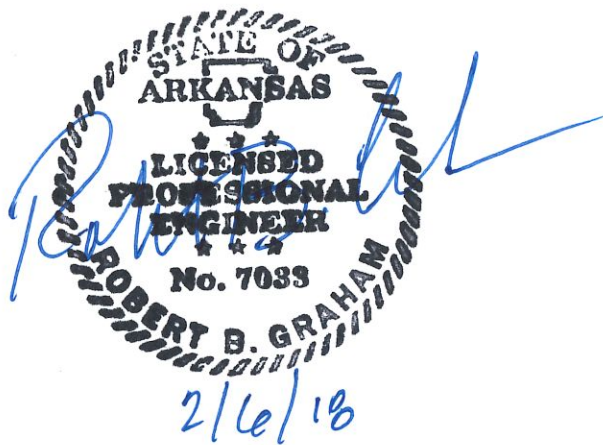


City of Jonesboro

Industrial Lead
Capacity and Future Growth Study

February 2018



This report will be a product of the City of Jonesboro, the Chamber of Commerce, and the rail users in the park wanting to explore the needs for growth. The report will discuss the current capacities as well as future capacities. The report will explore options for Union Pacific Rail Road service in the park and lastly the report will discuss the current maintenance needs and future needs with the possible expansion.

The City first met with the rail users in September of 2017 to discuss these needs and our firm met with the rail users in December of 2017 to discuss the rail users' needs. Our firm prepared a questionnaire to send to the rail users for rail car and commodity information. Our firm was able to conclude the rail user information by the second week of January 2018 for the report.

The Jonesboro Industrial Lead Rail Spur is a spur track that was constructed in three phases and is owned and maintained by the City of Jonesboro, Arkansas. The spur is served by and connected to the Burlington Northern and Santa Fe Rail Road. The Industrial Lead currently has seven facilities that have rail spurs that come off of the City's lead track. Of the seven facilities, five are currently receiving rail cars at their locations. One of the facilities not receiving rail cars now, plans on receiving cars in the near future.

The first phase of the industrial rail spur lead was constructed for Crane Composites in 1989 and then extended to Frito Lay shortly thereafter. Frito Lay was one of the first industries to receive rail service in the park. In 2011, the third phase was constructed for the Nordex facility that is currently occupied by Trinity Rail Car. The first two phases served four industries and consisted of 23,881 feet of track and the third phase added an additional 8,040 feet of track for Nordex.

Since the third expansion, there have been two additional industries that have made connections to the Industrial Lead track. A current list of Industries in the park includes the following: Anchor Packaging, Post Foods Inc., East Side Rice, Nestle, Crane Composites, Frito Lay, and Trinity Rail Car. Crane Composites is currently not a rail user and has not participated in any of the meetings. East Side Rice is currently not receiving rail service but intends on shipping products in the near future. From the questionnaire, the Park's industries currently receive 110 rail cars per week. Once East Side Rice begins shipping, this total will be close to 150 rail cars per week.

The way that the industrial lead is built, the Burlington Northern Rail has to pull the cars south out of their yard and then shove the cars back on the industrial lead. The switches for Post Foods, Nestle, Crane Composites, and Frito Lay all face towards the Burlington Northern's Main Line. The rail road will back-in and pick-up the outbound cars and then take those cars out and place the inbound cars in. The process is time consuming and in Post Foods case, Commerce Dr. gets blocked to motorists for a significant period of time.

One of the primary reasons for the report is to discuss the current capacity and future increased capacities. The report will try to provide solutions to service problems that exist today. The capacity concerns for the Industrial Park are real and need to be addressed. When our firm sent out the questionnaires, there was a question that asked for the estimated weekly volume five years from today's date. The estimated car volumes for five years from now would be approximately 185 cars per week.

With the track configuration in the park now, the only room for capacity is what each one of the industries has in their own facilities. For example, Trinity will bring in and ship out 75 cars per week but there is about a three week turnaround on their cars. Therefore there could be

225 cars on average at the facility per day. These types of facilities are not the norm. Most facilities will either load or unload the rail cars in two to three days. If a car stays at a site for more than three days, there is a penalty assessed to the industry. This penalty is referred to as demurrage.

If the Rail Road had a long siding track with switches on the ends, the Rail Road could pull the inbound cars in and set them on one of the tracks and place the outbounds on the other track and move throughout the park to switch each facility with ease. Once all the cars have been switched out, the cars could be moved around so that the crew could pull the cars out to take back to the BNSF yard on the north side of town.

When looking at the rail layout, there is not enough room between road crossings to get a long enough side track. The only way to get a spot long enough would be to close one of the road crossings. When looking at possible roads to close, the only road available for closure that is not a major road is Heath Road. There are bridges on either side of Heath Road. The bridge between Moore Road and Heath Road is 80 feet long and the bridge between Heath Road and Nestle Way is 170 feet long. Therefore, the new siding track should go from the east side of Moore Road to the west side of the bridge for Little Bay Ditch. This siding track would be 5,007 feet long from switch to switch and could hold approximately 75-60' cars. The proposed siding will be referred to as Alternate #1.

As the volume increases in the Park, there may need to be more storage built next to the siding track in Alternate #1. How much the volume increases will obviously depend on how much the traffic increases. If the Industries' volume forecasts for five years from now are fairly accurate, the second siding could be limited to being between the two bridges west and east of

Heath Road. This would allow a track that is about 3,500 feet long and would hold at least 50-60 additional cars.

With the proposed double ended siding track, the current capacity issues would be resolved. However, the current switching that takes place at Post Foods will still be an issue of concern for motorists. Currently, when Post Foods is switched by the Rail Road, the signals on Commerce Drive activate and the crossing arms come down to stop the traffic. The inbound cars are placed on the Industrial Lead east of the Commerce Dr. crossing and the locomotives enter the facility and pick up the outbound cars on the two tracks. Then the power will pull the outbound cars out across Commerce Dr. and go pick-up the inbound cars left on the Industrial Lead. Once connected, the inbound car will be pulled back across Commerce and then shoved back onto the two tracks. Once the inbounds are set then the locomotive will pull back out across Commerce and connect to the rest of the cars. The City Engineering Department has video where this switching will block Commerce Dr. for 30 to 45 minutes any time Post Foods gets a switch.

