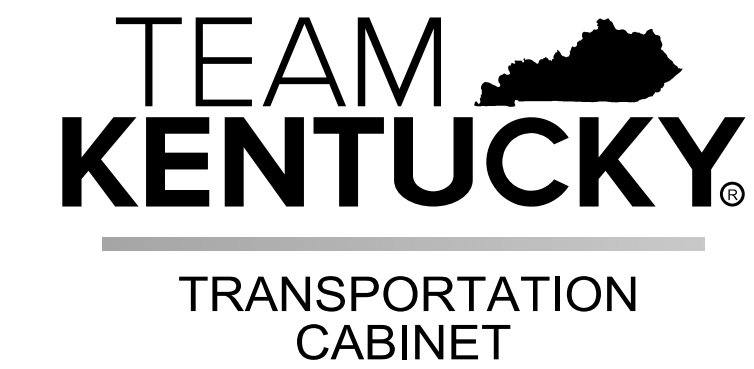




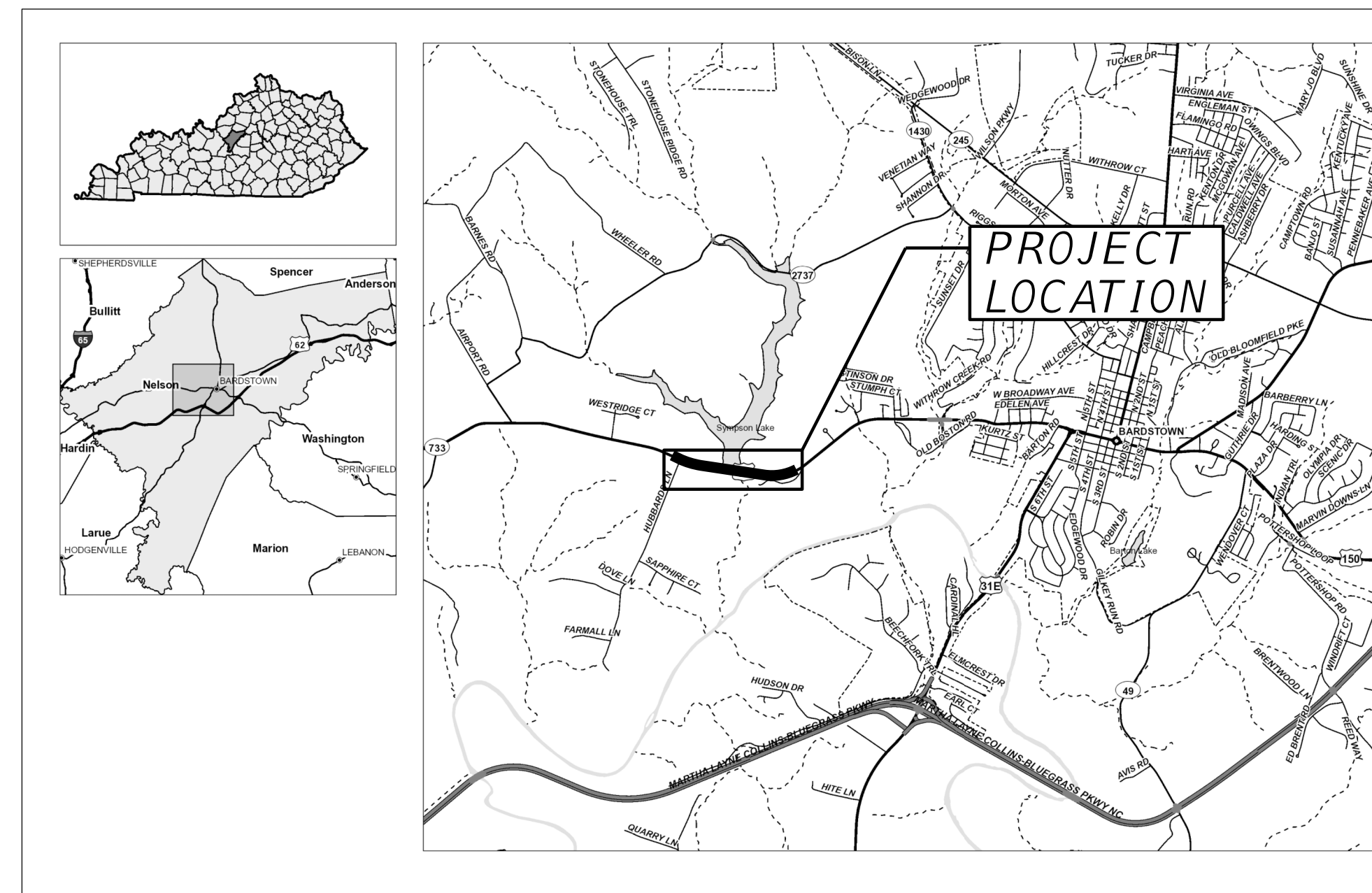
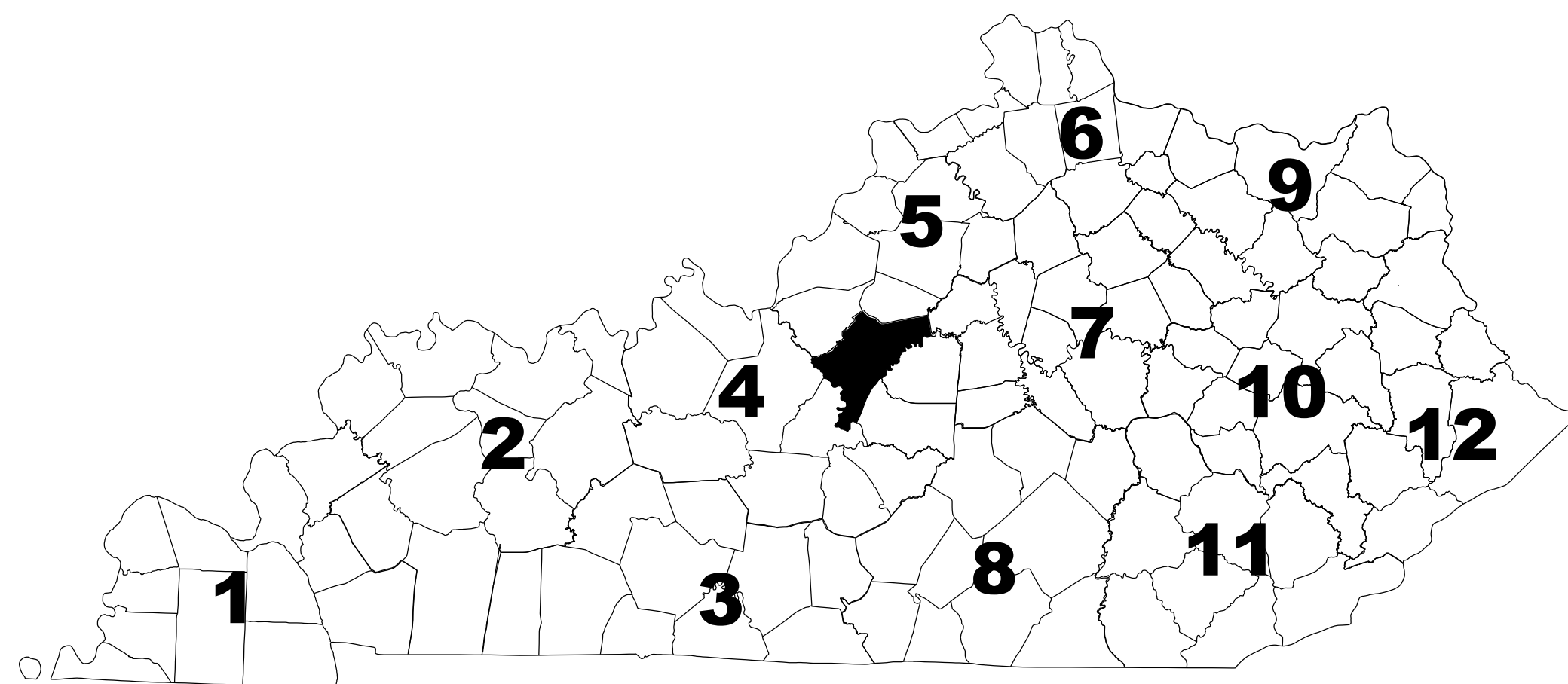
COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

PLANS OF PROPOSED PROJECT NELSON County



SYMPSON LAKE DAM CUTOFF WALL US62 WESTBOUND LANE



LAYOUT MAP
SCALE: NTS

DESIGN CRITERIA

CLASS OF HIGHWAY MAJOR COLLECTOR
 TYPE OF TERRAIN FLAT
 DESIGN SPEED 55 MPH
 REQUIRED NPSD _____
 REQUIRED PSD _____
 LEVEL OF SERVICE _____
 ADT PRESENT (2024) 5,738
 ADT FUTURE () _____
 DHV _____
 D % _____
 T % 4.42

INDEX OF SHEETS

R01 LAYOUT SHEET
 R02-R02B TYPICAL SECTION, GENERAL SUMMARY AND NOTES
 R03 ROADWAY PLAN SHEET
 R04-R07 MAINTENANCE OF TRAFFIC NOTES AND PLANS
 R08 SECANT WALL PLAN AND PROFILE
 R09 FILTER DIAPHRAGM DETAILS
 R10-R10A SECANT WALL DETAILS
 R11-R12 GEOTECHNICAL SYMBOLS AND NOTES
 R13-R16 GEOTECHNICAL BORING PLAN AND PROFILE

STANDARD DRAWINGS

TPR-115-01
 TPR-120-01
 RBR-035-13
 RBM-135
 RBR-001
 RBR-015
 RBR-016
 RBR-055
 RDX-210
 TTC-110-04

LENGTH 985 LIN. FT. 0.18 MILES
 ADDED _____ FOR EQUALITIES _____ LIN. FT.
 DEDUCTED _____ NOT INCLUDED _____
 RAILROAD CROSSINGS NO. N/A LIN. FT.
 BRIDGES 50 LIN. FT.

GEOGRAPHIC COORDINATES
 LATITUDE 37 DEGREES 48 MINUTES 23 SECONDS NORTH
 LONGITUDE 85 DEGREES 30 MINUTES 31 SECONDS WEST

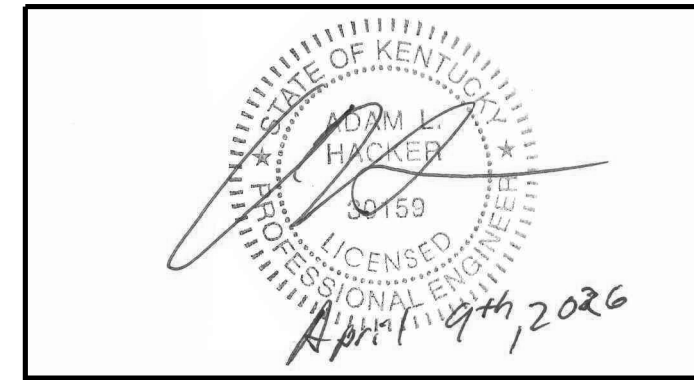
DESIGNED

% RESTRICTED SD X
 LEVEL OF SERVICE X
 MAX. DISTANCE W/O PASSING X

PROJECT NUMBER: FD04 SM5038129

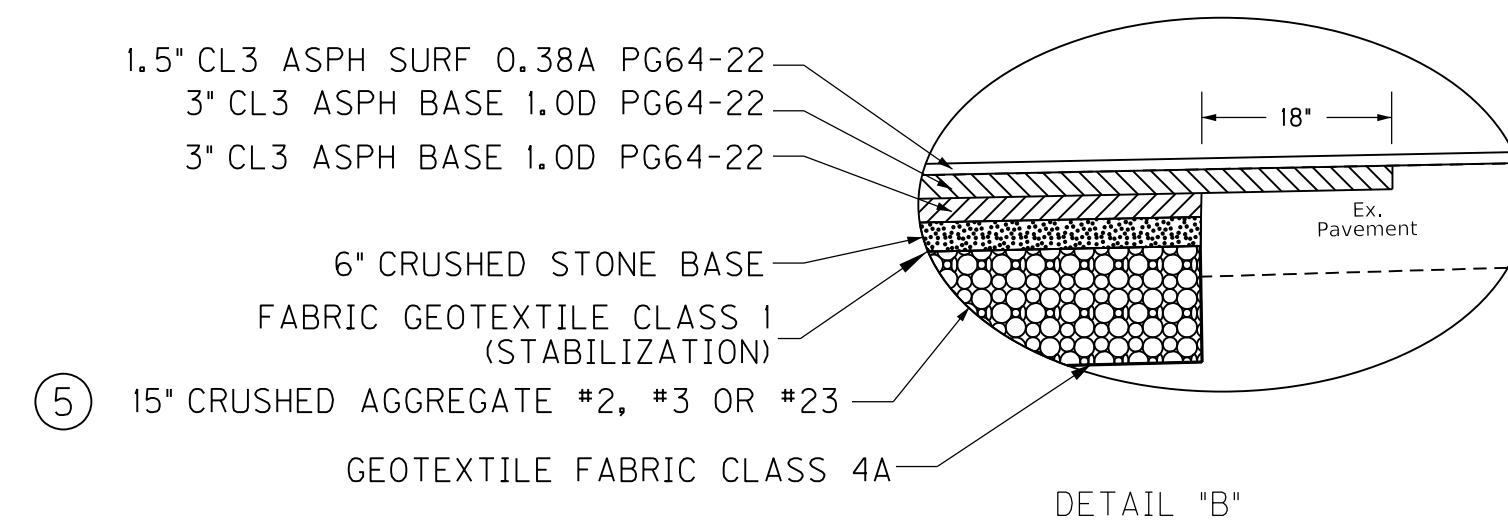
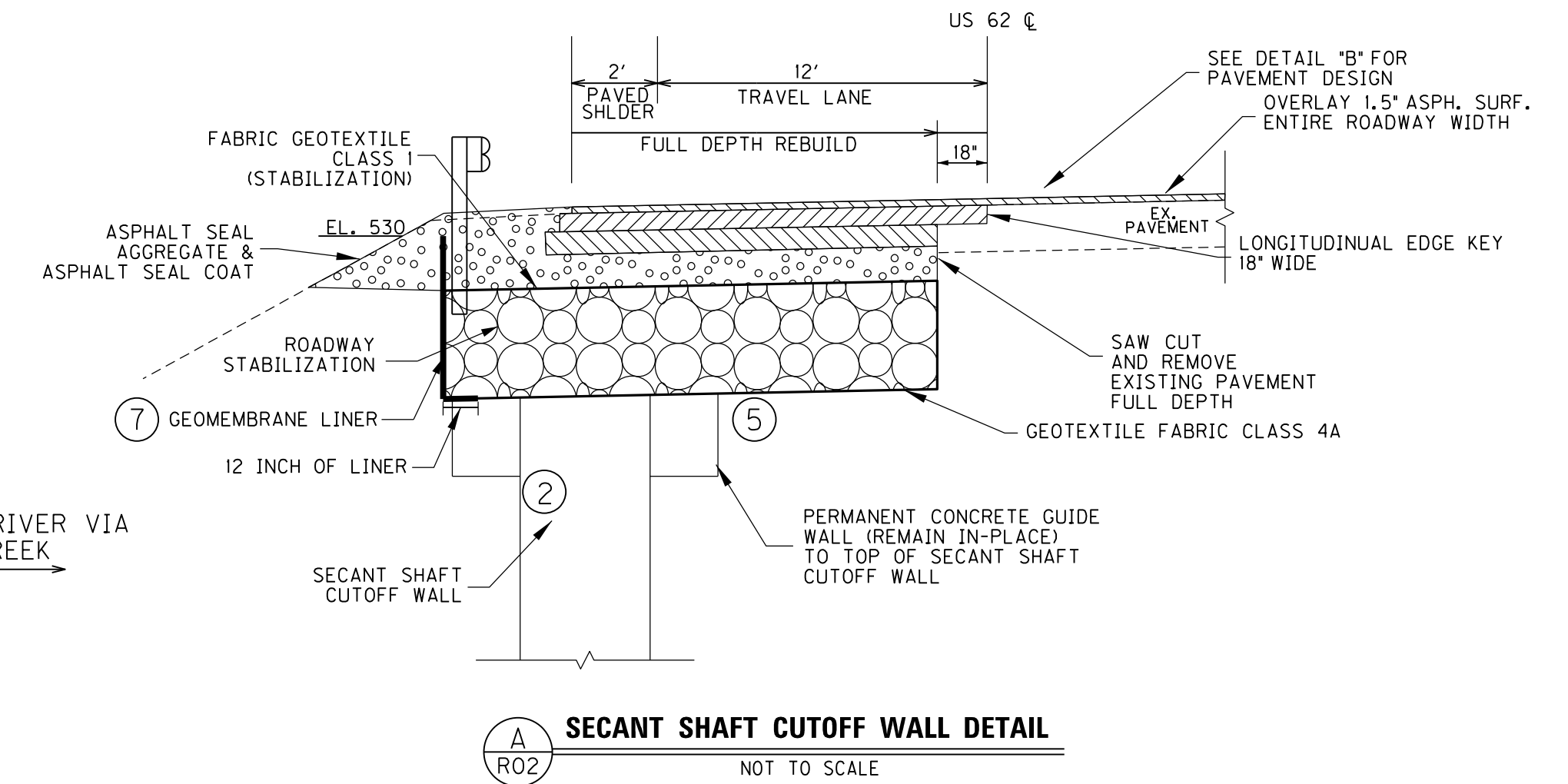
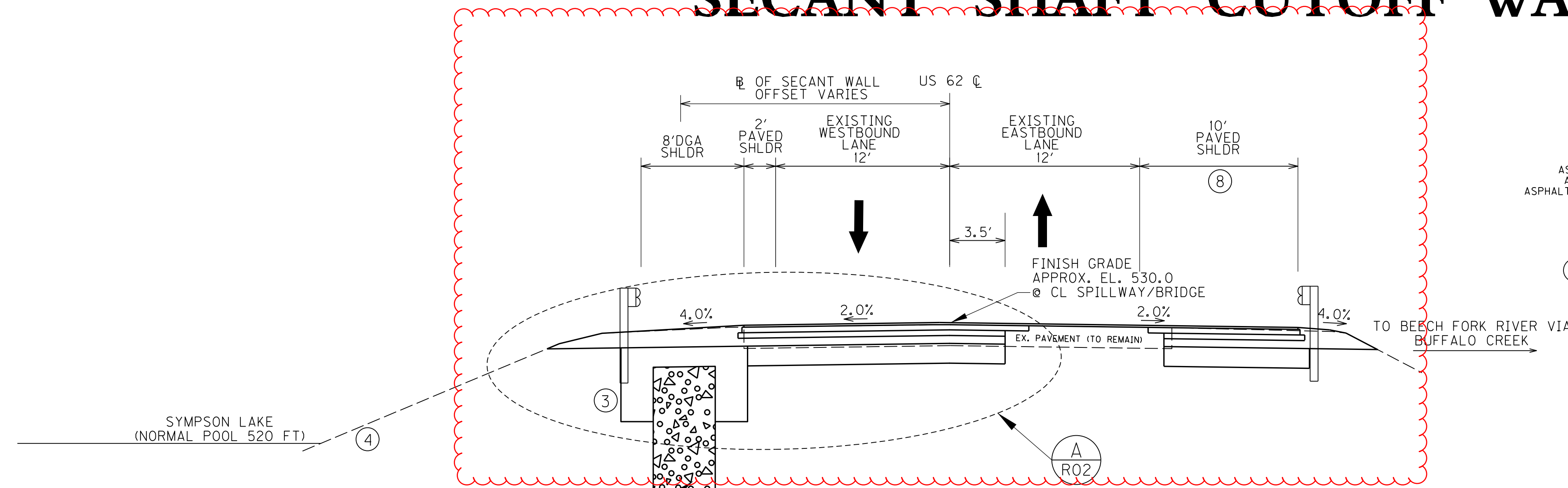
PROJECT DESCRIPTION: SYMPSON LAKE DAM CUTOFF WALL US62 WESTBOUND LANE

RECOMMENDED BY: MICHAEL CARPENTER, PE
 PROJECT MANAGER DATE: _____
 PLAN APPROVED BY: _____
 STATE HIGHWAY ENGINEER DATE: _____

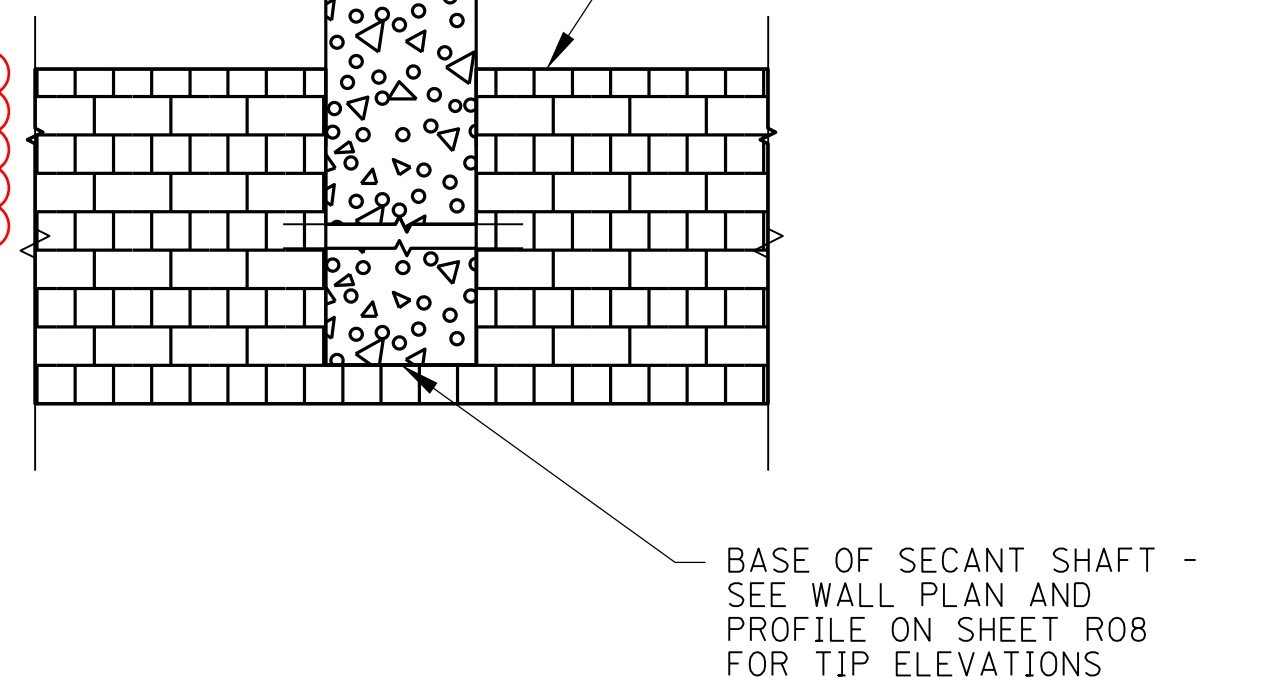


LETTING DATE: 5/21/2026
 COUNTY OF NELSON
 ITEM NO. 04-5013.00
 SHEET NO. R01

TYPICAL SECTION US 62 – SYMPSON LAKE SECANT SHAFT CUTOFF WALL



- NOTES:**
- ① CONSTRUCT PROPOSED ASPHALT BASE TO EXISTING GRADE. OVERLAY SURFACE ENTIRE WIDTH AFTER WALL CONSTRUCTION COMPLETE. REFER TO SHEET R03 AND R04 FOR ADDITIONAL ROADWAY AND CONSTRUCTION PHASING DETAILS.
 - ② REFER TO SPECIAL NOTE FOR SECANT SHAFT CUTOFF WALL.
 - ③ THE TOP OF WALL ELEVATION SHALL BE ESTABLISHED AS THE EXISTING TOP OF GRADE MINUS THE REQUIRED 27-INCH PAVEMENT (THE 1.5-SURFACE IS AT GRADE) AND ROADWAY STABILIZATION THICKNESS, EXCEPT WITHIN THE LIMITS OF THE SPILLWAY WEIR WHERE THE TOP OF WALL SHALL BE SET TO ELEVATION 517.0.
 - ④ MINIMIZE DISTURBANCE TO EXISTING SLOPE AND SOILS.
 - ⑤ ANY ADDITIONAL AREA BETWEEN TOP OF WALL AND ROADWAY STABILIZATION MAY BE BACKFILLED WITH NO. 2 STONE.
 - ⑥ REFER TO SHEET R04 FOR ADDITIONAL ROADWAY DETAILS.
 - ⑦ GEOMEMBRANE LINER TO BE INSTALLED IN ALL LOCATIONS WHERE TOP OF SECANT WALL IS BELOW 530 FEET. THE LINER SHALL BE A 60-MIL GEOMEMBRANE MANUFACTURED BY AGRU OR A 60-MIL LDFE LINER OF EQUIVALENT PROPERTIES.
 - ⑧ 10 FT PAVED SHOULDER IS FROM EX. 1.5 FT PAVED SHOULDER (AFTER SAWCUT) PLUS 8.5 FT WIDENING FOR MAINTENANCE OF TRAFFIC. SEE MOT TYPICAL SECTIONS FOR MORE INFORMATION.



