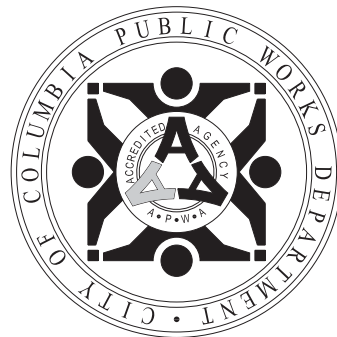


# City of Columbia, Missouri

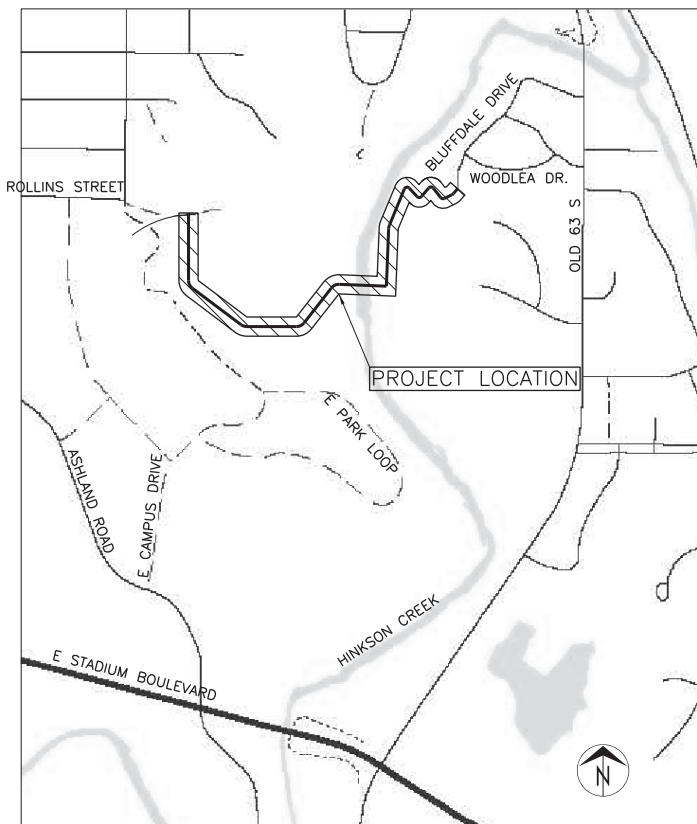
## Department of Public Works



# SHEPARD TO ROLLINS TRAIL CONNECTION

CPP - 9999 (523)

R 164-14



LOCATION MAP

STA. 10+25.47 TO STA. 42+24.32

SHARED USE PATH  
DESIGN SPEED = 20 MPH

HORIZONTAL CURVE IS LESS THAN AASHTO BICYCLE DESIGN GUIDE FOR A 20 MPH CURVE. THE CURVE DOES MEET A 14 MPH DESIGN CRITERIA. STATION 23+98.51.

HORIZONTAL CURVE IS LESS THAN AASHTO BICYCLE DESIGN GUIDE FOR A 20 MPH CURVE. THE CURVE DOES MEET A 14 MPH DESIGN CRITERIA. STATION 24+23.85.

HORIZONTAL CURVE IS LESS THAN AASHTO BICYCLE DESIGN GUIDE FOR A 20 MPH CURVE. THE CURVE DOES MEET A 10 MPH DESIGN CRITERIA. STATION 27+77.19.

HORIZONTAL CURVE IS LESS THAN AASHTO BICYCLE DESIGN GUIDE FOR A 20 MPH CURVE. THE CURVE DOES MEET A 10 MPH DESIGN CRITERIA. STATION 37+70.72, STA. 38+70.42, STA. 39+70.10, AND STA. 40+69.79.

HORIZONTAL CURVE IS LESS THAN AASHTO BICYCLE DESIGN GUIDE FOR A 20 MPH CURVE. THE CURVE DOES MEET A 14 MPH DESIGN CRITERIA. STATION 41+75.30.

**GENERAL NOTES**

- All construction to be in accordance with "City of Columbia Street, Storm and Sanitary Specifications" (Current edition).
- Known underground utilities are shown in their approximate locations. Other utilities may exist.
- All removal of driveway pavements should be verified by field engineer.
- All excavation to be in accordance with Sections 319.010-319.050, Revised Statutes of the State of Missouri. Such compliance shall not, however, excuse any person making any excavation from doing so in a careful and prudent manner, nor shall it excuse such person from liability for any damage or injury to underground utilities resulting from the excavation.
- All RCP is Class III unless otherwise indicated.
- All disturbed earth areas shall be restored as per TS-\_\_\_ Seeding and TS-\_\_\_ Erosion Control.
- Remove all pavement surfaces, inlets, pipes and sidewalks within the construction limits as per TS-\_\_\_, except those noted to remain. The field inspector shall verify removal of all driveway pavement.
- Removal of trees and bushes shall be verified by field inspectors. Exercise caution when working near the construction limits to minimize disturbance to adjacent trees and shrubs that are not being removed by construction activities.
- Backfill of reinforced concrete pipe shall be 1 inch clean rock or soil compacted to 90 percent of standard proctor density as per TS-\_\_\_.
- No open trenches will be allowed overnight outside of the "road closed" area. Asphaltic "cold mix" shall be used as a temporary patch overnight. Temporary patching shall be considered incidental to the work.

**UTILITY COMPANIES:**

**TELEPHONE**  
CenturyLink  
625 Cherry Street  
Columbia, MO 65205  
573-886-3505

**WATER**  
City of Columbia  
P.O. Box 6015  
Water & Light Department  
Columbia, MO 65205  
573-874-7301

**NATURAL GAS**  
Ameren Missouri  
2001 Maguire Boulevard  
Columbia, MO 65201  
573-239-6165 (N of I-70)  
573-876-3030 (S of I-70)

**ELECTRIC**  
City of Columbia  
P.O. Box 6015  
Water & Light Department  
Columbia, MO 65205  
573-874-7301

**CABLE TELEVISION**  
Mediacom  
901 N. College Avenue  
Columbia, MO 65201  
573-443-1536 ext 354

**SANITARY SEWER**  
City of Columbia  
P.O. Box 6015  
Public Works Department  
Columbia, MO 65205  
573-874-7250

**LOCATES**  
Missouri One Call Inc.  
1022 B Northeast Drive  
Jefferson City, MO 65109  
1-800-344-7483

**ELECTRIC (county)**  
Boone Electric Cooperative  
1413 Range Line Street  
Columbia, MO 65201  
573-449-4181 ext 231

INDEX OF SHEETS	
Description	Sheet No.
Cover Sheet	1
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Typical Sections, Alignment Tabulation, and General Notes	3
Plan and Profile	4 - 7
Storm Drainage Profiles	8
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Traffic Control Details	10
Cross Sections	11 - 16