The most feasible way to solve this issue is to switch Post Foods from the other direction. The layout that shows this concept is labeled Alternate #2. In Alternate #2, the Rail Road would enter the facility from the east. Currently, there is one track is for inbound cars and one track for outbound cars. The rail road will drop the inbound cars and pick-up the outbound cars. The personnel at Post Foods will use a rail car mover and spot the inbound cars in the receiving building and once emptied, the Post Food car mover will remove the car and place the car on the outbound spur. None of this switching will involve crossing Commerce Dr. or activating the crossing gates stopping motorists.

One of the biggest items of interest that was relayed from the rail users meeting is the possibility of Union Pacific Railroad service to the park. There were several rail users that believed that their business would greatly benefit from having the additional Union Pacific rail service. This report addresses four options for adding Union Pacific rail service and an estimated cost to provide those services. One option will require Burlington Northern trackage rights and the other three are direct connections to the Union Pacific Rail Road. Exhibit "A" is enclosed and shows the different rail roads in this area and the owners. The class one railroads refers to their different tracks as subdivisions. In the City of Jonesboro, the Union Pacific has two subdivisions and the Burlington Northern Santa Fe has one. Both Union Pacific and Burlington Northern have signalized mainlines, but the Union Pacific's Wynne Subdivision is not signalized. Track signalization makes a substantial difference when estimating a switch installation cost. The cost of getting a switch in a non signalized track verses a signalized track can be a difference of \$1,000,000.00 additional for the signalized installation. The switches used in signalized track are typically power operated switches and each one has to be designed specifically for the location to be installed.

The first Union Pacific connection option will be referred to as Alternate #3. Alternate #3 is dependent on the Union Pacific obtaining trackage rights from the Burlington Northern and also being able to bring rail cars south into the Industrial Park from the rail yards north of town. There would need to be a new connection built from the Burlington Northern Santa Fe mainline to the Industrial Lead feeding the park. The new connection would mean the train could enter the park from the north heading south. The switch for the mainline connection would be a power operated switch and would allow a train coming from the north to go straight into the Park without having to stop the train and manually throw the switch. Being able to come straight from the Union Pacific switch yard to the Park without stopping would insure the Burlington

Northern that the main line would not be interrupted with a parked train. The proposed siding discussed with Alternate #1 would also be required with Alternate #3 (See Alt #3 tab).

The second option for Union Pacific rail service will be referred to as Alternate #4. Alternate #4 includes a switch coming off of the Union Pacific Wynne Subdivision. The switch would be located just northeast of the Burlington Northern and Union Pacific rail crossing. The new track would curve around the west side of an existing building at 4401 Sarah Street. The new track would tie into the existing retired track that previously went to the old Industrial Park. This rail has been out of service for years and would have to be rehabilitated for use in the new connection track. The existing, retired track continues to the east across Industrial Drive but appears to stop prior to Distributor Drive. The new track would continue from that point to the east crossing Distributor Drive, Commerce Drive, and Moore Road. The track would then curve to the south and intersect with the Jonesboro Industrial Lead just west of Heath Road. The new Union Pacific track would tie into the Industrial Lead in the same area as the proposed siding (Alt#1) is located. The siding would be critical for the Union Pacific for the purpose of switching out the Industries in the Park. A few drawbacks to this alternate are that the radius of the first curve is near the minimum allowed (maintenance issues, safety) and the expansion does not open much acreage for future industry development.

The third option for Union Pacific rail service will be called Alternate #5. This option will start at the end of the existing Industrial Lead and curve to the north. The new alignment will parallel Barnhill Road on the west side and cross East Highland Drive (5-lanes). The track continues to the north before curving to the west and parallel to County Road 906. The new track will cross Little Bay Ditch and continue to the northwest while paralleling Lateral Number 1 Ditch. The new track for Alternate #5 will tie into the Wynne Subdivision near the northeast corner of the Airport property. There will be both a north and south connection to the UP

mainline. This type of connection is referred to as a “Y” connection. If Alt #5 is constructed, the Union Pacific would serve the facility pulling in locomotive first and travel to the siding (ALT #1). From the siding, the Union Pacific would switch the facilities from that point. The drawbacks for this alternate are that there will be seven road crossings (eight including the Commerce Dr extension) and four major creek crossings. However, the alternate does open up substantial additional acreage for future Industrial Park expansion.

The fourth option for Union Pacific rail service will be called Alternate #6. This alternate will start out the same as Alternate #5 and follow the same path until the route reaches County Road 906. At this point the alignment will go in a northwesterly direction. The track will continue in this direction crossing Butler Ditch and County Roads 910, 912, and 928 before crossing part of Little Bay Ditch. Alternate #6 will tie into the Union Pacific Mainline (Jonesboro Subdivision) just north of the existing Anheuser-Bush Facility. The connection will be a “Y” connection similar to Alternate #5. The “Y” connection will be located on the Jonesboro Subdivision which is a signalized track and the switch cost will be higher than standard switches. The drawback to this alternate is the power mainline switch costs. This alternate also will have five road crossings and two creek crossings. As a benefit, this alternate avoids the Commerce Drive expansion and opens up substantial acreage for possible Industrial Park expansion.

Of the four Union Pacific rail service options presented, two are somewhat more expensive than the others. However, the options for future growth with those two are substantially more. The City of Jonesboro could advertise multiple Super Sites that can be rail served by two class 1 railroads from the same track. There are currently only two Super Sites located in Arkansas that are rail served.

The last item this report covers is the track maintenance. Typically the maintenance cost has a direct correlation to the amount of cars (traffic) that travel the tracks. There are currently 110 cars per week entering into the Park. By Union Pacific standards, that would be considered heavy traffic loading. For heavy traffic facilities, the spacing for the crossties should be 19.5” center to center of each crosstie. A 7”x9”x8’6” industrial grade crosstie costs around \$50.00 per tie. Once the labor cost of replacing the crossties is included, tie replacement becomes the major cost in track maintenance programs. The current rail park contains approximately 31,700 feet of track from the Derail at the Burlington Northern Main to the end of the tracks at Trinity Rail Car. Based on 19.5” tie centers, there should be approximately 19,500 crossties in place on the City owned track portion. There are various opinions on how long a tie will remain serviceable. A quick internet search shows times ranging anywhere from 30 to 70 years. For the purpose of this report, the life cycle for wood crossties at this facility will be figured using a 50 year cycle. If 400 ties are changed per year during maintenance, then the ties would be on a 50 year cycle. The most critical part of extending a crosstie’s life span is moisture control. If a wood crosstie can stay relatively dry with a good ballast rock section around the tie allowing proper drainage, then the ties will last longer. If a crosstie is submerged in mud and organics not allowing proper drainage, then the tie will not last long. The Jonesboro Lead has a good ballast rock section around the ties and overall appears to be in good shape. The existing track in the Jonesboro Lead is predominately in a straight alignment. Of the 31,700 feet of existing rail, only 5,010 feet are in a curved alignment. Rail located in curves will wear down quicker than rail located in straight track. Typically, the outside rail in a curve will wear down and need to be transposed or replaced over time. Rail wear is directly related to the amount of traffic and the sharpness of the curve radius of the track alignment.

