

Dawkins Trail Phase 3: Carver Tunnel
CID-151231
June 15, 2015
Pre-Bid Meeting

Presentation

A slide show presentation was given by the Department and their Consultant. This presentation is attached at the end of these notes.

Rock core from borings CT-1 and CT-2, from a height of approximately 20 feet above the tunnel roof to the bottom of the boring were offered for contractor review.

Question and Answer Session

1. What is the quantity estimate for the collapsed material in the tunnel?
A: Based upon the small portion of the tunnel visible during the assessments and the three borings drilled through the tunnel roof, it has been roughly estimated that there could be on the order of 33,000 cubic yards of collapsed material. This is a preliminary estimate and should not be used for bidding purposes. The Bidder should develop their own estimate for calculating their bid.
2. Can material or work extend beyond the Right of Way?
A: All work is to be performed within the Right of Way. If the Contractor elects to work outside the Right of Way they will have to acquire consent release forms from the owners of the properties they wish to affect. The Contractor will be responsible for any required permits for working on those properties.
3. The sidewall of the tunnel is not smooth; therefore can short bars be used to act as spacers from the walls to keep the conduit straight?
A: Yes, if approved by the Engineer. The cost of the spacers will be incidental to the installation of the conduit.
4. If material is brought out and crushed, can it be stockpiled for later use by others, or be used on other trail sections?
A: Excess material must be used on site, within the Right of Way, or removed by the Contractor.
5. Is instrumentation (i.e. extensometers) being installed for this project?
A: The Contractor may install instrumentation, provided that the instrumentation has been requested in the required Health and Safety Plan, and approved by the Engineer. The instrumentation will be installed at no cost to the Department.
6. Can shotcrete be used in the undulations to keep blocks from moving into the tunnel?
A: No.
7. Can longer rock bolts be used?
A: Longer bolts can be used at contractor's option, but the Department will pay only for the specified bolt lengths.
8. It is typical to 'wrap' the mesh and bolts from the tunnel out onto the tunnel portal faces until the portals are constructed. Will this be done at this project?
A: The scaling required around the portals is considered sufficient to remove the loose rock.

9. Is a u-bolt in resin necessary for holding the lighting conduit, or can a mechanical bolt be used with the resin with straps and screws to hold the conduit?
A: A mechanical bolt used in conjunction with resin is permissible if approved by the Engineer.
10. Would a staggered rock bolt pattern be allowed?
A: No variation in the bolt pattern will be allowed.
11. Would it be possible to make arrangements to obtain access to the south portal?
A: Direct access to the south tunnel would require traversing very rough terrain and KYTC does not have a construction easement for direct access. The tunnel contractor could potentially coordinate with the coal company and/or the contractor for the trail section to the south in order to obtain access to the south portal. However, KYTC's intent is for the tunnel contractor to work from the north portal and we cannot assure the tunnel contractor that south portal access can be obtained.
12. Is there a staging area that could be used for storing materials and crushing rock?
A: The contractor needs to stay within the right-of-way limits or make arrangements with adjacent property owners in order to work outside of right-of-way. The Contractor will be responsible for any required permits for working on properties outside of the Right of Way.

Following the presentation the meeting was continued at the North Portal of the tunnel where all present were asked to sign the attendance sheet. After viewing the portal and local access, the meeting ended. The attendance sheets for both the meeting at the maintenance garage and the tunnel site are attached at the end of this document.

The following links for Construction Procurement can be used to access information for this project:

Main site <http://transportation.ky.gov/Construction-Procurement/Pages/default.aspx>

PreQualified Contractors List <http://transportation.ky.gov/Construction-Procurement/Documents/Prequalified%20Contractors%20List.pdf>

Work Items List <http://transportation.ky.gov/Construction-Procurement/Documents/Work%20Items%20Listing.pdf>

Prequal Information <http://transportation.ky.gov/Construction-Procurement/Pages/Prequalification.aspx>

PlanRoom <http://www.kytcplanroom.com/View/Default.aspx>
<http://www.kytcplanroom.com/View/Default.aspx>

June 26 Letting <http://transportation.ky.gov/Construction-Procurement/Pages/lettings.aspx?letting=6/26/2015>

Bidder Registration Form required to bid <http://transportation.ky.gov/Construction-Procurement/Publications/2015-05-29/Bidder%20Registration%20Form.pdf>

Call 202 base proposal <http://transportation.ky.gov/Construction-Procurement/Proposals/202-BREATHITT-MAGOFFIN-15-1231.pdf>

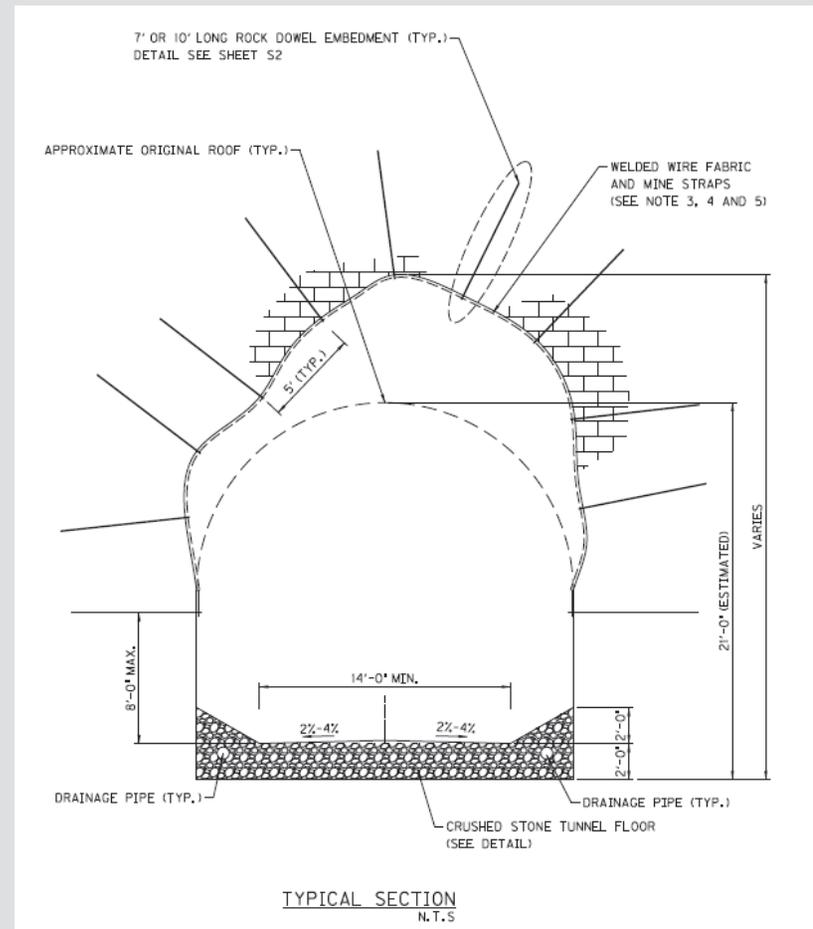
June 26 Q/A <http://transportation.ky.gov/Construction-Procurement/Pages/questions-and-answers.aspx?letting=6/26/2015>

Pre-Bid Conference

Dawkins Line Rail Trail

Carver Tunnel Rehabilitation

6/15/2015



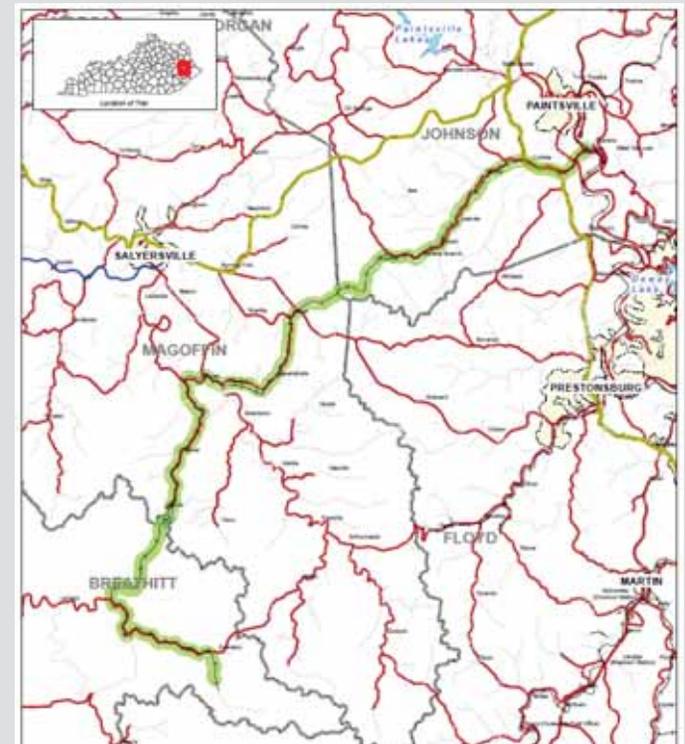
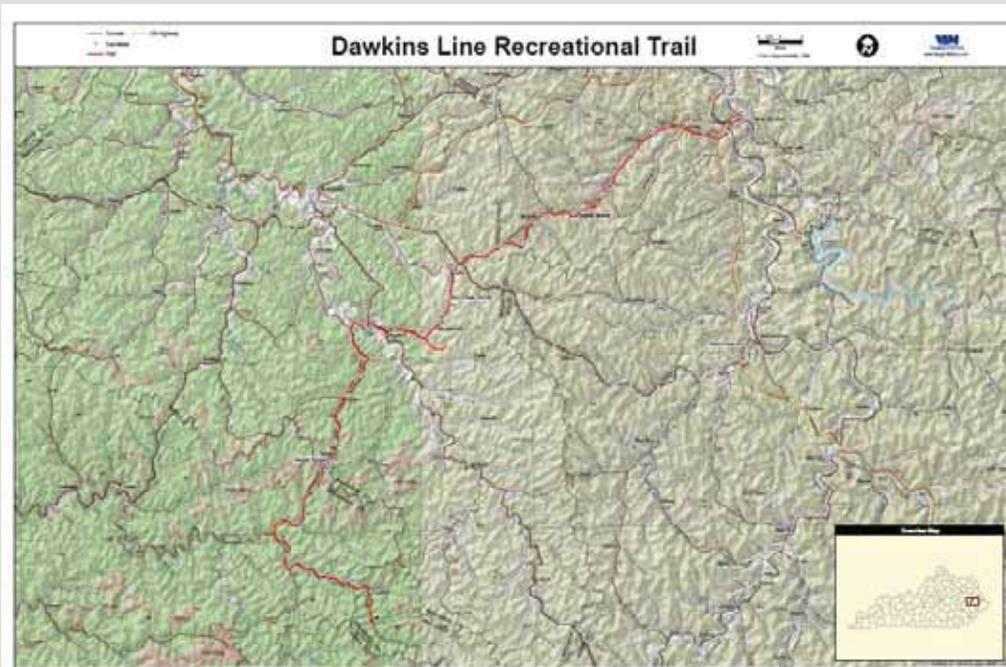
Bart Asher, Branch Manager
KYTC, Division of Structural Design
Geotechnical Branch

