

CITY OF BLOOMINGTON



CASCADES TRAIL PHASE 2: WEST BRANCH ALONG CLUBHOUSE DRIVE FROM CASCADES PARK TO KINSER PIKE BPR 2013-2

CITY OF BLOOMINGTON

Mark Kruzan
HON. MARK KRUZAN, MAYOR

Mick Renneisen
MICK RENNEISEN, DIRECTOR, PARKS DEPT.

John Carter
JOHN CARTER, PRESIDENT, BOARD OF PARK COMMISSIONERS

WEST BRANCH
PORTION WEST OF PHASE 2
BY A FUTURE PROJECT

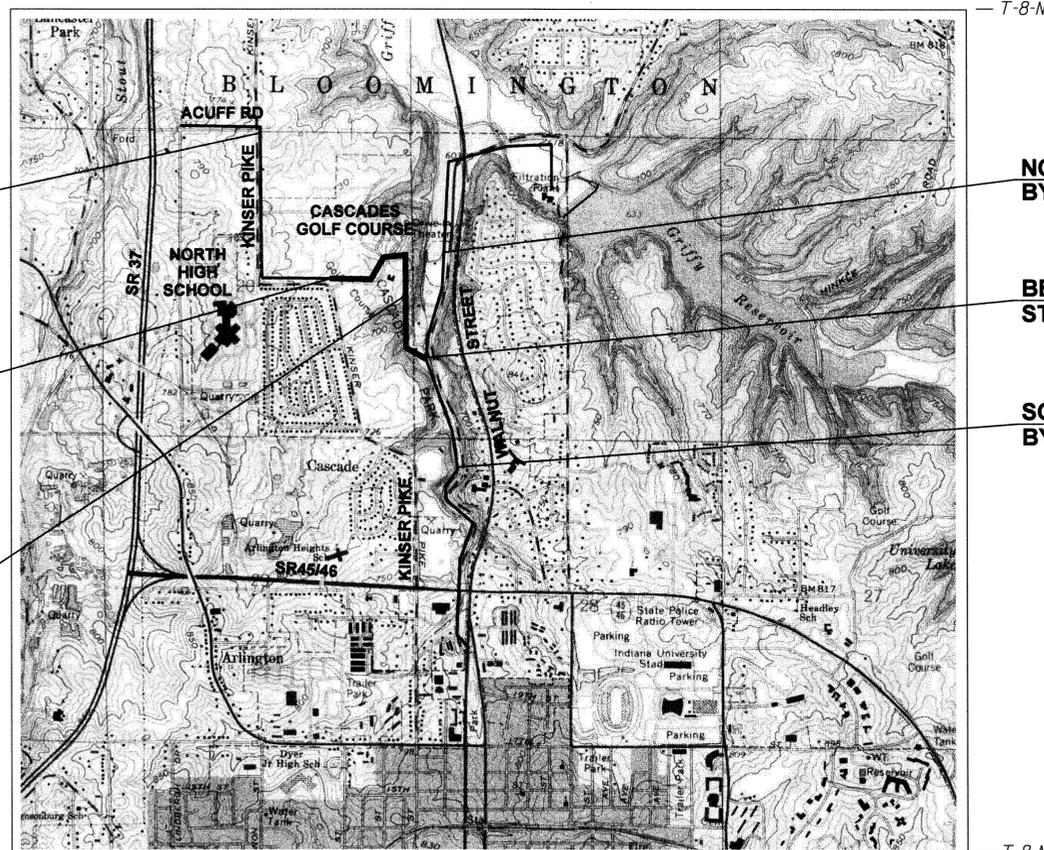
END PROJECT
STA. 535+00.00 "K"

PHASE 2
CASCADES ROAD
TO KINSER PIKE

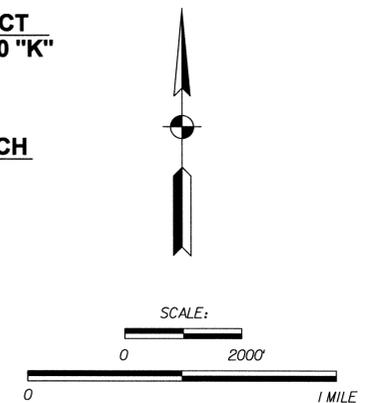
NORTH BRANCH
BY OTHERS

BEGIN PROJECT
STA. 500+00.00 "K"

SOUTH BRANCH
BY OTHERS



PROJECT LOCATION MAP
MONROE COUNTY, CITY OF BLOOMINGTON

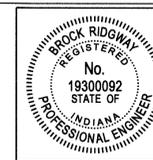


INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS. CURRENT VERSION
TO BE USED WITH THESE PLANS

PREPARED BY:



1321 Laurel Oak Drive
Avon, Indiana 46123
(317) 370-9672
www.eagleridgecivil.com



PLANS
PREPARED BY:



EAGLE RIDGE
CIVIL ENGINEERING SERVICES, LLC

(317) 370-9672
PHONE NUMBER

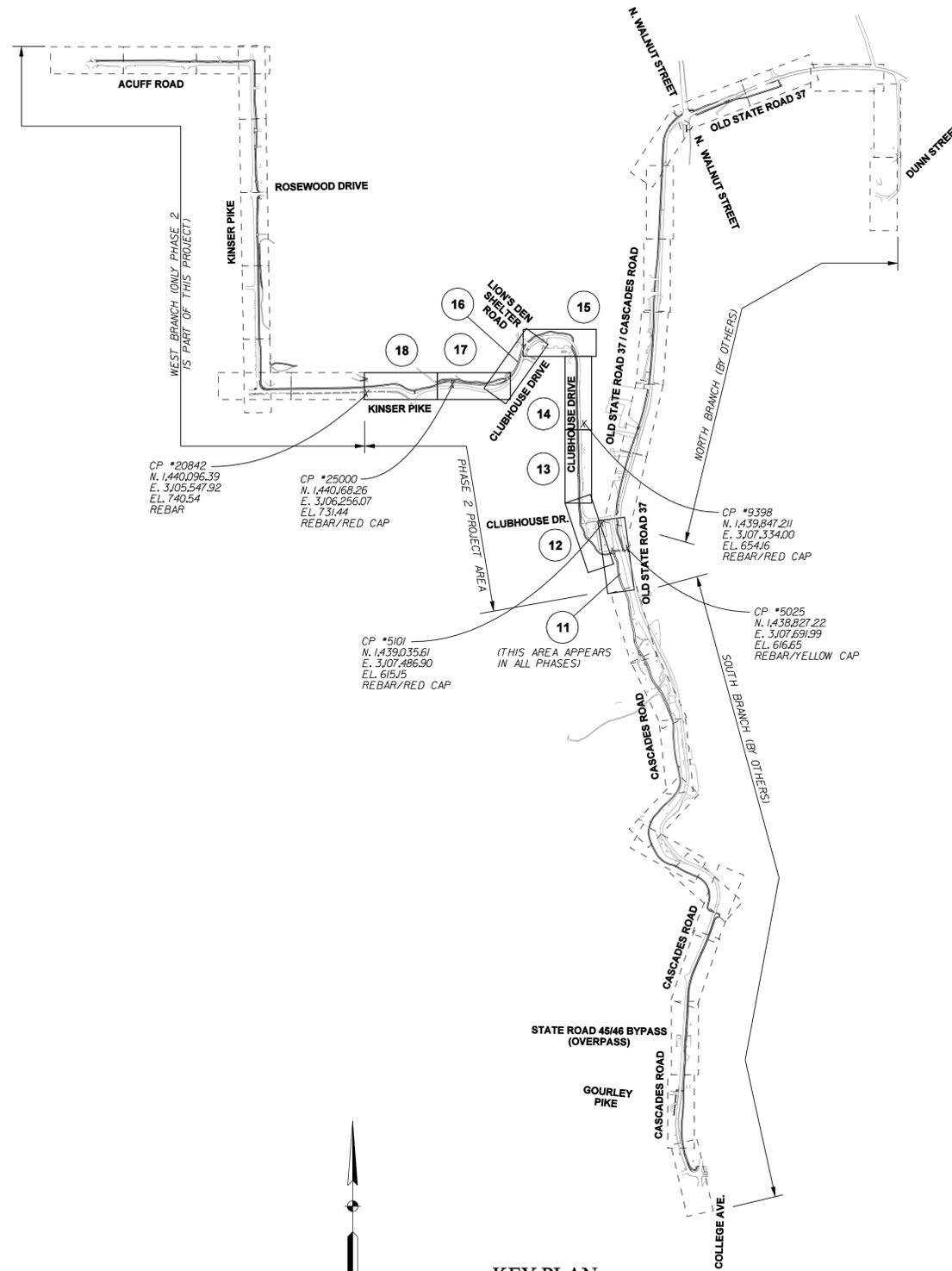
CERTIFIED BY:



8-10-2013
DATE

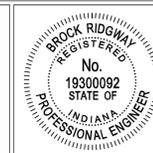
SHEETS
1 of 47

- PLAN AREAS IN FUTURE PHASES
- PLAN AREAS IN PHASE 2
- # SHEET NUMBER ON WHICH AREA IS SHOWN



KEY PLAN

Key Plan-BH2 9/7/2013 11:25:59 AM c:\p\o\ecrs\10024\dgn\index\024r003.dgn



RECOMMENDED FOR APPROVAL: *B. Ridway* 9-7-2013 DATE
 DESIGN ENGINEER
 DESIGNED: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

**CITY OF BLOOMINGTON
 CASCADES TRAIL**

**KEY PLAN /
 BENCH MARK / CONTROL DATA**

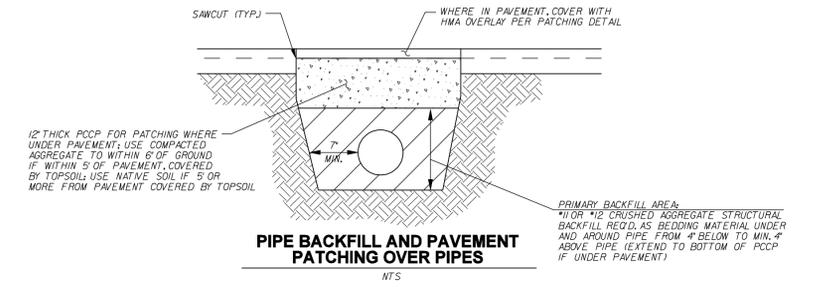
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1" = 600'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	3 of 47
CONTRACT	PROJECT
N/A	CASCADES TRAIL PHASE 1

STRUCTURE DATA TABLE

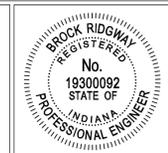
STRUCTURE NUMBER	LOCATION			SIZE	PIPE MATERIAL REQUIRED (See Note *1)	MANHOLE, CATCH BASIN, INLET, OR SPECIALTY STRUCTURE DESCRIPTION	LENGTH	SLOPE	COVER	FLOWLINE		APPROX. CASTING EL. (Note *2)	END SECTIONS (PRECAST IF ON RCP)	ADJUST CASTING TO GRADE	STRUCTURAL BACKFILL No. 11s or 12s	NATIVE STONE AS RIPRAP AT INLET END	CONCRETE CLASS A FOR STRUCTURES	CONNECT TO STR.	REMARKS		
	STATION	LEFT	RIGHT							CROSS	UP STREAM									DOWN STREAM	
				IN			FT	%	FT	ELEV.	ELEV.	ELEV.	EACH	EACH	CYS	CYD	CYS				
201	500+00	X			18	RCP CLASS III												Wall/Creek	Patch/Mortar the Existing Stone Wall to Cascades Creek, Shallow Pipe, include Concrete Toe Wall at end section		
202	505+12		X		N/A	N/A	N/A	N/A	N/A	N/A	N/A	618.4	N/A	1				N/A	Reseal per CBU Specifications		
203	505+62			X	24	DUCTILE IRON (WG)						616.7	614.8	N/A	1 ea 24"	12.2	7.5	0.5	Existing Shallow Installation under Path		
205	506+83			X	18	HDPE (WG)						613.2	612.9	615.5	N/A				206		
206	506+83		X		24	DUCTILE IRON						612.8	612.7	615.4	N/A			0.5	Exist DIP Req'd due to shallow, Special Precast Box to Fit EJIW Casting 7031, consisting of 2 each EJ#7030 Castings with Type M6 Grates and T1 Backs		
207	507+85		X	X	12	HDPE (WG)						613.6	613.5	616.3	N/A				208		
208	507+82		X		12	HDPE (WG)						613.4	612.9	616.8	N/A				206		
209	508+20			X	8	HDPE (WG)						611.6	610.3	618.8	N/A			0.5	Bypass Pumping Required. Remove Existing Manhole		
210	508+22			X	8	HDPE (WG)						611.7	N/A	N/A				0.5	Bypass Pumping Required		
211	509+07			X	39*	RCP CLASS III						616.8	614.6	N/A	1 ea 39" *	35.3	29.6	1.0	212 Grade area around end section to meet pipe. Construct Class A concrete cut off wall (8'x2'x1.5') req'd at end section. The size of this structure must be verified in the field prior to ordering pipe and end section. The size of this structure must be verified in the field prior to ordering pipe and end section.		
212	509+07		X		39*	RCP CLASS III						614.3	Exist	624.2	N/A				Exist		
213A	510+50		X		12	From CBU Material List						638.8	621.7	641.2	N/A				212		
213B	510+50			X		From CBU Material List						639.2	639.0	641.2	N/A				213A		
214A	512+00		X		12	From CBU Material List						657.3	639.0	659.8	N/A				213A		
214B	512+00			X		From CBU Material List						657.7	657.5	659.8	N/A				214A		
215A	515+00		X		12	From CBU Material List						683.9	657.4	686.5	N/A				214A		
215B	515+00			X		From CBU Material List						684.3	684.1	686.4	N/A				215A		
216	521+66			X	12	DUCTILE IRON						701.2	701.0	N/A	N/A				N/A Shallow Installation under Path, Final Location to be Field Determined		
217	521+60	X			12	DUCTILE IRON						Exist	Exist	N/A	N/A				N/A Shallow Installation under Pavement, Final Location to be Field Determined		
TOTALS													1	416	37	5.0					
													EA	CYS	CYS	CYS					

STRUCTURE NOTES:

- WG DENOTES PIPES WHICH MUST BE WATER GRADE MATERIAL DUE TO WATERMAIN PROXIMITY.
- DUE TO THE AGE OF THE SURVEY, THE EXISTING EDGE OF PAVEMENT OR GROUND ELEVATIONS ARE TO BE VERIFIED AT ALL STRUCTURES WITH CASTINGS BEFORE STRUCTURES ARE ORDERED.
- THE TREATMENT OF ANY EXISTING STORM OR SANITARY SEWER PIPE, INCLUDING REMOVAL OR ABANDONMENT IN PLACE WITH GROUTING SHALL BE INCLUDED IN THE COST OF NEW PIPES.
- QUANTITIES PRESENTED HEREIN ARE ESTIMATES FOR INFORMATION ONLY. BIDDERS SHALL BE RESPONSIBLE FOR THEIR OWN QUANTITY AND COST ESTIMATING.



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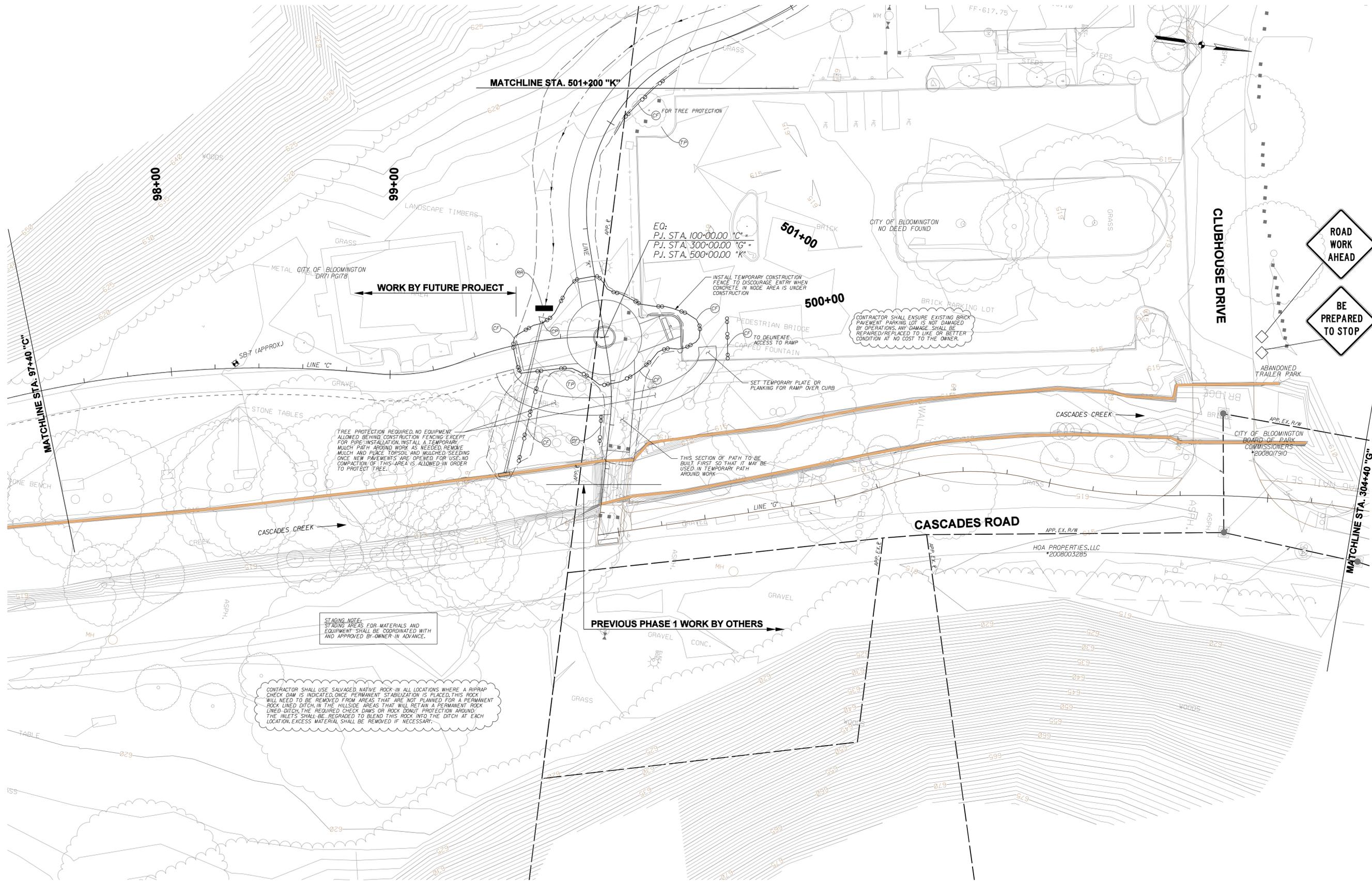


