

#### Planning & Engineering

Office of Project Development 700 E. Broadway Avenue Pierre, SD 57501 O: 605.773.3275 dot.sd.gov

November 8, 2024

Re: Project's NH-CR 0014(185)229, 436( ) – PCN's 026Z & X05W– Urban Grading, Curb & Gutter, Sidewalk, Signals, Storm Sewer, Lighting, Asphalt Concrete Surfacing, PCC Surfacing, Water Main Improvement & Sewer Manhole Adjustments

To Whom It May Concern,

A pre-bid meeting for the US 14 (Euclid Ave) Reconstruction project is being held on November 26<sup>th</sup> at 1:30 PM CST via Microsoft TEAMS. Interested contracting parties are invited to attend the meeting virtually via the Microsoft Teams Meeting Link provided below.

This meeting will include a presentation of the project covering topics such as the overall scope of work, design aspects, traffic control, and contract time. There will be an opportunity for Contractors to present questions to Department staff, consultants, and project stakeholders.

Attendance is not a requirement, but all interested contracting parties are strongly encouraged to attend.

If attending the meeting you must join the meeting via the link provided. In order to reduce sound feedback please mute the microphone on your computer. Due to the meeting being virtual we are requesting that you please enter the name of your company followed by the individuals from your company attending the meeting into the chat feature of Microsoft Teams.

#### **Join Pre-bid Meeting**

Date: November 26, 2024

Time: 1:30-3:30 PM (CST)

Meeting ID: 211 221 837 478

Additional instructions regarding the meeting format will be provided at the beginning of the meeting.

We look forward to seeing you there!

Sincerely, SD DOT

#### TOTAL SHEETS PROJECT STATE OF SHEET NH-CR 0014(185)229 C1 C46 SECTION C: TRAFFIC CONTROL PLANS 06/05/2024 Plotting Date: **INDEX OF SHEETS** General Layout with Index Estimate With General Notes & Tables C2-C11 C12 Construction Phasing Plan Construction Phase Layouts Fixed Sign Locations Detour Layouts C13-C25 C26-C31 C32-C38 Downtown Business Signing Layout Hilger's Gulch Pedestrian Detour Portable Message Board Layout Temporary Marking/Typical Traffic Control Sections Standard Plates C39 C40 POPLAR C41 C42-C44 C45-C46 ONIEDA AVE. ONIEDA SENECA BRANDTS POND PARK SEBREE CENTRAL AVE. HURON AVE. GRAND AVE. END NH 0014(185)229 Station 80+45.00 EUCLID AVE. W YNO NO P HIGHLAND MARY EVANS 1804 DR. STATE LAB

BEGIN NH 0014(185)229 Station 10+30.00

AVE.

#### **SECTION C ESTIMATE OF QUANTITIES\***

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E6005	Pavement Marking Masking, 5"	885	Ft
633E6035	Pavement Marking Masking, Combination Arrow	4	Each
634E0010	Flagging	1,000.0	Hour
634E0110	Traffic Control Signs	1,178.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	58	Each
634E0330	Temporary Raised Pavement Markers	18,743	Ft
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	28,858	Ft
634E0700	Traffic Control Movable Concrete Barrier	17	Each
634E1002	Detour and Restriction Signing	1,492.5	SqFt
634E1020	Temporary Business Signing	98.4	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	3	Each
634E2000	Longitudinal Pedestrian Barricade	348	Ft
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
634E2020	Temporary Curb Ramp	5	Each
634E3000	Traffic Control Barrier	1,705	Ft

\*Some quantities are based on the maximum number of TC phases that can be implemented simultaneously. See "Mainline Phases" notes below.

#### **SEQUENCE OF OPERATIONS**

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

Work on this project will consist of pavement removal, grading, storm sewer, utility relocation, traffic signal removal and installation, ADA improvements, PCC installation, asphalt concrete resurfacing, and permanent pavement marking.

The Contractor will be required to maintain all detour routes throughout the length and duration of the project to the satisfaction of the Engineer. Locations for repair will be determined by the Engineer. See Section F for quantities.

Details in the traffic control plans are based on the following sequence of operations for construction of the project. The sequencing is based on anticipated areas of construction. Mainline Phases 1 & 2 can be worked on concurrently, and the side-street phases (Wynoka St. and Elizabeth St.) can be worked on in conjunction with any mainline phase. Additional concurrent work will be allowed if resources are proven available, concurrent work is supported by the construction schedule, and the work is ultimately approved by the Engineer. The work will be divided into the following phases:

#### MAINLINE PHASE 1A/1B/1C/1D/1E

Phase 1 will consist of work on the Sioux Ave./South Pierre St. intersection as well as mainline S Pierre St./Pleasant Dr. Work on Sioux Ave will be in the westbound lane from approximately Sta. 900+91.25 to Sta. 901+91.70. Work on S Pierre St. will be from approximately Sta. 10+00 to Sta. 32+70. Work on Pleasant Dr. will be from approximately Sta. 906+00 to Sta. 910+55.

- During Phase 1A, the Contractor will set up two-way traffic in the westbound lanes of Sioux Ave. to complete all work on the south side of the S Pierre St./Sioux Ave. intersection. Work from approximately Sta. 10+37 to 12+66 will be allowed on S Pierre St. as a full road closure. This work will continue into Phases 1B and 1C. The two-way traffic will be set up for continuous flow in both directions, with no turning movements allowed. S Pierre St. south of the intersection will be given two-way functionality. Phase 1A will consist of work from approximately Sta. 9+50 to Sta. 10+00 (S Pierre St. alignment).
  - During phases 1A-1C, S Pierre St. will be open to southbound traffic from Pleasant Dr. in order to access the Federal Building and Walgreens. A U-turn will be implemented just north of the work zone in order to return traffic to Pleasant Dr., and a temporary access will be set up from the alley north of the Federal Building to provide access to the parking lot. Direct access to the Federal Building from S Pierre St. will be closed.
  - Traffic intending to access S Pierre St. south of the intersection will be detoured to Highland Ave. and Central Ave., with access then provided off Dakota Ave. This portion of S Pierre St. will be reconfigured as a two-way road for the duration of Phases 1A-1C, with a U-turn at the north end to return traffic back to Dakota Ave. See sheets C16, C32, and C44 for detailing.
- During Phase 1B, the Contractor will set up continuous two-way traffic in the eastbound lanes of Sioux Ave. No turning movements from Sioux Ave. will be allowed, as in Phase 1A. Phase 1B will consist of work from approximately Sta. 10+00 to Sta. 12+66.
- During Phase 1C, the Contractor will set up two-way traffic in the outermost lanes of Sioux Ave. to accommodate resurfacing work in the middle of the intersection. The two-way functionality of S Pierre St. will be removed, and access re-opened from Sioux Ave., following completion of Phase 1C work. No turning movements from Sioux Ave. will be allowed, as in Phase 1A.
- During Phase 1D, the U-turn at the Federal Building/Walgreens will be flipped and placed facing south at roughly Sta. 12+66. S Pierre St. will be closed in its entirety from Sta. 12+66 to Pleasant Dr. Two-way traffic will be implemented in the existing westbound lanes of Pleasant. The gravel access through the alley to the Federal Building will be maintained, and access to Walgreens and the alley will be closed off. Work will extend past the limits of S Pierre St. onto Pleasant Dr. Phase 1D will consist of work from approximately Sta. 12+66 to Sta. 18+00 on S Pierre St., and from Sta. 906+00 to 910+55 on Pleasant Dr.
- During Phase 1E, Pleasant Dr. will be closed off at the west intersection with S Pierre St. Two-way traffic will be implemented in the eastbound lanes, with ingress/egress allowed only onto S Pierre St. south of Pleasant Dr. and onto Pleasant Dr. east of the work zone. The U-turn will be moved to roughly Sta. 18+10 facing north to return traffic to Capitol Ave. Phase 1E will consist of work from approximately Sta. 12+50 to Sta. 18+80 on S Pierre St., and from Sta. 906+00 to 910+55 on Pleasant Dr.

Phase 1 will consist of removal and installation of storm sewer reinforced concrete pipe/inlets, removal and installation of manholes, installation of junction boxes, traffic signal replacement, pedestrian push buttons, grading, curb and gutter, sidewalk, city utility work, PCC and asphalt resurfacing, and permanent pavement markings. Work will also include tying new storm sewer into the existing storm sewer system in all directions to maintain drainage on the project at all times.

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The Contractor will take the following additional considerations into account during Phase 1 operations:

- 1. OVERWIDTH DETOUR During Phases 1A-1C, overwidth traffic on Sioux Ave. will be diverted north around the Oahe Dam as detailed on sheets C33-C36.
- 2. Phase 1E can be worked on concurrently with Phases 1A-1C. If the Contractor elects to do this, Phase 1D will take place after 1E, and existing road width will be utilized to allow egress onto Pleasant Dr. west of the work zone. Phase 2A will not be worked on if 1E is closed.

#### MAINLINE PHASE 2A/2B/2C/2D

Phase 2 will consist of sequential full-width closures on Euclid Ave. between Pleasant Dr. and Wynoka St. from approximately Sta. 18+80 to Sta. 32+70. These closures are allowed to take place concurrently with Phases 1A-1C. Phase 2 closures will only be worked south to north. Egress onto at least one of the side streets within Phase 2 work limits (Capitol Ave, Prospect Ave, Broadway Ave) will be maintained at all times. If the Contractor elects to close any side street/Euclid intersection at half-intersection width, traffic control will be set up in accordance with Standard Plate 634.25. Block closure phases are as follows:

- Phase 2A Approx. Sta 18+80 to Sta. 22+11
- Phase 2B Approx. Sta. 22+11 to Sta. 26+18
- o Phase 2C Approx. Sta. 26+18 to Sta. 30+47
- o Phase 2D Approx. Sta. 30+47 to Sta. 32+70

Phase 2 will consist of removal and installation of storm sewer reinforced concrete pipe/inlets, removal and installation of manholes, installation of junction boxes, grading, curb and gutter, sidewalk, city utility work, asphalt concrete resurfacing, and permanent pavement markings. Work will also include tying new storm sewer into the existing storm sewer system in all directions to maintain drainage on the project at all times.

The Contractor will take the following additional considerations into account during Phase 2 operations:

- 1. Phase 2A will not be worked on concurrently with Phase 1E.
- A detour as detailed on sheet C38 will be established during all fullwidth closures to divert thru traffic to Garfield Ave.

#### **MAINLINE PHASE 3A/3B/3C**

Phase 3 will consist of work from approximately Sta. 32+70 to Sta. 61+50 on Euclid Ave. Phase 3A will consist of a block closure from approximately Sta. 32+70 to Sta. 47+00. Phases 3B/3C will consist of two-way traffic from approximately Sta. 47+00 to 61+50, with Phase 3B being the southbound lane closures and Phase 3C being the northbound lane closures. 3A can be worked on concurrently with 3B and 3C.

Utility adjustments on the south side of the Euclid/4<sup>th</sup> St intersection will require a full road closure of Euclid. This closure will be implemented at a time during Phase 3B or 3C where it is suitable to work on the existing utilities south of the intersection. Traffic control will be set up to allow stop-controlled traffic on 4<sup>th</sup> St., and full access to Euclid north of the intersection. This closure will be limited to 3 weeks, and will not take place during school season. See sheet C23 for detailing.

#### **MAINLINE PHASE 3A/3B/3C (CONT.)**

Phase 3 will consist of removal and installation of storm sewer reinforced concrete pipe/inlets, removal and installation of manholes, installation of junction boxes, traffic signal replacement/new installation, grading, curb and gutter, sidewalk, asphalt resurfacing, and permanent pavement markings. Work will also include tying new storm sewer into the existing storm sewer system in all directions to maintain drainage on the project at all times.

The Contractor will take the following additional considerations into account during Phase 3 operations:

- 1. If the Contractor elects to work on the Elizabeth St. phase concurrently with Phase 3B/3C, the block closure will be extended north to 1st St.
- 2. The detour detailed on sheet C38 will be re-established during any Phase 3A work (full-width closure).

#### **MAINLINE PHASE 4A/4B**

Phase 4 will consist of work from approximately Sta. 61+50 to Sta. 80+45 on Euclid Ave. Phase 4 will consist of two-way traffic in the above zone, with Phase 4A being the northbound lane closures and Phase 4B being the southbound lane closures. Phase 4 can be worked in conjunction with either Phases 1 and 2 or Phase 3.

Egress onto 5<sup>th</sup> or 6<sup>th</sup> St. east of mainline will be maintained at all times to allow access to the residences there.

Phase 4 will consist of removal and installation of storm sewer reinforced concrete pipe/inlets, removal and installation of manholes, installation of junction boxes, grading, curb and gutter, sidewalk, asphalt resurfacing, and permanent pavement markings. Work will also include tying new storm sewer into the existing storm sewer system in all directions to maintain drainage on the project at all times.

The Contractor will take the following additional considerations into account during Phase 4 operations:

- 1. Prior to any mainline Phase 4 operations, a temporary median crossover at the end of the US14 divided highway will be constructed in order to facilitate two-way traffic. This crossover will be constructed between two existing luminaires at approximately Sta. 82+56. Refer to Section F for more details.
- 2. A temporary pedestrian access route (TPAR) will be maintained from 6<sup>th</sup> St. to south of 4<sup>th</sup> St. to facilitate sidewalk access during Phase 4A. All costs for furnishing, installing, maintaining, relocating, and removing the TPAR will be included in the contract lump sum price for "Temporary Pedestrian Access Route" and the contract unit price for "Temporary Curb Ramp".

#### **WYNOKA STREET**

Work on Wynoka St. will consist of removal and installation of storm sewer reinforced concrete pipe/inlets, removal and installation of manholes, installation of junction boxes, grading, and asphalt resurfacing. Work will also include tying new storm sewer into the existing storm sewer system in all directions to maintain drainage on the project at all times.

If the Contractor elects to complete the Wynoka St. work while simultaneously working on mainline Phase 3, work on Wynoka will be sequenced so that traffic is provided access to the south via Mary Ln. or Highland Ave.

The Contractor will take the following considerations into account during Wynoka St. operations:

- 1. The Contractor will coordinate work on Wynoka St. in the proximity of the Catholic school to allow ingress/egress from the complex. The intersection of Highland and Wynoka will not be closed when the intersection of Euclid and Wynoka is closed (Phase 3A).
- 2. The Contractor will divert pedestrians around to the east sidewalks during work in Hilgers Gulch as detailed on sheet C40.

#### **ELIZABETH STREET**

Work on Elizabeth St. will consist of grading and asphalt resurfacing.

The Contractor will take the following considerations into account during Elizabeth St. operations:

1. The Contractor will allow access to another residential street (1st or 2nd Streets) through the two-way zone of Mainline Phase 2 if working on Elizabeth St. during Phase 3. If the Contractor elects to complete Elizabeth St. work during Phase 3, the 3A block closure will extend north to 1st St (~Sta. 50+25).

#### TRAFFIC CONTROL STIPULATIONS

Traffic will be maintained in accordance with the Manual on Uniform Traffic Control Devices and as follows:

- ➤ The Contractor will notify the Pierre Region Traffic Engineer (Hannah Covey, ((605) 773-5291) a minimum of 1 week prior to opening any phase of the project to traffic and a minimum of 2 weeks prior to the installation of permanent pavement markings to accommodate the installation of permanent signing.
- Street intersections will be maintained as noted in the Sequence of Operations. Closure time for all other streets intersecting the project will be kept to a minimum.
- Access will be maintained at all times to residences and business located along the project and noted in the Table of Blockout Areas in Section F. Concrete blockouts will be required at Phase 1 locations where access cannot be maintained in any other way. Businesses with multiple accesses may be accommodated by closing all but one access at a time as detailed in the Table of Blockout Areas. The Contractor may obtain an agreement with individual landowners and business owners to work through their respective access areas in lieu of installing a blockout. The Contractor will provide a copy of the written approval from the landowner or business to the Department. Temporary gravel accesses to businesses and residences are permitted.
- ➤ One entrance at Parcel 12, A31/A37 will be open at all times (Delta Dental).
- Access to the Saints Peter & Paul Catholic Church complex from either Wynoka St. or Broadway Ave. will be maintained at all times. At no time will both entrances be closed to the traveling public.

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- ➤ The Contractor will keep all businesses and residents informed of the progression and prosecution of work in areas that have a direct effect on their access. The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction, and will notify them again a minimum of 48 hours prior to any changes in access to allow them to make appropriate arrangements.
- The Contractor will conduct weekly meetings at a designated place on or adjacent to the project. Meetings will be open to the public. Public announcements will be made so all affected parties are aware of the meetings. The Contractor will be responsible for the public announcements, which will be pre-approved by the Engineer prior to submission to the media. The meetings will be conducted by the Contractor's Superintendent or management personnel. The purpose of these meetings will be to:
  - o Present the work schedule for the following week,
  - Coordinate work activities with subcontractors, the City of Pierre, and utility companies,
  - Coordinate traffic control,
  - o Coordinate public and private accesses, and
  - o Inform businesses, residents, and the public of project status.

All costs related to these weekly meetings and public announcements will be incidental to the contract lump sum price for "Traffic Control Supervisor".

- The Contractor will provide the Pierre Police Department, the Pierre Fire Department, the Pierre Ambulance Service, the Hughes County Sheriff's office, the South Dakota Highway Patrol, and the Avera Hospital Emergency Department a detailed map showing roadway segment construction limits and the most appropriate routing for emergency vehicles. Updated maps will be provided to these entities a minimum of 24 hours prior to any changes in work limits. Changes in work limits will not be allowed until the 24-hour advance notice requirement has been satisfied.
- ➤ Orange plastic safety fence will be provided to enclose any areas that are unsafe for pedestrian traffic, during undercutting operations, and when sidewalk has been removed. All related costs to furnish, place, and maintain the plastic safety fence will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".
- ➤ Locations of signs on traffic control layouts are diagrammatic. Portable sign supports may be used as long as the duration is less than 3 days. The portable supports will be constructed to yield upon impact to minimize hazards to motorists. The bottoms of portable or temporary signs will not be less than seven feet above the pavement. If the duration is more than 3 days, the signs will be on fixed location breakaway supports.

#### **GENERAL TRAFFIC CONTROL**

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

#### **GENERAL TRAFFIC CONTROL (CONT.)**

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

The Contractor will maintain northbound/southbound access on one lane throughout the entirety of the project in order to allow emergency vehicles through the construction zone.

### AGREEMENT FOR USE AND RESTORATION OF CONTRACTOR'S HAUL ROAD

The Contractor may enter into an agreement with the South Dakota Department of Transportation and the City of Pierre for a haul road for the duration of the project. All work shall be in accordance with Section 601 of the Standard Specifications. Refer to the Special Provisions to review the Dot-45A; "South Dakota Department of Transportation Agreement For Use and Restoration of Contractor's Haul Road".

#### **OVERWIDTH RESTRICTION AND DETOUR SIGNING**

The Contractor will furnish and install the overwidth restriction and detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction and detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the overwidth restriction and detour signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the overwidth restriction and detour signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

#### **WORK ZONE SPEED REDUCTION**

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63 or as shown in the plans. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

#### **TEMPORARY RAISED PAVEMENT MARKERS**

Temporary raised pavement markers will be used for marking edge lines, lane lines, and centerlines in two-way traffic control situations. Temporary raised pavement markers will be used on all new permanent surfacing sections of roadway and on existing surfacing where temporary marking locations are different than existing marking locations, unless noted or as directed by the Engineer.

Temporary raised pavement markers will be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer.

All costs to furnish, install, replace if necessary, and remove the markers will be incidental to the contract unit price per foot for "Temporary Raised Pavement Markers".

#### PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMs) will be installed at locations detailed in the plans to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

(1) ROAD WORK STREET

(2) STARTS (DATE) Revised 10/07/2024 JDC

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Portable message boards will be placed as detailed on sheet C41 prior to the following phases:

- Phase 1A placed on Sioux Ave. and S Pierre St. (3 boards)
- Phase 2A placed on Euclid Ave. (2 boards)
- Phase 3A placed on Euclid Ave. and 4<sup>th</sup> St. (3 boards)
- Phase 4A placed on Euclid Ave./US14 (2 boards)

#### **INCIDENTS**

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Hughes County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be maintained at all times and all phase changes will be communicated to emergency officials by the traffic control supervisor.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for "Flagging".

