

Beal Slough Relief Trunk Sewer Alignment Study Report

Description of Proposed Alignment Alternatives

2.0 Description of Proposed Alignment Alternatives

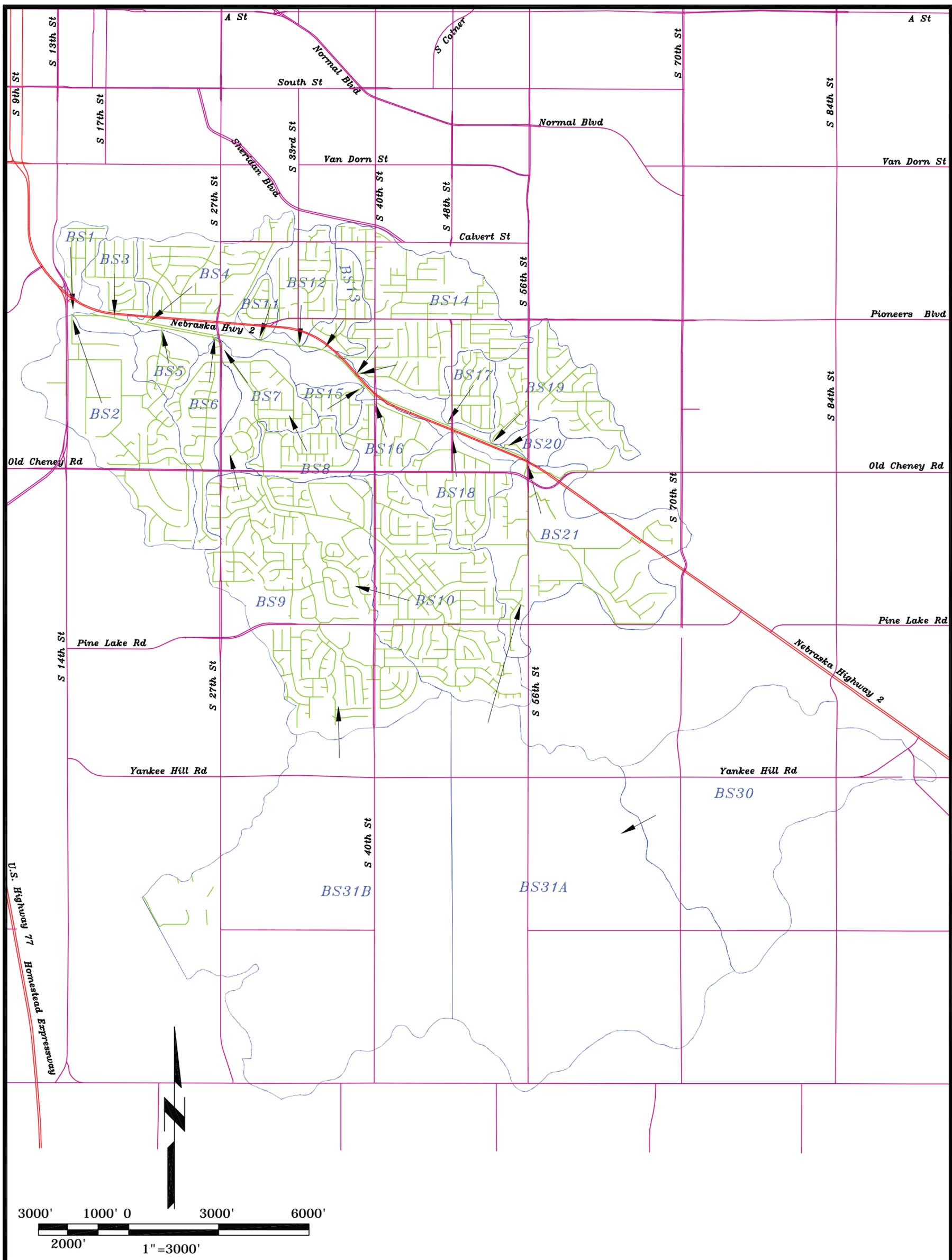
Field investigations were conducted to review potential alignments for the Beal Slough Relief Trunk Sewer. Existing information on utilities, railroads, wetlands, soil conditions, and proposed improvements was reviewed to determine potential alignments. All potential alignments were then reviewed and the best three alignments were selected for further evaluation. Information pertaining to the factors utilized in selecting the alignments is provided in the Findings and Evaluation of Alignment Selection Factors section. Each alignment is broken into Phase I and Phase II to indicate where the alignments will be divided.