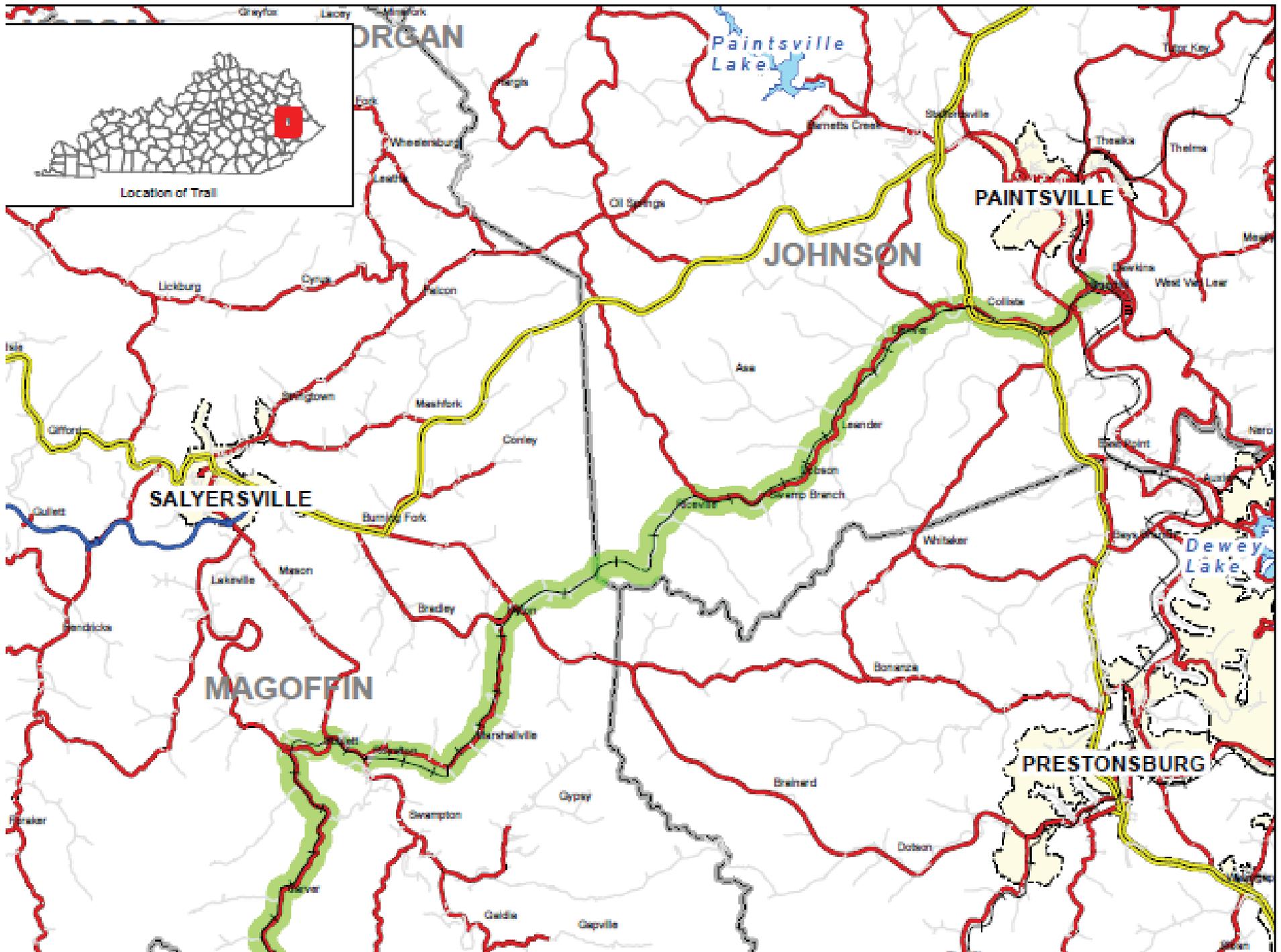
Housekeeping

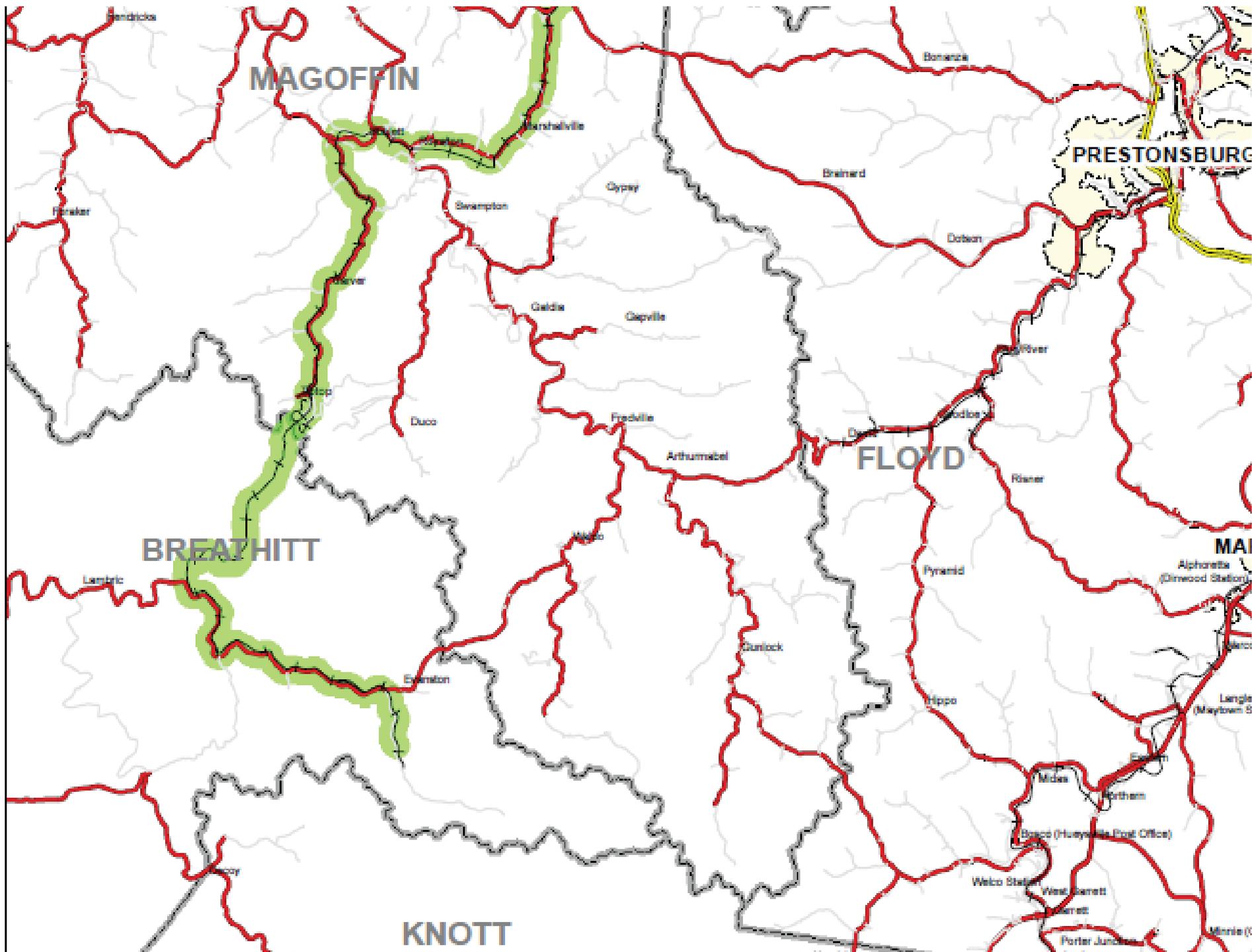
- **Facilities**
- **Sign in Sheets**
- **Prequalification Requirements**
- **Notes of Meeting**
- **Safety**
- **Site Visit**
 - **Parking**
 - **Shuttling to tunnel**
 - **South Portal**

Dawkins Line Rail Trail

- Currently, the Dawkins Line Rail Trail is 18 miles long. When the second phase of the trail is completed, it will be 36 miles.
- The first 18-mile leg of the trail was opened to hikers, cyclists and horseback riders on June 15, 2013. The Dawkins Line Rail Trail is the largest rail-to-trail in the state.
- Trail Design and Construction is the responsibility of KYTC – Trail will be turned over to KY State Parks



