



Andy Beshear
GOVERNOR

TRANSPORTATION CABINET
200 Mero Street
Frankfort, Kentucky 40601

Jim Gray
SECRETARY

April 14, 2023

CALL NO. 328
CONTRACT ID NO. 231012
ADDENDUM # 1

Subject: Laurel County, FD04 063 0192 018-021
Letting April 27, 2023

- (1) Added - Special Notes - Pages 38A-38K of 344
- (2) Revised - Proposal Bid Items - Pages 337-344 of 344
- (3) Revised - Plan Sheets - R2T-7, R2W-1, R3, R5, R7, R9, R11, R21, R23, R27, R29, R31, R33, R37, R39, R57, R85, R297, R299, R300, R318, R321, R326, R337, R345, R353, R356, R357, R373, R374, R375

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills,

A handwritten signature in black ink that reads "Rachel Mills".

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:mr
Enclosures



SPECIAL NOTER FOR PIPE CLEANING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required to clean all pipes, as specified herein.

B. Cleaning shall include the proper high pressure water jetting, rodding, snaking, bucketing, brushing and flushing of pipes prior to inspection by closed circuit television, pipeline rehabilitation, and testing operations.

C. Cleaning shall dislodge, transport and remove all sludge, mud, sand, gravel, rocks, bricks, grease, roots, sticks, and all other debris from the interior of the sewer pipe and structures as required for pipeline rehabilitation.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Hydraulically propelled Sewer Cleaning Equipment

1. Hydraulically propelled sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.

2. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.

3. Contractor shall take precautions against flooding prior to using sewer cleaning balls or

other such equipment that cannot be collapsed instantly.

B. High Velocity Hydro-Cleaning Equipment shall have the following:

1. A minimum of 500-ft of high pressure hose.
2. Two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees in all size lines to be cleaned.
3. A high velocity gun for washing and scouring manhole walls and floor.
4. Capability of producing flows from a fine spray to a long distance solid stream.
5. A water tank, auxiliary engines and pumps and a hydraulically driven hose reel.
6. Equipment operating controls located above ground.

C. Mechanical cleaning equipment for sewer mains shall be either power buckets or power rodders.

1. Bucket machines
 - a. Be furnished with buckets in pairs
 - b. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
 - c. Be equipped with a take up drum and a minimum of 500-ft of cable.
 - d. Have sufficient dragging power to perform the work efficiently.
2. Power rodding machine

- a. Either sectional or continuous.
- b. Hold a minimum of 750-ft of rod.
- c. The machine shall have a positive rod drive to produce 2000 pounds of rod pull.

PART 3 -- EXECUTION

3.01 PERFORMANCE

A. Selection of cleaning equipment shall be based on the conditions of the structures and lines at the time the work commences based on the pre-construction CCTV inspection to be conducted by the Contractor under this Contract.

B. Use properly selected equipment to remove all dirt, grease, rock and other deleterious materials, and obstructions.

C. Protect existing lines from damage caused by improper use of cleaning equipment.

D. Take precautions to avoid damage or flooding to public or private property being served by the line being cleaned.

F. Removal of Materials

1. Remove all solids and semi-solids at the downstream opening of the section being cleaned.

2. Passing material from one section of a line to another will not be permitted; unless access to any one section of line cannot be achieved.

G. Remove from the site and properly dispose of all solids or semi-solids recovered during the cleaning operation.

H. No cleaning shall take place in a particular segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

3.02 FIELD QUALITY CONTROL

A. Acceptance of this portion of the work shall be dependent upon the results of the television inspection. Lines not acceptably clean as to permit television inspection and rehabilitation shall be re-cleaned and re-inspected at no additional cost to the Owner

B. Following cleaning, the Contractor shall inspect each section in accordance with the Special Note for Pipe Liner Acceptance Testing.

C. Upon the Engineer's final structure to structure inspection of the system, if any foreign matter is still present in the system, clean the sections and portions of the lines as required.

PART 4 – PAYMENT

Payment for cleaning of the pipes as detailed in the Pipe Drainage Summary will be made per linear foot as the price bid for CLEAN. The CLEAN bid item will be paid for the cleaning of all pipe sizes. Payment for CLEAN will be considered full compensation for all work, equipment, and incidentals necessary to clean the pipe in accordance with this note.

SPECIAL NOTE FOR PIPE LINER ACCEPTANCE TESTING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

- A. Furnish all necessary labor, materials, equipment, services and incidentals required to visually inspect by means of closed-circuit television (CCTV) designated pipe sections including, but not limited to, recording and playback equipment, materials and supplies.
- B. The inspection shall be performed on one section (i.e. curb box inlet to curb box inlet) at a time. The section being inspected shall be suitably isolated from the remainder of the system.
- C. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Engineer.
- D. Contractor may have to perform point repairs, remove obstructions or remove protruding service connections to complete pre-rehabilitation TV inspection.

PART 2 -- PRODUCTS

2.01 EQUIPMENT

- A. The television camera used for inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, inspection shall be performed again with the appropriate changes made as designated by the Engineer at no additional cost to the Engineer. The television inspection equipment shall have an accurate footage counter that shall display on the monitor, the exact distance of the camera from the centerline of the starting manhole.

PART 3 -- EXECUTION

3.01 PROCEDURE

- A. The camera shall be moved through the pipe in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the pipe's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the pipe conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through the entire section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite opening. All set-up costs for the inspection shall be included in the unit prices bid. If the camera fails to pass through the entire section, the Contractor shall perform point repairs as required or approved by the Engineer. Point repairs will be paid as each at the bid price for "PIPE REPAIR". The Contractor shall re-clean or further remove blockage after the point repairs at no additional cost to the Engineer.
- B. Whenever non-remote powered and controlled winches are used to pull the television camera

through the line, telephones, radios, or other suitable means of communication shall be set up between the two openings of the line being inspected to ensure that good communications exist between members of the crew.

The camera height shall be adjusted such that the camera lens is always centered in the pipe being televised. Flow shall be controlled such that depth of flow shall not exceed 20% of pipe's diameter.

Lighting system shall be adequate for quality pictures.

3.02 RECORDING OF FIELD OBSERVATIONS

A. Television Inspection logs

1. Printed location records shall be kept which shall clearly show the location. In addition, other data of significance including joints, unusual conditions, roots, collapsed sections, or presence of scale and corrosion that the camera failed to pass through and reasons for the failure and other discernible features shall be recorded and annotated using the PACP system and a copy of such records shall be supplied to the Engineer.

B. Digital Recordings

1. The purpose of digital recording shall be to supply a visual and audio record of areas of interests of the pipe segments that may be replayed by the Engineer. Digital recording playback shall be at the same speed that it was recorded and shall be made in color. The Contractor shall be required to have all digital media and necessary playback equipment readily accessible for review by the Engineer during the project.
2. The Contractor shall perform CCTV inspection of each newly installed or rehabilitated pipe segment after testing and before re-introducing any flow into the pipe. Each test shall be witnessed by the Engineer.
3. The Contractor shall record each CCTV inspection on a DVD and submit such recordings to the Engineer as a prerequisite for Partial Utilization/Substantial Completion.
4. CCTV inspections shall be performed by a PACP certified and trained person.
5. Inspections shall include narration that notes the location and type of defects, if any.
6. At the completion of the project, the Contractor shall furnish all of the original digital recordings to the Engineer. Each disc shall be labeled as to its contents. Labels shall include the disc number, date televised, sewer segment reach designation, street location, and structure numbers on the disc. The Contractor shall keep a copy of the discs for 30 days after the final payment for the project, at which time the discs may be erased at the Contractor's option.

PART 4 – PAYMENT

Payment for both the video inspection prior to and after the Pipe Liners have been installed will be made as one lump sum payment as PIPE LINER ACCEPTANCE TESTING. Payment for PIPE LINER ACCEPTANCE TESTING will be considered full compensation for all work, equipment, and incidentals necessary to perform the video inspection in accordance with this note.

Payment for pipe point repairs will be made as each at the bid price for PIPE REPAIR. Payment for PIPE REPAIR will be considered full compensation for all work, equipment, and incidentals necessary to make point repairs as required and approved by the Engineer.

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SPECIAL NOTE FOR PVC FOLD-AND-FORM PIPE LINER

I. GENERAL

A. SUMMARY

1. Section Includes: Definition of the approved methods and materials to rehabilitate gravity pipelines by the insertion of a continuously extruded, folded, PVC Fold-and-Form Pipe Liner into a conduit (host pipe), and the “blow-molding” (thermoforming) of the pipe liner to conform to the shape of the existing pipe. The pipe liner shall:

- a) Extend continuously from one access point to the next access point with no joints.
- b) Provide a tightly conforming fit against the inner wall of the host pipe.
- c) Definitions:
 - (1) PVC Fold-and-Form Pipe Liner: A continuously extruded (jointless), polyvinyl chloride (PVC) Pipe Liner that is shaped into a reduced form to facilitate insertion into existing pipelines or conduits. The Pipe Liner shall return to its extruded, round memory upon application of heat and pressure and form tightly against the host pipe by “blow molding” (thermoforming) techniques.
 - (2) Host Pipe: An existing gravity pipeline or conduit to be internally rehabilitated by installation of the PVC Fold-and-Form Pipe Liner.

B. REFERENCES

1. Codes and standards referred to in this Special Note are:
 - a) ASTM D 256: Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
 - b) ASTM D 638: Standard Test Method for Tensile Properties of Plastics
 - c) ASTM D 790: Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics
 - d) ASTM D 1784: Standard Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
 - e) ASTM D 2122: Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
 - f) ASTM D 2152: Standard Test Method for Extrusion Quality using Acetone Immersion
 - g) ASTM D 2444: Standard Test Method for Impact Strength
 - h) ASTM F 1057: Standard Test Method for Extrusion Quality using Heat Reversion
 - i) ASTM F 1504: Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe for Existing Sewer and Conduit rehabilitation

C. PIPE DESIGN AND DIMENSION

1. Submittals: The Contractor shall furnish engineering data covering materials and installation procedures.

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2. Unless otherwise specified, the Contractor shall determine the minimum and maximum length of liner to effectively span the distance from the inlet to the outlet of the respective pipelines.

3. The pipe liner shall have a nominal outside diameter and minimum wall thickness based upon project parameters and the condition of the host pipe.

D. SAFETY

1. The CONTRACTOR shall conform to all safety requirements of pertinent regulatory agencies, and shall secure the site for the working conditions in compliance with the same. The CONTRACTOR shall erect signs and devices as are necessary for the safety of the work site.

2. The CONTRACTOR shall also provide all of the WORK in accordance with applicable OSHA standards. Emphasis shall be placed upon the requirements for entering confined spaces and working with steam.

II. PRODUCTS

A. MATERIAL SPECIFICATIONS:

1. The PVC Fold-and-Form Pipe Liner will be manufactured from virgin PVC Fold-and-Form Pipe Liner compound, containing no fillers, and meet or exceed the following minimum physical properties:

- a) COMBUSTIBILITY: Self-Extinguishing
- b) FLEXURAL MODULUS: ASTM D 790 280,000 PSI @73F
- c) FLEXURAL STRENGTH: ASTM D 790 5,000 PSI @73F
- d) IZOD IMPACT: ASTM D 256 1.5 FT-LB/IN
- e) CHEMICAL RESISTANCE: suitable under general sanitary sewer conditions

2. CHARACTERISTICS: The PVC Fold-and-Form Pipe Liner shall be designed to meet the following installation performance requirements:

- a) The Pipe Liner shall be capable of expanding a full pipe size larger than the nominal diameter (ex: 8" to 10") without splitting, or rupturing with the understanding that the pipe liner dimension ratio will increase when so expanded.
- b) After being expanded by "blow-molding", the installed Pipe Liner will match the configuration of the host pipe.
- c) The Pipe Liner shall be capable of negotiating pipe line bends in the host pipe without splitting, rupturing, or wrinkling of the pipe liner material.
- d) The pipe liner shall be dimensionally stable after cool-down.
- e) Processing of the pipe liner shall cause no degradation of the pipe liner physical properties.

3. MARKINGS: The pipe liner shall be marked at maximum five (5) foot intervals indicating ASTM D 1784 cell classification, manufacturer, and size (diameter and SDR). Each production lot will be uniquely coded.

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4. DIMENSIONS:

- a) The Pipe Liner outside diameter will be manufactured substantially smaller than the inside diameter of the host pipe. The pipe liner shall be manufactured with sufficient excess wall thickness to allow the pipe liner to meet or exceed the DR requirements after being expanded by "blow-molding" within the host pipe.
- b) Unless otherwise specified, the Standard Dimension Ration (SDR) of 4" to 15" diameter Pipe Liner will be SDR 35. 18" to 36" Pipe Liner will be specified by wall thickness. The Pipe Liner will be continuously extruded (no joints) at the factory to the minimum length required to effectively span the distance between access points, in accordance with actual distances which shall be field verified by the Contractor prior to manufacturing.

B. MATERIAL TESTING: Each production lot of Pipe Liner will be inspected and tested at the time of manufacture for defects in accordance with ASTM D 2444, and ASTM D 2152. All pipe liners shall conform to the specified dimensions. Material design properties shall be confirmed in accordance with ASTM D 790.

III. EXECUTION

A. HOST PIPE PREPARATION

1. The existing pipeline shall be cleaned of any obstructions and televised using CCTV immediately prior to installation of the pipe liner. The host pipe condition shall be acceptable to the ENGINEER as appropriate for lining prior to the insertion of the pipe Liner.
2. Prior to beginning the insertion of the pipe liner, the CONTRACTOR shall confirm that the host pipe is adequately cleaned.

B. INSTALLATION PROCEDURES:

1. The pipe liner manufacturer's installation instructions and procedures shall be followed during installation.
2. Point Repairs
 - a) Point repairs and obstruction removals shall be completed, as necessary, in order to enable lining.
3. Liner Insertion
 - a) The entrance to the host pipe shall be covered so as to provide a smooth surface to prevent damage to the Pipe Liner.
 - b) The Pipe Liner shall be positioned to enable it to naturally curve into the access point and the host pipe.
 - c) The insertion end of the Pipe Liner shall be sealed to inhibit fluids and solids from entering the lumen of the Pipe Liner.
 - d) Insert the Pipe Liner into the entry access point. Slowly feed the Pipe Liner from the supply reel, while simultaneously pulling the Pipe Liner at the exit access point, to minimize tension on the Pipe Liner. Maintain two-way communication between personnel at entry and exit access points to coordinate the rate of Pipe Liner supply and pulling operations.
 - e) Use a power winch and a steel cable connected to the pulling head as recommended by the manufacturer to advance the Pipe Liner.

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4. Pipe Liner Processing and “Blow-Molding”:
 - a) Process and “blow-mold” the PVC Fold and-Form Pipe Liner in accordance with the manufacturer’s instructions for heating and expanding the Pipe Liner. Upon completion of processing and “blow-molding”, the Pipe Liner shall fit tightly against the inside wall of the host pipe and be locked into the joints of the host pipe, if possible.
 - b) Temperature and pressure gauges shall be used at the insertion and termination access points to monitor internal conditions during Pipe Liner processing and “blow-molding”.
 - c) Introduce pressurized steam to heat and relax the Pipe Liner in strict accordance with the recommendations of the Pipe Liner manufacturer.
 - d) Continue the application of steam while introducing compressed air to increase internal pressure on the Pipe Liner as recommended by the manufacturer. DO NOT ALLOW PRESSURE TO EXCEED 12 PSI, AS DAMAGE MAY OCCUR TO HOST PIPE.
 - e) Discontinue the use of steam while continuing the use of compressed air to maintain the internal pressure. Allow the Pipe Liner to cool below 100 F before releasing pressure.
5. Liner Termination:
 - a) During the pulling in place and “blow-molding” process, the PVC liner shall form a bell shape at each end effectively locking the liner in place.

IV. PAYMENT

- A. Payment for PVC Fold and Form Pipe Liners will be made per linear foot as
 1. PVC FOLD AND FORM PIPE LINER – 12 IN - ITEM 24860EC
 2. PVC FOLD AND FORM PIPE LINER – 15 IN - ITEM 24861EC
 3. PVC FOLD AND FORM PIPE LINER – 18 IN - ITEM 24862EC
 4. PVC FOLD AND FORM PIPE LINER – 24 IN - ITEM 24863EC
 5. PVC FOLD AND FORM PIPE LINER – 30 IN - ITEM 24864EC
 6. PVC FOLD AND FORM PIPE LINER – 36 IN - ITEM 24865EC
- B. Payment will be considered full compensation for all work, equipment, and incidentals necessary to install the pipe liners in accordance with this note.

PROPOSAL BID ITEMS

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Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	34,353.00	TON	\$		
0020	00078		CRUSHED AGGREGATE SIZE NO 2	1,798.00	TON	\$		
0030	00100		ASPHALT SEAL AGGREGATE	138.00	TON	\$		
0040	00103		ASPHALT SEAL COAT	17.00	TON	\$		
0050	00190		LEVELING & WEDGING PG64-22	18,984.00	TON	\$		
0060	00194		LEVELING & WEDGING PG76-22	541.00	TON	\$		
0070	00205		CL3 ASPH BASE 1.50D PG64-22	33,849.00	TON	\$		
0080	00212		CL2 ASPH BASE 1.00D PG64-22	6,596.00	TON	\$		
0090	00214		CL3 ASPH BASE 1.00D PG64-22	6,568.00	TON	\$		
0100	00216		CL3 ASPH BASE 1.00D PG76-22	18,511.00	TON	\$		
0110	00336		CL3 ASPH SURF 0.38A PG76-22	8,442.00	TON	\$		
0120	00339		CL3 ASPH SURF 0.38D PG64-22	1,669.00	TON	\$		
0130	00356		ASPHALT MATERIAL FOR TACK	127.00	TON	\$		
0140	02101		CEM CONC ENT PAVEMENT-8 IN	1,367.00	SQYD	\$		
0150	02107		BREAKING AND SEATING PAVEMENT	56,111.00	SQYD	\$		
0160	02603		FABRIC-GEOTEXTILE CLASS 2	59,889.00	SQYD	\$		
0170	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS	\$		
0180	02677		ASPHALT PAVE MILLING & TEXTURING	4,344.00	TON	\$		
0190	20071EC		JOINT ADHESIVE	105,924.00	LF	\$		
0200	24685EC		CL2 ASPH SURF 0.38A PG64-22	2,652.00	TON	\$		
			INTELLIGENT COMPACTION FOR AGGREGATE	34,353.00	TON	\$		
0220	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	89,575.00	TON	\$		
0230	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	1,398,114.00	SF	\$		