This section provides a general description of each alignment as illustrated on Figures 2-1 through 2-5. The proposed alignments described below have been color coded for reference in the report figures as follows:

- Alignment No. 1 – Brown (north alignment)
- Alignment No. 2 – Red (middle alignment)
- Alignment No. 3 – Green (south alignment)

2.1 Alignment No. 1 (Brown Alignment)

Phase I. Alignment No. 1 begins at the connection to the Salt Valley Relief Trunk Sewer-Phase IV south of Pioneers Blvd and west of Beal Slough. It crosses beneath the Burlington Northern and Santa Fe (BNSF) railroad tracks and under Beal Slough in the planned 30 foot right-of-way expansion for Pioneers Blvd. The sewer extends northeast within the right-of-way until it crosses the existing Salt Valley Trunk Sewer. Alignment No. 1 then extends east along the north side of the existing sewer, and crosses beneath the BNSF railroad tracks. It extends north along the State Penitentiary access road and turns east near the guard tower. The sewer then extends through the penitentiary parking lot and beneath the Highway 2 and 14th Street intersection. It parallels the north side of Highway 2 from 14th Street to 27th Street in an easement through Parks and Recreation property and Highway 2 right-of-way. Two additional 30 inch sewers are required to convey flow from the existing sewers to the relief sewer at 14th Street and at 27th Street. The total length of Phase I is 9,987 feet with 6 tunnels of 1,355 feet in total length.



LEGEND

-  EXISTING SEWER
-  SUBSYSTEM BOUNDARIES
-  HIGHWAYS
-  STREETS
-  BS-1 BEAL SLOUGH DRAINAGE SUBBASINS
-  FLOW PATTERN IN BASIN

City of Lincoln, NE
**Beal Slough Relief Trunk Sewer
 Phases I & II
 Alignment Study**

Beal Slough Drainage Basins
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Phase II. Alignment No. 1 continues from 27th Street on the north side of Highway 2 to 56th Street in an easement through Parks and Recreation property, including 40th and Hwy 2 Park, and Highway 2 right-of-way. It connects to the existing 18 inch and 24 inch sewers on the northwest corner of 56th Street and Highway 2. The total length of Phase II is 12,126 feet with 5 tunnels of 1,170 feet in total length.

2.2 Alignment No. 2 (Red Alignment)

Phase I. Alignment No. 2 begins at the connection to the Salt Valley Relief Trunk Sewer-Phase IV south of Pioneers Blvd. and west of Beal Slough. It crosses beneath the BNSF railroad tracks and continues east paralleling the Lincoln Electric System (LES) easement south of Beal Slough through a proposed 30 foot permanent easement. The sewer then crosses beneath Beal Slough directly east of the BNSF railroad line on Correctional Services property, then turns east in a proposed 30 foot permanent easement to 14th Street. From 14th Street, it continues along the north side of Beal Slough and turns north along the east edge of Fleming Foods property through a proposed 30 foot permanent easement. At Pioneers Blvd, the sewer extends east through an easement north of Budget Self Storage, Cambell Industries, and the LES substation. It continues through Peterson Park to 27th Street and connects to the two existing 18 inch sewers prior to tunneling beneath the BNSFRR tracks and 27th Street. The total length of Phase I is 9,411 feet with 6 tunnels of 815 feet in total length.