#### **TUBULAR MARKERS**

The color of the tubular markers on centerline will be predominately orange.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

All costs for furnishing, installing, maintaining, and removing the tubular markers will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

#### **EXISTING LIGHTING SYSTEM**

The Contractor will provide overhead electric cable at street crossings where the underground electric is compromised during construction to maintain the existing roadway lighting system throughout construction.

During the project, the Contractor will keep the existing roadway lighting inservice to maintain roadway lighting to the traffic that will be running through and adjacent to the project. The Contractor will also minimize the amount of time the project area is without roadway lighting.

The work will be completed in compliance with industry standards and comply with all applicable codes and regulations.

The Contractor will communicate and coordinate with local utility companies and the City of Pierre to determine the existing lighting system, circuits, and wiring.

All costs for this work will be incidental to "Traffic Control, Miscellaneous".

#### **TEMPORARY PEDESTRIAN ACCESS ROUTE**

A Temporary Pedestrian Access Route (TPAR) will be provided in Phase 4A when crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated. A TPAR may consist of a combination of existing and/or temporary pedestrian facilities. The TPAR will be kept free of any obstructions and hazards, such as holes, debris, mud, snow, construction equipment, traffic control signing, stored materials, etc.

The Contractor will notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access. Pedestrian traffic signal displays controlling a crosswalk that is closed will be covered or removed.

#### **TEMPORARY CURB RAMP**

Temporary curb ramps should be firm, stable, and have a non-slip surface. They will not warp or buckle, and should be made of materials strong enough to support a weight of 800 pounds. Temporary curb ramps will be yellow or color contrasting and contain marked edges, so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces will be a maximum of 0.5 inches in width. Temporary curb ramps will include detectable warning panels.

Temporary curb ramps will be the same width as the temporary pedestrian access route, with a recommended width of 60 inches and a minimum width of 48 inches. Temporary curb ramps will have a maximum slope of 8.3% and have free draining surfaces with a maximum cross slope of 2%. Handrails on temporary curb ramps are not required unless the curb ramp has a rise exceeding 6 inches and a length exceeding 72 inches.

All costs will be incidental to the contract unit price per each for "Temporary Curb Ramp".

#### LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

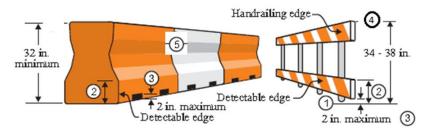
To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

#### PEDESTRIAN CHANNELIZING DEVICE DETAILS



Longitudinal Pedestrian Barrier

Longitudinal Pedestrian Barricade

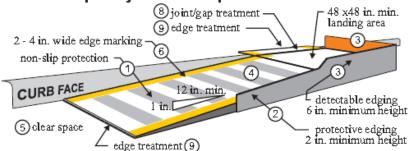
- 1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
- 2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
- 3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
- 4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
- 5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

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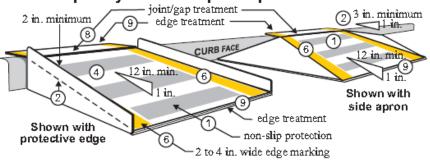
STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	NH-CR 0014(185)229	C5	C46

#### TEMPORARY CURB RAMP DETAILS

#### Temporary Curb Ramp - Parallel to Curb



#### Temporary Curb Ramp - Perpendicular to Curb



- 1. Curb ramps will be 48-inch minimum width with a firm, stable, and non-slip surface.
- 2. Protective edging with a 2-inch minimum height will be installed when the curb ramp or landing platform has a vertical drop of 6 inches or greater or has a side apron slope steeper than 33:1 (33%). Protective edging should be considered when curb ramps or landing platforms have a vertical drop of 3 inches or more.
- 3. Detectable edging with 6 inches minimum height and contrasting color will be installed on all curb ramp landings where the walkway changes direction (turns).
- 4. Curb ramps and landings should have a 50:1 (2%) maximum cross slope.
- 5. A minimum clear space of 48 inch x 48 inch minimum will be provided above and below the curb ramp, with a 60 inch x 60 inch clear space preferred.
- 6. The curb ramp walkway edge will be marked with a contrasting color 2 to 4 inch wide marking. The marking is optional where color contrasting edging is used.
- 7. Water flow in the gutter system will have minimal restriction.
- 8. Lateral joints or gaps between surfaces will be less than 0.5 inches in width.
- 9. Changes between surface heights should not exceed 0.5 inches. Lateral edges between 0.25 inches and 0.5 inches in height, should be vertical up to 0.25 inches in height and beveled at 2:1 between 0.25 inches and 0.5 inches in height.

#### TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Concrete barriers will be provided by the State and are available for pickup from the SDDOT Murdo Maintenance Yard. The barriers will be hauled back to the SDDOT Murdo Maintenance Yard when they are no longer needed on the project.

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

All costs associated with picking the barriers up from the SDDOT Maintenance Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier.

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier". All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

#### **BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS**

A linear delineation system (LDS) panel will be attached to each barrier section. The color will be the same as the nearest pavement marking, white along outside edgelines or yellow for the left side on one way traffic sections. The LDS will be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It will be sheeted with sheeting meeting the requirements of ASTM D4956 Type XI. The panels will be evenly spaced, with the top of the panel 4 inches below the top of the barrier. Installation will be as per the manufacturer's recommendations. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. The Contractor will furnish and install one panel along each side of the barrier if any panels are missing from the barriers. Replacement of damaged linear delineation system panels will be furnished and replaced by the Contractor. All costs associated with furnishing, installing, and replacing, if needed, will be incidental to the contract unit price per each for Linear Delineation System Panel. Barrier Mounted.

All LDS panels will remain attached to the barrier sections and will become the property of the State of South Dakota upon completion of the project.

The Contractor will verify the number of LDS panels that will need to be installed or replaced on the Traffic Control Movable Concrete Barriers. The contract amount of LDS panels is an estimate and the full contract amount may not be needed.

Maintaining the linear delineation system, including moving LDS panels from one side of the barrier to the other side of the barrier to match the applicable color of the nearest pavement marking will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

#### **KEEP RIGHT SIGNS**

Keep Right signs that are used in two-way traffic control situations will be "Safe-Hit RubberTough 360" with a heavy-duty signpost, or an approved equal. The sign post will be predominantly orange in color and will be reflectorized. The back side of the sign panel will also be sheeted with high-intensity retroreflective sheeting for visibility.

Keep Right signs will be maintained in a like-new condition as directed by the Engineer.

Keep Right symbol signs will be placed at intersections as appropriate and as directed by the Engineer. Keep Right signs have been included in the Itemized List for Traffic Control Signs.

Payment for Keep Right signs will fall under the contract unit price per square foot for Traffic Control Signs. Payment will be full compensation for furnishing, installing, maintaining, replacing, and removal of the Keep Right signs as required by the Engineer.

#### **TEMPORARY BUSINESS SIGNING**

The Contractor will provide special business access signing during construction for downtown businesses whose access is affected during Phases 1A-1C of construction. The Engineer and Contractor will coordinate with these businesses to determine that sign placement is adequate. See sheet C39 for sign layout and sheet C10 for sign legend. Temporary business signs will be placed such that they are visible to traffic in both directions along the roadway.

Temporary business access signs will have a black legend on orange background. Temporary business signs will not block or obscure existing or temporary traffic control signing. All costs for furnishing, installing, maintaining, relocating, and removal of business access signing and supports will be paid for by the contract unit price per square foot for "Temporary Business Signing".

#### TABLE OF TEMPORARY BUSINESS SIGNING

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	DOWNTOWN BUSINESS ACCESS LT ARROW	3	42" x 42"	12.3	36.9
SPECIAL	DOWNTOWN BUSINESS ACCESS RT ARROW	3	42" x 42"	12.3	36.9
SPECIAL	DOWNTOWN BUSINESS ACCESS AHEAD ARROW	2	42" x 42"	12.3	24.6
		BUSINESS ACCESS SIGNING (SQFT)		98.4	

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STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	NH-CR 0014(185)229	C6	C46

#### TABLES OF TRAFFIC CONTROL SIGNS BY PHASE

#### Phase 1A

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

	SIGN DESCRIPTION	CONVENTIONAL ROAD			
SIGN CODE		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 10	1	24" x 30"	5.0	5.0
R3-1	RIGHT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0
R3-2	LEFT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0
R4-7	KEEP RIGHT (symbol)	3	24" x 30"	5.0	15.0
R7-8	RESERVED PARKING (HANDICAP)	1	18" x 24"	3.0	3.0
R8-3a	NO PARKING	2	24" x 24"	4.0	8.0
W1-4	REVERSE CURVE (L or R) (one each)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol) (one each)	2	48" x 48"	16.0	32.0
W11-1	U-TURN (symbol)	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	2	30" x 30"	6.3	12.6
W16-8P	PIERRE ST	5	24" x 12"	2.0	10.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-3	ROAD CLOSED AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0
W20-5a	LEFT or RIGHT LANE CLOSED 350 FT (one each)	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 1/2 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			407.6

#### Phase 1B

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 10	1	24" x 30"	5.0	5.0
R3-1	RIGHT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0
R3-2	LEFT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0
R4-7	KEEP RIGHT (symbol)	3	24" x 30"	5.0	15.0
R7-8	RESERVED PARKING (HANDICAP)	1	18" x 24"	3.0	3.0
R8-3a	NO PARKING	2	24" x 24"	4.0	8.0
W1-4	REVERSE CURVE (L or R) (one each)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol) (one each)	2	48" x 48"	16.0	32.0
W11-1	U-TURN (symbol)	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	2	30" x 30"	6.3	12.6
W16-8P	PIERRE ST	5	24" x 12"	2.0	10.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-3	ROAD CLOSED AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0
W20-5a	LEFT or RIGHT LANE CLOSED 350 FT (one each)	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 1/2 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
			VENTIONAL CONTROL S		407.6

#### Phase 1C

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

			CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	
R2-1	SPEED LIMIT 10	1	24" x 30"	5.0	5.0	
R3-1	RIGHT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0	
R3-2	LEFT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0	
R4-7	KEEP RIGHT (symbol)	3	24" x 30"	5.0	15.0	
R7-8	RESERVED PARKING (HANDICAP)	1	18" x 24"	3.0	3.0	
R8-3a	NO PARKING	2	24" x 24"	4.0	8.0	
W4-2	LEFT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0	
W11-1	U-TURN (symbol)	2	48" x 48"	16.0	32.0	
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	2	30" x 30"	6.3	12.6	
W16-8P	PIERRE ST	5	24" x 12"	2.0	10.0	
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0	
W20-3	ROAD CLOSED AHEAD	5	48" x 48"	16.0	80.0	
W20-5	LEFT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0	
W20-5a	LEFT LANE CLOSED 350 FT	2	48" x 48"	16.0	32.0	
G20-1	ROAD WORK NEXT 1/2 MILES	2	36" x 18"	4.5	9.0	
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0	
			VENTIONAL CONTROL S	39 23 25	375.6	

#### TABLES OF TRAFFIC CONTROL SIGNS BY PHASE (CONT.)

#### Phase 1D

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

			CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	
R1-1	STOP	1	30"	5.2	5.2	
R3-1	RIGHT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0	
R3-2	LEFT TURN PROHIBITION (symbol)	2	24" x 24"	4.0	8.0	
R4-7	KEEP RIGHT (symbol)	6	24" x 30"	5.0	30.0	
W1-4	REVERSE CURVE (L or R) (one each)	2	48" x 48"	16.0	32.0	
W3-1	STOP AHEAD (symbol)	1	48" x 48"	16.0	16.0	
W4-2	LEFT or RIGHT LANE ENDS (symbol) (one each)	2	48" x 48"	16.0	32.0	
W8-17	SHOULDER DROP-OFF (symbol)	1	48" x 48"	16.0	16.0	
W11-1	U-TURN (symbol)	1	48" x 48"	16.0	16.0	
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	2	30" x 30"	6.3	12.6	
W16-8P	PIERRE ST	6	24" x 12"	2.0	12.0	
W20-1	ROAD WORK AHEAD	3	48" x 48"	16.0	48.0	
W20-3	ROAD CLOSED AHEAD	6	48" x 48"	16.0	96.0	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0	
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0	
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT				368.8		

#### Phase 1E

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	30"	5.2	5.2
R2-1	SPEED LIMIT 25	1	24" x 30"	5.0	5.0
R3-1	RIGHT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0
R3-2	LEFT TURN PROHIBITION (symbol)	1	24" x 24"	4.0	4.0
R4-7	KEEP RIGHT (symbol)	1	24" x 30"	5.0	5.0
R11-2	ROAD CLOSED	3	48" x 30"	10.0	30.0
W1-4	REVERSE CURVE (L)	1	48" x 48"	16.0	16.0
W8-17	SHOULDER DROP-OFF (symbol)	1	48" x 48"	16.0	16.0
W11-1	U-TURN (symbol)	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	1	30" x 30"	6.3	6.3
W20-1	ROAD WORK AHEAD	1	48" x 48"	16.0	16.0
W20-3	ROAD CLOSED AHEAD	5	48" x 48"	16.0	80.0
W20-5	RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
W16-8P	PIERRE ST	5	24" x 12"	2.0	10.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			238.5		

#### Phase 2A/2B/2C/2D (Block Closures)

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD					
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT		
R11-2	ROAD CLOSED	6	48" x 30"	10.0	60.0		
W20-1	ROAD WORK AHEAD	8	48" x 48"	16.0	128.0		
W20-3	ROAD CLOSED AHEAD	10	48" x 48"	16.0	160.0		
G20-2	END ROAD WORK	6	36" x 18"	4.5	27.0		
W16-8P	EUCLID AVE	10	24" x 12"	2.0	20.0		
		1/2 (200 pt )	/ENTIONAL I		395.0		

#### Phase 3A (Block Closure)

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

			CONVENTIO			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	
R11-2	ROAD CLOSED	7	48" x 30"	10.0	70.0	
R11-4	ROAD CLOSED TO THRU TRAFFIC	4	60" x 30"	12.5	50.0	
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT				

#### Phase 3B/3C

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	3	30"	5.2	15.6
R2-1	SPEED LIMIT 25	1	24" x 30"	5.0	5.0
R4-7	KEEP RIGHT (symbol)	10	24" x 30"	5.0	50.0
R11-2	ROAD CLOSED	11	48" x 30"	10.0	110.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	8	60" x 30"	12.5	100.0
W1-4	REVERSE CURVE (L)	1	48" x 48"	16.0	16.0
W4-2	LEFT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0
W8-17	SHOULDER DROP-OFF (symbol)	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	1	30" x 30"	6.3	6.3
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-3	ROAD CLOSED AHEAD	8	48" x 48"	16.0	128.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0
W20-5a	LEFT or RIGHT LANE CLOSED 200 FT (one each)	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 1/2 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
W16-8P	PIERRE ST	8	24" x 12"	2.0	16.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQI			588.4		

#### Phase 3 Utility Relocation Closure

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	3	30"	5.2	15.6
R4-7	KEEP RIGHT (symbol)	4	24" x 30"	5.0	20.0
R11-2	ROAD CLOSED	3	48" x 30"	10.0	30.0
W3-1	STOP AHEAD (symbol)	1	48" x 48"	16.0	16.0
W4-2	LEFT or RIGHT LANE ENDS (one each) (symbol)	2	48" x 48"	16.0	32.0
W20-3	ROAD CLOSED AHEAD	1	48" x 48"	16.0	16.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 161.6					

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#### Phase 4A/4B

#### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

			CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT	
R4-7	KEEP RIGHT (symbol)	12	24" x 30"	5.0	60.0	
R11-2	ROAD CLOSED	4	48" x 30"	10.0	40.0	
R11-4	ROAD CLOSED TO THRU TRAFFIC	3	60" x 30"	12.5	37.5	
W1-4	REVERSE CURVE (L or R) (one each)	2	48" x 48"	16.0	32.0	
W4-2	LEFT or RIGHT LANE ENDS (symbol) (one each)	2	48" x 48"	16.0	32.0	
W8-17	SHOULDER DROP-OFF (symbol)	1	48" x 48"	16.0	16.0	
W13-1P	ADVISORY SPEED (25 MPH) (plaque)	2	30" x 30"	6.3	12.6	
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0	
W20-5	LEFT or RIGHT LANE CLOSED AHEAD (one each)	2	48" x 48"	16.0	32.0	
W20-5a	LEFT or RIGHT LANE CLOSED 200 FT (one each)	2	48" x 48"	16.0	32.0	
G20-1	ROAD WORK NEXT 1/2 MILES	2	36" x 18"	4.5	9.0	
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0	
			/ENTIONAL I		376.1	

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#### **SUMMARY OF PEDESTRIAN SIGNS\***

SIGN CODE	DIMEN	ISIONS	SICAL DESCRIPTION	C	COLOR		OLIANITITY	TOTAL ADEA (coft)
SIGN CODE	WIDTH (in)	HEIGHT (in)	SIGN DESCRIPTION	BACKGROUND	LEGEND/BORDER	SIGN AREA (sqft)	QUANTITY	TOTAL AREA (sqft)
R9-9	24	12	SIDEWALK CLOSED	WHITE	BLACK	2.0	25	50.0
R9-10	24	12	SIDEWALK CLOSED USE OTHER SIDE	WHITE	BLACK	2.0	24	48.0
R9-11L	24	12	SIDEWALK CLOSED AHEAD CROSS LT	WHITE	BLACK	2.0	5	10.0
R9-11R	24	12	SIDEWALK CLOSED AHEAD CROSS RT	WHITE	BLACK	2.0	2	4.0
R9-11aL	24	12	SIDEWALK CLOSED CROSS LT	WHITE	BLACK	2.0	4	8.0
R9-11aR	24	12	SIDEWALK CLOSED CROSS RT	WHITE	BLACK	2.0	1	2.0
		-					TOTAL:	122.0

#### PEDESTRIAN SIGNS BY PHASE

PHASE	R9-9 (SIDEWALK CLOSED) (each)	R9-10 (SIDEWALK CLOSED USE OTHER SIDE) (each)		R9-11R (SIDEWALK CLOSED AHEAD CROSS RT) (each)	R9-11aL (SIDEWALK CLOSED CROSS LT) (each)	R9-11aR (SIDEWALK CLOSED CROSS RT) (each)	LONGITUDINAL PEDESTRIAN BARRICADE (ft)	TEMPORARY CURB RAMP (each)
1A/1B/1C	8	8	-	-	-	-	96	-
1D	-	-	1	1	1	1	24	1
1E	-	-	1	1	1	1	24	1
2A/2B/2C/2D	12	10	1	1	-	-	144	-
3A	16	14	1	1	•	-	192	-
3B	9	8	-	1	-	-	108	-
3C	5	4	1	-	-	-	60	-
3 UTIL RELOC	1	-	1	-	-	-	12	-
4A	-	-	-	-	3	-	18	-
4B	9	6	3	-	-	-	108	3

<sup>\*</sup>All pedestrian signing will be paid for under the bid item "Detour and Restriction Signing".

