

| | | | |
|-----------------------|-------------------------|-------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C1 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|-------------|---------------------|

Plotting Date: 05-07-2015

Section C: Traffic Control Plans

INDEX OF SHEETS

- C1 General Layout w/ Index
- C2-C10 Estimate of Quantities and General Notes
- C11-C21 Traffic Control Layouts
- C22-C25 Storm Sewer Sequencing Layouts
- C26-C29 Special Details
- C30-C37 Standard Plates

END IM 1902(61)0

INTERSTATE 190
 Station 155+33.00
 14.87 Feet East & 4265.99 Feet North
 of the East Quarter of Section 35 -
 Township 2 North, Range 7 East

INTERSTATE 190
 Station 154+00.00 - End Resurfacing

Sec. 26-T2N-R7E
 Sec. 35-T2N-R7E

INTERSTATE 190
 Station 149+60.00 - End Grading, Begin Resurfacing

END IM 1902(61)0

WEST BLVD.
 Station 26+75.28 - End Grading

BEGIN IM 1902(61)0

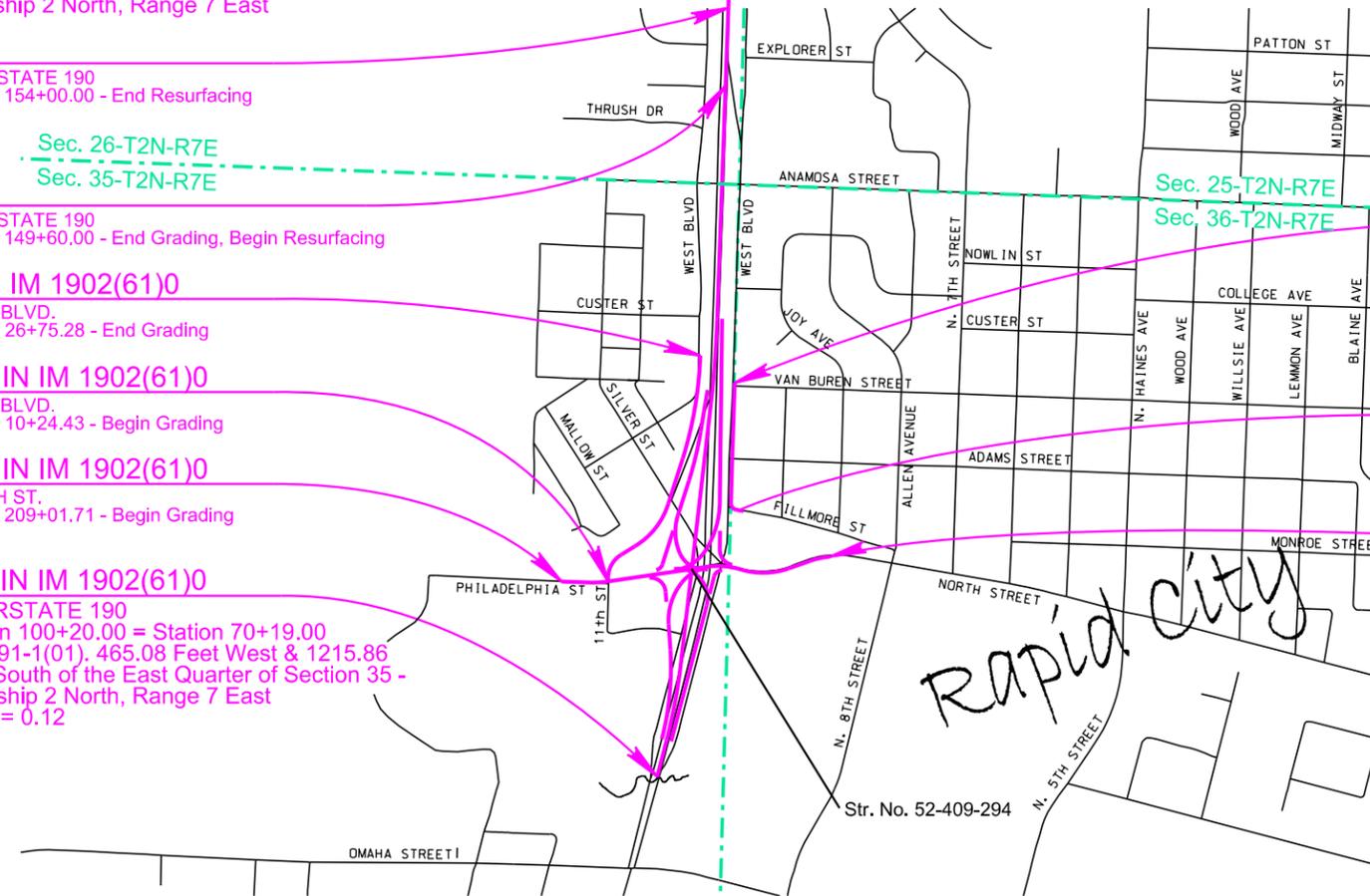
WEST BLVD.
 Station 10+24.43 - Begin Grading

BEGIN IM 1902(61)0

NORTH ST.
 Station 209+01.71 - Begin Grading

BEGIN IM 1902(61)0

INTERSTATE 190
 Station 100+20.00 = Station 70+19.00
 on I 091-1(01). 465.08 Feet West & 1215.86
 Feet South of the East Quarter of Section 35 -
 Township 2 North, Range 7 East
 MRM = 0.12



END IM 1902(61)0

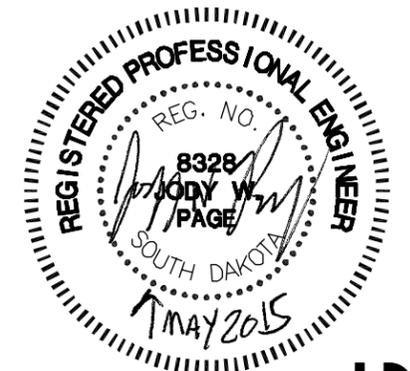
WEST BLVD. NORTH
 Station 59+08.72 - End Grading

BEGIN IM 1902(61)0

WEST BLVD. NORTH
 50+24.42 - Begin Grading

END IM 1902(61)0

NORTH ST.
 Station 224+72.00 - End Grading



SECTION C ESTIMATE OF QUANTITIES

| Bid Item Number | Item | Quantity | Unit |
|-----------------|--|----------|------|
| 110E1400 | Remove Pavement Marking, 4" or Equivalent | 31,500 | Ft |
| 260E6010 | Granular Material | 1,500.0 | Ton |
| 380E9010 | Temporary Gravel Crossing | 1 | Each |
| 621E0060 | 6' Chain Link Fence with Top Rail | 1,300 | Ft |
| 634E0010 | Flagging | 2,000.0 | Hour |
| 634E0100 | Traffic Control | 15,550 | Unit |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 634E0330 | Raised Pavement Markers | 31,500 | Ft |
| 634E0380 | Tubular Marker | 400 | Each |
| 634E0420 | Type C Advance Warning Arrow Panel | 6 | Each |
| 634E0430 | Vertical Panel | 70 | Each |
| 634E0525 | Linear Delineation System Panel, Barrier Mounted | 816 | Each |
| 634E0640 | Temporary Pavement Marking | 31,500 | Ft |
| 634E0700 | Traffic Control Movable Concrete Barrier | 408 | Each |
| 634E0705 | Remove and Reset Traffic Control Movable Concrete Barrier | 408 | Each |
| 634E0750 | Temporary Concrete Barrier End Protection | 8 | Each |
| 634E0755 | Remove and Reset Temporary Concrete Barrier End Protection | 8 | Each |
| 634E0760 | Temporary Concrete Barrier End Protection Module Set or Repair Kit | 2 | Each |
| 634E1215 | Contractor Furnished Portable Changeable Message Sign | 4 | Each |
| 634E2000 | Longitudinal Pedestrian Barricade | 8,100 | Ft |
| 634E2020 | Temporary Curb Ramp | 12 | Each |
| 634E2050 | Temporary Sidewalk | 19,905 | SqFt |

TRAFFIC CONTROL – GENERAL NOTES

1. Requests to deviate from the sequence of operations shall 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 shall be submitted for review a minimum of one week prior to potential implementation.
2. Unless otherwise stated in these plans, no work will allowed during hours of darkness. Hours of darkness are defined as 1/2 hour after sunset until 1/2 hour before sunrise.
3. Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of the vegetation, surfacing, embankment, delineators, and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.
4. Existing guide, route, informational logo, regulatory, and warning signs shall be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the

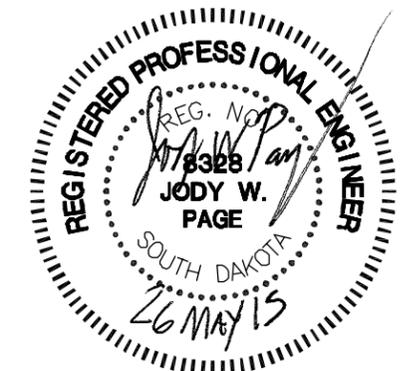
responsibility of the Contractor. Non-applicable signing shall be covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 48 hours. The cost of removing or covering non-applicable signs shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

5. Construction signing mounted on portable supports shall not be used for a duration of more than 3 days, unless approved by the Engineer. Construction signing that remains in the same location for more than 3 days shall be mounted on fixed location, ground mounted, breakaway supports.
6. If inappropriate/conflicting pavement markings exist, the markings shall be removed and replaced with applicable temporary pavement markings when the work duration is more than 3 days. When the work duration is less than 3 days, the channelizing devices in the area where the pavement markings conflict shall be placed at a spacing of 1/2 G. Pavement marking removals shall be paid for at the contract unit price per foot for Remove Pavement Marking, 4" or Equivalent. Temporary pavement marking shall be paid for at the contract unit price per foot for Temporary Pavement Marking. The additional channelizing devices shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".
7. The quantity of Signs paid for will be for the greatest number of installations per sign in place at any one time regardless of the number of set-ups on the project.
8. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.
9. The Contractor shall provide documentation that all breakaway sign supports comply with test level 3 requirements of the NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.
10. The Contractor shall be required to have a person available 24 hour/day, 7 days/week to maintain traffic control devices. The name and cellular telephone number of this individual shall be given to the Engineer at the preconstruction meeting.
11. The Contractor or designated traffic control subcontractor shall make night inspections at the initial set up of traffic control and every week thereafter to ensure the adequacy, legibility and reflectivity of each sign and device. A written summary of each inspection shall be given to the Engineer within 24 hours after completion of the inspection. The cost for the nighttime inspection work shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".
12. Vehicles working in traffic or alongside traffic shall be equipped with a flashing amber light visible from all directions. The amber light shall be mounted on the uppermost part of the contractor's vehicle. Lights must have peak intensity within the range of 40 to 400 candelas and must flash at 75 ± 15 flashes per minute. Vehicle flasher/hazard lights are not acceptable. All haul trucks shall be equipped with a second flashing amber light that is visible from the

backside of the haul truck. The costs for the flashing amber lights shall be incidental to the various related contract bid items.

13. All construction operations shall be conducted in the general direction of traffic movement.
14. If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD – whichever is more stringent shall be used, as determined by the Engineer.
15. Temporary Road Markers shall be used for lane closure tapers or lane shift tapers. Temporary Road Markers used for tapers and shifts will not be measured for payment and will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".
16. During non-work hours a maximum 3" drop off and 4:1 slope must be maintained adjacent to the traveled roadway. Drop off conditions greater than 3 inches shall not be left overnight and actions taken to mitigate the concern such as placement of a material wedge. No extra payment will be made for this work. Shoulder Drop Off warning signs shall be provided to warn of a difference in elevation 3 inches or greater. Low shoulder signs shall be used to warn of a low shoulder with a difference in elevation of less than 3 inches.
17. If the contractor chooses to work within the clear zone of the roadway in a location not detailed in the plans, the Contractor shall submit a traffic control detail indicating how traffic will be maintained past the work area to the Engineer prior to the work for consideration and approval.
 - Interstates – 30 Feet
 - Urban Roadways – A minimum of 2' behind the back of curb and gutter. A minimum of 20' if no barrier curb and gutter protection.

All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.
18. Regulatory speed limits of 35 miles per hour shall be used in two-way traffic situations on I190.
19. Contractors' equipment and trucks will not be allowed to enter or exit lanes used by traffic or cross opposing traffic on Interstate 190. The Contractor shall submit a plan in writing detailing how haul vehicles will enter and exit the work site.



COORDINATION BETWEEN PROJECTS

Coordination with SDDOT projects NH 0016(79)68, PCN 027C, NH 0016(84)67, PCN 049F, & NH- 0016(78)67, PCN 01TH will be required for work and traffic control on this project. The Mt. Rushmore Road project is currently scheduled to begin in the spring of 2015 and run through 2017. The Contractor shall coordinate with the adjacent projects traffic control to eliminate conflicting detour routes and width restrictions.

TRAFFIC CONTROL NOTES

Traffic control devices listed are minimum requirements and, depending on exact construction sequences, may not be a complete inventory of all signs, barricades and devices required. The exact location of all traffic control devices shall be determined at the site. Any damage to public or private property caused by the Contractor's signing shall be repaired at the Contractor's expense. Failure to adequately follow the traffic control plan will result in the project being shut down until deficiencies are corrected.

In the event additional signs are needed, but not listed in the traffic control sheets, payment to the Contractor will be based on the unit value of the sign(s) as listed in the current SDDOT traffic control list.

Signs and barricades are periodically required to be moved due to construction operations. They shall be placed at locations where they give sufficient warning to motorists and pedestrians of the condition ahead and shall be relocated as needed to keep signing current at required locations.

SEQUENCE OF OPERATIONS

The following sequence of operation for construction shall be followed unless an alternate plan is submitted by the Contractor and approved by the Engineer a minimum of one week prior to potential implementation.

Construction activities shall be restricted to the work area limits as detailed in the traffic control plans and described below. Work in this area consists of removals, grading, the installation of water & sewer main, the installation of storm sewer, bridge construction, concrete sidewalk and fillets, curb and gutter, retaining walls, landscaping, signals & lighting, and roadway surfacing.

GENERAL

1. The Contractor shall coordinate with the Engineer to keep all businesses and residents informed on the progression and prosecution of work in areas which have a direct effect on their access.
2. The Contractor shall take the necessary precautions to ensure temporary sidewalk access paths meet ADA sidewalk requirements during construction. All discrepancies shall be reported to the Engineer for review.
3. Owners shall have access to their driveways during construction unless the Contractor obtains written permission from both the landowner and the Engineer to make other accommodations. This may require grading and temporary gravel surfacing. Any costs associated with this work shall be included in the contract unit price per ton for "Granular Material".
4. Owners shall have pedestrian access to their businesses during construction unless written permission is obtained and approved by

- the business owner and the Engineer. The Contractor shall coordinate with the Engineer prior to any sidewalk or utility replacements that will affect pedestrian access and shall minimize disruptions.
5. The Contractor will have to coordinate with the property owners in the project area and provide temporary access for delivery trucks as needed throughout construction.
 6. The Rapid City Central High School parking lot modifications shall be completed in the summer months when school is not in session during Phase 2. The Contractor shall install 6' chain link fence between their work area and the school parking lot during phase 3 (approximately 1300'), any damage to the parking lot caused by this installation shall be repaired by the contractor and all costs associated with the installation, removal, and pavement repair shall be included in the contract unit price per foot for 6' Chain Link Fence with Top Rail.
 7. The new 90" & 96" storm sewer trunk line shall be tied in prior to removing the existing 60"/ 72" trunk sewer. Any portions of the trunk sewer that are not able to be fully removed shall be filled completely with flowable fill.
 8. Prior to establishing two-way traffic patterns in the northbound lanes of Interstate 190 for Phase 2, the contractor will need to place the concrete barrier as shown in the plan sheets. Traffic control setups for this work shall be as shown in standard plates 634.63 for the centerline barrier and the shoulder barrier.
 9. Erosion Control measures and Inlet Protection shall be in place and approved by the Engineer prior to commencement of any other activity on the site.
 10. The Contractor shall perform sawing and removal operations consistent with the removal notes.
 11. Street closures will be limited as shown in the traffic phasing sheets and as needed for utility installation and surfacing operations.
 12. At the end of each working day the adjacent roadway pavements and areas will be cleaned and left in a condition approved by the Engineer.
 13. Additional traffic control setups details are shown in the standard plate section of Section C. Upon approval from the Engineer, these plates shall also be used as necessary by the Contractor to complete the crossovers and single lane closures as needed throughout the project. Signs installed for these setups shall be paid at the contract unit price per unit for "Traffic Control".

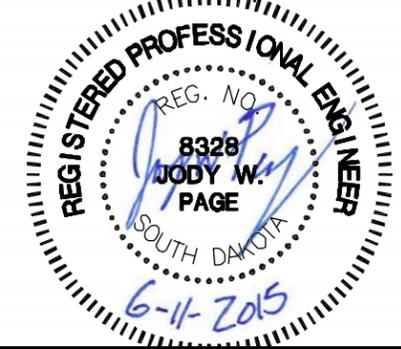
PHASE 1A- EXCAVATION & TEMPORARY SURFACING

1. Install traffic control devices in accordance with the traffic control sheets for Phase 1A.
2. The southbound on ramp will be closed at the start of this phase and remain closed. The southbound off ramp will be closed temporarily for installation of temporary drainage structures. The Contractor will have 2 working days to complete the temporary drainage connection and install asphalt surfacing at the disturbed ramp area. During this timeframe the ramp must remain in service between 6 AM and 9 AM. This can be accomplished with gravel surfacing, however the asphalt surfacing must be installed by the end of the 2 working days. The ramp will then remain open until the contractor closes off North St. under the existing structure.
3. Install temporary erosion control devices per plans and as needed in the locations determined by the Engineer.
4. Perform removals in the project area as shown in the plan sheets.

5. Complete the excavation and Soil Nail Wall in the NW quadrant of the new West Blvd./ North St. intersection. See Section E notes for further details on the Soil Nail Wall and reinforced fill slope construction and Section B for excavation requirements. The Reinforced Fill Slope and Gravity Large Concrete Block Wall shall be completed after the 6 month rebound period.
6. See Section B notes for further information on which material and what quantity shall be stockpiled or wasted.
7. The Contractor shall maintain access to the neighborhood north of the project at all times. The Contractor shall conduct operations such that neighborhood residents have a means of ingress and egress at all times via Silver Street or the temporary West Blvd. surfacing alignment.
8. Install temporary surfacing from the West Blvd/North St. intersection to the West Blvd./ Silver St. intersection. The temporary surfacing shall be a 6" thick 28' wide section of aggregate base course. The Contractor will be responsible for maintaining the gravel surface until the permanent surface is constructed in Phase 2. See the "TEMPORARY GRAVEL ACCESS ROADS" note for further information regarding temporary West Blvd.
9. The soil rebound area will not have permanent surfacing or underground utilities until the 6 months rebound period is complete. The Engineer must approve the time at which the Contractor can begin work in the rebound area (Grading Excavation/Rebound Area and Wall Construction/Rebound Area).
10. Install temporary traffic control on West Blvd. This shall include vertical panels installed on both sides of the roadway at 25' spacing.

PHASE 1B - GRADING & BEGIN STRUCTURE REPLACEMENT

1. Install traffic control devices in accordance with the traffic control sheets for Phase 1B.
2. Install hard surface temporary pedestrian access path.
3. Install temporary erosion control devices per plans and as needed in the locations determined by the Engineer.
4. Perform removals in the project area as shown in the plan sheets.
5. Construct the median crossovers for use in phases 2 & 3. See Standard Plate 634.66 for median crossover details.
6. Construct as much of the new foundations, backfill, and MSE walls as possible west of current I190 alignment.
7. The Contractor will be allowed to complete as much work as possible west of the current I190 alignment and outside of the large cut areas in this phase. The following items describe work in those areas, if this work is not completed during this phase it can be completed during Phase 2.
8. Install new water and sanitary sewer main piping outside of the large cut sections.
9. Install new water and sanitary sewer main piping outside of the large cut sections.
10. Remove storm sewer piping and inlets as shown in the plan sheets.



SEQUENCE OF OPERATIONS (Continued)

- Construct new storm sewer outfall piping & sediment control pond.
- Install new storm sewer inlets and piping as shown in the plan sheets outside of the large cut sections.
- Complete grading and base course placement outside of the large cut sections.
- Install concrete curb and gutter and fillets and asphalt concrete pavement.
- Install temporary pavement marking and signing.

PHASE 2 – SOUTHBOUND LANES & FINISH STRUCTURE REPLACEMENT

- Install traffic control devices in accordance with the traffic control sheets for Phase 2 and divert traffic head to head in the existing I190 northbound lanes.
- Install temporary erosion control devices per plans and as needed in the locations determined by the Engineer.
- Perform removal operations in the project area as shown in the plan sheets.
- Remove existing southbound I190 structure.
- Complete the new I190 structure. The east end of the MSE walls around the new bridge abutments will not be completed in this phase due to the existing structure and storm sewer trunk line to be removed in phase 3.
- Begin grading for new I190 alignment and construct retaining walls.
- Complete the Rapid City Central High School Parking lot modifications.
- After the 6 month soil rebound period has expired finish utilities and permanent surfacing west of mainline I190.
- Install new sanitary sewer main piping as shown in the plan sheets.
- Install hydrants & water main as shown in the plan sheets.
- Remove storm sewer piping and inlets as shown in the plan sheets.
- Install new storm sewer inlets and piping as shown in the plan sheets.
- Install conduit, street lighting, and traffic signals.
- Complete grading and base course placement within the phase limits.
- Install concrete curb and gutter, fillets, sidewalk, PCC pavement, and asphalt concrete pavement.
- Install landscaping, pavement marking, and permanent signing.
- Traffic will not be split between the new SBL's and existing NBL's between Phases 2 and 3, all traffic will be carried on new SBL's following the completion of Phase 2.
- Install traffic control devices in accordance with the traffic control sheets for Phase 3 and place traffic on new SBL's.

PHASE 3 – NORTHBOUND LANES & NORTH STREET

- Install temporary erosion control devices per plans and as needed in the locations determined by the Engineer.
- Perform removal operations in the project area as shown in the plan sheets.
- Remove existing northbound I190 structure.
- Complete grading for new northbound I190 alignment and finish construction of retaining walls A & B.
- Install new sanitary sewer main piping as shown in the plan sheets.
- Install hydrants & water main as shown in the plan sheets.
- Remove storm sewer piping and inlets as shown in the plan sheets.

- Install new storm sewer inlets and piping as shown in the plan sheets.
- Install conduit, street lighting, and traffic signals.
- Construct retaining wall D and the type C retaining wall in front of Howard Johnson.
- Complete grading and base course placement within the phase limits.
- Install concrete curb and gutter, fillets, sidewalk, PCC pavement, and asphalt concrete pavement.
- Install landscaping, pavement marking, and permanent signing.
- Remove the traffic control and open to traffic.