Phase II. Alignment No. 2 begins on the east side of 27th Street and parallels the north side of the BNSF railroad tracks to 40th Street. At 40th Street, it crosses beneath Highway 2 and 40th Street and continues east to 56th Street. It connects to the existing 18 inch and 24 inch sewers on the northwest corner of 56th Street and Highway 2. The total length of Phase II is 11,694 feet with 2 tunnels of 290 feet in total length.

2.3 Alignment No. 3 (Green Alignment)

Phase I. Alignment No. 3 begins at the connection to the Salt Valley Relief Trunk Sewer-Phase IV south of the Beal Slough. It crosses beneath the BNSF railroad tracks and continues east paralleling the LES easement and the south side

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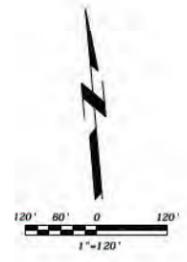
Description of Proposed Alignment Alternatives

of Beal Slough through a proposed 30 foot permanent easement in Correctional Services land to 14th Street. From 14th Street, it continues on the south side of Beal Slough through a proposed 30 foot permanent easement through several commercial developments to approximately 18th Street. From 18th Street to 27th Street, the sewer parallels the LES easement in Southwood Park and Peterson Park. It continues beneath the hiking/biking trail and the LES easement within a tunnel to the east side of 27th Street and connects to the two existing 18 inch sewers. The total length of Phase I is 8,853 feet with 6 tunnels of 2,105 feet in total length.

Phase II. Alignment No. 3 continues from 27th Street along the north side of the LES easement, crossing the easement intermittently, until it reaches Beal Slough east of Stephanos Drive. It then turns southeast along the property lines to 40th Street. At 40th Street, the sewer crosses beneath the BNSF railroad tracks and 40th Street and continues east to 56th Street along the south side of Highway 2. The total length of Phase II is 11,315 feet with 2 tunnels of 260 feet in total length.

