

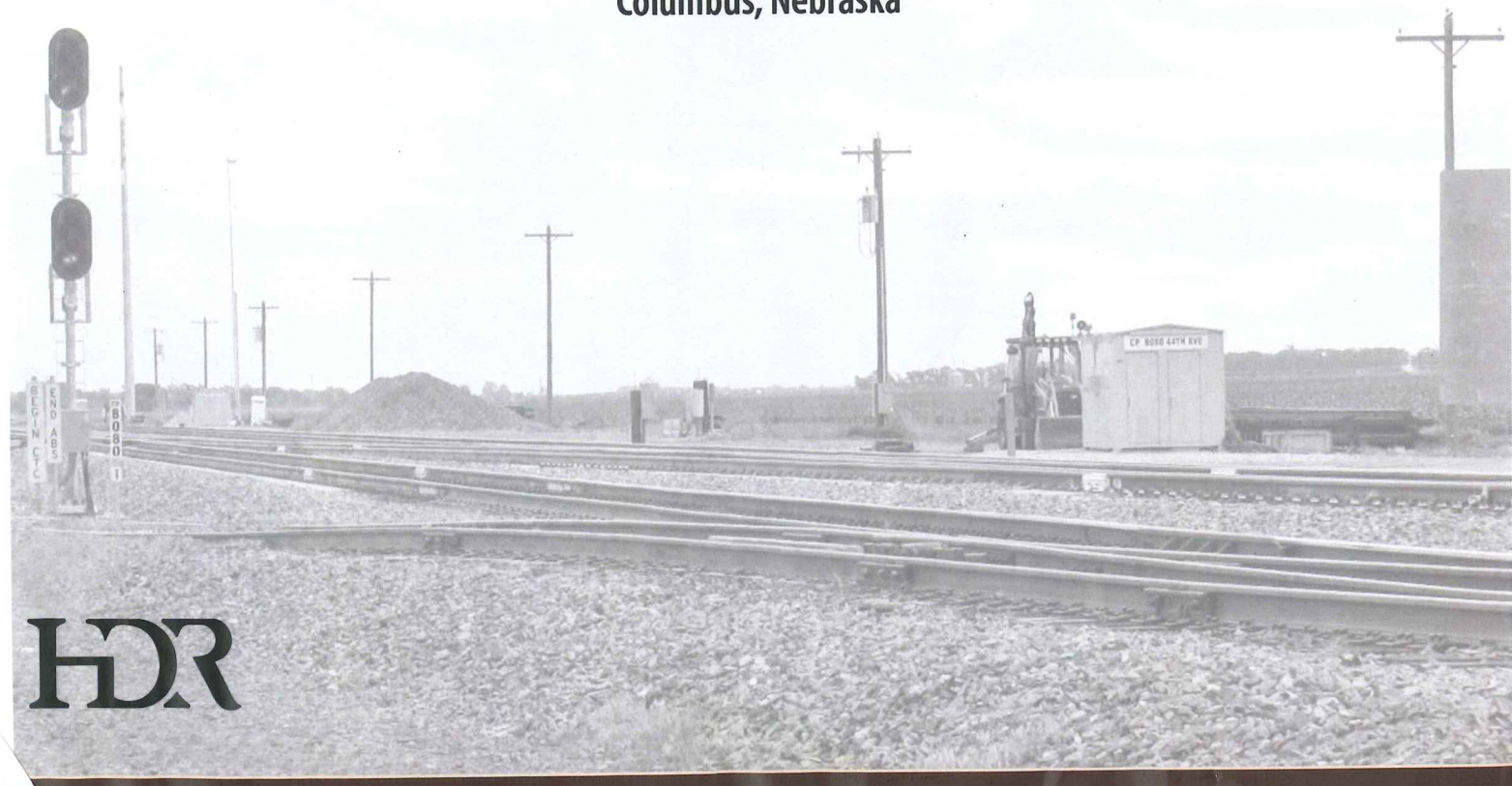
September 2012

The City of **Columbus**



East Industrial Park Rail Access Study

Columbus, Nebraska



HDR

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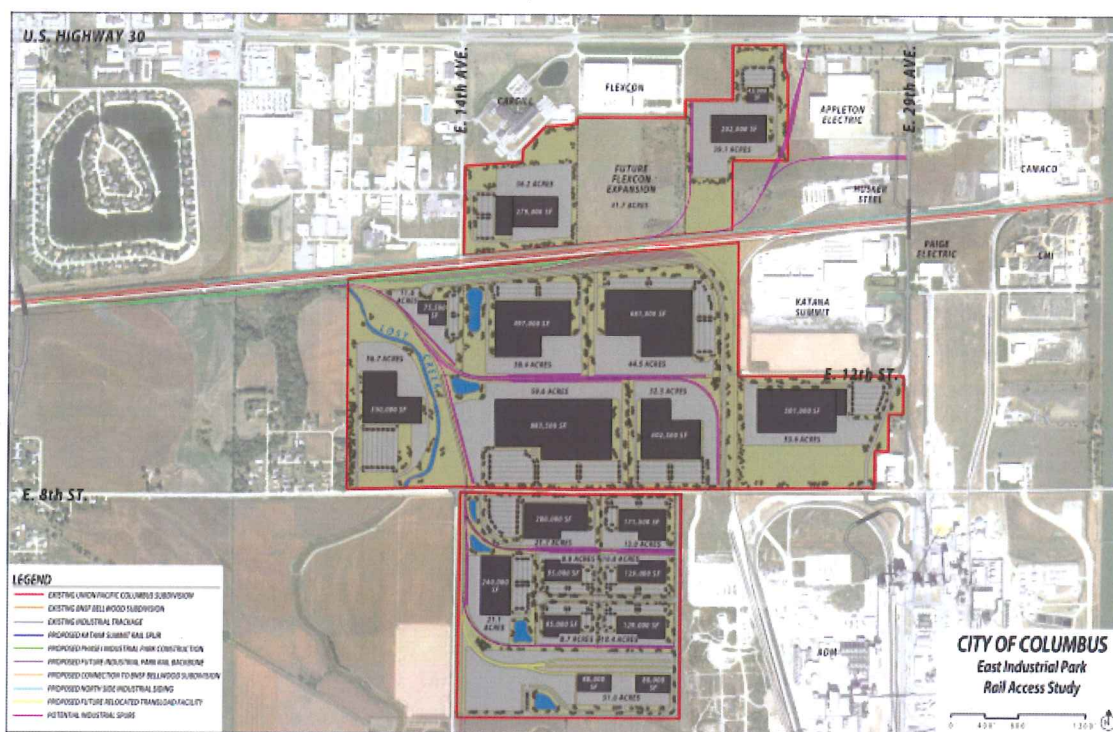
1.0 EXECUTIVE SUMMARY

The City of Columbus, in partnership with the Nebraska Department of Economic Development (NDED) is planning for development of a rail-served industrial park to be located adjacent to the Union Pacific Columbus Subdivision mainline on the east side of the City. Development of this industrial park represents a major investment for the City and has the potential to be a significant economic driver for the City and surrounding area.

The East Industrial Park Rail Access Study was completed to determine the feasibility of a rail-served industrial park on the east side of the City and how the development of such an industrial park might be pursued. The study identified major site constraints and challenges as well as opportunities for development of the park and surrounding area. As the surrounding area is already primarily industrial several synergies were identified for improving access to the specific study area as well as surrounding development.

The plan developed involves an initial construction phase to develop a transload facility adjacent to the existing UP tracks. This phase will allow for initial track construction including the necessary connections to the UP mainline for the industrial park build-out. Based on information received from UP and BNSF, as well as local industries, there is a need for a transload facility in the area. The initial phase will allow for a jumping off point for development of the remaining industrial park.

Future development phases were planned with the idea of being as flexible as possible by running a rail backbone down the west side of the industrial park and allowing individual rail spurs to connect to the backbone as necessary to serve individual customers. This allows customers of any size to be served by the park without precluding development of adjacent area. The backbone also allows for a potential future connection to the BNSF Bellwood Subdivision allowing the industrial park to have dual rail service from UP and BNSF.



