

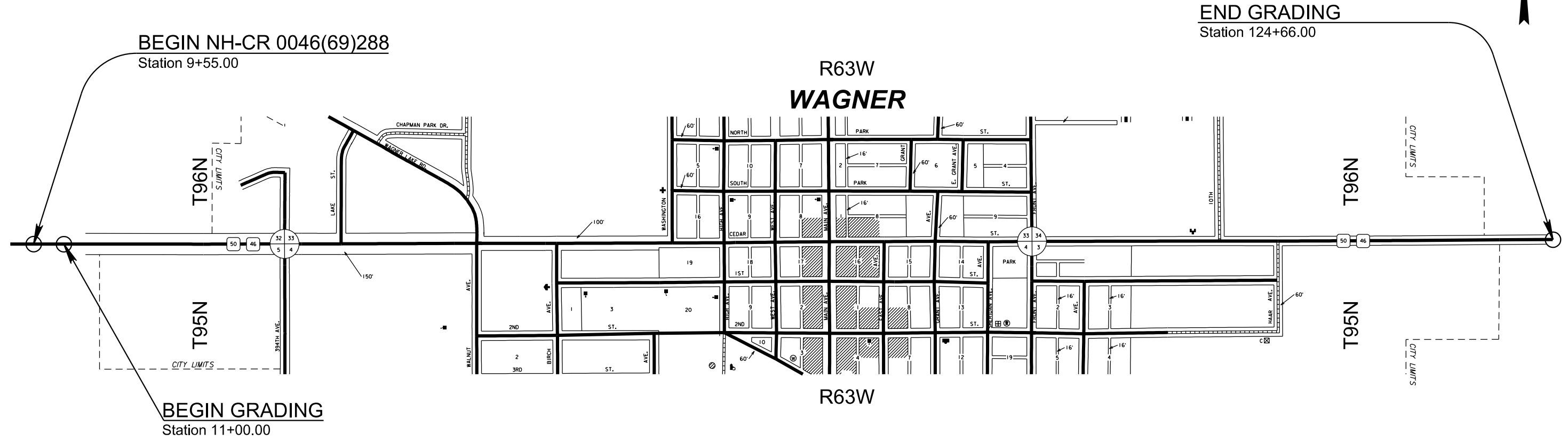
SECTION C: TRAFFIC CONTROL PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C1	C28

Plotting Date: 09/22/2024

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PLOT SCALE - 1:7000

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SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	500.0	Hour
634E0110	Traffic Control Signs	1,351.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	56	Each
634E0330	Temporary Raised Pavement Markers	32,900	Ft
634E0380	Tubular Marker	30	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	12,350	Ft
634E0640	Temporary Pavement Marking	25,220	Ft
634E0650	Temporary Pavement Marking	269	Gal
634E1002	Detour and Restriction Signing	741.0	SqFt
634E1020	Temporary Business Signing	204.0	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
634E2000	Longitudinal Pedestrian Barricade	7,500	Ft
634E2020	Temporary Curb Ramp	12	Each
634E2025	Longitudinal Pedestrian Barrier	7,500	Ft
634E2052	Temporary Flexible Sidewalk	2,500	SqFt
634E3000	Traffic Control Barrier	5,994	Ft
634E3000	Traffic Control Barrier	4,500	Ft
634E3000	Traffic Control Barrier	4,439	Ft
634E3030	Reset Traffic Control Barrier	14,933	Ft
900E1080	Orange Plastic Safety Fence	12,300	Ft

SEQUENCE OF OPERATION

The plans have been organized to aid in the guidance and requirements as they pertain to the various conditions and traffic control setups required for the project.

The Contractor may utilize the listed traffic control to best fit their planned sequence and operation.

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

GENERAL TRAFFIC CONTROL

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

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

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

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

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

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

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

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

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

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

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

If inappropriate or conflicting pavement markings exist, the markings will 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 will be placed at one-half of the normal channelizing device spacing. Pavement marking removals will be incidental to the contract unit price per foot for "Remove Pavement Marking, 4" or equivalent". Temporary pavement marking will be paid for at the contract unit price per foot for "Temporary Pavement Marking". The additional channelizing devices will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

WAGNER LABOR DAY CELEBRATION

See Special Provision for Contract Time.

TRAFFIC CONTROL PROJECT PHASES

The project will consist of five phases:

2025

- Phase 1 – SD 46 Eastbound Lanes construction from 65+50 to 124+66
- Phase 2 – SD 46 Westbound Lanes construction from 124+66 to 65+50

2026

- Phase 3 – SD 46 Eastbound Lanes construction from 9+55 to 65+50
- Phase 4 – SD 46 Westbound Lanes construction from 65+50 to 9+55

2027

- Phase 5 – SD 46 Eastbound and Westbound Lanes from 9+55 to 124+66.
 1. Construction will be completed one-half roadway width at a time, with traffic being maintained at all times. The Contractor may remove the entire existing surface of each phase during that particular phase of work.
 2. The following intersections must be kept open at all times: 394th Avenue/Estates Drive, Walnut Avenue, High Avenue, Main Avenue and Front Avenue. Closure time for all other streets intersecting the project must be kept to a minimum. Closures will not extend to consecutive intersections, unless approved by the Engineer.
 3. Main service and emergency vehicle accesses must be maintained at all times.
 4. Existing street lighting will be maintained as much as practical.
 5. The Contractor will hold weekly meetings to discuss project progress as well as upcoming work. The Contractor will invite local law enforcement and emergency services and DOT personnel to be physically present at the weekly meetings. Prior to the start of any work on the project, the Contractor will hold an initial meeting to discuss the project sequences, traffic control, goal, etc. The Contractor is required to place an advertisement in the local newspaper three weeks before the initial meeting and for the duration of the project providing the necessary information for the public to address these meetings. The advertisement must include a telephone number so people may call to ask questions. The Contractor will be responsible for securing a time and location for these meetings.
 6. Once work begins on the project, the Contractor will be responsible for maintaining the entire project. This will include, but is not limited to, all surface maintenance, drainage, sidewalks and traffic signs.
 7. Businesses and residences must have an access at all times. The Contractor may pursue an agreement with individual landowners and business owners to work through their respective access areas in lieu of installing a block out. The Contractor must receive written approval from the landowner or business owner and provide a copy of the agreement to the Department.
 8. The Contractor will be required to share their schedule and coordinate with various Contractors working for the City of Wagner. The Contractor will allow other Contractor's access onto the project site while the roadway surface is removed.