RECOMMENDED FOR APPROVAL	<i>B. Ridgway</i>	9-7-2013
	DESIGN ENGINEER	DATE
DESIGNED: BR	DRAWN: SI	
CHECKED: MT	CHECKED: BR	

**CITY OF BLOOMINGTON
CASCADES TRAIL**

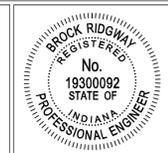
**TYPICAL DRAINAGE DETAILS /
STRUCTURE EXTENSIONS /
STRUCTURE DATA TABLE**

HORIZONTAL SCALE	BRIDGE FILE
NONE	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	5 of 47
CONTRACT	PROJECT
N/A	CASCADES TRAIL



MAINTENANCE OF TRAFFIC AND EROSION CONTROL LEGEND

●	INDOT STANDARD DRUM WITH STEADY BURN LIGHTS	⊙	DITCH INLET PROTECTION
◇	CONSTRUCTION SIGNS (SHAPE PER MUTCD)	⊙	CULVERT END PROTECTION
⊙	INLET PROTECTION, CURB	⊙	TEMPORARY 4 CONSTRUCTION FENCE
⊙	TEMPORARY CHECK DAM, RETEVMENT RIPRAP	⊙	TEMPORARY SILT FENCING



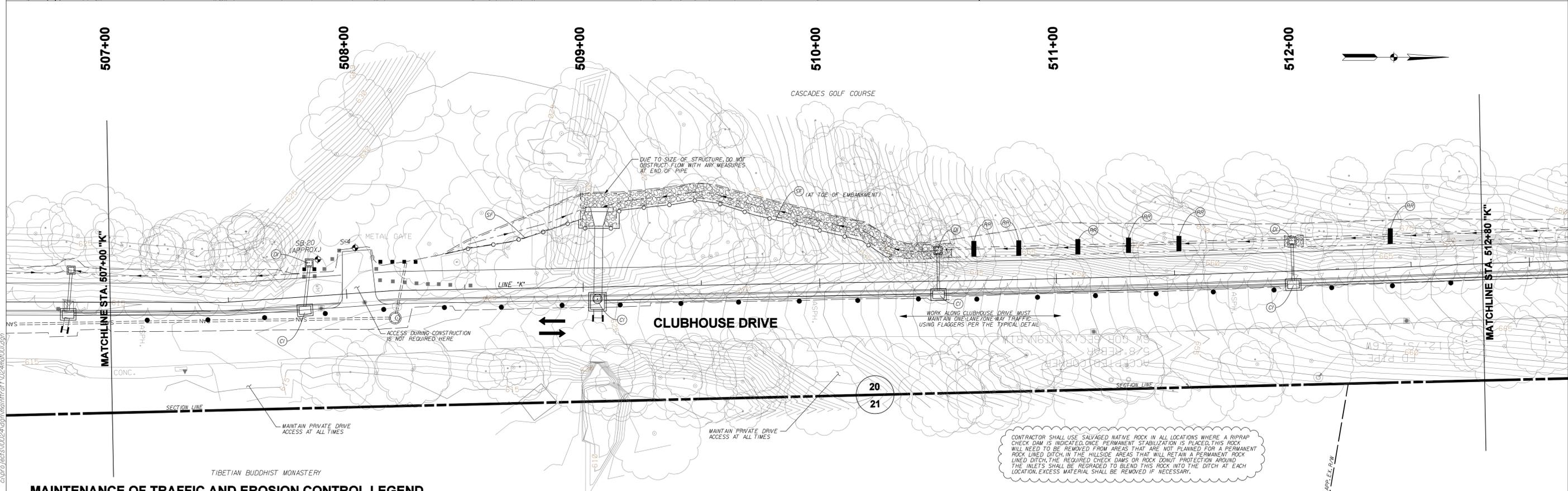
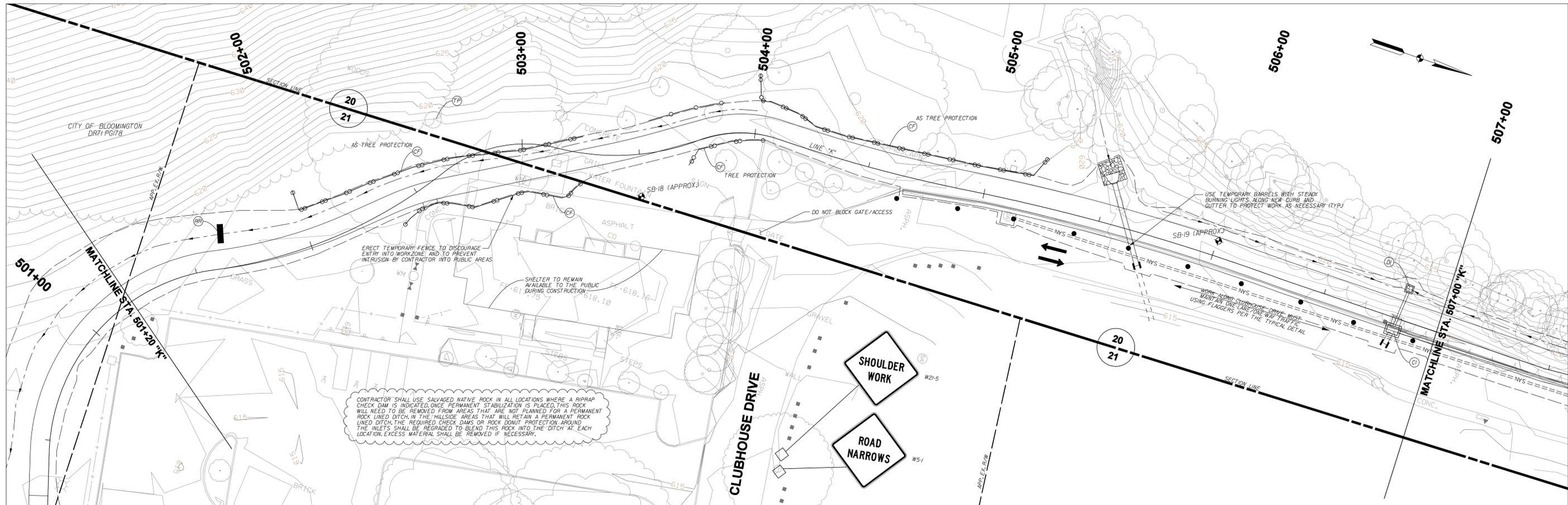
RECOMMENDED FOR APPROVAL	<i>B. Ridman</i>	9-7-2013	
DESIGNED:	BR	DRAWN:	SI
CHECKED:	MT	CHECKED:	BR

CITY OF BLOOMINGTON
CASCADES TRAIL

MAINTENANCE OF TRAFFIC/ACCESS AND EROSION CONTROL PLANS

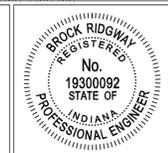
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1" = 20'-0"	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
N/A	6 of 47
CONTRACT	PROJECT
N/A	CASCADES TRAIL

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MAINTENANCE OF TRAFFIC AND EROSION CONTROL LEGEND

- INDOT STANDARD DRUM WITH STEADY BURN LIGHTS
- ◇ CONSTRUCTION SIGNS (SHAPE PER MUTCD)
- ▬ TEMPORARY CHECK DAM, REVETMENT RIPRAP
- ⊙ INLET PROTECTION, CURB
- ⊙ DITCH INLET PROTECTION
- ⊙ CULVERT END PROTECTION
- ⊙ TEMPORARY 4 CONSTRUCTION FENCE
- ⊙ TEMPORARY SILT FENCING
- ➔ TRAFFIC FLOW DIRECTION



RECOMMENDED FOR APPROVAL: *B. Ridsma* DESIGN ENGINEER 9-7-2013 DATE

DESIGNED: BR DRAWN: SI

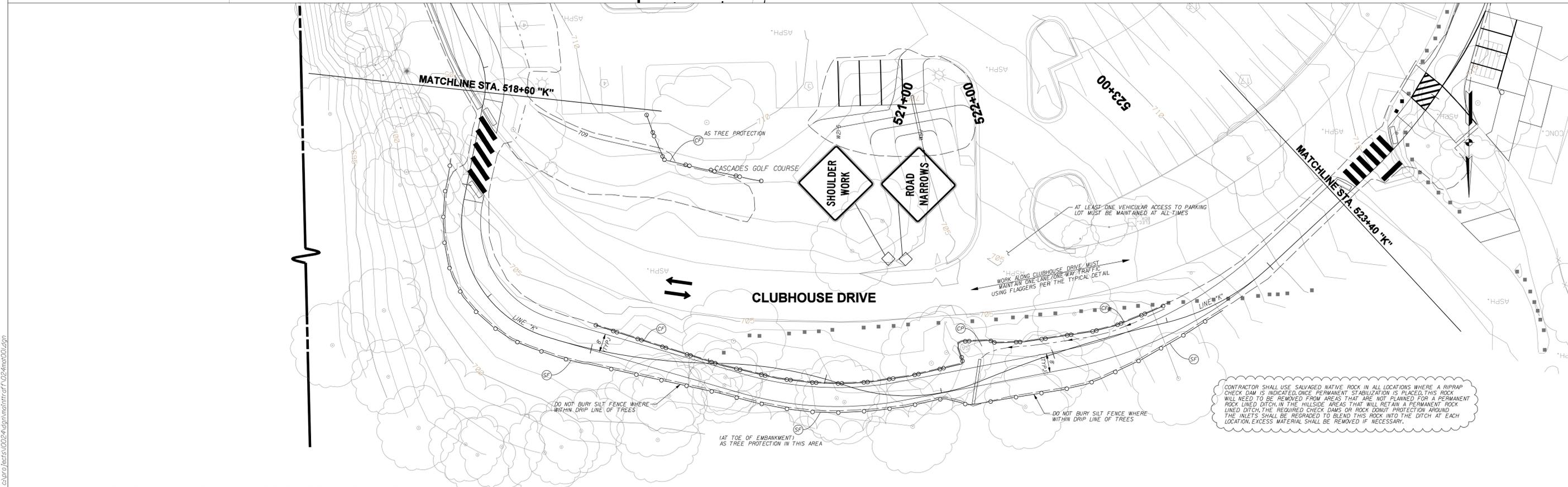
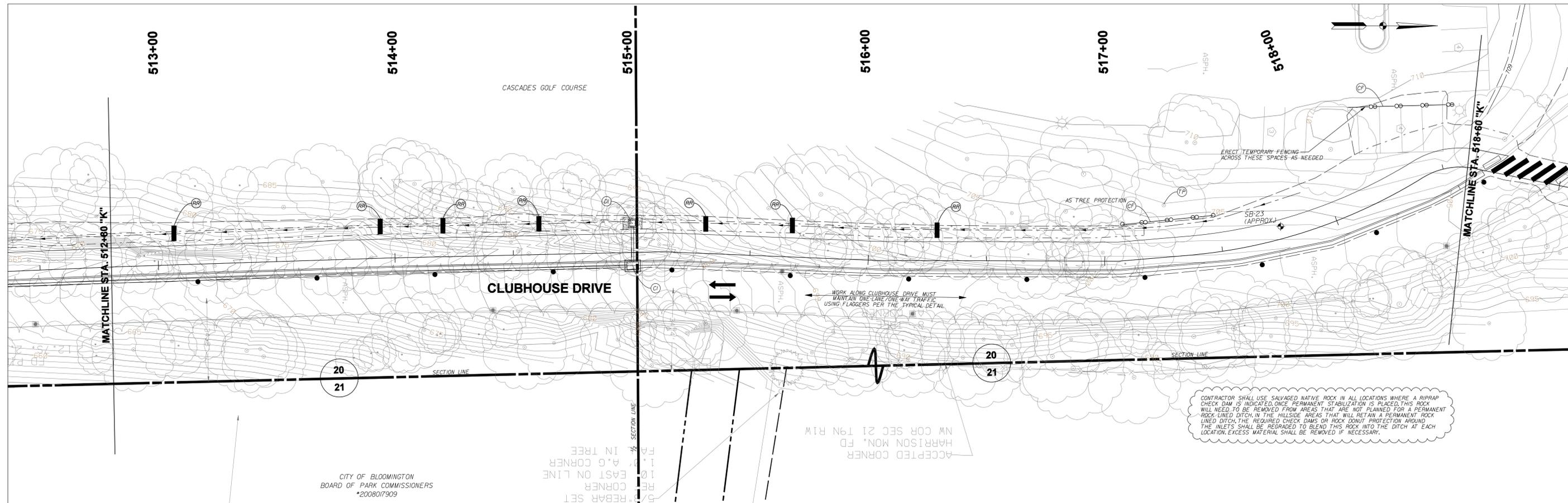
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**CITY OF BLOOMINGTON
CASCADES TRAIL**

**MAINTENANCE OF TRAFFIC/ACCESS
AND EROSION CONTROL PLANS**

HORIZONTAL SCALE F = 20'-0"	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 7 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL

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MAINTENANCE OF TRAFFIC AND EROSION CONTROL LEGEND

●	INDOT STANDARD DRUM WITH STEADY BURN LIGHTS	DI	DITCH INLET PROTECTION
◇	CONSTRUCTION SIGNS (SHAPE PER MUTCD)	CP	CULVERT END PROTECTION
RR	TEMPORARY CHECK DAM, REVETMENT RIPRAP	CF	TEMPORARY 4 CONSTRUCTION FENCE
⊙	INLET PROTECTION, CURB	SF	TEMPORARY SILT FENCING
		→	TRAFFIC FLOW DIRECTION



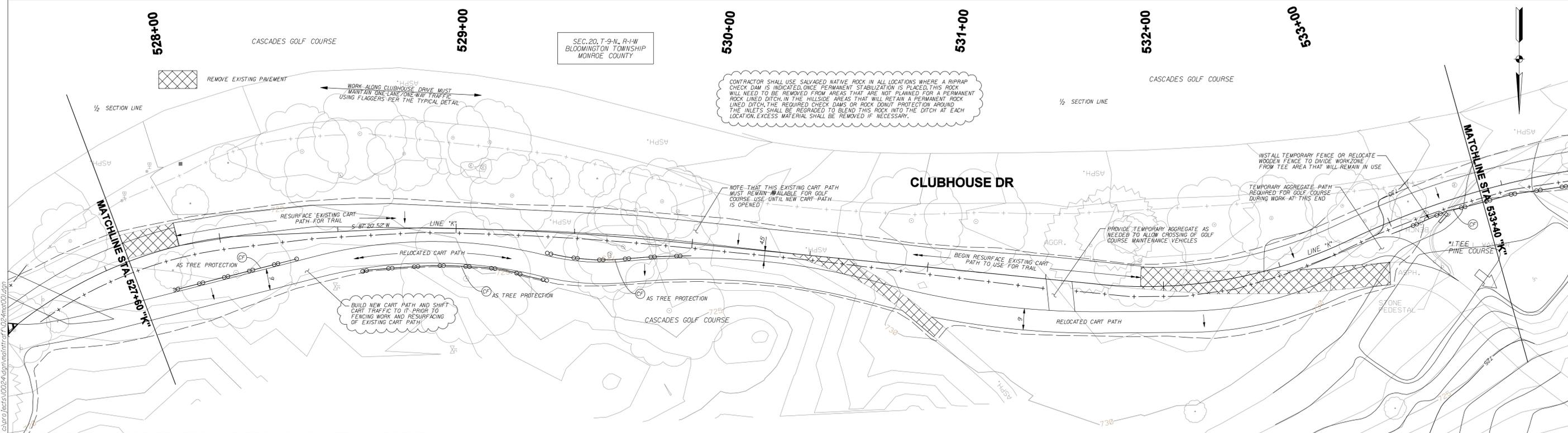
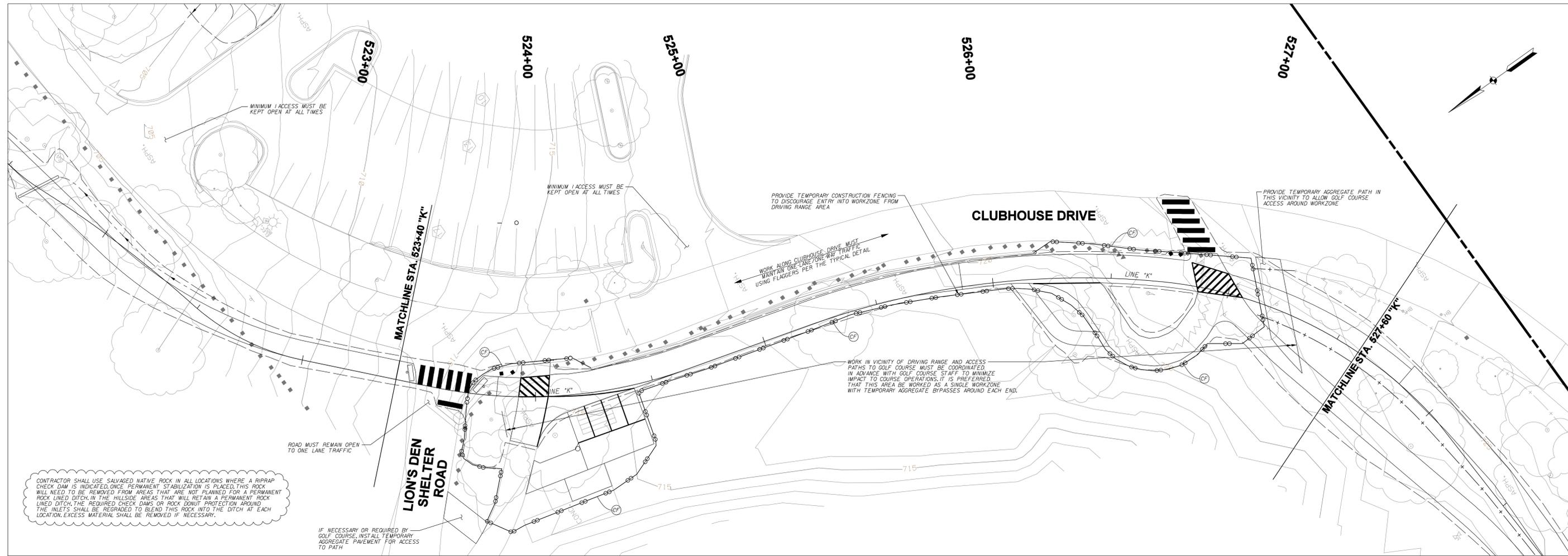
RECOMMENDED FOR APPROVAL	<i>B. Ridgway</i>	DESIGN ENGINEER	9-7-2013
DESIGNED:	BR	DRAWN:	SI
CHECKED:	MT	CHECKED:	BR

**CITY OF BLOOMINGTON
CASCADES TRAIL**

**MAINTENANCE OF TRAFFIC/ACCESS
AND EROSION CONTROL PLANS**

HORIZONTAL SCALE	BRIDGE FILE
F = 20'-0"	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	8 of 47
CONTRACT	PROJECT
N/A	CASCADES TRAIL

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MAINTENANCE OF TRAFFIC AND EROSION CONTROL LEGEND

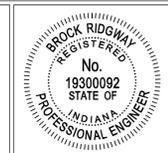
●	INDOT STANDARD DRUM WITH STEADY BURN LIGHTS	DI	DITCH INLET PROTECTION
◇	CONSTRUCTION SIGNS (SHAPE PER MUTCD)	CP	CULVERT END PROTECTION
RR	TEMPORARY CHECK DAM, REVETMENT RIPRAP	CF	TEMPORARY 4 CONSTRUCTION FENCE
⊙	INLET PROTECTION, CURB	SF	TEMPORARY SILT FENCING
→		→	TRAFFIC FLOW DIRECTION

SEC. 20, T-9-N, R-1-W
BLOOMINGTON TOWNSHIP
MONROE COUNTY

CONTRACTOR SHALL USE SALVAGED NATIVE ROCK IN ALL LOCATIONS WHERE A RIPRAP CHECK DAM IS INDICATED. ONCE PERMANENT STABILIZATION IS PLACED, THIS ROCK WILL NEED TO BE REMOVED FROM AREAS THAT ARE NOT PLANNED FOR A PERMANENT ROCK LINED DITCH. IN THE HILLSIDE AREAS THAT WILL RETAIN A PERMANENT ROCK LINED DITCH, THE REQUIRED CHECK DAMS OR ROCK DOWN PROTECTION AROUND THE INLETS SHALL BE REGRADED TO BLEND THIS ROCK INTO THE DITCH AT EACH LOCATION. EXCESS MATERIAL SHALL BE REMOVED IF NECESSARY.

