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Addendum No. 1 Bid Date: May 10, 2021 to the Plans, Specifications and Contract Documents for Columbia-Adair County Economic Development Authority Contract 3: Green River Commerce Park -South Access Road Extension Grading and Drainage Columbia, Kentucky Issued April 26, 2022

The following additions, deletions, changes or revisions are issued herewith and become a part of the Project Documents.

Item 1: Plan Sheets for Project Attached.



# GREEN RIVER COMMERCE PARK CONTRACT 3 SOUTH ACCESS ROAD **GRADING & DRAINAGE**



VICINITY MAP

MSE PROJECT No. 2060-12

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#### **UTILITIES**

Electricity: Taylor County RECC Barry Myers, Manager, Taylor County RECC PHONE: (270) 465-4101 (800) 931-4551 Sewer: Columbia/Adair Utilities District Facility Contact: Lenny Stone 270 384 2181 Facility Phone: P.O. Box 567 Facility Addr1: Facility Addr2: 109 Grant Lane Facility City, State Zip: Columbia , KY 42728 Water Columbia/Adair Utilities District

Facility Contact: Lenny Stone 270 384 2181 Facility Phone: Facility Addr1: P.O. Box 567 109 Grant Lane Facility Addr2: Facility City, State Zip: Columbia , KY 42728

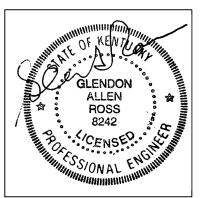
Natural Gas: City of Columbia Gas Department Gas Superintendent Ronald Cook Phone: (270) 384-2006 emergency after hours call (270) 384-2006

Bobby Morrisson Chairman Columbia-Adair County Economic Development Authority, Inc. 201 Burkesville Street PO Box 116 Columbia, KY 42728 Phone: 270-384-4401 FAX: 270-384-2056

Natural Gas Transmission Line: Contact: Taylor Price TC Energy 170 Jackie Hollow Road Liberty KY 42539 Phone: 606-787-3945

Surveyor: McKinney Land Surveying 103 South Reed Street Columbia, KY 42728 Phone: 270-384-5293





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### **GENERAL NOTES:**

1. PRIOR TO ANY CONSTRUCTION OR DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE TO ADJACENT FACILITIES DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY OWNERS. SHOULD DAMAGE OCCUR TO EXISTING OR NEW UTILITY SERVICES DURING CONSTRUCTION, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR AND/OR REPLACE SAID DAMAGE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER. NEW UTILITY WORK, REPAIRS, REPLACEMENTS AND/OR RELOCATIONS SHALL MEET THE APPROVAL OF THE UTILITY OWNER.

2. CONTRACTOR TO MARK AND PROTECT ALL UNDERGROUND UTILITIES AND OVERHEAD OBSTRUCTIONS

3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS INCLUDING GRADING PERMIT FROM LOCAL AUTHORITIES AND THE SUBMISSION OF A NOTICE ON INTENT (NOI) FOR STORMWATER DISCHARGE WITH THE KENTUCKY DEPARTMENT OF WATER PRIOR TO ANY CONSTRUCTION ACTIVITY. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO THE KENTUCKY DIVISION OF WATER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF ALL PERMITS OBTAINED.

4. VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE "KENTUCKY BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES" DATED AUGUST 1994 AS PREPARED BY THE DIVISION OF CONSERVATION AND DIVISION OF WATER, NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET AND/OR THE KENTUCKY TRANSPORTATION CABINET (KYTC) STANDARDS. CONTRACTOR SHALL USE THE "KENTUCKY EROSION PREVENTION AND SEDIMENT CONTROL FIELD GUIDE" AS THE DEFINITION OF REQUIREMENTS FOR CONSTRUCTION ACTIVITY.

5. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN AND MUST BE PROPERLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY OWNER OR THE GOVERNING AGENCY. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RUN-OFF PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MADE IMMEDIATELY WITHIN 24 HOURS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING CONSTRUCTION ENTRANCES AND SHALL KEEP ALL ROADS AND STREETS FREE ROM MUD, DIRT AND DEBRIS.

7. THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE KENTUCKY DEPARTMENT OF HIGHWAYS GUIDANCE MANUAL.

8. THE CONTRACTOR MUST MAINTAIN ACCESS TO EXISTING BUSINESSES AND EXISTING ROADS.

9. IN ADDITION TO PREVENTING SEDIMENT AND EROSION CONTROL DURING CONSTRUCTION, THE CONTRACTOR MUST MINIMIZE OR ELIMINATE THE POTENTIAL FOR CHEMICAL CONTAMINANTS TO ENTER THE SOIL OR BE CARRIED ACROSS THE SITE BY STORM WATER. POTENTIAL CONTAMINANTS NORMALLY ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE GASOLINE AND DIESEL FUEL, OIL, GREASE, ANTIFREEZE, TERMITE SOIL TREATMENT CHEMICALS, FERTILIZER, ASPHALT OILS, EMULSIONS AND SMALL PARTICLE SIZE CONSTRUCTION DEBRIS. THE CONTRACTOR MUST EMPLOY VARIOUS BEST MANAGEMENT PRACTICES TO ELIMINATE OR MINIMIZE THE POTENTIAL FOR THESE CONTAMINANTS TO REACH THE SOIL AND/OR DRAINAGE SYSTEMS.

10. ALL SURFACE RUNOFF SHALL BE DIRECTED AWAY FROM ROADWAYS AND BUILDINGS AND DIRECTED TO DRAINAGE STRUCTURES, DITCHES OR SWALES.

11. CONTRACTOR SHALL ACCURATELY RECORD ALL UTILITIES CONSTRUCTED OR ENCOUNTERED ON "AS-BUILT" DRAWINGS AND PROVIDE TO OWNER AND ENGINEER.S SHA

12. MATERIALS AND METHODS OF CONSTRUCTION FOR GRADING AND DRAINAGE STRUCTURES INCLUDING PIPING AND HEADWALLS SHALL BE IN ACCORDANCE WITH KENTUCKY TRANSPORTATION CABINET (KYTC) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.

13. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY AREAS WHERE UNACCEPTABLE SOILS, SINKHOLES, WET AREAS OR OTHER CONDITIONS ARE ENCOUNTERED WHICH MAY ADVERSELY AFFECT THE SITE. IF DIRECTED BY ENGINEER, REMOVE UNSUITABLE SOILS AND REPLACE THEM WITH ACCEPTABLE SOILS.

14. EARTH AND ROCK WORK IS UNCLASSIFIED. NO EXTRA PAYMENT WILL BE MADE FOR ROCK EXCAVATION.

15. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS IN GRADING PLAN AS NECESSARY TO PROVIDE FOR SMOOTH TRANSITION FOR EXISTING ENTRANCES.

16. ALL SPOT ELEVATIONS INDICATE FINISH GRADE OF SURFACE. CONTRACTOR SHALL MAKE ADJUSTMENTS TO ESTABLISH GRADES OF SUB-BASE OR SUBGRADE.

17. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE EARTHWORK (EXCAVATION AND EMBANKMENT) QUANTITIES.

18. AREAS TO BE FILLED, EXCAVATED, LANDSCAPED, OR REGRADED SHALL BE STRIPPED OF ALL VEGETATION AND TOPSOIL. ALL TOPSOIL SHALL BE STOCKPILED FOR REDISTRIBUTION. STOCKPILE AREAS SHALL HAVE SOIL EROSION PROTECTION IN THE FORM OF SILT FENCING INSTALLED AROUND THE PERIMETER OR OTHER SUCH ACCEPTABLE MEASURES.

19. ALL SOIL FILL MATERIAL PLACED ON THIS PROJECT SHOULD BE COMPACTED WITH APPROPRIATE EQUIPMENT IN UNIFORM LAYERS TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) AS RECOMMENDED IN THE GEOTECHNICAL REPORT FOR THIS PROJECT.

20. FILL MATERIAL SHALL BE PROPERTY MONITORED USING FIELD DENSITY TEST CHECKS. ALL TESTING SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT TESTING AGENCY. SHOULD REPORTS INDICATE SPECIFIED COMPACTION IS NOT ACHIEVED, THE CONTRACTOR SHALL REMOVE MATERIAL, REPLACE, AND RETEST AT NO ADDITIONAL COST TO THE OWNER UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. COPIES OF TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER.

21. CONTRACTOR SHALL PROVIDE REDISTRIBUTION OF STOCKPILED OR IMPORT TOPSOIL AS REQUIRED OVER ALL FINISHED GRADE SOIL ARES TO A MINIMUM OF 12 INCHES AND PROVIDE FINAL SITE GRADING TO INSURE POSITIVE DRAINAGE AWAY FROM ROADWAYS AND BUILDINGS. AFTER FINAL GRADING, ANY LOW SPOTS WHICH ALLOW WATER TO POND SHALL MAKE ANY NECESSARY MINOR GRADE ADJUSTMENTS AS REQUIRED TO BEST FIT THE ACTUAL SITE CONDITIONS. CONTRACTOR SHALL PROVIDE BORROW MATERIAL AS REQUIRED FOR FILLING EXCAVATIONS, HOLES AND OTHER SUCH OPENINGS. 22. ALL EARTH GRADED AREAS SCARRED OR DENUDED BY THE CONSTRUCTION ACTIVITY SHALL BE SEEDED AND PROTECTED IN ADDITION TO THE PROVISIONS OF OTHER EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED.

23. ALL SURPLUS AND WASTE MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS AND CODES UNLESS OTHERWISE APPROVED BY OWNER. NO BURNING OR BURYING OF TREES, BRUSH, CONSTRUCTION DEBRIS, RUBBISH, ETC. SHALL BE ALLOWED ON SITE UNLESS OWNER APPROVAL IS OBTAINED.

### UTILITY CONSTRUCTION WITHIN ROADWAY AREA

NO ADDITIONAL FUNDS WILL BE PAID TO CONTRACTOR FOR SPECIAL CONSTRUCTION NECESSARY TO COMPLY WITH THE FOLLOWING REQUIREMENTS:

UTILITY CONTRACTOR SHALL INSURE THAT FINISHED PIPELINES, BOTH WATER AND SEWER, HAVE SPECIFIED DEPTH OF COVER FROM FINISHED GRADES, INCLUDING ROADWAY AND ROADWAY DITCHES. CAREFUL ATTENTION SHALL BE PAID TO AVOID CONFLICT WITH PROPOSED DITCHES, STORM DRAINS AND ROADWAY EXCAVATION. BACKFILL IN PIPELINES WITHIN THE ROADWAY LIMITS (PAVEMENT AND SHOULDERS) SHALL BE CRUSHED STONE AS SPECIFIED. UTILITY CONTRACTORS SHALL INCLUDE EXTRA DEPTH TRENCHING IF NECESSARY TO YIELD REQUIRED COVER AFTER ROADWAY EXCAVATION AND USE CRUSHED STONE TO THE ELEVATION NECESSARY TO YIELD A CRUSHED STONE TRENCH BACKFILL UNDER PAVEMENT AND SHOULDERS.