PAVEMENT DESIGN ① ⑥

ITEM NO.	DESCRIPTION	DEPTH
22906ES403	CL3 ASPH SURF 0.38A PG64-22	1.50\"/>

GENERAL SUMMARY

ITEM CODE	ITEM	UNIT	TOTAL PROJECT			
00078	CRUSHED AGGREGATE SIZE NO. 2 ⑪	TONS	2801			
01984	DELINEATORS FOR BARRIER - WHITE	EACH	13			
01987	DELINEATOR FOR GUARDRAIL B/W	EACH	24			
02014	BARRICADE TYPE III	EACH	4			
02200	ROADWAY EXCAVATION ⑭	CUYD	5309			
02360	GUARDRAIL TERMINAL SECTION NO 1	EACH	1			
02373	GUARDRAIL END TREATMENT TYPE 3	EACH	3			
02381	REMOVE GUARDRAIL	LF	2356			
02562	TEMPORARY SIGNS	SOFT	186			
02602	FABRIC-GEOTEXTILE CLASS 1 ⑫	SOYD	2754			
02608	FABRIC-GEOTEXTILE CLASS 4A ⑨	SOYD	3498			
02671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2			
02697	EDGE LINE RUMBLE STRIPS	LF	2700			
02701	TEMP SILT FENCE ⑧	LF	1242			
03171	CONCRETE BARRIER WALL TYPE 9T ⑦	LF	1300			
04933	TEMP SIGNAL 2 PHASE ⑬	EACH	2			
05953	TEMP SEEDING AND PROTECTION ⑧	SOYD	1814			
05963	INITIAL FERTILIZER ⑧	TON	0.19			
05964	MAINTENANCE FERTILIZER ⑧	TON	0.11			
05985	SEEDING AND PROTECTION ⑧	SOYD	3629			
05992	AGRICULTURAL LIMESTONE ⑧	TON	2.25			
06511	PAVE STRIPING-TEMP PAINT-6IN	LF	3500			
06568	PAVE MARKING-THERMO STOP BAR-24IN	LF	48			
06515	PAVE STRIPING-PERM PAINT-6IN	LF	2825			
08912	CRASH CUSHION TY 6 CLASS T TL3	EA	2			
20430ED	SAW CUT	LF	2735			
21802EN	GUARDRAIL - STEEL W BEAM-S FACE (7 FT POST)	LF	2300			
22664EN	WATER BLASTING EXISTING STRIPE	LF	2000			
20191ED	OBJECT MARKER TY 3	EA	4			
25078ED	THREE BEAM GUARDRAIL TRANSITION TL-3	EA	4			
21289ED	LONGITUDINAL EDGE KEY	LF	2735			
02585	EDGE KEY	LF	112			
24550EC	VIBRATION MONITORING	LS	1			
26203EC	SECANT SHAFT CONCRETE CORES	EA	10			
26202EC	WATER PSSR TEST IN CORES-SINGLE PACKER	EA	2			
26201EC	24 HR FALLING HEAD PERM TEST IN CORES	EA	2			
22839NN	CSL TESTING	EA	10			
02483	CHANNEL LINING CLASS II ⑩	TON	150			
00083	CRUSHED AGGREGATE SIZE NO. 8 ⑩	TON	100			
02700	SAND ⑩	TON	550			
00001	DENSE GRADED AGGREGATE ⑩	TONS	200			
21843EN	GEOMEMBRANE LINER ⑬	SOYD	256			
08003	FOUNDATION PREPARATION	LS	1			
02568	MOBILIZATION	LS	1			
02569	DEMobilIZATION	LS	1			
02650	MAINTAIN & CONTROL TRAFFIC	LS	1			
02726	STAKING	LS	1			
26322ED	SECANT SHAFT - COMMON	SOFT	47968			
26323ED	SECANT SHAFT - SOLID ROCK	SOFT	30165			
26324ED	SECANT SHAFT WITH LIGHTWEIGHT CONCRETE-COMMON	SOFT	1682			
26325ED	SECANT SHAFT WITH LIGHTWEIGHT CONCRETE-SOLID ROCK	SOFT	127			
26326ED	SECANT SHAFT GUIDE WALL	LF	991			
15000	S BYPASS PUMPING	EA	1			
24786EN	HDPE PIPE	LF	80			
23911EC	GROUT	CY	1			
24668EC	STEEL ENCASMENT PIPE	LF	12			
02403	REMOVE CONCRETE MASONRY	CY	39			
08100	CONCRETE-CLASS A	CY	39			
08150	STEEL REINFORCEMENT	LBS	5200			
02268	REMOVE & REPLACE FENCE	LF	35			

NOTES

ALL ASPHALT MIXTURES SHALL BE ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH, UNLESS NOTED OTHERWISE.

① ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.

② THIS INCLUDES FULL DEPTH CSB SHOULDER WEDGE

③ TWO APPLICATIONS PER PAVING AREA FROM EDGE OF PAVEMENT TO A POINT 2' DOWN THE SLOPE BEHIND GUARDRAIL.

④ ESTIMATED AT 20 LBS. PER SQ. YD. (SIZE NO. 8 OR 9 M)

⑤ ESTIMATED AT 2.4 LBS. PER SQ. YD.

⑥ ASPHALT MATERIAL FOR TACK SHALL BE APPLIED IN BETWEEN EACH LAYER OF ASPHALT, ESTIMATED @ 0.84 LBS PER SQ. YD.

⑦ TEMPORARY CONCRETE BARRIER BECOMES THE PROPERTY OF THE CONTRACTOR UPON COMPLETION OF PROJECT.

⑧ EROSION CONTROL QUANTITIES ARE BASED ON THE PROBABLE AMOUNT OF EROSION CONTROL FEATURES AS ESTIMATED BY THE DESIGNER.

⑨ FOR PLACEMENT UNDER THE ROADWAY STABILIZATION & GRANULAR EMBANKMENT

⑩ TO BE USED FOR FILTER DIAPHRAGM. SAND SHALL MEET THE GRADATION REQUIREMENTS OF SECTION 408.10 OF THE 2026 STANDARD SPECIFICATIONS.

⑪ TO BE USED FOR ROADWAY STABILIZATION

⑫ FOR PLACEMENT BETWEEN CSB & ROADWAY STABILIZATION

⑬ FOR IMPERVIOUS LINER PLACED UPSTREAM OF GRANULAR ROADWAY STABILIZATION AND BASE, UP TO ELEVATION 530 (SEE NOTE 7, SHEET R02).

⑭ ROADWAY EXCAVATION QTY INCLUDES: SHOULDER WEDGE EXCAVATION OF EXISTING EMBANKMENT MATERIAL FROM THE TOP OF THE SECANT WALL TO THE EDGE OF SLOPE; EXCAVATION REQUIRED FOR THE GUIDEWALL; EXCAVATION IN EASTBOUND LANE FOR PAVEMENT WIDENING; 800 CY FOR FILTER DIAPHRAGM

⑮ FOR REMOVAL AND REPLACEMENT OF SLUDGE LINE FM IN WESTBOUND LANE AND SHOULDER.

⑯ SUPPLEMENTAL SIGNALS NEEDED FOR DRIVEWAYS/SIDE ROADS SHALL BE INCIDENTAL TO "TEMP SIGNAL 2 PHASE".

COMMON EXCAVATION	
5309	CY
EMBANKMENT	
	CY
FOR BIDDING	
5309	CY

~~EARTHWORK CALCULATIONS & CALCULATIONS~~
ARE FOR BIDDING PURPOSES ONLY. AUTHORIZED ADJUSTMENTS WILL CONFORM TO SECTION 204.04.02 OF THE SPECIFICATIONS.

IMPORTANT NOTE

ALL THE QUANTITIES SHOWN ON THESE PLANS ARE INTENDED FOR ESTIMATING PURPOSES ONLY. THE DESIGNER MAKES NO GUARANTEES ABOUT THE ACCURACY OF THESE QUANTITIES FOR CONSTRUCTION PURPOSES.

THE CONTRACTOR WILL BE PAID FOR THE QUANTITIES OF THE ACTUAL WORK PERFORMED.

PAVING AREAS

ITEM	S Q U A R E Y A R D S				TOTAL PROJECT
	1.50" CL3 ASPH SURF 0.38A PG 64-22				
3.00" CL3 ASPH BASE 1.00D PG 64-22 (FIRST LIFT)					3144
3.00" CL3 ASPH BASE 1.00D PG 64-22 (SECOND LIFT)					3219
6.00" CRUSHED STONE BASE					3840
ASPHALT SEAL AGGREGATE					2034
ASPHALT SEAL COAT					2034
ASPHALT MATERIAL FOR TACK					6363

PAVING SUMMARY

ITEM CODE	ITEM	UNIT					TOTAL PROJECT
3	CRUSHED STONE BASE ① ②	TON					3097
100	ASPHALT SEAL AGGREGATE ③ ④	TON					41
103	ASPHALT SEAL COAT ③ ⑤	TON					6
22906ES403	CL3 ASPH SURF 0.38A PG 64-22	TON					326
214	CL3 ASPH BASE 1.00D PG 64-22	TON					1051
356	ASPHALT MATERIAL FOR TACK ⑥	TON					4



GENERAL NOTES

SPECIFICATIONS

REFERENCES TO THE SPECIFICATIONS ARE TO THE 2026 EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION INCLUDING ANY CURRENT SUPPLEMENTAL SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS

FOR FLOWABLE FILL F'C = 50 PSI (MIN.)
FOR CLASS "A" MODIFIED CONCRETE F'C = 3,500 PSI
FOR CLASS "B" CONCRETE F'C = 2,500 PSI
FOR LIGHTWEIGHT CONCRETE F'C = 4,500 PSI
FOR STEEL REINFORCEMENT FY = 60,000 PSI

CONCRETE

CLASS "A" MODIFIED CONCRETE SHALL BE USED THROUGHOUT, UNLESS WHERE NOTED ABOVE AND BESIDE THE EXISTING RCBC.

DIMENSIONS

DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL DIMENSIONS.

SAWCUTTING CONCRETE

PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO A DEPTH OF ONE INCH TO FACILITATE A NEAT LINE.

LIGHTWEIGHT CONCRETE

THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE METHOD OTHER THAN USING LIGHTWEIGHT CONCRETE FOR INSTALLING THE SECANT SHAFT WALL AROUND THE EXISTING CONCRETE BOX CULVERT. ANY ALTERNATIVES SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND TO KYTC FOR APPROVAL BEFORE BEGINNING CONSTRUCTION.

FLOOD RISK

THE PORTION OF THE CUTOFF WALL CONSTRUCTED UPSTREAM OF SYMPSON LAKE DAM WILL BE SUBJECT TO INCREASED FLOOD RISK FROM RISING LAKE LEVELS. KYTC, WHEN POSSIBLE, WILL LOWER THE LAKE POOL TO ELEVATION 515 FEET USING PUMPS, SIPHONS, OR OTHER MEANS TO ALLOW CONSTRUCTION OF THE UPSTREAM WALL NORTH OF THE EXISTING SPILLWAY WEIR; HOWEVER, THE RESERVOIR CONTROL EQUIPMENT IS SIZED ONLY FOR NORMAL OPERATING CONDITIONS AND CANNOT MAINTAIN LAKE LEVELS DURING SIGNIFICANT RAINFALL OR EXTREME HYDROLOGIC EVENTS. THE CONTRACTOR SHALL ASSUME THAT ANY RAINFALL EVENT PRODUCING MORE THAN 2 INCHES OF RAIN WITHIN 24 HOURS, OR A CUMULATIVE TOTAL OF MORE THAN 2 INCHES WITHIN ANY 4-DAY PERIOD, WILL RESULT IN A LAKE LEVEL RISE THAT PLACES EQUIPMENT AND/OR MATERIAL STAGED WITHIN THE UPSTREAM RESERVOIR AREA AT RISK. THE CONTRACTOR IS RESPONSIBLE FOR ANY EQUIPMENT OR MATERIAL LOST OR DAMAGED AS A RESULT OF FAILURE TO PROPERLY PROTECT AND STAGE SUCH ITEMS IN RESPONSE TO ANY ACTUAL OR FORECASTED RAINFALL EVENT OF THIS MAGNITUDE OR GREATER. SECANT SHAFTS SHALL NOT BE LEFT OPEN DURING OR PRIOR TO ANY FORECASTED RAINFALL EVENT OF THIS MAGNITUDE OR GREATER. ALL SHAFTS SHALL BE BACKFILLED AND PROTECTED IN ACCORDANCE WITH THE SPECIAL NOTE FOR THE EMERGENCY ACTION PLAN. THE CONTRACTOR IS NOT ALLOWED TO PLACE MATERIAL ABOVE ELEVATION 517.0 FEET UPSTREAM OF THE OGEE WEIR. THE CONTRACTOR SHALL SUBMIT TO KYTC, FOR APPROVAL PRIOR TO BEGINNING UPSTREAM CUTOFF WALL CONSTRUCTION, A PLAN DESCRIBING THE STAGING, PROTECTION, AND MAINTENANCE OF ALL EQUIPMENT TO BE USED DURING ONGOING WORK. ALL LABOR AND MATERIALS REQUIRED TO PREPARE AND IMPLEMENT THE PLAN SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR SECANT SHAFTS.

SHOP DRAWINGS

CONTRACTOR SHALL SUBMIT, AT A MINIMUM, SHOP DRAWINGS FOR ALL MAJOR COMPONENTS ASSOCIATED WITH THE CUTOFF WALL TO THE ENGINEER OF RECORD FOR REVIEW. IF ANY CHANGES TO THE DESIGN PLANS ARE PROPOSED BY A FABRICATOR OR SUPPLIER, THOSE CHANGES SHALL BE SUBMITTED TO THE ENGINEER OF RECORD THROUGH THE CONTRACTOR.

VERIFY EXISTING DIMENSIONS

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIALS.

SPECIAL NOTES

SPECIAL NOTE FOR SECANT SHAFT CUTOFF WALL

~~SPECIAL NOTE FOR EMERGENCY ACTION PLAN~~

SPECIAL NOTE FOR SLUDGE LINE REPLACEMENT

UTILITIES

ALL UTILITIES SHOWN ON THE PLANS ARE FOR REFERENCE ONLY AND HAVE NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL HAVE THE UTILITIES FIELD LOCATED PRIOR TO BEGINNING WORK.

GROUND SURFACE

THE EXISTING GROUNDLINE FOR THIS PROJECT WAS DEVELOPED FROM A COMBINATION OF A POINT CLOUD .LAZ FILE PROVIDED BY KYTC FROM A SEPTEMBER 16, 2025 DRONE FLIGHT, AVAILABLE KENTUCKY STATEWIDE LIDAR DATA, AND BATHYMETRIC SURVEY DATA COLLECTED BY OTHERS IN 2021.

SAW CUTTING PAVEMENT

PRIOR TO REMOVAL OF THE EXISTING PAVEMENT FOR FULL-DEPTH PAVEMENT REPLACEMENT, THE PAVEMENT SHALL BE SAW CUT ALONG A NEAT LINE TO A DEPTH THAT WILL ENSURE CLEAN BREAKAGE OF PAVEMENT FROM THE EXISTING LANE PAVEMENT THAT IS DESIGNATED TO REMAIN. THE NECESSARY SAW CUT DEPTH WILL BE DETERMINED BY THE ENGINEER BASED ON SAMPLE SAW CUT AND REMOVAL TESTS PERFORMED BY THE CONTRACTOR.

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.

ASPHALT PAVEMENT RIDE QUALITY

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

STANDARD DRAWINGS

STANDARD DRAWINGS ARE NOT ATTACHED TO THESE PLANS. A STANDARD DRAWING BOOK MAY BE OBTAINED FROM THE POLICY SUPPORT BRANCH OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES IN FRANKFORT, KENTUCKY AT 502-564-3670.

WINTER CLOSDOWN

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

VERTICAL DATUM

ALL ELEVATIONS REFERENCED HEREIN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD). IF REQUIRED, THE VERTICAL DATUM CONVERSION AT THE SITE FROM THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD) TO NAVD IS +0.026 FEET.

COMPACTION OF ASPHALT MIXTURES

WILL ACCEPT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR DRIVING LANES AND RAMPS AT ONE INCH 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 SUBSECTION 402.03.02 FOR SURFACE MIXTURES ONLY. WILL ACCEPT THE COMPACTION OF ALL OTHER ASPHALT MIXTURES BY OPTION B.

EXISTING SIGNS

ALL EXISTING SIGNS AFFECTED BY CONSTRUCTION SHALL BE INVENTORIED AND REINSTALLED OR REPLACED DEPENDING ON THEIR CONDITION, AS DIRECTED BY THE ENGINEER. THIS WORK IS INCIDENTAL TO MAINTENANCE OF TRAFFIC.

EROSION CONTROL NOTES

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

- UPGRADIENT AREAS NOT DISTURBED (ACRES).
- UPGRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH.(ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UPGRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES). AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UPGRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRATOR AND RESIDENT ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE PROJECT LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES WHENEVER THEY BECOME ONE-HALF FULL AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE RESIDENT ENGINEER.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE RESIDENT ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN MOBILE FLOATING BOOMS AND/OR TURBIDITY CURTAINS TO CONTROL AND CONTAIN SEDIMENT AND DEBRIS GENERATED BY CONSTRUCTION ACTIVITIES. THESE CONTROLS SHALL BE POSITIONED, RELOCATED, AND MAINTAINED AS NECESSARY TO REMAIN ADJACENT TO THE ACTIVE WORK AREA. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF BARDSTOWN TO IMPLEMENT ONGOING MONITORING OF WATER CONDITIONS DURING CONSTRUCTION.

UTILITY COORDINATION - DRINKING WATER

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF BARDSTOWN TO PROVIDE CONTINUOUS ACCESS TO THE RAW WATER INTAKE TOWER FOR THE DURATION OF CONSTRUCTION AND SHALL MAINTAIN OPERATIONS IN A MANNER THAT PREVENTS ANY INTERRUPTION TO WATER TREATMENT PROCESSES OR WATER DELIVERY. AT NO POINT DURING CONSTRUCTION SHALL THE EXISTING BOX CULVERT OR THE 30-INCH RAW WATER LINE WITHIN THE RCBC BE BLOCKED OR MADE UNABLE TO PROPERLY CONVEY WATER FROM SYMPSON LAKE TO THE CITY OF BARDSTOWN WATER TREATMENT PLANT (WTP) UNLESS NOTED OTHERWISE.

PENALTIES

A DAILY PENALTY WILL BE ASSESSED FOR ANY DAMAGE TO THE CITY'S WATER TREATMENT PLANT (WTP) FACILITIES, SUPPORTING FACILITIES, AND SUPPLY THAT RESULTS IN STOPPAGE OF OPERATION. THE PENALTY FOR THIS WILL ACCRUE AT A RATE OF \$10,000 PER DAY UNTIL THE PLANT IS FULLY OPERATIONAL.

