PUBLIC IMPROVEMENT PLANS
FOR
LOWENSTEIN DRIVE
STREETS OF WEST PRYOR
LEE'S SUMMIT, MO

SM Engineering
5507 High Meadow Circle
Manhattan Kansas, 66503
smcivilengr@gmail.com
785.341.9747

Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
1-10-22 STORM LINE E
2-2-22 PLAN CORRECTION
5-3-23 AS BUILTS

UTILITIES
Electric Service
Evergy
Nathan Michael
913-347-4310
Nathan.michael@evergy.com

Gas Service
Spire
Katie Darnell
816-969-2247
Katie.darnell@spireenergy.com

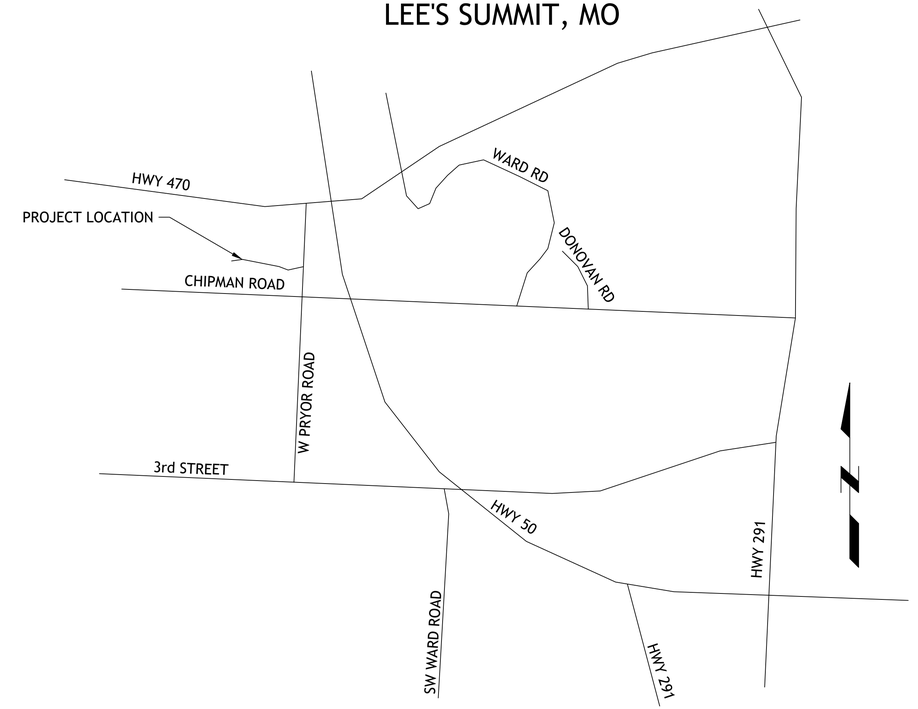
Water/Sanitary Sewer
Water Utilities Department
1200 SE Hamblen Road
Lee's Summit, Mo 64081
Jeff Thorn
816-969-1900
jeff.thorn@cityofls.net

Communication Service
AT&T Carrie Cilke
816-703-4386
cc3527@att.com

Time Warner Cable
Steve Baxter
913-643-1928
steve.baxter@charter.com

Comcast
Ryan Alkire
816-795-2218
ryan.alkire@cable.comcast.com

Google Fiber
Becky Davis
913-725-8745
rebeccadavis@google.com



LOCATION MAP

INDEX OF SHEETS

AS-BUILTS
SME 5-3-23

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.
SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICE, THE CONTRACTOR WILL 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.

WARRANTY/DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENEDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER SM ENGINEERING NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE SM ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION- NOTICE TO CONTRACTOR
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 COMPANY AT LEAST 72 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 PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

ALL EXISTING TOPOGRAPHIC DATA AND INFRASTRUCTURE IMPROVEMENTS SHOWN BASED ON INFORMATION BY KAW VALLEY ENGINEERING

BENCHMARKS:
#1 CHISELED "SQUARE" ON TOP OF CURB POINT OF INTERSECTION OF WEST PARK PARKING LOT AT EAST DRIVE ENTRANCE
ELEVATION 985.05

#2 CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25' EAST OF CURB LINE AND ON-LINE WITH SOUTH CURB OF LOWENSTEIN DRIVE AT 90° BEND IN ROAD
ELEVATION 971.06

FLOODPLAIN NOTE:
SUBJECT PROPERTY IS SHOWN TO BE LOCATED IN "OTHER AREAS ZONE X" ON THE FLOOD INSURANCE RATE MAP FOR JACKSON COUNTY, MISSOURI AND INCORPORATED AREAS. COMMUNITY PANEL NO. 29095C0416G, REVISED JANUARY 20, 2017. "OTHER AREAS ZONE X" IS DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUL CHANCE FLOODPLAIN". LOCATION DETERMINED BY A SCALED GRAPHICAL PLOT OF THE FLOOD INSURANCE RATE MAP.

NOTES
1. 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 MORE STRINGENT SHALL PREVAIL.

2. THERE ARE NO GAS/OIL WELLS PER MDNR DATABASE OF OIL AND GAS PERMITS.

3. THE CONTRACTOR SHALL CONTACT THE CITY DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT 816-969-1200.

DEVELOPER
SWP III, LLC
C/O DRAKE DEVELOPMENT, LLC
7200 W 132nd ST, SUITE 150
OVERLAND PARK, KS 66213
913-662-2630

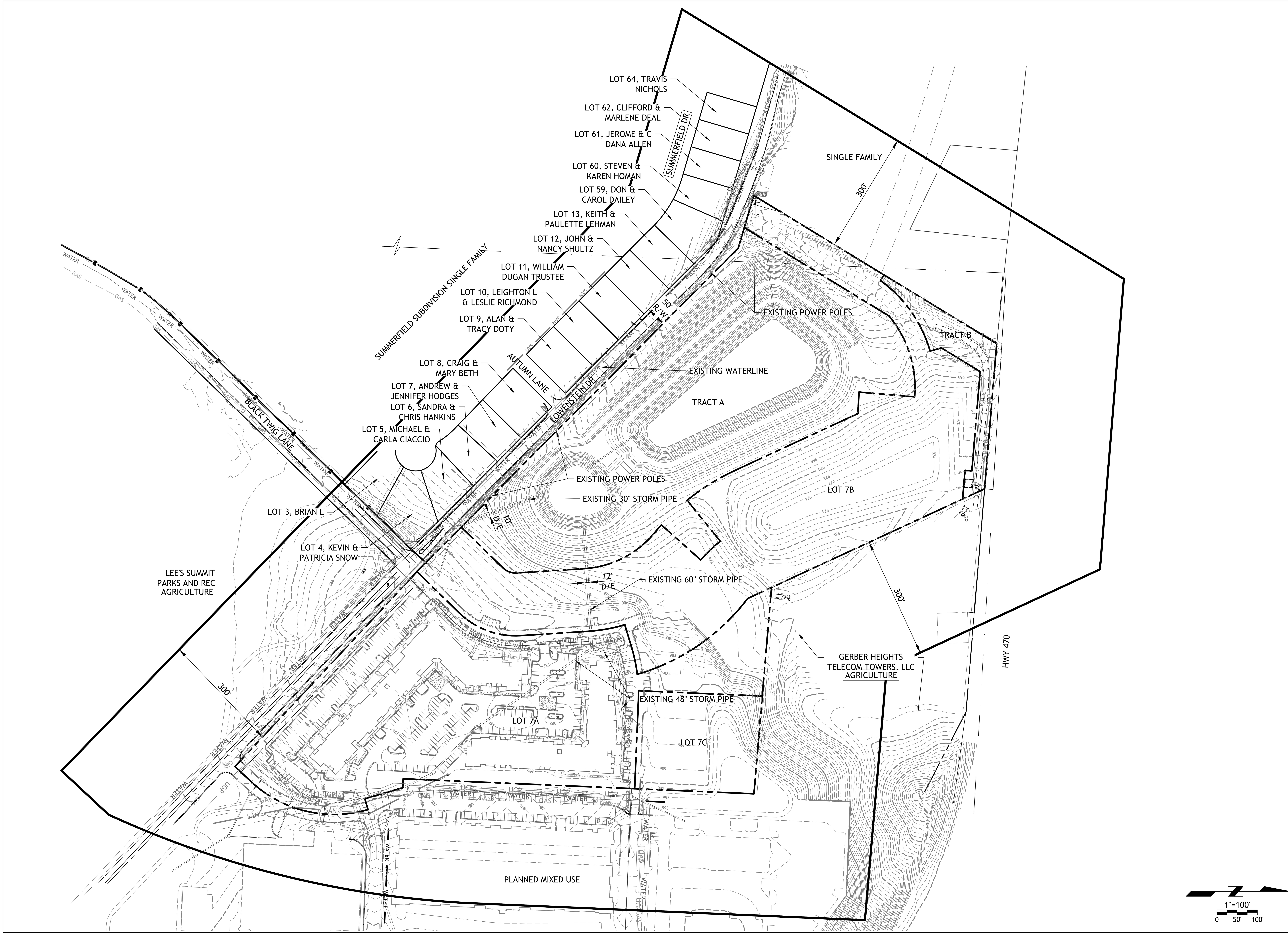
ENGINEER
SM ENGINEERING
SAM MALINOWSKY
5507 HIGH MEADOW CIRCLE
MANHATTAN KANSAS, 66503
SMCIVILENGR@GMAIL.COM
785.341.9747

STATE OF MISSOURI
SAMUEL D. MALINOWSKY
NUMBER 2010029762
PROFESSIONAL ENGINEER
5-3-23

SAMUEL D. MALINOWSKY
PROFESSIONAL ENGINEEER

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C1.0
Civil
Site Improvement PLan
permit
7 JULY 2021



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9-28-21 CITY COMMENTS
12-7-21 STORM LINE E

STREETS OF W. PRYOR LOWENSTIEN DR

LEE'S SUMMIT, MO.