The City is required by the Federal Railroad Administration to perform scheduled maintenance at each of the road crossings protection devices. This is currently being performed by the City on nine road crossings. If the Heath Road crossing is closed, then the crossings would be reduced to eight crossings. If any of the Union Pacific direct tie-ins are pursued, then the number of crossings under maintenance could increase significantly.

Currently, the City has about \$100,000.00 per year budgeted for the rail maintenance in the Industrial Park. Of that \$100,000.00, almost \$40,000.00 is used on inspections, lubrication of switches, and signal testing. The remaining is used on batteries for the signals, road crossing panels and general maintenance. On average the City is replacing around 200 ties per year. If the budget were increased to \$175,000.00 per year on average, then the City could replace an additional extra 450 ties per year and on occasion bring in a big tamping machine to line and tamp the existing track, which would help with the stability of the rail spur.

The City frequently has to perform additional maintenance on the first curve coming off the Burlington Northern mainline track. The existing curve has a fairly sharp radius and if the “Y” connection (Alt#4) gets installed, most of the traffic will be using the new north leg of the “Y”. If the City ever pursues one of the other Union Pacific rail connections, then the early maintenance work will have to increase. The first five to ten years should have minimal maintenance costs for crosstie and rail replacement, but after this initial period the amount of maintenance will likely increase from year to year.

In conclusion, our firm has the following recommendations. Number 1 is to have a double ended run-around track constructed in the Park. The track needs to be built so that the serving railroad is able to bring cars into the Park and run around the cars so that the cars can be switched into the existing facilities. Proposed Alternate No. 1 provides this improvement.

Number 2, our firm would recommend that the City meet with the personnel of Post Foods on trying to find a way to eliminate the traffic problems that occur on Commerce Drive when the railroad is serving the facility.

Number 3, our firm would suggest that the city meet with the Union Pacific to discuss the options of service in the Park. The City should ask the Union Pacific if the railroad would consider using one mainline switch for service and if the railroad would consider sharing in some of the cost. Our firm feels like the two northern connections would leave plenty of room for future expansion in the Industrial Park and that the Union Pacific might participate in the project for future growth.

Lastly, our firm would recommend that the maintenance budget be increased by \$75,000.00 per year to help keep up with the deteriorating ties. This increase would also help with periodic tamping of the rail. With the annual budget increased to \$175,000.00, the City would be spending \$5.50 per foot per year in the Industrial Park. If any of these alternates are constructed, the City needs to increase the annual budget by multiplying the new constructed footage by the \$5.50 per foot for the increase.

Alternate No. 1 – Storage Track at Heath Road

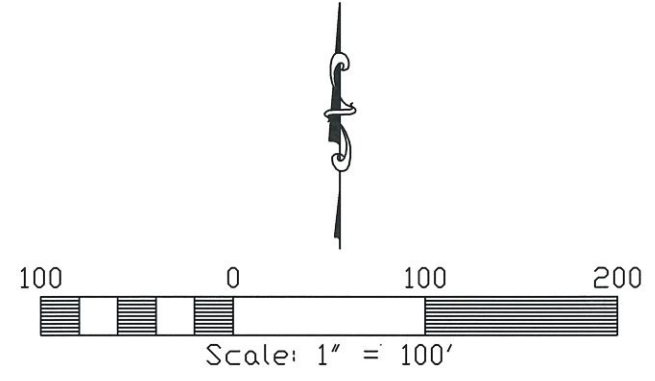
1. Min 112# Rail, Ties, Ballast, Subballast, Subgrade & Incidentals	4,757 @ 250.	\$1,189,250.00
2. 112# Min No. 11 Turnouts	2 EA @ 75,000.	\$ 150,000.00
3. Rail Bridge	80 LF @ 3,000.	\$ 240,000.00
4. Derail	2 EA @ 10,000.	<u>\$ 20,000.00</u>
	Subtotal	\$1,599,250.00
	15% Engineering	<u>\$ 239,750.00</u>
	Total	\$1,839,000.00

REVISED ON:		
NO.	DATE	BY
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CITY OF JONESBORO - Jonesboro, AR
Proposed Industrial Lead Rail Expansion
Preliminary Rail Layout - Proposed Siding Track ALT #1

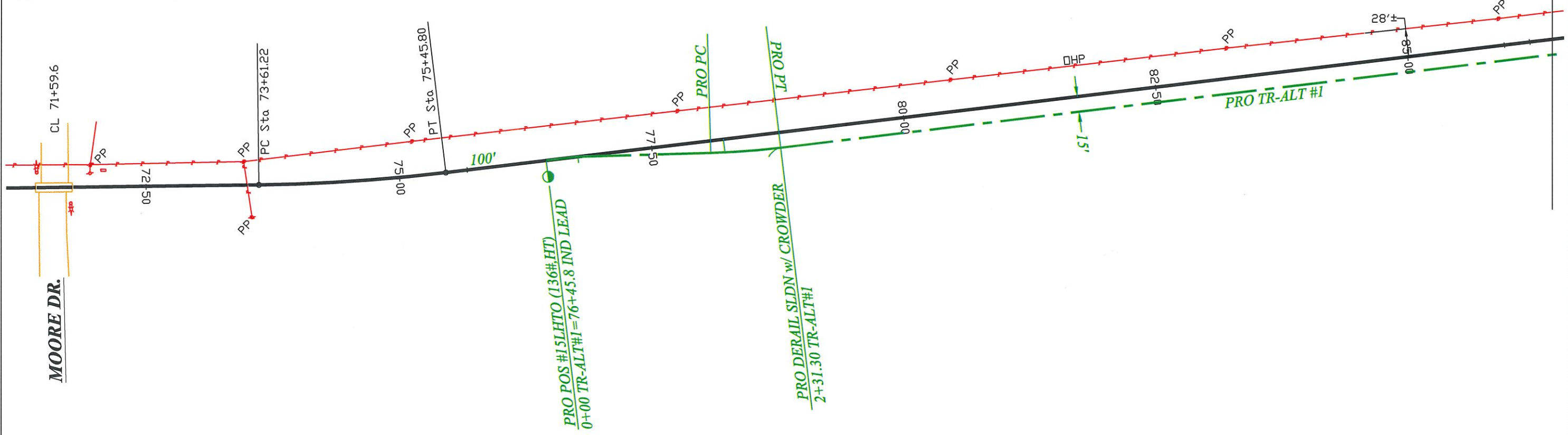
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SHEET
C1
1 OF 15