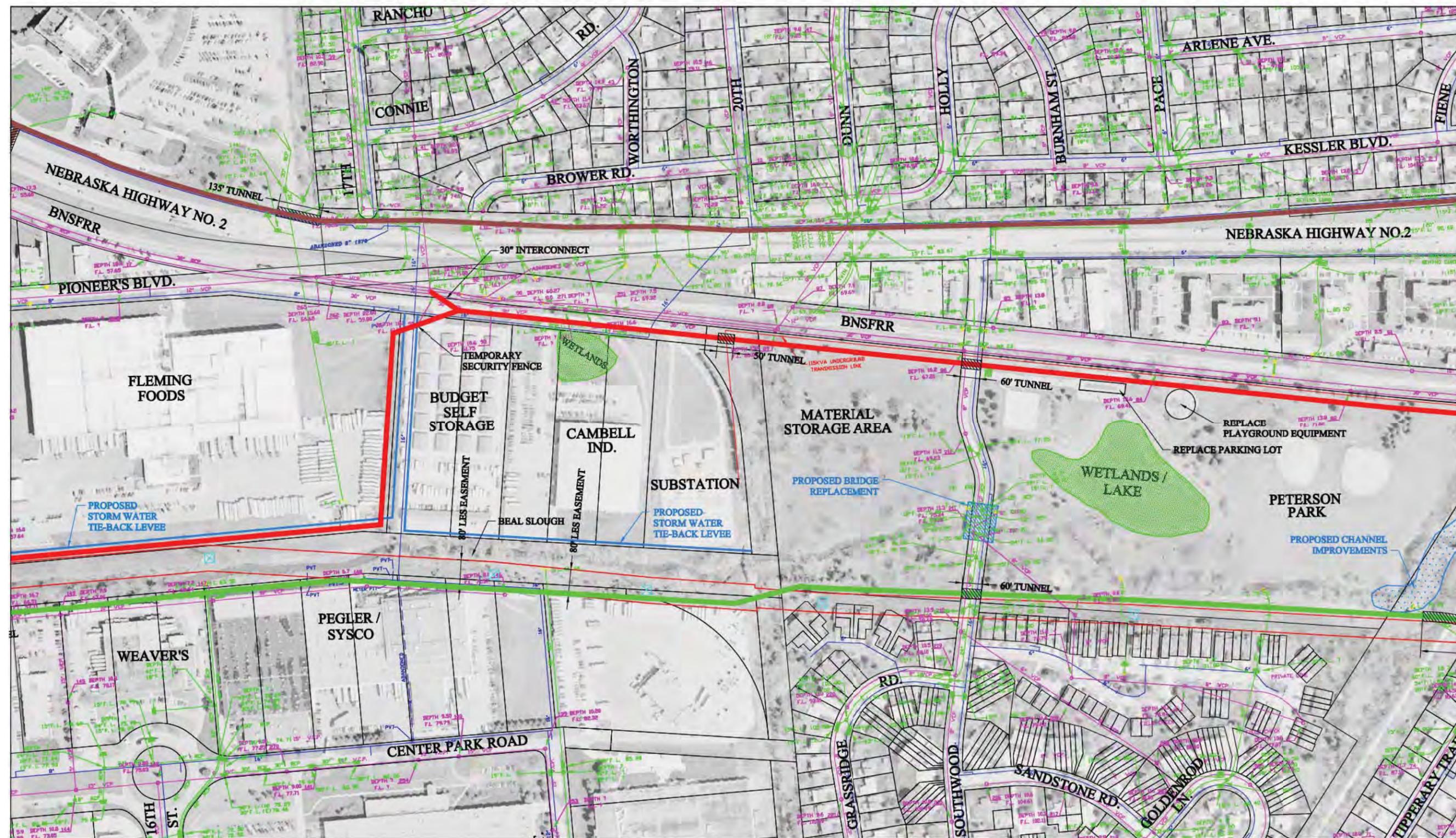


- LEGEND**
- PROPOSED BEAL SLOUGH RELIEF TRUNK SEWER ALIGNMENTS**
- ALIGNMENT #1
 - ALIGNMENT #2
 - ALIGNMENT #3
- NOTE: DASHED ALIGNMENTS WERE CONSIDERED AND SCREENED OUT DURING EVALUATIONS
- EXISTING SANITARY SEWERS**
- SALT VALLEY TRUNK SEWER
 - BEAL SLOUGH TRUNK SEWER
- PROPOSED SANITARY SEWERS**
- SALT VALLEY RELIEF SEWER - PHASE IV
 - SALT VALLEY RELIEF SEWER - PHASE V
- OTHER FEATURES**
- SANITARY SEWER
 - STORM SEWER
 - WATER MAINS
 - PROPERTY LINES
 - WETLANDS
 - PROPOSED STORM WATER MASTER PLAN PROJECTS
 - LES EASEMENTS
 - LES TOWERS

