



North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

October 24, 2017

ADDENDUM 1 – JOB 28

TO: All prospective bidders on project NHU-4-002(116)149, Job No. 28 scheduled for the November 17, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from Jonathan P. Morgenroth, PE, SRF Consulting Group, Inc. dated October 16, 2017 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 1 thru 16 of 16 with pages 1 thru 17 of 17 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 10/23/2017.

The following changes were made to the Bid Items:

Spec No.	Code No.	Description	Description of Change
202	0130	REMOVAL OF CURB AND GUTTER	Increased from 2,144 to 2,175 EA.
302	0100	SALAVAGED BASE COURSE	Increased from 47,480 to 47,513 TON
401	0050	TACK COAT	Increased from 3,555 to 3,556 GAL
411	0114	MILLING PAVEMENT SURFACE – 2 INCH	Added Item 14 SY
430	0045	SUPERPAVE FAA 45	Increased from 13,454 to 13,456 TON
714	7040	SANITARY SEWER SERVICE CONNECTION	Added Item 1 EA
714	7046	PIPE PVC 4" SEWER	Added Item 50 LF
724	0610	WATER SERVICE LINE 1 IN COPPER	Added Item 29 LF
724	0905	CURB STOP & BOX 1 IN	Added Item 1 EA
724	5812	SS WRAP-AROUND 6 IN WITH 1 IN TAP	Added Item 1 EA
748	0140	CURB & GUTTER-TYPE 1	Increased from 5,270 to 5,781 LF
750	1020	DRIVEWAY CONCRETE 8 IN	Increased from 252 SY to 287 SY

Add Special Provision 575(14) Sanitary Sewer Service

Addendum 1

Job 28, November 17, 2017 Bid Opening

Page 2 of 2

This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.

A handwritten signature in black ink, appearing to read 'Phillip Murdoff', written in a cursive style.

PHILLIP MURDOFF – CONSTRUCTION SERVICES ENGINEER

80:jwj

Enclosure



ENGINEERS
PLANNERS
DESIGNERS

SRF No. 9096

October 16, 2017

ADDENDUM 1 – JOB 28

TO: All prospective bidders on project NHU-4-002(116)149, Job No. 28 scheduled for the November 17, 2017 bid opening.

Addendum 1 is to address: Addition of a sanitary sewer service and a water service to be stubbed in at the property of Frank Bader along the north side of 14th Ave SE. Revising the location of the southerly temporary access to Gooseneck Implement Company's property on the west side of US Highway 2 and adding a permanent driveway in the same location.

The following plan and proposal revisions shall be made:

Proposal Revisions:

Added SP 575(14) Sanitary Sewer Service

Plan Revisions:

Added sheet 20-11 with the enclosed sheet added 9/27/17.

Remove and replace sheets 2-1, 60-17, and 60-22 with the enclosed sheets revised 9/27/17.

Remove and replace sheets 6-2 to 3, 8-1, 10-1, 20-1, 20-10, 40-1, 55-4, 75-3, 75-13, 76-1, 76-11, 77-1, 77-11, 82-1 to 4, 82-6, 82-14, 82-16, 100-4 to 11, 100-17 to 18, 110-5, 120-1, and 140-2 with the enclosed sheets revised 10/11/17.

Remove and replace sheet 4-1 with the enclosed sheet revised 10/12/17.

Remove and replace sheets 8-2 and 60-4 with the enclosed sheets revised 10/16/17.

Sheet 2-1:

Added sheet 20-11.

Sheet 4-1:

Removed Gooseneck temporary access and added permanent private drive.

Sheet 6-2:

Revised Stage 5 traffic control to describe removal of Gooseneck temporary access and construction of permanent private drive. Revised Stage 6 to specify US Highway 2 and East Frontage Road temporary accesses are to be removed.

Sheet 6-3:

Notes moved down because of added text to Sheet 6-2.

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Case Plaza, One North Second Street, Suite 226 | Fargo, ND 58102-4801 | 701.237.0010 Fax: 701.237.0017

An Equal Opportunity Employer

Sheet 8-1:

Item 202 0130 Removal of Curb & Gutter increased from 2114 LF to 2175 LF
Item 302 0100 Salvaged Base Course increased from 47480 TON to 47513 TON
Item 401 0050 Tack Coat increased from 3555 GAL to 3556 GAL
Added item 411 0114 Milling Pavement Surface – 2 Inch 14 SY
Item 430 0045 Superpave FAA 45 increased from 13454 TON to 13456 TON
Added item 714 7040 Sanitary Sewer Service Connection 1 EA
Added item 714 7046 Pipe PVC 4" Sewer 50 LF
Added item 724 0610 Water Service Line 1IN Copper 29 LF
Added item 724 0905 Curb Stop & Box 1IN 1 EA
Added item 724 5812 SS Wrap-Around 6IN With 1IN Tap 1 EA
Item 748 0140 Curb & Gutter-Type 1 increased from 5720 LF to 5781 LF
Item 750 1020 Driveway Concrete 8IN increased from 252 SY to 287 SY

Sheet 8-2:

Changed "Alternative 1" and "Alternative 2" to "Option 1" and "Option 2".

Sheet 10-1:

Revised "Salvaged Base Course Required" quantity in Salvaged Base Course Summary and updated "Import" quantity.

Sheet 20-1:

Added "Private Drive @ 5+44 LT (PRFRONT_W)" to "(1) Gravel Private Drive Approach" list. Added "2" Mill & Overlay" detail.

Sheet 20-10:

Revised size and dimensions of temporary access. Updated stationing.

Sheet 20-11:

Added sheets to describe City of Minot residential service connection details.

Sheet 40-1:

Revised location of temporary construction easement. Added hatching to show Milling Pavement Surface – 2 Inch quantity. Updated quantities.

Sheet 55-4:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive.

Sheet 60-4:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive. Updated quantities.

Sheet 60-17:

Proposed services shown in plan view. Callouts added to plan and profile views.

Sheet 60-22:

Proposed services and callouts added to plan view. Quantities added for proposed services. Profiles and callouts added for proposed services.

Sheet 75-3:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive.

Sheet 75-13:

Added new location of temporary construction easement and proposed private drive.

Sheet 76-1:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive.

Sheet 76-11:

Added new location of temporary construction easement and proposed private drive.

Sheet 77-1:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive.

Sheet 77-11:

Added new location of temporary construction easement and proposed private drive.

Sheet 82-1 to 4:

Removed Gooseneck temporary access and added proposed private drive.

Sheet 82-6:

Removed Gooseneck temporary access and added proposed private drive. Revised survey data points 9350-9353 locations, added points 9354-9355, and updated "West Frontage Road (PRFRONT_W)" data table.

Sheet 82-14:

Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive. Added station/offset callouts for temporary easement corners.

Sheet 82-16:

Removed Gooseneck temporary access, temporary construction easement, and callouts.

Sheet 100-4 to 5:

Removed Gooseneck temporary access and added proposed private drive.

Sheet 100-6:

Revised location of West Gooseneck temporary access work area.

Sheet 100-7 to 9:

Revised location of West Gooseneck temporary access.

Sheet 100-10:

Removed West Gooseneck temporary access. Added work area for proposed private drive. Updated Stage 5 description.

Sheet 100-11:

Removed West Gooseneck temporary access and added proposed private drive. Updated Stage 6 description.

Sheet 100-17:

Added new temporary access location. Added survey data points and data table.

Sheet 100-18:

Removed temporary access.

Sheet 110-5:

Removed Gooseneck temporary access and added proposed private drive.

Sheet 120-1:

Removed Gooseneck temporary access and added proposed private drive.

Sheet 140-2:

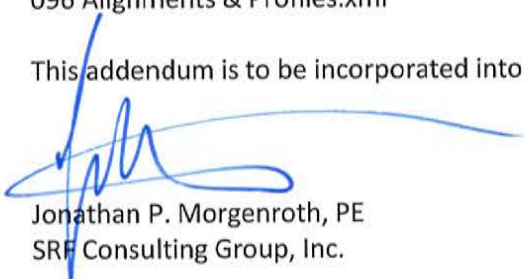
Revised location of temporary construction easement, removed Gooseneck temporary access, and added proposed private drive.

Supplemental Design Data Revisions:

The following design files were modified to reflect the plan changes described above:

DS_Align_Watermain_AD-A.dgn, Profile_Watermain_AD-A.dgn, job096.gpk, AAREADME_AD-A.pdf, GPK
096 Alignments & Profiles.xml

This addendum is to be incorporated into the bidder's proposal for this project.



Jonathan P. Morgenroth, PE
SRF Consulting Group, Inc.

Enclosure

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

Sanitary Sewer Service

Project #NHU-4-002(116)149 – PCN #21174

THIS SPECIAL PROVISION ONLY APPLIES TO THE SANITARY SEWER SERVICE IN THE WATERMAIN PLANS IN SEC 60 OF THE PLANS.

SECTION 600 – PROJECT TESTING REQUIREMENTS

PART 1: GENERAL

1.01 SECTION SUMMARY

- A. Required testing frequency and procedures for City of Minot projects and projects in City right-of-way.

1.02 RELATED SECTIONS OF CITY OF MINOT STANDARD SPECIFICATIONS

- A. Section 2000 – Trench Excavation and Backfill.
- B. Section 2300 – Sanitary Sewer.
- C. Section 2400 – Sanitary Sewer Services.

1.03 REFERENCES

- A. NDDOT Field Testing Manual.
- B. AASHTO Testing Procedures.
- C. ASTM Testing Procedures.

1.04 SUBMITTALS

- A. All testing reports for City projects or for projects that will be constructed in City right-of-way, will be submitted or copied to the City Engineer’s Offices.

PART 2: EXECUTION

2.01 EXCAVATION, EMBANKMENT, AND AGGREGATE BASE.

Type of Construction:	Excavation, Embankment, and Aggregate Base	
Test Required	Frequency	Specification
1. Gradation		
(A) Granular Borrow	1/500 Tons	Section 1800 2.01B
(b) Aggregate Base	1/1000 Tons	NDDOT Class 5 Specification
2. Moisture-Density (Standard Proctor)		
(a) Embankment Soil	1 per major soil	AASHTO T-99
(b) Aggregate Base	1 per source	AASHTO T-99

3. Compaction		
(a) Embankment Soils (subgrade)	1/600 SY or 1/STA for each lift, whichever is more Frequent	100% Maximum Density (AASHTO T-99) within 1 foot of subgrade, otherwise 95% Maximum Density with +/- 3% optimum moisture.
(b) Aggregate Base	1/600 SY or 1/STA whichever is more frequent	100% Maximum Density (AASHTO T-99)
(c) Utility Trench Backfill	1/100 LF at Various Depths	100% Maximum Density (AASHTO T-99) within 1 foot of subgrade, otherwise 95% Maximum Density with +/- 3% optimum moisture.
(d) Utility Service Trench Backfill	50% of Total Services at Various Depths	100% Maximum Density (AASHTO T-99) within 1 foot of subgrade, otherwise 95% Maximum Density with +/- 3% optimum moisture.

- A. Compaction testing can be done by a nuclear density gauge.
- B. Compaction testing by sand cone method must be done on 10 Percent of compaction tests.

2.02 SANITARY SEWER AND SERVICES

Type of Construction:	Sanitary Sewer and Services	
Test Required	Frequency	Specification
1. Deflection (Mandrel)	Manhole to Manhole	30 day minimum wait after installation before test, 5% maximum deflection
2. Closed Circuit TV Inspection (Televisé)	Manhole to Manhole	Accurate to 1 ft. label each run, audio description of condition, STA location for service, DVD and paper report submittal

2.03 GENERAL

- A. Contractor shall assist Engineer in obtaining materials needed for conducting tests. Contractor will supply labor and equipment necessary for taking tests.
- B. Engineer shall determine all test locations.
- C. When the work does not meet test requirements, the Engineer shall have sole authority to reject the work and require the Contractor to take corrective action.
- D. The testing frequency in this Section may be adjusted with approval of the City Engineer.

2.04 MEASUREMENT AND PAYMENT

- A. All required passing tests shall be paid for by the Owner. All failing tests shall be paid for by the Contractor.

B. All other work and costs of this Section shall be incidental to the Project.

END OF SECTION

SECTION 2400 – SANITARY SERVICES

PART 3: GENERAL

3.01 SECTION SUMMARY

- A. Sanitary sewer service pipe installation and appurtenances.

3.02 RELATED SECTIONS OF CITY OF MINOT STANDARD SPECIFICATIONS

- A. Section 2000 – Trench Excavation and Backfill
- B. Section 2300 – Sanitary Sewer

3.03 REFERENCES

- A. American Society of Testing Materials (ASTM)
 - 1. D698 – Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.
 - 2. D2665 – Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.

3.04 SUBMITTALS

- A. Submit to the Engineer for review:
 - 1. Wye location (station).
 - 2. Depth of service.
 - 3. Length of service line.
- B. Final payment will not be made until all service information is submitted to and reviewed by the Engineer.

PART 4: PRODUCTS

4.01 SERVICE PIPE

- A. Polyvinyl Chloride (PVC) Service Pipe
 - 1. Pipe shall conform to ASTM D2665.
 - 2. All pipes shall be bell and spigot.
 - 3. Each pipe shall be identified by name of manufacturer, nominal pipe size, and PVC cell classification.
 - 4. Minimum service size is 4 inch.
 - 5. Minimum wall thickness is Schedule 40.
 - 6. Solvent welded joints will be required and must be done in accordance with manufacturer's instructions.
 - 7. New sanitary sewer connections shall be installed using an inline wye.
 - 8. SDR 26 shall be acceptable for 6" services.

4.02 MARKING TAPE

- A. Tape shall be 3 inch width, non-detectable type.
- B. Tape shall be green with black lettering with words "CAUTION SEWER LINE BELOW".

4.03 PIPE BEDDING

- A. Bedding material shall conform to Section 2000 – Trench Excavation and Backfill.

4.04 EXISTING SERVICE CONNECTORS

- A. Connections to existing service pipe materials other than PVC shall be made with a strong back FERNCO.

PART 5: EXECUTION

5.01 PIPE INSTALLATION

- A. Governing code shall be North Dakota Plumbing Code and all City Ordinances that apply.
- B. Minimum grade shall be ¼ inch per foot unless directed by the Engineer.
- C. Lay pipe and fittings in accordance with Section 2300 – Sanitary Sewer of the City of Minot Standard Specifications.
- D. Service locations shall be shown on the Plans, at a minimum services must be downstream 10 feet from water services.
- E. Record all necessary information to comply with the submittal requirements of this Section.
- F. Plug end of service to protect the system.
- G. Mark end of service with a 2 X 4 wood post, painted green, extending from the service cap to 4 feet above the surface.

5.02 RECONNECT EXISTING SEWER SERVICES

- A. No warranty is expressed or implied as to the location, size, or material type of existing service lines. The Contractor shall furnish and install all fittings required to make the connection.

5.03 CLEANOUTS

- A. PVC Service Pipe: Shall be paid for by the lineal foot (LF) for each size and type specified on the Plan. Measurement will be along the axis of the pipe without regard to fittings. Price shall include all materials and labor necessary for installation including excavation, bedding, necessary fittings, backfill and compaction.
- B. Reconnect Existing Service: Shall be paid for by each (EA) connection to the existing service pipe. Price shall include all materials and labor required to make the connection.
- C. Cleanout: Shall be paid for by each (EA) cleanout installed as specified.
- D. No Bid Items have been provided for plugs or 2 X 4 wood markers, these costs shall be included in the price per lineal foot for PVC Service Pipe.
- E. All other work and costs of this Section shall be incidental to the Project.

END OF SECTION

Project: NHU-4-002(116)149 (PCN-21174)

The company, firm, corporation, or individual hereby acknowledges that it has designated a responsible person or persons as having the authority to obligate the company, firm, or individual, through electronic or paper submittal, to the terms and conditions described herein and in the contract documents. The designated responsible person submitting this proposal shall be hereafter known as the bidder. By submitting this proposal, the bidder fully accepts and agrees to all the provisions of the proposal. The bidder also certifies that the information given in this proposal is true and the certifications made in this proposal are correct.

The bidder acknowledges that they have thoroughly examined the plans, proposal form, specifications, supplemental specifications, special provisions and agrees that they constitute essential parts of this proposal.

The bidder acknowledges that all line items which contain a quantity shall have a unit price bid. Any line item which is bid lump sum shall contain a lump sum bid price.

The bidder acknowledges that they understand that the quantities of work required by the plans and specifications are approximate only and are subject to increases and decreases; the bidder understands that all quantities of work actually required must be performed and that payment therefore shall be at the prices stipulated herein; that the bidder proposes to timely furnish the specified materials in the quantities required and to furnish the machinery, equipment, labor and expertise necessary to competently complete the proposed work in the time specified.

NON-COLLUSION AND DEBARMENT CERTIFICATION

The bidder certifies that neither he/she, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid.

By submitting this proposal, the bidder certifies to the best of his/her knowledge and belief that he/she and his/her principles:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal Department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or perform a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property

Project: NHU-4-002(116)149 (PCN-21174)

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- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph b. of the certification; and
 - d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or Local) terminated for cause or default

Where the prospective bidder is unable to certify to any of the statements in this certification, the bidder shall submit an explanation in the blanks provided herein. The explanation will not necessarily result in denial of participation in a contract:

Explanation: _____

If the prequalified bidder's status changes, he/she shall immediately submit a new fully executed non-collusion affidavit and debarment certification with an explanation of the change to the Contract Office prior to submitting the bid.

Failure to furnish a certification or an explanation will be grounds for rejection of a bid.

BID LIMITATION (Optional)

The bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than the bidder is equipped to handle, may bid on multiple projects and limit the total amount of work awarded to the bidder on selected projects by completing the "Bid Limitation".

The Bid Limitation must be filled in on each proposal form for which the Bidder desires protection. Each such proposal must be covered by a proposal guaranty.

The bid limitation can be made by declaring the total dollar value of work OR total number of projects a bidder is willing to perform.

The Bidder desires to disqualify all of his/her bids on this bid opening that exceed a total dollar value of \$ _____

OR

that exceed a total number of _____ projects.

The Bidder hereby authorizes the Department to determine which bids shall be disqualified.

Project: NHU-4-002(116)149 (PCN-21174)

PERMISSIBLE DISCOUNT (optional)

Only when invited to do so in the Request for Proposal by Special Provision, Bidders are permitted to offer a discount on a specific project (discount project) if they are awarded the contract on one or more additional projects bid at the same bid opening time and date. The bidder must present the proposal so that it can be considered with or without the discount. The bid or discount offered on the "discount project" will not affect the determination of the low bid of any other project.

When discounts are offered, they must be presented as a reduction in the unit price for one or more items of work in the specified proposal (discount project).

Space for Offering Discounts:

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

TOTAL DISCOUNT _____

It is understood that the discount will only apply if awarded under the conditions as listed above and signed by the bidder.

Project: NHU-4-002(116)149 (PCN-21174)

RECEIPT OF ADDENDA ACKNOWLEDGEMENT

We hereby acknowledge receipt of the following addenda:

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

PROPOSAL GUARANTY

A proposal guaranty is required. The proposal guaranty must comply with Section 102.09, "Proposal Guarantee" of the Standard Specifications.

TYPE OF PROPOSAL GUARANTY APPLIED TO THIS PROJECT (Check one):

_____ Annual Bid Bond*

_____ Single Project Bid Bond

_____ Certified or Cashier's Check

*Annual Bid Bond is required when submitting proposals electronically

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	103	0200	ESCROW OF BID DOCUMENTATION	L SUM	1.				
003	201	0330	CLEARING & GRUBBING	L SUM	1.				
004	201	0380	REMOVAL OF TREES 18IN	EA	10.				
005	201	0390	REMOVAL OF TREES 30IN	EA	7.				
006	202	0130	REMOVAL OF CURB & GUTTER	LF	2,175.				
007	202	0136	REMOVAL OF PAVEMENT	TON	19,632.				
008	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	989.				
009	202	0230	REMOVAL OF INLETS	EA	2.				
010	203	0101	COMMON EXCAVATION-TYPE A	CY	46,587.				
011	203	0109	TOPSOIL	CY	13,585.				
012	203	0121	TOPSOIL-WETLAND	CY	821.				
013	216	0100	WATER	M GAL	1,392.				
014	230	0300	SUBGRADE PREPARATION-TYPE A	STA	36.				
015	251	0200	SEEDING CLASS II	ACRE	16.900				
016	251	1000	WETLAND SEED	ACRE	1.100				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
017	251	2000	TEMPORARY COVER CROP	ACRE	17.400				
018	253	0101	STRAW MULCH	ACRE	17.400				
019	253	0201	HYDRAULIC MULCH	ACRE	16.900				
020	255	0101	ECB TYPE 1	SY	2,354.				
021	255	0104	ECB TYPE 4	SY	763.				
022	260	0200	SILT FENCE SUPPORTED	LF	200.				
023	260	0201	REMOVE SILT FENCE SUPPORTED	LF	200.				
024	261	0112	FIBER ROLLS 12IN	LF	743.				
025	261	0113	REMOVE FIBER ROLLS 12IN	LF	404.				
026	261	0120	FIBER ROLLS 20IN	LF	10,068.				
027	261	0121	REMOVE FIBER ROLLS 20IN	LF	4,014.				
028	302	0100	SALVAGED BASE COURSE	TON	47,513.				
029	401	0050	TACK COAT	GAL	3,556.				
030	401	0060	PRIME COAT	GAL	11,484.				
031	401	0160	BLOTTER MATERIAL CL 44	TON	348.				
032	411	0114	MILLING PAVEMENT SURFACE - 2 INCH	SY	14.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
033	430	0045	SUPERPAVE FAA 45	TON	13,456.				
034	430	1000	CORED SAMPLE	EA	49.				
035	430	5828	PG 58-28 ASPHALT CEMENT	TON	498.				
036	430	6428	PG 64-28 ASPHALT CEMENT	TON	291.				
037	702	0100	MOBILIZATION	L SUM	1.				
038	704	0100	FLAGGING	MHR	1,200.				
039	704	1000	TRAFFIC CONTROL SIGNS	UNIT	4,489.				
040	704	1052	TYPE III BARRICADE	EA	70.				
041	704	1060	DELINEATOR DRUMS	EA	161.				
042	704	1081	VERTICAL PANELS-BACK TO BACK	EA	228.				
043	704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	2.				
044	704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	5.				
045	706	0400	FIELD OFFICE	EA	1.				
046	706	0500	AGGREGATE LABORATORY	EA	1.				
047	706	0550	BITUMINOUS LABORATORY	EA	1.				
048	706	0600	CONTRACTOR'S LABORATORY	EA	1.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
049	708	1540	INLET PROTECTION-SPECIAL	EA	34.				
050	708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	34.				
051	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	7,567.				
052	714	0825	PIPE CONC REINF 30IN CL III-STORM DRAIN	LF	8.				
053	714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	45.				
054	714	4099	PIPE CONDUIT 18IN-APPROACH	LF	117.				
055	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	199.				
056	714	4106	PIPE CONDUIT 24IN-APPROACH	LF	481.				
057	714	4110	PIPE CONDUIT 30IN	LF	180.				
058	714	4115	PIPE CONDUIT 36IN	LF	185.				
059	714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	68.				
060	714	4121	PIPE CONDUIT 42IN-STORM DRAIN	LF	82.				
061	714	7040	SANITARY SEWER SERVICE CONNECTION	EA	1.				
062	714	7046	PIPE PVC 4IN SEWER	LF	50.				
063	714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	1.				
064	714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	2.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
065	720	0110	RIGHT OF WAY MARKERS	EA	35.				
066	720	0125	ALIGNMENT MONUMENTS	EA	31.				
067	720	0130	IRON PIN R/W MONUMENTS	EA	30.				
068	720	0135	IRON PIN REFERENCE MONUMENTS	EA	6.				
069	722	0100	MANHOLE 48IN	EA	2.				
070	722	1100	MANHOLE RISER 48IN	LF	14.				
071	722	3510	INLET-TYPE 2	EA	10.				
072	722	3520	INLET-TYPE 2 DOUBLE	EA	3.				
073	722	3701	INLET SPECIAL-TYPE 2 48IN	EA	1.				
074	722	3713	INLET SPECIAL MOUNTABLE-TYPE B 48IN	EA	2.				
075	722	3761	INLET SPECIAL-TYPE 2 60IN	EA	1.				
076	722	3766	INLET SPECIAL-TYPE 2 72IN	EA	1.				
077	722	4060	INLET MOUNTABLE CURB-TYPE B	EA	4.				
078	722	4565	MEDIAN DRAIN PRECAST CONCRETE-TYPE A	EA	1.				
079	722	6140	ADJUST GATE VALVE BOX	EA	5.				
080	722	6200	ADJUST MANHOLE	EA	7.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
081	724	0270	REMOVE GATE VALVE & BOX	EA	3.				
082	724	0300	GATE VALVE & BOX 6IN	EA	3.				
083	724	0310	GATE VALVE & BOX 8IN	EA	1.				
084	724	0314	GATE VALVE & BOX 12IN	EA	1.				
085	724	0411	6IN HYDRANT	EA	1.				
086	724	0427	ADJUST HYDRANT	EA	1.				
087	724	0430	REMOVE HYDRANT	EA	2.				
088	724	0610	WATER SERVICE LINE 1IN COPPER	LF	29.				
089	724	0810	WATERMAIN 6IN PVC	LF	43.				
090	724	0830	WATERMAIN 8IN PVC	LF	794.				
091	724	0850	WATERMAIN 12IN PVC	LF	684.				
092	724	0905	CURB STOP & BOX 1IN	EA	1.				
093	724	0944	CONNECTION TO EXISTING MAIN	EA	5.				
094	724	5812	SS WRAP-AROUND 6IN WITH 1IN TAP	EA	1.				
095	724	6820	8IN 11.25DEG BEND	EA	2.				
096	724	6840	12IN 11.25DEG BEND	EA	2.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
097	724	6842	12IN 22.5DEG BEND	EA	2.				
098	724	6844	12IN 45DEG BEND	EA	1.				
099	724	7010	8IN X 6IN REDUCER	EA	2.				
100	724	8097	12IN X 8IN REDUCER	EA	1.				
101	744	0100	POLYSTYRENE INSULATION BOARD	BD FT	12,800.				
102	748	0120	CURB & GUTTER MOUNTABLE-TYPE I	LF	502.				
103	748	0140	CURB & GUTTER-TYPE I	LF	5,781.				
104	750	0100	SIDEWALK CONCRETE	SY	860.				
105	750	0200	CONCRETE MEDIAN PAVING	SY	630.				
106	750	0210	CONCRETE MEDIAN NOSE PAVING	SY	50.				
107	750	1000	DRIVEWAY CONCRETE	SY	78.				
108	750	1020	DRIVEWAY CONCRETE 8IN	SY	287.				
109	750	2115	DETECTABLE WARNING PANELS	SF	65.800				
110	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	352.				
111	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	239.				
112	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	1,001.700				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
113	754	0214	GALV STEEL POSTS-W-SHAPE POSTS(TWO OR MORE)	LF	48.800				
114	754	0563	REFERENCE MARKER-TYPE C	EA	2.				
115	754	0592	RESET SIGN PANEL	EA	3.				
116	754	0805	OBJECT MARKERS - CULVERTS	EA	22.				
117	762	0110	EPOXY PVMT MK 4IN LINE-GROOVED	LF	4,512.				
118	762	0113	EPOXY PVMT MK 4IN LINE	LF	8,452.				
119	762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	448.				
120	762	0132	EPOXY PVMT MK 8IN LINE-GROOVED	LF	6,989.				
121	762	0134	EPOXY PVMT MK 12IN LINE-GROOVED	LF	1,013.				
122	762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	9,958.				
123	762	1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	187.				
124	762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	390.				
125	764	9011	ATTENUATING CRASH CUSHION TL-3	EA	2.				
126	766	0100	MAILBOX-ALL TYPES	EA	1.				
127	770	0020	CONCRETE FOUNDATION-HIGHWAY LIGHTING	EA	22.				
128	770	0220	CABLE TRENCH-TYPE II	LF	4,225.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

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Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
129	770	0330	2IN DIAMETER RIGID CONDUIT	LF	1,736.				
130	770	0504	UNDERGROUND CONDUCTOR NO4-TYPE RHW	LF	9,308.				
131	770	0604	UNDERGROUND CONDUCTOR NO4-TYPE THW	LF	4,654.				
132	770	1676	LT STD 6FT MA 40FT MT HT BREAKAWAY	EA	8.				
133	770	1778	LT STD 10FT MA 42FT MT HT BREAKAWAY	EA	14.				
134	770	4210	LED LUMINAIRE	EA	15.				
135	770	4220	LED LUMINAIRE - 150 WATT	EA	11.				
136	770	4567	REMOVE LIGHTING SYSTEM	EA	1.				
137	772	9811	TRAFFIC SIGNAL SYSTEM - SITE 1	EA	1.				
138	990	0230	TEMPORARY ACCESS	L SUM	1.				
			SUBTOTAL						
OPTION 1									
139	714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	653.				
140	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	367.				
			SUBTOTAL OPTION 1						

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
OPTION 2									
141	714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	653.				
142	714	0315	PIPE CONC REINF 18IN CL III-STORM DRAIN	LF	367.				
			SUBTOTAL OPTION 2						
OPTION 3									
143	714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	268.				
144	714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	94.				
145	714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	75.				
			SUBTOTAL OPTION 3						
OPTION 4									
146	714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	268.				
147	714	0315	PIPE CONC REINF 18IN CL III-STORM DRAIN	LF	94.				
148	714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	75.				