### **ROADWAY CONSTRUCTION NOTES**

1. SUBGRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS. COMPACTION TESTS AT SPECIFIED INTERVALS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PLACING THE FIRST LIFT OF STONE.

2. CONCRETE CURB SHALL CONFORM TO THE DETAILS IN THE GENERAL SPECIFICATIONS. CONSTRUCTION JOINTS SHALL BE INSTALLED AT 500 FOOT INTERVALS AND CONTROL JOINTS SHALL BE SAWED TRANSVERSELY AT 25 FOOT INTERVALS TO A MINIMUM DEPTH OF 2 INCHES. DGA BACKFILL SHALL BE PLACED BEHIND THE CURB PRIOR TO PAVING ROADWAY.

### **STORM DRAINAGE FACILITIES NOTES**

1. STORM SEWER PIPE SHALL BE AS DESIGNATED ON THE APPROVED CONSTRUCTION PLANS, AND SHALL CONFORM TO THE GENERAL SPECIFICATIONS.

- 2. BEDDING AND BACKFILL SHALL CONSIST OF THE FOLLOWING: A. WHEN THE TRENCH EXCAVATION IS IN ROCK, THE PIPE SHALL BE BEDDED ON AT LEAST 6 INCHES OF NO. 9 OR NO. 68 CRUSHED STONE, AND SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE FOR A MINIMUM OF 12 INCHES ABOVE THE TOP OF THE PIPE. BACKFILL ABOVE THIS CUSHION SHALL NOT CONTAIN PIECES OF ROCK LARGER THAN 12 INCHES IN ANY DIMENSION.
- B. WHEN THE TRENCH EXCAVATION IS IN SOIL, THE PIPE SHALL BE BEDDED ON AT LEAST 6 INCHES OF NO. 9 OR NO. 68 CRUSHED STONE, AND SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE TO THE SPRINGLINE OF THE PIPE. THE REMAINING PORTION OF THE TRENCH, NOT LOCATED WITHIN A STREET, CAN BE BACK FILLED WITH SELECT SOIL CONTAINING ROCKS NO LARGER THAN 1 1/2 INCH IN SIZE.
- C. WHEN THE TRENCH EXCAVATION IS WITHIN A STREET (I.E., BACK OF CURB TO BACK OF CURB), THEN THE ENTIRE TRENCH SHALL BE BACKFILLED WITH NO. 9 OR NO. 68 CRUSHED STONE.
- 3. MANHOLES SHALL BE CONSTRUCTED OF PRECAST CONCRETE AND SHALL CONFORM TO THE GENERAL SPECIFICATIONS. ALL MANHOLE TOPS SHALL BE ECCENTRIC IN DESIGN. CONICAL TOPS SHALL BE USED FOR ALL MANHOLES WITH DEPTHS SUFFICIENT FOR THEIR USE. MINOR GRADE ADJUSTMENTS (THROUGH THE USE OF GRADE RINGS) TO THE RIM ELEVATION SHALL NOT EXCEED 12 INCHES. NO MORE THAN 2 GRADE RINGS SHALL BE PERMITTED. BITUMINOUS MASTIC SEALANT SHALL BE USED AT EACH JOINT OF THE MANHOLE AND BETWEEN ALL GRADE RINGS AND/OR CASTINGS. NON-SHRINK (HYDRAULIC) GROUT SHALL BE REQUIRED INSIDE THE MANHOLES WHERE THE PIPES ENTER AND EXIT.
- 4. HEADWALLS AND OTHER CONCRETE STRUCTURES SHALL BE AS DESIGNATED ON THE APPROVED CONSTRUCTION PLANS, AND SHALL CONFORM TO THE GENERAL SPECIFICATIONS.
- 5. DRAINAGE SWALES SHALL CONFORM TO THE GENERAL SPECIFICATIONS. DRAINAGE SWALES SHALL BE SODDED OR HAVE VEGETATION BLANKETS USED TO THE ELEVATION OF THE 25-YEAR FREQUENCY STORM.
- 6. MINIMUM 3 FOOT HIGH CHAIN LINK FENCING SHALL BE REQUIRED ALONG THE PERIMETER OF THE HEADWALL IF THE DISTANCE FROM THE PIPE INVERT TO THE TOP OF THE HEADWALL EXCEEDS 3.5 FEET.

### SPECIFICATIONS FOR GEOTEXTILE FABRIC

GRAB TENSILE STRENGTH 220 LBS. (MIN.) (ASTM D1682) ELONGATION FAILURE 60% (MIN.) (ASTM D1682) MULLEN BURST STRENGTH 430 LBS. (MIN.) (ASTM D3768) PUNCTURE STRENGTH 125 LBS. (MIN.) (ASTM D751) (MODIFIED) EQUIVALENT OPENING SIZE 40-80 (US STD SIEVE) (CW-02215)

NOTES

1. A STABILIZED ENTRANCE PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.

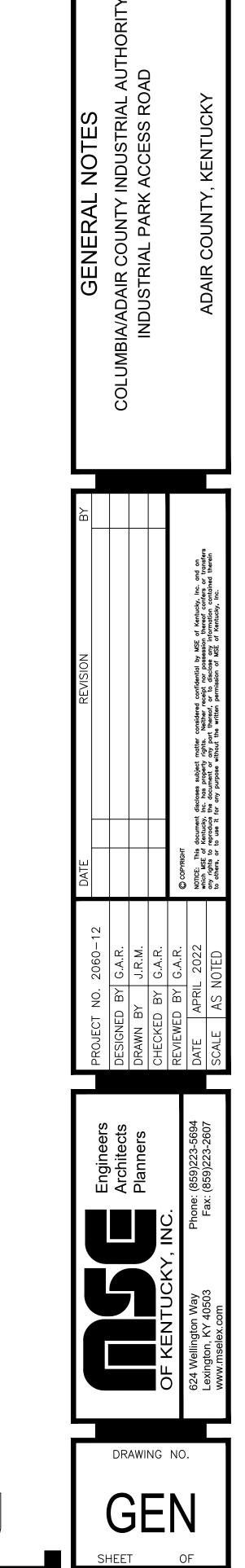
2. SOIL STABILIZATION FABRIC SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.

3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

MUST BE REMOVED IMMEDIATELY.

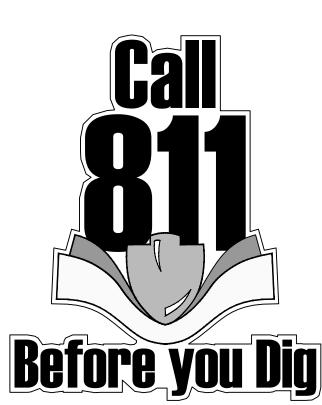
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.

4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS OR INTO STORM DRAINS



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# **EROSION CONTROL NOTES:**

THE EROSION CONTROL MEASURES NOTED BELOW ARE MINIMUMS AND DO NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR COMPLIANCE WITH ANY AND ALL U.S. EPA , KENTUCKY DIVISION OF WATER AND/OR LOCAL REQUIREMENTS.

CONTRACTOR SHALL ESTABLISH EROSION CONTROL MEASURES BEFORE DISTURBING SITE.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.

ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION, IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT EROSION ONTO ADJACENT PROPERTY. ANY REMEDIAL MEASURES REQUIRED TO CORRECT DAMAGE CREATED BY EROSION SHALL BE AT THE CONTRACTOR'S EXPENSE

TOPSOIL STOCKPILES THAT ARE NOT BEING UTILIZED FOR A PERIOD OF 14 DAYS TO BE SURROUNDED BY SILT FENCE.

SILT FENCES TO BE CLEANED OUT WHEN THEY BECOME ONE-THIRD FULL

WHEN SEASONAL CONDITIONS PROHIBIT THE APPLICATION OF TEMPORARY OR PERMANENT SEEDING, NON-VEGETATIVE SOIL STABILIZATION PRACTICES SUCH AS MULCHING AND MATTING SHALL BE USED, UNTIL SUCH TIME AS CONDITIONS PERMIT.

ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD. A FIELD LOG OF INSPECTIONS SHALL BE MADE AND A COPY GIVEN TO THE OWNER.

ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL SOIL STABILIZATION HAS BEEN OBTAINED.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NO MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PART OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED UNLESS THAT ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.

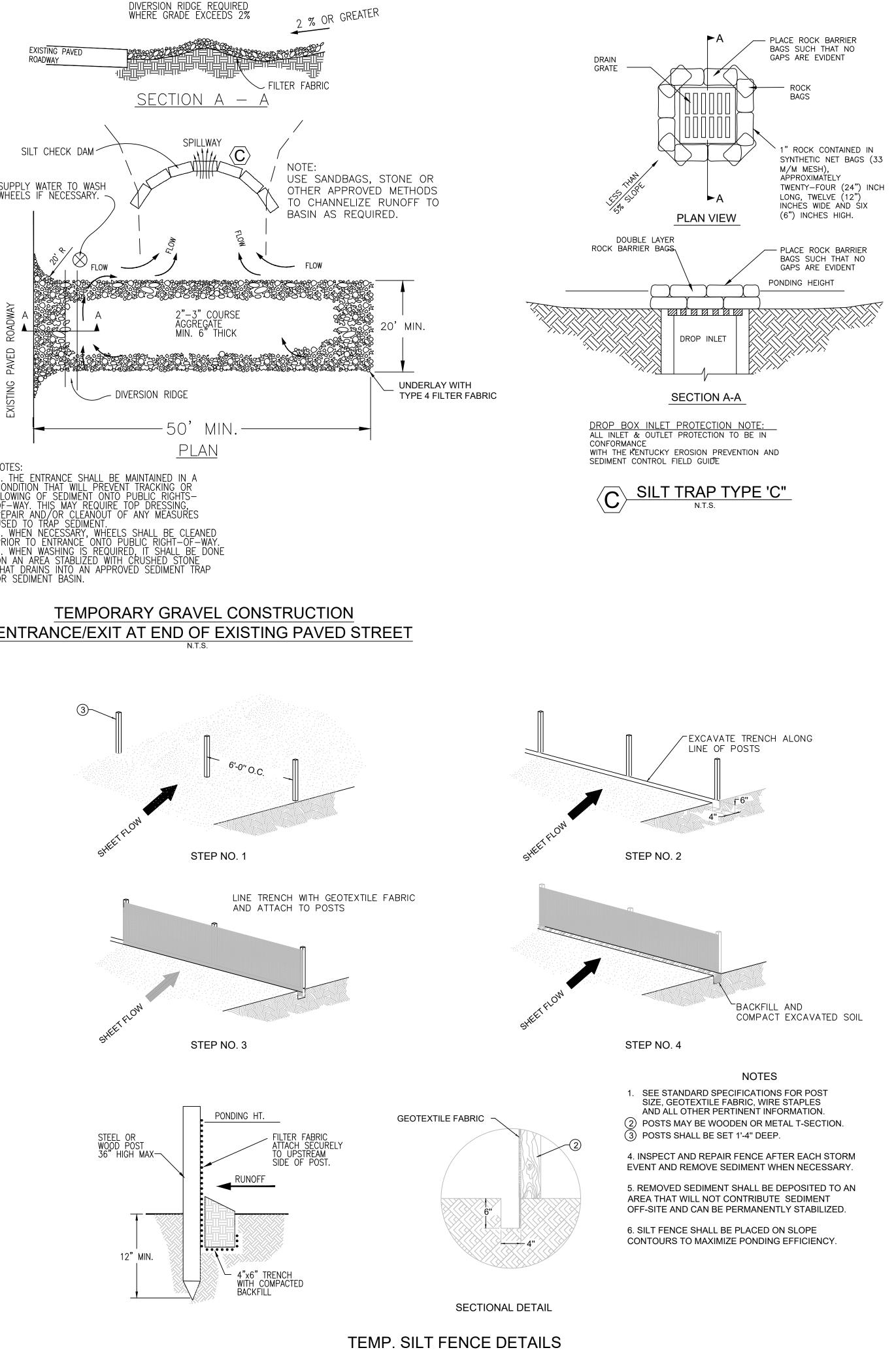
THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED