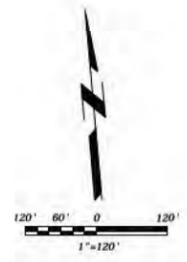


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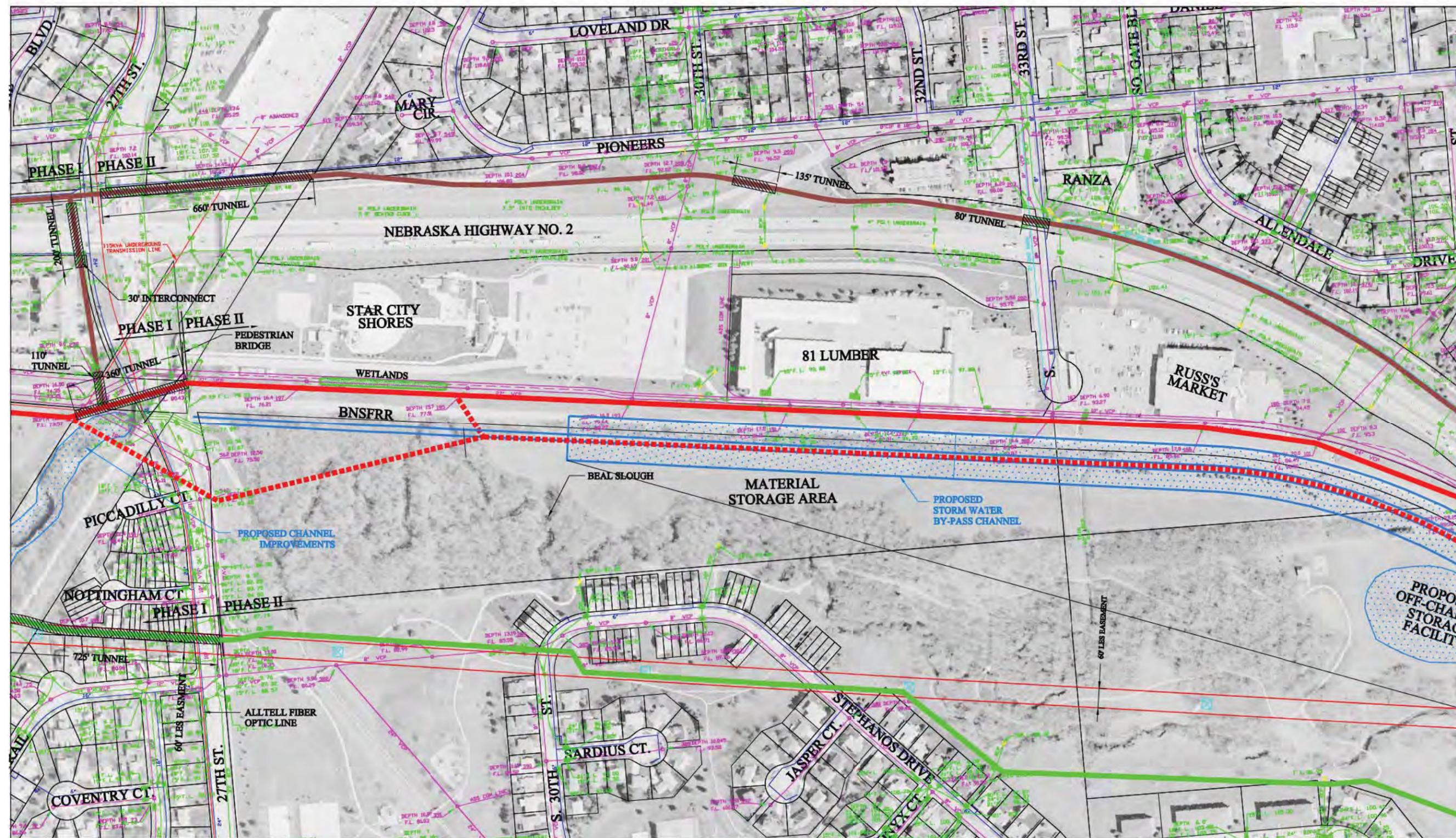
SVTS to 14th Street
 Sheet 1 of 5



- LEGEND**
- PROPOSED BEAL SLOUGH RELIEF TRUNK SEWER ALIGNMENTS**
- ALIGNMENT #1
 - ALIGNMENT #2
 - ALIGNMENT #3
 - NOTE: DASHED ALIGNMENTS WERE CONSIDERED AND SCREENED OUT DURING EVALUATIONS
- EXISTING SANITARY SEWERS**
- SALT VALLEY TRUNK SEWER
 - BEAL SLOUGH TRUNK SEWER
- PROPOSED SANITARY SEWERS**
- SALT VALLEY RELIEF SEWER - PHASE IV
 - SALT VALLEY RELIEF SEWER - PHASE V
- OTHER FEATURES**
- SANITARY SEWER
 - STORM SEWER
 - WATER MAINS
 - PROPERTY LINES
 - WETLANDS
 - PROPOSED STORM WATER MASTER PLAN PROJECTS
 - LES EASEMENTS
 - LES TOWERS