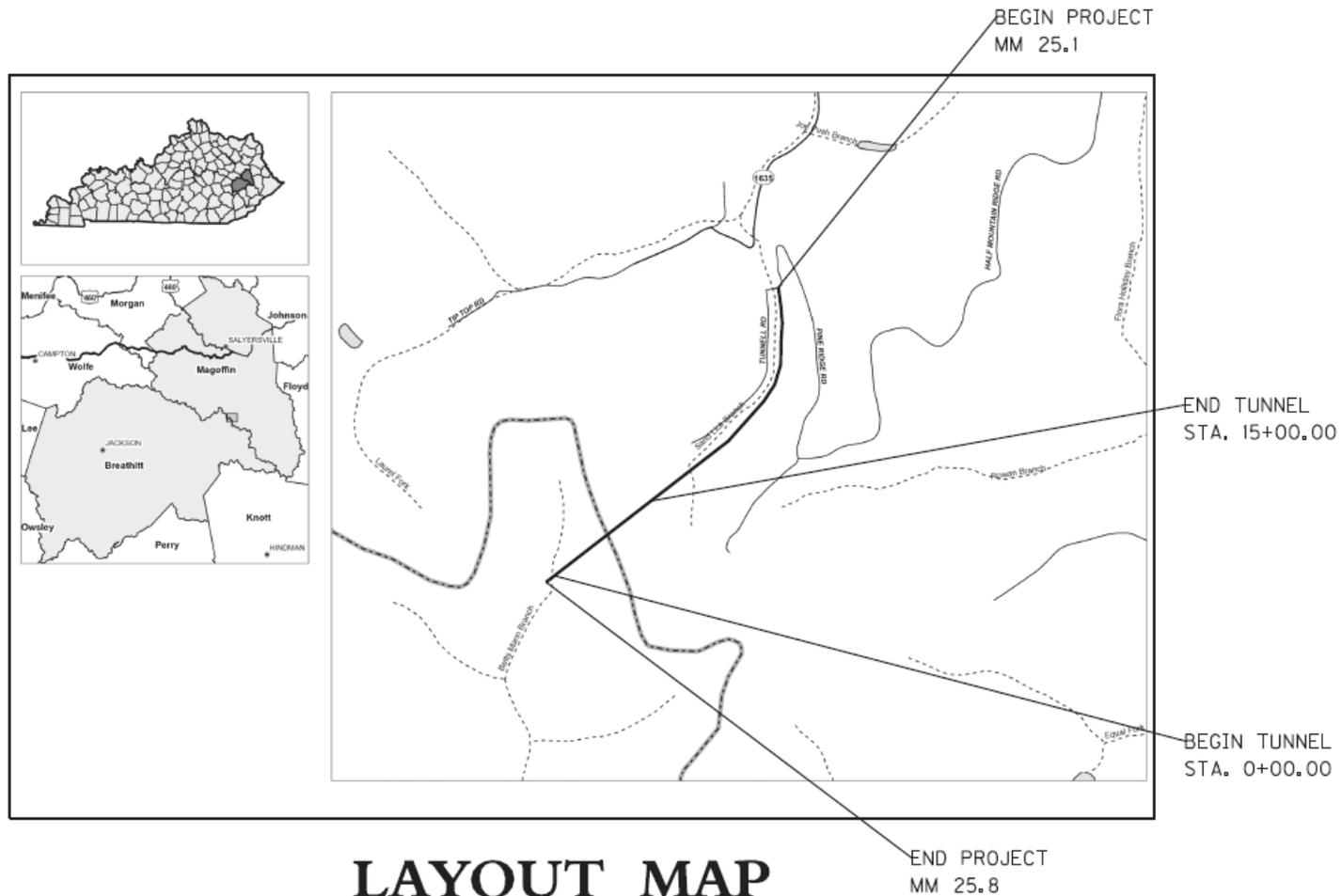




CARVER TUNNEL

MAGOFFIN / BREATHITT COUNTIES

STPE 6000(031)



- Rehabilitation of the Carver Tunnel is important for completion of the trail

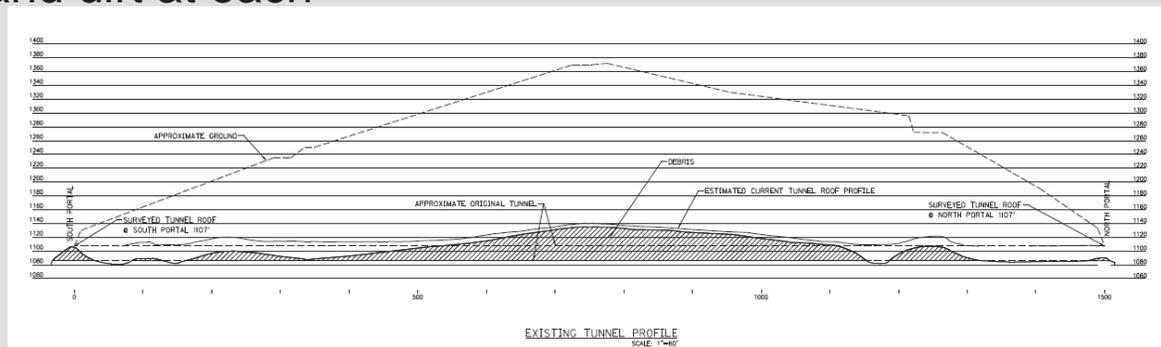
The Carver Tunnel is approximately 1,500 feet in length, and was constructed as an extension to the Dawkins Line to allow the C&O to reach into the Kentucky River watershed and provide rail service for a coal mine in Breathitt County.

Sometime after the removal of the rails, vandals stole a car and set it on fire inside the South end of the tunnel. The car subsequently caused the wood lagging in the tunnel to ignite. Various sources also indicate that coal or a coal seam also ignited. According to the local fire department, attempts to put the fire out were unsuccessful. The EPA ordered RJ Corman to seal the tunnel, and they did so by creating berms of rocks and dirt at each end.



Photo 1

North Portal – Beginning excavation of soil berm.



An active coal Mine surrounds the Carver Tunnel

- Licking River Resources closed operations on February 27, 2015
- Ember Energy, LLC assumed all of the permits of the old mine
- Plan to begin operation again first week of June
- Contact – Chris Lacy. Ember Energy, LLC.
Office Phone – 606-743-4223
- Coordination will be required



1635

Old rail bed to tunnel

County Rt 1225

Pine Ridge Road

North Portal

South Portal

TUNNEL

Old Rail Bed

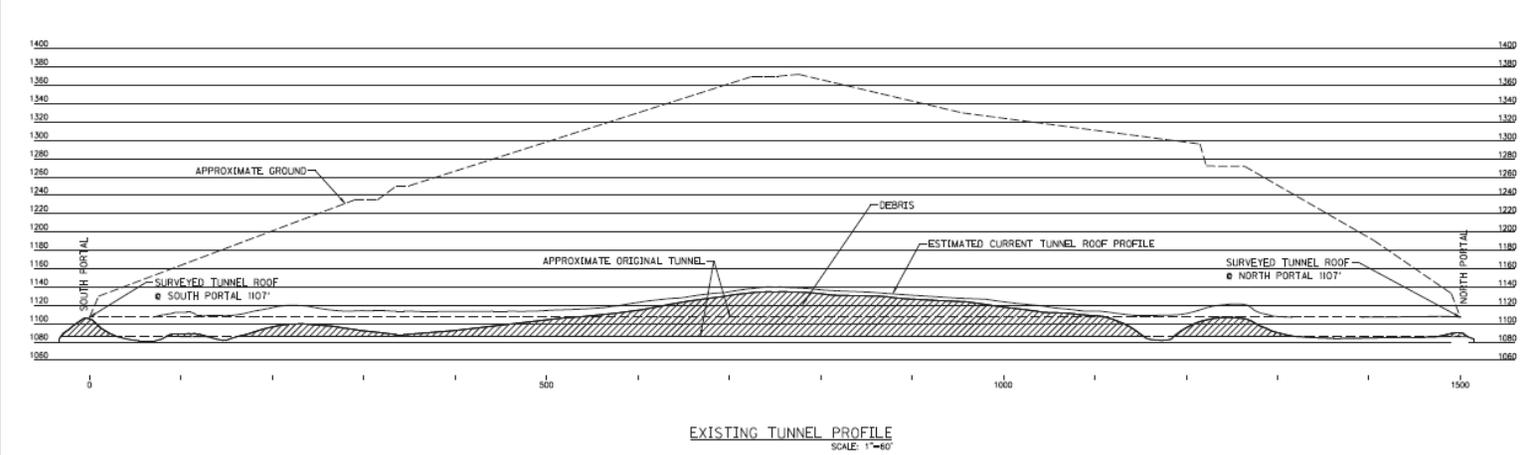
Cr-1153

Rowan Creek Rd



Existing Conditions and Construction Details

Kurt Schaefer – Stantec



North Portal at Present



View into North Portal (Some Steel Ribs have been stolen)