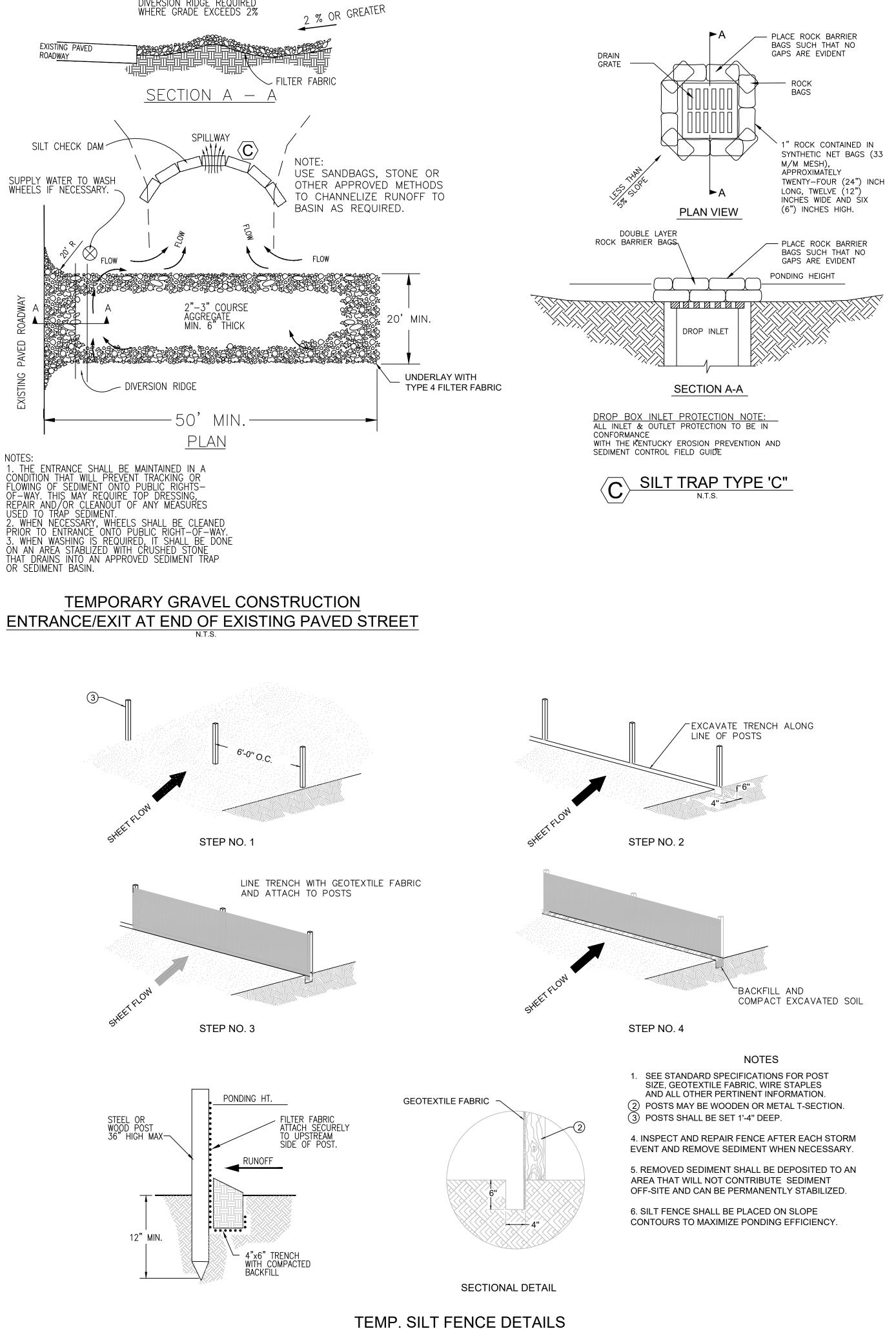
PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE KENTUCKY DEPARTMENT OF HIGHWAYS GUIDANCE MANUAL.

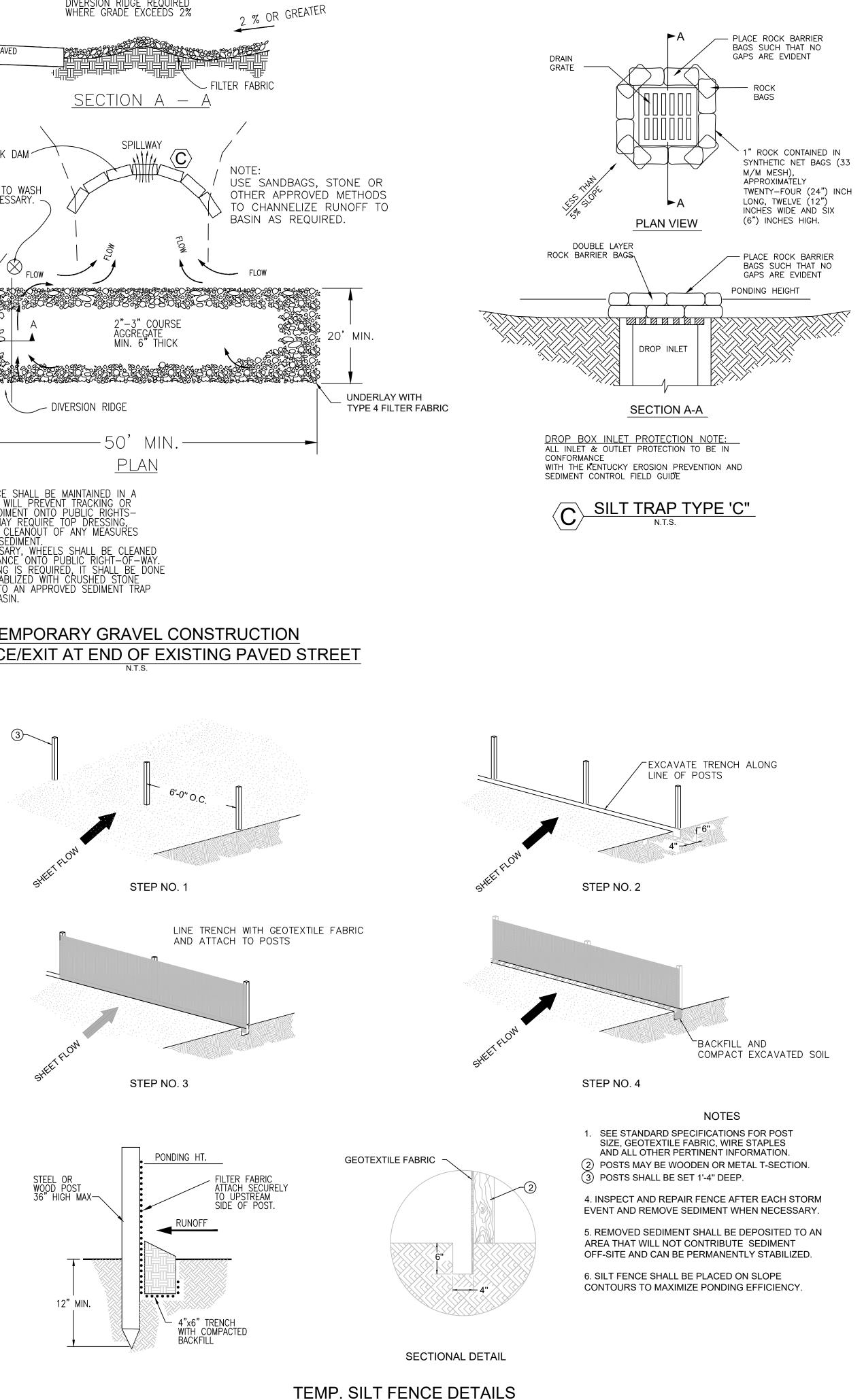
MAINTAIN ACCESS TO EXISTING BUSINESSES AND EXISTING ROADS.