UTILITY OWNERS AND CONTACT INFORMATION

** IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL EXISTING UTILITIES WITHIN THE PROJECT AREA. THE FOLLOWING CONTACT LIST IS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL CONDUCT THEIR OWN UTILITY IMPACT INVESTIGATION ALONG WITH THE COORDINATION MENTIONED ABOVE**

WATER: CITY OF BARDSTOWN
220 N. FIFTH ST.
BARDSTOWN, KENTUCKY 40004
CONTACT: JESSICA FILIATREAU
(502) 348-5947

ELECTRIC: SALT RIVER ELECTRIC
111 W BRASHEAR AVE.
BARDSTOWN, KENTUCKY 40004
CONTACT: DANIEL CARRICO
(502) 373-7730 / (502) 350-1606

CABLE/INTERNET: CITY OF BARDSTOWN
220 N. FIFTH ST.
BARDSTOWN, KENTUCKY 40004
CONTACT: ERIC RICHTER
(502) 348-5947

SEWER: CITY OF BARDSTOWN
220 N. FIFTH ST.
BARDSTOWN, KENTUCKY 40004
CONTACT: JESSICA FILIATREAU
(502) 348-5947

GAS: LG&E/KU
10300 BALLARDSVILLE RD.
LOUISVILLE, KY 40241
CONTACT: CAROLINE JUSTICE
(502) 648-7418

ELECTRIC: CITY OF BARDSTOWN
220 N. FIFTH ST.
BARDSTOWN, KENTUCKY 40004
CONTACT: ERIC RICHTER
(502) 348-5947

CABLE/INTERNET: AT&T
1340 E. JOHN ROWAN BLVD.
BARDSTOWN, KENTUCKY 40004
CONTACT: SCOTT ROCHE
(502) 847-4703

BEFORE YOU DIG

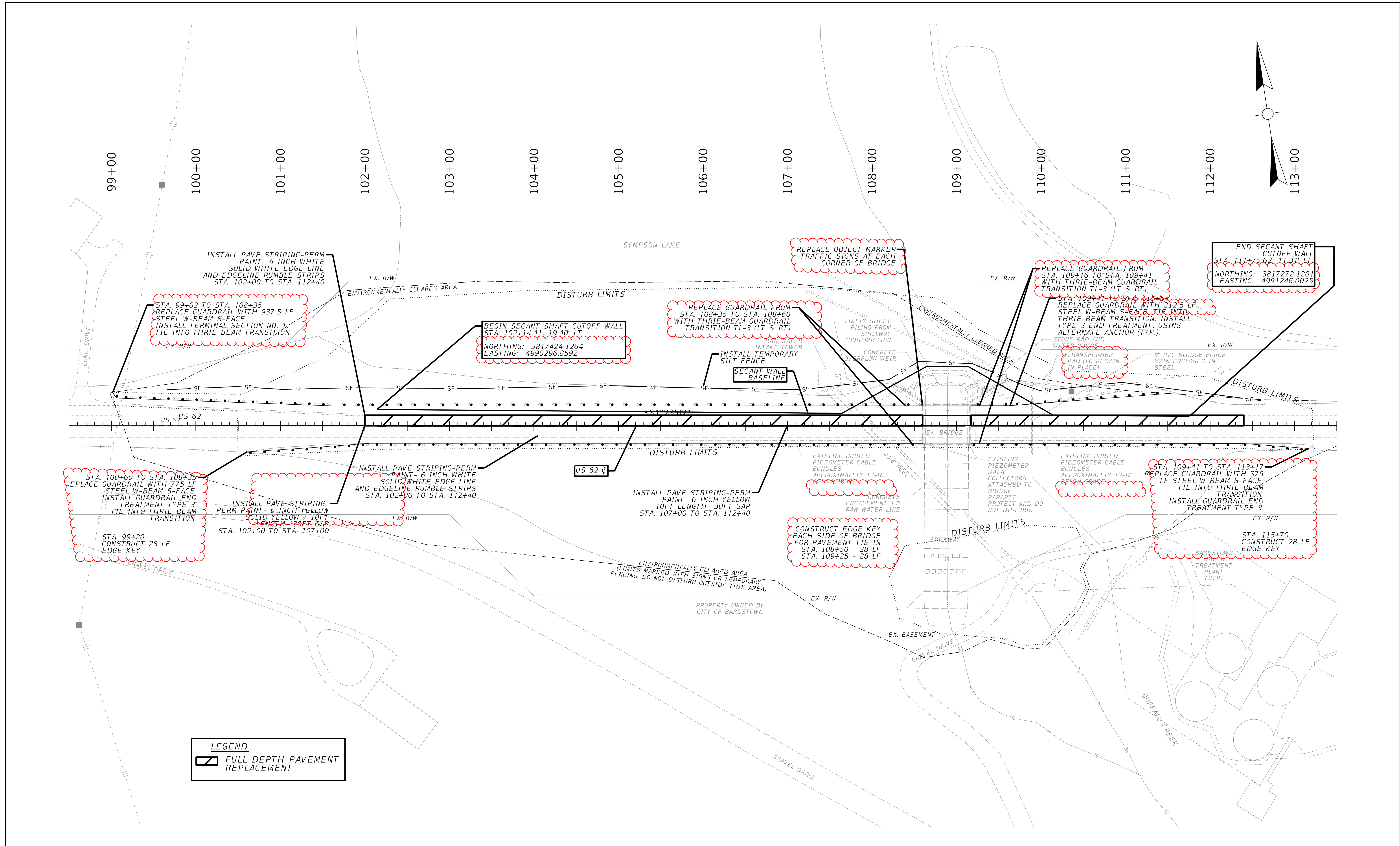
The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) 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.



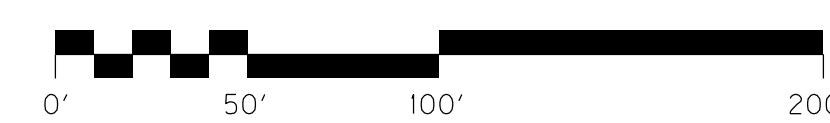
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



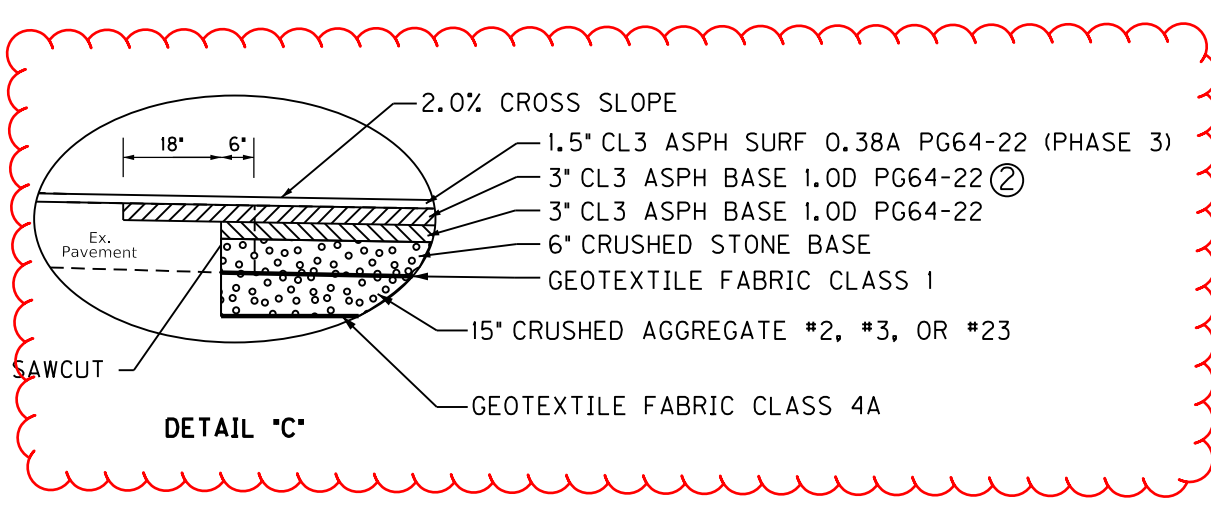
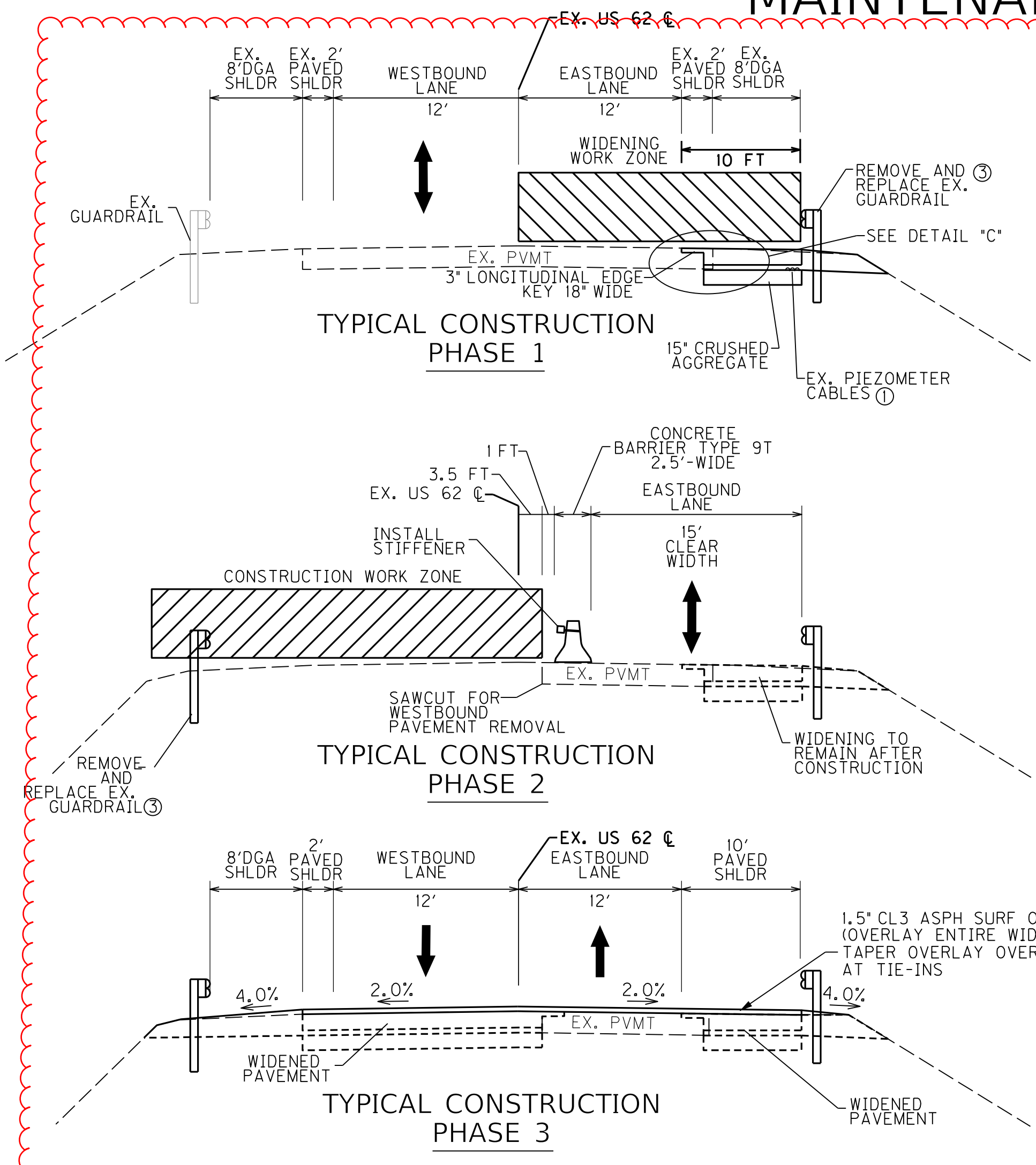
DRAWING TITLE: SYMPSON LAKE
GENERAL NOTES



LEGEND
 FULL DEPTH PAVEMENT REPLACEMENT



MAINTENANCE OF TRAFFIC NOTES



- NOTES**
- ① THERE ARE EXISTING PIEZOMETER CABLES FROM STA. 105+60 TO STA. 111+20. THE GEOTECHNICAL BRANCH WILL CUT THEM FOR EXCAVATION AND THEN REINSTALL THEM PRIOR TO PAVING. CONTRACTOR TO CONTACT KYTC GEOTECHNICAL BRANCH PRIOR TO EXCAVATION TO COORDINATE THIS WORK. SEE NOTE 9 UNDER GENERAL NOTES FOR CONTACT INFORMATION AND OTHER REQUIREMENTS.
 - ② TRAFFIC TO RUN ON ASPHALT BASE LAYER. AFTER CONSTRUCTION OF WALL IS COMPLETE, THE ENTIRE ROADWAY WIDTH WILL RECEIVE 1.5" ASPHALT SURFACE PLACED DURING PHASE 3. MILL EDGE KEYS AT EACH END OF THE PROJECT, AND EACH SIDE OF THE BRIDGE.
 - ③ PROPOSED GUARDRAIL TO BE SET AT THE APPROPRIATE HEIGHT FOR THE FINAL PAVEMENT. MATCH EXISTING GUARDRAIL OFFSETS FROM CENTERLINE EXCEPT SHOWN OTHERWISE ON PLANS.

GENERAL NOTES

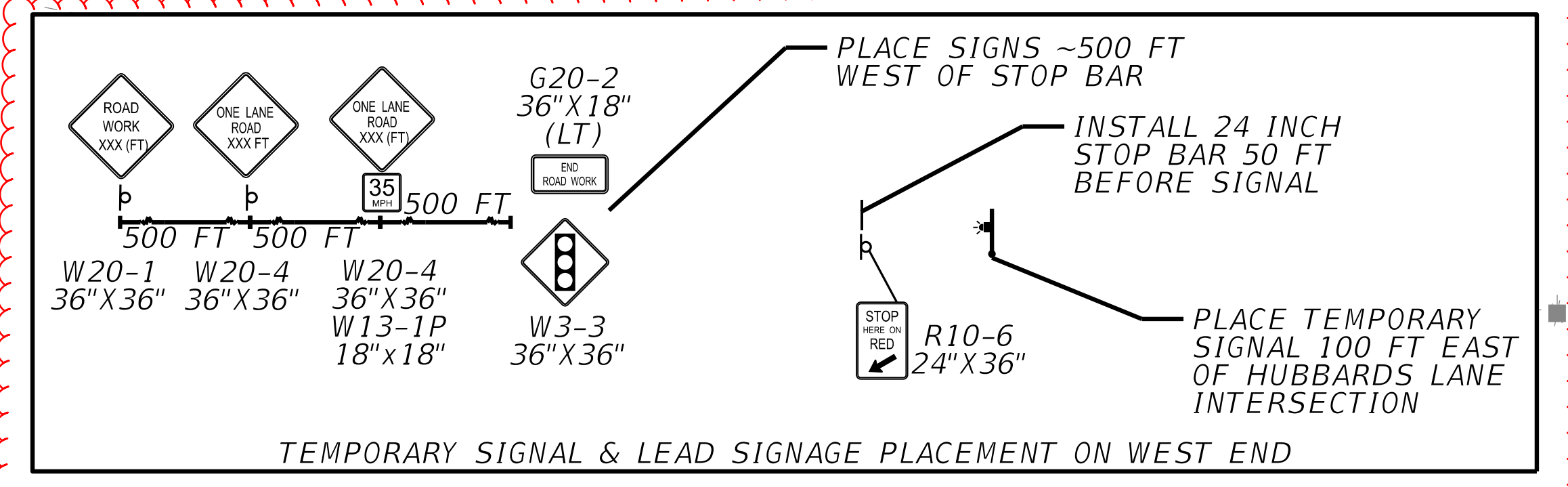
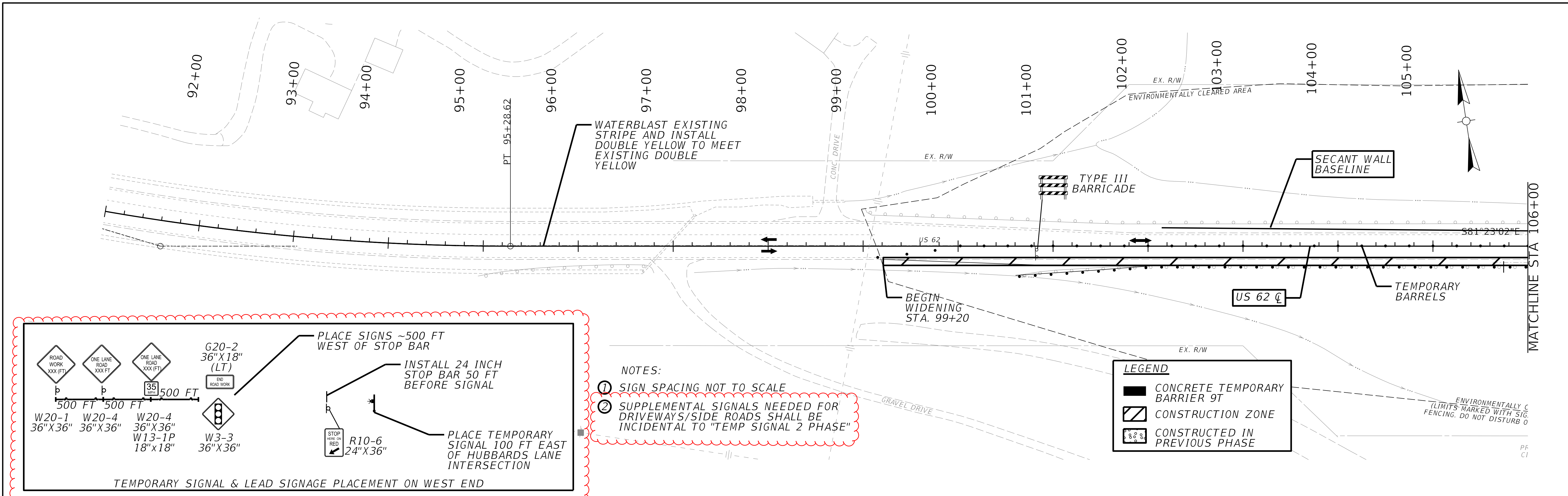
1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.
2. EXCEPT FOR THE ROADWAY AND TRAFFIC CONTROL BID ITEMS LISTED, ALL ITEMS OF WORK NECESSARY TO MAINTAIN AND CONTROL TRAFFIC WILL BE PAID AT THE LUMP SUM BID PRICE TO "MAINTAIN AND CONTROL TRAFFIC" AS SET FORTH IN THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE PROVIDED FOR IN THESE NOTES. THE LUMP SUM BID TO "MAINTAIN AND CONTROL TRAFFIC" SHALL ALSO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS AND OPERATIONS:
 - A. ALL LABOR AND MATERIALS NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES AND MARKINGS.
 - B. ALL FLAGPERSONS AND TRAFFIC CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, FLASHERS, SIGNS, BARRICADES AND VERTICAL PANELS, PLASTIC DRUMS (STEEL DRUMS WILL NOT BE PERMITTED) AND CONES NECESSARY FOR THE CONTROL AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC AS SPECIFIED IN THESE NOTES, THE PLANS, THE MUTCD OR THE ENGINEER.
3. ANY TEMPORARY TRAFFIC CONTROL ITEMS, DEVICES, MATERIALS AND INCIDENTALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED.
4. THE CONTRACTOR SHALL MAINTAIN A ONE-LANE TRAVELED WAY WITH A MINIMUM LANE WIDTH OF 11 FEET.
5. THE CONTRACTOR SHALL COMPLETELY COVER ANY SIGNS, EITHER EXISTING, PERMANENT OR TEMPORARY, WHICH DO NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING, AND SHALL MAINTAIN THE COVERING UNTIL THE SIGNS ARE APPLICABLE OR ARE REMOVED.
6. IN GENERAL, ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED STARTING AND PROCEEDING IN THE DIRECTION OF THE FLOW OF TRAFFIC AND REMOVED STARTING AND PROCEEDING IN THE DIRECTION OPPOSITE THE FLOW OF TRAFFIC.
7. THE ENGINEER AND THE CONTRACTOR, OR THEIR AUTHORIZED REPRESENTATIVES, SHALL REVIEW THE SIGNING BEFORE TRAFFIC IS ALLOWED TO USE ANY LANE CLOSURES, CROSSOVERS OR DETOURS. ALL SIGNING SHALL BE APPROVED BY THE ENGINEER BEFORE WORK CAN BE STARTED BY THE CONTRACTOR.
8. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL OF THE DIVISIONS OF TRAFFIC, DESIGN AND CONSTRUCTION, AND THE FEDERAL HIGHWAY ADMINISTRATION, WHERE APPLICABLE.
9. PIEZOMETER CABLES ARE BURIED APPROXIMATELY 12-INCHES BELOW GRADE ALONG THE EASTBOUND SHOULDER AT THE APPROXIMATE LOCATION OF STATION 105+60 TO STA. 111+20. CONTRACTOR SHALL NOTIFY KYTC'S GEOTECHNICAL BRANCH PRIOR TO EXCAVATION TO ALLOW KYTC TO REMOVE THE CABLES AT THE DATA COLLECTORS AND PREVENT DAMAGE OF INSTRUMENTS. UPON COMPLETION OF EXCAVATION AND PRIOR TO BACKFILLING, NOTIFY THE GEOTECHNICAL BRANCH TO ALLOW FOR SPLICING, ROUTING, AND REINSTALLATION OF THE CABLES BENEATH THE ROADWAY SECTION.
 CONTACT: AARON WALLACE
 AARON.WALLACE@KY.GOV
 270-590-3693
10. IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE THE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

PHASING NOTES:

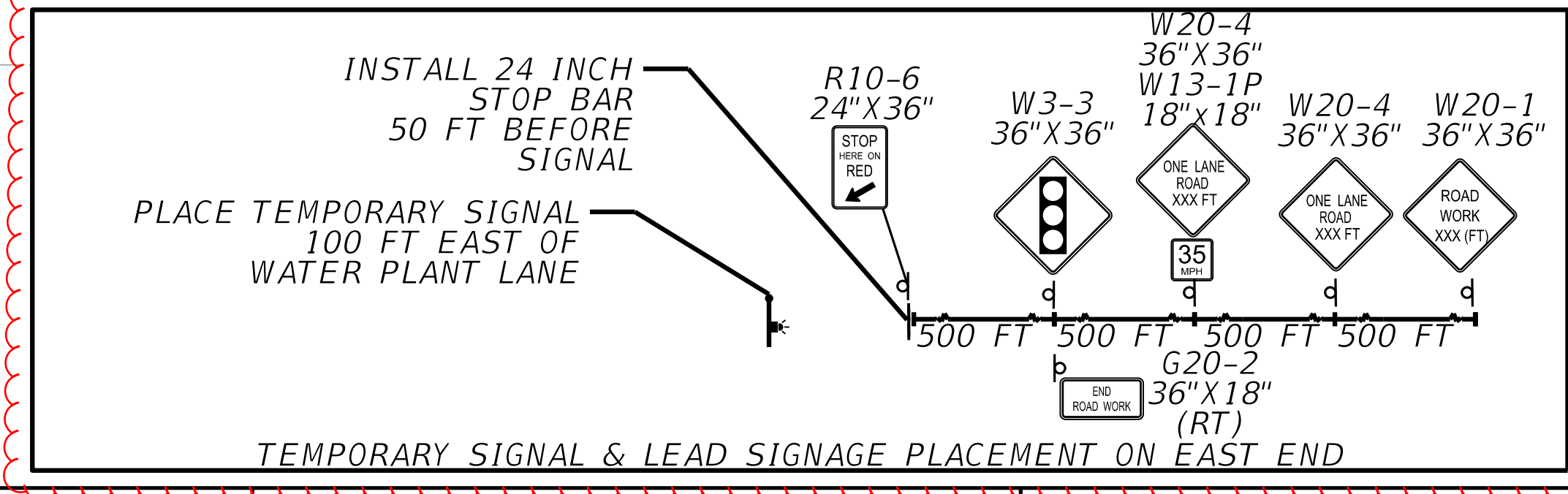
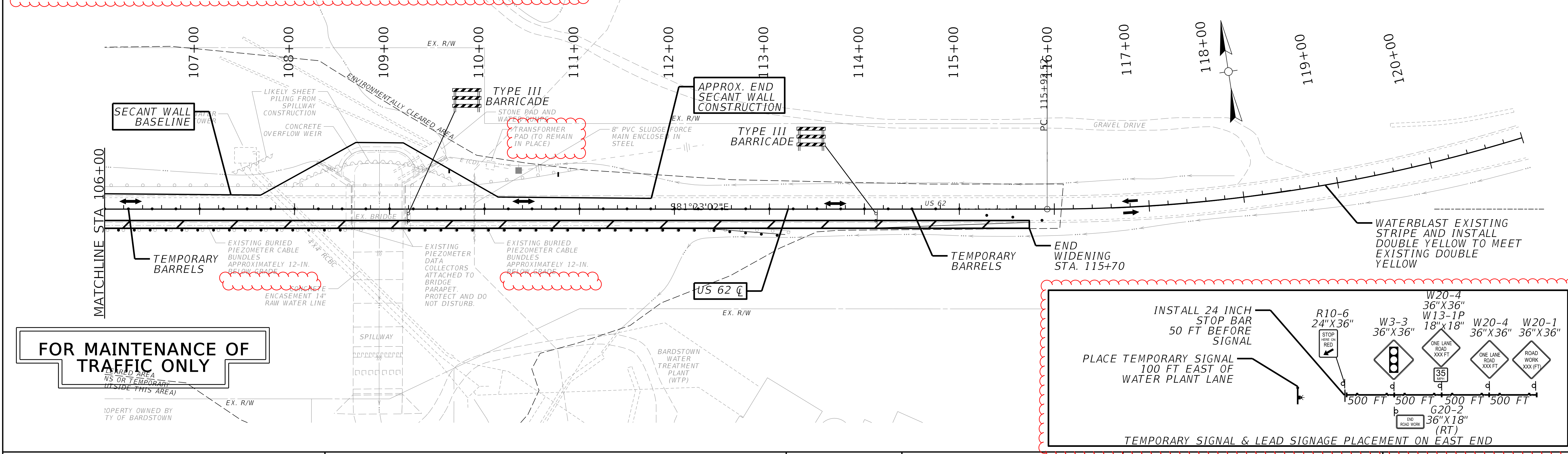
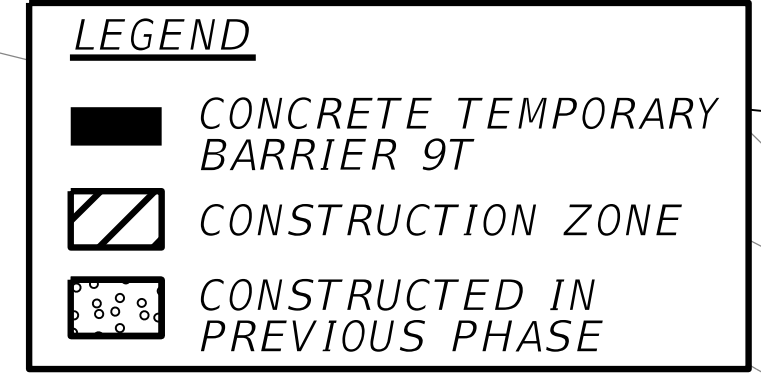
- PHASE 1 - STATION 98+35 TO STATION 116+60**
1. INSTALL ALL TEMPORARY TRAFFIC DEVICES, INCLUDING BUT NOT LIMITED TO TEMPORARY SIGNALS, SIGNS, CONCRETE BARRIERS ETC.
 2. REMOVE EXISTING PAVEMENT MARKINGS VIA WATERBLASTING WITHIN PHASE 1 AND INSTALL NEW PAVEMENT MARKINGS PER PLANS.
 3. SHIFT TRAFFIC TO USING WESTBOUND LANE FOR TWO-WAY TRAFFIC.
 4. CONSTRUCT THE WIDENING SECTION ALONG THE EXISTING SHOULDER OF THE EASTBOUND LANE FROM STATION 98+20 TO STATION 115+70. THIS SECTION WILL REMAIN IN PLACE AFTER CONSTRUCTION. MATCH EXISTING PAVEMENT ELEVATION WITH TOP OF ASPHALT BASE.
 5. REMOVE AND REPLACE EXISTING GUARDRAIL ON THE EASTBOUND SIDE.
 6. INSTALL TEMPORARY LANE STRIPING.
- PHASE 2 - STATION 98+35 TO STATION 116+60**
1. RELOCATE ANY NECESSARY TEMPORARY TRAFFIC DEVICES, INCLUDING BUT NOT LIMITED TO TEMPORARY SIGNALS, SIGNS, CONCRETE BARRIERS ETC.
 2. SHIFT TRAFFIC TO USING EASTBOUND LANE FOR TWO-WAY TRAFFIC.
 3. CONSTRUCT THE SECANT WALL THROUGH PHASE 1 LIMITS. MAINTAIN ONE-LANE TWO-WAY TRAFFIC WITH TEMPORARY SIGNALS.
 4. CONSTRUCT NEW WESTBOUND PAVEMENT SECTION EXCEPT THE SURFACE COURSE, MATCHING THE EXISTING PAVEMENT ELEVATION WITH THE TOP OF ASPHALT BASE.
 5. GUARDRAIL AND OTHER ROADWAY ITEMS TO RETURN THE CONSTRUCTION ZONE TO ITS ORIGINAL CONDITION.
- PHASE 3 - STATION 98+35 TO STATION 116+60**
1. MILL EDGE KEYS AND COMPLETE FINAL ASPHALT SURFACING OF THE ROADWAY AND FINAL LANE STRIPING. TAPER ASPHALT SURFACE OVERLAY OVER A MINIMUM LENGTH OF 75' AT EDGE KEYS.