BID ITEMS

Project: NHU-4-002(116)149 (PCN-21174)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
			SUBTOTAL OPTION 4						
			SUBTOTAL + ALL OPTIONS						

PROPOSAL FORM

North Dakota Department of Transportation

BID OPENING: November 17, 2017

Job 028

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Rev: 10/23/2017

Project: NHU-4-002(116)149 (PCN-21174)

Type of Work: HMA, GRADING, STORM SEWER, WATERMAIN, SIDEWALK, SIGNALS, STRIPING, AND LIGHTING

County: WARD

Length: 0.4640 Miles

TIME FOR COMPLETION:

The undersigned Bidder agrees, if awarded the contract, to prosecute the work with sufficient forces and equipment to complete the contract work within the allowable time specified as follows:

WORKING DAY CONTRACT: NA working days are provided. The Department will begin charging working days beginning NA or the date work begins on the project site, whichever is earlier.

CALENDAR DAY CONTRACT: NA calendar days are provided. The completion date will be determined by adding NA calendar days to NA or the date work begins on the project site, whichever is earlier.

COMPLETION DATE CONTRACT The project completion date is 10/13/2018. The Department provides a minimum of NA working days. The Department will begin charging working days beginning NA or the date work begins on the project site, whichever is earlier.

Project: NHU-4-002(116)149 (PCN-21174)

Type of Work: HMA, GRADING, STORM SEWER, WATERMAIN, SIDEWALK, SIGNALS, STRIPING, AND LIGHTING

County: WARD

Length: 0.4640 Miles

UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISE (M/WBE):

The undersigned Bidder certifies that the information given on behalf of the Bidder in Special Provision, "Utilization of Disadvantaged Business Enterprise" (M/WBE), is true and correct and that the bidder has met the assigned goals or has met the good faith effort requirements of the Special Provision.

CONTRACT EXECUTION:

The undersigned Bidder agrees, if awarded the contract, to execute the contract form and furnish a contract bond within fifteen calendar days, as determined by NDCC Section 1-02-15, after date of notice of award, in accordance with the provisions of Sections 103.05 and 103.06 of the Standard Specifications.

AFFIDAVIT:

STATE OF _____)
) **ss.**
COUNTY OF _____)

The undersigned bidder, being duly sworn, does depose and say that they are an authorized representative of _____
CONTRACTOR NAME
of _____, a
MAILING ADDRESS

- Individual Partnership Joint Venture Corporation

and that they have read, understand, acknowledge, and accept the entire proposal form; and that all statements made by said bidder are true and correct.

_____, TITLE _____
BIDDER MUST SIGN ON THIS LINE

TYPE OR PRINT SIGNATURE ON THIS LINE

Subscribed and sworn to before me this day.

COUNTY

(Seal)

STATE DATE

NOTARY PUBLIC

My commission expires _____

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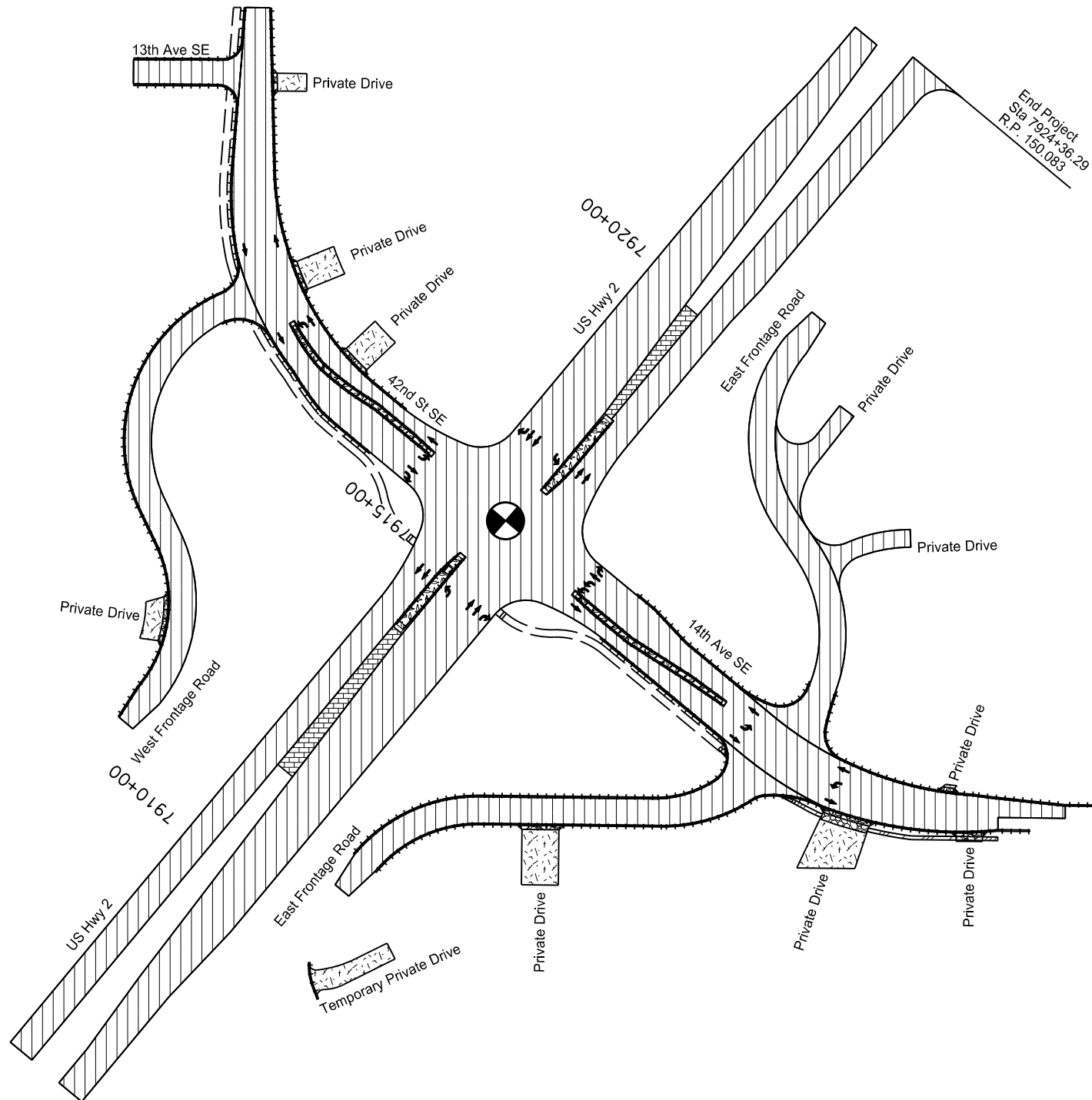
PLAN SECTIONS

Section	Page(s)	Description
1	1	Title Sheet
2	1 - 2	Table of Contents
4	1	Scope of Work
6	1 - 8	Notes
6	9	Environmental Notes
8	1 - 2	Quantities
10	1	Basis of Estimate
11	1 - 5	Data Tables
20	1 - 11	General Details
30	1 - 9	Typical Sections
40	1 - 7	Removals
50	1	Hydraulic Data
50	2	Inlet and Manhole Summary
51	1 - 3	Allowable Pipe List
55	1 - 16	Drainage Layouts
60	1 - 16	Plan & Profile
60	17 - 22	Watermain Lowering
70	1	Contours
75	1 - 13	Wetlands, Mitigation and Environmental
76	1 - 12	Temporary Erosion Control
77	1 - 12	Permanent Erosion Control
81	1 - 3	Survey Coordinate and Curve Data
82	1 - 17	Survey Data Layouts
100	1 - 18	Work Zone Traffic Control
110	1 - 12	Signing
120	1 - 7	Pavement Marking
130	1	Guardrail
140	1 - 7	Lighting
150	1 - 19	Signals
200	1 - 127	Cross Sections










SPECIAL PROVISIONS

Number	Description
SP 003(14)	Temporary Erosion and Sediment Best Management Practices
SP 460(14)	Conditions of Contract Award
SP 483(14)	Battery Back-up System
SP 484(14)	Watermain
SP 5158(14)	Permits and Environmental Considerations
SP 575(14)	Sanitary Sewer Service

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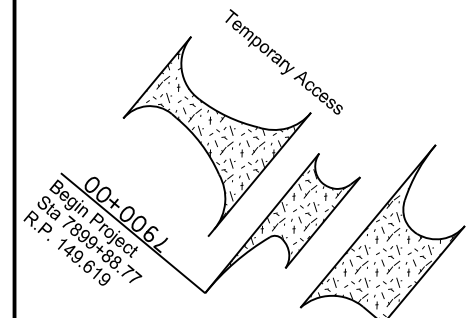


Legend

-  Superpave FAA 45
-  Raised Concrete Median Paving
-  Depressed Bituminous Median Paving
-  Concrete Driveway
-  Concrete Sidewalk
-  Salvaged Base Course
-  Curb & Gutter
-  Future Shared Use Path (by others)
-  Traffic Signal

This document was originally issued and sealed by Jonathan P. Morgenroth, Registration Number PE- 6872, on 10/12/17 and the original document is stored at the North Dakota Department of Transportation

Scope of Work
US Hwy 2 & 42nd St SE
Intersection Improvements



NOTES

Revised 10/11/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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Phase 3

- Existing intersection to remain closed – local road detour
- Move US Highway 2 traffic to inside aggregate base built in Phase 2
- Build outside subgrade and aggregate base on US Highway 2
- Build new connection for 42nd Street SE/14th Avenue SE to US Highway 2
- Continue work on 14th Avenue SE
- Continue work on southeast portion of 42nd Street SE
- Continue work on frontage roads

Stage 4

- Move traffic to outside lane aggregate base on US Highway 2
- Complete median and inside aggregate base
- Continue work on 14th Avenue SE
- Continue work on southeast portion of 42nd Street SE
- Continue work on frontage roads

Stage 5

- Pave US Highway 2 under traffic utilizing lane closures.
- Complete work on 14th Avenue SE
- Complete work on southeast portion of 42nd Street SE
- Complete work on frontage roads
- Remove temporary access to Gooseneck Property on West Frontage Road after frontage road construction is complete and construct permanent private drive.

Stage 6

- Open intersection to traffic
- Start and complete work on north portion of 42nd Street SE
- Remove temporary accesses on US Highway 2 and East Frontage Road.

704-P04 TRAFFIC CONTROL: At various times throughout the construction, missile convoys to or from the MAFB will occur. The timing of the convoys may be announced with extremely short or no notification. Cease all operations and remove equipment and personnel from the roadway during this operation. Do not impede the missile convoys. No additional compensation shall be made to the contractor for delays caused by missile convoys.

706-P01 FIELD OFFICE: Provide a field office which meets the following requirements:

1. Be completely insulated and weather tight.
2. Minimum total area of 650 square feet.
3. Indoor bathroom facilities, sewer and potable water. Include the cost of the installation and monthly fees.
4. Have a dependable source of electricity for power and lights with a minimum of 6 electrical outlets spaced throughout the building and light fixtures spaced to uniformly light the entire interior (lumens required 110 foot-candles). Include the cost of the installation and monthly fees.

5. Be wired for DSL Broadband internet with wireless Wi-Fi and have the capability to allow for hard wiring the computer. Include the cost of the installation and monthly fees.
6. A heating and cooling system that is capable of maintaining the temperature between 65°F and 78°F year around.
7. A minimum of 3 desks and 3 desk chairs, 3 extra chairs, one drawer file cabinet with at least four drawers, one table minimum of 2.5 ft x 6 ft.
8. Photocopy machine/Printer capable of 11x17 photocopies/prints and toner to last the duration of the project. Engineer will provide paper. Other features to include digital coping & scanning. (Fax capabilities can be included but not necessary).
9. The location of the field office will be on, or as close to the project as possible and approved by the Engineer. Any rental fees will be paid by the Contractor.
10. Make the field office available for occupancy one week before the start of the project and remain through project completion.

All requirements of the Field Office are subject to approval by the Engineer.

Include the costs for the field office in the bid item "Field Office" and the Schedule for

Payment is as follows:

- 25% when set up on site.
- 50% when 30% of the work is complete.
- 75% when 60% of the work is complete.
- 100% when project is complete

714-P01 STORM DRAIN: All "PIPE CONDUIT (size) IN – STORM DRAIN" or "PIPE CONC REINF (size) IN CL (class) – STORM DRAIN" inverts are located at the edge of structures or at the end of the closed conduit within the end section. Pipe lengths are measured at the edge of structures or at the end of the closed conduit within the end section.

Provide gaskets for all joints capable of remaining watertight and that meet the following requirements:

- ASTM C443 for concrete pipe
- ASTM D1056 for spiral ribbed steel pipe

714-P02 PLUG PIPE: Plug and abandon existing storm drain lateral pipes at 11+54 on the East Frontage Road. The pipes, from 11' RT to 16' LT and 11' RT to 20' RT, can be seen on sheet 55-13.

Use a blend of cement, water, pozzolanic materials, and fillers for the backfill. The material will be fluid on placement to flow through and fill the pipes. The material needs to be able to support normal loads after six hours and have a compressive strength in the range of 75 psi to 125 psi at 28 days. The material must be such that it lends itself to easy removal with a tractor backhoe.

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NOTES

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If one of the following mix designs shown is used, no further testing will be required. The mix designs yield approximately one cubic yard of controlled density backfill.

MIX DESIGN 2	
Water	50 gals
Cement	165 lbs
Fine Aggregate	2600 lbs

MIX DESIGN 1	
Fly Ash	300 lbs
Water	70 gals
Cement	100 lbs
Fine Aggregate	2600 lbs

Furnish and install end plugs at the manhole-side of both pipes prior to placing backfill in the pipe itself. The end plugs must be watertight and be constructed of a minimum of 9 inches thick concrete or of materials recommended by the pipe supplier. Allow the end plugs to set for 24 hours before placing controlled density backfill.

Place controlled density backfill starting at the end plug, filling the cavity progressively away from the manhole until the entire pipe is filled. Controlled density backfill must continue to be pumped until refusal (when no more backfill can be pumped).

The functionality, invert, and structural stability of the existing manhole (East Frontage Road 11+54 – 11' RT) must not be negatively impacted or changed in any way during this described work.

Include labor, materials, and equipment necessary to perform this described work in the price bid for "Plug Pipe - All Types and Sizes".

714-P03 SILTED PIPES: Clean the silt from all pipes to be extended or reused. Include the cost of removing and disposing of the silt in the price bid for centerline pipe installation. Handle removed material appropriately, and spread and stabilized onsite.

714-P04 PIPE CONDUIT-STORM DRAIN CONNECTIONS: No field cutting of spiral rib pipe is allowed. Attach metal end sections to the ends of spiral rib pipe by standard metal bands or as approved by the Engineer. Furnish and install toe plates on the metal end sections as indicated on the plans.

714-P05 PIPE CONDUIT (size) IN-APPROACH: Pipe conduit has been provided in the plans to convey the flow of storm water through the temporary access points near US Highway 2 station 7901+25 RT and LT. Provide pipe conduit with a minimum waterway opening as shown on Section 51 Sheet 2. The Contractor may provide pipes with a larger waterway opening in lieu of the pipes shown subject to the following criteria and approval by the engineer. Pipe end sections are not required.

- Minimum cover requirements over the drainage pipes will be maintained without altering the vertical profile of the temporary roadway. Minimum cover is defined by the greater of the manufacturer recommendation or one foot to the top of gravel surfacing for unpaved surfaces, to the top of base for asphalt surfaces, or to the top of pavement for concrete surfaces.

- Any drainage pipes or structures proposed for use by the Contractor shall be free of any structural defects and will have sufficient structural capacity for use as a highway drainage structure.

The Contractor may provide used pipe conduit in lieu of new pipe conduit if the above criteria are met.

Include all costs for furnishing and installing the drainage system to convey the flow of storm water through the temporary roadways in the price for as "Pipe Conduit (size) IN-Approach".

Remove the drainage system used to convey the flow of storm water through the temporary roadways concurrent with removal of the temporary roadways. Include all costs for removing the drainage system in the price for "Removal of Pipe All Types and Sizes".

722-P01 ADJUST MANHOLE: Remove and replace the existing sanitary manhole casting at the below locations with a floating manhole casting as per Standard Drawing D-722-5A. Include all costs for labor, materials, and equipment required to perform this work in the unit price bid for "Adjust Manhole".

722-P02 ADJUST MANHOLE: Include all costs for labor, materials, and equipment needed to make adjustments to the riser length including removing, replacing, supplying, and adding additional riser in the unit bid for "Adjust Manhole".

Adjust Manhole		
Alignment	Station	Offset
PR14	6+80.61	139.0' LT
PR14	11+25.77	27.8' RT
PRFRONT_E	9+87.94	7.4' LT
PRFRONT_E	10+48.15	75.4' LT
PRFRONT_E	12+78.37	1.2' RT

722-100 INLETS AND MANHOLES: Inlets and manholes were designed with a minimum 4 foot riser height. Fill the bottom of each drainage structure with concrete, up to the lowest invert elevation.

762-050 PAVEMENT MARKING: If the Engineer and Contractor agree, plan quantity will be used as the measurement for payment for pavement marking items.

764-P01 ATTENUATING CRASH CUSHION TL-3: Install attenuating crash cushion TL-3 units at the signal standards on US Hwy 2 at Sta 7914+63 and 7916+93 that are 6 inches wider than the signal standard. Install the crash cushions with 1 inch of clearance between the back of the rail and the face of the signal standard on the back side of the crash cushion, and 5 inches of clearance on the approach side of the crash

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Spec	Code	Item Description	Unit	Quantity				
				US Hwy 2	Urban Roads	Frontage Roads	100% Local	Total
103	0100	Contract Bond	L SUM	1				1
103	0200	Escrow of Bid Documentation	L SUM	1				1
201	0330	Clearing & Grubbing	L SUM	1				1
201	0380	Removal of Trees 18 IN	EA		6	4		10
201	0390	Removal of Trees 30 IN	EA			7		7
202	0130	Removal of Curb & Gutter	LF		1943	232		2175
202	0136	Removal of Pavement	TON	12991	3737	2904		19632
202	0174	Removal of Pipe All Types and Sizes	LF	901	30	58		989
202	0230	Removal of Inlets	EA			2		2
203	0101	Common Excavation-Type A	CY	27948	8104	10535		46587
203	0109	Topsoil	CY	7010	3007	3568		13585
203	0121	Topsoil - Wetland	CY	790		31		821
216	0100	Water	MGAL	1392				1392
230	0300	Subgrade Preparation-Type A	STA	36				36
251	0200	Seeding Class II	ACRE	10.8	2.7	3.4		16.9
251	1000	Wetland Seed	ACRE	1.1				1.1
251	2000	Temporary Cover Crop	ACRE	11.3	2.7	3.4		17.4
253	0101	Straw Mulch	ACRE	11.3	2.7	3.4		17.4
253	0201	Hydraulic Mulch	ACRE	10.8	2.7	3.4		16.9
255	0101	ECB - Type 1	SY	1270	110	974		2354
255	0104	ECB - Type 4	SY		108	655		763
260	0200	Silt Fence Supported	LF	200				200
260	0201	Remove Silt Fence Supported	LF	200				200
261	0112	Fiber Rolls 12 IN	LF	94	333	316		743
261	0113	Remove Fiber Rolls 12 IN	LF	74	117	213		404
261	0120	Fiber Rolls 20 IN	LF	5385	2087	2596		10068
261	0121	Remove Fiber Rolls 20 IN	LF	2190	916	908		4014
302	0100	Salvaged Base Course	TON	32277	8938	6298		47513
401	0050	Tack Coat	GAL	2645	409	502		3556
401	0060	Prime Coat	GAL	7039	1989	2456		11484
401	0160	Blotter Material CL 44	TON	213	61	74		348
411	0114	Milling Pavement Surface - 2 Inch	SY			14		14
430	0045	Superpave FAA 45	TON	9363	1989	2104		13456
430	1000	Cored Sample	EA	25	16	8		49
430	5828	PG 58-28 Asphalt Cement	TON	371	64	63		498
430	6428	PG 64-28 Asphalt Cement	TON	176	52	63		291
702	0100	Mobilization	L SUM	1				1
704	0100	Flagging	MHR	1200				1200
704	1000	Traffic Control Signs	UNIT	4489				4489
704	1052	Type III Barricades	EA	70				70
704	1060	Delineator Drums	EA	161				161
704	1081	Vertical Panels - Back to Back	EA	228				228
704	1087	Sequencing Arrow Panel - Type C	EA	2				2
704	4011	Portable Changeable Message Sign	EA	5				5
706	0400	Field Office	EA	1				1
706	0500	Aggregate Laboratory	EA	1				1
706	0550	Bituminous Laboratory	EA	1				1
706	0600	Contractor's Laboratory	EA	1				1
708	1540	Inlet Protection-Special	EA	6	22	6		34
708	1541	Remove Inlet Protection-Special	EA	6	22	6		34
709	0151	Geosynthetic Material Type R1	SY	3366	1858	2343		7567
714	0825	Pipe Conc Reinf 30IN CL III-Storm Drain	LF			8		8
714	4097	Pipe Conduit 15IN-Storm Drain	LF	45				45
714	4099	Pipe Conduit 18IN-Approach	LF		49	68		117
714	4101	Pipe Conduit 18IN-Storm Drain	LF	199				199
714	4106	Pipe Conduit 24IN-Approach	LF	396		85		481
714	4110	Pipe Conduit 30IN-Storm Drain	LF	180				180
714	4115	Pipe Conduit 36IN	LF	185				185
714	4117	Pipe Conduit 36IN-Storm Drain	LF	68				68
714	4121	Pipe Conduit 42IN-Storm Drain	LF	82				82
714	7040	Sanitary Sewer Service Connection	EA				1	1

Spec	Code	Item Description	Unit	Quantity				
				US Hwy 2	Urban Roads	Frontage Roads	100% Local	Total
714	7046	Pipe PVC 4" Sewer	LF				50	50
714	9660	Remove & Relay End Section-All Types and Sizes	EA			1		1
714	9680	Plug Pipe-All Types and Sizes	EA			2		2
720	0110	Right of Way Markers	EA	2	18	15		35
720	0125	Alignment Monuments	EA	2	10	19		31
720	0130	Iron Pin R/W Monuments	EA		16	14		30
720	0135	Iron Pin Reference Monuments	EA	2	2	2		6
722	0100	Manhole 48IN	EA		1	1		2
722	1100	Manhole Riser 48IN	LF		5.7	8.3		14
722	3510	Inlet - Type 2	EA		6	4		10
722	3520	Inlet-Type 2-Double	EA		1	2		3
722	3701	Inlet Special -Type 2 48IN	EA		1			1
722	3713	Inlet Special Mountable-Type B 48IN	EA	1	1			2
722	3761	Inlet Special-Type 2 60IN	EA			1		1
722	3766	Inlet Special-Type 2 72IN	EA	1				1
722	4060	Inlet Mountable Curb-Type B	EA	3	1			4
722	4565	Median Drain Precast Concrete-TypeA	EA	1				1
722	6140	Adjust Gate Valve Box	EA				5	5
722	6200	Adjust Manhole	EA		3	4		7
724	0270	Remove Gate Valve & Box	EA				3	3
724	0300	Gate Valve & Box 6IN	EA				3	3
724	0310	Gate Valve & Box 8IN	EA				1	1
724	0314	Gate Valve & Box 12IN	EA				1	1
724	0411	6IN Hydrant	EA				1	1
724	0427	Adjust Hydrant	EA				1	1
724	0430	Remove Hydrant	EA				2	2
724	0610	Water Service Line 1IN Copper	LF				29	29
724	0810	Watermain 6IN PVC	LF				43	43
724	0830	Watermain 8IN PVC	LF				794	794
724	0850	Watermain 12IN PVC	LF				684	684
724	0905	Curb Stop & Box 1IN	EA				1	1
724	0944	Connection to Existing Main	EA				5	5
724	5812	SS Wrap-Around 6IN With 1IN Tap	EA				1	1
724	6820	8IN 11.25Deg Bend	EA				2	2
724	6840	12IN 11.25Deg Bend	EA				2	2
724	6842	12IN 22.5Deg Bend	EA				2	2
724	6844	12IN 45Deg Bend	EA				1	1
724	7010	8IN x 6IN Reducer	EA				2	2
724	8097	12IN X 8IN Reducer	EA				1	1
744	0100	Polystyrene Insulation Board	BD FT				12800	12800
748	0120	Curb & Gutter Mountable-Type I	LF	502				502
748	0140	Curb & Gutter-Type I	LF	715	2723	2343		5781
750	0100	Sidewalk Concrete	SY		860			860
750	0200	Concrete Median Paving	SY	466	164			630
750	0210	Concrete Median Nose Paving	SY	40	10			50
750	1000	Driveway Concrete	SY		78			78
750	1020	Driveway Concrete 8IN	SY		175	112		287
750	2115	Detectable Warning Panels	SF	40	25.8			65.8
754	0110	Flat Sheet For Signs-Type XI Refl Sheeting	SF	238	48	66		352
754	0112	Flat Sheet For Signs-Type IV Refl Sheeting	SF	202	37			239
754	0206	Steel Glav Posts-Telescoping Perforated Tube	LF	582.6	175.8	243.3		1001.7
754	0214	Glav Steel Posts-W-Shape Posts(Two or More)	LF	48.8				48.8

Quantities
US Hwy 2 & 42nd St SE
Intersection Improvements

Spec	Code	Item Description	Unit	Quantity				
				US Hwy 2	Urban Roads	Frontage Roads	100% Local	Total
754	0563	Reference Marker-Type C	EA	2				2
754	0592	Reset Sign Panel	EA	1	1	1		3
754	0805	Object Marker - Culvert	EA	8	5	9		22
762	0110	Epoxy Pvmt Mk 4IN Line-Grooved	LF	1376	3136			4512
762	0113	Epoxy Pvmt Mk 4IN Line	LF	7070		1382		8452
762	0122	Preformed Patterned Pvmt Mk-Messaged-Grooved	SF	320	128			448
762	0132	Epoxy Pvmt Mk 8IN Line-Grooved	LF	5706	1283			6989
762	0134	Epoxy Pvmt Mk 12IN Line-Grooved	LF	1013				1013
762	0430	Short Term 4IN Line - Type NR	LF	9958				9958
762	1307	Preformed Patterned Pvmt Mk 6IN Line-Grooved	LF		187			187
762	1325	Preformed Patterned Pvmt Mk 24IN Line-Grooved	LF	289		101		390
764	9011	Attenuating Crash Cushion TL-3	EA	2				2
766	0100	Mailbox-All Types	EA		1			1
770	0020	Concrete Foundation-Highway Lighting	EA	13	9			22
770	0220	Cable Trench-Type II	LF	2650	1575			4225
770	0330	2IN Diameter Rigid Conduit	LF	995	741			1736
770	0504	Underground Conductor NO4-Type RHW	LF	5890	3418			9308
770	0604	Underground Conductor NO4-Type THW	Lf	2945	1709			4654
770	1676	LT Std 6FT MA 40FT MT HT Breakaway	EA		8			8
770	1778	LT Std 10FT MA 42FT MT HT Breakaway	EA	13	1			14
770	4210	LED Luminaire	EA	10	5			15
770	4220	LED Luminaire - 150 Watt	EA	7	4			11
770	4567	Remove Lighting System	EA		1			1
772	9811	Traffic Signal System - Site 1	EA	1				1
990	0230	Temporary Access	LSUM	1				1

Option 1: Pipe Conduit Storm Sewer (See Section 51 for Allowable Materials)

Spec	Code	Item Description	Unit	Quantity				
				US Hwy 2	Urban Roads	Frontage Roads	100% Local	Total
714	4097	Pipe Conduit 15IN-Storm Drain	LF		653	268		921
714	4101	Pipe Conduit 18IN-Storm Drain	LF		367	94		461
714	4107	Pipe Conduit 24IN-Storm Drain	LF			75		75