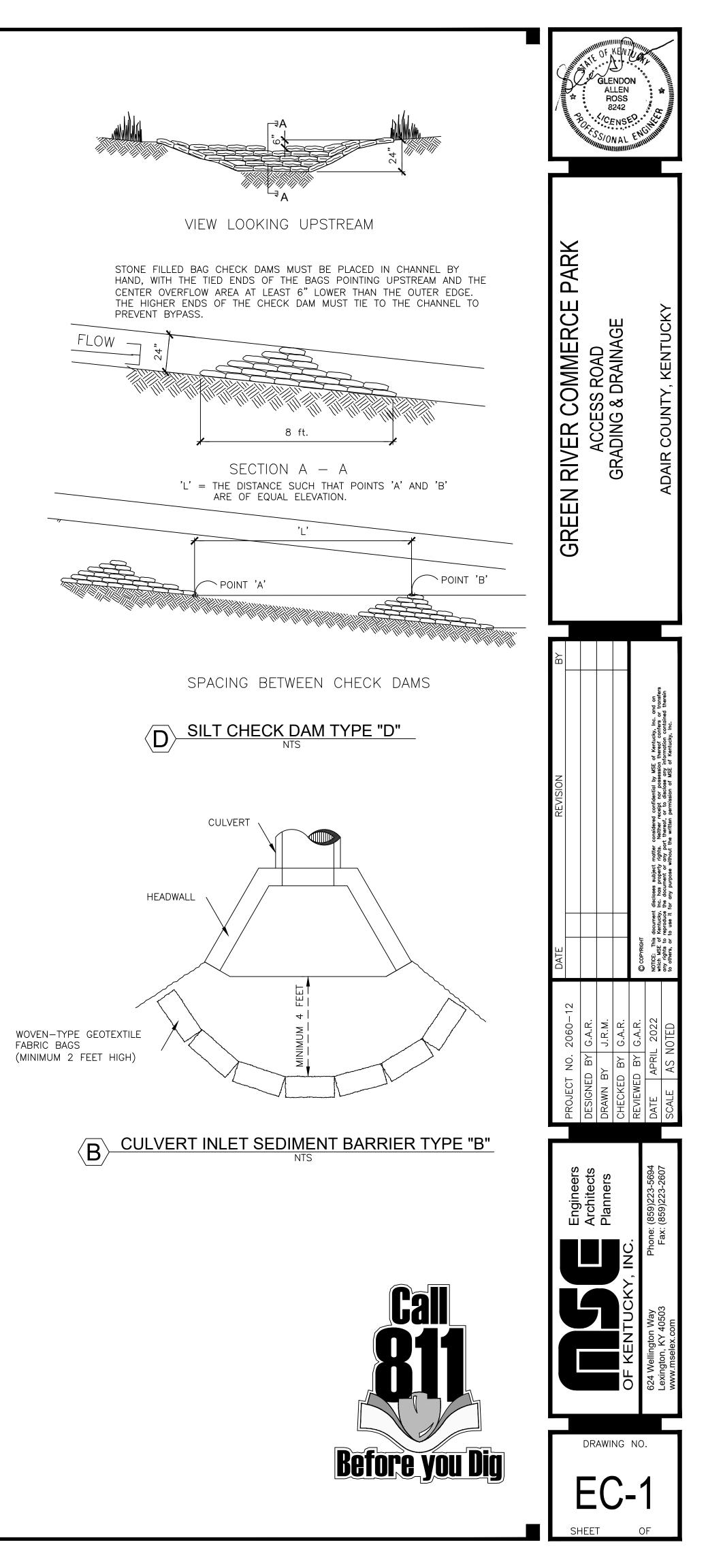
ALL EARTHWORK TO COMPLY WITH KENTUCKY DEPT. OF HIGHWAYS (KY-DOH SECTION 400) SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. EDITION OF 2000 AND ANY AMENDMENTS.

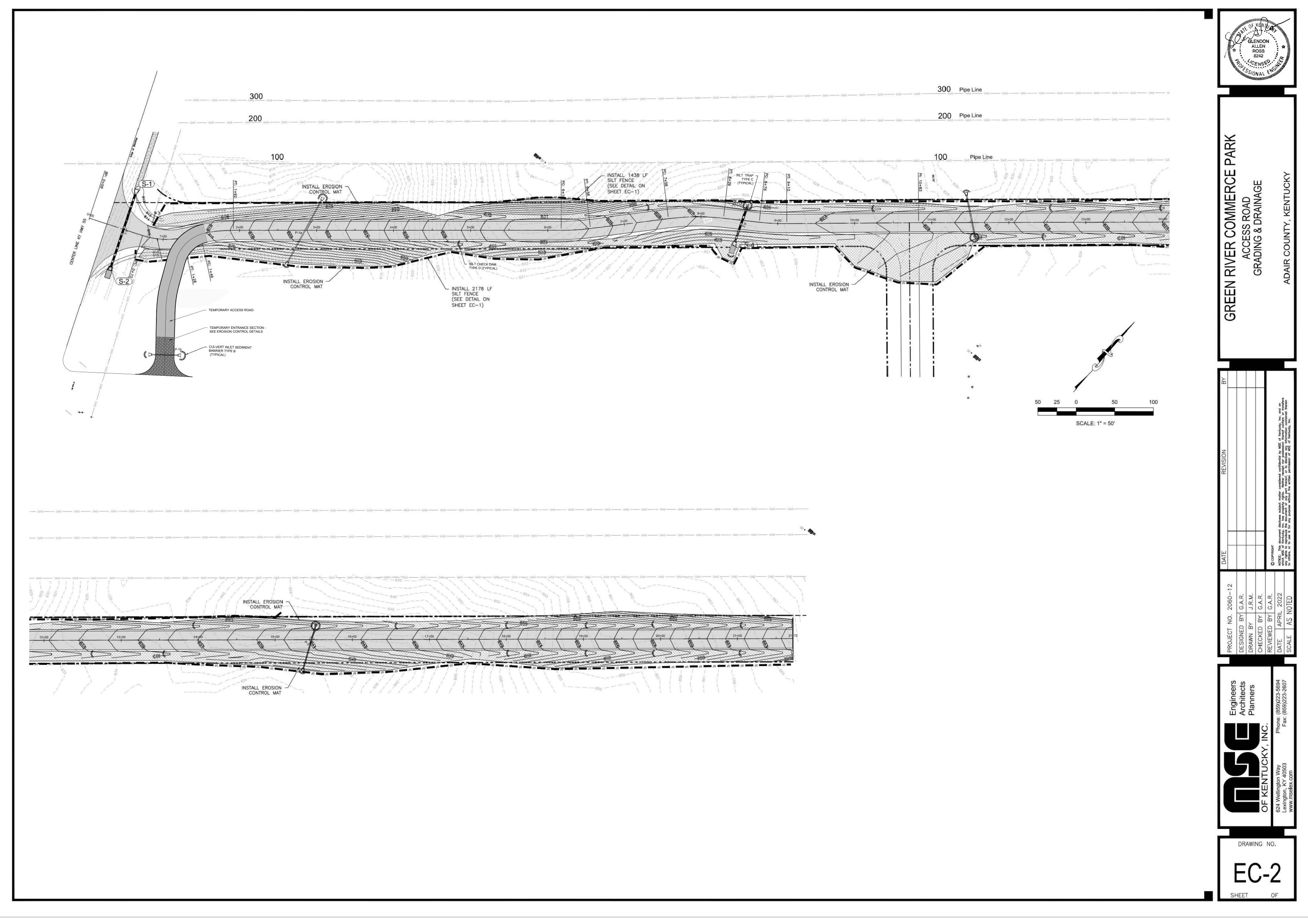
THE CONTRACTOR SHALL SHALL LIMIT ACCESS TO THE SITE TO THE CONSTRUCTION ENTRANCES. THE LOCATION OF THE CONSTRUCTION ENTRANCES SHALL BE APPROVED BY THE ENGINEER AND DESIGNATED ON THE SWPPP. THE CONTRACTOR SHALL INSTALL STONE SURFACE AT THE LOCATION WHERE CONSTRUCTION TRAFFIC LEAVES AND ENTERS THE SITE. THESE ACCESS POINTS SHALL BE MIN. 20' WIDE, 50' LONG, 0.5' DEEP AND USE NO 7 STONE OVER GEOTEXTILE FABRIC. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND PARKING AREAS FREE FORM MUD, DIRT, DEBRIS, AND ROCK. DUST SHALL BE KEPT TO A MINIMUM BY UTILIZING SPRINKLING, CALCIUM CHLORIDE, VEGETATIVE COVER, SPRAY ON ADHESIVES OR OTHER APPROVED METHODS. THIS ENTRANCE SHALL BE MAINTAINED UNTIL THE STREET HAS BEEN CONSTRUCTED.