#### SUMMARY OF DETOUR SIGNS

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	NH-CR 0014(185)229	C9	C46

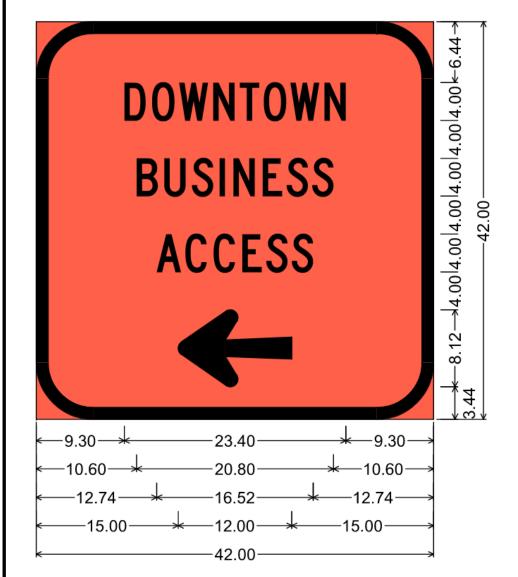
CICN CODE	DIMEN	DIMENSIONS COLOR SIGN DESCRIPTION COLOR		CICAL ADEA ((+)	OLIANITITY	TOTAL ADEA (ft)		
SIGN CODE	WIDTH (in)	HEIGHT (in)	SIGN DESCRIPTION	BACKGROUND	LEGEND/BORDER	SIGN AREA (sqft)	QUANTITY	TOTAL AREA (sqft)
W20-2	48	48	DETOUR AHEAD	ORANGE	BLACK	16.0	7	112.0
M1-4	24	24	US HWY 14	WHITE	BLACK	4.0	14	56.0
M1-4	24	24	US HWY 83	WHITE	BLACK	4.0	14	56.0
M1-5	24	24	SD HWY 34	WHITE	BLACK	4.0	15	60.0
M3-1	24	12	NORTH	WHITE	BLACK	2.0	7	14.0
M3-2	24	12	EAST	WHITE	BLACK	2.0	9	18.0
M3-3	24	12	SOUTH	WHITE	BLACK	2.0	7	14.0
M3-4	24	12	WEST	WHITE	BLACK	2.0	7	14.0
M4-8	24	12	DETOUR	ORANGE	BLACK	2.0	31	62.0
M4-8A	24	18	END DETOUR	ORANGE	BLACK	3.0	5	15.0
M5-1L	21	15	WIDE LT ARROW	WHITE	BLACK	2.2	4	8.8
M6-1R	21	15	RTARROW	WHITE	BLACK	2.2	10	22.0
M6-1L	21	15	LT ARROW	WHITE	BLACK	2.2	7	15.4
M6-3	21	15	AHEAD ARROW	WHITE	BLACK	2.2	9	19.8
R10-9	24	30	NO THRU TRAFFIC	WHITE	BLACK	5.0	6	30.0
R11-3A	60	30	ROAD CLOSED XX MILES THRU	WHITE	BLACK	12.5	3	37.5
SPECIAL	30	24	OVERWIDTH VEHICLES	WHITE	BLACK	5.0	16	80.0
W16-8P	24	12	US14	ORANGE	BLACK	2.0	18	36.0
W16-8P	24	12	EUCLID AVE	ORANGE	BLACK	2.0	18	36.0
W16-8P	24	12	S PIERRE ST	ORANGE	BLACK	2.0	12	24.0
SPECIAL	120	96	WIDTH RESTRICTION 12 FT MAX 14/34 E	WHITE/ORANGE	BLACK	80.0	2	160.0
SPECIAL	120	96	WIDTH RESTRICTION 12 FT MAX 14/34 W	WHITE/ORANGE	BLACK	80.0	2	160.0
SPECIAL	120	96	WIDTH RESTRICTION 12 FT MAX 83 S	WHITE/ORANGE	BLACK	80.0	2	160.0
SPECIAL	120	96	WIDTH RESTRICTION 12 FT MAX 83 N	WHITE/ORANGE	BLACK	80.0	2	160.0
							TOTAL:	1370.5

STATE OF SOUTH DAKOTA NH-

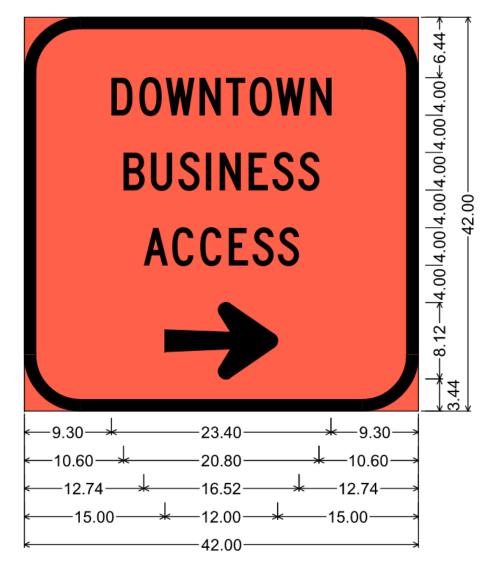
NH-CR 0014(185)229

SHEET TOTAL SHEETS
C10 C46

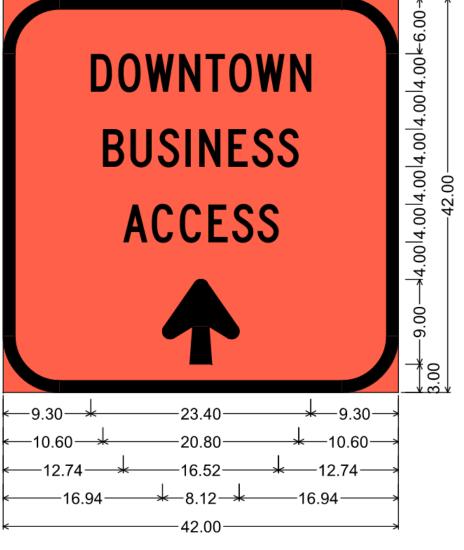
#### **BUSINESS SIGN DETAILING**



6.00" Radius, 1.25" Border, Black on Fluorescent Orange; "DOWNTOWN", C 2K; "BUSINESS", C 2K; "ACCESS", C 2K; Arrow Custom - 12.00" 180°;



6.00" Radius, 1.25" Border, Black on Fluorescent Orange; "DOWNTOWN", C 2K; "BUSINESS", C 2K; "ACCESS", C 2K; Arrow Custom - 12.00" 0°;



6.00" Radius, 1.25" Border, Black on Fluorescent Orange; "DOWNTOWN", C 2K; "BUSINESS", C 2K; "ACCESS", C 2K; Arrow Custom - 9.00" 90°;

#### **TABLE OF TRAFFIC CONTROL DEVICES\***

Revised 10/07/2024 JDC

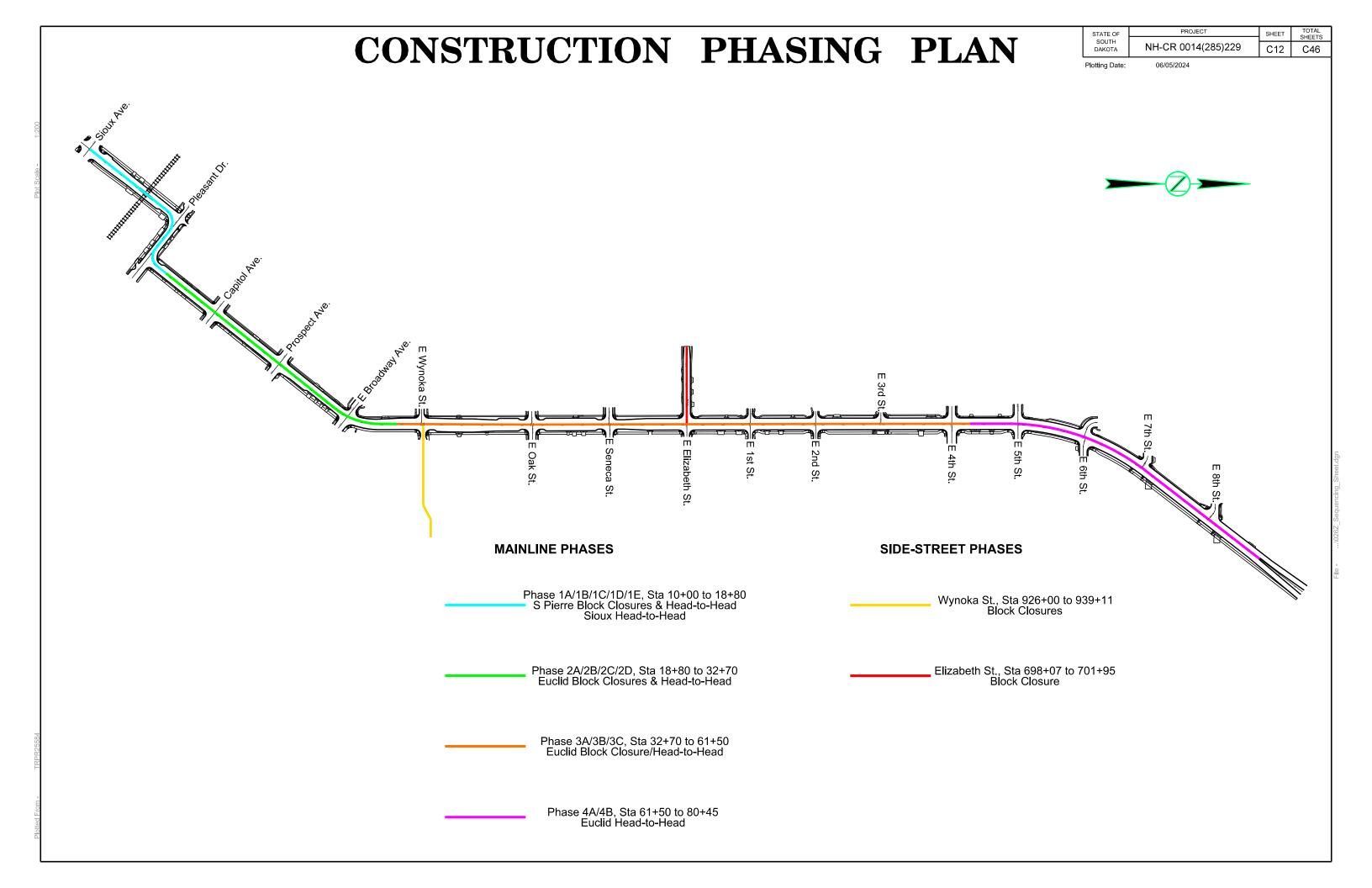
DC STATE OF SOUTH DAKOTA NH-CR 0014(185)229 C11 C46

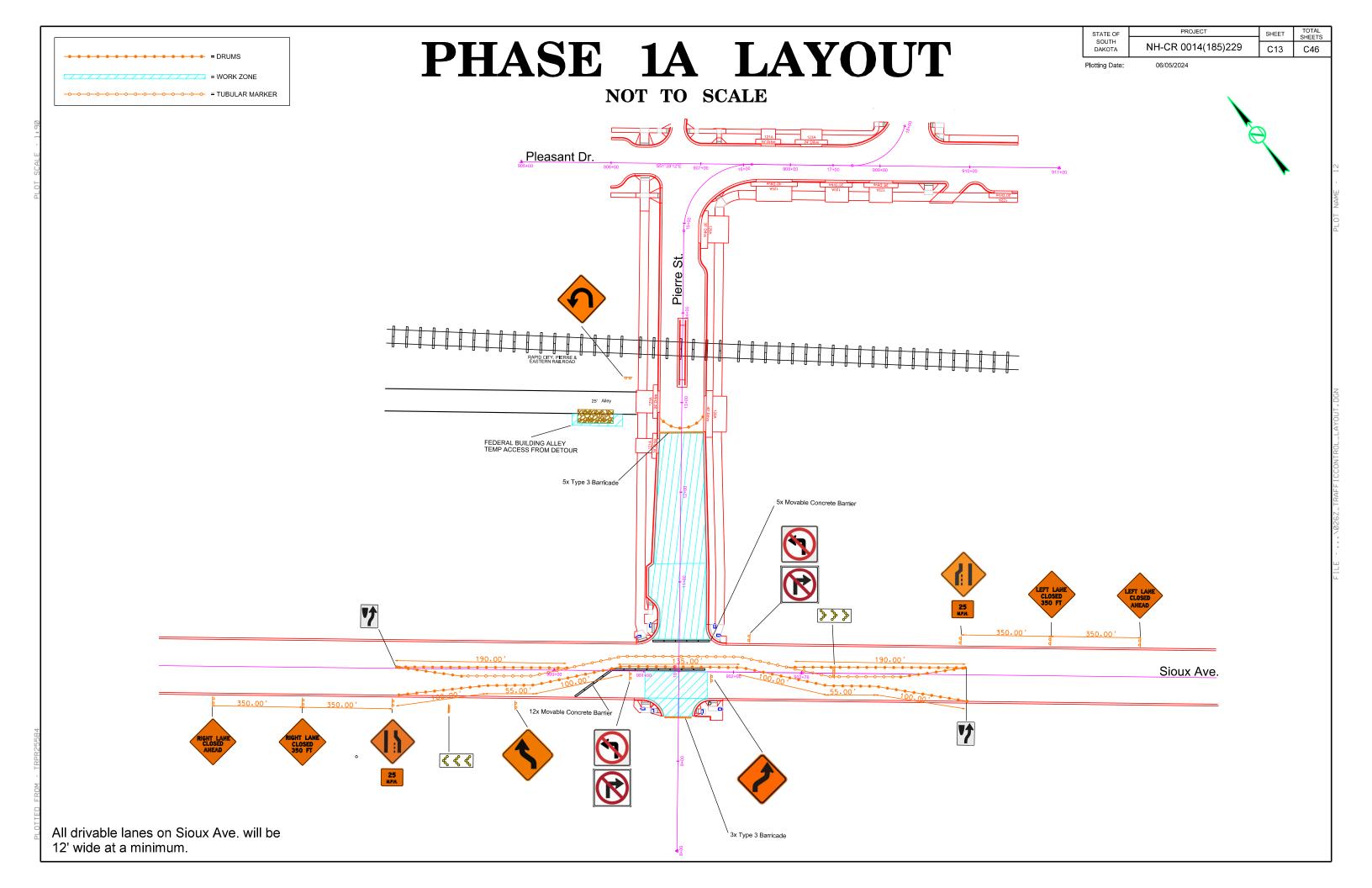
	FOR TRAFFIC CONTROL DELINEATION AND MARKING (TOTAL <u>APPLICATION</u> ESTIMATES)							
PHASE	TEMPORARY RAISED PAVEMENT MARKER (4" YELLOW UNLESS OTHERWISE SPECIFIED)	BALLASTABLE JERSEY BARRIER (EDGELINE)	TUBULAR MARKER (CENTERLINE) (N.A.B.I.)	TRAFFIC CONTROL DRUM (EDGELINE/TAPERS) (N.A.B.I.)	TRAFFIC CONTROL MOVABLE CONCRETE BARRIER	TYPE 3 BARRICADE	TRAFFIC CONTROL CANDLESTICK (DELINEATOR (N.A.B.I.)	
	(ft)	(ft)	(each)	(each)	(each)	(each)	(each)	
1A	1971 (yellow) 290 (white)	-	44	98	17	8	37	
1B	985	-	44	98	12	8	37	
1C	842	-	37	65	4	14	37	
1D	692	455	15	20	-	9	-	
1E	1005	315	22	17	-	9		
2A/2B/2C/2D	-	-	-	-	-	20	-	
3A	-	-	-	-	-	31	-	
3B	2534	1410	51	12	-	17	-	
3C	2396	1410	51	12	-	18	-	
3 UTIL RELOC	468	-	15	10	-	16	-	
4A	3638	1705	79	45	-	14	-	
4B	3922	1705	79	45	-	24	-	
TOTALS:	18743	7000	437	422	33	188	37	

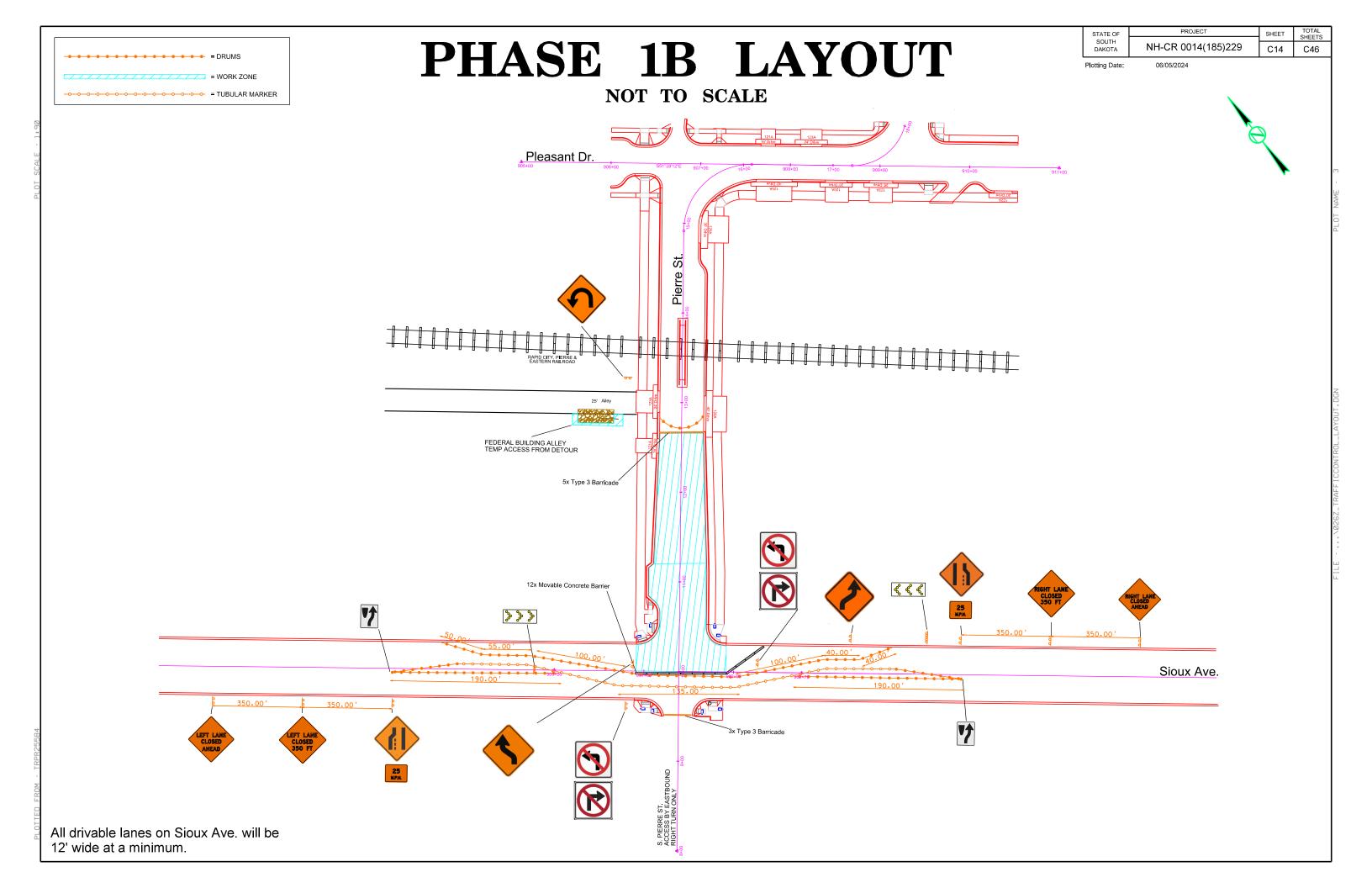
#### TABLE OF TEMPORARY PAVEMENT MARKING

