MCBAIN DR. (ORNAMENTAL TREES) = 7  
 TOTAL = 10  
 2. SHRUBS ALONG THE ROW MCBAIN DR. = 12  
 THESE WILL BE MET BY THE PARKING SCREENING REQUIREMENTS\*  
 3. OTHER PROPOSED TREES = 0  
 4. OTHER PROPOSED ORNAMENTAL TREES = 2  
 5. OTHER PROPOSED SHRUBS = 8

2. UDC SECTION 8. PARKING LOT SCREENING  
 DO TO THE GRADES OF THIS SITE WE INTEND TO USE PLANTING ONLY AS OUT SCREENING  
 1. REQUIRED 12' 18" TALL SHRUBS PER 40' OF PARKING AREA LEES DRIVE ENTRANCES AND SIGHT TRIANGLES.

TOTAL LANDSCAPING REQUIRED  
 1. PARKING LOT ALONG MCBAIN = 162 L.F.  
 REQUIRED SHRUBS = 162 X 12 = 49  
 TOTAL SHRUBS = 49

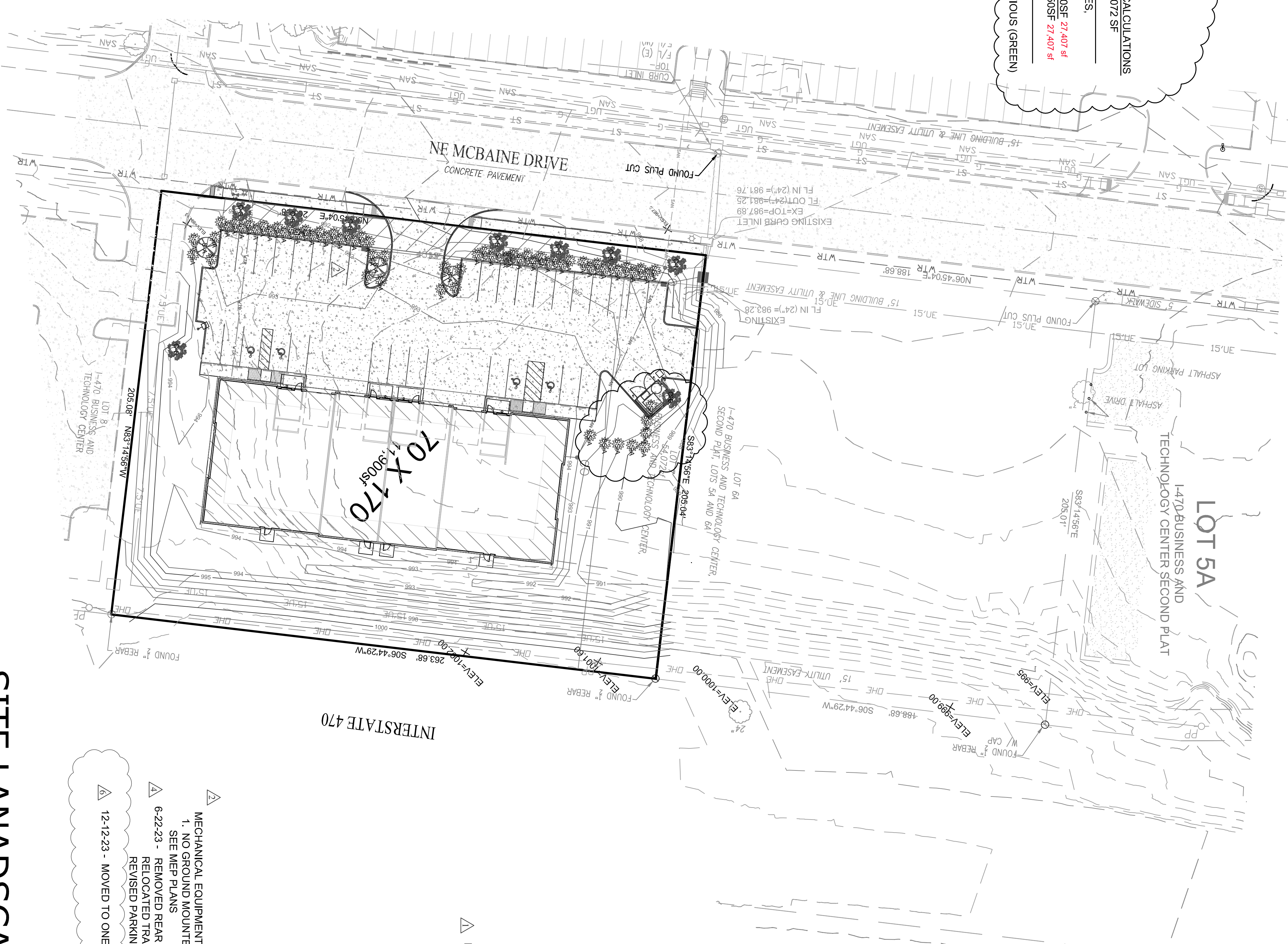
- E. PROPOSED SHRUBS:  
 1. SHRUBS ALONG THE ROW MCBAIN DR. = 49  
 TOTAL SHRUBS = 49

**B PLANTING SCHEDULE**

SA	COMMON NAME	SCIENTIFIC NAME	CALIPER	TOTAL PROPOSE
S-A	STATE STREET MAPLE	ACER NYRABEI	3" CAL.	3
S-B	PACIFIC SUNSET MAPLE	ACER TRUNCATUM PACIFICUSUNSET	3" CAL.	0
S-C	AUTUMN BLAZE MAPLE	ACER X AUTUMN BLAZE	3" CAL.	0
S-D	SHAWNEE BRAVE BALD CYPRESS	TAXODIUM DISTICHUM SHAWNEE BRAVE	3" CAL.	0
S-E	VALLEY FORGE ELM	ULMUS AMERICANA VALLEY FORGE	3" CAL.	0
S-F	SWAMP WHITE OAK	QUERCUS BICOLOR	3" CAL.	0
ORNAMENTAL TREES				TOTAL PROPOSED = 3
O-A	ROYAL RAINDROPS ORNAMENTAL	MALUS ROYAL RAINDROPS	3" CAL.	0
O-B	HOT WINGS MAPLE	ACER TATARICUM HOT WINGS	3" CAL.	9
O-C	IVORY SILK TREE LILAC	SYRINGA RETICULATA IVORY SILK	3" CAL.	0
O-D	REDBUD	CERCIS CANADENSIS	3" CAL.	0
O-E	JUNE SNOW DOGWOOD	CORNUS CONTROVERSA JUNE SNOW	3" CAL.	0
O-F	SPRING FLURRY SERVICEBERRY	AMELANCHIER LAEVIS SPRING FLURRY	3" CAL.	0
TOTAL PROPOSED = 9				

**A EVERGREEN TREES/SHRUB**

E-A	NORWAY SPRUCE	PICEA ABIES	8' HT.	9
E-B	CANAMERTI JUNIPER	JUNIPERUS VIRGINIANA CANAMERTI	8' HT.	0
E-C	GREEN GIANT ARBOVIVATAE	THUJA PLICATA GREEN GIANT	8' HT.	0
TRUE SHRUBS				
SS-A	BOX WOOD	BUXUS SEMPERVERENS	18" HT.	56
TOTAL PROPOSED = 56				

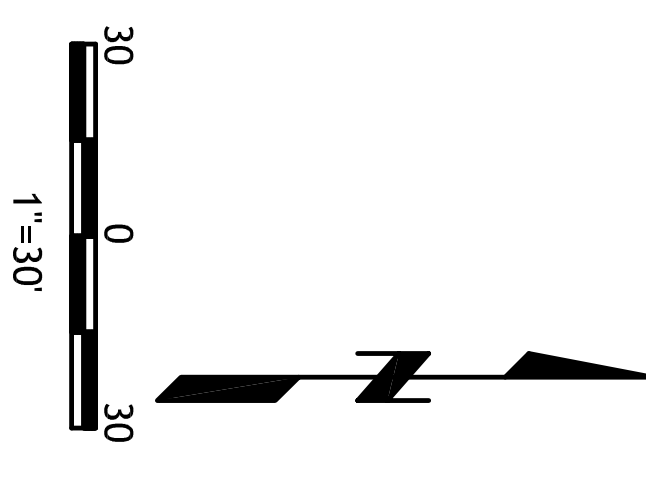


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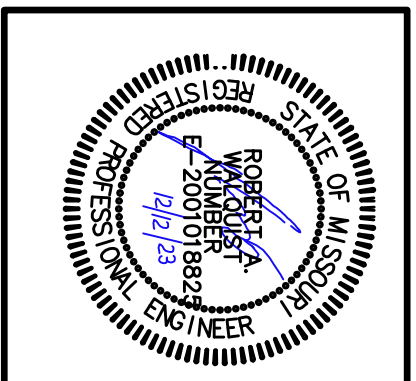
△ MECHANICAL EQUIPMENT  
 1. NO GROUND MOUNTED EQUIPMENT IS PROPOSED.  
 SEE MEP PLANS

△ 6-22-23 - REMOVED REAR ACCESS ROAD  
 RELOCATED TRASH ENCLOSURE  
 REVISED PARKING ALONG FRONT OF BUILDING

△ 12-12-23 - MOVED TO ONE ACCESS DRIVE.



## SITE LANDSCAPING PLAN



**LOT 7 OF I-470 B & T CENTER**  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**Quist Engineering, Inc**  
 Civil Engineering for Residential & Commercial Site Development  
 821 NE Columbus St.  
 Lee's Summit, Missouri 64063  
 Phone: (816) 550-5675  
 email: rwaquist@quistengineering.com