SITE DEVELOPMENT POTENTIAL

2.0 STUDY AREA

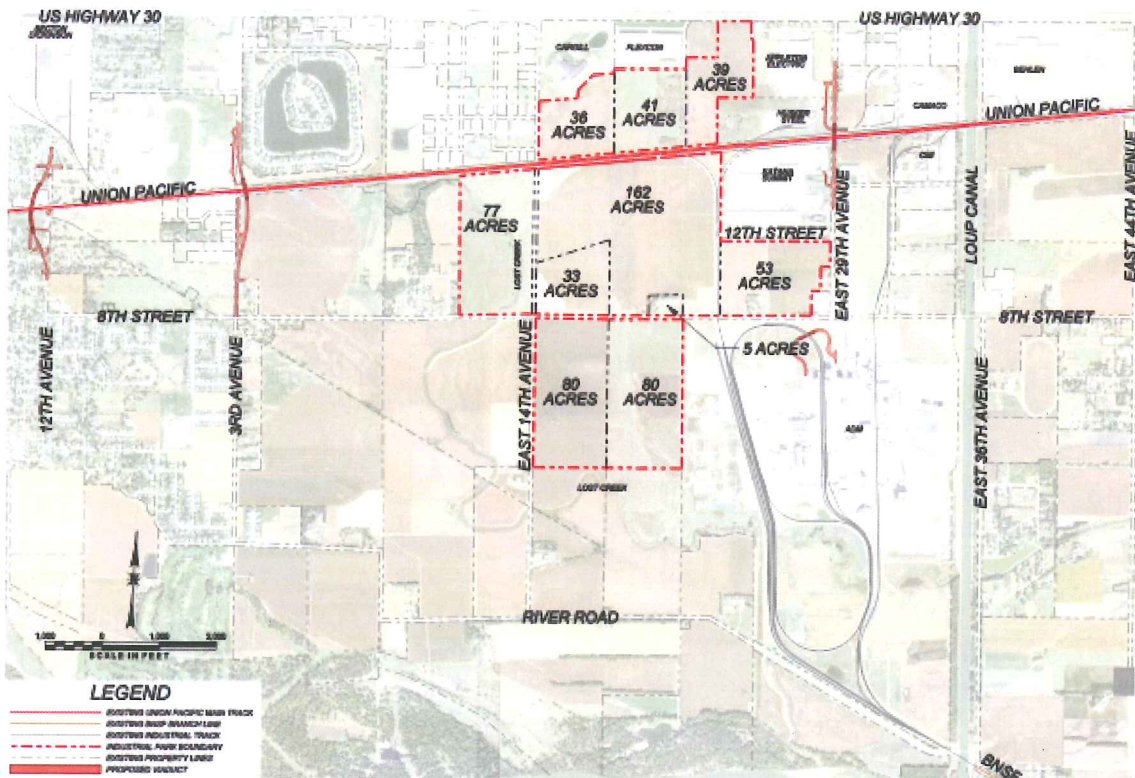
The study area as identified in the RFP and later refined during stakeholder input sessions includes over 660 acres of developable land and contains the following parcels:

South of Union Pacific Columbus Subdivision

- ~200 acres bounded by the UPRR main tracks, the ADM plant lead track, 8th Street, and East 14th Avenue
- ~77 acres bounded by the UPRR main tracks, East 14th Avenue, 8th Street, and a line 1/4 mile west of East 14th Avenue
- ~160 acres bounded by 8th Street, East 14th Avenue, a line 1/2 mile south of 8th Street, and a line 1/2 mile east of East 14th Avenue
- ~53 acres bounded by 12th Street, East 29th Avenue, 8th Street, and the ADM plant lead track excluding the former elementary school parcel and adjacent residential parcels along East 19th Avenue

North of Union Pacific Columbus Subdivision

- ~36 acres located south of the existing Cargill facility and north of the UPRR main tracks
- ~41 acres located south of the Flexcon facility and north of the UPRR main tracks
- ~39 acres located south of US Highway 30 and north of the UPRR main tracks between Flexcon and the former Appleton Electric building
- The former Appleton Electric building (~371,000 SF on ~44 acres)



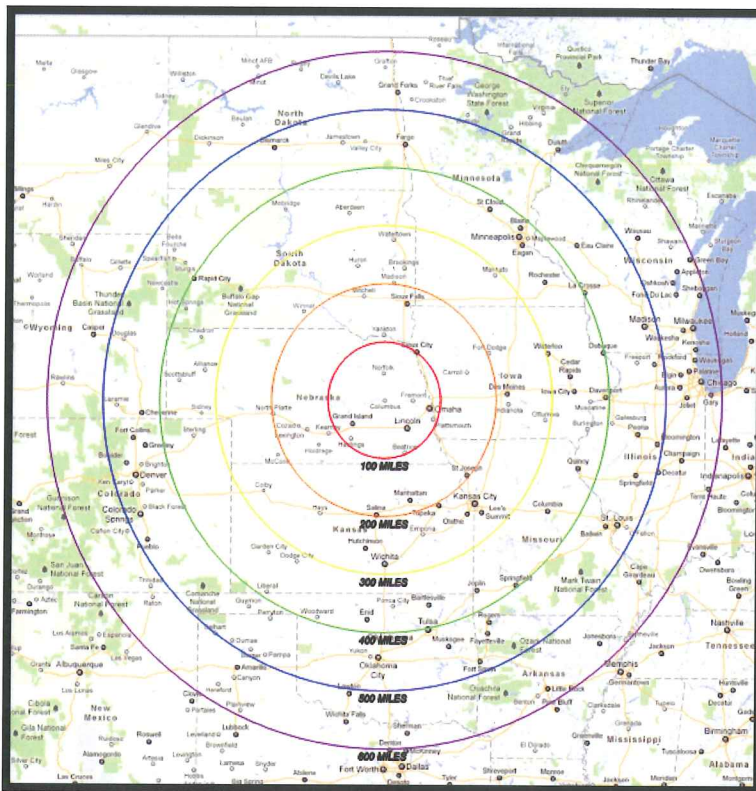
STUDY AREA

2.1 ZONING

The project site is generally zoned for heavy manufacturing as is much of the surrounding area. The majority of the study area is currently used for agricultural purposes. Residential areas are located primarily to the west of the study area and there are some commercial properties located north of the study area along US Highway 30.

2.2 REGIONAL ACCESSIBILITY

The project site is centrally located with good roadway and rail access to multiple hub locations within the central United States. US Highway 30 is located on the north side of the study area and US Highway 81 is located approximately 3 miles west of the study area. Both highways have good access to the national interstate highway system. Union Pacific's Columbus subdivision transverses through the study area and BNSF's Bellwood Subdivision ends just south of the study area; both rail lines provide access to the Class I railroad system with access to major rail hubs.



Highway Travel Times / Distances

Omaha	1.5 Hours	85 Miles
Des Moines	3.5 Hours	210 Miles
Kansas City	4.5 Hours	270 Miles
Oklahoma City	7.5 Hours	440 Miles
Minneapolis	7.5 Hours	450 Miles
Denver	7.5 Hours	470 Miles
St Louis	8.5 Hours	520 Miles
Chicago	9.0 Hours	540 Miles
Dallas	11.0 Hours	650 Miles

3.0 CURRENT CONDITIONS REVIEW

3.1 ENVIRONMENTAL REVIEW

A Phase I Environmental Review was completed for the study area and no sites of concern were discovered within the project area. Adjacent to the project area small quantity generators and underground storage tanks were identified by the Environmental Data Resources report. A Wellhead Protection Area was identified north of the UP tracks in the vicinity of the Loup Canal.