TRAFFIC CONTROL PROJECT PHASES (CONTINUED)

Detailed description of each phase:

2025

Phase 1 – Eastbound SD 46 Sta. 65+50 to 124+66

1. Install fixed location (ground mounted) traffic control signs.
2. Install lane closures as per Standard Plate 634.47 to close the right lane of the westbound lanes. Remove the existing curb & gutter and sidewalk and construct the extra widening for two-way traffic in the westbound lanes.
3. Install temporary traffic control for two-way traffic in the westbound lanes.
4. Establish two-way traffic on the westbound lanes from 65+50 to 124+66.
5. Remove surfacing on the eastbound lanes.
6. Perform storm sewer upgrades. The City of Wagner will also perform city utility upgrades.
7. Grade the roadway.
8. Place PCC pavement.
9. Place temporary asphalt concrete from Sta. 65+50 to 66+50.
10. Install fillets, curb & gutter, ADA ramps and sidewalk.
11. Install lighting and traffic signals.

Phase 2 Westbound SD 46 Sta. 124+66 to 65+50

1. Adjust temporary traffic control to accommodate two-way traffic on the eastbound lanes.
2. Switch traffic from the westbound lanes to the eastbound lanes from 124+66 to 65+50.
3. Remove surfacing on the westbound lanes.
4. Perform storm sewer upgrades. The City of Wagner will also perform city utility upgrades.
5. Grade the roadway.
6. Place PCC pavement.
7. Place temporary asphalt concrete from Sta. 65+50 to 66+50.
8. Install fillets, curb & gutter, ADA ramps and sidewalk.
9. Install lighting and traffic signals.
10. Complete erosion and sediment control.
11. Install permanent signing.
12. Apply temporary pavement marking.
13. Remove all traffic control devices.

TRAFFIC CONTROL PROJECT PHASES (CONTINUED)

Detailed description of each phase:

2026

Phase 3 – Eastbound SD 46 Sta. 9+55 to 65+50

1. Install fixed location (ground mounted) traffic control signs.
2. Install lane closures as per Standard Plate 634.47 to close the right lane of the westbound lanes. Remove the existing curb & gutter and sidewalk and construct the extra widening for two-way traffic in the westbound lanes.
3. Install temporary traffic control for two-way traffic in the westbound lanes.
4. Establish two-way traffic onto the westbound lanes from 9+55 to 65+50.
5. Remove surfacing on the eastbound lanes.
6. Perform storm sewer upgrades. The City of Wagner will also perform city utility upgrades.
7. Grade the roadway.
8. Place PCC pavement.
9. Place temporary asphalt concrete from Sta. 65+50 to 66+50.
10. Install fillets, curb & gutter, ADA ramps and sidewalk.
11. Install lighting.

Phase 4 Westbound SD 46 Sta. 9+55 to 65+50

1. Adjust temporary traffic control to accommodate two-way traffic on the eastbound lanes.
2. Switch traffic from the westbound lanes to the eastbound lanes from 9+55 to 65+50.
3. Remove surfacing on the westbound lanes.
4. Perform storm sewer upgrades. The City of Wagner will also perform city utility upgrades.
5. Grade the roadway.
6. Place PCC pavement.
7. Place temporary asphalt concrete from Sta. 65+50 to 66+50.
8. Install fillets, curb & gutter, ADA ramps and sidewalk.
9. Install lighting.
10. Complete erosion and sediment control.
11. Install permanent signing.
12. Apply temporary pavement marking.
13. Remove all traffic control devices.

2027

Phase 5 Eastbound and Westbound Lanes SD 46 Sta. 9+55 to 124+66

1. Complete durable pavement marking.

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MAINTENANCE OF TRAFFIC

Existing stop signs that are temporarily removed must be reset prior to the end of each day's work. Stop signs on portable supports must be used whenever a permanent ground mounted stop sign is removed. Portable sign supports for stop signs may be used for a maximum of three (3) days and will have a minimum mounting height of 7 feet in urban locations. Temporary stop signs may be mounted on fixed supports for longer durations. Cost for this work will be included in the contract unit price per square foot for Traffic Control Signs.

Where phased construction of the intersections is indicated it should be understood that the paving sequence must correspond with the joint details shown on the pavement layout. Each phase may require two or more individual pours.

The Contractor will provide the Department, Wagner Police Department, Charles Mix County Sheriff and Yankton Sioux Tribal Police a list of names and phone numbers of whom to contact if issues arise or maintenance is needed on traffic control devices.

Throughout the project, the Contractor must maintain local traffic and access to businesses and residences at all times. Adequate passage and ramping must be provided. The Contractor will keep businesses and residents informed of construction sequences in areas that have a direct effect on their access.

Construction signs will not obscure existing signs and be a minimum of 50' to 100' from any existing signs, or as directed by the Engineer.

Placement of temporary R1-1 STOP signs, as directed by the Engineer, will also be required where major business approaches enter the project. R1-1 STOP signs will be measured and paid for under the contract unit price per square foot for Traffic Control Signs.

Enough signs and barricades have been included in the Estimate of Quantities to pay the Contractor for the maximum number of each of these devices that will be required on the project at one time. The Contractor will be required to remove and reset individual traffic control devices during the differing phases of construction as detailed in these plans. Each traffic control device will only be paid for one time no matter how many times it is moved.

Additional standard signs, as ordered by the Engineer, must be available within 2 working days. Failure to provide signs within this time limit will result in Liquidated Damages being assessed in the amount of \$400.00 per Calendar Day. Payment for additional signs will be paid for at the contract unit price per square foot for Traffic Control Signs.

All fixed location signs and applicable traffic control devices must be installed or in place prior to the start of work or mobilization of equipment within the traveled way.

Non-applicable signing will be covered or removed during periods of in-activity. Improper covering will result in Liquidated Damages being assessed in the amount of \$400 per calendar day. All costs to do this work will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

The Contractor will be required to utilize block outs during the PCC paving in order to maintain access to intersecting side streets, businesses, and residences. The Contractor may pave through some of these locations by getting written permission from the adjacent owner of the access. The Contractor must provide a copy of the written agreement to the Engineer prior to closing off an access.

WIDTH RESTRICTION SIGNING

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

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

TEMPORARY TRAFFIC CONTROL WIDENING AND SURFACING

The typical sections for the temporary traffic control widening and surfacing are found in this section. The quantities for this work are found in Sections B and F.

TEMPORARY BUSINESS SIGNING

The Contractor will be required to furnish, install and maintain signs to businesses along the project that have their access affected by construction activities. A maximum of two (2) signs with a maximum size of 24" wide by 12" high will be required for each business. The Contractor will be required to install the signs on temporary supports, maintain and relocate them as necessary and remove the signs at the completion of the work.