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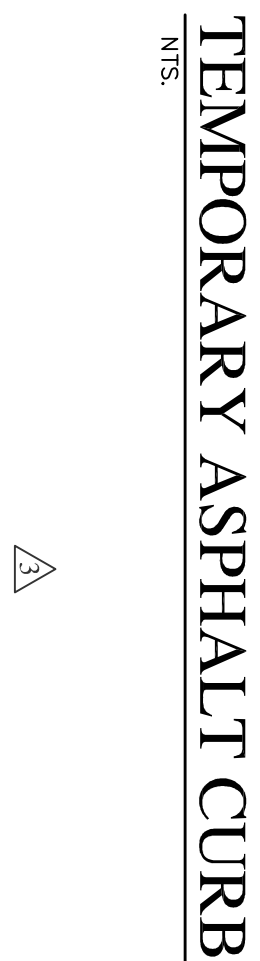
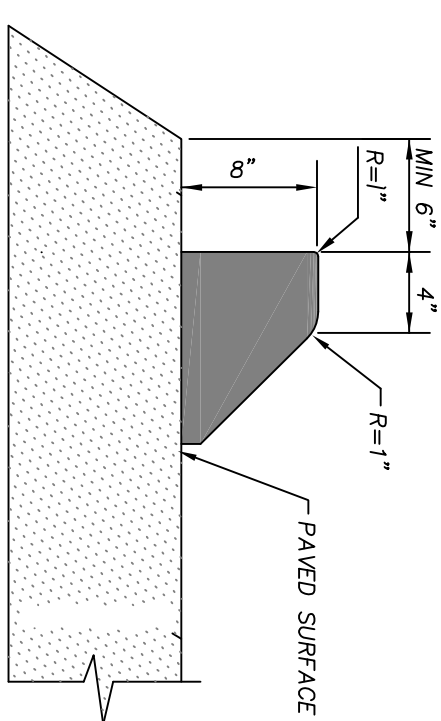
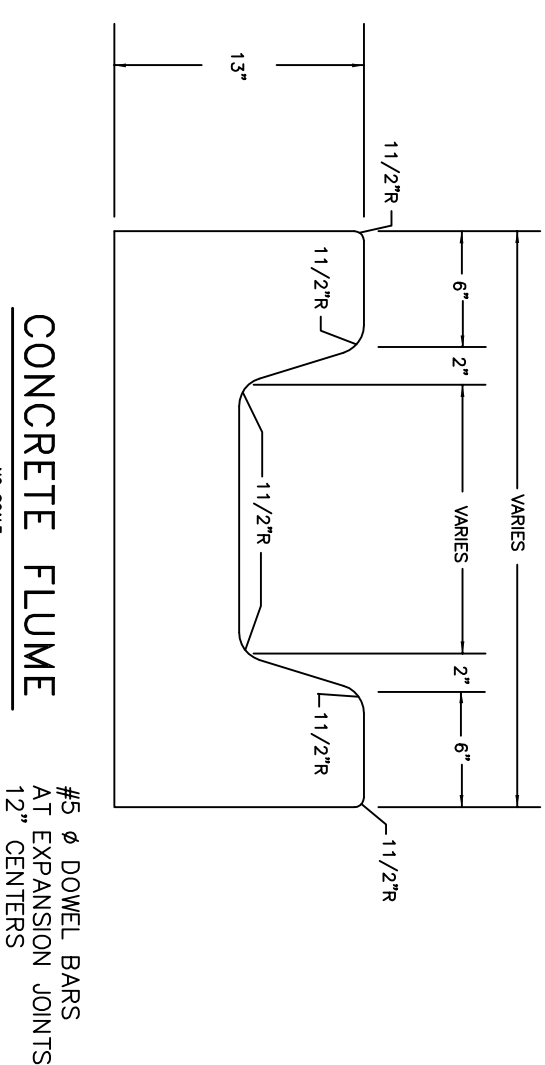
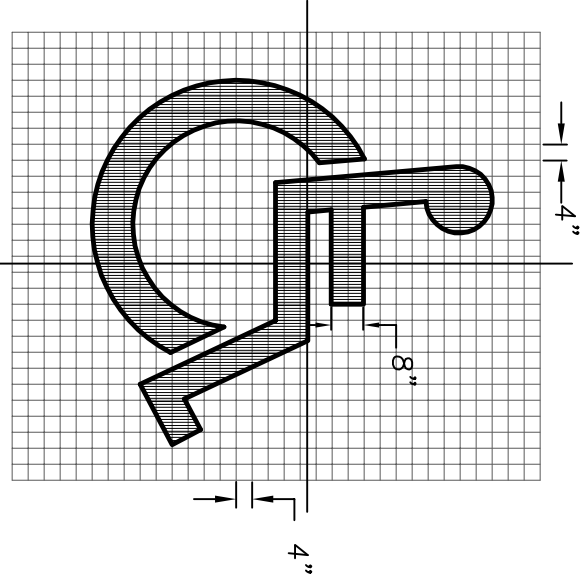
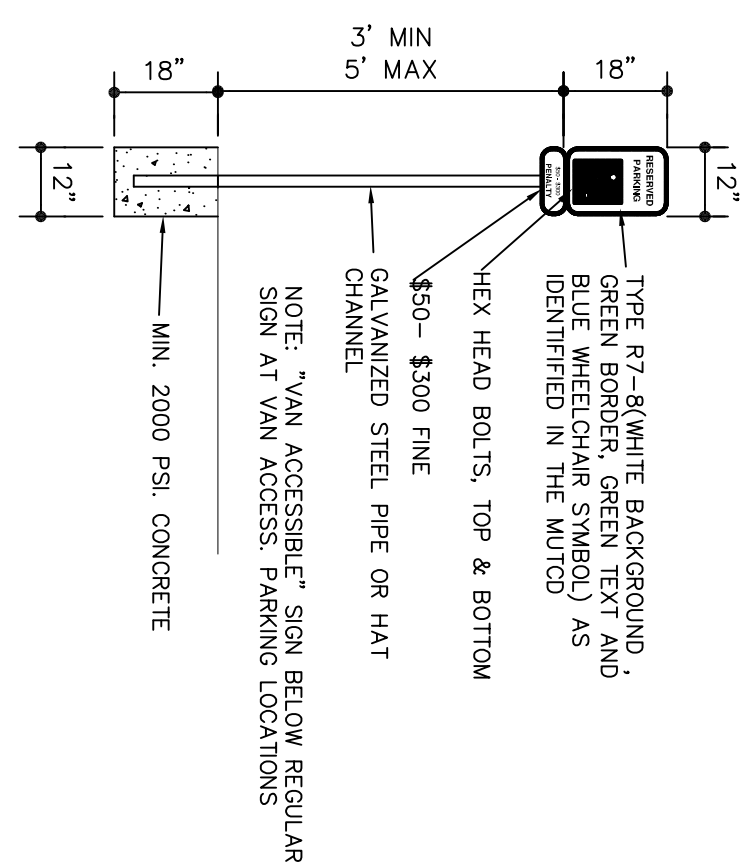
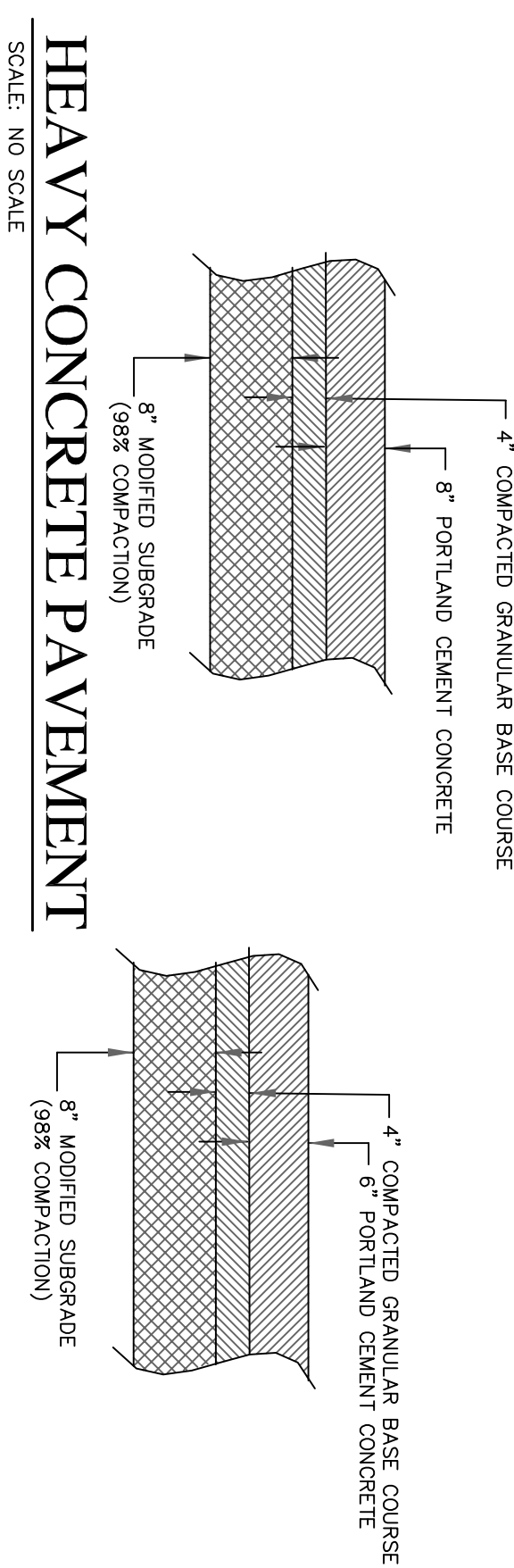
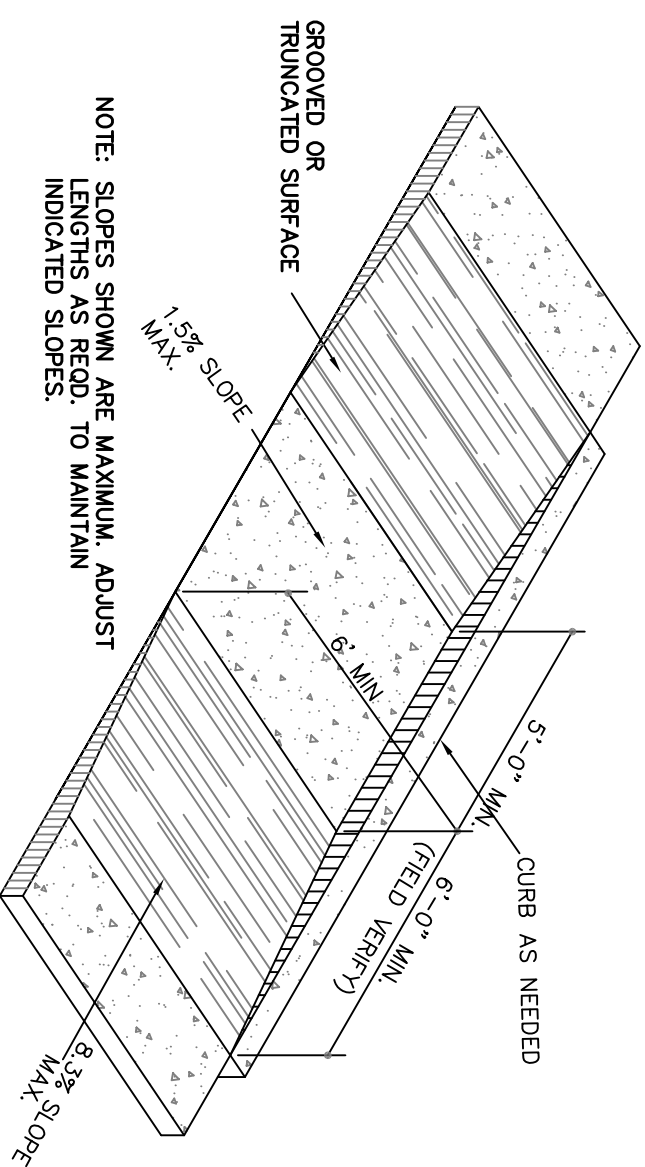
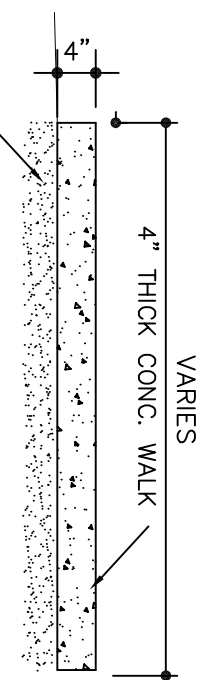
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SHEET NO. **C201**

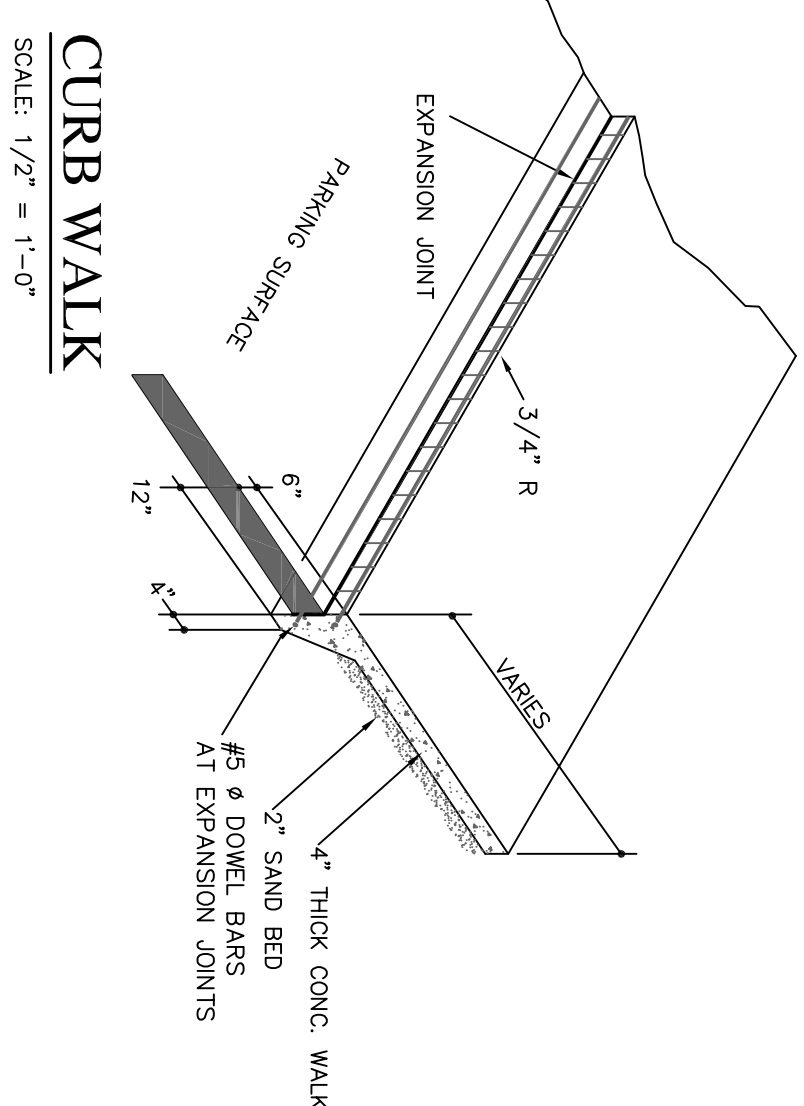
JOB NO. E21-318





△ NONE THIS SHEET 11-17-22  
△ 12-14-22 REMOVED CURB DETAILS

△ NONE THIS SHEET 12-12-23

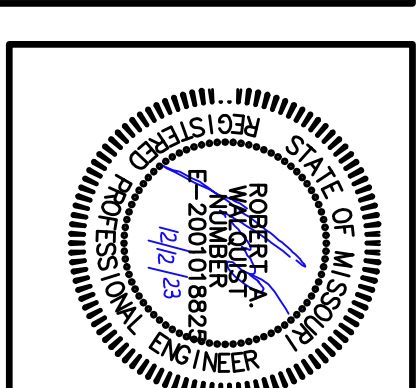


**SITE NOTES**

1. The Contractor shall strip the building area of top soil and stockpile it. He shall then install fill dirt as per soils report included within the specifications.
2. The bottoms of footings shall bear on soils as per soils report included within the specifications. If the soils are not suitable, the contractor shall provide the necessary support required due to specific site conditions.
3. Topsoil finish grade shall be 8" below the finish floor elevations, sloping away, 6" in 10' minimum. Finish grades shall not exceed a 2:1 slope.
4. Finish grade shall be 2" below the surface of walks, stairs, etc., except for ramps, curbs, etc., as noted and detailed. Contractor shall steel all areas of site disturbed by construction.
5. Sidewalks shall not exceed 5% (1'-0" in 20'-0") slopes with a 2% (1'-0" in 50'-0") cross-slope. Other portions of the site shall not exceed a 5% (1'-0" in 20'-0") slope in any direction. Other portions of the accessible routes shall not exceed a 5% (1'-0" in 20'-0") longitudinal slope and a 2% (1'-0" in 50'-0") cross-slope. Other parking areas and cross-slopes of drives shall not exceed a 5% (1'-0" in 20'-0") slope.
6. The Contractor shall obtain and pay for building permit(s) as may be required.
7. The Contractor shall furnish and install one mailbox as per office requires.
8. Parking areas @ handicap accessible spaces and access lanes shall not exceed a 2% slope (1'-0" in 50'-0") in any direction. Other portions of the accessible routes shall not exceed a 5% (1'-0" in 20'-0") longitudinal slope and a 2% (1'-0" in 50'-0") cross-slope. Other parking areas and cross-slopes of drives shall not exceed a 5% (1'-0" in 20'-0") slope.