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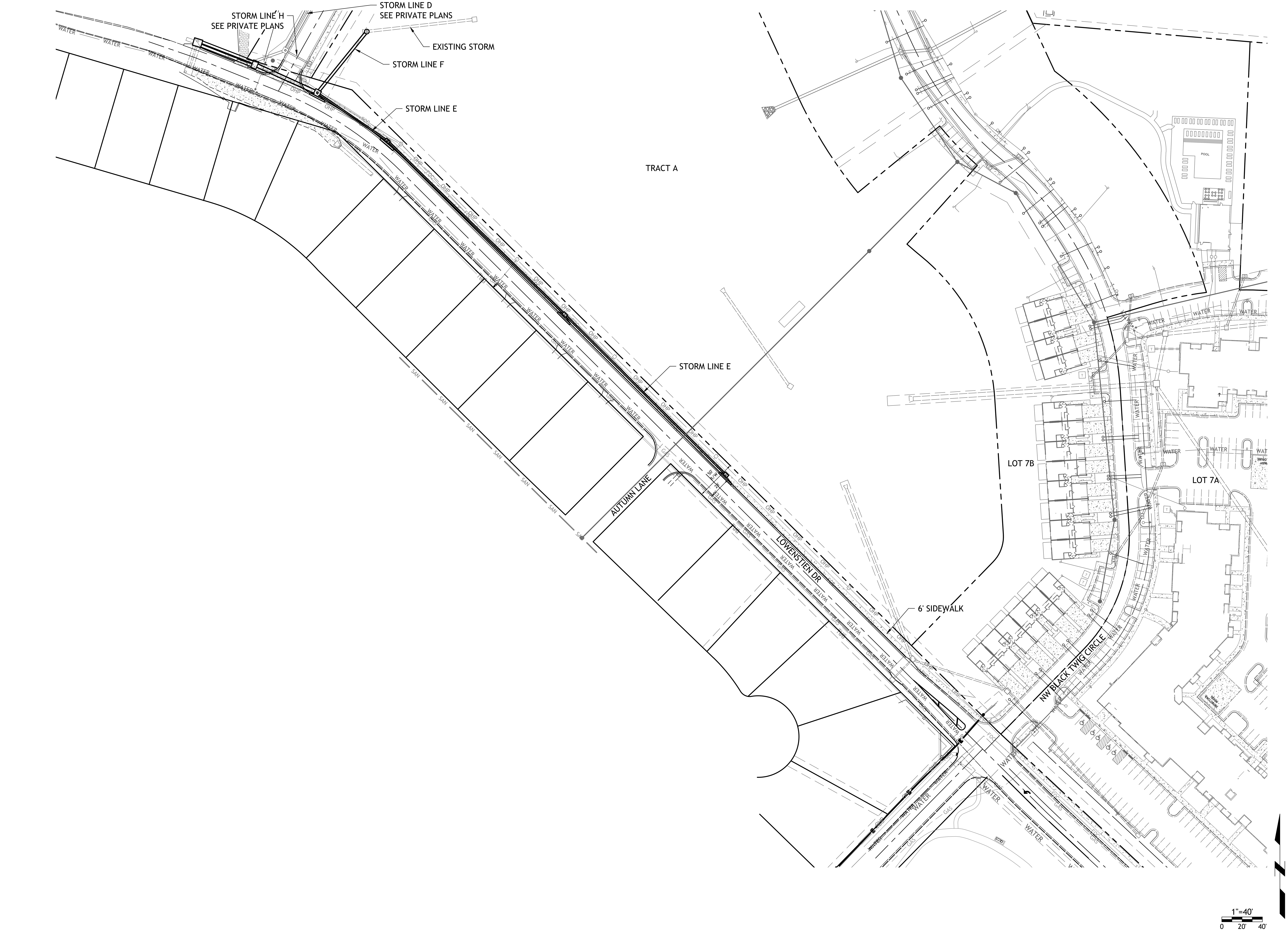
EXISTING CONDITIONS
permit
7 JULY 2021



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STREETS OF W. PRYOR LOWENSTIEN DR

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sheet
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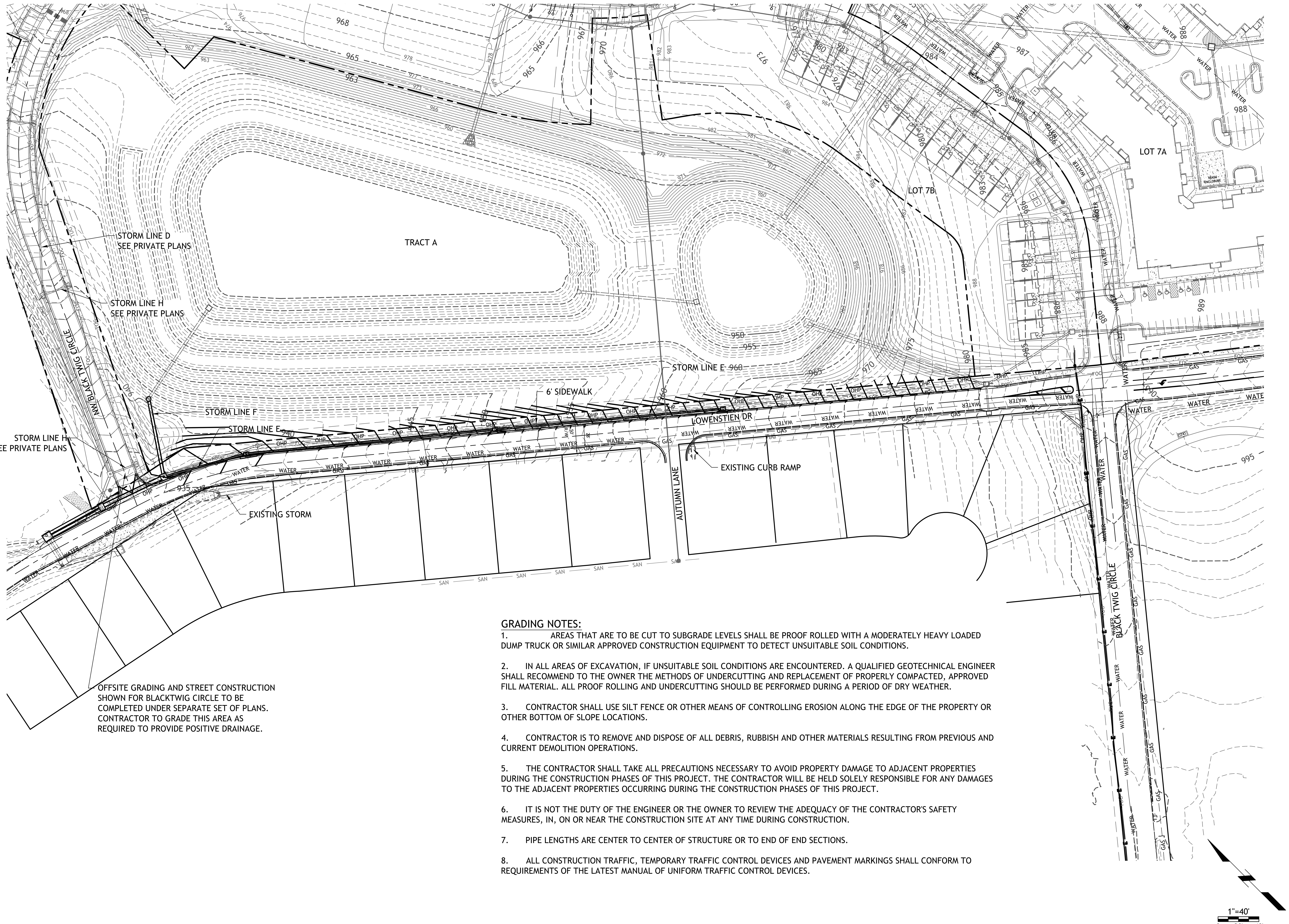
Civil
LAYOUT PLAN
permit
7 JULY 2021



GRADING NOTES:

1. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.

2. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED. A QUALIFIED GEOTECHNICAL ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOF ROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.

3. CONTRACTOR SHALL USE SILT FENCE OR OTHER MEANS OF CONTROLLING EROSION ALONG THE EDGE OF THE PROPERTY OR OTHER BOTTOM OF SLOPE LOCATIONS.

4. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.

5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

6. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.

7. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTIONS.

8. ALL CONSTRUCTION TRAFFIC, TEMPORARY TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO REQUIREMENTS OF THE LATEST MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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STREETS OF W. PRYOR LOWENSTIEN DR

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Civil
GRADING PLAN
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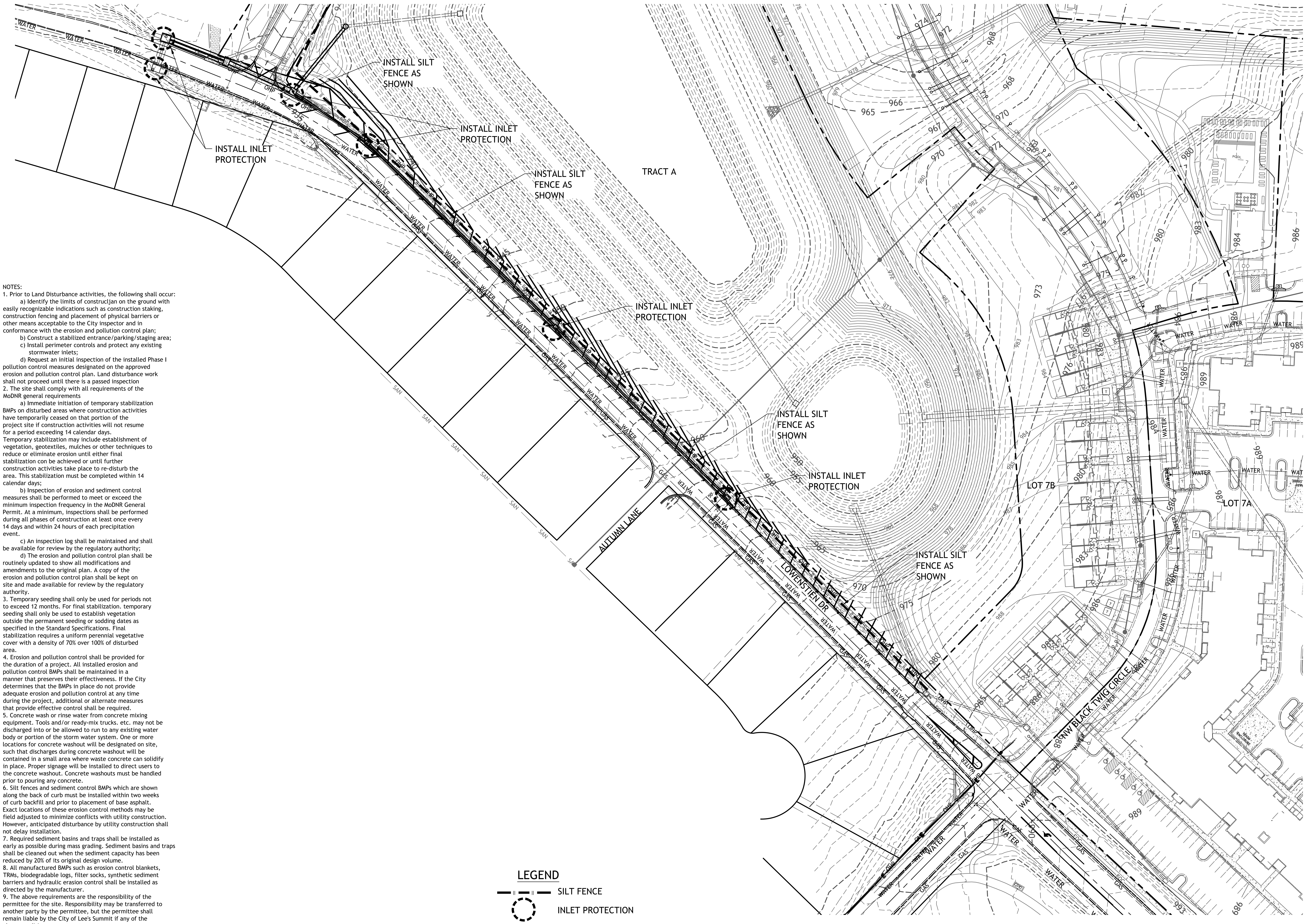
7 JULY 2021



NOTES:

1. Prior to Land Disturbance activities, the following shall occur:
   a) Identify the limits of construcljan on the ground with easily recognizable indications such as construction staking, construction fencing and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and pollution control plan;
   b) Construct a stabilized entrance/parking/staging area;
   c) Install perimeter controls and protect any existing stormwater inlets;
   d) Request an initial inspection of the installed Phase I pollution control measures designated on the approved erosion and pollution control plan. Land disturbance work shall not proceed until there is a passed inspection
2. The site shall comply with all requirements of the MoDNR general requirements
   a) Immediate initiation of temporary stabilization BMPs on disturbed areas where construction activities have temporarily ceased on that portion of the project site if construction activities will not resume for a period exceeding 14 calendar days. Temporary stabilization may include establishment of vegetation, geotextiles, mulches or other techniques to reduce or eliminate erosion until either final stabilization con be achieved or until further construction activities take place to re-disturb the area. This stabilization must be completed within 14 calendar days;
   b) Inspection of erosion and sediment control measures shall be performed to meet or exceed the minimum inspection frequency in the MoDNR General Permit. At a minimum, inspections shall be performed during all phases of construction at least once every 14 days and within 24 hours of each precipitation event.
   c) An inspection log shall be maintained and shall be available for review by the regulatory authority;
   d) The erosion and pollution control plan shall be routinely updated to show all modifications and amendments to the original plan. A copy of the erosion and pollution control plan shall be kept on site and made available for review by the regulatory authority.
3. Temporary seeding shall only be used for periods not to exceed 12 months. For final stabilization. temporary seeding shall only be used to establish vegetation outside the permanent seeding or sodding dates as specified in the Standard Specifications. Final stabilization requires a uniform perennial vegetative cover with a density of 70% over 100% of disturbed area.
4. Erosion and pollution control shall be provided for the duration of a project. All installed erosion and pollution control BMPs shall be maintained in a manner that preserves their effectiveness. If the City determines that the BMPs in place do not provide adequate erosion and pollution control at any time during the project, additional or alternate measures that provide effective control shall be required.
5. Concrete wash or rinse water from concrete mixing equipment. Tools and/or ready-mix trucks. etc. may not be discharged into or be allowed to run to any existing water body or portion of the storm water system. One or more locations for concrete washout will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place. Proper signage will be installed to direct users to the concrete washout. Concrete washouts must be handled prior to pouring any concrete.
6. Silt fences and sediment control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction. However, anticipated disturbance by utility construction shall not delay installation.
7. Required sediment basins and traps shall be installed as early as possible during mass grading. Sediment basins and traps shall be cleaned out when the sediment capacity has been reduced by 20% of its original design volume.
8. All manufactured BMPs such as erosion control blankets, TRMs, biodegradable logs, filter socks, synthetic sediment barriers and hydraulic erasion control shall be installed as directed by the manufacturer.
9. The above requirements are the responsibility of the permittee for the site. Responsibility may be transferred to another party by the permittee, but the permittee shall remain liable by the City of Lee's Summit if any of the above conditions are not met.

LEGEND

SILT FENCE

INLET PROTECTION

1"=40'
0 20' 40'

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LEE'S SUMMIT, MO.

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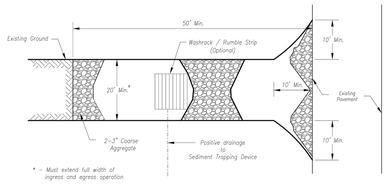
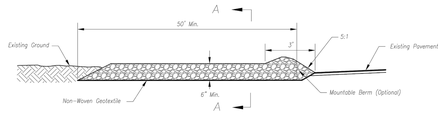
7 JULY 2021



Plan View
Not to Scale



Side Elevation
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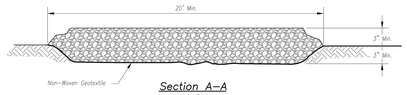


Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

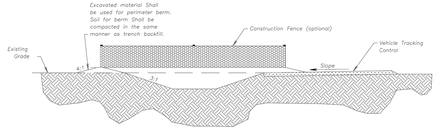
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



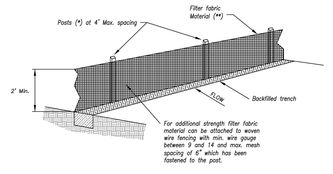
CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control, Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

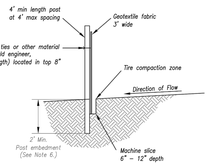
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ⅜" x 1 ⅜"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288



Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long slopes will require runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

SILT FENCE DETAILS
Not to Scale

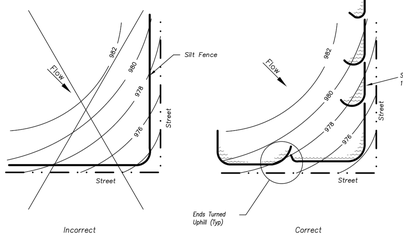
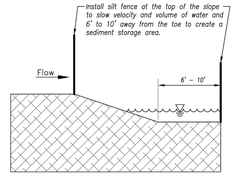


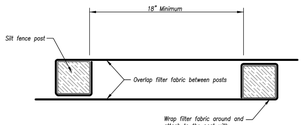
Figure A

SILT FENCE LAYOUT
Not to Scale



Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.



JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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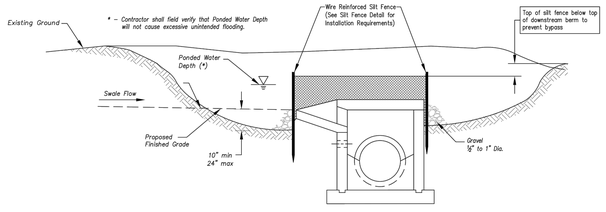
KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016



Section A-A
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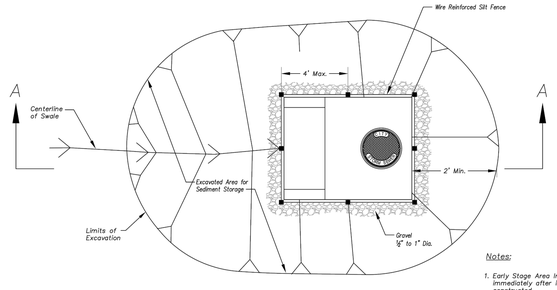
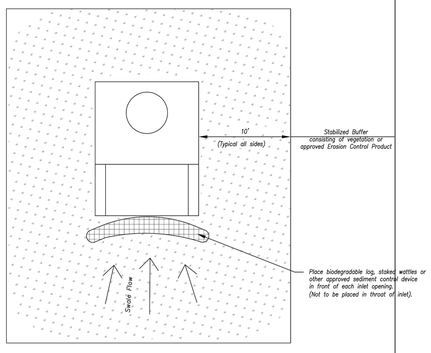


Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan
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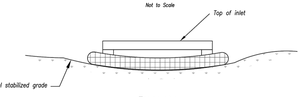

Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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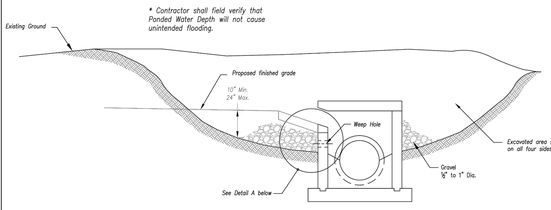
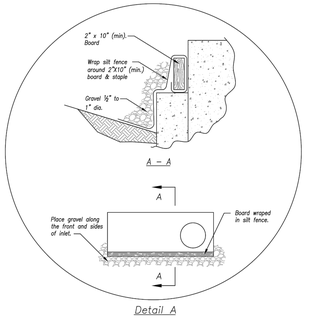
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

AREA INLET AND JUNCTION BOX PROTECTION

STANDARD DRAWING NUMBER ESC-07
ADOPTED: 10/24/2016





Detail A

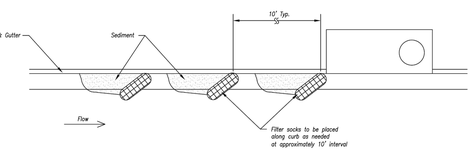
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

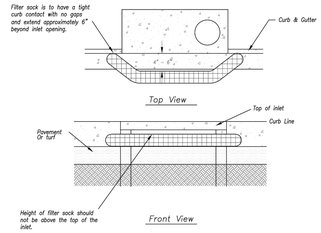
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



On Grade Curb Inlet Protection



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016

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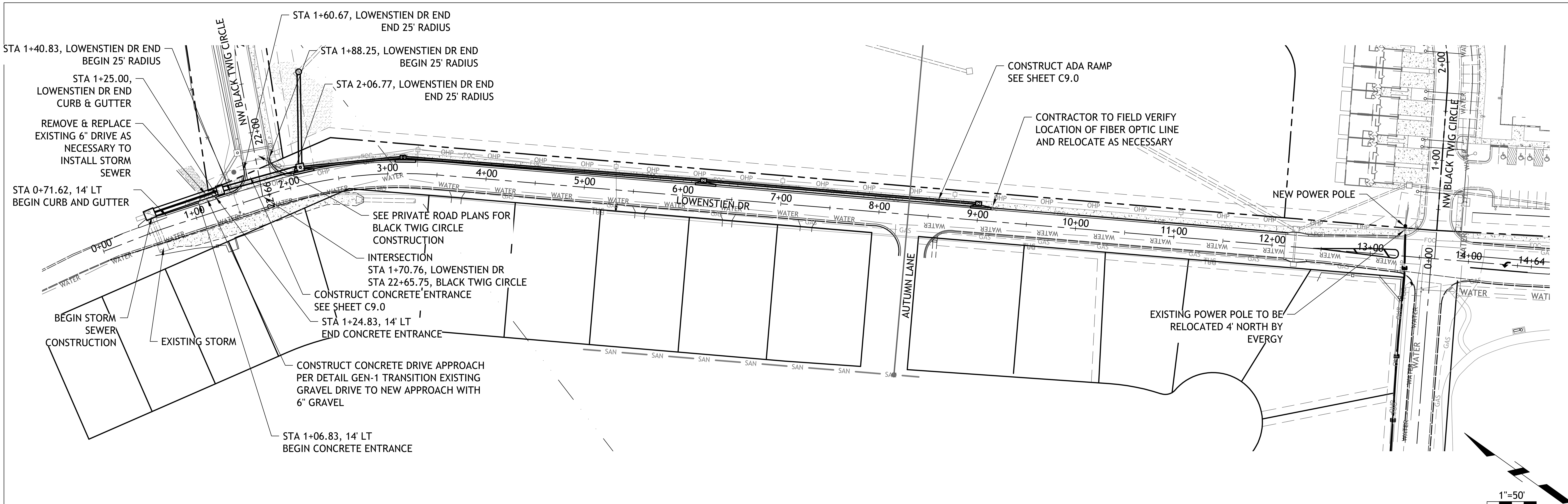
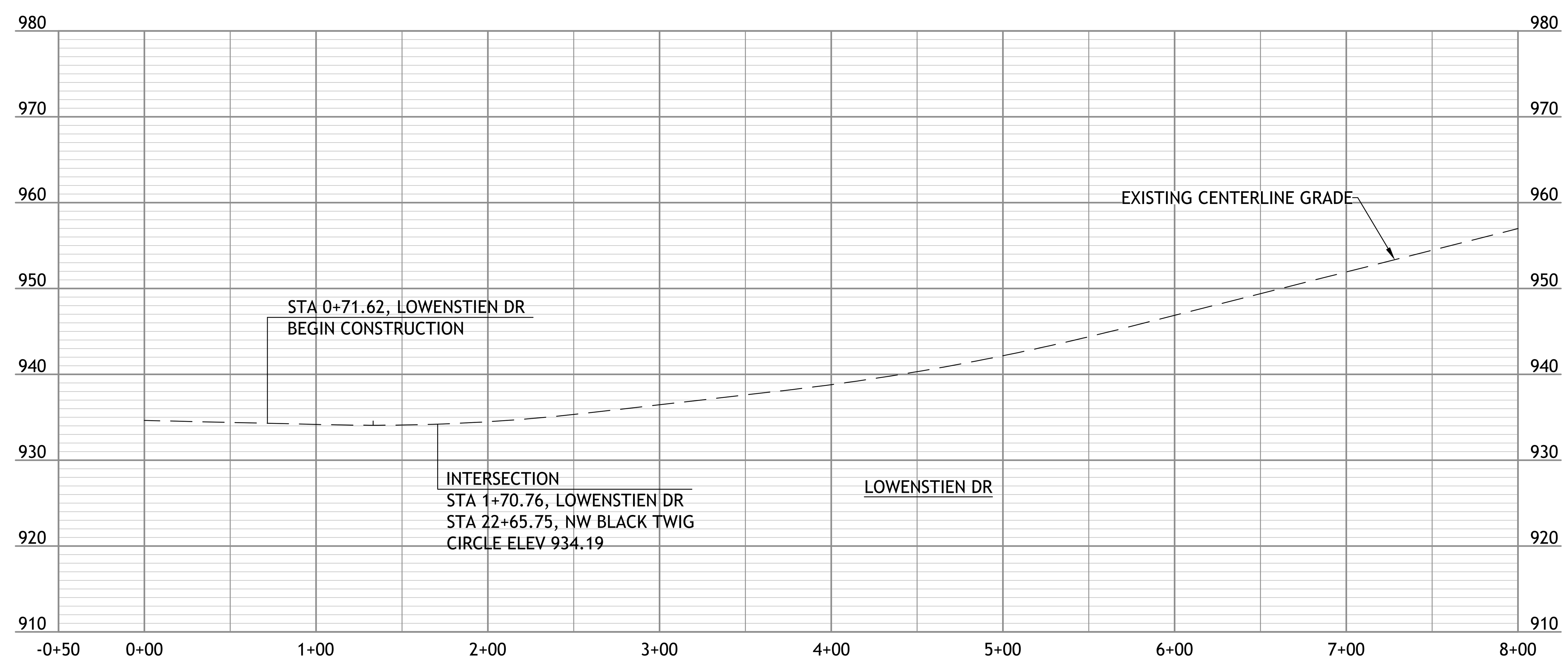
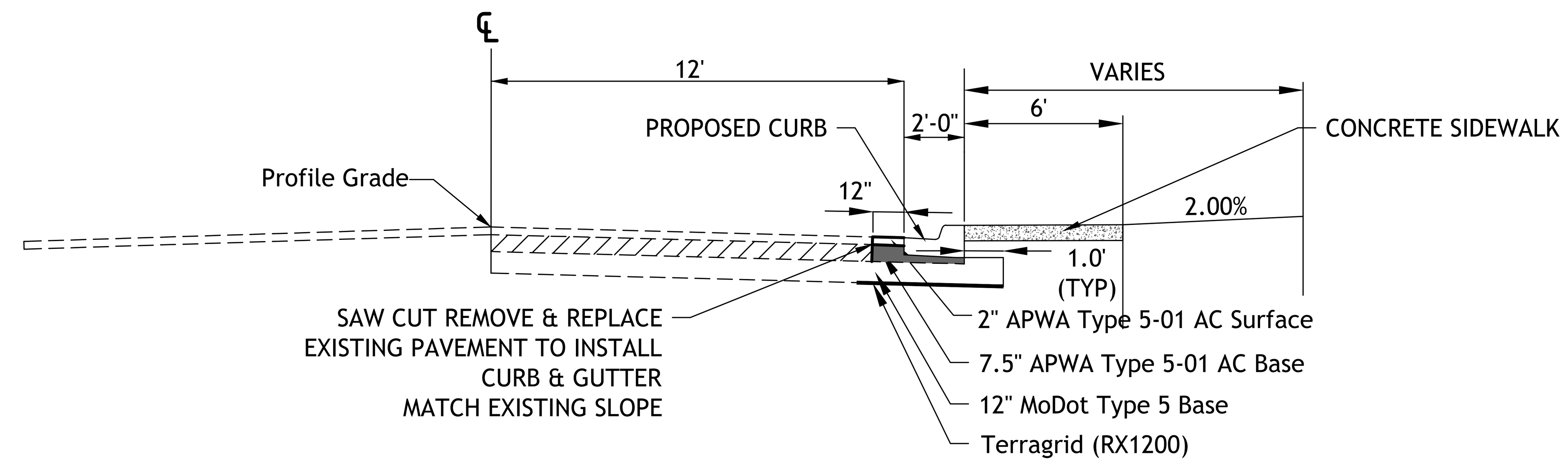
Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
12-7-21 STORM LINE E