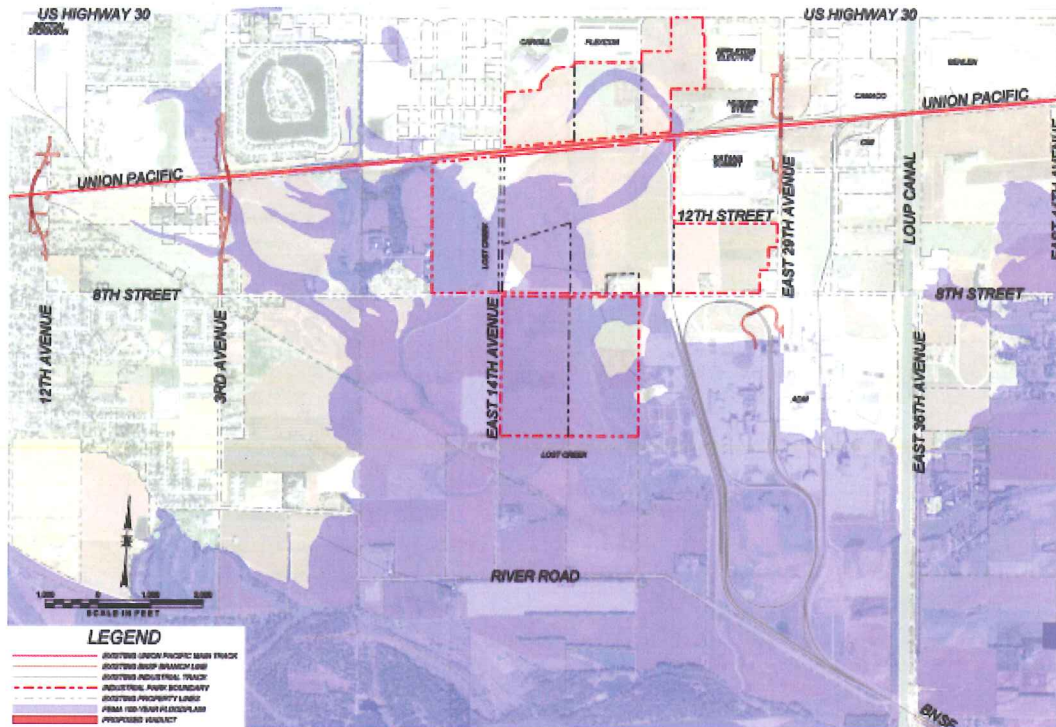
No wetlands in the National Wetland Inventory (NWI) are located within the proposed industrial park boundary. Wetlands are a concern for the local Corps of Engineers District although little evidence of sustainable wetlands has been found in the area. A wetland mitigation site for the Lost Creek basin is located in the southeast corner of the Christopher Cove Subdivision adjacent to the UP main tracks and another wetland mitigation site for the UP is located south of the UP tracks along Lost Creek immediately to the west of the proposed industrial park boundary. Industrial rail connections currently proposed both north and south of the UP main tracks have the potential to impact these sites and additional mitigation will likely be required at each of these locations if they are disturbed by construction activities as part of this project.



3.2 FLOODPLAIN REVIEW

A significant portion of the study area is located within the 100-year floodplain based on the most recent (April 2010 mapping) developed by FEMA. This includes approximately 90% of the study area located south of 8th Street, 80% of the study area located west of East 14th Avenue, and 40% of the study area between the UP main tracks, the ADM lead track, 8th Street, and East 14th Avenue. The majority of the project area within the floodplain is located along the southwest side of the study area.

The primary concern associated with constructing in the floodplain in this area is keeping infrastructure above the 100-year floodplain elevation. This may require significant amounts of fill material be brought to the site to raise the existing ground by 1-3 feet under buildings or other infrastructure. Additionally, in areas near Lost Creek, hydraulic modeling may be necessary to ensure that improvements do not result in more than a 1' rise to the water elevation of Lost Creek.



FEMA 100-YEAR FLOOD PLAN

3.3 GEOTECHNICAL REVIEW

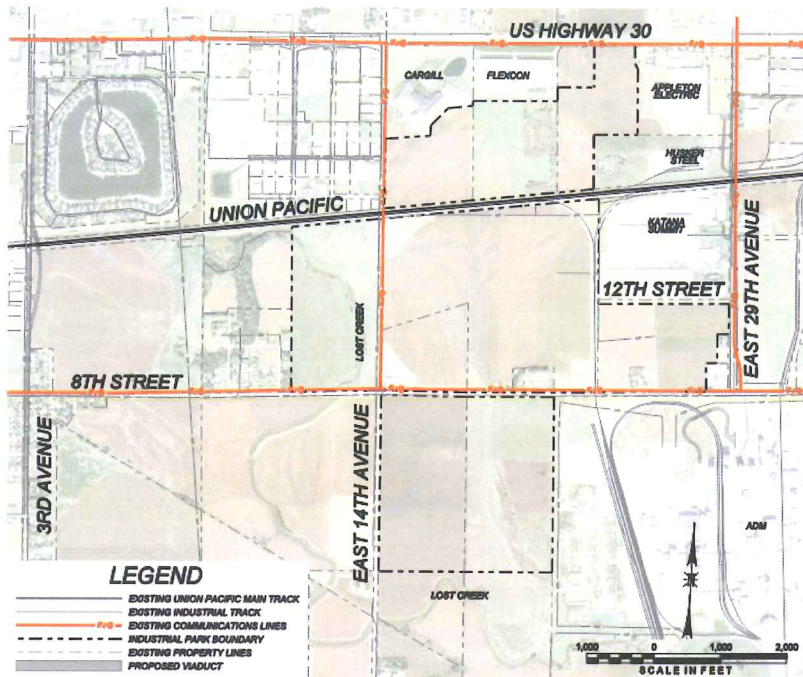
The study area is generally level, low-lying land that lies within the historical floodplains of the Platte and Loup Rivers. The surface geology of the floodplain consists mainly of alluvium deposits composed of clay, silty sand, and gravel. Silty to fine sand is mixed in near the surface, becoming coarser with depth. Bedrock is generally located below 100 feet and consists of chalky shale and lime-cemented marine sediment. The water table is generally high and groundwater is typically found between 6-20 feet below existing ground. Settlement and slope stability are generally not a concern for this project as fills will generally be only a couple of feet in depth and the existing granular soil should settle during fill placement.

4.0 UTILITIES

The study area is well served by all major utilities including communications, electric, natural gas, sanitary sewer, and potable water. Additionally ADM is a major producer of steam from their plant operations and piping steam from the existing ADM plant to a customer within the industrial park is a possibility. Enclosed storm sewer systems are generally not located in this area and on-site drainage detention will likely be a requirement.

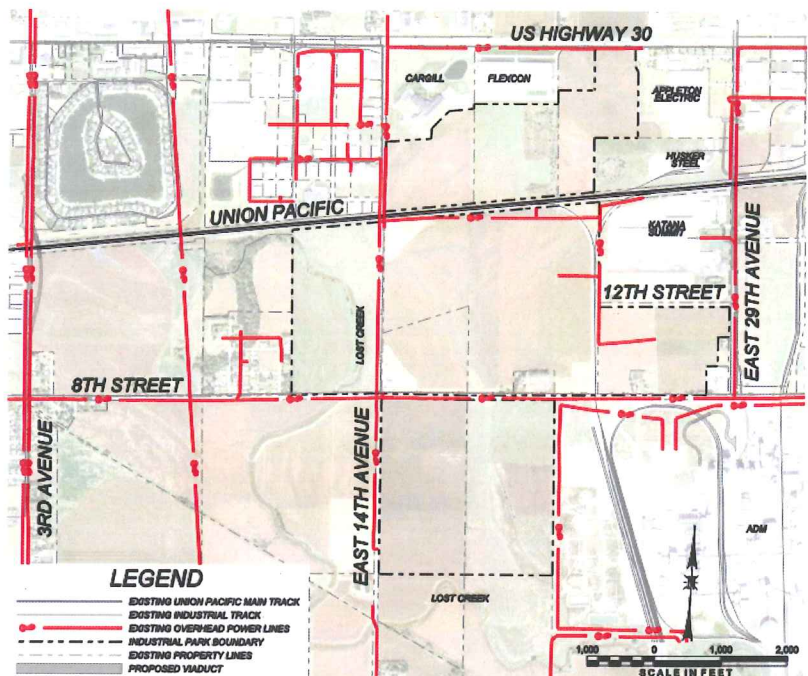
4.1 COMMUNICATIONS

Frontier Communications is the local service provider for the study area and is capable of providing data, telephone, and cable service. Fiber optic cable and copper lines are both currently available along US Highway 30, 8th Street, and East 29th Avenue within the study area. Fiber optic cable is available along East 14th Avenue between US Highway 30 and 8th Street and copper lines are available along East 14th Avenue south of 8th Street.