NOTE THAT THIS EXISTING CART PATH MUST REMAIN AVAILABLE FOR GOLF COURSE USE UNTIL NEW CART PATH IS OPENED.

BUILD NEW CART PATH AND SHIFT CART TRAFFIC TO IT PRIOR TO FENCING WORK AND RESURFACING OF EXISTING CART PATH.



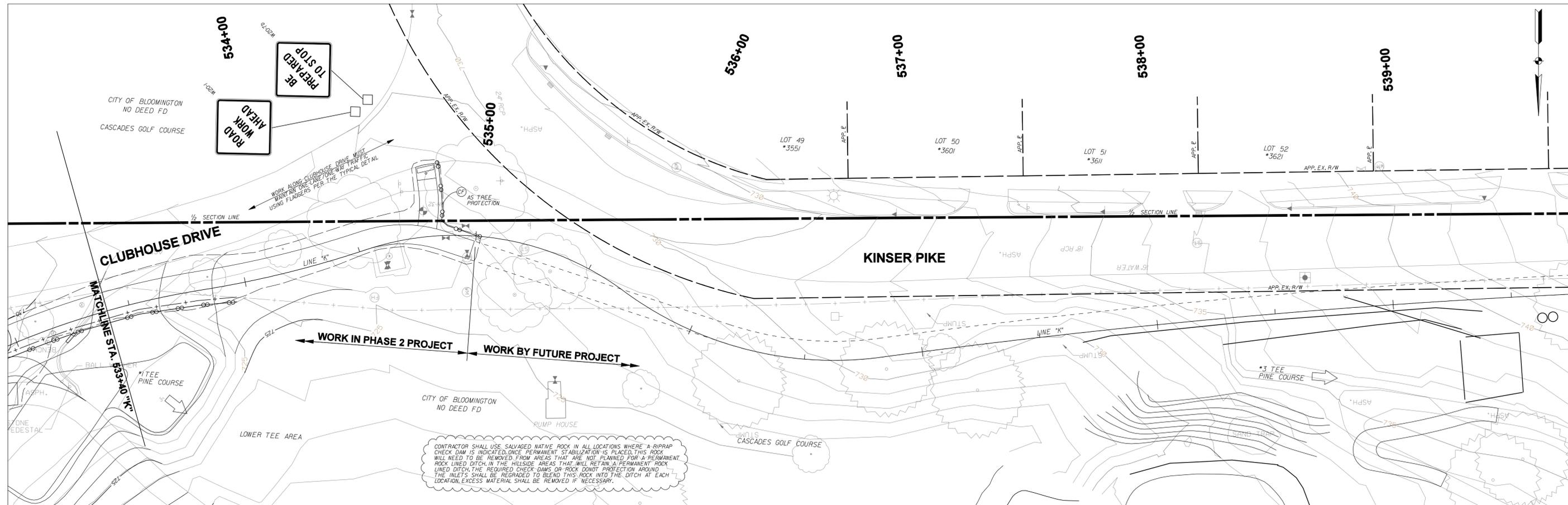
RECOMMENDED FOR APPROVAL	<i>B. Dumas</i>	DESIGN ENGINEER	9-7-2013
DESIGNED:	BR	DRAWN:	SI
CHECKED:	MT	CHECKED:	BR

**CITY OF BLOOMINGTON
CASCADES TRAIL**

**MAINTENANCE OF TRAFFIC/ACCESS
AND EROSION CONTROL PLANS**

HORIZONTAL SCALE	BRIDGE FILE
F = 20'-0"	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	9 of 47
CONTRACT	PROJECT
N/A	CASCADES TRAIL

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CONSTRUCTION SIGN AND BARRICADE SUMMARY			
ITEM	CODE	SUBTOTAL/HIGHEST NEED	PAY ITEM QTY.
BARRICADE 110' EAJ	-	8 EA.	
CONSTRUCTION SIGNS, A			
ROAD NARROWS	W5-1	2 EA.	
SHOULDER WORK	W2-5	2 EA.	
ROAD WORK AHEAD	XW20-1	2 EA.	
ROAD WORK 300 FT	XW20-1	2 EA.	
FLAGGER AHEAD	XW20-7a	2 EA.	
BE PREPARED TO STOP	XW20-7b	4 EA.	
		14 EA.	

PERMIT IN EFFECT:
 THIS PROJECT IS SUBJECT TO THE CONDITIONS OF ITS CURRENT EROSION CONTROL (RULE 5) PERMIT. CONTRACTOR WILL IMPLEMENT AND COMPLY WITH THAT PERMIT ON BEHALF OF THE OWNER. IF FIELD CONDITIONS WARRANT, ADDITIONAL MEASURES OR MODIFICATIONS OF THE MEASURES MAY BE NEEDED.

MAINTENANCE OF TRAFFIC REQUIREMENTS:

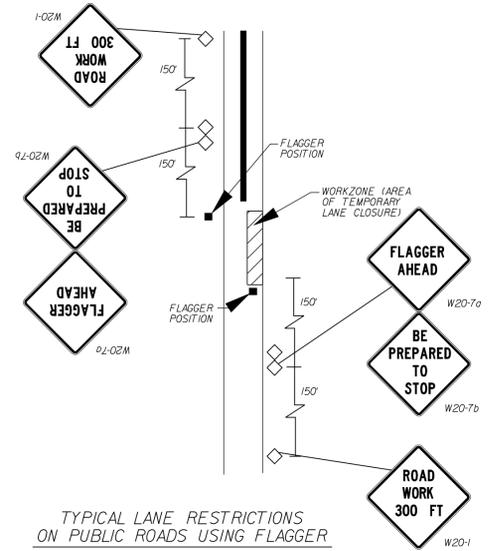
- ROAD CLOSURES: FULL CLOSURE OF CLUBHOUSE DRIVE WILL NOT BE PERMITTED.
- LANE RESTRICTIONS WILL BE ALLOWED FOR DRIVE REPLACEMENT AND PATH CONSTRUCTION, BUT ONLY DURING DAYLIGHT WORK HOURS. NO OVERNIGHT RESTRICTIONS ARE PERMITTED.
- FLAGGER OPERATIONS AND TEMPORARY SIGNAGE IN ACCORDANCE WITH INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ARE REQUIRED FOR ALL LANE RESTRICTIONS.
- ALL SIGNS TO BE MOUNTED ON STANDARDS.
- ALL SIGNS IN ACCORDANCE WITH INDOT STANDARDS AND INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL SIGNS, BARRICADES AND DRUMS TO BE MOUNTED WITH A TYPE C (STEADY BURN) WARNING LIGHT AND MAINTAINED DUSK TO DAWN.

EROSION CONTROL REQUIREMENTS:

- INSTALL EROSION CONTROL MEASURES PRIOR TO ACTIVITIES UPSTREAM/UPSLOPE OF THAT PROTECTION.
- INSPECT ADJACENT STREETS DAILY. CLEAN PUBLIC STREETS AS NEEDED OF ANY CONSTRUCTION DEBRIS OR SPILLAGE.
- SEE TECHNICAL SPECIFICATION "PROTECTION OF ENVIRONMENT" FOR ADDITIONAL REQUIREMENTS.

MAINTENANCE OF TRAFFIC AND EROSION CONTROL LEGEND

- INDOT STANDARD DRUM WITH STEADY BURN LIGHTS
- ➔ TRAFFIC FLOW DIRECTION
- ◇ CONSTRUCTION SIGNS (SHAPE PER MUTCD)
- ⊙ INLET PROTECTION, CURB
- ⊙ DITCH INLET PROTECTION
- ⊙ CULVERT END PROTECTION
- ⊙ TEMPORARY 4 CONSTRUCTION FENCE
- ⊙ TEMPORARY SILT FENCING
- ⊙ TEMPORARY CHECK DAM, REVETMENT RIPRAP



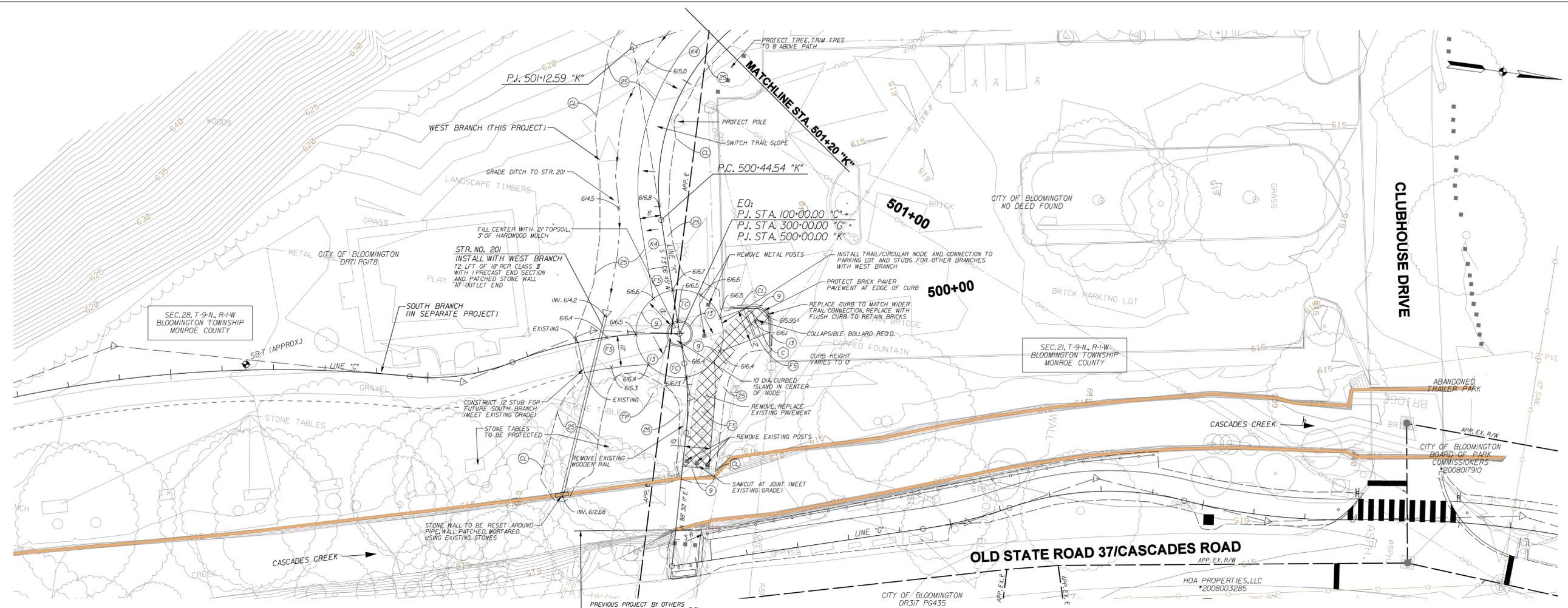
TYPICAL LANE RESTRICTIONS ON PUBLIC ROADS USING FLAGGER
 NOTE: DISTANCES SHALL BE ADJUSTED TO FIELD CONDITIONS WHERE SPACE IS LIMITED. (FOR USE DURING PHASE 1)

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 RECOMMENDED FOR APPROVAL: *B. Ridgway* 9-7-2013 DATE
 DESIGNER: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

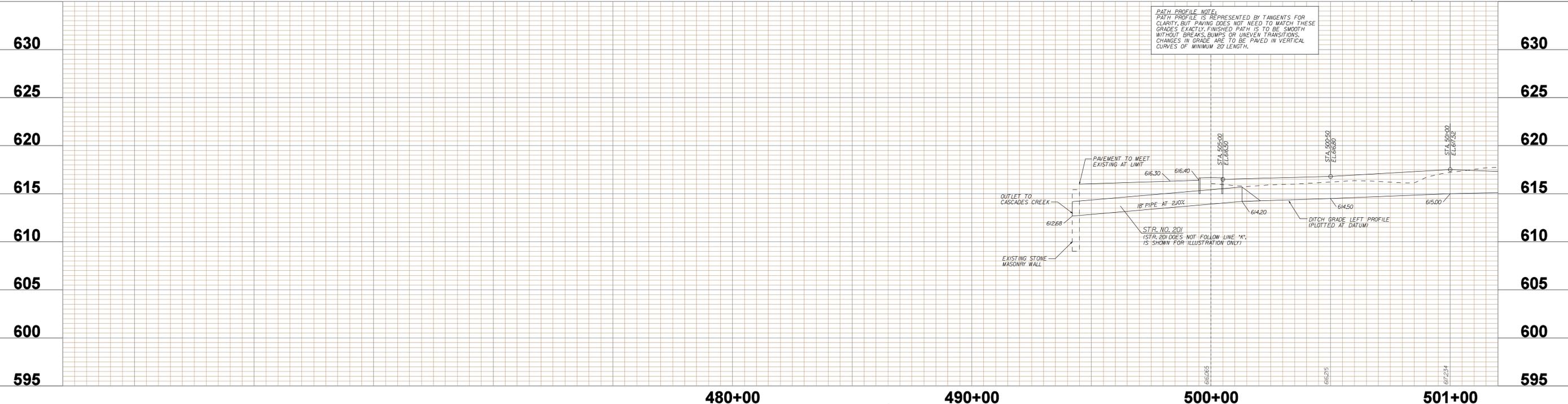
CITY OF BLOOMINGTON
CASCADES TRAIL
MAINTENANCE OF TRAFFIC/ACCESS AND EROSION CONTROL PLANS

HORIZONTAL SCALE F = 20'-0"	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 10 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



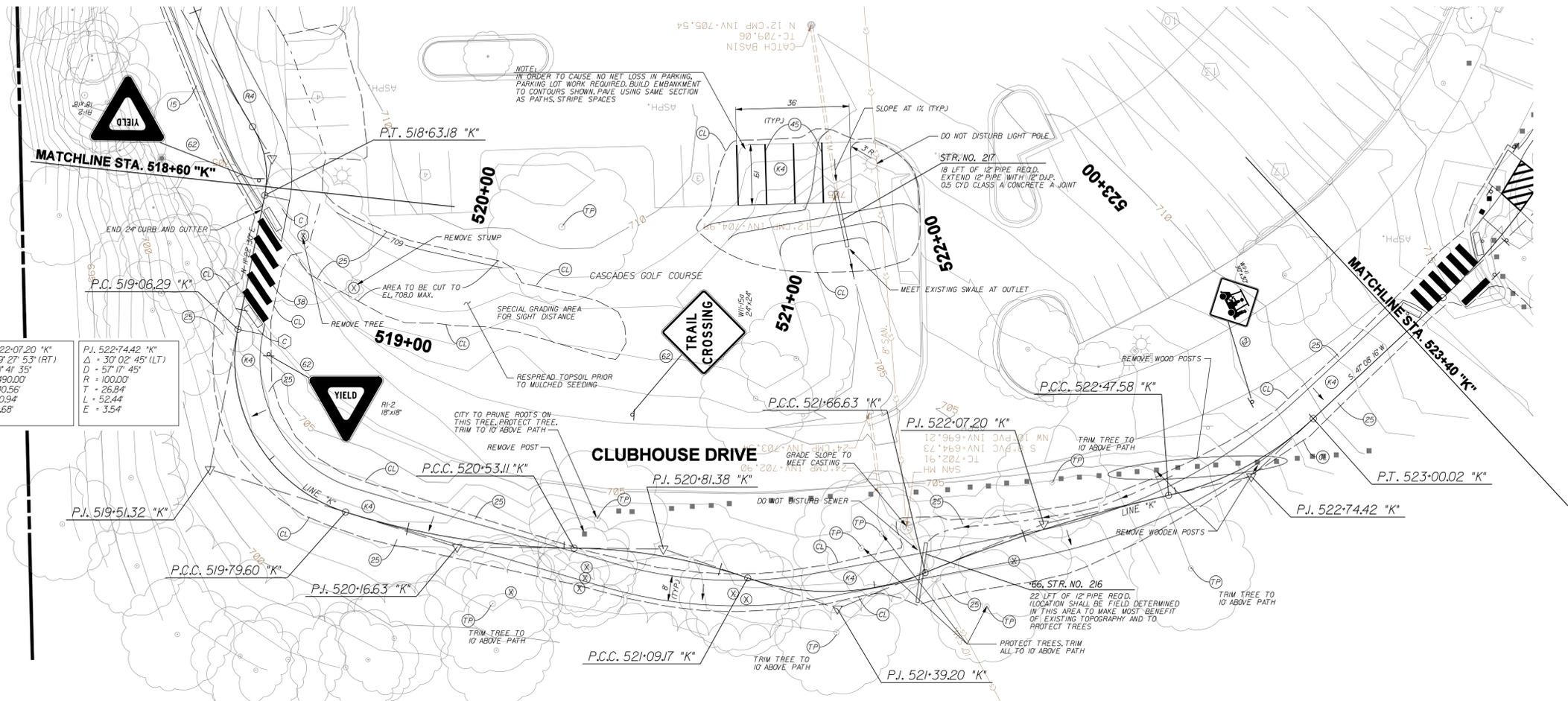
EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATED IN ACCORDANCE WITH AVAILABLE RECORDS AND PHYSICAL EVIDENCE. OTHER UTILITIES MAY BE PRESENT. ACTUAL LOCATIONS AND ELEVATIONS ARE TO BE DETERMINED BY CONTRACTOR.