If multiple businesses share a single access point, the Contractor may propose other methods of guiding motorists to the various businesses for approval by the Engineer.

Costs for this temporary business signing work shall be included in the contract unit price per square foot for Temporary Business Signing. A list of signs that may be required can be found in the Temporary Business Signing table in these plans. The Contractor will be paid for the actual square footage of signs placed and maintained. No change in contract unit price will be allowed for any quantity change.

KEEP RIGHT SIGNS, TUBULAR MARKERS AND CENTERLINE MARKING

Keep Right signs are required as indicated in the plan sheets. The Keep Right signs placed on centerline between head-to-head traffic will be mounted with the bottom of the sign a minimum of 20" above the pavement surface. The mounting device will be a glued down 48" tubular marker. The Keep Right sign will be backed with a corrugated plastic sign blank. The Keep Right signs will be 18" wide by 30" high. The cost to furnish, install, maintain and remove the Keep Right signs will be included in the contract unit price per square foot for Traffic Control Signs.

The Engineer will inspect and approve the 48" tubular marker prior to it being installed on the project. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base. The cost to furnish, install, maintain, replace and remove the tubular markers will be incidental to the contract unit price per each for Tubular Marker. It is estimated that 30 tubular markers will be needed for the project.

Centerline of the head-to-head traffic must be marked with double yellow pavement marking. Paint will be allowed on existing surfacing that will be removed during construction. New surfacing must be marked with raised pavement markers.

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours.

It is required that the flaggers and equipment operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

INCIDENTS

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

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

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

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic on short notice. As such, the Contractor is directed to have a person on the project knowledgeable as to how to access into the changeable message sign's hardware/software to change these messages on short notice. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

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

PRESS RELEASE ANNOUNCEMENTS

The Contractor will prepare a press release to be released five days prior to any phase change or any other major change that affects traffic flow. The Contractor will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information seven days prior to any phase change or any other major change that affects traffic flow.

TRAFFIC CONTROL BARRIERS

Traffic control barriers will be placed longitudinally to separate traffic from the work zone during all the phases. The estimate, for Traffic Control Barrier, is the maximum length of each class of barrier needed in Phase 1 plus the maximum length of each class of barrier needed in Phase 3. All costs to furnish and install the traffic control barriers for Phase 1 and for Phase 3 will be incidental to the contract unit price per foot for each class of "Traffic Control Barrier".

All costs to reset the traffic control barriers for Phase 2 and Phase 4 will be incidental to the contract unit price per foot for "Reset Traffic Control Barrier".

Traffic Control Barriers must be water-filled, traffic rated barriers meeting the requirements of NCHRP 350, MASH TL-1 (max speed = 31 mph), MASH TL-2 (max speed = 44 mph) or MASH TL-3 (max speed = 62 mph). The estimated footage of traffic control barriers is shown in the below table.

Item	2025		2026		Total Install	Total Reset
	Phase 1 Install	Phase 2 Reset	Phase 3 Install	Phase 4 Reset		
Traffic Control Barrier TL-1	5514	5514	480	480	5994	5994
Traffic Control Barrier TL-2	900	900	3600	3600	4500	4500
Traffic Control Barrier TL-3	1152	1152	3287	3287	4439	4439
					14,933	

Alternate barrier types must be approved by the Engineer. Concrete barriers will not be permitted on the project. All costs for filling, emptying, placing, minor location adjustments and removing the barriers will be incidental to the contract unit price per foot for "Traffic Control Barrier" or "Reset Traffic Control Barrier".

Crash attenuators meeting the requirements of NCHRP 350, MASH TL-1, MASH TL-2, or MASH TL-3 will be furnished and installed, by the Contractor, at the ends of the corresponding class of the traffic control barrier run. Attachment of the attenuators to the traffic control barriers will be by approved methods. There are an estimated 4 MASH TL-1, 4 MASH TL-2 and 2 MASH TL-3 crash attenuators required.

All costs to furnish and install the crash attenuators for Phase 1 and for Phase 3 will be incidental to the contract unit price per foot for "Traffic Control Barrier".

All costs to reset the crash attenuators for Phase 2 and Phase 4 will be incidental to the contract unit price per foot for "Reset Traffic Control Barrier".

All costs for filling, emptying, placing, minor location adjustments and removing the crash attenuators will be incidental to the contract unit price per foot for "Traffic Control Barrier" or "Reset Traffic Control Barrier".

TEMPORARY PAVEMENT MARKING – PHASES 1 & 3

Temporary paint will not be permitted on new pavement.

On the existing pavement sections that will carry two-way traffic and will later be removed during construction, the Contractor will apply yellow paint for the double yellow line. No paint will be allowed in the two-way traffic on new PCC pavement sections or outside the project limits, as approved by the Engineer. Payment will be paid at the contract unit price per foot for "Temporary Pavement Marking".

Approximately 25,220 feet of temporary pavement marking paint will be required for the double yellow on centerline for Phases 1 & 3.

SURFACE PREPARATION FOR TEMPORARY RAISED PAVEMENT MARKERS

New pavement surfacing will be cleaned and sufficiently prepared for optimum adhesion of Temporary Raised Pavement Markers. All costs to prepare the roadway surface will be incidental to the contract unit price per foot for "Temporary Raised Pavement Markers".

TEMPORARY RAISED PAVEMENT MARKERS

Temporary Raised Pavement Markers will be used in the mainline closure tapers for Phases 1 & 3. Approximately 25,220 feet of Temporary Raised Pavement Markers will be required for the double yellow on centerline for Phases 2 & 4. Raised pavement markers will not be used for the white temporary edge line in the two-way traffic section.

Raised Pavement Markers will be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface.

Approximately 25,220 feet of yellow and 7680 feet of white temporary raised pavement markers will be required.

Cost for furnishing, installing, maintaining (including cleaning and replacing, if necessary), removing markers and bituminous adhesive will be incidental to the contract unit price per foot for "Temporary Raised Pavement Markers".

TEMPORARY PAVEMENT MARKING – FALL 2025 & FALL 2026

Temporary pavement marking paint will be applied on the new pavement after completion of Phase 2 in the Fall of 2025 and after the completion of Phase 4 in the Fall of 2026.

Care will be taken to place the temporary pavement marking in the same location that the permanent pavement marking will be placed in the Spring of 2027 (except for the transition area between Phases 2 and 3).

Payment for this work will be at the contract unit price per gallon for "Temporary Pavement Marking".