EX CURVE
R = 1,725'±
Dc = 3°19'19"

PRO CURVE TR-ALT#1
R = 764.49'
Dc = 7°30'

TO BNSF MAINLINE



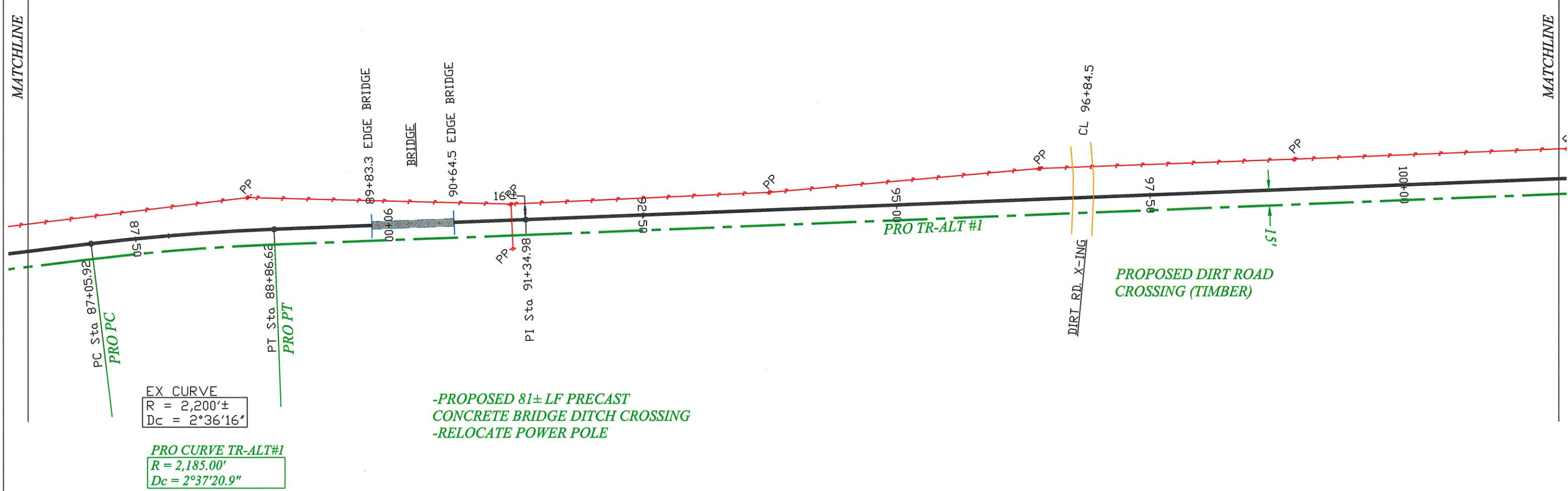
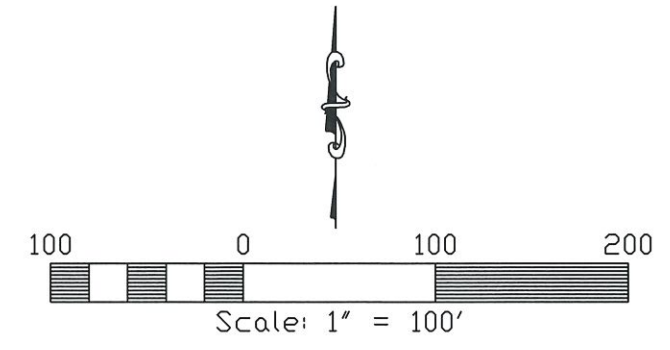
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CITY OF JONESBORO - Jonesboro, AR
Proposed Industrial Lead Rail Expansion
Preliminary Rail Layout - Proposed Siding Track ALT #1

DESIGNER ges
CHECKER rbg
DRAFTER ccr
PROJECT 2018_02
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2 OF 15