PAVEMENT DROP-OFF

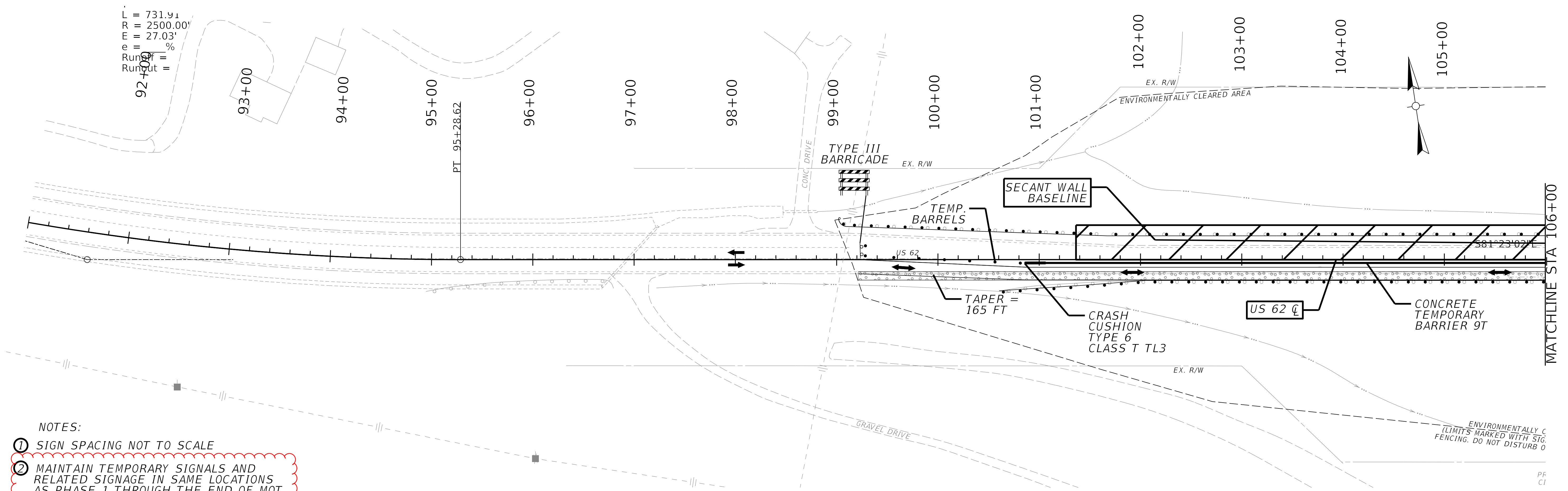
- A PAVEMENT EDGE THAT TRAFFIC IS NOT EXPECTED TO CROSS, EXCEPT ACCIDENTALLY, SHOULD BE TREATED AS FOLLOWS:
- * LESS THAN TWO INCHES - NO PROTECTION REQUIRED. WARNING SIGNS SHOULD BE PLACED IN ADVANCE AND THROUGHOUT THE DROP-OFF AREA.
 - * TWO TO FOUR INCHES - PLASTIC DRUMS, VERTICAL PANELS OR BARRICADES EVERY 100 FEET ON TANGENT SECTIONS FOR SPEEDS OF 50 MPH OR GREATER. CONES MAY BE USED IN PLACE OF PLASTIC DRUMS, PANELS AND BARRICADES DURING DAYLIGHT HOURS. FOR TANGENT SECTIONS WITH SPEEDS LESS THAN 50 MPH AND FOR CURVES, DEVICES SHOULD BE PLACED EVERY 50 FEET. SPACING OF DEVICES ON TAPERED SECTIONS SHOULD BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
 - * GREATER THAN FOUR INCHES - POSITIVE SEPARATION OR WEDGE WITH 3:1 OR FLATTER SLOPE NEEDED. IF THERE IS FIVE FEET OR MORE DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE DROP-OFF, THEN DRUMS, PANEL, OR BARRICADES MAY BE USED. IF THE DROP-OFF IS GREATER THAN 12 INCHES, POSITIVE SEPARATION IS STRONGLY ENCOURAGED. IF CONCRETE BARRIERS ARE USED, SPECIAL REFLECTIVE DEVICES OR STEADY BURN LIGHTS SHOULD BE USED FOR OVERNIGHT INSTALLATIONS.
- FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN FOUR INCHES MAY BE PROTECTED WITH PLASTIC DRUMS, VERTICAL PANELS OR BARRICADES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA.
- LESSER TREATMENTS THAN THOSE DESCRIBED ABOVE MAY BE CONSIDERED FOR LOW-VOLUME LOCAL STREETS.
- PAYMENT WILL BE ALLOWED FOR DGA MATERIAL USED FOR WEDGING.



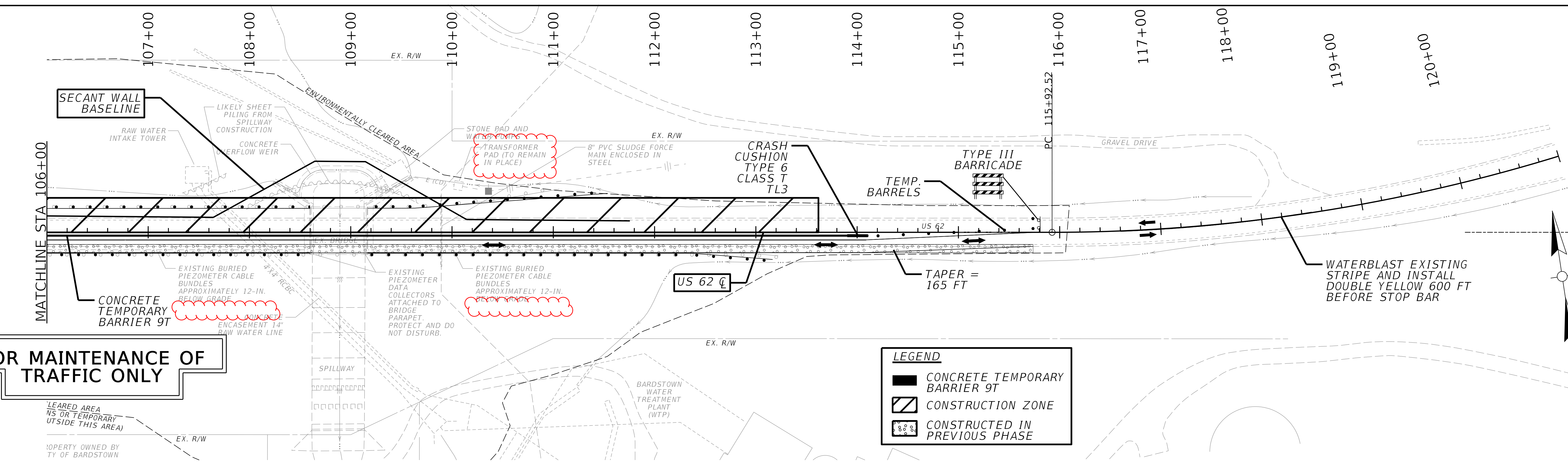
- NOTES:
- ① SIGN SPACING NOT TO SCALE
 - ② SUPPLEMENTAL SIGNALS NEEDED FOR DRIVEWAYS/SIDE ROADS SHALL BE INCIDENTAL TO "TEMP SIGNAL 2 PHASE"



L = 731.91
 R = 2500.00'
 E = 27.03'
 e = %
 Runout =
 Runout =



- NOTES:
- ① SIGN SPACING NOT TO SCALE
 - ② MAINTAIN TEMPORARY SIGNALS AND RELATED SIGNAGE IN SAME LOCATIONS AS PHASE 1 THROUGH THE END OF MOT.

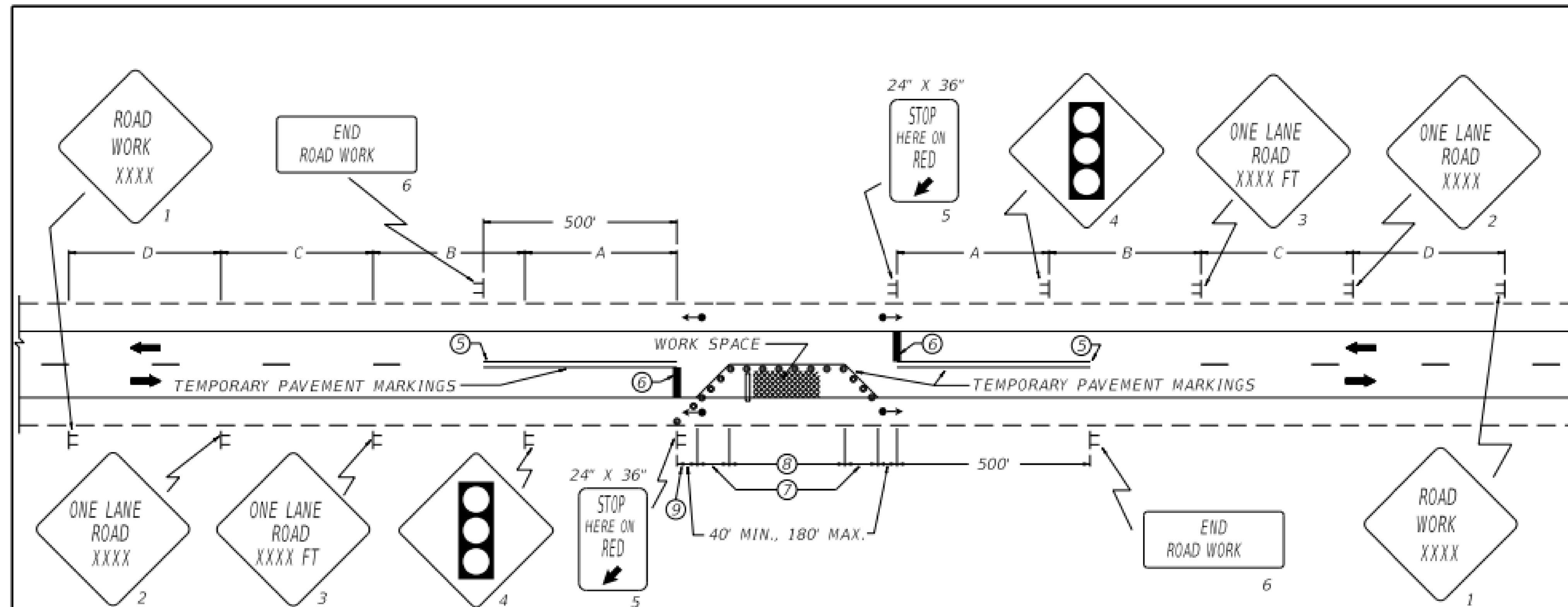


LEGEND

	CONCRETE TEMPORARY BARRIER 9T
	CONSTRUCTION ZONE
	CONSTRUCTED IN PREVIOUS PHASE

FOR MAINTENANCE OF TRAFFIC ONLY

MAINTENANCE OF TRAFFIC SIGNING NOTES



- NOTES -

1. THE SIZE OF SIGNS 2 THRU 5 SHALL BE 48" X 48" FOR EXPRESSWAYS/FREEWAYS. THE MINIMUM SIZE OF SIGNS 2 THRU 5 SHALL BE 36" X 36" FOR OTHER ROADWAYS. SIGN NOS. 1 AND 6 SHALL BE 48" X 24" FOR EXPRESSWAYS/FREEWAYS AND 36" X 18" FOR OTHER ROADWAYS. A FREEWAY IS DEFINED AS A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS. AN EXPRESSWAY IS DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.
2. TEMPORARY TRAFFIC SIGNALS SHALL BE INSTALLED AND OPERATED IN ACCORDANCE WITH THE PROVISIONS OF PART 4 OF THE MUTCD.
3. ALL SHOULDER MOUNTED SIGNAL HEADS SHALL BE A MINIMUM HEIGHT OF 12 FEET. ANY SIGNAL HEADS OR OTHER DEVICES MOUNTED OVER THE ROADWAY SHALL HAVE A MINIMUM UNDERCLEARANCE OF 17 FEET.
4. ALL CONFLICTING PAVEMENT MARKINGS BETWEEN THE STOP BARS SHALL BE OBLITERATED BY AN APPROVED METHOD.
- ⑤ "NO PASSING" ZONES (500' MIN.) SHALL BE INSTALLED ON THE APPROACHES TO THE CLOSURE.
- ⑥ STOP BARS SHALL HAVE A WIDTH OF 24".
- ⑦ TAPERS SHALL BE 50' (MIN) TO 100' (MAX) IN LENGTH. SPACING OF CHANNELIZING DEVICES SHOULD BE 20' THRU THE TAPER AREAS.
- ⑧ SPACING OF CHANNELIZING DEVICES THROUGH THE ACTIVITY AREA SHOULD BE 80'.
- ⑨ SPACING OF CHANNELIZING DEVICES THROUGH SHOULDER TAPER SHOULD BE 20'.
10. GRABBER CONES MAY BE USED IN LIEU OF DRUMS IF THE USE OF DRUMS WOULD RESULT IN LANES THAT ARE TOO NARROW OR AN UNACCEPTABLE SITUATION BASED ON ENGINEERING JUDGMENT.
11. TEMPORARY TRAFFIC CONTROL SIGNAL TIMING, INCLUDING CLEARANCE INTERVALS, SHALL BE VERIFIED BY DISTRICT TRAFFIC.

BID ITEMS AND UNIT TO BID
 LANE CLOSURE EACH
 TEMP SIGNAL EACH
 BARRICADE TYPE-III EACH
 REFER TO SECTION 112 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

- LEGEND
- TYPE III BARRICADE
 - ⊥ SIGN
 - ← TRAFFIC SIGNAL
 - CHANNELIZING DEVICES DRUMS

SIGNING AND SPACING TABLE				
ROAD TYPE	A	B	C	D
EXPRESSWAY/ FREEWAY	1000'	500'	1100'	2600'
SP. LT. ≥ 45 MPH*	500'	500'	500'	1100'
SP. LT. ≤ 40 MPH*	250'	250'	500'	500'

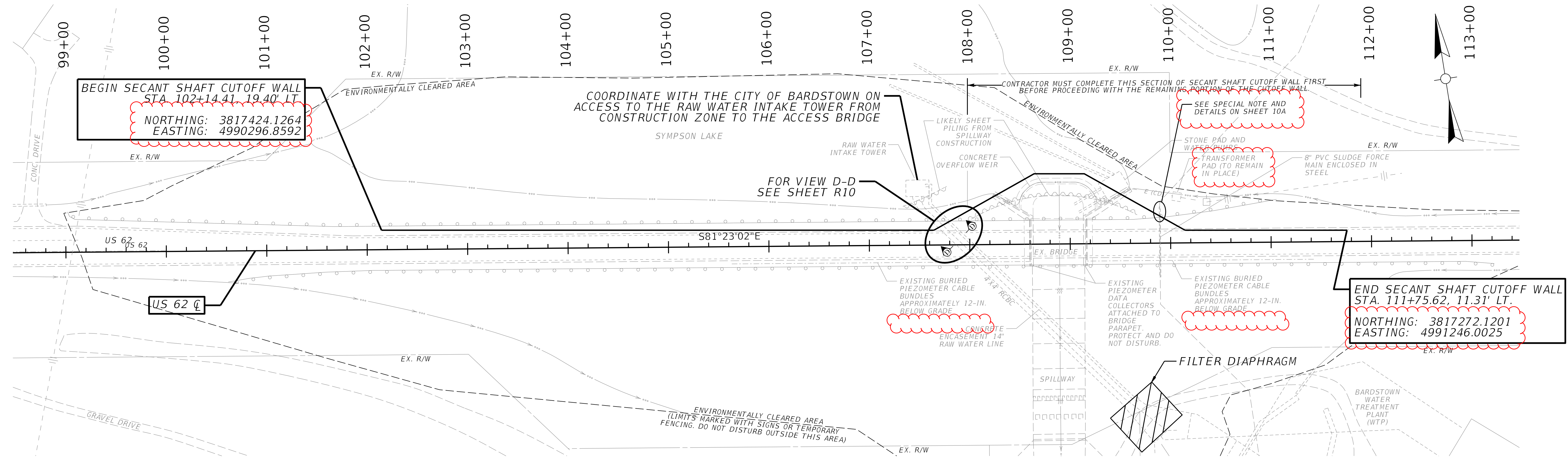
*NOTE: USE NORMAL POSTED SPEED LIMIT

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

LANE CLOSURE
USING TRAFFIC SIGNALS

STANDARD DRAWING NO. TTC-110-04
 SUBMITTED: *B. Allen* 02-26-20
 APPROVED: *[Signature]* 02-26-20

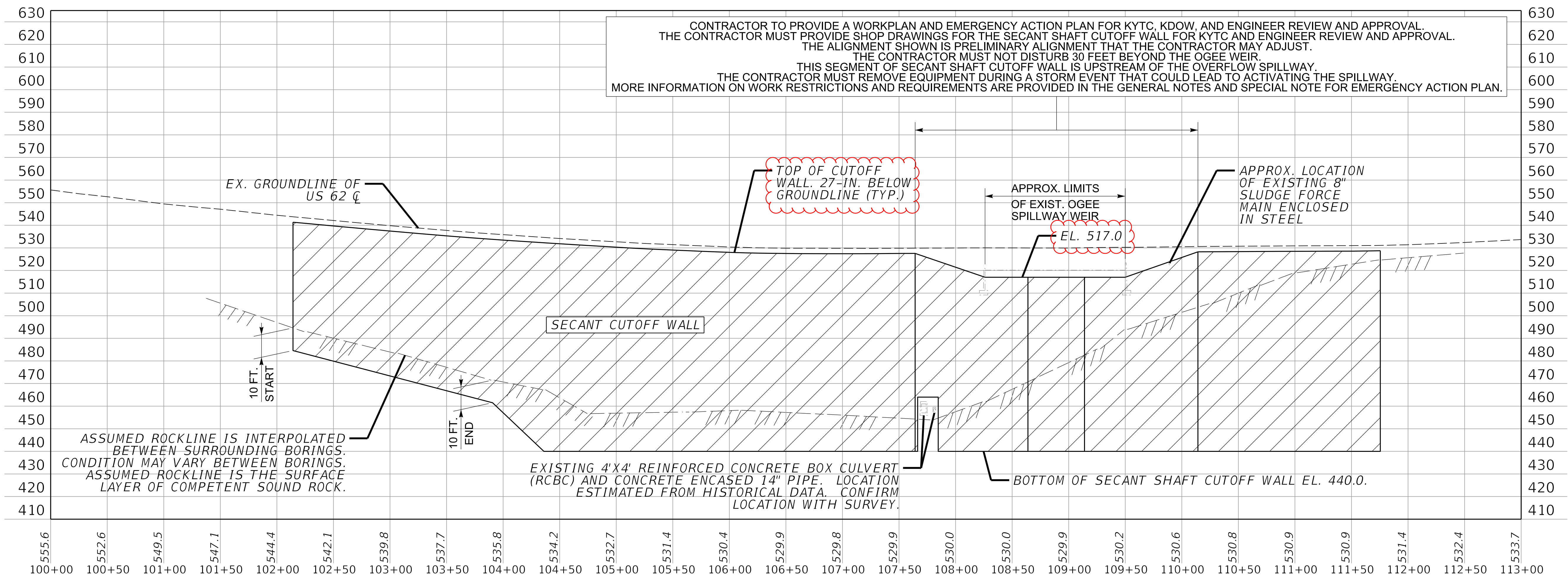


BEGIN SECANT SHAFT CUTOFF WALL
 STA. 102+14.41, 19.40' LT.
 NORTHING: 3817424.1264
 EASTING: 4990296.8592

END SECANT SHAFT CUTOFF WALL
 STA. 111+75.62, 11.31' LT.
 NORTHING: 3817272.1201
 EASTING: 4991246.0025

COORDINATE WITH THE CITY OF BARDSTOWN ON ACCESS TO THE RAW WATER INTAKE TOWER FROM CONSTRUCTION ZONE TO THE ACCESS BRIDGE