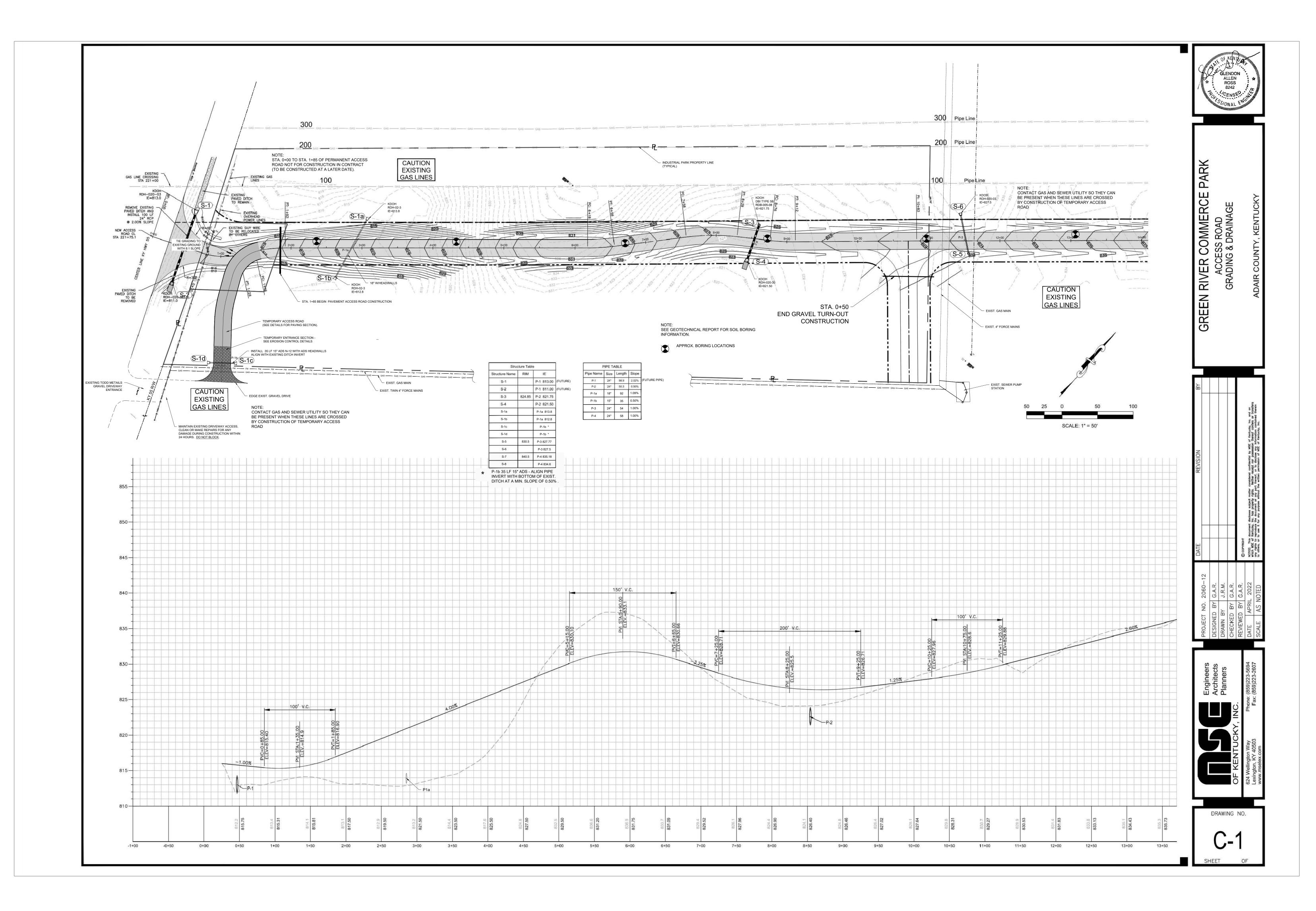




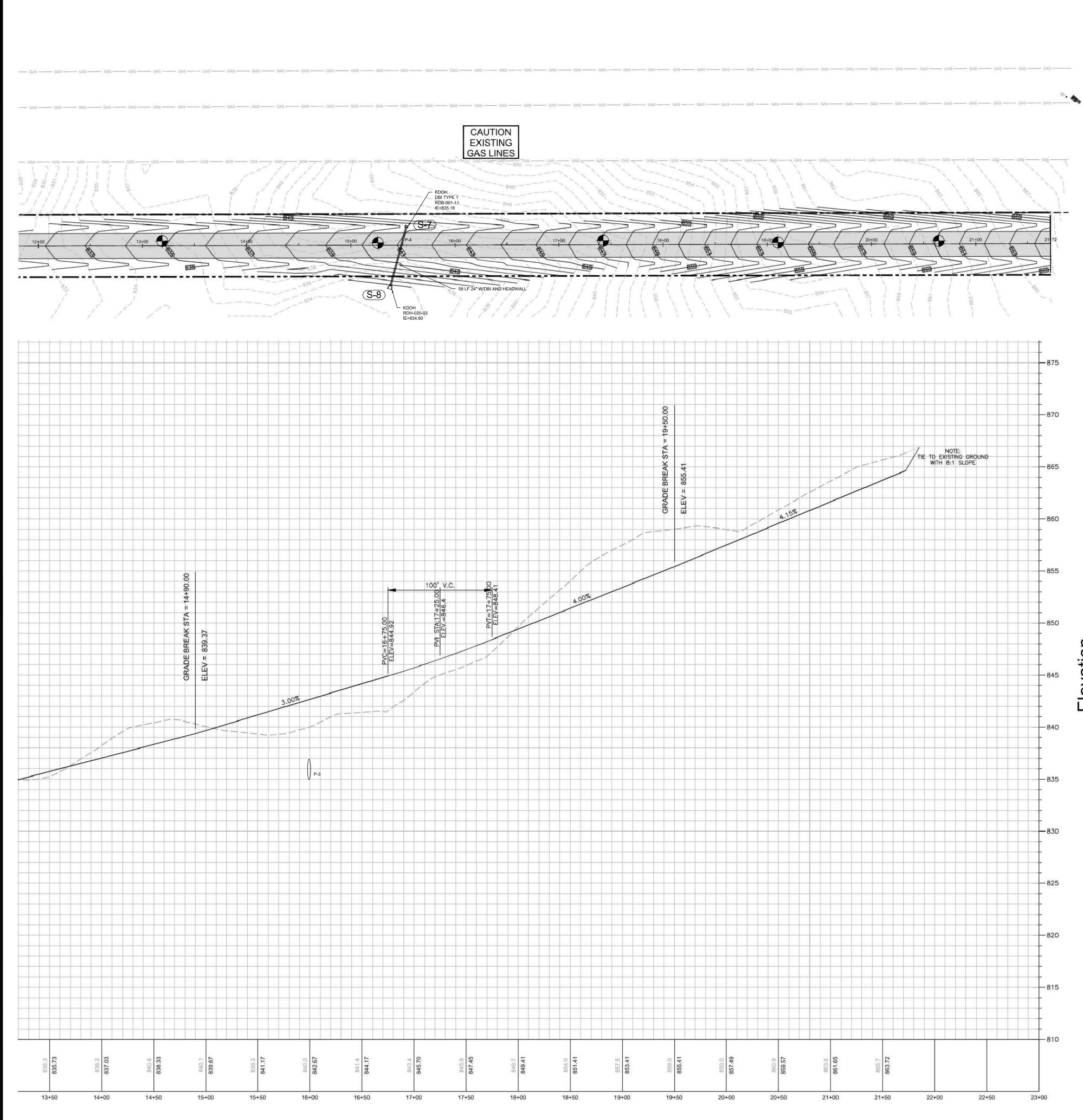




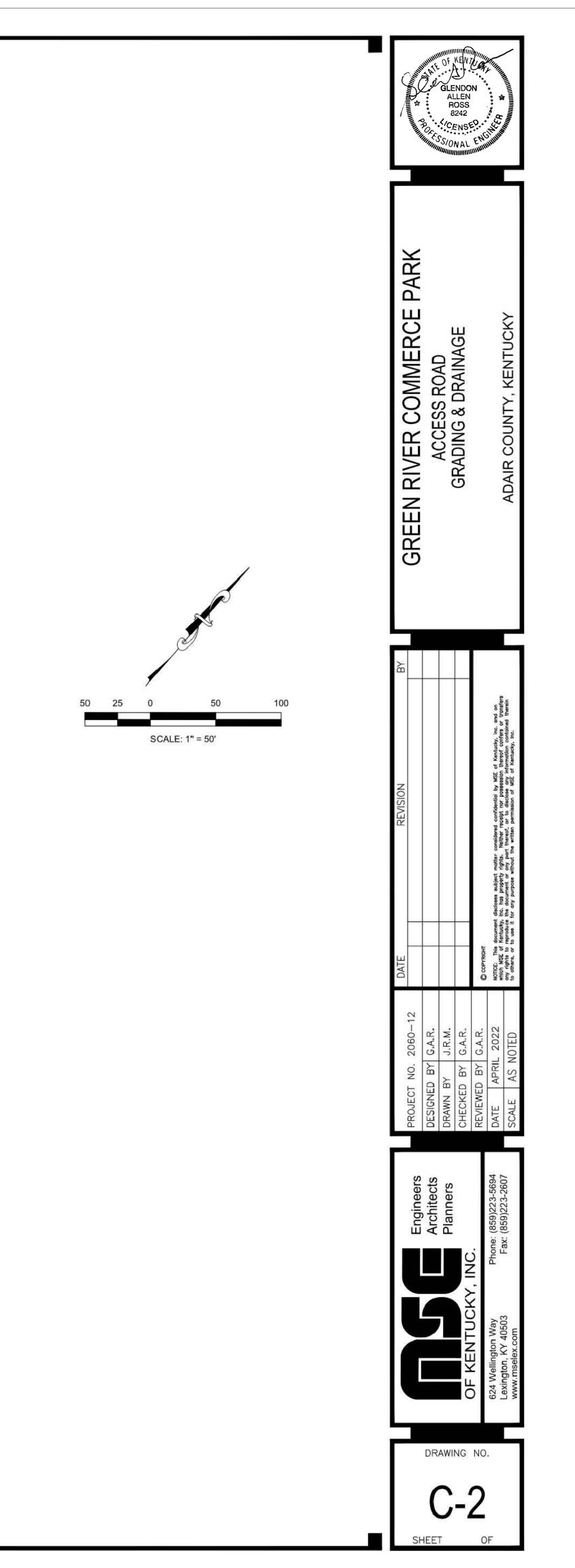
ROJECTS/Adair County - Green River Commerce Park 2019-2021/Working-New Entrance Road/Adair Co -south Entrance Road - PDF 4-18-22.dwg, 4/20/2022 4:46:26 PM, DWG To PDF, pc

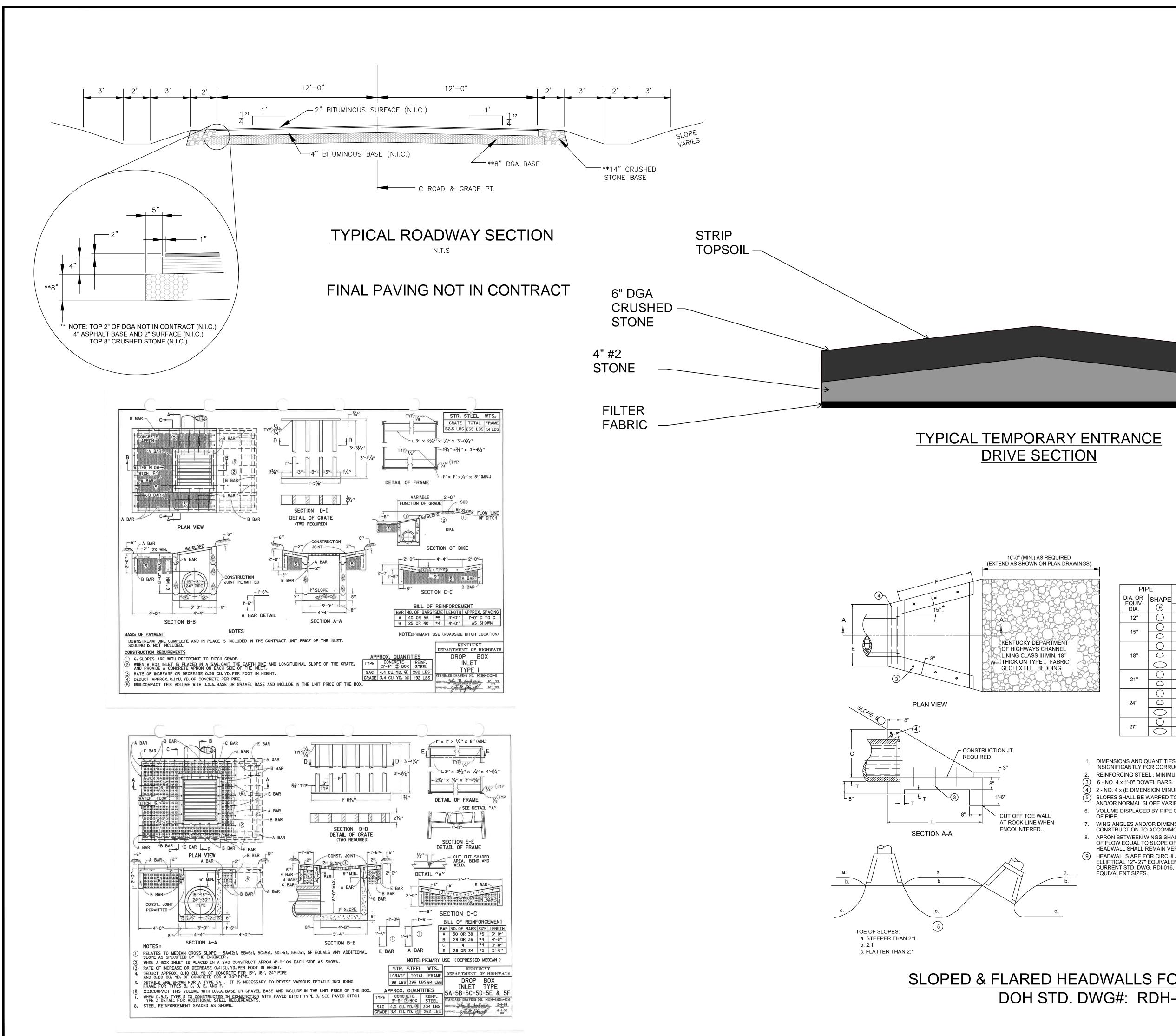


DJECTS\Adair County - Green River Commerce Park 2019-2021\Working-New Entrance Road\Adair Co -south Entrance Road - PDF 4-18-22.dwg, 4/21/2022 10:45:07 AM, DWG To PDEpc3