SEE SHEET 2 FOR LEGEND



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480+00	490+00	500+00	501+00									
				CITY OF BLOOMINGTON CASCADES TRAIL								
RECOMMENDED FOR APPROVAL: <i>B. Ridgway</i> DESIGN ENGINEER DATE: 9-7-2013				TRAIL PLAN AND PROFILE LINE "K"								
DESIGNED: BR DRAWN: SI		CHECKED: MT CHECKED: BR		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE 1" = 20'-0"</td> <td>BRIDGE FILE N/A</td> </tr> <tr> <td>VERTICAL SCALE 1" = 5'-0"</td> <td>DESIGNATION</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEETS 11 of 47</td> </tr> <tr> <td>CONTRACT</td> <td>PROJECT CASCADES TRAIL</td> </tr> </table>	HORIZONTAL SCALE 1" = 20'-0"	BRIDGE FILE N/A	VERTICAL SCALE 1" = 5'-0"	DESIGNATION	SURVEY BOOK	SHEETS 11 of 47	CONTRACT	PROJECT CASCADES TRAIL
HORIZONTAL SCALE 1" = 20'-0"	BRIDGE FILE N/A											
VERTICAL SCALE 1" = 5'-0"	DESIGNATION											
SURVEY BOOK	SHEETS 11 of 47											
CONTRACT	PROJECT CASCADES TRAIL											



P.I. 519-51.32 "K" Δ = 84'00" 22" (LT) D = 114'35" 30" R = 500.00 T = 45.03' L = 73.31' E = 17.28'	P.I. 520-16.63 "K" Δ = 16'50" 52" (LT) D = 22'55" 06" R = 250.00 T = 37.02' L = 73.51' E = 2.73'	P.I. 520-81.38 "K" Δ = 18'21" 10" (RT) D = 32'44" 26" R = 800.00 T = 28.27' L = 56.06' E = 2.27'	P.I. 521-39.20 "K" Δ = 41'09" 20" (RT) D = 71'37" 11" R = 175.00 T = 30.03' L = 57.46' E = 5.45'	P.I. 522-07.20 "K" Δ = 9'27" 53" (RT) D = 11'41" 35" R = 490.00 T = 40.56' L = 80.94' E = 1.68'	P.I. 522-74.42 "K" Δ = 30'02" 45" (LT) D = 57'17" 45" R = 1000.00 T = 26.84' L = 52.44' E = 3.54'
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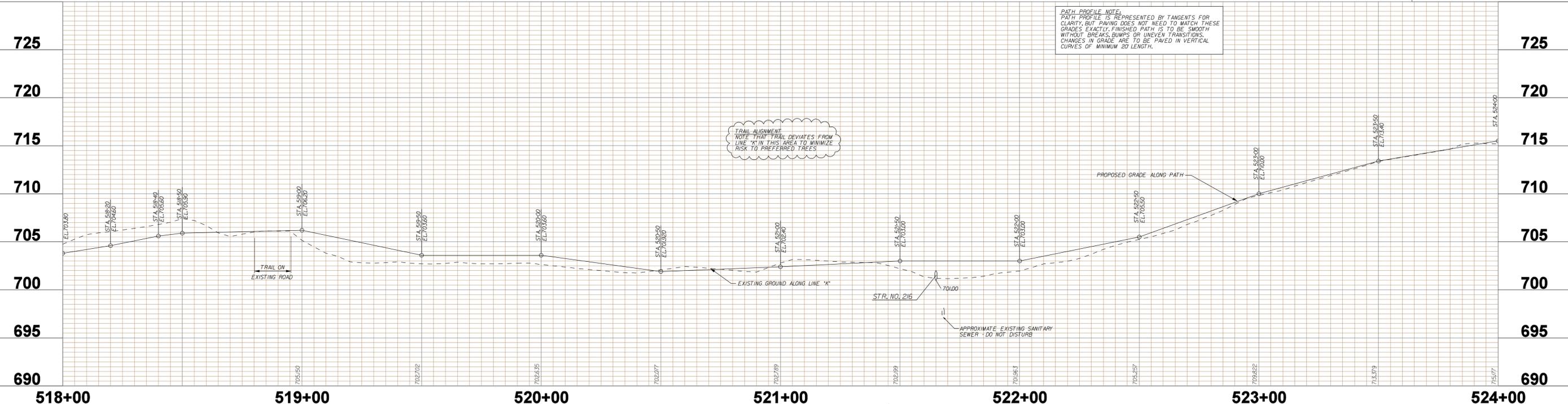
SEC. 21, T-9-N, R-1-W
BLOOMINGTON TOWNSHIP
MONROE COUNTY

SEC. 20, T-9-N, R-1-W
BLOOMINGTON TOWNSHIP
MONROE COUNTY

EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATED IN ACCORDANCE WITH AVAILABLE RECORDS AND PHYSICAL EVIDENCE. OTHER UTILITIES MAY BE PRESENT. ACTUAL LOCATIONS AND ELEVATIONS ARE TO BE DETERMINED BY CONTRACTOR.

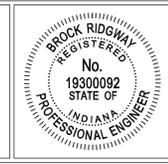
PATH PROFILE NOTE:
PATH PROFILE IS REPRESENTED BY TANGENTS FOR CLARITY, BUT PAVING DOES NOT NEED TO MATCH THESE GRADES EXACTLY. FINISHED PATH IS TO BE SMOOTH WITHOUT BREAKS, BUMPS OR UNEVEN TRANSITIONS. CHANGES IN GRADE ARE TO BE PAVED IN VERTICAL CURVES OF MINIMUM 30 LENGTH.

TRAIL ALIGNMENT
NOTE THAT TRAIL DEVIATES FROM LINE "K" IN THIS AREA TO MINIMIZE RISK TO PREFERRED TREES.



SEE SHEET 2 FOR LEGEND

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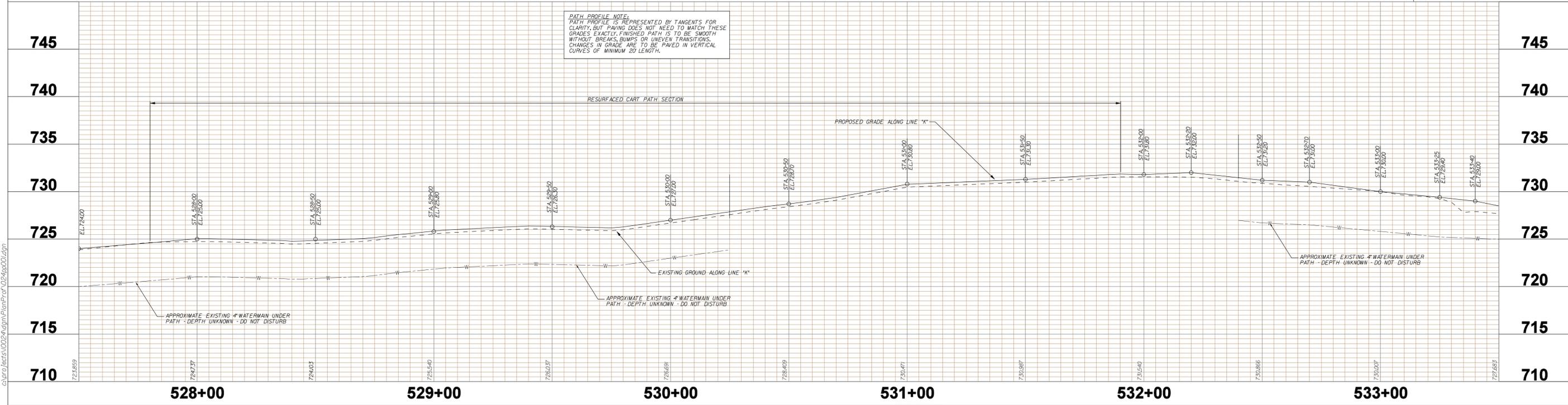
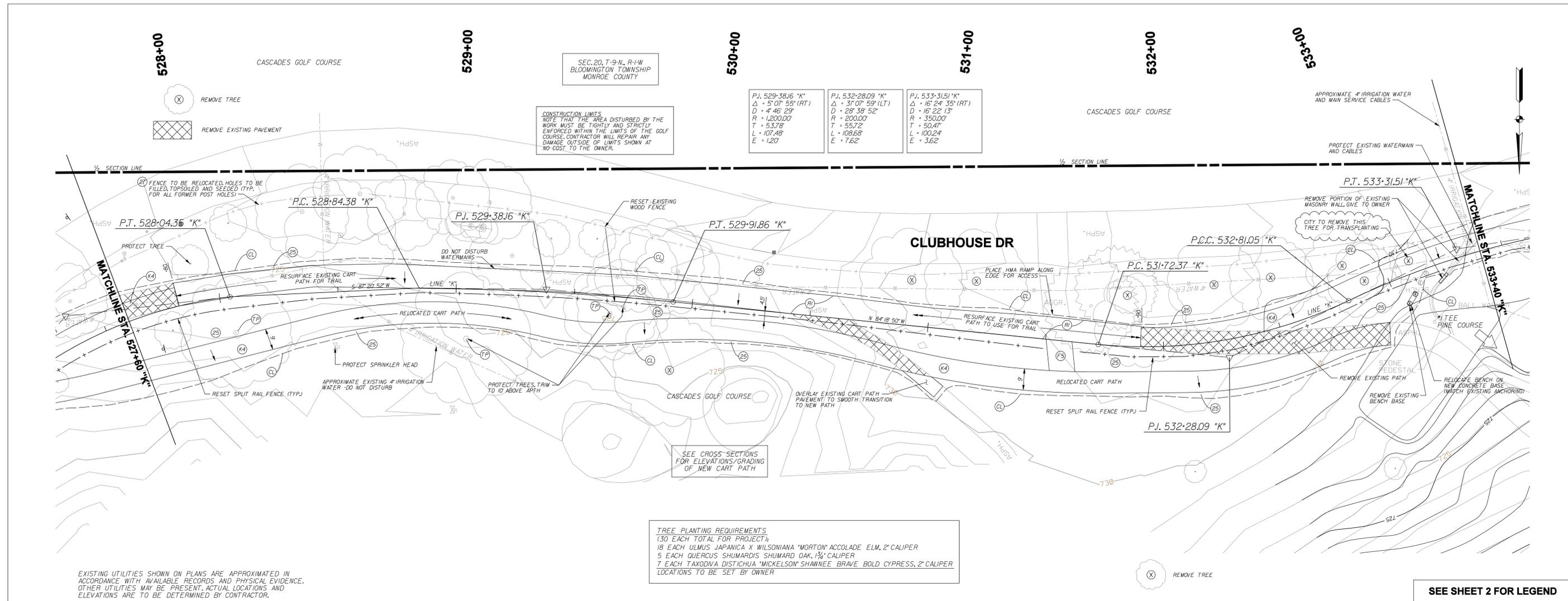
RECOMMENDED FOR APPROVAL: *B. Swain* DESIGN ENGINEER 9-7-2013 DATE

DESIGNED: BR DRAWN: SI
CHECKED: MT CHECKED: BR

CITY OF BLOOMINGTON
CASCADDES TRAIL

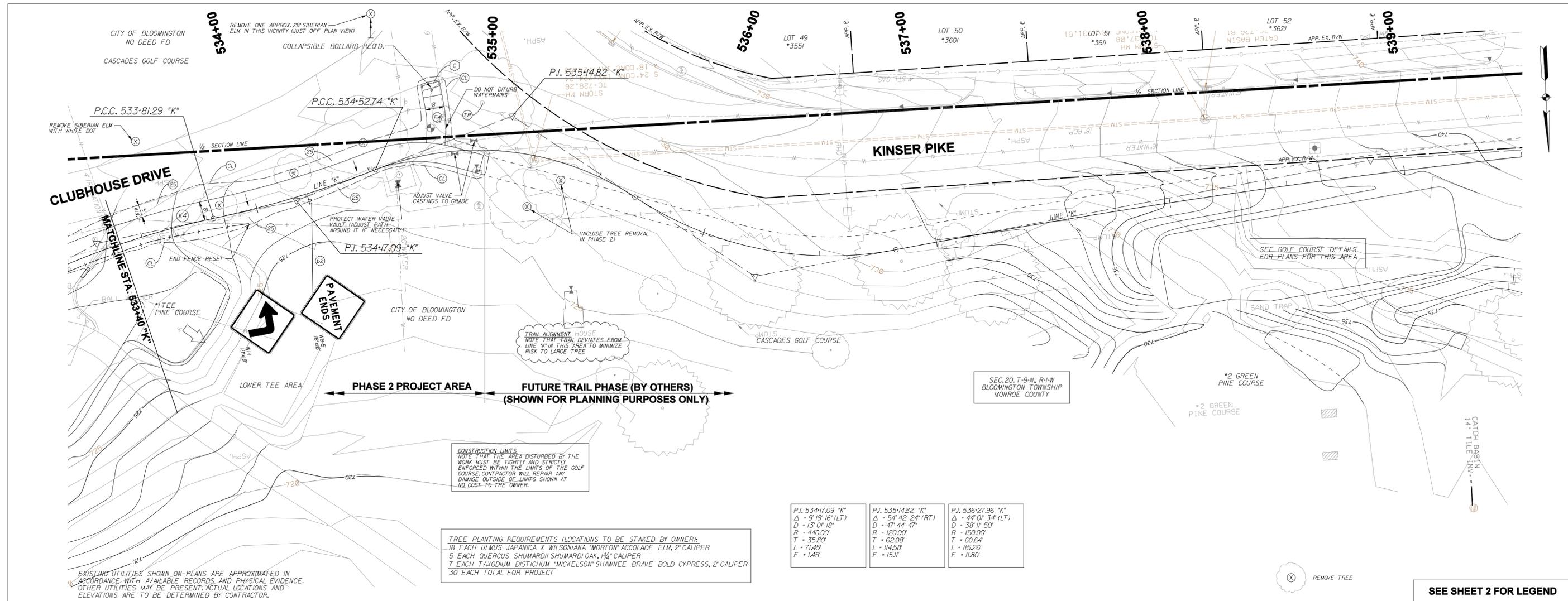
TRAIL PLAN AND PROFILE
LINE "K"

HORIZONTAL SCALE 1" = 20'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION
SURVEY BOOK	SHEETS 15 of 47
CONTRACT	PROJECT CASCADDES TRAIL

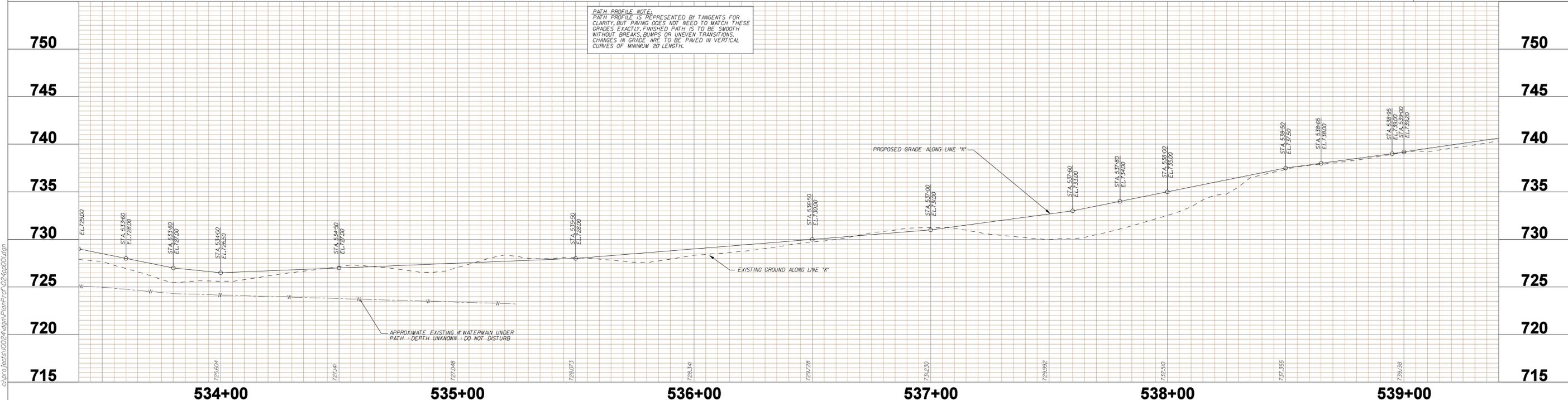


	RECOMMENDED FOR APPROVAL: <i>B. King</i> DESIGN ENGINEER 9-7-2013 DATE	CITY OF BLOOMINGTON CASCADES TRAIL	HORIZONTAL SCALE: 1" = 20'-0" VERTICAL SCALE: 1" = 5'-0"	BRIDGE FILE: N/A DESIGNATION:
	DESIGNED: BR DRAWN: SI CHECKED: MT CHECKED: BR		TRAIL PLAN AND PROFILE LINE "K"	SURVEY BOOK: 17 of 47 SHEETS CONTRACT: PROJECT CASCADERS TRAIL