**SITE DETAILS**

**Quist Engineering, Inc**  
Civil Engineering for Residential & Commercial Site Development  
821 NE Columbus St.  
Lee's Summit, Missouri 64063  
Phone: (816) 550-5675  
email: rwa@quistengineering.com



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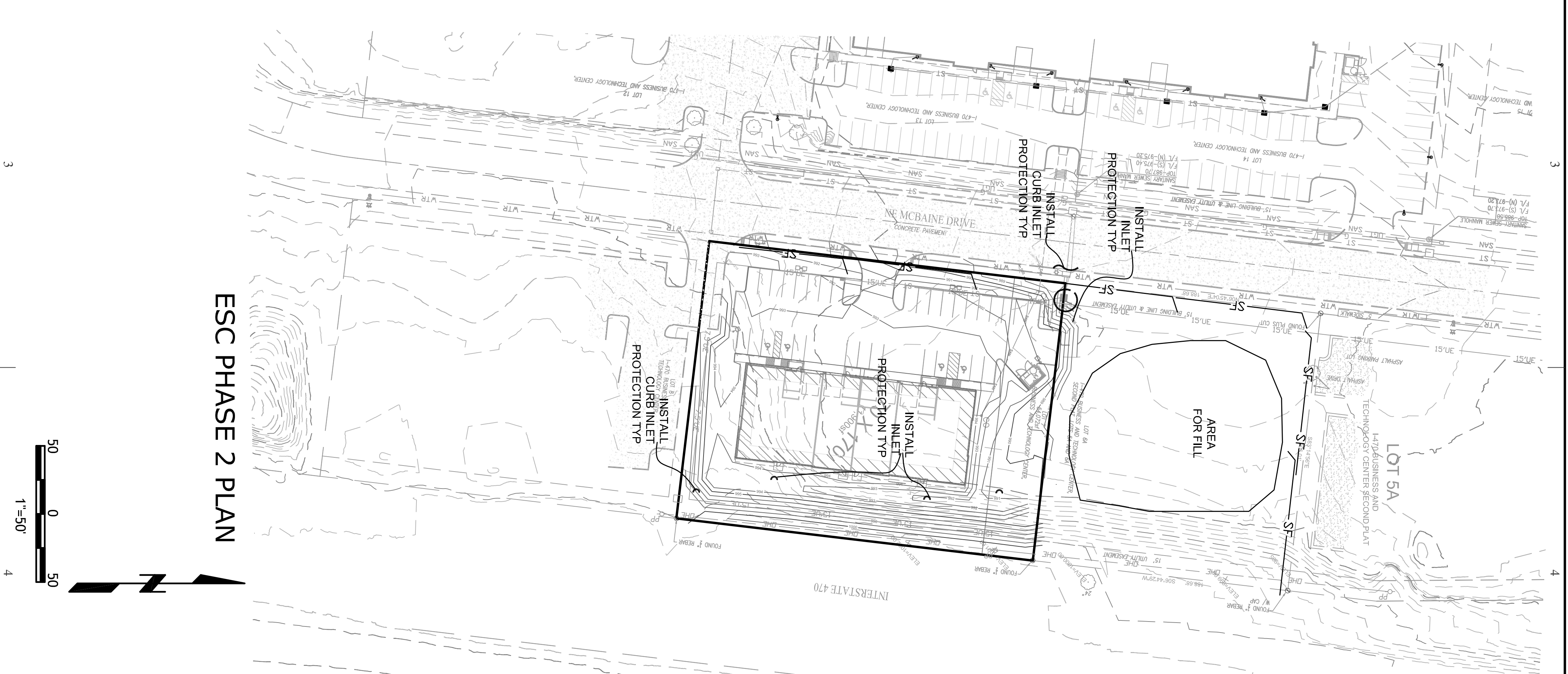
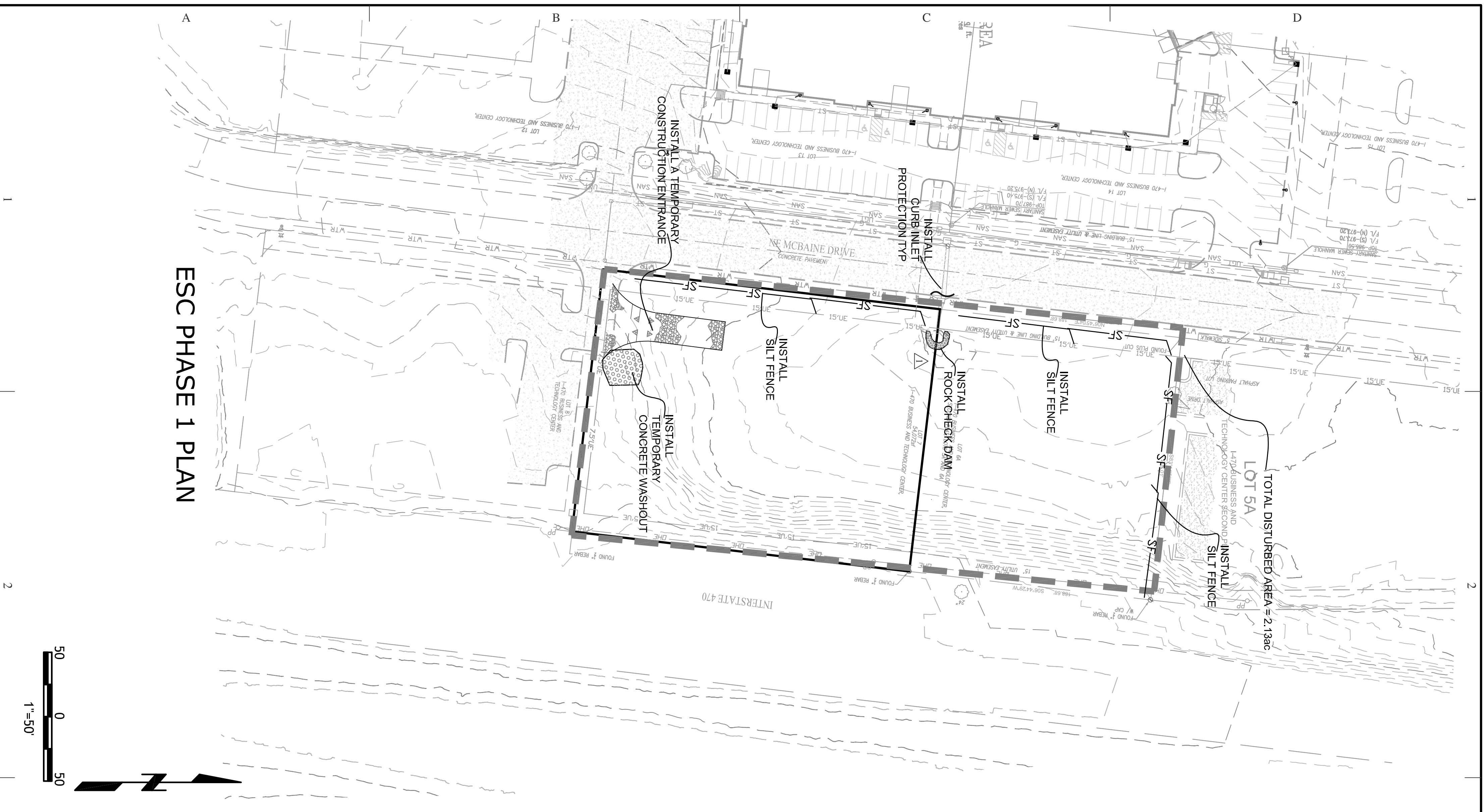
**C210**

JOB NO.  
E21-318









**GENERAL NOTES:**

1. ADJACENT LAND AREAS SHALL BE PROTECTED FROM EROSION AND SLURRY WITH HAY BALES OR RA-700 FABRIC. SILT CONCENTRATIONS SHALL REMAIN IN RANGE UNTIL RESTORATION IS COMPLETED WITH END SECTIONS AND THE REMAINING EROSION PROTECTED BY SLOTTED FILTER AND CONTROL EROSION.
2. THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION AND THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION.
3. THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION AND THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION.
4. ALL METHODS SHALL BE UTILIZED AND MAINTAINED UNTIL THE SURFACE HAS BEEN STABILIZED WITH VEGETATION.
5. THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION AND THE SLOTTED FILTERS SHALL BE INSTALLED AT THE END OF EACH SECTION.
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**PHASE 1**  
SHALL INCLUDE THE FOLLOWING:

1. INSTALL SILT FENCE
2. INSTALL TEMPORARY CONSTRUCTION ENTRANCE

**PHASE 2**  
SHALL INCLUDE THE FOLLOWING:

1. REMOVE TOP SOIL, CURB, SIDEWALK, FENCE, AND TREES.
2. ROUGH GRADE CUT A ENGINEERED FILL
3. INSTALL UTILITIES
4. INSTALL FOOTING AND WALLS
5. INSTALL PARKING LOT, SIDEWALK AND MAIN ENTRANCES
6. SEED AND SOD ALL DISTURBED AREAS

**PHASE 3**  
SHALL INCLUDE THE FOLLOWING:

1. REMOVE VEGETATED SITE
2. REMOVE SILTATION FENCE

NOTE:  
1. ALL ESC INSPECTIONS REPORTS SHALL BE MADE PER THE CURRENT SWPPP REQUIREMENTS AND COPIES KEPTED ONSITE.

6-22-23 - REMOVED REAR ACCESS ROAD, RELOCATED TRASH ENCLOSURE, RELOCATED PARKING ALONG FRONT OF BUILDING

12-12-23 - MOVED TO ONE ACCESS DRIVE

NONE THIS SHEET 11-17-22

**SITE ESC PHASE 1 AND 2 PLAN**

**Quist Engineering, Inc**  
Civil Engineering for Residential & Commercial Site Development  
821 NE Columbus St.  
Lee's Summit, Missouri 64063  
Phone: (816) 550-5675  
email: rwaquist@quistengineering.com