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0240	01691		FLUME INLET TYPE 2	9.00	EACH	\$		
0250	01810		STANDARD CURB AND GUTTER	18,513.00	LF	\$		
0260	01811		STANDARD CURB AND GUTTER MOD	35,945.00	LF	\$		
0270	01820		LIP CURB AND GUTTER	131.00	LF	\$		
0280	01875		STANDARD HEADER CURB	2,408.00	LF	\$		
			DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	121.00	EACH	\$		
0290	01982		BARRICADE-TYPE III	12.00	EACH	\$		
0300	02014		REMOVE PAVEMENT	1,487.00	SQYD	\$		
0320	02230		EMBANKMENT IN PLACE	110,768.00	CUYD	\$		
0330	02242		WATER	5,438.00	MGAL	\$		
0340	02262		FENCE-WOVEN WIRE TYPE 1	76.00	LF	\$		
0350	02351		GUARDRAIL-STEEL W BEAM-S FACE	5,950.00	LF	\$		
0360	02367		GUARDRAIL END TREATMENT TYPE 1	10.00	EACH	\$		
0370	02369		GUARDRAIL END TREATMENT TYPE 2A	5.00	EACH	\$		
0380	02381		REMOVE GUARDRAIL	267.00	LF	\$		
0390	02391		GUARDRAIL END TREATMENT TYPE 4A	3.00	EACH	\$		
0400	02429		RIGHT-OF-WAY MONUMENT TYPE 1	13.00	EACH	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0410	02430	RIGHT-OF-WAY MONUMENT TYPE 1A	6.00	EACH	\$		
0420	02432	WITNESS POST	38.00	EACH	\$		
		CLEARING AND GRUBBING					
0430	02545	86.96 ACRES	1.00	LS	\$		
0440	02551	CONCRETE-CLASS A FOR STEPS	1.88	CUYD	\$		
0450	02555	CONCRETE-CLASS B	229.80	CUYD	\$		
0460	02562	TEMPORARY SIGNS	1,691.00	SQFT	\$		
0470	02575	DITCHING AND SHOULDERING	2,370.00	LF	\$		
0480	02585	EDGE KEY	129.00	LF	\$		
0490	02602	FABRIC-GEOTEXTILE CLASS 1	734.00	SQYD	\$		
0500	02612	HANDRAIL-TYPE A-2	232.00	LF	\$		
0510	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS	\$		
0520	02654	TRUCK MOUNTED ATTENUATOR	1.00	EACH	\$		
0530	02671	PORTABLE CHANGEABLE MESSAGE SIGN	10.00	EACH	\$		
0540	02690	SAFELOADING	29.00	CUYD	\$		
0550	02701	TEMP SILT FENCE	13,640.00	LF	\$		
0560	02703	SILT TRAP TYPE A	106.00	EACH	\$		
0570	02704	SILT TRAP TYPE B	106.00	EACH	\$		
0580	02705	SILT TRAP TYPE C	106.00	EACH	\$		
0590	02706	CLEAN SILT TRAP TYPE A	106.00	EACH	\$		
0600	02707	CLEAN SILT TRAP TYPE B	106.00	EACH	\$		
0610	02708	CLEAN SILT TRAP TYPE C	106.00	EACH	\$		
0620	02720	SIDEWALK-4 IN CONCRETE	3,276.00	SQYD	\$		
0630	02726	STAKING	1.00	LS	\$		
0640	02775	ARROW PANEL	5.00	EACH	\$		
0650	04953	TEMP RELOCATION OF SIGNAL HEAD	21.00	EACH	\$		
0660	05950	EROSION CONTROL BLANKET	16,466.00	SQYD	\$		
0670	05952	TEMP MULCH	283,360.00	SQYD	\$		
0680	05953	TEMP SEEDING AND PROTECTION	218,771.00	SQYD	\$		
0690	05963	INITIAL FERTILIZER	13.90	TON	\$		
0700	05964	MAINTENANCE FERTILIZER	9.10	TON	\$		
0710	05985	SEEDING AND PROTECTION	218,053.00	SQYD	\$		
0720	05989	SPECIAL SEEDING CROWN VETCH	40,248.00	SQYD	\$		
0730	05992	AGRICULTURAL LIMESTONE	146.30	TON	\$		
0740	05997	TOPSOIL FURNISHED AND PLACED	982.00	CUYD	\$		
0750	06510	PAVE STRIPING-TEMP PAINT-4 IN	51,993.00	LF	\$		
0760	06511	PAVE STRIPING-TEMP PAINT-6 IN	229,214.00	LF	\$		
0770	06514	PAVE STRIPING-PERM PAINT-4 IN	51,112.00	LF	\$		
0780	06516	PAVE STRIPING-PERM PAINT-8 IN	954.00	LF	\$		
0790	06530	PAVE STRIPING REMOVAL-4 IN	39,816.00	LF	\$		
0800	06531	PAVE STRIPING REMOVAL-6 IN	96,144.00	LF	\$		
0810	06542	PAVE STRIPING-THERMO-6 IN W	48,174.00	LF	\$		
0820	06543	PAVE STRIPING-THERMO-6 IN Y	25,814.00	LF	\$		
0830	06546	PAVE STRIPING-THERMO-12 IN W	5,256.00	LF	\$		
0840	06547	PAVE STRIPING-THERMO-12 IN Y	689.00	LF	\$		
0850	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF	\$		
0860	06551	PAVE STRIPING-TEMP REM TAPE-Y	1,000.00	LF	\$		
0870	06565	PAVE MARKING-THERMO X-WALK-6 IN	2,288.00	LF	\$		
0880	06566	PAVE MARKING-THERMO X-WALK-12 IN	526.00	LF	\$		
0890	06567	PAVE MARKING-THERMO STOP BAR-12IN	132.00	LF	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0900	06568	PAVE MARKING-THERMO STOP BAR-24IN	1,779.00	LF	\$		
0910	06570	PAVE MARKING-PAINT CROSS-HATCH	1,870.00	SQFT	\$		
0920	06573	PAVE MARKING-THERMO STR ARROW	3.00	EACH	\$		
0930	06574	PAVE MARKING-THERMO CURV ARROW	231.00	EACH	\$		
0940	06575	PAVE MARKING-THERMO COMB ARROW	15.00	EACH	\$		
0950	06576	PAVE MARKING-THERMO ONLY	4.00	EACH	\$		
0960	06600	REMOVE PAVEMENT MARKER TYPE V	793.00	EACH	\$		
0970	06610	INLAID PAVEMENT MARKER-MW	786.00	EACH	\$		
0980	06611	INLAID PAVEMENT MARKER-MY	280.00	EACH	\$		
0990	06612	INLAID PAVEMENT MARKER-BY	58.00	EACH	\$		
1000	06613	INLAID PAVEMENT MARKER-B W/R	62.00	EACH	\$		
1010	06614	INLAID PAVEMENT MARKER-B Y/R	1.00	EACH	\$		
1020	08001	STRUCTURE EXCAVATION-COMMON	195.00	CUYD	\$		
1030	08100	CONCRETE-CLASS A	987.86	CUYD	\$		
1040	08150	STEEL REINFORCEMENT	386.00	LB	\$		
1050	10020NS	FUEL ADJUSTMENT	184,160.00	DOLL \$1.00	\$	\$	\$184,160.00
1060	10030NS	ASPHALT ADJUSTMENT	383,414.00	DOLL \$1.00	\$	\$	\$383,414.00
1070	20191ED	OBJECT MARKER TY 3	10.00	EACH	\$		
1080	20362ES403	SHOULDER RUMBLE STRIPS-SAWED	10,308.00	LF	\$		
1090	20550ND	SAWCUT PAVEMENT	30,963.00	LF	\$		
1100	21289ED	LONGITUDINAL EDGE KEY	848.00	LF	\$		
1110	23010EN	PAVE MARK TEMP PAINT STOP BAR-24 IN	2,239.00	LF	\$		
1120	23158ES505	DETECTABLE WARNINGS	1,239.00	SQFT	\$		
1130	23274EN11F	TURF REINFORCEMENT MAT 1	15,650.00	SQYD	\$		
1140	23275EN11F	TURF REINFORCEMENT MAT 2	262.00	SQYD	\$		
1150	23276EN11F	TURF REINFORCEMENT MAT 3	33.00	SQYD	\$		
1160	23277EN11F	TURF REINFORCEMENT MAT 4	45.00	SQYD	\$		
		YIELD LINES					
1170	23745EC	9.	24.00	EACH	\$		
1180	23875NC	REMOVE THERMOPLASTIC ARROWS	4.00	EACH	\$		
1190	24109EC	BARRIER CURB AND GUTTER-MOD	709.00	LF	\$		
1200	24540	R/W MONUMENT TYPE 3	82.00	EACH	\$		
1210	24541	R/W MONUMENT TYPE 3A	16.00	EACH	\$		
1220	24596EN	GRANULAR BACKFILL	81.00	CUYD	\$		
1230	24679ED	PAVE MARK THERMO CHEVRON	141.00	SQFT	\$		
1240	24889EC	PAVE MARKING-THERMO U-TURN	2.00	EACH	\$		

Section: 0003 - ROADWAY- PARKING LOT

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1250	00003	CRUSHED STONE BASE	600.00	TON	\$		
1260	00103	ASPHALT SEAL COAT	1.60	TON	\$		
1270	00212	CL2 ASPH BASE 1.00D PG64-22	285.00	TON	\$		
1280	00522	STORM SEWER PIPE-18 IN	153.00	LF	\$		
1290	01310	REMOVE PIPE	25.00	LF	\$		
1300	01459	CURB BOX INLET TYPE A MOD	3.00	EACH	\$		
1310	01642	JUNCTION BOX-18 IN	1.00	EACH	\$		
1320	01718	REMOVE INLET	1.00	EACH	\$		
1330	01811	STANDARD CURB AND GUTTER MOD	1,362.00	LF	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1340	01812	REMOVE CURB AND GUTTER	996.00	LF	\$		
1350	02091	REMOVE PAVEMENT	2,939.00	SQYD	\$		
1360	02460	REMOVE TREES OR STUMPS	8.00	EACH	\$		
1370	02720	SIDEWALK-4 IN CONCRETE	34.00	SQYD	\$		
1380	05990	SODDING	1,074.00	SQYD	\$		
1390	06406	SBM ALUM SHEET SIGNS .080 IN	201.00	SQFT	\$		
1400	06410	STEEL POST TYPE 1	63.00	LF	\$		
1410	06540	PAVE STRIPING-THERMO-4 IN W	644.00	LF	\$		
1420	06541	PAVE STRIPING-THERMO-4 IN Y	3,965.00	LF	\$		
1430	06567	PAVE MARKING-THERMO STOP BAR-12IN	120.00	LF	\$		
1440	06574	PAVE MARKING-THERMO CURV ARROW	11.00	EACH	\$		
1450	06576	PAVE MARKING-THERMO ONLY	1.00	EACH	\$		
1460	20550ND	SAWCUT PAVEMENT	1,054.00	LF	\$		
1470	21373ND	REMOVE SIGN	3.00	EACH	\$		
1480	22664EN	WATER BLASTING EXISTING STRIPE	5,524.00	LF	\$		
1490	23793EC	CONNECT TO EXIST CULVERT	1.00	EACH	\$		
1500	23794EC	CONNECT TO STORM SEWER STRUCTURE	1.00	EACH	\$		
1510	24685EC	CL2 ASPH SURF 0.38A PG64-22	150.00	TON	\$		
1520	40048	TOPSOILING-4 IN THICK OBTAINED ON SITE	1,074.00	SQYD	\$		

Section: 0004 - DRAINAGE

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1530	00078	CRUSHED AGGREGATE SIZE NO 2	40.00	TON	\$		
1540	00462	CULVERT PIPE-18 IN	273.00	LF	\$		
1550	00464	CULVERT PIPE-24 IN	380.00	LF	\$		
1560	00466	CULVERT PIPE-30 IN	28.00	LF	\$		
1570	00499	CULVERT PIPE-48 IN EQUIV	57.00	LF	\$		
1580	00520	STORM SEWER PIPE-12 IN	169.00	LF	\$		
1590	00521	STORM SEWER PIPE-15 IN	6,720.00	LF	\$		
1600	00522	STORM SEWER PIPE-18 IN	6,270.00	LF	\$		
1610	00523	STORM SEWER PIPE-21 IN	297.00	LF	\$		
1620	00524	STORM SEWER PIPE-24 IN	1,331.00	LF	\$		
1630	00526	STORM SEWER PIPE-30 IN	712.00	LF	\$		
1640	00528	STORM SEWER PIPE-36 IN	855.00	LF	\$		
1650	00533	STORM SEWER PIPE-66 IN	17.00	LF	\$		
1660	00535	STORM SEWER PIPE-78 IN	64.00	LF	\$		
1670	00556	STORM SEWER PIPE-30 IN EQUIV	259.00	LF	\$		
1680	01000	PERFORATED PIPE-4 IN	27,754.00	LF	\$		
1690	01005	PERFORATED PIPE EDGE DRAIN-4 IN	380.00	LF	\$		
1700	01010	NON-PERFORATED PIPE-4 IN	1,566.00	LF	\$		
1710	01015	INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS	\$		
1720	01020	PERF PIPE HEADWALL TY 1-4 IN	9.00	EACH	\$		
1730	01024	PERF PIPE HEADWALL TY 2-4 IN	5.00	EACH	\$		
1740	01028	PERF PIPE HEADWALL TY 3-4 IN	22.00	EACH	\$		
1750	01032	PERF PIPE HEADWALL TY 4-4 IN	4.00	EACH	\$		
1760	01208	PIPE CULVERT HEADWALL-24 IN	3.00	EACH	\$		
1770	01210	PIPE CULVERT HEADWALL-30 IN	7.00	EACH	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1780	01212	PIPE CULVERT HEADWALL-36 IN	2.00	EACH	\$		
1790	01217	PIPE CULVERT HEADWALL-48 IN EQUIV	2.00	EACH	\$		
1800	01222	PIPE CULVERT HEADWALL-66 IN	1.00	EACH	\$		
1810	01310	REMOVE PIPE	13.00	LF	\$		
1820	01428	SLOPED BOX OUTLET TYPE 1-12 IN	1.00	EACH	\$		
1830	01432	SLOPED BOX OUTLET TYPE 1-15 IN	3.00	EACH	\$		
1840	01433	SLOPED BOX OUTLET TYPE 1-18 IN	11.00	EACH	\$		
1850	01434	SLOPED BOX OUTLET TYPE 1-24 IN	5.00	EACH	\$		
1860	01452	S & F BOX INLET-OUTLET-30 IN	2.00	EACH	\$		
1870	01453	S & F BOX INLET-OUTLET-36 IN	1.00	EACH	\$		
1880	01456	CURB BOX INLET TYPE A	72.00	EACH	\$		
1890	01480	CURB BOX INLET TYPE B	26.00	EACH	\$		
1900	01490	DROP BOX INLET TYPE 1	4.00	EACH	\$		
1910	01496	DROP BOX INLET TYPE 3	1.00	EACH	\$		
1920	01511	DROP BOX INLET TYPE 5D	6.00	EACH	\$		
1930	01514	DROP BOX INLET TYPE 5E	9.00	EACH	\$		
1940	01517	DROP BOX INLET TYPE 5F	6.00	EACH	\$		
1950	01544	DROP BOX INLET TYPE 11	14.00	EACH	\$		
1960	01547	DROP BOX INLET TYPE 12	100.00	LF	\$		
1970	01559	DROP BOX INLET TYPE 13G	119.00	EACH	\$		
1980	01568	DROP BOX INLET TYPE 13S	26.00	EACH	\$		
1990	01577	DROP BOX INLET TYPE 14	5.00	EACH	\$		
2000	01580	DROP BOX INLET TYPE 15	3.00	EACH	\$		
2010	01650	JUNCTION BOX	9.00	EACH	\$		
2020	01740	CORED HOLE DRAINAGE BOX CON-4 IN	164.00	EACH	\$		
2030	01756	MANHOLE TYPE A	9.00	EACH	\$		
2040	01761	MANHOLE TYPE B	1.00	EACH	\$		
2050	01767	MANHOLE TYPE C	9.00	EACH	\$		
2060	01789	RECONSTRUCT MANHOLE	5.00	EACH	\$		
2070	01791	ADJUST MANHOLE FRAME TO GRADE	7.00	EACH	\$		
2080	02607	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	43,331.00	SQYD	\$2.00	\$	\$86,662.00
2090	03262	CLEAN PIPE STRUCTURE	5.00	EACH	\$		
2100	03387	PVC PIPE-8 IN	8.00	LF	\$		
2110	03389	PVC PIPE-10 IN	8.00	LF	\$		
2120	24860EC	PVC FOLD AND FORM PIPE LINER-12 IN (ADDED 4-14-23)	67.00	LF	\$		
2130	24863EC	PVC FOLD AND FORM PIPE LINER-24 IN (ADDED 4-14-23)	490.00	LF	\$		
2140	24861EC	PVC FOLD AND FORM PIPE LINER-15 IN (ADDED 4-14-23)	731.00	LF	\$		
2150	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN (ADDED 4-14-23)	1,259.00	LF	\$		
2160	26190EC	PVC FOLD AND FORM PIPE LINER-21 IN (ADDED 4-14-23)	61.00	LF	\$		
2170	24864EC	PVC FOLD AND FORM PIPE LINER-30 IN (ADDED 4-14-23)	690.00	LF	\$		
2180	24865EC	PVC FOLD AND FORM PIPE LINER-36 IN (ADDED 4-14-23)	142.00	LF	\$		
2190	22767ES710	DROP BOX INLET TY 6E	3.00	EACH	\$		
2200	23793EC	CONNECT TO EXIST CULVERT	59.00	EACH	\$		
2210	23794EC	CONNECT TO STORM SEWER STRUCTURE	6.00	EACH	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2220	24575ES610	HEADWALL PIPE CULVERT HEADWALL-78 IN.	1.00	EACH	\$		
2230	24814EC	PIPELINE INSPECTION	16,514.00	LF	\$		

Section: 0005 - BRIDGE- CULVERT

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2240	02403	REMOVE CONCRETE MASONRY	1.20	CUYD	\$		
2250	08002	STRUCTURE EXCAV-SOLID ROCK	13.00	CUYD	\$		
2260	08003	FOUNDATION PREPARATION	1.00	LS	\$		
2270	08100	CONCRETE-CLASS A	91.30	CUYD	\$		
2280	08150	STEEL REINFORCEMENT	13,029.00	LB	\$		

Section: 0006 - SEWER

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2290	15011	S DIRECTIONAL BORE	40.00	LF	\$		
2300	15017	S ENCASEMENT STEEL BORED RANGE 4	84.00	LF	\$		
2310	15018	S ENCASEMENT STEEL BORED RANGE 5	525.00	LF	\$		
2320	15057	S FORCE MAIN PVC 02 INCH	180.00	LF	\$		
2330	15061	S FORCE MAIN PVC 08 INCH	1,660.00	LF	\$		
2340	15063	S FORCE MAIN PVC 12 INCH	1,660.00	LF	\$		
2350	15071	S FORCE MAIN TIE-IN 02 INCH	2.00	EACH	\$		
2360	15075	S FORCE MAIN TIE-IN 08 INCH	4.00	EACH	\$		
2370	15077	S FORCE MAIN TIE-IN 12 INCH	4.00	EACH	\$		
2380	15091	S LATERAL SPECIAL	4.00	EACH	\$		
2390	15092	S MANHOLE	28.00	EACH	\$		
2400	15093	S MANHOLE ABANDON/REMOVE	16.00	EACH	\$		
2410	15099	S MANHOLE TAP EXISTING	4.00	EACH	\$		
2420	15112	S PIPE PVC 08 INCH	2,400.00	LF	\$		
2430	15114	S PIPE PVC 12 INCH	300.00	LF	\$		
2440	15120	S SPECIAL ITEM	2.00	EACH	\$		

Section: 0007 - SIGNING

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2450	06406	SBM ALUM SHEET SIGNS .080 IN	1,041.00	SQFT	\$		
2460	06407	SBM ALUM SHEET SIGNS .125 IN	235.00	SQFT	\$		
2470	06411	STEEL POST TYPE 2	2,645.00	LF	\$		
2480	20418ED	REMOVE & RELOCATE SIGNS	17.00	EACH	\$		
2490	21373ND	REMOVE SIGN	8.00	EACH	\$		
2500	24631EC	BARCODE SIGN INVENTORY	271.00	EACH	\$		

Section: 0008 - SIGNALIZATION

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2510	04780	FUSED CONNECTOR KIT	35.00	EACH	\$		
2520	04820	TRENCHING AND BACKFILLING	675.00	LF	\$		
2530	04845	CABLE-NO. 14/7C	21,300.00	LF	\$		
2540	04886	MESSENGER-15400 LB	3,945.00	LF	\$		
2550	04892	MESSENGER-26900 LB	800.00	LF	\$		
2560	04932	INSTALL STEEL STRAIN POLE	32.00	EACH	\$		
2570	04953	TEMP RELOCATION OF SIGNAL HEAD	104.00	EACH	\$		
2580	06472	INSTALL SPAN MOUNTED SIGN	8.00	EACH	\$		
2590	20093NS835	INSTALL PEDESTRIAN HEAD-LED	28.00	EACH	\$		
2600	20188NS835	INSTALL LED SIGNAL-3 SECTION	67.00	EACH	\$		
2610	20266ES835	INSTALL LED SIGNAL- 4 SECTION	48.00	EACH	\$		
2620	20390NS835	INSTALL COORDINATING UNIT	5.00	EACH	\$		
2630	21543EN	BORE AND JACK CONDUIT	190.00	LF	\$		
2640	21743NN	INSTALL PEDESTRIAN DETECTOR	28.00	EACH	\$		
		REMOVE & REINSTALL COORDINATING UNIT					
2650	23068NN		3.00	EACH	\$		
2660	23157EN	TRAFFIC SIGNAL POLE BASE	148.00	CUYD	\$		
2670	23222EC	INSTALL SIGNAL PEDESTAL	10.00	EACH	\$		
2680	23235EC	INSTALL PEDESTAL POST	4.00	EACH	\$		
2690	24901EC	PVC CONDUIT-2 IN-SCHEDULE 80	1,010.00	LF	\$		
2700	24908EC	INSTALL SIGNAL CONTROLLER-TY ATC	8.00	EACH	\$		
2710	24955ED	REMOVE SIGNAL EQUIPMENT	6.00	EACH	\$		
		INSTALL RADAR PRESENCE DETECTOR TYPE A					
2720	26119EC		32.00	EACH	\$		
		INSTALL RADAR ADVANCE DETECTOR TYPE B					
2730	26120EC		2.00	EACH	\$		

Section: 0009 - WATERLINE

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2740	14003	W CAP EXISTING MAIN	29.00	EACH	\$		
2750	14004	W DIRECTIONAL BORE	652.00	LF	\$		
2760	14006	W ENCASEMENT STEEL BORED RANGE 1	57.00	LF	\$		
2770	14009	W ENCASEMENT STEEL BORED RANGE 4	467.00	LF	\$		
2780	14010	W ENCASEMENT STEEL BORED RANGE 5	109.00	LF	\$		
2790	14017	W ENCASEMENT STEEL OPEN CUT RANGE 6	56.00	LF	\$		
2800	14019	W FIRE HYDRANT ASSEMBLY	12.00	EACH	\$		
2810	14031	W METER VAULT	22.00	EACH	\$		
2820	14032	W METER/FIRE SERVICE COMBO VAULT	1.00	EACH	\$		
2830	14056	W PIPE PVC 02 INCH	221.00	LF	\$		
2840	14059	W PIPE PVC 06 INCH	128.00	LF	\$		
2850	14060	W PIPE PVC 08 INCH	6,720.00	LF	\$		
2860	14062	W PIPE PVC 12 INCH	165.00	LF	\$		
2870	14063	W PIPE PVC 16 INCH	150.00	LF	\$		
2880	14089	W TAPPING SLEEVE AND VALVE SIZE 1	2.00	EACH	\$		
2890	14090	W TAPPING SLEEVE AND VALVE SIZE 2	2.00	EACH	\$		
2900	14091	W TIE-IN 02 INCH	4.00	EACH	\$		
2910	14094	W TIE-IN 06 INCH	4.00	EACH	\$		
2920	14095	W TIE-IN 08 INCH	18.00	EACH	\$		

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LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2930	14102	W VALVE 02 INCH	6.00	EACH	\$		
2940	14105	W VALVE 06 INCH	3.00	EACH	\$		
2950	14106	W VALVE 08 INCH	25.00	EACH	\$		
2960	14109	W VALVE 16 INCH	1.00	EACH	\$		
2970	14145	W SERV COPPER LONG SIDE 1 IN	5.00	EACH	\$		
2980	14147	W SERV COPPER LONG SIDE 2 IN	1.00	EACH	\$		
2990	14148	W SERV COPPER LONG SIDE 3/4 IN	2.00	EACH	\$		
3000	14150	W SERV COPPER SHORT SIDE 1-1/2 IN	1.00	EACH	\$		
3010	14151	W SERV COPPER SHORT SIDE 2 IN	4.00	EACH	\$		
3020	14152	W SERV COPPER SHORT SIDE 3/4 IN	13.00	EACH	\$		
3030	14158	W BLOWOFF ASSEMBLY Laurel	1.00	EACH	\$		

Section: 0010 - MOBILIZATION AND/OR DEMOBILIZATION

LINE	BID CODE	ALT DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3040	02568	MOBILIZATION	1.00	LS	\$		
3050	02569	DEMOBILIZATION	1.00	LS	\$		