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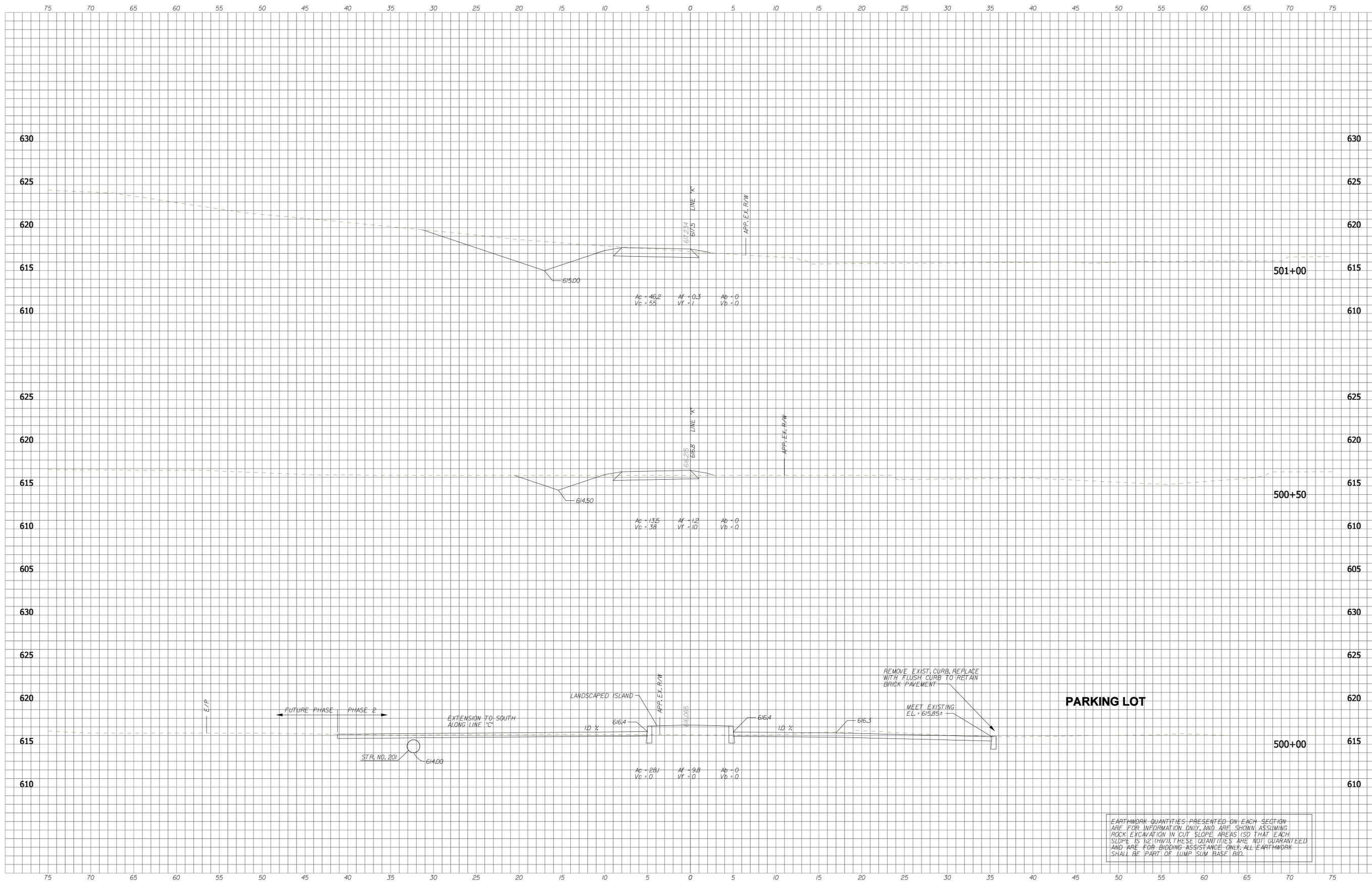


P.J. 534+17.09 "K" Δ = 9' 18" 16' (LT) D = 15' 01" 18" R = 440.00 T = 35.80 L = 71.45 E = 1.45	P.J. 535+14.82 "K" Δ = 54' 42" 24" (RT) D = 47' 44" 47" R = 120.00 T = 62.08 L = 114.58 E = 15.11	P.J. 536+27.96 "K" Δ = 44' 01" 34" (LT) D = 38' 11" 50" R = 150.00 T = 60.64 L = 115.26 E = 11.80
---	--	--



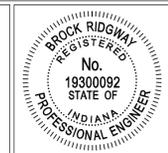
	RECOMMENDED FOR APPROVAL: <i>B. Rodman</i> DESIGN ENGINEER 9-7-2013 DATE	CITY OF BLOOMINGTON CASCADES TRAIL	HORIZONTAL SCALE: 1" = 20'-0" VERTICAL SCALE: 1" = 5'-0" SURVEY BOOK: _____ CONTRACT: _____	BRIDGE FILE: N/A DESIGNATION: _____ SHEETS: 18 of 47 PROJECT: CASCADES TRAIL
	DESIGNED: BR DRAWN: SI CHECKED: MT CHECKED: BR		TRAIL PLAN AND PROFILE LINE "K"	

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EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 1:2 (H/V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

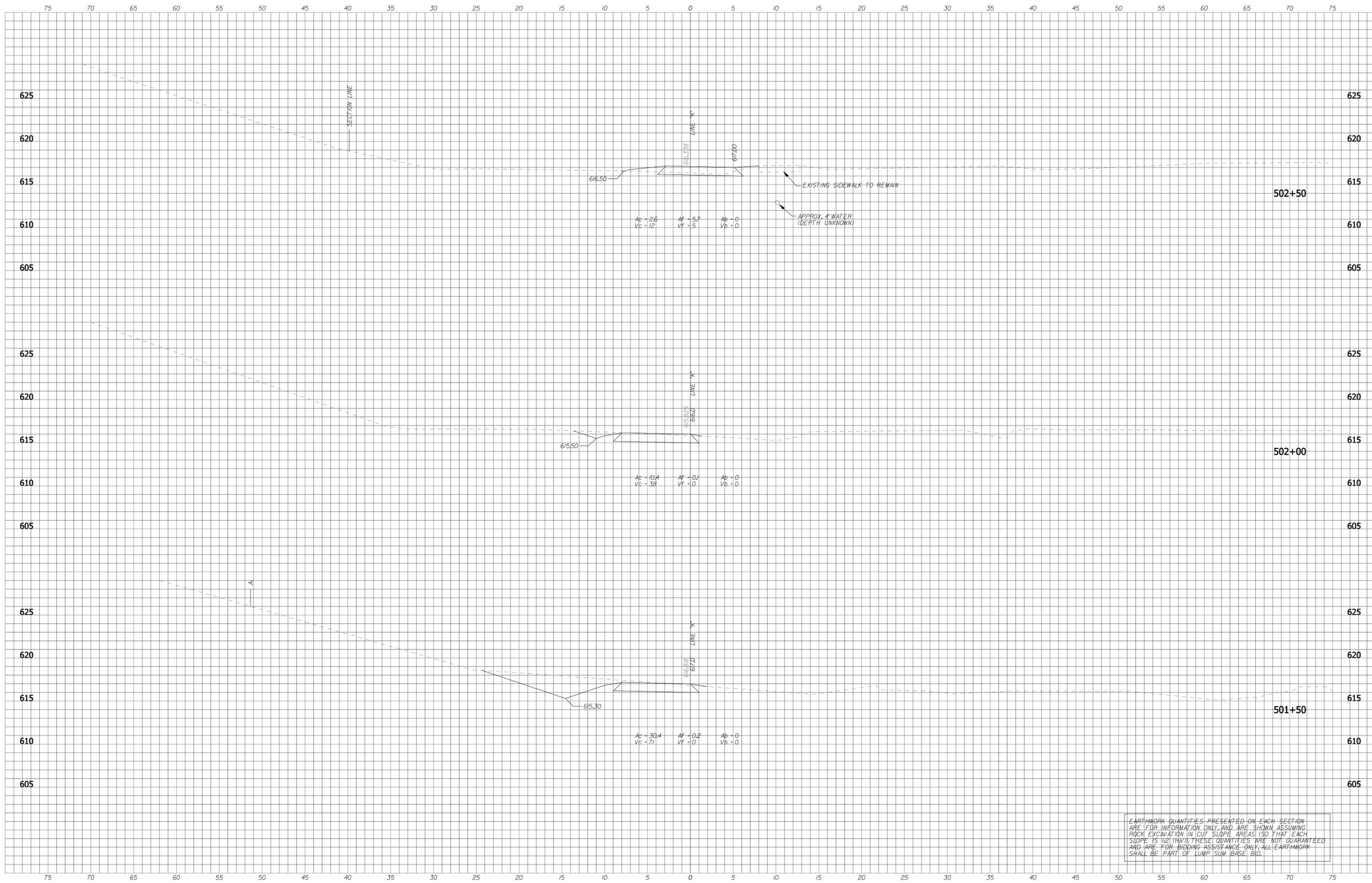
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RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER 9-7-2013 DATE
 DESIGNED: BR DRAWN: SI
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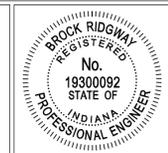
CITY OF BLOOMINGTON
 CASCADES TRAIL
 CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 20 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 1:2 (H:V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

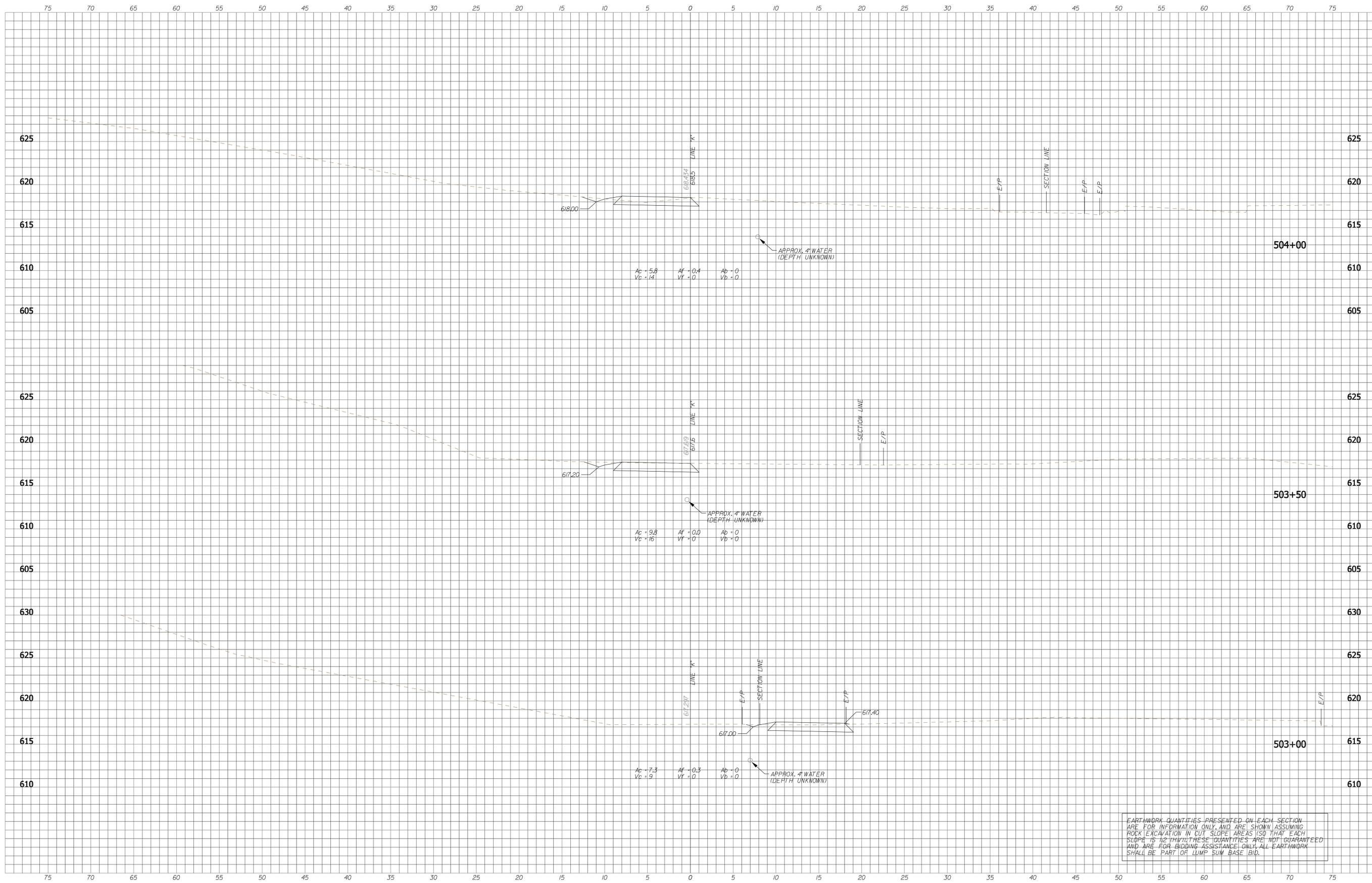
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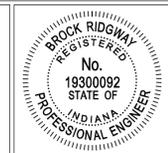
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 21 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12 IN/1); THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

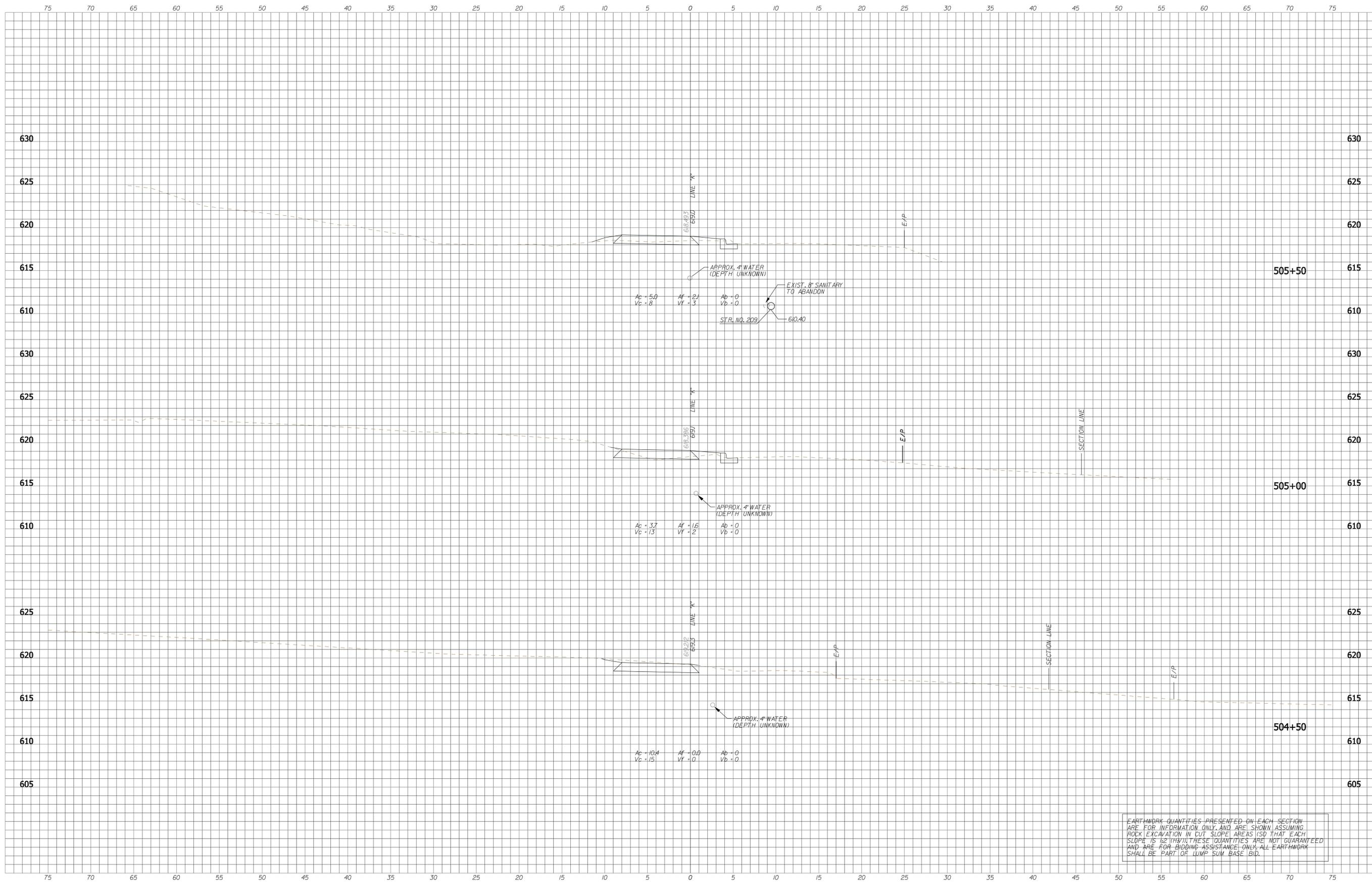
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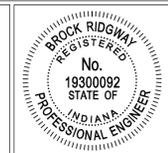
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 22 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1 MIN); THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

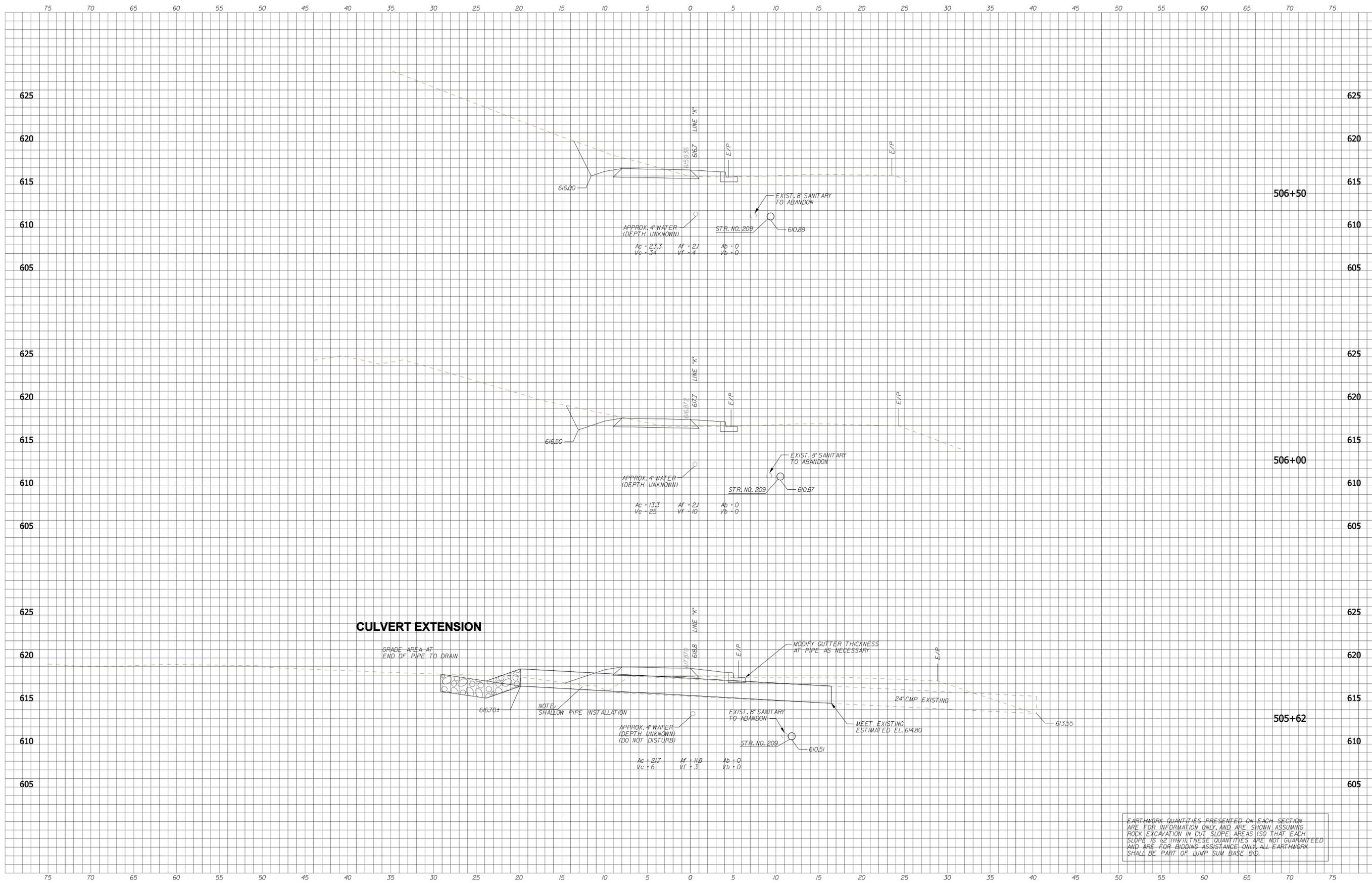
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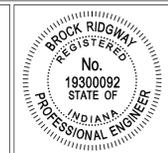
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 23 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1 MIN); THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