**LEGEND OF SYMBOLS**

POWER POLE	
TELEPHONE POLE	
GUY ANCHOR	
GUY POLE	
STREET LIGHT POLE	
YARD LIGHT (SOLAR)	
WATER METER	
GAS METER	
GAS VALVE	
WATER VALVE	
FIRE HYDRANT	
PIPE BREAKLINE	
SANITARY MANHOLE	
SANITARY CLEANOUT	
SANITARY LATERAL CLEANOUT	
TRAVERSE POINT	
MoDOT ROW MARKER	
BENCHMARK	
SIGN	
MAIL BOX	
PROPERTY IRON	
BUSH	
STUMP	
TREE REMOVAL	
TREE	
TREE LINE	
SILT FENCE/TREE PROTECT	
EXISTING PUBLIC SANITARY SEWER	
EXISTING SANITARY SEWER LATERAL	
EXISTING SANITARY SEWER TO BE ABANDONED	
PROPOSED SEWER MAIN AND LATERALS	
FENCE	
CABLE TELEVISION	
TELEPHONE	
ELECTRIC	
TELEPHONE OR ELECTRIC MANHOLE	
WATER MAIN	
GAS MAIN	
FIBER OPTIC	
FLOW LINE	
PROPERTY LINE	
LOT LINE	
EXISTING RIGHT OF WAY LINE	
EXISTING EASEMENT	
PERMANANT UTILITY EASEMENT	
PROPOSED SANITARY SEWER EASEMENT	
PROPOSED PERMANENT DRAINAGE EASEMENT	
PROPOSED RIGHT OF WAY	
TEMPORARY ACCESS EASEMENT	
TEMPORARY CONSTRUCTION EASEMENT	
GRADING LIMIT	

<b>City of Columbia, Missouri</b> Department of Public Works			
No.	Date	By	Revision
File No. 32-XX-XX	Des. K.M.B.	Sheet	David Allen Nichols Registered Professional Engineer E-24212
Scale: None	Dwn. K.M.B.	1 of 16	
Date: 9/6/2016	Chk. J.W.Z.		
<b>SHEPARD TO ROLLINS TRAIL CONNECTION</b>			
Approved By _____			
Director of Public Works			Date _____

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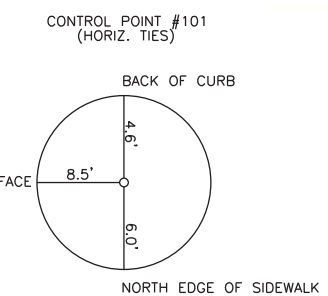
No.	Date	By	Revision

**SHEPARD TO ROLLINS  
TRAIL CONNECTION**  
Coordinate Reference Points

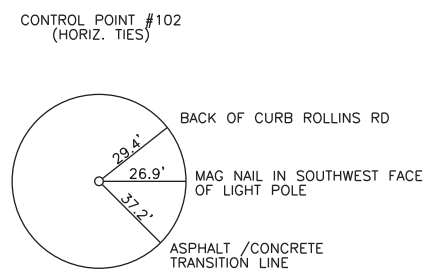
City of Columbia, Missouri  
Department of Public Works

JOHN ZIMMERMANN  
Registered Professional Engineer  
(ENGINEER NUMBER)

File No.	P101160118
Scale:	1" = 100'
Date:	11/9/2016
Des.	K.M.B.
Dwn.	K.M.B.
Chk.	J.W.Z.



SET 1/2" REBAR WITH CAP WESTSIDE EAST ENTRANCE COLLEGE VET BLD.  
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E = 1692512.9520

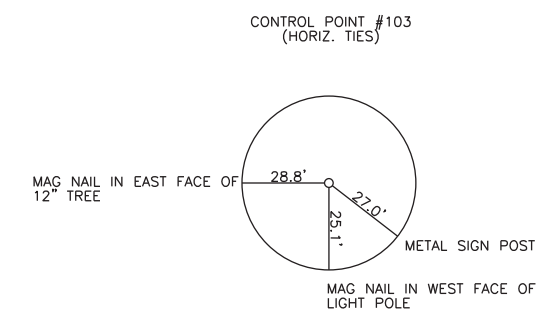


SET 1/2" REBAR WITH CAP WESTSIDE ENTRANCE TO PARKING LOT  
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E = 1692698.8010

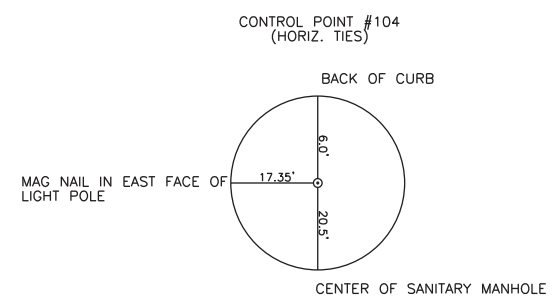
**BENCHMARKS**

- TBM 10-16 (PT. 100)  
ELEV.: 638.11'  
SET "SQUARE" CUT NORTH SIDE SANITARY SEWER VAULT
- TBM 11-16 (PT. 108)  
ELEV.: 741.65'  
SET "SQUARE" CUT ON SE CORNER CURB INLET ON WEST SIDE OF CUL DE SAC BLUFFDALE DR IN FRONT OF HOUSE #723
- TBM 12-16 (PT. 109)  
ELEV.: 696.59'  
SET RAILROAD SPIKE IN SOUTH FACE LIGHT POLE SE CORNER OF PARKING LOT
- TBM 13-16 (PT. 110)  
ELEV.: 741.65'  
SET "+" CUT ON NORTH LOWER FLANGE BOLT FIRE HYDRANT EASTSIDE OF EAST ENT TO COLLEGE VET BLD.

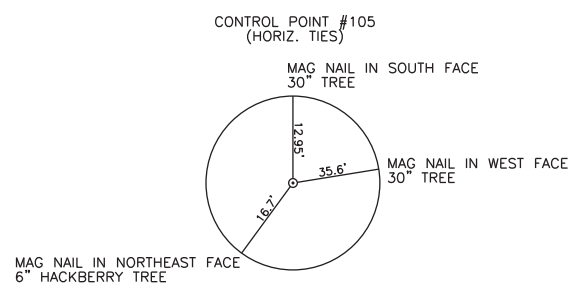
C.A.F. = 0.999907917



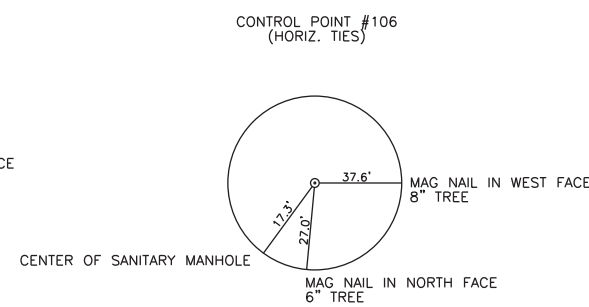
SET 1/2" REBAR WITH CAP SW CORNER PARKING LOT.  
N = 1131341.6490  
E = 1693056.3660