PIPE SUMMARY

SHEET NO.	ITEM CODE	PVC FOLD AND FORM PIPE LINER						REMARKS
		12"	15"	18"	21"	24"	30"	
UNIT TO BID	24860EC	24861EC	24862EC	26190EC	24863EC	24864EC	24865EC	
STRUCTURE								
R294	HDWL 1101+99.05 L†	HDWL 1101+47.00 R†						1 Clean entire length of Ex. Double 10'x7' RCBC (Approx. 260 L.F.)
R297	EX. DBI 992+28.53 R†	EX. DBI 993+89.66 RT	44	221				
	DBI 992+90.00 R†	EX. DBI 993+56.16 L†		162				
N/A	EX. HDWL 996+87.13 R†	EX. CBI 997+11.76 R†		54				
N/A	EX. CBI 1001+09.08 L†	EX. HDWL 1000+93.12 R†		163				See sheet R5 for plan location
N/A	EX. CBI 1007+39.94 L†	EX. HDWL 1007+56.71 L†		41				See sheets R5 & R7 for plan location
R299	HDWL 1010+55.57 L†	EX. DBI 1011+97.96 L†		124				See sheet R9 for plan location
N/A	EX. DBI 1011+97.96 L†	EX. HDWL 1013+29.26 L†		51	26	61		See sheets R9 & R11 for plan location
N/A	EX. MH 1011+07.85 L†	EX. DBI 1012+56.84 R†		232				Outlet unknown, assumed length for PVC Liner. See sheet R11 for plan location.
R300	DBI 1013+00.00 L†	HDWL 1013+72.83 L†			165			
	HDWL 1013+72.83 L†							Inlet unknown, assumed length for PVC Liner
R304	EX. DBI 1024+57.21 L†	HDWL 1025+48.03 R†						1 Clean entire length of Ex. 66" RCP (Approx. 216 L.F.)
R310	DBI 1037+04.89 L†	MH 1037+57.46 L†						1 Clean entire length of Ex. 60" RCP (Approx. 147 L.F.)
N/A	DBI 1043+65.00 L†	DBI 1043+64.86 R†		100				See sheet R21 for plan location
R318	EX. DBI 1050+05.46 L†	EX. OUT. 1049+17.99 R†		83	210			See sheet R23 for plan location
N/A	EX. MH 1053+43.98 L†	MH 1053+43.50 L†		33				
R321	HDWL 1063+05.30 L†	HDWL 1063+65.32 R†				206		
R326	DBI 1096+15.92 L†	HDWL 1096+15.43 R†				124		
R374	HDWL 1072+85.96 R†	DBI 1072+85.80 L†				187		CC1 is stationed off Entr. Conn. Road Centerline on sheet R374 (1604+11.59 R†)
R375	EX. HDWL 1082+03.71 L†	MH 1082+92.25 R†			180			FF2 is stationed off Monument Road Centerline on sheet R374 (1709+93.50 L†)
	KY 192 SUBTOTAL		67	519	1025	61	345	517 0 3
KY 1006								
R337	DBI 109+03.00 L†	EX. DBI 112+59.27 L†			126			
	LONDON MARKETPLACE ROAD							
R345	EX. HDWL 2001+03.13 R†	EX. HDWL 2001+05.22 L†		108				
	US 25 NORTH							
R353	EX. HDWL 1007+47.43 L†	DBI 1007+96.00 L†		41				
	US 25 SOUTH							
R356	HDWL 2171+31.71 L†	EX. HDWL 2171+13.76 R†				142		
R357	DBI 1176+28.00 L†	EX. HDWL 1176+31.82 R†				173		
	US 25 SOUTH SUBTOTAL		0	0	0	0	173	142 0
	BACKAGE ROAD 2 (OFFICE DEPOT)							
N/A	EX. PIPE 1200+50.12							1 See sheet R61 for plan location. Clean entire length of Ex. 72" CMP (Approx. 721 L.F.)
	BACKAGE RD 2 (WENDON WAY EXT.)							
R366	HDWL 1907+88.62 R†							1 Clean entire length of Ex. 78" RCP (Approx. 456 L.F.)
	ENTRANCE CONNECTOR ROAD							
N/A	EX. INLET 1600+69.76 L†	DBI 1601+76.16 L†		171				See sheet R29 for plan location
R373	DBI 1602+15.00 L†	EX. JB 1604+93.47 R†				145		
	ENTRANCE CONNECTOR ROAD SUBTOTAL		0	171	0	0	145	0 0 0
	TOTAL PROJECT		67	731	1259	61	490	690 142 5

COUNTY OF
LAWRENCE
ITEM NO.
11-0087.00
SHEET NO.
R21-7

REVISED 4/11/2023

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
USER: backherms

E-SHEET NAME:
BURGESS & NIPLE

Power Inroads v8.11.9.397

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
USER: backherms

E-SHEET NAME:
BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
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E-SHEET NAME:
BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
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BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
USER: backherms

E-SHEET NAME:
BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
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DATE PLOTTED: APRIL 13, 2023
USER: backherms

E-SHEET NAME:
BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 202

PIPE SUMMARY

SHEET NO.	ITEM CODE	PVC FOLD AND FORM PIPE LINER						REMARKS		
		UNIT TO BID	12"	15"	18"	21"	24"	30"	36"	
	R294	HDWL 1101+99.05 L†	HDWL 1101+47.00 R†							1 Clean entire length of Ex. Double 10'x7' RCBC (Approx. 260 L.F.)
	R297	EX. DBI 992+28.53 R†	EX. DBI 993+89.66 RT		44	221				
	DBI 992+90.00 R†	EX. DBI 993+56.16 L†				162				
N/A	EX. HDWL 996+87.13 R†	EX. CBI 997+11.76 R†			54					See sheet R5 for plan location
N/A	EX. CBI 1001+09.08 L†	EX. HDWL 1000+93.12 R†			163					See sheets R5 & R7 for plan location
N/A	EX. CBI 1007+39.94 L†	EX. HDWL 1007+56.71 L†			41					See sheet R9 for plan location
R299	HDWL 1010+55.57 L†	EX. DBI 1011+97.96 L†			124					
N/A	EX. DBI 1011+97.96 L†	EX. HDWL 1013+29.26 L†			51	26	61			See sheets R9 & R11 for plan location
N/A	EX. MH 1011+07.85 L†	EX. DBI 1012+56.84 R†			232		165			Outlet unknown, assumed length for PVC Liner. See sheet R11 for plan location.
R300	DBI 1013+00.00 L†	HDWL 1013+72.83 L†								
	HDWL 1013+72.83 L†	HDWL 1024+57.21 L†			67					Inlet unknown, assumed length for PVC Liner
R304	EX. DBI 1024+57.21 L†	HDWL 1025+48.03 R†								1 Clean entire length of Ex. 66' RCP (Approx. 216 L.F.)
R310	DBI 1037+04.89 L†	MH 1037+57.46 L†								1 Clean entire length of Ex. 60' RCP (Approx. 147 L.F.)
N/A	DBI 1043+65.00 L†	DBI 1043+64.86 R†				100				See sheet R21 for plan location
R318	EX. DBI 1050+05.46 L†	EX. OUT. 1049+17.99 R†			83	210				
N/A	EX. MH 1053+43.98 L†	MH 1053+43.50 L†			33					See sheet R23 for plan location
R321	HDWL 1063+05.30 L†	HDWL 1063+65.32 R†					206			
R326	DBI 1096+15.92 L†	HDWL 1096+15.43 R†					124			
R374	HDWL 1072+85.96 R†	DBI 1072+85.80 L†					187			CC1 is stationed off Entr. Conn. Road Centerline on sheet R374 (1604+11.59 R†)
R375	EX. HDWL 1082+03.71 L†	MH 1082+92.25 R†					180			FF2 is stationed off Monument Road Centerline on sheet R374 (1709+93.50 L†)
	KY 192 SUBTOTAL				67	519	1025	61	345	517 0 3
	KY 1006									
R337	DBI 109+03.00 L†	EX. DBI 112+59.27 L†				126				
	LONDON MARKETPLACE ROAD									
R345	EX. HDWL 2001+03.13 R†	EX. HDWL 2001+05.22 L†				108				
	US 25 NORTH									
R353	EX. HDWL 1007+47.43 L†	DBI 1007+96.00 L†				41				
	US 25 SOUTH									
R356	HDWL 2171+31.71 L†	EX. HDWL 2171+13.76 R†						142		
R357	DBI 1176+28.00 L†	EX. HDWL 1176+31.82 R†						173		
	US 25 SOUTH SUBTOTAL				0	0	0	0	173	142 0
	BACKAGE ROAD 2 (OFFICE DEPOT)									
N/A	EX. PIPE 1200+50.12									1 See sheet R61 for plan location. Clean entire length of Ex. 72" CMP (Approx. 721 L.F.)
	BACKAGE RD 2 (WENDON WAY EXT.)									
R366	HDWL 1907+88.62 R†									1 Clean entire length of Ex. 78' RCP (Approx. 456 L.F.)
	ENTRANCE CONNECTOR ROAD									
N/A	EX. INLET 1600+69.76 L†	DBI 1601+76.16 L†								See sheet R29 for plan location
R373	DBI 1602+15.00 L†	EX. JB 1604+93.47 R†								
	ENTRANCE CONNECTOR ROAD SUBTOTAL				0	171	0	0	145	0 0 0
	TOTAL PROJECT				67	731	1259	61	490	690 142 5

COUNTY OF
LAUREL
ITEM NO.
11-0087.00
SHEET NO.
R27-7

REVISED 4/13/2023

STRUCTURE
CLEAN PIPE

REMARKS

BURGESS & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY.PDSU - PIPESUM.DGN
DATE PLOTTED: APRIL 13, 2023
USER: backherms

PIPE DRAINAGE SUMMARY
SHEET 7 OF 7

SCALE: N/A

PIPE DRAINAGE SUMMARY
SHEET 7 OF 7

GENERAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-0087.00	R2W-1

N.C.S. (U.S.G.S.) BENCH MARKS
DO NOT DISTURB N.G.S. (U.S.G.S.) BENCH MARKS IN ANY MANNER
UNLESS DIRECTED BY THE ENGINEER.

BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF THE UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTORS MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS. INCLUDING THOSE WHO DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNT COURT CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

DEPARTMENT OF THE ARMY PERMIT AND WATER QUALITY CERTIFICATION APPROVALS

A DEPARTMENT OF THE ARMY (DA) PERMIT, WHICH MAY REQUIRE APPROVAL OF A STATE WATER QUALITY CERTIFICATION FROM THE KENTUCKY DIVISION OF WATER, REGULATES THIS PROJECT AT ONE OR MORE LOCATIONS. PERFORM ALL APPLICABLE WORK IN COMPLIANCE WITH THE CONDITIONS STATED IN THE DA PERMIT AND THE APPROVED WATER QUALITY CERTIFICATION. POST A COPY OF THE DA PERMIT AND THE WATER QUALITY CERTIFICATION IN A CONSPICUOUS PLACE AT THE PROJECT SITE. IF A DA PERMIT OR WATER QUALITY CERTIFICATION APPROVAL IS PENDING, DO NOT WORK IN OR DISTURB THE DESIGNATED AREA(S) UNTIL OBTAINING THE APPROPRIATE APPROVAL(S). REFER TO NOTICE(S) CONTAINED IN THE CONTRACT BID PROPOSAL FOR DESIGNATED AREA(S) WHERE WORK IS PROHIBITED BY THE ABSENCE OF APPROVAL.

ROADBED NOTE, EMBANKMENT-IN-PLACE

USE EMBANKMENT-IN-PLACE WITH A MINIMUM C.B.R VALUE OF 2 OR GREATER IN THE TOP 12 INCHES OF ROADBED IN CUT AND FILL SECTIONS.

WINTER CLOSEDOWN

ANY ASPHALT CONCRETE BASE AND/OR SURFACE COURSE USED AS A RIDING SURFACE EXPOSED TO TRAFFIC DURING WINTER CLOSED DOWN PERIODS SHALL CONTAIN NATURAL, CONGLOMERATE, CRUSHED SLAG, CRUSHED GRANITE OR CRUSHED SANDSTONE SAND IN THE PROPORTION OF NO LESS THAN 25% OF THE TOTAL COMBINED COARSE AND FINE AGGREGATE.

ASPHALT PAVEMENT RIDE QUALITY

PAVEMENT RIDEABILITY REQUIREMENTS, IN ACCORDANCE WITH SECTION 410 OF THE STANDARD SPECIFICATIONS, SHALL APPLY ON THIS PROJECT. CATEGORY B SHALL APPLY.

COMPACTION OF ASPHALT MIXTURES

WILL ACCEPT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR DRIVING LANES AND RAMPS AT ONE INCH (25 MM) OR GREATER ON THIS PROJECT BY OPTION A ACCORDING TO SUBSECTIONS 402 AND 403 OF THE CURRENT STANDARD SPECIFICATIONS. USE JOINT CORES AS DESCRIBED IN SUBSECTIONS 402, 03, 02 FOR SURFACE MIXTURES ONLY. WILL ACCEPT THE COMPACTION OF ALL OTHER ASPHALT MIXTURES BY OPTION B.

SPECIAL NOTES

STANDARD DRAWINGS
STANDARD DRAWINGS ARE NOT ATTACHED TO THESE PLANS. A STANDARD DRAWING BOOK AND THE HEADWALL SUPPLEMENTAL BOOK MAY BE OBTAINED FROM THE POLICY SUPPORT BRANCH OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES IN FRANKFORT, KY. AT (502) 564-4610.

EXISTING LANDSCAPE MATERIAL
DO NOT DISTURB LANDSCAPE PLANTS UNLESS ABSOLUTELY NECESSARY.
DO NOT DISTURB ANY PLANTS WITHOUT PRIOR APPROVAL OF THE PROJECT ENGINEER.

THE PROJECT ENGINEER SHALL NOTIFY THE DISTRICT AGRONOMIST FOR POSSIBLE DEPARTMENT SALVAGE OF ANY PLANTS NEEDING REMOVAL.

GENERAL NOTES

REVISED 4/11/2023

COUNTY OF	ITEM NO.	SHEET NO.
LARREL	11-0087.00	R2W-1

N.C.S. (U.S.G.S.) BENCH MARKS
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WITH THE CONDITIONS STATED IN THE DA PERMIT AND THE APPROVED
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Special Note for Non-Tracking Tack Coat-Revised 20200128
Special Note for Barcodes on Permanent Signs 2019
Special Note for Pipe Liner Acceptance Testing
Special Note for PVC Fold and Form Pipe Liner
Special Note for Pipe Cleaning

CONVENTIONAL SIGNS

SURVEY LINE	GRADE LINE	GROUND LINE	COUNTY LINE	CORPORATE LIMITS	EXIST. PROPERTY LINE	EXIST. RIGHT OF WAY & PROPERTY LINE	PROPOSED RIGHT OF WAY	RIGHT OF WAY MONUMENT	BENCH MARK
EXISTING ROAD	RAILROAD	FENCE (CONTROLLED ACCESS) FENCE (EXCEPT STONE AND HEDGE)	TREE LINE	TREES	PIPE CULVERT	CULVERT	BRIDGE	BUILDINGS	GUARDRAIL
EXISTING R/W MARKER	RIGHT OF WAY MONUMENT	EXISTING/PROPOSED	UTILITY TEST HOLE	EXISTING ROAD	RAILROAD	FENCE	BRIDGE	BUILDINGS	GUARDRAIL
B.M. NO. 40	XX	TH	XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
XX	XX	XX	XX	XX	XX	XX	XX	XX	XX

DRAINAGE STRUCTURE CONSTRUCTION

SIDE	STA.	STA. TO STA.	TYPE	INV. OUT S.S. PROF.	LENGTH (FT.)
RT.	992+67.16	TO 993+65.33	STD. C&G MOD	241	

DITCH CONSTRUCTION CHART

L.T	RT	STA. TO STA.	TYPE	QUANTITY	DEPTH	THICKNESS	TYPE
X	X	993+72.95	TO 994+44.43	ECB	146 SY	1.5	V

UTILITY COMPANIES

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\ROADWAY PLANS\00300PL.KY 192-EGC.DCN	DATE PLOTTED: APR 11, 2023	USER: BACKPLATES
WATER & SEWER	Windstar Team	Brenton Reed
London Utility Commission	Steve Baker	719 N. Main St.
801 N. Main St.	London, KY 40741	Phone: (606) 878-3263
Phone: (606) 864-2103	Laurel Water District #2	AT&T
Ken Fisher	3910 S. Laurel Rd.	O'Dell Keene
London, KY 40741	London, KY 40741	131 Amesbury Ave.
Phone: (606) 878-2494	Phone: (606) 878-2494	Middlesboro, KY 40965
POWER	Kentucky Utilities	Phone: (606) 248-7243
David Lain	180 Substation Rd.	Charter Communications
London, KY 40741	London, KY 40741	Lee Bowlin
Phone: (606) 864-2821	Phone: (606) 271-2504	Corbin, KY 40701
Jackson Energy	Brenton Bingham	Gas
Brent Bingham Energy Lane	McKee, KY 40447	Brent Means
McKee, KY 40447	Phone: (606) 364-9227	3617 Lexington Road
Phone: (859) 744-6177x134	Elaine Helton	Whitchester, KY 40391
Blue Line Stream	Gas	D.B. 65, PG. 260
Quarry Site	Telephone	Phone: (859) 744-6177x134
Intermittent Stream	Electric	Power
Regulated Floodway	Water	Water
North Point	Telephone	Water

WARNING NOTE:
POSSIBLE GAS LINES OR OTHER LINES CARRYING HAZARDOUS MATERIALS ARE PRESENT IN THE VICINITY OF CONSTRUCTION.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-5007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are required to be members of the KY 811 one-call Before-Utility service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

CONVENTIONAL SIGNS

LAUREL

PROJECT #**FD04 063 0192 018-021**
NUMBER #**KY 192**
PLAN SHEET #**1**
BEGINNING TO STA. 995+00

BURGESS & NIPPLE

BURGESS & NIPPLE

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-0087.00	R5

1001+00

MATCHLINE STA. 1001+00

SHEET R7

1000+00

RAMP FROM
I-75 SOUTH
ASPHALT
GRAVELDIRECTION
OUTLET =
18' RCP

ELEC.

AT&T FIBER OPTIC

SIGN

OVERHEAD UTILITY

ELEV. = 1266.65

SIGN

OVERHEAD UTILITY

ELEV. = 1259.03

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OVERHEAD UTILITY

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SIGN

OVERHEAD UTILITY

ELEV. = 1260.45

SIGN

OVERHEAD UTILITY

ELEV. = 1261.90

SIGN

OVERHEAD UTILITY

ELEV. = 1260.45

SIGN

OVERHEAD UTILITY

ELEV. = 1261.90

REVISED 4/11/2023

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-0087.00	R5

1001+00

R7

STATION

1001+00

SHET R7

STATION

1001+00

SHET R7

KY 192
PLAN SHEET
STA. 995+00 TO STA. 1001+00

SCALE: 1" = 20'
80' 40' 20' 0'