STREETS OF W. PRYOR
LOWENSTIEN DR
LEES SUMMITT, MO.

sheet
C6.0
Civil
EROSION DETAILS
permit
7 JULY 2021







LOWENSTIEN DRIVE
TYPICAL SECTION
NTS

1"=50'
0 25' 50'
1"=10'
0 5' 10'

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Revisions
8-17-21 CITY COMMENTS
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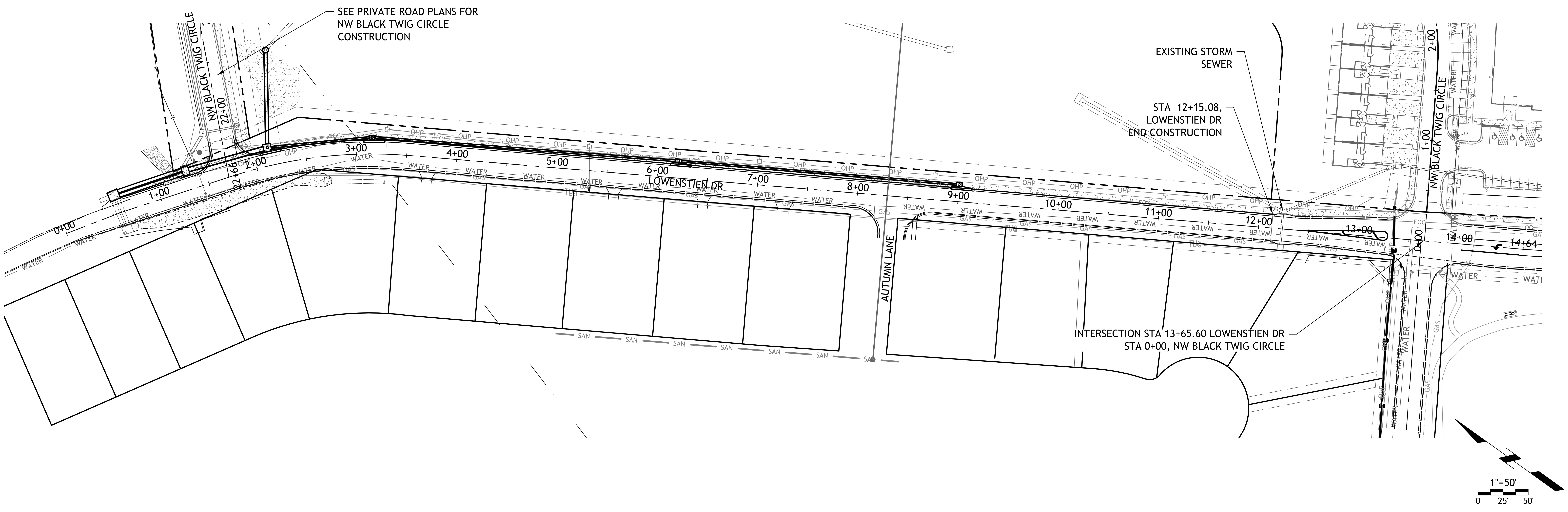
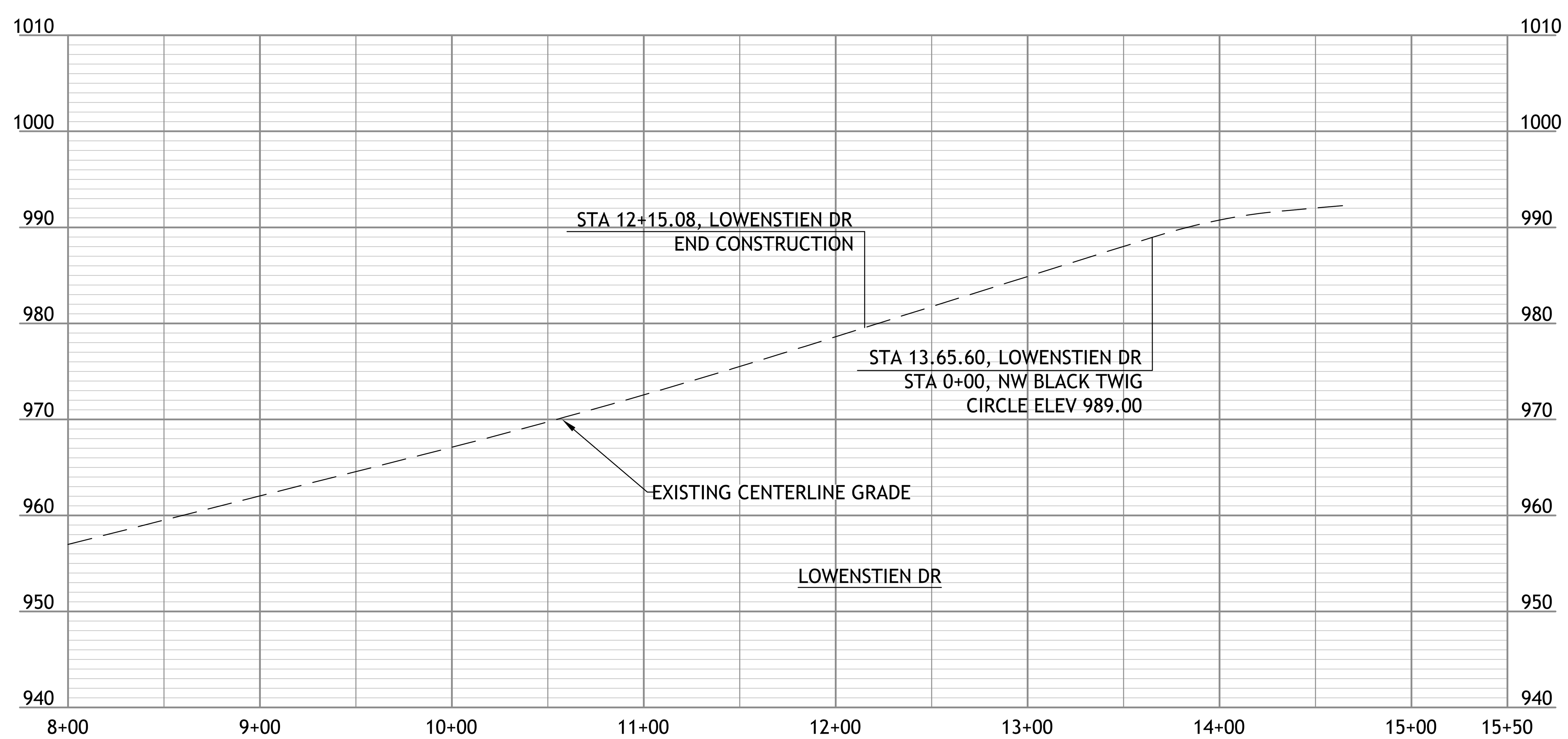
1-10-22 STORM LINE E

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C7.0
Civil
LOWENSTIEN DR
PLAN AND PROFILE
permit
7 JULY 2021





1"=50'
0 25' 50'

1"=10'
0 5' 10'