Option 2: Reinforced Concrete Pipe Storm Sewer

Spec	Code	Item Description	Unit	Quantity				
				US Hwy 2	Urban Roads	Frontage Roads	100% Local	Total
714	0210	Pipe Conc Reinf 15IN CL III - Storm Drain	LF		653	268		921
714	0315	Pipe Conc Reinf 18IN CL III - Storm Drain	LF		367	94		461
714	0620	Pipe Conc Reinf 24IN CL III - Storm Drain	LF			75		75

Quantities
US Hwy 2 & 42nd St SE
Intersection Improvements

BASIS OF ESTIMATE

Revised 10/11/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(116)149	10	1

Conversions/Rates

Salvaged Base Course @ 1.875 Ton/CY
 Prime Coat @ 0.25 Gal/SY
 Blotter Material CI 44 @ 15 lbs/SY
 Tack Coat @ 0.05 Gal/SY
 Superpave FAA 45 @ 2 Ton/CY
 PG 58-28 Asphalt Cement @ 5.8%
 PG 64-28 Asphalt Cement @ 5.8%

Water

25 MGal/Mile for Subgrade Preparation
 25 MGal/Mile for Dust Palliative
 20 Gal/Ton for Aggregates
 10 Gal/CY for Embankment

Mailboxes

<u>Station</u>	<u>Type</u>	<u>Work</u>
(PR14) 12+85 – RT	Single (5)	Remove & Reset Assembly and Boxes

Coring

HBP Cored Samples							
	A	B	C	D			
Spec 430.04	Distance (Ft)÷2000	Lanes	Lifts	Sublots (A × B × C)	Quantity (D × 2)	Quantity (1 per mile)	Unit
US Hwy 2	1	4	3	12	24	N/A	EA
US Hwy 2 430.04 I.2.b(2), "Pavement Thickness Determination Cores"	N/A	N/A	N/A	N/A	N/A	1	EA
42 nd St SE	1	2	2	4	8	N/A	EA
14 th Ave SE	1	2	2	4	8	N/A	EA
Frontage Roads	1	2	2	4	8	N/A	EA
				Total	48	1	EA

Subgrade Preparation

US Hwy 2	Station
EB 7906+27.50 to 7924+36.29	18.1
WB 7906+27.50 to 7924+17.50	17.9
Total	36

Salvaged Base Course Summary

Location	Salvage Quantities	
	Pavement TON	Aggregate TON
US 2 EB	3,783	3,547
US 2 WB	3,035	2,626
West Frontage Road	146	239
East Frontage Road	954	1,566
42nd St SE	930	436
14th Ave SE	647	1,516
Concrete Sidewalk & Driveway	141	66
Total	9,636	9,996

Note: Quantity assumes that 2" of aggregate base is staying in place

Removal of Pavement (Ton)	Salvaged Base Course Created (Ton)	Aggregate Required to Create Salvaged Base Course (Ton)	Existing Aggregate (Ton)	Virgin Aggregate Required (Ton)	Produced Material (Ton)
A	B = (A)/0.3	C = B-A	D	E = C-D	F
9,637	32,123	22,486	9,996	12,490	32,123

Note: Assumed minimum 30% bituminous or concrete material see Spec Book section 817

Salvaged Base Course from Removals (Ton)	Salvaged Base Course Required (Ton)	Import (Ton)
G	H	I = H-G
32,120	47,513	15,393

Striping

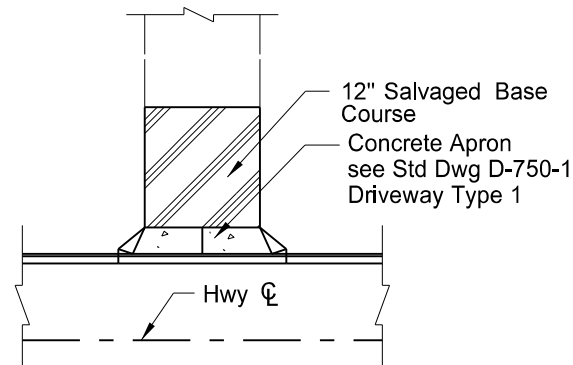
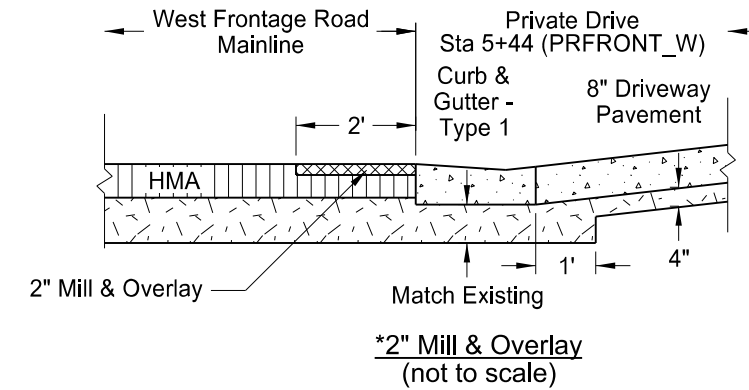
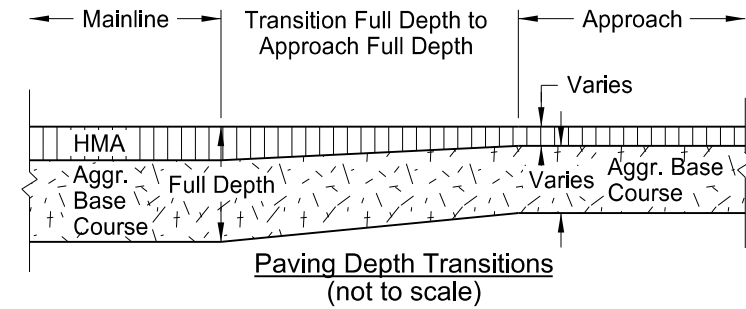
Short Term 4IN Line - Type NR		
Location	Basis	Quantity
US 2 - Top of 1st Lift	Centerline Skips 1,320 LF/mile	906 LF
US 2 - Top of 2nd Lift	Centerline Skips 1,320 LF/mile Edge lines 10,560 LF/mile	906 LF
US 2 - Top of 3rd Lift	Centerline Skips 1,320 LF/mile Edge lines 10,560 LF/mile	8,146 LF

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Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	20	1

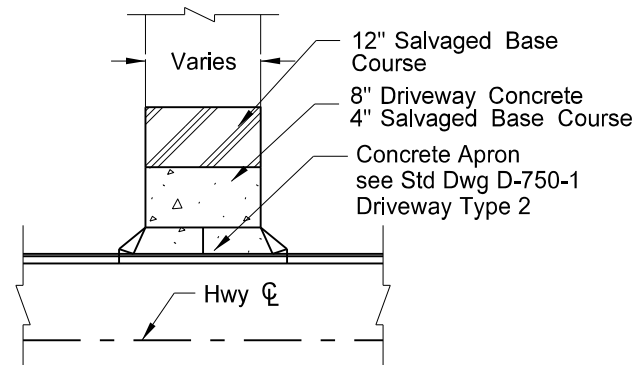
Notes:

- Actual HMA paving and Salvaged Base Course locations may vary in the field, as approved by the Engineer.
- Quantities are located in Sections 60 & 100 and the totals have been included in the bid items of the "Estimate of Quantities" of the plans.
- See Sections 82 & 100 for design details



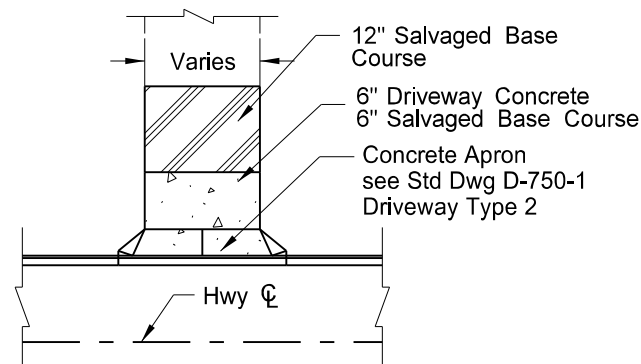
(1) Gravel Private Drive Approach

Private Drive @ 13+00 RT (PR42)
 Private Drive @ 14+50 RT (PR42)
 Private Drive @ 17+30 RT (PR42)
 Private Drive @ 12+30 LT (PR14)
 *Private Drive @ 5+44 LT (PRFRONT_W)
 Private Drive @ 13+35 LT (PRFRONT_W)
 Private Drive @ 11+30 RT (PRFRONT_E)



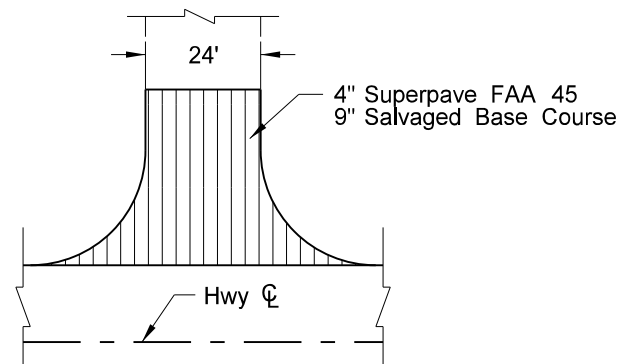
(2) Concrete Private Drive Approach

Private Drive @ 11+00 RT (PR14)



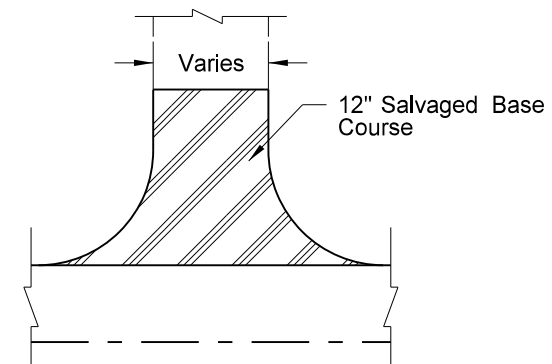
(3) Concrete Private Drive Approach

Private Drive @ 12+70 RT (PR14)



(4) Asphalt Approach

Private Drive @ 17+50 RT (PRFRONT_E)
 Private Drive @ 18+55 RT (PRFRONT_E)



(5) Temporary Gravel Approach

Temporary Access Road @ 7901+25 (SCL2CL)
 Temporary Private Drive @ 6+63.63 RT (PRFRONT_E)

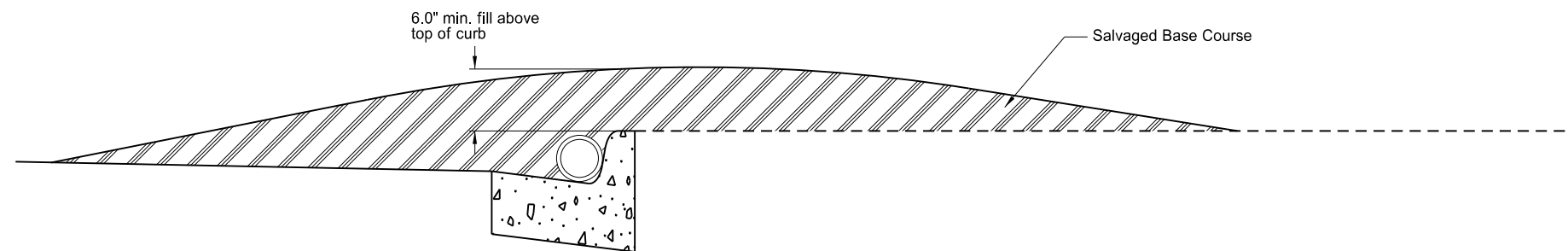
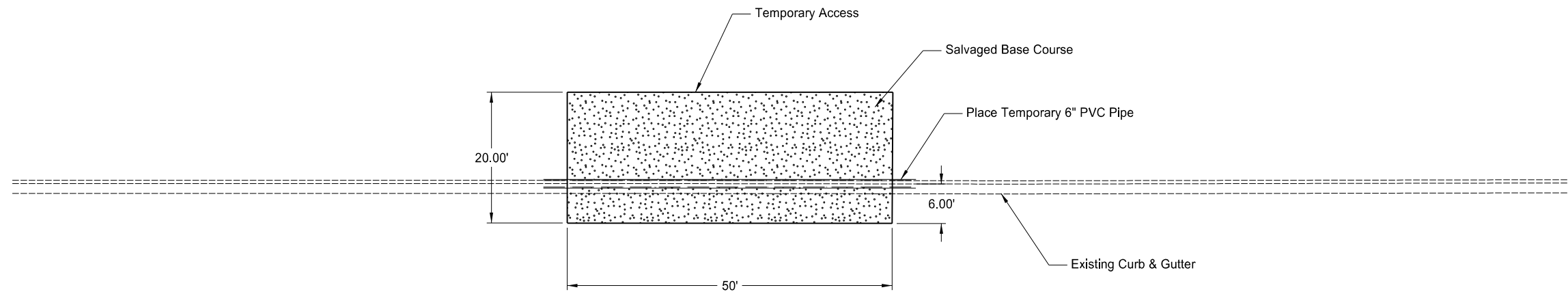
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General Details

US Hwy 2 & 42nd St SE
 Intersection Improvements
 Approach Paving Details

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	20	10

Note:
Items paid for by Temporary Access which includes the installation, maintenance, and removal

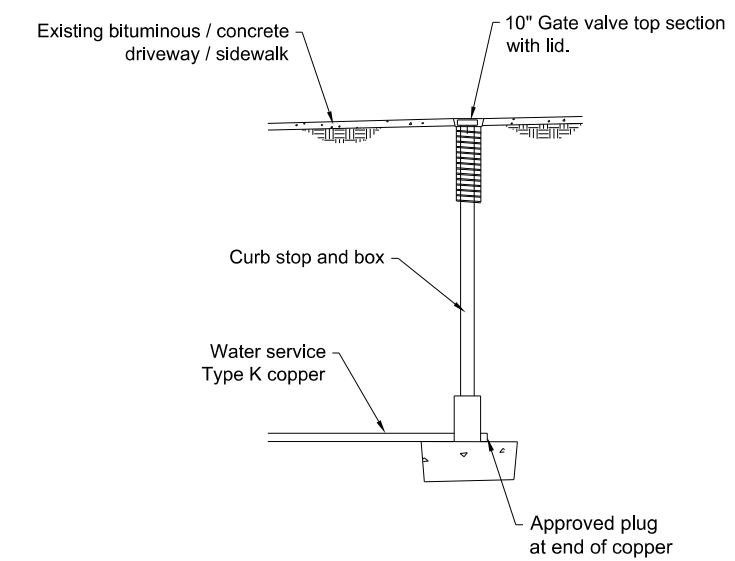
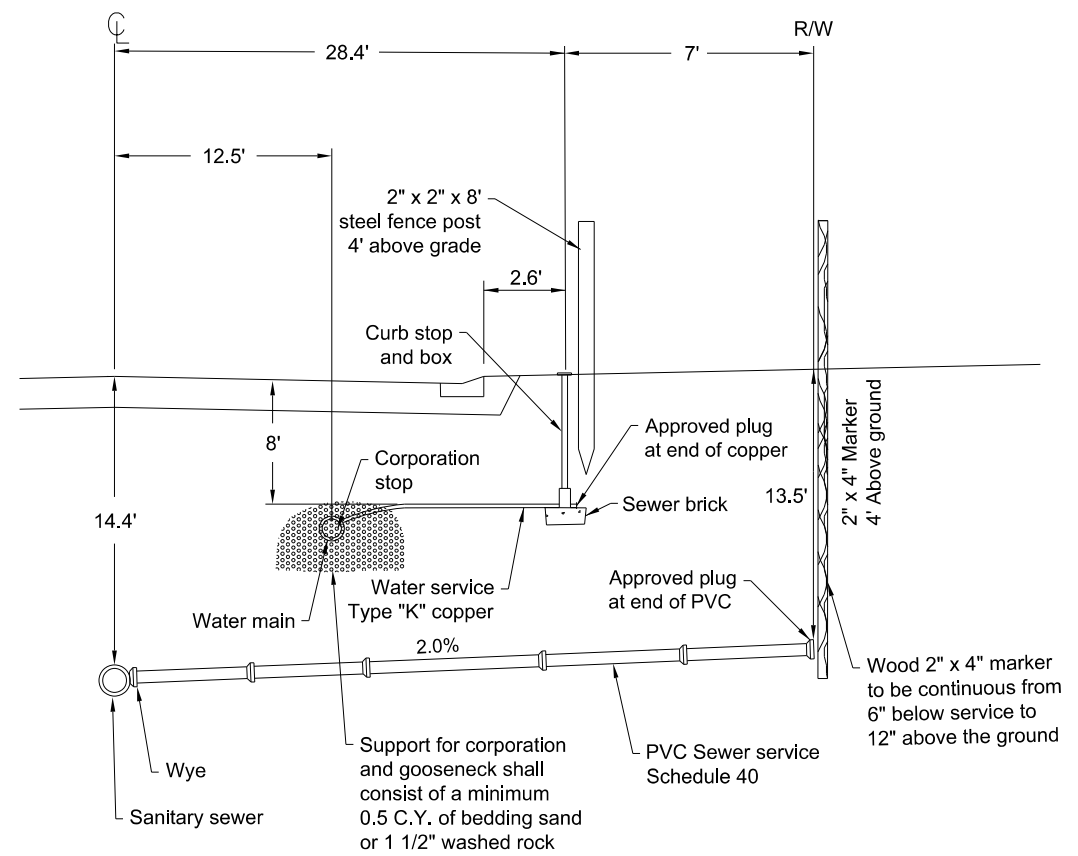


Temporary Access over Curb & Gutter
Sta 5+13.50 to Sta 5+74.50 (PRFRONT_W)

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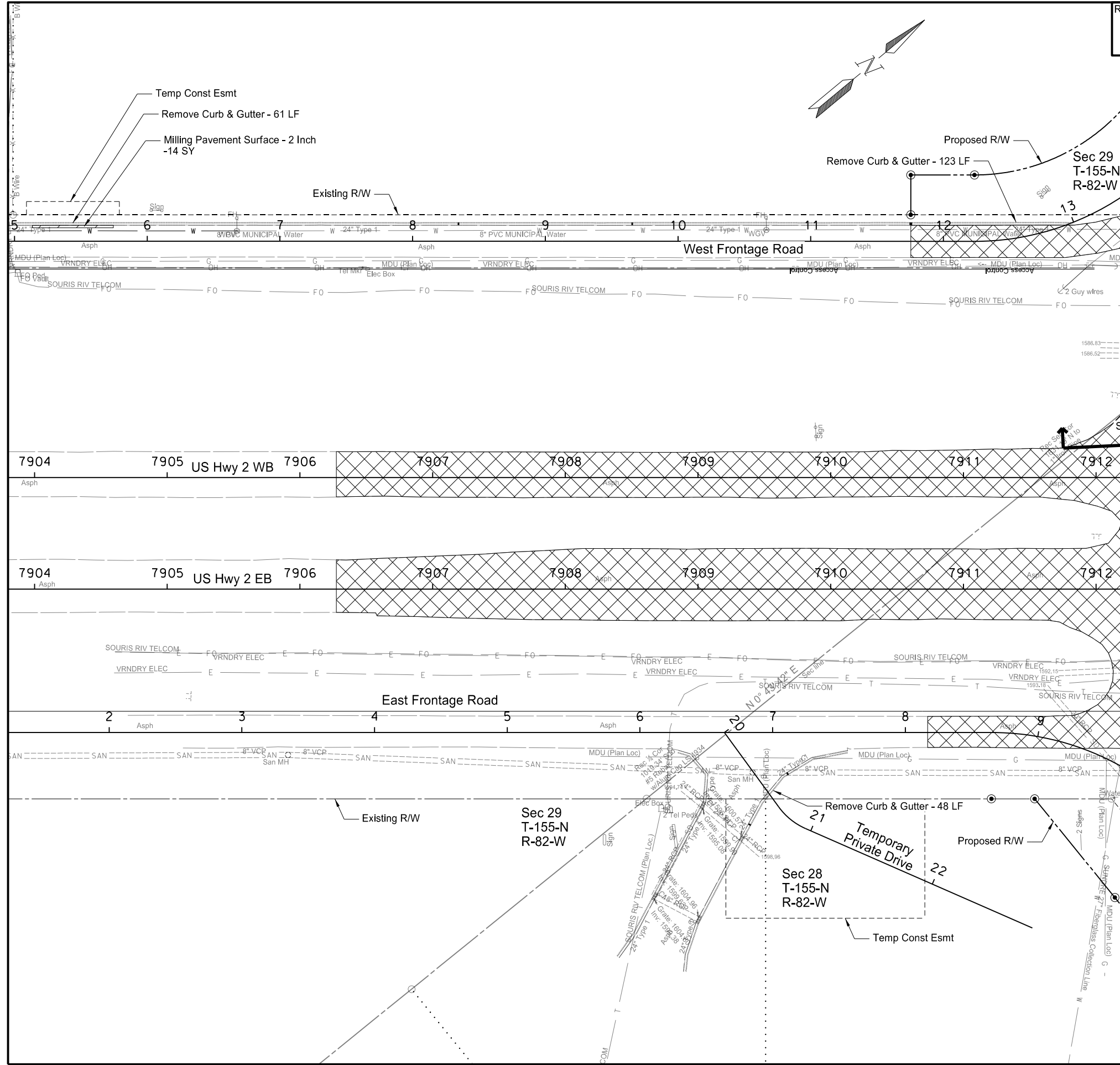
General Details
US Hwy 2 & 42nd St SE
Intersection Improvements
Temporary Access over Curb & Gutter

Added	09/27/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	20	11






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General Details
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Residential Sewer & Water Service Details



202	0130	Removal of Curb & Gutter		
		5+13.50 14' LT to 5+74.50 14' LT (PRFRONT_W)	61	LF
		11+75.41 13' LT to 12+99.41 1' RT (PRFRONT_W)	123	LF
		6+82.7 70' RT to 7+11.2 31' RT (PRFRONT_E)	48	LF
202	0136	Removal of Pavement		
		7906+27.50 to 7912+00 (EX2EB)	2497	TON
		7906+27.50 to 7912+00 (EX2WB)	1492	TON
		11+75.41 to 13+10.40 (PRFRONT_W)	220	TON
		8+16.83 to 9+40.00 (PRFRONT_E)	201	TON
411	0114	Milling Pavement Surface - 2 Inch		
		5+13.50 to 5+74.50 LT (PRFRONT_W)	14	SY

-  Remove Bituminous Pavement (include Pavement and Base)
-  Remove Concrete Sidewalk/Driveway
-  Removal of Tree

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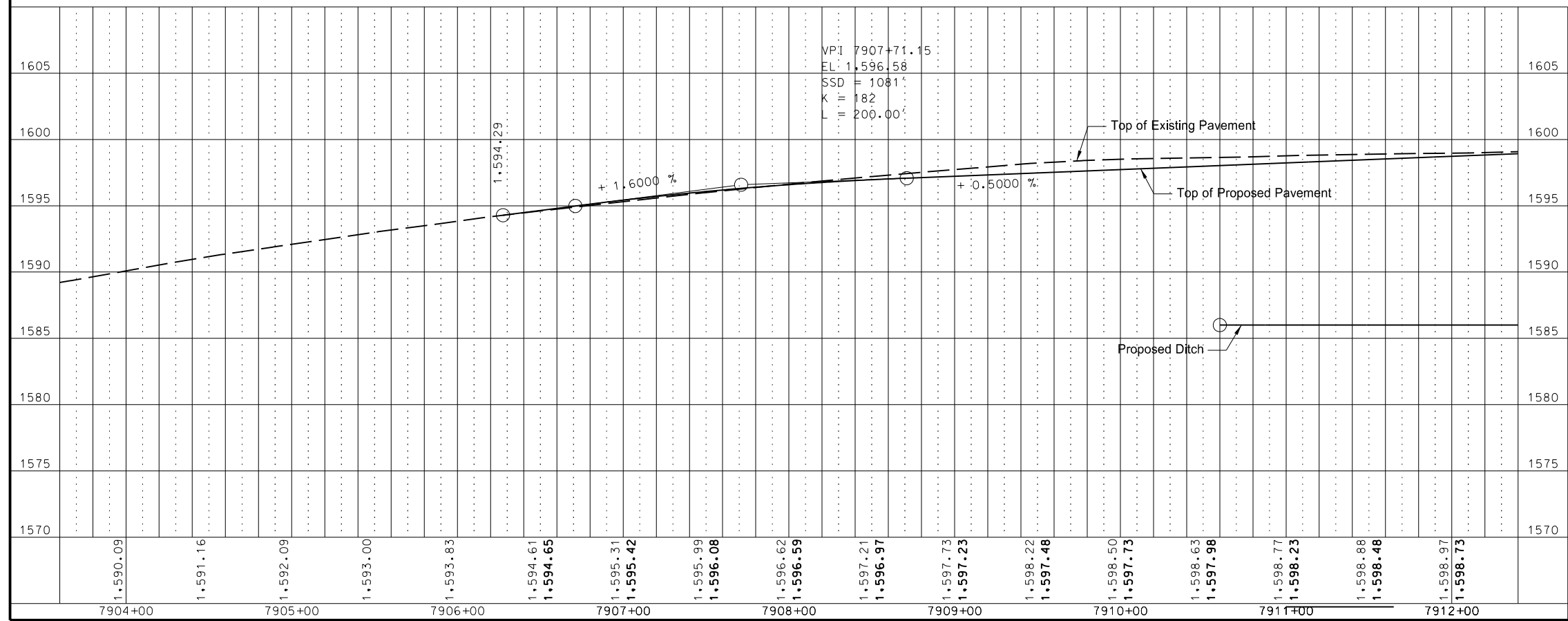
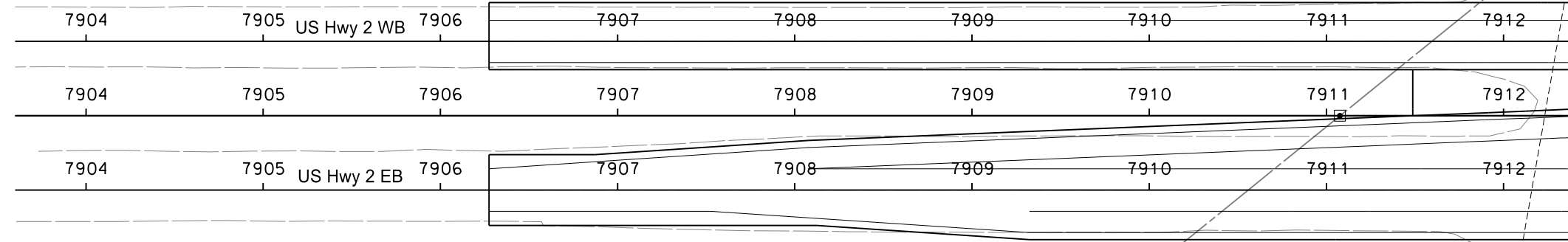
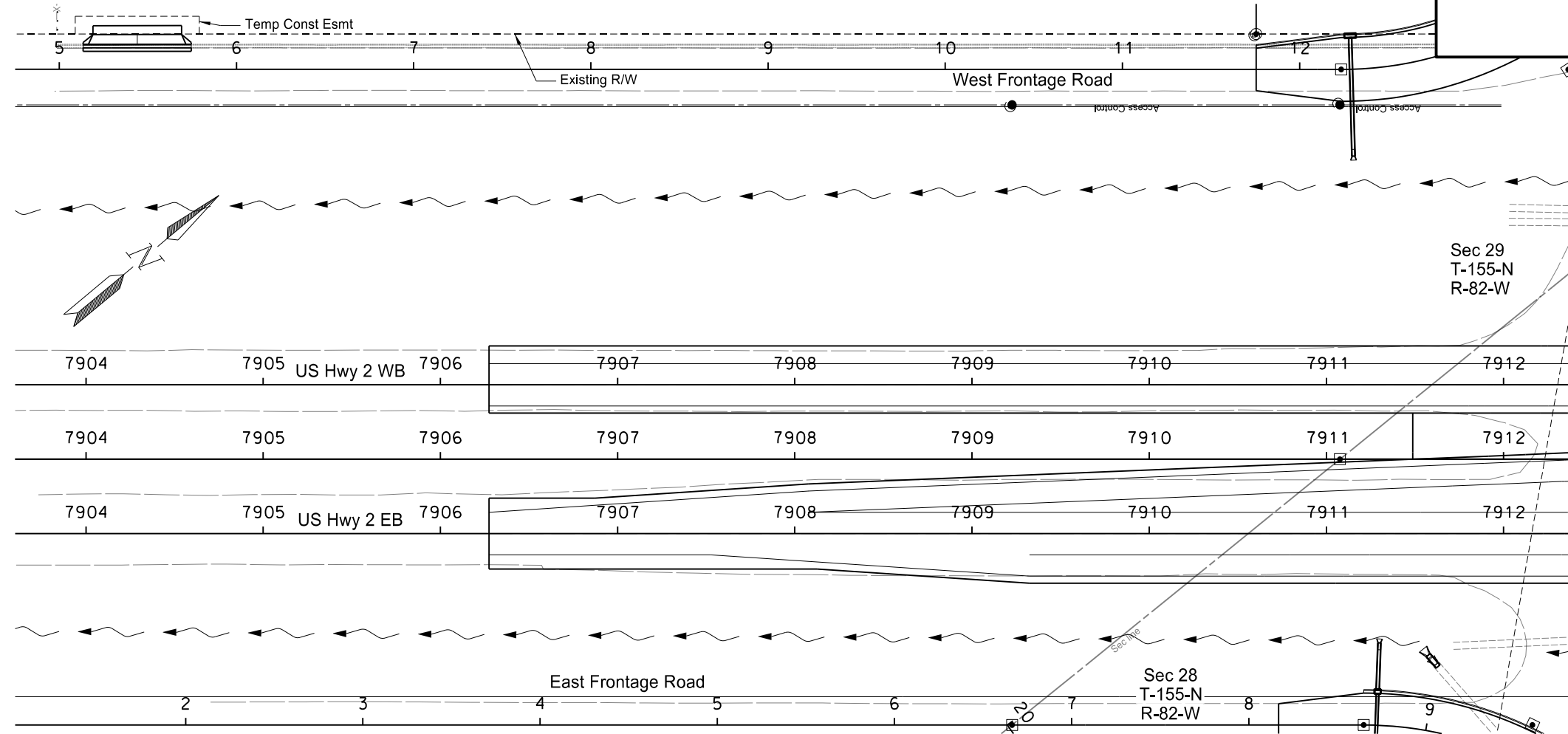
Removals