ENVIRONMENTALLY CLEARED AREA (LIMITS MARKED WITH SIGNS OR TEMPORARY FENCING. DO NOT DISTURB OUTSIDE THIS AREA)

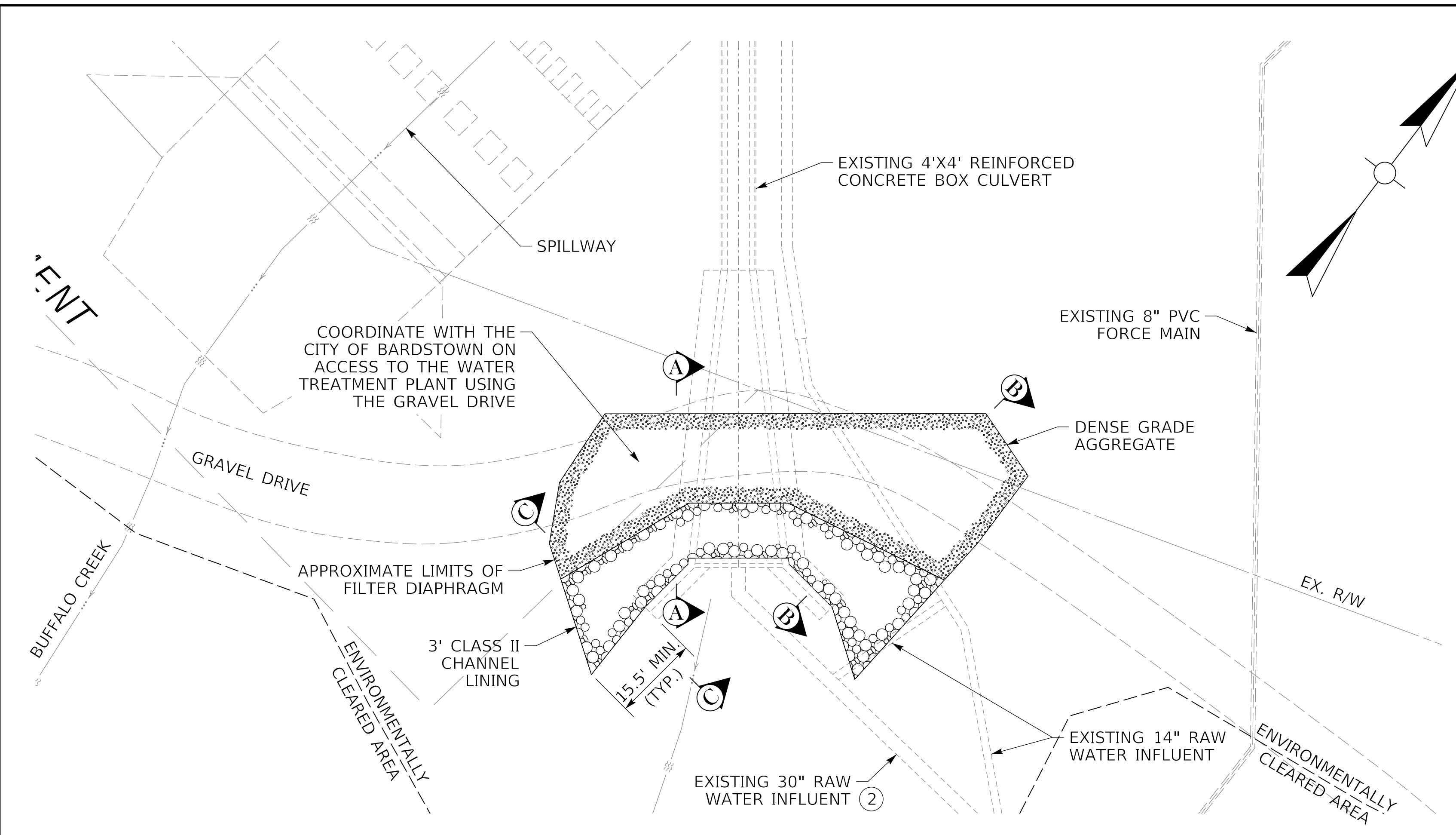


CONTRACTOR TO PROVIDE A WORKPLAN AND EMERGENCY ACTION PLAN FOR KYTC, KDOW, AND ENGINEER REVIEW AND APPROVAL. THE CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR THE SECANT SHAFT CUTOFF WALL FOR KYTC AND ENGINEER REVIEW AND APPROVAL. THE ALIGNMENT SHOWN IS PRELIMINARY ALIGNMENT THAT THE CONTRACTOR MAY ADJUST. THE CONTRACTOR MUST NOT DISTURB 30 FEET BEYOND THE OGEE WEIR. THIS SEGMENT OF SECANT SHAFT CUTOFF WALL IS UPSTREAM OF THE OVERFLOW SPILLWAY. THE CONTRACTOR MUST REMOVE EQUIPMENT DURING A STORM EVENT THAT COULD LEAD TO ACTIVATING THE SPILLWAY. MORE INFORMATION ON WORK RESTRICTIONS AND REQUIREMENTS ARE PROVIDED IN THE GENERAL NOTES AND SPECIAL NOTE FOR EMERGENCY ACTION PLAN.

ASSUMED ROCKLINE IS INTERPOLATED BETWEEN SURROUNDING BORINGS. CONDITION MAY VARY BETWEEN BORINGS. ASSUMED ROCKLINE IS THE SURFACE LAYER OF COMPETENT SOUND ROCK.

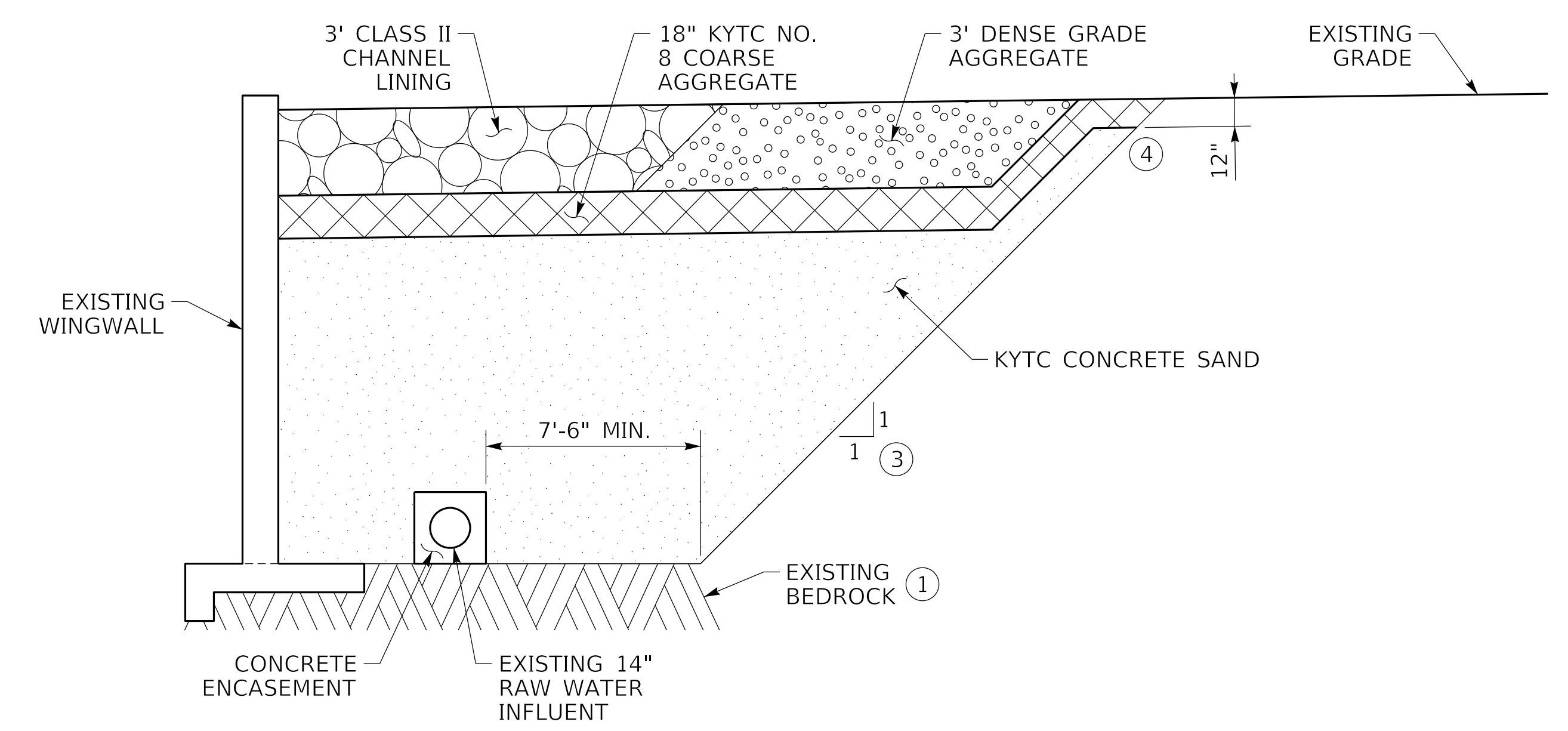
EXISTING 4'x4' REINFORCED CONCRETE BOX CULVERT (RCBC) AND CONCRETE ENCASED 14" PIPE. LOCATION ESTIMATED FROM HISTORICAL DATA. CONFIRM LOCATION WITH SURVEY.

BOTTOM OF SECANT SHAFT CUTOFF WALL EL. 440.0.

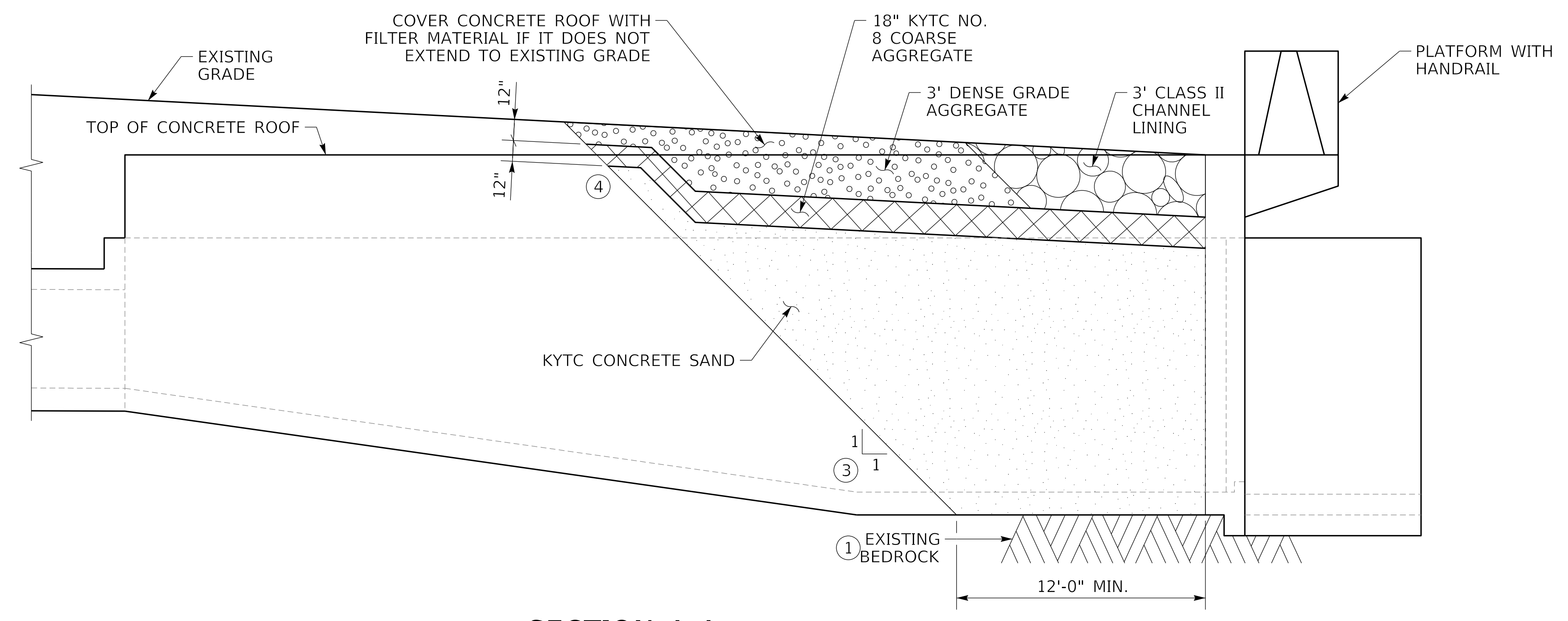


FILTER DIAPHRAGM PLAN

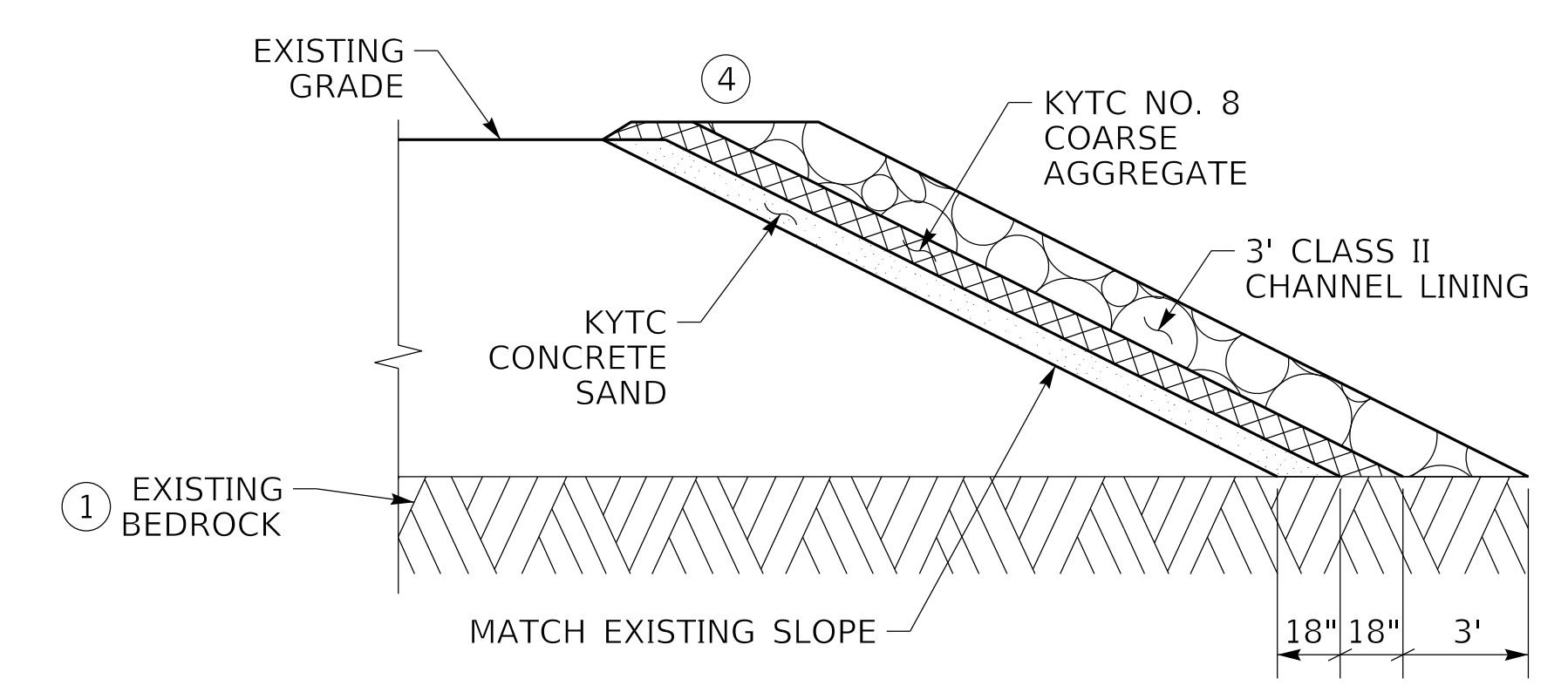
- ① CONTACT AARON WALLACE WITH KYTC'S GEOTECHNICAL SERVICES BRANCH AT (270) 237-9589 PRIOR TO PLACEMENT OF BACKFILL TO ALLOW OBSERVATION OF EXPOSED BEDROCK. SOME BEDROCK EXCAVATIONS MAY BE REQUIRED TO ENSURE FILTER MATERIAL IS INSTALLED ON COMPETENT BEDROCK.
- ② CONTRACTOR SHALL ENSURE BOTH 14" AND 30" RAW WATER INFLUENT PIPES ARE NOT DISTURBED DURING FILTER DIAPHRAGM CONSTRUCTION.
- ③ THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, AND MAINTENANCE OF ALL TEMPORARY EXCAVATION SLOPES REQUIRED FOR FILTER DIAPHRAGM INSTALLATION. SLOPES SHOWN ON THIS SHEET ARE FOR GENERAL GUIDANCE ONLY. THE CONTRACTOR SHALL ESTABLISH TEMPORARY SLOPES THAT REMAIN SAFE AND STABLE FOR THE DURATION OF THE WORK.
- ④ NO. 8 COARSE AGGREGATE AND CONCRETE SAND SHALL MEET THE GRADATION REQUIREMENTS IN SECTIONS 805.15 AND 804.10, RESPECTIVELY, OF THE 2026 STANDARD SPECIFICATIONS.