South Portal at Present

Access is difficult



Close Up of Rock Fall at South Portal



South Portal Excavated Oct 2013



View Inside South Portal



South Portal Steel Set Condition



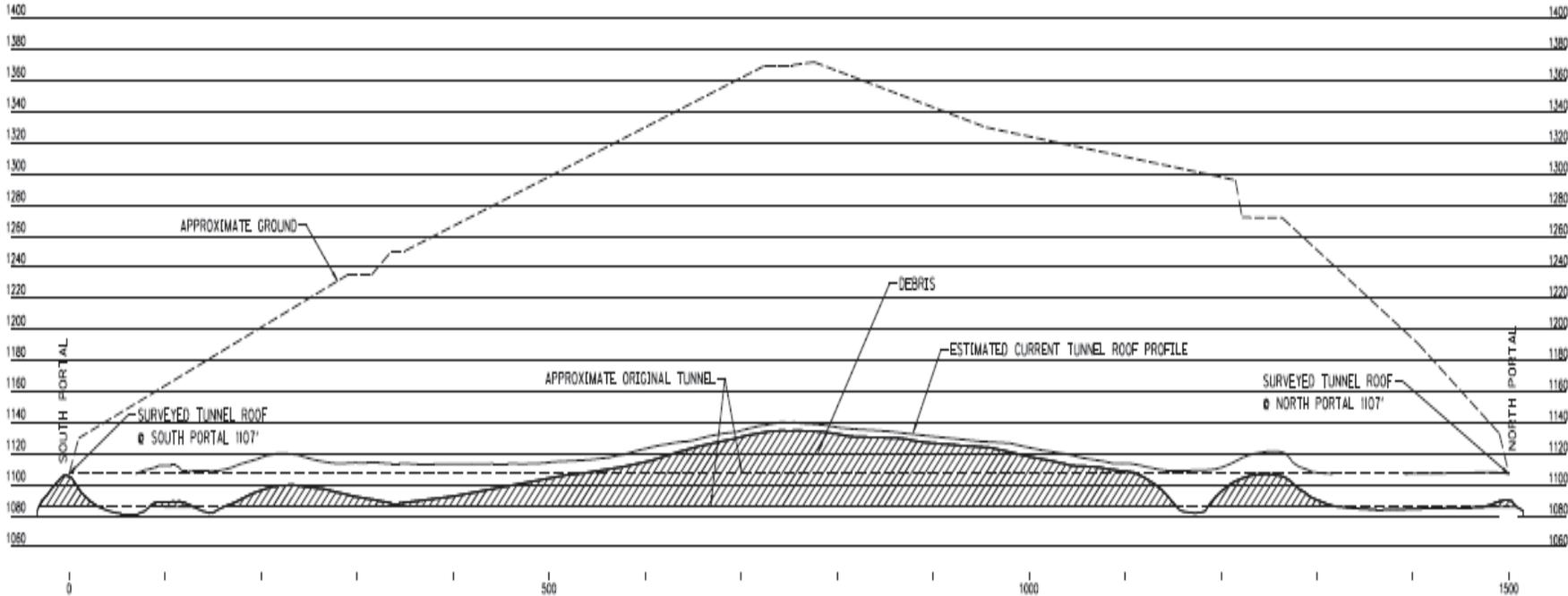
Sample Rockfall Inside South Portal



Sample Rockfall Inside South Portal
Largest Dimension 10' X 4' X 2-3'thick

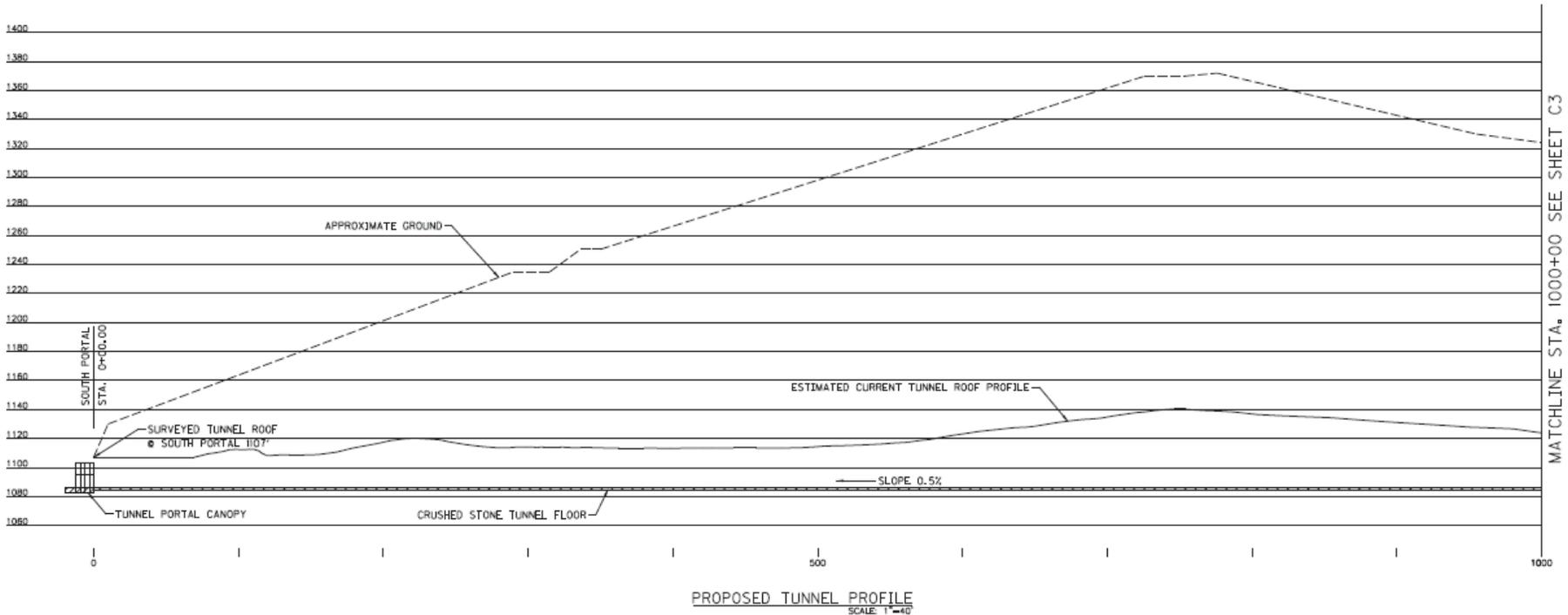


Existing Conditions Inside Tunnel

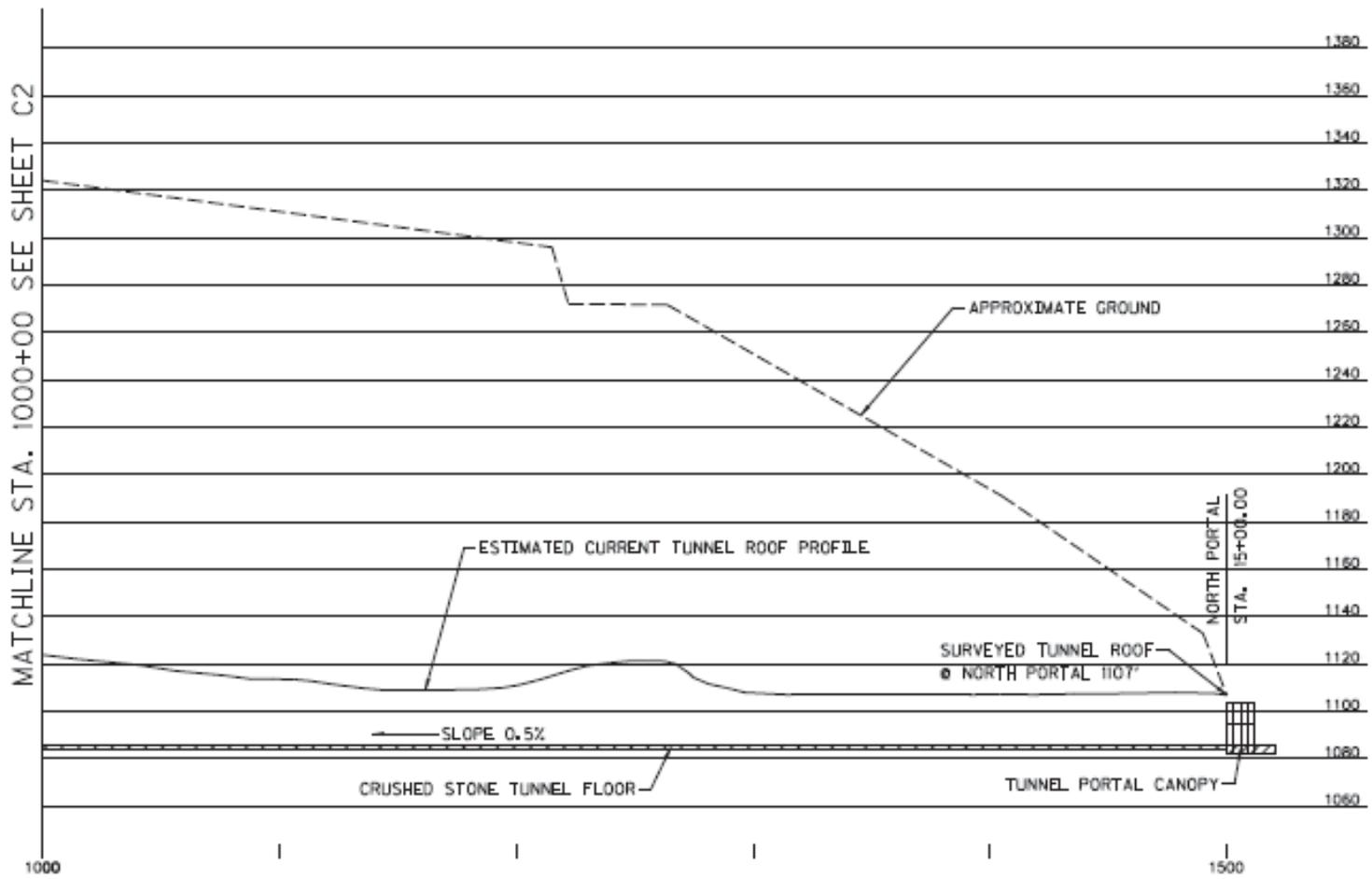


EXISTING TUNNEL PROFILE
SCALE: 1"=60'

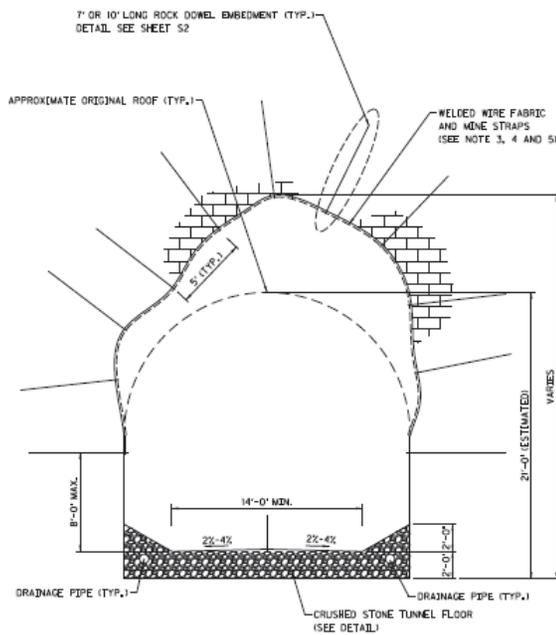
Tunnel Profile



Tunnel Profile

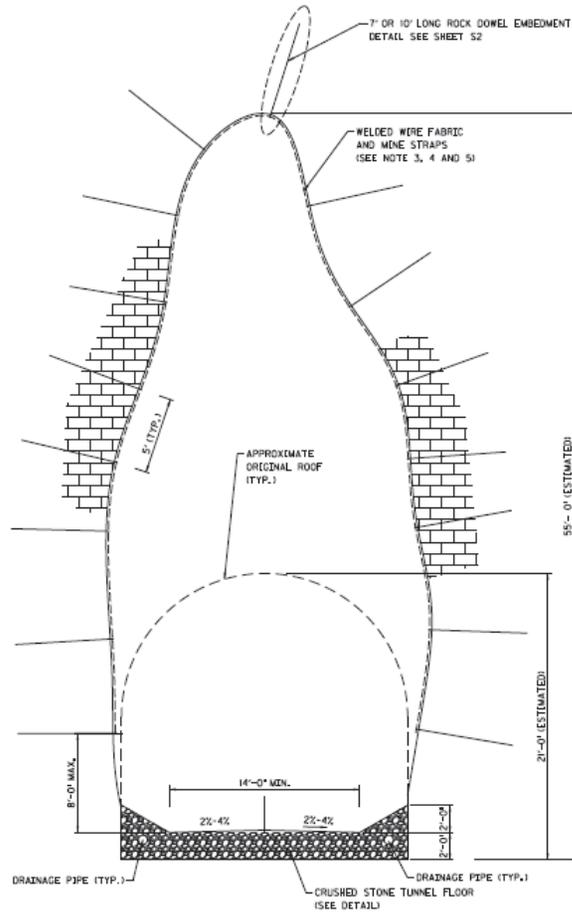


PROPOSED TUNNEL PROFILE
SCALE: 1"=40'



TYPICAL SECTION
N.T.S.

RING OF ROCK DOWELS SPACED 5 FT
LONGITUDINALLY WITH WELDED WIRE FABRIC
AND MINE STRAPS.



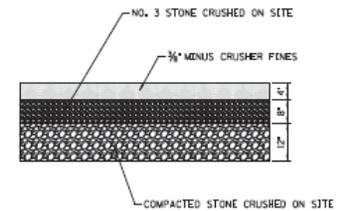
SECTION WITH MOST SEVERE COLLAPSE
N.T.S.

RING OF ROCK DOWELS SPACED 5 FT
LONGITUDINALLY WITH WELDED WIRE FABRIC
AND MINE STRAPS.