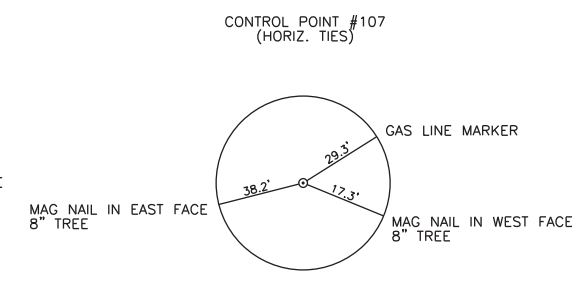
SET 1/2" REBAR WITH CAP AT THE END OF CUL DE SAC BLUFFDALE DR  
N = 1132081.8610  
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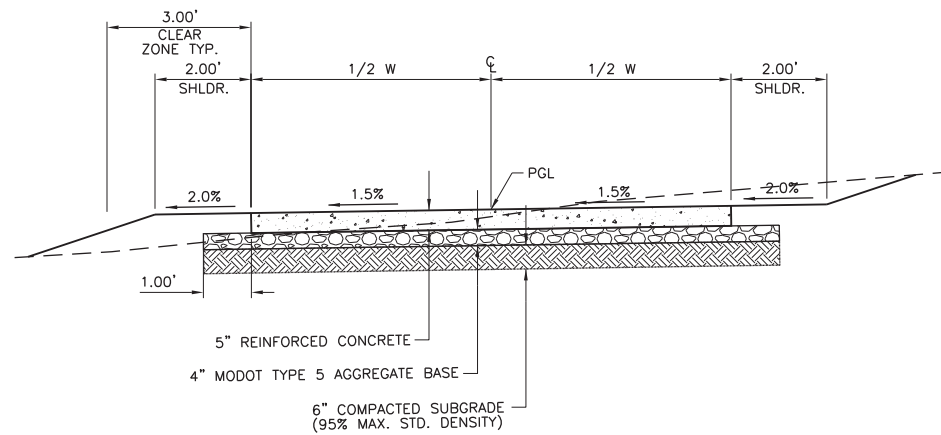
SET 1/2" REBAR WITH CAP SOUTHWEST CORNER OPEN LOT AT THE END OF CUL DE SAC  
N = 1131939.5180  
E = 1694571.6470



SET 1/2" REBAR WITH CAP WESTSIDE ACCESS RD EAST SIDE OF CREEK  
N = 1131734.6360  
E = 1694248.6030

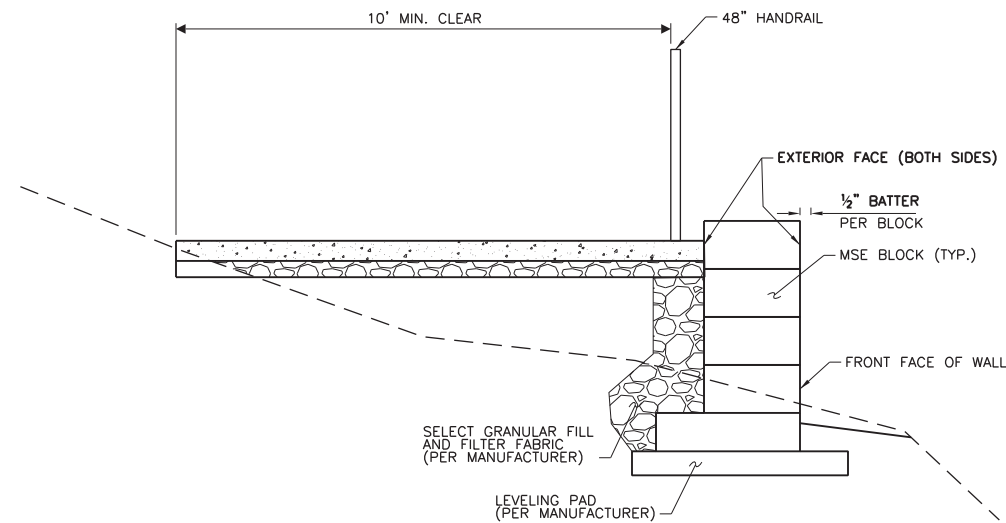


SET 1/2" REBAR WITH CAP WESTSIDE ACCESS RD EAST SIDE OF CREEK  
N = 1131525.7880  
E = 1694249.0820



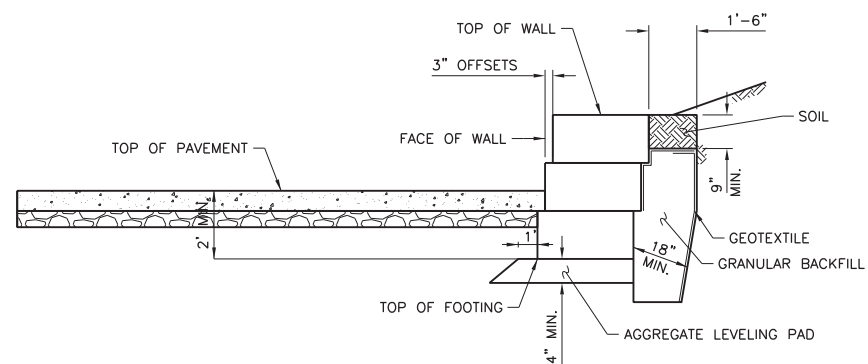
**TRAIL TYPICAL SECTION**

STA. 10+25.47 TO STA. 31+49.00 (EXCEPT BRIDGE), W = 10'  
 STA. 31+44.00 TO STA. 33+05.00, W = 11'  
 STA. 33+05.00 TO STA. 42+24.32, W = 10'



**MSE RETAINING WALL SECTION**

STA. 31+40.86 TO STA. 33+05.00, LT. & RT. (NO. 3 & 4)



**STACKED LIMESTONE RETAINING WALL SECTION**

STA. 15+86.15 TO STA. 16+66.60, RT. (NO. 1)  
 STA. 27+10.00 TO STA. 28+14.00, LT. (NO. 2)

**GENERAL NOTES**

- "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES", 2012, AASHTO IS HEREBY INCORPORATED, EXCEPT AS OTHERWISE SHOWN.
- ALL SIGNAGE TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), LATEST RELEASE AND EDITIONS. POSTS TO BE 1 3/4" SQUARE 14 GAUGE.
- TRAIL ALIGNMENTS MAY BE ADJUSTED TO MEET FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- UTILITIES SHOWN MEET FHWA SUBSURFACE UTILITY ENGINEERING QUALITY LEVEL B. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES, CALL 1-800-344-7233. LAW REQUIRES 48 HOURS NOTICE. UNDERGROUND UTILITY LOCATIONS SHALL BE DETERMINED IN THE FIELD BY EACH UTILITY COMPANY AT THE REQUEST OF THE CONTRACTOR WHERE NECESSARY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT AND THEIR EXACT HORIZONTAL AND VERTICAL LOCATIONS AS NEEDED.
- ALL NECESSARY UTILITY RELOCATIONS AND SERVICE LINE RECONNECTIONS SHALL BE PERFORMED PRIOR TO OR CONCURRENTLY WITH CONSTRUCTION. CONTRACTOR SHALL BE REQUIRED TO COOPERATE AND SCHEDULE WITH UTILITY COMPANIES TO FACILITATE RELOCATIONS DURING CONSTRUCTION.
- ALL TREES, SHRUBS, BUSHES, AND BRUSH WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT SHALL BE REMOVED BY THE CONTRACTOR UNLESS SPECIFICALLY INDICATED TO BE SAVED ON THE PLANS. CONTRACTOR SHALL CONDUCT HIS CONSTRUCTION ACTIVITIES TO MINIMIZE THE AMOUNT OF CLEARING AND GRUBBING. LARGE TREES THAT ARE NOT SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO DISTURBANCE AND SHALL BE SPARED, BY ADJUSTING THE PROJECT CONSTRUCTION LIMITS DURING CONSTRUCTION OR REMOVED, AS DIRECTED BY THE ENGINEER.
- TREES AND SHRUBS ADJACENT TO CONSTRUCTION AREAS SHALL BE PROTECTED BY THE CONTRACTOR. DAMAGE OR CUT SURFACE AREAS ON TREES OR SHRUBS SHALL BE PAINTED WITH AN ACCEPTED PRUNING PAINT SPECIALLY FORMULATED FOR HORTICULTURE APPLICATION. ALL TREES AND BRUSH, WHICH MUST BE REMOVED FOR PROPER EXECUTION OF THE WORK, SHALL BE REMOVED BY CONTRACTOR.
- ALL WORK SHALL BE CONFINED WITHIN THE EASEMENTS AND/OR CONSTRUCTION LIMITS. ANY DISTURBANCE OF EXISTING CONDITIONS OUTSIDE THE GRADING LIMITS SHALL BE REPAIRED PROMPTLY TO THE ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHER WRITTEN ARRANGEMENTS HAVE BEEN MADE.
- ALL DEBRIS AND WASTE SHALL BE REMOVED FROM THE JOB SITE IMMEDIATELY AND DISPOSED OF AT A SITE FURNISHED BY THE CONTRACTOR. NO STOCKPILING ON SITE WILL BE ALLOWED.
- ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED AS SOON AS FINISH GRADING IS COMPLETED OR AS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION SITE IN A CLEAN, ORDERLY AND SAFE CONDITION AT ALL TIMES DURING THE COURSE OF THE PROJECT.
- THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP ALL STREETS CLEAN OF MUD AND DEBRIS.