RAMP FROM

I-75 SOUTH

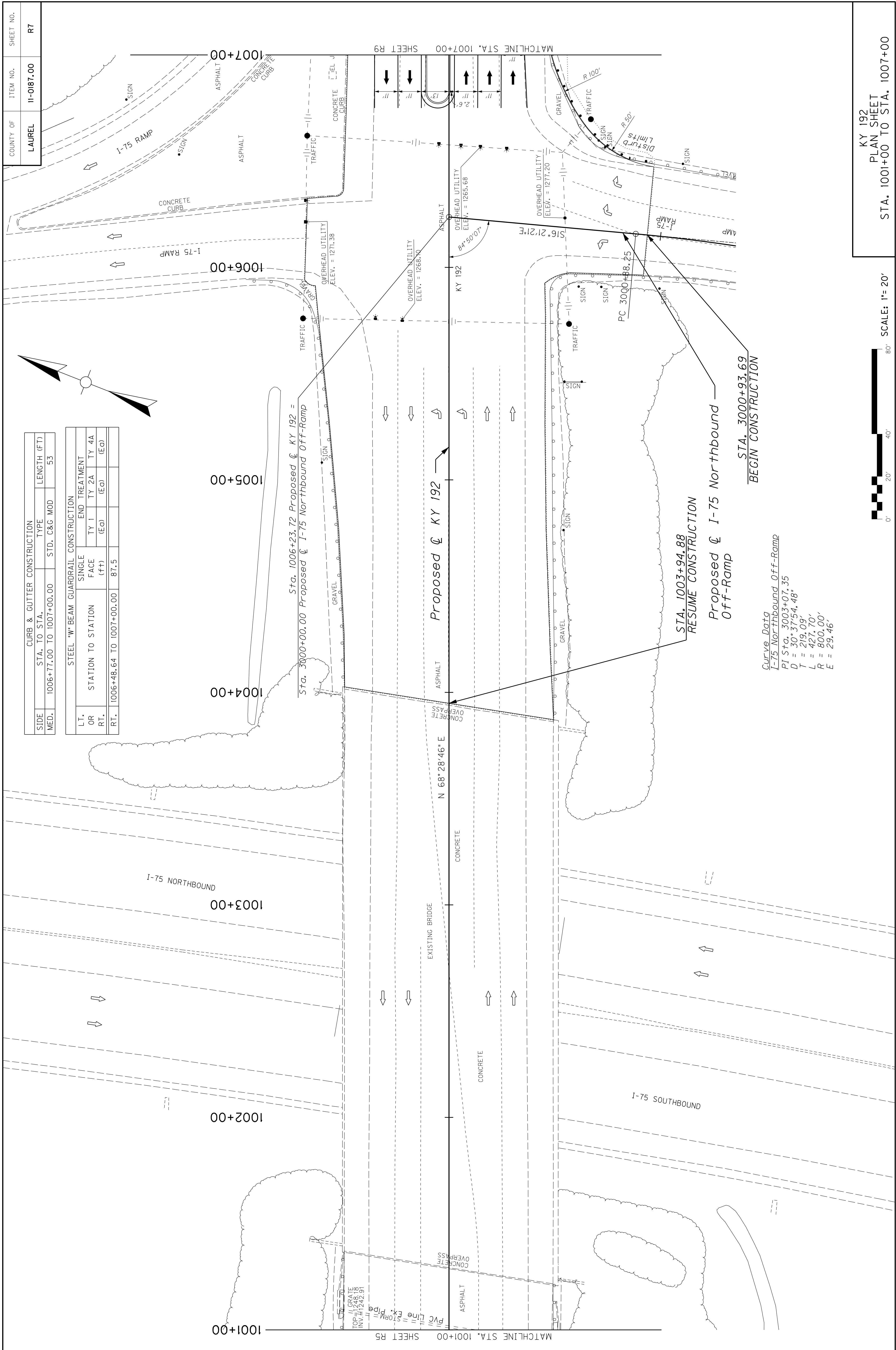
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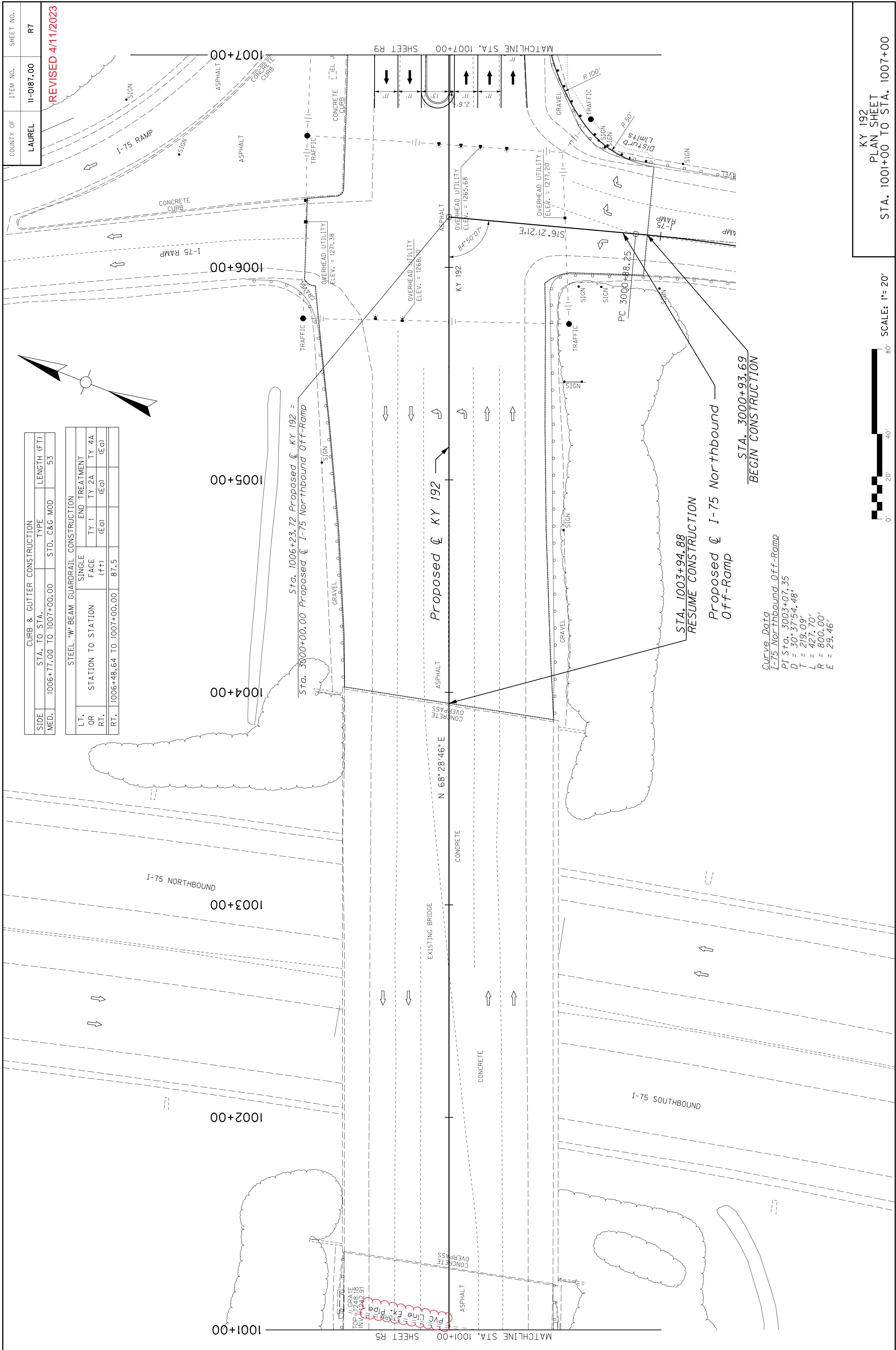
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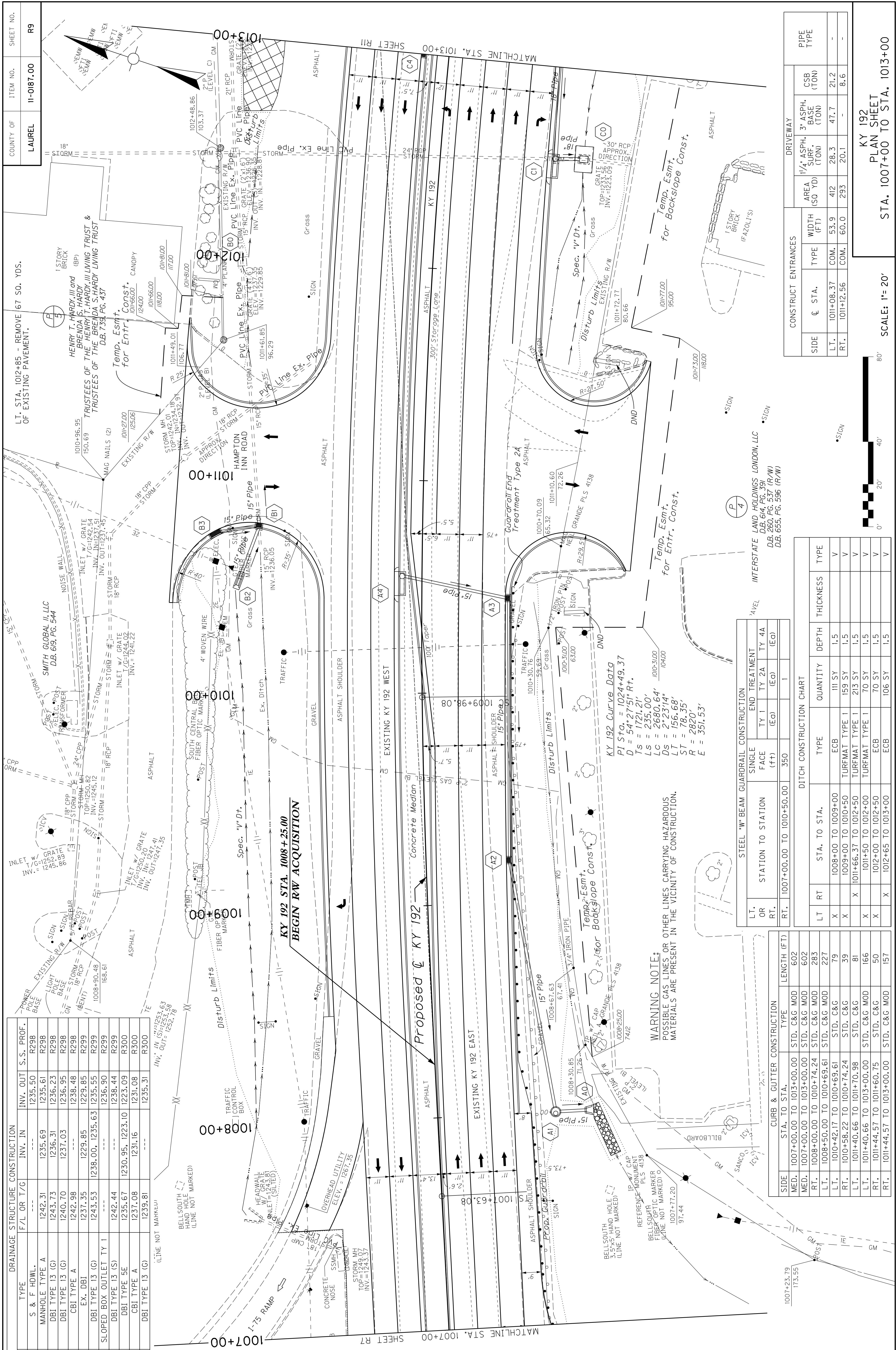
GRAVEL

ASPHALT

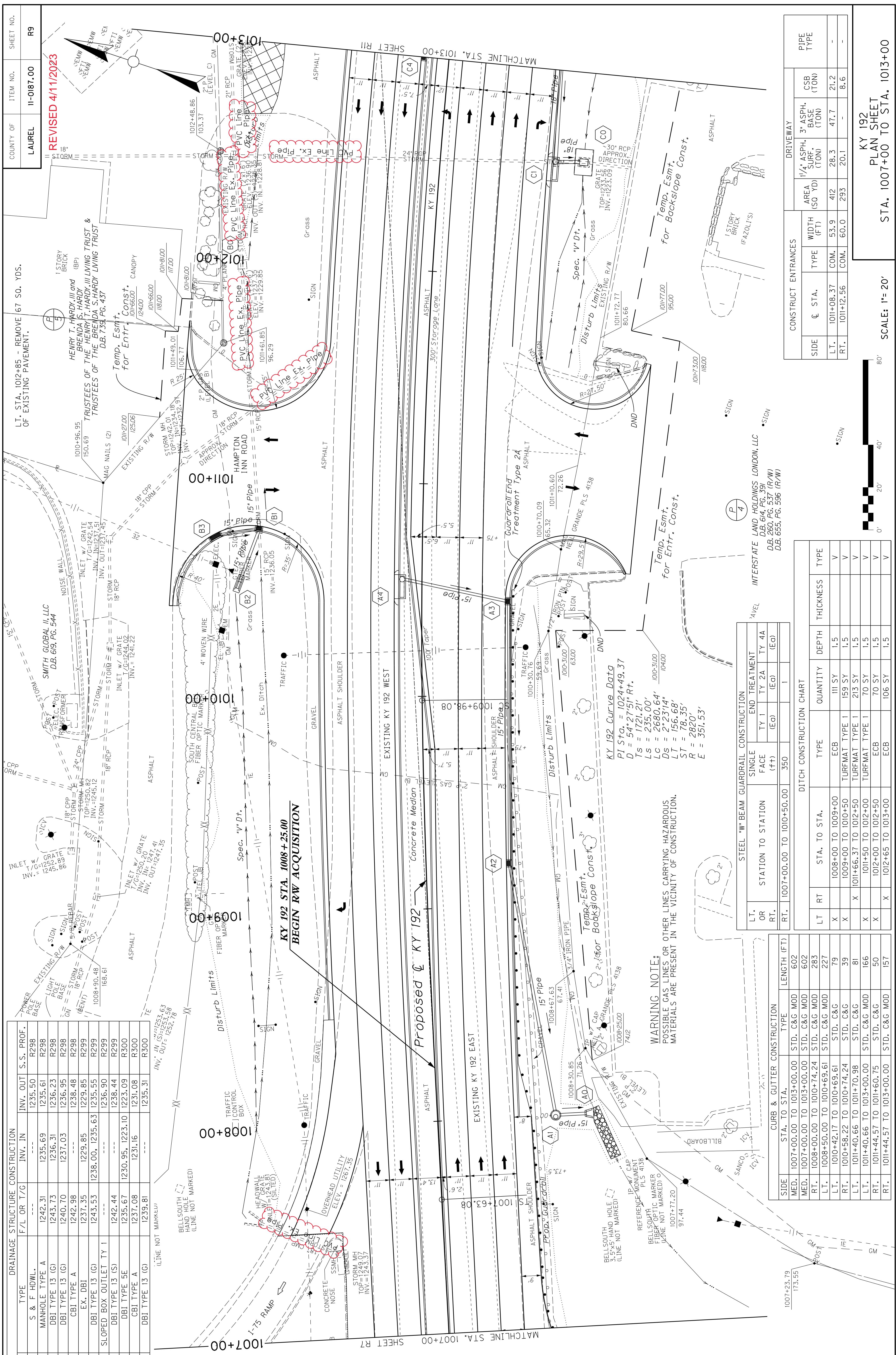
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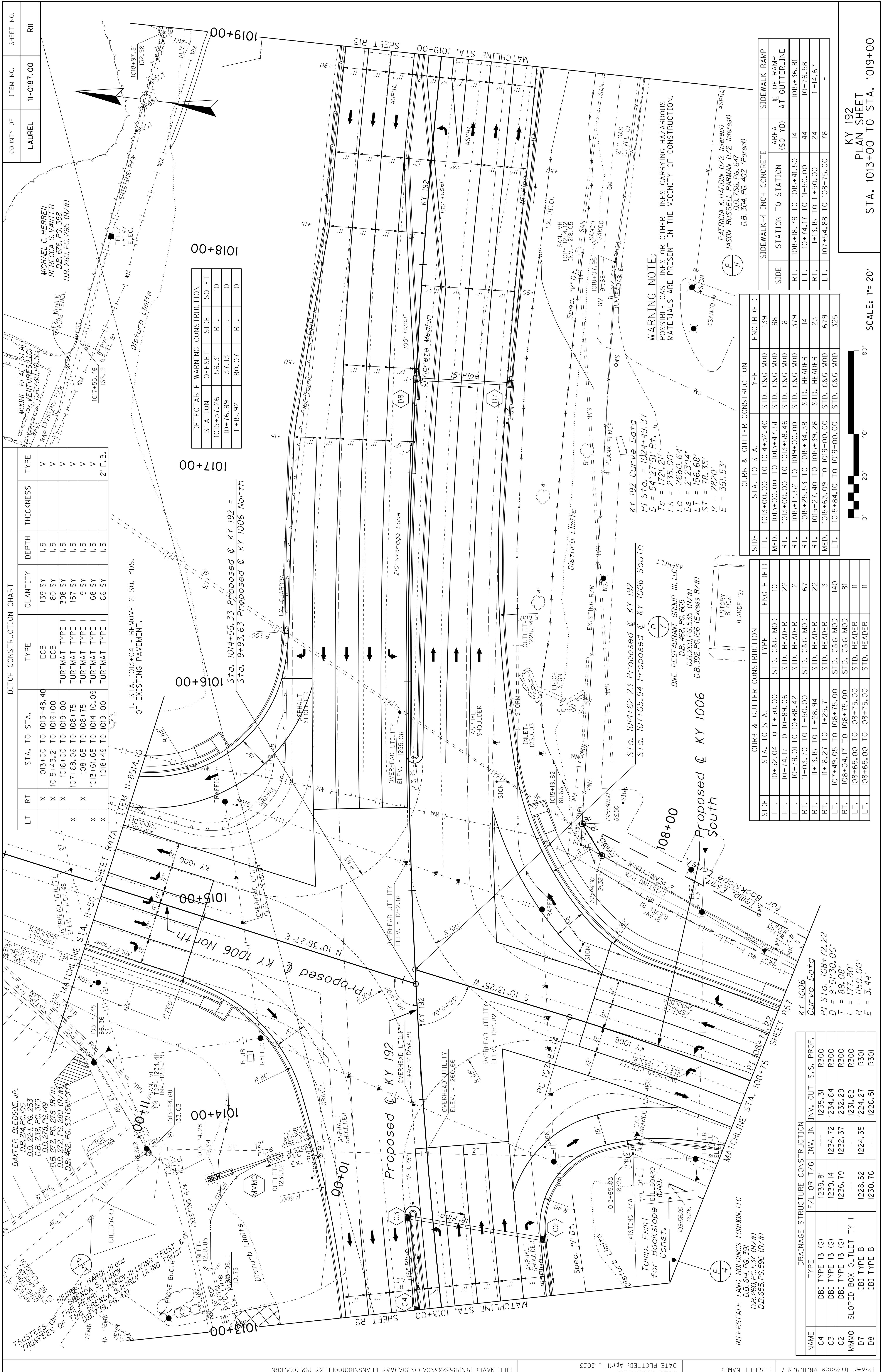