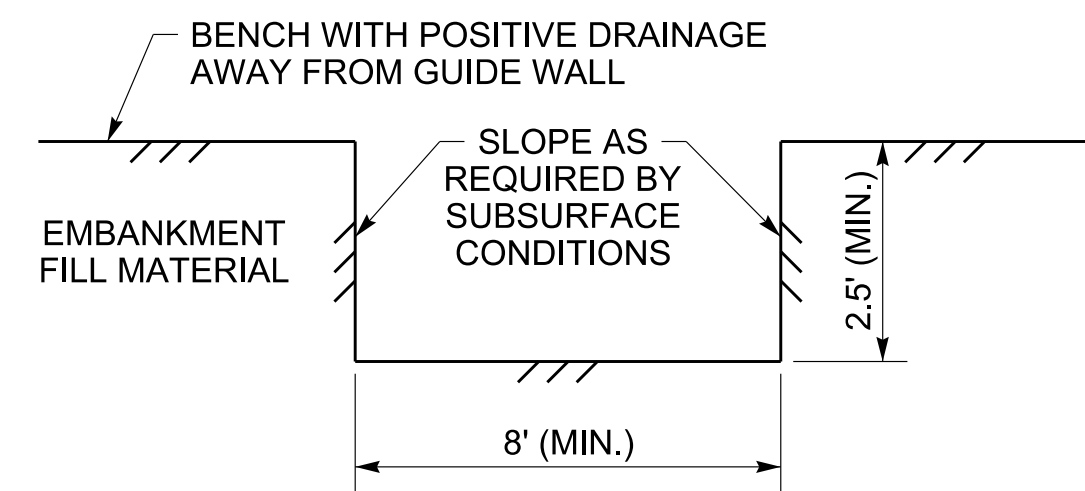
SECTION B-B



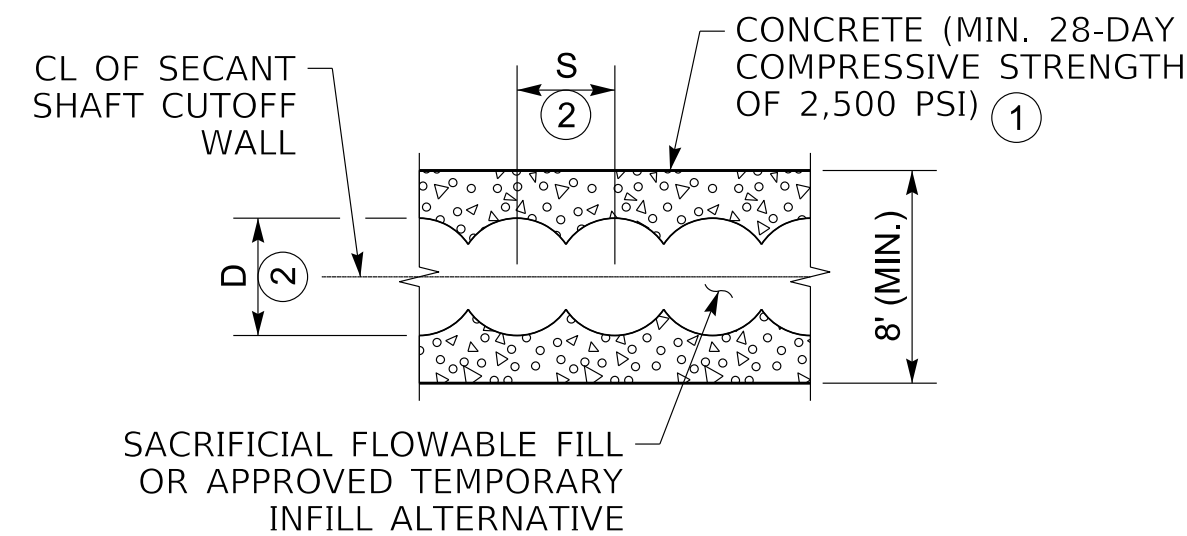
SECTION A-A



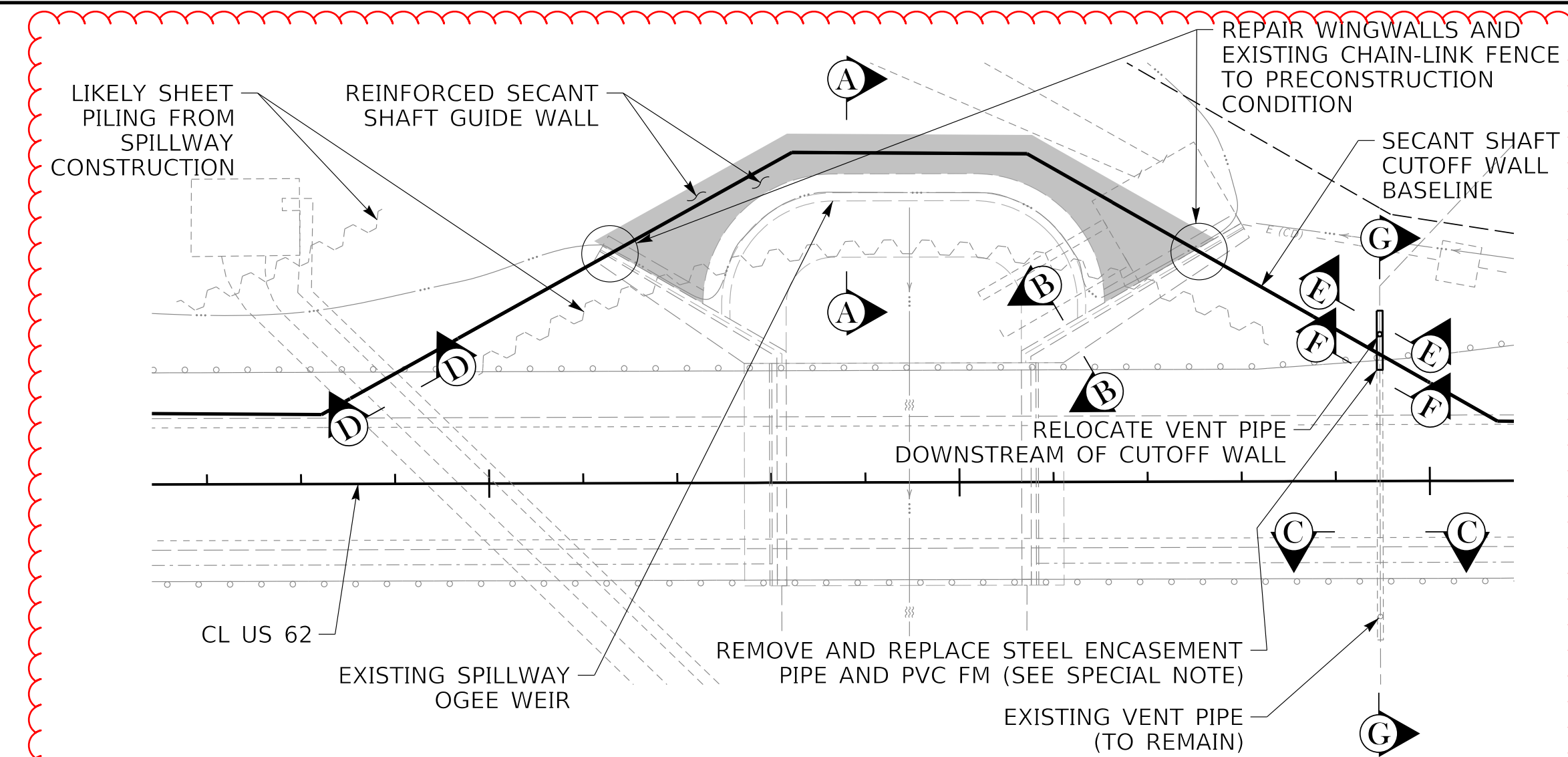
SECTION C-C



EXCAVATION FOR SECANT SHAFT GUIDE WALL

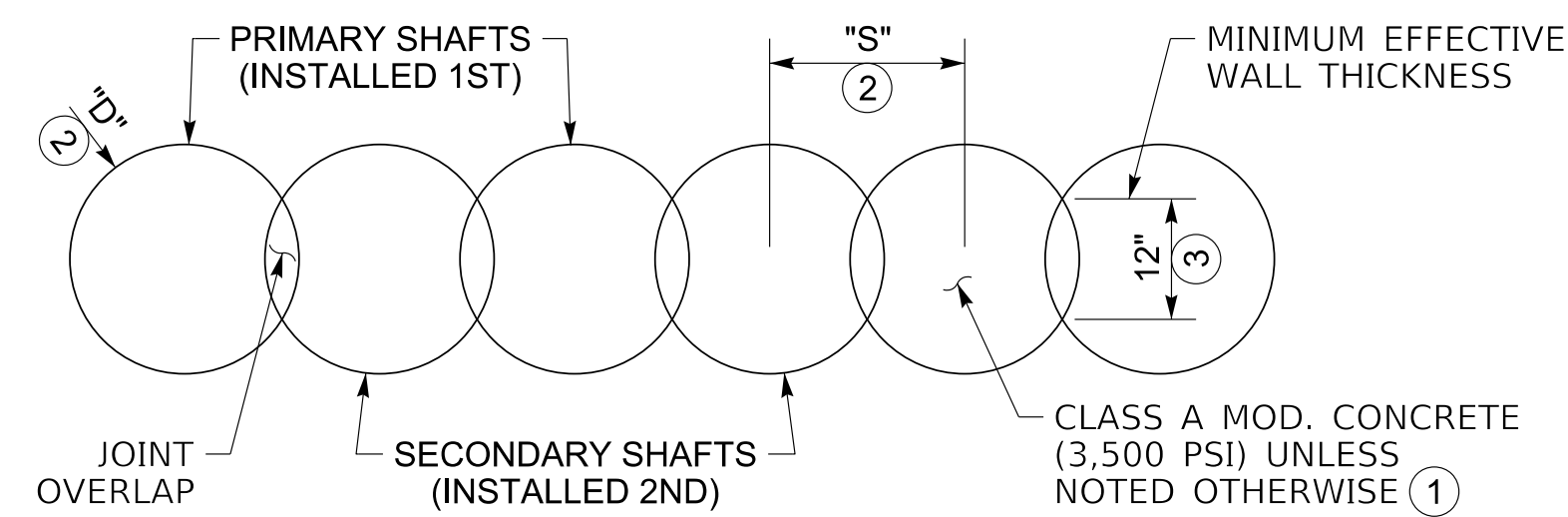


SECANT SHAFT GUIDE WALL DETAIL PLAN

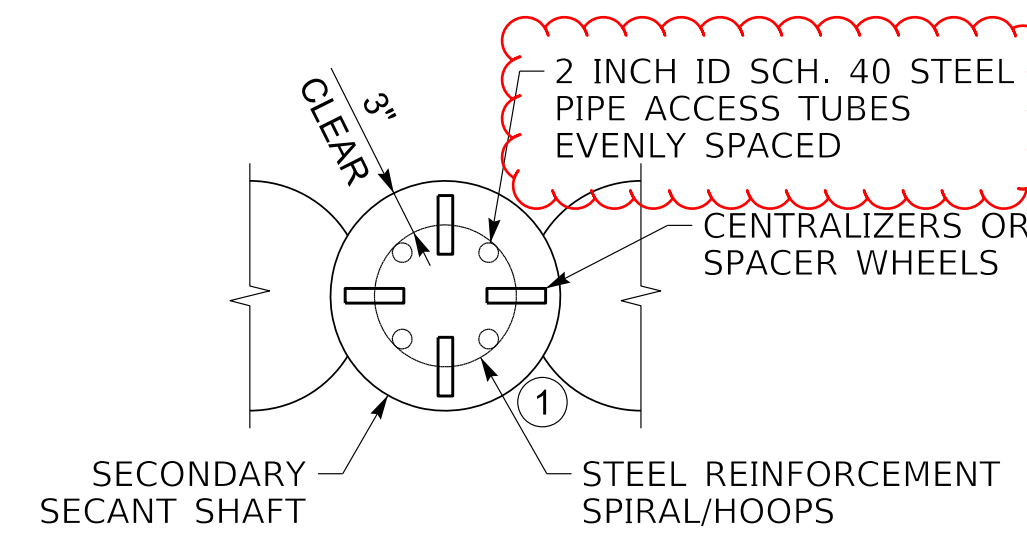


REINFORCED SECANT SHAFT GUIDE WALL DETAIL PLAN

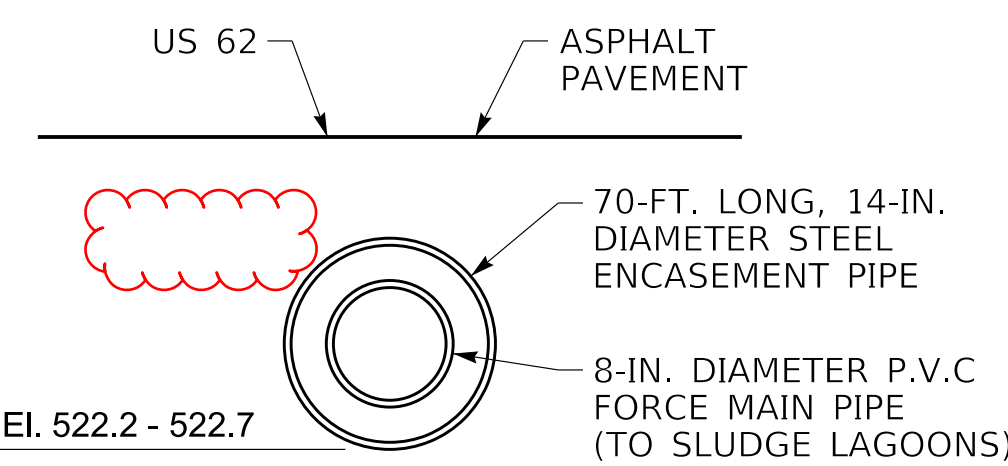
NOTE: SEE "SECANT WALL DETAILS (2 OF 2)" SHEET FOR SECTION E-E, SECTION F-F AND SECTION G-G.



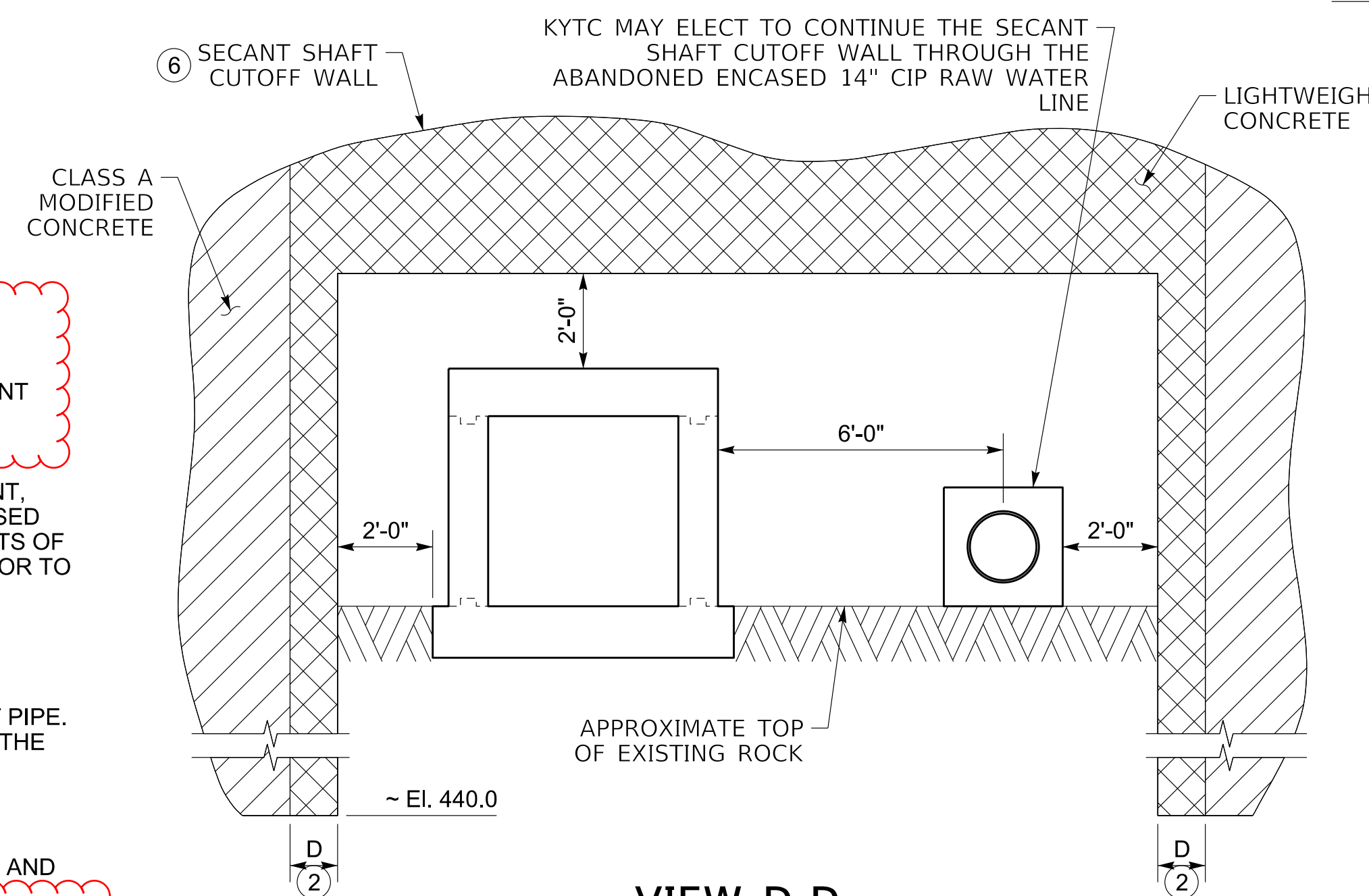
SECANT SHAFT CUTOFF WALL LAYOUT DETAIL



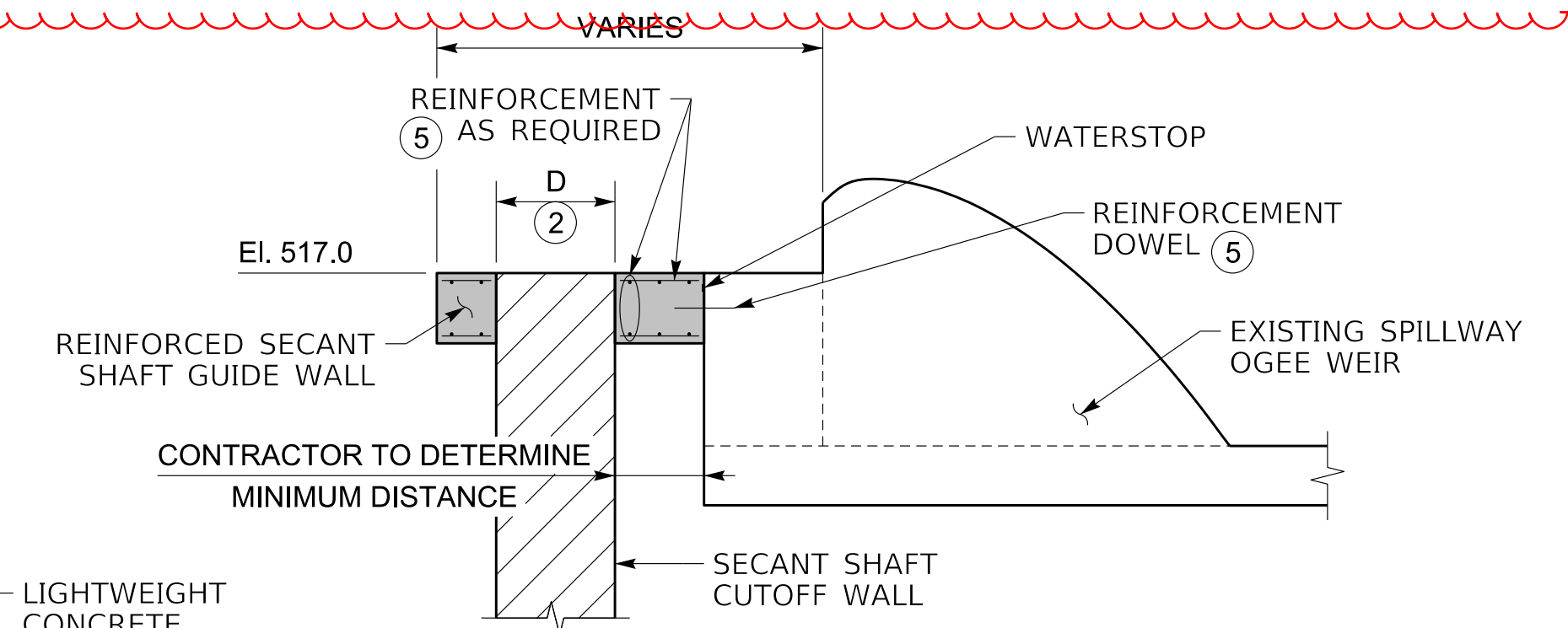
CROSSHOLE SONIC LOGGING (CSL) DETAIL



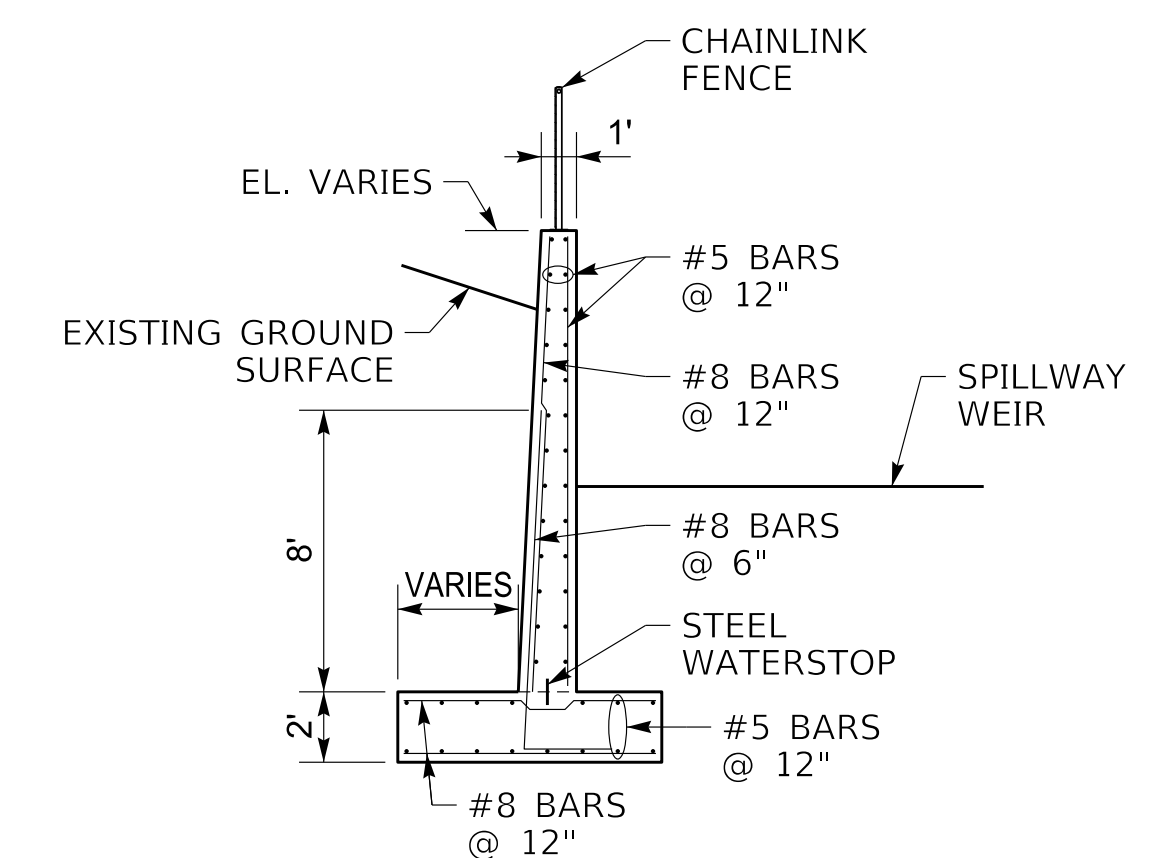
SECTION C-C (EXISTING)



VIEW D-D (PROPOSED CONSTRUCTION)

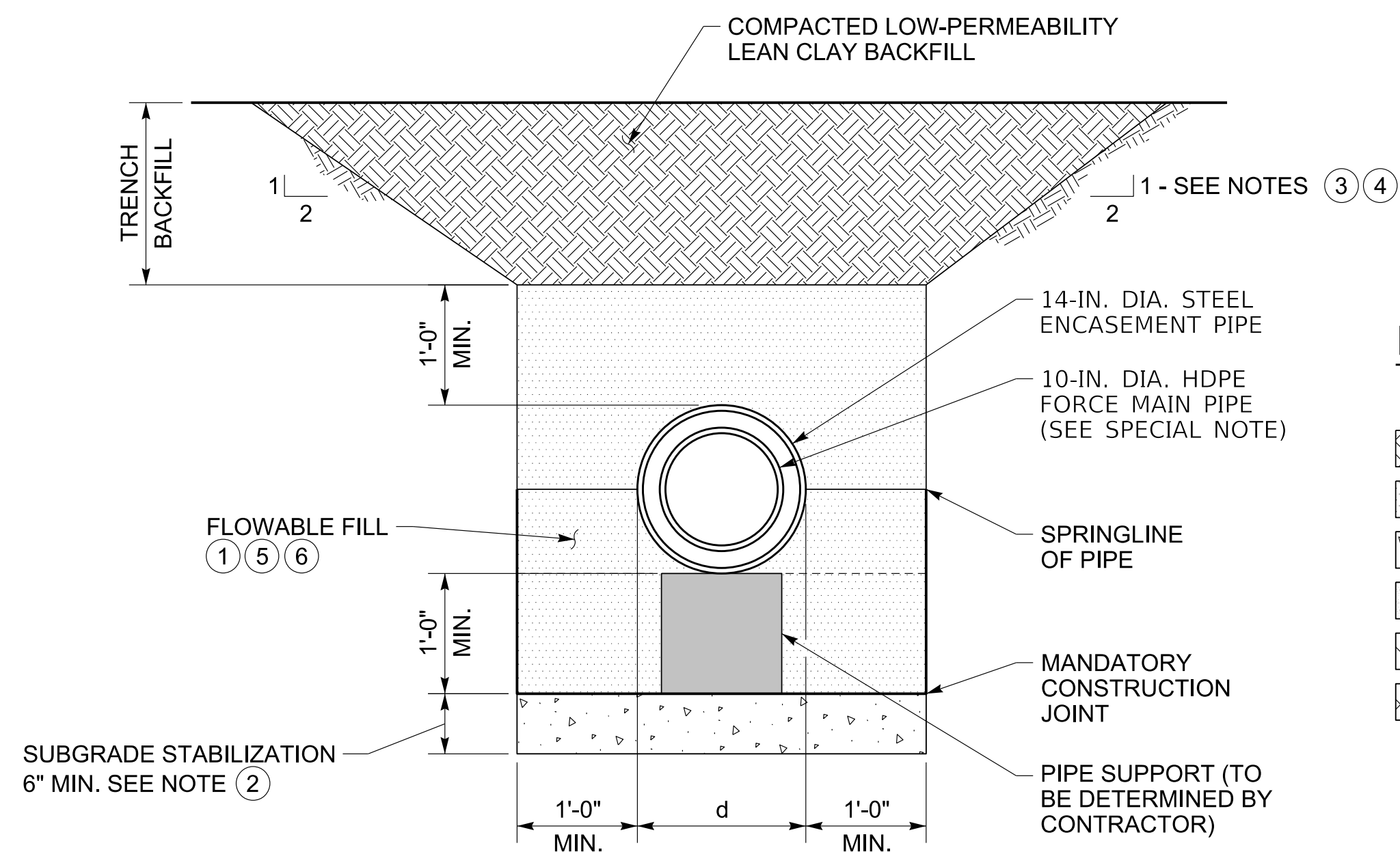


SECTION A-A (PROPOSED CONSTRUCTION)



SECTION B-B (EXISTING)