TEMPORARY PAVEMENT MARKING

	2025	2026	TOTAL
WHITE	82	65	147
YELLOW	62	60	122
TOTAL GALLONS			269

PEDESTRIAN TRAFFIC CONTROL

The existing sidewalks cannot be closed without supplying an alternate route. When crosswalks, sidewalks or other pedestrian facilities are blocked, closed or relocated, temporary facilities must include accessibility features.

The Contractor will adhere to the requirements of the Americans with Disabilities Act (ADA) during construction. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), and should not be used as a control for pedestrian movements.

The Contractor will adequately sign and barricade the sidewalk for pedestrian traffic. The Contractor must not leave un-barricaded holes open either overnight or over the weekend.

The Contractor will accommodate pedestrian traffic, including those with disabilities. Bicycle traffic will also be accommodated. The Contractor will submit a detailed plan to the Engineer on how pedestrian and bicycle traffic will be accommodated during the various phases of the work at the affected locations. This plan should be in conformance with the details contained in these plans for pedestrian accommodation. The plan may be submitted at the Preconstruction Meeting.

The plan must be submitted no later than two weeks prior to the start of work. Some options for consideration to accommodate the pedestrian traffic include:

1. The use of various approved traffic control devices to maintain the pedestrians through or past the immediate work area.
2. The detour of pedestrians and bicycles to the opposite side of the street, alternate route(s) or around a City block.
3. Manned crossing assistance (crossing guards) combined with an accessible path.

Unless otherwise stated in the plans, the cost for all other pedestrian traffic control will be incidental to the contract lump sum price for Traffic Control, Miscellaneous

TEMPORARY FLEXIBLE SIDEWALK

During Phase 1, the sidewalks will have been removed on both sides of SD 46 from Front Ave to west of Main Avenue. Pedestrian Traffic will be routed to 1st Street on the south side of the project and Park Street on the north side of the project during this phase. During Phase 2, pedestrian traffic will use the newly completed sidewalks on the south side of SD 46. Temporary crosswalks will be installed and maintained at Front Avenue, Grant Avenue and West Avenue during both Phase 1 & Phase 2.

During Phase 3, the sidewalks will have been removed on both sides of SD 46 from west of Main Avenue to Walnut Avenue. Pedestrian Traffic will be routed to 1st Street on the south side of the project and to Park Street on the north side of the project during this phase. During Phase 4, pedestrian traffic will use the newly completed sidewalks on the south side of SD 46. Temporary crosswalks will be installed and maintained at Main Avenue, High Avenue, Birch Avenue, Walnut Avenue and 394th Avenue during both Phase 3 & Phase 4.

Temporary flexible sidewalk (such as Mobi Mats or an equivalent) will be required for the temporary crosswalks during all of the phases. Temporary curb ramps will be used in conjunction with the temporary flexible sidewalk, where needed, to adequately accommodate pedestrian traffic. The Contractor may submit to the Department, at least two weeks before construction, an alternative proposal to create the temporary pedestrian crosswalks. Any alternative proposal must be approved by the Department prior to installation. All costs for moving the temporary flexible sidewalk will be incidental to the contract unit price per each for "Temporary Flexible Sidewalk".

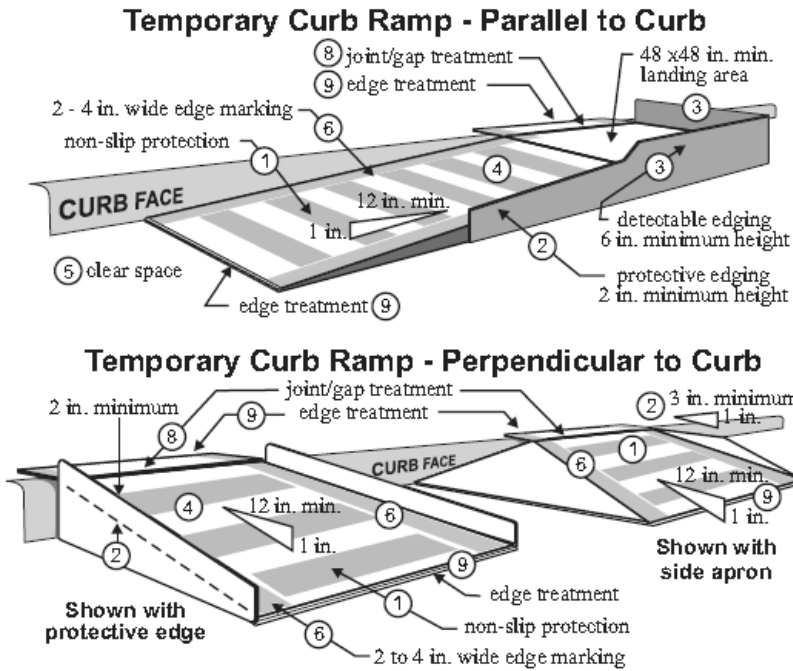
TEMPORARY CURB RAMP

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

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

The maximum number of temporary curb ramps required at one time is estimated to be 12. All costs for moving the temporary curb ramps will be incidental to the contract unit price per each for "Temporary Curb Ramp".

TEMPORARY CURB RAMP DETAILS



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

LONGITUDINAL PEDESTRIAN BARRICADE

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

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

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

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

Costs for resetting Longitudinal Pedestrian Barricades based on the Contractors sequence of work and phasing will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade". Payment will be for the maximum amount installed at one time.

LONGITUDINAL PEDESTRIAN BARRIER

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

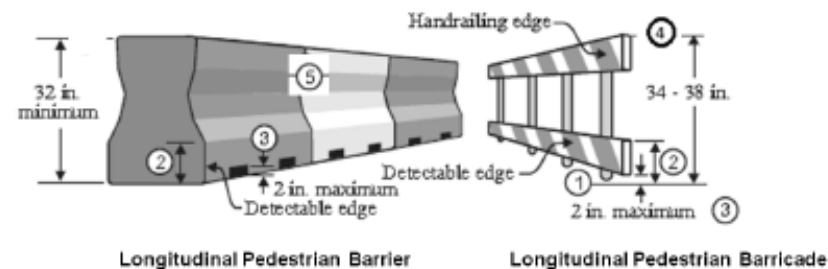
When longitudinal pedestrian barriers are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock should be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. Channelizing devices should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Chapter 6F of the MUTCD.

Longitudinal pedestrian barriers will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barrier". Payment will be for the maximum amount installed at one time.

All costs to reset Longitudinal Pedestrian Barriers for subsequent phases will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barrier".