PHASE 4 – WEST BLVD. NORTH & PAVEMENT TIE INS

- Install traffic control devices in accordance with the traffic control sheets for Phase 4.
- Install temporary erosion control devices per plans and as needed in the locations determined by the Engineer.
- Perform removal operations in the project area as shown in the plan sheets.
- Remove the two median crossovers and replace with final surfacing. See Section F for surfacing requirements and Section E for barrier requirements.
- Install new sanitary sewer main piping as shown in the plan sheets.
- Install hydrants & water main as shown in the plan sheets.
- Remove storm sewer piping and inlets as shown in the plan sheets.
- Install new storm sewer inlets and piping as shown in the plan sheets.
- Install conduit and street lighting.
- Complete grading and base course placement within the phase limits.
- Install concrete curb and gutter, fillets, sidewalk, PCC pavement, and asphalt concrete pavement.
- Install landscaping, pavement marking, and permanent signing.
- Remove traffic control and open to traffic.

OTHER TRAFFIC CONTROL ITEMS**PROPOSED SURFACING NEAR MEDIAN CROSSOVERS**

The Contractor shall take extra safety precautions while completing all proposed surfacing work near the Median Crossovers (Crossovers are 260' long centered at Sta. 101+50 & Sta. 154+03) and shall not stop the flow of traffic at these locations. Prior to completing the surfacing work near this median, the Contractor shall submit a plan to the Engineer that fully describes and illustrates all safety precautions to allow the surfacing work to proceed without disruption or stoppage of traffic. Following is a sequence to install the proposed surfacing near the median.

Lanes Not-Adjacent to Median (NB lanes, CL to East; SB lanes, CL to West)

During Phase 4, the Contractor shall install the proposed surfacing along the NB lanes, CL to East and along the SB lanes, CL to West.

Lanes Adjacent to Median (NB lanes, CL to West; SB lanes, CL to East)

During Phase 4, the Contractor shall install the proposed surfacing along the NB lanes, CL to West and along the SB lanes, CL to East.

All costs, labor and materials required to prepare the safety plan shall be included in the contract lump sum price for "Traffic Control, Miscellaneous". All flagging required shall be paid at the contract unit price per hour for Flagging.

MEDIAN CROSSOVERS TRAFFIC CONTROL

When the Contractor is placing traffic control on the median crossovers, the Contractor shall verify with the Engineer the layout that is intended. All curve designs, signs, pavement markings, tubular markers, drums and raised pavement markers installed on the median crossovers shall be approved for location before and after placement, before traffic is allowed onto the median.

Contractor shall use Standard Plate #634.66 (Sheets 1 & 2 of 2) to layout all curve designs, signs, pavement markings, tubular markers, drums and raised pavement markers. Traffic control installed for this shall be paid under their appropriate bid items.

An interim crossover closure will be required once the crossover removals and construction are complete in Phase 1B, but prior to switching traffic for Phase 2. The crossover closure is required for both the north and south crossovers, and shall be accomplished by using drilled or ground installed delineators spaced at 3' along the centerline for the entire crossover length. All costs for supplying, installing, and removing the delineators shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

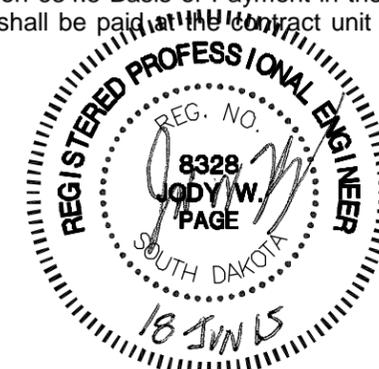
INCIDENTS

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 an accident, hazardous materials spill, or similar event.

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

The Contractor shall provide adequate personnel to accomplish the necessary traffic control work in the event of an incident. The Contractor will be required to modify messages on portable changeable message signs or relocate portable changeable message signs. The Contractor shall provide flaggers to direct or detour of traffic. The Contractor shall relocate advance warning signs for a major traffic incident lasting for more than two hours. Ground mounted advance warning signs may be covered and additional portable warning signs provided.

No additional payment will be made for the relocation or message modification of portable changeable message signs. Costs for flagging shall be paid at the contract unit price per hour for "Flagging". Costs for the relocation of an advanced warning sign shall be 50% of the designated sign rate as per Section 634.5 Basis of Payment in the Specifications. Cost for additional signs shall be paid at the contract unit price per unit for "Traffic Control".



WATER AND SEWER INSTALLATION

See the Water and Sewer plan set for information about sequencing of the water and sewer installation.

MAINTENANCE OF DRAINAGE

The Contractor will be required to maintain drainage on the project during the course of construction. See Section B for details on temporary drainage measures.

COVERING/BAGGING OF EXISTING TRAFFIC SIGNS

The Contractor shall cover/bag existing traffic signs that conflict with the proposed traffic control. This shall include covering/bagging the existing stop signs that impede the flow of traffic within the detour route. The bags used to cover the signs shall fully conceal the sign. The Contractor shall have the bags, used to cover the signs, approved by the Engineer, prior to installation. The Contractor shall include payment for the covered/bagged signs in the contract lump sum price for "Traffic Control, Miscellaneous".

PEDESTRIAN TRAFFIC CONTROL

When crosswalks, sidewalks, or other pedestrian facilities are blocked, closed, or relocated, temporary pedestrian facilities shall be provided. Temporary pedestrian facilities shall be kept free of any obstructions and hazards, such as holes, debris, mud, construction equipment, traffic control signing, stored materials, etc.

The Contractor shall notify the Engineer at least 72 hours prior to start of any construction operation that will necessitate a change in pedestrian access.

TEMPORARY PEDESTRIAN FACILITY

An alternate walkway featuring a smooth, continuous, hard surface should be provided throughout the entire length of the temporary facility. There should be no curbs or abrupt changes in grade or terrain that could cause tripping or be a barrier to wheelchair use. Whenever possible, the temporary pedestrian access route shall only utilize in-place street crossing. Pedestrian traffic signal displays controlling a crosswalk that is closed shall be covered or deactivated.

Temporary pedestrian facilities shall have a minimum width of 48", with 60" recommended. Temporary pedestrian facilities less than 60" wide shall provide for a 60"x60" passing space at intervals not to exceed 200 ft.

All costs shall be incidental to the contract unit price per square foot for TEMPORARY SIDEWALK.

LONGITUDINAL PEDESTRIAN BARRICADE

When exposed to vehicular traffic, pedestrian channelizing devices shall be crashworthy, and the bottom and top surfaces of the devices shall have retroreflective sheeting or delineation for improved nighttime visibility.

When pedestrian channelizing devices are combined in a series, the gap between devices should not exceed one inch. Joints between channelizing

devices should be closed and flush to prevent canes or small wheels from being trapped, to reduce the risk of tripping and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, channelizing devices must run the entire width of the sidewalk without gaps. Channelizing devices should provide a color contrasting pattern for pedestrians with low vision. Black should not be used to color any base on a device.

Pedestrian channelizing devices shall have continuous bottom and top surfaces. The lower edge of the bottom portion shall be no higher than 2 inches above the walkway. The top edge of the bottom portion shall measure at least 8 inches above the walkway. The top of the top portion shall be no lower than 32 inches above the walkway. The top surface shall be smooth to optimize hand-trailing. Both upper and lower surfaces shall share a common vertical plane.

All costs shall be incidental to the contract unit price per foot for LONGITUDINAL PEDESTRIAN BARRICADE.

TEMPORARY CURB RAMPS & PEDESTRIAN CROSSINGS

The Contractor shall maintain a hard surfaced pedestrian crossing across Philadelphia St. and 11th St. as directed by the Engineer. When the existing pedestrian pathway is no longer accessible, the Contractor will be required to provide an accessible pedestrian crossing that replicates as nearly as practical the most desirable characteristics of the existing pathway. The crossing shall consist of applicable signing and curb ramps. Existing curbs shall be modified to provide access for pedestrians to the roadway. Removal of the existing curbs shall be paid for at the appropriate contract unit price based on type.

Pedestrian Crossing signs (W11-2 with appropriate supplemental plaques) shall be installed per MUTCD Figure 2C-12 and as directed by the Engineer. Sign color shall be fluorescent yellow-green. Signing will be paid for at the contract unit price per unit for "Traffic Control."

Temporary curb ramps should be firm, stable, and have a non-slip surface. They should not warp or buckle, and should be made of materials strong enough to support the weight of pedestrians as well as motorized scooters and wheelchairs. Temporary curb ramps should also be color contrasting and contain marked edges so they are noticeable by pedestrians who have visual impairments. Lateral joints or gaps between surfaces shall be less than 0.5 inches in width.

Temporary curb ramps should be the full width of the temporary pedestrian route, with a 60" recommended width and a minimum width of 48". Temporary curb ramps should have a slope of 1:12 or less, and have free draining surfaces with a maximum cross slope of 2 percent. Handrails on curb ramps are not required unless the curb ramp has a rise exceeding 6" and a length exceeding 72".

All costs shall be incidental to the contract unit price per each foot for TEMPORARY CURB RAMP.

OVERWIDTH DETOUR SIGNING

Details of the approximate location of the Overwidth Detour Signing are as shown in these plans. Prior to installing the signs the Contractor shall mark out the sign locations and review them with the Engineer.

Overwidth Detour Signing shall be furnished and installed by the Contractor as detailed in these plans. 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 shall remove the Overwidth Detour Signing. Overwidth Detour Signing shall be installed on fixed location, ground mounted, breakaway supports.

Payment at the contract unit price per unit for "Traffic Control" shall be full compensation for furnishing, installing, and removing the Overwidth Detour signs as indicated in the Traffic Control plan. If a detour sign is relocated because of an error in the plans or by the Engineer, an additional 50 percent of the designated sign rate will be paid.

PAVEMENT MARKING REMOVAL

Removal of pavement marking shall be completed by:

- Sandblasting, soda blasting, water blasting, or burning on existing PCC Pavement.
- A method satisfactory to the Engineer on asphalt concrete surfacing.
- Sandblasting on new PCC Pavement. Care shall be taken not to damage the surface of any permanent pavement during pavement marking removal.

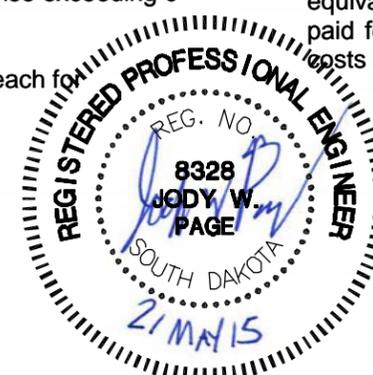
Removal of pavement markings shall be accomplished where traffic crosses existing pavement marking lines for various construction phases and where pavement markings may cause motorist confusion.

Removal of pavement markings shall be paid for at the contract unit price per foot for "Remove Pavement Marking, 4" or Equivalent." Removal of existing and temporary ARROWS and ONLYs shall be paid for at the contract unit price per foot under the same item at the rate of 250 feet per each. Removal process shall be performed in a square shape on the surface in these areas to obscure the original arrow or message.

TEMPORARY PAVEMENT MARKING

Temporary Pavement Marking shall be used on all temporary surfacing, or surfacing which is to be removed, as needed in the traffic crossovers, for temporary pedestrian crossings, and as directed by the Engineer.

Payment for temporary pavement marking will be by the foot per 4" line or equivalent. Any temporary pavement marking arrows that are needed will be paid for as 250' of Temporary Pavement Marking. Payment will be for all costs to furnish, and install temporary pavement markings.



| | | | |
|-----------------------------|--------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C6 | C37 |

TEMPORARY SCRAPER CROSSING

A temporary scraper crossing will need to be installed by the Contractor over the existing Silver Street pavement when hauling material to the stockpile location between Silver St. and the southbound I190 off ramp. The Contractor shall construct this crossing using standard plate 380.30. All costs, labor and materials for furnishing, installing, removing, and maintaining the crossing shall be included in the contract unit price per each for Temporary Gravel Crossing.

TEMPORARY GRAVEL ACCESS ROADS

- Temporary gravel access roads shall have a minimum of 6" depth of aggregate base course installed on them. The ends of roads shall have a smooth transition onto the existing/proposed pavements.
- The Contractor shall re-grade the access roadway on a daily basis or as directed by the Engineer.
- **1500 tons** of aggregate base course is estimated to be used for temporary gravel access paths & roads. The Contractor is allowed to use asphalt millings in lieu of gravel for the temporary access roadways.
- All costs, labor and materials for furnishing, installing, removal and reinstallation per phasing, maintenance and removal of the temporary access roads shall be included in the contract unit price per ton for "Granular Material".
- The granular material installed may be reused in the select topping if it is blended with the select topping to the satisfaction of the Engineer. All costs, labor and materials to remove and reinstall this gravel for the roadbed shall be included in the bid item "Granular Material".

TUBULAR MARKERS

The markers shall be securely attached to the roadway surface. The method of attachment shall be resistant to the effects of weather and capable of retaining the marker in position under traffic during the interval of time it is required to function. For two-way traffic installations on Interstate 190, Tubular Markers shall be placed every 80' for centerline delineation except 10' spacing shall be used at locations where traffic is merging into a two-way traffic situation and at intersections/turn lanes, as directed by the Engineer.

Payment for "Tubular Markers" will be at the contract unit price per each. Payment shall be full compensation for furnishing, installing, maintaining, replacing (as required by the Engineer at no additional cost to the Department), and removal of the tubular markers as required by the Engineer.

RAISED PAVEMENT MARKERS (RPM's)

Raised pavement markers (RPM's) shall be used for marking lane lines including turn lanes lane, closure tapers and lane shift tapers on new concrete sections of roadway and existing pavement to remain as detailed in the traffic control sheets and standard plates. The markers shall be installed at 5-foot spacing and will be paid for at the contract unit price per foot per 4" line for both Yellow and White markers. The contract unit price per foot for "Raised Pavement Markers" will be full compensation for all costs associated to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove all markers. The Contractor shall pick up all raised pavement markers from the roadway when not in use.

Raised pavement markers shall 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.

TYPE C ADVANCE WARNING ARROW PANEL

The quantity of Type C Advance Warning Arrow Panels paid will be the most installations in place at any one time regardless of the number of setups on the project.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGNS

The Contractor shall furnish portable changeable message signs to be used for the duration of the project. Message signs shall be installed to inform the traveling public of when construction will begin for each phase (2 week advance notice), advising the general public of the conditions ahead, and as directed by the Engineer. The changeable message signs shall be furnished, programmed, and maintained for the entire project duration. The message boards shall be capable of remote programming. The Engineer will assist in determining the location and messages to be programmed into the message sign. The message boards shall be clearly visible from a minimum of 900 feet and shall be solar powered or wired directly to a power source. Diesel and gas powered message panels will not be allowed. The portable message panels will be paid for at the contract unit price per each for Contractor Furnished Portable Changeable Message Sign. Payment will be full compensation for furnishing, maintaining, and relocating as many times as required by the Engineer and the Contractor's operations.

The Contractor shall store the Portable Changeable Message Signs (PCMS), ready for use, at anytime. 4 PCMS boards shall be available two weeks prior to starting the project to warn traffic of upcoming work and shall be available for the duration of the project.

The PCMS shall be non-operational unless required for:

- advanced notices
- traffic queues during peak traffic hours
- incident/crash management.
- unforeseen project conditions

Below are several examples of the messages that shall be displayed on the signs throughout the project. The Engineer has the authority to move message panels and display different messages as needed at no additional cost.

Advance closure notice:
**I190 ROAD WORK
STARTS (DATE)**

**SILVER STREET
CLOSED AHEAD
STARTS (DATE)**

**NORTH STREET
CLOSED AHEAD
STARTS (DATE)**

During typical traffic control operations:

**REDUCE SPEED
DETOUR AHEAD**

During peak times when traffic queues exist or incident management:
**SLOW TRAFFIC AHEAD
BE PREPARED TO STOP**

If crashes occur within the project:
**ACCIDENT AHEAD
BE PREPARED TO STOP**

All costs, labor and materials for furnishing, installing, storing, relocating, reprogramming, and maintaining these PCMS boards shall be included in the contract unit price per each for "Contractor Furnished Portable Changeable Message Sign." All bracing required to install the PCMS at the proper height shall be included in this bid item.

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

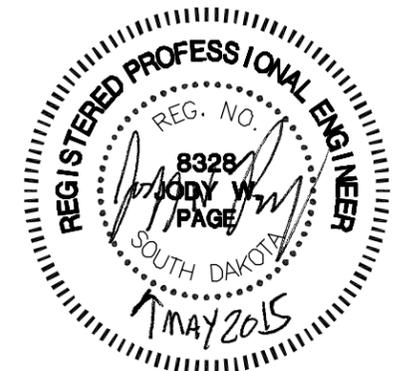
The DOT will provide 400 concrete barriers (F Shape Interior Section) for the project and they will be available for pickup at the SDDOT Exit 52 site and the SDDOT South Maintenance Yard on Highway 79. The contractor shall utilize the barriers from the Exit 52 site first and then from the South Maintenance Yard. All barriers shall be returned to the SDDOT South Maintenance Yard after use.

All costs associated with loading/unloading, transporting to the project site, placing and transporting to the SDDOT South Yard after use shall be included in the contract unit price per each for "Traffic Control Movable Concrete Barrier."

The barriers shall be pinned and bolted together as directed by the Engineer. Concrete barriers that are to be adjusted or moved shall be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor shall be replaced at no cost to the Department.

No additional payment will be made for concrete barriers that are not immediately reset at a new location on the project and will be stored onsite until they are either reset or returned to the SDDOT South Yard as determined by the Engineer. No additional payment will be made for minor adjustments.

If the concrete barriers need to be moved and reset on the project, all costs for removing, transporting, and resetting the barriers shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barriers."



TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (CONT)

Concrete barriers shall, at all times, be set on a flat surface (10:1 or less) with a minimum of 4' of flat embankment or surfacing behind the barrier. Where 4' of flat embankment or surfacing is not attainable behind the barriers, the Contractor shall furnish and install Guardrail Post and Block behind the barriers at 6' spacing or a minimum of 2 posts per section of barrier. Other means for securing the barrier from lateral movement may be acceptable with written approval by the Engineer. All costs associated with furnishing and installing Guardrail Post and Block or securing the barrier by other means, shall be included in the contract unit price per each for "Traffic Control Movable Concrete Barrier."

Concrete barrier sections shall be placed to comply with clear zone requirements and as directed by the Engineer.

MOVABLE F SHAPE CONCRETE BARRIER, END SECTION

The DOT will provide 4 concrete barrier end sections (F Shape End Section) for the project and are available for pickup at the SDDOT South Maintenance Yard on Highway 79.

All costs associated loading/unloading, transporting to project site, placing and transporting to SDDOT South Yard after use shall be included in the contract unit price per each for "Traffic Control Movable Concrete Barrier."

If the concrete barrier end sections need to be moved and reset on the project, all costs for removing, transporting, and resetting the end sections shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barriers."

TEMPORARY CONCRETE BARRIER END PROTECTION

The Contractor shall furnish and install crash attenuators that meet the test level 3 crash testing requirements of NCHRP 350 or MASH at the ends of exposed concrete barriers. Crash attenuators shall be installed parallel to the roadway. The crash attenuator shall be attached to the concrete barrier with a transition that meets test level 3 requirements of NCHRP 350 or MASH at locations shown in the Table of Temporary Concrete Barrier End Protection. For bidirectional traffic, the transition shall be placed on both sides of the crash cushion and barrier.

The Contractor shall certify that the crash attenuator was installed according to the manufacturer's installation instructions and meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

All costs for furnishing and installing the crash attenuators including transporting, initial setup, maintaining, removal, anchoring to the pavement, transitions to the concrete barrier(if required), materials, labor, equipment, and incidental items shall be paid for at the contract unit price per each for "Temporary Concrete Barrier End Protection."

Crash attenuators may need to be moved and reset to accommodate traffic flows after initial setup. All costs associated with removing the crash attenuator from the initial placement and resetting at a new location shall be paid for at the contract unit price per each for "Remove and Reset Temporary Concrete Barrier End Protection." Additional payment will not be

made for crash attenuators that are not immediately reset at a new location on the project and will be stored onsite until they are either reset or removed from the project as determined by the Engineer. No additional payment will be made for minor adjustments.

The Contractor shall have replacement hardware/pats immediately available onsite for repairing the end protection to a condition that meets the Test Level 3 crash testing requirements of NCHRP 350 or MASH. The Contractor will be expected to repair the end protection within 24 hours after impact or damage. The Contractor shall supply two sets of replacement hardware/parts. One set of replacement hardware/parts is considered as the proper amount of materials to fix the crash attenuator after one vehicle hit. All costs for furnishing and delivering the replacement hardware/parts shall be incidental to the contract unit price per each for "Temporary Concrete Barrier End Module Set or Repair Kit." Payment will not be made for the Temporary Concrete Barrier End Module Set or Repair Kit in the event that repairs are not necessary.

TABLE OF TEMPORARY CONCRETE BARRIER END PROTECTION

| Station | Description | Phase | Unidirectional/ Bidirectional | Quantity (Each) |
|--------------|--|-------|----------------------------------|--------------------|
| 112+54-0 L/R | New Bridge: south end | 3 | Unidirectional | 1 |
| 115+16-0 L/R | New Bridge: north end | 3 | Unidirectional | 1 |
| 112+54-20 L | New Bridge Temporary Barrier: south end | 3 | Bidirectional | 1 |
| 115+16-20 L | New Bridge Temporary Barrier: north end | 3 | Bidirectional | 1 |
| 116+20-130 R | NB Silver Street Bridge Trailing guardrail: south end | 2 | Unidirectional | 1 |
| 139+64-42 R | NB Anamosa Street Bridge Trailing Guardrail: south end | 2 | Unidirectional | 1 |
| 103+80-8 R | Existing I-190 NB Temporary Barrier: south end | 2 | Unidirectional | 1 |
| 152+72-8 R | Existing I-190 NB Temporary Barrier: north end | 2 | Unidirectional | 1 |

LINEAR DELINEATION SYSTEM PANEL, BARRIER MOUNTED

A linear delineation system panel shall be attached to each side of the barrier section. One panel shall be white and the other panel shall be yellow. The color shall be the same as the nearest pavement marking, white along outside edge lines or yellow for the left side on one way traffic sections. The linear delineation system shall 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 shall be sheeted with Type XI super high or very high intensity sheeting. The Contractor shall furnish, install, and maintain one panel along each side of the barrier section. The panels shall be installed at the longitudinal center of the barrier sections with the top of the panel 4 inches below the top of the barrier section. Using stainless steel hardware, installation shall be as per the manufacturer's instructions. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color.

Damaged linear delineation system panels shall be furnished and replaced by the Contractor. Cost for furnishing, installing and maintaining the linear delineation system panels shall be included in the contract unit price per each for "Linear Delineation System Panel, Barrier Mounted."

All linear delineation system panels shall remain attached to the barrier sections and shall become the property of the State of South Dakota upon completion of the project.