US Hwy 2 & 42nd St SE
Intersection Improvements

US Hwy 2
7904+00 to 7912+00

Revised 10/11/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(116)149	55	4

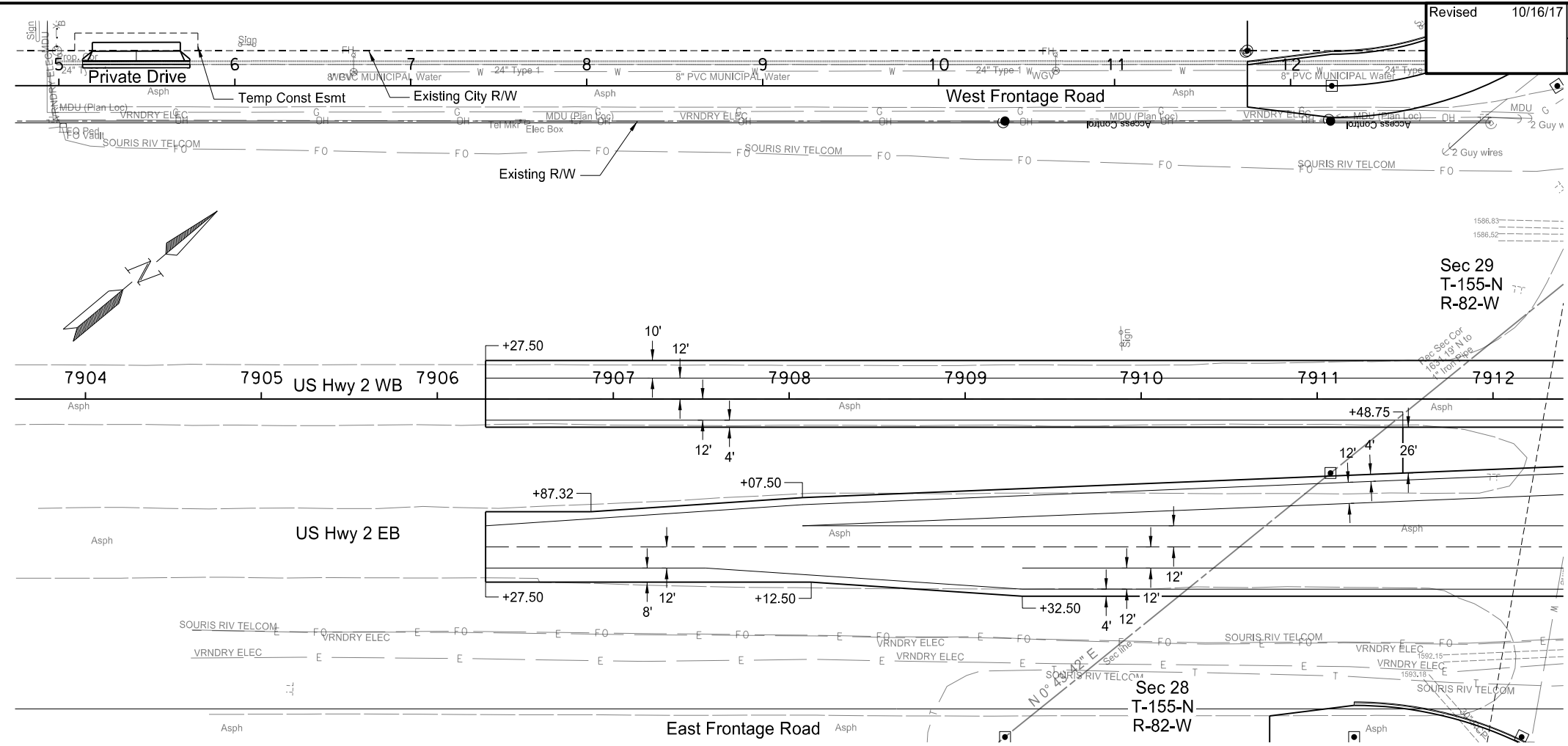


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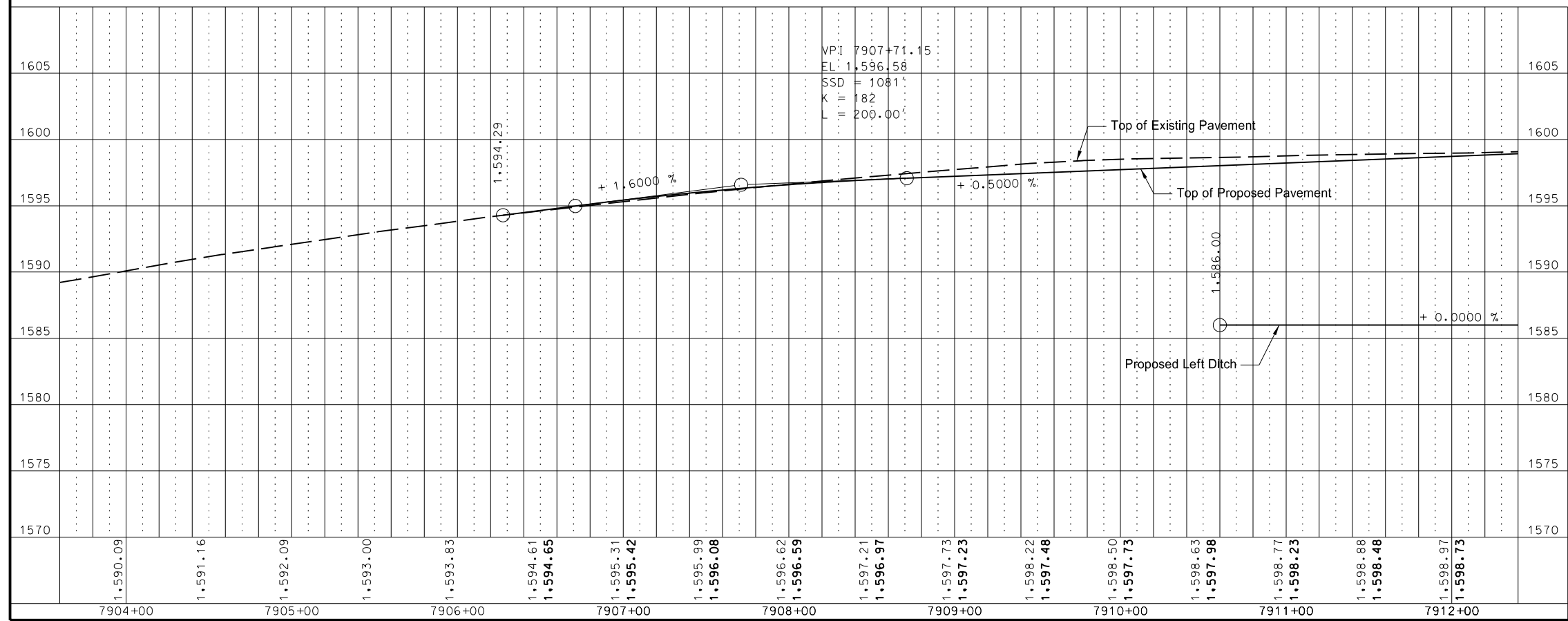
Storm Sewer
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2 WB
 7904+00 to 7912+00

Revised 10/16/17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NHU-4-002(116)149	60	4



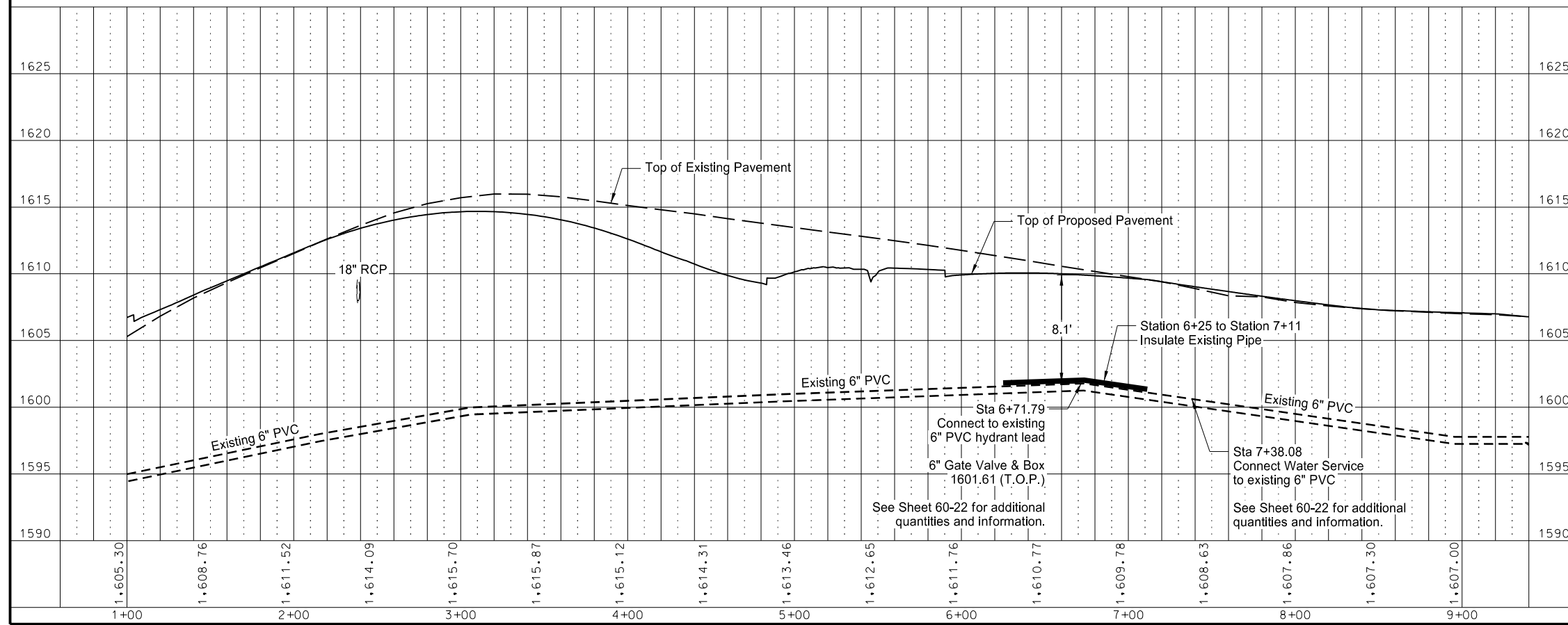
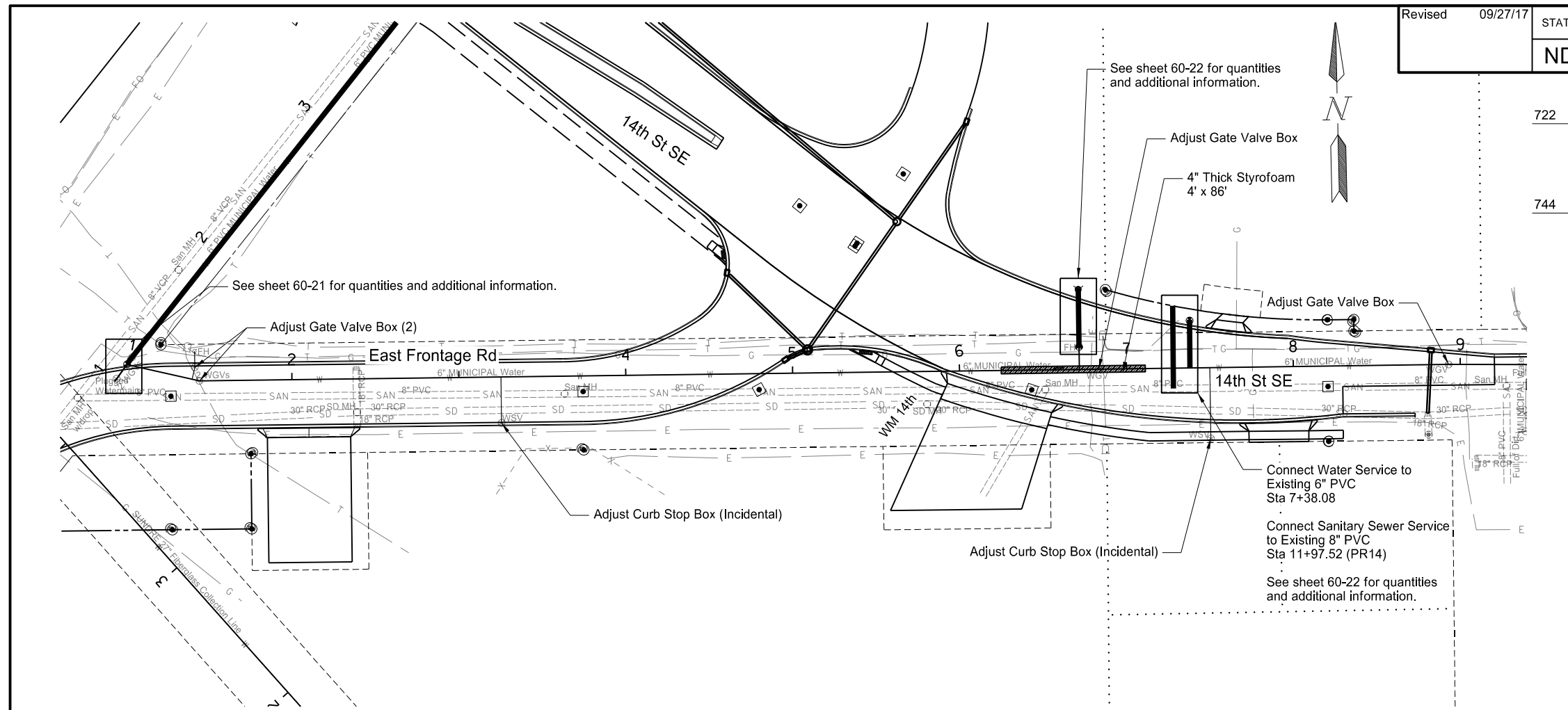
302	0100	Salvaged Base Course		
		7906+27.50 to 7912+00.00	3434	TON
		Driveway @ 5+44 LT (PRFRONT_W)	33	TON
401	0050	Tack Coat		
		7906+27.50 to 7912+00.00	303	GAL
		5+13.50 to 5+74.50 LT (PRFRONT_W)	1	GAL
401	0060	Prime Coat		
		7906+27.50 to 7912+00.00	756	GAL
401	0160	Blotter Material CL 44		
		7906+27.50 to 7912+00.00	23	TON
430	0045	Superpave FAA 45		
		7906+27.50 to 7912+00.00	1008	TON
		5+13.50 to 5+74.50 LT (PRFRONT_W)	2	TON
430	5828	PG 58-28 Asphalt Cement		
		7906+27.50 to 7912+00.00	41	TON
430	6428	PG 64-28 Asphalt Cement		
		7906+27.50 to 7912+00.00	18	TON
748	0140	Curb & Gutter-Type 1		
		5+13.50 14' LT to		
		5+74.50 14' LT (PRFRONT_W)	61	LF
750	1020	Driveway Concrete 8IN		
		Driveway @ 5+44 LT (PRFRONT_W)	35	SY



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Plan & Profile
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2 WB
 7904+00 to 7912+00

722	6140	Adjust Gate Valve Box		
		1+40.08 LT	1	EA
		1+44.56	1	EA
		6+83.50	1	EA
		8+93.10	1	EA
744	100	Polystyrene Insulation Board		
		6+25 to 7+11	1376	BD FT



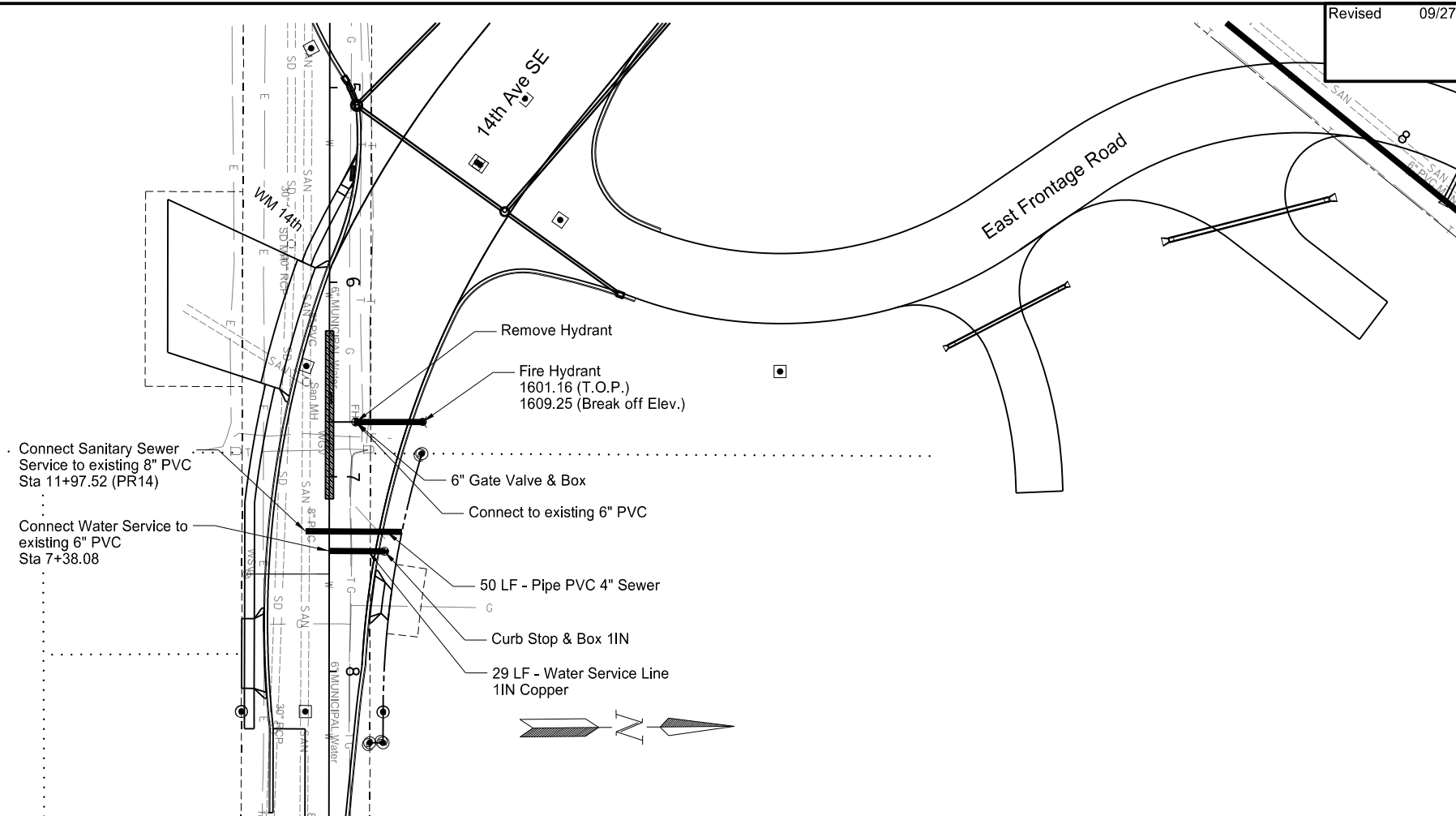
Note:
Watermain elevation is approximate. Field verify and adjust accordingly.

Allowable axial pipe deflection = 2.0°

Styrofoam insulation to be installed at stormsewer crossings and locations where 8.5' of cover isn't maintained.

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Watermain Lowering
US Hwy 2 & 42nd St SE
Intersection Improvements
East Frontage Road / 14th St SE
1+00 to 9+00



714	7040	Sanitary Sewer Service Connection		
		11+97.52 9' RT (PR14)	1	EA
714	7046	Pipe PVC 4" Sewer		
		11+97.52 9' RT to 11+87.89 40' LT (PR14)	50	LF
724	300	Gate Valve & Box 6IN		
		1+13.55	1	EA
724	411	6IN Hydrant		
		1+47.99	1	EA
724	430	Remove Hydrant		
		1+13.55	1	EA
724	610	Water Service Line 1IN Copper		
		7+38.08 CL to 7+38.24 29' LT	29	LF
724	810	Watermain 6IN PVC		
		1+13.55 to 1+47.99	35	LF
724	905	Curb Stop & Box 1IN		
		7+38.25 28' LT	1	EA
724	944	Connection to Existing Main		
		1+13.55	1	EA
724	5812	SS Wrap-Around 6IN With 1IN Tap		
		7+38.08 CL	1	EA

1625					1625
1620	Hydrant Lead	Sanitary Sewer Service	Water Service		1620
1615					1615
1610	Top of Proposed Pavement Top of Existing Pavement	Top of Proposed Pavement Top of Existing Pavement	Top of Proposed Pavement Top of Existing Pavement		1610
1605	Sta 6+71.72 48' LT F.H. 1601.16 (T.O.P.) 1609.25 Break Off Elevation	Existing Watermain 6" PVC	Curb Stop & Box 1IN Sta 7+38.25 28' LT		1605
1600	35 LF 6" PVC Sta 6+71.77 13.55' LT Connect Water Service to Existing 6" PVC	Sanitary Sewer Service Connection Sta 11+97.52 9' RT (PR14)	SS Wrap-Around 6IN with 1IN Tap Sta 7+38.08 CL	Plug and mark end of service per Section 20 Details Sta 7+38.24 29' LT	1600
1595	Remove F.H. 6" Gate Valve & Box	50 LF - Pipe PVC 4" Sewer @ 2.0%	Existing Watermain 6" PVC	29 LF - Water Service Line 1IN Copper	1595
1590		Existing Sanitary 8" PVC Invert El. 1593.7			1590
	1+610.34 1+00	1+609.57 1+00	1+609.11 1+00	1+608.98 1+00	

Note:
Watermain elevation is approximate. Field verify and adjust accordingly.

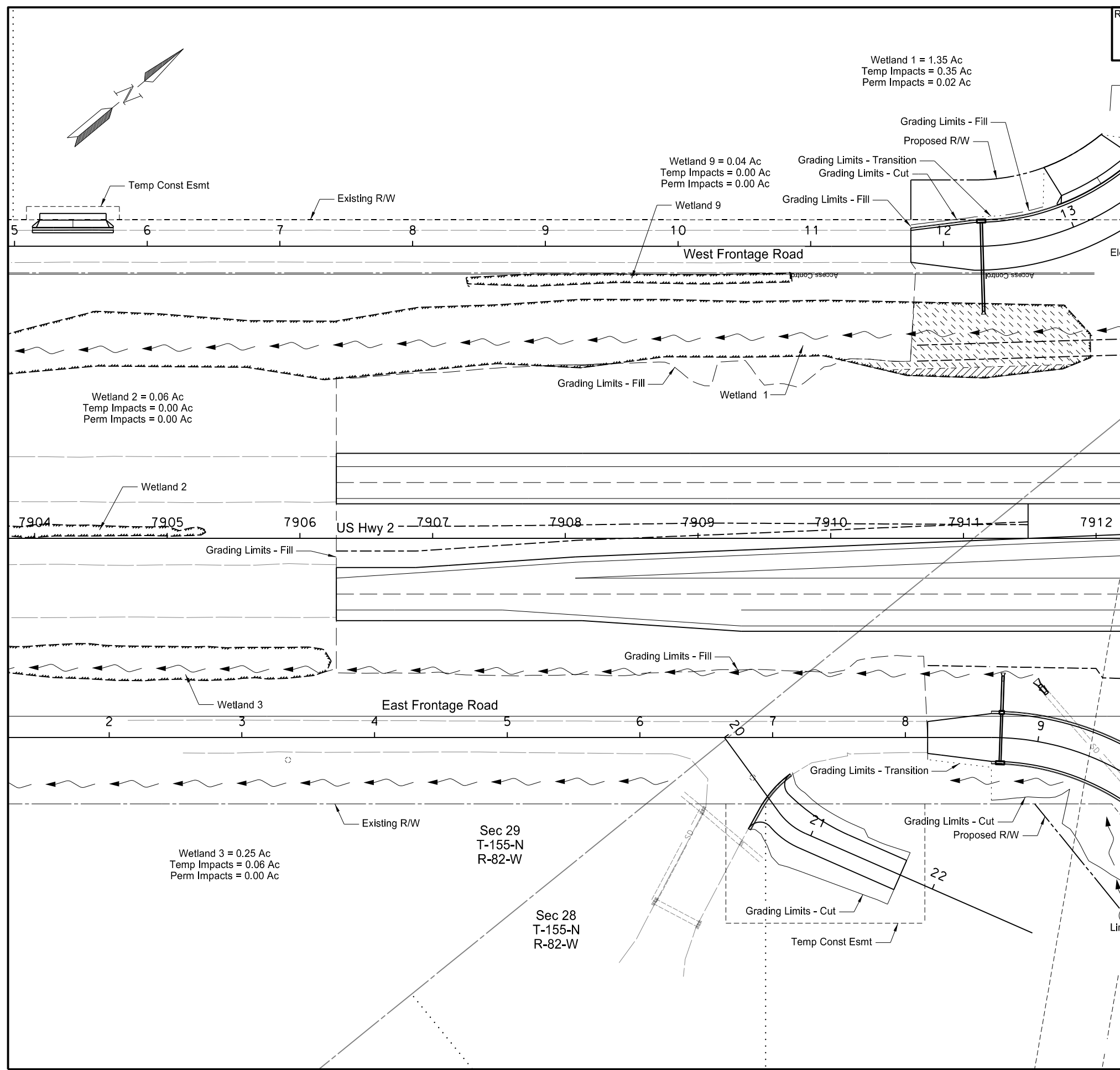
Allowable axial pipe deflection = 2.0°

Styrofoam insulation to be installed at stormsewer crossings and locations where 8.5' of cover isn't maintained.