# LOT 7 OF I-470 B & T CENTER

## LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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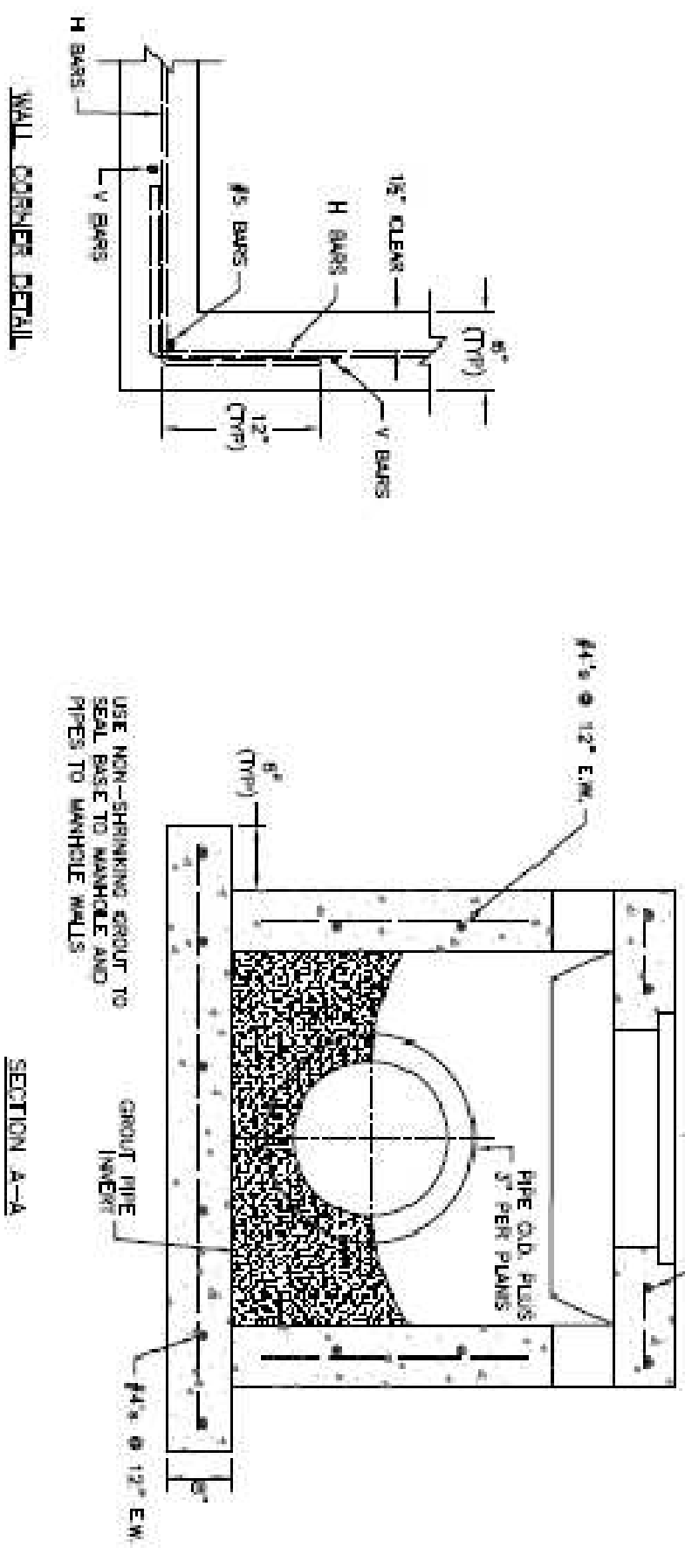
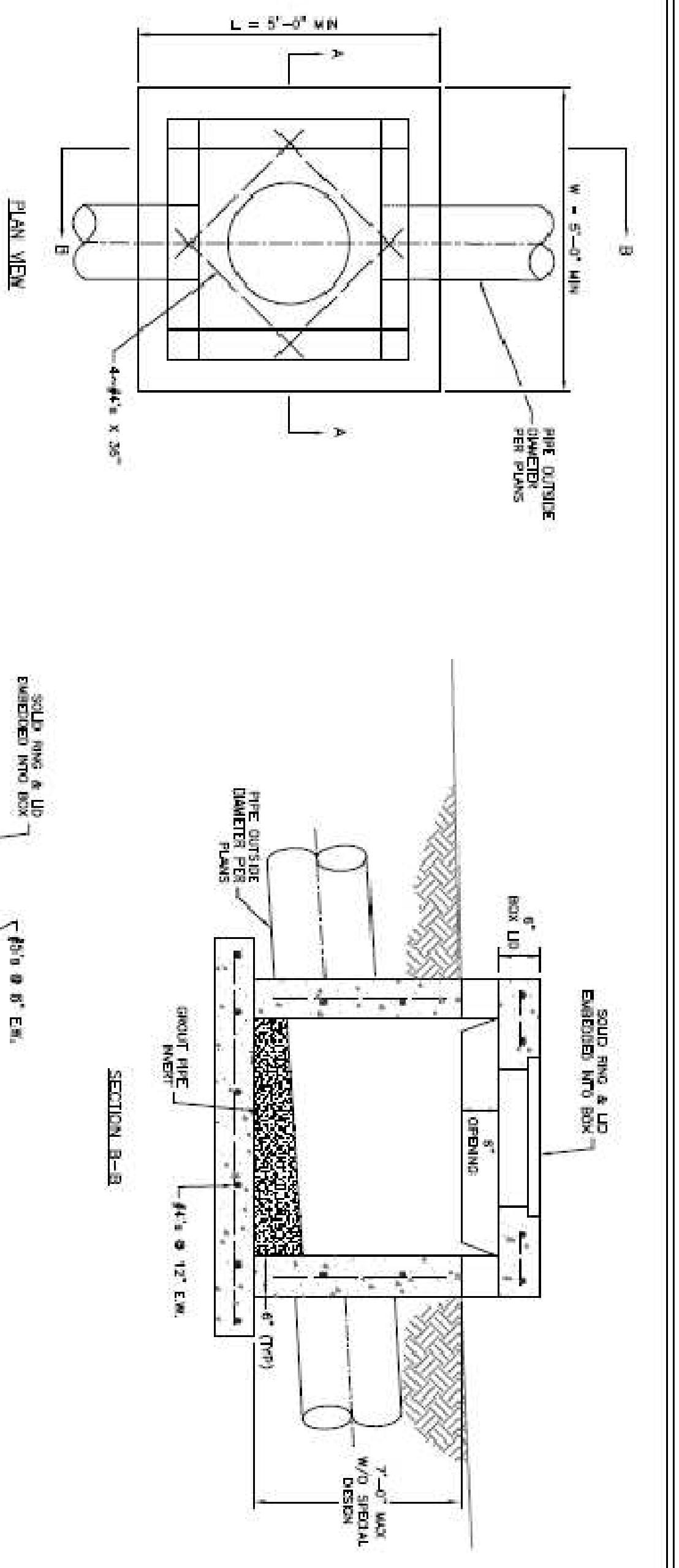
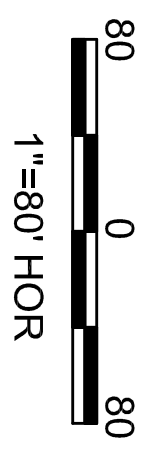
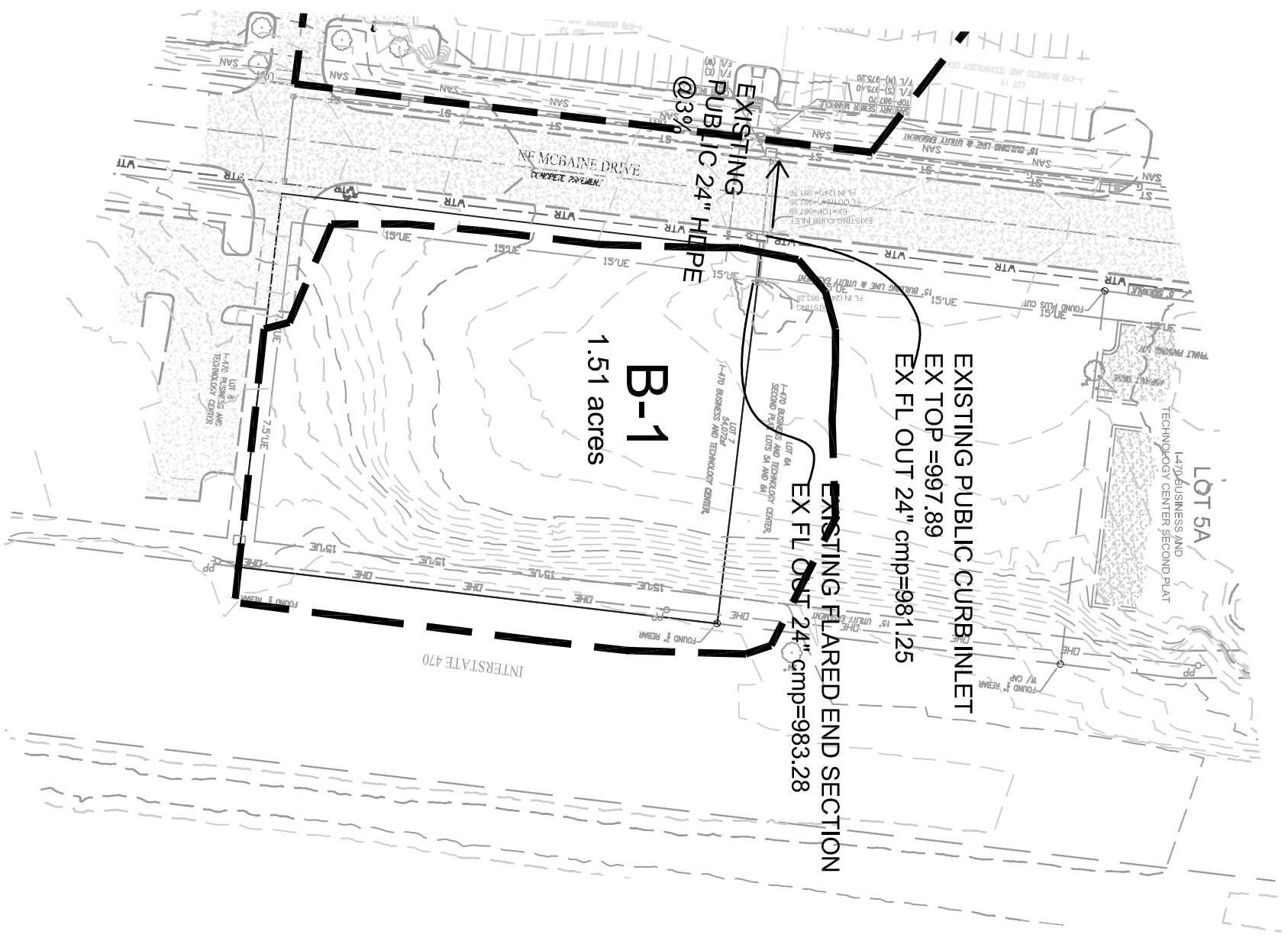
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**C301**

JOB NO.  
E21-318









- GENERAL NOTES:**
1. LOCATE RING AND COVER OVER GUTTER ON BLANK WALL.
  2. USE 3\"/>
  - 3. FLOOR OF INLET CONCRETE AND SLOPED TO MATCH PIPE INVERT TO FURNISH SMOOTH FLOW.
  - 4. STEPS REQUIRED AT 1/4\"/>
  - 5. RINGS SHALL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
  - 6. THE MINIMUM REINFORCEMENT SHALL BE 1\"/>
  - 7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIZE OF OPENINGS.
  - 8. PRECAST LIDS SHALL BE FINISH, SEALS WITH NON-SHRINKING GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
  - 9. FOR RINGS AND COVERS SEE THE STORMWATER APPROVED PRODUCT LIST.

DATE	DESCRIPTION
11-17-22	ISSUED FOR PERMITS
12-12-23	REVISED PER COMMENTS

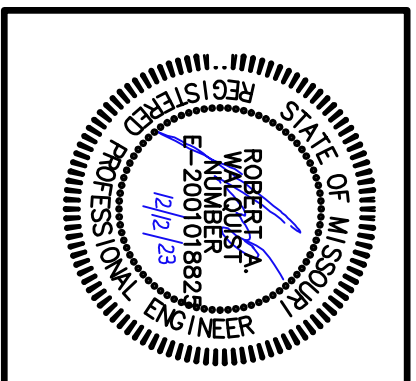
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 PUBLIC WORKS DIVISION | 200 S. GILBERT STREET | LEE'S SUMMIT, MO 64063

- △ NONE THIS SHEET 11-17-22
- △ REMOVED PATIAL PROFILE
- △ NONE THIS SHEET 6-22-23
- △ NONE THIS SHEET 12-12-23

**PRIVATE STORM IMPROVEMENT PLAN**

**Quist Engineering, Inc**  
 Civil Engineering for Residential & Commercial Site Development  
 821 NE Columbus St.  
 Lee's Summit, Missouri 64063  
 Phone: (816) 550-5675  
 email: rwaquist@quistengineering.com

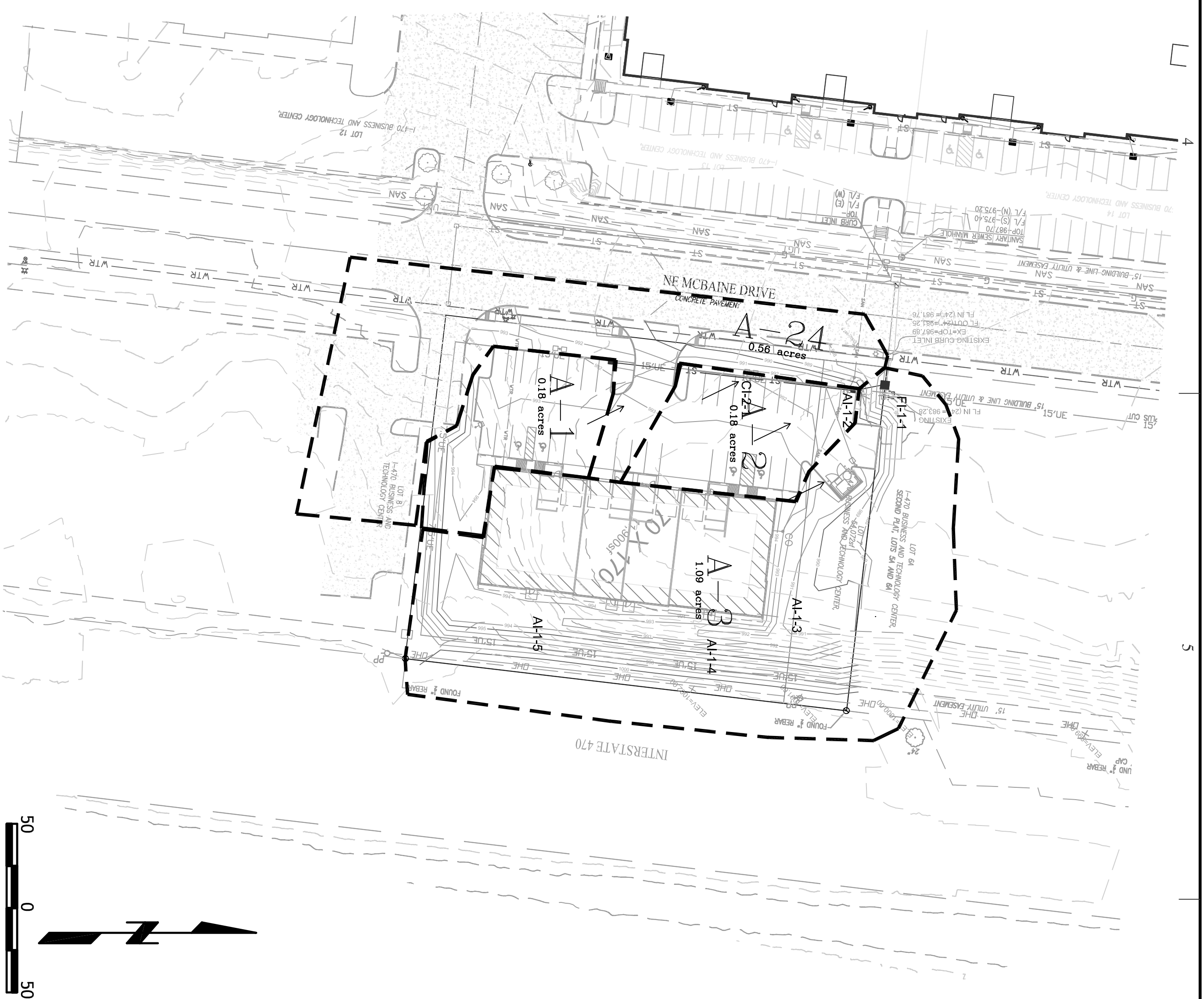
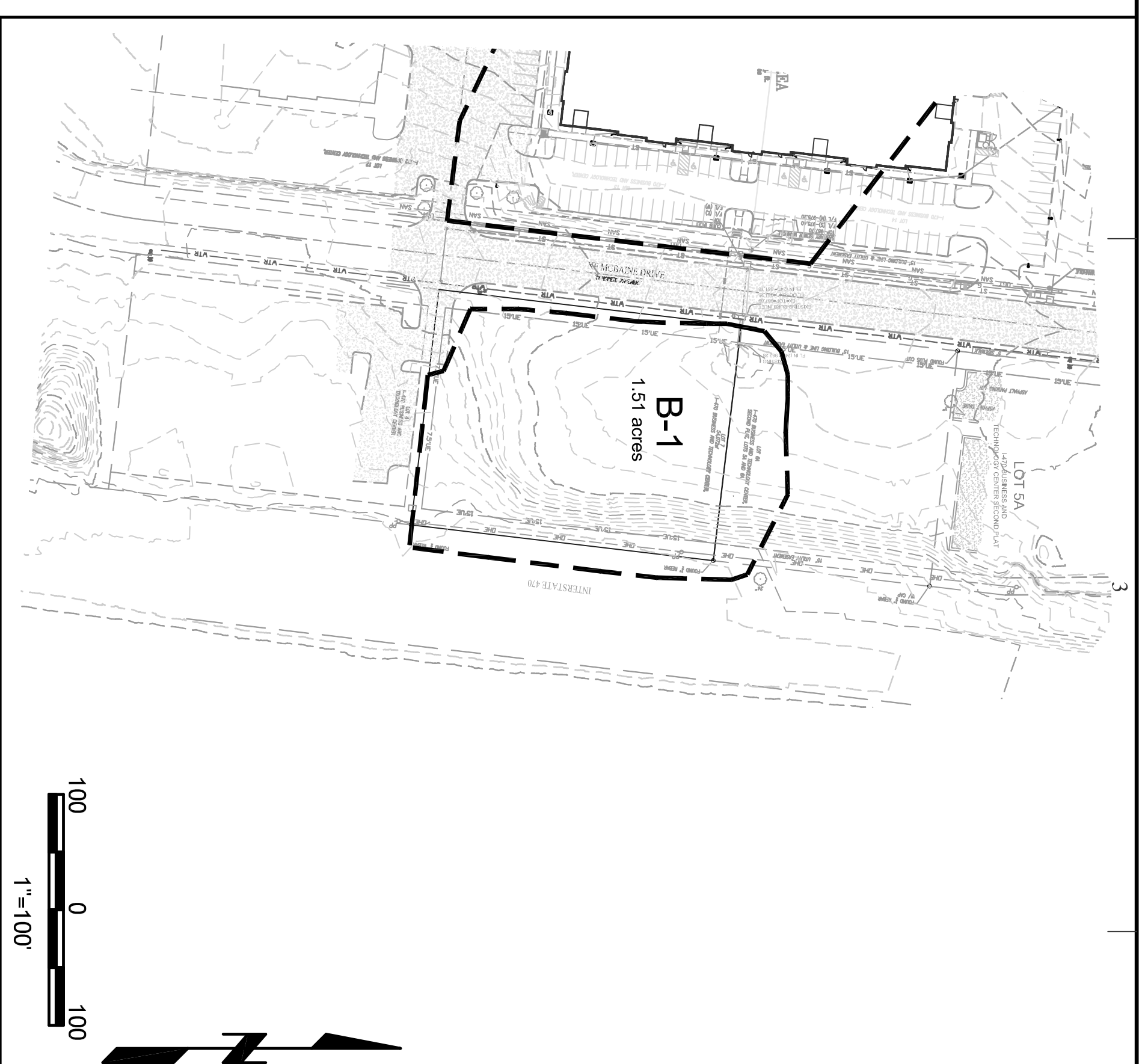
**LOT 7 OF I-470 B & T CENTER**  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**C400**  
 SHEET NO.