- 1 REFER TO SPECIAL NOTE FOR SECANT SHAFT CUTOFF WALL FOR MATERIAL AND NON-DESTRUCTIVE TESTING REQUIREMENTS. THE REQUIRED NUMBER OF STEEL PIPE ACCESS TUBES SHALL BE BASED ON THE SECANT SHAFT DIAMETER (D) AS DETERMINED BY THE CONTRACTOR. PROVIDE THE NUMBER OF ACCESS TUBES BASED ON THE SECANT SHAFT DIAMETER (D) IN ACCORDANCE WITH APPENDIX C OF THE SECANT SHAFT CUTOFF WALL SPECIAL NOTE.
- 2 SECANT SHAFT DIAMETER (D), CENTER-TO-CENTER SPACING (S), AND JOINT OVERLAP OF PRIMARY AND SECONDARY SHAFTS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE SELECTED CONSTRUCTION METHOD, EQUIPMENT, SUBSURFACE CONDITIONS, AND PERFORMANCE REQUIREMENTS OF THE CUTOFF WALL. THE CONTRACTOR'S PROPOSED SHAFT GEOMETRY SHALL PRODUCE A CONTINUOUS, FULLY INTERSECTING CUTOFF WALL MEETING THE REQUIREMENTS OF THE SPECIAL NOTE FOR SECANT SHAFT CUTOFF WALL. GEOMETRY SHALL BE SUBMITTED FOR ENGINEER REVIEW PRIOR TO CONSTRUCTION.
- 3 OUT-OF-PLUMBNESS SHALL NOT EXCEED 0.4%. THE EFFECTIVE WALL THICKNESS SHALL BE A MINIMUM OF 12-INCHES THROUGH THE FULL DEPTH OF THE CUTOFF WALL.
- 4 AS-BUILT DRAWINGS ARE NOT AVAILABLE FOR THE BACKWASH HOLDING BASIN FORCE MAIN AND STEEL ENCASUREMENT PIPE. HISTORICAL CORRESPONDENCE INDICATE THE BOTTOM OF THE ENCASUREMENT PIPE IS LOCATED 2 TO 2.5 FEET ABOVE THE SPILLWAY WEIR.
- 5 REINFORCEMENT DESIGN SHALL BE DETERMINED BY THE CONTRACTOR.
- 6 USE LIGHTWEIGHT CONCRETE FOR SHAFTS INSTALLED IMMEDIATELY BESIDE THE EXISTING CULVERT AND INLET PIPE, AND FOR ALL SHAFTS INSTALLED BETWEEN THE TWO.
- 7 LIMIT WINGWALL AND CHAIN-LINK FENCE REMOVAL TO THE MINIMUM REQUIRED FOR CONSTRUCTION OF THE SECANT SHAFT CUTOFF WALL AND GUIDE WALL. REPLACE REMOVED PORTIONS IN KIND USING THE MATERIALS AND DETAILS PROVIDED IN THE AS-BUILT ON PROJECT-RELATED INFORMATION. QUANTITIES SHOWN ON SHEET R02A ARE ESTIMATED FOR REPLACEMENT OF BOTH WINGWALLS

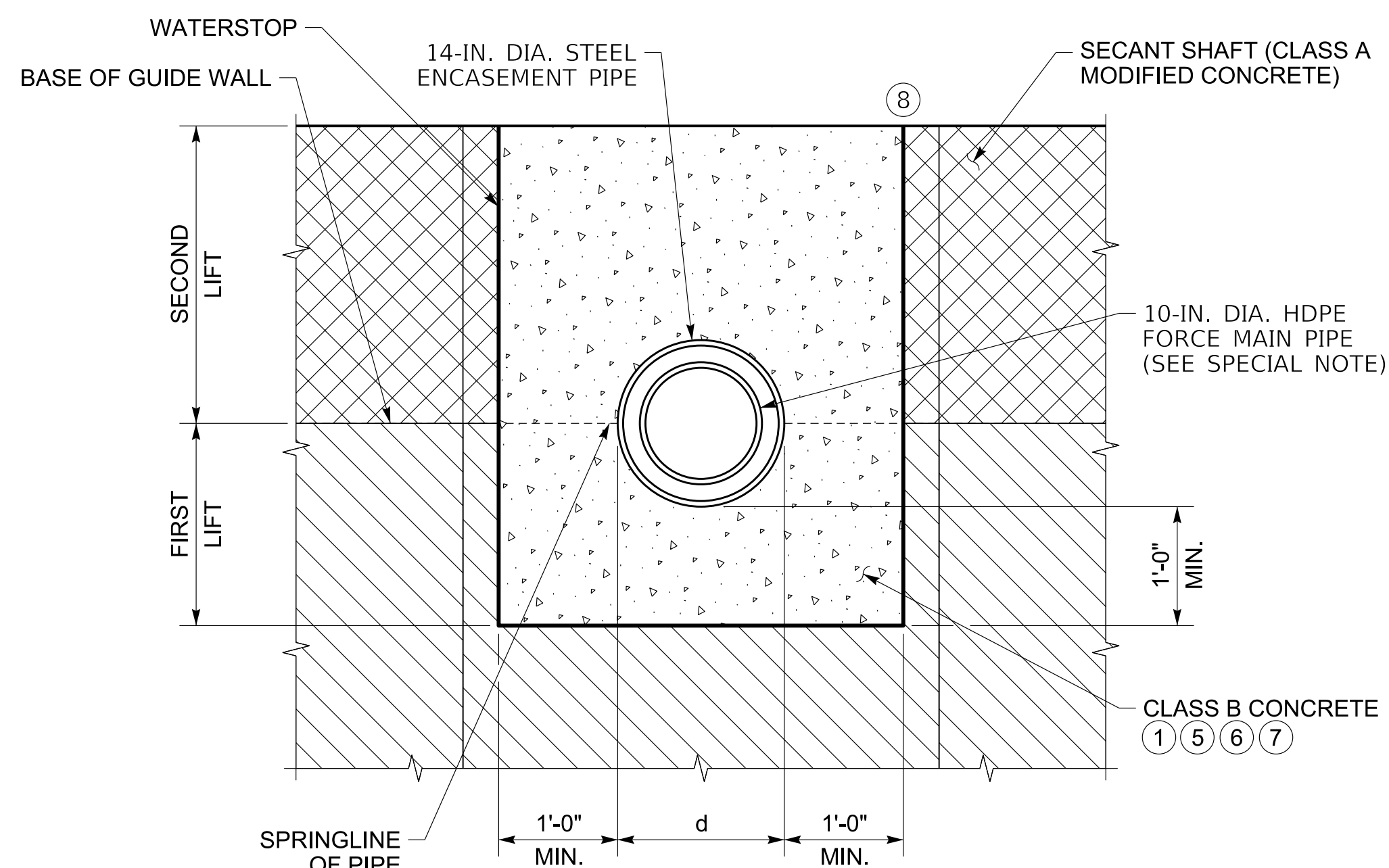


SECTION E-E
(PIPE OUTSIDE OF WALL LIMITS)

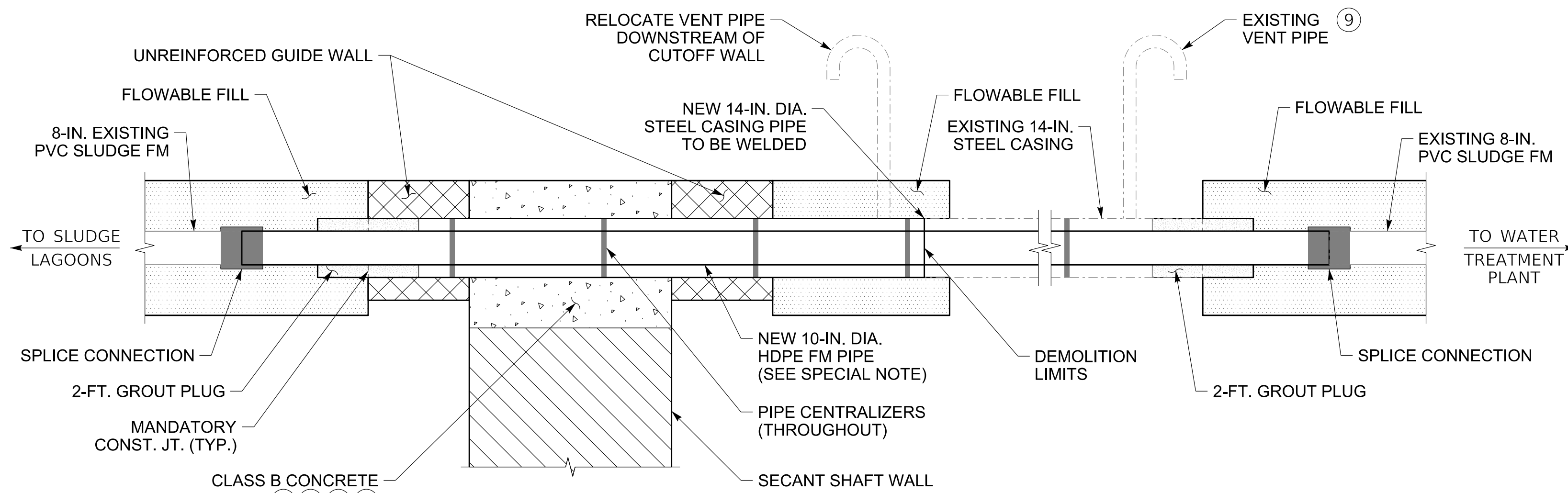
LEGEND

- d - NOMINAL CASING SIZE (O.D.)
- TRENCH BACKFILL
 - FLOWABLE FILL
 - CLASS B CONCRETE
 - GROUT PLUG
 - SECANT SHAFT
 - UNREINFORCED GUIDE WALL

- ① PIPE EMBEDMENT SHALL BE FLOWABLE FILL OUTSIDE OF WALL LIMITS AND CLASS B CONCRETE WITHIN THE LIMITS OF THE GUIDE WALL AND CUTOFF WALL. SEE SPECIAL NOTE FOR MATERIAL REQUIREMENTS.
- ② FOUNDATION MATERIAL FOR SUBGRADE STABILIZATION SHALL BE CLASS B CONCRETE. OVER EXCAVATION DEPTH VARIES (6" MINIMUM). PLACE WHEN DIRECTED BY THE DEPARTMENT TO STABILIZE TRENCH BOTTOM PRIOR TO PLACEMENT OF PIPE SUPPORTS.
- ③ TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE OR SOIL CONDITIONS. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.
- ④ PRIOR TO BACKFILL, SLOPE THE SIDES OF THE TRENCH AT A 2 HORIZONTAL TO 1 VERTICAL SLOPE OR FLATTER. FLATTEN SLOPE AS NECESSARY FOR STABILITY.
- ⑤ FLOWABLE FILL OR CONCRETE FOR BEDDING AND PIPE ENCASEMENT SHALL BE PLACED IN MULTIPLE LIFTS TO PREVENT FLOTATION OF PIPE. CONTRACTOR SHALL NOTIFY ENGINEER AND DEPARTMENT PRIOR TO PLACEMENT AND AT CONCLUSION OF EACH LIFT.
- ⑥ RESTRAIN PIPE AS NECESSARY TO PREVENT FLOTATION.
- ⑦ MAINTAIN CONTINUITY OF THE SEEPAGE CUTOFF SYSTEM AT THE SLUDGE FM PENETRATION THROUGH THE SECANT SHAFT WALL. ALL VOIDS, INTERFACES, AND ANNULAR SPACES SHALL BE SEALED IN ACCORDANCE WITH THESE DRAWINGS AND THE SPECIAL NOTES.
- ⑧ REMOVAL OF PORTIONS OF THE GUIDE WALL AND CUTOFF WALL SHALL BE PERFORMED USING CONTROLLED CUTTING METHODS TO PRODUCE NEAT, CLEAN, AND UNIFORM LINES. METHODS THAT MAY INDUCE CRACKING, DISTURBANCE, OR DAMAGE TO ADJACENT PORTIONS OF THE CUTOFF WALL SHALL NOT BE PERMITTED.
- ⑨ THE LOCATION OF THE VENT PIPE SHALL BE VERIFIED DURING CONSTRUCTION AND RELOCATED TO THE NORTH SIDE OF THE NEW GROUT PLUG IF ITS CURRENT LOCATION IS WITHIN THE LIMITS OF THE PROPOSED PLUG.



SECTION F-F
(PIPE THROUGH SECANT WALL)



SECTION G-G
(SLUDGE LINE REPLACEMENT PROFILE)

GEOTECHNICAL SYMBOLS

AASHTO Classification of Soils and Soil-Aggregate Mixtures

General Classification	Granular Materials (35% or less passing 0.075 mm)						Silt-Clay Materials (More than 35% passing 0.075 mm)			
	A-1		A-3	A-2			A-4	A-5	A-6	A-7
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6				
Sieve Analysis, Percent Passing										
2.00 mm (No. 10)	50 max	---	---	---	---	---	---	---	---	---
0.425 mm (No. 40)	30 max	50 max	51 min	---	---	---	---	---	---	---
0.075 mm (No. 200)	15 max	25 max	10 max	35 max	35 max	35 max	35 max	36 min	36 min	36 min
Characteristics of Fraction Passing 0.425 mm (No. 40)										
Liquid Limit	---	---	---	40 max	41 min	40 max	41 min	40 max	41 min	41 min
Plasticity Index	6 max		N.P.	10 max	10 max	11 min	11 min	10 max	10 max	11 min

- AI Activity Index
- LI Liquidity Index
- S+C Silt + Clay (% finer than No.200 Sieve)
- Rockline Soundings
- ⊕ Disturbed Sample Boring
- ⊙ Undisturbed Sample Boring
- ⊙ Undisturbed Sample Boring & Rock Core
- Rock Core
- ⊙ Slope inclinometer Installation
- typical applications: ⊙ ⊕ ⊙ ⊙ ●
- OW Observation Well
- ➔ Approximate Footing Elevation
- ▼ (Date) Water Elevation

- VS (psf) Field Vane Shear Strength
- Thin-walled Tube Sample
- < Standard Penetration Test Sample
- N Penetration Resistance
- Qu (psf) Unconfined Compressive Strength
- UU (psf) Unconsolidated Undrained Triaxial Strength
- w% Moisture Content
- KY RQD Rock Quality Designation (Kentucky Method)
- STD RQD Rock Quality Designation (Standard Method)
- SDI(JS) Slake Durability Index (Jar Slake Test)
- REC Core Recovery
- ∅ Angle of Internal Friction (Total Stress)
- ∅̄ Angle of Internal Friction (Effective Stress)
- c (psf) Cohesion (Total Stress)
- c̄ (psf) Cohesion (Effective Stress)
- γ (pcf) Total Unit Weight
- RDZ Rock Disintegration Zone
- OB Overburden Bench
- IB Intermediate Bench
- R Refusal
- NR Refusal Not Encountered

Unified Soil Classifications

MAJOR DIVISIONS	SYMBOL	NAME
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW Well-graded gravels or gravel-sand mixtures, little or no fines.
		GP Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GM Silty gravels, gravel-sand-silt mixtures.
		GC Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS	SW Well graded sands or gravelly sands, little or no fines.
		SP Poorly graded sands or gravelly sands, little or no fines.
		SM Silty sands, sand-silt mixtures.
		SC Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LL IS LESS THAN 50	ML Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
		CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		ML-CL Silty clay-silty clay with sand and or gravel, sandy silty clay, sandy silty clay with gravel, gravelly silty clay, gravelly silty clay with sand
	SILTS AND CLAYS LL IS GREATER THAN 50	MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
		CH Inorganic clays of high plasticity, fat clays.

Unified Soil Classifications - Continued

MAJOR DIVISIONS	SYMBOL	NAME
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GP-GC Poorly graded gravel with clay (or silty clay), poorly graded gravel with clay and sand (or silty clay & sand)
		GP-GM Poorly graded gravel with silt, poorly graded gravel with silt and sand
		GW-GC Well graded gravel with clay (or silty clay), well graded gravel with clay and sand (or silty clay and sand)
		GW-GM Well graded gravel with silt, well graded gravel with silt and sand
		GC-GM Silty clayey gravel, silty clayey gravel with sand
	SAND AND SANDY SOILS	SW-SC Well graded sand with clay (or silty clay), well graded sand with clay and gravel (or silty clay & gravel)
		SP-SC Poorly graded sand with clay (or silty clay), poorly graded sand with clay and gravel (or silty clay and gravel)
		SP-SM Poorly graded sand with silt, poorly graded sand with silt and gravel
		SC-SM Silty clayey sand, silty clayey sand with gravel
		SW-SM Well graded sand with silt, well graded sand with silt and gravel
UNCLASSIFIED MATERIAL	OH Organic (High Plasticity)	
	OL Organic (Low Plasticity)	

- LIMESTONE
- SANDSTONE
- DURABLE SHALE (SDI ≥ 95)
- NONDURABLE SHALE (SDI < 95)
- GRANULAR EMBANKMENT
- STRUCTURE GRANULAR BACKFILL
- TALUS, MINE WASTE, FILL MATERIAL, BOULDERS, & ETC.
- COAL
- DOLOMITE
- LIMESTONE (ARGILLACEOUS)
- SLOPE PROTECTION



GEOTECHNICAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING ANY OPERATIONS NECESSARY TO EXCAVATE PAVEMENT, BASE MATERIAL, AND EMBANKMENT FILL IN THE DISTURBED LIMITS TO THE REQUIRED TYPICAL SECTION, INCLUDING THE SECANT SHAFT GUIDE WALL. FRAGMENTS MAY BE PRESENT AT THE BASE OF THE EXCAVATIONS REQUIRED AND MAY RESULT IN AN UNEVEN SURFACE. THE CONTRACTOR SHALL BE PREPARED TO REMOVE AND/OR REDUCE BOULDERS/SHOT ROCK SUCH THAT A LEVEL BASE IS CREATED ACROSS THE EXCAVATED AREA. THESE OPERATIONS SHALL BE INCIDENTAL TO ROADWAY EXCAVATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THIS WORK.
2. EXCAVATED PAVEMENT, BASE MATERIAL, AND SUBGRADE SOILS/EMBANKMENT FILL SHALL NOT BE PLACED IN THE DISTURBED LIMITS EXCAVATION AND SHALL BE WASTED. NO DIRECT PAYMENT FOR HAULING, STOCKPILING, AND/OR DISPOSING OF EXCAVATED MATERIAL SHALL BE PERMITTED. AS AN OPTION, THE CONTRACTOR MAY DISPOSE OF SUCH MATERIAL, FOR A FEE, AT THE NELSON COUNTY LANDFILL LOCATED AT 1025 AIRPORT RD, BARDSTOWN, KY 40004. THE LANDFILL IS OPEN FROM 8:00 AM TO 4:30 PM, MONDAY THROUGH FRIDAY, AND FROM 8:00 AM TO 12:00 PM ON SATURDAY. THE SOLID WASTE COORDINATOR IS MR. JOHN GREENWELL, WHO CAN BE REACHED AT (502) 348-1876.
3. ANY SATURATED AND/OR SOFT SUBGRADE AREAS AFTER EXCAVATION SHALL BE DRAINED IF NECESSARY AND STABILIZED WITH KY COARSE AGGREGATE NO. 2 UNDERLAIN WITH FABRIC-GEOTEXTILE, CLASS 4A. A TOTAL THICKNESS OF 2 FEET IS ESTIMATED FOR THIS TREATMENT, WHICH IS 9 INCHES MORE THAN THE REQUIRED ROCK ROADBED THICKNESS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
4. CONSTRUCT A 15-INCH ROCK ROADBED CONSISTING OF COARSE AGGREGATE NO. 2 IN ACCORDANCE WITH SECTION 805 OF THE CURRENT STANDARD SPECIFICATIONS. THE ROADBED SHALL BE UNDERLAIN WITH FABRIC-GEOTEXTILE, CLASS 4A (STABILIZATION) IN ACCORDANCE WITH SECTIONS 214 AND 843 OF THE CURRENT STANDARD SPECIFICATIONS. EXTEND THE ROADBED FROM THE EXCAVATION LIMITS TOWARD THE SHOULDER AS SHOWN IN THE DETAILS AND TYPICAL SECTIONS FOR THE SECANT SHAFT CUTOFF WALL. WHERE SOFT AND/OR WET SUBGRADE IS ENCOUNTERED, DURING CONSTRUCTION, THE THICKNESS OF THE ROCK ROADBED MAY NEED TO BE ADJUSTED (INCREASED) TO ALSO SERVE AS A WORKING PLATFORM FOR SUBGRADE STABILIZATION. THESE ADJUSTMENTS SHALL BE DIRECTED BY THE ENGINEER.
5. THE SECANT SHAFT GUIDE WALL IS PERMANENT AND SHALL REMAIN IN PLACE UP TO THE TOP OF THE SECANT SHAFT CUTOFF WALL. CONSTRUCT THE GUIDE WALL TO THE MINIMUM REQUIRED DIMENSIONS TO REDUCE IMPACTS TO THE DAM. ONLY THE PORTION OF THE GUIDEWALL CONSTRUCTED NORTH OF THE SPILLWAY OGEE WEIR SHALL BE REINFORCED IN ACCORDANCE WITH THESE PLANS. UTILIZE CONCRETE AND FLOWABLE FILL MEETING THE REQUIREMENTS OF THE SECANT SHAFT CUTOFF WALL SPECIAL NOTE.
6. CONSTRUCT SECANT SHAFTS IN ACCORDANCE WITH THE SECANT SHAFT CUTOFF WALL SPECIAL NOTE. USE ONLY MATERIALS, METHODS, AND PERSONNEL AS REQUIRED BY THE SPECIAL NOTE AND THOSE APPROVED BY THE ENGINEER.
7. THE SECANT SHAFTS SHALL BE INSTALLED INTO COMPETENT BEDROCK IN ACCORDANCE WITH THE TIP ELEVATIONS SHOWN IN THESE PLANS AND THE SECANT SHAFT CUTOFF WALL SPECIAL NOTE. ADDITIONAL BEDROCK EMBEDMENT MAY BE REQUIRED DEPENDING ON THE SUBSURFACE CONDITIONS ENCOUNTERED AND SHOULD BE PERFORMED AS DIRECTED BY THE ENGINEER. FOR INFORMATION ONLY, THE REFUSAL AND/OR BEDROCK ELEVATIONS AT THE CORE BORING LOCATIONS PERFORMED IN 2024 AND 2026 ARE PROVIDED IN THESE NOTES.
8. SHAFT INSTALLATION METHODS SHOULD MINIMIZE DISTURBANCES TO THE EXISTING RCBC AND EXISTING 14-INCH RAW WATER LINE. LOCATIONS AND DIMENSIONS OF THE EXISTING RCBC AND EXISTING 14-INCH RAW WATER LINE SHOWN IN THESE PLANS ARE APPROXIMATE BASED OFF AVAILABLE FIELD RECONNAISSANCE AND REVIEW OF HISTORICAL DRAWINGS. THE EXACT LOCATION OF THE CULVERT SHALL BE CONFIRMED BY THE CONTRACTOR.
9. THE SECANT SHAFTS LOCATED ADJACENT TO THE EXISTING RCBC AND 14-INCH RAW WATER LINE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS. MAXIMUM UNIT WEIGHT OF 115 PCF SHALL BE USED FOR ALL SHAFTS INSTALLED IMMEDIATELY BESIDE BOTH THE EXISTING RCBC AND THE 14-INCH RAW WATER LINE, AND FOR ALL SHAFTS INSTALLED BETWEEN THE TWO.
10. PERFORM CUTOFF WALL VERIFICATION TESTING ON COMPLETED SHAFTS IN ACCORDANCE WITH THE SPECIAL NOTE FOR SECANT SHAFT CUTOFF WALL. VERIFICATION TESTING INCLUDES CENTER CORES, INTERFACE JOINT CORES, IN-SITU PERMEABILITY TESTS, AND CROSS-HOLE SONIC LOGGING TESTS.
11. IF SINKHOLES AND/OR VOIDS ARE ENCOUNTERED DURING CONSTRUCTION, PLEASE CONTACT THE DEPARTMENT'S GEOTECHNICAL SERVICES BRANCH FOR MITIGATION PROCEDURES.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, AND MAINTENANCE OF ALL TEMPORARY EXCAVATION SLOPES REQUIRED FOR FILTER DIAPHRAGM INSTALLATION AT THE DOWNSTREAM TOE OF THE EMBANKMENT. SLOPES SHOWN ON THESE DRAWINGS ARE FOR GENERAL GUIDANCE ONLY. THE CONTRACTOR SHALL ESTABLISH TEMPORARY SLOPES THAT REMAIN SAFE AND STABLE FOR THE DURATION OF THE WORK, IMPLEMENTING ANY NECESSARY MEASURES TO MAINTAIN THE EXCAVATIONS. THESE OPERATIONS SHALL BE INCIDENTAL TO ROADWAY EXCAVATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THIS WORK.
13. IN ACCORDANCE WITH SECTION 206 OF THE CURRENT STANDARD SPECIFICATIONS, THE MOISTURE CONTENT OF EMBANKMENT MATERIAL SHALL NOT VARY FROM THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE CURRENT VERSION OF KM 64-511 BY MORE THAN +2 PERCENT OR LESS THAN -2 PERCENT. THIS MOISTURE CONTENT REQUIREMENT SHALL HAVE EQUAL WEIGHT WITH THE DENSITY REQUIREMENT WHEN DETERMINING THE ACCEPTABILITY OF EMBANKMENT CONSTRUCTION.
14. ALL SOILS MAY REQUIRE MANIPULATION TO OBTAIN PROPER MOISTURE CONTENT PRIOR TO COMPACTION. DIRECT PAYMENT SHALL NOT BE PERMITTED FOR REHANDLING, HAULING, STOCKPILING, AND/OR MANIPULATING SOILS.