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785.341.9747

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8-17-21 CITY COMMENTS
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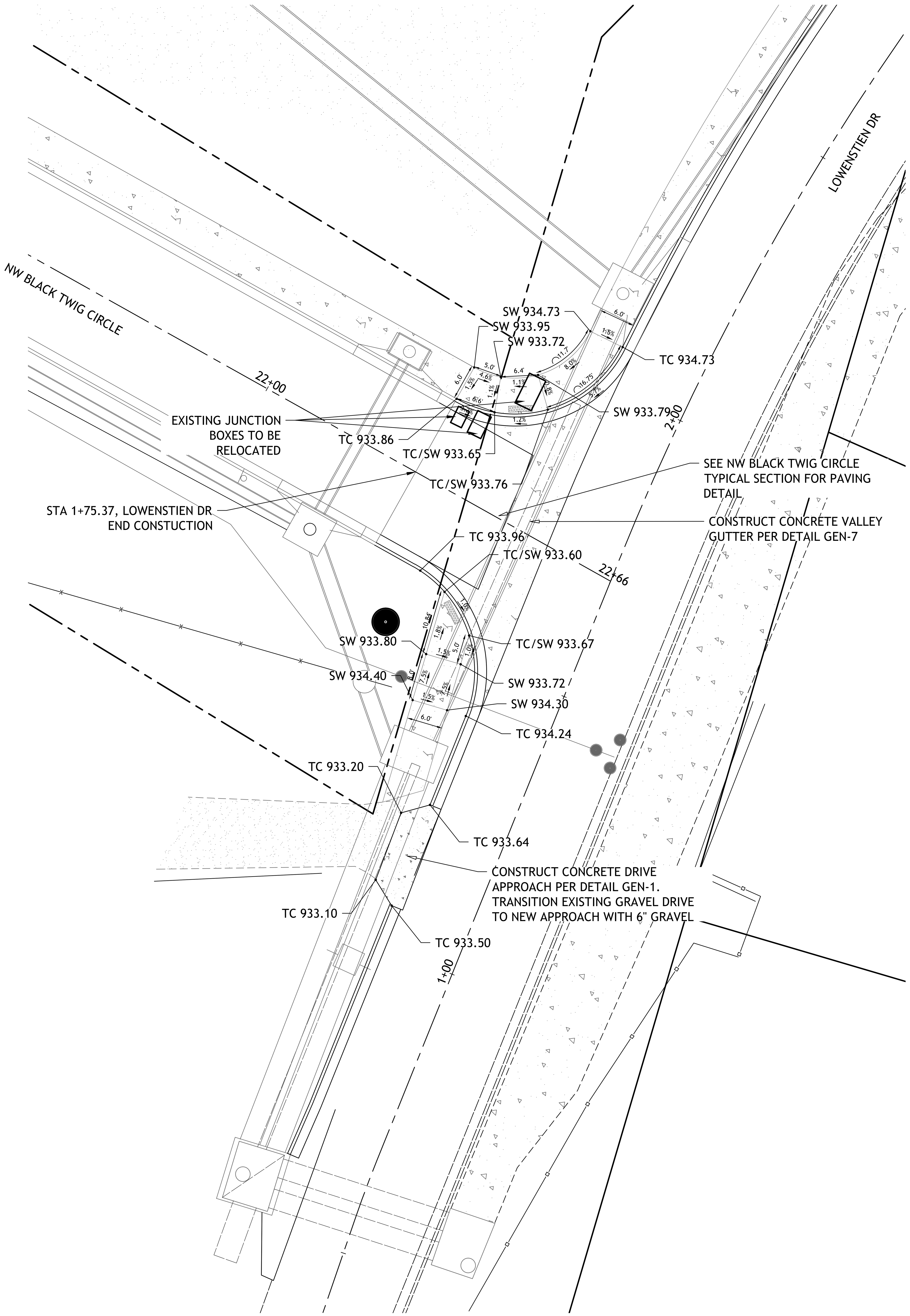
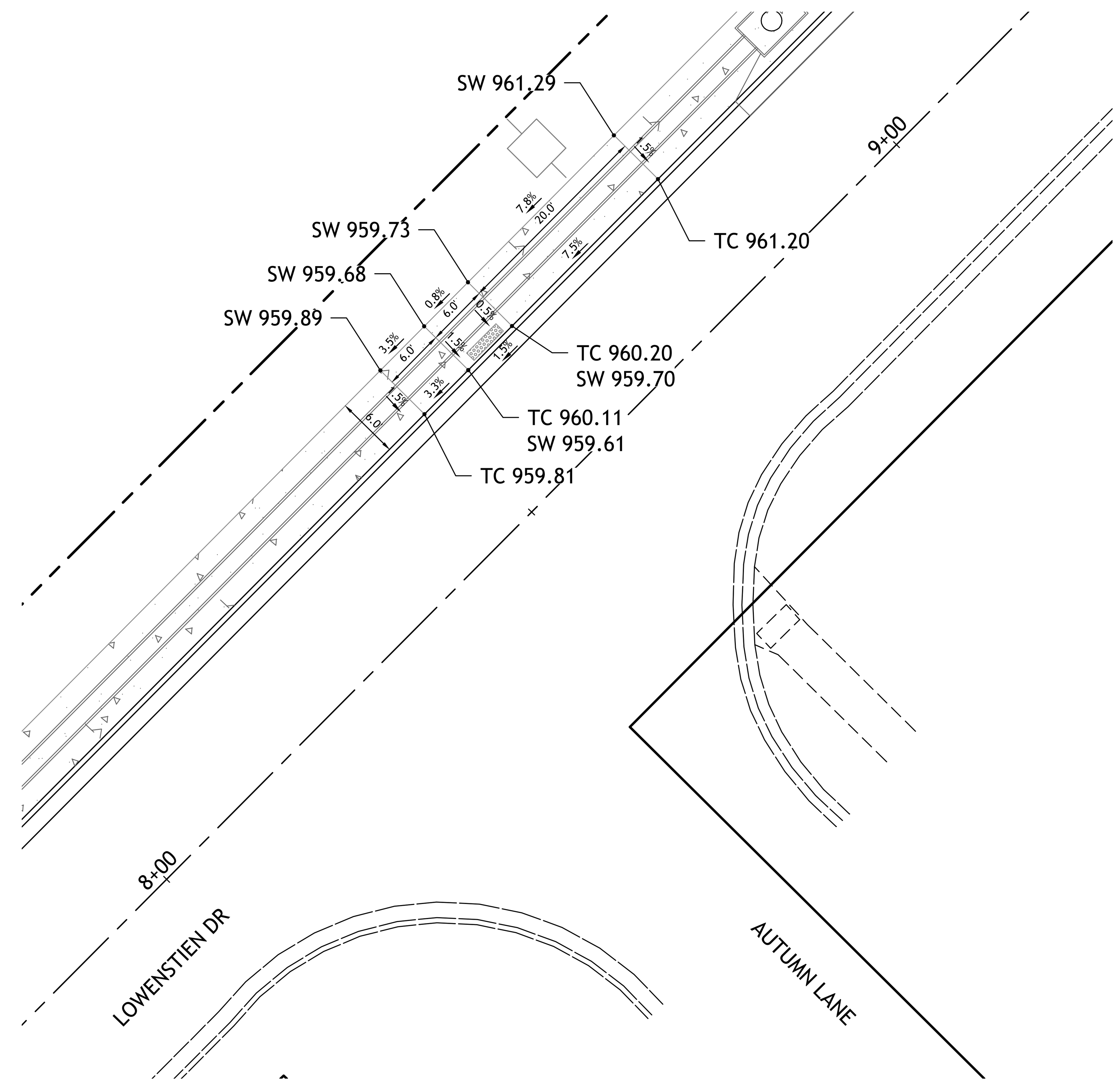
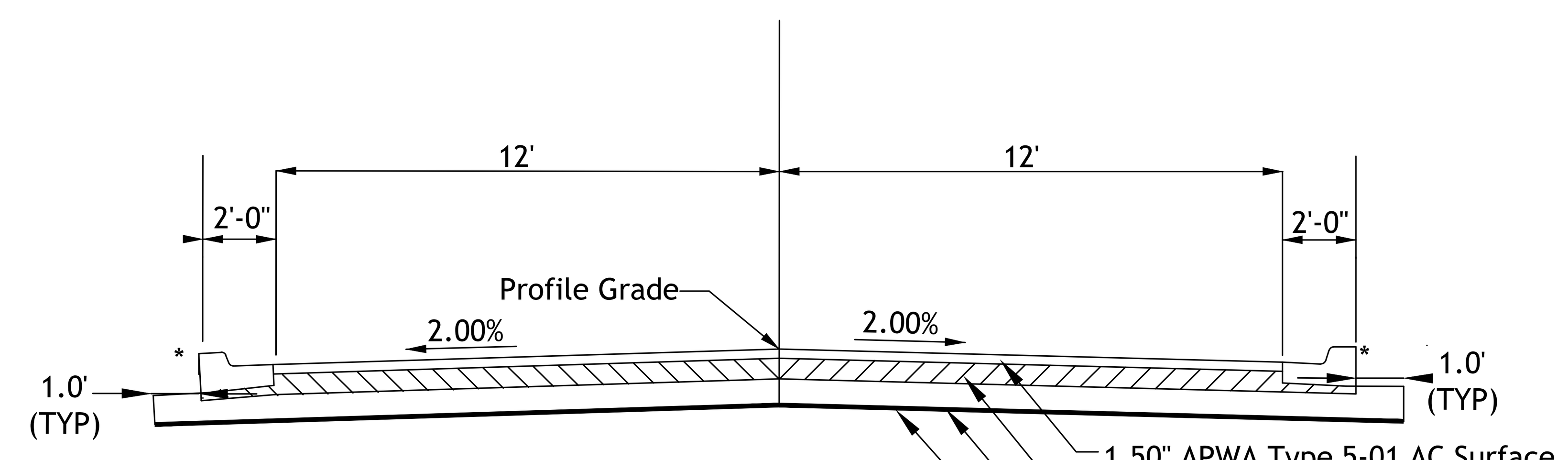
1-10-22 STORM LINE E

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C8.0
Civil
LOWENSTIEN DR
PLAN AND PROFILE
permit
7 JULY 2021







*STA 6+-50.28 - STA 16+78.90 RT = TYPE CG-2 CURB & GUTTER
STA 6+50.22 - STA 15+17.33 LT = TYPE CG-2 CURB & GUTTER
ALL OTHER CURB IS TYPE CG-1 CURB & GUTTER

NW BLACK TWIG CIRCLE
TYPICAL SECTION
NTS

LEGEND

TC	TOP OF CURB ELEVATION
TE	TOP ELEVATION OF STRUCTURE
TP	TOP OF PAVEMENT ELEVATION
SW	TO OF SIDEWALK ELEVATION
R	RAMP
L	LANDING

1"=10'
0 5' 10'

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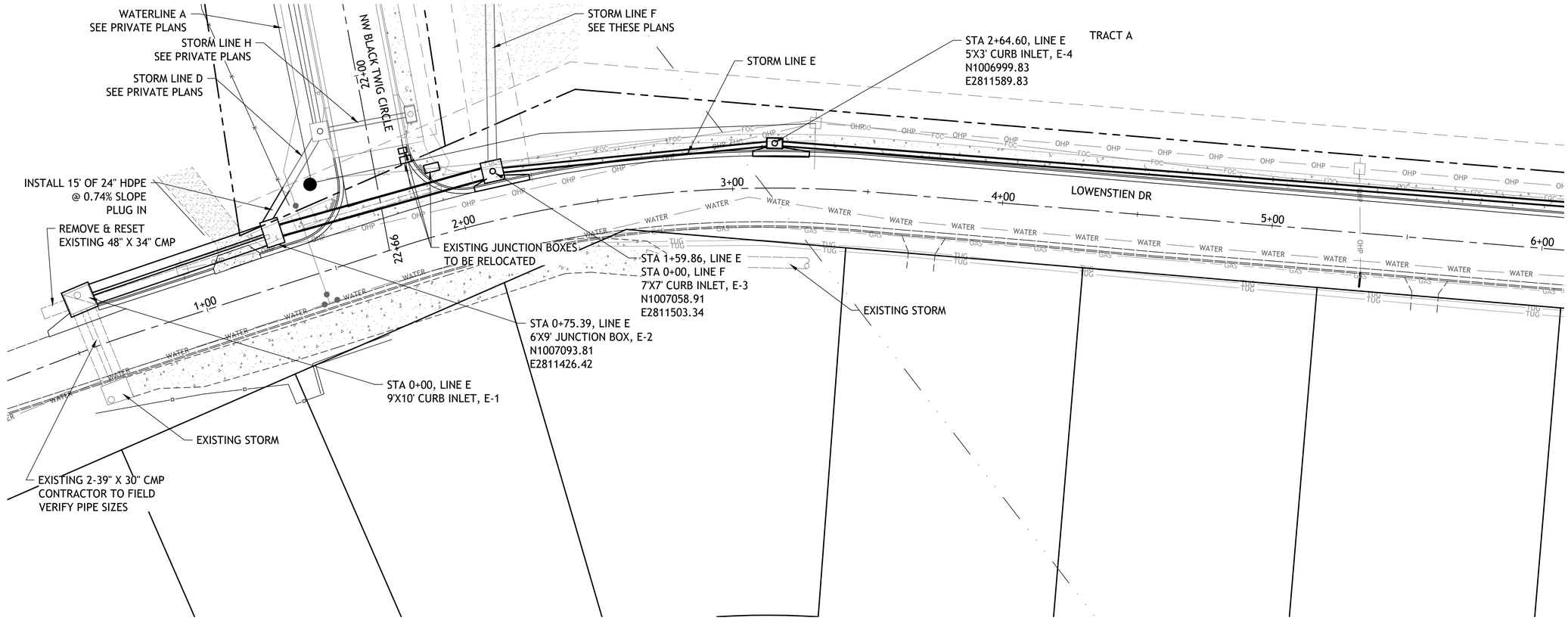
1-10-22 STORM LINE E

STREETS OF W. PRYOR LOWENSTIEN DR
LEE'S SUMMITT, MO.