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



INVENTORY OF TRAFFIC CONTROL DEVICES

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------------|--------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C8 | C37 |

INVENTORY OF TRAFFIC CONTROL DEVICES

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|--|--------|------------|----------------|--------------|
| R1-1 | STOP | 7 | 36" x 36" | 27 | 189 |
| R1-2 | YIELD | 1 | 60" x 60" | 44 | 44 |
| R2-1 | SPEED LIMIT 35 | 9 | 36" x 48" | 29 | 261 |
| R2-1 | SPEED LIMIT 45 | 4 | 36" x 48" | 29 | 116 |
| R2-1 | SPEED LIMIT 55 | 4 | 36" x 48" | 29 | 116 |
| R2-6aP | FINES DOUBLE (plaque) | 11 | 36" x 24" | 20 | 220 |
| R3-7L | LEFT LANE MUST TURN LEFT | 1 | 30" x 30" | 21 | 21 |
| R4-1 | DO NOT PASS | 2 | 36" x 48" | 29 | 58 |
| R4-7 | KEEP RIGHT (symbol) | 1 | 36" x 48" | 29 | 29 |
| R5-1 | DO NOT ENTER | 2 | 36" x 36" | 27 | 54 |
| R9-8 | PEDESTRIAN CROSSWALK | 2 | 36" x 18" | 17 | 34 |
| R9-9 | SIDEWALK CLOSED | 6 | 24" x 12" | 15 | 90 |
| R9-10 | SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE | 2 | 24" x 12" | 15 | 30 |
| R9-10 | SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R9-11 | HERE | 2 | 24" x 18" | 15 | 30 |
| R9-11a | SIDEWALK CLOSED with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R11-2 | ROAD CLOSED | 11 | 48" x 30" | 27 | 297 |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 1 | 60" x 30" | 30 | 30 |
| W1-4 | REVERSE CURVE (L or R) | 3 | 48" x 48" | 34 | 102 |
| W1-6 | LARGE ARROW (one direction) | 2 | 60" x 30" | 30 | 60 |
| W3-2 | YIELD AHEAD (symbol) | 1 | 48" x 48" | 34 | 34 |
| W3-5 | SPEED REDUCTION AHEAD (35 MPH) | 2 | 48" x 48" | 34 | 68 |
| W3-5 | SPEED REDUCTION AHEAD (45 MPH) | 4 | 48" x 48" | 34 | 136 |
| W4-1 | MERGE (symbol) | 2 | 48" x 48" | 34 | 68 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 4 | 48" x 48" | 34 | 136 |
| W6-3 | TWO WAY TRAFFIC (symbol) | 2 | 48" x 48" | 34 | 68 |
| W7-3aP | NEXT 1 MILES (plaque) | 2 | 36" x 30" | 23 | 46 |
| W11-2 | PEDESTRIAN (symbol) | 2 | 36" x 36" | 27 | 54 |
| W13-1P | ADVISORY SPEED (plaque) | 2 | 30" x 30" | 21 | 42 |
| W16-7P | DOWNWARD DIAGONAL ARROW (plaque) | 2 | 24" x 12" | 15 | 30 |
| W20-1 | ROAD WORK AHEAD | 9 | 48" x 48" | 34 | 306 |
| W20-2 | DETOUR AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-3 | ROAD CLOSED AHEAD | 5 | 48" x 48" | 34 | 170 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 4 | 48" x 48" | 34 | 136 |
| E5-2a | EXIT CLOSED | 4 | 48" x 36" | 29 | 116 |
| G20-2 | END ROAD WORK | 5 | 48" x 24" | 24 | 120 |
| M1-1 | INTERSTATE ROUTE MARKER (2 digits) | 18 | 36" x 36" | 27 | 486 |
| M1-1 | INTERSTATE ROUTE MARKER (3 digits) | 52 | 45" x 36" | 28 | 1456 |
| M3-1 | DIRECTION MARKER - NORTH | 18 | 36" x 18" | 17 | 306 |
| M3-3 | DIRECTION MARKER - SOUTH | 32 | 36" x 18" | 17 | 544 |
| M4-5 | TO | 18 | 36" x 18" | 17 | 306 |
| M4-8 | DETOUR | 20 | 30" x 15" | 15 | 300 |
| M4-8a | END DETOUR | 5 | 36" x 24" | 20 | 100 |
| M4-9 | DETOUR with ARROW (L or R) | 19 | 36" x 48" | 29 | 551 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 10 | 30" x 21" | 16 | 160 |
| M6-1 | DIRECTION ARROW - Horizontal Single Head (L or R) | 11 | 30" x 21" | 16 | 176 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 49 | 30" x 21" | 16 | 784 |
| SPECIAL | ACCESS TO BUSINESSES | 6 | 60" x 126" | 83 | 498 |
| SPECIAL | NORTH ST | 27 | 48" x 12" | 20 | 540 |
| SPECIAL | SILVER ST | 11 | 48" x 12" | 20 | 220 |
| SPECIAL | OVERWIDTH VEHICLES | 50 | 54" x 24" | 26 | 1300 |
| SPECIAL | NO ACCESS TO OMAHA STREET USE 8TH STREET | 6 | 126" x 60" | 83 | 498 |
| SPECIAL | WIDTH RESTRICTION - I190 (South or North) | 4 | 96" x 78" | 83 | 332 |
| - | TYPE 3 BARRICADE - 8' double sided | 64 | | 56 | 3584 |
| TOTAL UNITS | | | | | 15550 |

The following tables provide estimated inventories for each individual phase of the project:

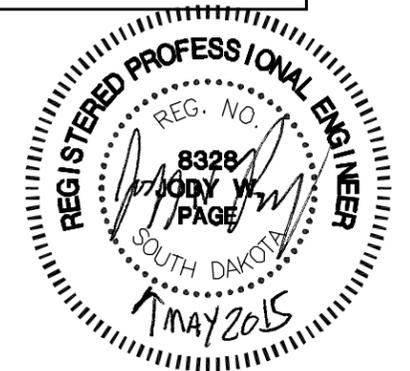
PHASE 1A SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|--|--------|------------|----------------|-------------|
| R9-8 | PEDESTRIAN CROSSWALK | 2 | 36" x 18" | 17 | 34 |
| R9-9 | SIDEWALK CLOSED | 6 | 24" x 12" | 15 | 90 |
| R9-10 | SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE | 2 | 24" x 12" | 15 | 30 |
| R9-11 | SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE | 2 | 24" x 18" | 15 | 30 |
| R9-11a | SIDEWALK CLOSED with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R11-2 | ROAD CLOSED | 6 | 48" x 30" | 27 | 162 |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 1 | 60" x 30" | 30 | 30 |
| W20-1 | ROAD WORK AHEAD | 4 | 48" x 48" | 34 | 136 |
| W20-3 | ROAD CLOSED AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-7 | FLAGGER (symbol) | 2 | 48" x 48" | 34 | 68 |
| E5-2a | EXIT CLOSED | 4 | 48" x 36" | 29 | 116 |
| G20-2 | END ROAD WORK | 3 | 48" x 24" | 24 | 72 |
| M4-8 | DETOUR | 5 | 30" x 15" | 15 | 75 |
| M4-8a | END DETOUR | 1 | 36" x 24" | 20 | 20 |
| M4-9 | DETOUR with ARROW (L or R) | 5 | 36" x 48" | 29 | 145 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 2 | 30" x 21" | 16 | 32 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 3 | 30" x 21" | 16 | 48 |
| SPECIAL | NORTH ST | 10 | 48" x 12" | 20 | 200 |
| SPECIAL | ACCESS TO BUSINESSES | 6 | 60" x 126" | 83 | 498 |
| SPECIAL | NO ACCESS TO OMAHA STREET USE 8TH STREET | 6 | 126" x 60" | 83 | 498 |
| - | TYPE 3 BARRICADE - 8' double sided | 28 | | 56 | 1568 |
| TOTAL UNITS | | | | | 3950 |

OVERWIDTH DETOUR SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|---|--------|------------|----------------|-------------|
| M1-1 | INTERSTATE ROUTE MARKER (2 digits) | 18 | 36" x 36" | 27 | 486 |
| M1-1 | INTERSTATE ROUTE MARKER (3 digits) | 52 | 45" x 36" | 28 | 1456 |
| M3-1 | DIRECTION MARKER - NORTH | 18 | 36" x 18" | 17 | 306 |
| M3-3 | DIRECTION MARKER - SOUTH | 32 | 36" x 18" | 17 | 544 |
| M4-5 | TO | 18 | 36" x 18" | 17 | 306 |
| M4-8a | END DETOUR | 2 | 36" x 24" | 20 | 40 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 8 | 30" x 21" | 16 | 128 |
| M6-1 | DIRECTION ARROW - Horizontal Single Head (L or R) | 11 | 30" x 21" | 16 | 176 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 31 | 30" x 21" | 16 | 496 |
| SPECIAL | OVERWIDTH VEHICLES | 50 | 54" x 24" | 26 | 1300 |
| SPECIAL | WIDTH RESTRICTION - I190 (South or North) | 4 | 96" x 108" | 106 | 424 |
| TOTAL UNITS | | | | | 5662 |

Total Units is based on the maximum totals of all phases which could occur simultaneously.



INVENTORY OF TRAFFIC CONTROL DEVICES (CONT'D)

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------------|--------------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C9 | C37 |

PHASE 1B SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|--|--------|------------|----------------|-------------|
| R1-1 | STOP | 7 | 36" x 36" | 27 | 189 |
| R2-1 | SPEED LIMIT 35 | 4 | 36" x 48" | 29 | 116 |
| R2-1 | SPEED LIMIT 45 | 4 | 36" x 48" | 29 | 116 |
| R2-1 | SPEED LIMIT 55 | 2 | 36" x 48" | 29 | 58 |
| R2-6aP | FINES DOUBLE (plaque) | 2 | 36" x 24" | 20 | 40 |
| R9-8 | PEDESTRIAN CROSSWALK | 2 | 36" x 18" | 17 | 34 |
| R9-9 | SIDEWALK CLOSED | 6 | 24" x 12" | 15 | 90 |
| R9-10 | SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE | 2 | 24" x 12" | 15 | 30 |
| R9-11 | SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE | 2 | 24" x 18" | 15 | 30 |
| R9-11a | SIDEWALK CLOSED with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R11-2 | ROAD CLOSED | 11 | 48" x 30" | 27 | 297 |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 1 | 60" x 30" | 30 | 30 |
| W3-5 | SPEED REDUCTION AHEAD (35 MPH) | 2 | 48" x 48" | 34 | 68 |
| W3-5 | SPEED REDUCTION AHEAD (45 MPH) | 4 | 48" x 48" | 34 | 136 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 4 | 48" x 48" | 34 | 136 |
| W20-1 | ROAD WORK AHEAD | 9 | 48" x 48" | 34 | 306 |
| W20-2 | DETOUR AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-3 | ROAD CLOSED AHEAD | 5 | 48" x 48" | 34 | 170 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 4 | 48" x 48" | 34 | 136 |
| W20-7 | FLAGGER (symbol) | 2 | 48" x 48" | 34 | 68 |
| E5-2a | EXIT CLOSED | 4 | 48" x 36" | 29 | 116 |
| G20-2 | END ROAD WORK | 5 | 48" x 24" | 24 | 120 |
| M4-8 | DETOUR | 15 | 30" x 15" | 15 | 225 |
| M4-8a | END DETOUR | 3 | 36" x 24" | 20 | 60 |
| M4-9 | DETOUR with ARROW (L or R) | 19 | 36" x 48" | 29 | 551 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 2 | 30" x 21" | 16 | 32 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 13 | 30" x 21" | 16 | 208 |
| SPECIAL | ACCESS TO BUSINESSES | 6 | 60" x 126" | 83 | 498 |
| SPECIAL | NORTH ST | 27 | 48" x 12" | 20 | 540 |
| SPECIAL | SILVER ST | 7 | 48" x 12" | 20 | 140 |
| SPECIAL | NO ACCESS TO OMAHA STREET USE 8TH STREET | 6 | 126" x 60" | 83 | 498 |
| - | TYPE 3 BARRICADE - 8' double sided | 52 | | 56 | 2912 |
| TOTAL UNITS | | | | | 8048 |

PHASE 2 SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|--|--------|------------|----------------|-------------|
| R1-1 | STOP | 5 | 36" x 36" | 27 | 135 |
| R1-2 | YIELD | 1 | 60" x 60" | 44 | 44 |
| R2-1 | SPEED LIMIT 35 | 9 | 36" x 48" | 29 | 261 |
| R2-1 | SPEED LIMIT 55 | 1 | 36" x 48" | 29 | 29 |
| R2-6aP | FINES DOUBLE (plaque) | 11 | 36" x 24" | 20 | 220 |
| R3-7L | LEFT LANE MUST TURN LEFT | 1 | 30" x 30" | 21 | 21 |
| R4-1 | DO NOT PASS | 2 | 36" x 48" | 29 | 58 |
| R4-7 | KEEP RIGHT (symbol) | 1 | 36" x 48" | 29 | 29 |
| R5-1 | DO NOT ENTER | 2 | 36" x 36" | 27 | 54 |
| R9-8 | PEDESTRIAN CROSSWALK | 2 | 36" x 18" | 17 | 34 |
| R9-9 | SIDEWALK CLOSED | 6 | 24" x 12" | 15 | 90 |
| R9-10 | SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE | 2 | 24" x 12" | 15 | 30 |
| R9-11 | SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE | 2 | 24" x 18" | 15 | 30 |
| R9-11a | SIDEWALK CLOSED with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R11-2 | ROAD CLOSED | 7 | 48" x 30" | 27 | 189 |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 1 | 60" x 30" | 30 | 30 |
| W1-4 | REVERSE CURVE (L or R) | 2 | 48" x 48" | 34 | 68 |
| W1-6 | LARGE ARROW (one direction) | 2 | 60" x 30" | 30 | 60 |
| W3-2 | YIELD AHEAD (symbol) | 1 | 48" x 48" | 34 | 34 |
| W3-5 | SPEED REDUCTION AHEAD (35 MPH) | 2 | 48" x 48" | 34 | 68 |
| W4-1 | MERGE (symbol) | 2 | 48" x 48" | 34 | 68 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 1 | 48" x 48" | 34 | 34 |
| W6-3 | TWO WAY TRAFFIC (symbol) | 2 | 48" x 48" | 34 | 68 |
| W7-3aP | NEXT 1 MILES (plaque) | 2 | 36" x 30" | 23 | 46 |
| W13-1P | ADVISORY SPEED (plaque) | 2 | 30" x 30" | 21 | 42 |
| W20-1 | ROAD WORK AHEAD | 8 | 48" x 48" | 34 | 272 |
| W20-2 | DETOUR AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-3 | ROAD CLOSED AHEAD | 3 | 48" x 48" | 34 | 102 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 1 | 48" x 48" | 34 | 34 |
| G20-2 | END ROAD WORK | 5 | 48" x 24" | 24 | 120 |
| M4-8 | DETOUR | 16 | 30" x 15" | 15 | 240 |
| M4-8a | END DETOUR | 3 | 36" x 24" | 20 | 60 |
| M4-9 | DETOUR with ARROW (L or R) | 15 | 36" x 48" | 29 | 435 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 2 | 30" x 21" | 16 | 32 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 14 | 30" x 21" | 16 | 224 |
| SPECIAL | ACCESS TO BUSINESSES | 6 | 60" x 126" | 83 | 498 |
| SPECIAL | NORTH ST | 23 | 48" x 12" | 20 | 460 |
| SPECIAL | SILVER ST | 8 | 48" x 12" | 20 | 160 |
| SPECIAL | NO ACCESS TO OMAHA STREET USE 8TH STREET | 6 | 126" x 60" | 83 | 498 |
| - | TYPE 3 BARRICADE - 8' double sided | 48 | | 56 | 2688 |
| TOTAL UNITS | | | | | 7663 |



INVENTORY OF TRAFFIC CONTROL DEVICES (CONT'D)

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|--------------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C10 | C37 |

PHASE 3 SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|--|--------|------------|----------------|-------------|
| R1-2 | YIELD | 1 | 60" x 60" | 44 | 44 |
| R2-1 | SPEED LIMIT 35 | 8 | 36" x 48" | 29 | 232 |
| R2-1 | SPEED LIMIT 55 | 1 | 36" x 48" | 29 | 29 |
| R2-6aP | FINES DOUBLE (plaque) | 10 | 36" x 24" | 20 | 200 |
| R3-7L | LEFT LANE MUST TURN LEFT | 1 | 30" x 30" | 21 | 21 |
| R4-1 | DO NOT PASS | 2 | 36" x 48" | 29 | 58 |
| R4-7 | KEEP RIGHT (symbol) | 1 | 36" x 48" | 29 | 29 |
| R5-1 | DO NOT ENTER | 2 | 36" x 36" | 27 | 54 |
| R9-8 | PEDESTRIAN CROSSWALK | 2 | 36" x 18" | 17 | 34 |
| R9-9 | SIDEWALK CLOSED | 6 | 24" x 12" | 15 | 90 |
| R9-10 | SIDEWALK CLOSED with ARROW (L or R) USE OTHER SIDE | 2 | 24" x 12" | 15 | 30 |
| R9-11 | SIDEWALK CLOSED AHEAD with ARROW (L or R) CROSS HERE | 2 | 24" x 18" | 15 | 30 |
| R9-11a | SIDEWALK CLOSED with ARROW (L or R) CROSS HERE | 2 | 24" x 12" | 15 | 30 |
| R11-2 | ROAD CLOSED | 8 | 48" x 30" | 27 | 216 |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 1 | 60" x 30" | 30 | 30 |
| W1-4 | REVERSE CURVE (L or R) | 3 | 48" x 48" | 34 | 102 |
| W1-6 | LARGE ARROW (one direction) | 2 | 60" x 30" | 30 | 60 |
| W3-2 | YIELD AHEAD (symbol) | 1 | 48" x 48" | 34 | 34 |
| W3-5 | SPEED REDUCTION AHEAD (35 MPH) | 2 | 48" x 48" | 34 | 68 |
| W4-1 | MERGE (symbol) | 2 | 48" x 48" | 34 | 68 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 1 | 48" x 48" | 34 | 34 |
| W6-3 | TWO WAY TRAFFIC (symbol) | 2 | 48" x 48" | 34 | 68 |
| W7-3aP | NEXT 1 MILES (plaque) | 2 | 36" x 30" | 23 | 46 |
| W13-1P | ADVISORY SPEED (plaque) | 2 | 30" x 30" | 21 | 42 |
| W20-1 | ROAD WORK AHEAD | 8 | 48" x 48" | 34 | 272 |
| W20-2 | DETOUR AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-3 | ROAD CLOSED AHEAD | 2 | 48" x 48" | 34 | 68 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 2 | 48" x 48" | 34 | 68 |
| E5-2a | EXIT CLOSED | 2 | 48" x 36" | 29 | 58 |
| G20-2 | END ROAD WORK | 5 | 48" x 24" | 24 | 120 |
| M4-8 | DETOUR | 20 | 30" x 15" | 15 | 300 |
| M4-8a | END DETOUR | 3 | 36" x 24" | 20 | 60 |
| M4-9 | DETOUR with ARROW (L or R) | 17 | 36" x 48" | 29 | 493 |
| M5-1 | ADVANCE TURN ARROW 90° (L or R) | 2 | 30" x 21" | 16 | 32 |
| M6-3 | DIRECTION ARROW - Vertical Single Head | 18 | 30" x 21" | 16 | 288 |
| SPECIAL | ACCESS TO BUSINESSES | 6 | 60" x 126" | 83 | 498 |
| SPECIAL | NORTH ST | 26 | 48" x 12" | 20 | 520 |
| SPECIAL | SILVER ST | 11 | 48" x 12" | 20 | 220 |
| SPECIAL | NO ACCESS TO OMAHA STREET USE 8TH STREET | 5 | 126" x 60" | 83 | 415 |
| - | TYPE 3 BARRICADE - 8' double sided | 58 | | 56 | 3248 |
| TOTAL UNITS | | | | | 8377 |

PHASE 4 SIGNS

| SIGN CODE | DESCRIPTION | NUMBER | SIGN SIZE | UNITS PER SIGN | UNITS |
|--------------------|------------------------------------|--------|-----------|----------------|-------------|
| R2-1 | SPEED LIMIT 35 | 6 | 36" x 48" | 29 | 174 |
| R2-1 | SPEED LIMIT 45 | 2 | 36" x 48" | 29 | 58 |
| R2-1 | SPEED LIMIT 55 | 4 | 36" x 48" | 29 | 116 |
| R2-6aP | FINES DOUBLE (plaque) | 2 | 36" x 24" | 20 | 40 |
| R11-2 | ROAD CLOSED | 3 | 48" x 30" | 27 | 81 |
| W3-5 | SPEED REDUCTION AHEAD (35 MPH) | 2 | 48" x 48" | 34 | 68 |
| W3-5 | SPEED REDUCTION AHEAD (45 MPH) | 4 | 48" x 48" | 34 | 136 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 4 | 48" x 48" | 34 | 136 |
| W20-1 | ROAD WORK AHEAD | 8 | 48" x 48" | 34 | 272 |
| W20-3 | ROAD CLOSED AHEAD | 3 | 48" x 48" | 34 | 102 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 4 | 48" x 48" | 34 | 136 |
| W20-7 | FLAGGER (symbol) | 2 | 48" x 48" | 34 | 68 |
| G20-2 | END ROAD WORK | 4 | 48" x 24" | 24 | 96 |
| - | TYPE 3 BARRICADE - 8' double sided | 16 | | 56 | 896 |
| TOTAL UNITS | | | | | 2379 |