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Watermain Lowering
US Hwy 2 & 42nd St SE
Intersection Improvements
14th Ave SE Hydrant Lead & Services

203	0121	Topsoil - Wetland		
		7910+63.01 to 7912+00	118	CY
251	1000	Wetland Seed		
		7910+63.01 to 7912+00	0.2	Acre



- Grading Limits - Cut
- Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Wetland Delineated Existing
- Wetland Impacts Permanent
- Wetland Impacts Temporary
- Wetland Mitigation

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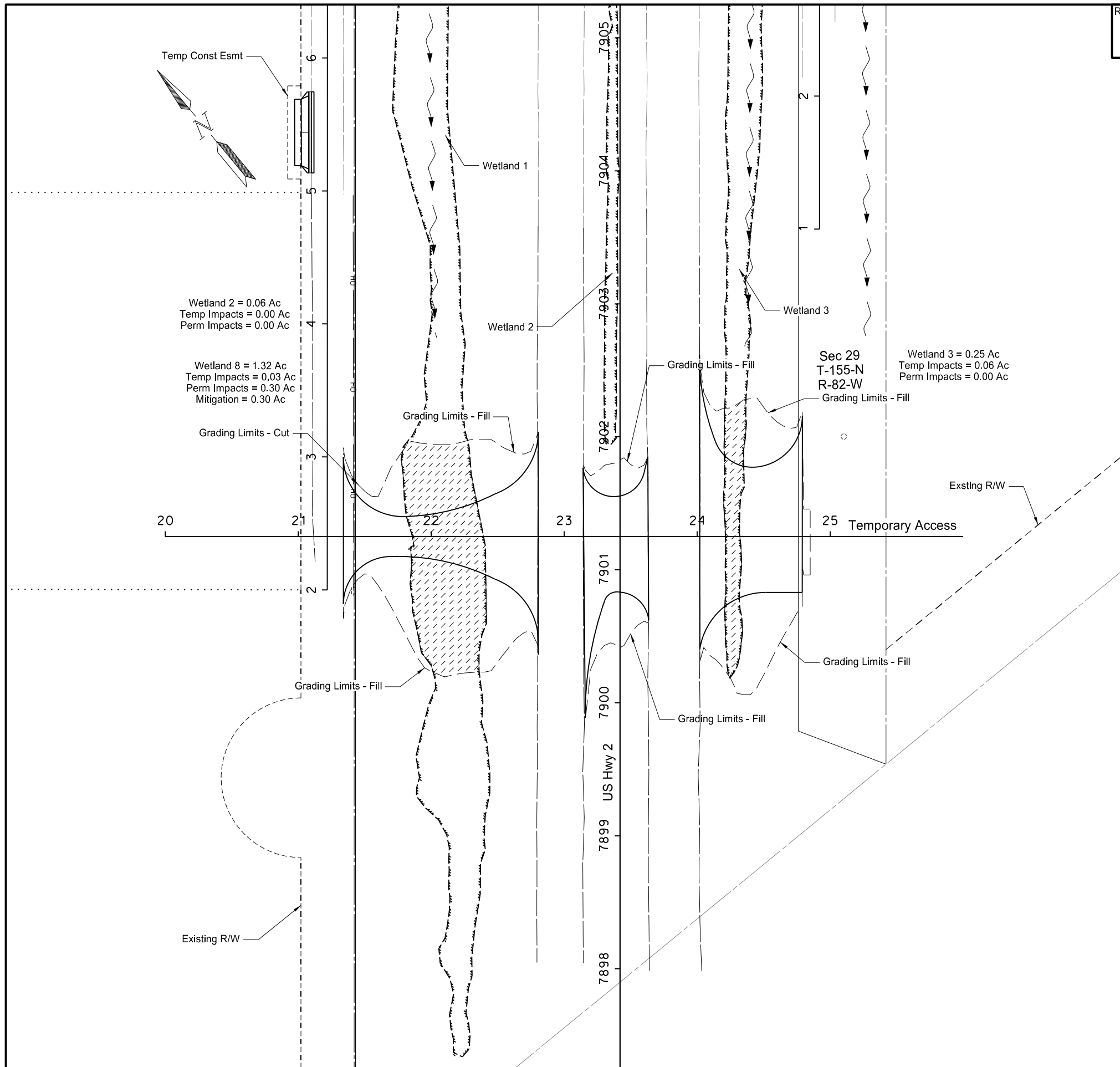
Wetlands, Mitigation and Environmental

US Hwy 2 & 42nd St SE
Intersection Improvements

US Hwy 2
7904+00 to 7912+00

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	75	13

203	0121	Topsoil - Wetland		
		Temporary Access	213	CY
251	1000	Wetland Seed		
		Temporary Access	0.3	Acre



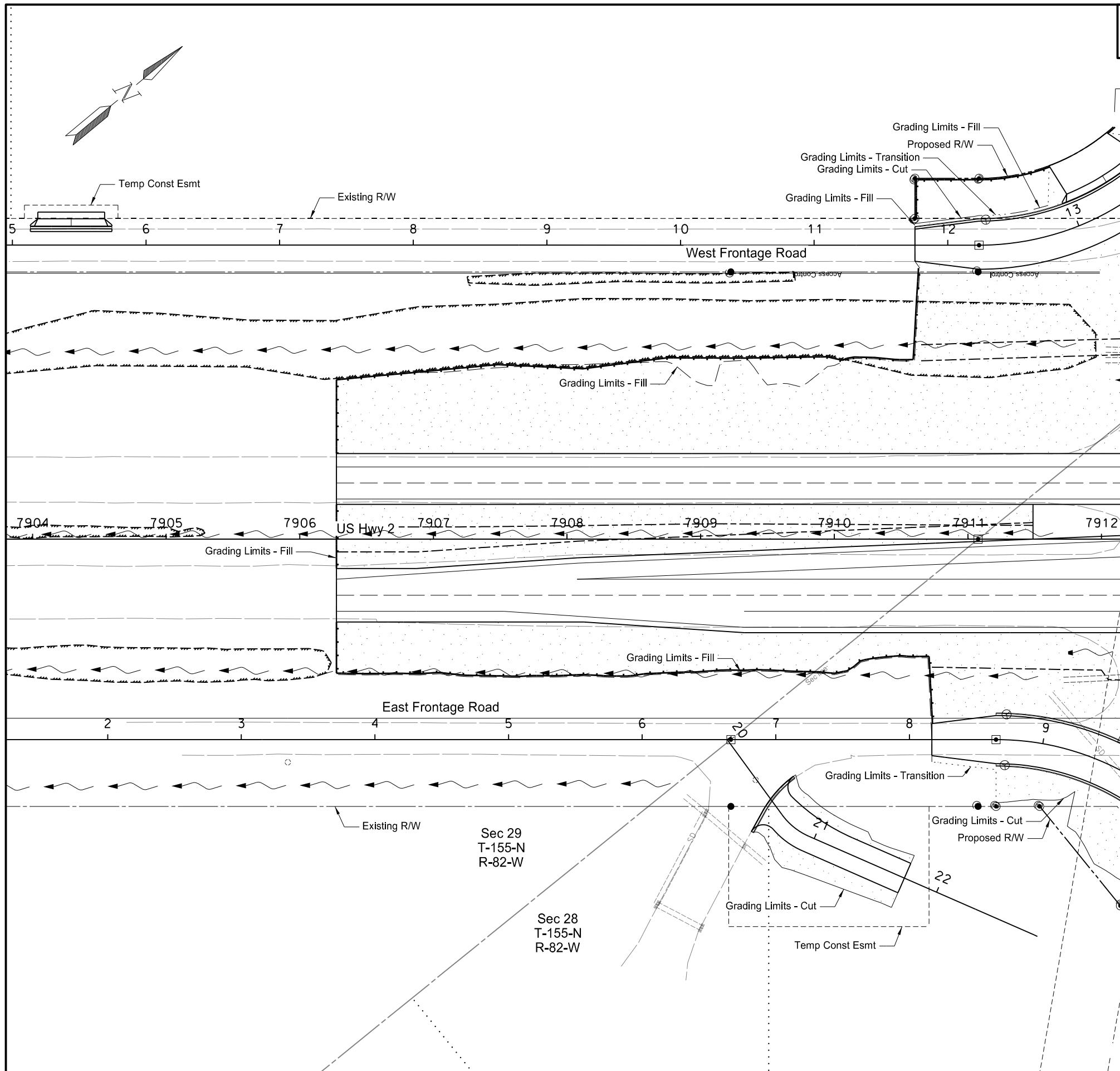
- Grading Limits - Cut
- - - Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Wetland Delineated Existing
- ▨ Wetland Impacts Permanent
- ▤ Wetland Impacts Temporary
- ▩ Wetland Mitigation

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Wetlands, Mitigation and Environmental
US Hwy 2 & 42nd St SE
Intersection Improvements
Temporary Access

251	2000	Temporary Cover Crop	7904+00 to 7912+00	2.6	Acre
253	0101	Straw Mulch	7904+00 to 7912+00	2.6	Acre

Note: See Sheet 76-12 for Temporary Fiber Roll Tables and Quantities



- Existing Flow Arrow
- Grading Limits - Cut
- Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Fiber Roll
- Wetland Delineated Existing
- Wetland Mitigation
- Temp Seeding
- Inlet Protection

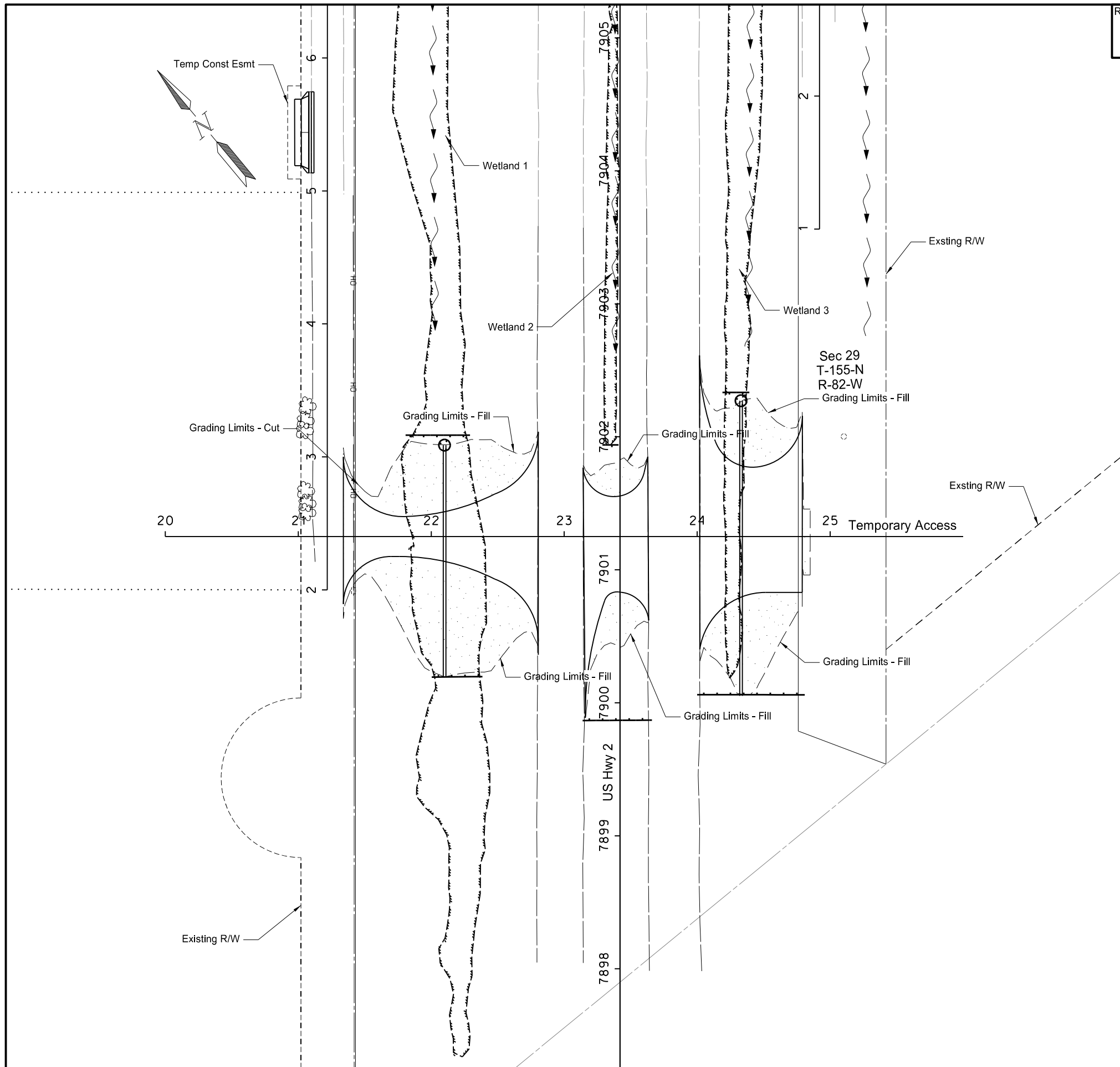
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Temporary Sediment and Erosion Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2
 7904+00 to 7912+00

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	76	11

251	2000	Temporary Cover Crop		
		Temporary Access	1.2	Acre
253	0101	Straw Mulch		
		Temporary Access	1.2	Acre

Note: See Sheet 76-12 for Temporary Fiber Roll Tables and Quantities



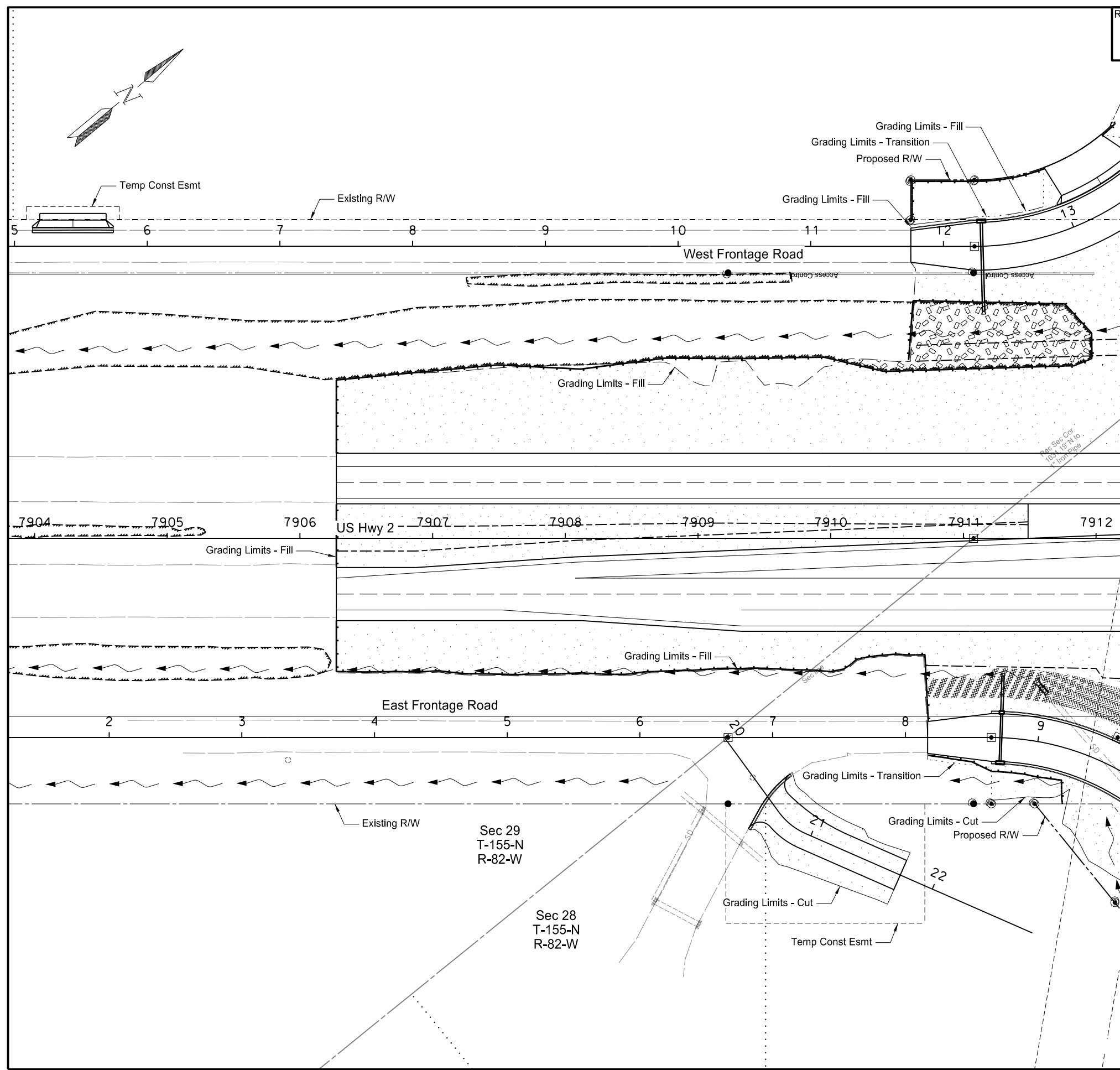
- Existing Flow Arrow
- Grading Limits - Cut
- Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Fiber Roll
- Wetland Delineated Existing
- Wetland Mitigation
- Temp Seeding
- Inlet Protection

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Temporary Sediment and Erosion Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Temporary Access

251	0200	Seeding Class II	7904+00 to 7912+00	2.4	Acre
253	0201	Hydraulic Mulch	7904+00 to 7912+00	2.4	Acre

Note: See Sheet 77-12 for Permanent Fiber Roll Tables and Quantities



- Proposed Flow Arrow
- Grading Limits - Cut
- Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Fiber Roll
- Wetland Delineated
- Erosion Control Blanket Type 1
- Erosion Control Blanket Type 4
- Permanent Seeding
- Wetland Seeding

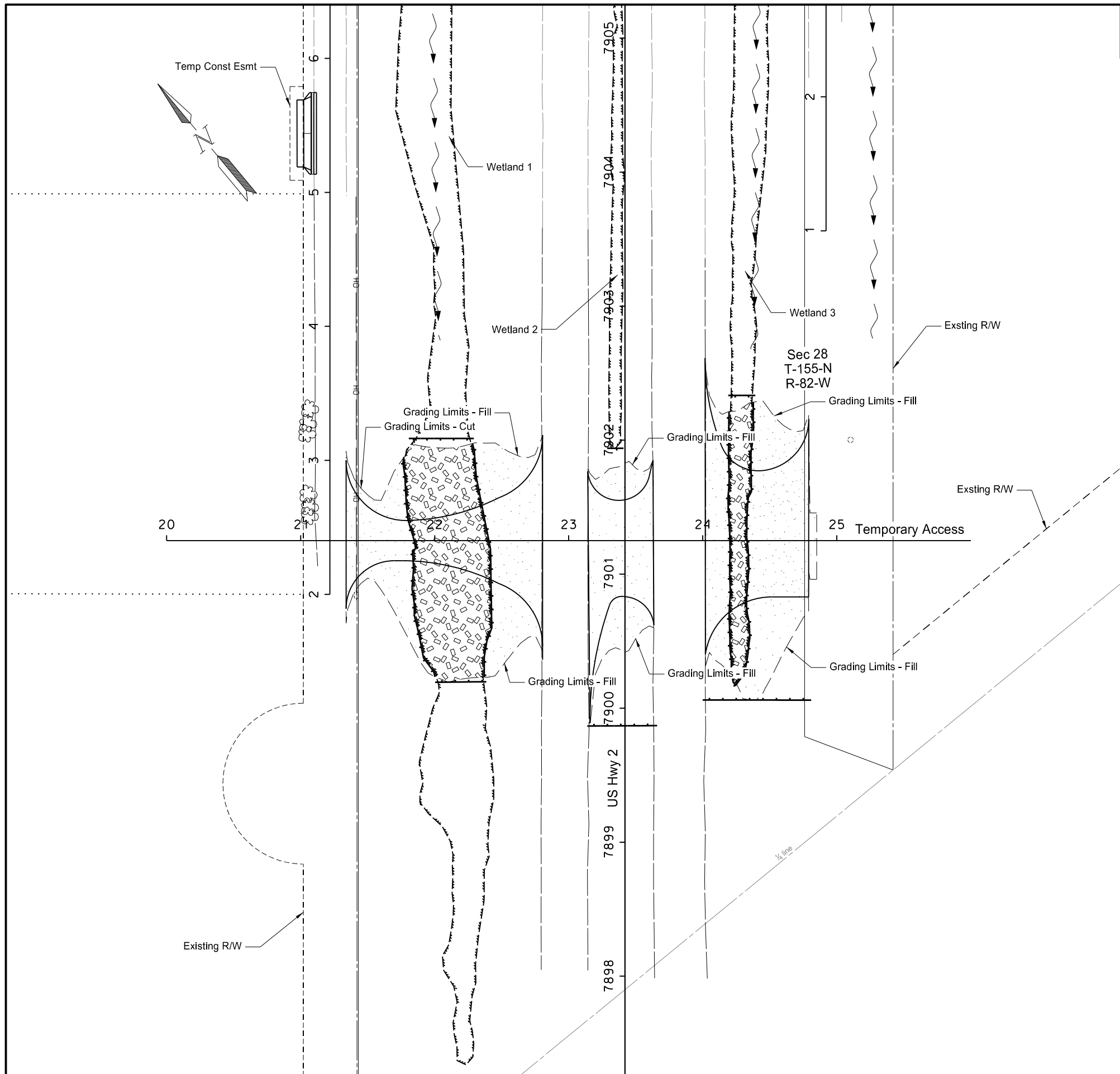
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Permanent Sediment and Erosion Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2
 7904+00 to 7912+00

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	77	11

251	0200	Seeding Class II		
		Temporary Access	1.4	Acre
253	0201	Hydraulic Mulch		
		Temporary Access	1.4	Acre

Note: See Sheet 77-12 for Permanent Fiber Roll Tables and Quantities

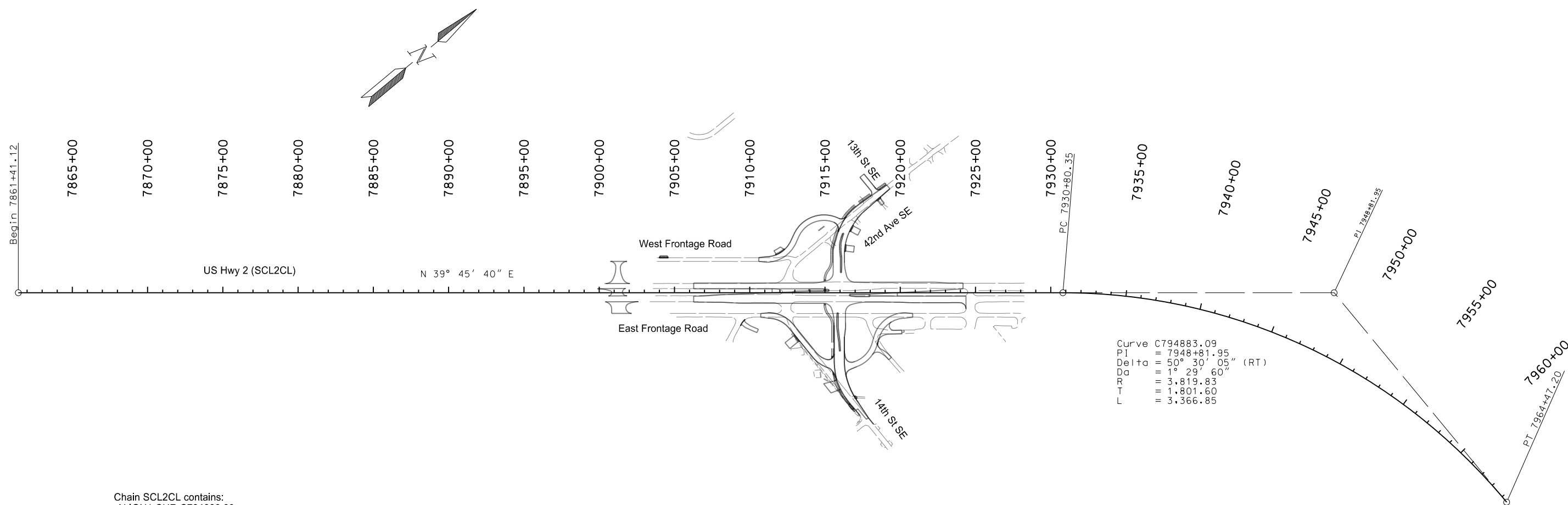


- Proposed Flow Arrow
- Grading Limits - Cut
- Grading Limits - Fill
- Grading Limits - Transitions
- Ditch Bottom
- Fiber Roll
- Wetland Delineated
- Erosion Control Blanket Type 1
- Erosion Control Blanket Type 4
- Permanent Seeding
- Wetland Seeding

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Permanent Sediment and Erosion Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Temporary Access

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	82	1



Curve C794883.09
 PI = 7948+81.95
 Delta = 50° 30' 05" (RT)
 Dg = 1° 29' 60"
 RT = 3,819.85
 L = 1,801.60
 = 3,366.85

Chain SCL2CL contains:
 ALIGN1 CUR C794883.09

Beginning chain SCL2CL description
 =====

Point ALIGN1 N 442,496.3085 E 1,787,351.5746 Sta 7861+41.12

Course from ALIGN1 to PC C794883.09 N 39° 45' 40" E Dist 6,939.2306

Curve Data

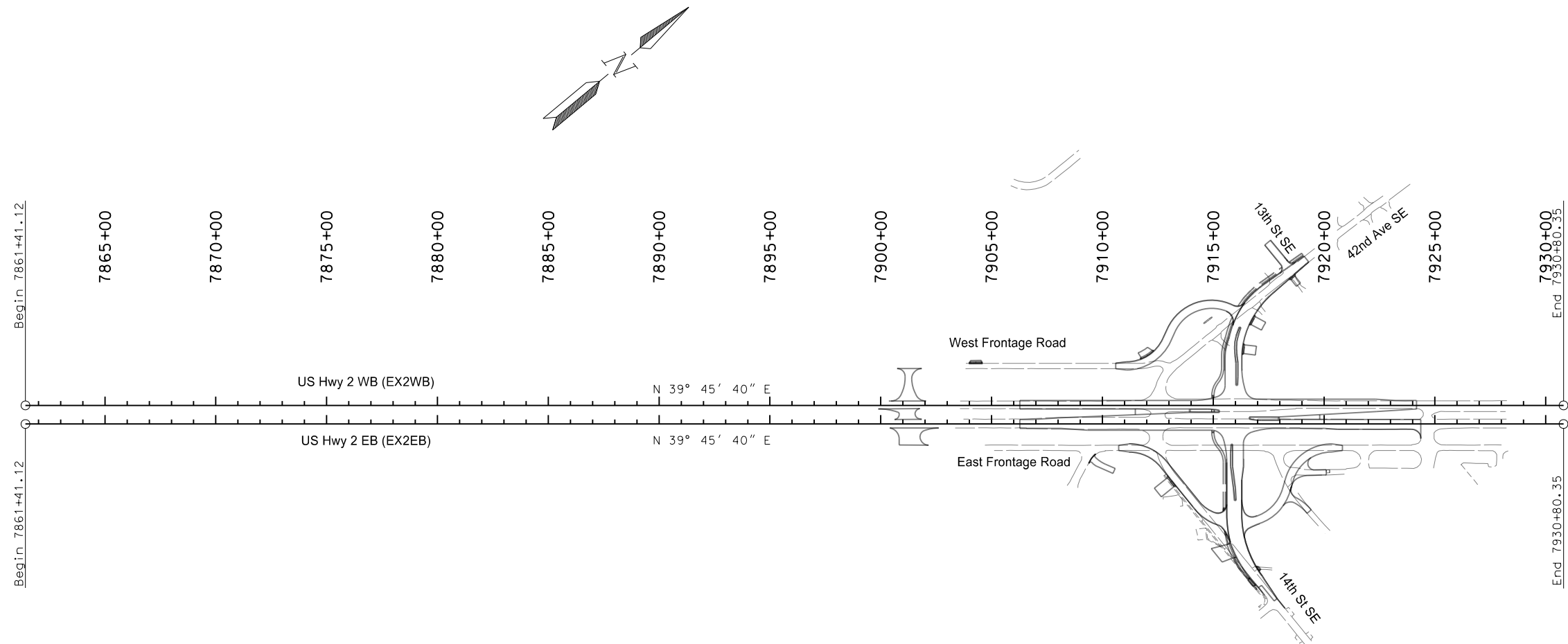
Curve C794883.09
 P.I. Station 7948+81.95 N 449,215.5305 E 1,792,942.1181
 Delta = 50° 30' 05" (RT)
 Degree = 1° 29' 60"
 Tangent = 1,801.6000
 Length = 3,366.8486
 Radius = 3,819.8300
 External = 403.5411
 Long Chord = 3,258.9159
 Mid. Ord. = 364.9830
 P.C. Station 7930+80.35 N 447,830.6106 E 1,791,789.8336
 P.T. Station 7964+47.20 N 449,207.2773 E 1,794,743.6992
 C.C. N 445,387.4874 E 1,794,726.2005
 Back = N 39° 45' 40" E
 Ahead = S 89° 44' 15" E
 Chord Bear = N 65° 00' 43" E

Ending chain SCL2CL description
 =====

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Survey Data Layout
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	82	2