EX CURVE
 $R = 2,200' \pm$
 $D_c = 2^\circ 36' 16''$

PRO CURVE TR-ALT#1
 $R = 2,185.00'$
 $D_c = 2^\circ 37' 20.9''$

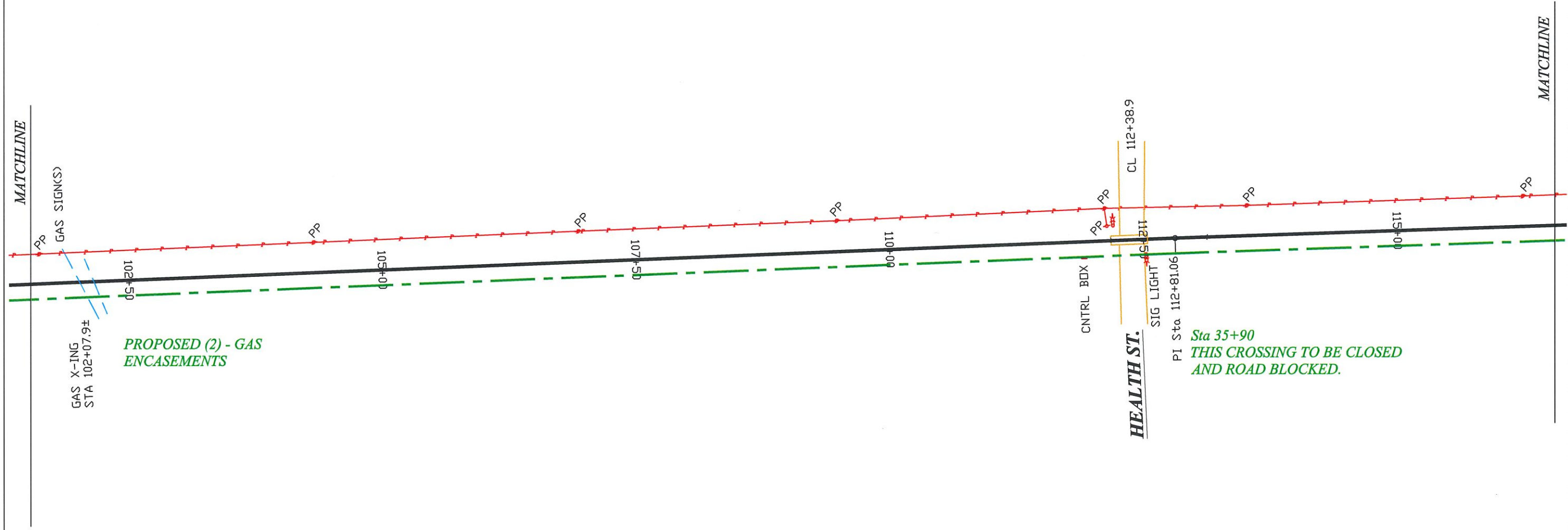
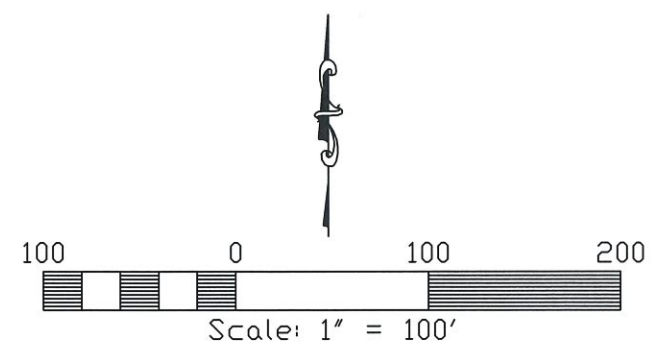
-PROPOSED 81± LF PRECAST
CONCRETE BRIDGE DITCH CROSSING
-RELOCATE POWER POLE

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CITY OF JONESBORO - Jonesboro, AR
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Preliminary Rail Layout - Proposed Siding Track ALT #1

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3 OF 15

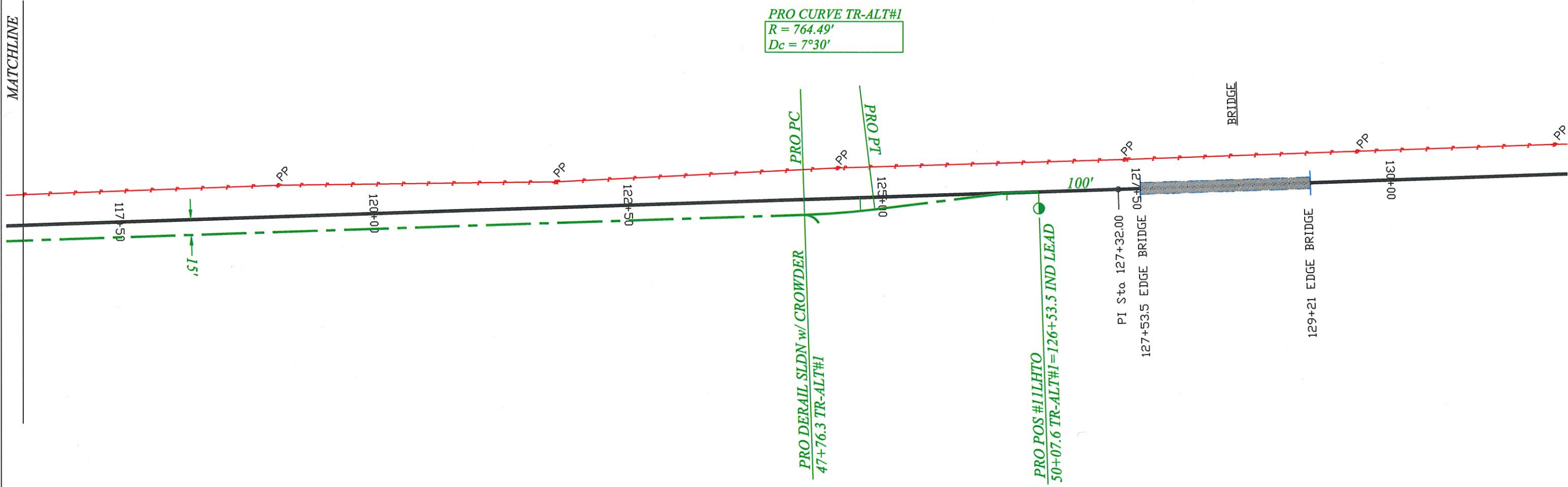


PROPOSED (2) - GAS
ENCASEMENTS

GAS X-ING
STA 102+07.9±

Sta 35+90
THIS CROSSING TO BE CLOSED
AND ROAD BLOCKED.

MATCHLINE



PRO CURVE TR-ALT#1
 $R = 764.49'$
 $D_c = 7^\circ 30'$

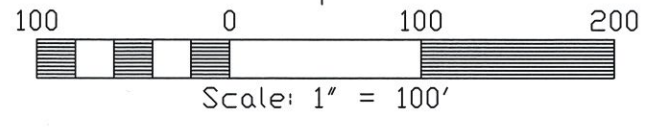
PRO DERAIL SLDN w/ CROWDER
 47+76.3 TR-ALT#1

PRO POS #11LHTO
 50+07.6 TR-ALT#1 = 126+53.5 IND LEAD

PI Sta. 127+32.00
 127+53.5 EDGE BRIDGE 05+721

129+21 EDGE BRIDGE

BRIDGE



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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Siding Track ALT #1

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Alternate No. 2 – East Switching for Post Foods