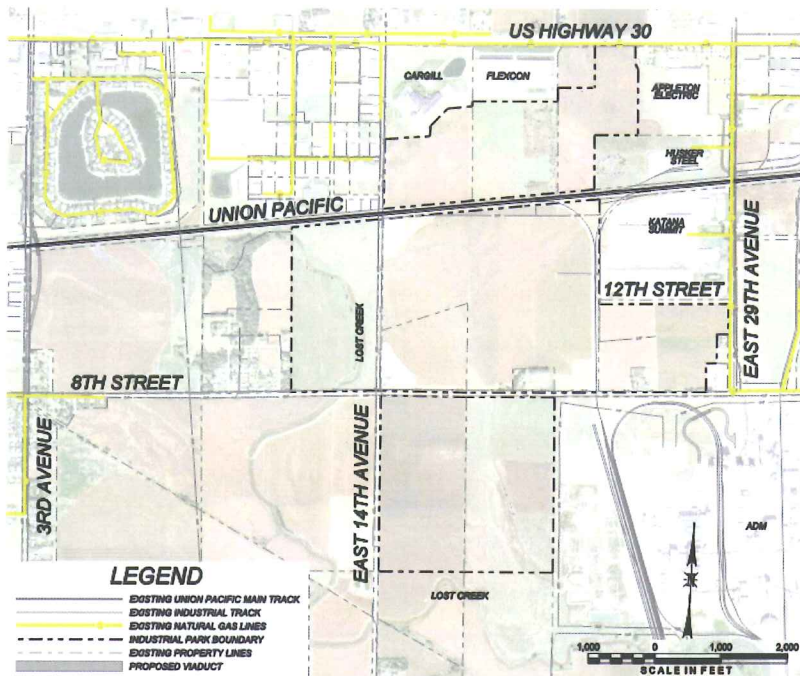
4.2 ELECTRIC

Loup Power District is the local service provider for the study area and has a grid of 12.5 kV and 34.5 kV transmission lines including multiple feeds from district substations. Distribution lines are currently located along US Highway 30, 8th Street, East 29th Avenue, and East 14th Avenue within the study area. Additional distribution lines are located south of the UP main tracks between East 14th Avenue and the ADM lead track as well as along the ADM lead track.



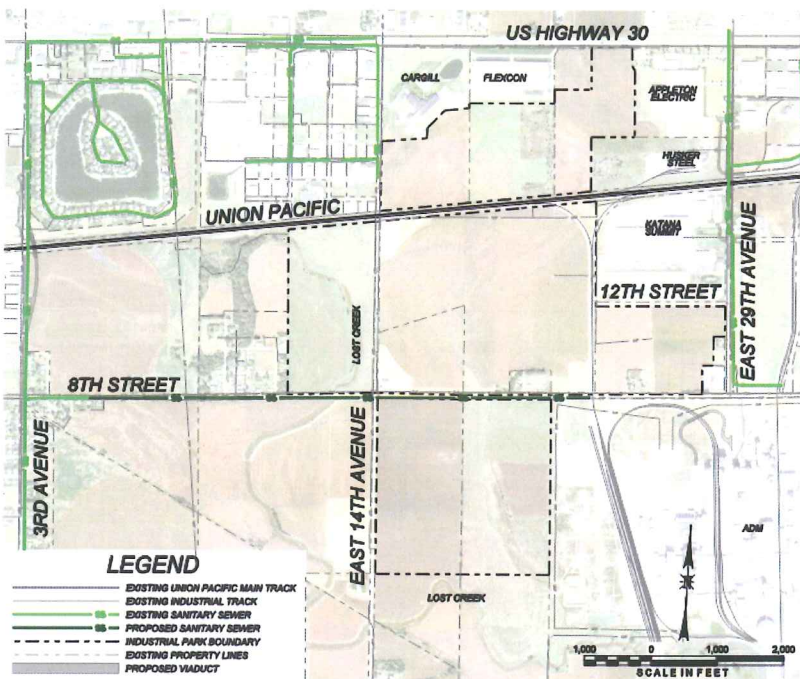
4.3 NATURAL GAS

Black Hills Energy is the local service provider for the study area with multiple high pressure gas lines up to 6" in diameter located in the area. Gas lines are currently located along US Highway 30, East 29th Avenue between US Highway 30 and 8th Street, and East 14th Avenue between US Highway 30 and approximately 19th Street north of the UP main tracks.



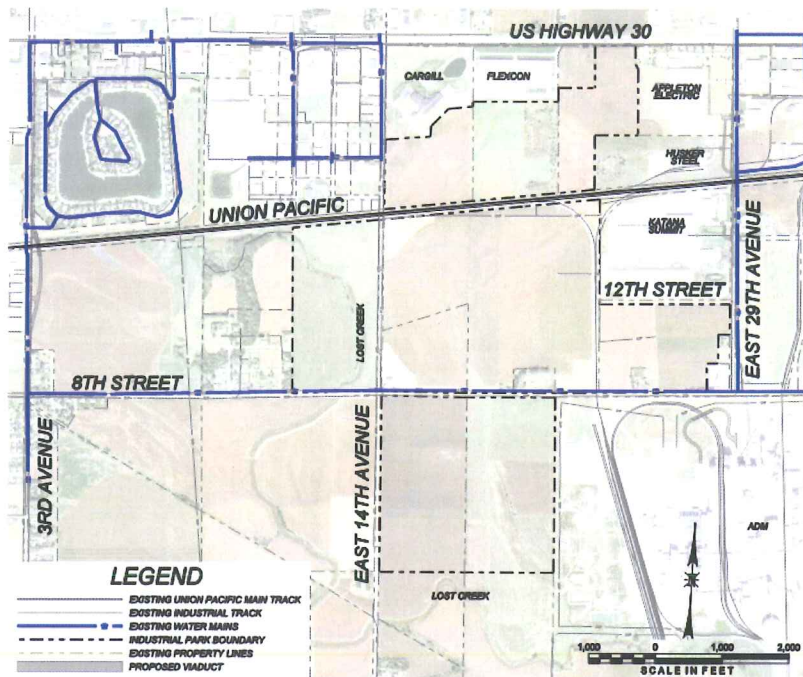
4.4 SANITARY SEWER

The City of Columbus is the local service provider for the study area and has a 4.5 MGD activated sewage treatment plant located southwest of the study area. A 6" force main is currently located along East 29th Avenue from 8th Street to the UP main tracks; a 15" gravity sewer is located along East 29th Avenue from the UP main tracks to US Highway 30. An 8" gravity sewer is located along East 14th Avenue from the UP main tracks to US Highway 30. Lastly, a 15" gravity sewer is planned for 8th Street between East 29th Avenue and 3rd Avenue under a separate project as the area develops.



4.5 WATER

The City of Columbus is the local service provider for the study area and has an 18 MGD treatment plant located southwest of the study area. The system currently provides 50-55 psi of pressure in the distribution system and a flow of up to 1,440 GPM. 12" water mains are currently located along East 29th Avenue between US Highway 30 and 8th Street and along East 14th Avenue between US Highway 30 and 19th Street. A 12" water main is being installed along 8th Street between 3rd Avenue and East 29th Avenue as part of the 8th Street widening project.



4.6 MISCELLANEOUS

Steam

ADM constructed an ethanol dry mill and co-generation facility that began operations in 2010. A byproduct of this process is steam that could be piped to other industries in the area for use in their processes.

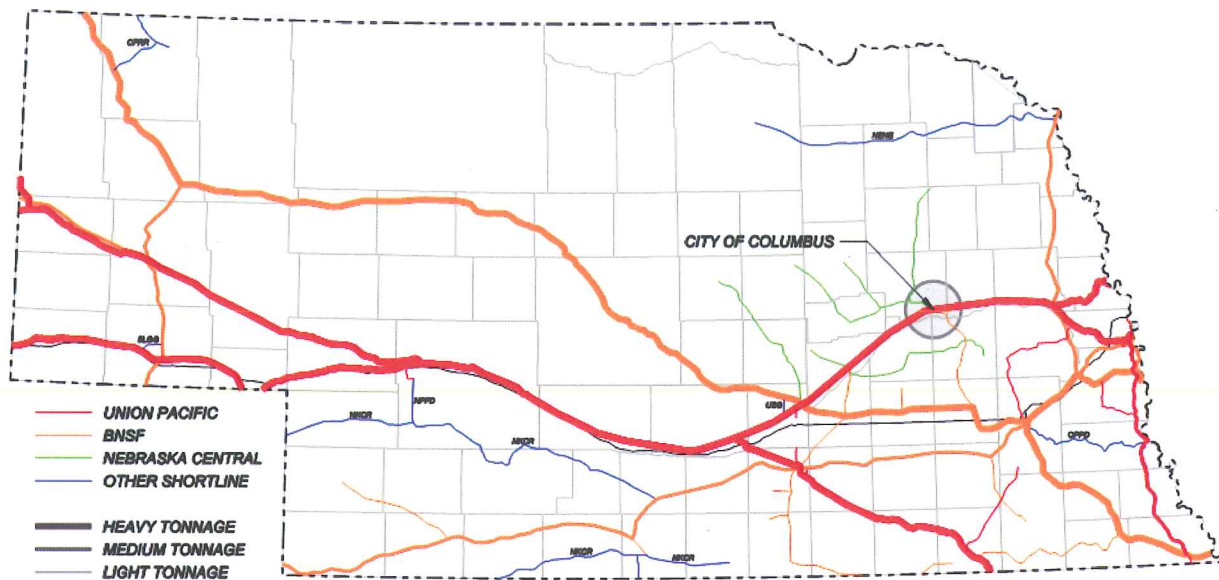
Storm Sewer

There are no enclosed storm sewer systems within the study area and on-site drainage detention and infiltration is anticipated for any development within the industrial park.