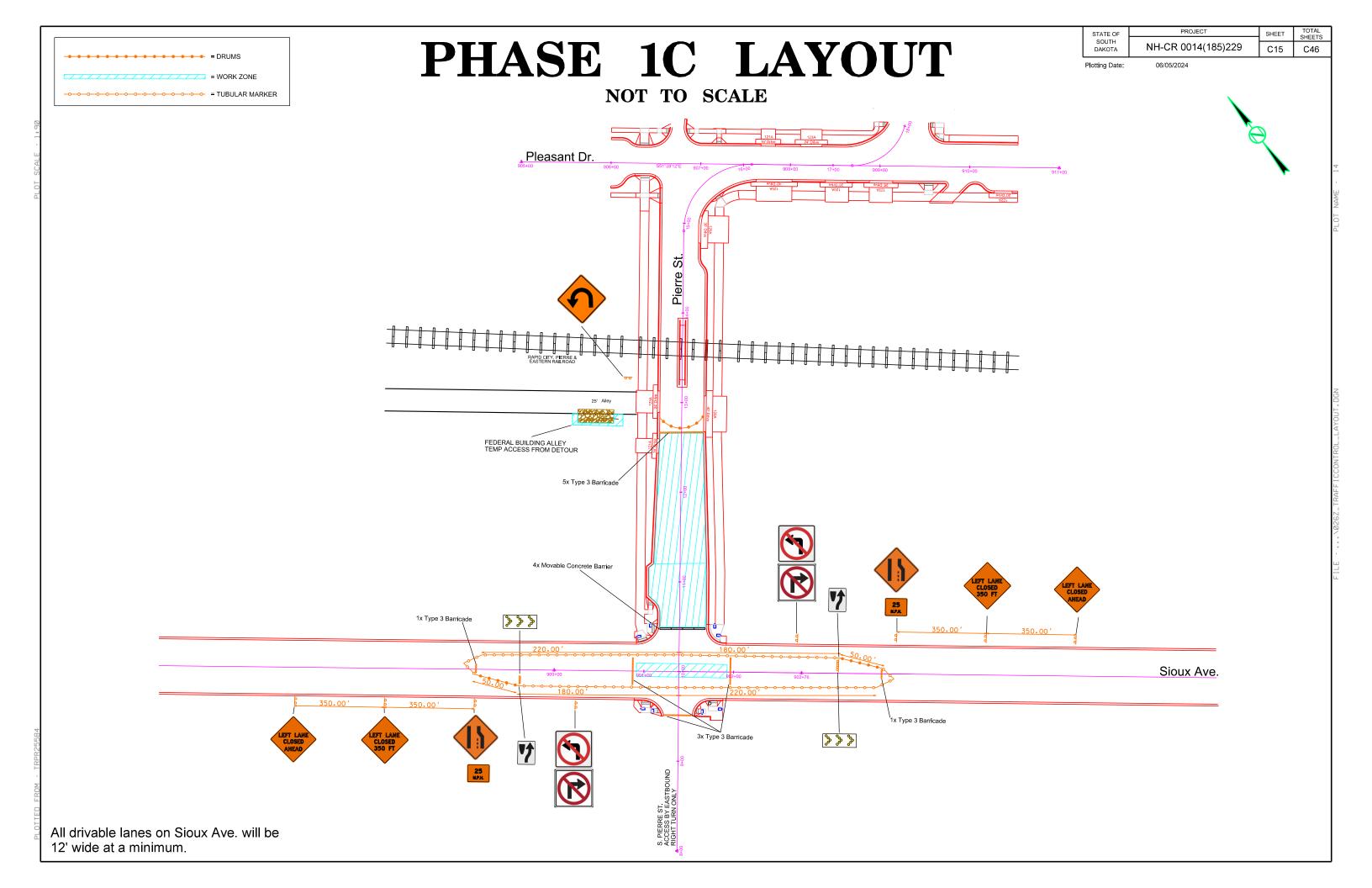
\*S. Pierre St. configuration quantities included in Phase 1A, 1B, and 1C entries.

		FOR	PERMANENT PAVEMENT MA	ARKING	
PHASE	TEMPORARY PAVEMENT MARKING (4" WHITE)	TEMPORARY PAVEMENT MARKING (4" YELLOW)	TEMPORARY PAVEMENT MARKING (24" WHITE)	TEMPORARY PAVEMENT MARKING (24" YELLOW)	TEMPORARY PAVEMENT MARKING (ARROW)
	(ft)	(ft)	(ft)	(ft)	(each)
1A/1B/1C/1D/1E	1262	2631	582	96	6
2A/2B/2C/2D	2607	3462	877	-	24
3A	1942	2813	-	68	-
3B/3C	688	2835	840	-	3
4A/4B	1891	5023	-	88	13
ELIZABETH ST.	201	928	-	24	2
TOTALS:	8591	17692	2299	276	48
	26	5283	2!		









= CANDLESTICKS (DELINEATORS)

## PHASES 1A-1C S PIERRE ST

**ONE-WAY CONFIGURATION** 

STATE OF NH-CR 0014(185)229

Plotting Date:

C16 Revised 10/07/2024 JDC

C46

SHEET

NOT TO SCALE

U-turn to return traffic to Dakota Ave. (6 candlesticks)

3x Type 3 Barricade

Block off 4 stalls each side on north end for U-turn (7 candlesticks each side)

\*Create temporary handicap stall w/ curb ramp

\*17 candlesticks denoting CL (All candlesticks under Traffic Control, Miscellaneous)

Rotate existing signs to match mirrored parking (Traffic Control, Miscellaneous)

\*Mask existing stall markings and gore area

\*Install temporary raised 4" yellow markers on median (1x application)

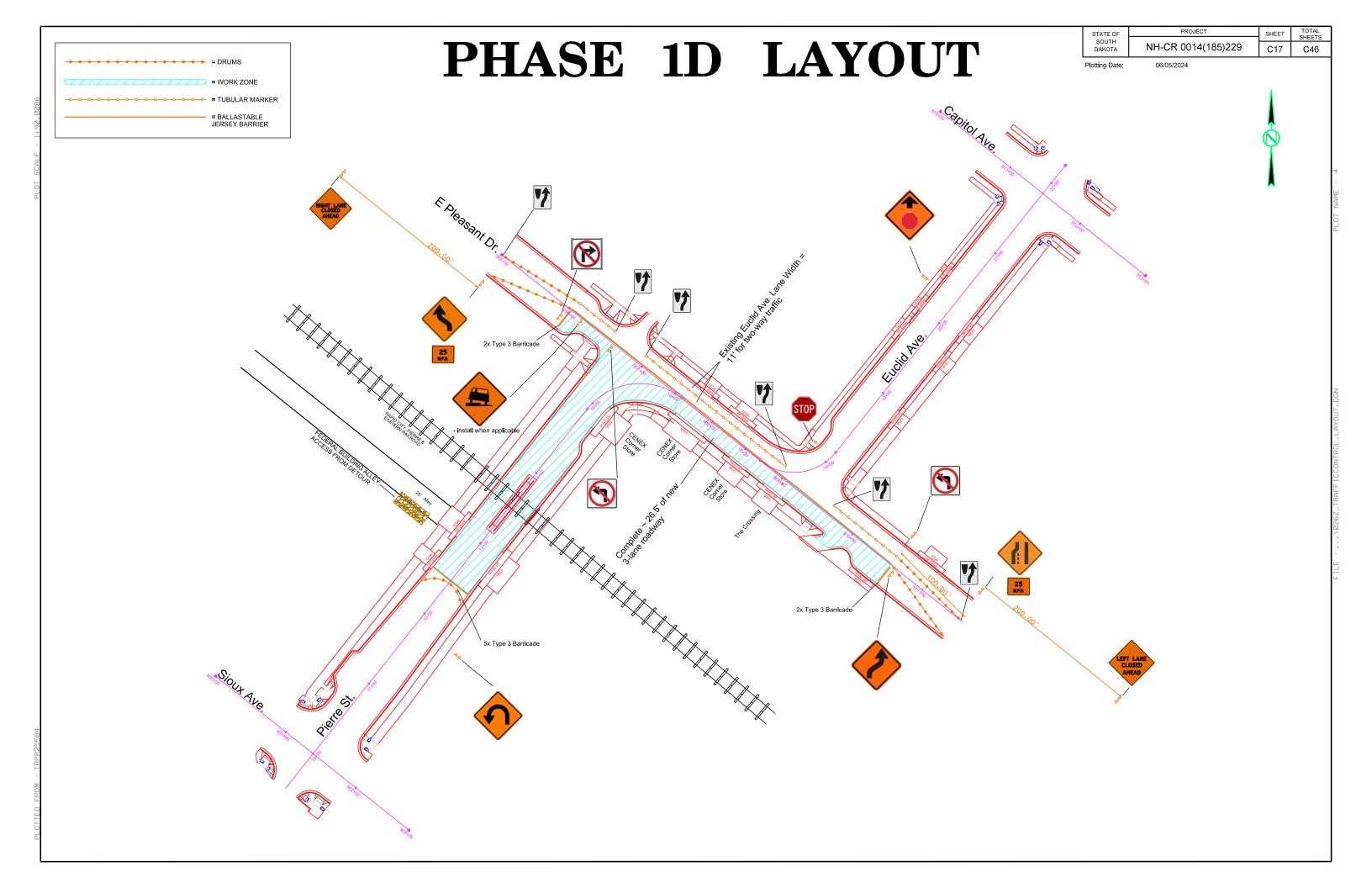
\*Install temporary raised 4" white markers to mirror existing stall markings (1x application)

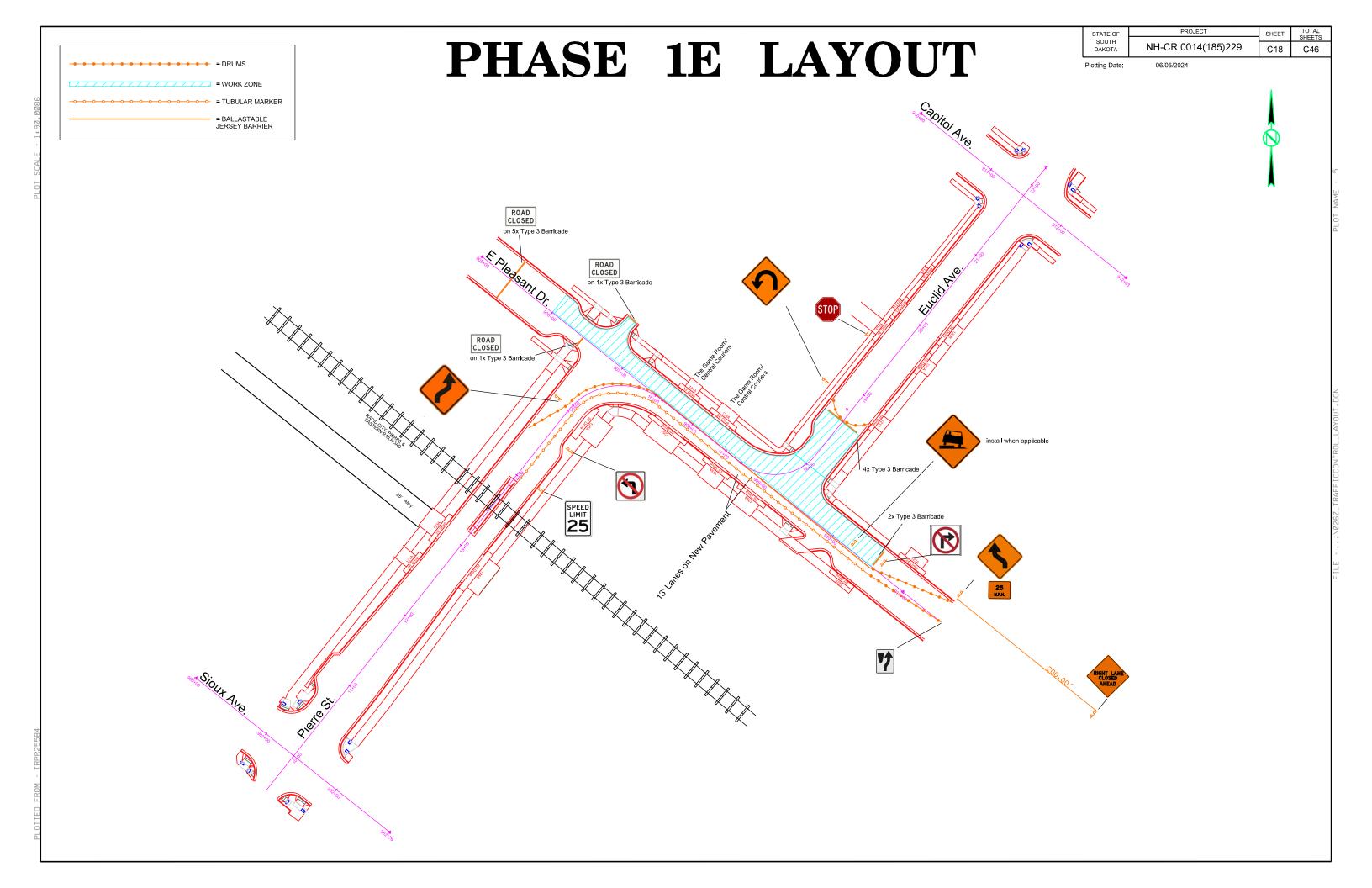
10

\*Mask existing arrow markings at south end

\*Refer to Sheet C44 for further detailing; Phase 1A-1C S Pierre St. Typical Section.

BBEE OGOOD

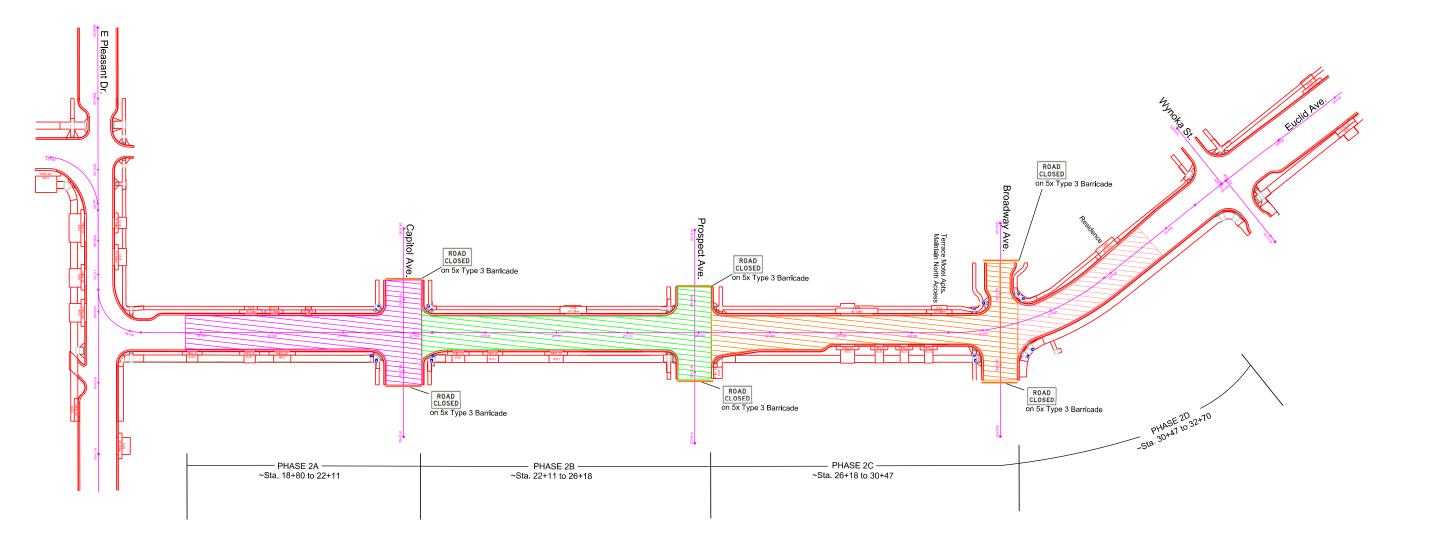




# PHASE 2A, 2B, 2C, 2D (BLOCK CLOSURES)

Plotting Date: 06/05





If the Contractor elects to close a block at halfway through an intersection, traffic control will be set up in accordance with Standard Plate 634.25, with an additional stop sign along Euclid for north-south traffic.

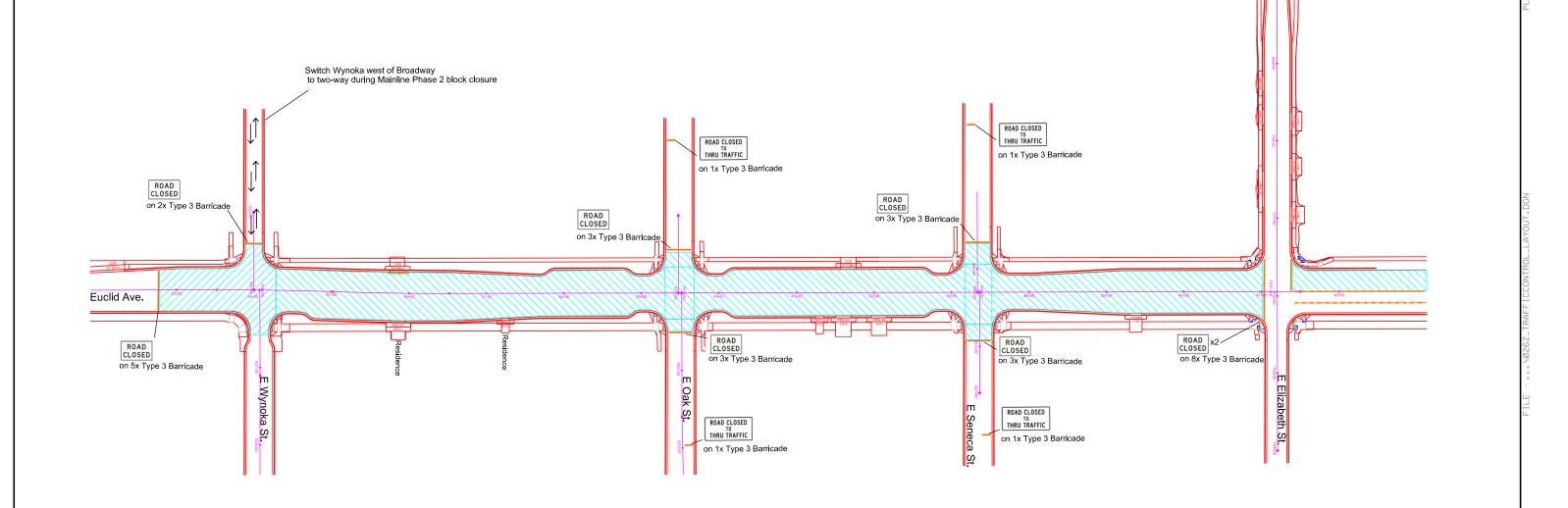
30M - TRPR25584

## PHASE 3A (BLOCK CLOSURE)

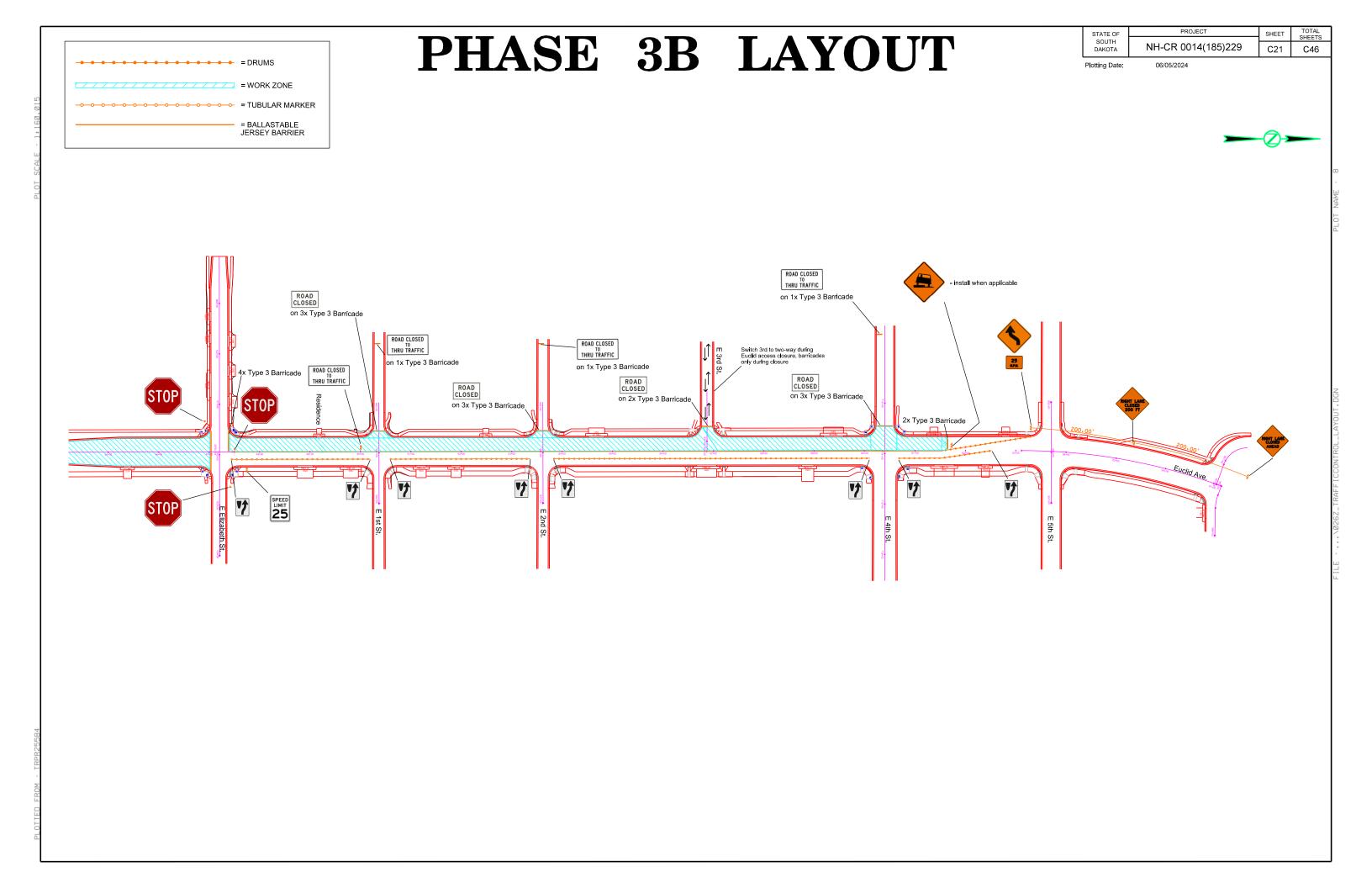
| STATE OF | SOUTH | DAKOTA | NH-CR 0014(185)229 | C20 | C46 |