JOB NO. E21-318





POST-DEVELOPMENT

6-22-23 - REMOVED REAR ACCESS ROAD,  
RELOCATED TRASH ENCLOSURE  
REVISED PARKING ALONG FRONT OF BUILDING

12-12-23 - MOVED TO ONE ACCESS DRIVE.  
NONE THIS SHEET 11-17-22

STORM SEWER CALCULATIONS TABLE

Sewer Location				Drainage Area to Inlet				Time of Flow				Rainfall Runoff Flow				Elevation				Sewer Characteristics				Velocity units					
Line	From	To	Designation	Area	Coef	Tc	H100 Intensity	H125 Intensity	H10 Intensity	Inlet 100yr K <sub>r</sub> +C <sub>o</sub> A	Inlet 25yr K <sub>r</sub> +C <sub>o</sub> A	Inlet 10yr K <sub>r</sub> +C <sub>o</sub> A	Additional Flow Lines	Additional cfs	In-pipe 100yr K <sub>r</sub> +C <sub>o</sub> A	In-pipe 25yr K <sub>r</sub> +C <sub>o</sub> A	In-pipe 10yr K <sub>r</sub> +C <sub>o</sub> A	Inlet elevation	Top coverage	Pipe Size (in)	Fl in	Fl out	segment length	slope	pipe area	Pipe Capacity (g/s)	100yr overflow	V 10y's	V 100 yr
LINE 1	CI-1-2	CI-1-1	A-1	0.18	0.70	5.00	10.32	8.53	7.35	1.63	1.18	0.93		1.63	1.63	1.18	0.93	CI-1-2	3.05	15.00	988.00	986.00	145.00	1.38	1.23	7.58	Yes	0.76	1.33
	CI-1-1	FI-1-1	A-2	0.18	0.70	5.00	10.32	8.53	7.35	1.63	2.36	1.85		3.25	2.36	1.85	CI-1-1	3.95	15.00	983.50	984.00	18.00	8.33	1.23	18.64	Yes	1.51	2.65	
	FI-1-1	EX-CI	A-3	1.09	0.70	5.00	10.32	8.53	7.35	9.85	7.46	5.61		13.10	9.52	7.46	FI-1-1	2.77	24.00	982.73	981.76	15.00	6.47	3.14	57.50	Yes	2.38	4.17	

SITE STORM DRAINAGE PLAN AND CALCULATIONS

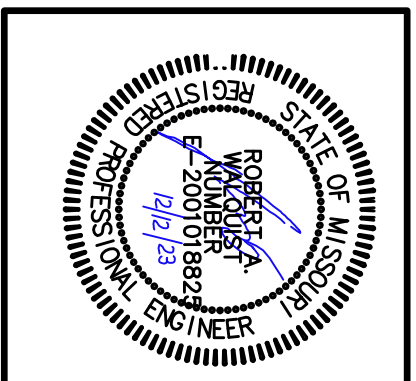
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**C401**

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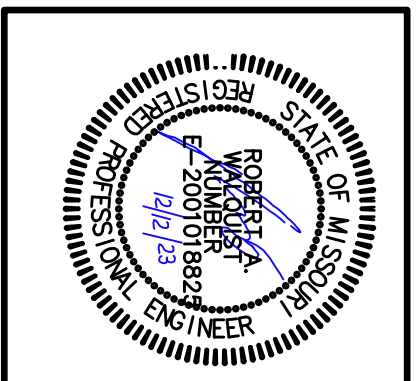
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JOB NO. E21-318



LOT 7 OF I-470 B & T CENTER  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI





# LOT 7 OF I-470 B & T CENTER LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

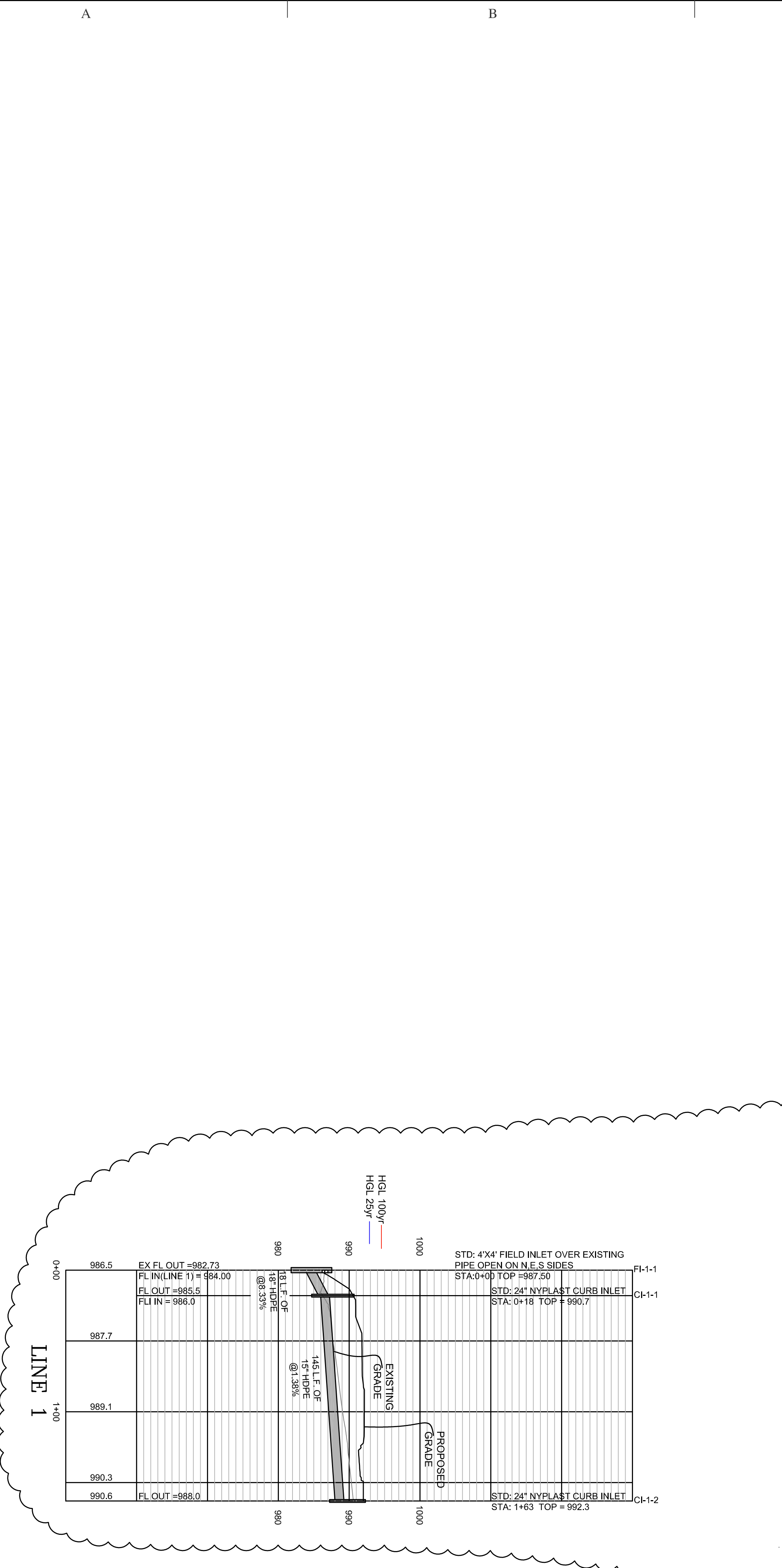
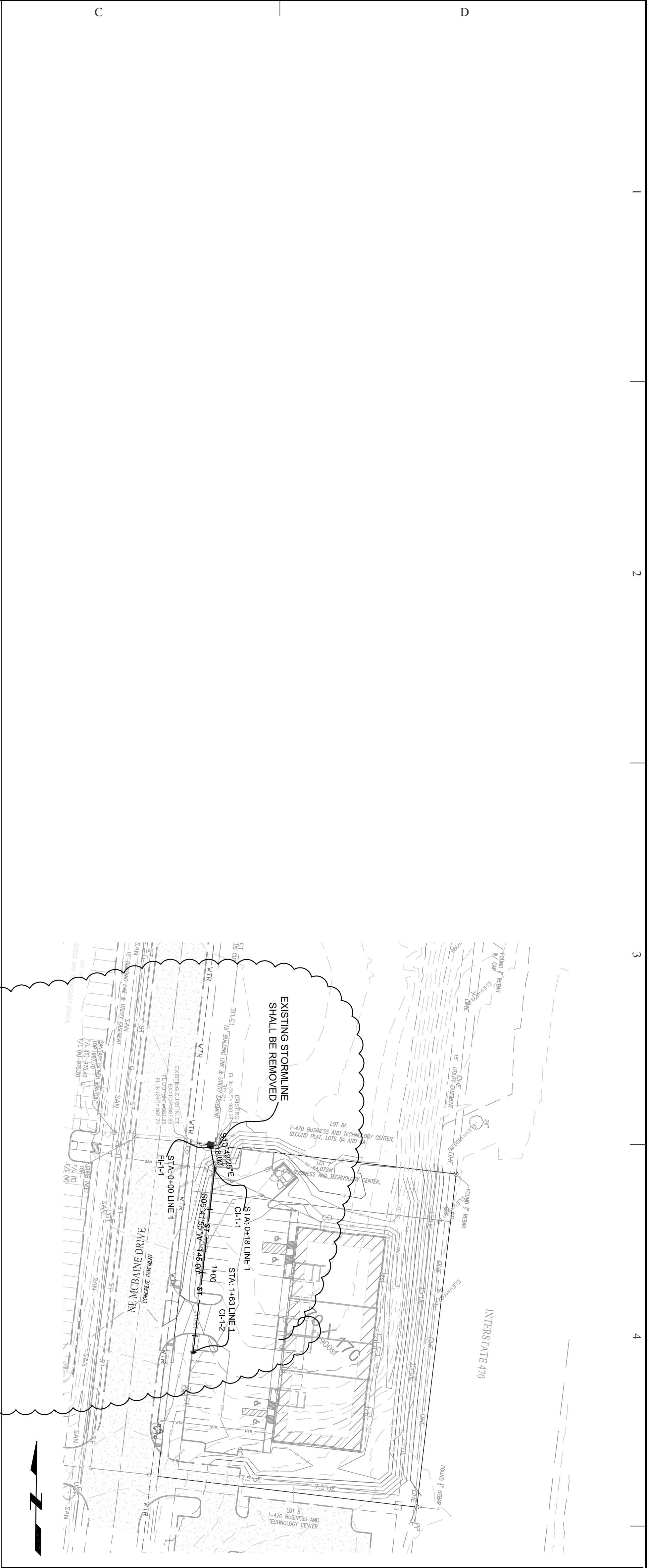
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NOTE:  
 1. COMPACTED FILL SHALL BE PLACED A MIN 18" ABOVE TOP OF PIPE PRIOR TO INSTALLATION.