PEDESTRIAN CHANNELIZING DEVICE DETAILS



1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.
6. Pedestrian channelizing devices will be in good working order.
7. Barriers will be in a condition such that when filled with water perform as intended by design. Leaking barriers will be replaced immediately at no additional cost to the State.

ORANGE SAFETY FENCE

The Contractor must have at their disposal 12,300 feet of Orange Safety Fence to use to protect working areas. It is estimated that up to 11,800 feet may be used to separate pedestrian facilities from the work, and 500 feet has been added for various other uses. The safety fence must be new. Safety fence will be paid for at the contract unit price per foot for "Orange Plastic Safety Fence." The price per foot will include all costs for materials, labor, and equipment required to properly install, remove, and reinstall the fence as needed or as directed by the Engineer. Total payment for this item will not exceed the plans listed quantity.

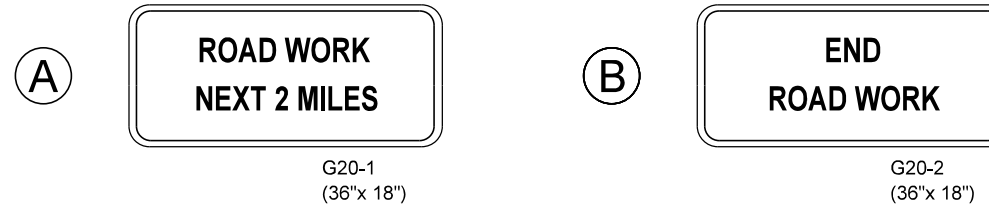
The safety fence may require portable supports in those areas where standard fence posts cannot be installed.

Safety fence will be placed not less than 2 feet from the traveled way of all current pedestrian shared use paths and sidewalks as directed by the Engineer. The safety fence is to provide a barrier to the public from entering sections of the work zone. The safety fence is not to be used as a pedestrian channeling device adjacent to current or temporary walk paths. Longitudinal Pedestrian Barriers will be utilized in those areas where pedestrian channelizing and walk path demarcation is required.

TRAFFIC CONTROL

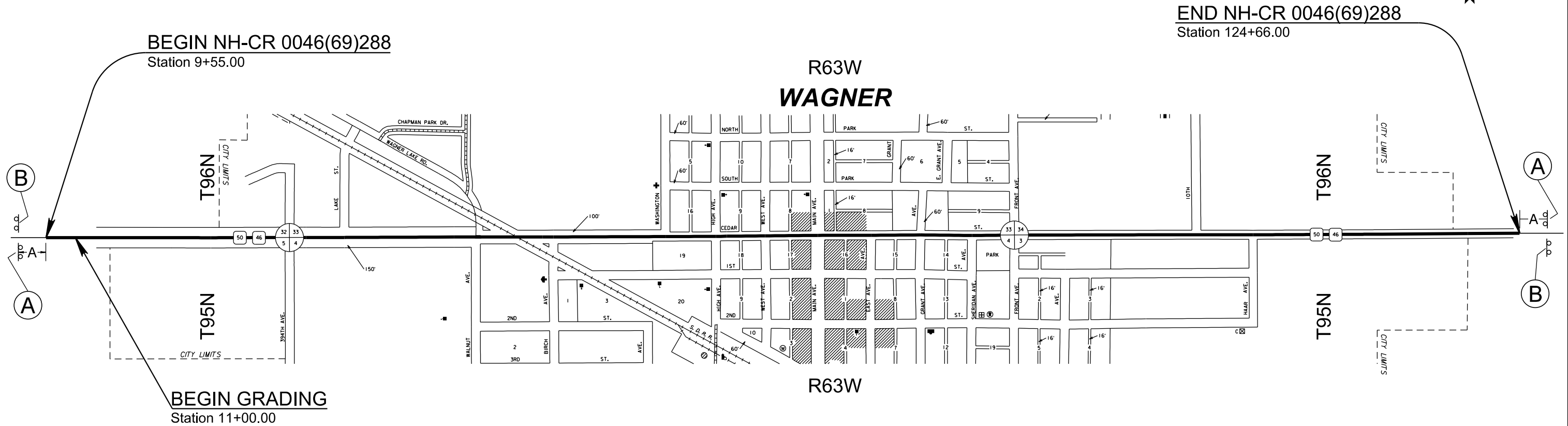
FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	1000



NOTES:

Construction signs shall not obscure existing signs and must be installed a minimum of 50' from an existing sign.