Beal Slough Relief Trunk Sewer Phases I & II Alignment Study
 October 2003
 14th Street to 27th Street
 Sheet 2 of 5



LEGEND

PROPOSED BEAL SLOUGH RELIEF TRUNK SEWER ALIGNMENTS

- ALIGNMENT #1
- ALIGNMENT #2
- ALIGNMENT #3

NOTE: DASHED ALIGNMENTS WERE CONSIDERED AND SCREENED OUT DURING EVALUATIONS

EXISTING SANITARY SEWERS

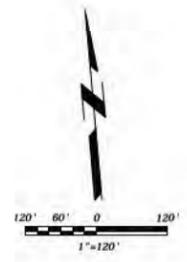
- SALT VALLEY TRUNK SEWER
- BEAL SLOUGH TRUNK SEWER

PROPOSED SANITARY SEWERS

- SALT VALLEY RELIEF SEWER - PHASE IV
- SALT VALLEY RELIEF SEWER - PHASE V

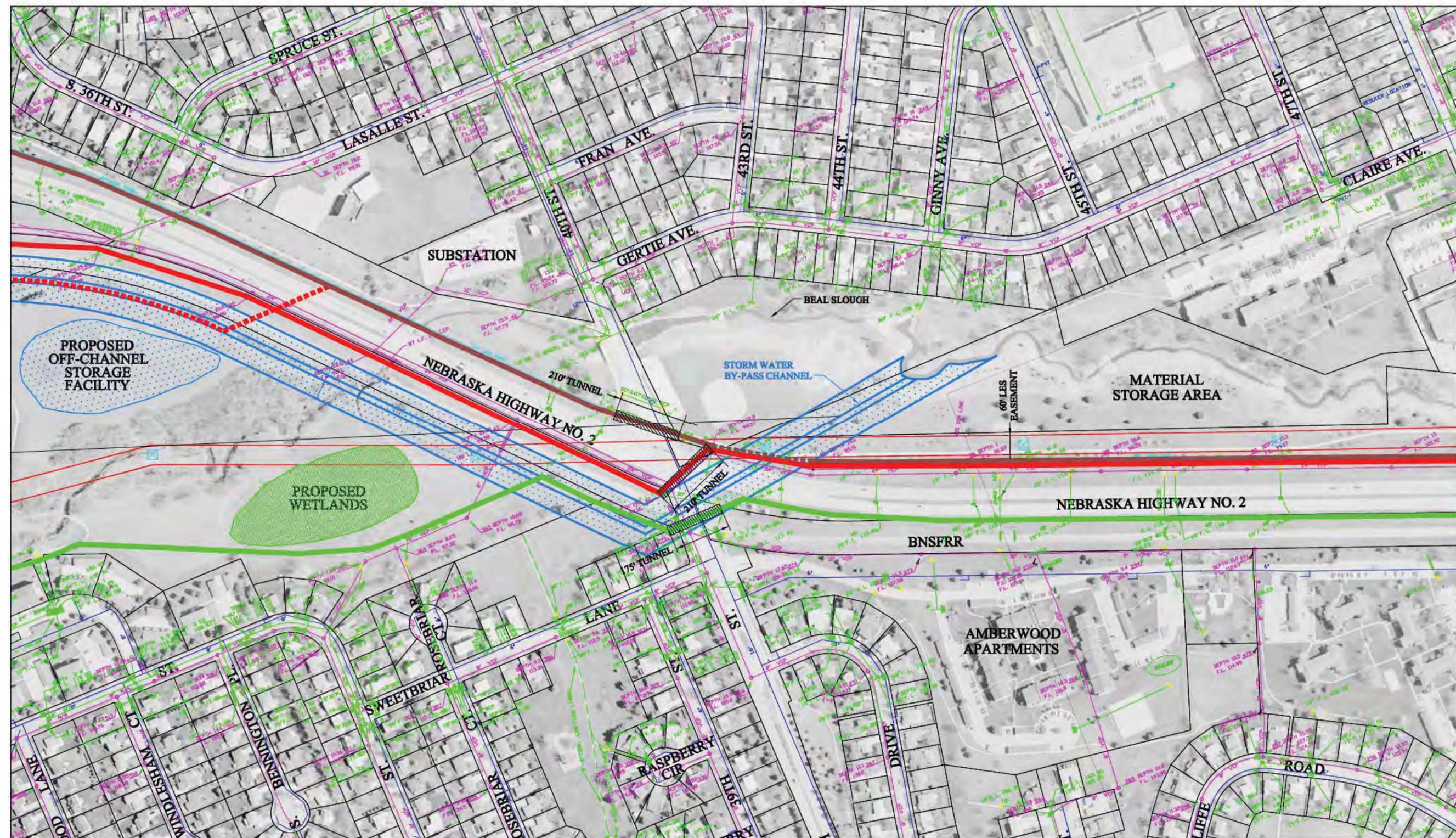
OTHER FEATURES

- SANITARY SEWER
- STORM SEWER
- WATER MAINS
- PROPERTY LINES
- WETLANDS
- PROPOSED STORM WATER MASTER PLAN PROJECTS
- LES EASEMENTS
- LES TOWERS



Beal Slough Relief Trunk Sewer Phases I & II Alignment Study
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27th Street to 36th Street
 Sheet 3 of 5