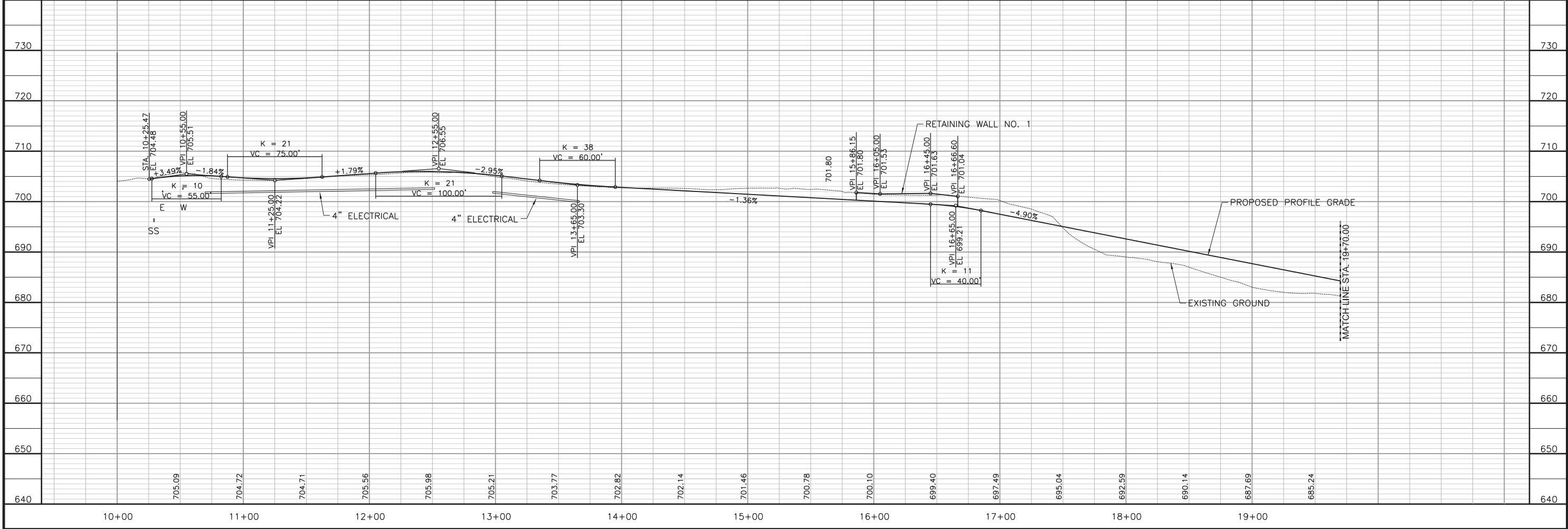
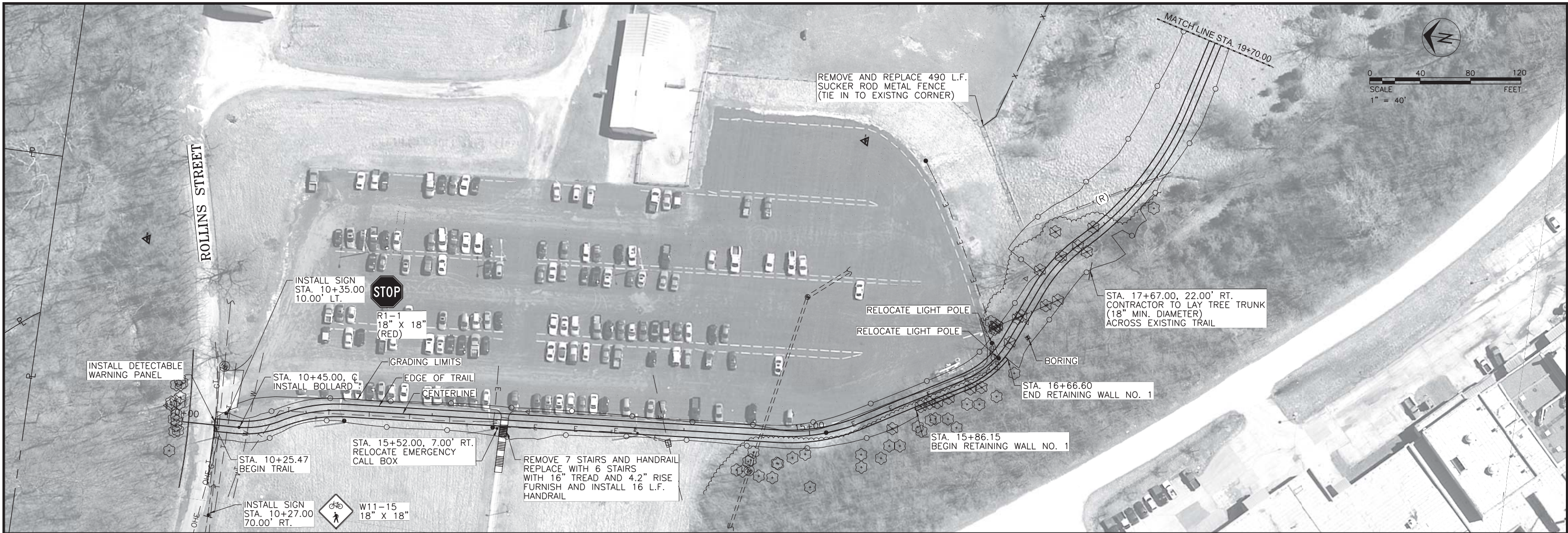
**TRAIL NOTES**