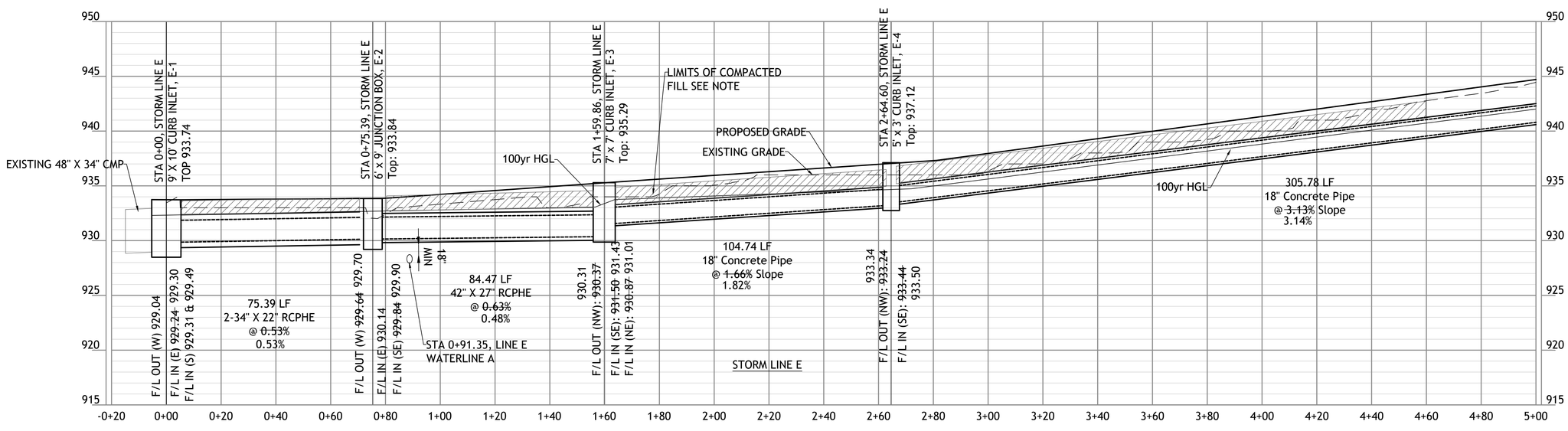
sheet
C9.0
Civil
INTERSECTION DETAIL
ADA RAMP GRADES
permit
7 JULY 2021



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

AS-BUILTS

SME 5-3-23



1"=5'
0 2.5' 5'

1"=20'
0 10' 20'

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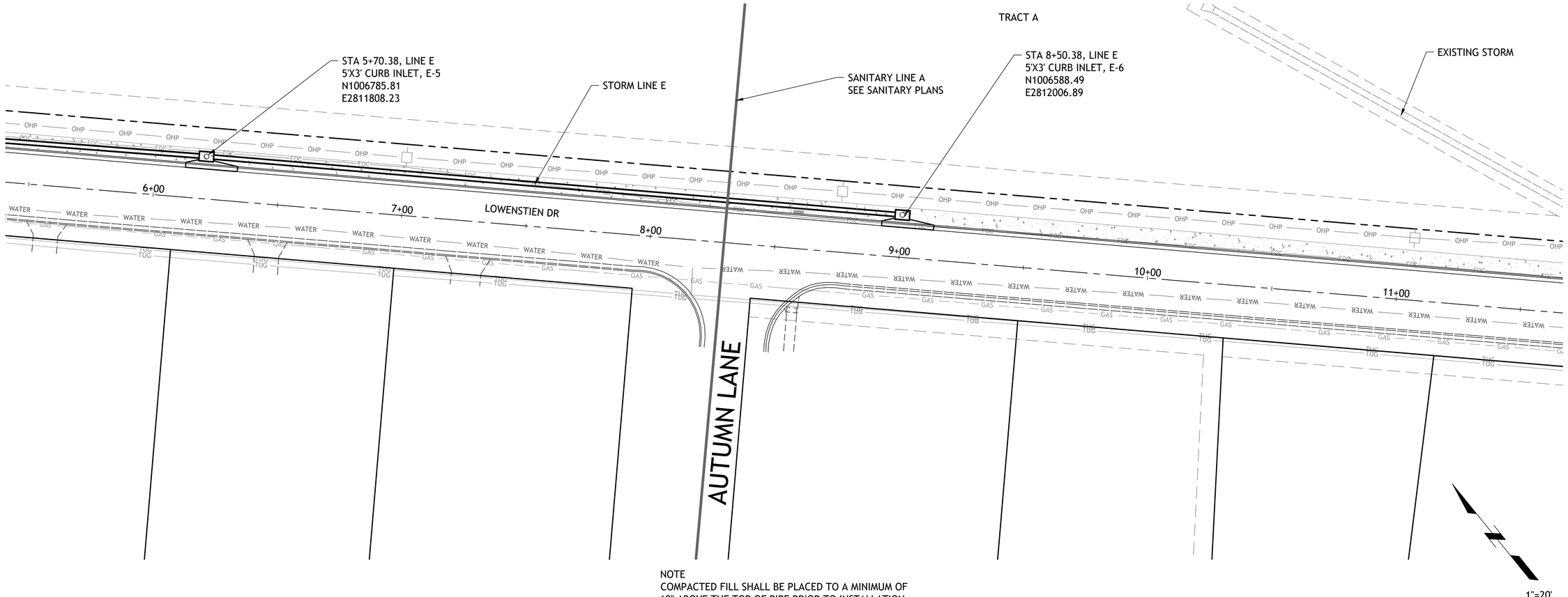
STATE OF MISSOURI
STEVEN D. MAKOWSKI
NUMBER
PE-2010
PROFESSIONAL ENGINEER

5-3-23

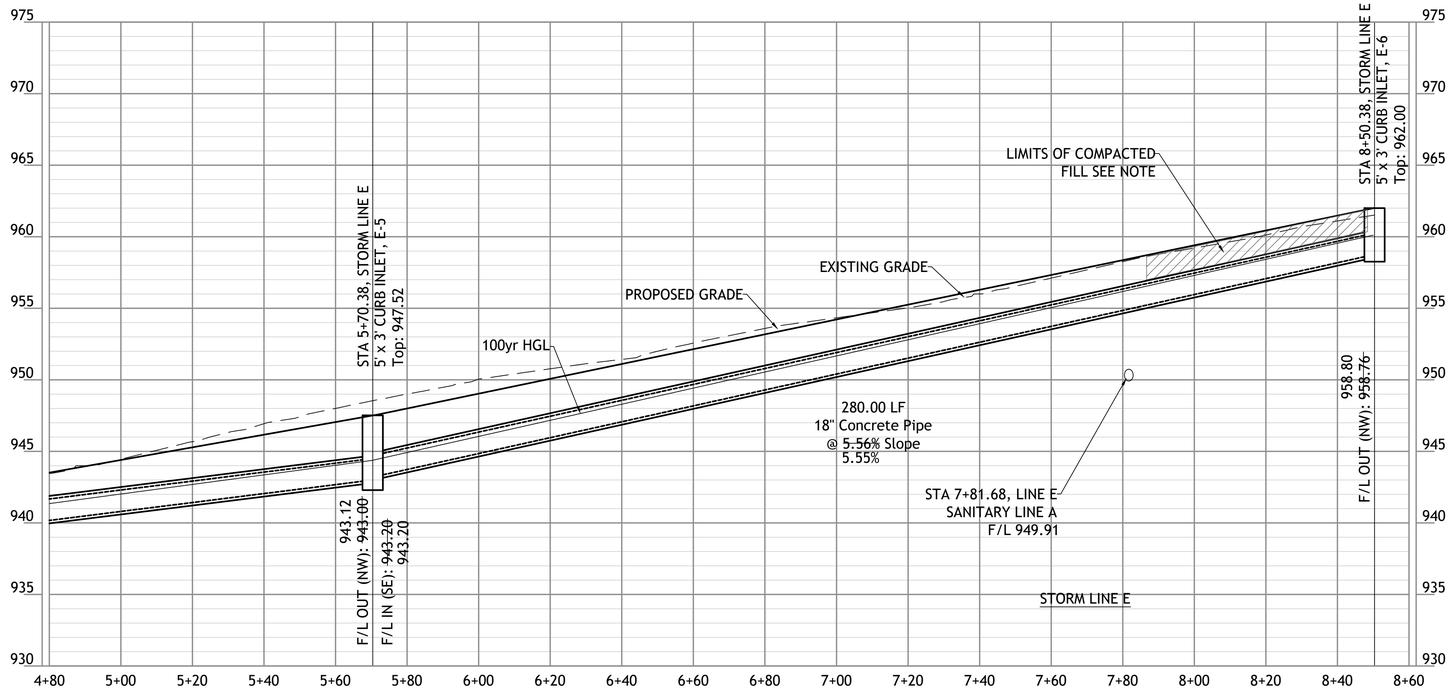
Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
1-10-22 STORM LINE E
2-2-22 PLAN CORRECTION
5-3-23 AS BUILTS

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C10.0
Civil
STORM LINE E
PLAN AND PROFILE
permit
7 JULY 2021



NOTE
COMPACTED FILL SHALL BE PLACED TO A MINIMUM OF
18" ABOVE THE TOP OF PIPE PRIOR TO INSTALLATION



1"=20'
0 10' 20'

AS-BUILTS
SME 5-3-23

1"=5'
0 2.5' 5'

1"=20'
0 10' 20'

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STATE OF MISSOURI
SHANE D. MAWSKY
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5-3-23