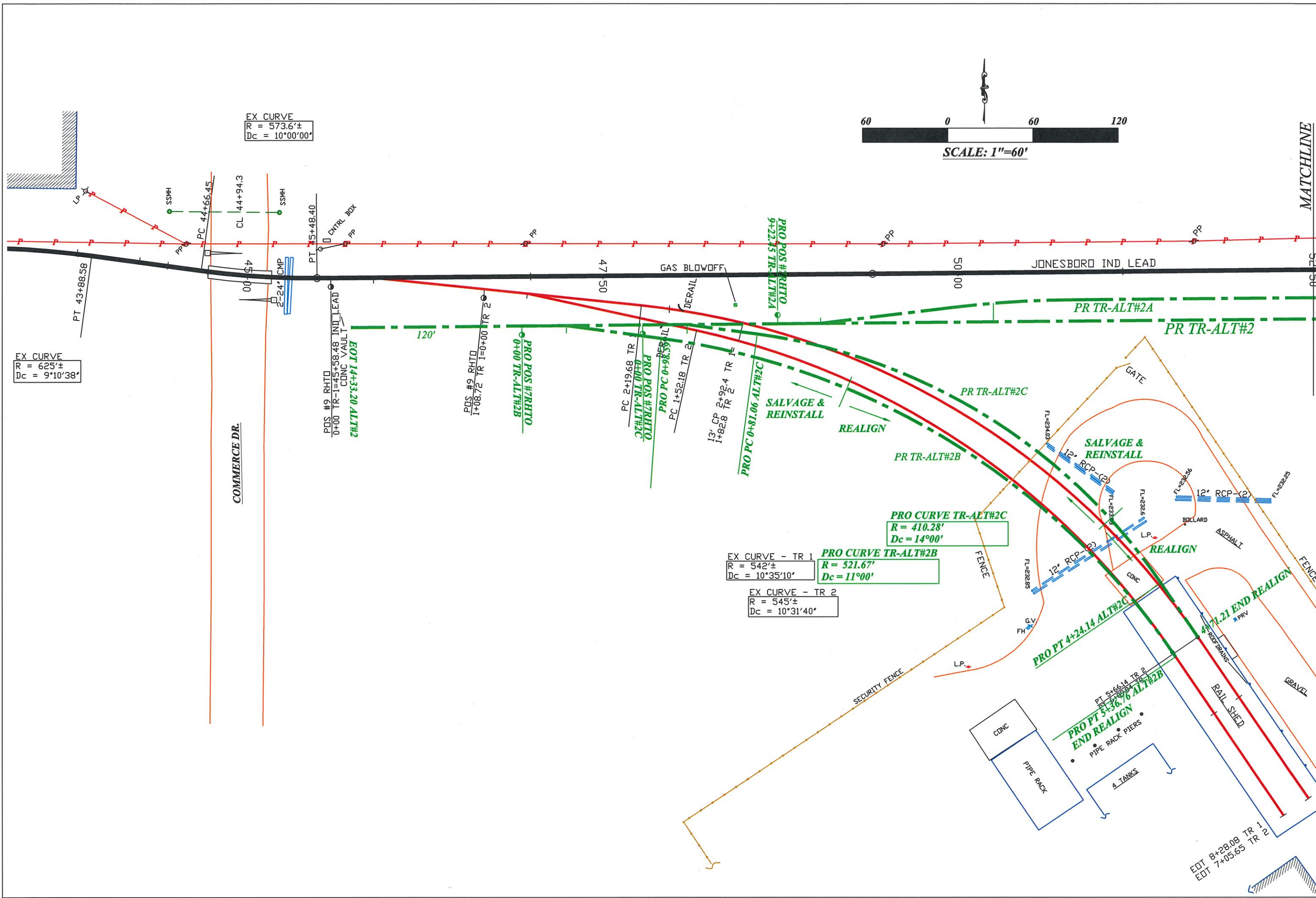
1. 112# Min Rail, Ties, Ballast, Subballast, Subgrade & Incidentals	1,610 @ 250.	\$402,500.00
2. Salvage & Reinstall Existing Track On New Road Bed	462 @ 150.	\$ 69,300.00
3. Realign Existing Track	400 @ 70.	\$ 28,000.00
4. Main Line Lead #11 Switch	1 @ 75,000.	\$ 75,000.00
5. #11 IG Switch	1 @ 60,000.	\$ 60,000.00
6. Salvage & Reinstall Existing No.9	1 @ 35,000.	\$ 35,000.00
7. #7 IG Switch	2 @ 45,000.	\$ 90,000.00
8. Derail	1 @ 10,000.	\$ 10,000.00
9. Dirt Bumper	1 @ 1,000.	<u>\$ 1,000.00</u>
	Subtotal	\$770,800.00
	15% Contingencies & Engineering	<u>\$115,600.00</u>
	Total	\$886,400.00

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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Track ALT #2

DESIGNER ges
CHECKER rbg
DRAFTER ccp
PROJECT 2018_02
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5 OF 15



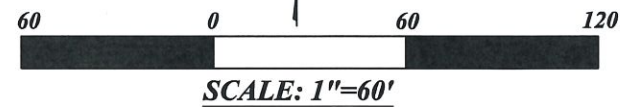
EX CURVE
 R = 573.6'±
 Dc = 10°00'00"

EX CURVE
 R = 625'±
 Dc = 9°10'38"

EX CURVE - TR 1
 R = 542'±
 Dc = 10°35'10"

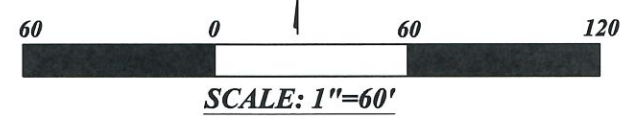
PRO CURVE TR-ALT#2B
 R = 521.67'
 Dc = 11°00'

EX CURVE - TR 2
 R = 545'±
 Dc = 10°31'40"