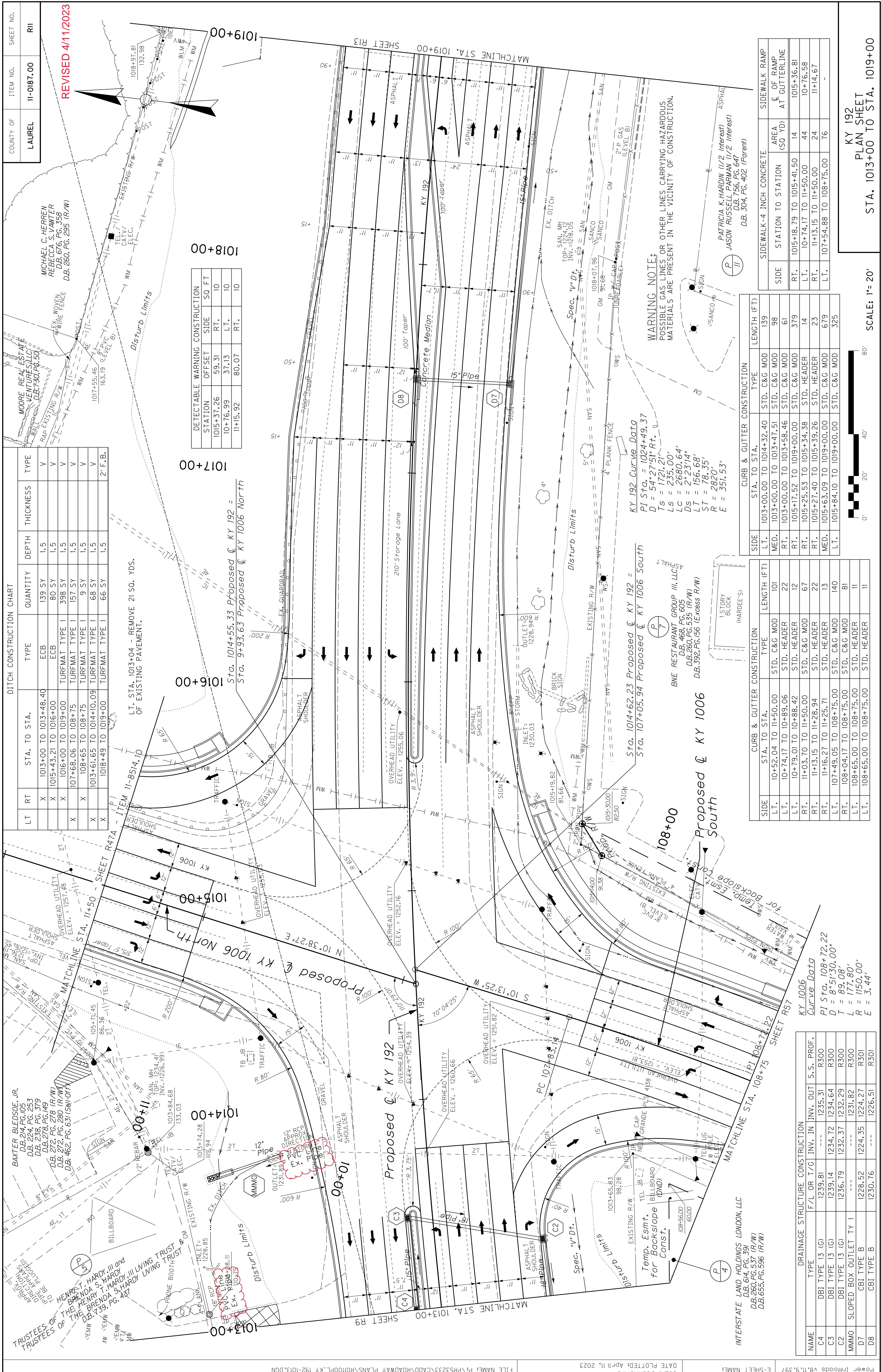




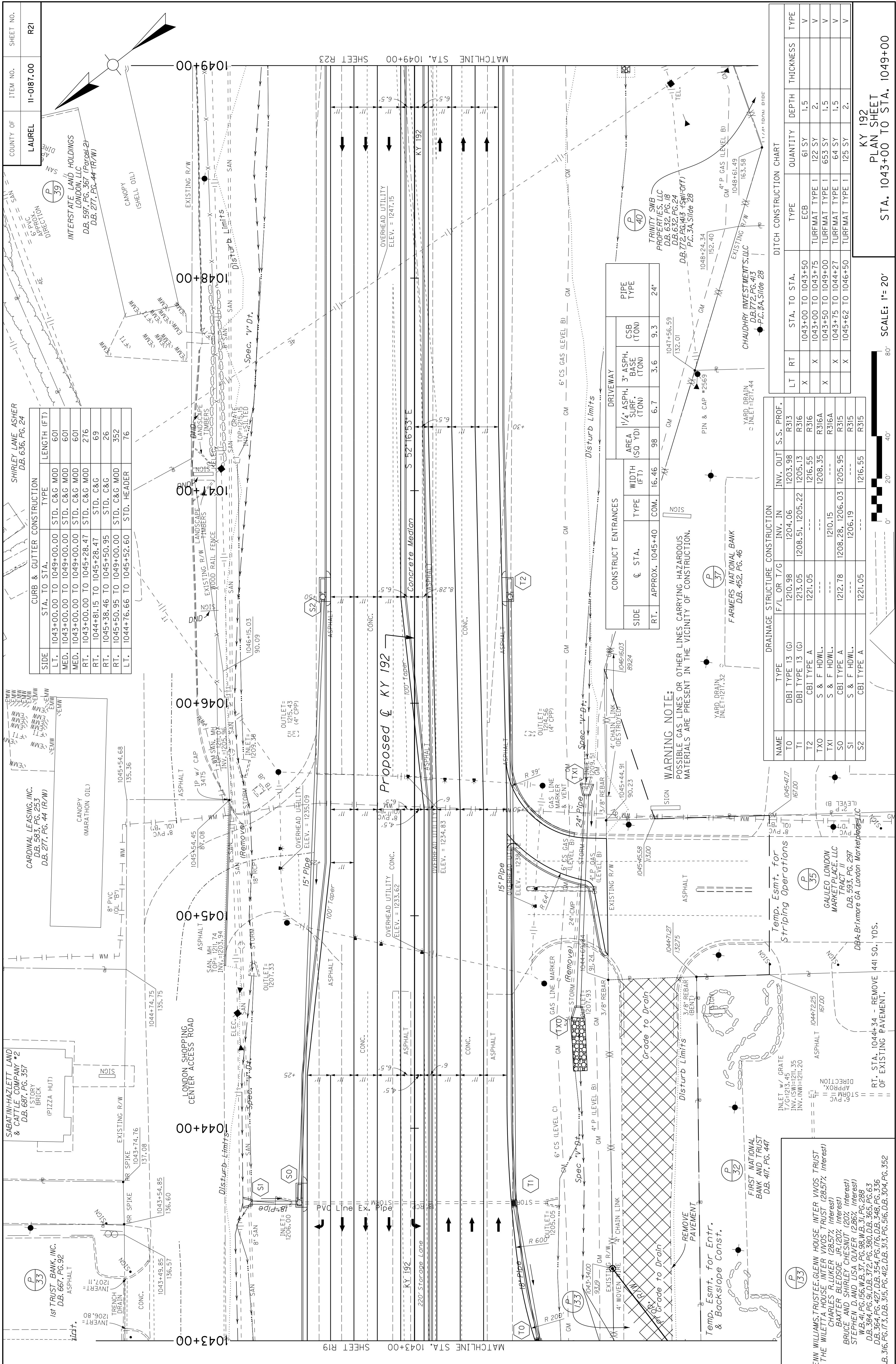
BURGESS & NIPPLE

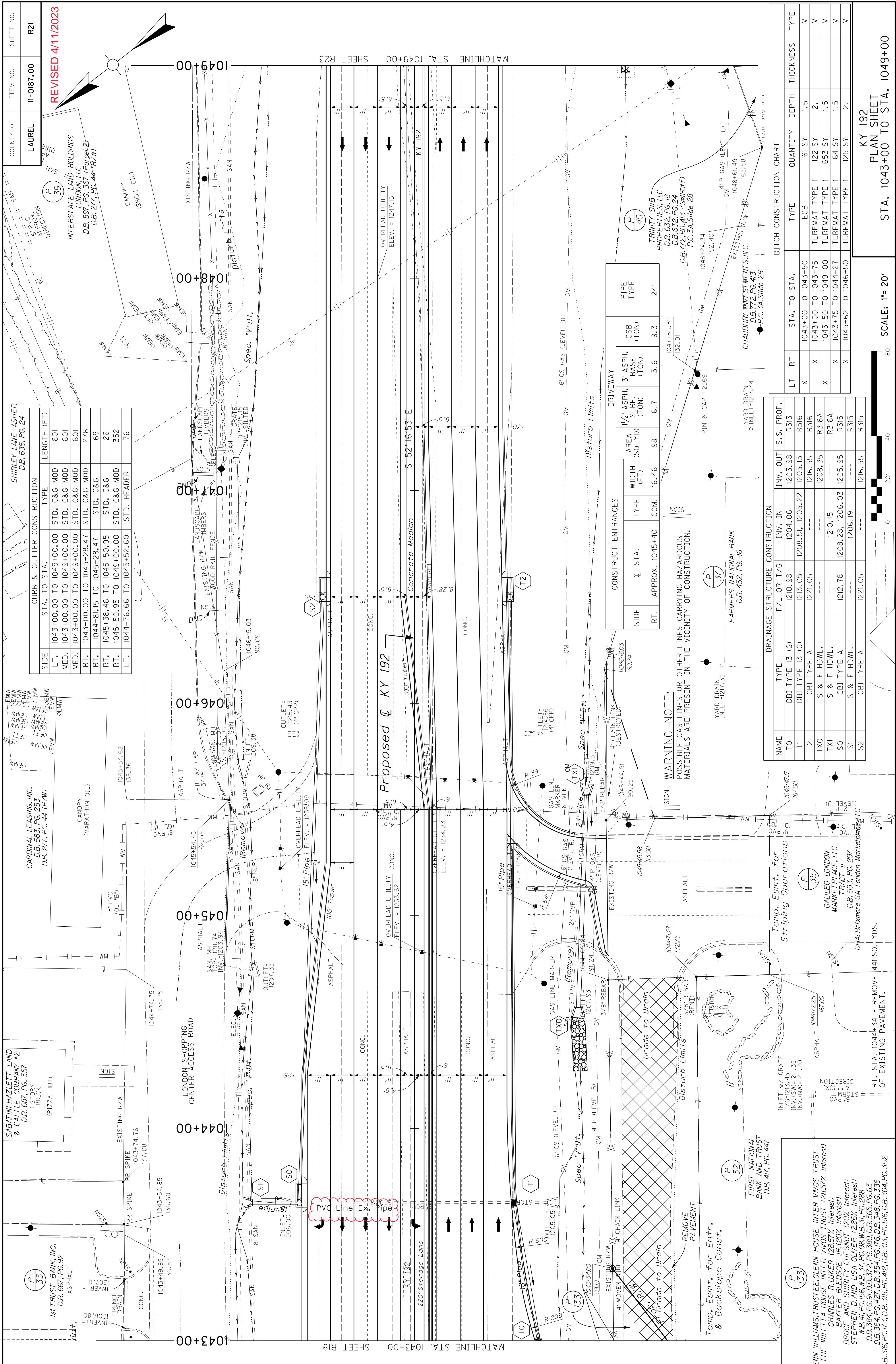


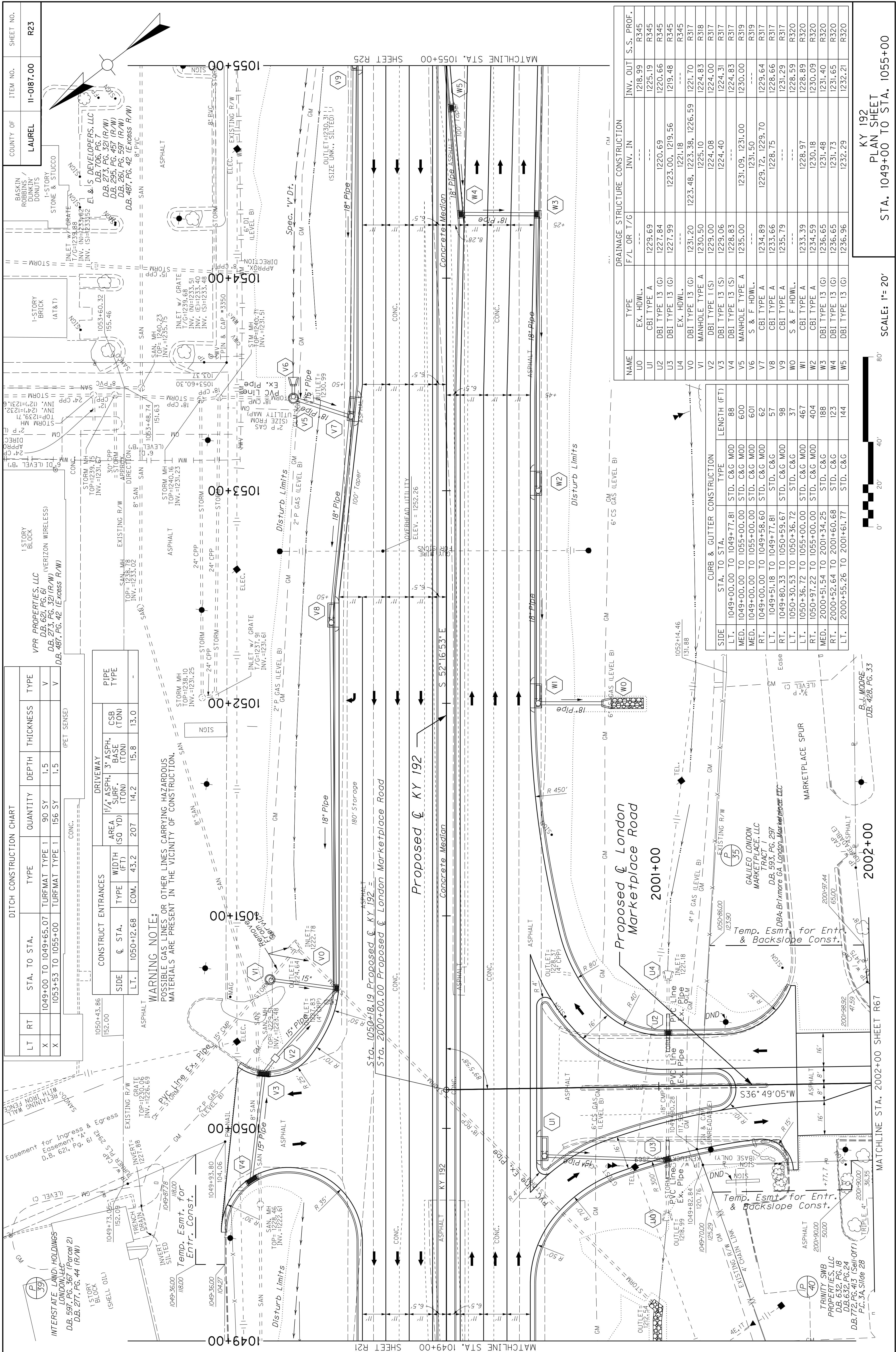


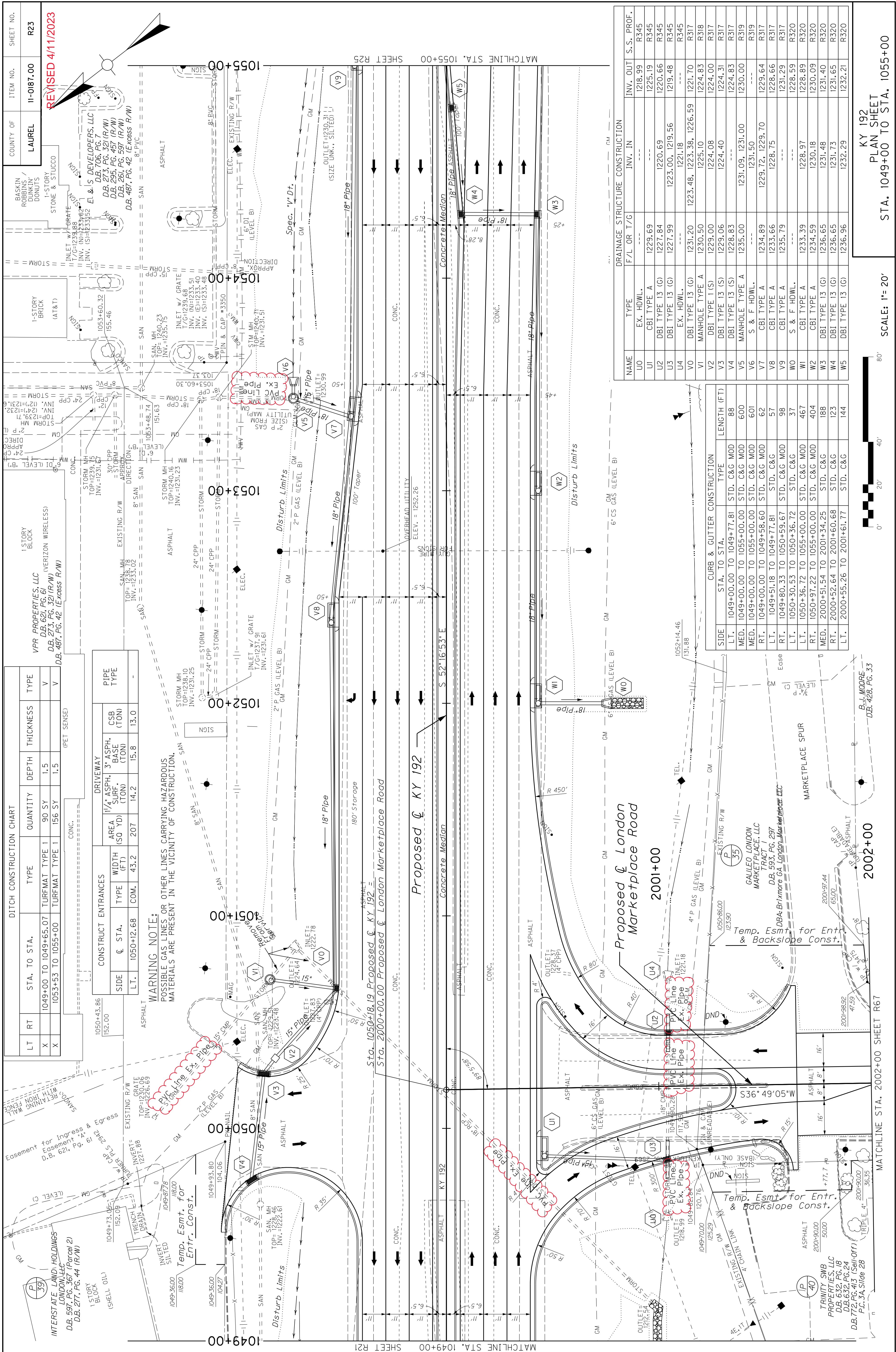


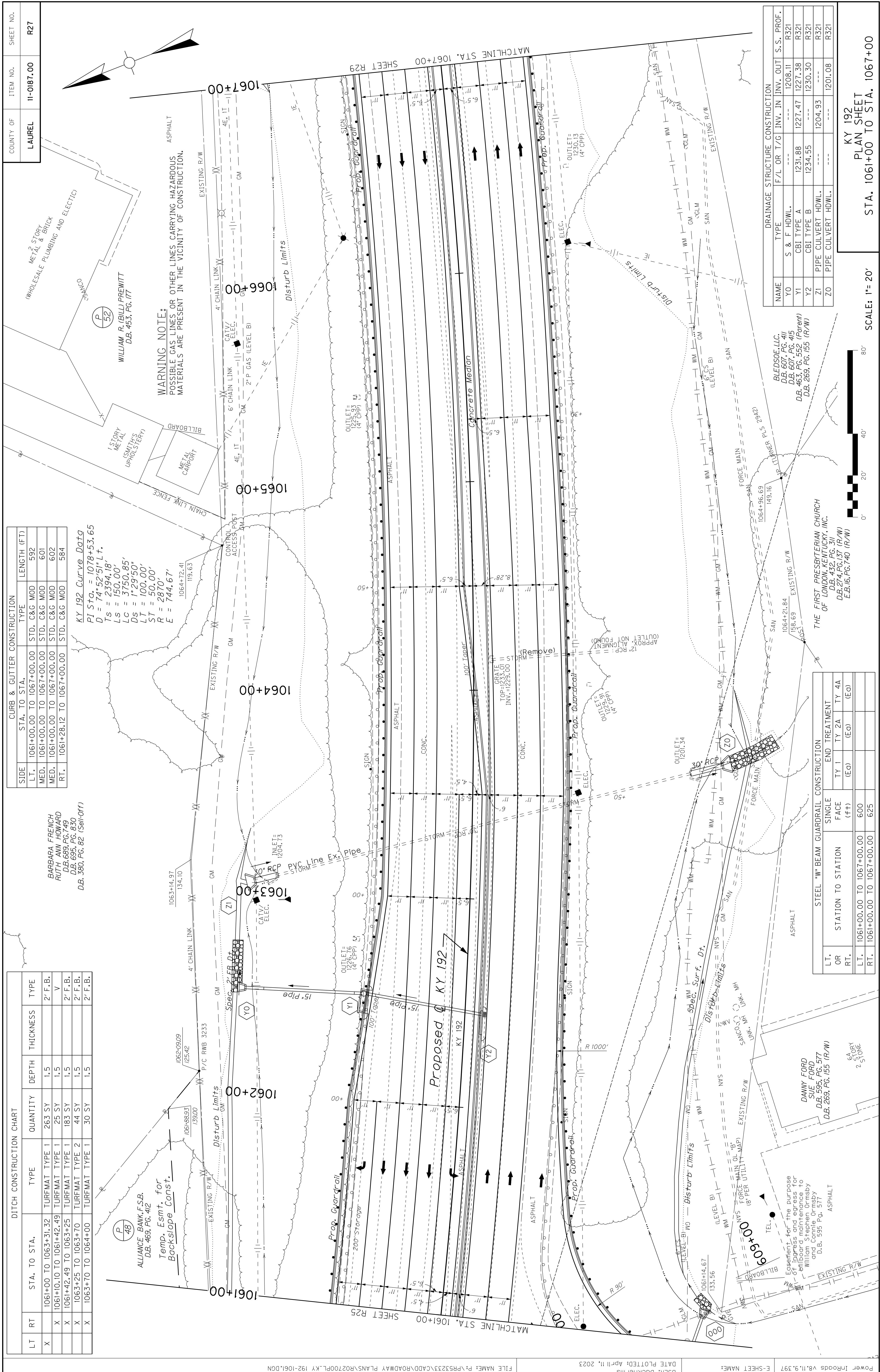
BURGESS & NIPPLE



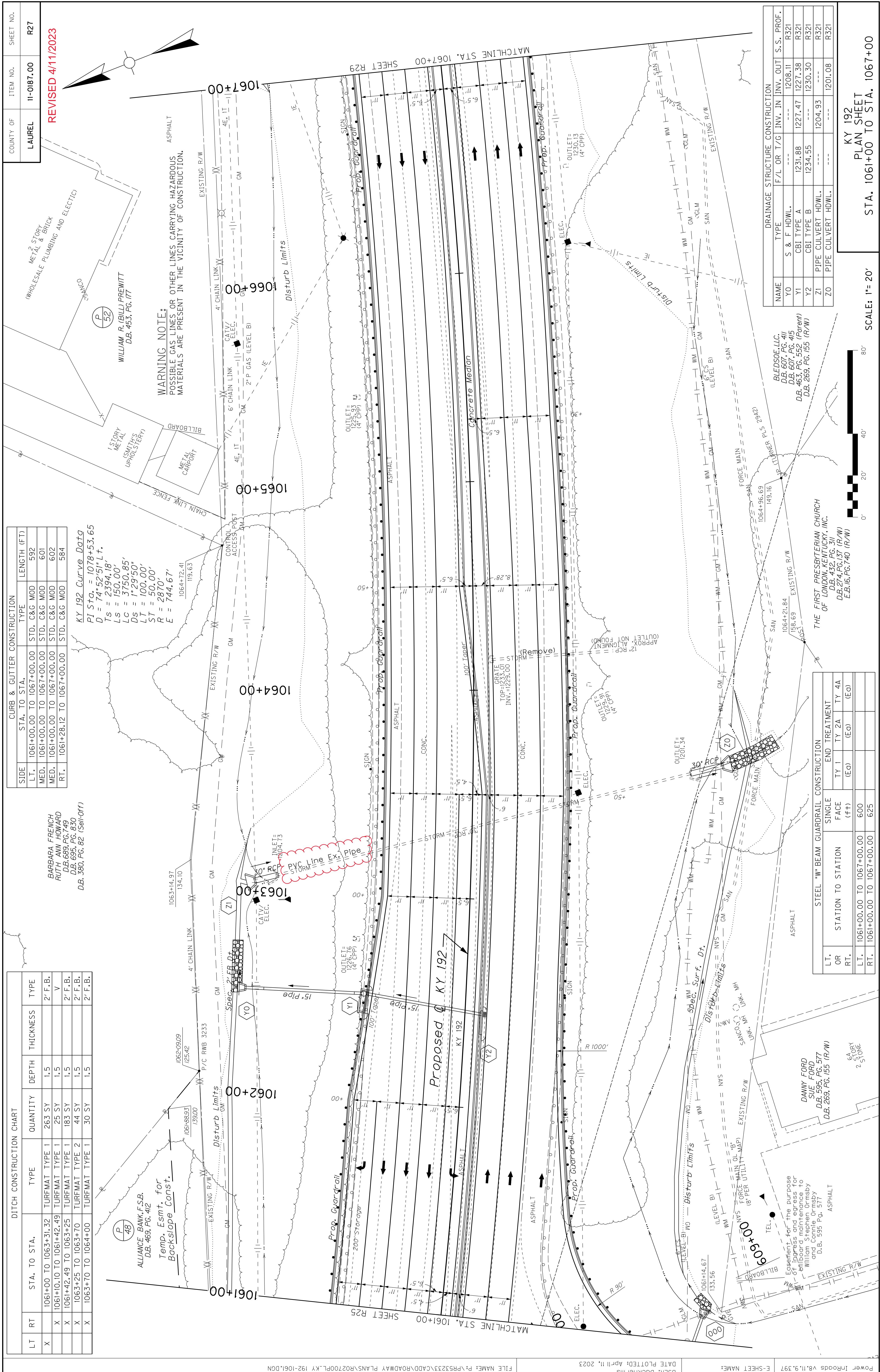