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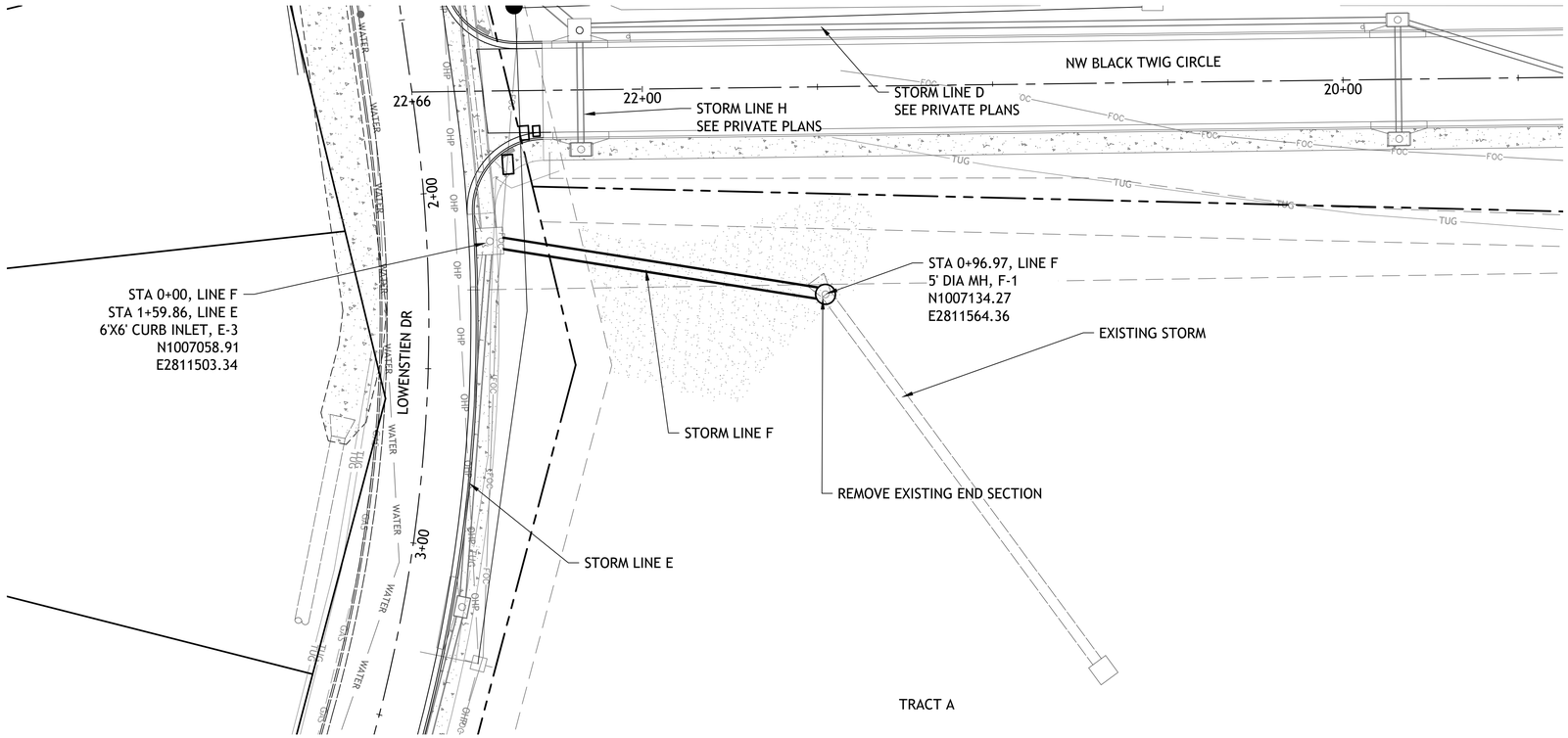
9-28-21 CITY COMMENTS
1-10-22 STORM LINE E
2-2-22 PLAN CORRECTION
5-3-23 AS BUILTS

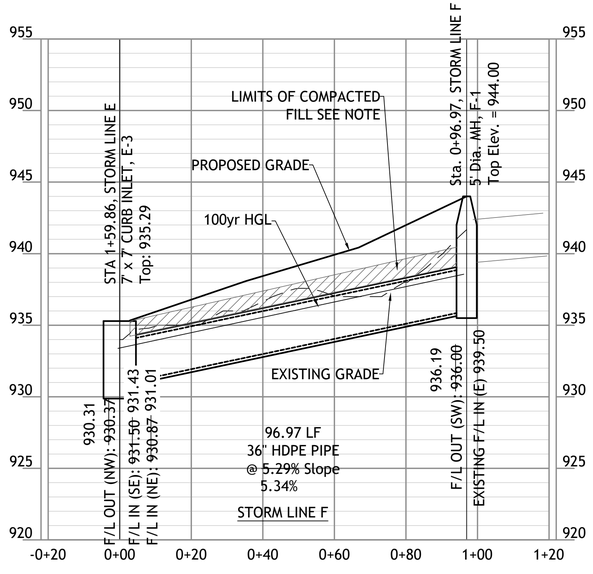
STREETS OF W. PRYOR
LOWENSTIEN DR
LEES SUMMITT, MO.

sheet
C11.0
Civil
STORM LINE E
PLAN AND PROFILE
permit
7 JULY 2021



1"=20'
0 10' 20'

NOTE
COMPACTED FILL SHALL BE PLACED TO A MINIMUM OF
18" ABOVE THE TOP OF PIPE PRIOR TO INSTALLATION



AS-BUILTS
SME 5-3-23

1"=5'
0 2.5' 5'

1"=20'
0 10' 20'

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STATE OF KANSAS
SCOTT D. MILEWSKI
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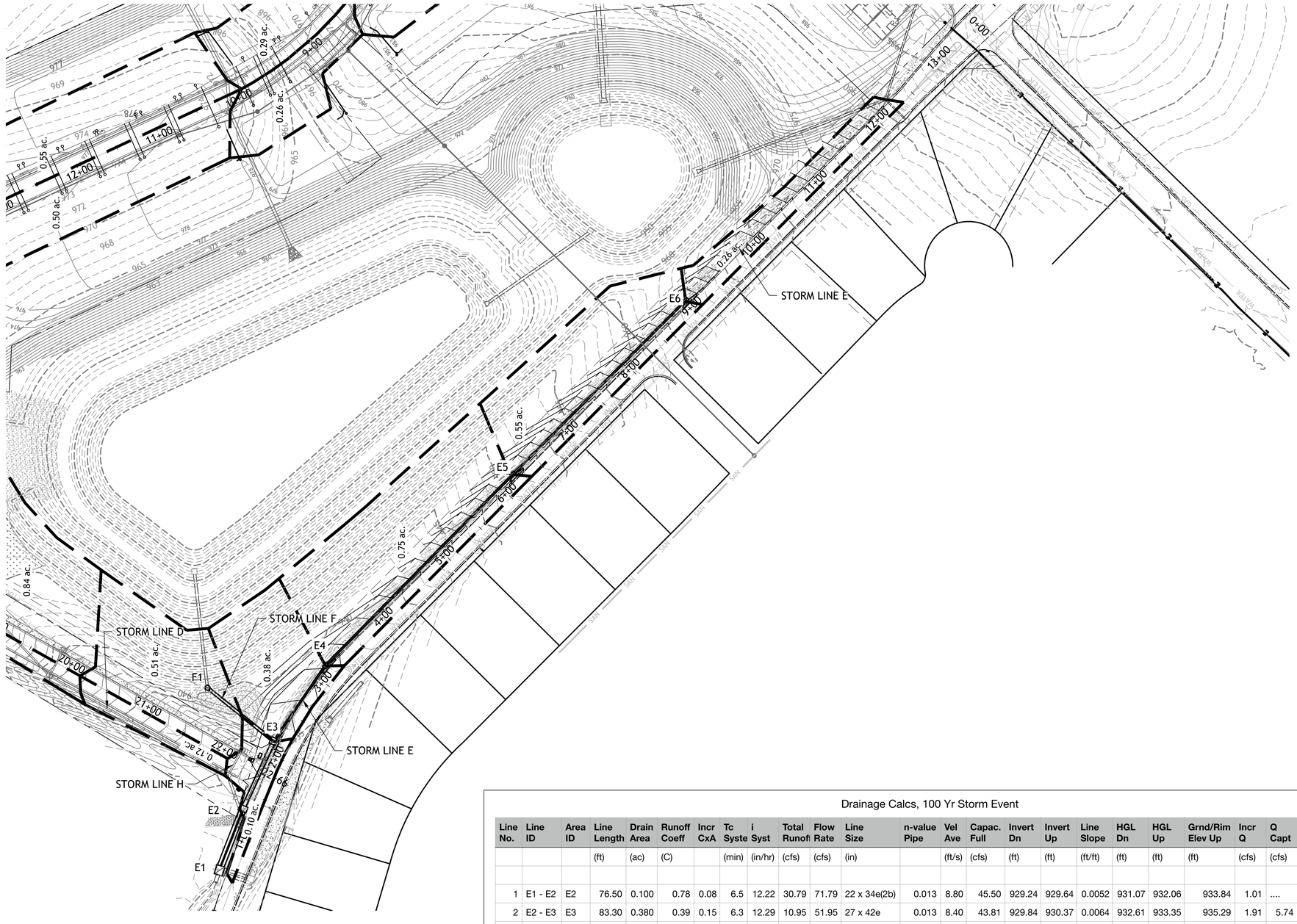
PROFESSIONAL ENGINEER
5-3-23

Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
1-10-22 STORM LINE E
2-2-22 PLAN CORRECTION
5-3-23 AS BUILTS

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C12.0
Civil
STORM LINE F
PLAN AND PROFILE
permit
7 JULY 2021



Drainage Calcs, 100 Yr Storm Event

Line No.	Line ID	Area ID	Line Length	Drain Area	Runoff Coeff	Incr CxA	Tc Syste	i Syst	Total Runofi	Flow Rate	Line Size	n-value Pipe	Vel Ave	Capac. Full	Invert Dn	Invert Up	Line Slope	HGL Dn	HGL Up	Grnd/Rim Elev Up	Incr Q	Q Capt	Q Bypas	Gutter Spread
			(ft)	(ac)	(C)		(min)	(in/hr)	(cfs)	(cfs)	(in)		(ft/s)	(cfs)	(ft)	(ft)	(ft/ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft)
1	E1 - E2	E2	76.50	0.100	0.78	0.08	6.5	12.22	30.79	71.79	22 x 34e(2b)	0.013	8.80	45.50	929.24	929.64	0.0052	931.07	932.06	933.84	1.01	....	....	....
2	E2 - E3	E3	83.30	0.380	0.39	0.15	6.3	12.29	10.95	51.95	27 x 42e	0.013	8.40	43.81	929.84	930.37	0.0064	932.61	933.35	935.29	1.91	5.74	2.77	6.3
3	E3 - E4	E4	104.74	0.750	0.43	0.32	6.1	12.38	9.19	9.19	18	0.013	5.20	14.78	931.17	933.24	0.0198	934.20	935.00	937.33	4.16	1.73	5.60	7.34
4	E4 - E5	E5	305.78	0.550	0.47	0.26	5.5	12.64	5.30	5.30	18	0.013	3.97	18.79	933.44	943.23	0.032	935.44	944.10	947.87	3.33	1.36	3.17	7.35
5	E5 - E6	E6	280.00	0.260	0.62	0.16	5.0	12.90	2.08	2.08	18	0.013	2.42	24.79	943.20	958.80	0.0557	944.46	959.35	962.17	2.08	0.89	1.19	4.65
6	E3 - F1	F1	96.81	0.000	0.00	0.00	0.0	0.00	0.00	41.00	36	0.013	6.90	148.98	930.87	935.70	0.0499	934.14	937.74	944.00	41.00	....	....	....
7	E2 - D1	D1	39.00	2.720	0.57	1.55	5.0	12.90	19.99	19.99	24	0.013	6.36	20.10	930.14	930.45	0.0079	932.89	933.19	935.00	19.99	19.99	0.00	....