S/Adair County - Green River Commerce Park 2019-2021\Working-New Entrance Road/Adair Co -south Entrance Road - PDF 4-18-22.dwg, 4/20/2022 445:18 PM, DWG To PDF.pr





PIPE				DIMEN	ISIONS			CLASS A	REINF STEEL	
DIA. OR EQUIV.	SHAPE							CONC	STEEL	
DIA.	9	С	E	F	L	W	Т	C. Y.	LBS.	
12"	0	1'-9"	2'-6"	2'-3"	3'-6"	4'-0"	2"	0.58	7	
15"	0	2'-0"	2'-9"	2'-9"	4'-0"	4'-9"	0.4/4	0.75		
15	$\bigcirc$	1'-9"	3'-0"	2'-6"	3'-6"	4'-9"	2-1/4"	0.68		
18"	0	2'-3"	3'-0"	3'-6"	4'-6"	5'-3"	2-1/2"	0.93		
	$\bigcirc$	- 2'-0"	3'-6"	21 01	4' 0"	EL C.		0.89	8	
	$\bigcirc$		2-0 3-0 3	3'-0"	4'-0"	5'-6"	0.0/4"			
	0	2'-6"	3'-3"	4'-0''	5'-0"	6'-0"	2-3/4"	1.14		
21"	$\bigcirc$	2'-3"	3'-0"	3'-6"	4'-6"	6'-0"	7	1.07	9	
	0	2'-9"	3'-6"	4'-6"	5'-6"	6'-6"	3"	1.35	8	
24"	$\bigcirc$		4' 0"	41.0"	E' 0"	CL 0"		1.20		
	$\bigcirc$	2'-6"	4'-0"	4'-0"	5'-0"	6'-9"	3-1/4"	1.30	9	
27"	0	3'-0"	3'-9"	5'-0"	6'-0''	7'-0''	7	1.57		
	$\bigcirc$	2'-9"	4'-6"	4'-3"	5'-3"	7'-3"	3-1/2"	1.51	10	

NOTES

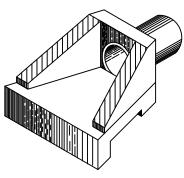
1. DIMENSIONS AND QUANTITIES ARE BASED ON CONCRETE PIPE AND WILL VARY

INSIGNIFICANTLY FOR CORRUGATED METAL PIPE. REINFORCING STEEL : MINIMUM GRADE 40, BARS EVENLY SPACED.

3) 6 - NO. 4 x 1'-0" DOWEL BARS.

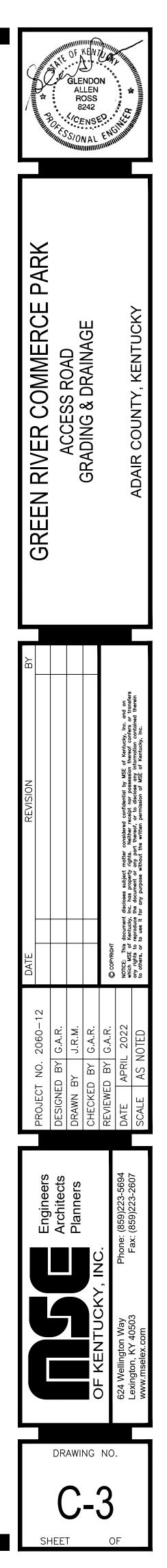
(4) 2 - NO. 4 x (E DIMENSION MINUS 4").

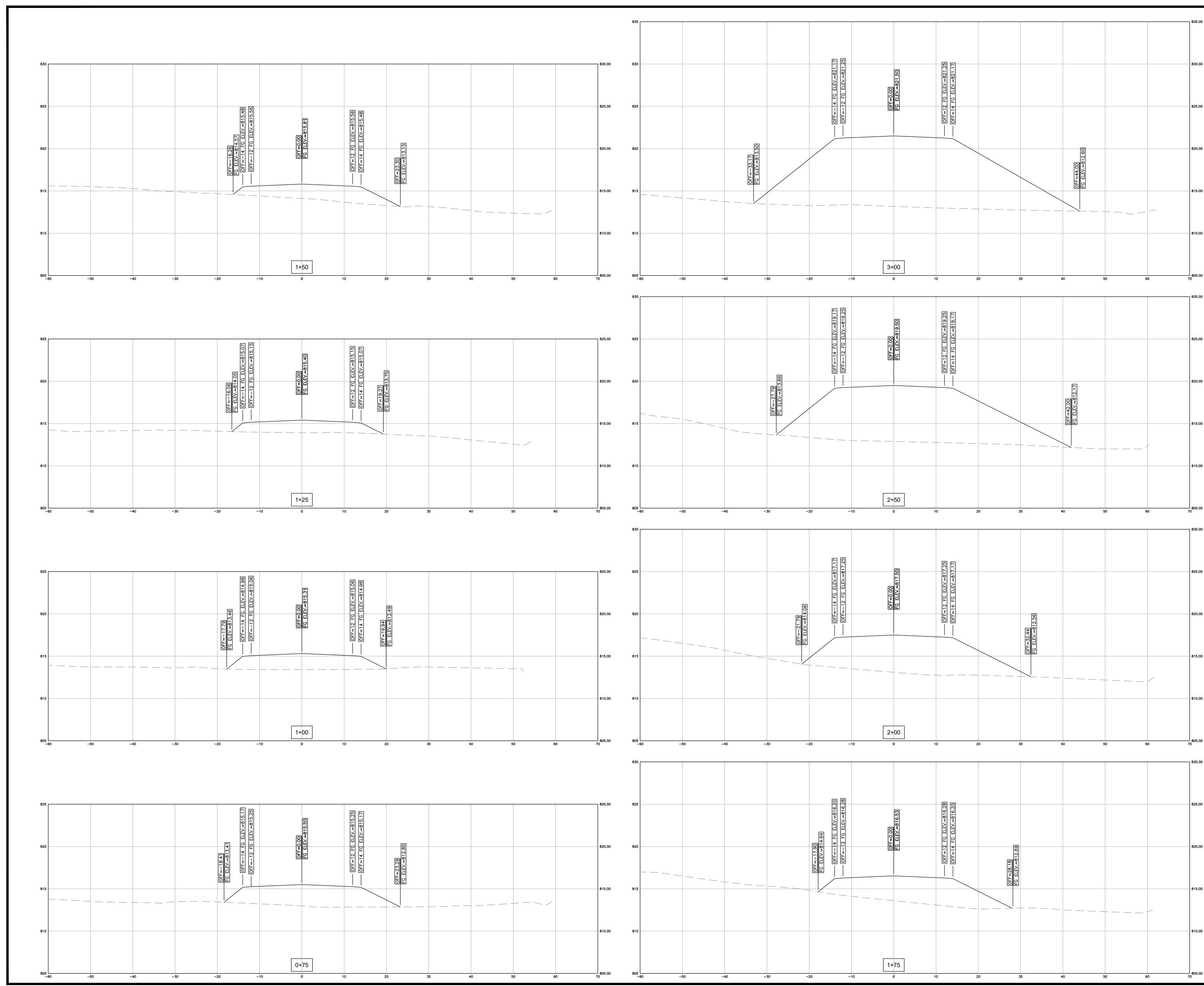
- 5 SLOPES SHALL BE WARPED TO FIT HEADWALL WHEN PIPE IS SKEWED AND/OR NORMAL SLOPE VARIES FROM 2:1. 6. VOLUME DISPLACED BY PIPE COMPUTED USING INSIDE DIAMETER
- 7. WING ANGLES AND/OR DIMENSIONS MAY BE ALTERED DURING CONSTRUCTION TO ACCOMMODATE FLOW OF WATER.
- 8. APRON BETWEEN WINGS SHALL BE SLOPED IN DIRECTION OF FLOW EQUAL TO SLOPE OF PIPE. FRONT FACE OF HEADWALL SHALL REMAIN VERTICAL.
- (9) HEADWALLS ARE FOR CIRCULAR, ARCH, AND HORIZONTAL ELLIPTICAL 12"- 27" EQUIVALENT PIPE SIZES. SEE CURRENT STD. DWG. RDI-016, FOR NON-CIRCULAR PIPE