△ NONE THIS SHEET 11-17-22

△ 6-22-23 - REMOVED REAR ACCESS ROAD, RELOCATED TRASH ENCLOSURE, REVISED PARKING ALONG FRONT OF BUILDING

△ 12-12-23 - MOVED TO ONE ACCESS DRIVE.

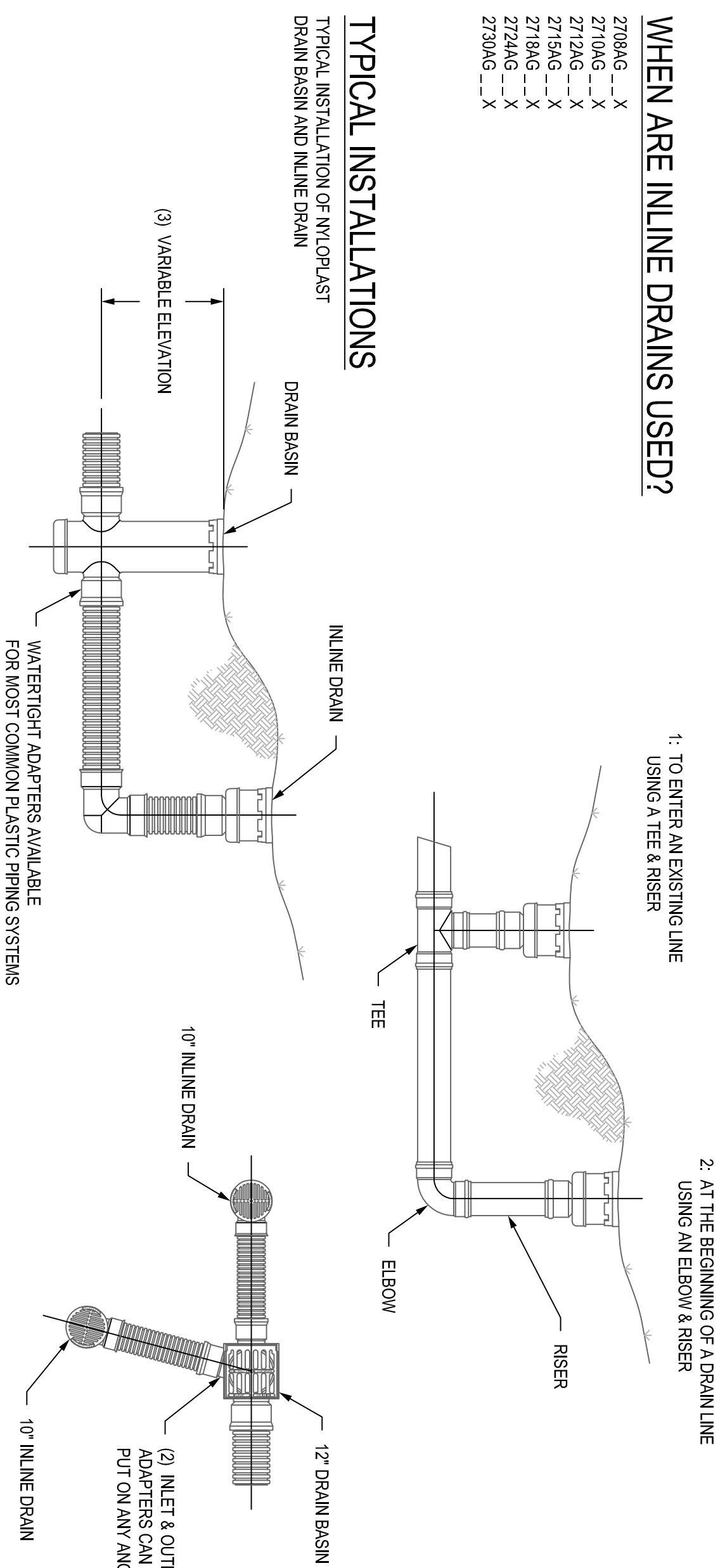
## PRIVATE STORM LINE 1



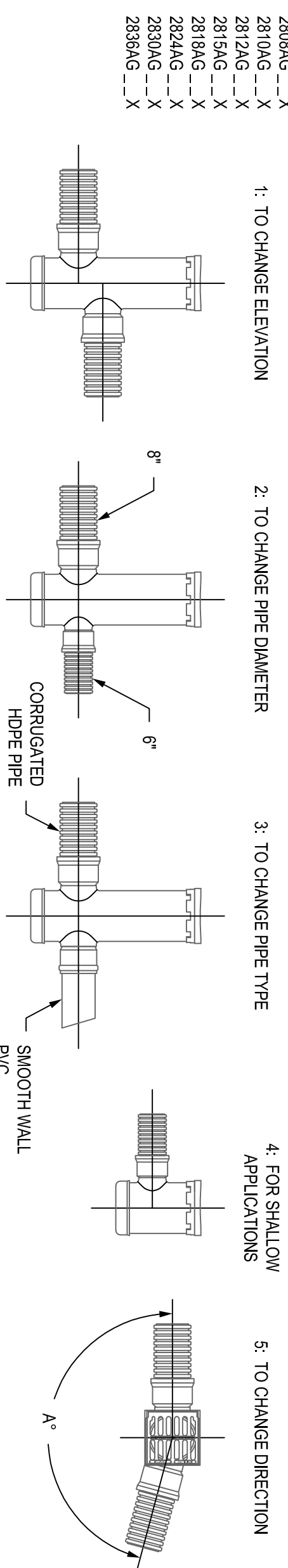
**WHEN ARE INLINE DRAINS USED?**

2709AG -- X  
 2710AG -- X  
 2712AG -- X  
 2715AG -- X  
 2718AG -- X  
 2724AG -- X  
 2730AG -- X

**TYPICAL INSTALLATIONS**

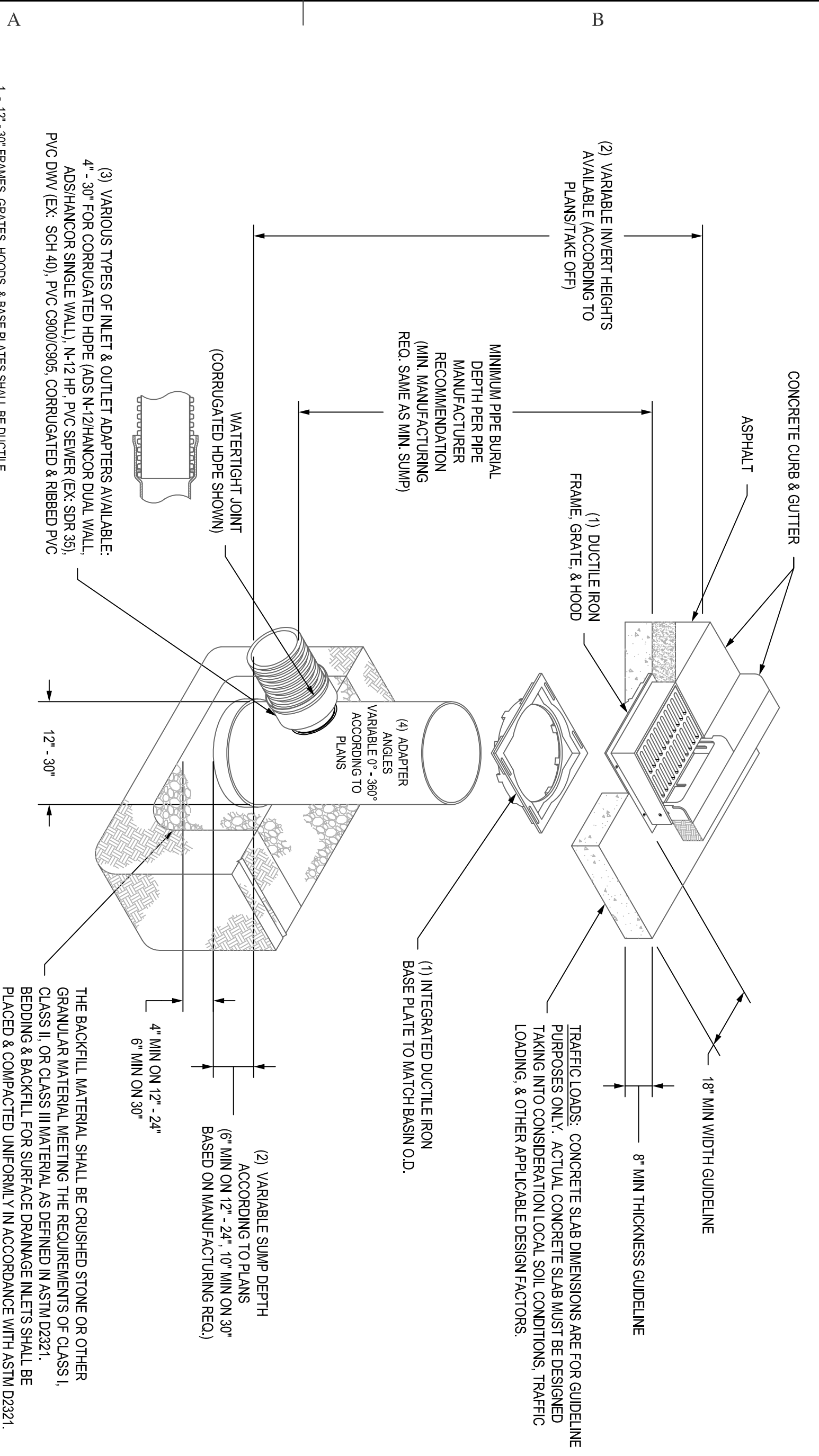


**WHEN ARE DRAIN BASINS USED?**



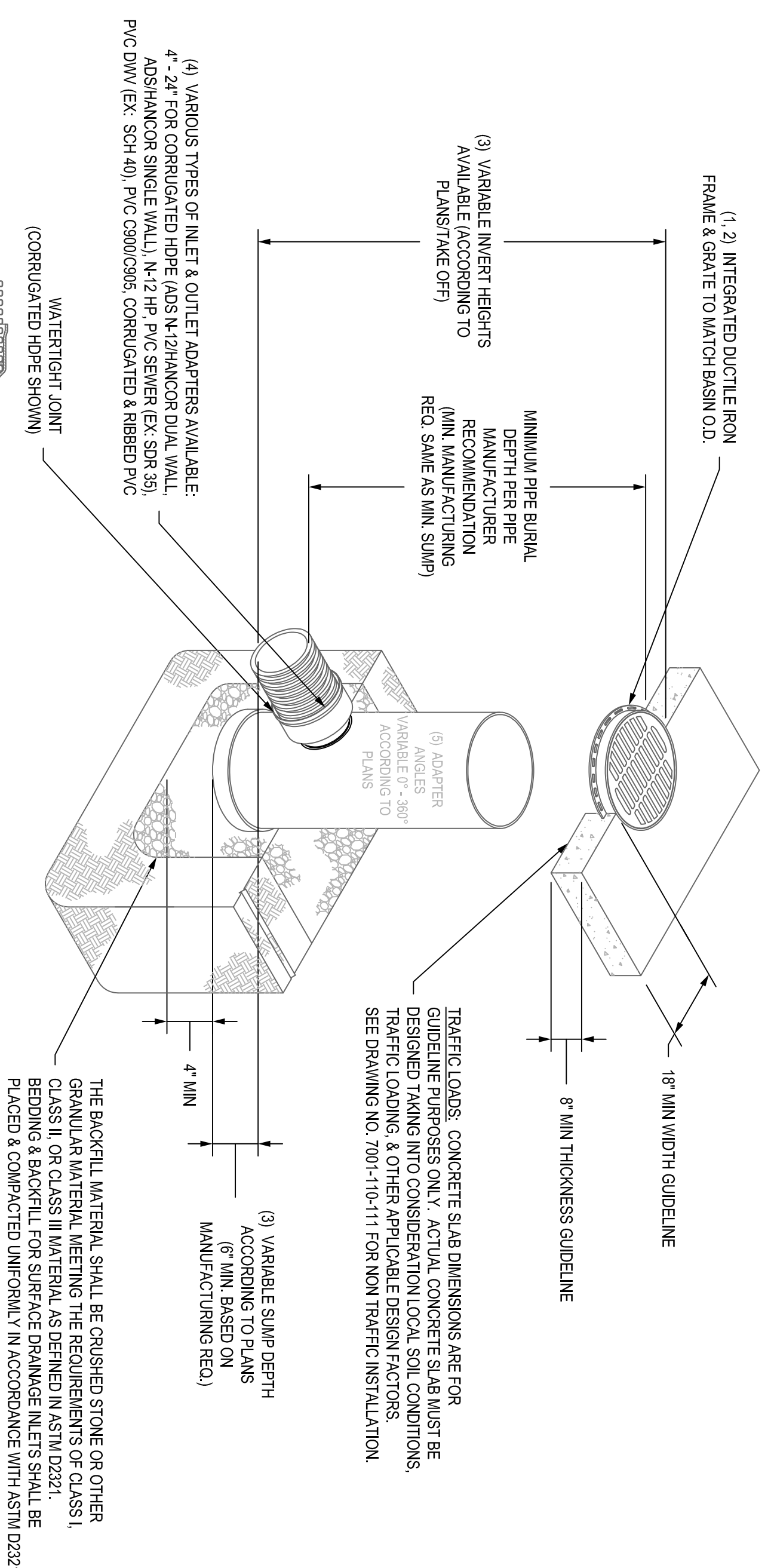
- STRUCTURES & ADAPTERS AVAILABLE IN SIZES 6" - 36"
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360° TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 701-110-112
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 701-110-108
- REPAIRS TO EXISTING DRAIN BASINS TO 36" DIAMETERS WILL BE REQUIRED FOR 36" DRAIN BASINS.