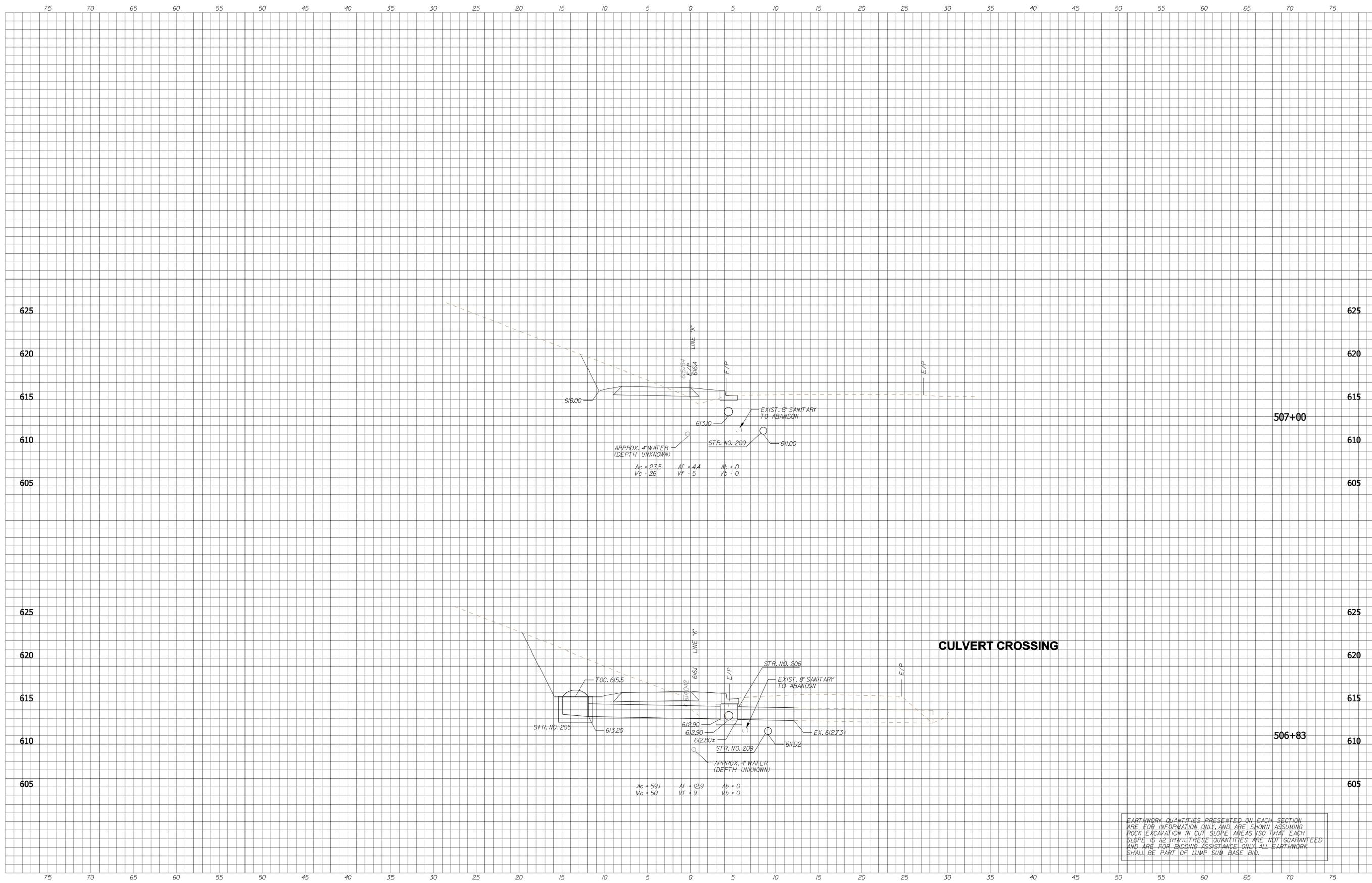
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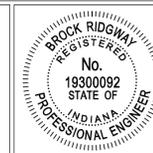
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 24 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

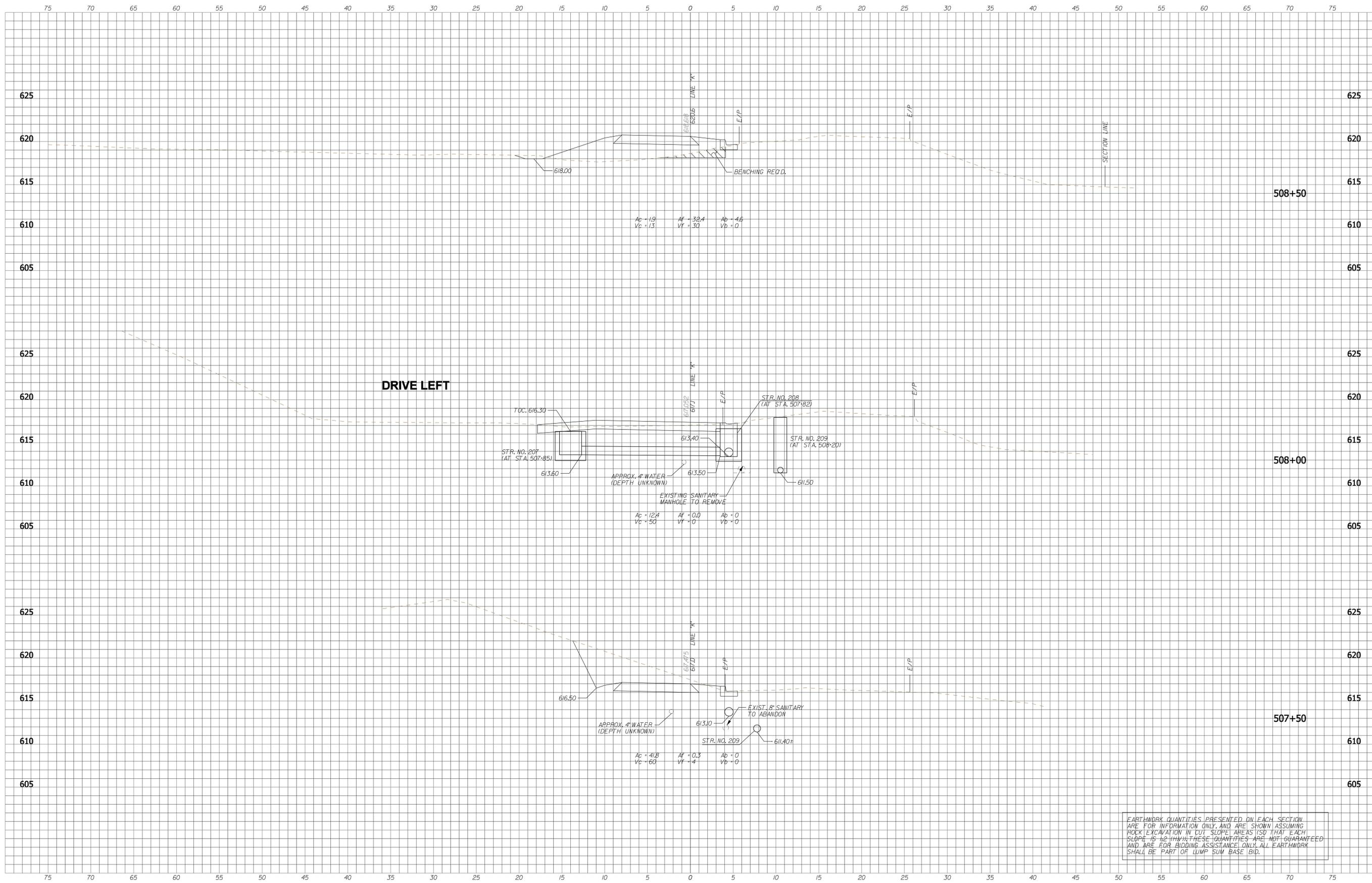
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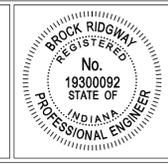
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 25 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 4:1 (H:V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

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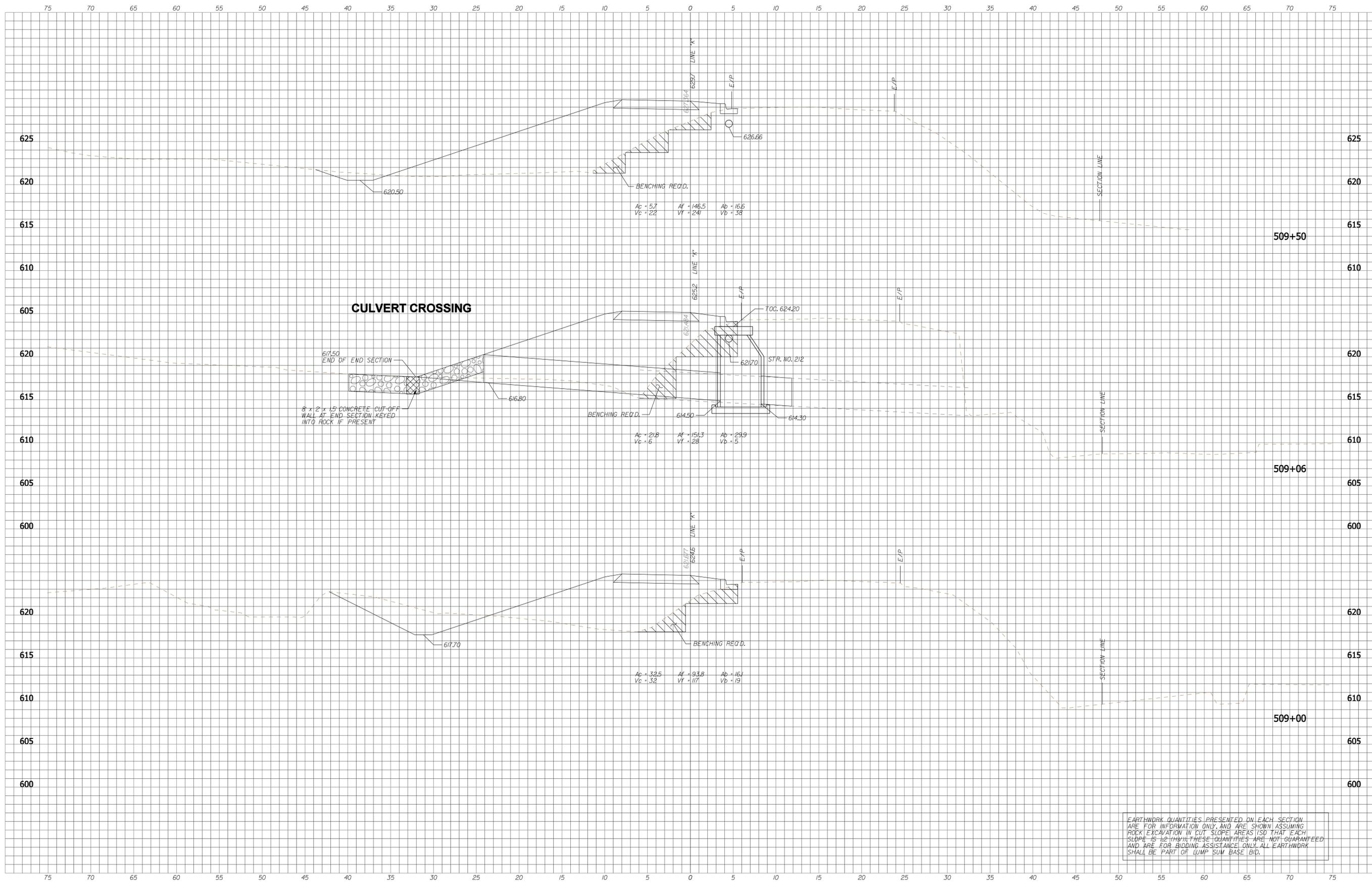
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DESIGNED: BR DRAWN: SI
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CITY OF BLOOMINGTON
 CASCADES TRAIL

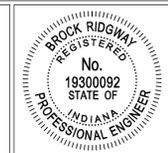
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 26 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 1:2 (H:V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

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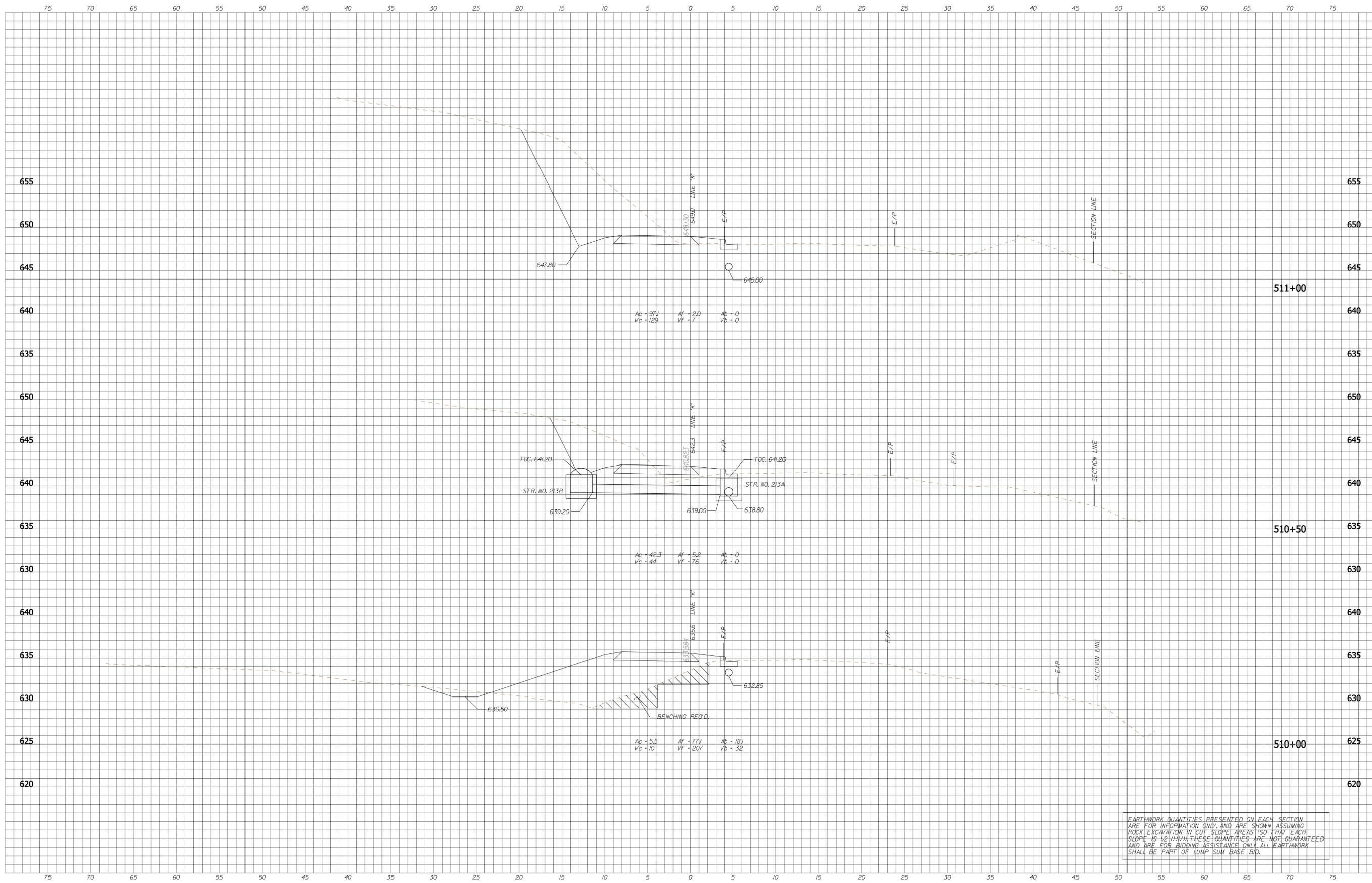
RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER DATE: 9-7-2013

DESIGNED: BR DRAWN: SI
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**CITY OF BLOOMINGTON
 CASCADES TRAIL**

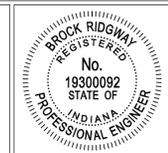
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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 27 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS IS TO THAT EACH SLOPE IS 1:2 (H:V). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