5.0 RAIL

5.1 ACCESS

Rail access is a key feature to the industrial park. The study area is located adjacent to the Union Pacific Railroad's Columbus Subdivision and BNSF Railway's Bellwood Subdivision ends at the south end of the ADM plant, approximately 1.5 miles from the southern boundary of the study area.



NEBRASKA RAIL NETWORK

Union Pacific Columbus Subdivision

The project study area is bisected by the UPRR Columbus Subdivision on one of UP's primary east-west transcontinental routes. The Columbus Subdivision currently handles approximately 70 trains per day and is classified by UP as a 'Restricted Access Mainline Corridor'. This requires that any customer infrastructure allow a full train length to clear the mainline with power operated switches on any UP controlled track.

To the south of the UP tracks rail access can be accomplished by connecting to the existing ADM siding near 3rd Avenue and again near the west leg of the ADM wye. The proposed industrial park trackage will accommodate clearing a train from the mainline and allow locomotives to run around their train to shove cars to individual industries.

As currently proposed the industrial park will have an initial phase to bring a transload facility to the area south of the UP tracks and east of East 14th Avenue. As the industrial park develops this initial phase can be modified into a rail support yard for the industrial park and the transload facility can be relocated to a permanent location elsewhere within the park. This concept allows rail access to be brought to the industrial park at minimal cost initially while allowing for expansion and minimizing use of the prime real estate adjacent to the UP main tracks. As the park develops rail spurs can be constructed from the support yard to individual industries per customer and railroad specifications.

Discussions with UP's Industrial Development group have validated the need for additional transload opportunities in the region and they see the potential for a transload facility in Columbus as a key feature for the industrial park.

On the north side of the UP tracks rail access will require construction of a new siding that is approximately 10,000 feet long and extends from the Loup Canal to East 6th Avenue. This siding would allow trains to clear the main track and serve industries north of the main tracks without impacting mainline traffic. Any proposed industrial spurs would connect to this siding rather than the main track and the existing Husker Steel industrial spur would also be connected to the siding.

BNSF Bellwood Subdivision

The existing terminus of the BNSF Bellwood Subdivision at the south end of the ADM plant is located approximately 1.5 miles southeast of the proposed industrial park boundary. The Bellwood Subdivision is a branch line that connects to one of BNSF's primary transcontinental routes in Lincoln. While this line does not handle the same volume of traffic as UP's Columbus Subdivision, it also does not have the same level of infrastructure and it is likely that the presence of a rail support yard at the industrial park would be required for BNSF operations.

Construction of a connection between the existing BNSF track and the proposed industrial park would require relocation of River Road to accommodate the BNSF access track. The access track would connect into the rail backbone through the industrial park and have access to the rail support yard located south of the UP main track. Providing a connection to the BNSF would provide dual rail access to the park, an uncommon and desirable feature for rail-served industrial parks.

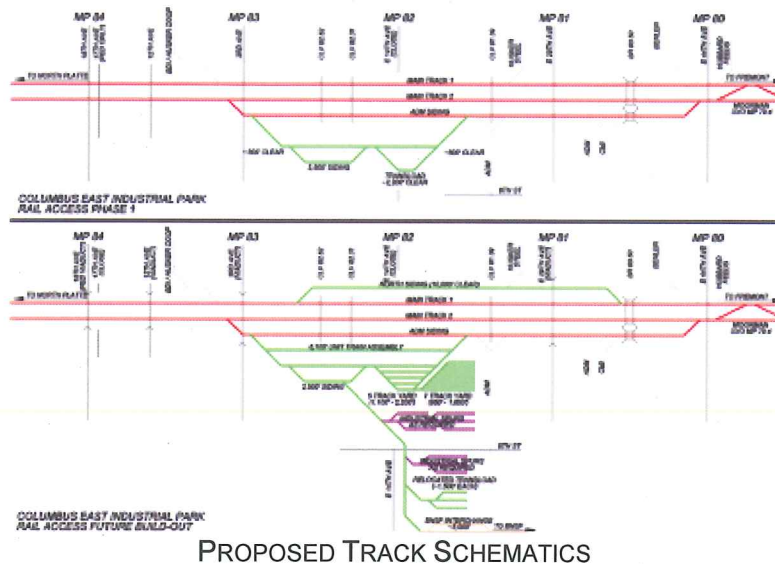
5.2 OPERATIONS

The other key component of the industrial park from the rail side is operations. Once the track is in place the method of service for individual customers in the Industrial Park must be determined. The potential for dual access to UP and BNSF adds a level of complexity in determining how the park will be served, potential options include individual customers being served by UP, BNSF, both railroads, or a 3rd party operator.

Allowing both railroads to serve individual customers within the park creates the potential for conflicts and creates safety concerns if both railroads are trying to serve customers within the park at the same time. Both railroads have expressed their concern with any operational scenario that has both railroads serving individual customers within the park and this is a scenario that should be avoided.

Service by either UP or BNSF to individual customers with the other railroad simply performing a drop/pull interchange operation at the industrial park boundary is a feasible alternative for providing service to individual customers within the park. This eliminates the safety and operational concerns associated with having multiple carriers attempting to serve individual customers within the park, but creates the potential for additional interchange fees for customers having cars delivered via the non-serving carrier. Under this scenario the preferred service provider would be UP as they have supporting infrastructure in Columbus and are in the process of considering an additional local train to serve customers in the area. In contrast, BNSF would have to add supporting infrastructure, including a location to tie-up locomotives and a crew duty station, in addition to the additional local train. The additional infrastructure requirements add significant cost to the project without a corresponding benefit.

Service by a 3rd party would allow both UP and BNSF to perform drop/pull operations to deliver and pick up cars at the Industrial Park boundary. The 3rd party operator would then pick up cars delivered by the railroads and distribute them to individual customers within the park as well as pick up cars from individual customers and deliver them to the appropriate rail carrier's interchange track for handling by the railroad. Depending on the number of customers within the industrial park this becomes an attractive means of providing good service to individual customers and allowing the railroads to maintain their operations.



5.3 CARRIER CONCERNS

Maintaining the integrity of their core system is of high concern to both UP and BNSF. The project is located at the end of a branch line for BNSF so the integrity of their core system is not a concern, however, they want to ensure that the level of service being provided to current customers on the line would be maintained with the addition of the industrial park.

The project is located on UP's primary east-west corridor along one of the busiest mainlines in the country. UP is concerned about maintaining and protecting the ability to increase capacity along this mainline including preserving the capability to build additional tracks to create a total of 4 mainlines between North Platte and Fremont. They are also concerned about maintaining fluidity through their yard network, including Columbus Yard, which is already over capacity and severely limited in the ability to expand. To maintain fluid operations throughout their network UP is always looking at ways to improve access into and out of industries without adversely impacting their core network. This typically includes power turnouts off the UP mainline and the ability to clear an entire train off the mainline. Additionally, UP is always looking to close at-grade crossings as they present a safety concern for mainline operations and can hamper yard and switching operations. This project has been designed to attempt to minimize the need for at-grade crossings and the requirement for these crossings to be blocked while serving customers within the park.

5.4 CONSTRUCTION PHASING PLAN

The construction phasing plan outlined below is a flexible concept that allows for adjustments as necessary. The current demand for additional transload capacity in the area is addressed in the initial stages of the phasing plan. Space is provided for rail expansion as the industrial park develops.