- ALL CONCRETE JOINTS SHALL BE AT RIGHT ANGLES TO THE ALIGNMENT OF THE TRAIL AND MEET THE REQUIREMENTS INDICATED BELOW. THE CONTRACTOR SHALL LAYOUT THE JOINTS FOR APPROVAL BY THE ENGINEER PRIOR TO SAW CUTTING. CONTRACTION JOINTS SHALL BE SAW CUT IN CONCRETE TO CREATE SQUARE PANELS, MATCHING THE WIDTH OF THE TRAIL. CONTRACTION JOINTS SHALL BE ONE-EIGHTH (1/8) INCH WIDE BY ONE (1) INCH DEEP. TOOLED JOINTS ARE NOT ALLOWED.
- ONE-HALF (1/2) INCH THICK EXPANSION JOINTS SHALL BE PLACED WHERE THE TRAIL ABUTS OTHER STRUCTURES AND AT 250 FOOT INTERVALS ALONG THE TRAIL. EXPANSION JOINTS SPACING MAY BE INCREASED TO 300 FOOT INTERVALS FOR MACHINE LAID TRAILS IF 3/4" JOINT FILLER IS USED. EXPANSION JOINTS SHALL BE FORMED BY PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTION OF CONCRETE.
- CONCRETE FINISHING: MEDIUM TRANSVERSE BROOM FINISH WITH NO EDGE TOOLING VISIBLE AFTER BROOM FINISH. SURFACE TO BE FREE OF DEFECTS, DISCOLORATION, AND DAMAGE FROM VANDALISM.
- CROSS-SLOPES CONSTRUCTED STEEPER THAN 2% ARE NOT COMPLIANT WITH THE AMERICANS WITH DISABILITIES ACT AND MUST BE MADE COMPLIANT AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MUST REPLACE THE NONCOMPLIANT SECTIONS AT THE NEAREST JOINTS.
- ALL CONCRETE SHALL BE 4,000 PSI.

**TRAIL ALIGNMENT**

CURVE	P.C. STA.	NORTH.	EAST.	DELTA	FOR. BEAR.	TAN.	RAD.
TRAIL-ALT-1	10+42.75	1,131,803.47	1,692,761.16	27° 21' 50.64" LT	S 16° 05' 24.73" E	18.26'	75.00'
TRAIL-ALT-2	10+78.57	1,131,769.38	1,692,770.99	25° 00' 23.03" RT	S 17° 16' 08.53" E	26.61'	120.00'
TRAIL-ALT-3	14+75.21	1,131,376.68	1,692,815.02	25° 48' 22.65" LT	S 17° 40' 08.34" E	34.36'	150.00'
TRAIL-ALT-4	16+29.52	1,131,238.16	1,692,879.48	37° 08' 02.71" LT	S 49° 08' 21.02" E	25.19'	75.00'
TRAIL-ALT-5	17+25.68	1,131,188.88	1,692,959.59	23° 49' 43.79" RT	S 55° 47' 30.48" E	25.32'	120.00'
TRAIL-ALT-6	17+75.58	1,131,161.02	1,693,000.57	31° 37' 49.09" LT	S 59° 41' 33.13" E	70.81'	250.00'
TRAIL-ALT-7	20+05.43	1,131,069.27	1,693,207.13	16° 11' 26.16" RT	S 67° 24' 44.59" E	42.67'	300.00'
TRAIL-ALT-8	20+90.21	1,131,036.82	1,693,285.14	14° 56' 43.43" LT	S 66° 47' 23.23" E	15.74'	120.00'
TRAIL-ALT-9	21+21.51	1,131,024.52	1,693,313.83	27° 38' 00.96" LT	S 88° 04' 45.42" E	93.46'	380.00'
TRAIL-ALT-10	23+04.78	1,131,018.43	1,693,495.22	21° 28' 51.38" LT	N 67° 21' 48.40" E	47.42'	250.00'
TRAIL-ALT-11	23+98.51	1,131,054.30	1,693,581.23	40° 19' 48.49" LT	N 36° 27' 28.47" E	13.22'	36.00'
TRAIL-ALT-12	24+23.85	1,131,074.26	1,693,595.98	34° 10' 53.46" RT	N 33° 23' 00.95" E	11.07'	36.00'
TRAIL-ALT-13	25+27.95	1,131,144.51	1,693,671.35	37° 52' 50.10" RT	N 69° 24' 52.73" E	34.32'	100.00'
TRAIL-ALT-14	25+94.06	1,131,167.34	1,693,732.12	84° 47' 41.74" LT	N 45° 57' 26.91" E	68.48'	75.00'
TRAIL-ALT-15	27+77.19	1,131,309.64	1,693,809.30	84° 23' 07.41" RT	N 45° 45' 09.75" E	22.66'	25.00'
TRAIL-ALT-16	32+07.01	1,131,395.34	1,694,174.34	13° 19' 02.95" LT	N 8° 42' 48.02" W	35.02'	300.00'
TRAIL-ALT-17	32+76.74	1,131,464.11	1,694,163.80	31° 15' 14.97" RT	N 0° 15' 17.99" E	134.26'	480.00'
TRAIL-ALT-18	35+38.58	1,131,722.70	1,694,164.95	15° 34' 18.43" LT	N 8° 05' 46.26" E	51.27'	375.00'
TRAIL-ALT-19	36+40.49	1,131,823.30	1,694,179.26	34° 41' 22.96" RT	N 17° 39' 18.52" E	37.48'	120.00'
TRAIL-ALT-20	37+70.72	1,131,938.64	1,694,233.99	110° 00' 00.00" RT	Due East	28.56'	20.00'
TRAIL-ALT-21	38+70.42	1,131,888.43	1,694,301.91	110° 00' 00.00" LT	Due East	28.56'	20.00'
TRAIL-ALT-22	39+70.10	1,131,938.63	1,694,369.83	110° 00' 00.00" RT	Due East	28.56'	20.00'
TRAIL-ALT-23	40+69.79	1,131,888.43	1,694,437.75	110° 00' 00.00" LT	Due East	28.56'	20.00'
TRAIL-ALT-24	41+34.60	1,131,910.07	1,694,485.67	16° 39' 29.32" RT	N 43° 19' 44.66" E	20.50'	140.00'
TRAIL-ALT-25	41+75.30	1,131,939.57	1,694,513.50	37° 40' 17.06" LT	N 32° 49' 20.79" E	13.64'	40.00'

Revision									
By		Date		No.					
<b>SHEPARD TO ROLLINS</b> <b>TRAIL CONNECTION</b> Typical Sections, Alignment Tabulation, and General Notes									
City of Columbia, Missouri Department of Public Works									
JOHN ZIMMERMANN Registered Professional Engineer [ENGINEER NUMBER]									
File No. P101160118									
Scale: No Scale									
Date: 11/9/2016									
Des. K.M.B.									
Dwn. K.M.B.									
Chk. J.W.Z.									
Sheet									
3 of 16									