Plotting Date:





EN FORM . TEEDSSESSA



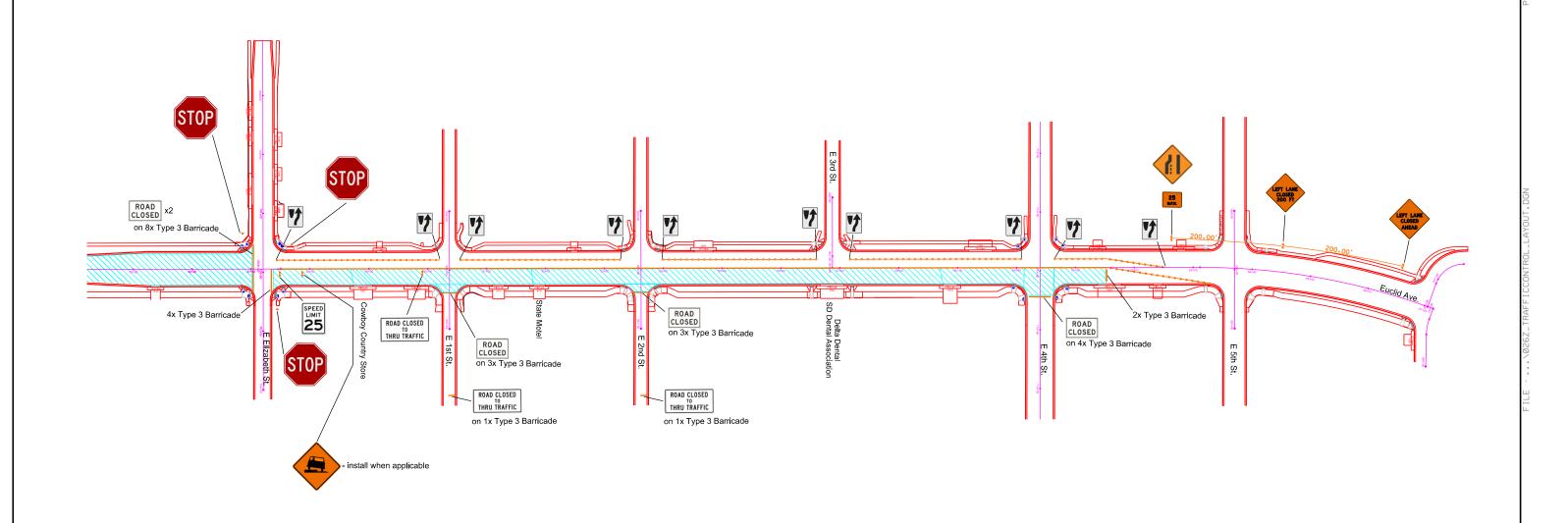


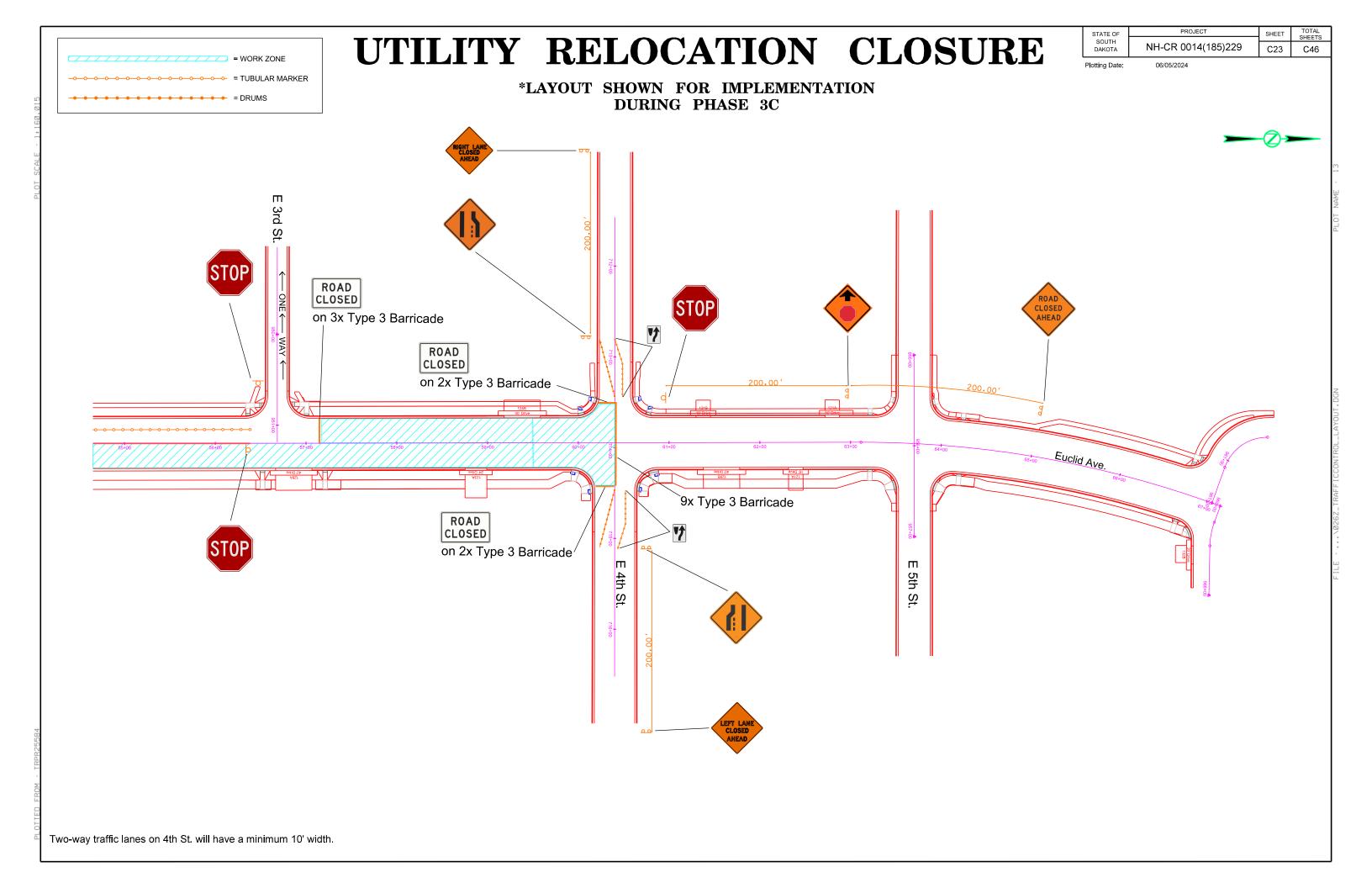
## PHASE 3C LAYOUT

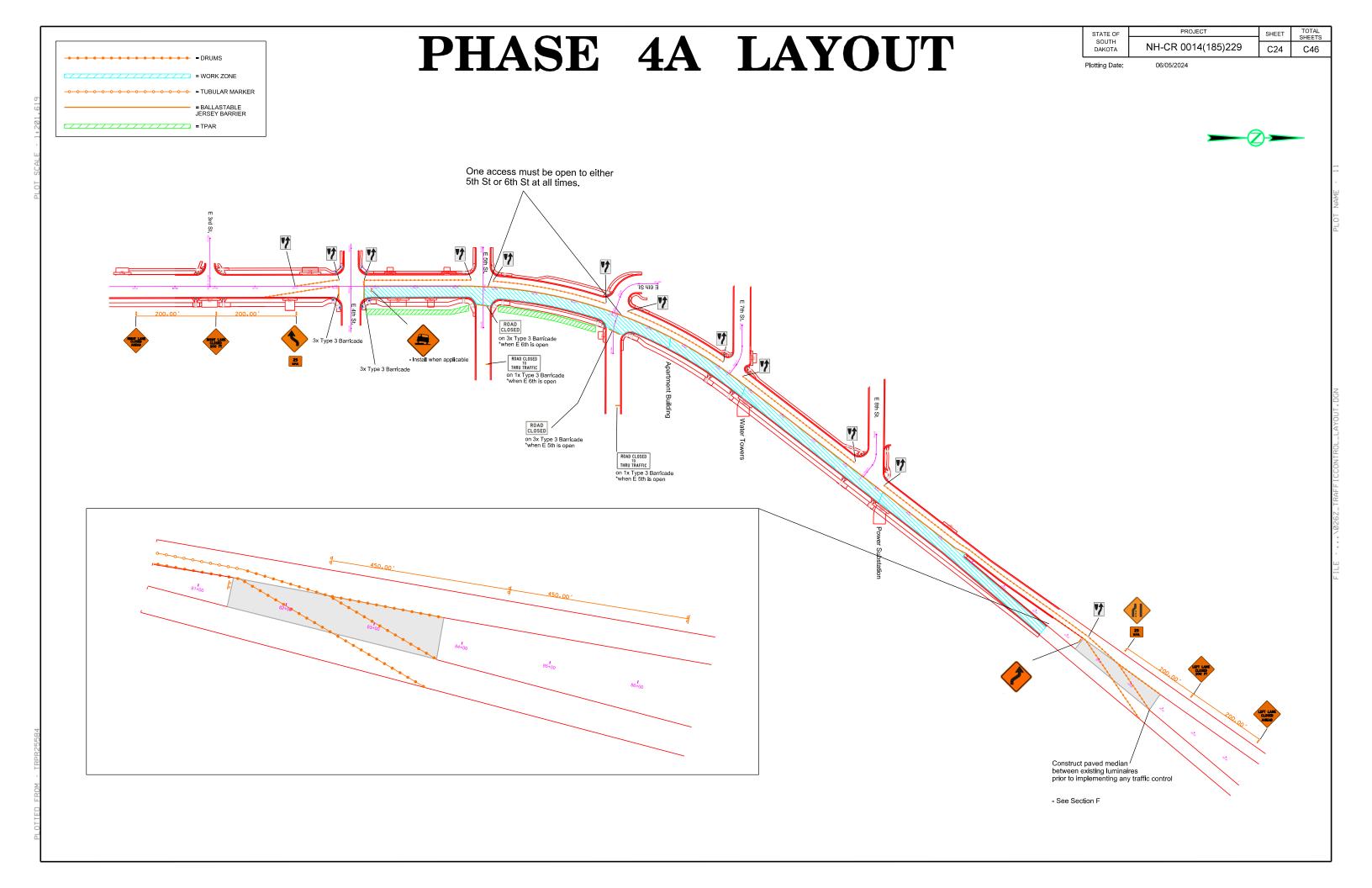
	PROJECT		TOTAL
STATE OF	PROJECT	SHEET	SHEETS
SOUTH DAKOTA	NH-CR 0014(185)229	C22	C46