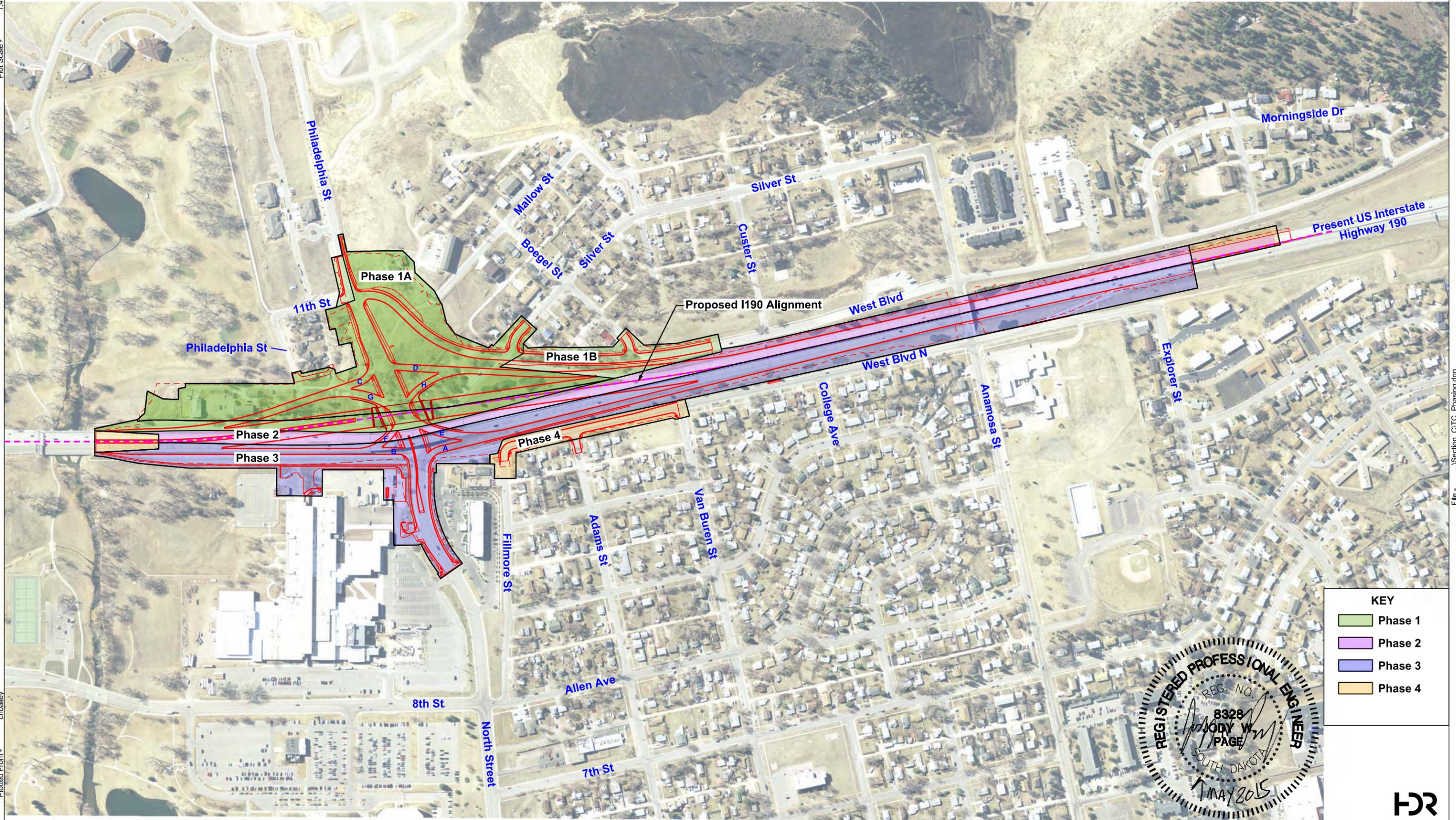
Traffic Phasing Diagram

FOR BIDDING PURPOSES ONLY

| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C11 | TOTAL SHEETS C37 |
| Plotting Date: 02-26-2015 | | | |

Plot Scale - 1:400

Plotted From - chbailey



KEY

| | |
|--------|---------|
| Green | Phase 1 |
| Pink | Phase 2 |
| Purple | Phase 3 |
| Orange | Phase 4 |



File - ... \Section_CITC_Phasing.dgn

Overwidth Vehicle Detour Phases 2 & 3

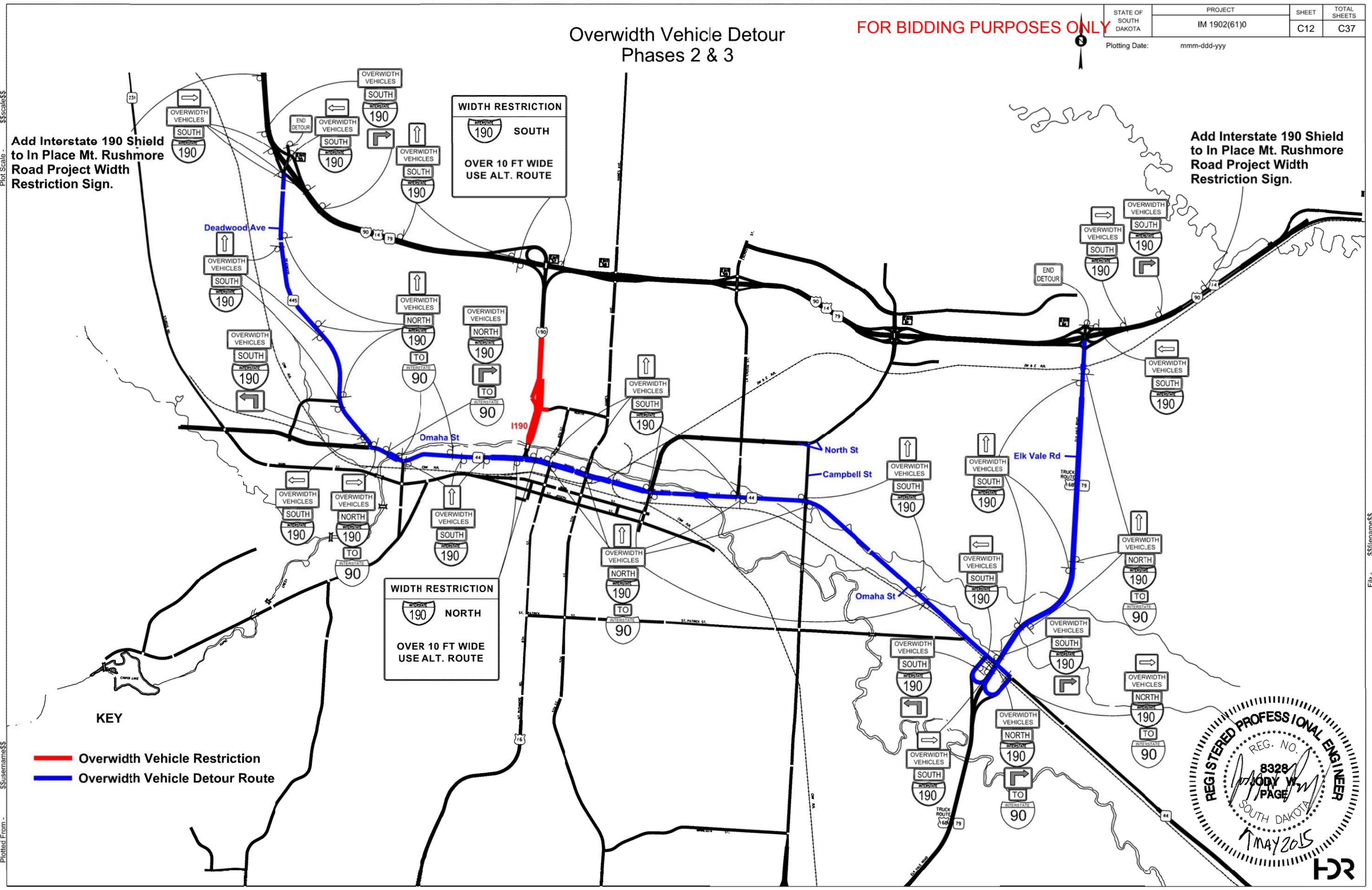
FOR BIDDING PURPOSES ONLY

| | | | |
|----------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C12 | TOTAL SHEETS C37 |
| Plotting Date: mmm-ddd-yyy | | | |

Plotted From - \$\$username\$\$ Plot Scale - \$\$scale\$\$

Add Interstate 190 Shield to In Place Mt. Rushmore Road Project Width Restriction Sign.

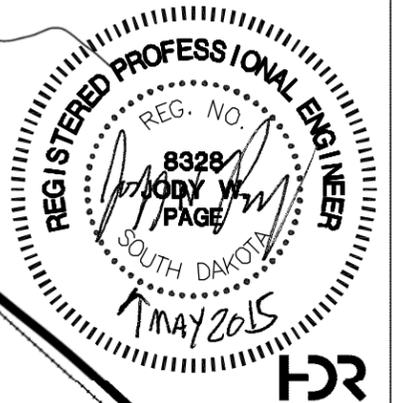
Add Interstate 190 Shield to In Place Mt. Rushmore Road Project Width Restriction Sign.



KEY
— Overwidth Vehicle Restriction
— Overwidth Vehicle Detour Route

WIDTH RESTRICTION
 INTERSTATE 190 NORTH
 OVER 10 FT WIDE
 USE ALT. ROUTE

WIDTH RESTRICTION
 INTERSTATE 190 SOUTH
 OVER 10 FT WIDE
 USE ALT. ROUTE



File - \$\$filename\$\$

Phase 1B

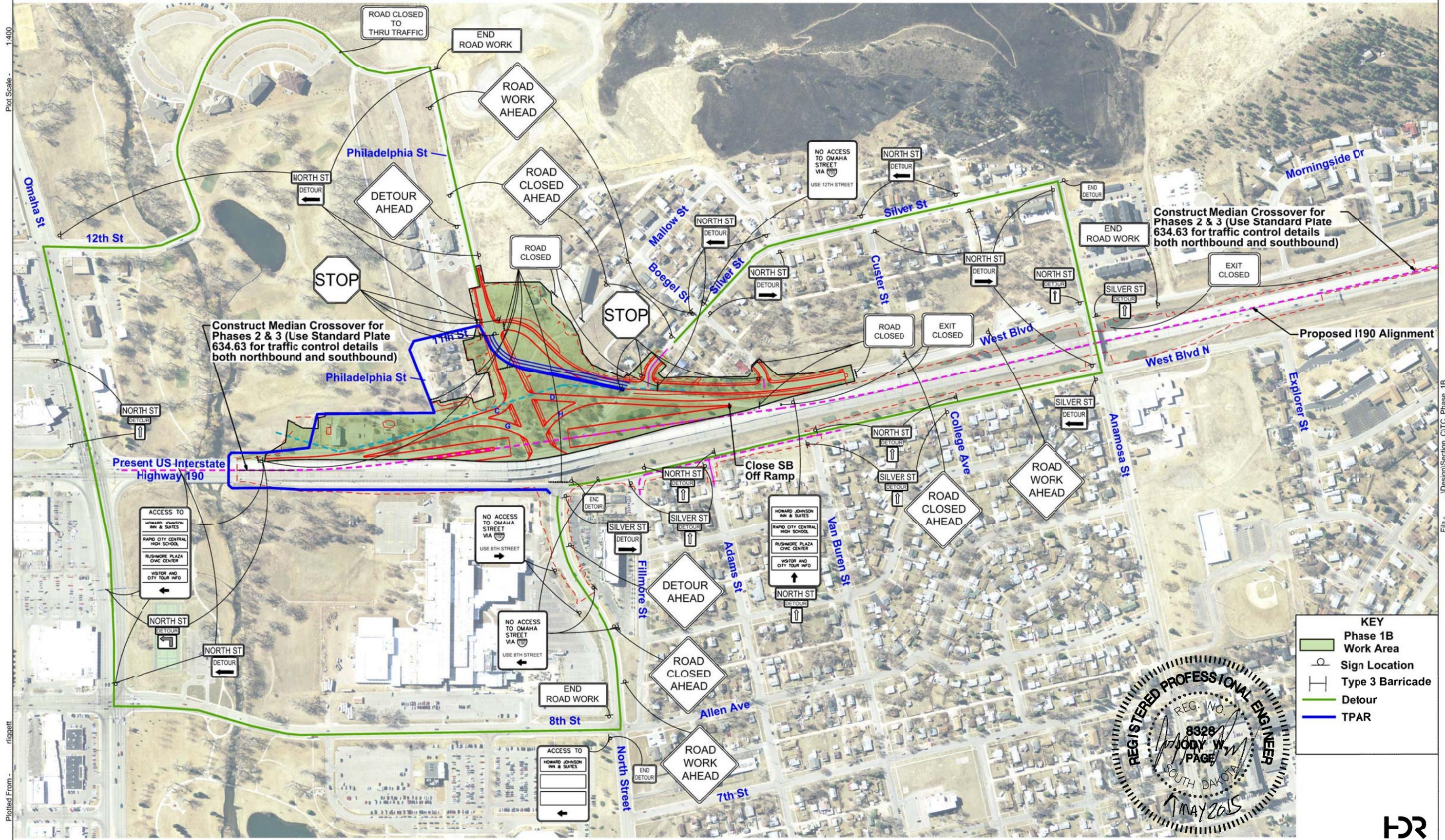
FOR BIDDING PURPOSES ONLY

| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|-----------------------|--------------|-------|--------------|
| | IM 1902(61)0 | C14 | C37 |

Plotting Date: 05-06-2015

Plot Scale - 1:400

Plotted From - rjiggatt



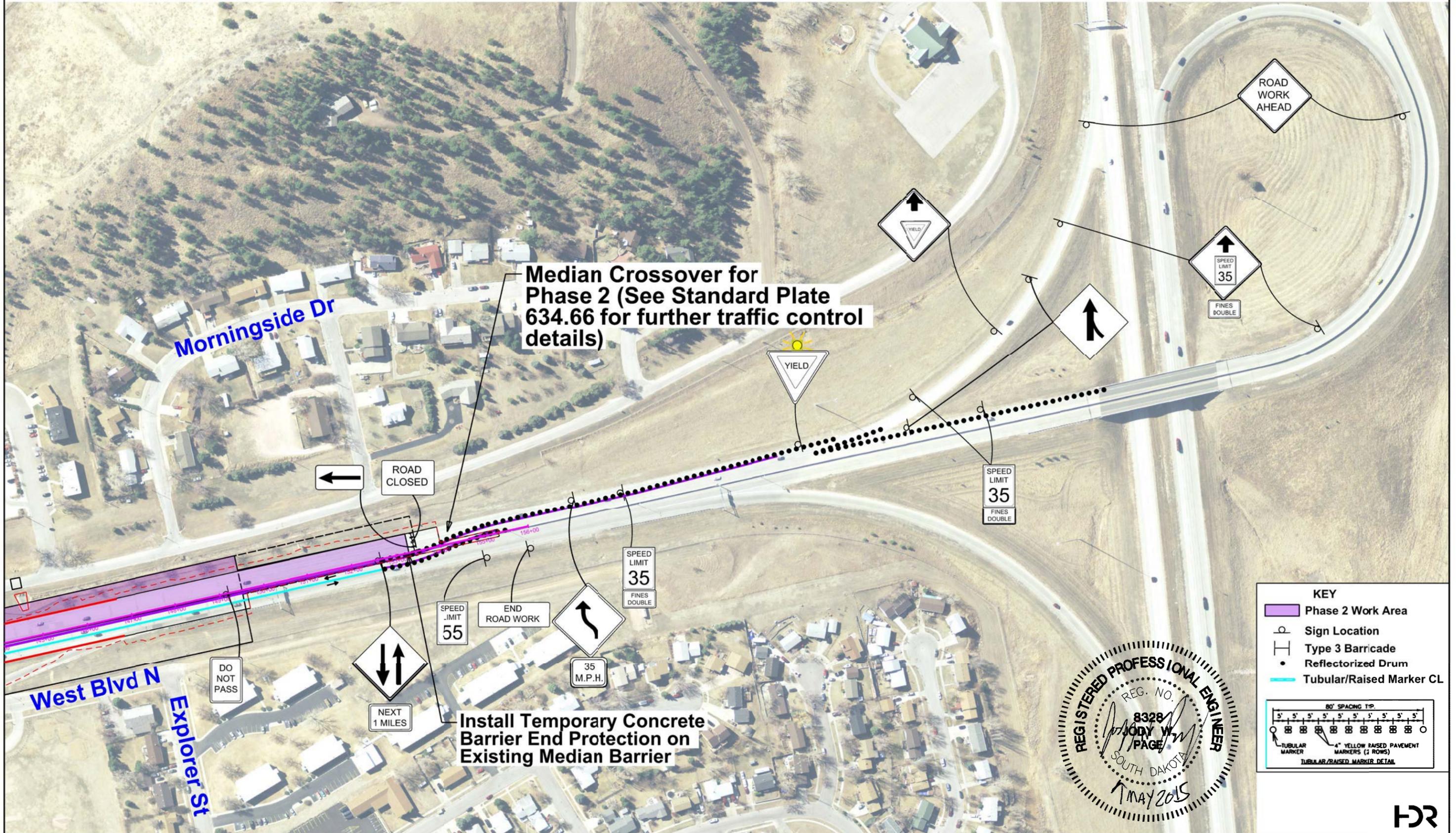
File - ...Design\Section_CITC_Phase_1B



Phase 2 North Crossover

FOR BIDDING PURPOSES ONLY

| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C16 | TOTAL SHEETS C37 |
| Plotting Date: 05-06-2015 | | | |



Median Crossover for Phase 2 (See Standard Plate 634.66 for further traffic control details)

Install Temporary Concrete Barrier End Protection on Existing Median Barrier

KEY

- Phase 2 Work Area
- Sign Location
- Type 3 Barricade
- Reflectorized Drum
- Tubular/Raised Marker CL

80' SPACING TIP:

5' 5' 5' 5' 5' 5' 5' 5' 5' 5' 5' 5'

TUBULAR MARKER 4" YELLOW RAISED PAVEMENT MARKERS (2 ROWS)

TUBULAR/RAISED MARKER DETAIL

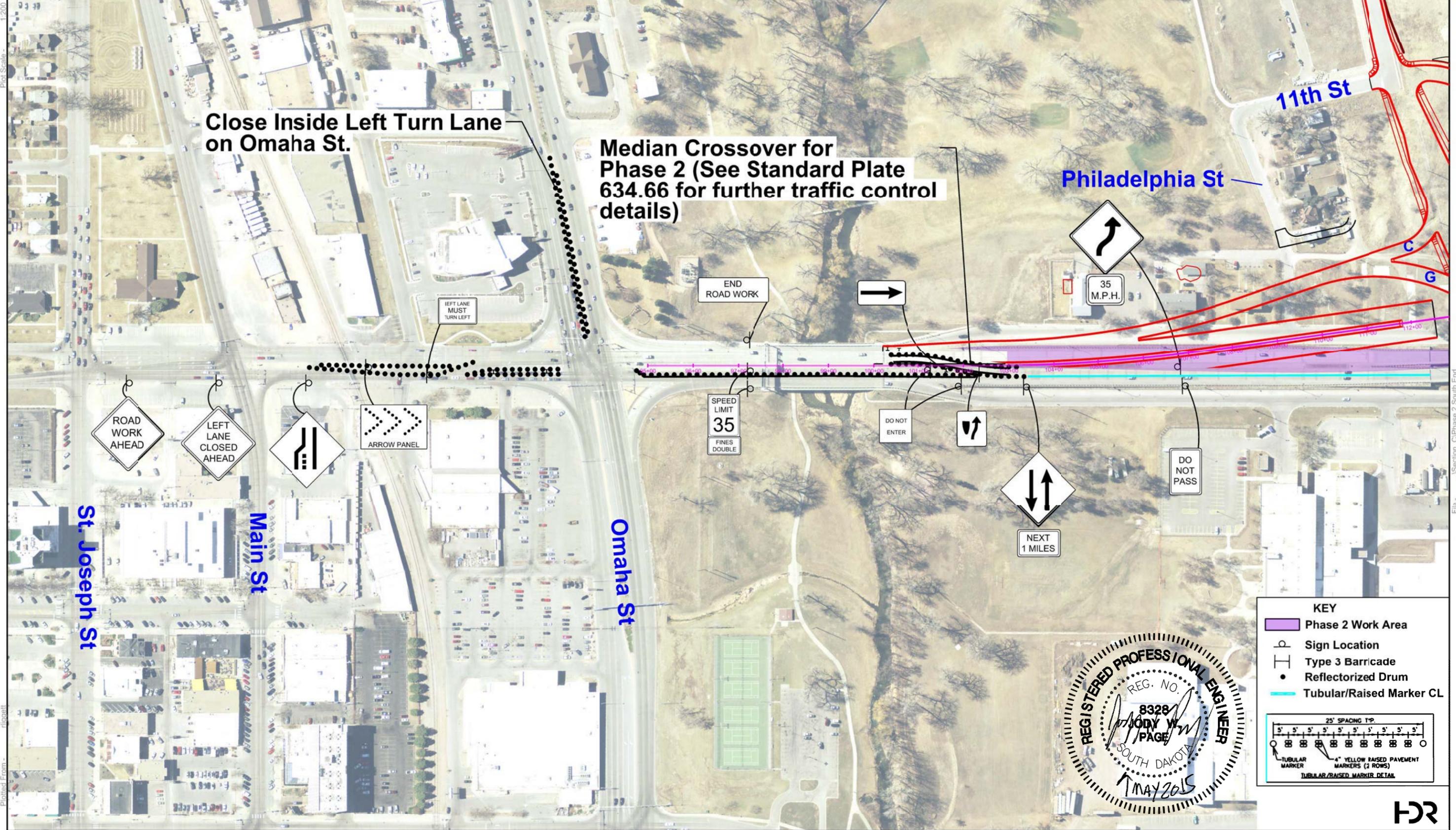


Phase 2 South Crossover

FOR BIDDING PURPOSES ONLY

| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C17 | TOTAL SHEETS C37 |
| Plotting Date: 05-06-2015 | | | |

Plot Scale: 1"=200'



Close Inside Left Turn Lane on Omaha St.