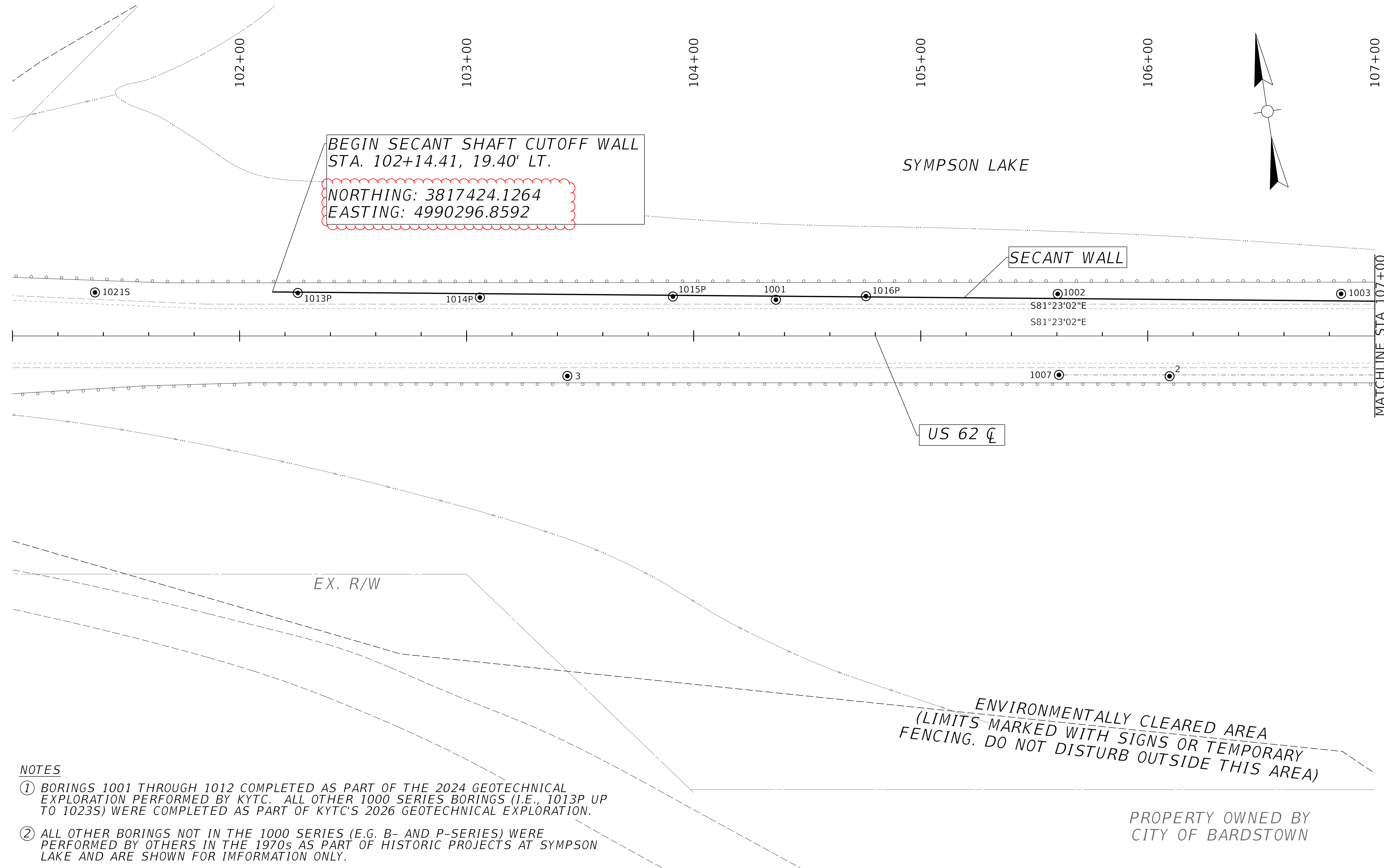
SUMMARY OF BORINGS

BORING	STATE PLANE SINGLE ZONE COORDINATES			STATION	OFFSET	BEDROCK DEPTH (FT)	BEDROCK ELEV (Z)
	NORTH (Y)	EAST (X)	ELEV. (Z)				
1001	3817387.5	4990515.7	533.6	104+36	16' LT.	66.3	467.3
1002	3817371.4	4990638.8	529.9	105+60	19' LT.	72.5	457.4
1003	3817352.8	4990762.2	528.7	106+85	19' LT.	72.3	456.4
1004	3817330.2	4990900.6	529.2	108+25	17' LT.	67.3	461.9
1005	3817310.8	4991024.3	529.8	109+51	16' LT.	35.9	493.9
1006	3817291.9	4991140.5	529.8	110+68	15' LT.	16.4	513.4
1007	3817336.1	4990633.9	530.3	105+61	17' RT.	72.9	457.4
1008	3817293.2	4990914.3	529.4	108+45	18' RT.	68.0	461.4
1009	3817129.2	4990886.9	469.0	108+42	184' RT.	14.3	454.7
1010	3817278.8	4991012.2	529.7	109+43	17' RT.	50.2	479.5
1011	3817110.5	4990978.6	469.1	109+35	189' RT.	14.5	454.6
1012	3817249.1	4991208.8	530.1	111+42	17' RT.	16.0	514.1
1013P	3817422	4990307.9	541.9	102+26	19' LT.	49.0	492.9
1014P	3817408	4990386.9	538.4	103+06	17' LT.	55.0	483.4
1015P	3817395.7	4990471	535.0	103+91	17' LT.	63.5	471.5
1016P	3817383.1	4990555.1	532.2	104+76	17' LT.	75.5	456.7
1017P	3817312	4991014.7	529.7	109+27	16' LT.	44.5	485.3
1018P	3817299.1	4991098.3	529.8	110+26	16' LT.	24.5	505.3
1019P	3817288.6	4991172.7	529.5	111+01	17' LT.	13.6	515.9
1020P	3817277.1	4991246.8	530.2	111+76	16' LT.	5.5	524.7
1021S	3817435.6	4990219.6	546.7	101+36	19' LT.	39.0	507.7
1023S	3817265.6	4991320.9	529.6	112+51	16' LT.	4.0	527.7
1030	3817322.3	4990979	511.2	109+04	21' LT.	N/A	N/A
1031	3817292.4	4990978.1	510.0	109+08	9' RT.	N/A	N/A
1032	3817308.8	4990966.2	510.6	108+93	6' LT.	N/A	N/A
1033	3817290.6	4990939.4	509.6	108+70	16' RT.	N/A	N/A
1034	3817324.9	4990943.9	511.1	108+69	18' LT.	N/A	N/A

* BORING LOCATION BASED ON US 62 CENTERLINE ALIGNMENT

** BEDROCK ELEVATIONS AND DEPTHS ARE BASED ON CONDITIONS ENCOUNTERED AT THE RESPECTIVE BORING LOCATIONS AND SHOULD NOT BE INTERPRETED AS CONTINUOUS ACROSS THE SITE. ACTUAL BEDROCK SURFACE CONDITIONS MAY VARY BETWEEN BORING LOCATIONS.





NOTES

- ① BORINGS 1001 THROUGH 1012 COMPLETED AS PART OF THE 2024 GEOTECHNICAL EXPLORATION PERFORMED BY KYTC. ALL OTHER 1000 SERIES BORINGS (I.E., 1013P UP TO 1023S) WERE COMPLETED AS PART OF KYTC'S 2026 GEOTECHNICAL EXPLORATION.
- ② ALL OTHER BORINGS NOT IN THE 1000 SERIES (E.G. B- AND P-SERIES) WERE PERFORMED BY OTHERS IN THE 1970s AS PART OF HISTORIC PROJECTS AT SYMPSON LAKE AND ARE SHOWN FOR IMFORMATION ONLY.

ENVIRONMENTALLY CLEARED AREA
 (LIMITS MARKED WITH SIGNS OR TEMPORARY
 FENCING. DO NOT DISTURB OUTSIDE THIS AREA)

PROPERTY OWNED BY
 CITY OF BARDSTOWN



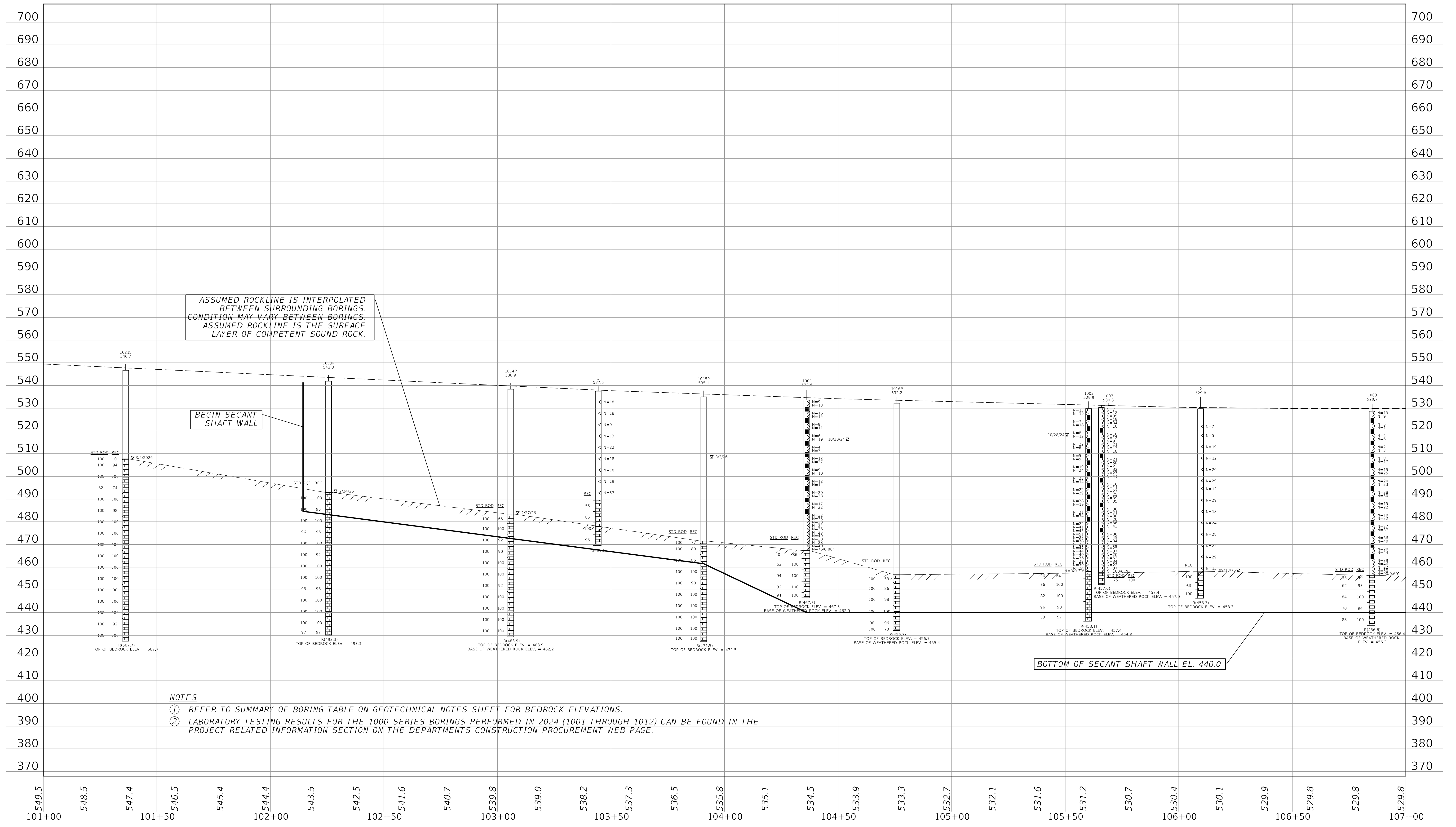
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS

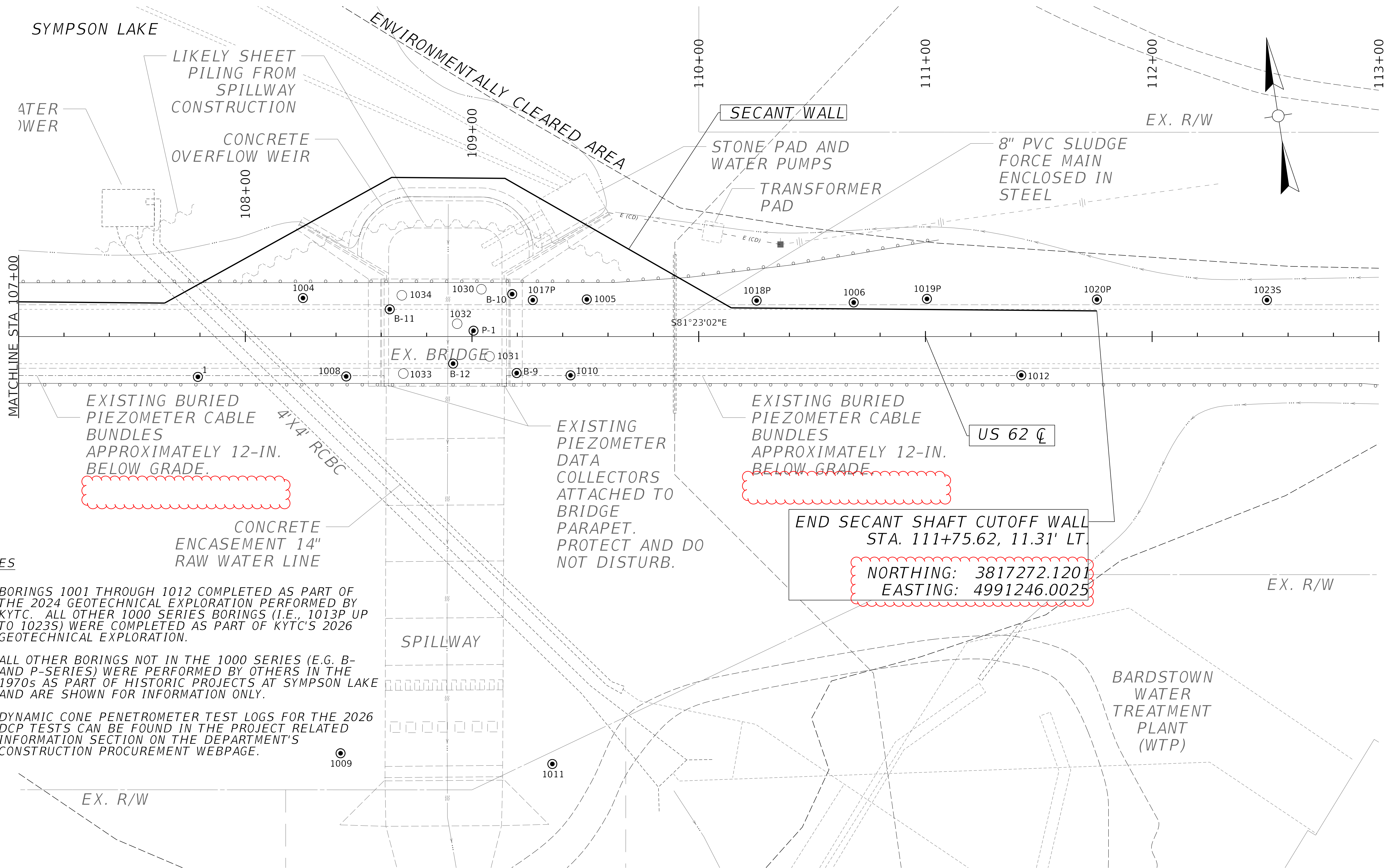
DRAWING TITLE: SYMPSON LAKE
 GEOTECHNICAL BORING PLAN 1 OF 2

HORIZONTAL SCALE
 SCALE: 1"=20'

STA. 101+00.00 TO STA. 107+00.00

ITEM NO. 04-5013.00 COUNTY OF NELSON
 SHEET NO. R13





EXISTING BURIED
PIEZOMETER CABLE
BUNDLES
APPROXIMATELY 12-IN.
BELOW GRADE.

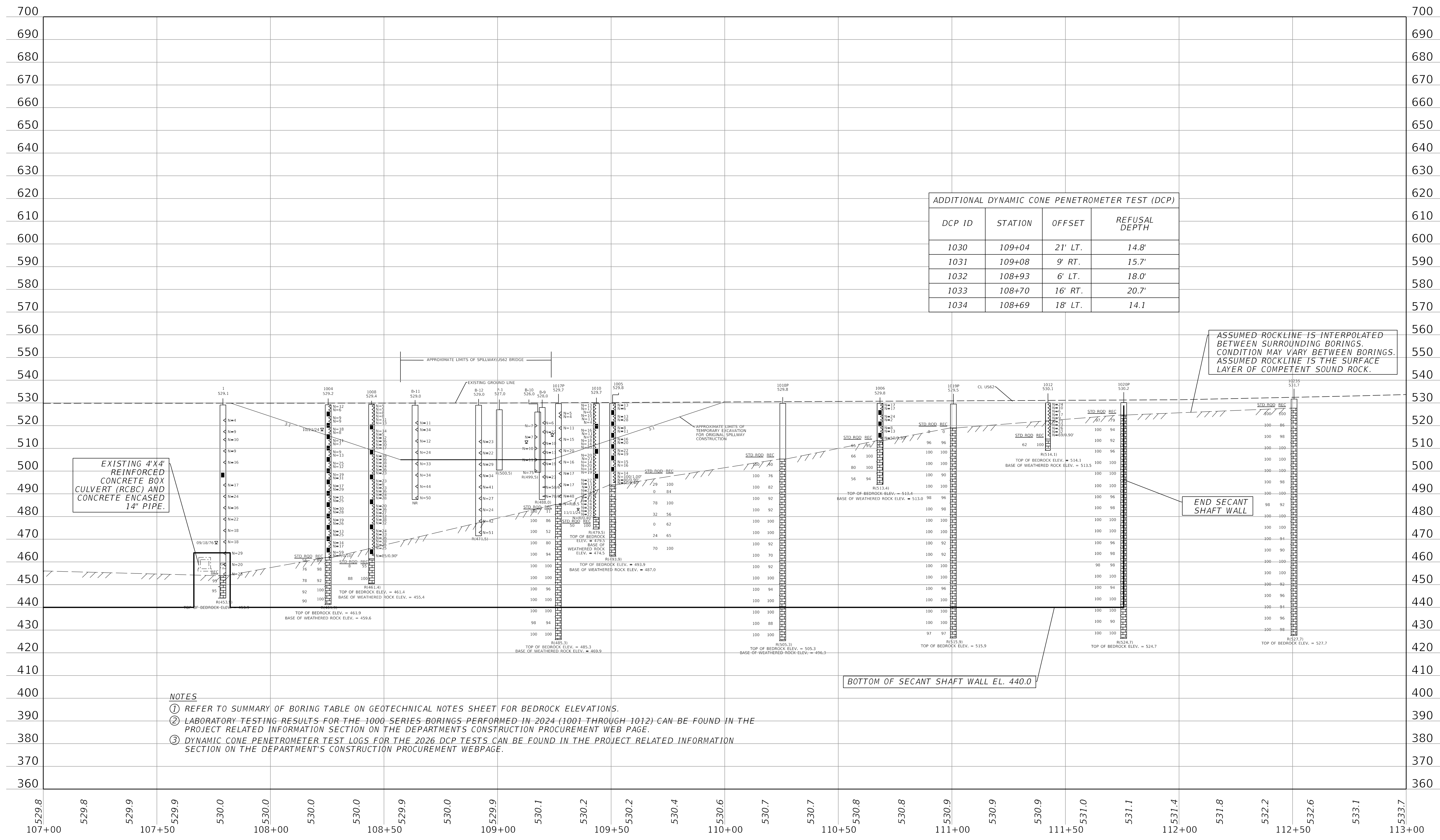
EXISTING
PIEZOMETER
DATA
COLLECTORS
ATTACHED TO
BRIDGE
PARAPET.
PROTECT AND DO
NOT DISTURB.

EXISTING BURIED
PIEZOMETER CABLE
BUNDLES
APPROXIMATELY 12-IN.
BELOW GRADE.

END SECANT SHAFT CUTOFF WALL
STA. 111+75.62, 11.31' LT.
NORTHING: 3817272.1201
EASTING: 4991246.0025

NOTES

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- ② ALL OTHER BORINGS NOT IN THE 1000 SERIES (E.G. B- AND P-SERIES) WERE PERFORMED BY OTHERS IN THE 1970s AS PART OF HISTORIC PROJECTS AT SYMPSON LAKE AND ARE SHOWN FOR INFORMATION ONLY.
- ③ DYNAMIC CONE PENETROMETER TEST LOGS FOR THE 2026 DCP TESTS CAN BE FOUND IN THE PROJECT RELATED INFORMATION SECTION ON THE DEPARTMENT'S CONSTRUCTION PROCUREMENT WEBSITE.



EXISTING 4'X4' REINFORCED CONCRETE BOX CULVERT (RCBC) AND CONCRETE ENCASED 14" PIPE.

ASSUMED ROCKLINE IS INTERPOLATED BETWEEN SURROUNDING BORINGS. CONDITION MAY VARY BETWEEN BORINGS. ASSUMED ROCKLINE IS THE SURFACE LAYER OF COMPETENT SOUND ROCK.

END SECANT SHAFT WALL

BOTTOM OF SECANT SHAFT WALL EL. 440.0

NOTES

- ① REFER TO SUMMARY OF BORING TABLE ON GEOTECHNICAL NOTES SHEET FOR BEDROCK ELEVATIONS.
- ② LABORATORY TESTING RESULTS FOR THE 1000 SERIES BORINGS PERFORMED IN 2024 (1001 THROUGH 1012) CAN BE FOUND IN THE PROJECT RELATED INFORMATION SECTION ON THE DEPARTMENT'S CONSTRUCTION PROCUREMENT WEB PAGE.
- ③ DYNAMIC CONE PENETROMETER TEST LOGS FOR THE 2026 DCP TESTS CAN BE FOUND IN THE PROJECT RELATED INFORMATION SECTION ON THE DEPARTMENT'S CONSTRUCTION PROCUREMENT WEBPAGE.