**NYLOPLAST 2 FT X 2 FT CURB INLET STRUCTURE: 30\_AGS\_X**



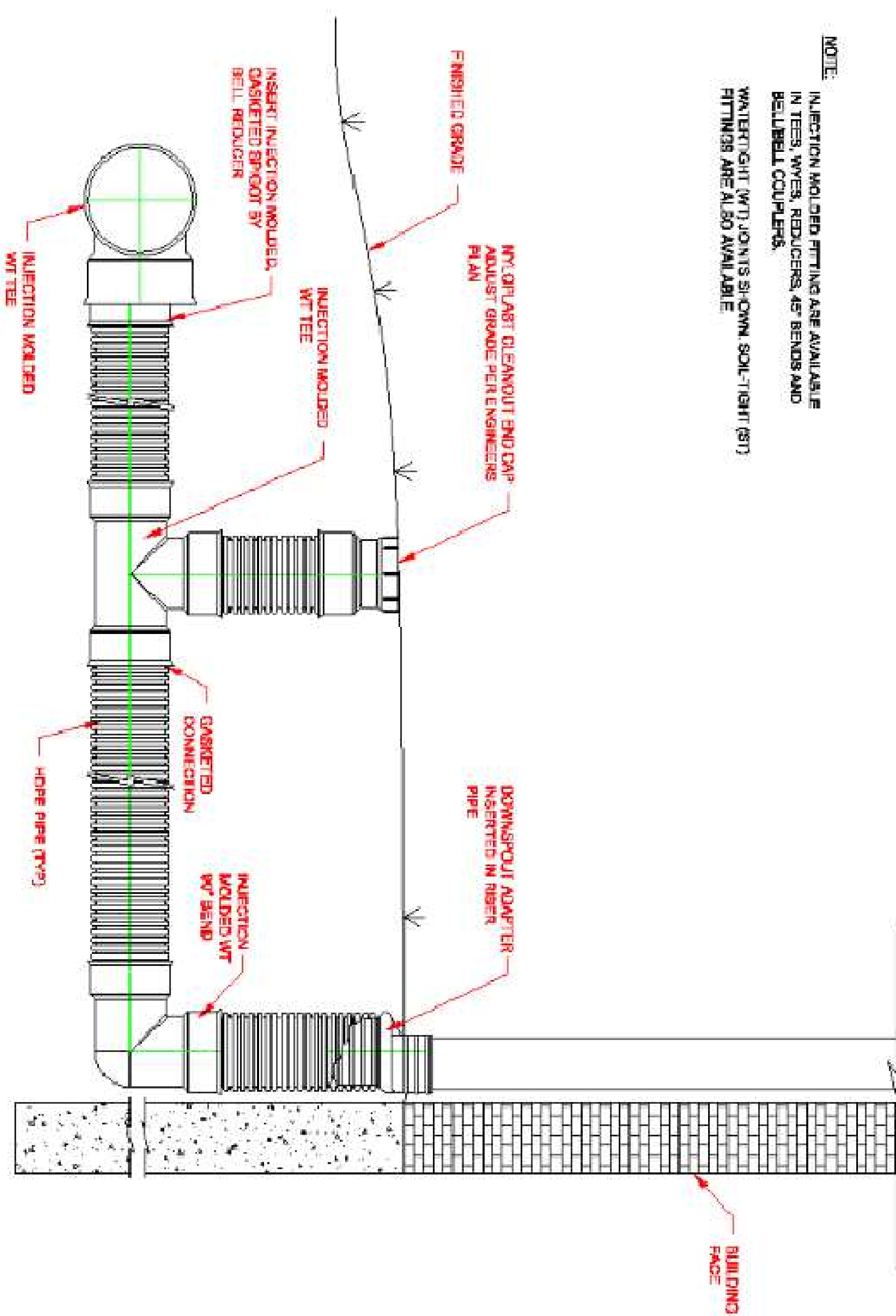
- 12" - 30" FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70/50/45
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D2231 FOR CORRUGATED HDPE (ADS N-2) HANCOCK DUAL WALL, ADS HANCOCK SINGLE WALL, N-12 HP, PVC SEWER (EX. SDR 35), PVC DWV (EX. SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360° TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 701-110-112
- ALL CURB MEET GEOTE OPTIONS (STANDARD & DACKOWAL) SHALL MEET ROAD CLOSING

**NYLOPLAST 24" DRAIN BASIN: 2824AG\_X**



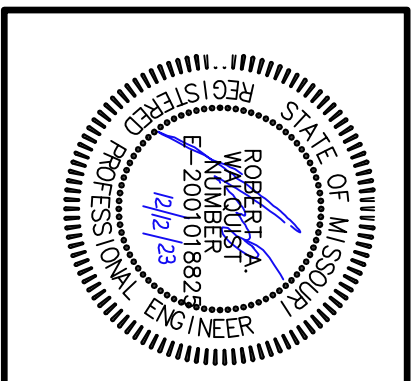
- GRATES/ID COVERS SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70/50/45
- FRAMES SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70/50/45
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 701-110-108
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360° TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 701-110-112

**NOTE:** INJECTION MOLDED FITTINGS ARE AVAILABLE IN TEES, WEERS, REDUCERS, 45° BENDS AND BELLBELL COUPLERS. WATERTIGHT (WT) JOINTS SHOWN SOLE-TIGHT (ST) FITTINGS ARE ALSO AVAILABLE



- △ NONE THIS SHEET 12-14-22
- △ NONE THIS SHEET 12-14-22
- △ NONE THIS SHEET 11-17-22
- △ NONE THIS SHEET 12-12-23

**STORM LINE DETAILS**



**LOT 7 OF I-470 B & T CENTER**  
**LEE'S SUMMIT, JACKSON COUNTY, MISSOURI**

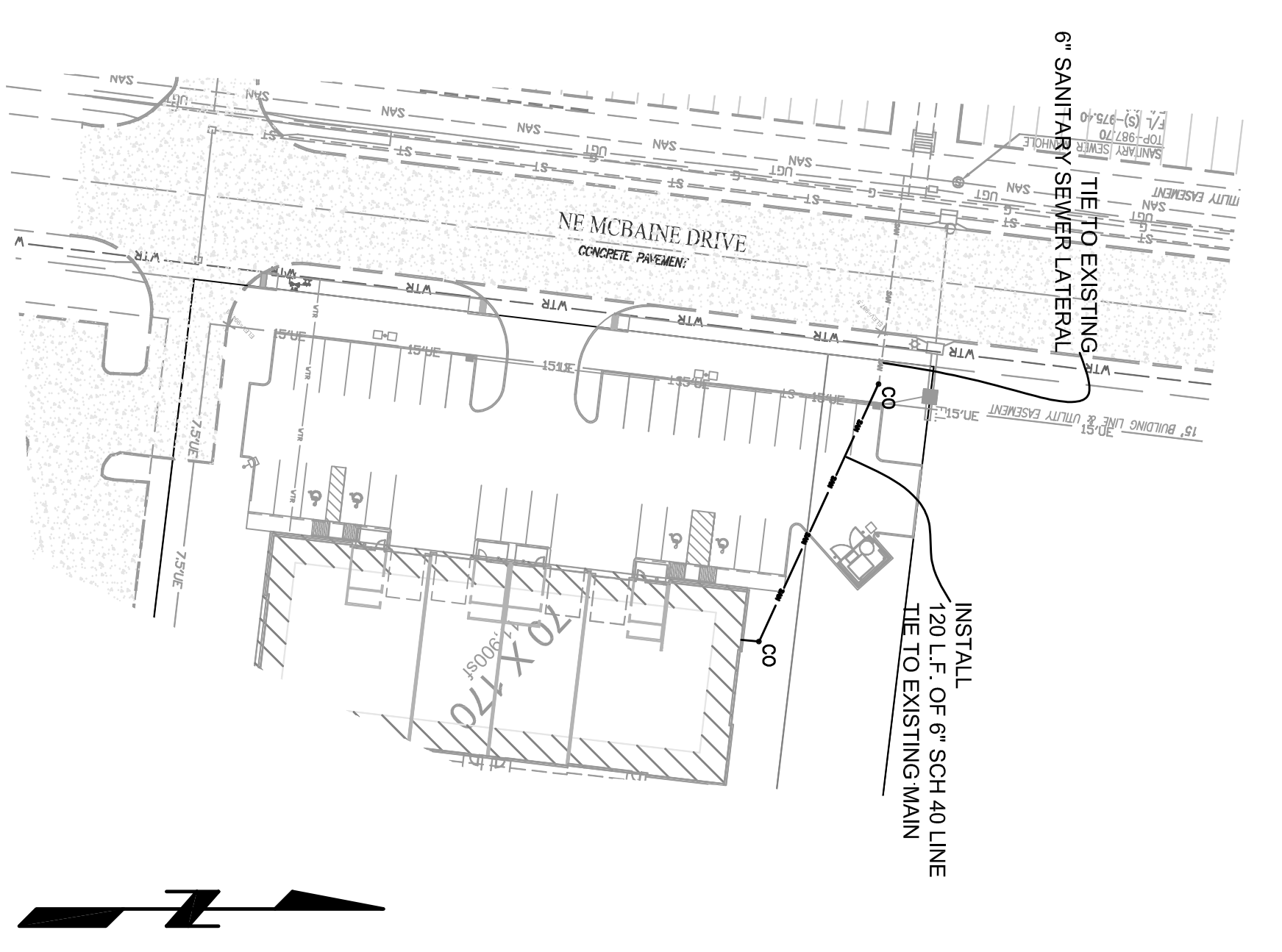
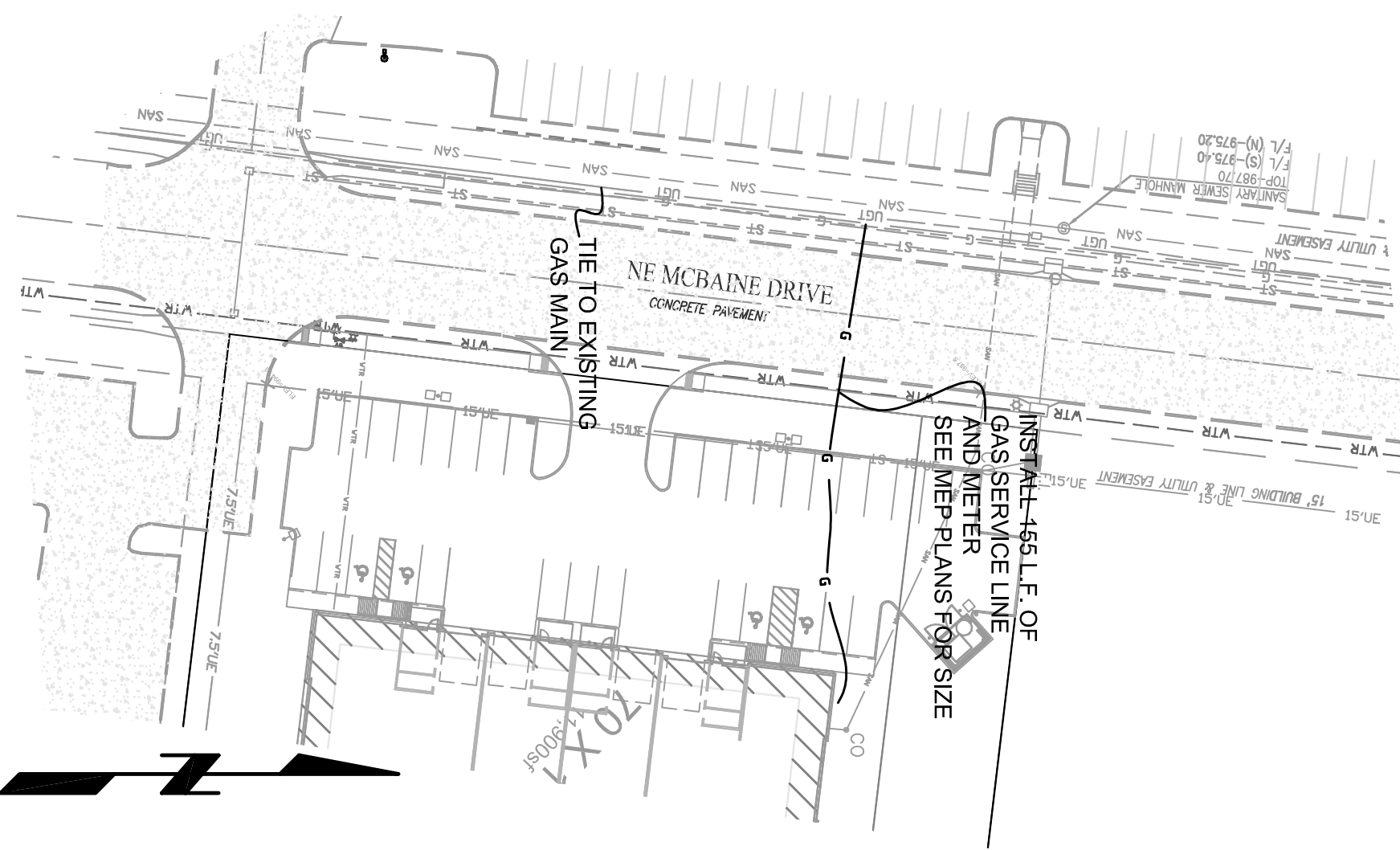
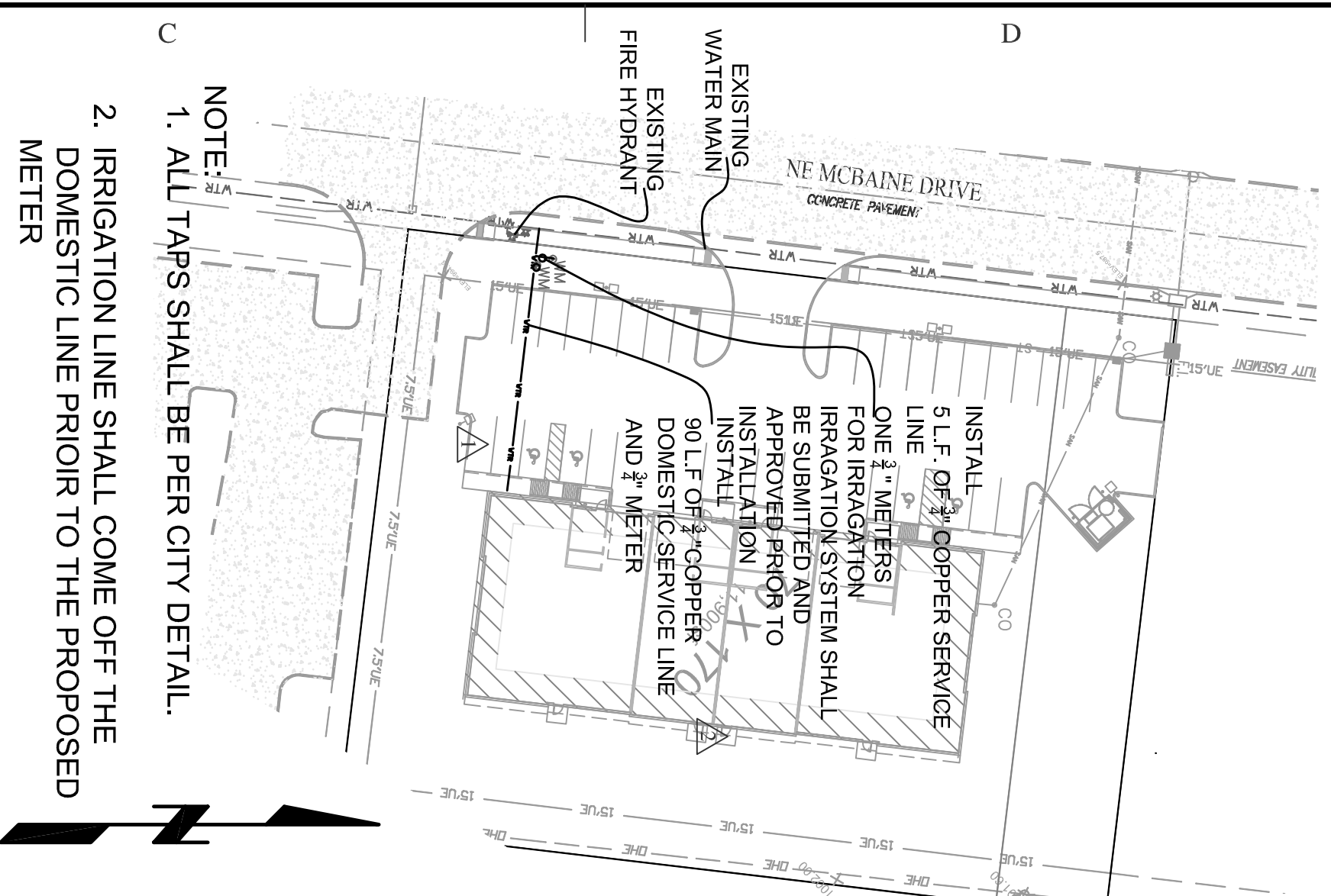
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### SITE WATER PLAN