PLOT SCALE - 1:7000

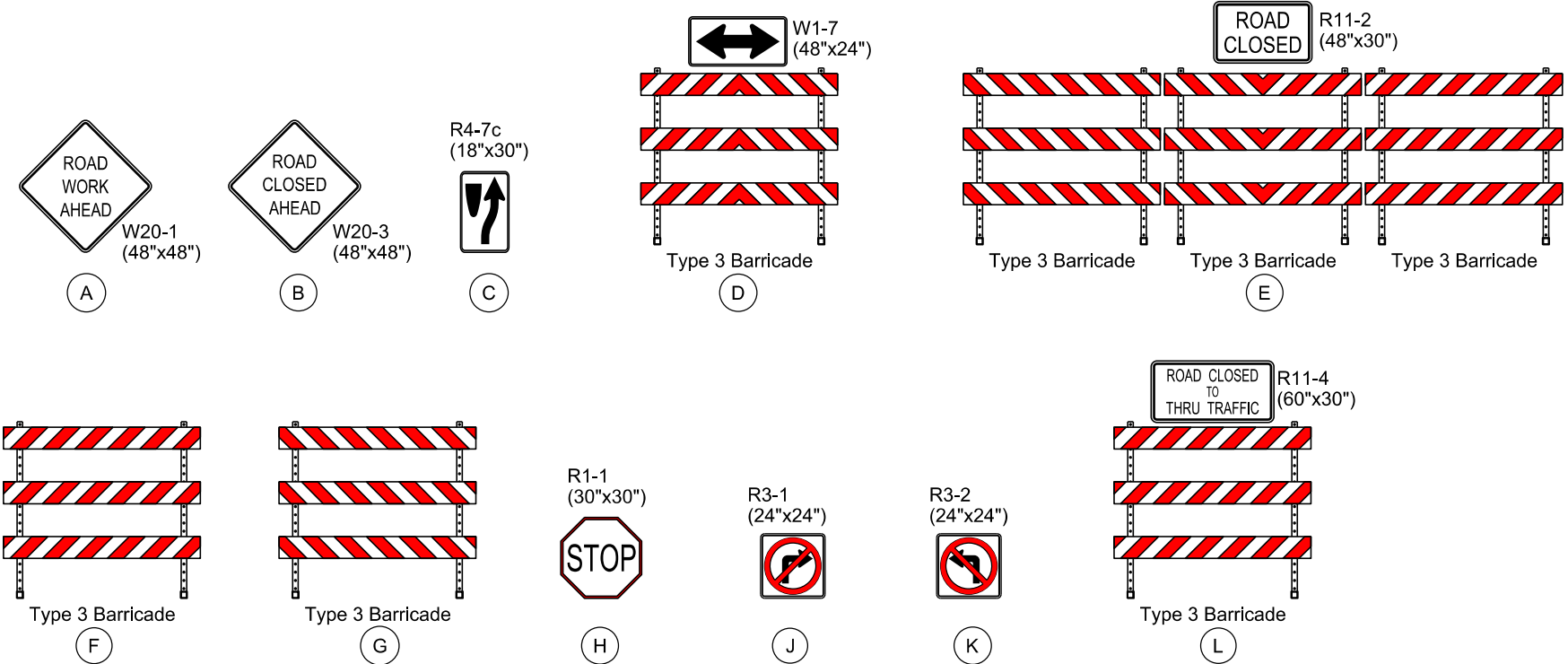
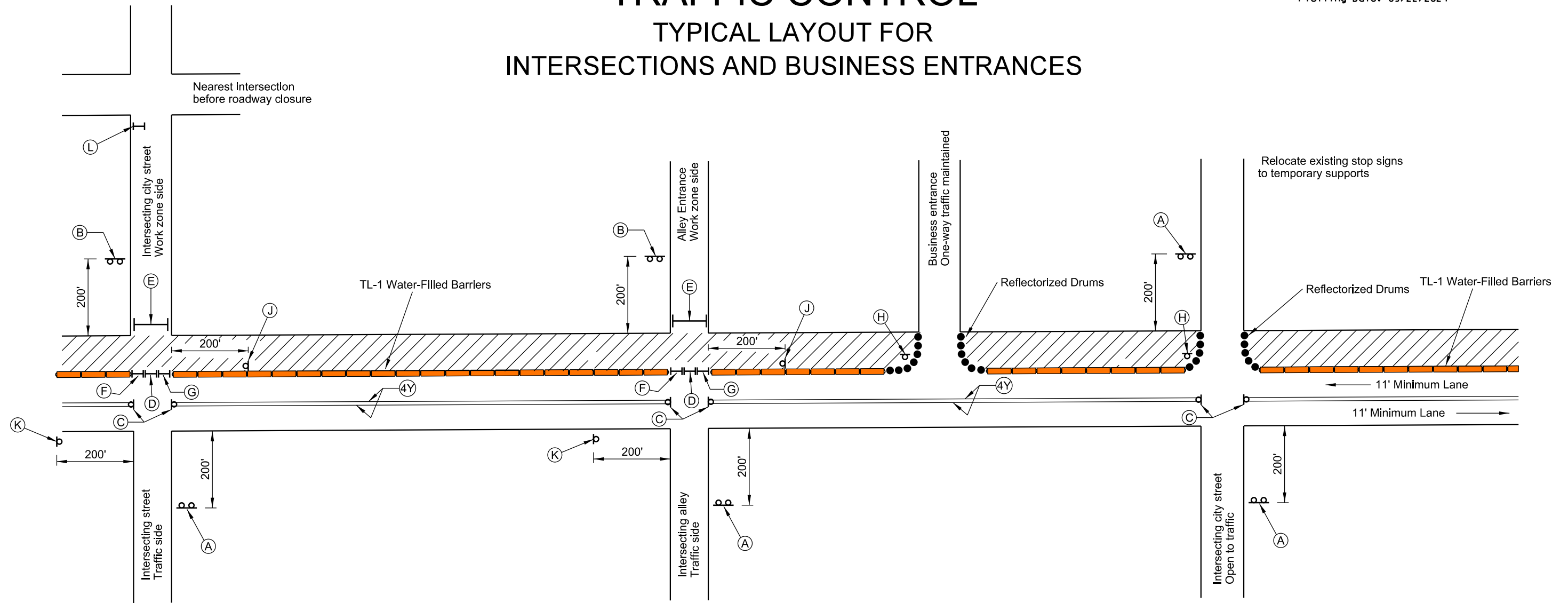
PLOT NAME - 1





FILE - ... \TC 05JUN REV 2.DGN

PLOTTED FROM - TRMLINT06

TRAFFIC CONTROL

TYPICAL LAYOUT FOR INTERSECTIONS AND BUSINESS ENTRANCES



-  TL-1 Water-Filled Barriers
-  Work Zone
-  Reflectorized Drums - 25' spacing on tapers
-  4Y 4" Yellow Raised Pavement Markers

NOTES:

Unless otherwise specified, signs are to be placed 200'-300' from intersections.

Construction signs will not obscure existing signs and must be installed a minimum of 50' from an existing sign.