NOTE

1. TUNNEL SECTIONS ARE BASED ON LIMITED AVAILABLE INFORMATION, ACTUAL CONFIGURATION TO BE DETERMINED BY THE ENGINEER AND THE CONTRACTOR AS WORK PROCEEDS.
2. THE CONTRACTOR SHALL DETERMINE WHERE 10' LONG ROCK DOWELS ARE TO BE INSTALLED BASED ON ACTUAL FIELD CONDITION AFTER ROCK SCALING.
3. THE CONTRACTOR SHALL INSTALL ADDITIONAL ROCK DOWELS AND WELDED WIRE FABRIC TO ENSURE THE STABILITY OF THE WORK, ACTUAL NUMBER OF ROCK DOWELS AND THEIR LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR.
4. WELDED WIRE FABRIC SHALL BE 4X4 - #6X6 GALVANIZED.
5. MINE STRAPS SHALL BE INSTALLED AS NEEDED, THE STRAP SHALL BE 12 GAUGE 8 INCHES WIDE AND GALVANIZED.
6. REFER TO SHEET S2 FOR DRAINAGE DETAILS.
7. REFER TO SPECIFICATION FOR REQUIREMENT OF TUNNEL FLOOR MATERIALS.
8. 3/4" MINUS CRUSHER FINES GRADATION CRITERIA

SIEVE SIZE	% PASSING
1"	100
1/2"	95-100
3/8"	70-95
#4	45-60
#20	15-30
#200	5-10



TUNNEL FLOOR DETAIL
N.T.S.

REVISION		DATE
DATE:	DESIGNED BY: TJ	CHECKED BY:
	DETAILED BY: DL	

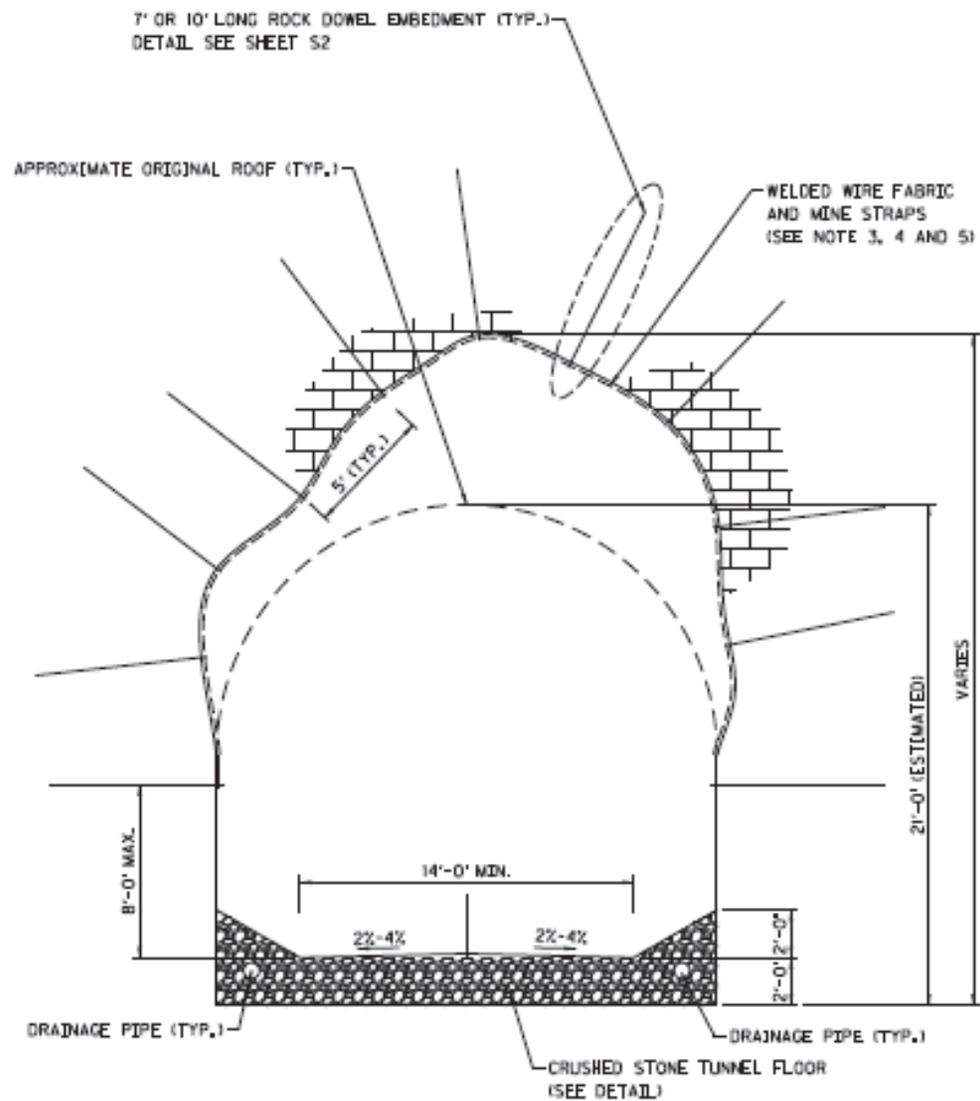
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
MAGOFFIN / BREATHITT

TYPICAL TUNNEL SECTIONS

ITEM NUMBER	12-3011.50
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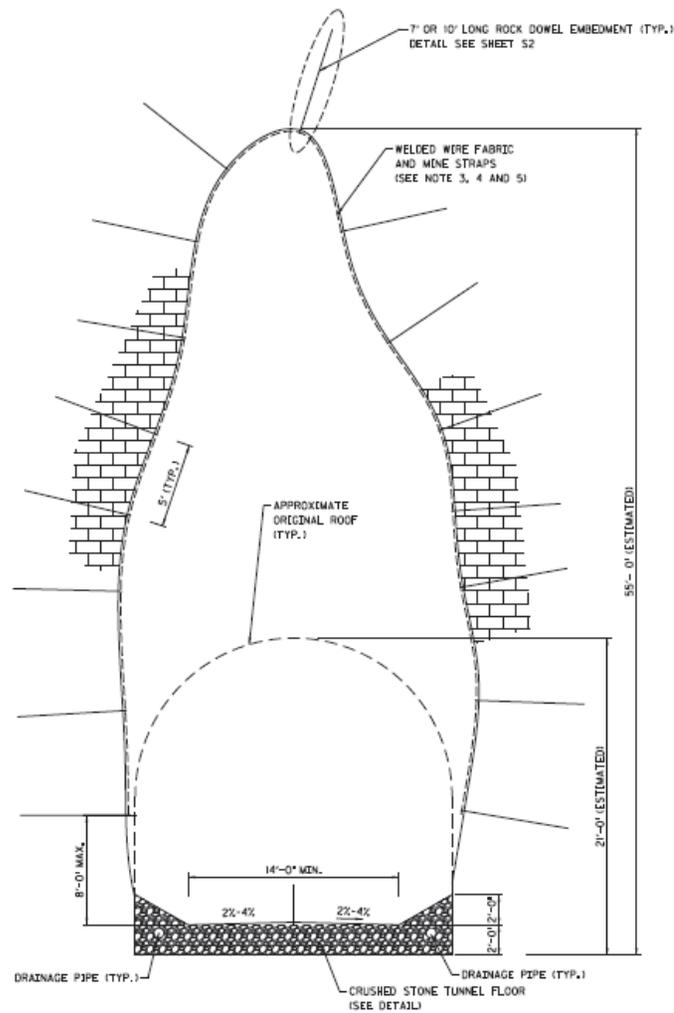


SHEET NO.	81
DRAWING NO.	



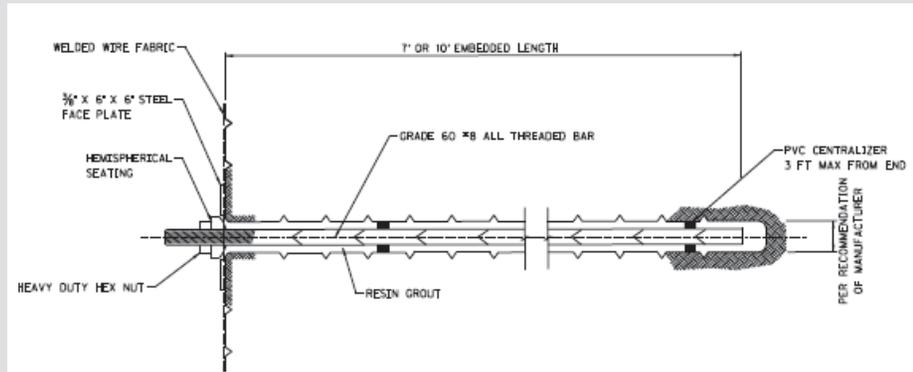
TYPICAL SECTION
N.T.S

RING OF ROCK DOWELS SPACED 5 FT
LONGITUDINALLY WITH WELDED WIRE FABRIC
AND MINE STRAPS.

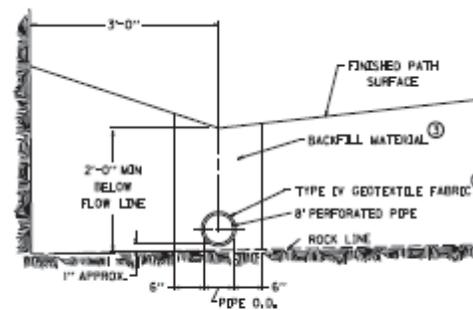


SECTION WITH MOST SEVERE COLLAPSE
N.T.S.

RING OF ROCK DOWELS SPACED 5 FT
LONGITUDDONALLY WITH WELDED WIRE FABRIC
AND MNE STRAPS.



ROCK DOWEL DETAIL
N.T.S.