Chain EX2EB contains:
ALIGN3 ALIGN4

Beginning chain EX2EB description

=====
Point ALIGN3 N 442,469.4458 E 1,787,383.8607 Sta 7861+41.12

Course from ALIGN3 to ALIGN4 N 39° 45' 40" E Dist 6,939.2306

Point ALIGN4 N 447,803.7478 E 1,791,822.1197 Sta 7930+80.35

=====
Ending chain EX2EB description

Chain EX2WB contains:
ALIGN5 ALIGN6

Beginning chain EX2WB description

=====
Point ALIGN5 N 442,523.1713 E 1,787,319.2885 Sta 7861+41.12

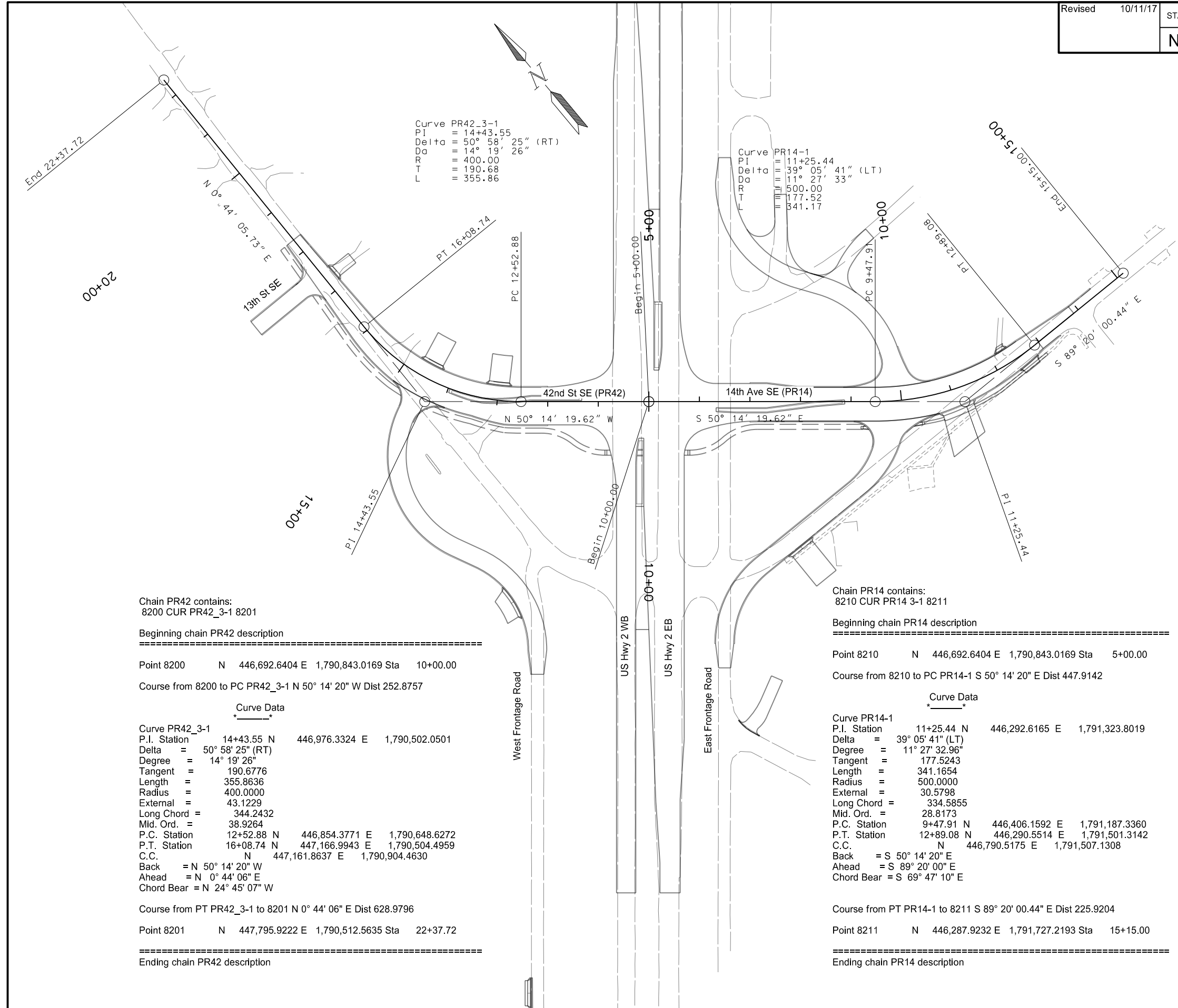
Course from ALIGN5 to ALIGN6 N 39° 45' 40" E Dist 6,939.2306

Point ALIGN6 N 447,857.4733 E 1,791,757.5475 Sta 7930+80.35

=====
Ending chain EX2WB description

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Survey Data Layout
US Hwy 2 & 42nd St SE
Intersection Improvements
US Hwy 2 EB
US Hwy 2 WB



Curve PR42_3-1
 PI = 14+43.55
 Delta = 50° 58' 25" (RT)
 Da = 14° 19' 26"
 R = 400.00
 T = 190.68
 L = 355.86

Curve PR14-1
 PI = 11+25.44
 Delta = 39° 05' 41" (LT)
 Da = 11° 27' 33"
 R = 500.00
 T = 177.52
 L = 341.17

Chain PR42 contains:
 8200 CUR PR42_3-1 8201

Beginning chain PR42 description
 =====

Point 8200 N 446,692.6404 E 1,790,843.0169 Sta 10+00.00

Course from 8200 to PC PR42_3-1 N 50° 14' 20" W Dist 252.8757

Curve Data

Curve PR42_3-1
 P.I. Station 14+43.55 N 446,976.3324 E 1,790,502.0501
 Delta = 50° 58' 25" (RT)
 Degree = 14° 19' 26"
 Tangent = 190.6776
 Length = 355.8636
 Radius = 400.0000
 External = 43.1229
 Long Chord = 344.2432
 Mid. Ord. = 38.9264
 P.C. Station 12+52.88 N 446,854.3771 E 1,790,648.6272
 P.T. Station 16+08.74 N 447,166.9943 E 1,790,504.4959
 C.C. N 447,161.8637 E 1,790,904.4630
 Back = N 50° 14' 20" W
 Ahead = N 0° 44' 06" E
 Chord Bear = N 24° 45' 07" W

Course from PT PR42_3-1 to 8201 N 0° 44' 06" E Dist 628.9796

Point 8201 N 447,795.9222 E 1,790,512.5635 Sta 22+37.72

Ending chain PR42 description
 =====

Chain PR14 contains:
 8210 CUR PR14 3-1 8211

Beginning chain PR14 description
 =====

Point 8210 N 446,692.6404 E 1,790,843.0169 Sta 5+00.00

Course from 8210 to PC PR14-1 S 50° 14' 20" E Dist 447.9142

Curve Data

Curve PR14-1
 P.I. Station 11+25.44 N 446,292.6165 E 1,791,323.8019
 Delta = 39° 05' 41" (LT)
 Degree = 11° 27' 32.96"
 Tangent = 177.5243
 Length = 341.1654
 Radius = 500.0000
 External = 30.5798
 Long Chord = 334.5855
 Mid. Ord. = 28.8173
 P.C. Station 9+47.91 N 446,406.1592 E 1,791,187.3360
 P.T. Station 12+89.08 N 446,290.5514 E 1,791,501.3142
 C.C. N 446,790.5175 E 1,791,507.1308
 Back = S 50° 14' 20" E
 Ahead = S 89° 20' 00" E
 Chord Bear = S 69° 47' 10" E

Course from PT PR14-1 to 8211 S 89° 20' 00.44" E Dist 225.9204

Point 8211 N 446,287.9232 E 1,791,727.2193 Sta 15+15.00

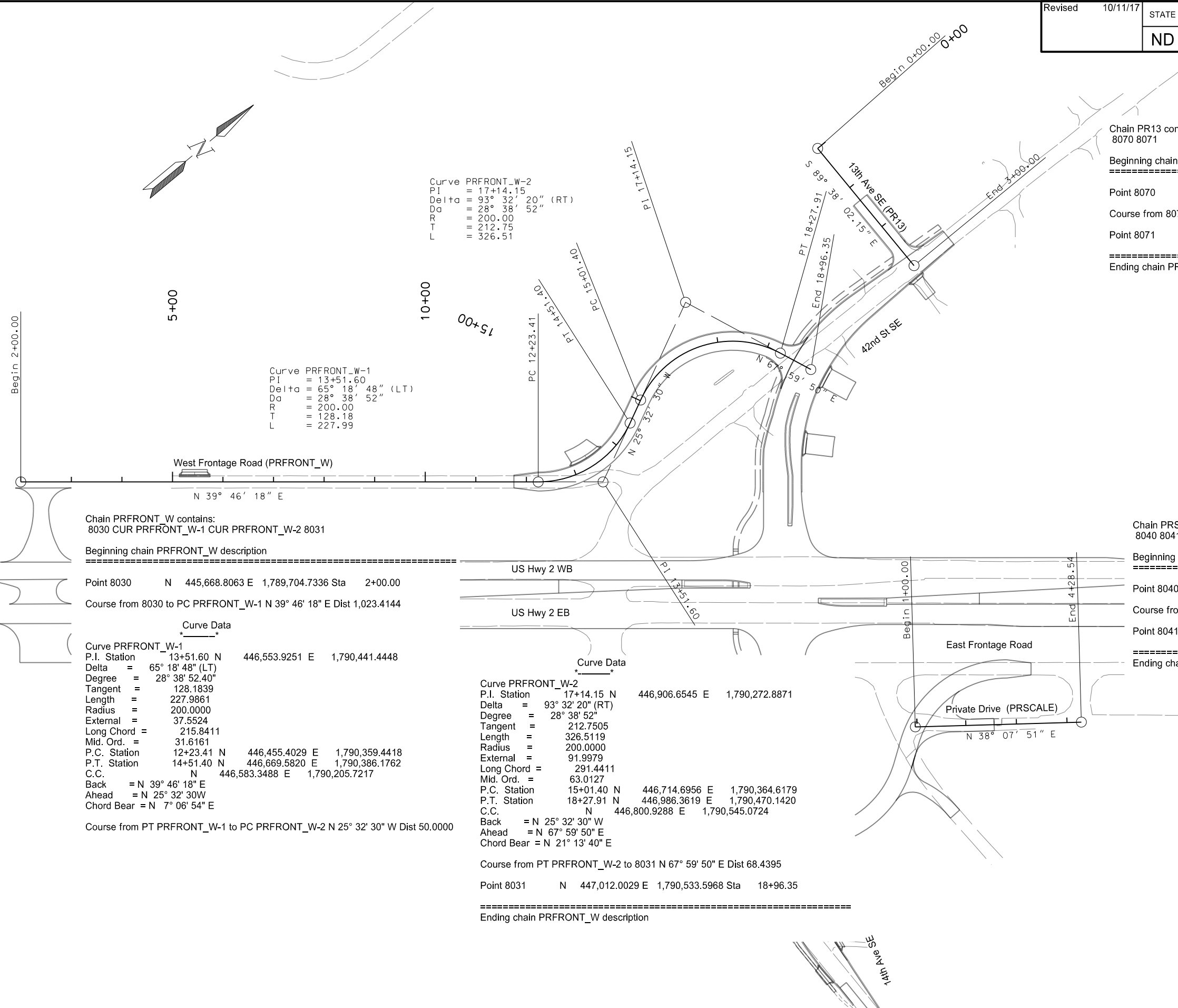
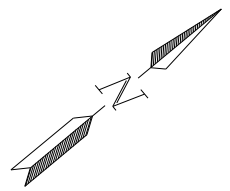
Ending chain PR14 description
 =====

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Survey Data Layout

US Hwy 2 & 42nd St SE
 Intersection Improvements

42nd St SE
 14th Ave SE



Curve PRFRONT_W-2
 P.I. = 17+14.15
 Delta = 93° 32' 20" (RT)
 Da = 28° 38' 52"
 R = 200.00
 T = 212.75
 L = 326.51

Curve PRFRONT_W-1
 P.I. = 13+51.60
 Delta = 65° 18' 48" (LT)
 Da = 28° 38' 52"
 R = 200.00
 T = 128.18
 L = 227.99

Chain PRFRONT_W contains:
 8030 CUR PRFRONT_W-1 CUR PRFRONT_W-2 8031

Beginning chain PRFRONT_W description
 =====
 Point 8030 N 445,668.8063 E 1,789,704.7336 Sta 2+00.00
 Course from 8030 to PC PRFRONT_W-1 N 39° 46' 18" E Dist 1,023.4144

Curve Data

 Curve PRFRONT_W-1
 P.I. Station 13+51.60 N 446,553.9251 E 1,790,441.4448
 Delta = 65° 18' 48" (LT)
 Degree = 28° 38' 52.40"
 Tangent = 128.1839
 Length = 227.9861
 Radius = 200.0000
 External = 37.5524
 Long Chord = 215.8411
 Mid. Ord. = 31.6161
 P.C. Station 12+23.41 N 446,455.4029 E 1,790,359.4418
 P.T. Station 14+51.40 N 446,669.5820 E 1,790,386.1762
 C.C. N 446,583.3488 E 1,790,205.7217
 Back = N 39° 46' 18" E
 Ahead = N 25° 32' 30" W
 Chord Bear = N 7° 06' 54" E

Course from PT PRFRONT_W-1 to PC PRFRONT_W-2 N 25° 32' 30" W Dist 50.0000

Curve Data

 Curve PRFRONT_W-2
 P.I. Station 17+14.15 N 446,906.6545 E 1,790,272.8871
 Delta = 93° 32' 20" (RT)
 Degree = 28° 38' 52"
 Tangent = 212.7505
 Length = 326.5119
 Radius = 200.0000
 External = 91.9979
 Long Chord = 291.4411
 Mid. Ord. = 63.0127
 P.C. Station 15+01.40 N 446,714.6956 E 1,790,364.6179
 P.T. Station 18+27.91 N 446,986.3619 E 1,790,470.1420
 C.C. N 446,800.9288 E 1,790,545.0724
 Back = N 25° 32' 30" W
 Ahead = N 67° 59' 50" E
 Chord Bear = N 21° 13' 40" E

Course from PT PRFRONT_W-2 to 8031 N 67° 59' 50" E Dist 68.4395

Point 8031 N 447,012.0029 E 1,790,533.5968 Sta 18+96.35

Ending chain PRFRONT_W description
 =====

Chain PR13 contains:
 8070 8071

Beginning chain PR13 description
 =====
 Point 8070 N 447,302.1690 E 1,790,206.2114 Sta 0+00.00
 Course from 8070 to 8071 S 89° 38' 02.15" E Dist 300.0000
 Point 8071 N 447,300.2523 E 1,790,506.2052 Sta 3+00.00
 =====
 Ending chain PR13 description

Chain PRSCALE contains:
 8040 8041

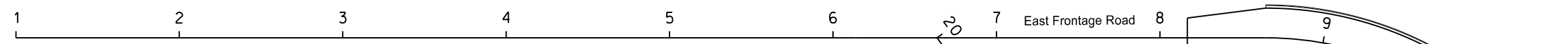
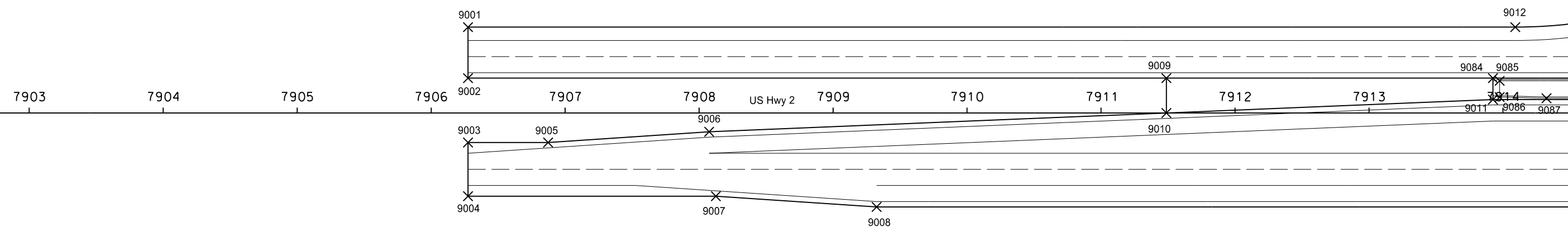
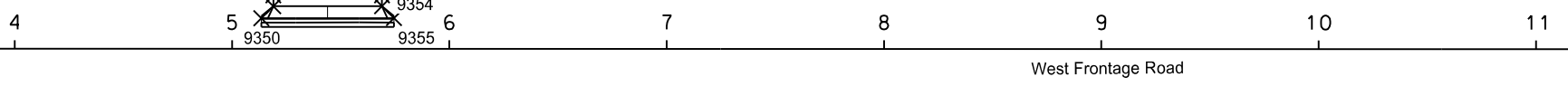
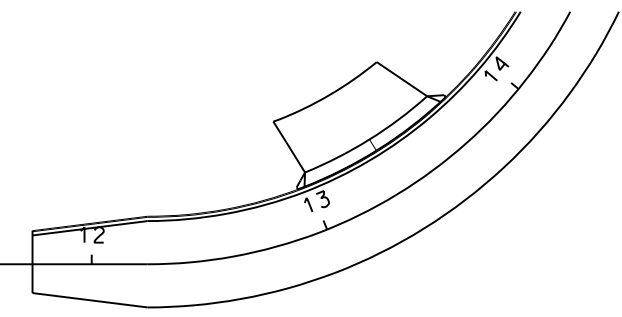
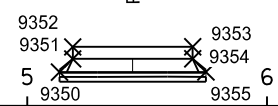
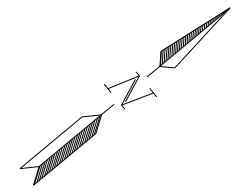
Beginning chain PRSCALE description
 =====
 Point 8040 N 446,718.8228 E 1,791,208.9366 Sta 1+00.00
 Course from 8040 to 8041 N 38° 07' 51" E Dist 328.5417
 Point 8041 N 446,977.2549 E 1,791,411.7975 Sta 4+28.54
 =====
 Ending chain PRSCALE description

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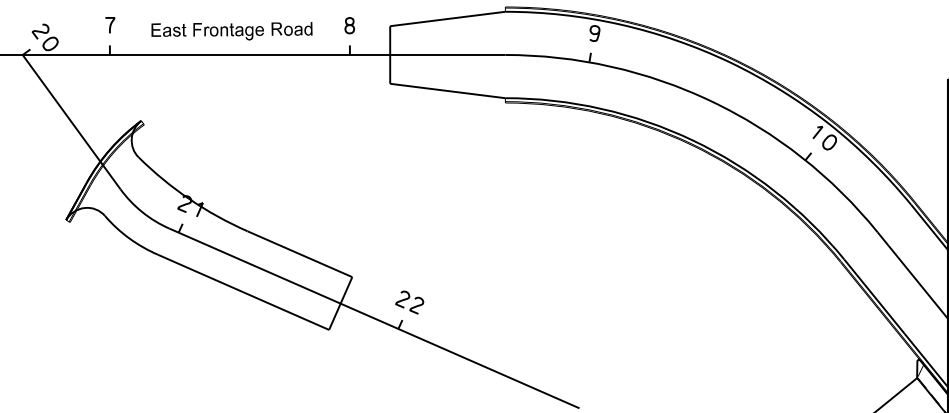
Survey Data Layout
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2 West Frontage Road
 13th Ave SE & Private Drive

West Frontage Road (PRFRONT_W)				
Point	Northing	Easting	Station	Offset
9350	445918.78	1789894.46	5+13.50	-14.09
9351	445926.52	1789893.75	5+19.00	-19.59
9352	445929.72	1789889.91	5+19.00	-24.59
9353	445968.18	1789921.85	5+69.00	-24.64
9354	445964.99	1789925.70	5+69.00	-19.64
9355	445965.70	1789933.44	5+74.50	-14.14

Point location given are top of face of curb, 6" from back of curb.
Non curb location points given edge of pavement.



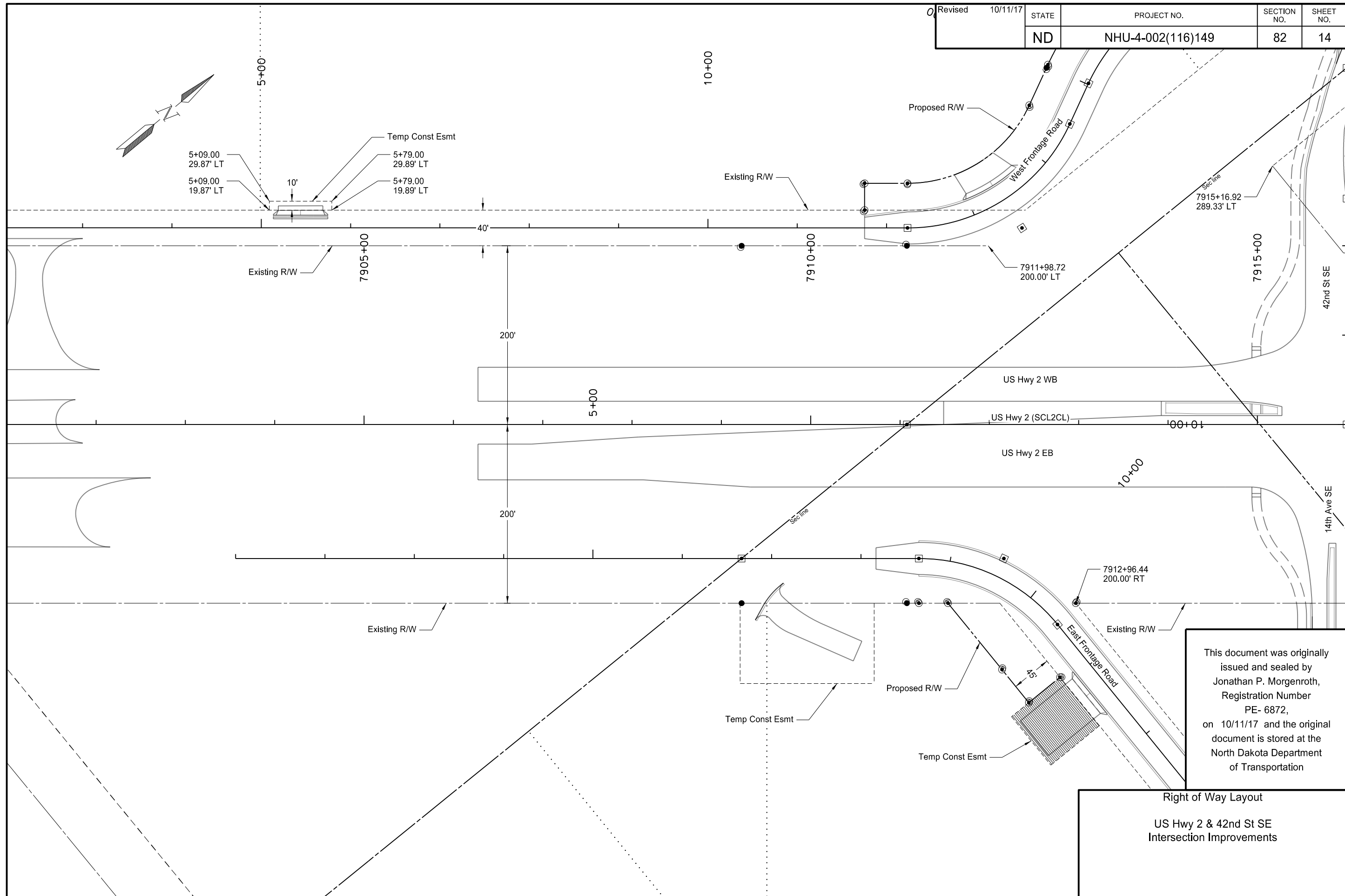
US Hwy 2 (SCL2CL)				
Point	Northing	Easting	Station	Offset
9001	445,986.00	1,790,171.82	7906+27.50	-64.00
9002	445,961.69	1,790,201.03	7906+27.50	-26.00
9003	445,930.99	1,790,237.93	7906+27.50	22.00
9004	445,905.41	1,790,268.68	7906+27.50	62.00
9005	445,976.98	1,790,276.19	7906+87.32	22.00
9006	446,074.49	1,790,346.89	7908+07.50	13.98
9007	446,047.62	1,790,387.00	7908+12.50	62.00
9008	446,134.75	1,790,469.90	7909+32.50	70.00
9009	446,362.39	1,790,534.42	7911+48.75	-26.00
9010	446,345.76	1,790,554.40	7911+48.75	-0.01
9011	446,539.53	1,790,702.61	7913+92.50	-10.00



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Survey Point Layout
US Hwy 2 & 42nd St SE
Intersection Improvements
US Hwy 2
West Frontage Road

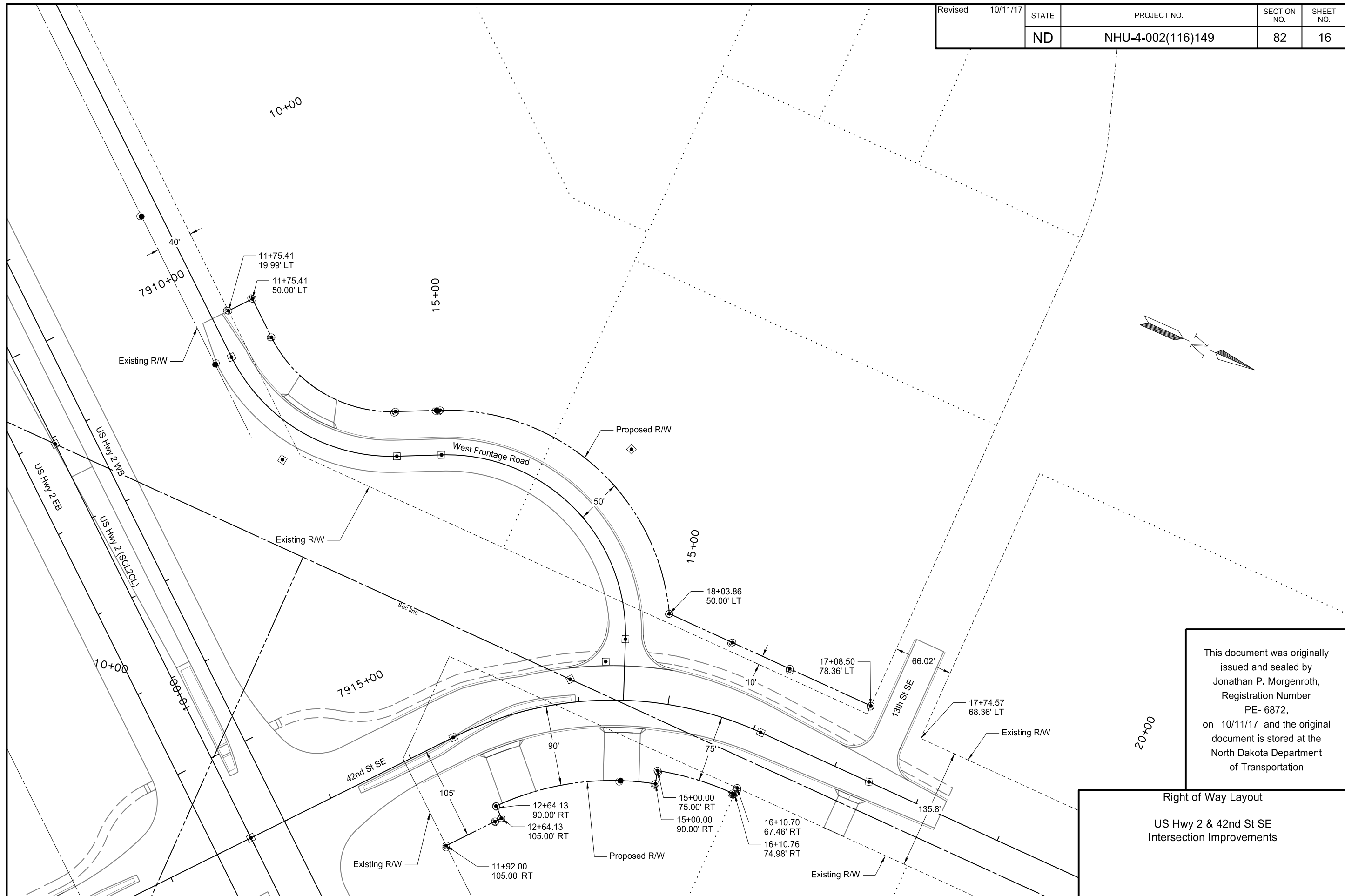
Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	82	14



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Right of Way Layout
US Hwy 2 & 42nd St SE
Intersection Improvements