PLOT SCALE - 1:7000

PLOTTED FROM - TRMLINT06

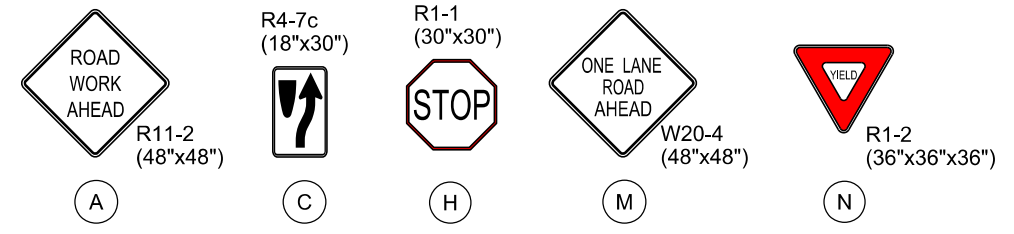
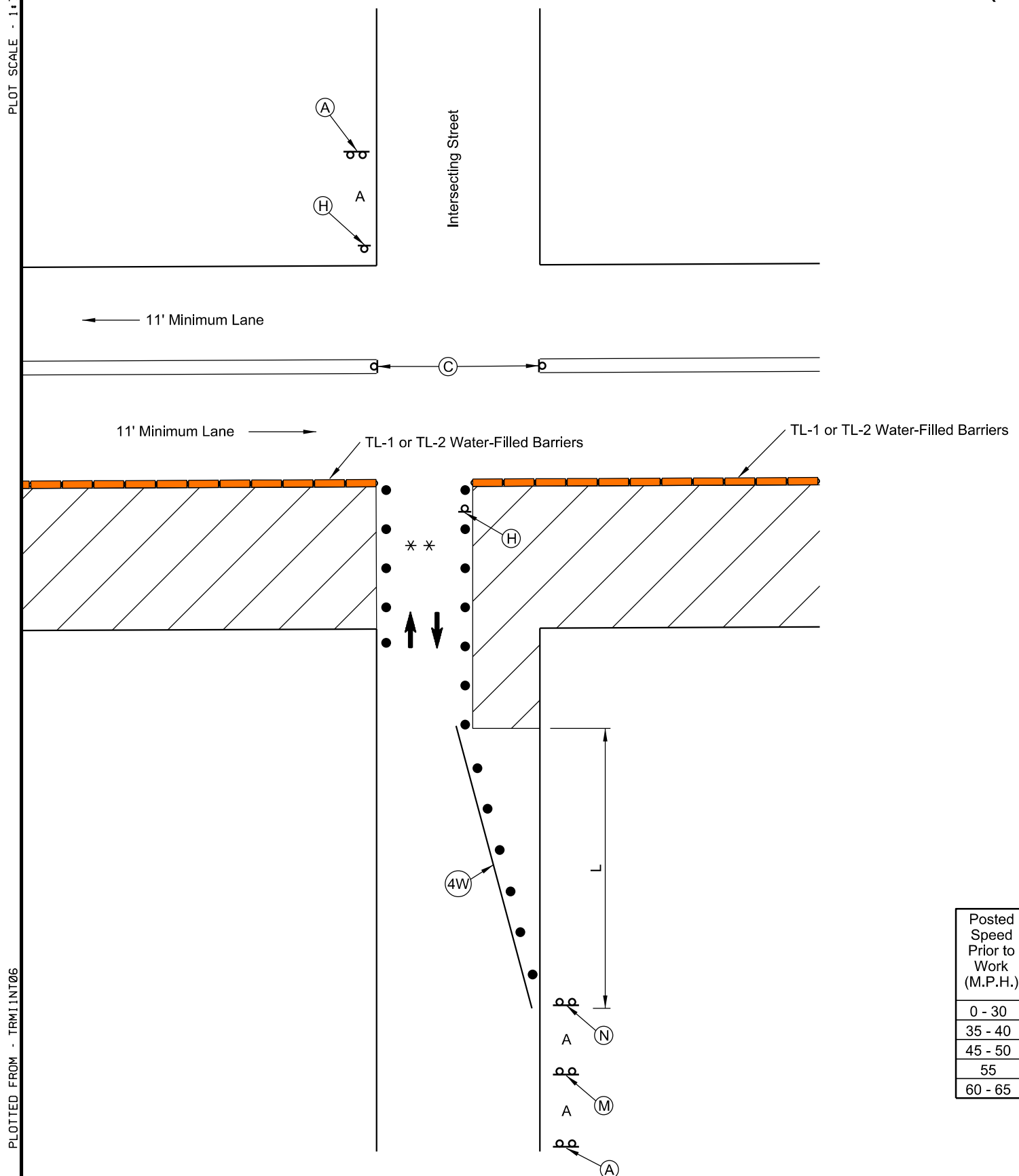
PLOT NAME - 2

FILE - ... \TC 05JUN REV.DGN

TRAFFIC CONTROL INTERSECTIONS CONSTRUCTION (TYPICAL)

PLOT SCALE - 1:7000

PLOT NAME - 3



* * 12' Minimum Lane Width

TL-1 or TL-2 Water-Filled Barriers

Work Zone

● ReflectORIZED Drums - 25' spacing on tapers

(4Y) 4" Yellow Raised Pavement Markers

(4W) 4" White Temporary Pavement Marking

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)	Taper Length (Feet)
	(A)	(L)
0 - 30	200	180
35 - 40	200	320
45 - 50	350	600
55	500	660
60 - 65	500	780

NOTES:

Remove existing pavement markings in all tapers and in other areas designated by the Engineer where they conflict with temporary traffic control plan. Payment for the removal of pavement marking will be paid at the contract unit price per foot for Remove Pavement Marking, 4" or Equivalent.

The Contractor will be required to maintain two way traffic at all times with a minimum of 12 ft. lanes.

PLOTTED FROM - TRMLINT06

FILE - ... \TC 05JUN REV.DGN

WIDTH RESTRICTION SIGNING

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET C11	TOTAL SHEETS C28
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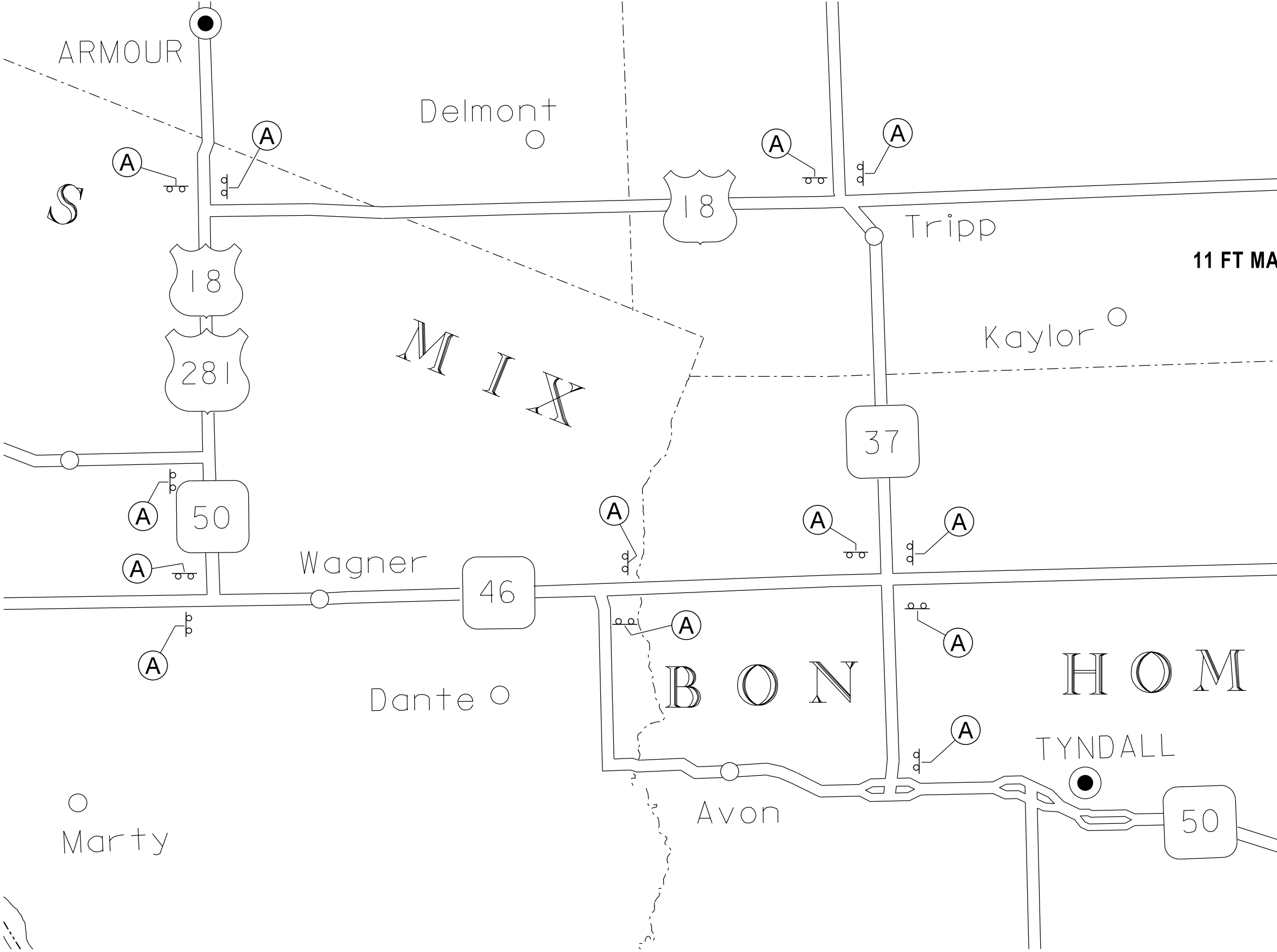
Plotting Date: 09/22/2024