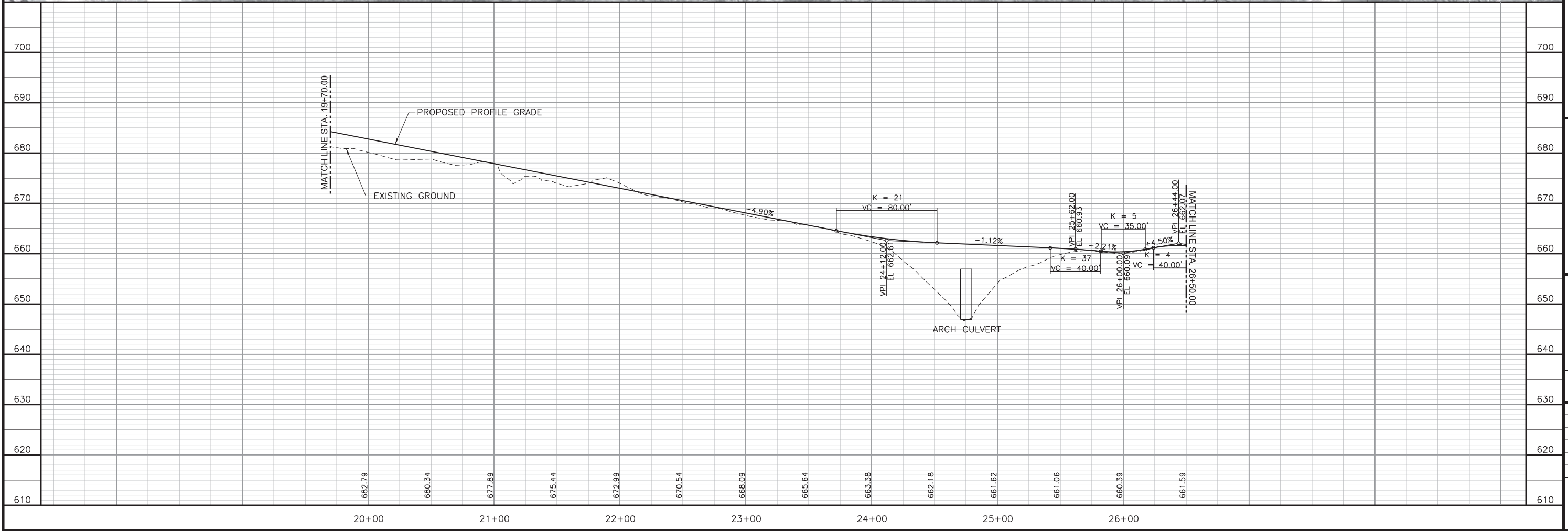
Revision	By	Date	No.

**SHEPARD TO ROLLINS  
TRAIL CONNECTION**  
Plan & Profile - Sta. 10+25.47 to Sta. 19+70.00

City of Columbia, Missouri  
Department of Public Works

JOHN ZIMMERMANN  
Registered Professional Engineer  
[ENGINEER NUMBER]

File No. P101160118  
Scale: 1" = 40'  
Date: 11/9/2016  
Des. K.M.B.  
Dwn. K.M.B.  
Chk. J.W.Z.



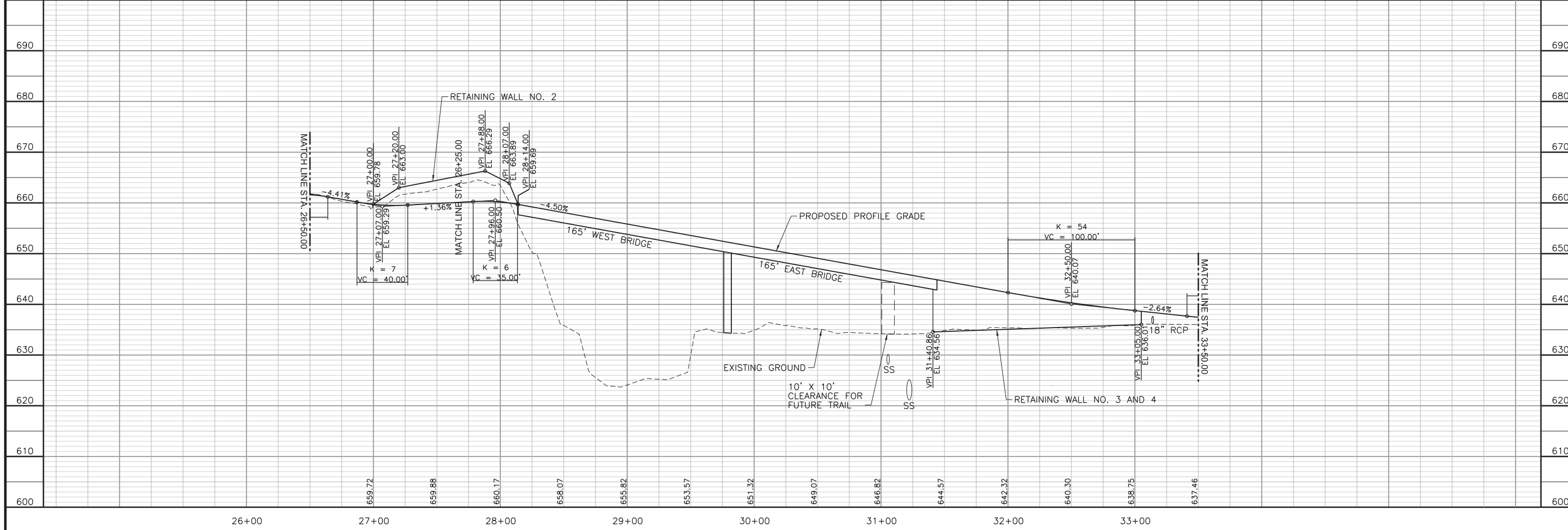
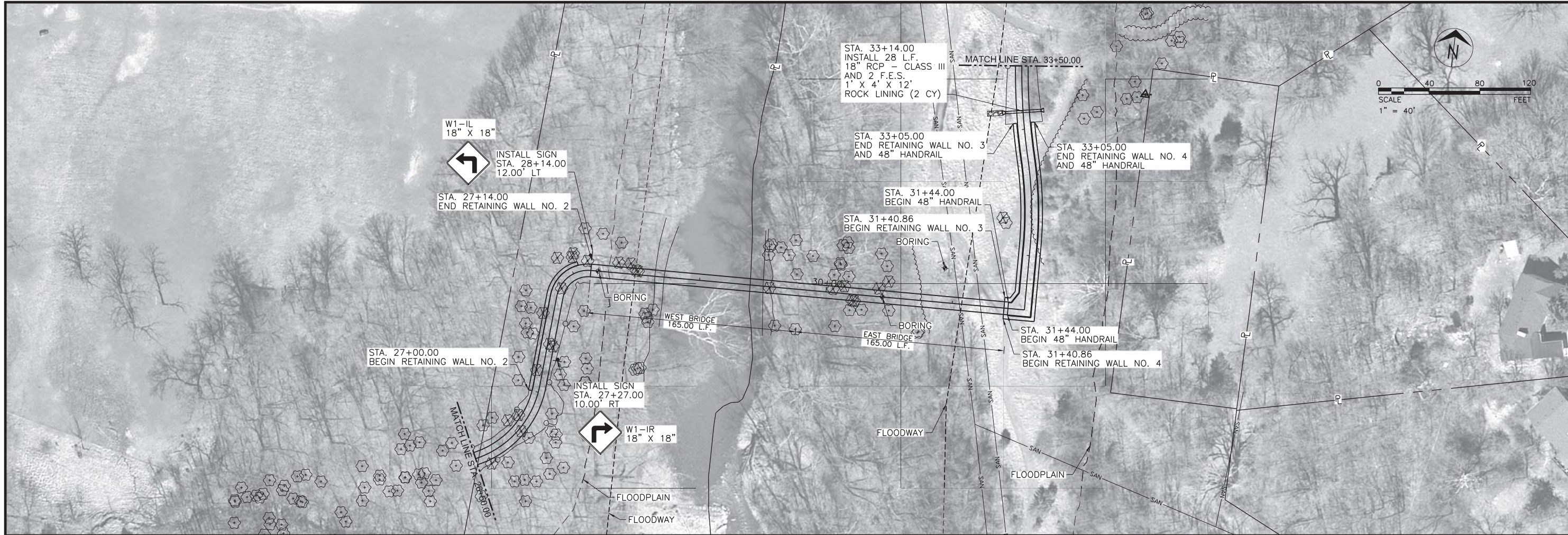
No.	Date	By	Revision

**SHEPARD TO ROLLINS**  
**TRAIL CONNECTION**  
 Plan & Profile - Sta. 19+70.00 to Sta. 26+50.00

City of Columbia, Missouri  
 Department of Public Works

JOHN ZIMMERMANN  
 Registered Professional Engineer  
 [ENGINEER NUMBER]

File No. P101160118  
 Scale: 1" = 40'  
 Date: 11/9/2016  
 Des. K.M.B.  
 Dwn. K.M.B.  
 Chk. JW.Z.