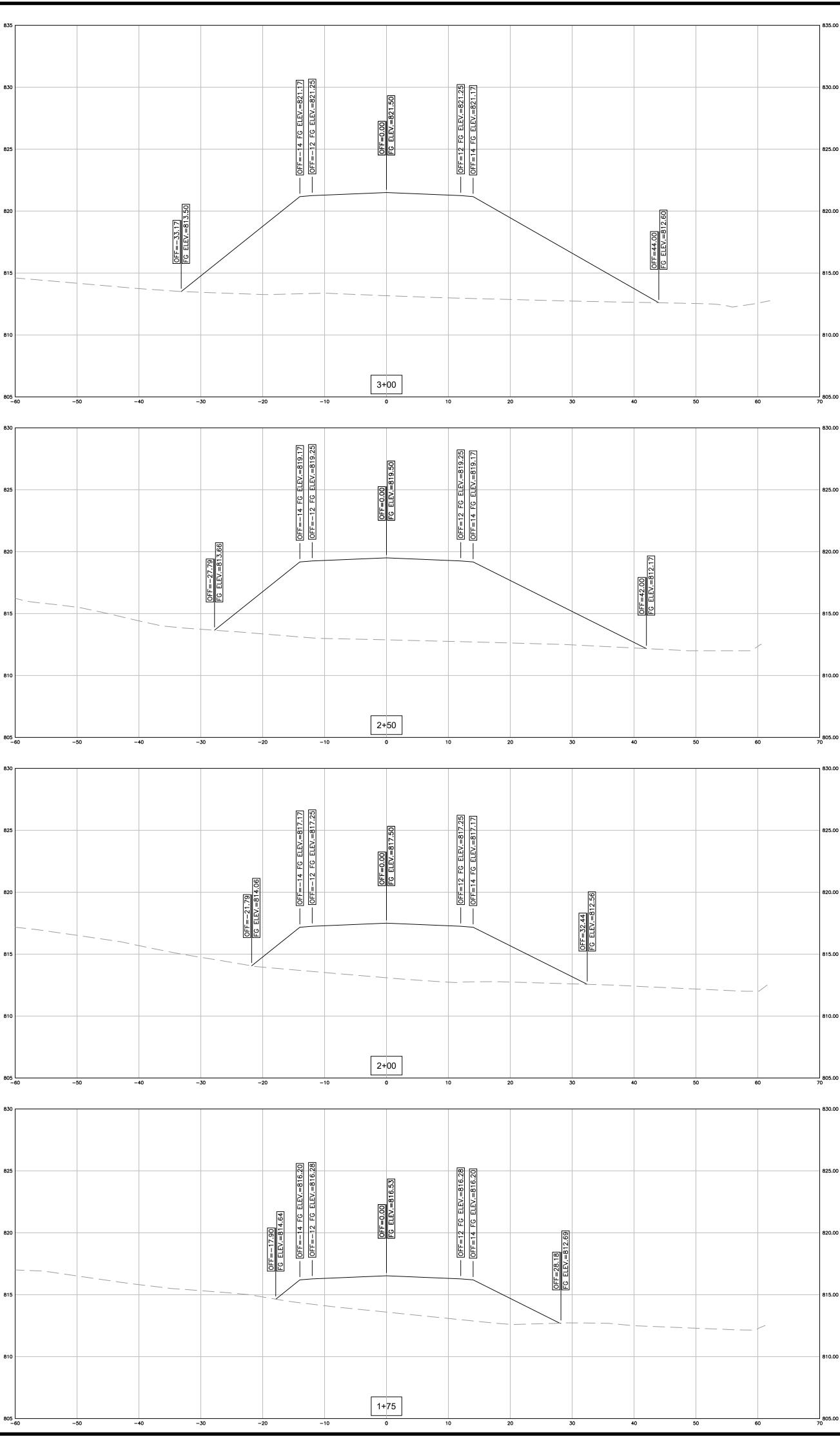


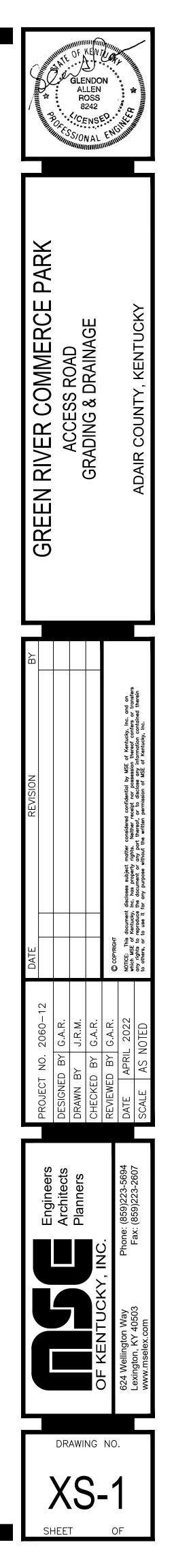
ISOMETRIC VIEW

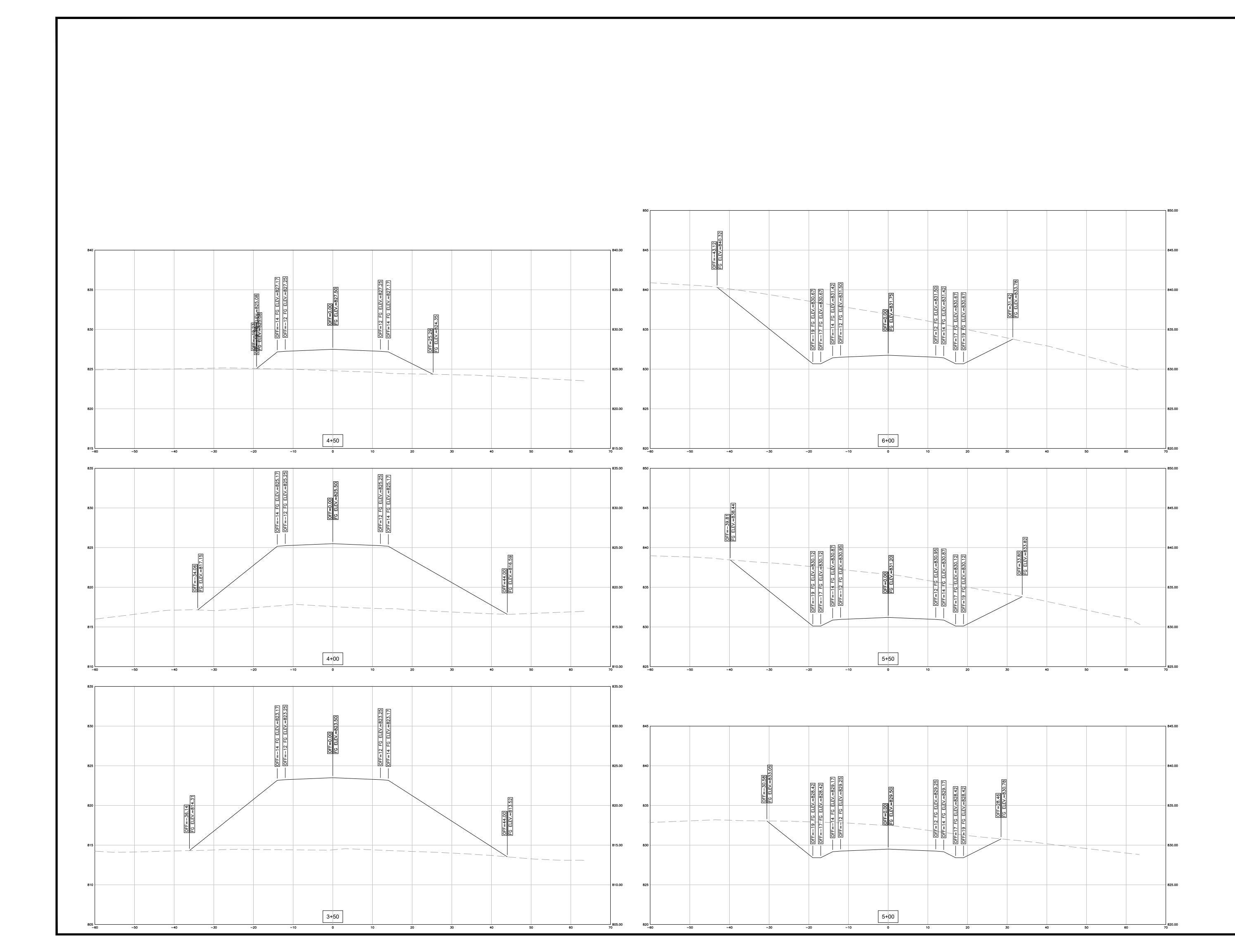
## SLOPED & FLARED HEADWALLS FOR 12" TO 27" PIPE DOH STD. DWG#: RDH-020-03

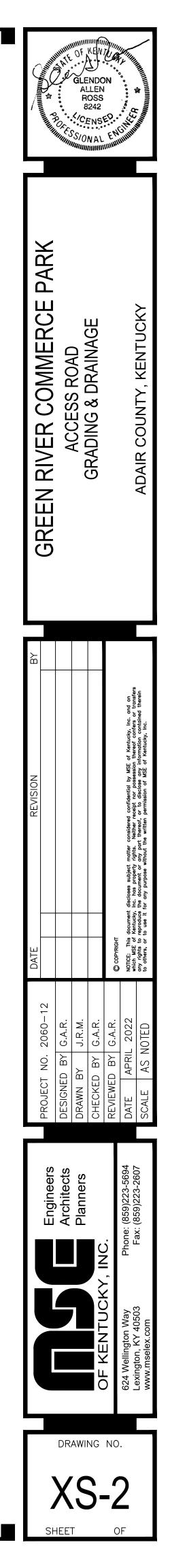


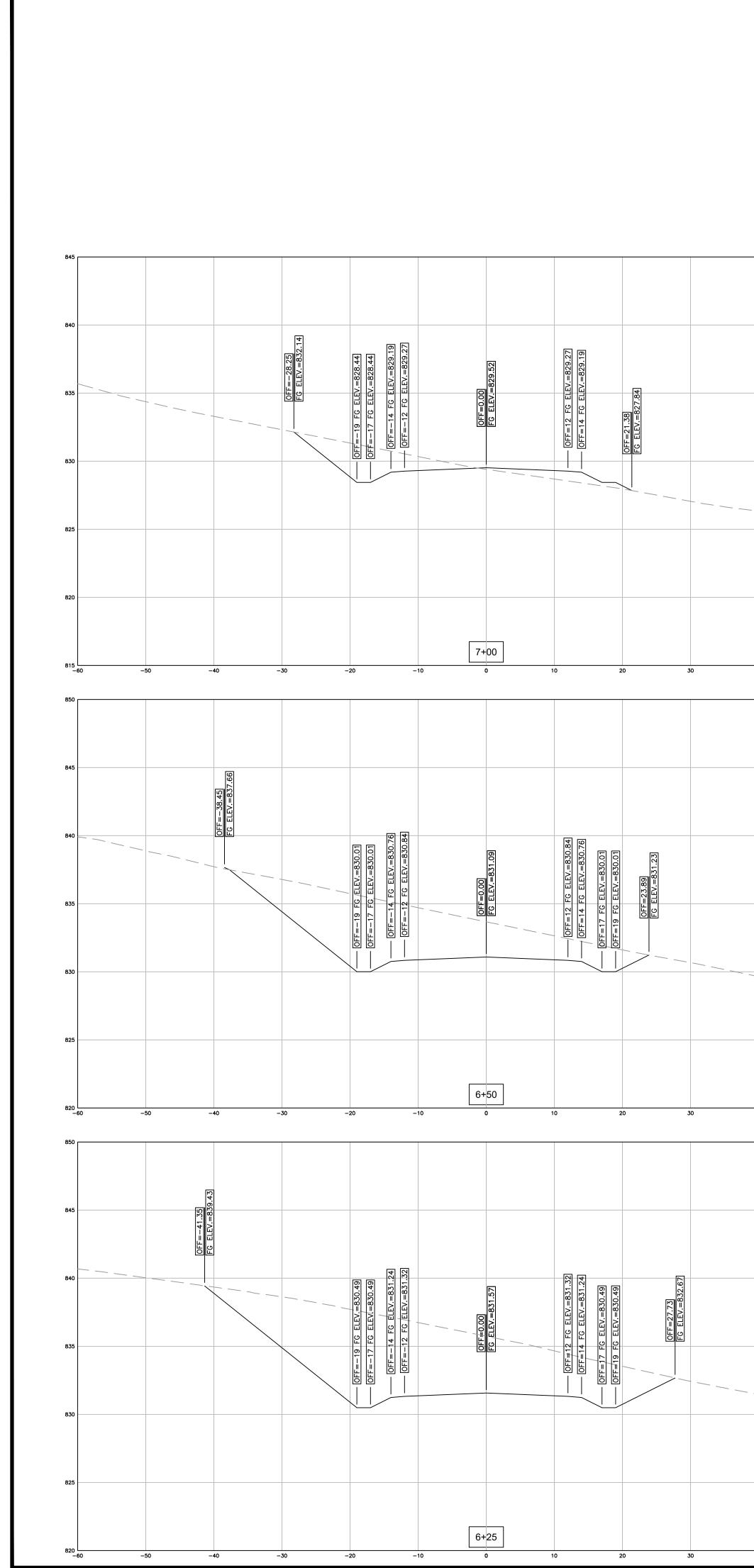




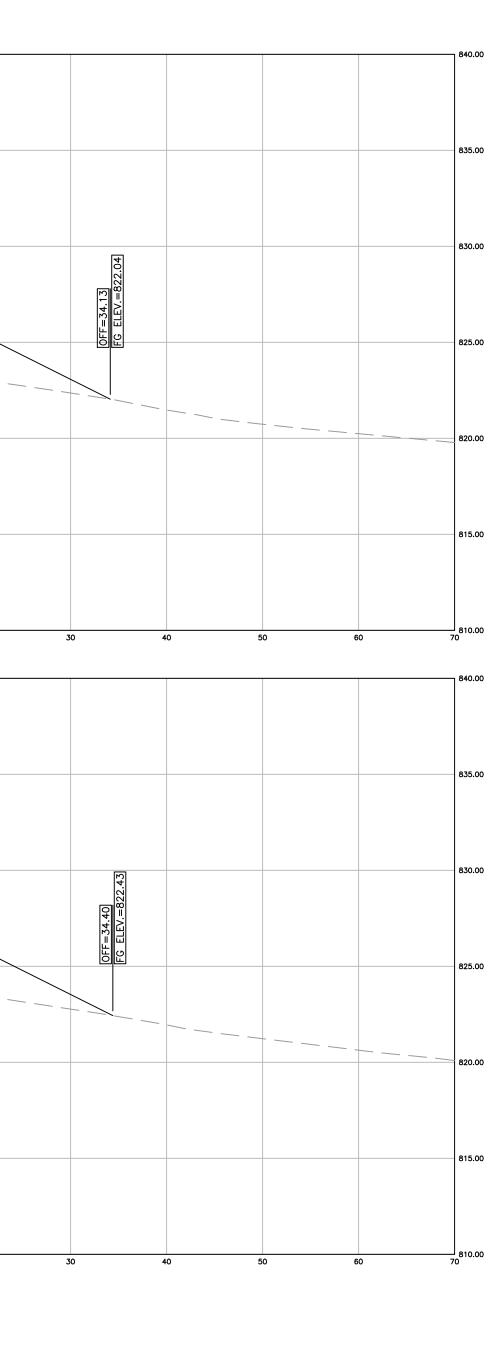


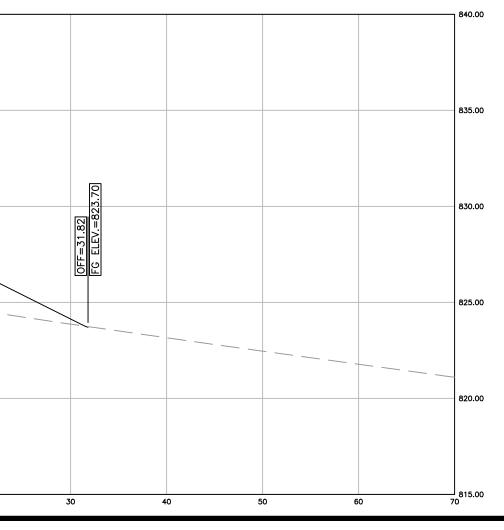


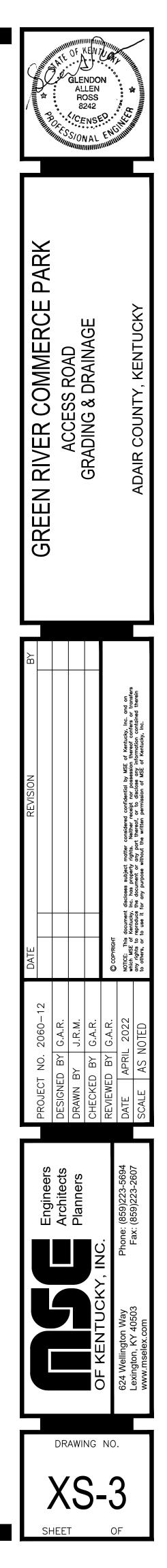


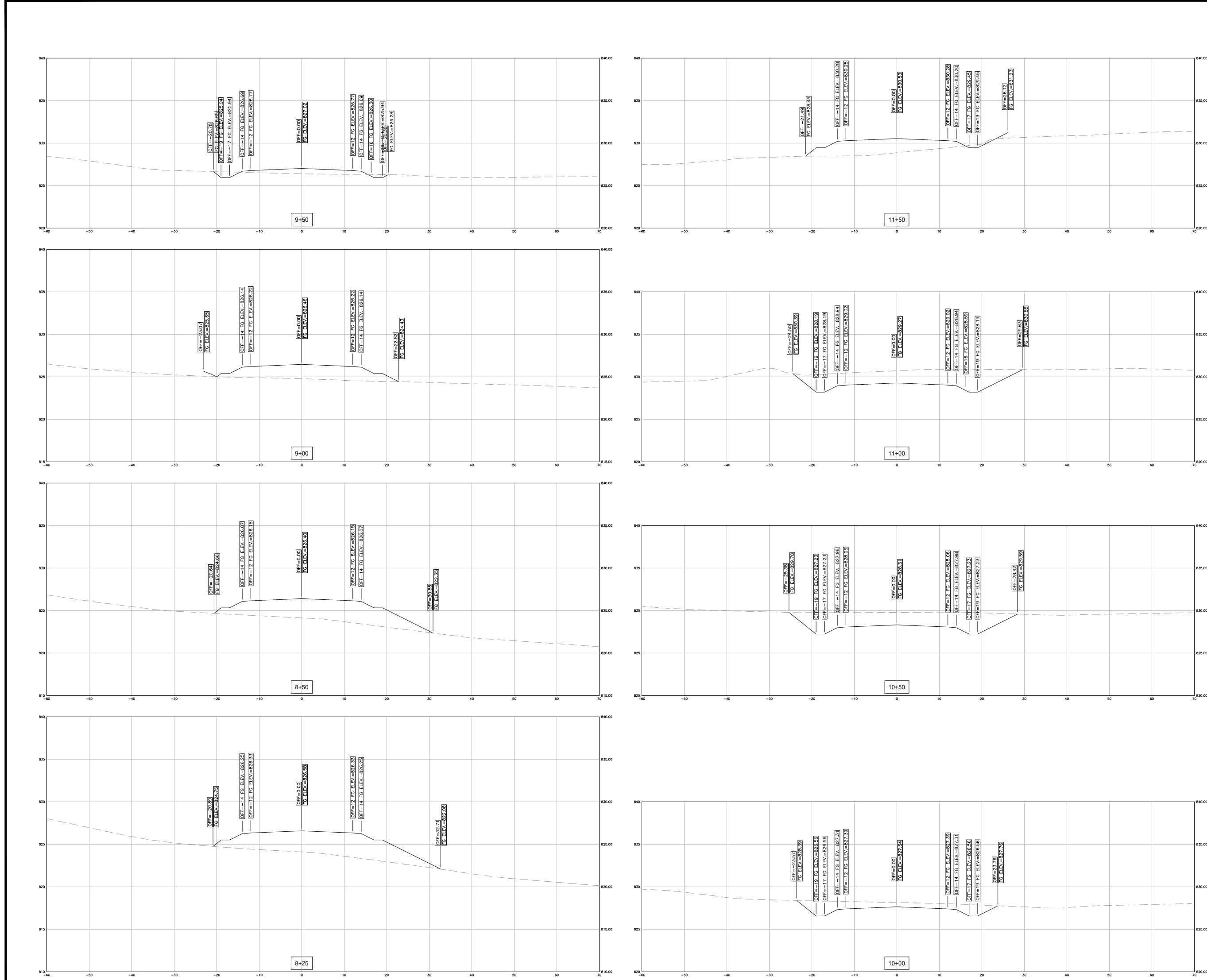


				I	ا 845.00	840	I	1		,				1
												0	<u>=826.65</u> =826.57	
					835.00	330			F=-20.31 ELEV.=82	OFF=-14 FG 1 0FF=-12 FG	== ==	ELEV.=		
					830.00	325								
	4	0 5	0 6				-50 –	40 -:	30 -20	-10				20
					845.00	335							ELEV.=827.11 ELEV.=827.03	
					840.00	330			OFF = -19.18	G ELEV.= F=-17 F OFF=-1 OFF=-1				
					835.00	325								
					830.00	320								
					825.00	815					7+7	75		
	4	0 5	0 6			810	-50 -	40 -3	30 –20	-10				20
						740								
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7+50					830.00	825								
40 50 60 70     815 -60 -50 -40 -30 -20 -10 0 10 20					825.00	320								
	4	0 5	0 6		820.00 8	B15_60 -	-50 –	40 –:	30 –20	-10				20









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3	0 4	0 5	0 6	0 70	820.00 D
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OFF:					835.00
0FF=26.12 FG ELEV.=8					
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840.00 r		 1	
			42 =829.59
835.00			8.42 
			0FF=28.42 FG_ELEV.=8
			E C F
830.00			
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825.00			
3 <sub>820.00</sub>	 •		

					840.00
.76					835.00
827.					
0FF=23.76 FG ELEV.=827					
비민					
					830.00
				8	825.00
3	50 4	0 5	0 6	0 70	820.00