Phase 1 - South

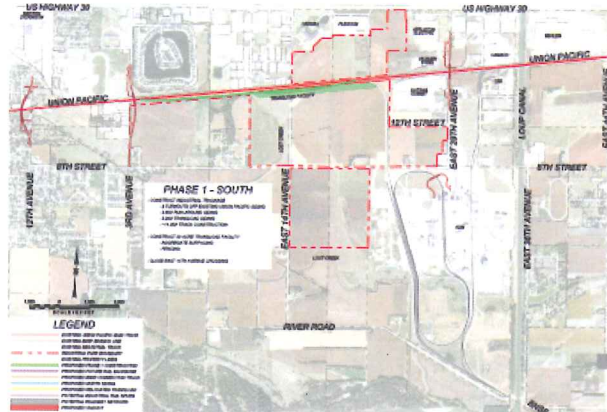
Construct Industrial Trackage

- Two turnouts off existing Union Pacific Siding
- 2,500' run-around siding
- 2,200' transload siding
- ~11,300' track construction

Construct 20 Acre Transload Facility

- Aggregate surfacing
- Fencing

Close East 14th Ave Crossing



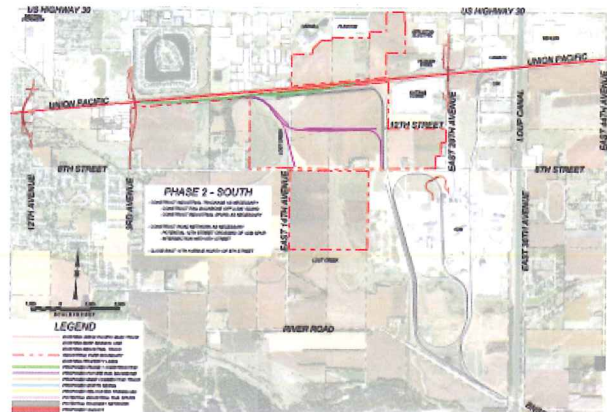
Phase 2 - South

Construct Industrial Trackage as necessary

- Construct rail backbone off 2500' siding
- Construct industrial spurs as necessary

Construct Road Network as necessary

- Potential 12th Street crossing of ADM spur
- Intersection with 8th Street



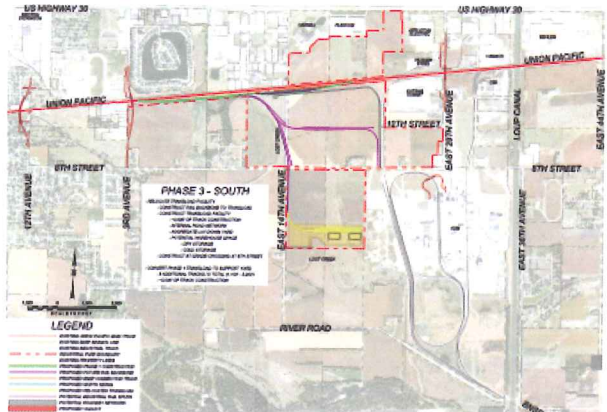
Phase 3 - South

Relocate Transload Facility

- Construct rail backbone to transload
- Construct Transload Facility
 - ~5,900' of track construction
 - Internal road network
 - Aggregate laydown yard
 - Potential warehouse space
- Construct at-grade crossing at 8th Street

Convert Phase 1 Transload to support yard

- 3 additional tracks/ 5 total
- ~5,000' of track construction



Phase 4 - South

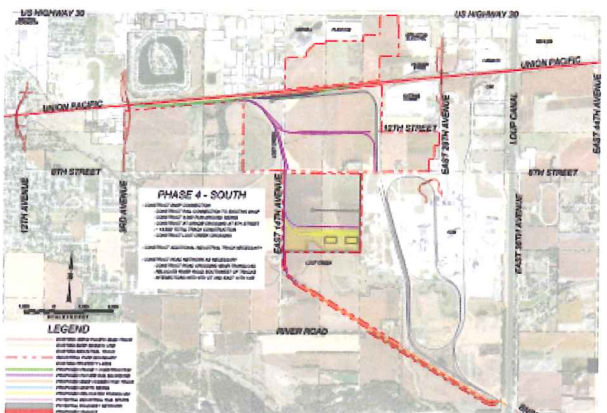
Construct BNSF Connection

- Construct rail connection to existing BNSF
- Construct 3,000' run-around siding
- Construct at-grade crossing at 8th Street
- ~13,500' total track construction

Construct Additional Industrial Track as necessary

Construct Road Network as necessary

- Construct road crossings near transload
- Relocate River Road southwest of tracks
- Intersections with 8th Street and East 14th Avenue

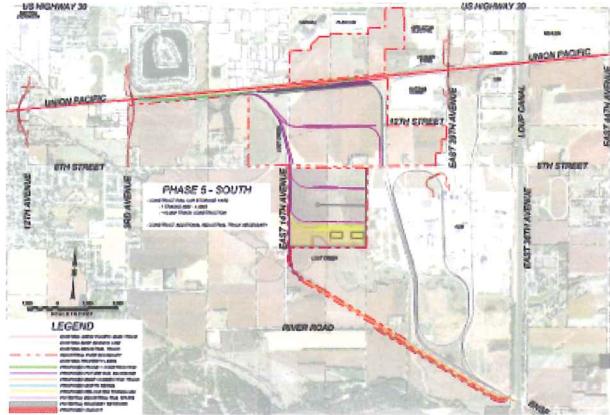


Phase 5 – South

Construct Rail Car Storage Yard

- 7 tracks (950' – 1,850')
- ~10,000' track construction

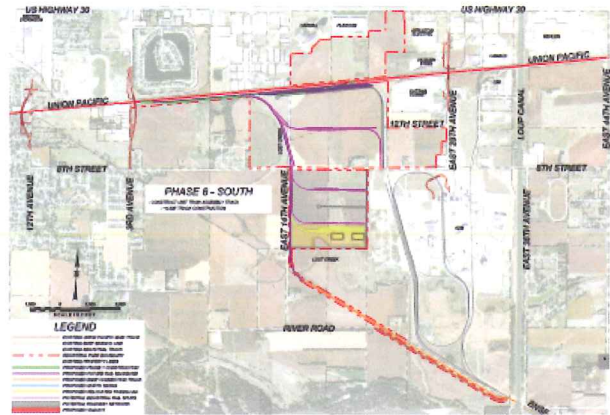
Construct Additional Industrial Track as necessary



Phase 6 – South

Construct Unit Train Assembly Track

- ~6,200' track construction

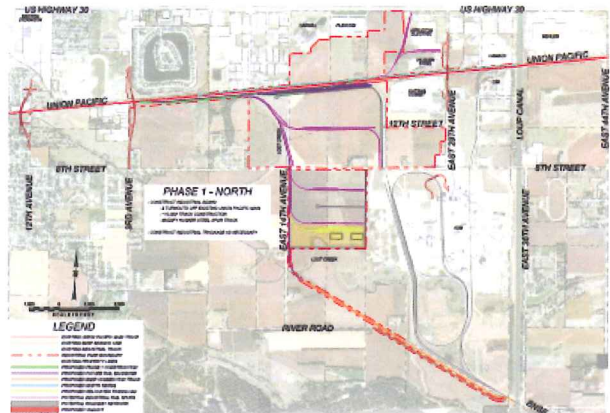


Phase 1 – North

Construct Industrial Siding

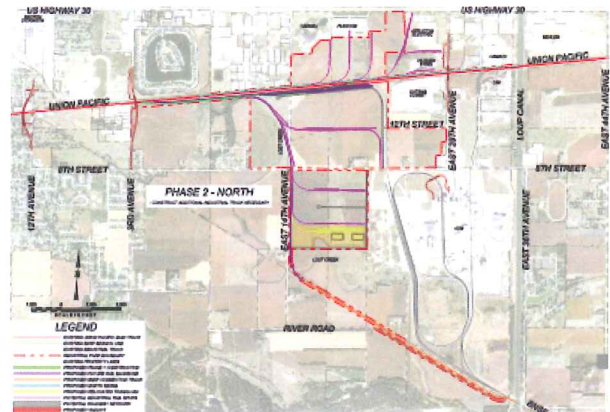
- 2 turnouts off existing Union Pacific Main
- ~10,300' track construction
- Modify Husker Steel Spur Track