LEGEND

PROPOSED BEAL SLOUGH RELIEF TRUNK SEWER ALIGNMENTS

- ALIGNMENT #1
- ALIGNMENT #2
- ALIGNMENT #3

NOTE: DASHED ALIGNMENTS WERE CONSIDERED AND SCREENED OUT DURING EVALUATIONS

EXISTING SANITARY SEWERS

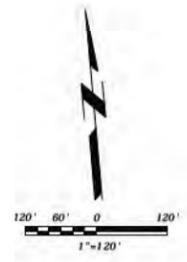
- SALT VALLEY TRUNK SEWER
- BEAL SLOUGH TRUNK SEWER

PROPOSED SANITARY SEWERS

- SALT VALLEY RELIEF SEWER - PHASE IV
- SALT VALLEY RELIEF SEWER - PHASE V

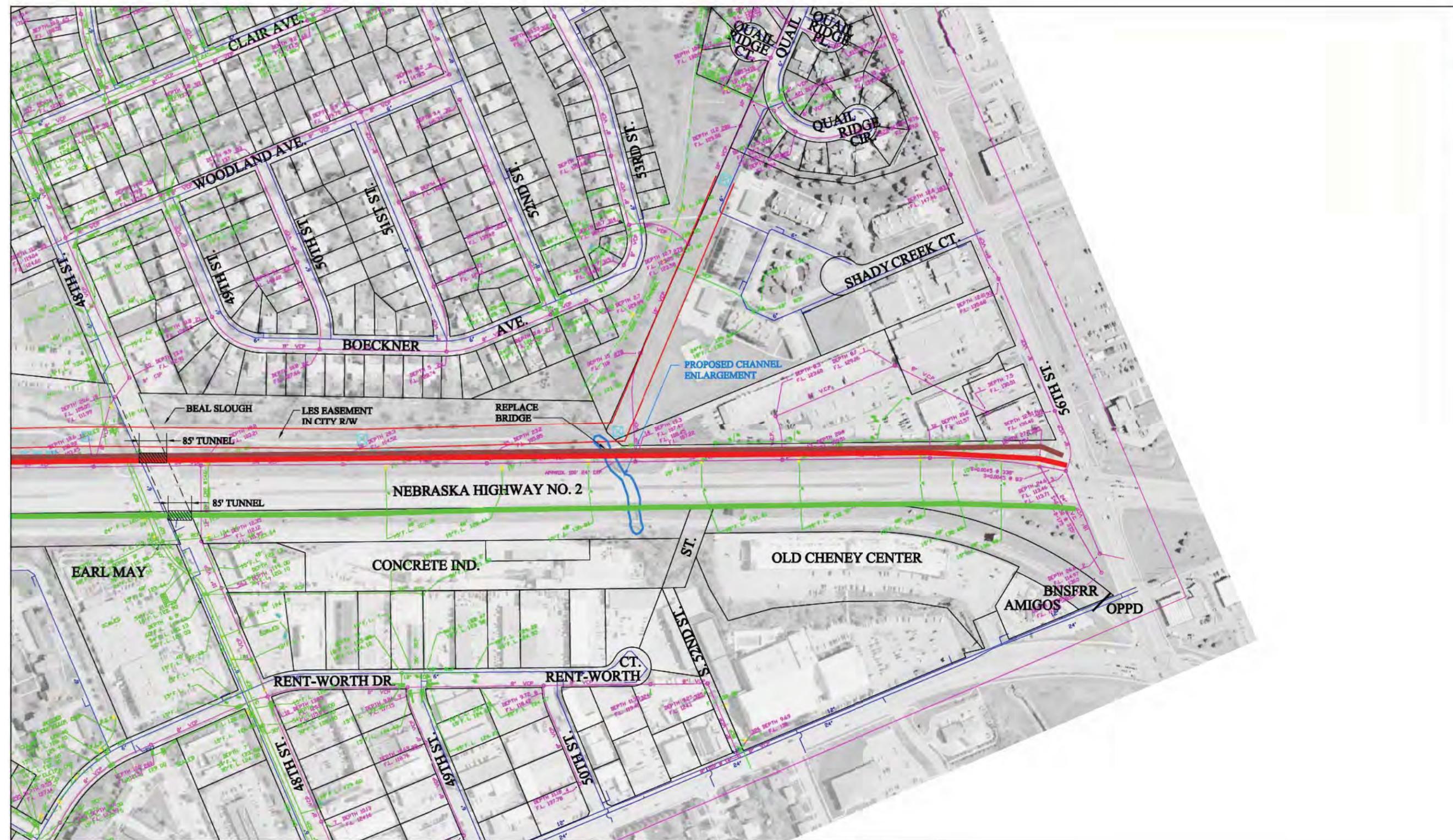
OTHER FEATURES

- SANITARY SEWER
- STORM SEWER
- WATER MAINS
- PROPERTY LINES
- WETLANDS
- PROPOSED STORM WATER MASTER PLAN PROJECTS
- LES EASEMENTS
- LES TOWERS

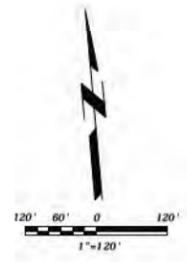


Beal Slough Relief Trunk Sewer Phases I & II Alignment Study
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36th Street to 47th Street
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- ### LEGEND
- PROPOSED BEAL SLOUGH RELIEF TRUNK SEWER ALIGNMENTS**
- ALIGNMENT #1
 - ALIGNMENT #2
 - ALIGNMENT #3
 - NOTE: DASHED ALIGNMENTS WERE CONSIDERED AND SCREENED OUT DURING EVALUATIONS
- EXISTING SANITARY SEWERS**
- SALT VALLEY TRUNK SEWER
 - BEAL SLOUGH TRUNK SEWER
- PROPOSED SANITARY SEWERS**
- SALT VALLEY RELIEF SEWER - PHASE IV
 - SALT VALLEY RELIEF SEWER - PHASE V
- OTHER FEATURES**
- SANITARY SEWER
 - STORM SEWER
 - WATER MAINS
 - PROPERTY LINES
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 - PROPOSED STORM WATER MASTER PLAN PROJECTS
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47th Street to 56th Street
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