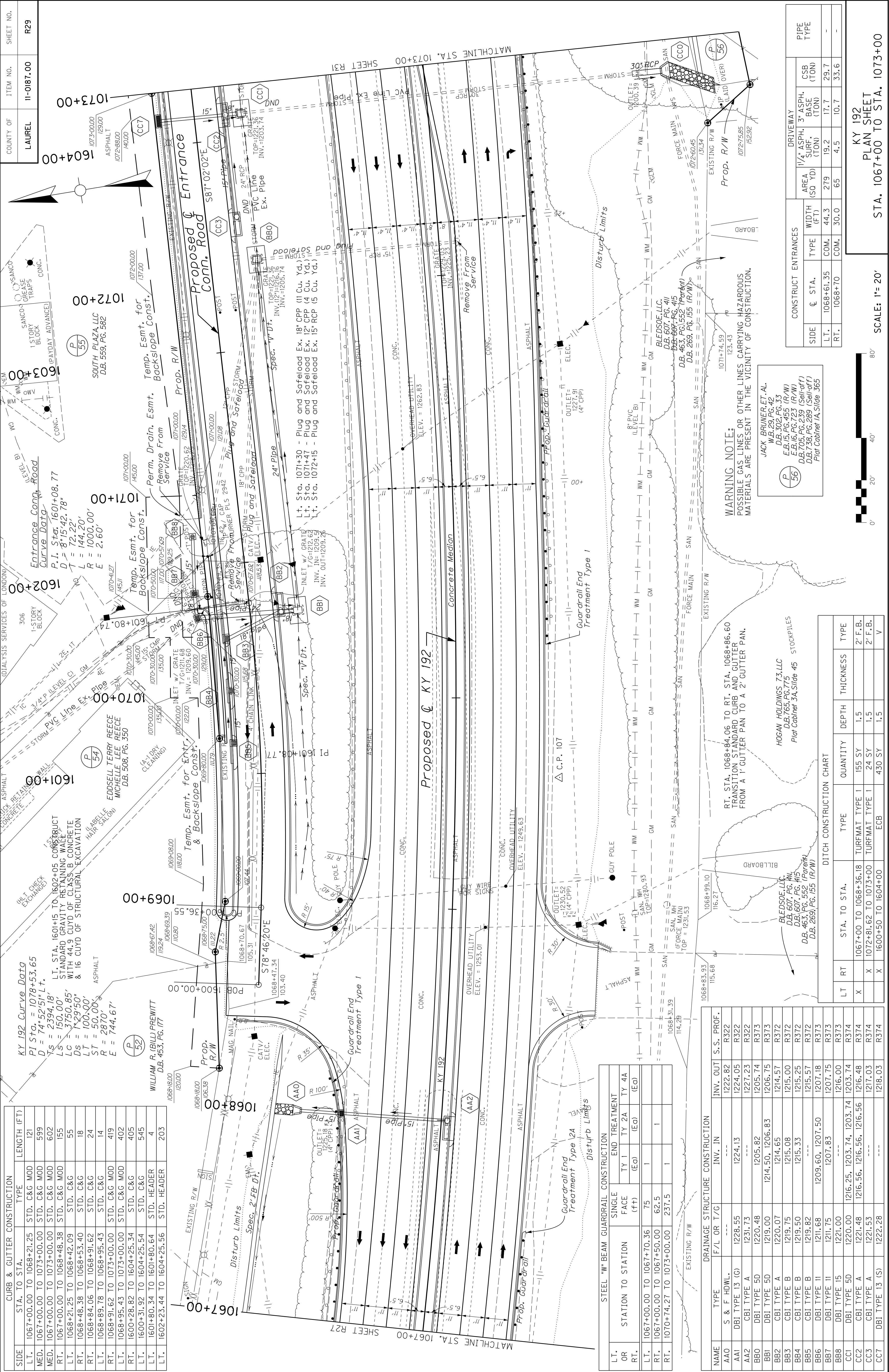


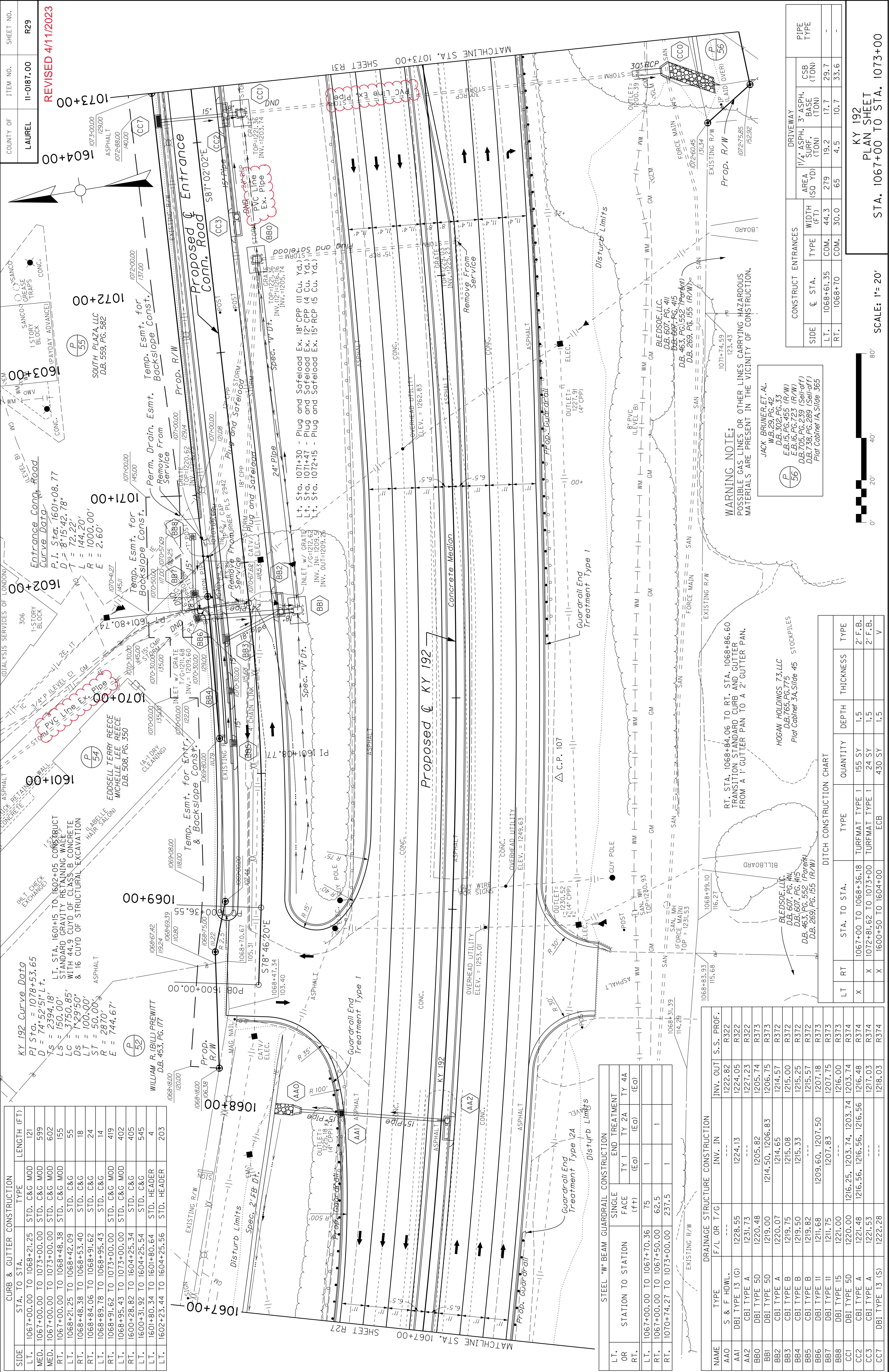


BURGESS & NIPPLE

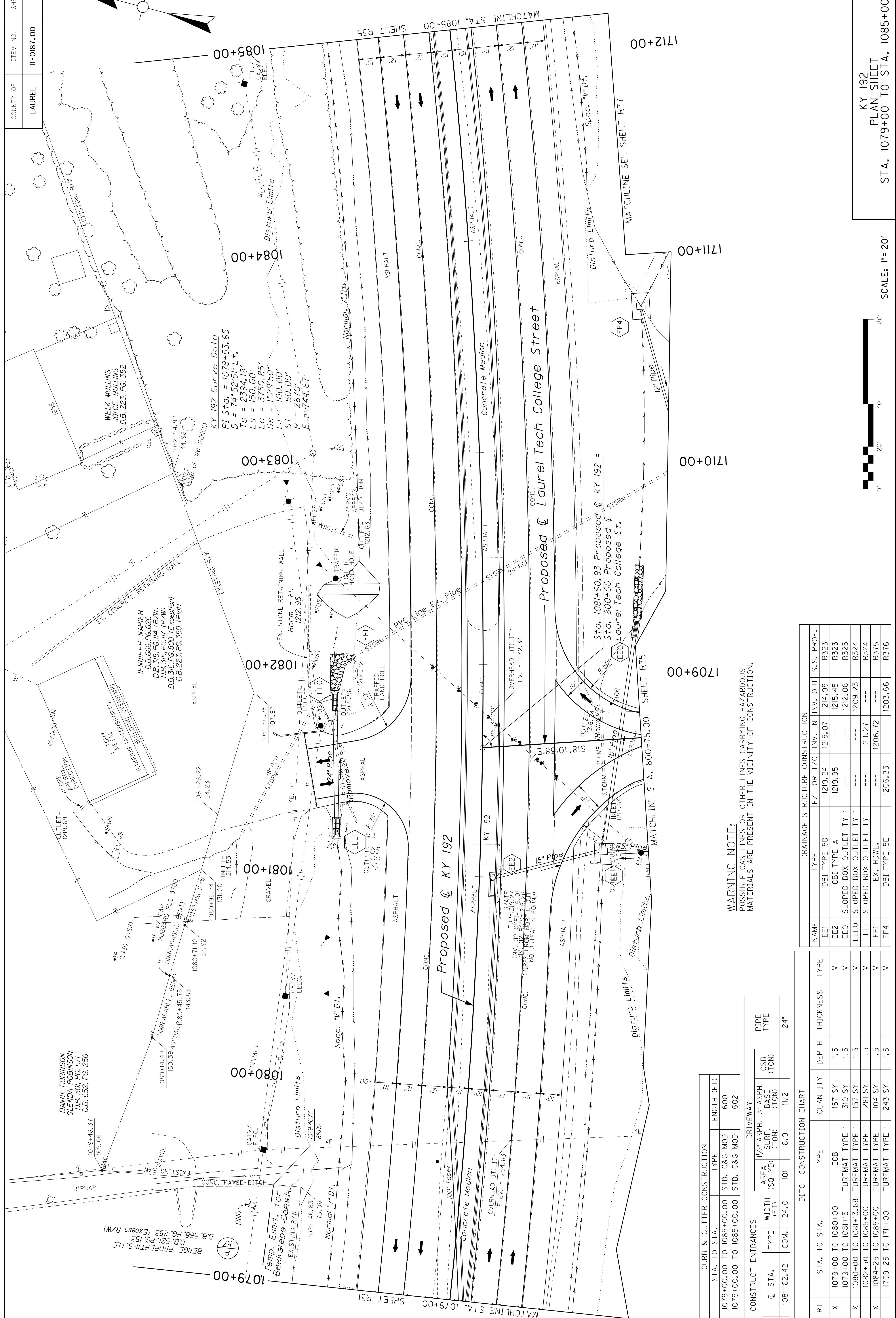


BURGESS & NIPPLE



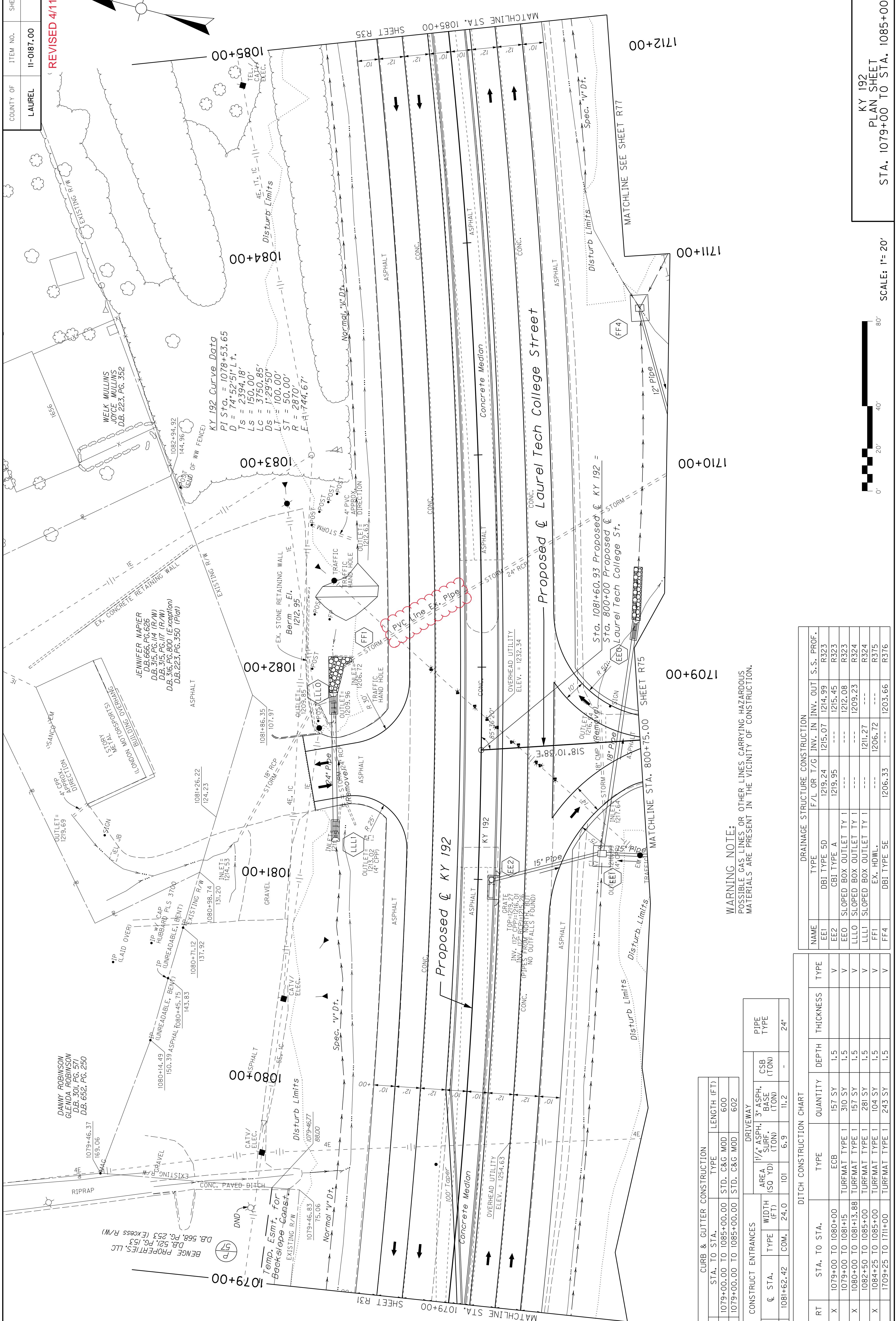


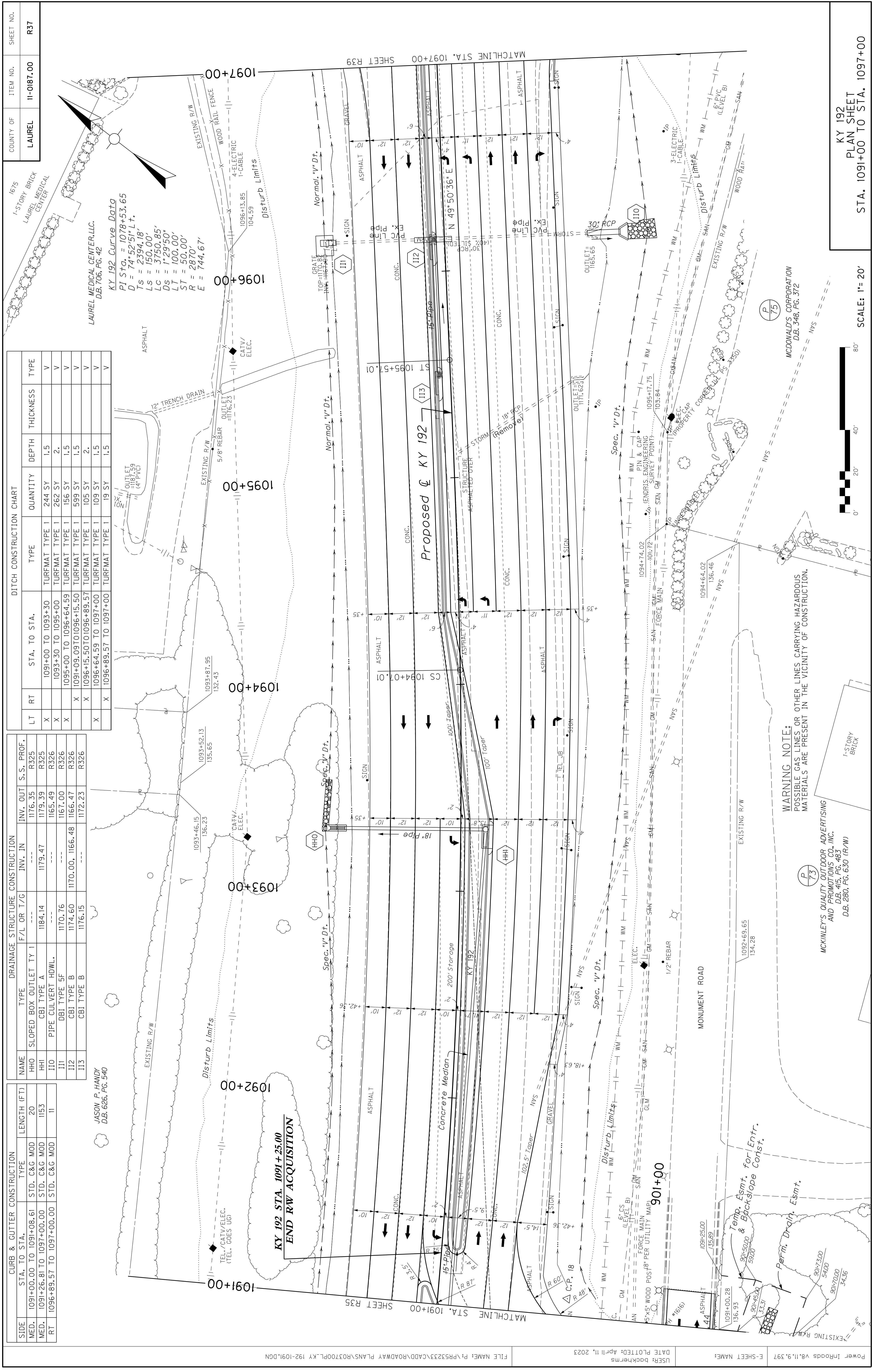
COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-0187.00	R33