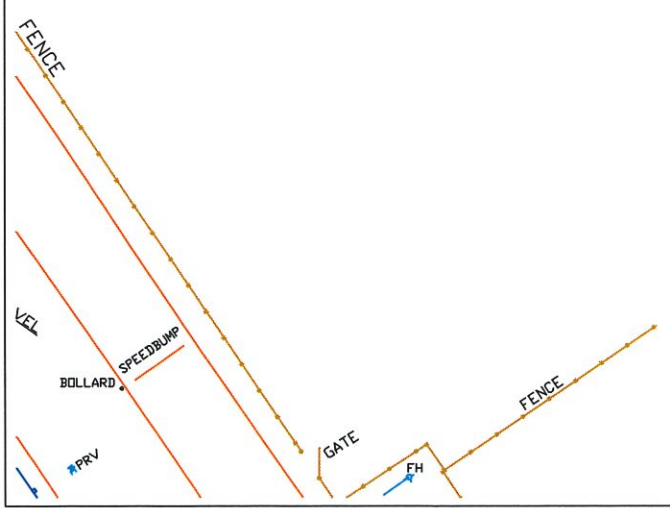
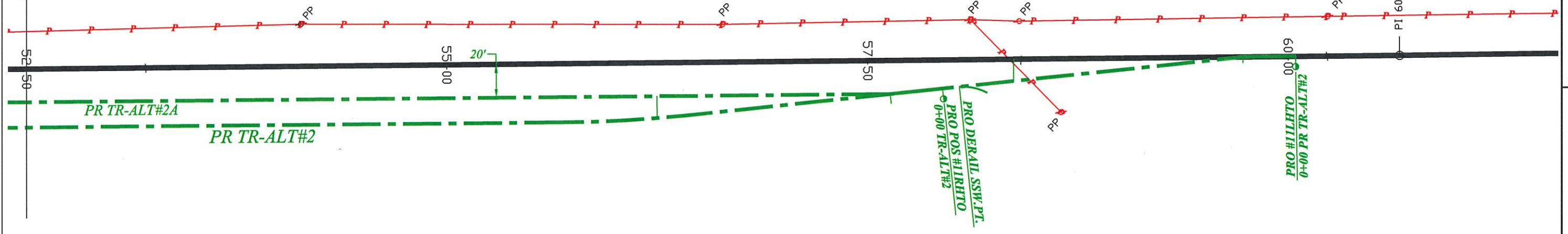
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MATCHLINE



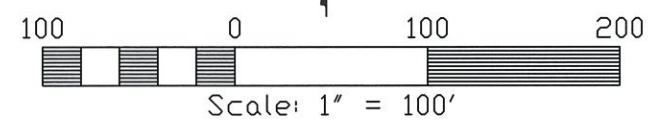
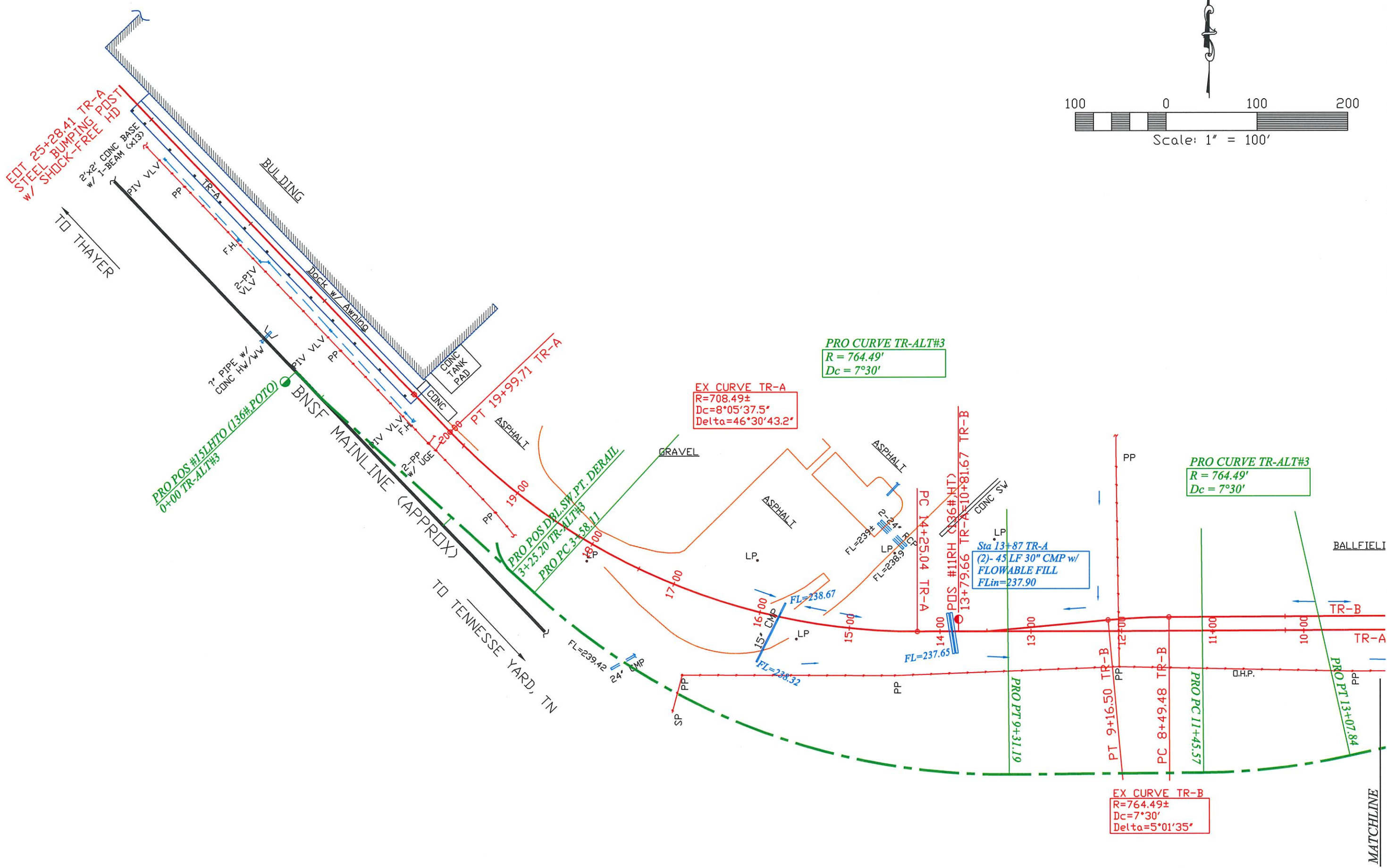
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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Track ALT #2

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	6 OF 15

Alternate No. 3 – North Leg of Y to BN Mainline

1. No. 15 Power Operated Switch and Power D-Rail (BN to build derail)	100% @ 1,200,000.	\$1,200,000.00
2. 112# Min Rail, Ties, Ballast, Subballast, Subgrade and Incidentals	1,659 @ 250.	\$ 414,750.00
3. No. 11 Main Lead Switch	1 EA @ 75,000.	<u>\$ 75,000.00</u>
	Subtotal	\$1,689,750.00
	15% Contingencies & Engineering	<u>\$ 253,450.00</u>
	Total	<u>\$1,943,200.00</u>