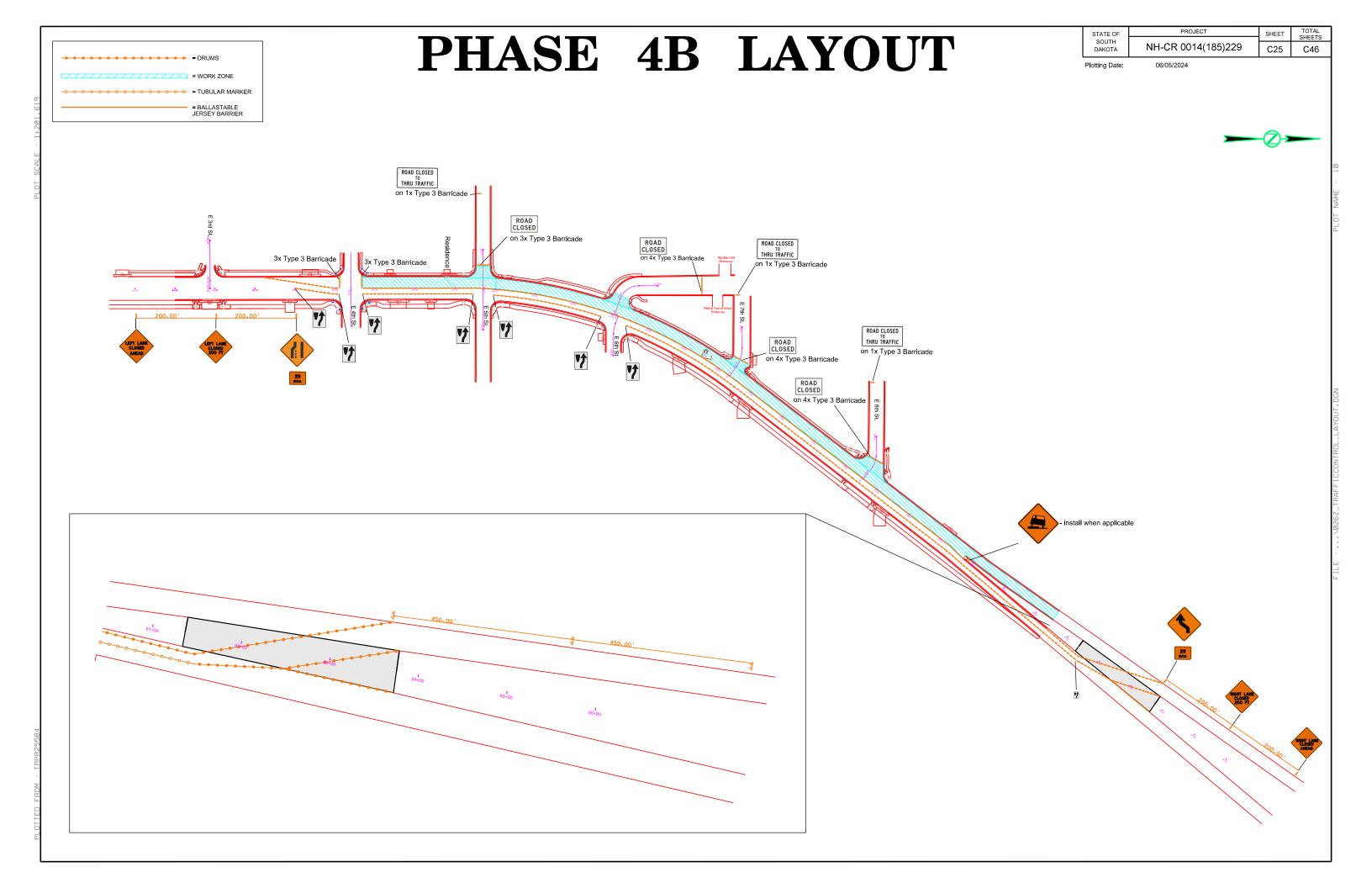
Plotting Date: 06/05/2024

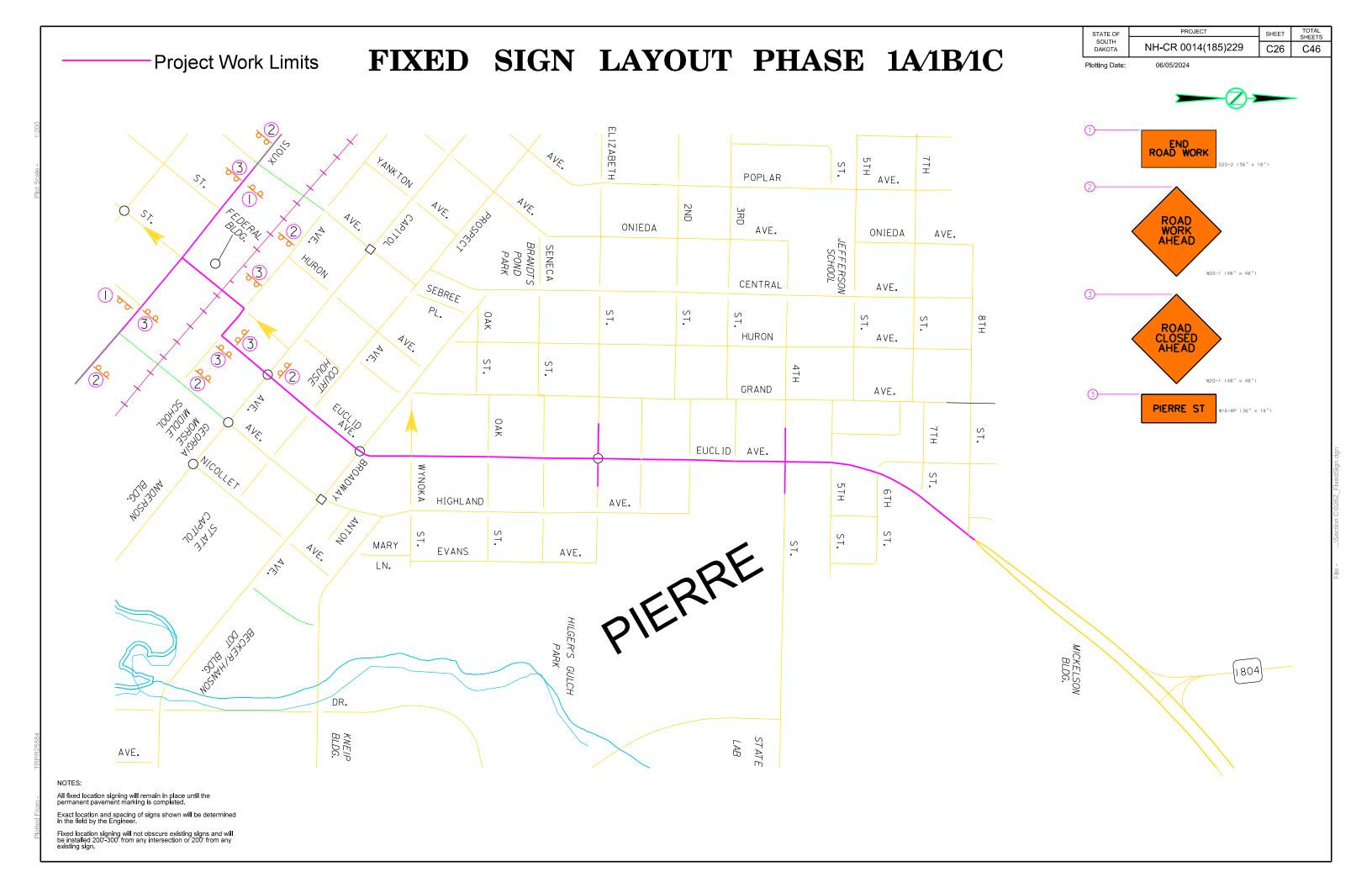


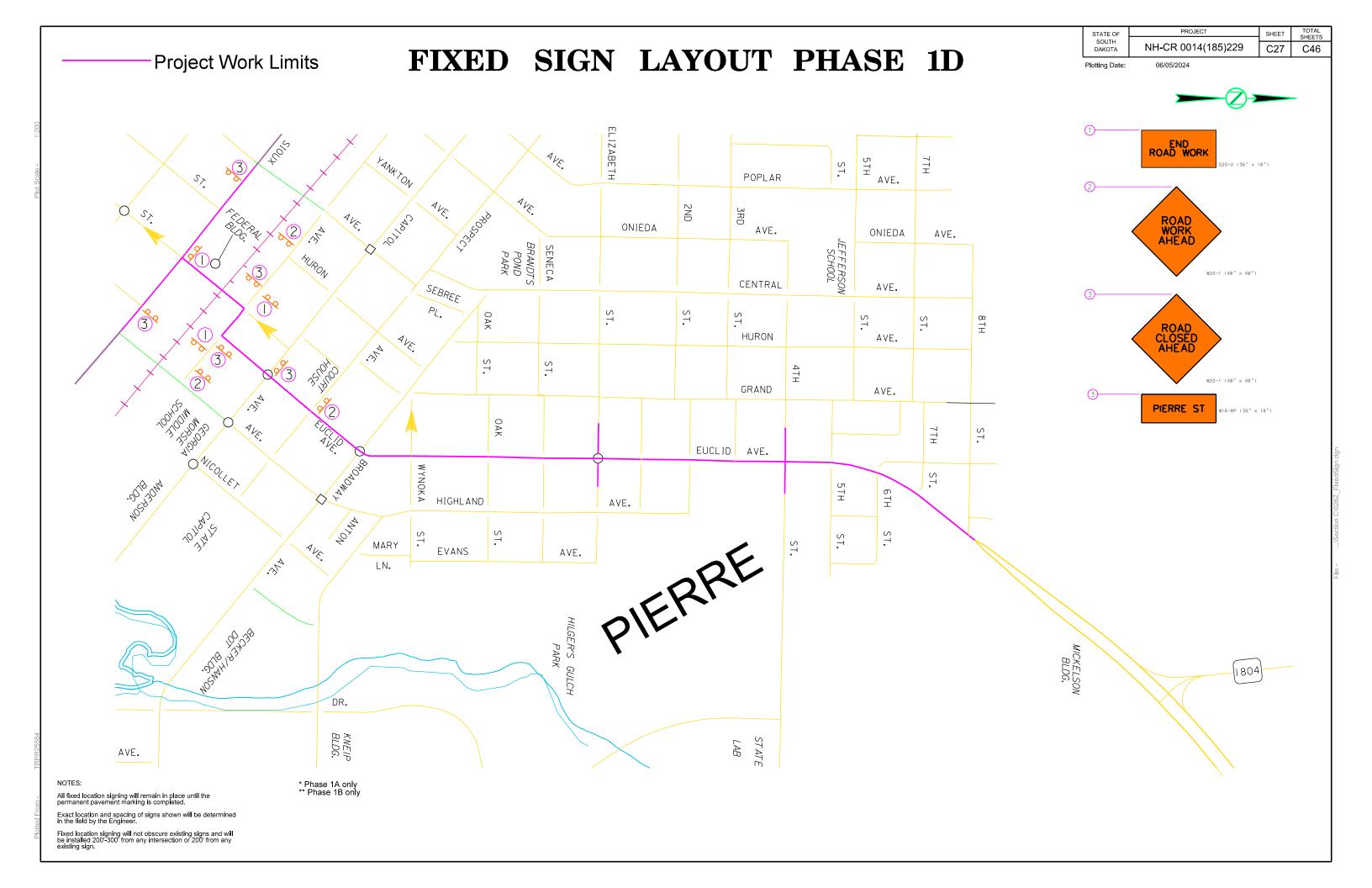


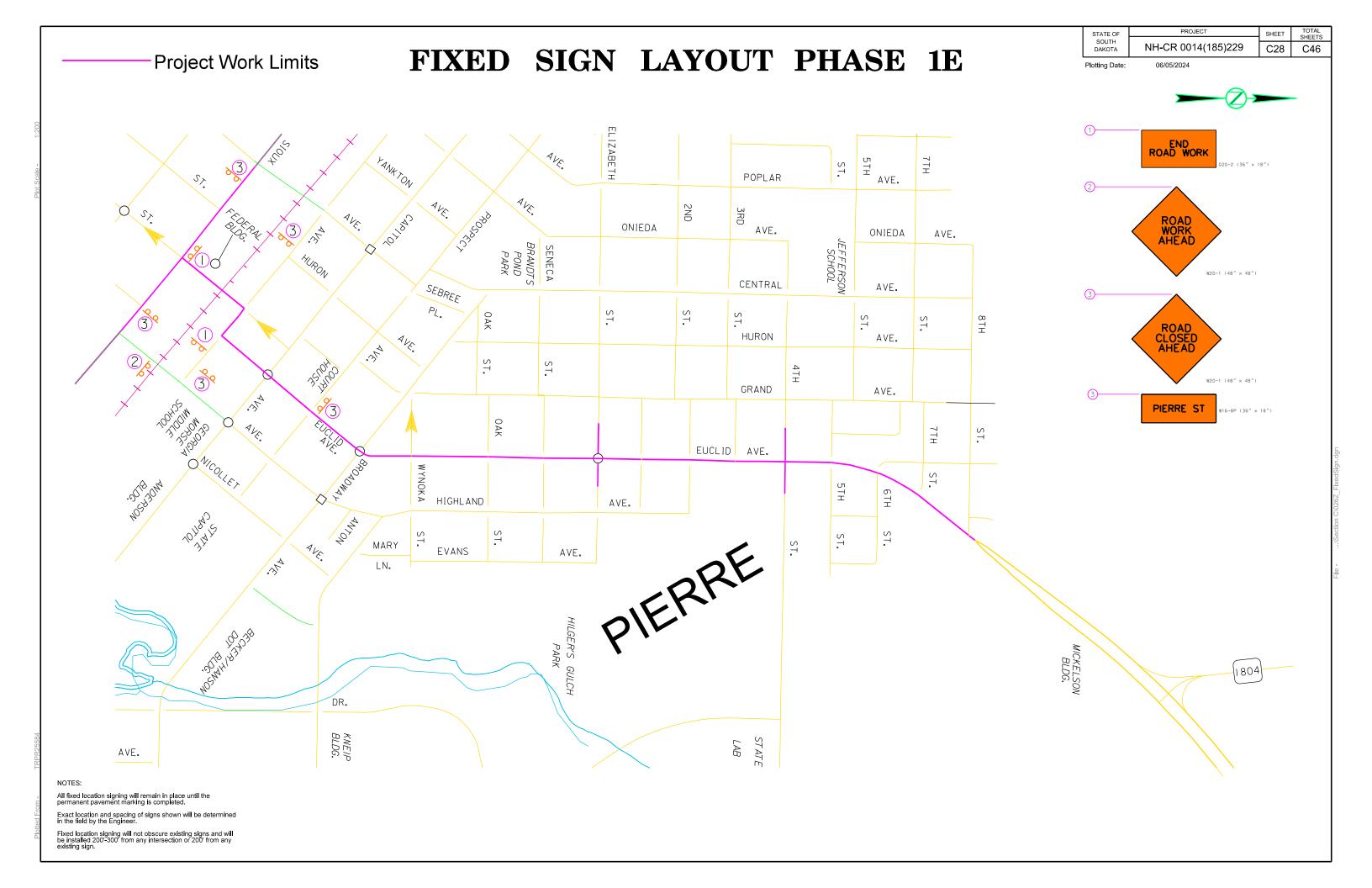


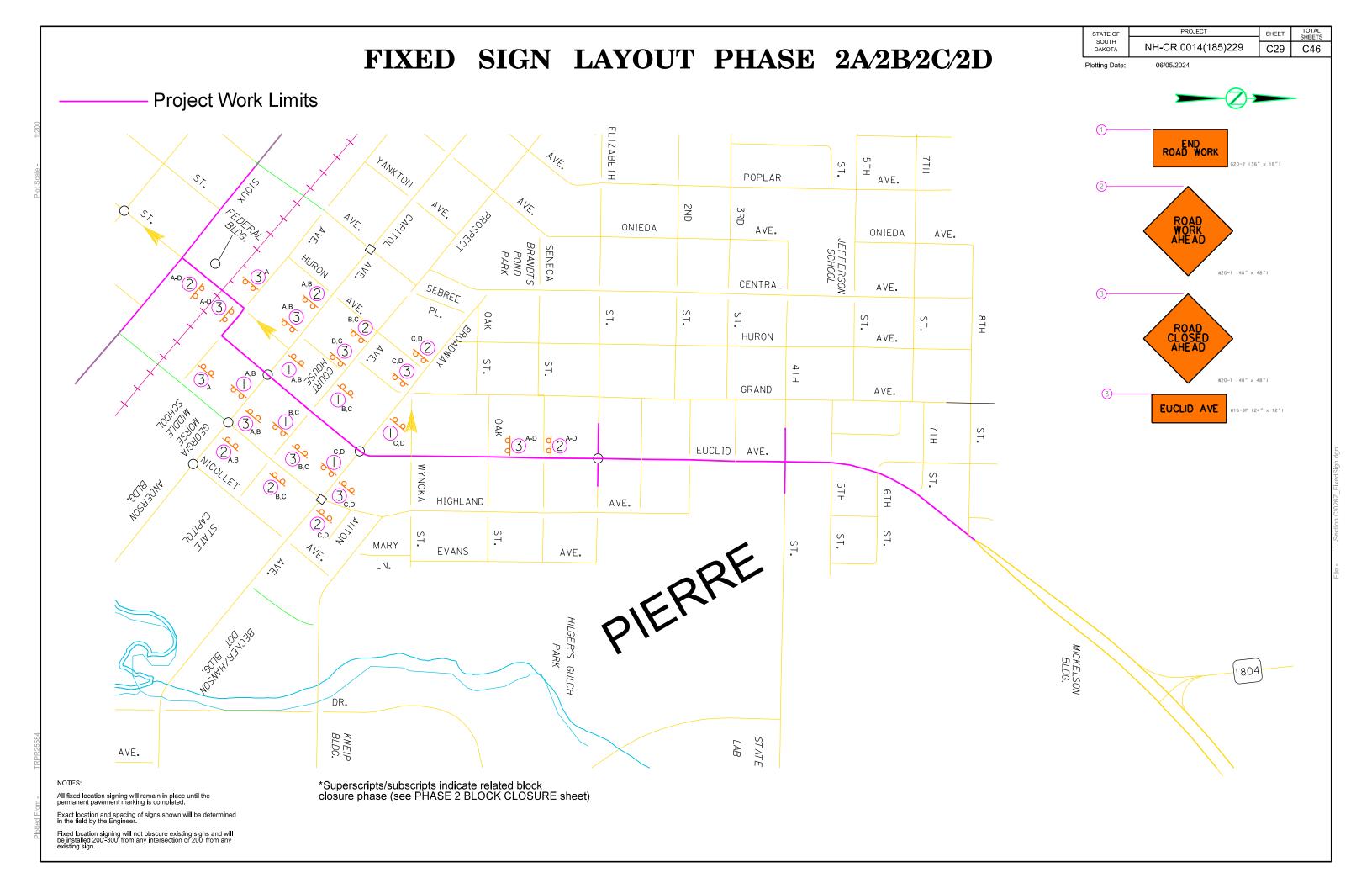


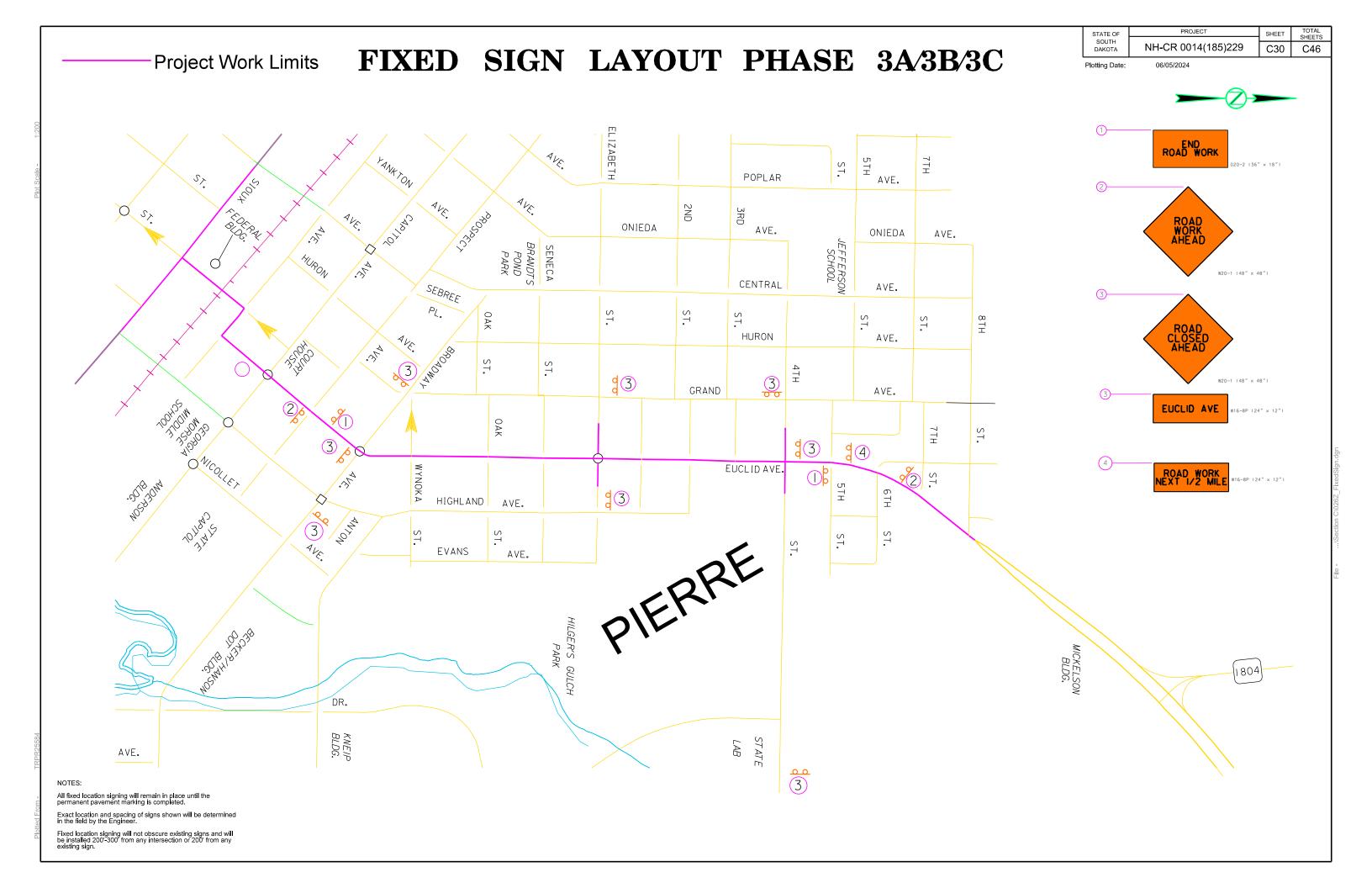


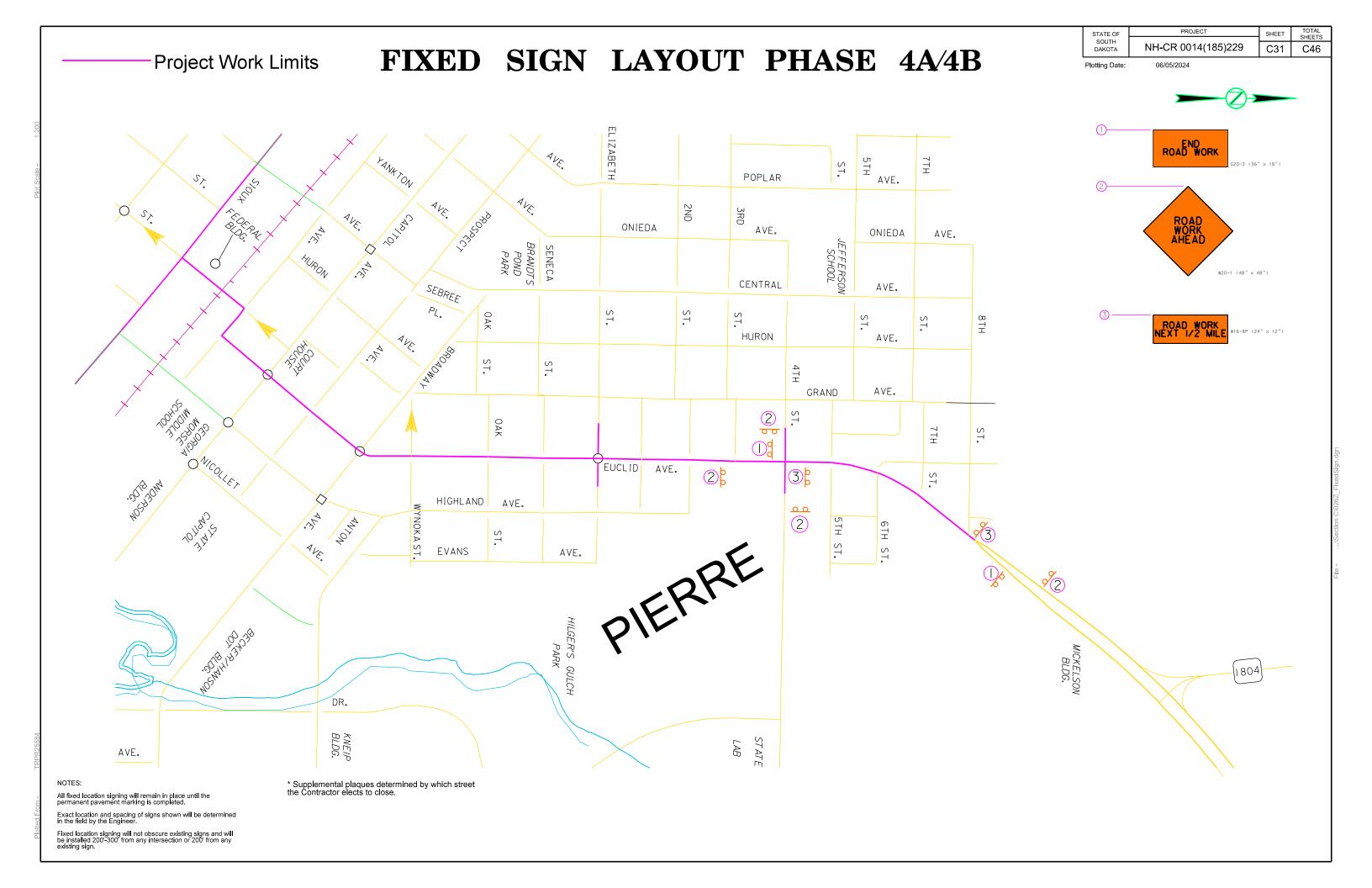












DETOUR ROUTE

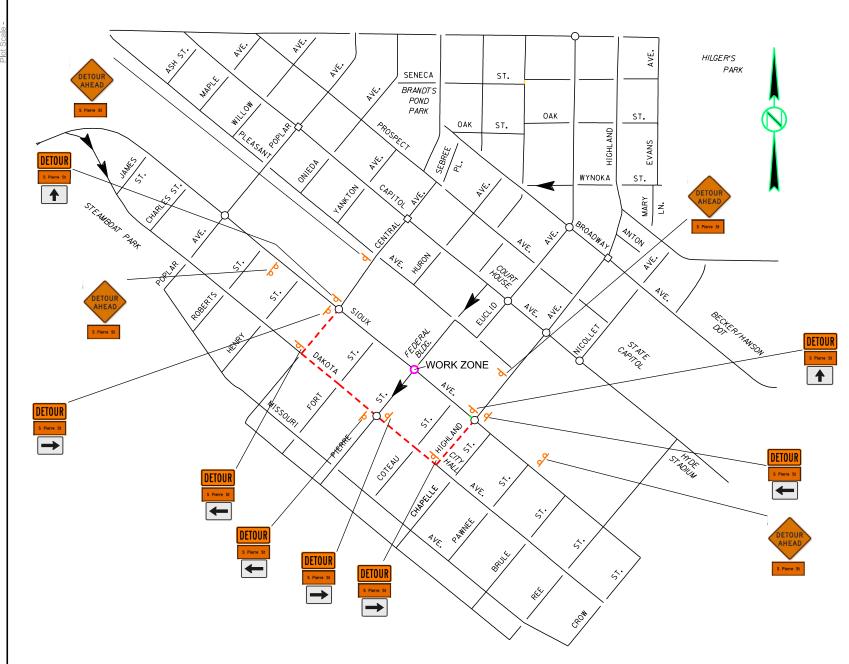
### PHASE 1A-1C S PIERRE ST DETOUR

 STATE OF SOUTH DAKOTA
 PROJECT
 SHEET SHEETS
 TOTAL SHEETS

 NH-CR 0014(185)229
 C32
 C46

Plotting Date:

06/05/2024











M6-1L (21" x 15")





S Pierre St

W20-2 (48" x 48")

W16-8P (24" x 12")

SIGN CODE	DIMENSIONS		CICAL DECCRIPTION	COLOR		CICAL ADEA (auft)	CHANTITY	TOTAL ADEA (ft)
	WIDTH (in)	HEIGHT (in)	SIGN DESCRIPTION	BACKGROUND	LEGEND/BORDER	SIGN AREA (sqft)	QUANTITY	TOTAL AREA (sqft)
W20-2	48	48	DETOUR AHEAD	ORANGE	BLACK	16.0	4	64.0
M4-8	24	12	DETOUR	ORANGE	BLACK	2.0	8	16.0
M6-1R	21	15	RIGHT ARROW	WHITE	BLACK	2.2	3	6.6
M6-1L	21	15	<i>LEFT ARROW</i>	WHITE	BLACK	2.2	3	6.6
M6-3	21	15	AHEAD ARROW	WHITE	BLACK	2.2	2	4.4
W16-8P	24	12	S PIERRE ST	ORANGE	BLACK	2.0	12	24.0
•							TOTAL AREA	121.5

:

## ADVANCED WARNING WIDTH RESTRICTION SIGN DETAILING (PHASE 1A/1B/1C SIOUX AVE)

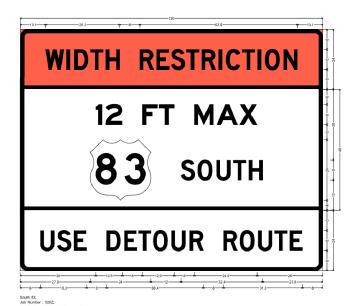
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS	
	NH-CR 0014(285)229	C33	C46	

Plotting Date:

06/05/2024



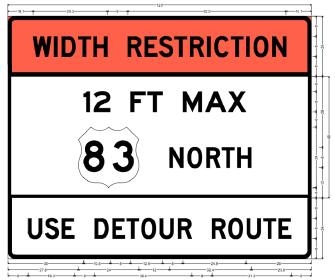
(1A)



(2A)



(1B)

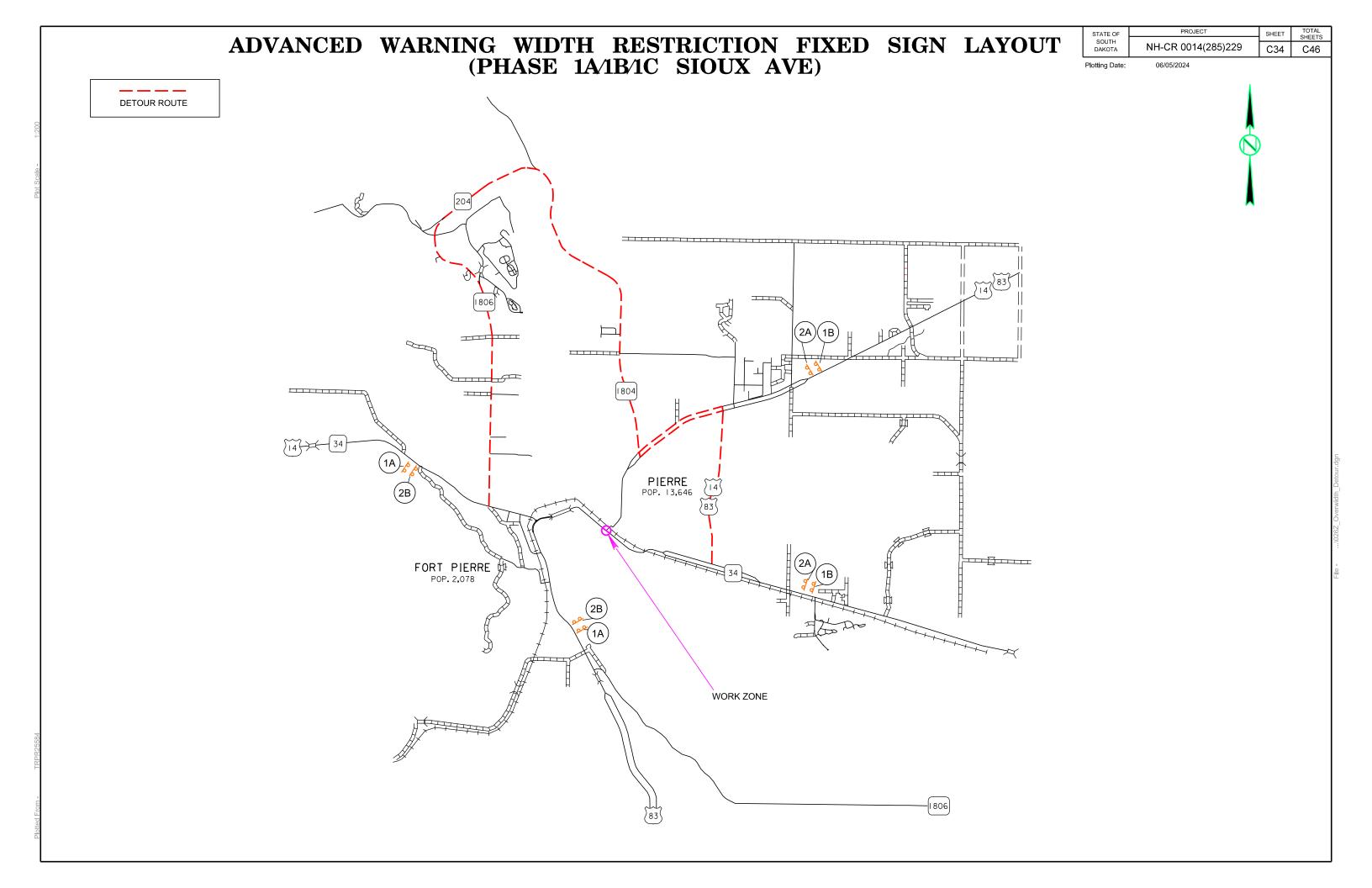


North 83
Ab Number - 0282;
3.0° Radius, 1.9° Border, Black on Fluorescent or MOTH RESTRICTION\*, D. 3X 85% spacing.
North 83;
5.00 Number - 0282;

2B

TRPR25584

tted From - Tl



### OVERWIDTH DETOUR ROUTE SIGN DETAILING (PHASE 1A/1B/1C SIOUX AVE)

PROJECT TOTAL SHEETS STATE OF SHEET SOUTH DAKOTA NH-CR 0014(285)229 C35 C46

Plotting Date:

06/05/2024









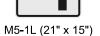
















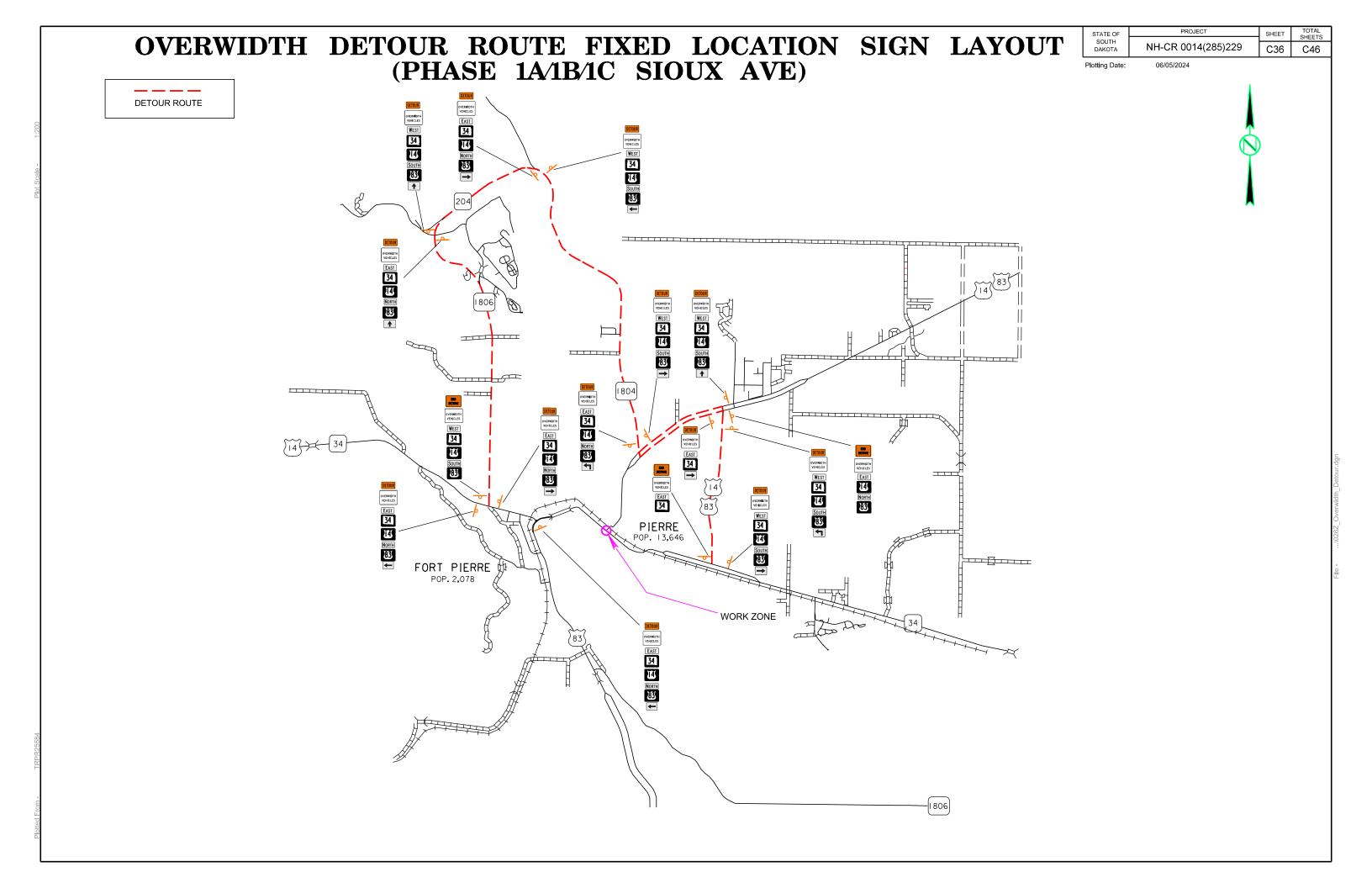






SPECIAL (30" x 24")

SIGN CODE	DIMENSIONS		SIGN DESCRIPTION	COLOR		SIGN AREA (sqft)	QUANTITY	TOTAL AREA (sqft)
	WIDTH (in)	HEIGHT (in)		BACKGROUND	LEGEND/BORDER			
M1-4 (US83)	24	24	US83 ROUTE MARKER	BLACK/WHITE	BLACK	4.0	14	56.0
M1-4 (US14)	24	24	US14 ROUTE MARKER	BLACK/WHITE	BLACK	4.0	14	56.0
M1-5 (SD34)	24	24	SD34 ROUTE MARKER	BLACK/WHITE	BLACK	4.0	15	60.0
M3-1	24	12	NORTH	WHITE	BLACK	2.0	7	14.0
M3-2	24	12	EAST	WHITE	BLACK	2.0	9	18.0
M3-3	24	12	SOUTH	WHITE	BLACK	2.0	7	14.0
M3-4	24	12	WEST	WHITE	BLACK	2.0	7	14.0
M4-8	24	12	DETOUR	ORANGE	BLACK	2.0	13	26.0
M4-8A	24	18	END DETOUR	ORANGE	BLACK	3.0	3	9.0
M5-1L	21	15	WIDE LEFT ARROW	WHITE	BLACK	2.2	2	4.4
M6-1R	21	15	RIGHT ARROW	WHITE	BLACK	2.2	5	10.9
M6-1L	21	15	LEFT ARROW	WHITE	BLACK	2.2	3	6.6
M6-3	21	15	AHEAD ARROW	WHITE	BLACK	2.2	2	4.4
SPECIAL	30	24	OVERWIDTH VEHICLES	WHITE	BLACK	5.0	16	80.0
	•		•			•	TOTAL AREA	373.3



### PHASE 2 – 3 DETOUR SIGN DETAILING

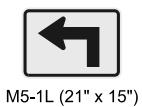
STATE OF	PROJECT	SHEET	TOTAL SHEETS	
SOUTH DAKOTA				
	NH-CR 0014(185)229	C37	C46	

Plotting Date:

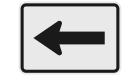
06/05/2024













M6-1L (21" x 15")

M6-3 (21" x 15")



R10-9 (24" x 30")

ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY

R11-3a (60" x 30")







W16-8P (24" x 12")



W16-8P (24" x 12")

SIGN CODE	DIMENSIONS		SIGN DESCRIPTION	COLOR		CICN AREA (auth)	OLIANTITY	TOTAL ADEA (a(4)
	WIDTH (in)	HEIGHT (in)	SIGN DESCRIPTION	BACKGROUND	LEGEND/BORDER	SIGN AREA (sqft)	QUANTITY	TOTAL AREA (sqft)
W20-2	48	48	DETOUR AHEAD	ORANGE	BLACK	16.0	3	48.0
M4-8	24	12	DETOUR	ORANGE	BLACK	2.0	10	20.0
M4-8A	24	18	END DETOUR	ORANGE	BLACK	3.0	2	6.0
M5-1L	21	<b>1</b> 5	WIDE LEFT ARROW	WHITE	BLACK	2.2	2	4.4
M6-1R	21	15	RIGHT ARROW	WHITE	BLACK	2.2	2	4.4
M6-1L	21	15	LEFT ARROW	WHITE	BLACK	2.2	1	2.2
M6-3	21	15	AHEAD ARROW	WHITE	BLACK	2.2	5	10.9
R10-9	24	30	NO THRU TRAFFIC	WHITE	BLACK	5.0	6	30.0
R11-3A	60	30	ROAD CLOSED XX MILES LOCAL TRAFFIC ONLY	WHITE	BLACK	12.5	3	37.5
W16-8P	24	12	US14	ORANGE	BLACK	2.0	18	36.0
W16-8P	24	12	EUCLID AVE	ORANGE	BLACK	2.0	18	36.0
	•			,			TOTAL AREA	235.4

STATE OF SOUTH DAKOTA PHASE 2 – 3 DETOUR FIXED LOCATION SIGN LAYOUT NH-CR 0014(185)229 C38 Plotting Date: **DETOUR ROUTE** ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY WORK ZONE ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY 1 MILE

PROJECT TOTAL SHEETS STATE OF SHEET Revised 10/07/2024 JDC PHASE 1A-1C S PIERRE ST NH-CR 0014(185)229 C39 C46 DAKOTA Plotting Date: 06/05/2024 **DETOUR ROUTE BUSINESS ACCESS SIGNING DOWNTOWN** HILGER'S **BUSINESS** SENECA ST. ACCESS BRANDTS POND OAK ST. ST. WYNOKA ST. **DOWNTOWN BUSINESS** ACCESS **DOWNTOWN DOWNTOWN BUSINESS BUSINESS** ACCESS WORK ZONE **ACCESS** DOWNTOWN **DOWNTOWN BUSINESS BUSINESS ACCESS** ACCESS **DOWNTOWN DOWNTOWN BUSINESS BUSINESS** ACCESS ACCESS

= Ped Detour Route

= Work Zone

## PEDESTRIAN DETOUR - HILGERS GULCH

STATE OF SOUTH DAKOTA NH-CR 0014(185)229 C40

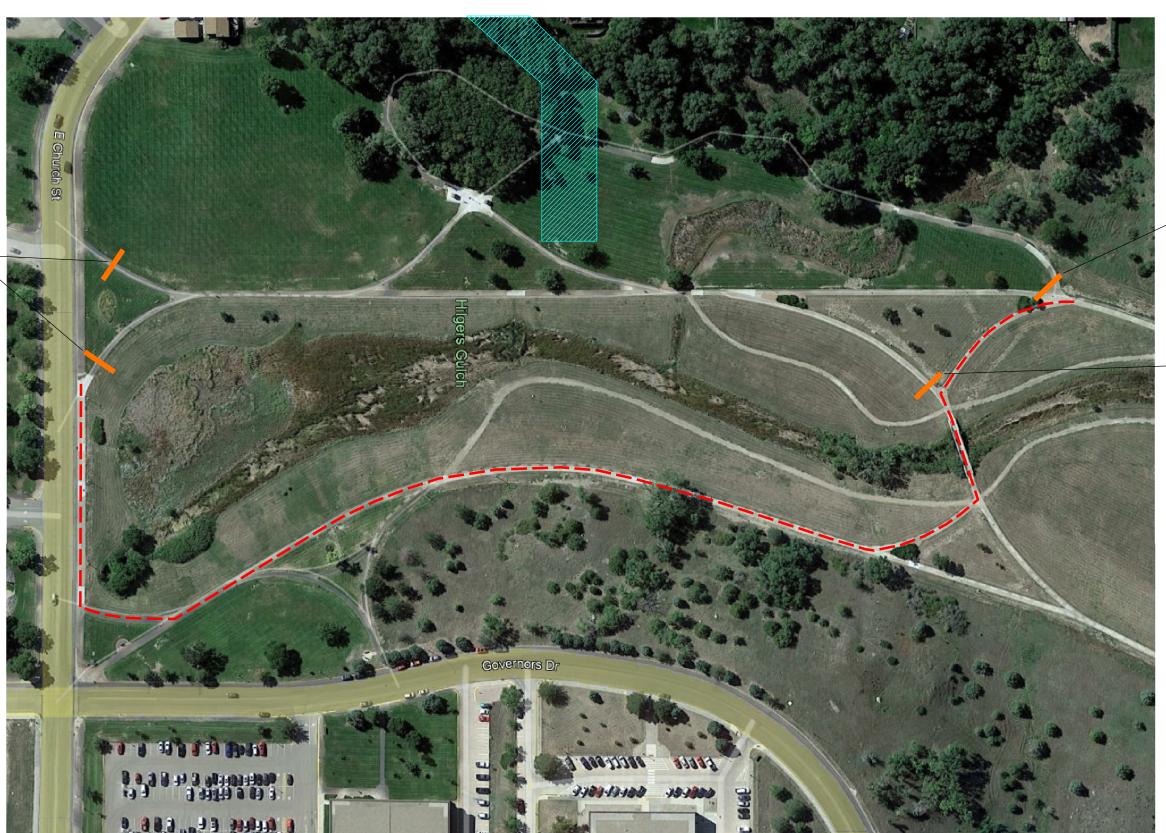
Plotting Date:



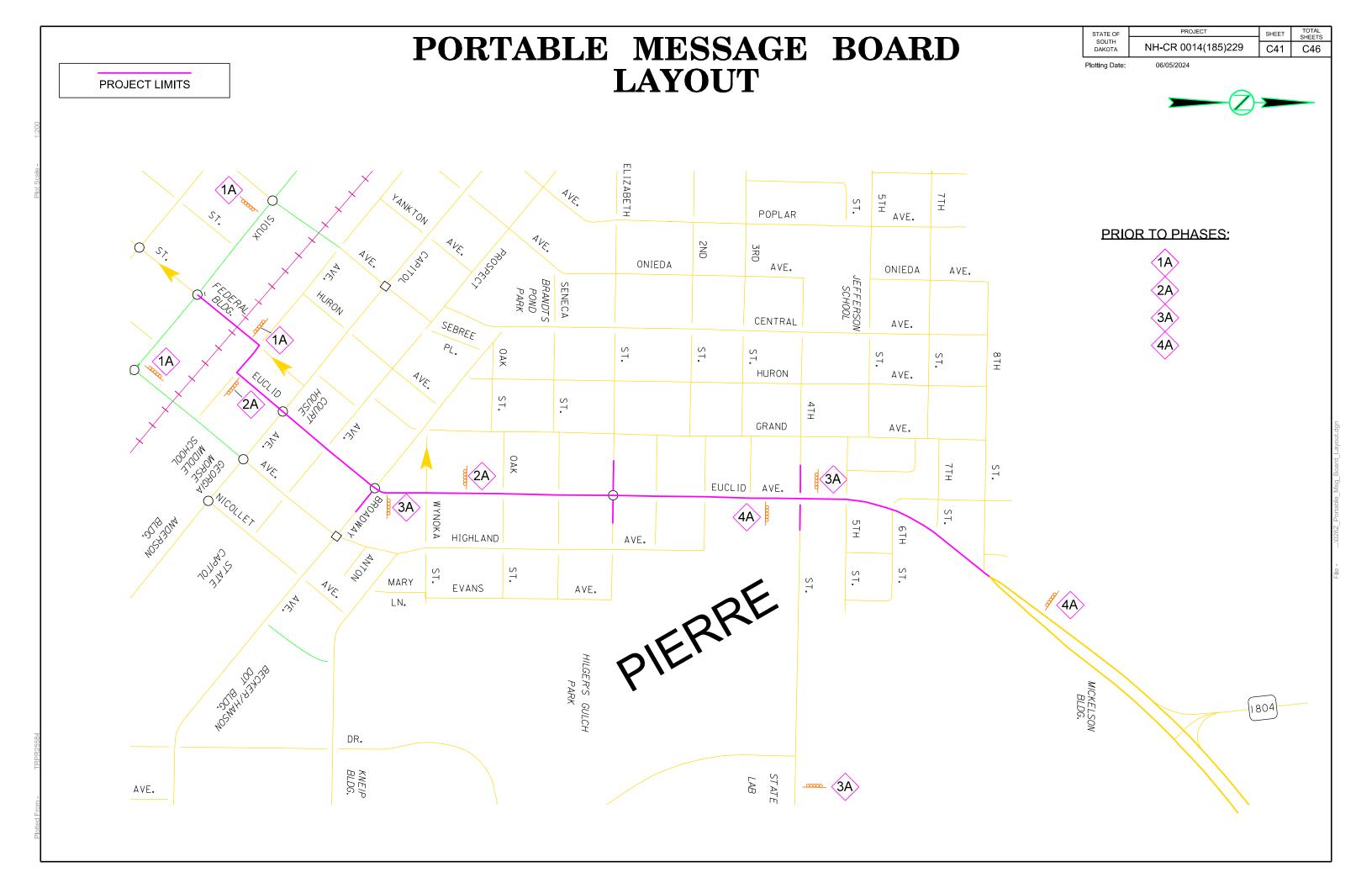
SIDEWALK CLOSED AHEAD

CROSS HERE

SIDEWALK CLOSED



SIDEWALK CLOSED AHEAD **CROSS HERE** 



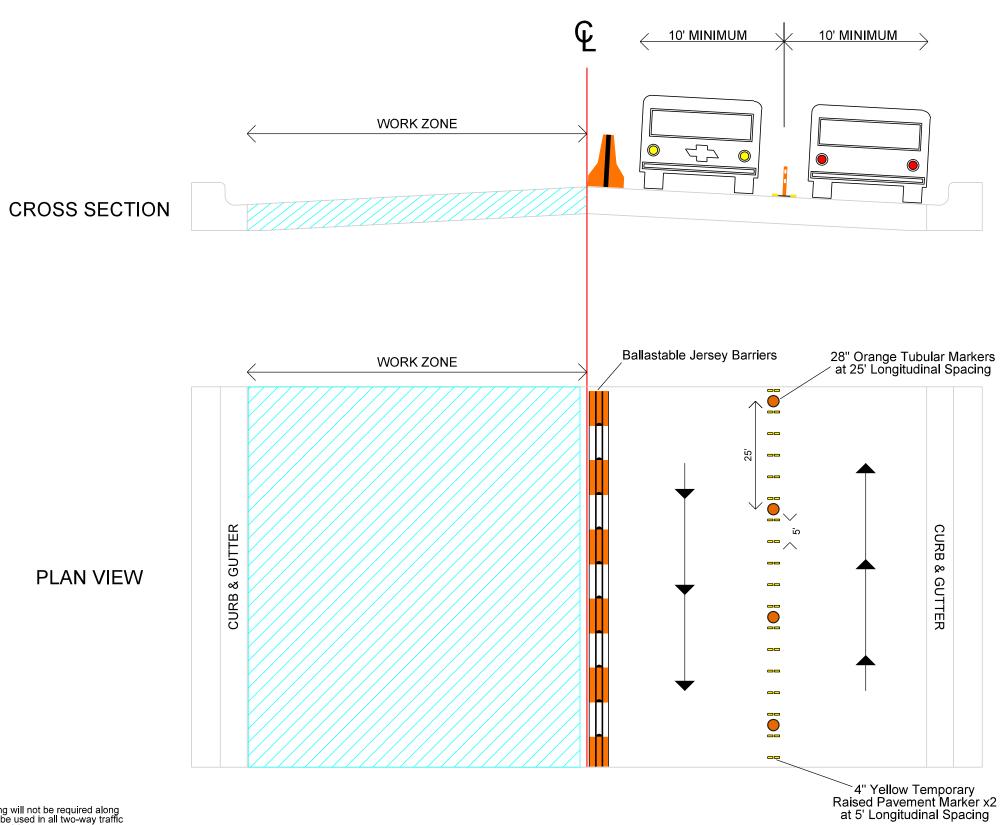
## TRAFFIC CONTROL TYPICAL SECTION

| STATE OF | SOUTH | DAKOTA | NH-CR 0014(185)229 | C42 | C46 |

Plotting Date:

06/05/2024

NOT TO SCALE

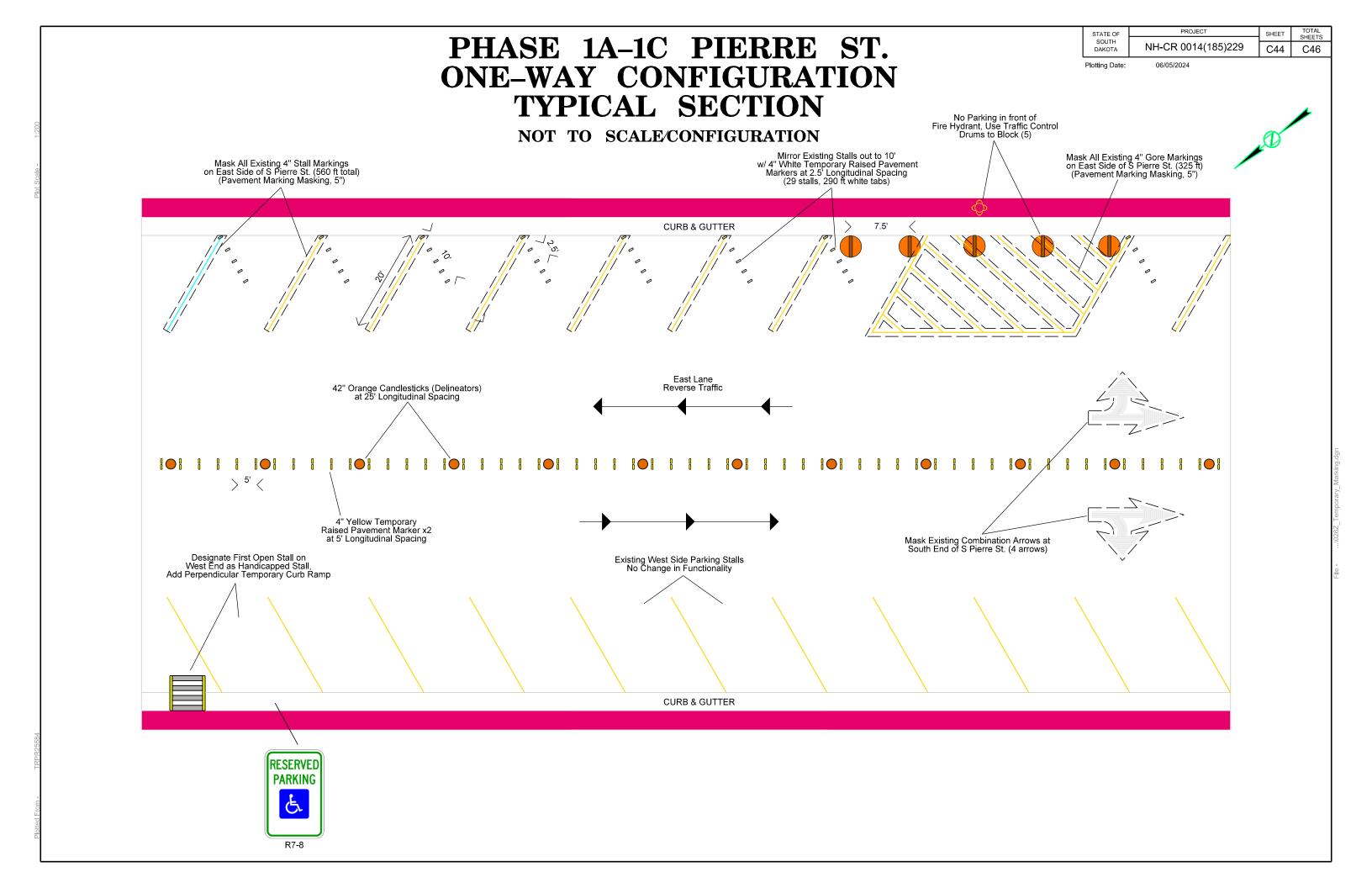


OTES:

 Temporary pavement marking will not be required along block closures. This layout will be used in all two-way traffic configurations in Phases 1, 2, and 3.

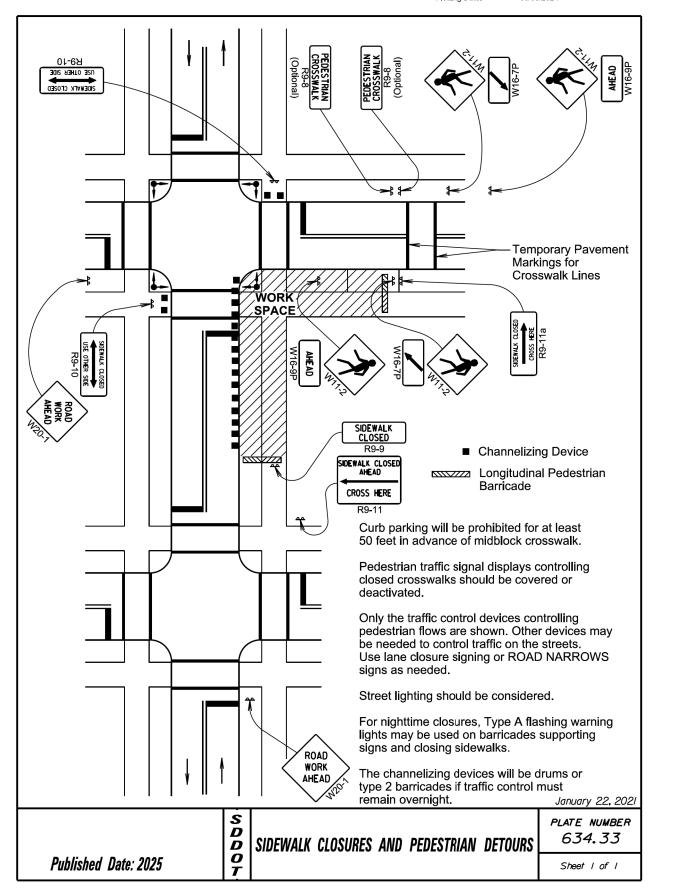
- 2. Drivable lane widths will not be shorter than 10'.
- 3. All tapers will consist solely of traffic control barrels at 20' spacing.

PROJECT TOTAL SHEETS STATE OF SHEET **BLOCKOUT TYPICAL SECTIONS** SOUTH NH-CR 0014(185)229 C43 C46 06/05/2024 Plotting Date: NOT TO SCALE BUSINESS/RESIDENTIAL ACCESSES MAINTAIN ONE WAY TRAFFIC CITY STREETS MAINTAIN TWO-WAY TRAFFIC Drums at maximum 25' spacing 1. All quantities for blockouts will be paid for under the "Traffic Control, Miscellaneous" bid item.



Plotting Date:

06/05/2024



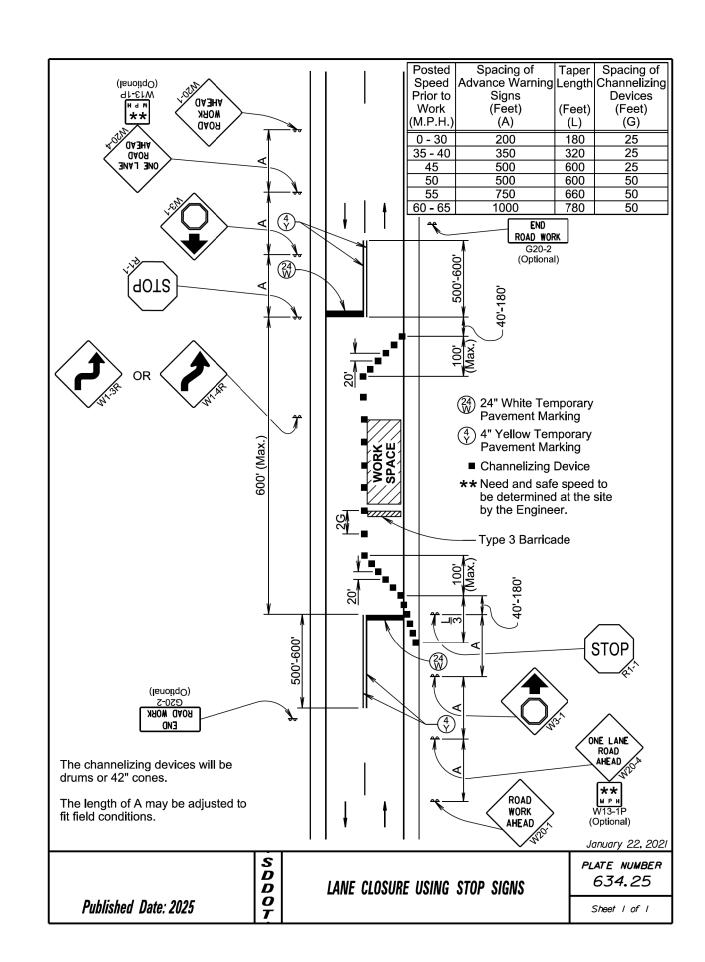


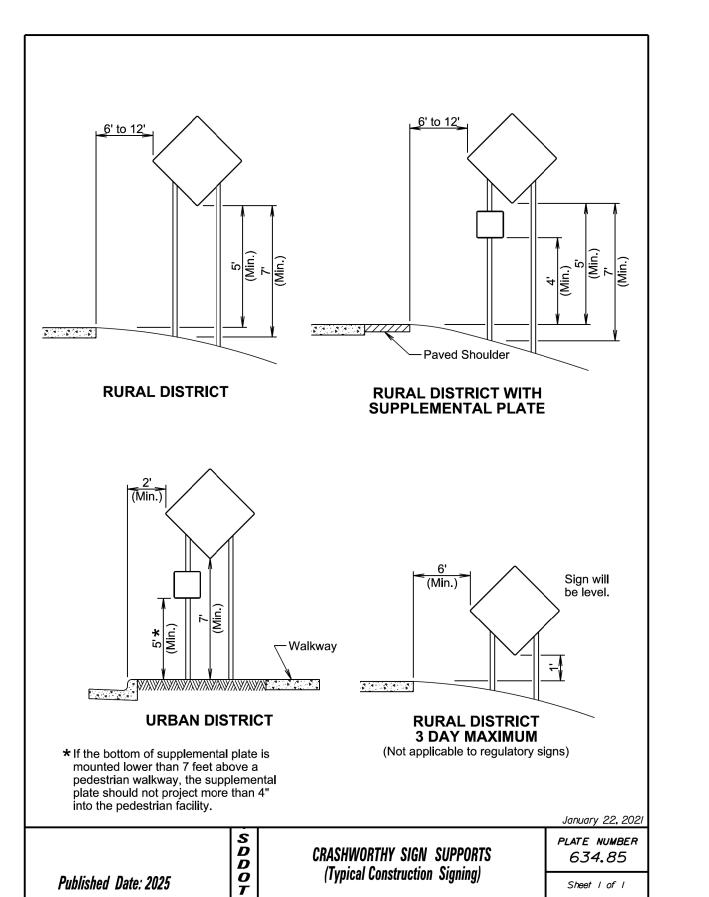
PLATE NUMBER

*634.99* 

Sheet I of I

Plotting Date:

06/05/2024



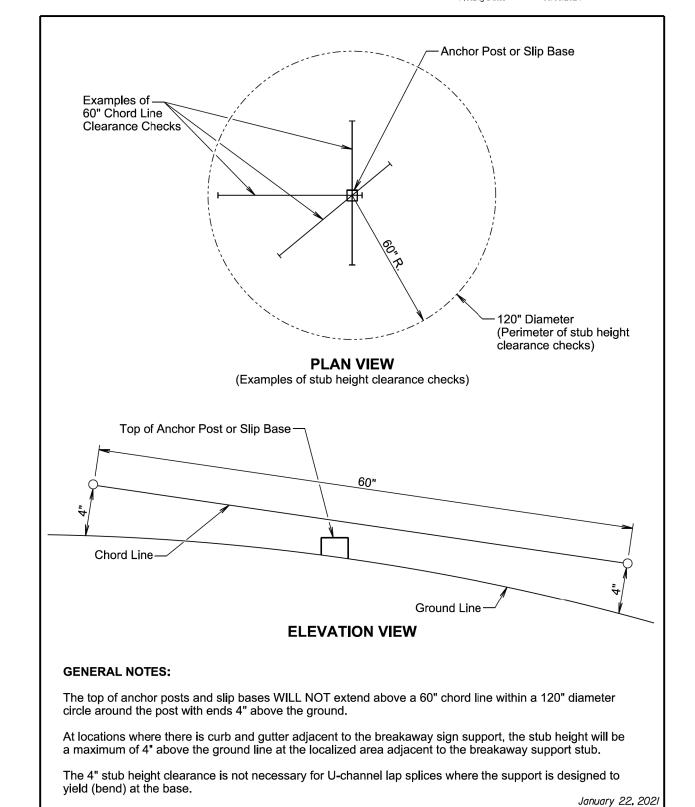
CRASHWORTHY SIGN SUPPORTS

(Typical Construction Signing)

Published Date: 2025

*634.85* 

Sheet I of I



BREAKAWAY SUPPORT STUB CLEARANCE

S D D O

Published Date: 2025