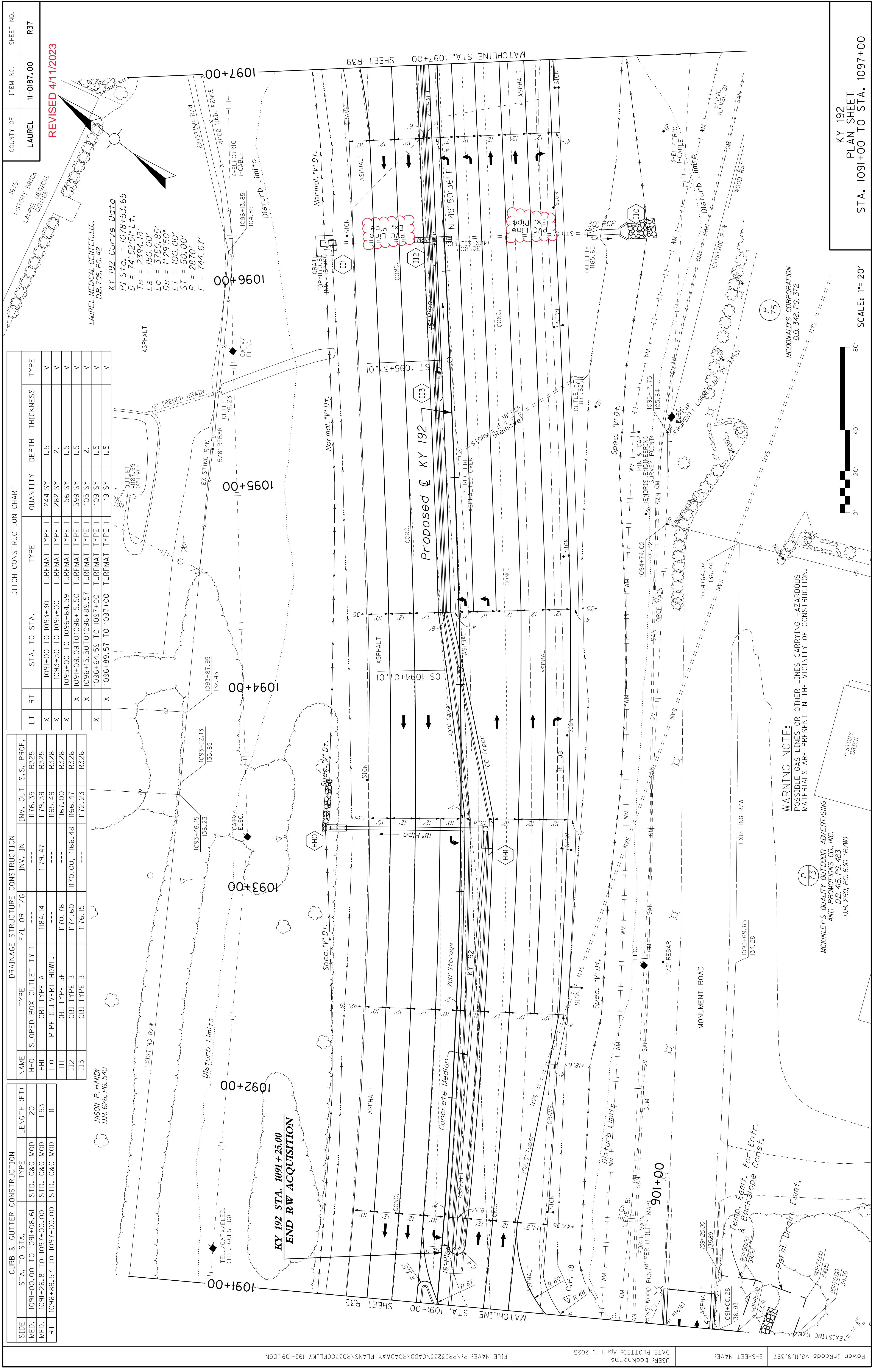
BURGESS & NIPPLE

COUNTY OF	ITEM NO.
LAUREL	11-0087.00

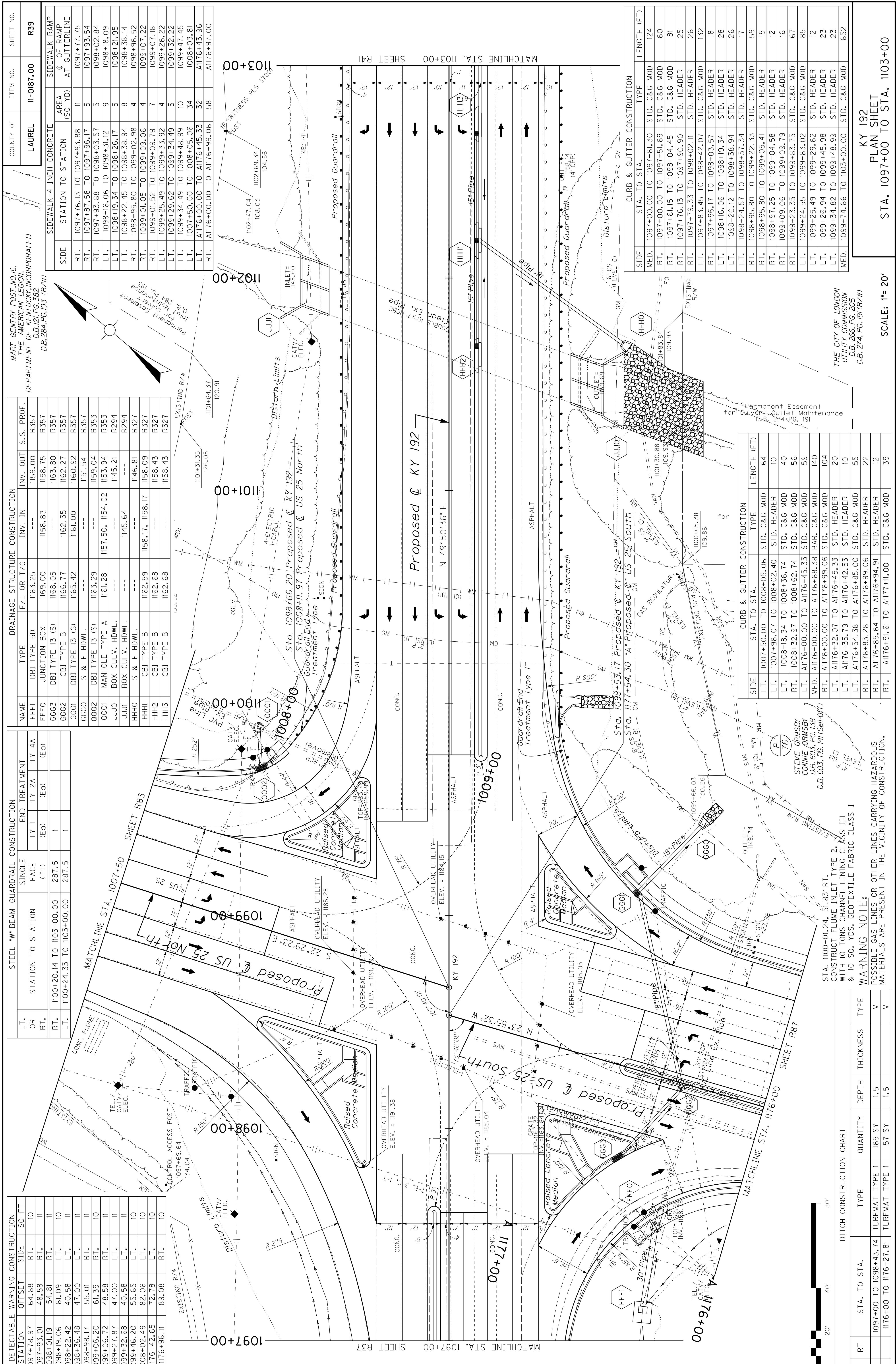




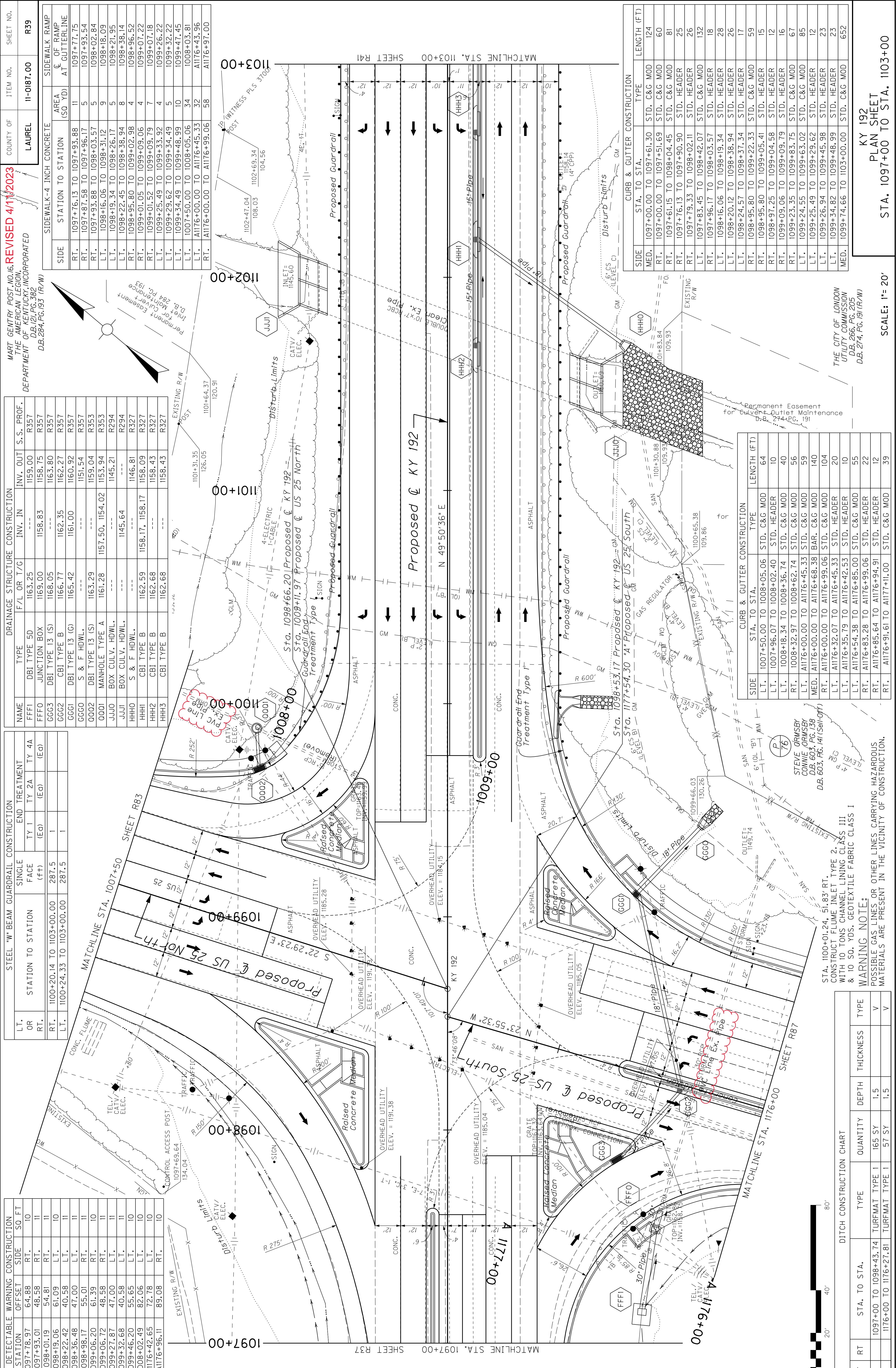
BURGESS & NIPPLE



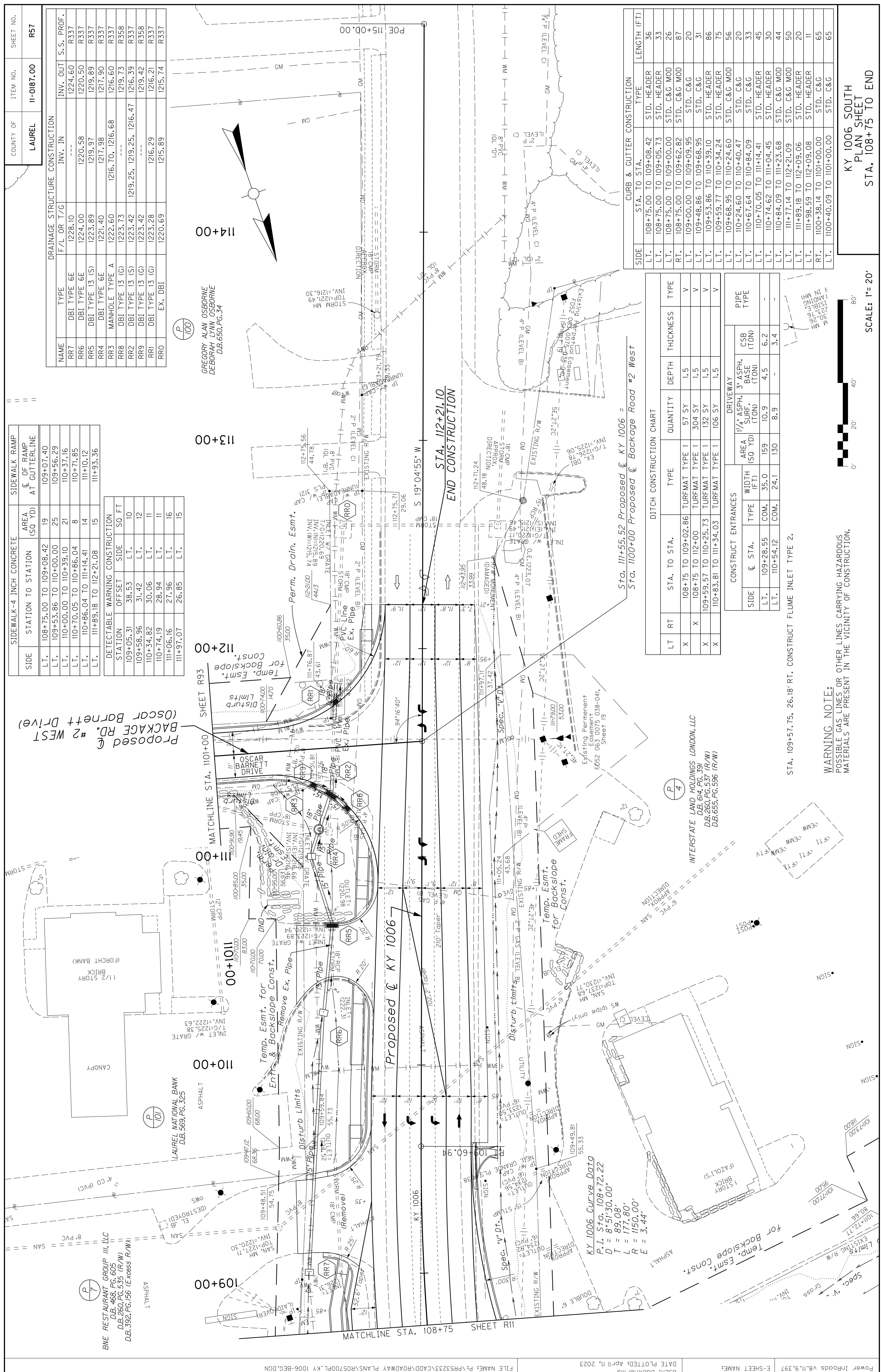
BURGESS & NIPPLE



BURGESS & NIPPLE



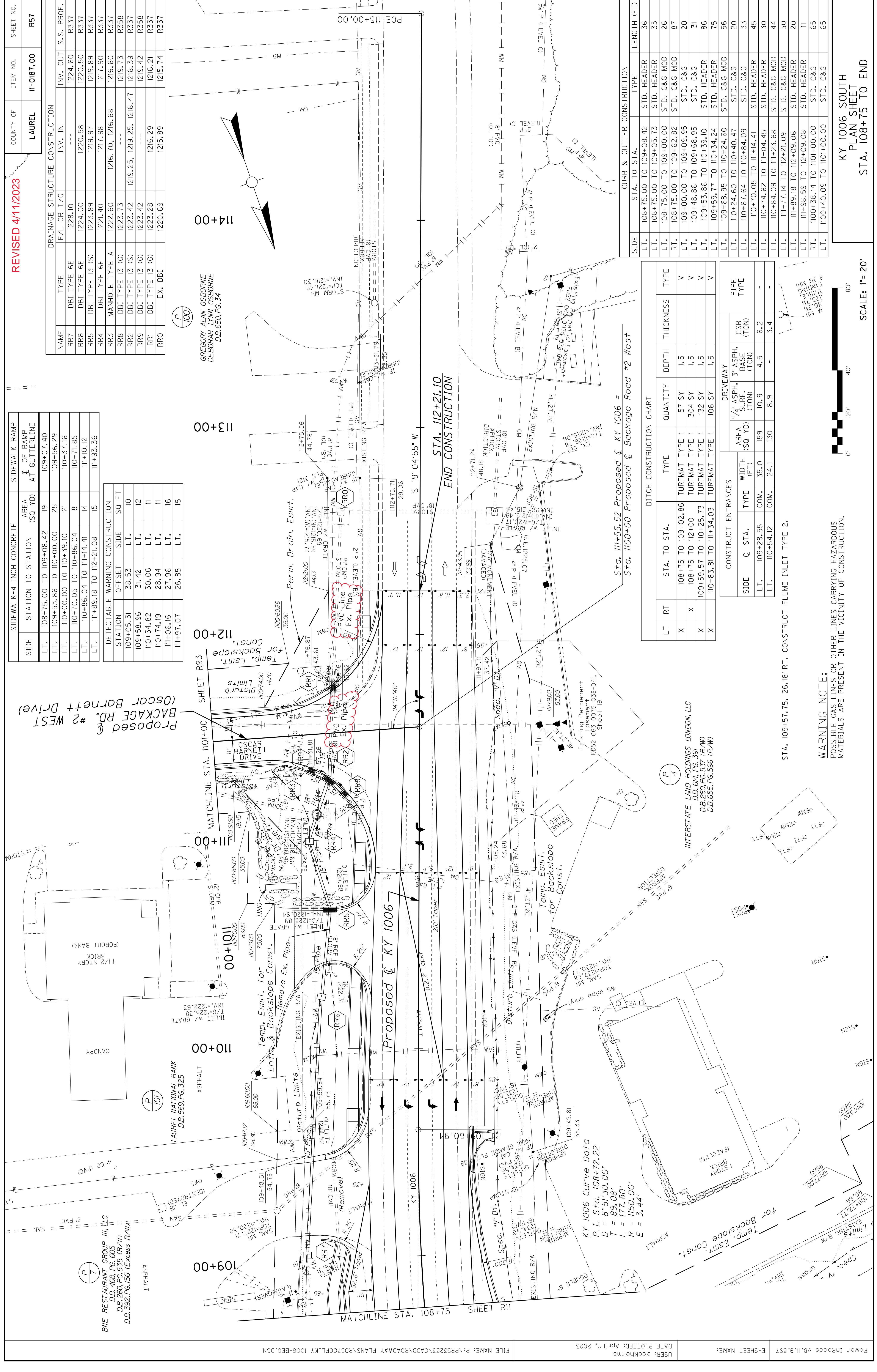
BURGESS & NIPPLE



DRAINAGE STRUCTURE CONSTRUCTION						
NAME	TYPE	F/L OR T/G	INV.	IN	INV.	OUT
RR7	DBI TYPE 6E	1228.10	---	---	1224.60	R337
RR6	DBI TYPE 6E	1224.00	1220.58	1220.50	1220.50	R337
RR5	DBI TYPE 13 (S)	1223.89	1219.97	1219.89	1219.89	R337
RR4	DBI TYPE 6E	1221.40	1217.98	1217.90	1217.90	R337
RR3	MANHOLE TYPE A	1222.60	1216.70, 1216.68	1216.60	1216.60	R337
RR8	DBI TYPE 13 (G)	1223.73	---	---	1219.73	R358
RR2	DBI TYPE 13 (S)	1223.42	1219.25, 1216.47	1216.39	1216.39	R337
RR9	DBI TYPE 13 (G)	1223.42	---	---	1219.42	R358
RR1	DBI TYPE 13 (G)	1223.28	1216.29	1216.21	1216.21	R337
RR0	EX. DBI	1220.69	1215.89	1215.74	1215.74	R337

REVISED 4/11/2023

Proposed 4 BACKAGE RD. #2 WEST (OSCAR BARNEtt DRIVE)



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PIPE DRAINAGE SHEET 1 of 87

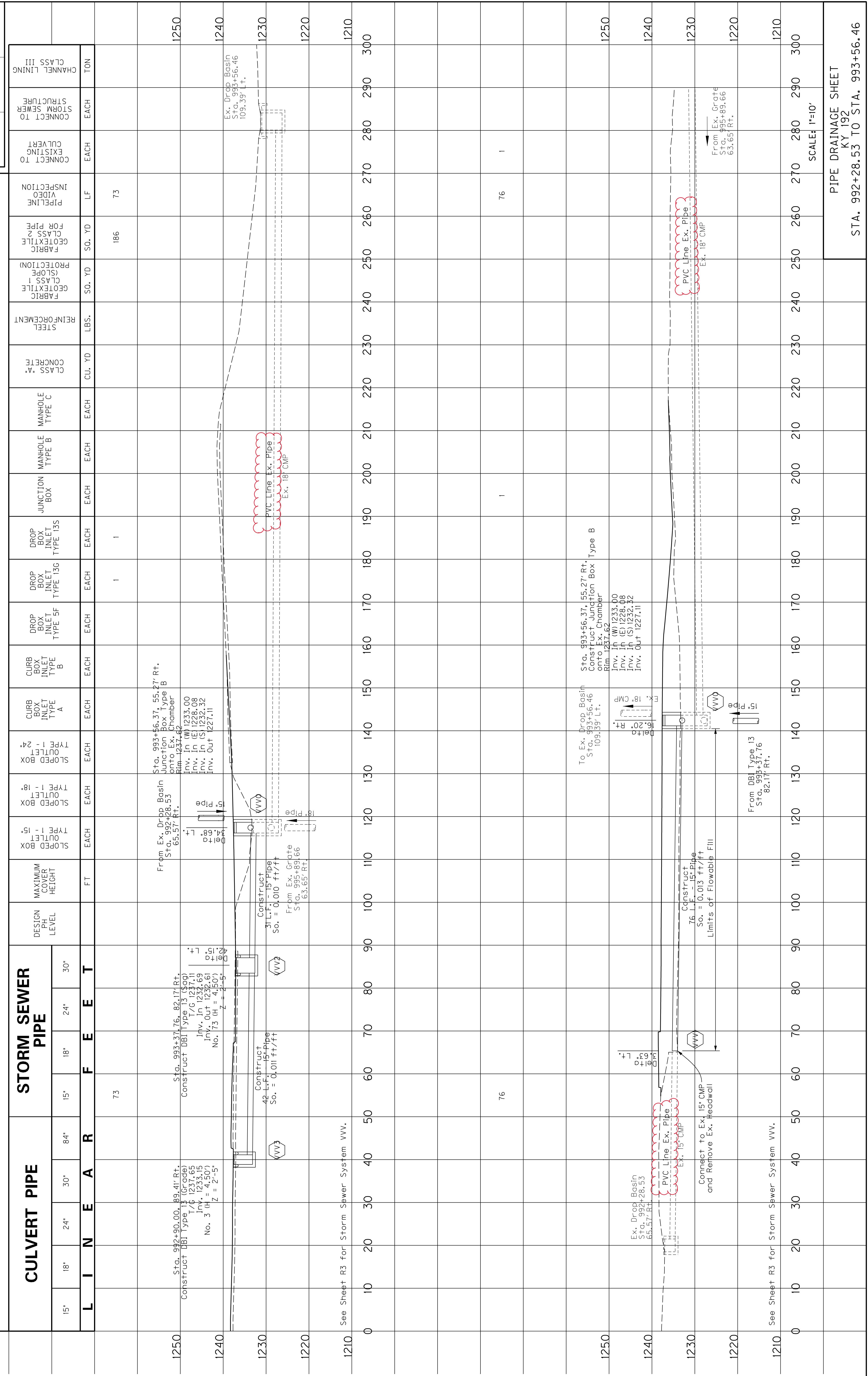
PIPE DRAINAGE SHEET 1 of 87

CULVERT PIPE		STORM SEWER PIPE																																			
L	I	N	E	A	R	F	E	E	T																												
15"	18"	24"	30"	84"	15"	18"	24"	30"																													
1250	Construct DBI Type 3 (Grade) T/C Inv. No. 3 (H = 4.20') Z = 2'-5"	Sta. 932+90.00, 80.41' Rt.	Construct DBI Type 13 (\$ag) T/G Inv. No. 73 (H = 4.50') Z = 2'-5"	Sta. 933+37.76, 82.17' Rt.																																	
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	1210				
1250																																					
1240																																					
1230																																					
1220																																					
1210	See Sheet R3 for Storm Sewer System VVV.	0</																																			

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PIPE DRAINAGE SHEET 1 of 87

REVISED 4/11/2023



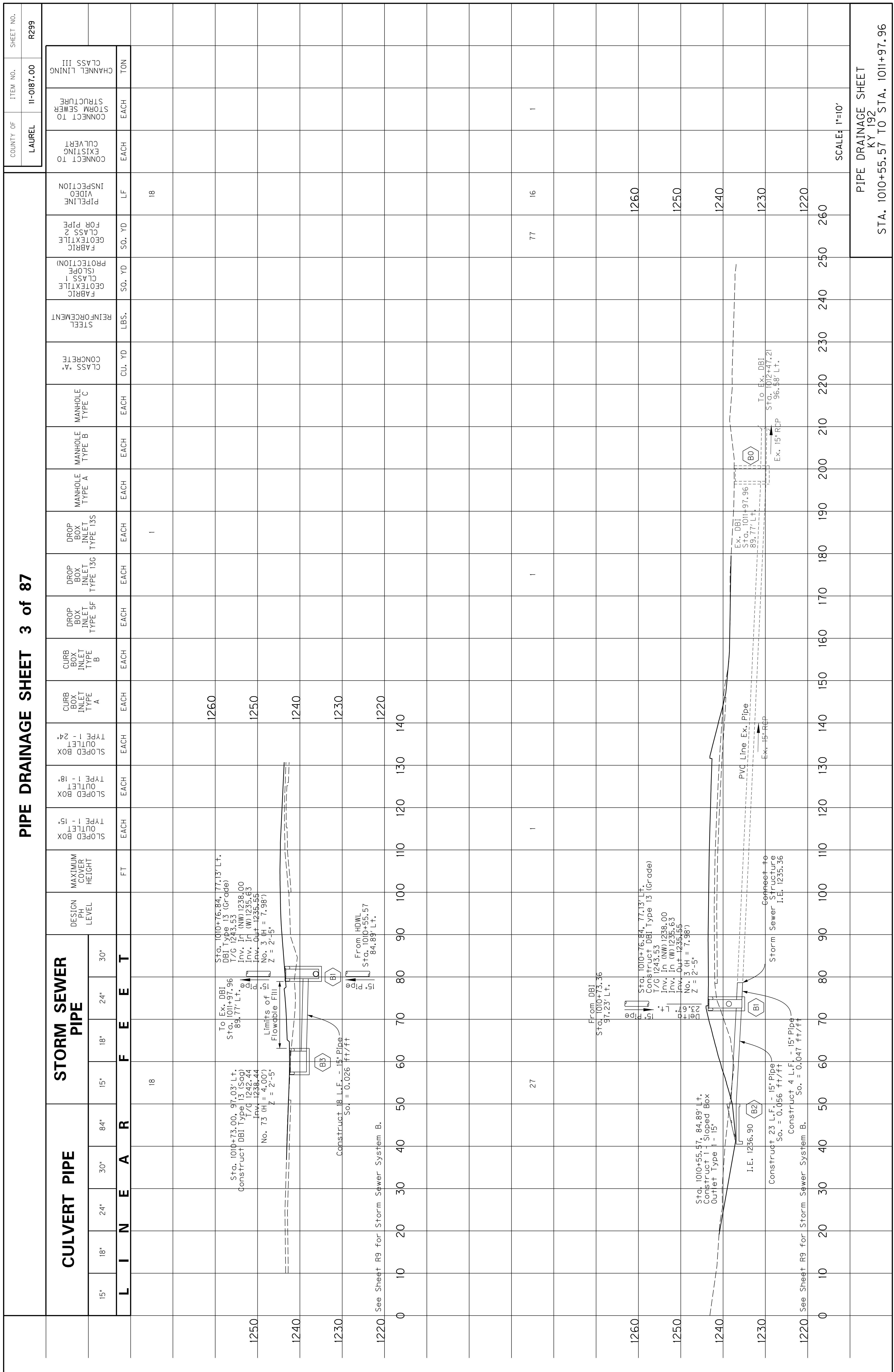
BURGES & NIPPLE

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DATE PLOTTED: APR 11, 2023
USER: messey