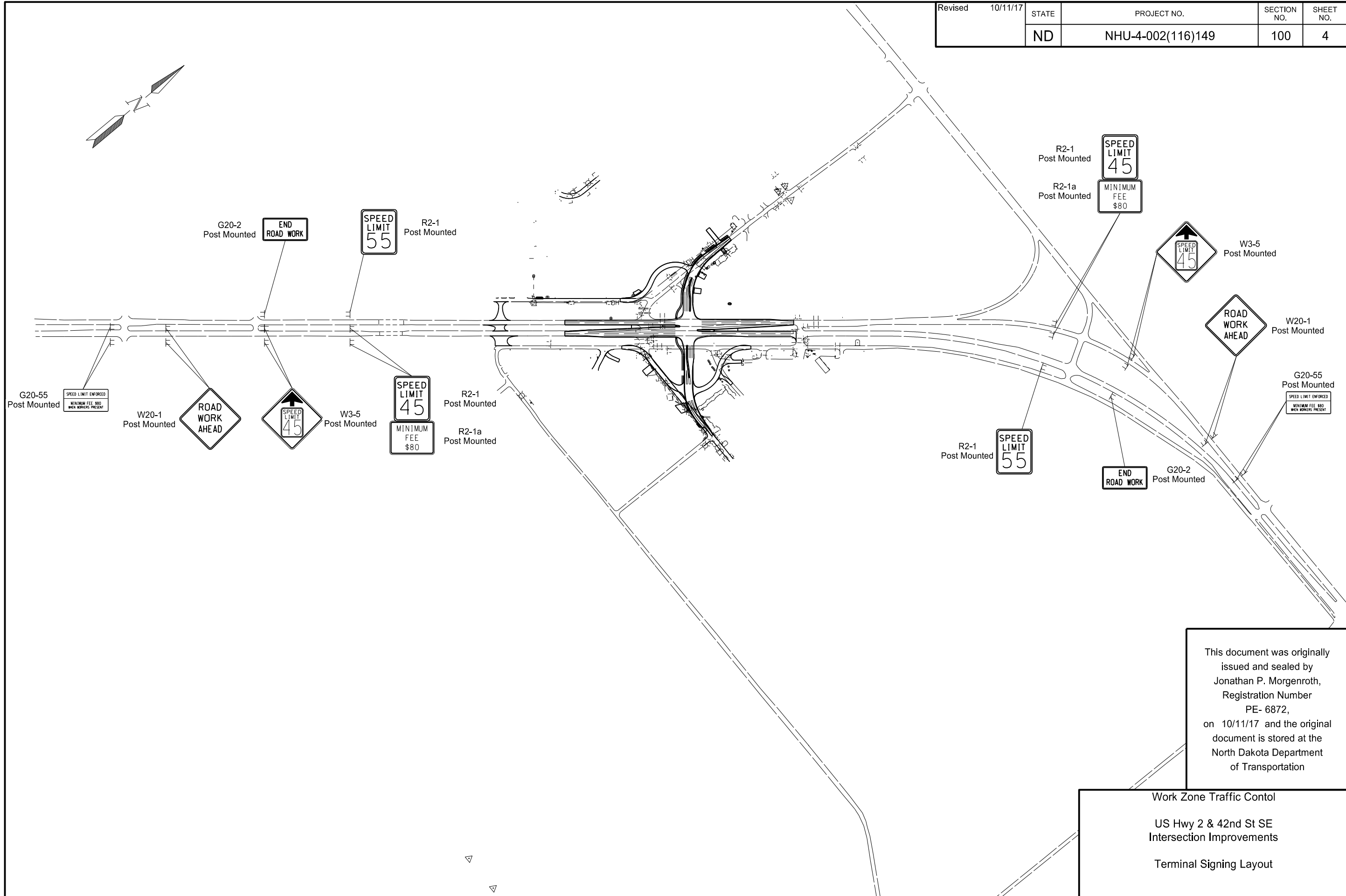
Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	82	16



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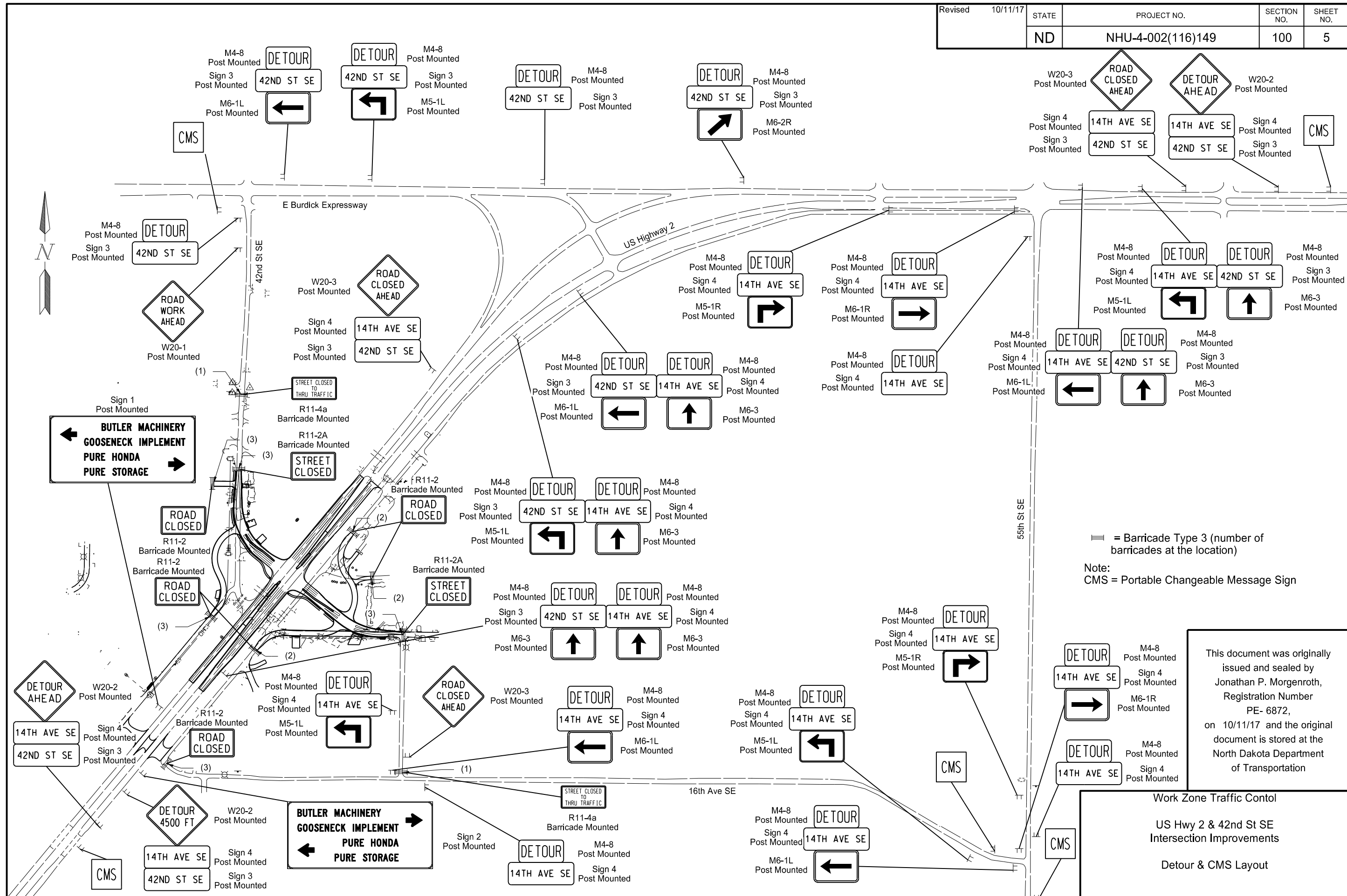
Right of Way Layout
US Hwy 2 & 42nd St SE
Intersection Improvements

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	4



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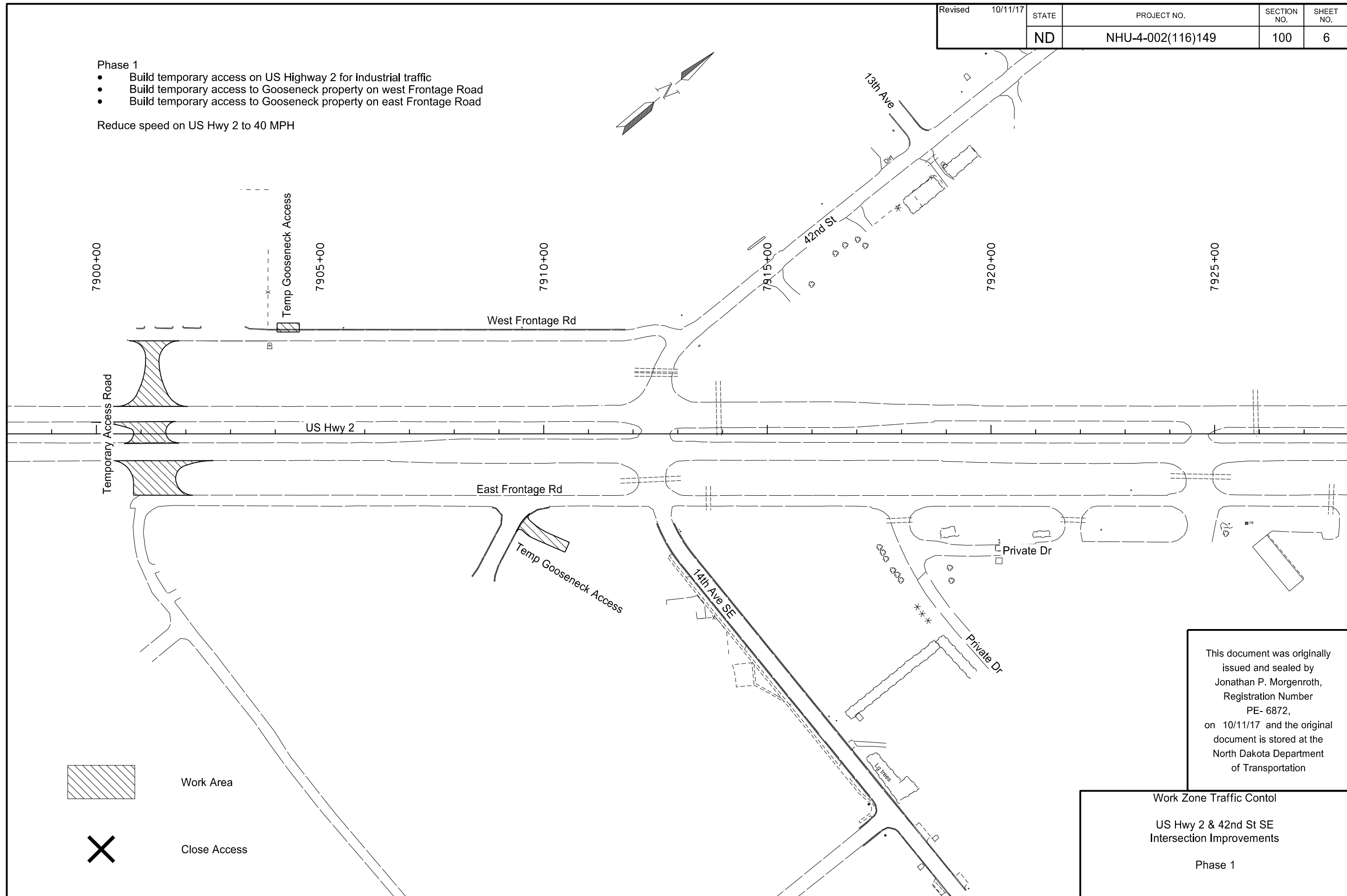
Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Terminal Signing Layout



Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	6

- Phase 1
- Build temporary access on US Highway 2 for industrial traffic
 - Build temporary access to Gooseneck property on west Frontage Road
 - Build temporary access to Gooseneck property on east Frontage Road

Reduce speed on US Hwy 2 to 40 MPH



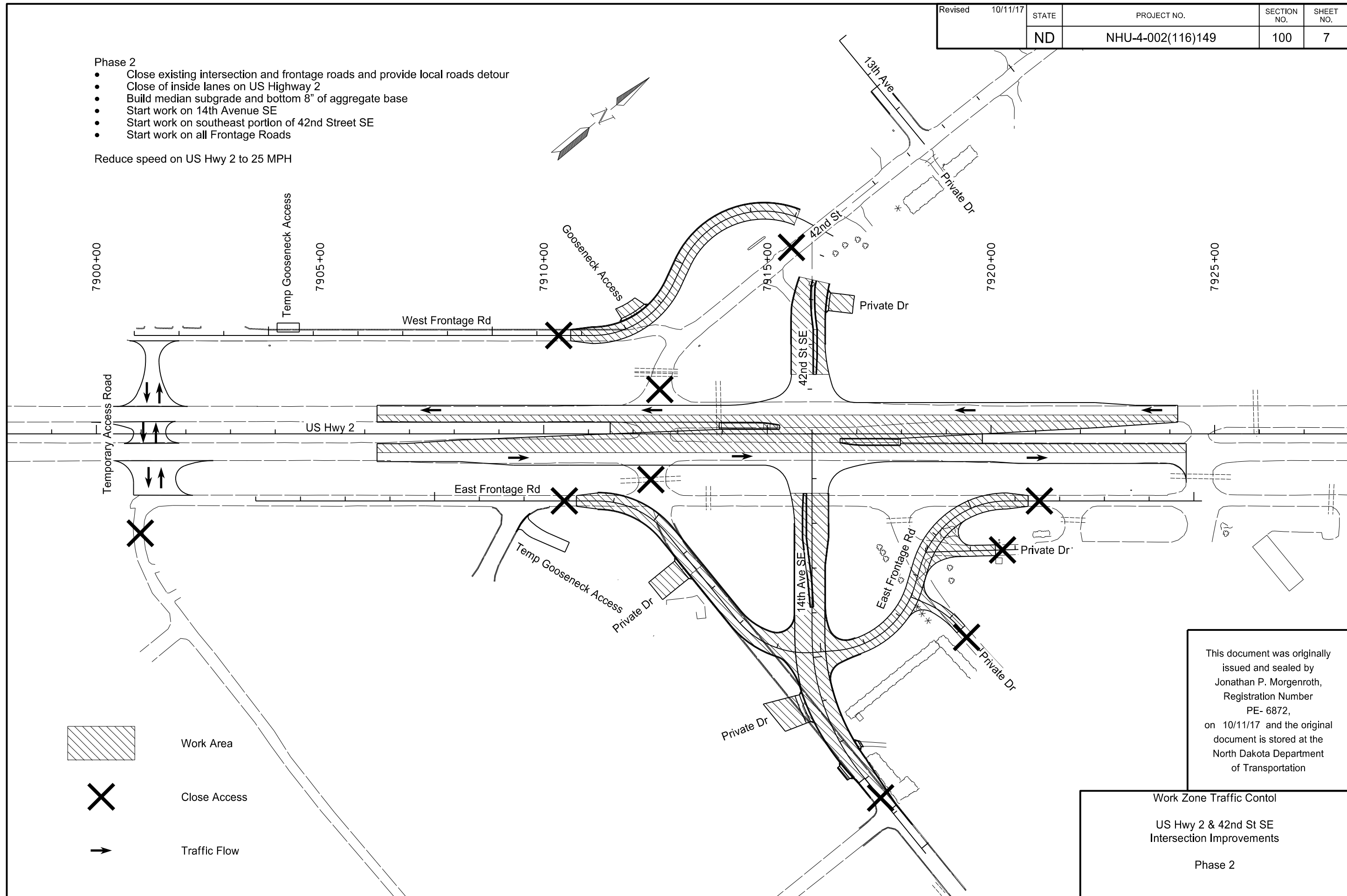
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
Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 1

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	7

- Phase 2
- Close existing intersection and frontage roads and provide local roads detour
 - Close of inside lanes on US Highway 2
 - Build median subgrade and bottom 8" of aggregate base
 - Start work on 14th Avenue SE
 - Start work on southeast portion of 42nd Street SE
 - Start work on all Frontage Roads

Reduce speed on US Hwy 2 to 25 MPH



-  Work Area
-  Close Access
-  Traffic Flow

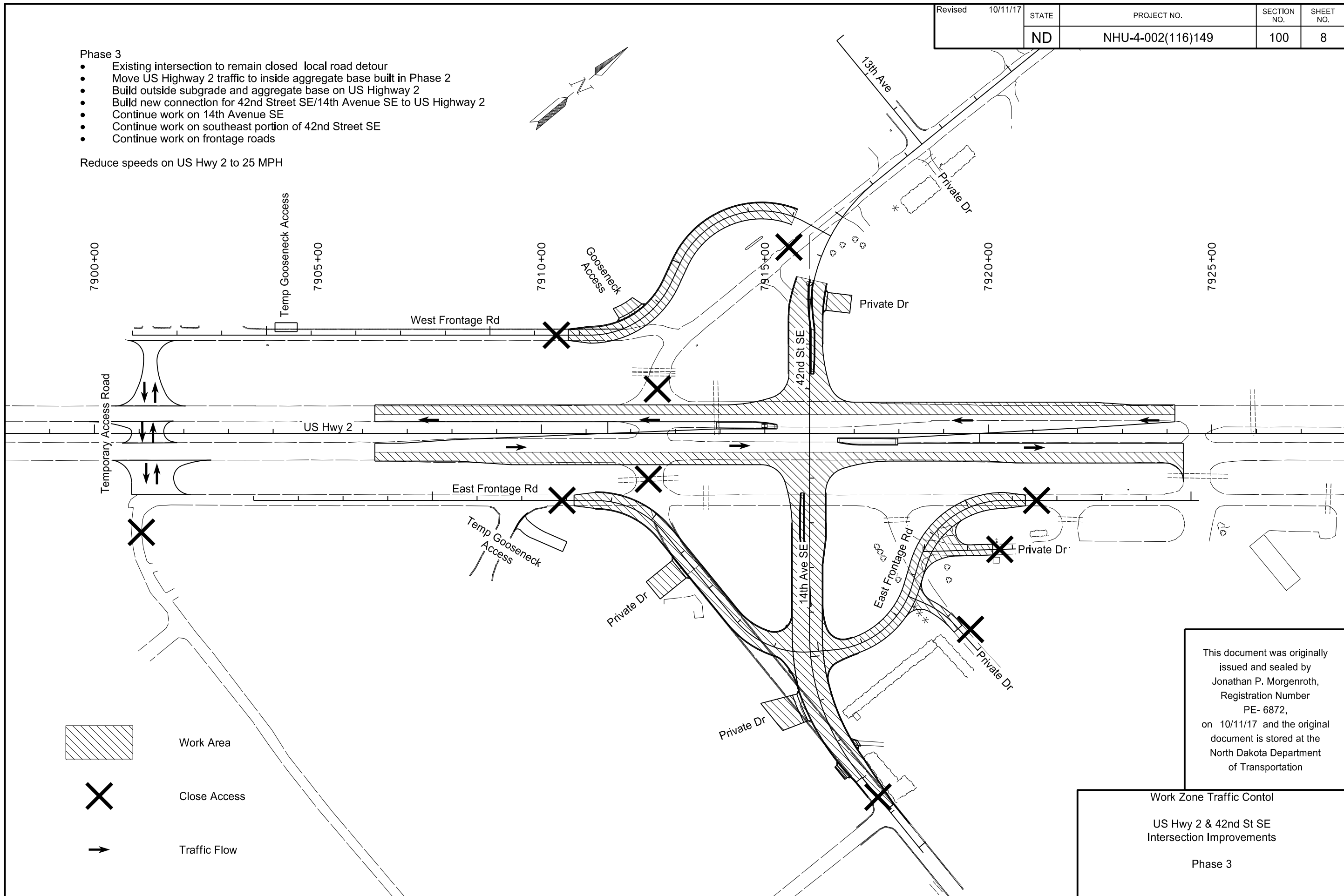
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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 2

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	8

- Phase 3
- Existing intersection to remain closed local road detour
 - Move US Highway 2 traffic to inside aggregate base built in Phase 2
 - Build outside subgrade and aggregate base on US Highway 2
 - Build new connection for 42nd Street SE/14th Avenue SE to US Highway 2
 - Continue work on 14th Avenue SE
 - Continue work on southeast portion of 42nd Street SE
 - Continue work on frontage roads

Reduce speeds on US Hwy 2 to 25 MPH



-  Work Area
-  Close Access
-  Traffic Flow

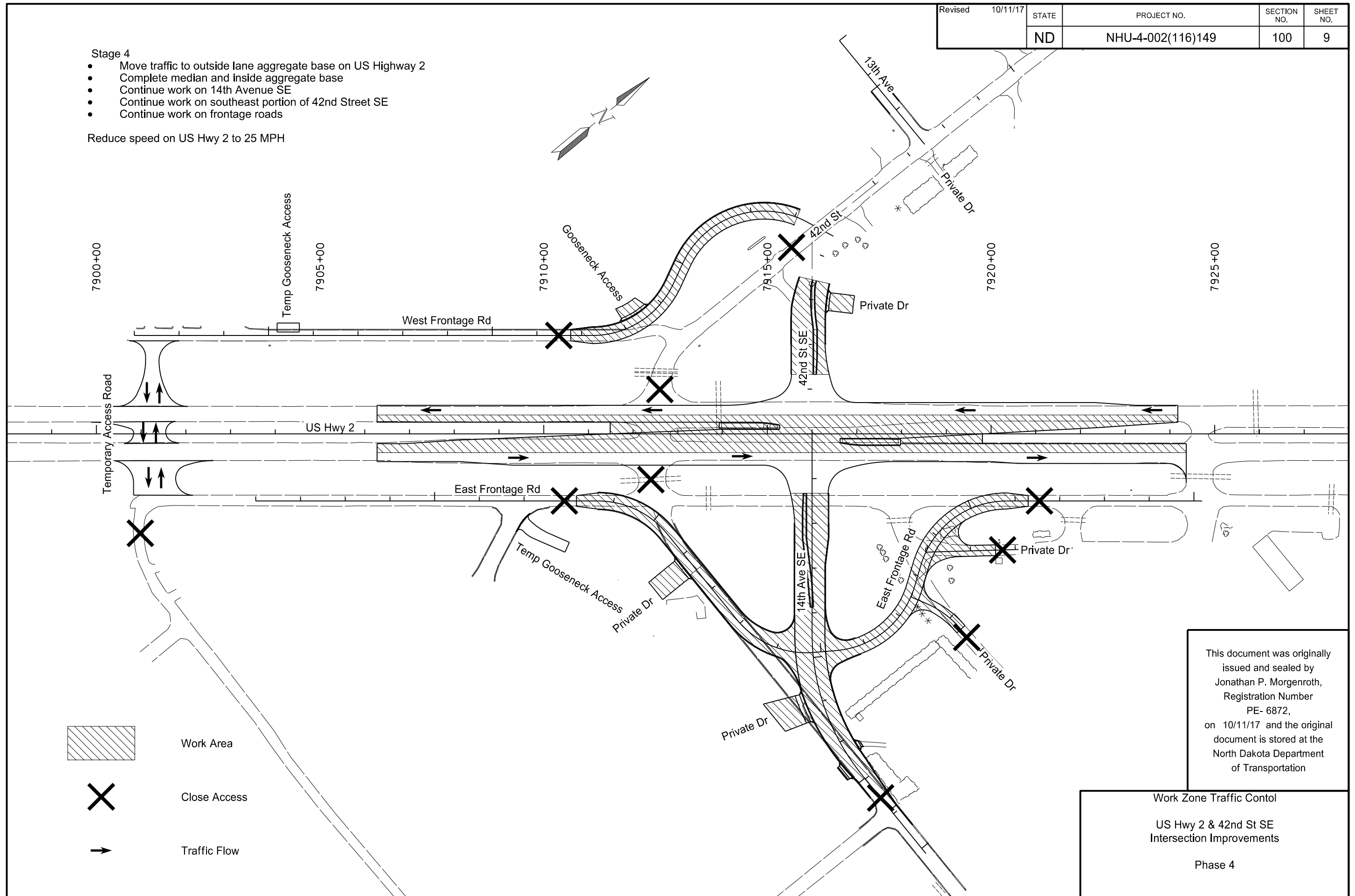
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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 3

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	9

- Stage 4
- Move traffic to outside lane aggregate base on US Highway 2
 - Complete median and inside aggregate base
 - Continue work on 14th Avenue SE
 - Continue work on southeast portion of 42nd Street SE
 - Continue work on frontage roads

Reduce speed on US Hwy 2 to 25 MPH



-  Work Area
-  Close Access
-  Traffic Flow

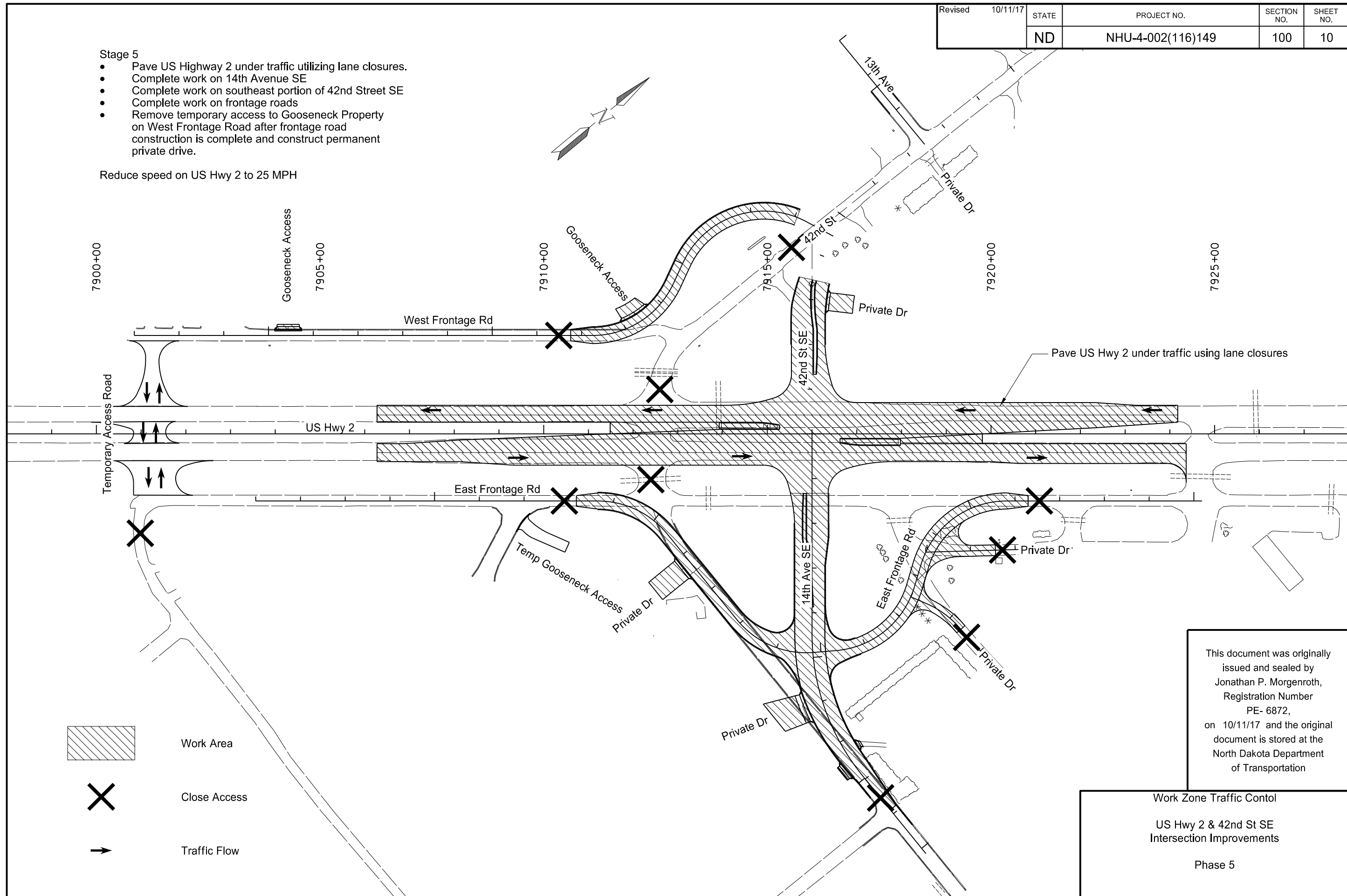
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
Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 4

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	10

- Stage 5
- Pave US Highway 2 under traffic utilizing lane closures.
 - Complete work on 14th Avenue SE
 - Complete work on southeast portion of 42nd Street SE
 - Complete work on frontage roads
 - Remove temporary access to Gooseneck Property on West Frontage Road after frontage road construction is complete and construct permanent private drive.