Construct Industrial Trackage as necessary



Phase 2 – North

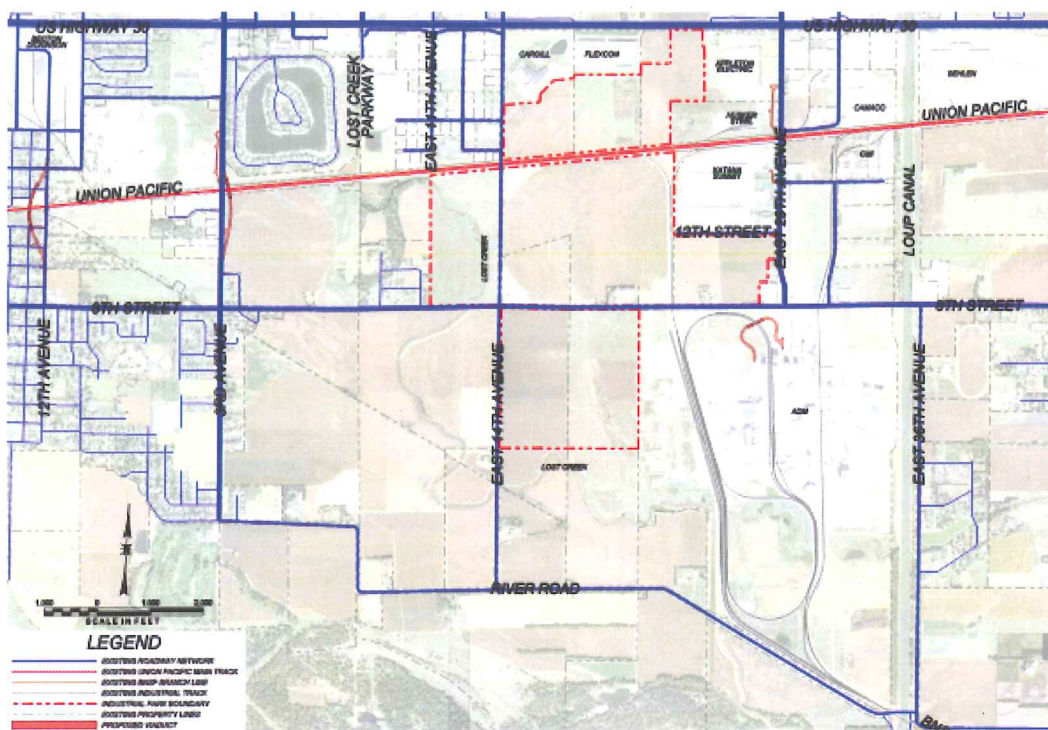
Construct Additional Industrial Track as necessary



6.0 ROADWAY

6.1 ROADWAY ACCESS

The study area has frontage along several existing streets within the City of Columbus and Platte County roadway networks. Highway access is provided via US Highway 30 located on the north side of the study area. Highway 30 is a 4-lane divided facility with turn lanes within the study area. Within the study area intersections with Highway 30 are generally stop controlled along the side streets with the exception of East 29th Avenue, which is signal controlled. Omaha is located approximately 85 miles east of Columbus on Highway 30 with access to Interstates 80, 680, and 29 and York is located approximately 50 miles south on US Highway 81 with access to Interstate 80.



LOCAL ROADWAY NETWORK

8th Street is the primary east-west road located south of the UP tracks and is in the process of being upgraded from a 2-lane section to a 3-lane section through the study area. This roadway supports a significant volume of employee traffic for ADM and other industries in the area. Currently truck traffic is prohibited on 8th Street within the City corporate limits. The intersection of 8th Street with East 29th Avenue is adjacent to the current ADM truck crossing location and the proximity of these two intersections to each other can create operational issues for traffic in the area.

12th Street is a 2-lane paved street that currently extends from East 29th Avenue to the ADM lead track; at this time the roadway does not cross the ADM lead. Extending 12th Street across the ADM lead track would provide another connection into the remaining industrial park and alleviate some of the operational issues for traffic on 8th Street; however it would add another at-grade rail crossing in the study area. The convenience of extending 12th Street should be weighed against the costs and operational issues associated with the additional rail crossing.

East 14th Avenue is currently a paved 2-lane section north of the UP tracks and a rural gravel section south of the tracks. The at-grade rail crossing at East 14th Avenue is currently proposed for closure as part of the East 29th Avenue viaduct project. During stakeholder input sessions concerns that East 14th Avenue is the wrong crossing to close were expressed, and there was a desire to review if the East 14th Avenue crossing could remain open and the East 44th Avenue crossing be closed instead. Communication with the State of Nebraska and Union Pacific Railroad has reaffirmed their desire to close East 14th Avenue as part of the East 29th Avenue viaduct project to maintain an approximately 7.5 mile long corridor without at-grade crossings. The state and the railroad feel this is a safety and a quality of life issue and intend to continue with the planned closure of East 14th Avenue as part of the East 29th Avenue viaduct project. The current master plan requires the closure of East 14th Avenue to accommodate the rail Transload facility and future rail support yard. It will be impractical to construct a viaduct at this location in the future due to the width of the support yard and multiple crossings that would be associated with the rail backbone and industrial rail spurs that are proposed to cross the existing road alignment. It is proposed that East 14th Avenue be closed between the UP tracks and 8th Street as the park develops.

Closure of the East 14th Avenue crossing would also allow for a track to be built between 3rd Avenue and the ADM lead track without any crossings that would allow for assembly of unit trains up to 6,000' in length. This is a key feature for Katana Summit and may be attractive to other industries as well as it would allow for the assembly of unit trains without the need for a loop or other rail facility to stage a unit train on. These facilities are costly not only in terms of rail infrastructure but also in terms of the loss of developable land located inside of a rail loop. The availability of a 6,000' long track would allow industries to load or unload cars in smaller groups at their facility or at the transload facility and then assemble a unit train for further handling by the railroad.

East 29th Avenue is currently a paved 2-lane section within the study area. A 2-lane viaduct is currently proposed for East 29th Avenue over the UP tracks with frontage roads to provide access to affected businesses. The viaduct is currently proposed to be constructed on the existing roadway alignment and the existing crossing would likely be closed during construction of the viaduct. East 29th Avenue is the primary truck access for the ADM plant as well as Katana Summit and Husker Steel. Katana Summit has expressed concern with the viaduct design accommodating their outbound wind-tower loads as they currently envision having to close the viaduct to all other traffic while moving wind tower sections. The potential for widening East 29th Avenue to a 3-lane section from Highway 30 to 8th Street has been discussed in stakeholder outreach meetings as a potential mitigation measure for Katana Summit's oversized load as well as additional queuing space for southbound grain trucks waiting to turn left into ADM's truck receiving area.

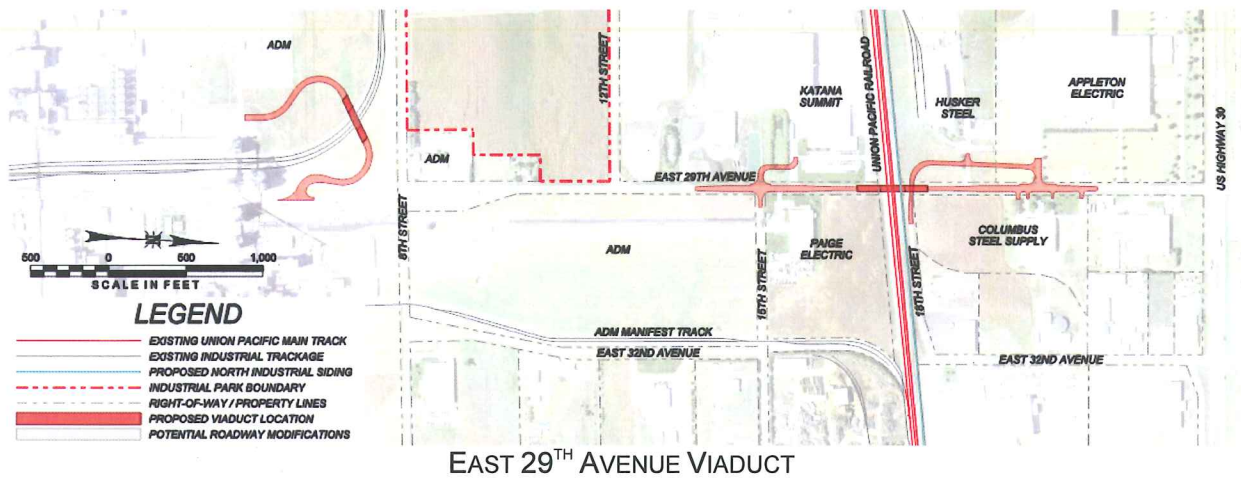
River Road is a rural gravel road located south of the study area that would likely have to be relocated to accommodate a rail connection to the BNSF Bellwood Subdivision. The relocation would likely be required from the west bank of the Loup Canal to a point approximately 1/4 mile northwest of Lost Creek, where River Road curves to the west. The relocated road would likely remain a rural gravel section.

An internal road network is proposed along the east side of the industrial park to allow access to individual tracts while minimizing the need for at-grade rail crossings.

6.2 TRAFFIC ANALYSIS

Although rail access is a significant element of this industrial park location, one of the primary concerns is traffic congestion associated with the roadway network. Truck traffic to and from the ADM plant located south of 8th Street at East 39th Avenue has been and continues to be a concern for the area. Grain trucks queuing along public roads have historically been a problem; however ADM has recently expanded their truck receiving area located east of East 29th Avenue between 8th Street and 15th Street. The expanded truck receiving area has alleviated much of the problem with trucks queuing along East 29th Avenue waiting for space at the receiving facility but the left turning movements continue to create some congestion.