FILE NAME: P:\PR53233\CAD\ROADWAY PLANS\R29700PD-VVV.DWG
DATE PLOTTED: APR 11, 2023
USER: messey

PIPE DRAINAGE SHEET
KY 192
STA. 992+28.53 TO STA. 993+56.46

PIPE DRAINAGE SHEET 3 of 87

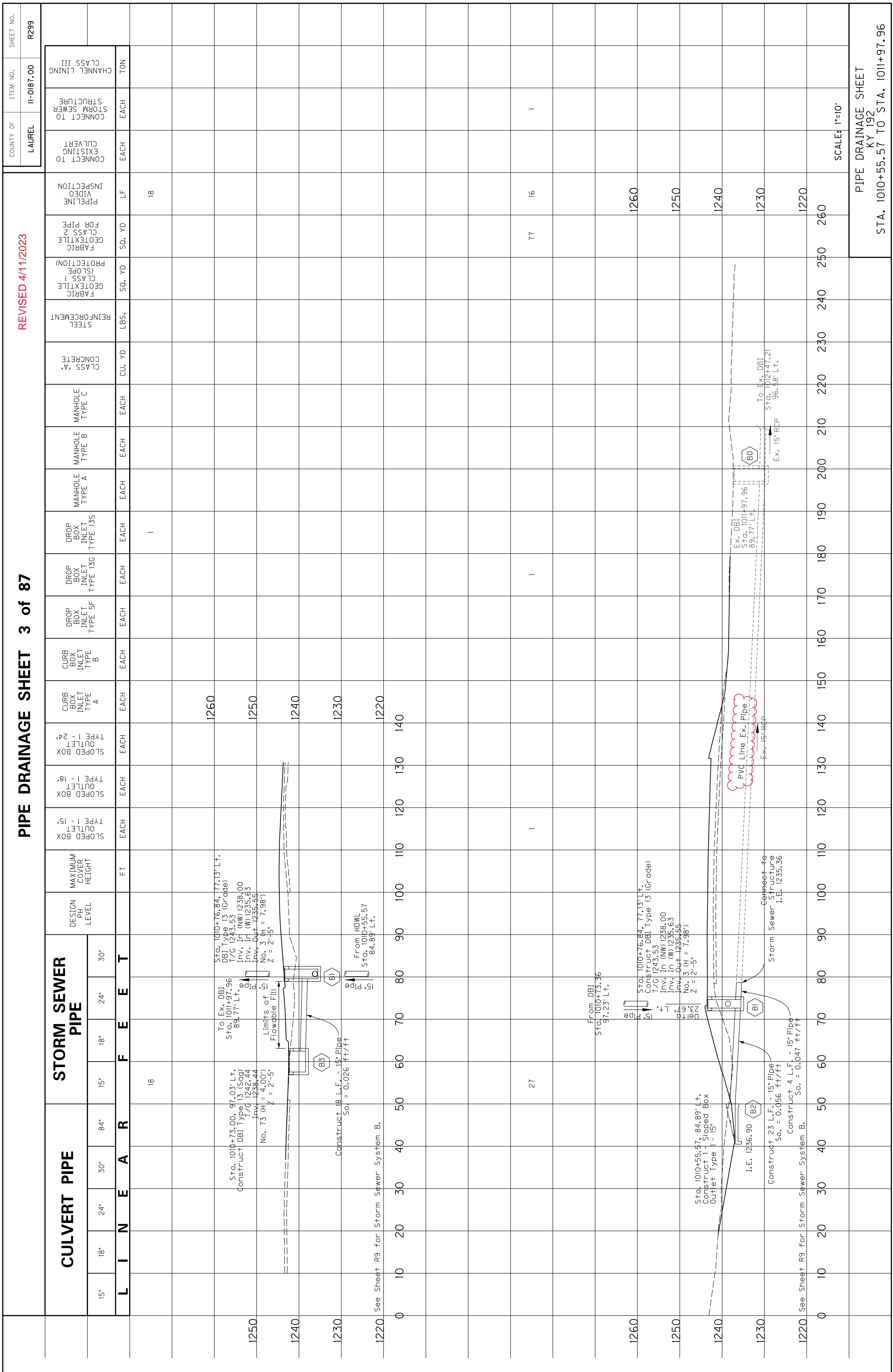


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DATE PLOTTED: Apr II, 2023
USER: messey
E-SHEET NAME:

PIPE DRAINAGE SHEET
KY 192
STA. 1010+55.57 TO STA. 1011+97.96

PIPE DRAINAGE SHEET 3 of 87

REVISED 4/11/2023



PIPE DRAINAGE SHEET 4 of 87

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PIPE DRAINAGE SHEET 4 of 87

REVISED 4/11/2023

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PIPE DRAINAGE SHEET 23 of 87

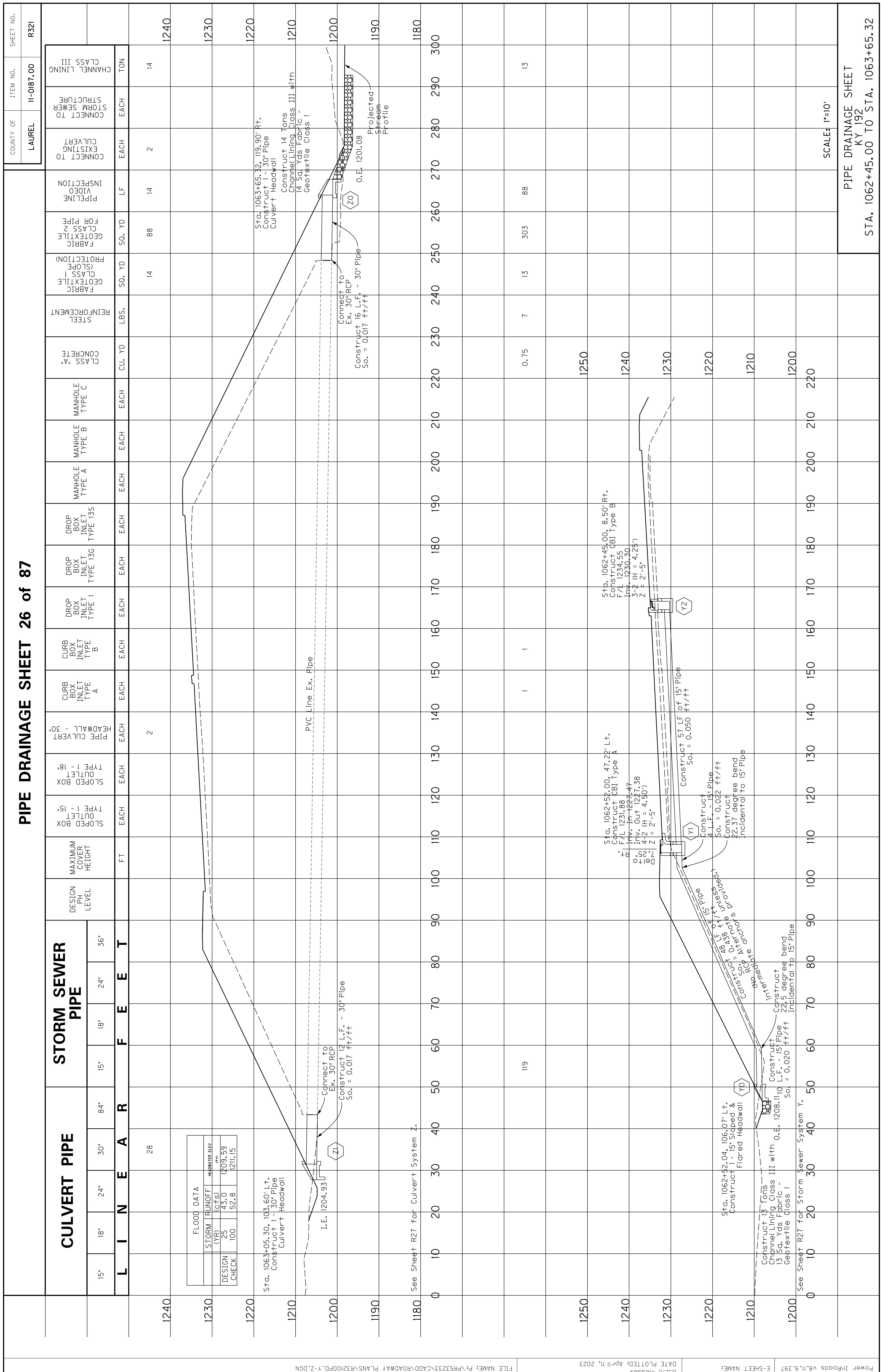
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PIPE DRAINAGE SHEET 23 of 87

REVISED 4/11/2023

		CULVERT PIPE		STORM SEWER PIPE		DESIGN PH LEVEL		MAXIMUM COVER HEIGHT		CURB BOX INLET TYPE A		DROP BOX INLET TYPE 13G		MANHOLE TYPE A		MANHOLE TYPE B		CHANNEL Lining CLASS III		
		L	I	N	E	A	R	F	E	E	T	F	T	EACH	EACH	EACH	EACH	EACH	EACH	TON
1250								27												11
1240																				11
1230																				
1220																				
1210																				
1200																				
300	30	320	330	340	350	360	370	380	390	400	410	420								
1230																				
1220																				
1210																				
1200	See Sheet R23 for Storm Sewer System V.																			
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
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1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
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1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
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1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190
1200	0	10	20																	

PIPE DRAINAGE SHEET 26 of 87



PIPE DRAINAGE SHEET 31 of 87

PIPE DRAINAGE SHEET 31 of 87

CULVERT PIPE		STORM SEWER PIPE							
L	I	N	E	A	R	F	E	E	T
15"	18"	24"	30"	84"	15"	18"	24"	30"	
63									
1190	Sta. 1095+50.00, 6.00' Lt. Construct CBI Type B F/L 1176.15 Inv. 1172.25 3-2 (H = 3.92) Z = 2'-5"								
1180	=====								
1170	=====								
1160	=====								
1150	See Sheet R37 for Storm Sewer System II.								
1190	0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170								
1180	=====								
1170	=====								
1160	=====								
1150	See Sheet R37 for Storm Sewer System II.								
1190	0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250								
1180	=====								
1170	=====								
1160	=====								
1150	See Sheet R37 for Storm Sewer System II.								
1190	0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250								
1180	=====								
1170	=====								
1160	=====								
1150	See Sheet R37 for Storm Sewer System II.								

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PIPE DRAINAGE SHEET 31 of 87

		CULVERT PIPE		STORM SEWER PIPE		DESIGN PH LEVEL		MAXIMUM COVER HEIGHT		CURB BOX INLET TYPE A		DROP BOX INLET TYPE 13G		MANHOLE TYPE A		MANHOLE TYPE B		CHANNEL LINING CLASS III	
		L	I	N	E	A	R	F	E	E	T	F	T	EACH	EACH	EACH	EACH	EACH	TON
15"	18"	24"	30"	84"	15"	18"	24"	30"											
1190					63														
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			
1160																			
1150	See Sheet R37 for Storm Sewer System II.	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170
1190																			
1180																			
1170																			

BURGESS & NIPLE

PIPE DRAINAGE SHEET 42 of 87

PIPE DRAINAGE SHEET 42 of 87

REVISED 4/11/2023

PIPE DRAINAGE SHEET 42 of 87

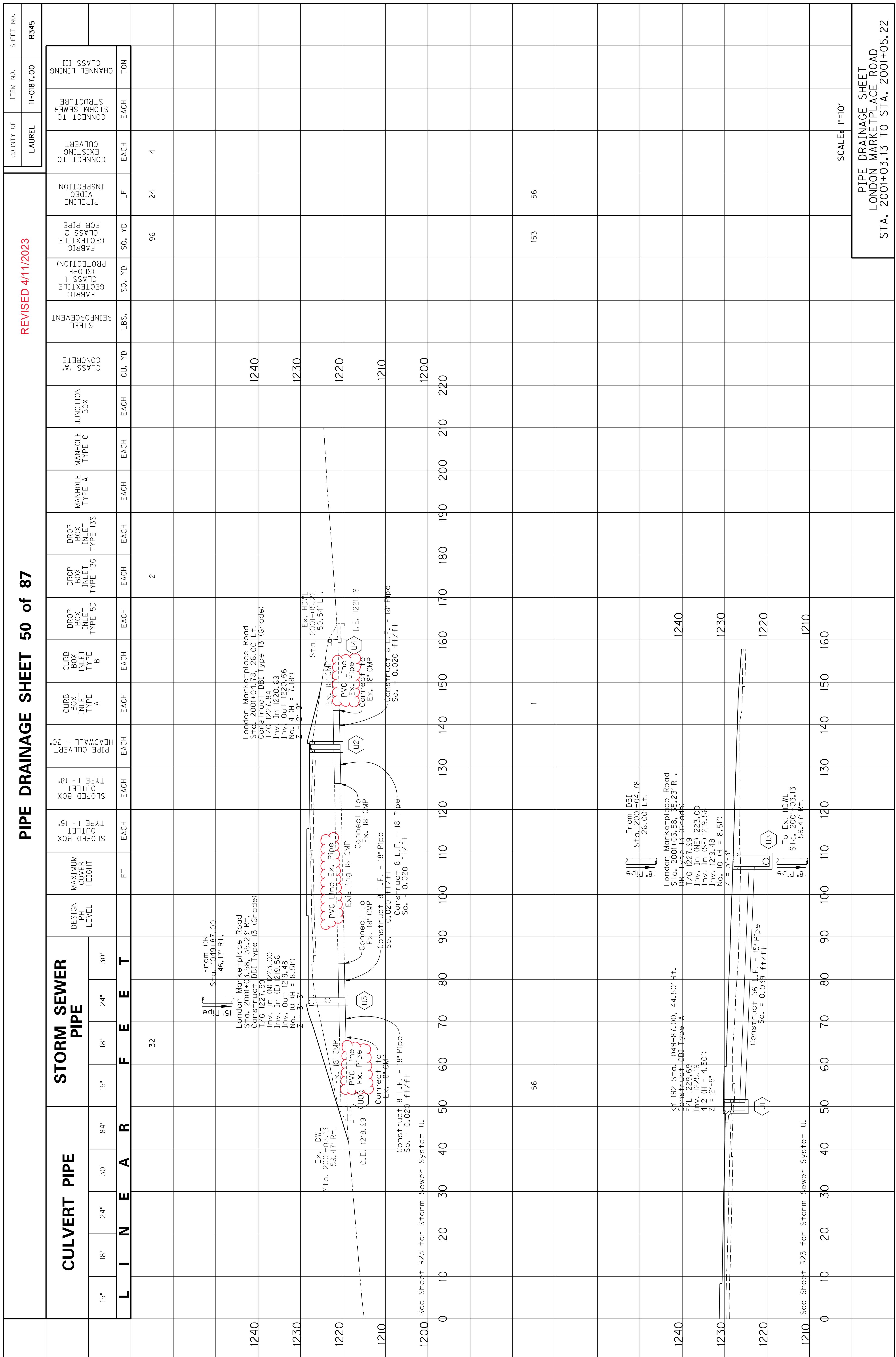
		CULVERT PIPE		STORM SEWER PIPE					
L	I	N	E	A	R	F	E	E	T
15"	18"	24"	30"	84"	15"	18"	24"	30"	
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PIPE DRAINAGE SHEET 50 of 87

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 50 of 87

REVISED 4/11/2023



BURGES & NIPLE

PIPE DRAINAGE SHEET
LONDON MARKETPLACE ROAD
STA. 2001+03.13 TO STA. 2001+05.22

SCALE: 1"-10'

Power Inroads v8.11.9.397 E-SHEET NAME: SHEET NO. R345

PIPE DRAINAGE SHEET 58 of 87

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PIPE DRAINAGE SHEET 58 of 87

REVISED 4/11/2023

PIPE DRAINAGE SHEET 58 of 87

		COUNTY OF		ITEM NO.		SHEET NO.						
		LAUREL		11-0187.00		R353						
CULVERT PIPE		STORM SEWER PIPE										
15"	18"	24"	30"	84"	15'	18"	24"	30"				
L	I	N	E	A	R	F	E	E	T	FT	EACH	EACH
REINFORCEMENT												
CLASS "A" CONCRETE												
FABRIC REINFORCEMENT												
FABRIC CLASS 1 PROTECTION												
PIPELINE INSPECTION												
CONNECT TO STORM SEWER												
CHANNEL LINING CLASS III												
CULVERT EXISTING												
PIPE CULVERT CONNECTION												
PIPE CULVERT SLOPE - 30°												
PIPE CULVERT TYPE 15'												
PIPE CULVERT OUTLET BOX TYPE 18"												
PIPE CULVERT OUTLET BOX TYPE 15'												
PIPE CULVERT OUTLET BOX TYPE 18"												
CURB BOX INLET TYPE A												
CURB BOX INLET TYPE B												
DROP BOX INLET TYPE 13G												
DROP BOX INLET TYPE 5F												
MANHOLE TYPE A												
MANHOLE TYPE C												
JUNCTION BOX												
LBS. SO. YD CU. YD EACH EACH EACH EACH EACH EACH												
TON LF EACH EACH EACH EACH EACH EACH												
42 9 1												
1 1												
17												
1180												
From Ex. Grate												
Sta. 1039.66.45 43.35.Lt. RCP												
Sta. 1007+89.57, 88.37 Lt. Construct Manhole Type A RCP												
Inv. In (SW) 1157.50 Inv. In (SE) 1154.02 Inv. Out 1153.94												
T/G 1153.29 Inv. 1153.04												
No. 72 (H = 4.25') Z = 2.5"												
1170												
1160												
Ex. Headwall Sta. 1007.47.43 94.12 Lt.												
Ex. 15 RCP PVC End Ex. Pipe Conn. to Ex. 15 RCP So. = 0.094 ft. Ex. 1148.79												
1150												
1140 See Sheets R39 & R83 for Storm Sewer System 000.												
1140 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170												
SCALE: 1"=10'												
PIPE DRAINAGE SHEET US 25 NORTH STA. 1007+47.43 TO STA. 1007+96.00												

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PIPE DRAINAGE SHEET 61 of 87

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PIPE DRAINAGE SHEET 61 of 87

REVISED 4/11/2023

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 62 of 87

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 62 of 87

REVISED 4/11/2023

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 78 of 87

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 78 of 87

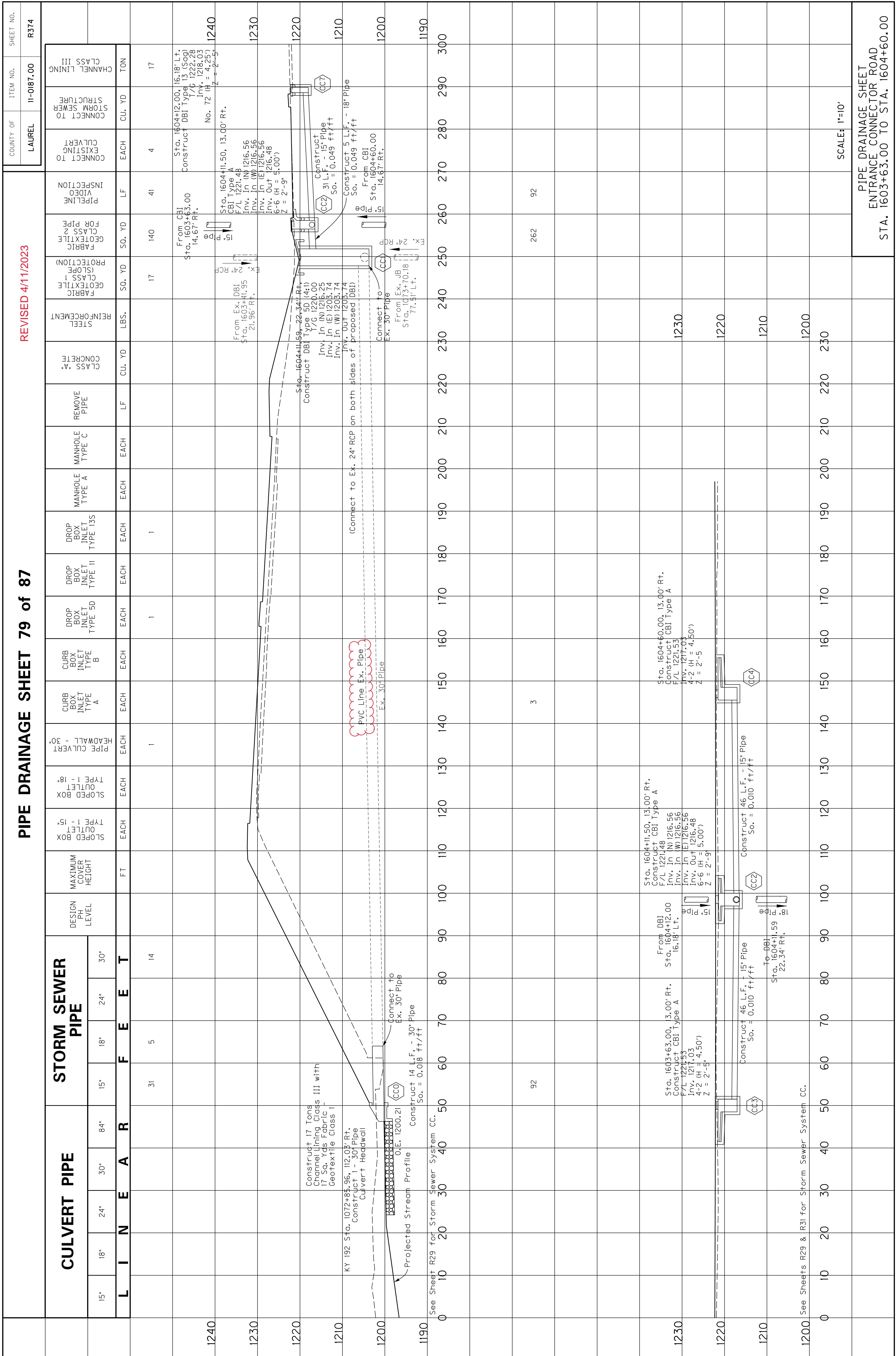
REVISED 4/11/2023

PIPE DRAINAGE SHEET 79 of 87

BURGESS & NIPPLE

PIPE DRAINAGE SHEET 79 of 87

REVISED 4/11/2023



BURGES & NIPLE

FILE NAME: P:\PR5323\CAD\ROADWAY PLANS\R57400PD-CC.DGN

DATE PLOTTED: APR II, 2023

USER: messex

FILE NAME: E-SHEET NAME:

Power Inroads v8.11.9.397

PIPE DRAINAGE SHEET
ENTRANCE CONNECTOR ROAD
STA. 1603+63.00 TO STA. 1604+60.00

SCALE: 1"-10'

PIPE DRAINAGE SHEET 82 of 87

PIPE DRAINAGE SHEET 82 of 87

CULVERT PIPE		STORM SEWER PIPE							
L	I	N	E	A	R	F	E	E	T
15"	18"	24"	30"	84"	15"	18"	24"	30"	
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PIPE DRAINAGE SHEET 82 of 87

REVISED 4/11/2023

		CULVERT PIPE		STORM SEWER PIPE		DESIGN PH LEVEL		MAXIMUM COVER HEIGHT		CURB BOX INLET TYPE A		DROP BOX INLET TYPE II		MANHOLE TYPE B		REMOVE PIPE		CHANNEL Lining CLASS III			
		L	I	N	E	A	R	F	E	E	T	F	T	EACH	EACH	EACH	LF	CU. YD	TON	CU. YD	TON
1240																					
1230																					
1220																					
1210	MATCHLINE																				
1200																					
1190	See Sheet R75 for Storm Sewer System FF.																				
300	310	320	330	340	350	360	370	380	390												
1240																					
1230																					
1220																					
1210	MATCHLINE																				
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
1200																					
1190	See Sheets R33 & R75 for Storm Sewer System FF.																				
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	</td