Revision	By	Date	No.

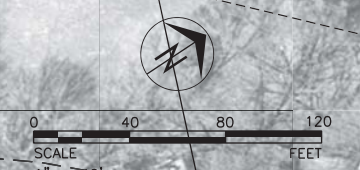
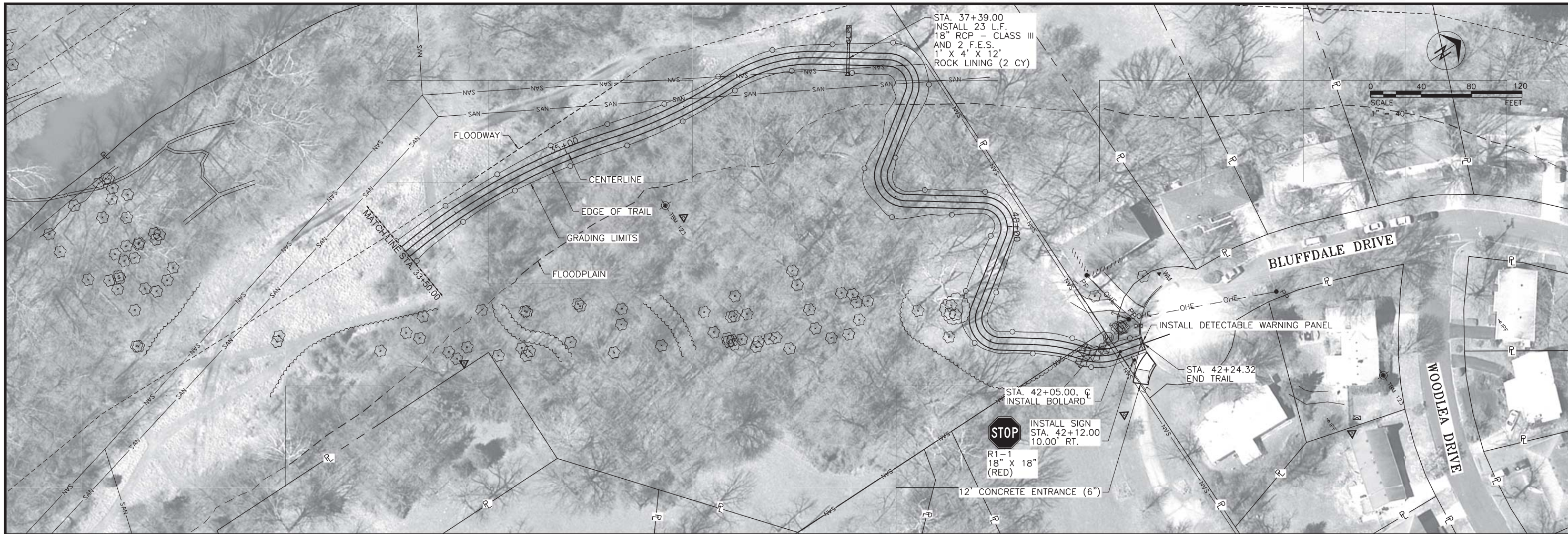
**SHEPARDT ROLLINS**  
**TRAIL CONNECTION**  
Plan & Profile - Sta. 26+50.00 to Sta. 33+50.00

City of Columbia, Missouri  
Department of Public Works

JOHN ZIMMERMANN  
Registered Professional Engineer  
[ENGINEER NUMBER]

File No. P101160118  
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Dwn. K.M.B.  
Chk. J.W.Z.

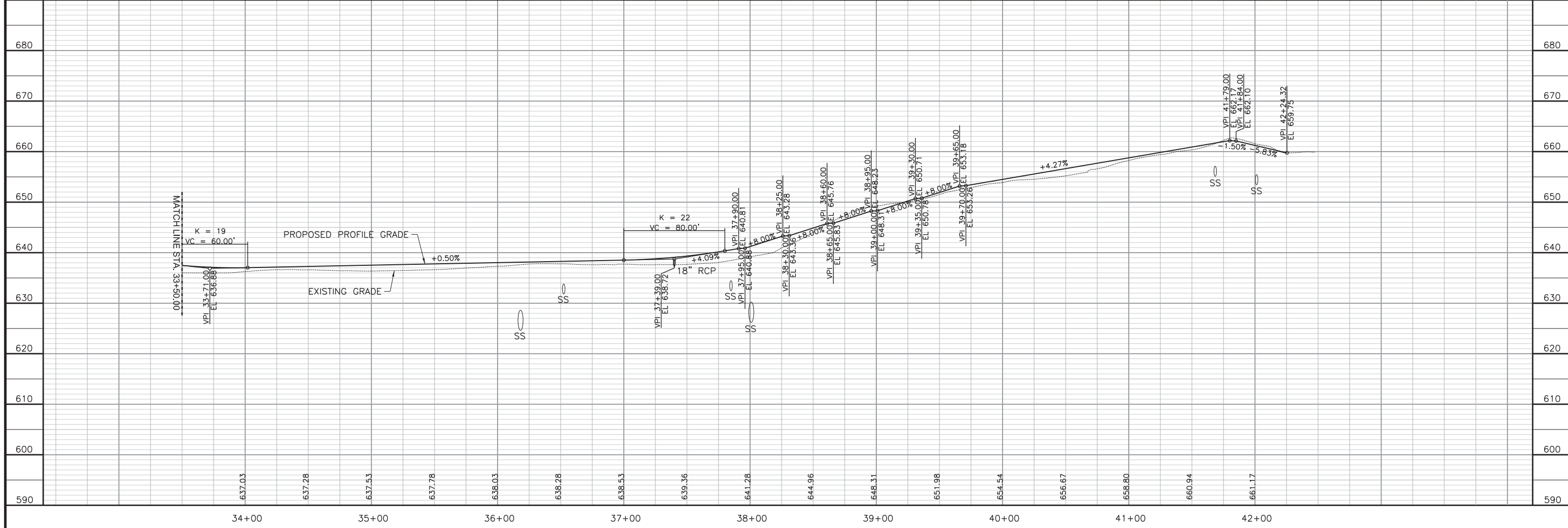
Sheet  
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No.	Date	By	Revision