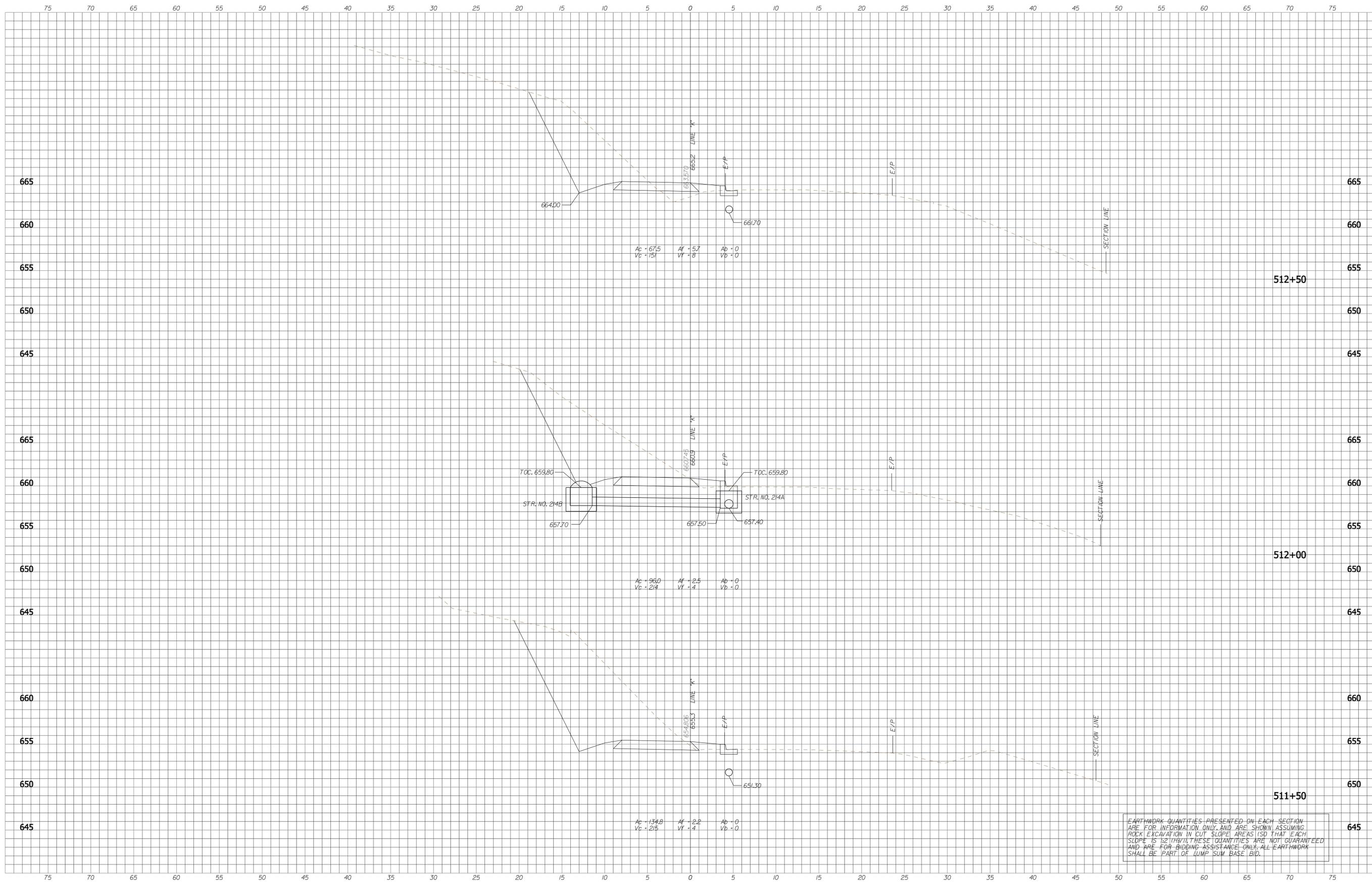
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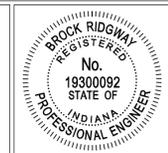
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 28 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SD THAT EACH SLOPE IS 12:1 (H:V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

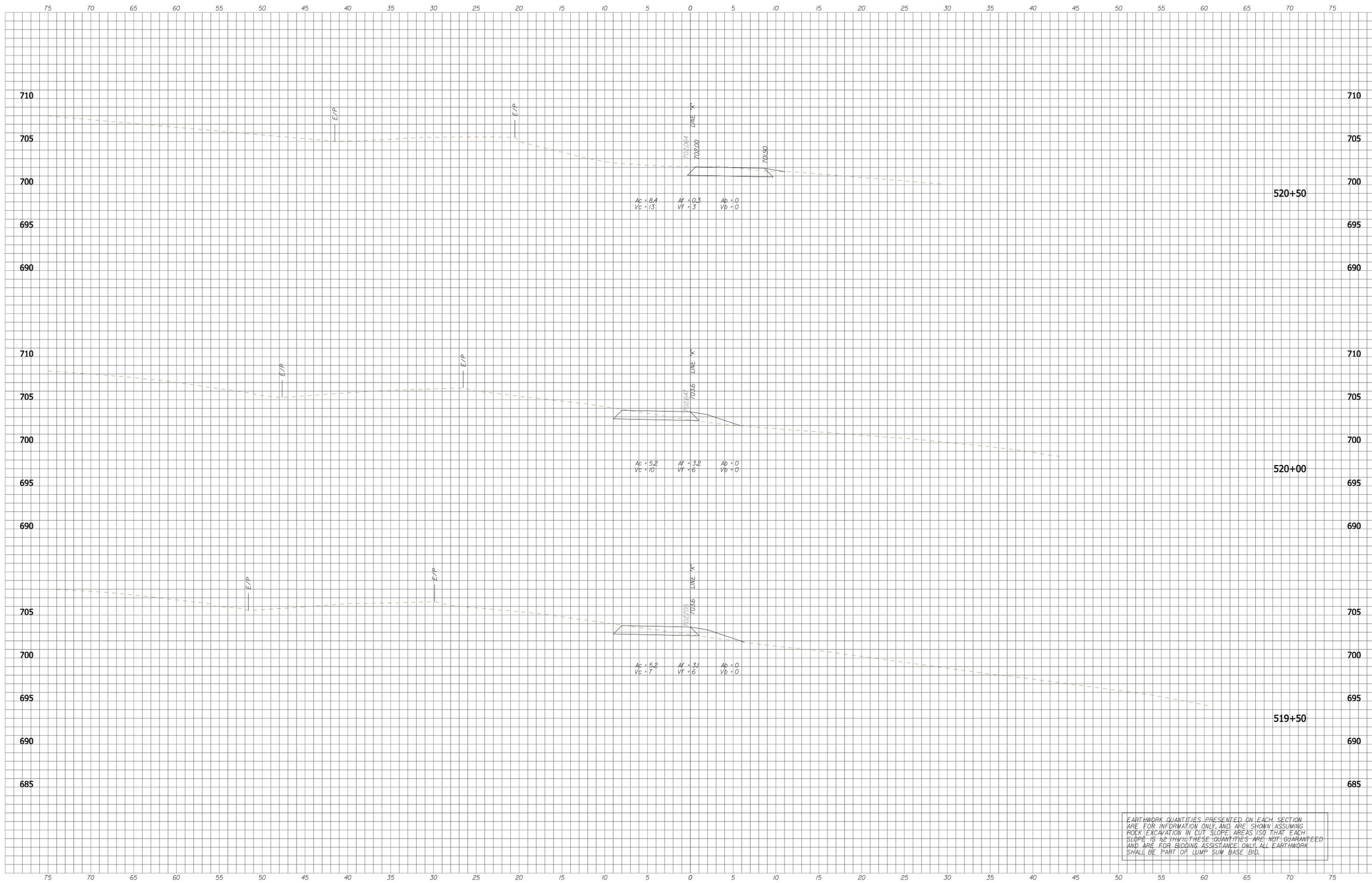
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RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER 9-7-2013 DATE
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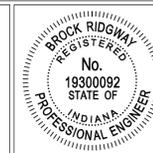
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 29 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS IS TO EACH SLOPE IS 1/2 (H:V). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

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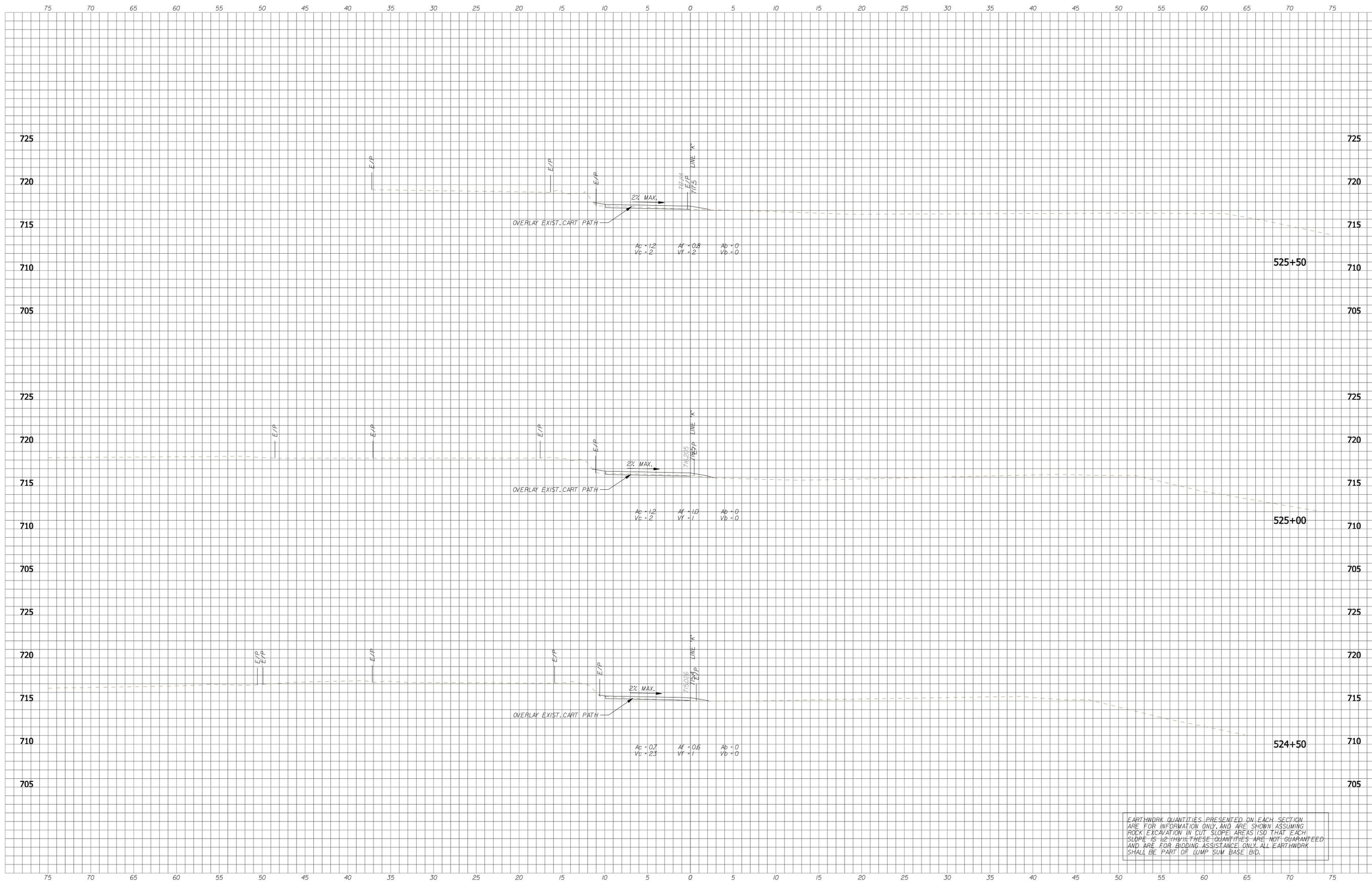
RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER DATE: 9-7-2013

DESIGNED: BR DRAWN: SI
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CITY OF BLOOMINGTON
 CASCADES TRAIL

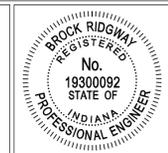
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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 35 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 1:2 (H:V)). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

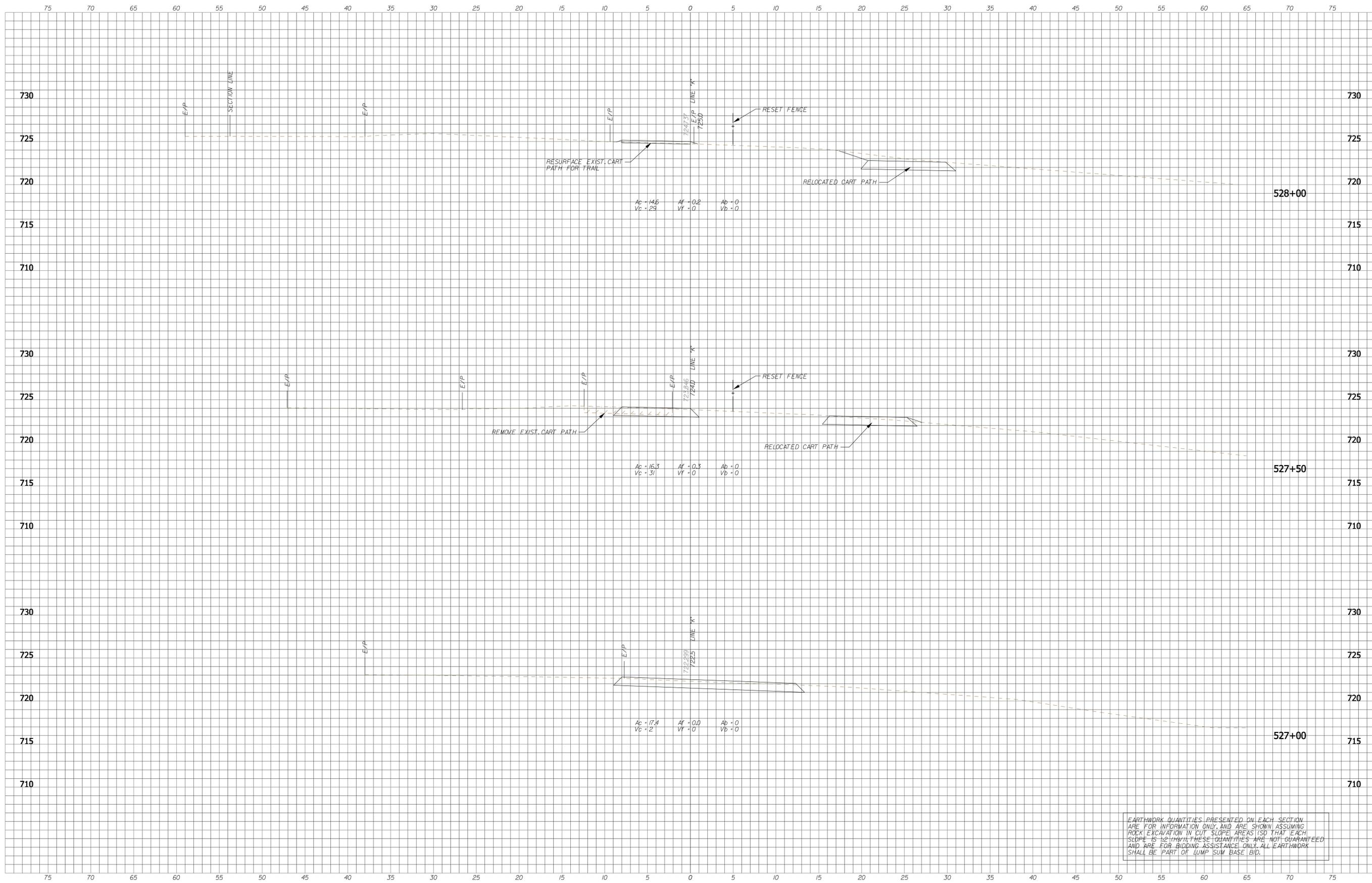
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RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER DATE: 9-7-2013
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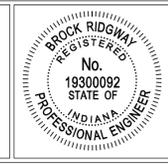
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 39 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS IS TO THAT EACH SLOPE IS 1:2 (H:V). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

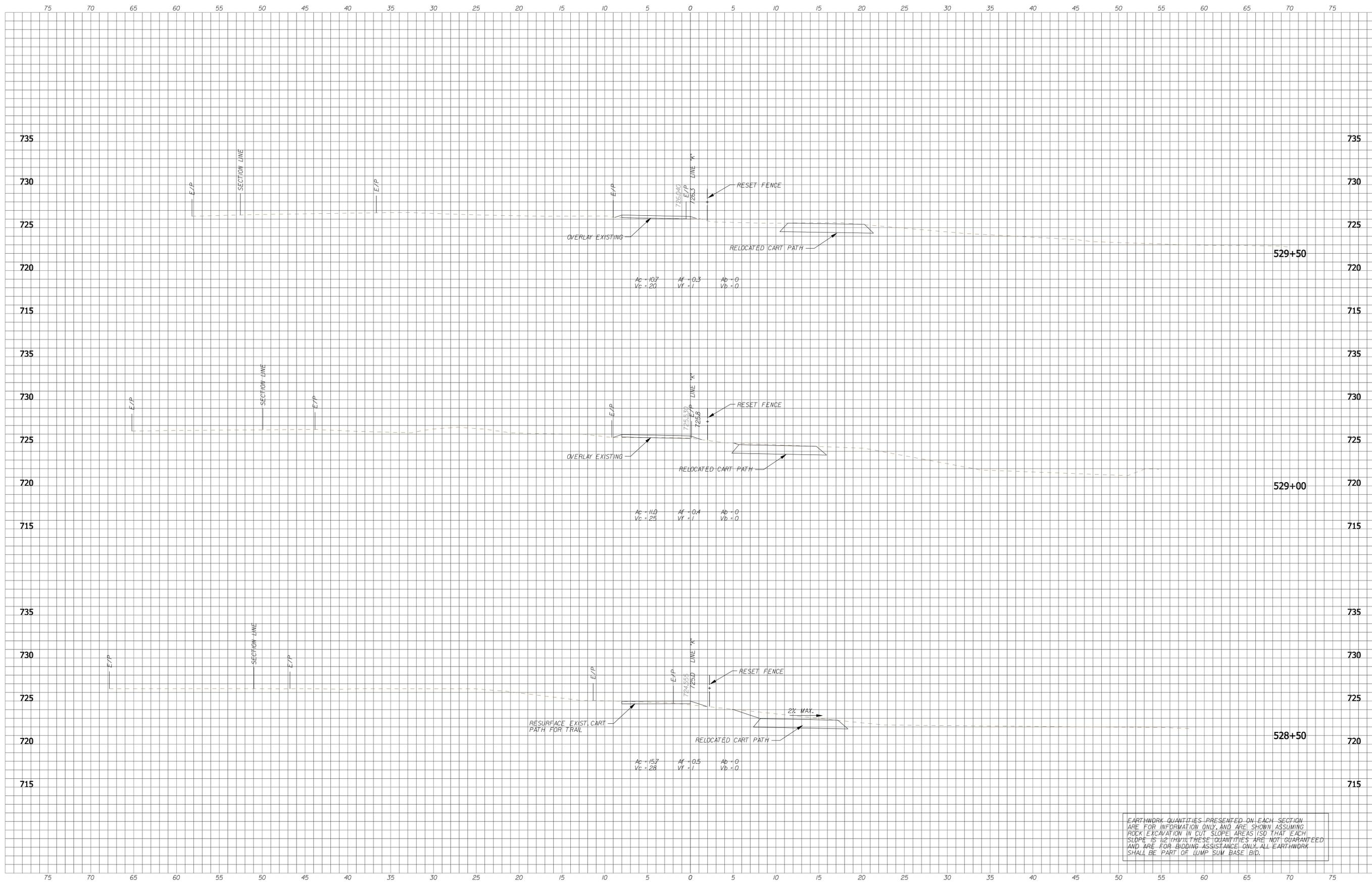
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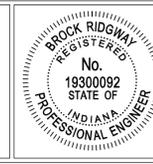
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 DESIGNED: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 41 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