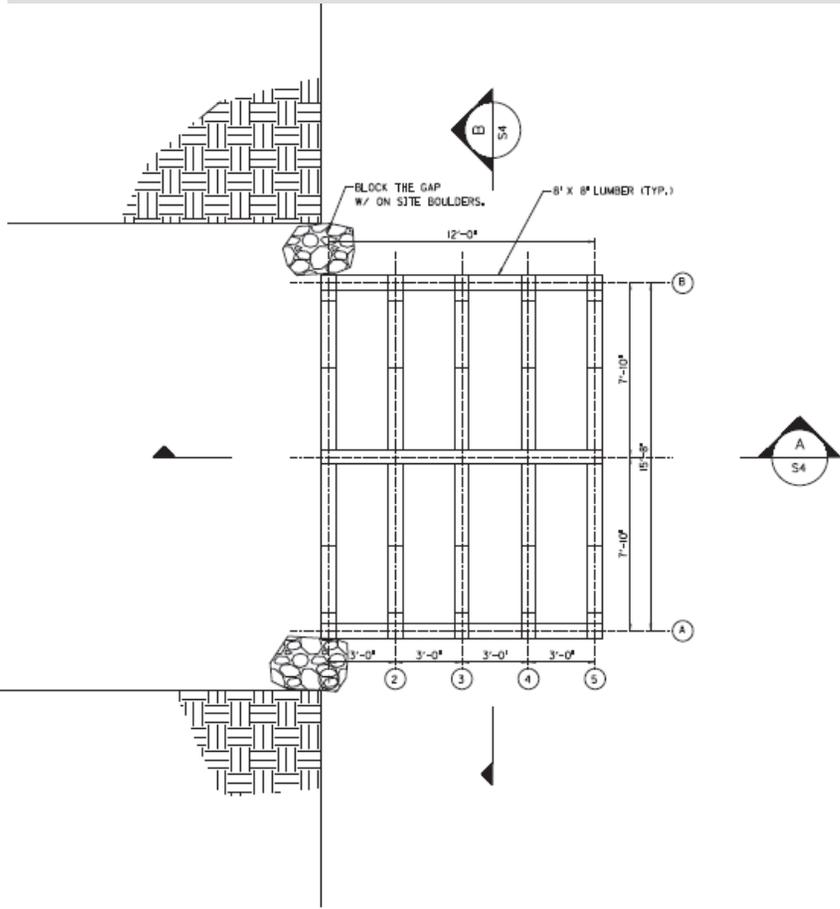
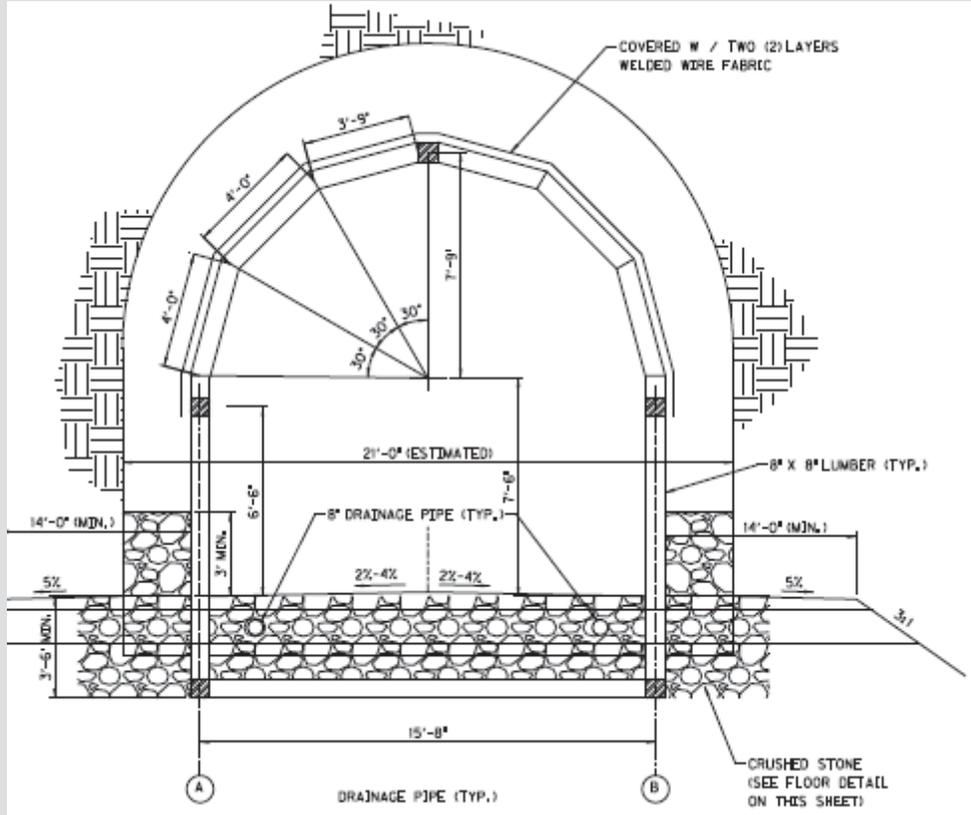


NOTES:

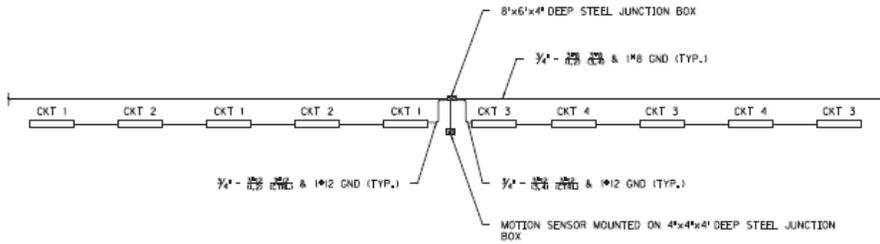
1. EXCAVATE PERFORATED PIPE TRENCH PRIOR TO FINAL LIMESTONE SURFACING.
2. PERFORATED PIPE SHALL BE WRAPPED IN TYPE IV GEOTEXTILE FABRIC.
3. BACKFILL MATERIAL SHALL BE COMPACTED STONE CRUSHED ON SITE PER SPECIFICATIONS FOR TUNNEL FLOOR MATERIALS.

PERFORATED PIPE DETAIL
N.T.S.

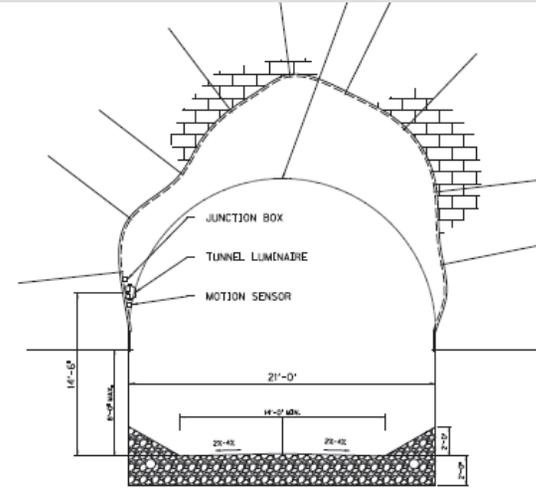
Portal Canopy



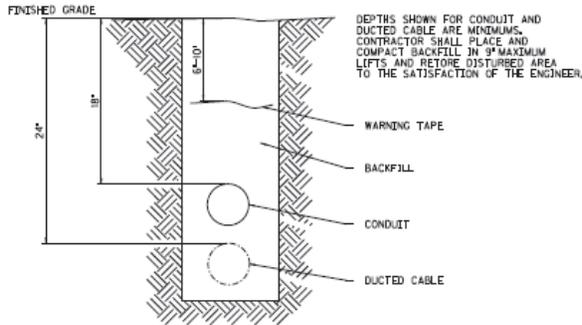
Lighting



CONDUIT DETAIL AND JUNCTION BOX LAYOUT (A)
SCALE: N.T.S. (L5)



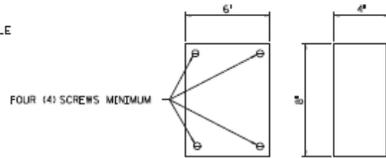
LUMINAIRE MOUNTING SECTION VIEW (B)
SCALE: N.T.S. (L5)



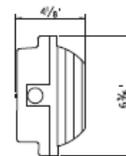
CONDUIT, DUCTED CABLE,
AND WARNING TAPE TRENCH

CONDUIT DETAIL (C)
SCALE: N.T.S. (L5)

SPLICE BOX SHALL BE FABRICATED FROM MINIMUM 12 GAUGE STEEL AND GALVANIZED AFTER FABRICATION. BOXES SHALL HAVE NO KNOCKOUTS AND SHALL BE PROVIDED WITH A PLATE COVER WITH A WEATHER RESISTANT GASKET AND A MINIMUM OF FOUR SCREWS FOR ATTACHING THE PLATE COVER TO THE BOX. CABLE CLAMPS SHALL BE PROVIDED FOR CABLES ENTERING AND EXITING THE BOX.



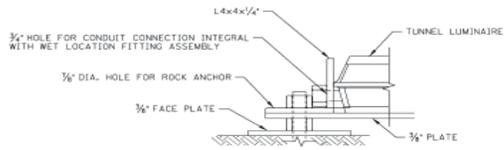
SPLICE BOX (D)
SCALE: N.T.S. (L5)



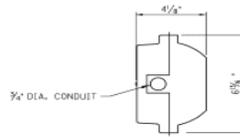
LUMINAIRE SECTION (E)
SCALE: N.T.S. (L5)

REVISION		DATE
DATE:	DESIGNED BY: MK	CHECKED BY:
	DETAILED BY: JD	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY MAGOFFIN / BREATHITT		
ROUTE	CROSSING	
LIGHTING DETAIL 1		
ITEM NUMBER	12-3011.50	DESIGNED BY: Stantec
		SHEET NO. L5 DRAWING NO.

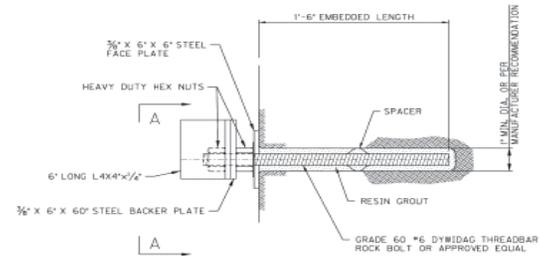
Lighting



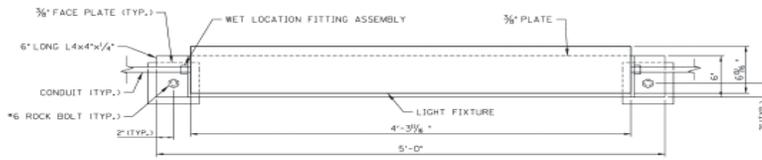
LIGHTING CONNECTION DETAIL (A)
SCALE: N. T. S. L6



LUMINAIRE SECTION (B)
SCALE: N. T. S. L6



LIGHTING ANCHORAGE DETAIL (D)
SCALE: N. T. S. L6



ELEVATION A-A (C)
SCALE: N. T. S. L6

FILE NAME: L:\UNIVERSITY\CAD\PROJECT SHEETS\12-3011.50\DWG.DWG

USER: MK09
DATE PLOTTED: April 28, 2015

FILE NAME:

PROJECT NUMBER: 12-3011.50

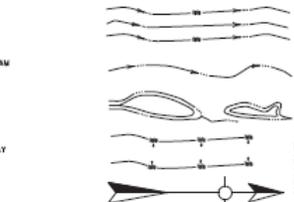
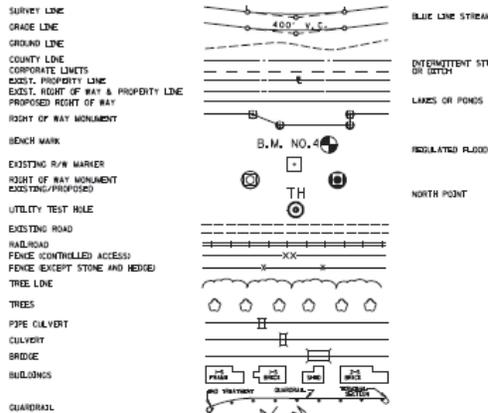
REVISION		DATE	CHECKED BY
Commonwealth of Kentucky			
DEPARTMENT OF HIGHWAYS			
MAGOFFIN / BREATHITT			
ROUTE:		PROJECT NO.:	
LIGHTING DETAIL 3			
PREPARED BY			
Stantec			
ITEM NUMBER			
12-3011.50			