Median Crossover for Phase 2 (See Standard Plate 634.66 for further traffic control details)

Philadelphia St

11th St

St. Joseph St

Main St

Omaha St

KEY

- Phase 2 Work Area
- Sign Location
- Type 3 Barricade
- Reflectorized Drum
- Tubular/Raised Marker CL

25' SPACING 1"=1'

TUBULAR MARKER 4" YELLOW RAISED PAVEMENT MARKERS (2 ROWS)
TUBULAR/RAISED MARKER DETAIL



Plotted From: rjpcg

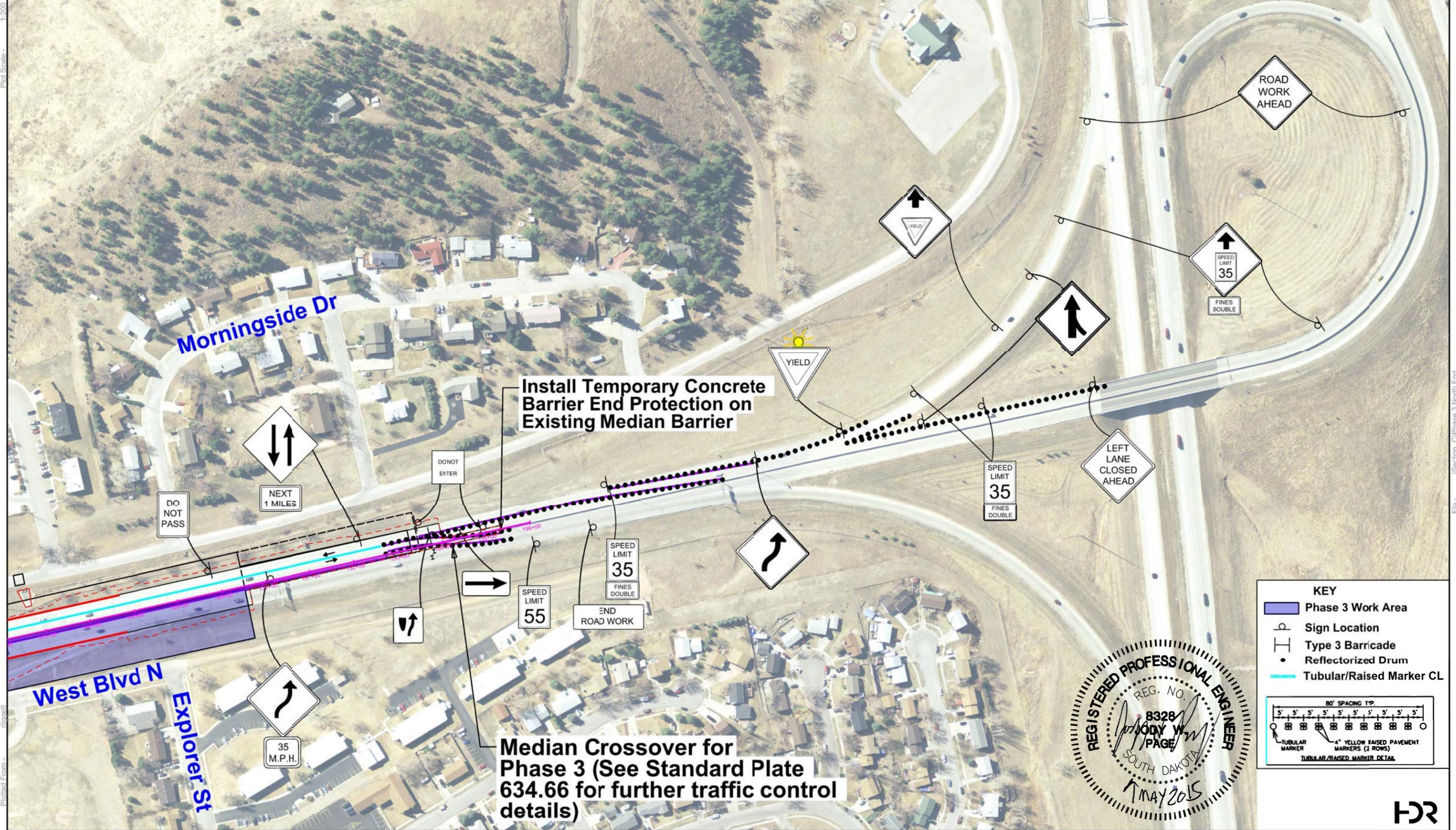
File: ...Section_C\Phase 2 South End

Phase 3 North Crossover

FOR BIDDING PURPOSES ONLY

| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C19 | TOTAL SHEETS C37 |
| Plotting Date: 05-06-2015 | | | |

Plot Scale: 1:200



KEY

- Phase 3 Work Area
- Sign Location
- Type 3 Barricade
- ReflectORIZED Drum
- Tubular/Raised Marker CL

80' SPACING TYP.
4" YELLOW RAISED PAVEMENT MARKERS (2 ROWS)
TUBULAR MARKER
TUBULAR/RAISED MARKER DETAIL

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8328
JODY W. PAGE
SOUTH DAKOTA
MAY 2015



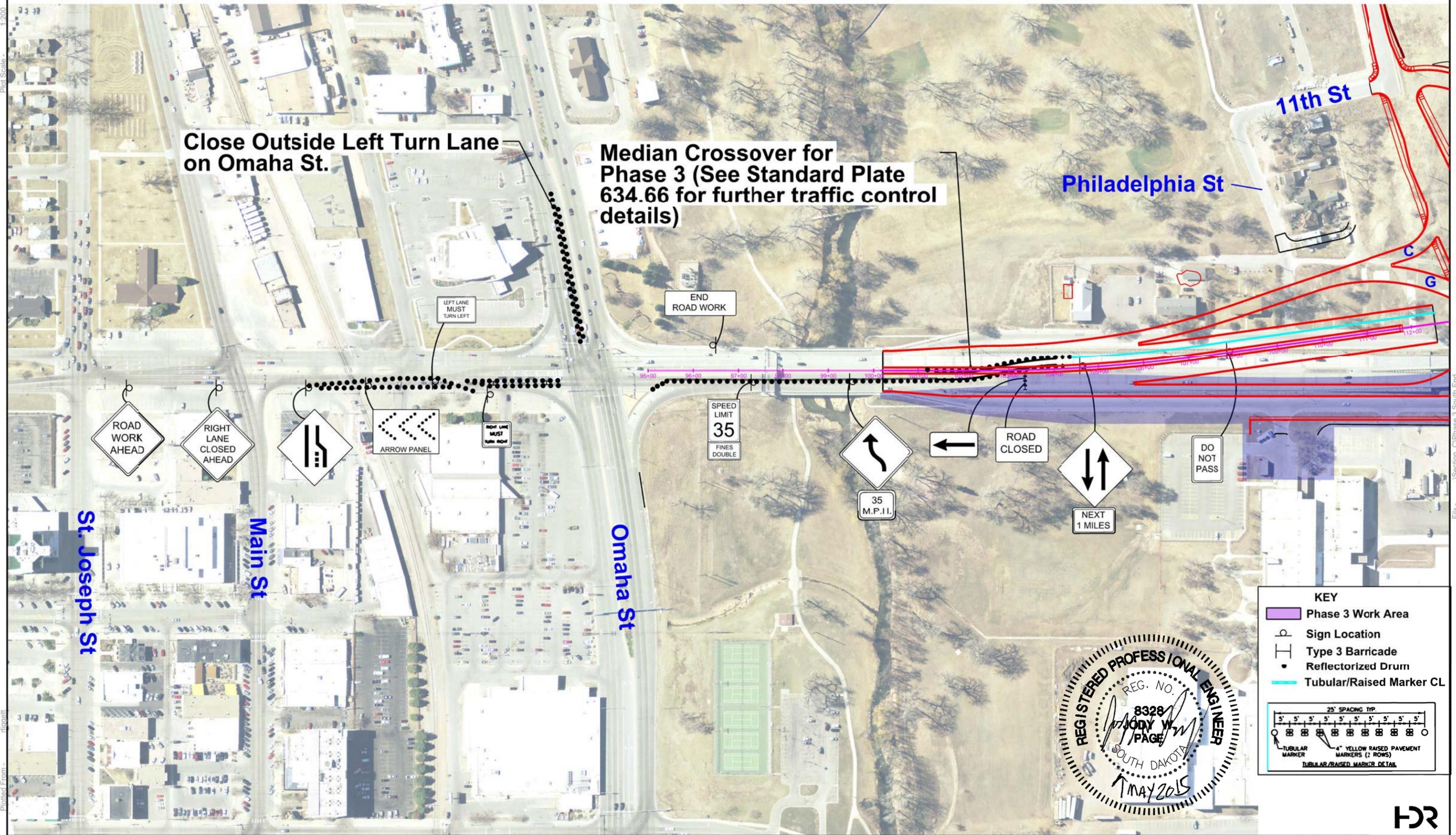
Phase 3 South Crossover

FOR BIDDING PURPOSES ONLY

| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C20 | TOTAL SHEETS C37 |
| Plotting Date: 05-06-2015 | | | |

Plot Scale: 1/200

Plotted From: rjgocoff



Close Outside Left Turn Lane on Omaha St.

Median Crossover for Phase 3 (See Standard Plate 634.66 for further traffic control details)

Philadelphia St

11th St

St. Joseph St

Main St

Omaha St

KEY

- Phase 3 Work Area
- Sign Location
- Type 3 Barricade
- Reflectorized Drum
- Tubular/Raised Marker CL

25' SPACING TYP.

TUBULAR MARKER

4" YELLOW RAISED PAVEMENT MARKERS (2 ROWS)

TUBULAR/RAISED MARKER DETAIL



File: ...Section_C\Phase 3 South End

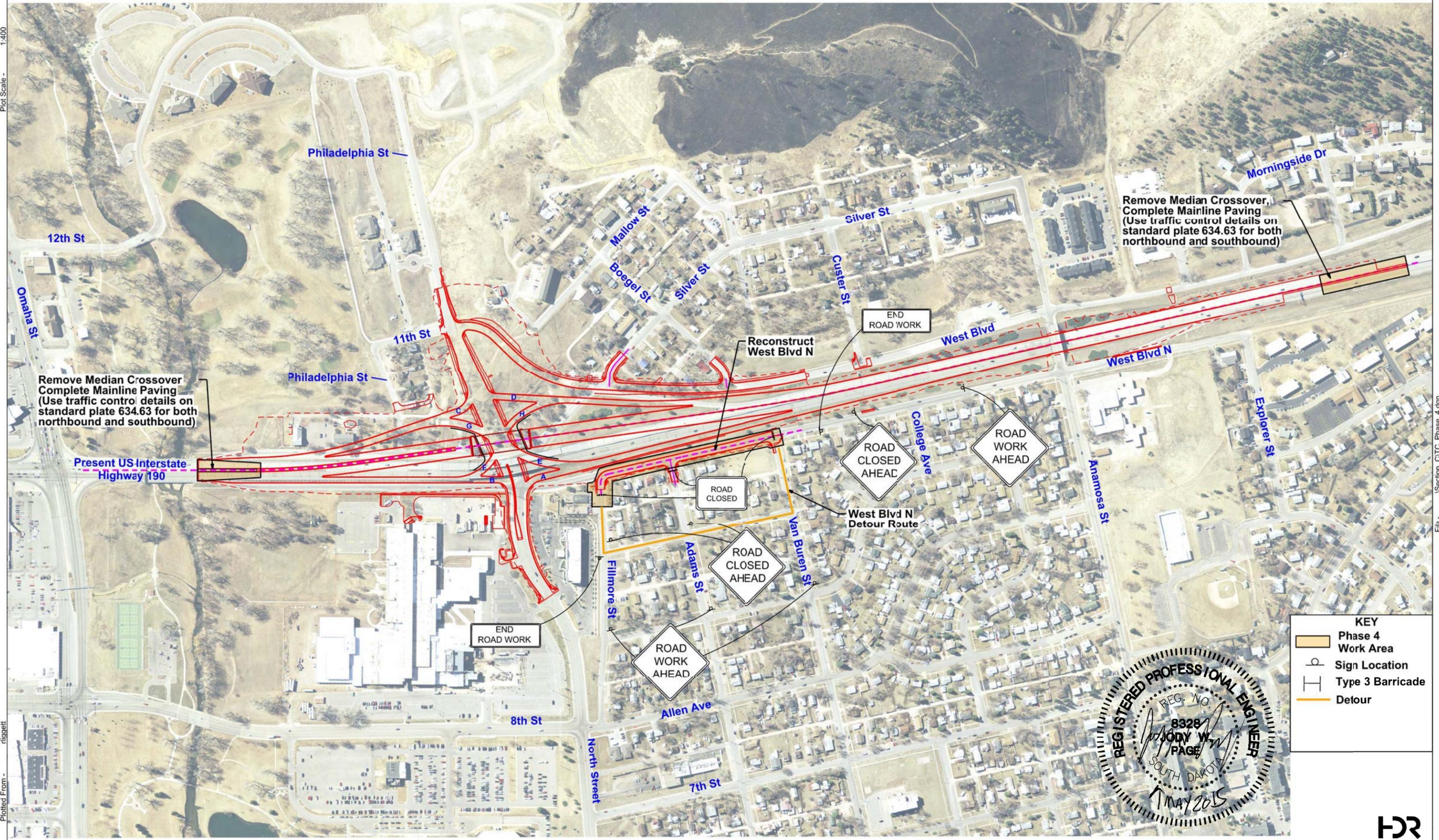
Phase 4

FOR BIDDING PURPOSES ONLY

| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|---------------------------|--------------|-------|--------------|
| | IM 1902(61)0 | C21 | C37 |
| Plotting Date: 05-06-2015 | | | |

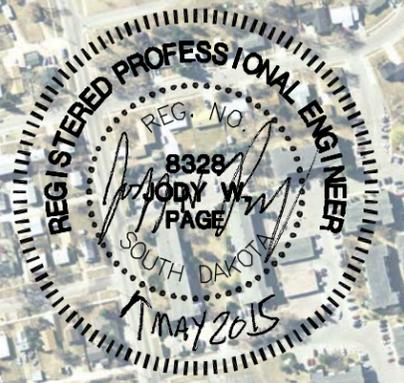
Plot Scale - 1:400

Plotted From - rjggett



KEY

- Phase 4 Work Area
- Sign Location
- Type 3 Barricade
- Detour



File - ... \Section_CITC_Phase_4.dgn

Storm Sewer Construction Sequencing

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C22 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|--------------|---------------------|

Plotting Date: 04-01-2015

Legend

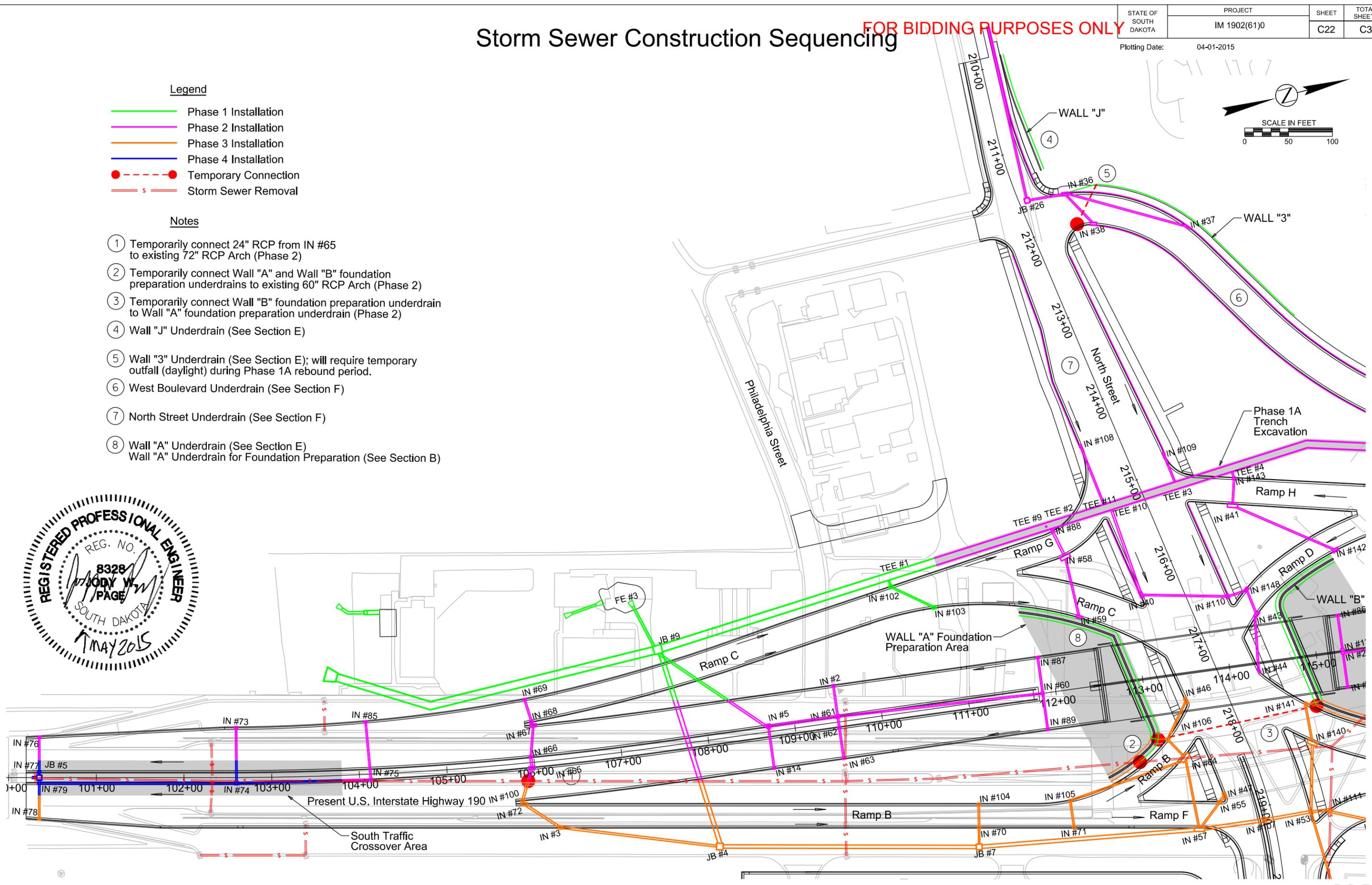
- Phase 1 Installation
- Phase 2 Installation
- Phase 3 Installation
- Phase 4 Installation
- - - Temporary Connection
- s - Storm Sewer Removal

Notes

- ① Temporarily connect 24" RCP from IN #65 to existing 72" RCP Arch (Phase 2)
- ② Temporarily connect Wall "A" and Wall "B" foundation preparation underdrains to existing 60" RCP Arch (Phase 2)
- ③ Temporarily connect Wall "B" foundation preparation underdrain to Wall "A" foundation preparation underdrain (Phase 2)
- ④ Wall "J" Underdrain (See Section E)
- ⑤ Wall "3" Underdrain (See Section E); will require temporary outfall (daylight) during Phase 1A rebound period.
- ⑥ West Boulevard Underdrain (See Section F)
- ⑦ North Street Underdrain (See Section F)
- ⑧ Wall "A" Underdrain (See Section E)
Wall "A" Underdrain for Foundation Preparation (See Section B)

Plot Scale - 1:100

Plotted From -



File - ...ISequencing100_storm.dgn



Storm Sewer Construction Sequencing

FOR BIDDING PURPOSES ONLY

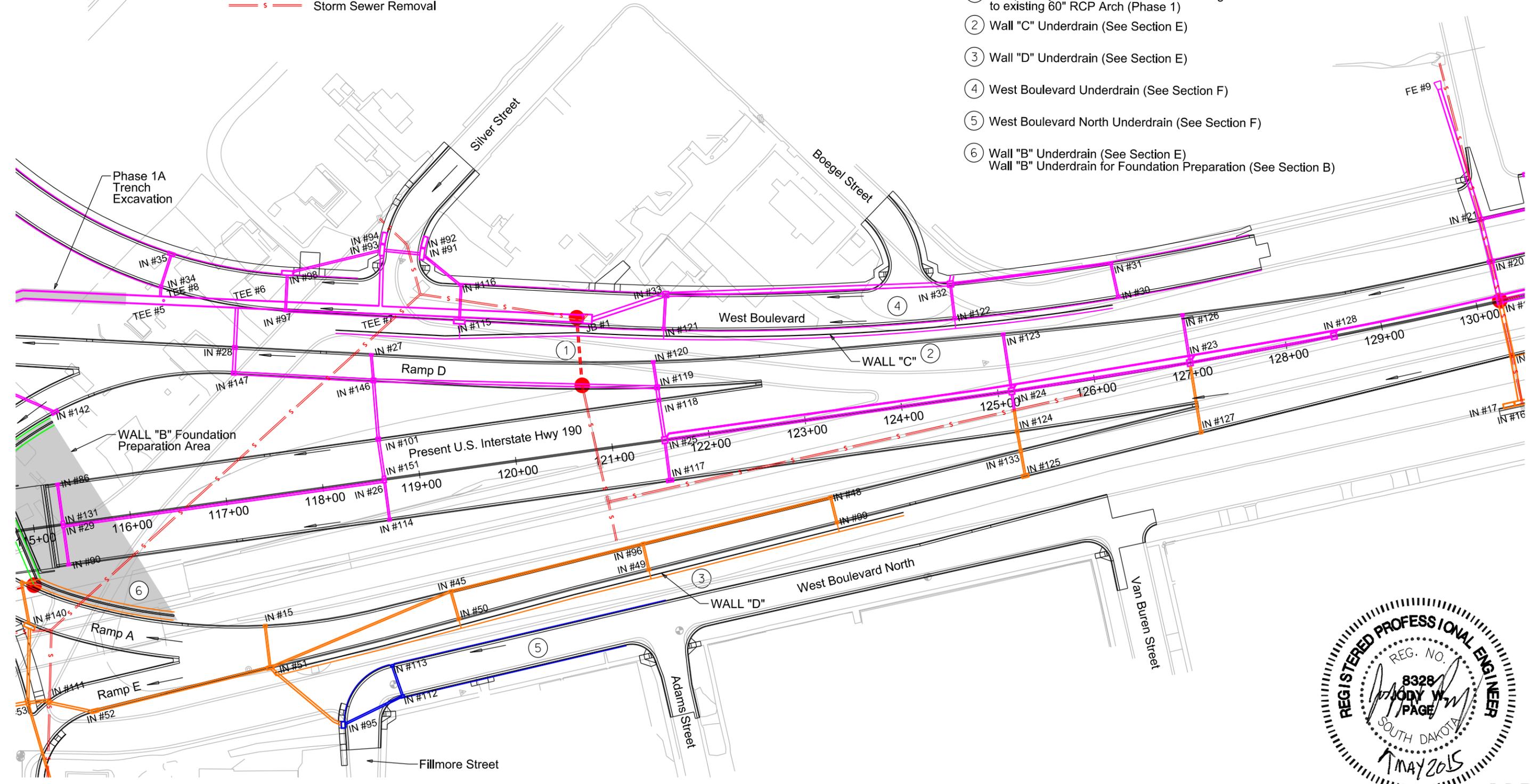
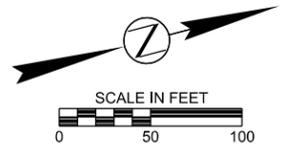
| | | | |
|---------------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C23 | TOTAL SHEETS C37 |
| Plotting Date: 04-01-2015 | | | |

Plot Scale - 1:95.9998
Plotted From - a1agame

- Legend**
- Phase 1 Installation
 - Phase 2 Installation
 - Phase 3 Installation
 - Phase 4 Installation
 - - - Temporary Connection
 - s - Storm Sewer Removal

Notes

- ① Temporarily connect 18" RCP from existing outfall to existing 60" RCP Arch (Phase 1)
- ② Wall "C" Underdrain (See Section E)
- ③ Wall "D" Underdrain (See Section E)
- ④ West Boulevard Underdrain (See Section F)
- ⑤ West Boulevard North Underdrain (See Section F)
- ⑥ Wall "B" Underdrain (See Section E)
Wall "B" Underdrain for Foundation Preparation (See Section B)



File - ...ISequencing115_storm.dgn

Storm Sewer Construction Sequencing

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C24 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|--------------|---------------------|