1"=60'
0 30' 60'

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STATE OF KANSAS
SCOTT M. D.
WISNIEWSKI
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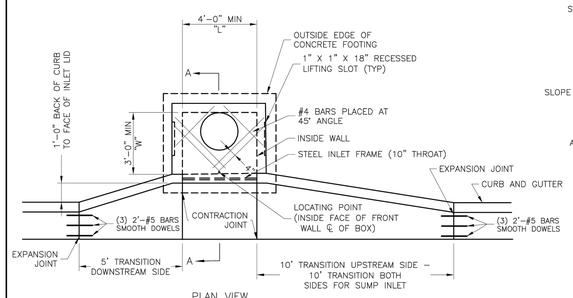
PE-2015
PROFESSIONAL ENGINEER
6/7/2022

Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
1-10-22 STORM LINE E

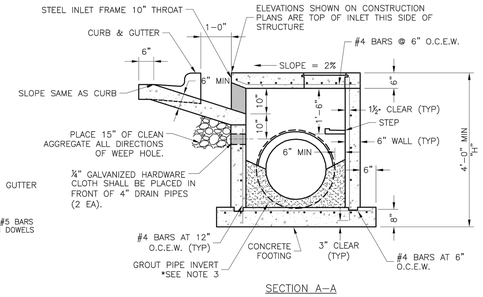
STREETS OF W. PRYOR LOWENSTIEN DR

LEE'S SUMMITT, MO.

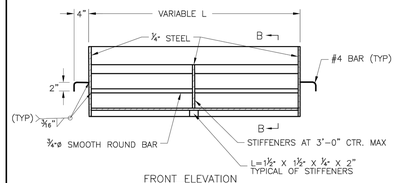
sheet
C13.0
Civil
DRAINAGE PLAN
permit
7 JULY 2021



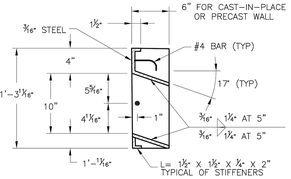
PLAN VIEW



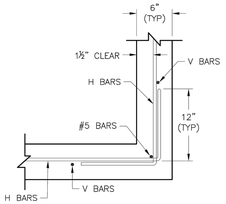
SECTION A–A



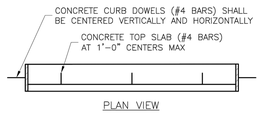
FRONT ELEVATION



SECTION B–B



WALL CORNER DETAIL



PLAN VIEW

STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

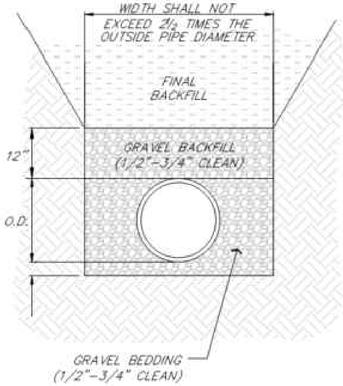
Project:
Sheet Name: CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-1

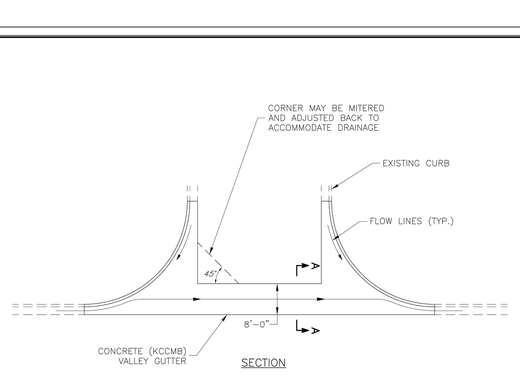
BEDDING
1/2"–3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY COMPACTED IN MAX. 4" LIFTS
INITIAL BACKFILL
–UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS
1/2"–3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY COMPACTED IN MAX. 4" LIFTS
–UNDER OPEN AREAS
1/2"–3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY COMPACTED IN MAX. 4" LIFTS
FINAL BACKFILL
–UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS
ON–SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH, CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8", COMPACTED TO 95% OF STANDARD DENSITY PER ASTM D–698
–UNDER OPEN AREAS
ON–SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH, CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8", COMPACTED TO 90% OF STANDARD DENSITY PER ASTM D–698

BEDDING DEPTH BELOW PIPE		
PIPE DIAMETER	IN SOIL	IN ROCK
24" AND LESS	6"	6"
27" THRU 60"	6"	9"

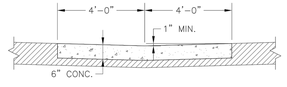


PIPE BEDDING DETAIL

NOT TO SCALE



SECTION



SECTION
Scale: 1" = 1'–0"

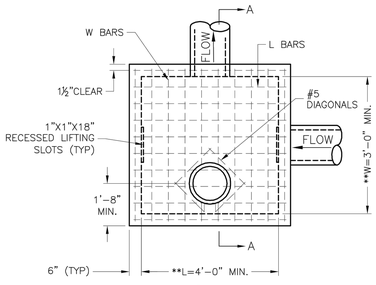
VALLEY GUTTER DETAIL
Intersection of Two Public Streets

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

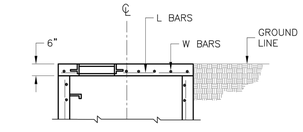
VALLEY GUTTER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

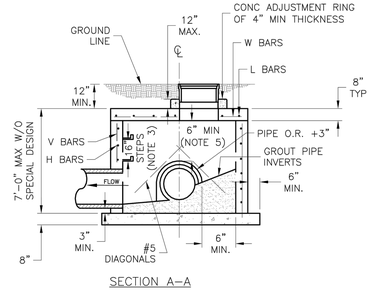
GEN-7



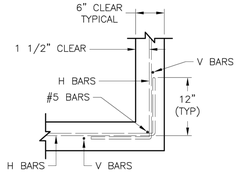
PLAN



SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)



SECTION A–A



WALL CORNER DETAIL

NOTE:
FOR ALL JUNCTION BOXES EXCEEDING 7'-0" IN DEPTH, THE PRECAST BOX MANUFACTURER SHALL PROVIDE AN ENGINEERED DESIGN.

** INCREASE IN MULTIPLES OF 6" (7'–0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Project:
Sheet Name: JUNCTION BOX DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

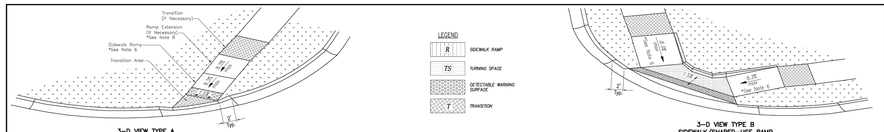
STM-3

SM Engineering
5507 High Meadow Circle
Manhattan Kansas, 66503
smcivilengr@gmail.com
785.341.9747

Revisions
8-17-21 CITY COMMENTS
9-10-21 CITY COMMENTS
9-28-21 CITY COMMENTS
12-7-21 STORM LINE E

STREETS OF W. PRYOR
LOWENSTIEN DR
LEE'S SUMMITT, MO.

sheet
C14.0
Civil
DETAILS
permit
7 JULY 2021

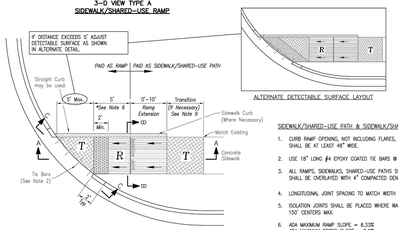


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION

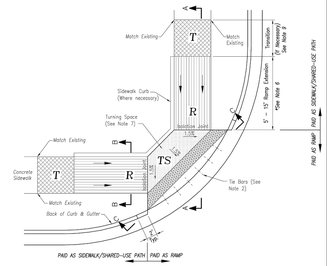


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
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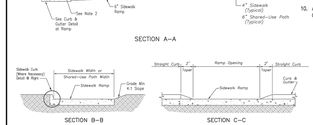
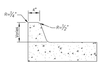


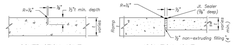
SECTION A-A

SECTION B-B | SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT | ISOLATION JOINT

JOINT DETAILS
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale

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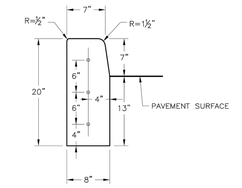
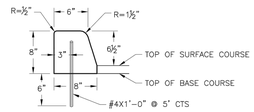
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

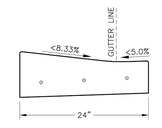
GEN-3A



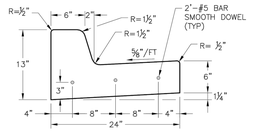
STRAIGHT CURB
(TYPE C-1)



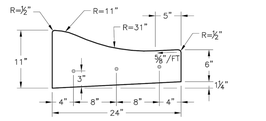
DOWELLED CURB
(TYPE DC)



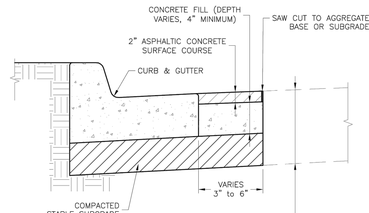
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



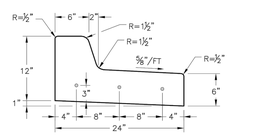
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



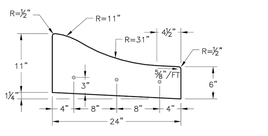
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

1. ½" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
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STANDARD DETAILS
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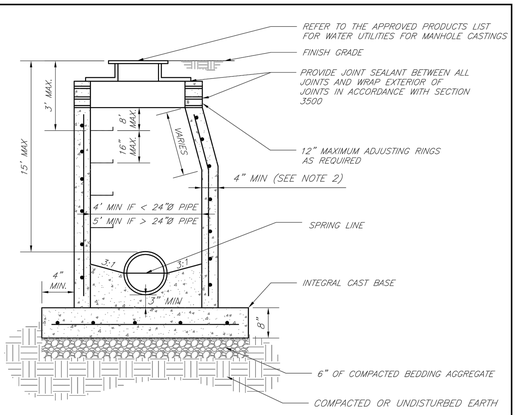
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4



NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

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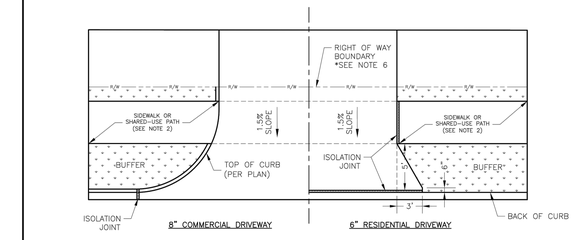
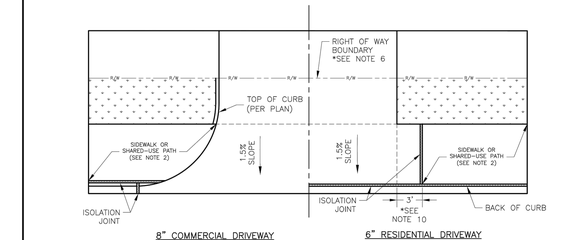
STANDARD PRECAST MANHOLE – SANITARY SEWER

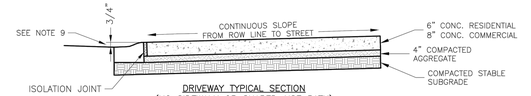
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN-2
Rev: 1/14
Rev:



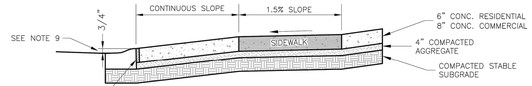
DRIVEWAY WITH BUFFER
NOT TO SCALE



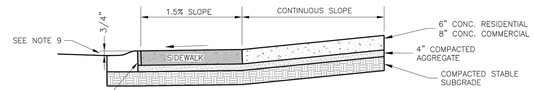
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
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STANDARD DETAILS
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LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Pr/BBS:

GEN-1

SM Engineering
5507 High Meadow Circle
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Revisions
8-17-21 CITY COMMENTS
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STREETS OF W. PRYOR
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