### GAS SERVICE PLAN

### SITE SEWER PLAN

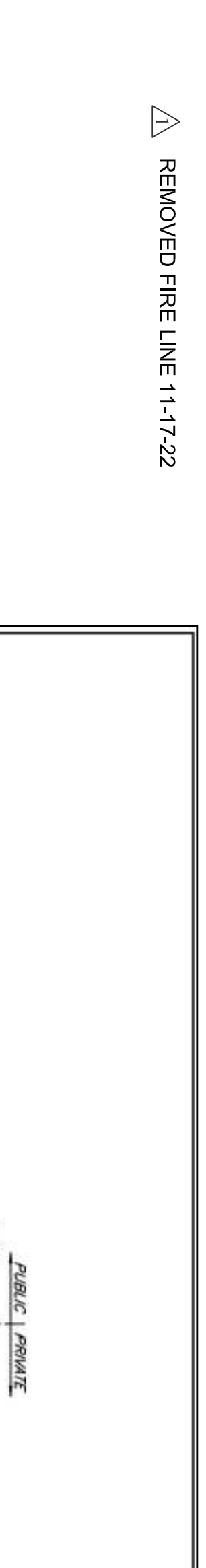
- NOTE: 1. ALL TAPS SHALL BE PER CITY DETAIL.  
2. IRRIGATION LINE SHALL COME OFF THE DOMESTIC LINE PRIOR TO THE PROPOSED METER

▲ ADDED LINE MATERIAL 12-14-22

▲ REMOVED FIRE LINE 11-17-22

NOTE: 1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.

50 0 50  
1"=50'



- NOTES:  
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PARKING WITHOUT CITY APPROVAL.  
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.  
3. CITY TO FURNISH FITS A-K.  
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.  
5. METER SHALL BE INSTALLED WITH 12" CLEARANCE FROM ALL STRUCTURES.  
6. EXCAVATION FOR METER TO EXPOSE 4 LINE IN FEET OF MAIN.  
7. NO STRESS ALLOWED BETWEEN METER AND MAIN.  
8. METER SHALL BE INSTALLED WITH 12" CLEARANCE FROM ALL STRUCTURES.  
9. LID AND COVER SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.  
10. CONTACT WATER UTILITIES, 816-869-1902, FOR REQUIREMENTS OF A METER LARGER THAN 2"

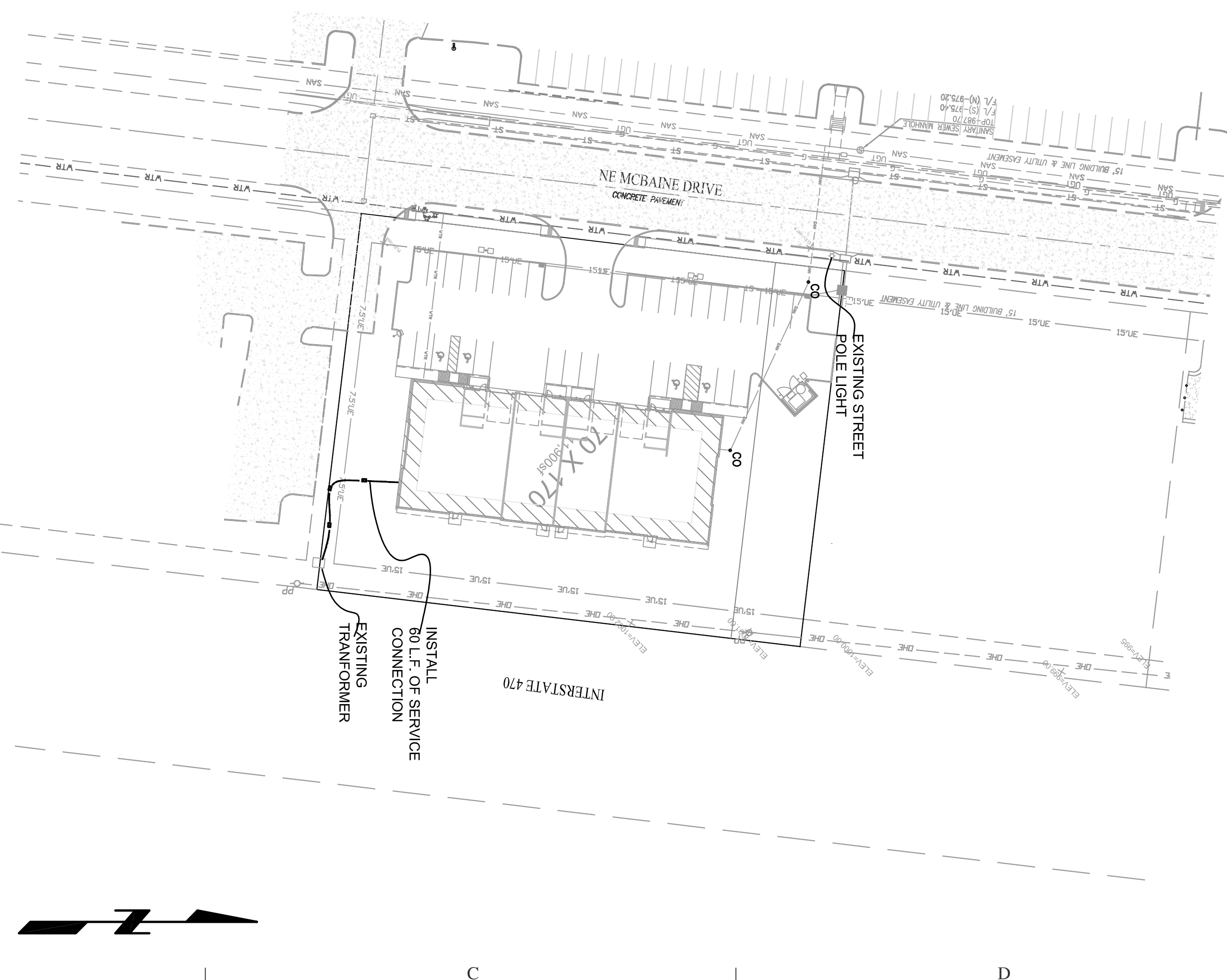
NOTE: 1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.

NOTE: 1. ENDS OF ALL CONDUITS SHALL BE MARKED WITH 4"x4" WOOD POST.  
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.  
3. COMPANY PRIOR TO CONSTRUCTION.  
4. SHOP DRAWINGS FOR THE LIGHT POLES SHALL BE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION.

▲ 6-22-23 - REMOVED REAR ACCESS ROAD, RELOCATED TRASH ENCLOSURE REVISED PARKING ALONG FRONT OF BUILDING

▲ 12-12-23 - MOVED TO ONE ACCESS DRIVE. NONE THIS SHEET

### SITE ELECTRICAL PLAN



NOTE: 1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.

NOTE: 1. ENDS OF ALL CONDUITS SHALL BE MARKED WITH 4"x4" WOOD POST.  
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.  
3. COMPANY PRIOR TO CONSTRUCTION.  
4. SHOP DRAWINGS FOR THE LIGHT POLES SHALL BE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION.

▲ 6-22-23 - REMOVED REAR ACCESS ROAD, RELOCATED TRASH ENCLOSURE REVISED PARKING ALONG FRONT OF BUILDING

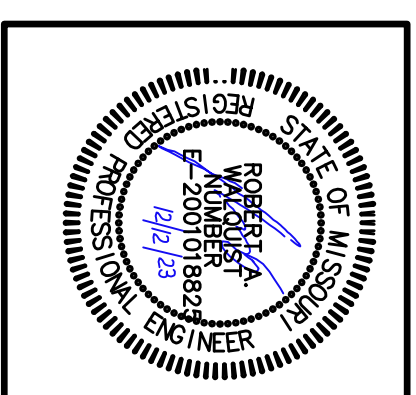
▲ 12-12-23 - MOVED TO ONE ACCESS DRIVE. NONE THIS SHEET

- LEGEND**
- FIRE HYDRANT
  - ⊗ WATER VALVE
  - ⊗ WATER METER
  - ⊗ GAS METER
  - ⊗ GAS MARKER
  - MANHOLE
  - STREET LIGHT
  - ⊗ YARD LIGHT
  - ⊗ CABLE TV PEDESTAL
  - ⊗ ELECTRIC TRANSFORMER
  - ⊗ TELEPHONE BOX
  - ⊗ POWER POLE
  - ⊗ POWER POLE W/TEL.
  - ⊗ ELECTRICAL PULL BOX
  - ⊗ POWER POLE W/STREET LIGHT
  - ▲ ELECTRICAL PULL BOX
  - ▲ ELECTRICAL PULL BOX
  - ▲ GROUND FLOOD LIGHT
  - ▲ TRAFFIC SIGN

**LEE'S SUMMIT MISSOURI**  
PUBLIC ENGINEERING AND ARCHITECTURE  
1201 S. GARDNER STREET, SUITE 100, JACOBSVILLE, MISSOURI 64063  
Phone: 816-869-1902  
Fax: 816-869-1903  
www.lee-summit.com

DATE: 02/13  
DRAWN BY: JLS  
CHECKED BY: JLS  
SCALE: 1/8"=1'-0"  
SHEET NO.: 11

### SITE UTILITY PLAN



# LOT 7 OF I-470 B & T CENTER LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**Quist Engineering, Inc**  
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