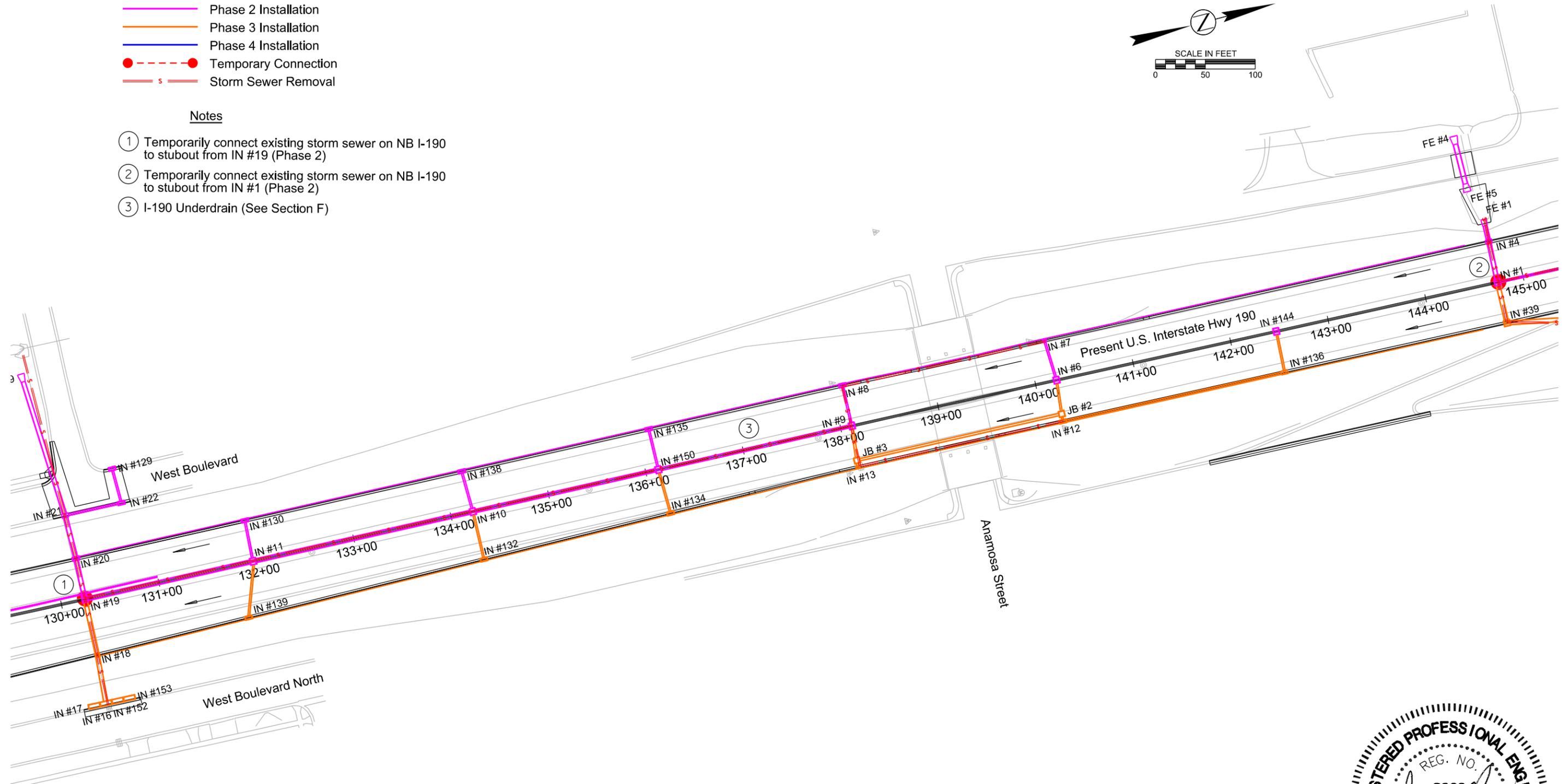
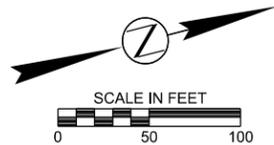
Plotting Date: 04-01-2015

Legend

- Phase 1 Installation
- Phase 2 Installation
- Phase 3 Installation
- Phase 4 Installation
- - - ● - - - Temporary Connection
- = s = Storm Sewer Removal

Notes

- ① Temporarily connect existing storm sewer on NB I-190 to stubout from IN #19 (Phase 2)
- ② Temporarily connect existing storm sewer on NB I-190 to stubout from IN #1 (Phase 2)
- ③ I-190 Underdrain (See Section F)



Plot Scale - 1:95,9998

Plotted From - aflageme

File - ...ISequencing130_storm.dgn

Storm Sewer Construction Sequencing

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C25 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|--------------|---------------------|

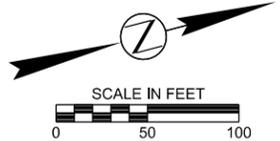
Plotting Date: 04-01-2015

Legend

- Phase 1 Installation
- Phase 2 Installation
- Phase 3 Installation
- Phase 4 Installation
- - - Temporary Connection
- = s = Storm Sewer Removal

Notes

- ① Do Not Disturb Existing Median Inlet



Plot Scale - 1:95,9998

Plotted From - a1ageme

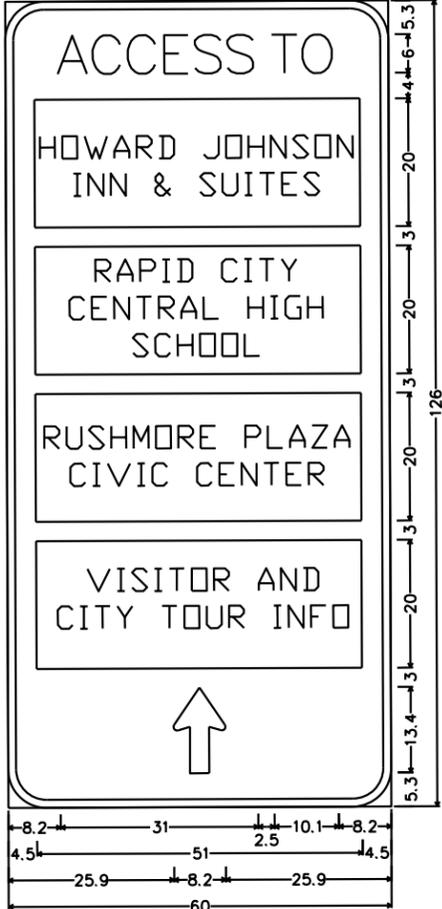
File - ...ISequencing145_storm.dgn

Special Sign Details

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C26 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|--------------|---------------------|

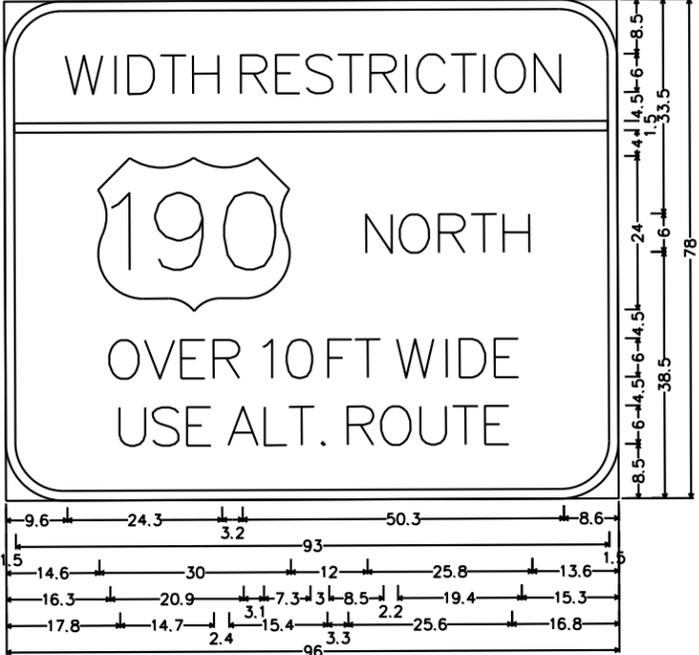
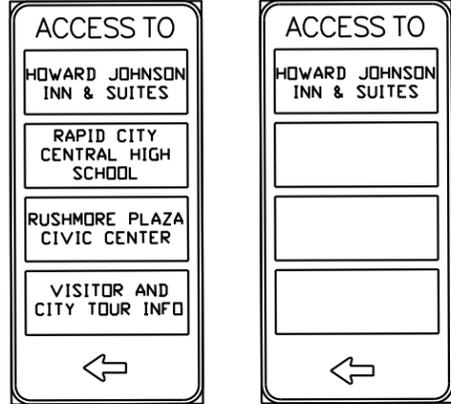
Plotting Date: 05-06-2015



6.0" Radius, 1.3" Border, Black on Orange;
 [ACCESS TO] Black Microsoft Sans Serif;
 Standard Arrow Custom 13.4" X 8.1" 90° Black;
 Table of letter and object lefts.

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| A | C | C | E | S | S | T | O |
| 8.2 | 13.7 | 19.2 | 24.9 | 29.7 | 34.8 | 41.7 | 46.6 |
| □ | □ | □ | □ | □ | □ | □ | □ |
| 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| ↑ | | | | | | | |
| 25.9 | | | | | | | |

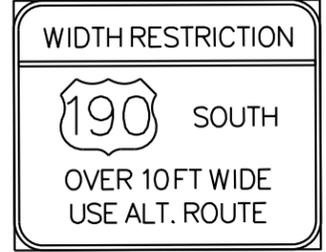
Similar Signs



9.0" Radius, 1.5" Border, Black on Orange;
 [WIDTH RESTRICTION] Black Microsoft Sans Serif; Horizontal Line Black;
 [NORTH] Black Microsoft Sans Serif;
 [OVER 10 FT WIDE] Black Microsoft Sans Serif;
 [USE ALT. ROUTE] Black Microsoft Sans Serif;
 Table of letter and object lefts.

| | | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| W | I | D | T | H | R | E | S | T | R | I | C | T | I | O | N |
| 9.6 | 17.4 | 19.4 | 24.5 | 29.5 | 37.1 | 42.6 | 47.4 | 52.3 | 57.3 | 62.9 | 64.7 | 70.0 | 75.2 | 77.0 | 83.1 |
| □ | | | | | | | | | | | | | | | |
| 1.5 | | | | | | | | | | | | | | | |
| □ | N | O | R | T | H | | | | | | | | | | |
| 14.6 | 56.6 | 61.8 | 68.0 | 73.0 | 78.1 | | | | | | | | | | |
| □ | O | V | E | R | I | O | F | T | W | I | D | E | | | |
| 16.3 | 21.9 | 27.5 | 32.6 | 40.3 | 44.1 | 50.6 | 54.7 | 61.3 | 69.1 | 71.1 | 76.6 | | | | |
| □ | U | S | E | A | L | T | R | O | U | T | E | | | | |
| 17.8 | 23.1 | 28.4 | 34.9 | 40.6 | 44.4 | 49.5 | 53.6 | 58.8 | 65.0 | 70.0 | 75.1 | | | | |

Similar Signs



All Special Signs shall be on Type IV sheeting and have an orange background with black border and lettering.



Plot Scale: 1/28.6368

Plotted From: chhailiv

File: ...Section_C\Special Sign Details

Special Sign Details

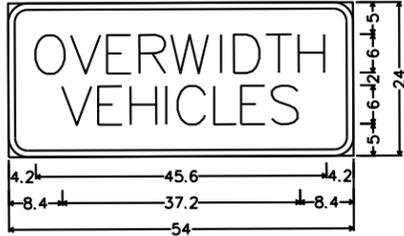
FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|-------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 1902(61)0 | SHEET C27 | TOTAL SHEETS C37 |
|-----------------------|-------------------------|--------------|---------------------|

Plotting Date: 05-06-2015

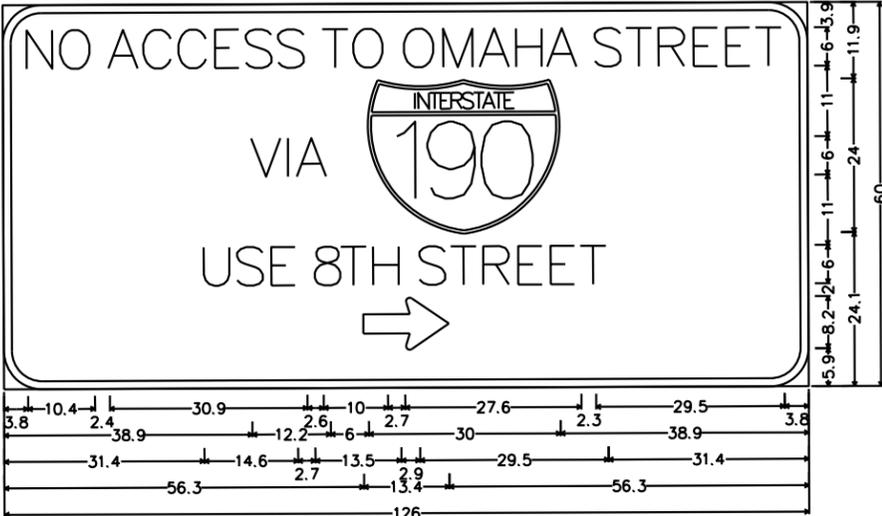
1:28.6:198

Plotted From: chbailey



3.0" Radius, 1.0" Border, Black on Orange;
 [OVERWIDTH] Black Microsoft Sans Serif;
 [VEHICLES] Black Microsoft Sans Serif;
 Table of letter and object lefts.

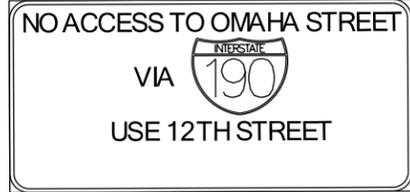
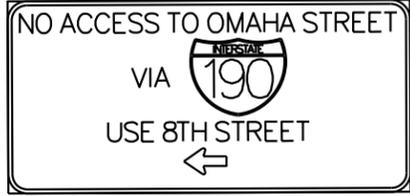
| | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|
| O | V | E | R | W | I | D | T | H |
| 4.2 | 9.8 | 15.5 | 20.5 | 25.5 | 33.3 | 35.3 | 40.4 | 45.5 |
| V | E | H | I | C | L | E | S | |
| 8.4 | 14.0 | 19.1 | 24.7 | 26.5 | 32.2 | 36.4 | 41.2 | |



6.0" Radius, 1.3" Border, Black on Orange;
 [NO ACCESS TO OMAHA STREET] Black Microsoft Sans Serif; [VIA] Black Microsoft Sans Serif;
 [USE 8TH STREET] Black Microsoft Sans Serif; Standard Arrow Custom 13.4" X 8.1" O Black;
 Table of letter and object lefts.

| | | | | | | | | | | | | | | |
|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| N | O | A | C | C | E | S | S | T | O | O | M | A | H | A |
| 3.8 | 9.0 | 16.6 | 22.0 | 27.5 | 33.3 | 38.1 | 43.1 | 50.1 | 54.9 | 62.8 | 69.0 | 74.7 | 80.4 | 85.3 |
| S | T | R | E | E | T | | | | | | | | | |
| 92.7 | 97.6 | 102.7 | 108.2 | 113.3 | 117.9 | | | | | | | | | |
| V | I | A | | | | | | | | | | | | |
| 38.9 | 44.6 | 46.0 | 57.1 | | | | | | | | | | | |
| U | S | E | B | T | H | S | T | R | E | E | T | | | |
| 31.4 | 36.6 | 41.9 | 48.7 | 52.8 | 57.9 | 65.1 | 70.0 | 75.1 | 80.8 | 85.7 | 90.3 | | | |
| ⇒ | | | | | | | | | | | | | | |
| 56.3 | | | | | | | | | | | | | | |

Similar Signs



All Special Signs shall be on Type IV sheeting and have an orange background with black border and lettering.



File: ...Special Sign Details 2

Plot Scale - 1:10

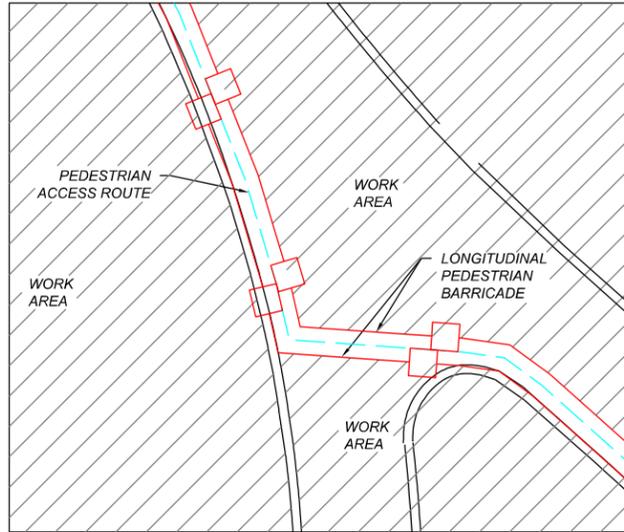
Plotted From - chbailey

Typical Sections

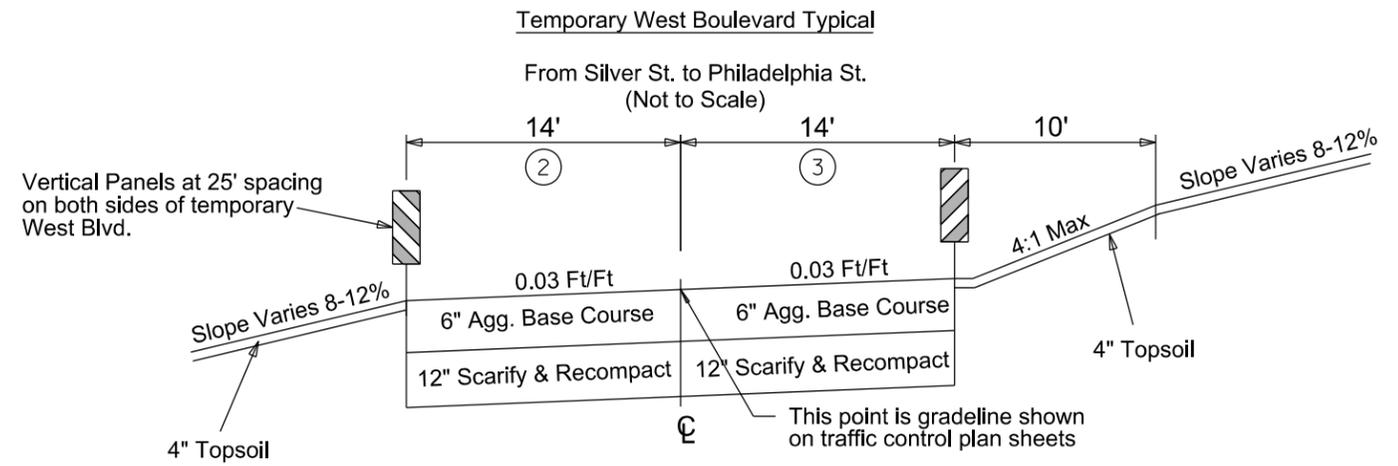
FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|--------------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C28 | C37 |

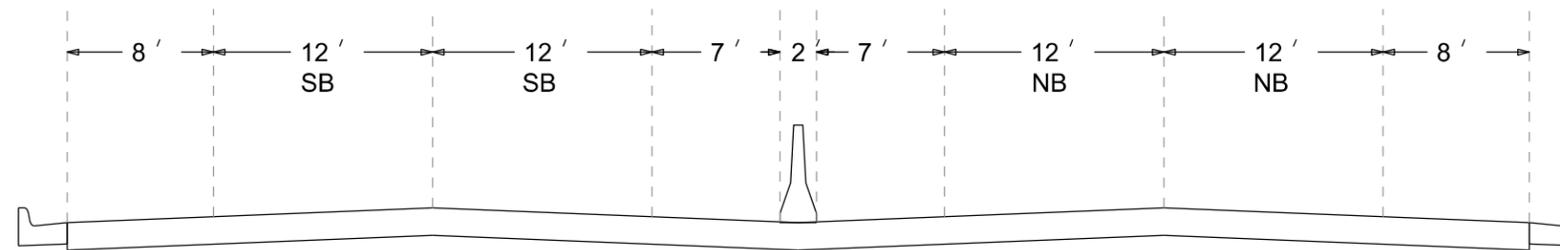
Plotting Date: 05-07-2015



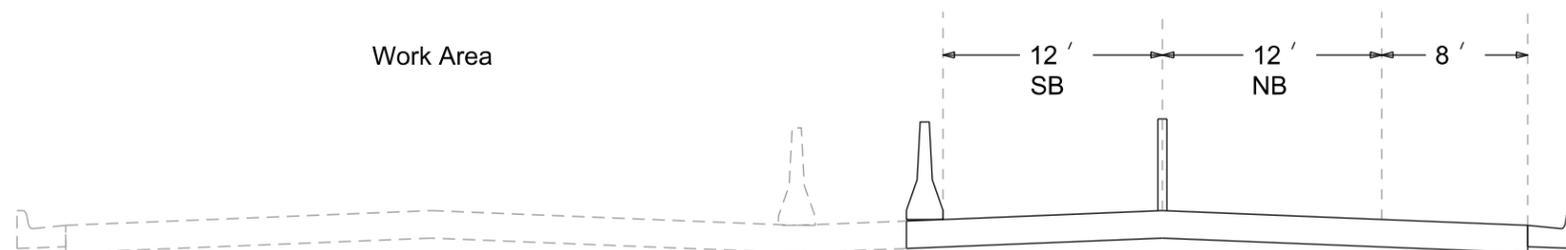
PEDESTRIAN ACCESS ROUTE
N.T.S



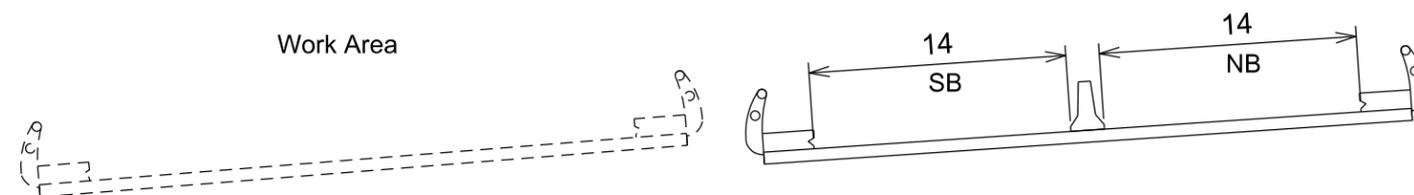
Existing I-190 Mainline



Phase 2: Two-Way Traffic



Phase 2: Two-Way Traffic on Existing Structure



File - ...Design\Section_Citypr13.DGN

Plot Scale - 1:40

chballev

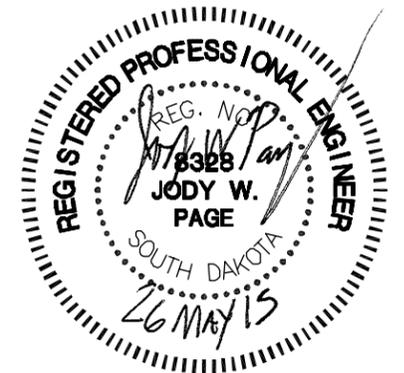
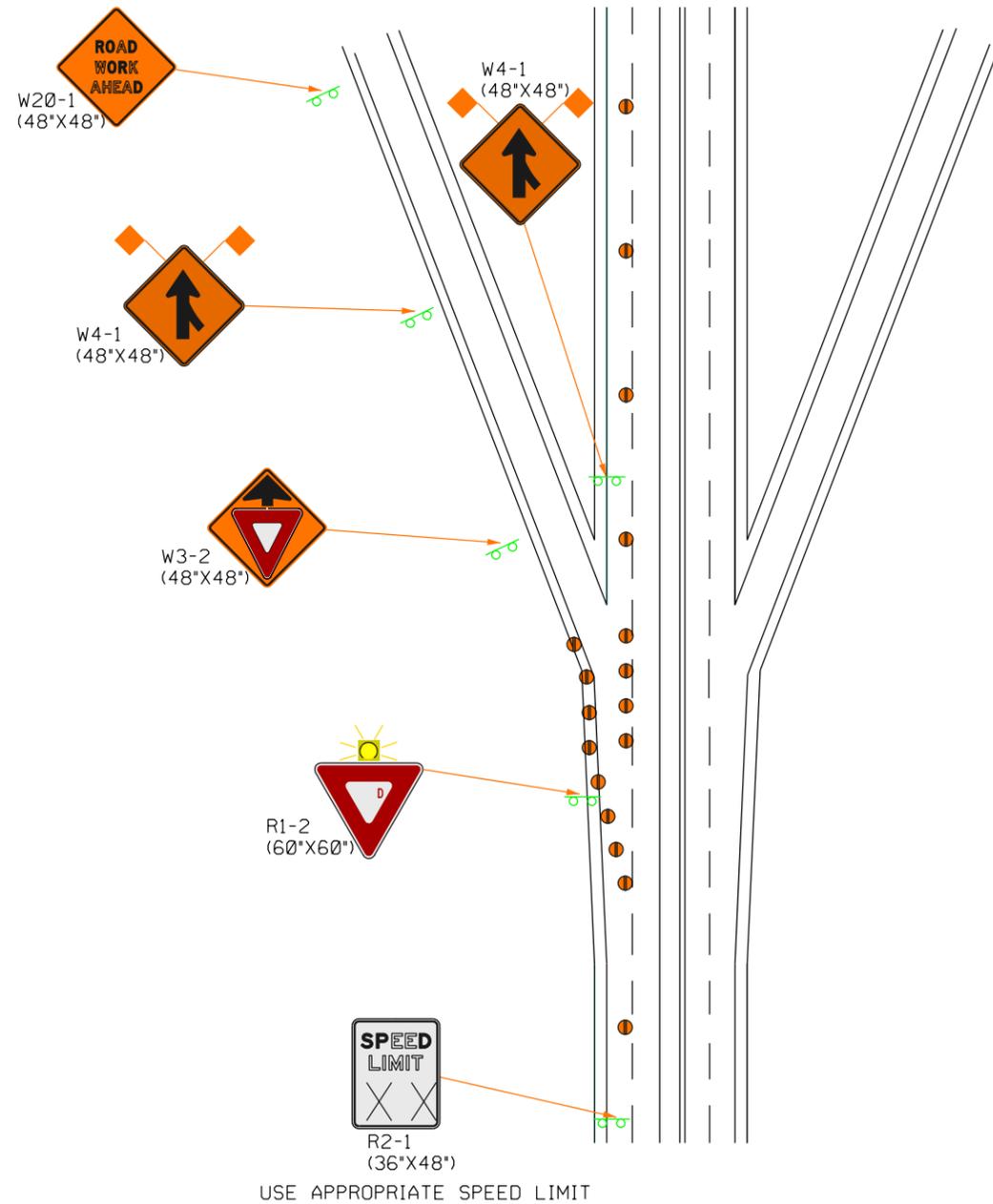
Plotted From -

TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT TYPICAL SIGNING DETAIL

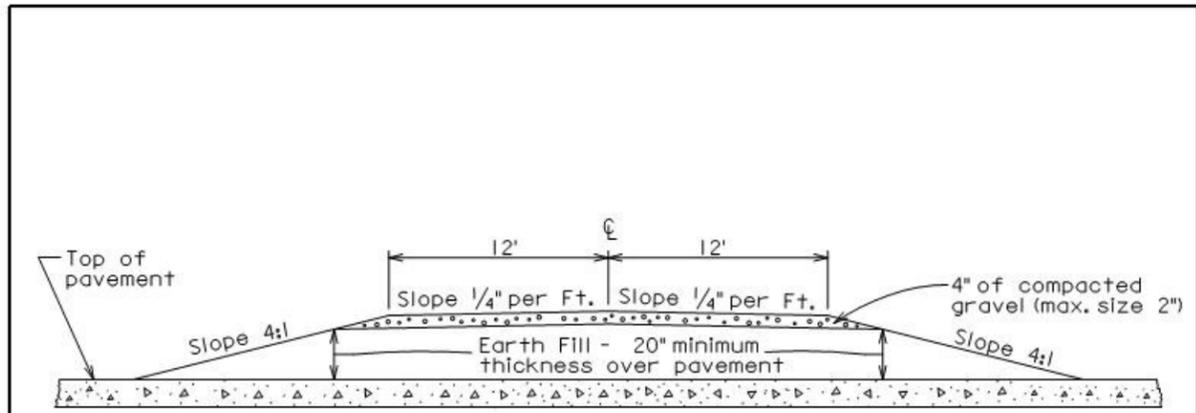
FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------------|--------------|---------------------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 1902(61)0 | C29 | C37 |
| Plotting Date: 05-26-2015 | | Rev. 05/26/2015 AJF | |

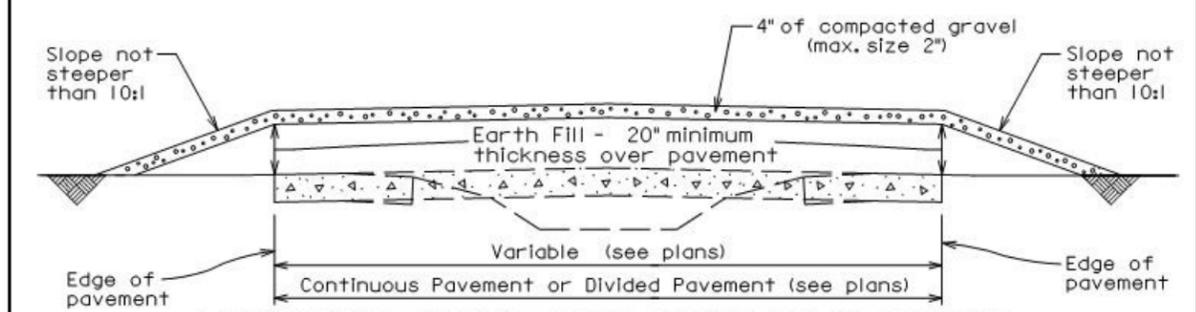


THE WARNING LIGHT SHALL BE A SHIELDED TYPE B, IN ACCORDANCE WITH THE MUTCD AND SHALL BE INCLUDED IN THE LUMP SUM CONTRACT UNIT PRICE FOR "TRAFFIC CONTROL, MISCELLANEOUS"

File - ...Special ramp signing details.dgn



TRANSVERSE SECTION OF CROSSING



LONGITUDINAL SECTION ALONG CENTERLINE OF CROSSING

GENERAL NOTES:

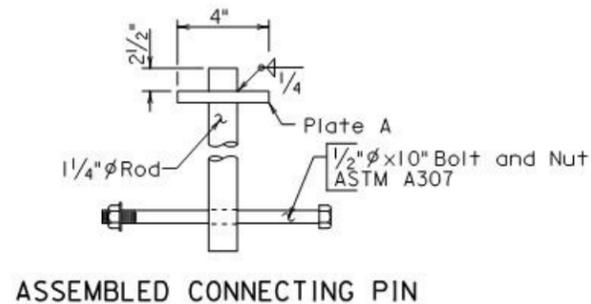
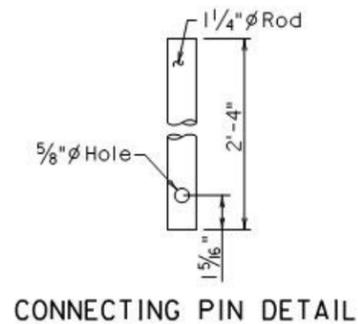
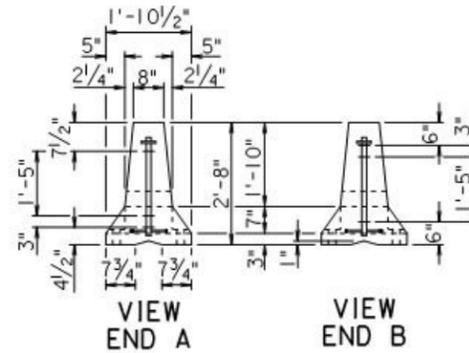
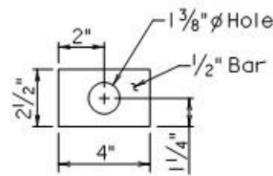
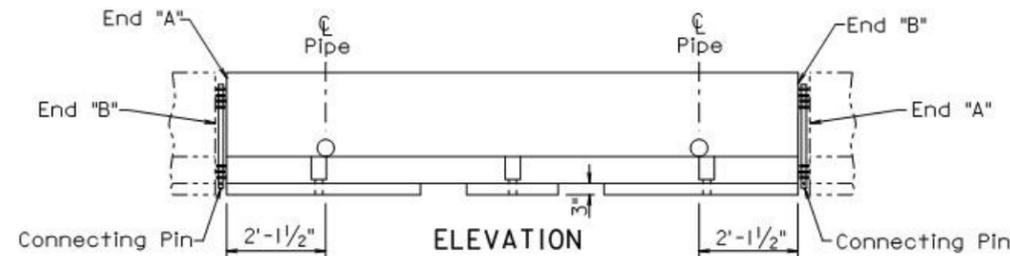
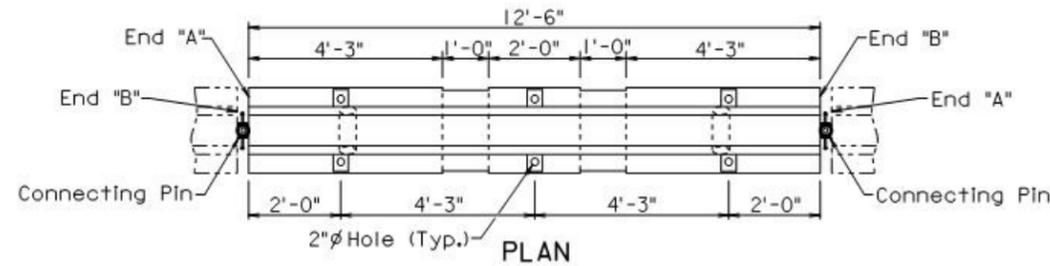
Temporary Earth Crossing shall be constructed and satisfactorily maintained in accordance with the details shown above. When the need for the crossing no longer exists the contractor shall, at the direction of the Engineer, remove the crossing and dispose of the materials therein to the satisfaction of the Engineer.

All costs for furnishing and placing all materials, labor, and equipment necessary for constructing and removing the Temporary Earth Crossing shall be incidental to the contract unit price per Each for "Temporary Earth Crossing."

When the plans specify that the fill over the pavement be entirely of gravel, instead of earth and gravel as shown by the details above, all except the upper 4 inches of the gravel may be pit run material. In these cases the Item becomes "Temporary Gravel Crossing" instead of "Temporary Earth Crossing", but otherwise the requirements stated above for "Temporary Earth Crossing" shall apply.

March 31, 2000

| | | | |
|-------------------------------|-----------------------|------------------------------------|--------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | TEMPORARY EARTH OR GRAVEL CROSSING | PLATE NUMBER |
| | | | 380.30 |
| | | | Sheet 1 of 1 |



June 26, 2009

June 26, 2009

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE INTERIOR SECTION) | PLATE NUMBER 628.01 |
| | | | Sheet 1 of 2 |

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE INTERIOR SECTION) | PLATE NUMBER 628.01 |
| | | | Sheet 2 of 2 |

GENERAL NOTES:

The detailed drawings are for illustrative purpose and depicts the current version of the F shape concrete barrier. If new movable concrete barriers are requested on a project, they shall be constructed according to the F shape movable concrete barrier details on standard plate 628.10.

Each movable concrete barrier section weighs 5030 \pm pounds.

Each movable concrete barrier section is detailed to provide end "A" to end "B" connection by insertion of a pin through steel loops.

The Jersey shape or any version of the F shape traffic control movable concrete barriers may be used on a project, however, only the same type or version shall be used for each run of barriers.

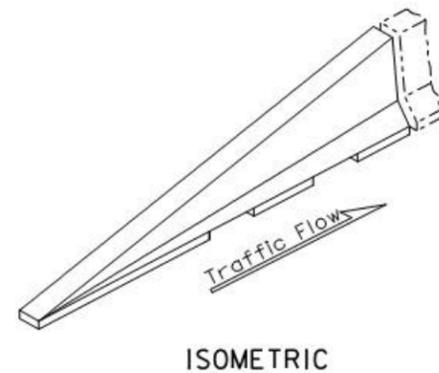
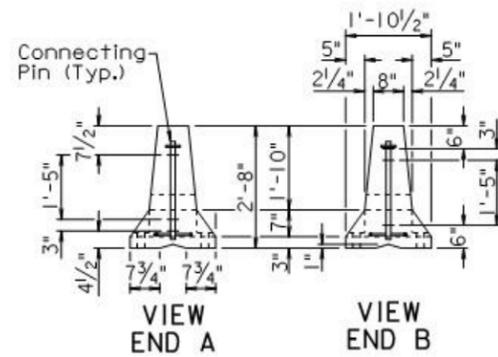
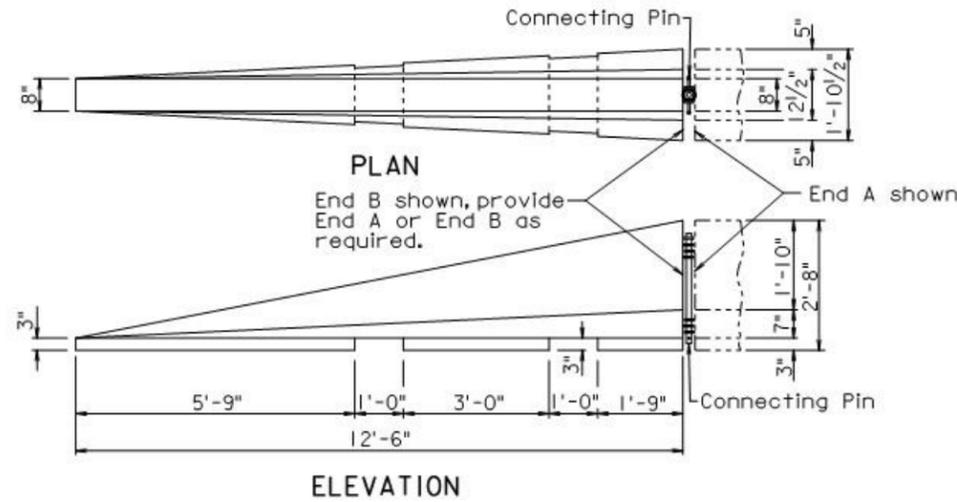
Movable concrete barrier sections shall be placed to provide uniform bearing of the sections with the paved surface as approved by the Engineer.

Movable concrete barrier sections shall never be moved or lifted using the end loops.

Movable concrete barrier sections that have been damaged shall not be used. Barrier sections are considered damaged if the loops are end welded onto existing damaged loops, loops are fractured, or there is exposed rebar from fractured concrete.

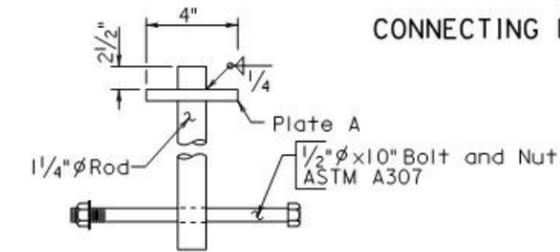
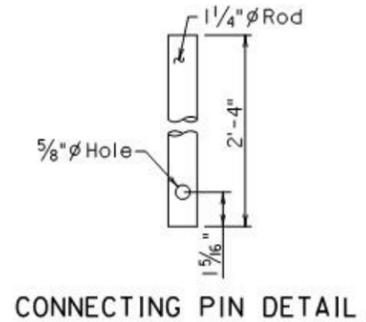
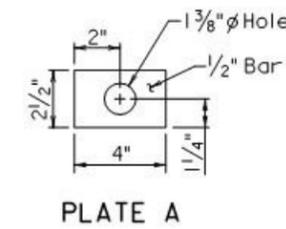
All cost for transporting the barriers from the specified location to the project site, installing, and returning the barriers to the specified location shall be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

If the concrete barriers need to be moved and reset on the project, requiring the barriers to be transported by truck, all cost for removing, transporting, and resetting the barriers shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". All cost for small shifts in alignment of the barriers, not requiring the barriers to be transported by truck, shall be incidental to various contract items.



June 26, 2009

| | | | |
|-------------------------------|-----------------------|--|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE END SECTION) | PLATE NUMBER 628.02 |
| | | | Sheet 1 of 2 |



ASSEMBLED CONNECTING PIN

GENERAL NOTES:

The detailed drawings are for illustrative purpose and depicts the current version of the F shape concrete barrier end section. If new concrete barrier end sections are requested on a project, they shall be constructed according to the F shape movable concrete barrier end section details on standard plate 628.11.

Each movable concrete barrier end section weighs 2450 ± pounds.

Each movable concrete barrier end section is detailed to provide end "A" to end "B" connection by insertion of a pin through steel loops.

The Jersey shape or any version of the F shape traffic control movable concrete barriers may be used on a project, however, only the same type or version shall be used for each run of barriers.

Movable concrete barrier sections shall be placed to provide uniform bearing of the sections with the paved surface as approved by the Engineer.

Movable concrete barrier end sections shall never be moved or lifted using the end loops.

Movable concrete barrier end sections that have been damaged shall not be used. Barrier sections are considered damaged if the loops are end welded onto existing damaged loops, loops are fractured, or there is exposed rebar from fractured concrete.

All cost for transporting the barriers from the specified location to the project site, installing, and returning the barriers to the specified location shall be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

If the concrete barriers need to be moved and reset on the project, requiring the barriers to be transported by truck, all cost for removing, transporting, and resetting the barriers shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". All cost for small shifts in alignment of the barriers, not requiring the barriers to be transported by truck, shall be incidental to various contract items.

June 26, 2009

| | | | |
|-------------------------------|-----------------------|--|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE END SECTION) | PLATE NUMBER 628.02 |
| | | | Sheet 2 of 2 |

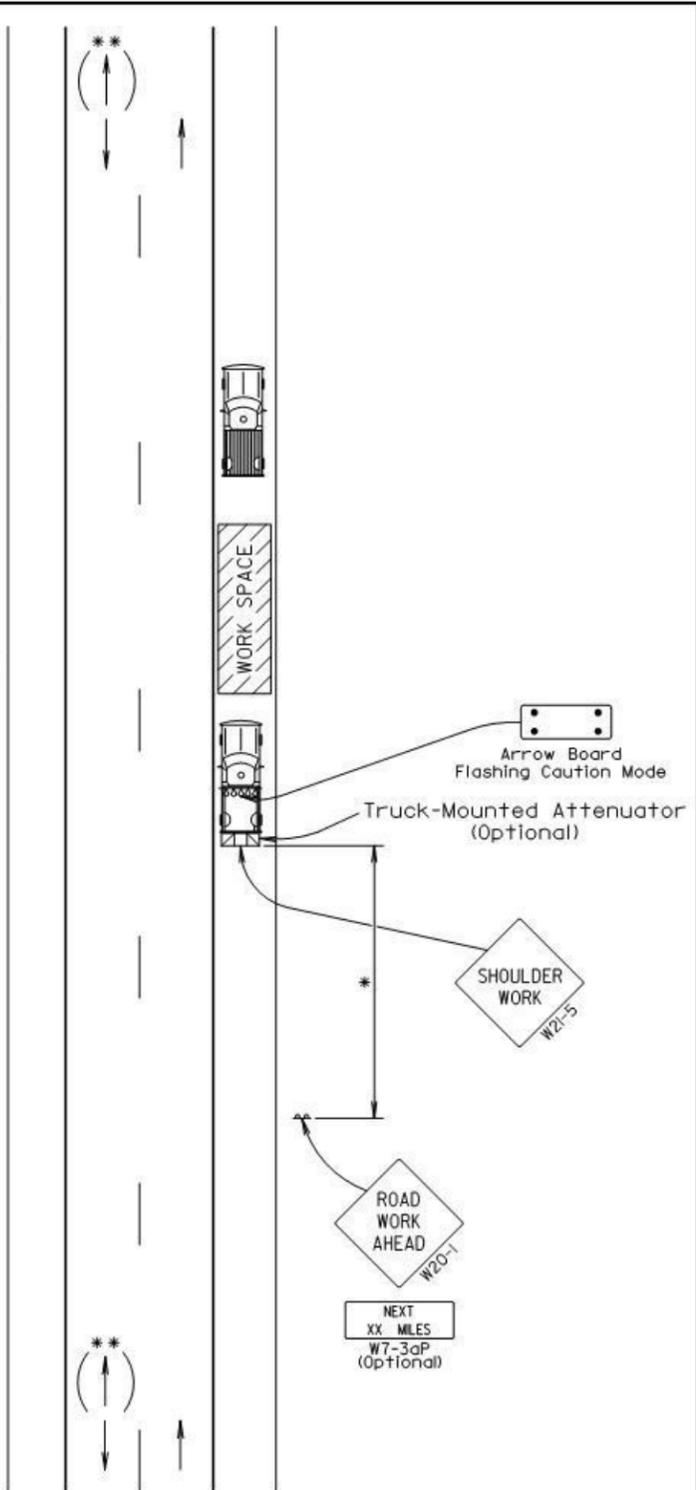
* In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

** If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.



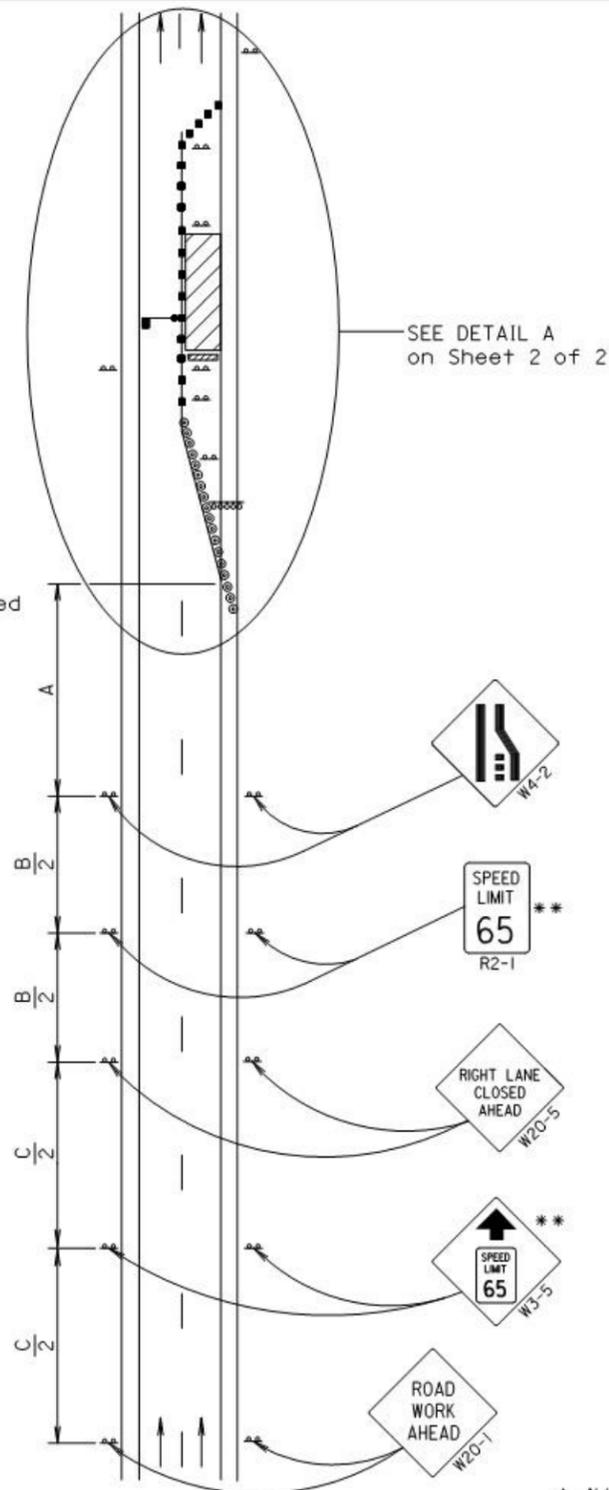
September 22, 2014

| Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) | | |
|-------------------------------------|---|------|------|
| | (A) | (B) | (C) |
| 0 - 30 | 200 | | |
| 35 - 40 | 350 | | |
| 45 - 50 | 500 | | |
| 55 | 750 | | |
| 60 - 65 | 1000 | | |
| | (A) | (B) | (C) |
| 70 - 80 | 1000 | 1500 | 2640 |

- ** Speed appropriate for location.
- ⊙ Reflectorized Drum
- Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.