Reduce speed on US Hwy 2 to 25 MPH



-  Work Area
-  Close Access
-  Traffic Flow

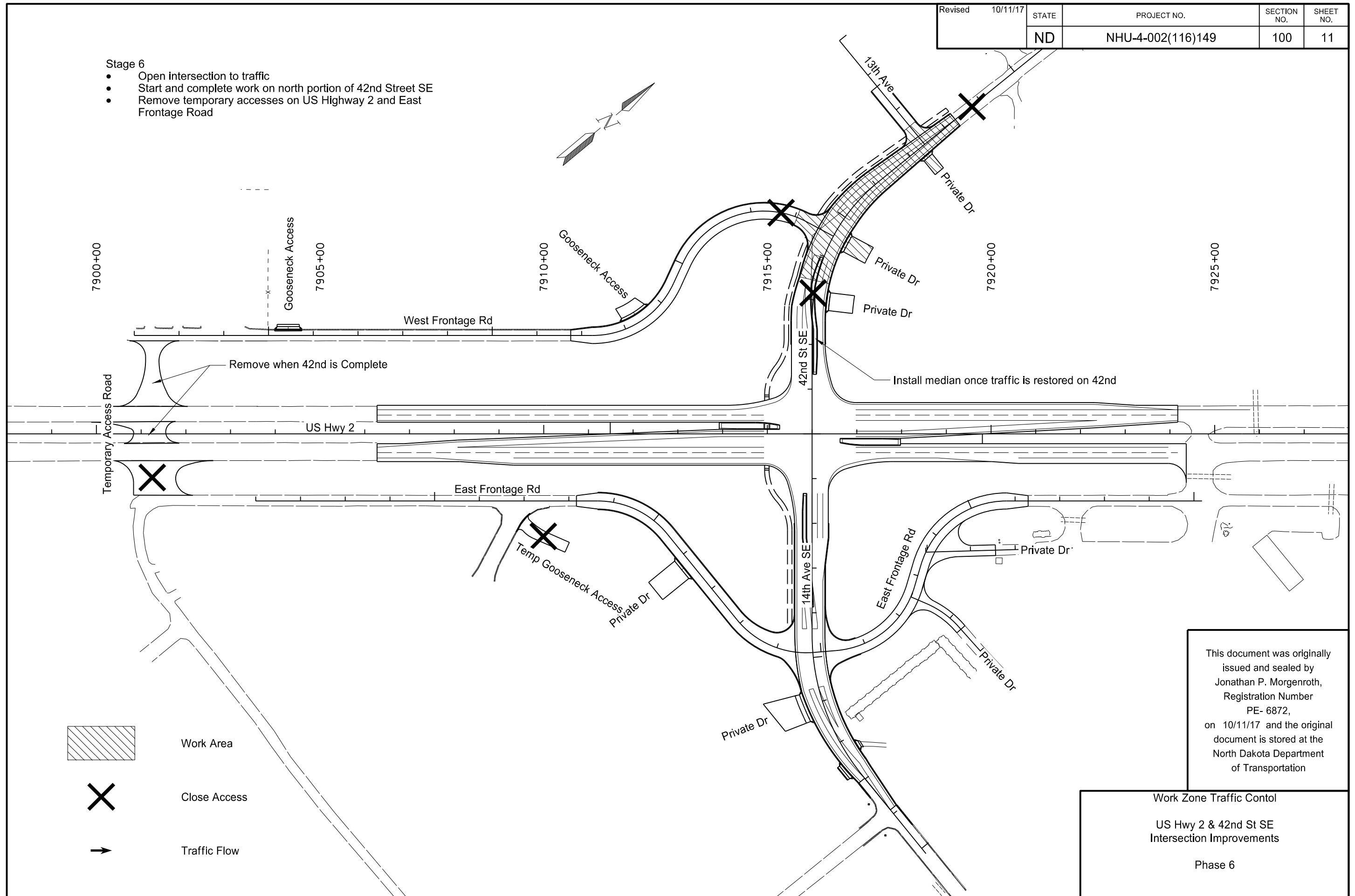
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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 5

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	11

Stage 6

- Open intersection to traffic
- Start and complete work on north portion of 42nd Street SE
- Remove temporary accesses on US Highway 2 and East Frontage Road

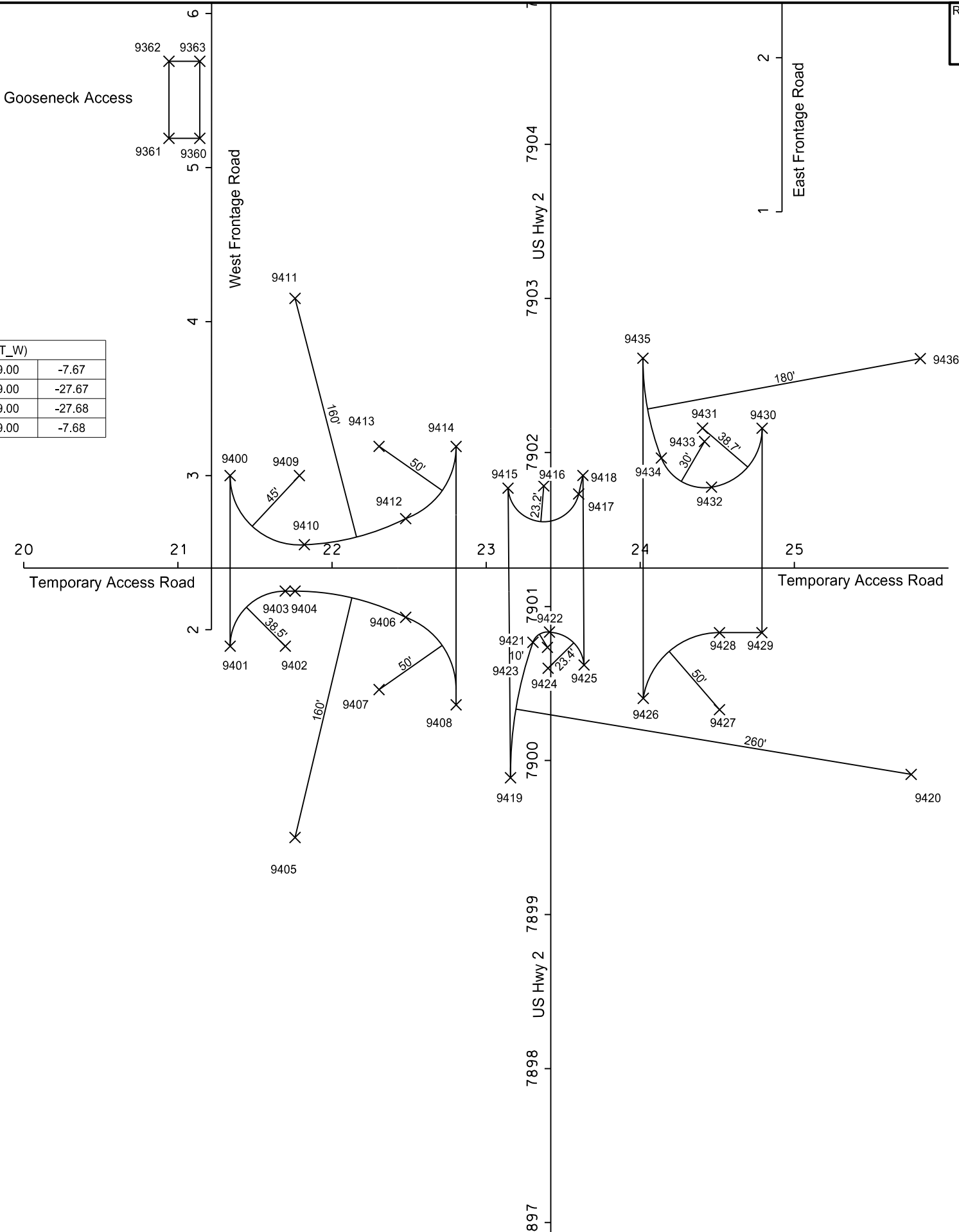
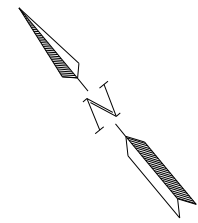


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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Phase 6

Temporary Access Road (PRTEMP)				
Point	Northing	Easting	Station	Offset
9400	445,738.01	1,789,777.98	21+33.86	-59.97
9401	445,652.81	1,789,707.18	21+33.93	50.80
9402	445,629.93	1,789,734.70	21+69.72	50.79
9403	445,657.45	1,789,757.58	21+69.70	15.00
9404	445,653.42	1,789,762.43	21+76.01	15.00
9405	445,530.43	1,789,660.09	21+76.01	175.00
9406	445,594.39	1,789,806.75	22+47.83	32.03
9407	445,569.39	1,789,763.45	22+30.54	78.94
9408	445,529.77	1,789,795.53	22+80.54	88.88
9409	445,709.25	1,789,812.59	21+78.86	-60.00
9410	445,672.69	1,789,786.36	21+82.08	-15.12
9411	445,799.48	1,789,883.95	21+76.01	-175.00
9412	445,643.63	1,789,847.72	22+47.83	-32.03
9413	445,690.76	1,789,864.43	22+30.54	-78.94
9414	445,658.73	1,789,902.83	22+80.54	-78.88
9415	445,616.38	1,789,911.41	23+14.22	-51.81
9416	445,602.64	1,789,930.16	23+37.42	-53.25
9417	445,584.14	1,789,944.22	23+60.07	-48.02
9418	445,591.59	1,789,954.07	23+62.87	-60.05
9419	445,470.81	1,789,792.36	23+15.82	136.23
9420	445,306.21	1,789,993.63	25+75.81	134.03
9421	445,529.13	1,789,859.82	23+30.37	48.25
9422	445,527.33	1,789,872.32	23+41.13	41.64
9423	445,520.56	1,789,864.96	23+39.81	51.55
9424	445,509.85	1,789,856.62	23+40.24	65.12
9425	445,496.57	1,789,875.89	23+63.55	63.01
9426	445,455.35	1,789,891.60	24+01.99	84.64
9427	445,418.06	1,789,924.91	24+51.45	92.00
9428	445,456.50	1,789,956.89	24+51.45	42.00
9429	445,438.90	1,789,978.04	24+78.96	42.00
9430	445,540.80	1,790,063.04	24+79.12	-90.70
9431	445,565.58	1,790,033.31	24+40.42	-90.73
9432	445,532.43	1,790,013.33	24+46.26	-52.47
9433	445,558.13	1,790,028.80	24+41.72	-82.12
9434	445,567.77	1,790,000.39	24+13.72	-71.36
9435	445,625.25	1,790,032.63	24+01.73	-136.17
9436	445,509.96	1,790,170.86	25+81.73	-135.94

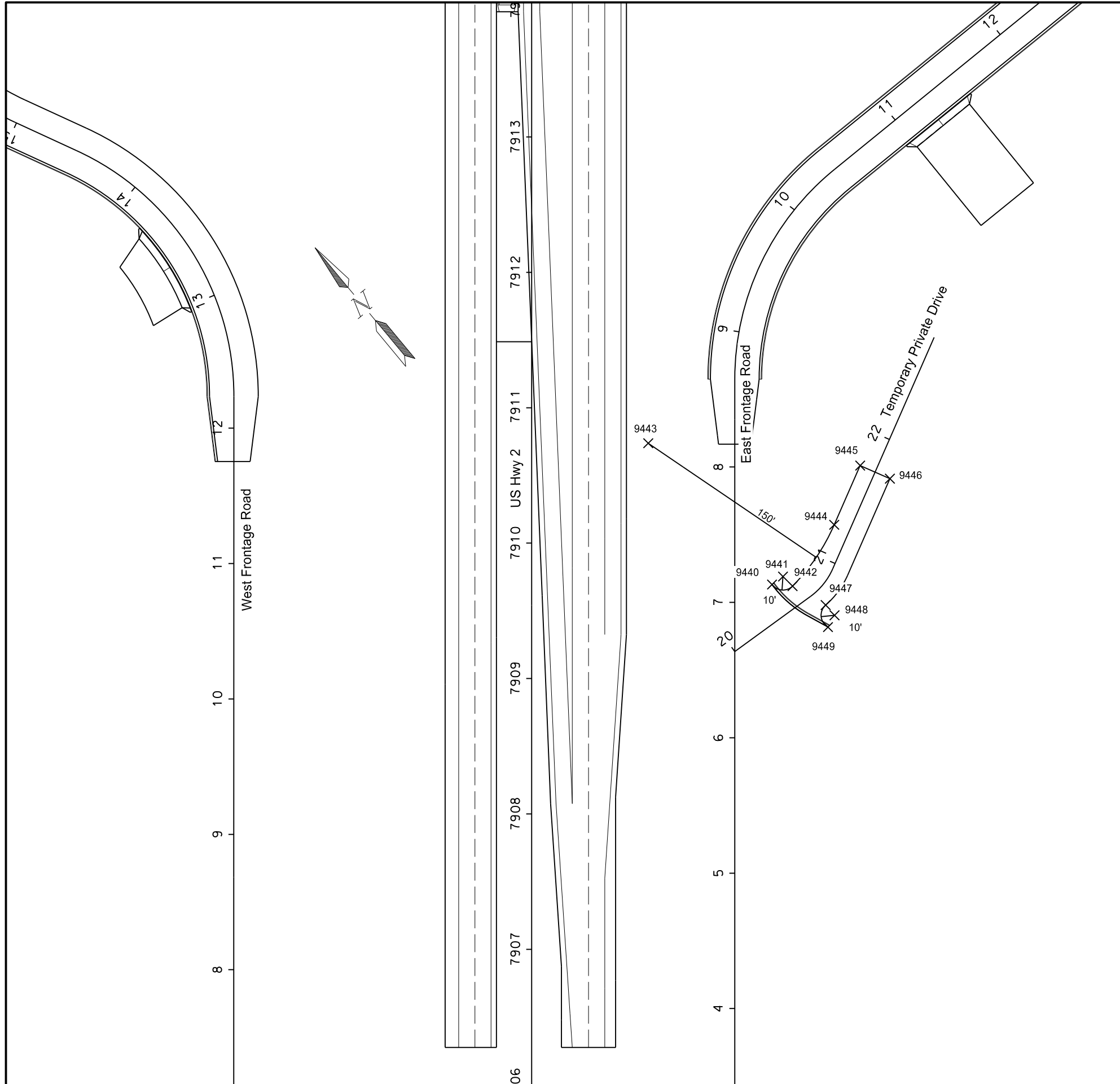
Temporary Gooseneck Access (PRFRONT_W)				
Point	Northing	Easting	Station	Offset
9360	445,918.90	1,789,902.91	5+19.00	-7.67
9361	445,931.69	1,789,887.53	5+19.00	-27.67
9362	445,970.13	1,789,919.51	5+69.00	-27.68
9363	445,957.34	1,789,934.89	5+69.00	-7.68



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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Survey Point Layout

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	100	18

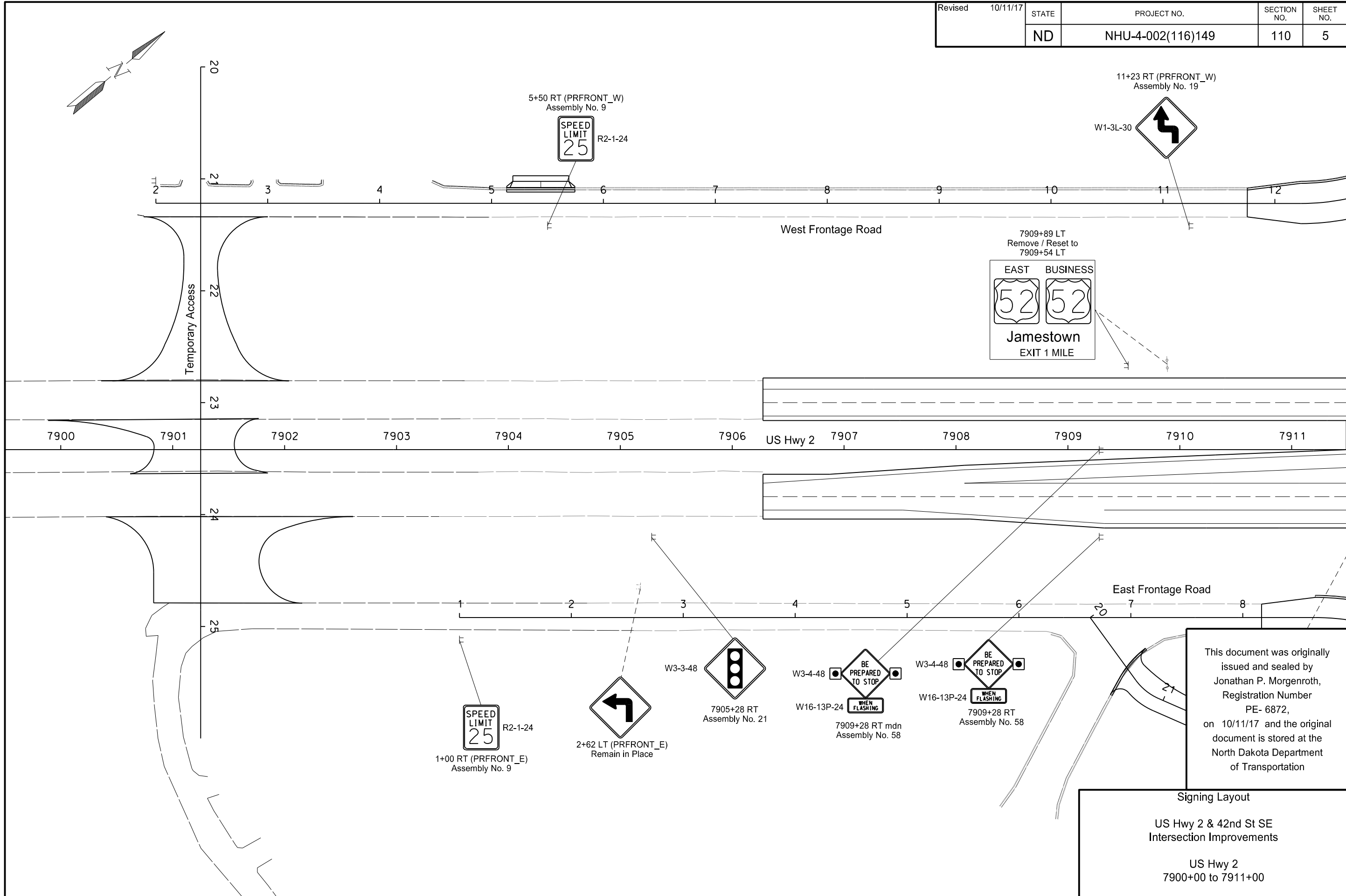


Temporary Private Drive (PRGOOSE)				
Point	Northing	Easting	Station	Offset
9440	446,094.36	1,790,576.17	20+51.44	-23.80
9441	446,093.71	1,790,586.15	20+61.44	-23.80
9442	446,083.76	1,790,587.11	20+63.03	-13.92
9443	446,233.06	1,790,572.64	20+39.08	-162.00
9444	446,098.90	1,790,639.73	21+25.94	-12.00
9445	446,120.25	1,790,682.42	21+73.66	-12.00
9446	446,098.78	1,790,693.15	21+73.66	12.00
9447	446,057.38	1,790,596.96	20+73.53	12.00
9448	446,047.38	1,790,597.16	20+73.53	22.00
9449	446,043.76	1,790,587.84	20+66.31	25.95

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Work Zone Traffic Control
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 Survey Point Layout

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	110	5

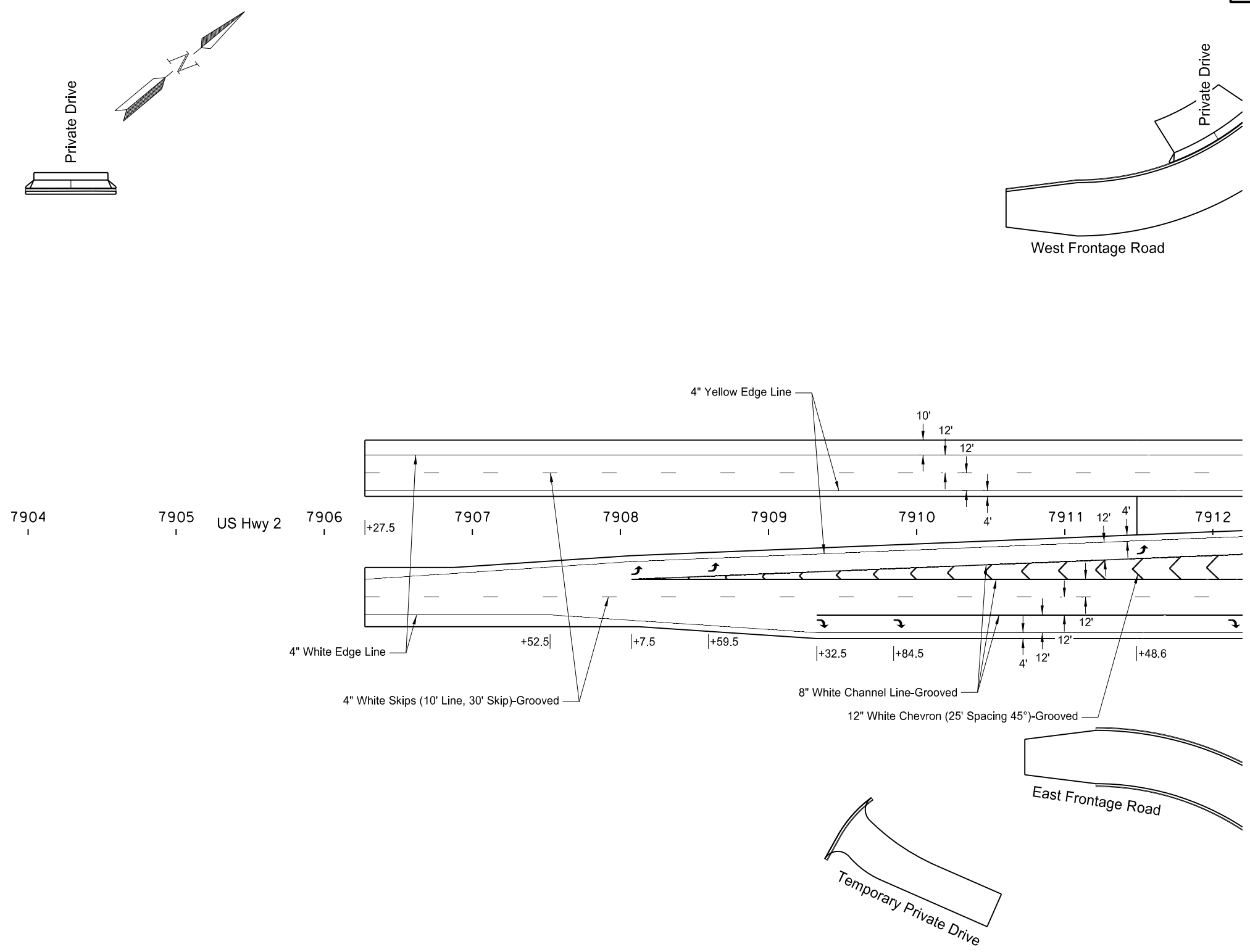


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Signing Layout
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2
 7900+00 to 7911+00

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	120	1

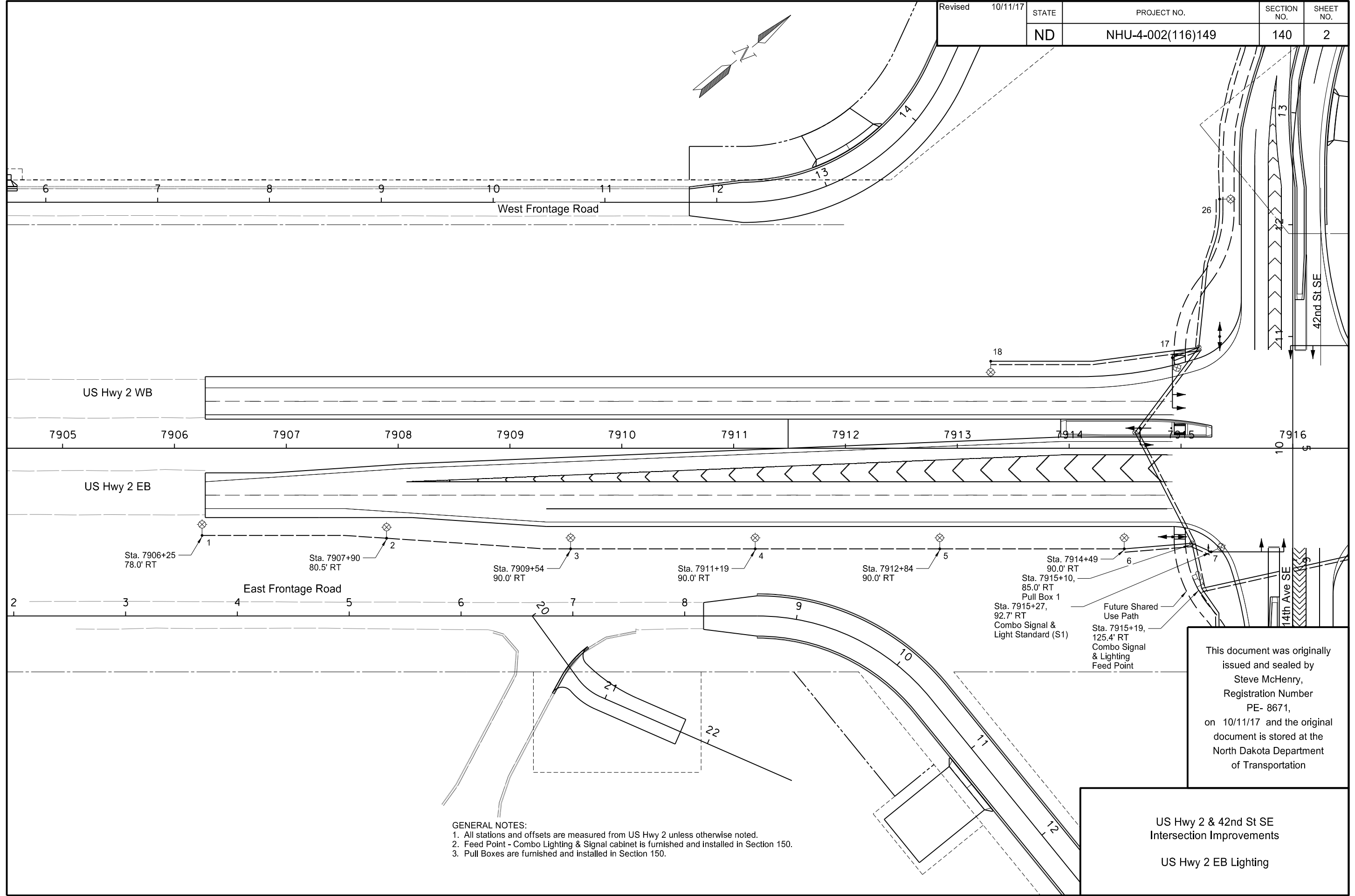
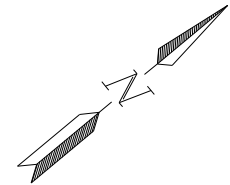
762	0110	Epoxy Pvmt Mk 4IN Line-Grooved			
		4" White Centerline Skip	30 Skips @ 10'/Skip =	300	LF
762	0113	Epoxy Pvmt Mk 4IN Line			
		4" White Edge Line		1146	LF
		4" Yellow Edge Line		1146	LF
			Total =	2292	LF
762	0122	Preformed Patterned Pvmt Mk-Message-Grooved			
		Arrow (RT)	16 SF x 2 EA =	32	SF
		Arrow (LT)	16 SF x 3 EA =	48	SF
			Total =	80	SF
762	0132	Epoxy Pvmt Mk 8IN Line-Grooved			
		8" White Channel Line		1053	LF
762	0134	Epoxy Pvmt Mk 12IN Line-Grooved			
		12" White Chevron		180	LF



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Pavement Marking Layout
 US Hwy 2 & 42nd St SE
 Intersection Improvements
 US Hwy 2
 7906+27.5 to 7912+00

Revised	10/11/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	NHU-4-002(116)149	140	2



GENERAL NOTES:
 1. All stations and offsets are measured from US Hwy 2 unless otherwise noted.
 2. Feed Point - Combo Lighting & Signal cabinet is furnished and installed in Section 150.
 3. Pull Boxes are furnished and installed in Section 150.

This document was originally issued and sealed by Steve McHenry, Registration Number PE- 8671, on 10/11/17 and the original document is stored at the North Dakota Department of Transportation

US Hwy 2 & 42nd St SE Intersection Improvements
 US Hwy 2 EB Lighting