TRAIL CONSTRUCTION



COUNTY OF	ITEM NO.	SHEET NO.
Magoffin/Breathitt	12-3011.50	R3

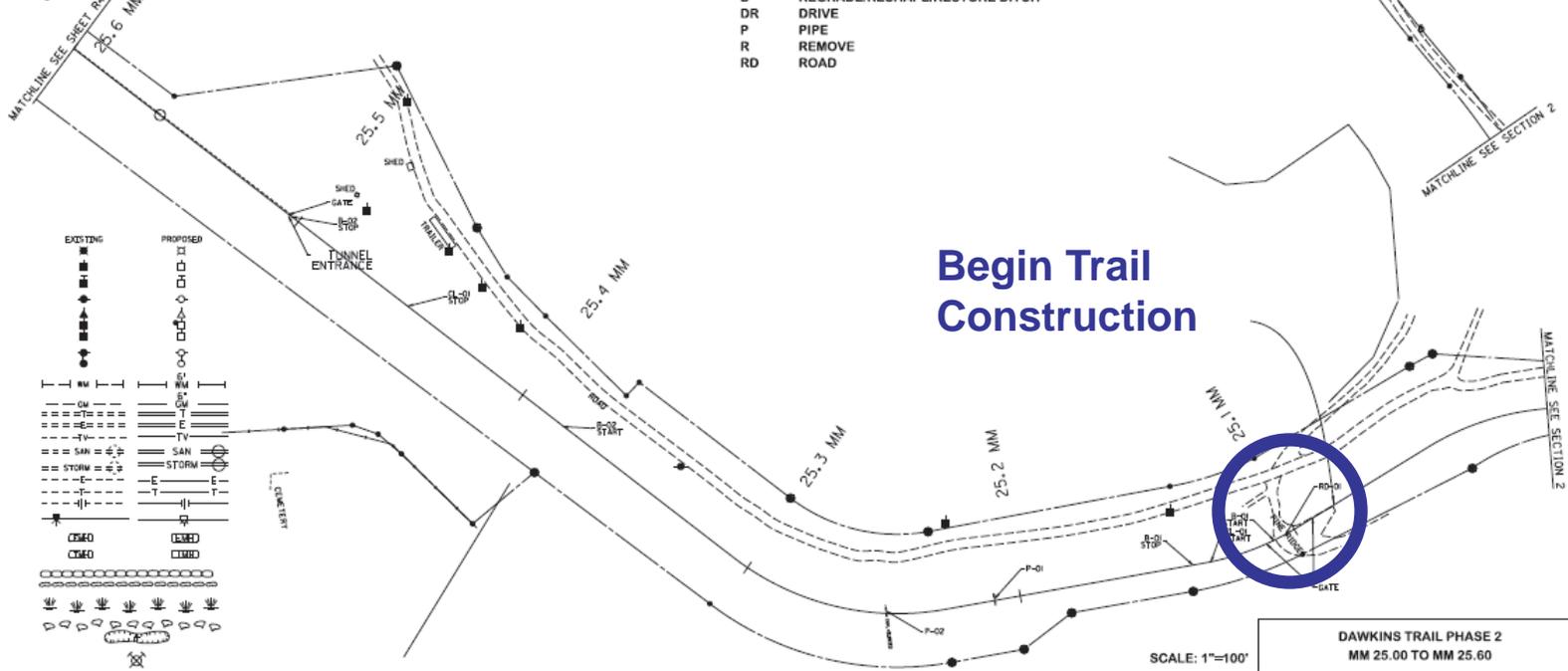
CONVENTIONAL SIGNS



BEFORE YOU DIG

The contractor is instructed to call 1-800-752-4907 to reach KY 812, 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 812 one-call before-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those who do not subscribe to KY 812. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

- LEGEND**
- B STONE BASE No. 4 - BALLAST
 - CL CLEARING & GRUBBING
 - D REGRADE/RESHAPE/RESTORE DITCH
 - DR DRIVE
 - P PIPE
 - R REMOVE
 - RD ROAD



Begin Trail Construction

SCALE: 1"=100'

DAWKINS TRAIL PHASE 2
MM 25.00 TO MM 25.60

FILE NAME: P:\12-3011\CONTRACT PLANS AND PROPOSAL\CONTRACT PLAN SET\MAGOFFIN\INDOOR.DWG
 USER: KENNEDY
 DATE PLOTTED: April 29, 2015
 E-SHEET NAME: MicroStation V8.L15.B37

TRAIL CONSTRUCTION

COUNTY OF	ITEM NO.	SHEET NO.
Magoffin/ Breathitt	12-3011.50	R4

BEFORE YOU DIG

CALL 1-800-752-6007 TOLL FREE A MINIMUM OF TWO AND NO MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES WHICH SUBSCRIBE TO THE BEFORE-DIG (BUD) SERVICE. COORDINATE EXCAVATION WITH ALL UTILITY OWNERS, INCLUDING THOSE WHO DO NOT SUBSCRIBE TO BUD. SHOW ALL UTILITIES AND A CONTACT PERSON FOR EACH COMPANY ON SHEET NO. 3 OF THE PLANS.

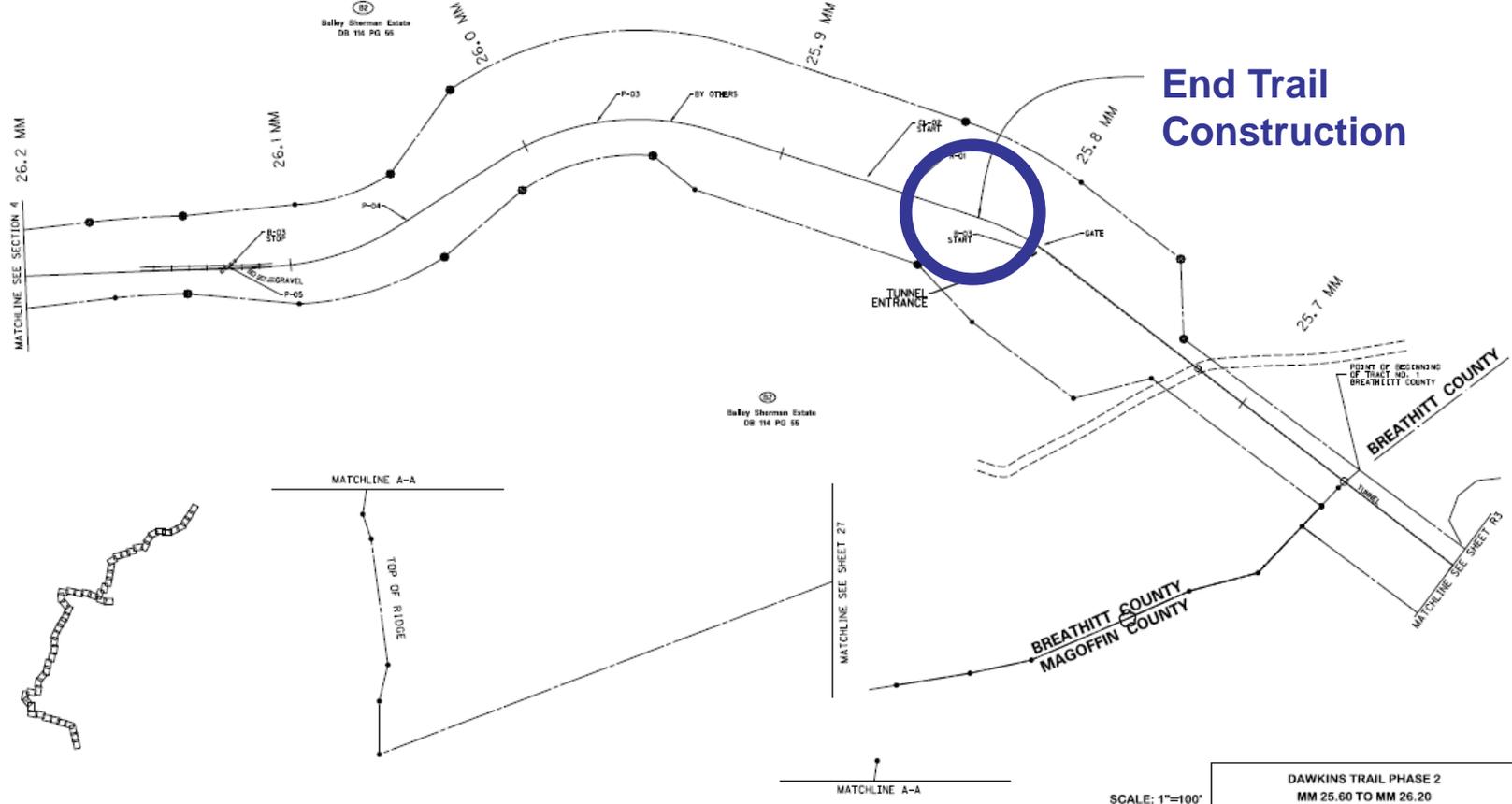
CAUTION CAUTION
 CAUTION CAUTION
 CAUTION CAUTION
 CAUTION CAUTION

THE CONTRACTOR IS ADVISED TO EXERCISE CAUTION IN HIS OPERATIONS IN AREAS WHERE PLANS INDICATE THE PRESENT OF A GAS LINE OR OTHER LINE CARRYING HAZARDOUS MATERIAL.