April 15, 2015

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS | PLATE NUMBER 634.63 |
| | | | Sheet 1 of 2 |

| Posted Speed Prior to Work (M.P.H.) | Spacing of Channelizing Devices (Feet) (G) | Taper Length (Feet) (L) |
|-------------------------------------|--|-------------------------|
| | | |
| 35 - 40 | 25 | 320 |
| 45 - 50 | 50 * | 600 |
| 55 | 50 * | 660 |
| 60 - 65 | 50 * | 780 |
| 70 - 80 | 50 * | 960 |

- * Spacing is 40' for 42" cones.
- ** Speed appropriate for location.
- *** Use speed limit designated for the condition when workers are present in the work space. Signs shall be covered or removed when workers are not present.

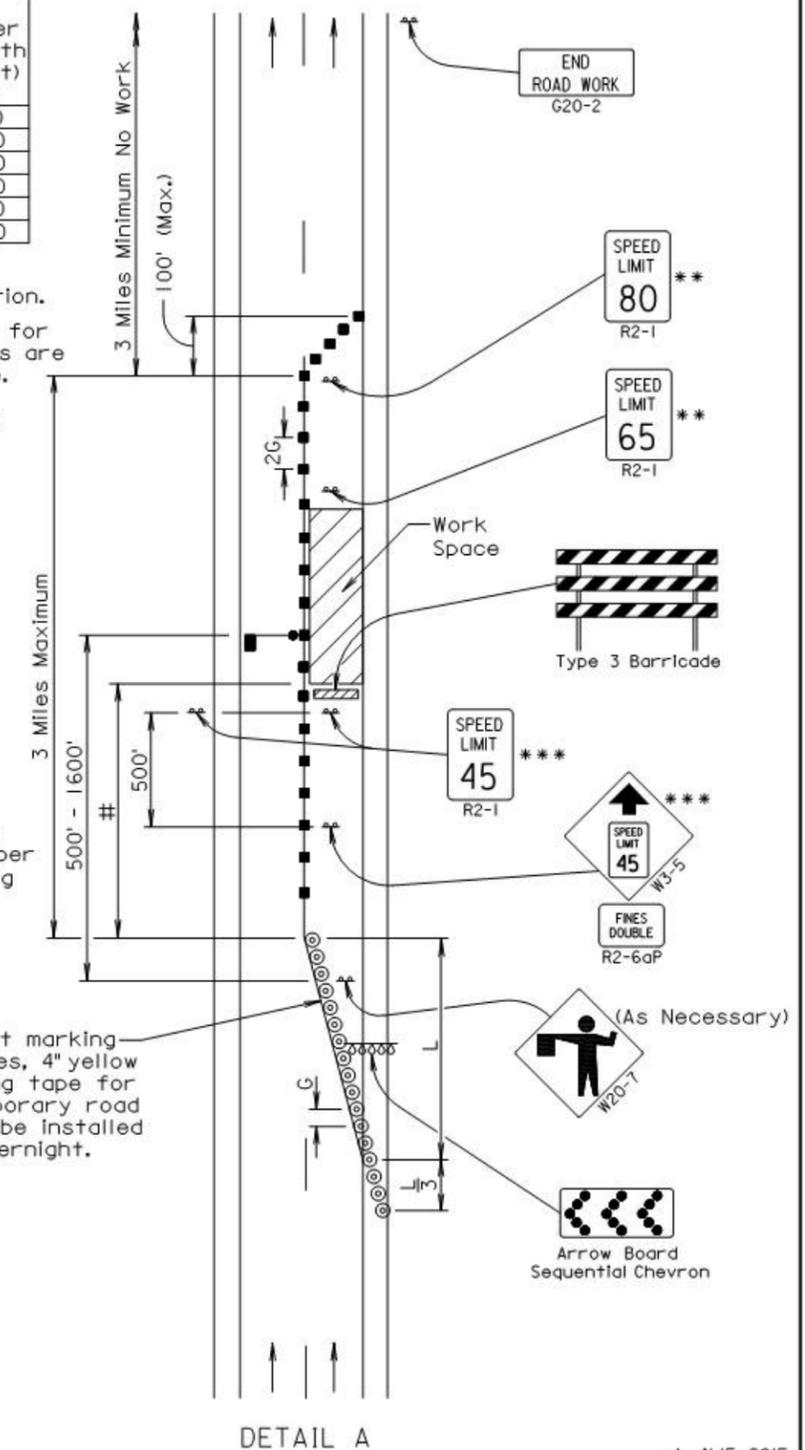
- Flagger (As Necessary)
- ⊙ Reflectorized Drum
- Channelizing Device
- # The Work Space shall be a minimum of 500' from the end of the taper.

The FLAGGER sign shall be used whenever there is a Flagger present.

The channelizing devices shall be 42" cones or drums.

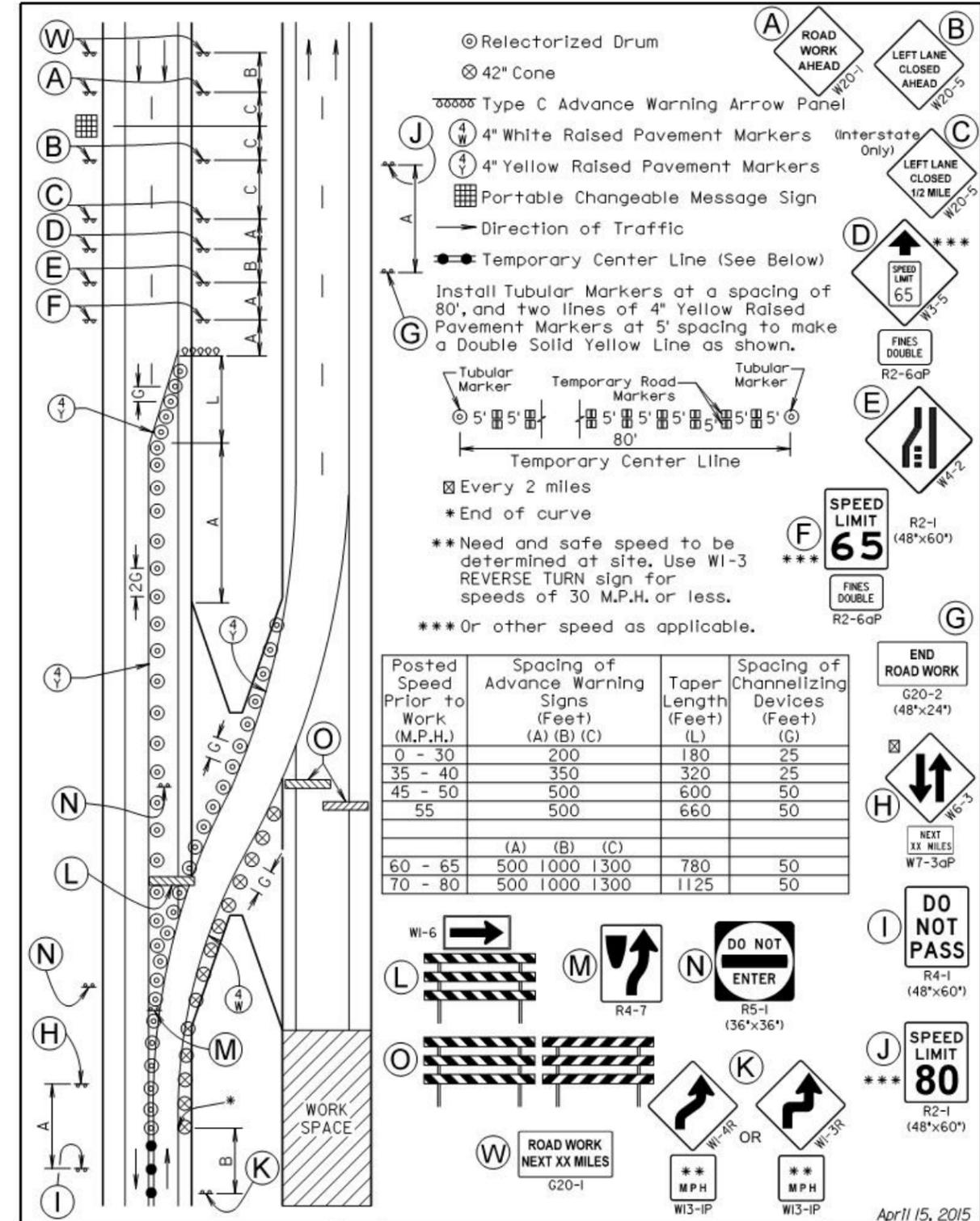
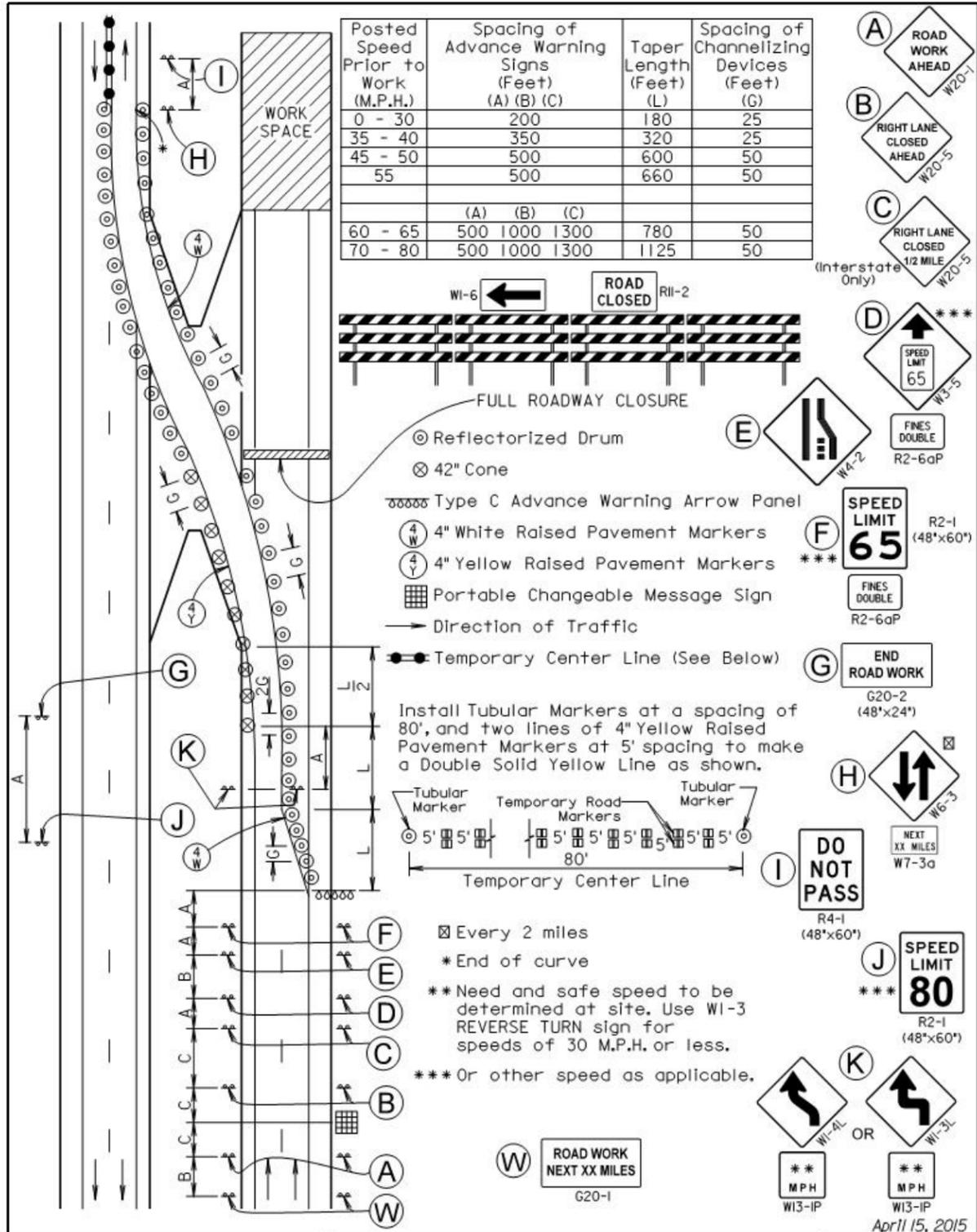
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

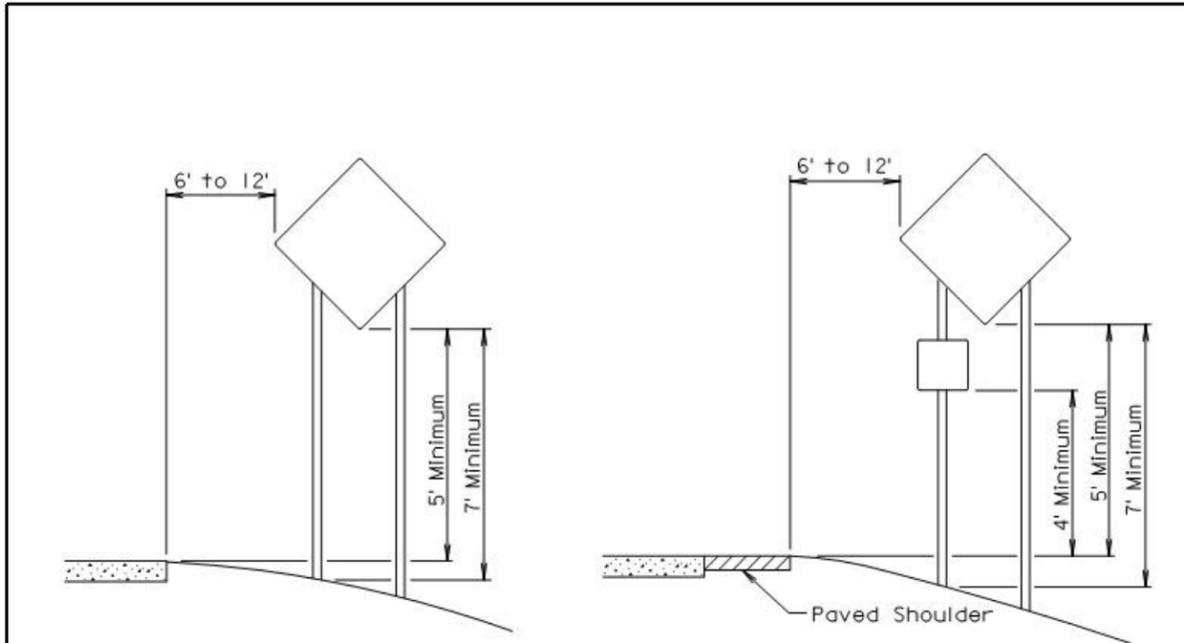
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary road markers at 5' spacing shall be installed when the lane is closed overnight.



April 15, 2015

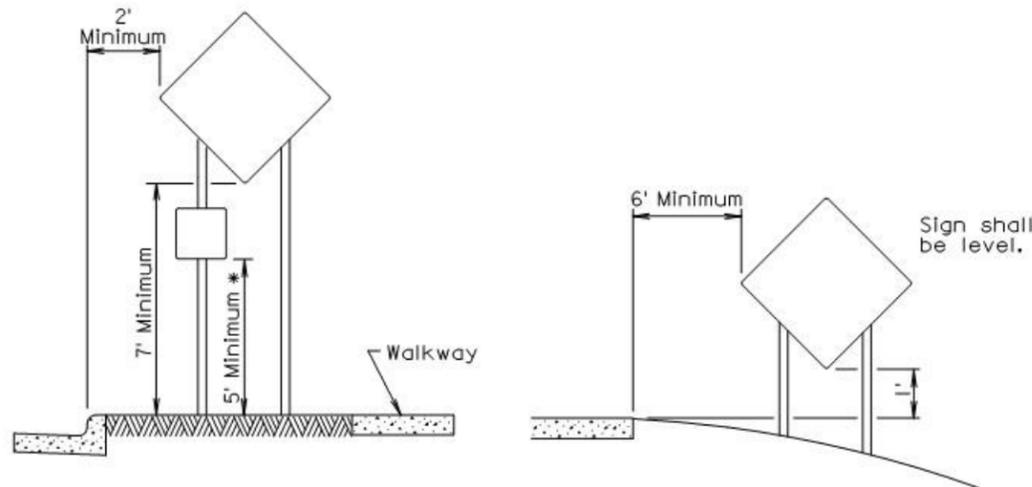
| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS | PLATE NUMBER 634.63 |
| | | | Sheet 2 of 2 |





RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

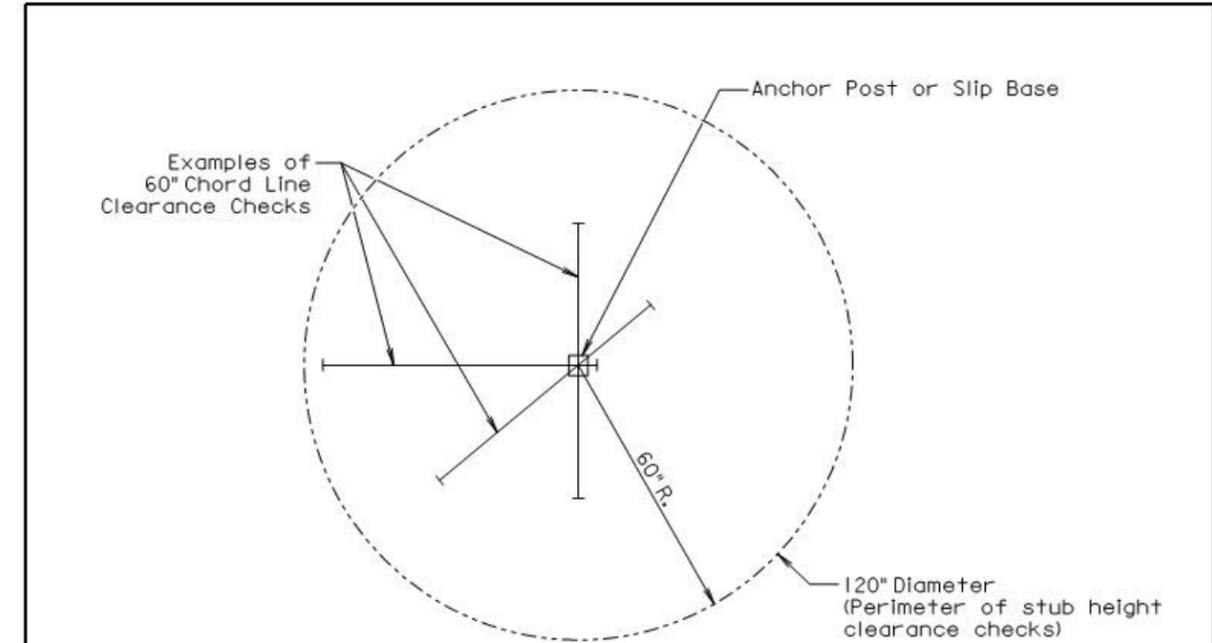
RURAL DISTRICT 3 DAY MAXIMUM

* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

(Not applicable to regulatory signs)

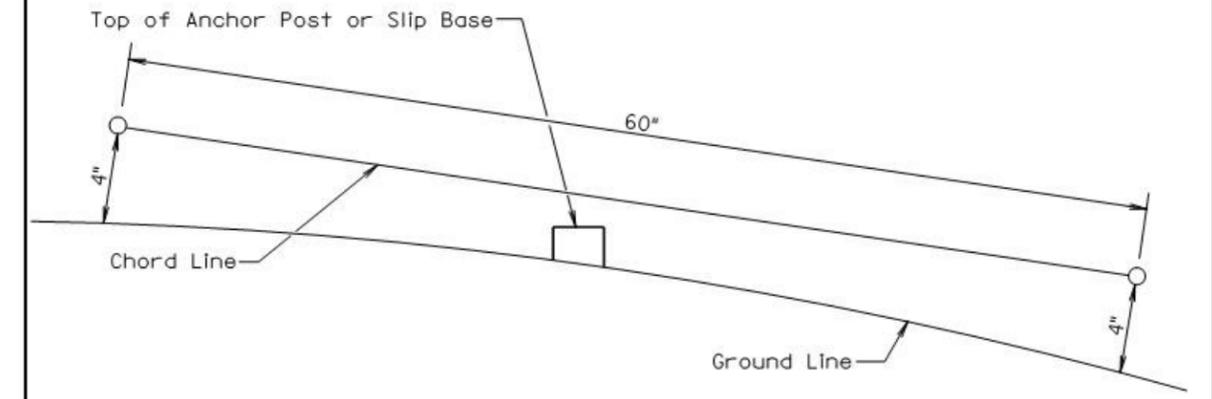
September 22, 2014

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing) | PLATE NUMBER 634.85 |
| | | | Sheet 1 of 1 |



PLAN VIEW

(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

July 1, 2005

| | | | |
|-------------------------------|-----------------------|----------------------------------|------------------------|
| Published Date: 2nd Qtr. 2015 | S D D O T | BREAKAWAY SUPPORT STUB CLEARANCE | PLATE NUMBER 634.99 |
| | | | Sheet 1 of 1 |