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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Track ALT #3

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CHECKER rbg
DRAFTER CCP
PROJECT 2018_02
SHEET C7
7 OF 15

Alternate No. 4 – U.P. Connection Using Old Industry Track

1. No.11 Mainline Switch and Extra Panel (U.P. installed)	1 EA @ 225,000.	\$ 225,000.00
2. 112# Min Rail, Ties, Ballast, Subballast, Subgrade and Incidentals	12,969 @ 250.	\$3,242,250.00
3. Existing Rail to be Rehabilitated Including Bridge	2,800 @ 100.	\$ 280,000.00
4. No.11 Main Lead Switches	3 EA @ 75,000.	\$ 225,000.00
5. 80' Creek Crossing ±5+00 TK 4A	80 @ 3,000.	\$ 240,000.00
6. 40' Creek Crossing ±117+00 TK 4	40 @ 3,000.	\$ 120,000.00
7. Concrete Road Crossing Panels	160 LF @ 750.	\$ 120,000.00
8. Road Cross Protection		
a) Industrial Dr (gates & flashers)	100% @ 150,000.	\$ 150,000.00
b) Distributor Dr (gates & flashers)	100% @ 150,000.	\$ 150,000.00
c) Commerce Dr (gates & flashers)	100% @ 150,000.	\$ 150,000.00
d) Moore Rd (flasher only)	100% @ 120,000.	<u>\$ 120,000.00</u>
	Subtotal	\$5,022,250.00
	±12% Contingencies & Engineering	<u>\$ 602,750.00</u>
	Total	<u>\$5,625,000.00</u>

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CITY OF JONESBORO - Jonesboro, AR
Proposed Industrial Lead Rail Expansion
Preliminary Rail Layout - Proposed Track ALT #4

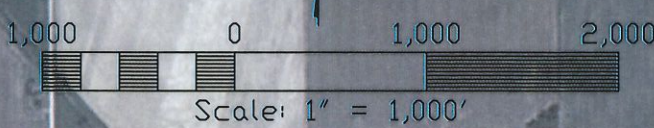
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Alternate No. 5 – U.P. Connection on Wynne Subdivision North of E. Highland

1. 112# Min Rail, Ties, Ballast, Subballast Subgrade and Incidentals	35,946 @ 250.	\$ 8,986,500.00
2. No. 11 Mainline Switches (U.P.)	2 EA @ 225,000.	\$ 450,000.00
3. No. 11 Industrial Lead Switches	3 EA @ 75,000.	\$ 225,000.00
4. Concrete Road Crossing	520 LF @ 750.	\$ 390,000.00
5. Road Crossing Protection		
a) Kathleen St N. (flashers & gates)	1 EA @ 150,000.	\$ 150,000.00
b) Kathleen St S. (flashers & gates)	1 EA @ 150,000.	\$ 150,000.00
c) Rodger Chapel Rd (flashers & gates)	1 EA @ 150,000.	\$ 150,000.00
d) Little Bay Rd (flashers only)	1 EA @ 120,000.	\$ 120,000.00
e) Grisham Rd (flashers only)	1 EA @ 120,000.	\$ 120,000.00
f) Gulley Rd (flashers only)	1 EA @ 120,000.	\$ 120,000.00
g) East Highland (gates, flashers & cantilevers)	1 EA @ 200,000.	\$ 200,000.00
h) Frito Lay Rd (flashers & gates)	1 EA @ 150,000.	\$ 150,000.00
6. Murry Creek Ditch Cross ±17+00 ±40	40' @ 3,000.	\$ 120,000.00
7. Ditch Crossing ±121+00 ±30	30' @ 3,000.	\$ 90,000.00
8. Ditch Crossing ±124+00 ±20	20' @ 3,000.	\$ 60,000.00
9. Ditch Crossing ±206+00 ±20	20' @ 3,000.	<u>\$ 60,000.00</u>
	Subtotal	\$11,541,500.00
	±10% Contingencies & Engineering	<u>\$ 1,154,000.00</u>
	Total	\$12,695,500.00



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W. WILLIAM GRAHAM JR., INC.
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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Track ALT #5

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CITY OF JONESBORO - Jonesboro, AR
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Preliminary Rail Layout - Proposed Track ALT #5

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CITY OF JONESBORO - Jonesboro, AR
Proposed Industrial Lead Rail Expansion
Preliminary Rail Layout - Proposed Track ALT #5

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Alternate No. 6 – U.P. Connection on Jonesboro Subdivision North of E. Highland

1. 112# Min Rail, Ties, Ballast, Subballast, Subgrade & Incidentals	36,299 @ 250.	\$ 9,074,750.00
2. No. 15 Power Operated Switch & Drail	2 EA @ 1,200,000.	\$ 2,400,000.00
3. No. 11 Industrial Lead Switches	3 EA @ 75,000.	\$ 225,000.00
4. Concrete Road Crossings	248 @ 750.	\$ 186,000.00
5. Road Crossing Protection		
a) Brookland Lester (flashers) (County Rd 928)	1 EA @ 120,000.	\$ 120,000.00
b) Farville Rd (flashers)	1 EA @ 120,000.	\$ 120,000.00
c) Prospect Rd (flashers)	1 EA @ 120,000.	\$ 120,000.00
d) River Rd (flashers)	1 EA @ 120,000.	\$ 120,000.00
e) East Highland (flashers, gates & cantilevers)	1 EA @ 200,000.	\$ 200,000.00
f) Frito Lay Rd (flashers & gates)	1 EA @ 150,000.	\$ 150,000.00
6. Ditch Crossing ±47+00 TK 6 50'	50 @ 3,000.	\$ 150,000.00
7. Ditch Crossing ±185+00 TK 6 30'	30 @ 3,000.	<u>\$ 90,000.00</u>
	Subtotal	\$12,955,750.00
	±10% Contingencies & Engineering	<u>\$ 1,295,250.00</u>
	Total	\$14,251,000.00



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Brookland Lester

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CITY OF JONESBORO - Jonesboro, AR
 Proposed Industrial Lead Rail Expansion
 Preliminary Rail Layout - Proposed Track ALT #6

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CITY OF JONESBORO - Jonesboro, AR
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CITY OF JONESBORO - Jonesboro, AR
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