LEGEND

- B STONE BASE No. 4 - BALLAST
- CL CLEARING & GRUBBING
- D REGRADE/RESHAPE/RESTORE DITCH
- DR DRIVE
- P PIPE
- R REMOVE
- RD ROAD



FILE NAME: P:\102301\102301\CONTRACT PLANS AND HISTORICAL CONTRACT PLANS SET\102301\102301.dwg

USER: Howard
 DATE PLOTTED: April 24, 2015

SHEET NAME

MicroStation v8.0.1.317

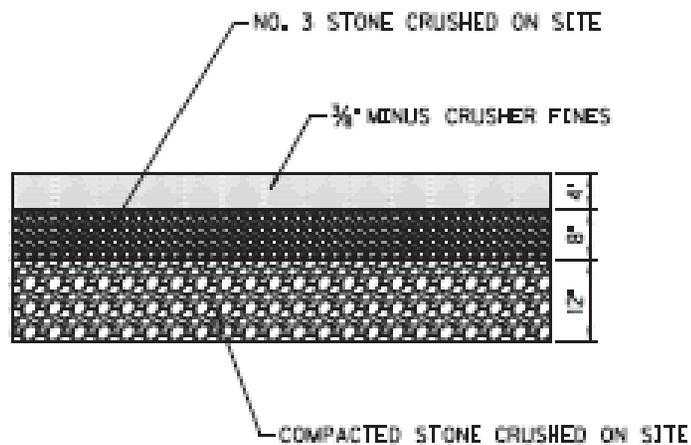
SCALE: 1"=100'

DAWKINS TRAIL PHASE 2
 MM 25.60 TO MM 26.20

TRAIL CONSTRUCTION

8. $\frac{3}{8}$ " MINUS CRUSHER FINES GRADATION CRITERIA

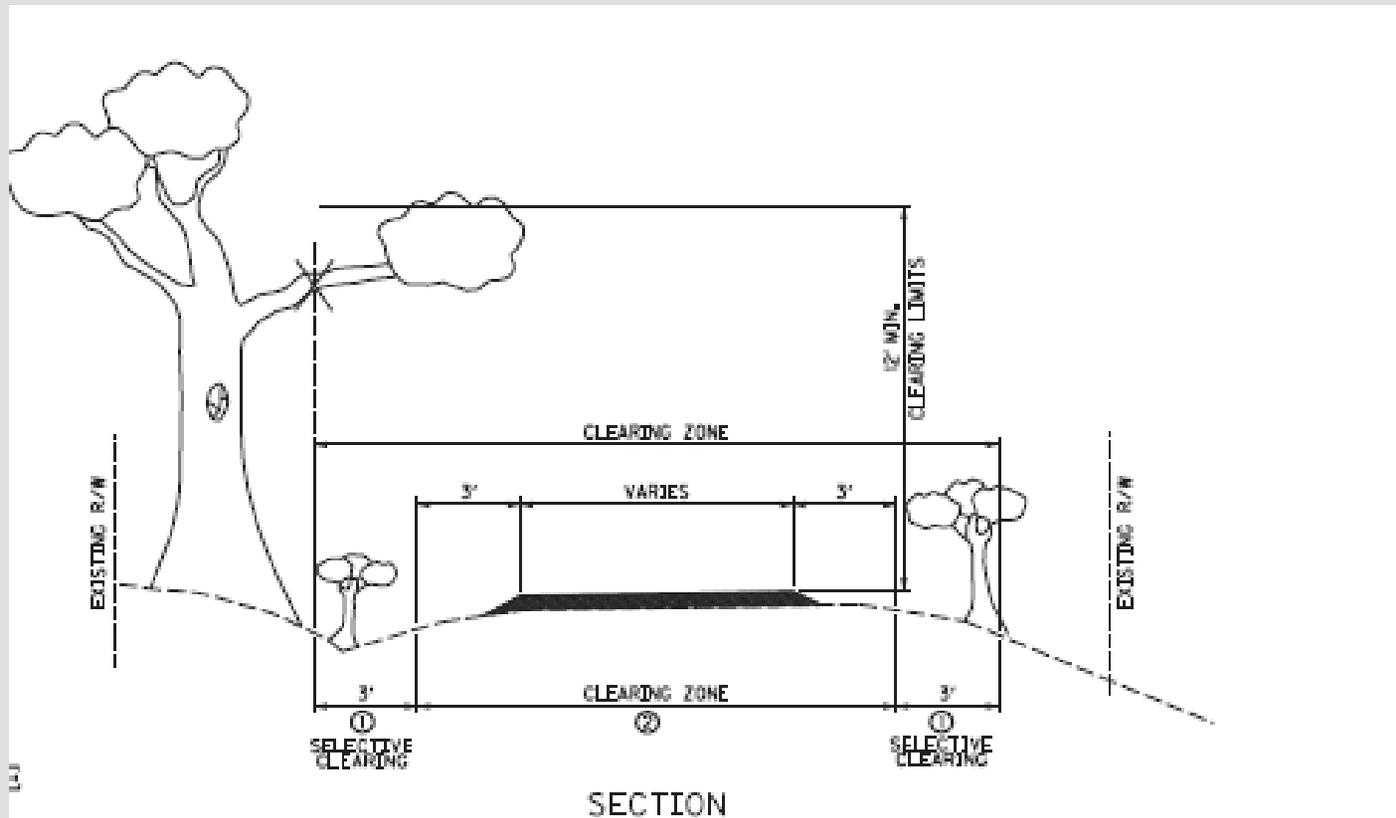
SIEVE SIZE	% PASSING
1"	100
$\frac{1}{2}$ "	95-100
$\frac{3}{8}$ "	70-95
#4	45-80
#30	15-30
#200	5-10



TUNNEL FLOOR DETAIL
N.T.S



TRAIL CONSTRUCTION



- ① Selective Pruning Zone-
Selectively Prune Limbs Extending Into Clear Zone
Remove All Dead/Decaying Debris and Trash
- ② Clearing Zone-
Cut and Remove All Brush and Trees Within Clearing Zone
Remove All Dead/Decaying Debris and Trash

SPECIAL NOTE D FOR TUNNEL INTERIOR PREPARATION

1.3 QUALITY ASSURANCE

- A. The Work of this project is deemed to be specialty contractor work. The Contractor and its project superintendent shall have experience as delineated below. Submit documentation of experience with the Bid Documents. These requirements do not apply to the work to place and grade the trail bed within the tunnel.
1. Contractor shall have completed a minimum of one similar rock tunnel or rock cavern rehabilitation project within the past 10 years.
 2. The project superintendent shall have hard rock tunneling or rock tunnel or cavern rehabilitation experience on a minimum of one project.

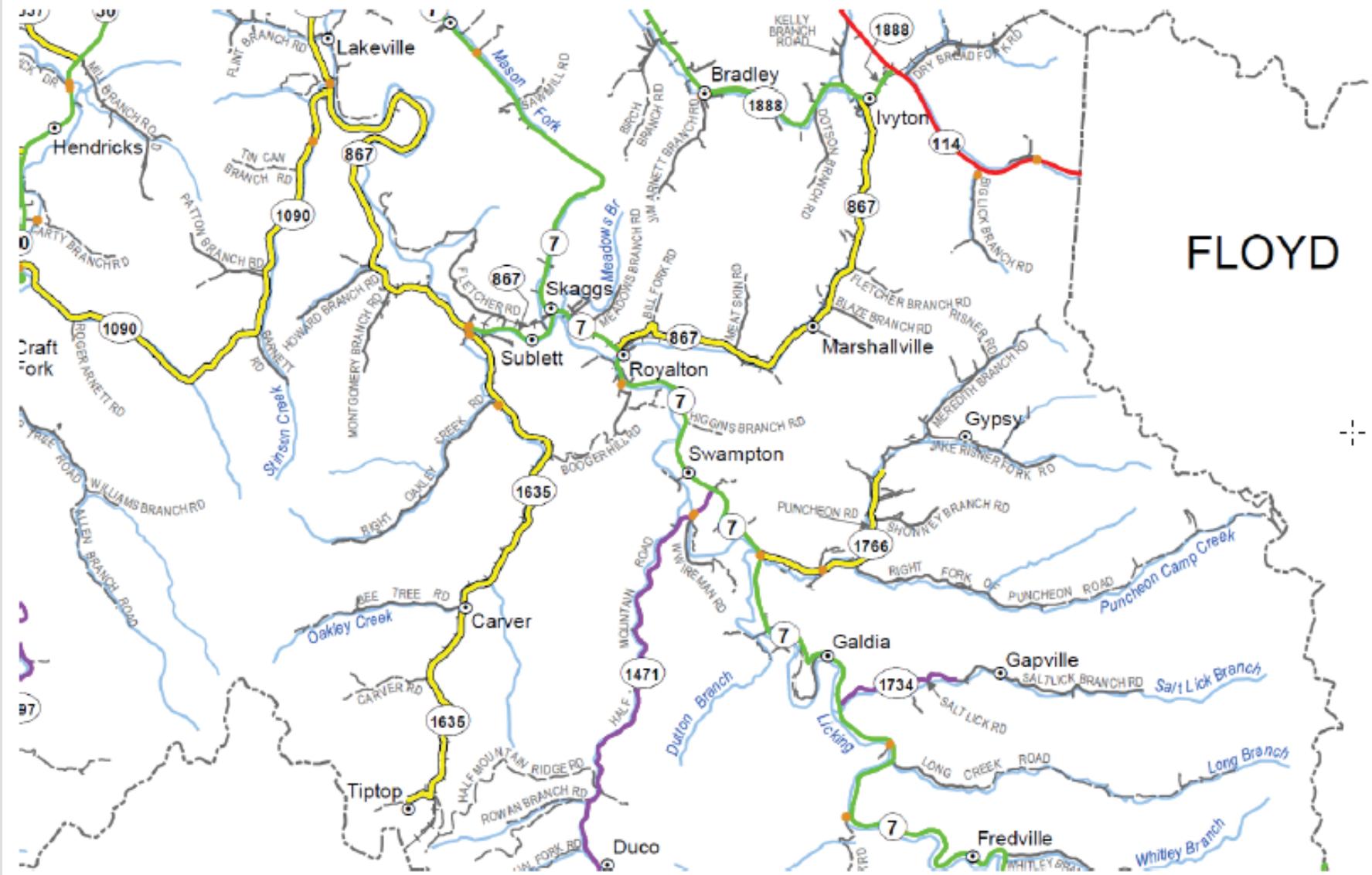
- Required information due as specified in the bid package.
- Submit information via e-mail to:
 - Bob Lewis (Bob.Lewis@ky.gov),
 - Wayne Simpson(Wayne.Simpson@ky.gov),
 - Ryan Griffith (Ryan.Griffith@ky.gov)
- Without this approved experience requirement submittal you WILL NOT be an eligible bidder.
- Safety is of utmost concern!

Questions and Answers

Bart Asher, Branch Manager
KYTC, Division of Structural Design
Geotechnical Branch

- Please feel free to ask questions here or through the Division of Construction Procurement's web site.
- Some rock core is here and all the core will be made available for viewing by appointment

Site Visit



Maintenance Barn is near Bradley. Carver Tunnel is near Tiptop.



Old rail bed
to tunnel

1635

County Rt 1225
Cr-1225

Old Rail Bed

Pine Ridge Road

North Portal

South Portal

TUNNEL

Rowan Creek Rd



Name	Signature	Company	Phone	Email
Jim Maier		Carver Tunnel Company	920-539-9849	Jmaier@michels.us
Mitch Lipsky		Michels	925-539-4798	MLIPSKY@michels.us
JOE ADKINSON		DAVIS H ELLIST	859-263-5148	TSEST@DHEC.com
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Carver Tunnel Pre-Bid 6/15/15
Maintenance Barn

Carver Tunnel Pre-Bid 6/15/15 Field

Name	Signature	Company
Jim Mauer		Michels
Mitch Lipsky		Michels
Paul Zick		Michels
Steve Adkinzen		DAVIS. H. ELLIOT BUSINESS CONTRACTING
DAVE LUTTRELL		Triton Construction
Robert Blankenship		KYTC
Darrin Beckett		