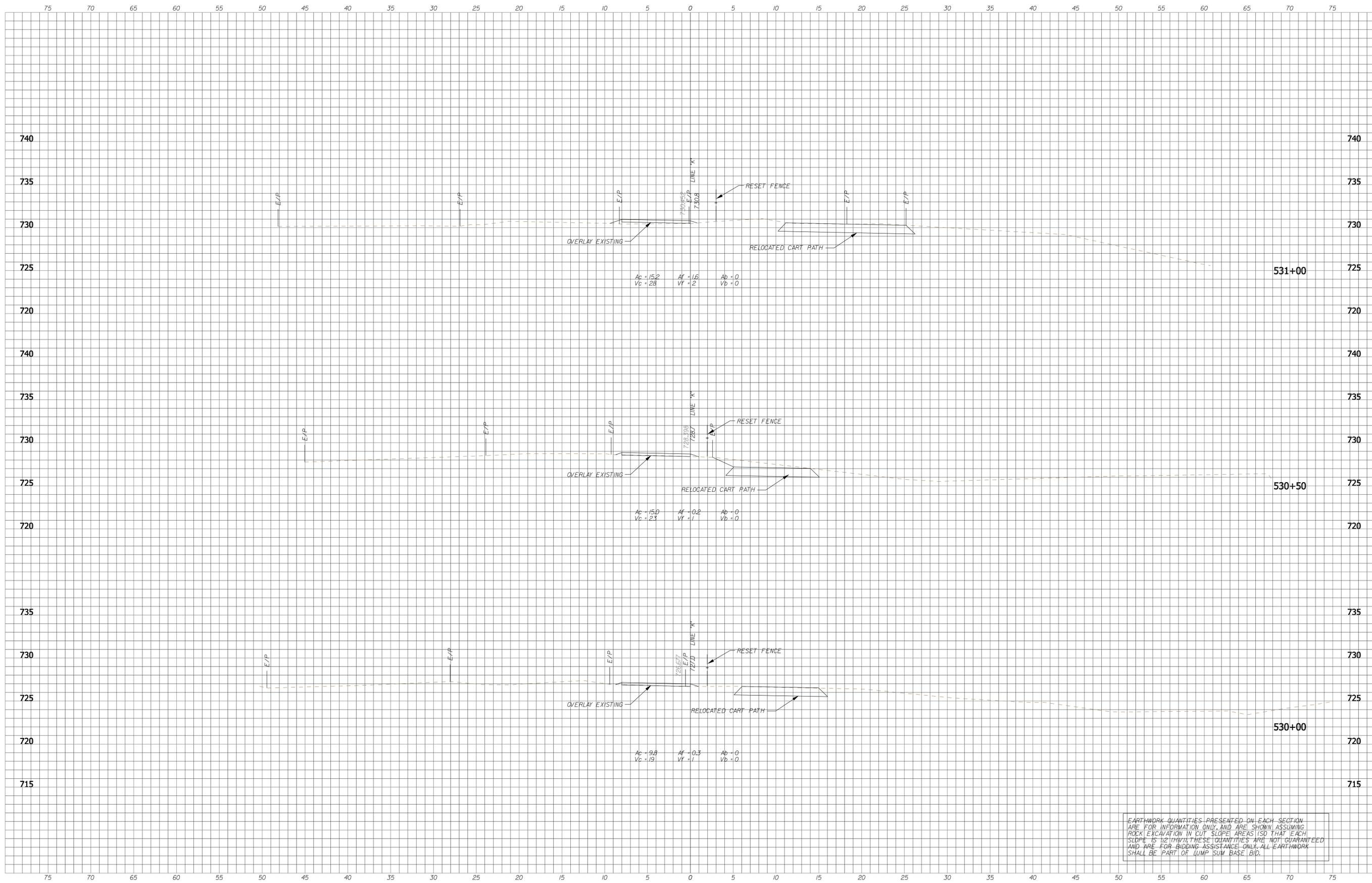
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RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER 9-7-2013 DATE
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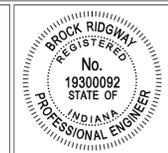
CITY OF BLOOMINGTON
CASCADES TRAIL
CROSS SECTIONS - LINE "K"

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VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 42 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1 H:V); THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

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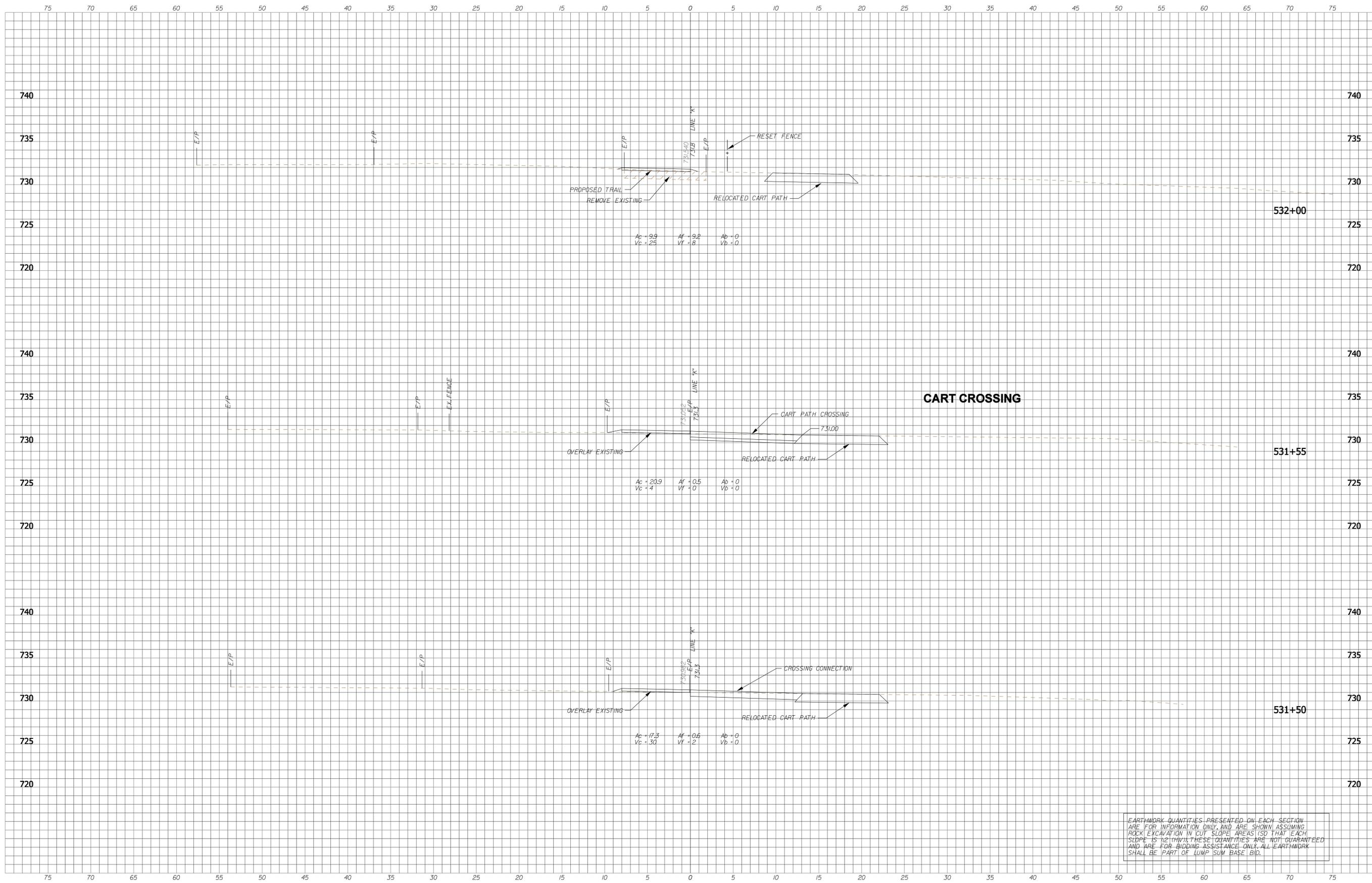
RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER 9-7-2013 DATE

DESIGNED: BR DRAWN: SI
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CITY OF BLOOMINGTON
 CASCADES TRAIL

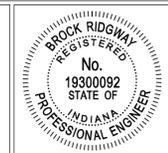
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 43 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS IS TO LEACH SLOPE IS RETAINED; THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

XS SHEET 1525
 9/6/2013
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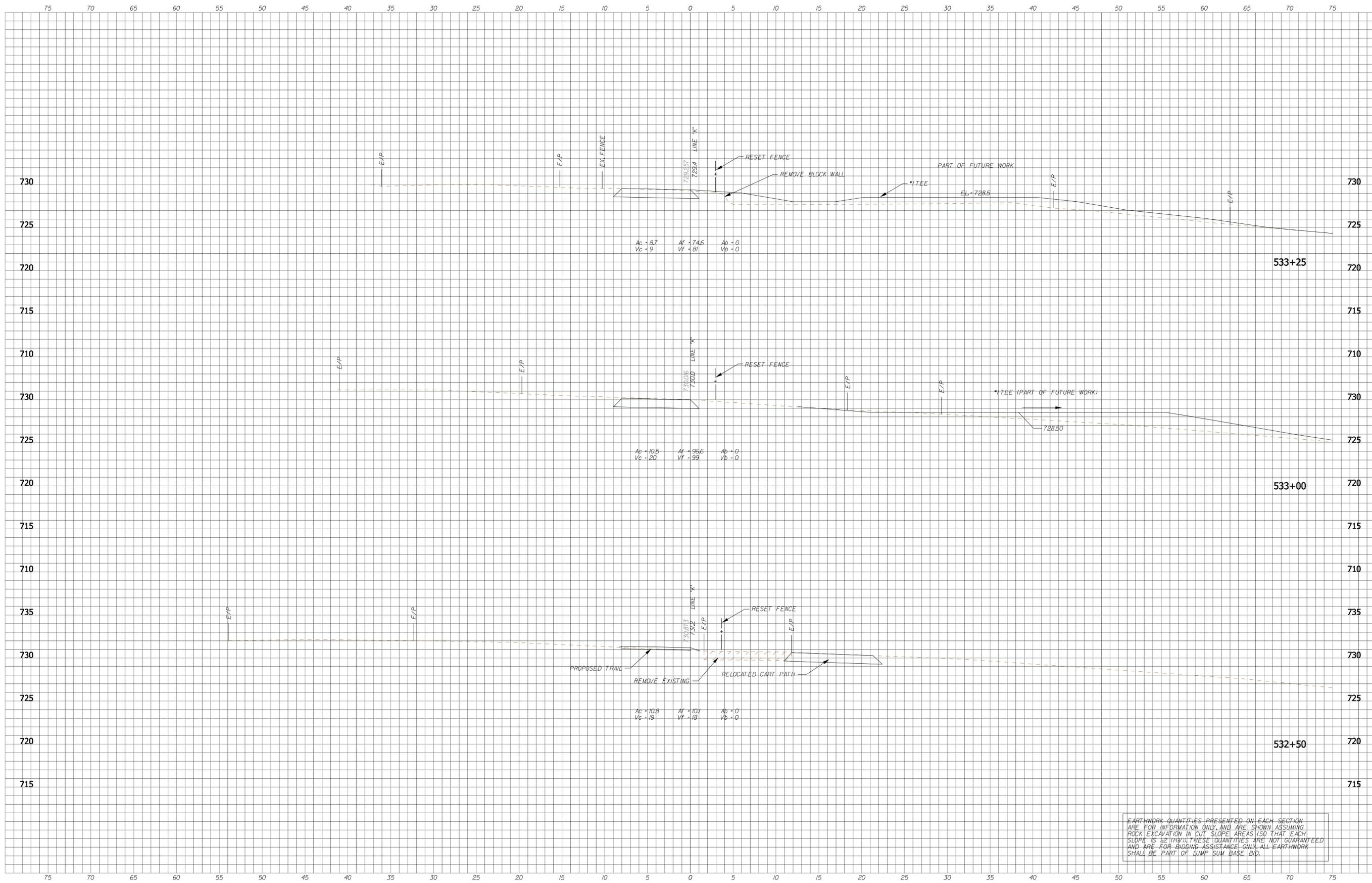
RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER 9-7-2013 DATE

DESIGNED: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

**CITY OF BLOOMINGTON
 CASCADES TRAIL**

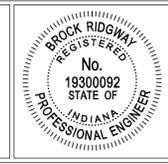
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 44 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1 MIN). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

XS SHEET 1506
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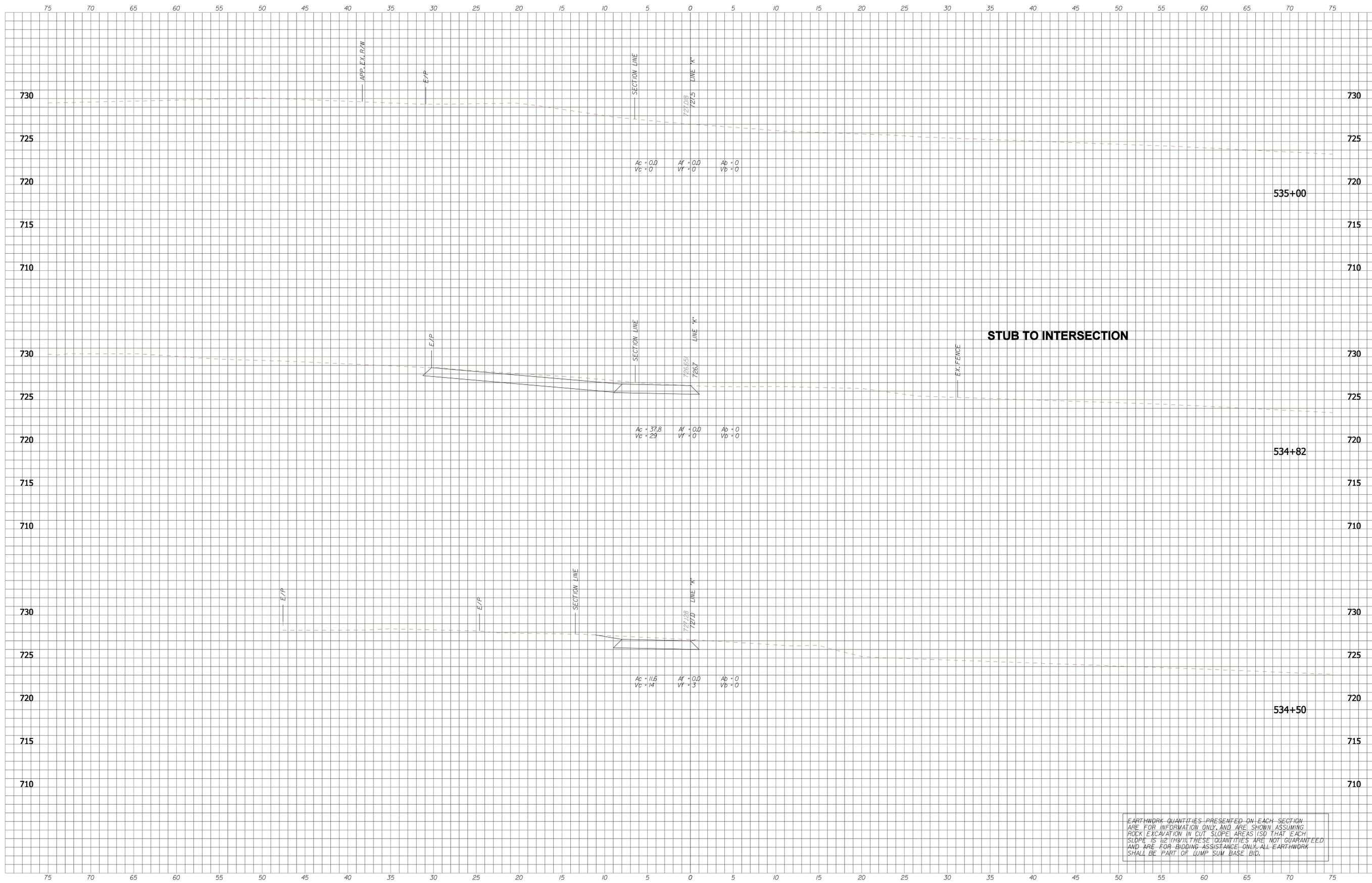
RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER DATE: 9-7-2013

DESIGNED: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

CITY OF BLOOMINGTON
 CASCADES TRAIL

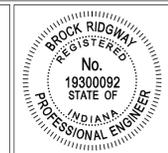
CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 45 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL



EARTHWORK QUANTITIES PRESENTED ON EACH SECTION ARE FOR INFORMATION ONLY, AND ARE SHOWN ASSUMING ROCK EXCAVATION IN CUT SLOPE AREAS (SO THAT EACH SLOPE IS 12:1 MIN). THESE QUANTITIES ARE NOT GUARANTEED AND ARE FOR BIDDING ASSISTANCE ONLY. ALL EARTHWORK SHALL BE PART OF LUMP SUM BASE BID.

XS SHEET JS28
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RECOMMENDED FOR APPROVAL: *B. Ridgway* DESIGN ENGINEER DATE: 9-7-2013

DESIGNED: BR DRAWN: SI
 CHECKED: MT CHECKED: BR

CITY OF BLOOMINGTON
 CASCADES TRAIL

CROSS SECTIONS - LINE "K"

HORIZONTAL SCALE 1" = 5'-0"	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'-0"	DESIGNATION N/A
SURVEY BOOK N/A	SHEETS 47 of 47
CONTRACT N/A	PROJECT CASCADES TRAIL