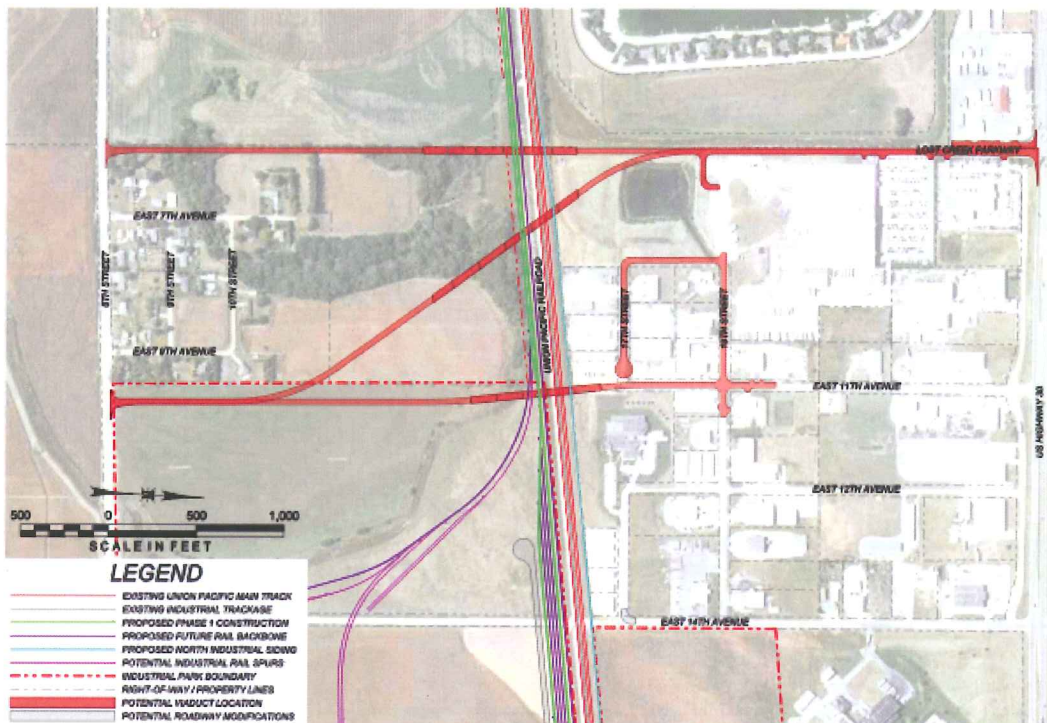
The construction of a viaduct on East 29th Avenue will eliminate delays associated with the at-grade railroad crossing, but will not eliminate traffic concerns within the study area. As part of the construction of the viaduct the entire corridor should be reviewed and necessary improvements made. As currently planned the viaduct will be a 2-lane structure with 6' shoulders and the roadway approaches will include left turn lanes. Consideration should be given to extending a 3-lane section from US Highway 30 to 8th Street including over the viaduct for additional width to allow for shipment of wind tower sections northbound over the viaduct and provide additional left turn queuing for ADM trucks traveling southbound over the viaduct.



The intersection of East 29th Avenue and 8th Street should be improved to accommodate truck turning movements and consideration should be made for improving operations with the ADM access currently located just east of the intersection. The intersection of East 29th Avenue and US Highway 30 should be improved for provide for better turning movements and to accommodate additional left-turn lane storage along Highway 30. Special consideration should be given to ensuring that the intersection adequately accommodates the oversized load movements generated by Katana Summit when they ship wind tower sections via truck.

In order to alleviate congestion along East 29th Avenue when the viaduct has been constructed and East 14th Avenue has been closed consideration should be given to allowing truck traffic on 8th Street west to 3rd Avenue and on 3rd Avenue between 8th Street and US Highway 30 to allow alternative access to Highway 30 for truck traffic. This would be especially beneficial to industries located west of East 29th Avenue as they would not have to compete with ADM truck traffic along East 29th Avenue. The intersections of 3rd Avenue with 8th Street and US Highway 30 should be evaluated to ensure they are adequate for truck turning movements.

Three corridors have been reviewed for the potential of additional viaduct crossings of the Union Pacific Railroad should future traffic volumes warrant the need for an additional viaduct. The corridors reviewed include East 11th Avenue, Lost Creek Parkway, and a corridor that transitions from the Lost Creek Parkway north of the UP tracks to the East 11th Avenue corridor south of the UP tracks.



POTENTIAL LOST CREEK PARKWAY VIADUCT LOCATIONS

Access points to individual industries should be limited to as few entrances and exits as possible. Driveway consolidation improves traffic flow and safety on the adjacent roadways. These entrances should also be located away from roadway intersections to minimize impacts to traffic operations at those intersections.

7.0 CONSTRUCTION COSTS

The primary infrastructure costs associated with the project are the initial rail construction phase to provide a transload facility adjacent to and south of the existing UP main tracks, construction of a connection to the BNSF Bellwood Subdivision and associated relocation of River Road, construction of a rail service yard and rail backbone adjacent to the ADM lead track, and construction of a siding north of the UP main tracks to accommodate rail-served industries north of the UP. Additional infrastructure costs are associated with construction of an interior roadway network based upon how the industrial park develops and the types of industries it attracts. A major cost associated with connecting to the UP mainline is the mainline turnout and associated signaling costs; depending on the location of the proposed turnout in relation to existing signaling on the UP mainline, the signaling cost can vary significantly. A brief, planning level, summary of the costs is included below:

Initial Rail Phase (UP rail access and transload facility)			
Item	Quantity	Unit Cost	Total Cost
Mainline Turnout (No. 15 Power Operated)	1 EA	\$400,000	\$400,000
Mainline Turnout (No. 11 Power Operated)	1 EA	\$800,000	\$800,000
Industrial Turnout (No. 9 Hand Throw)	4 EA	\$100,000	\$400,000
Industrial Track Construction	11,340 TF	\$150	\$1,701,000
Aggregate Surfacing	64,000 SY	\$7.50	\$480,000
Fencing & Miscellaneous	1 LS	\$350,000	\$350,000
Property Acquisition	5 AC	\$50,000	\$250,000
Wetland Mitigation	1 LS	\$100,000	\$100,000
Subtotal			\$4,481,000
Contingency (20%)			\$896,000
Total			\$5,377,000

Rail Backbone (Support Yard to BNSF Connection Track)			
Item	Quantity	Unit Cost	Total Cost
Industrial Turnout (No. 9 Hand Throw)	1 EA	\$100,000	\$100,000
Industrial Track Construction	4,620 TF	\$150	\$693,000
At-Grade Road Crossing	1 EA	\$100,000	\$100,000
Subtotal			\$893,000
Contingency (20%)			\$179,000
Total			\$1,072,000

BNSF Connection Track (BNSF Bellwood Sub to Industrial Park)			
Item	Quantity	Unit Cost	Total Cost
Mainline Turnout (No. 11 Hand Throw)	1 EA	\$150,000	\$150,000
Industrial Turnout (No. 9 Hand Throw)	3 EA	\$100,000	\$300,000
Industrial Track Construction	13,500 TF	\$150	\$2,025,000
River Road Relocation	1 LS	\$400,000	\$250,000
Property Acquisition	22 AC	\$50,000	\$1,100,000
Subtotal			\$3,825,000
Contingency (20%)			\$765,000
Total			\$4,590,000

Internal Road Network Construction			
Item	Quantity	Unit Cost	Total Cost
North of 8 th Street	22,000 SY	\$90	\$1,980,000
South of 8 th Street	24,200 SY	\$90	\$2,178,000
Miscellaneous (intersections, cul-de-sacs, etc)	3,000 SY	\$90	\$270,000
Subtotal			\$4,428,000
Contingency (20%)			\$886,000
Total			\$5,314,000

PROJECT SUMMARY	
Initial Rail Phase (UP rail access and transload facility)	\$5,377,000
Rail Backbone (Support Yard to BNSF Connection Track)	\$1,072,000
BNSF Connection Track (BNSF Bellwood Sub to Industrial Park)	\$4,590,000
Support Yard Construction (convert initial transload to support yard)	\$1,580,000
Storage Yard Construction (adjacent to support yard)	\$2,669,000
Relocated Transload Facility	\$5,898,000
Unit Train Assembly Track	\$2,213,000
Industrial Siding North of UP Main Track	\$5,784,000
Internal Road Network Construction	\$5,314,000
Total	\$34,497,000