**SHEPARDT ROLLINS**  
**TRAIL CONNECTION**  
 Plan & Profile - Sta. 33+50.00 to Sta. 42+24.32

City of Columbia, Missouri  
 Department of Public Works



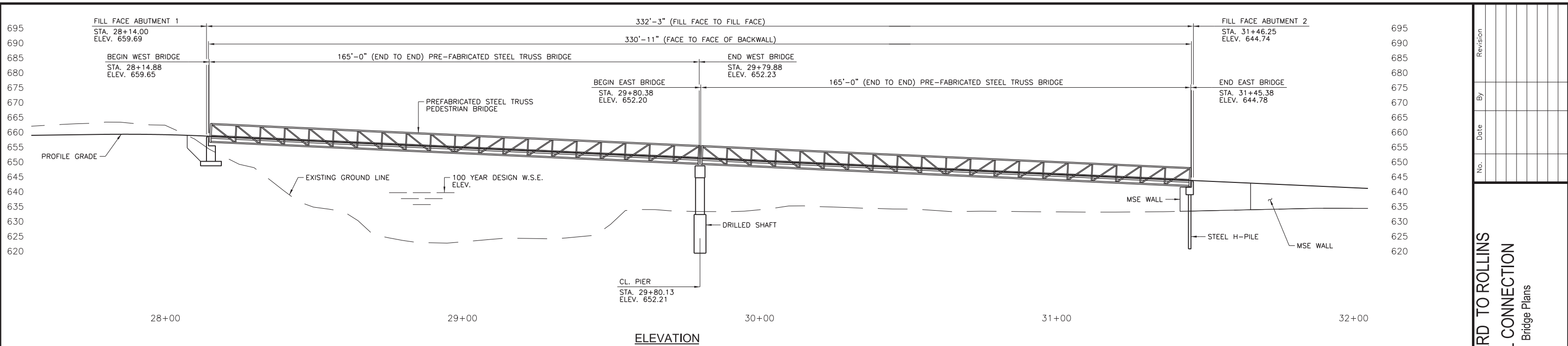
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600	600
590	590

JOHN ZIMMERMANN  
 Registered Professional Engineer  
 [ENGINEER NUMBER]

File No. P101160118  
 Scale: 1" = 40'  
 Date: 11/9/2016  
 Des. K.M.B.  
 Dwn. K.M.B.  
 Chk. J.W.Z.



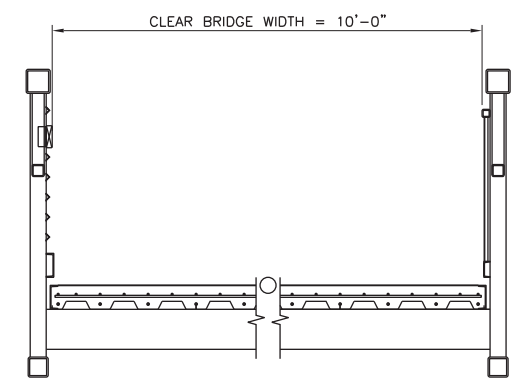
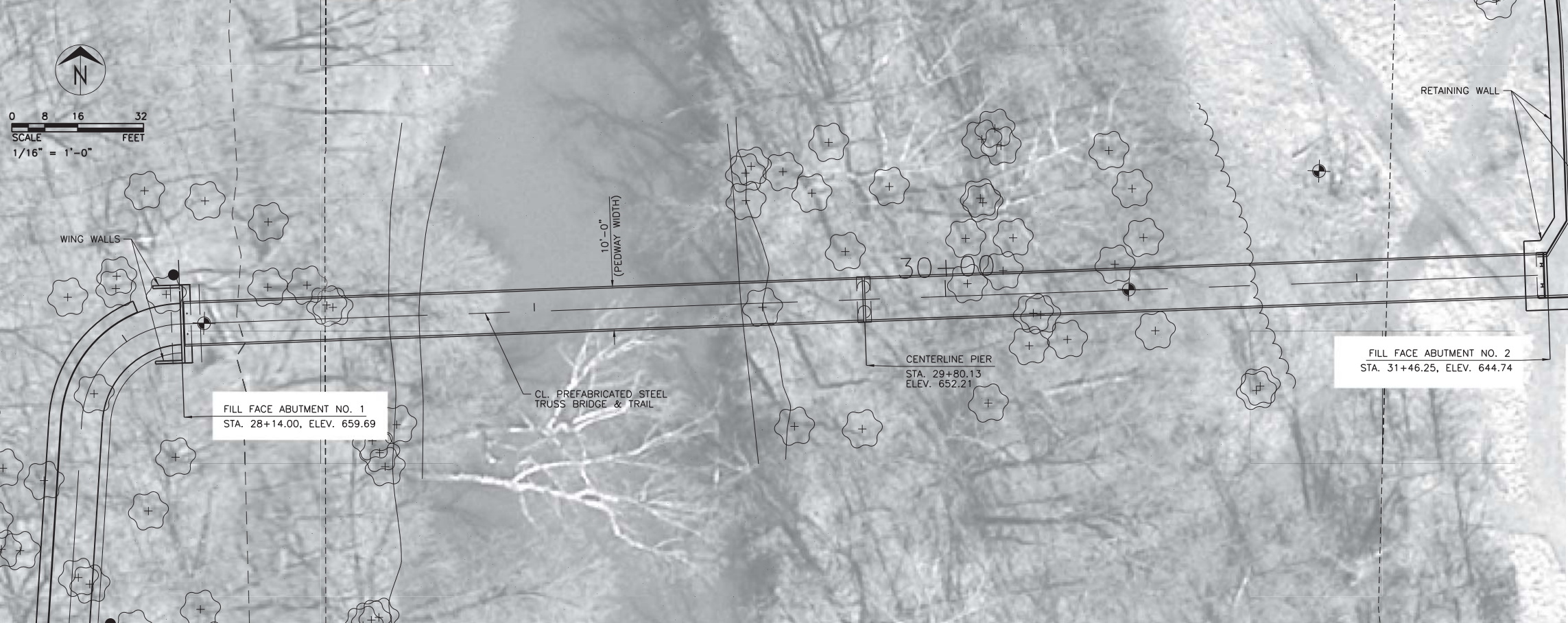




HYDROLOGIC DATA	
DRAINAGE AREA	= 52.2 SQ. MILES
DESIGN DISCHARGE	= 16,520 CU. FT. / SECOND (100 YR.)
DESIGN H.W. ELEVATION	= 643.7 FT. (100 YR.)
OVERTOPPING FLOOD DATA	
DESIGN ELEVATION	= 30 YR.
DESIGN DISCHARGE	= 12,500 CU. FT. / SECOND



**GENERAL NOTES:**  
 CONSTRUCTION SPECIFICATIONS:  
 ALL CONSTRUCTION FOR THIS PROJECT SHALL CONFORM TO THE 2004 MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND ANY JOB SPECIAL PROVISIONS.  
 DESIGN SPECIFICATIONS:  
 2009 AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES WITH 2015 INTERIM REVISIONS.  
 DESIGN UNIT STRESSES:  
 CLASS B CONCRETE (SUBSTRUCTURE)  $f'_c=3,000$  psi  
 REINFORCING STEEL (GRADE 60)  $f_y=60,000$  psi



No.	Date	By	Revision

**SHEPARD TO ROLLINS  
 TRAIL CONNECTION**  
 Bridge Plans

City of Columbia, Missouri  
 Department of Public Works

JOHN ZIMMERMANN  
 Registered Professional Engineer  
 [ENGINEER NUMBER]  
 File No. P101160118  
 Scale: As Shown  
 Date: 11/9/2016  
 Des. J.P.C.  
 Dwn. M.J.R.  
 Chk. D.J.G.