PLOT SCALE - 1:7000

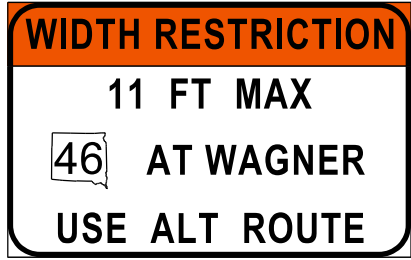
PLOTTED FROM - TRMLINT06

PLOT NAME - 4

FILE - ... \TC 05JUN REV.DGN



11 FT MAX



NOTES:

Signs shall be placed within 2000' of the nearest highway intersection. Exact location to be approved by the Engineer.

Construction signs shall not obscure existing signs and must be installed a minimum of 200' from an existing sign.

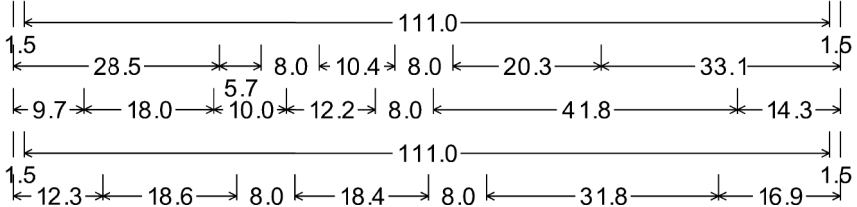
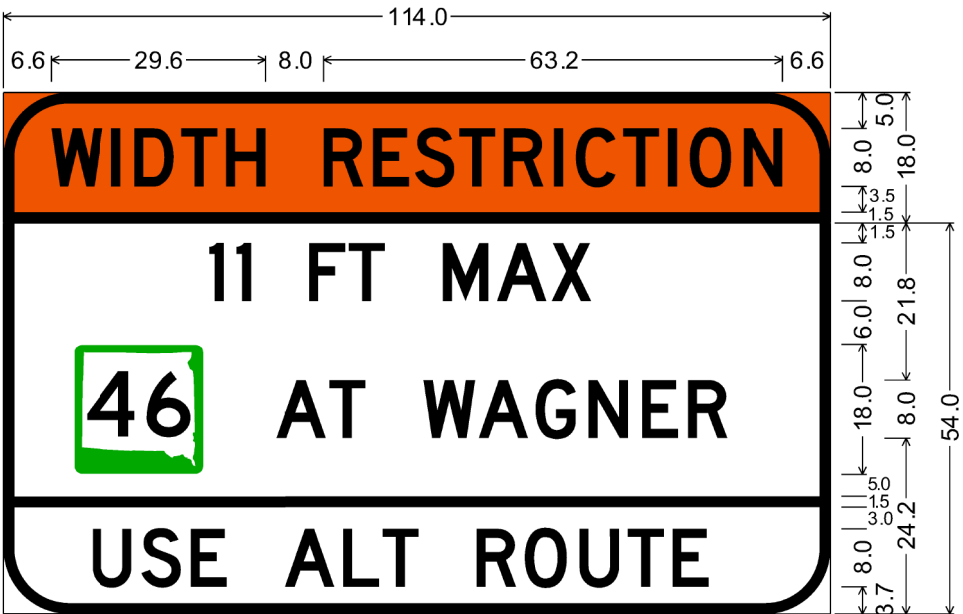
WIDTH RESTRICTION SIGN DESIGN

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET C12	TOTAL SHEETS C28
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Plotting Date: 09/22/2024

PLOT SCALE - 1:7000

PLOT NAME - 5



9.0" Radius, 1.5" Border, Black on Orange;

"WIDTH RESTRICTION", D 2K;

9.0" Radius, 1.5" Border, Black on White;

"11 FT MAX", D 2K; "AT WAGNER", D 2K;

"USE ALT ROUTE", D 2K;

Table of letter and object lefts

W	I	D	T	H						
6.6	14.9	18.1	24.6	30.8						
R	E	S	T	R	I	C	T	I	O	N
44.2	51.0	56.8	62.8	69.0	75.8	78.8	85.3	91.5	94.5	102.0

1.5								
I	I	F	T	M	A	X		
28.5	32.2	42.2	47.7	60.6	68.1	75.5		
■	A	T	W	A	G	N	E	R
9.7	37.7	45.0	57.9	65.5	73.4	80.6	87.9	94.3

1.5										
U	S	E	A	L	T	R	O	U	T	E
12.3	19.1	25.9	38.9	46.9	52.3	65.3	71.9	79.3	86.0	92.1

PLOTTED FROM - TRMLINT06

FILE - ... \TC 05JUN REV.DGN

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	24	30"	5.2	124.8
R1-2	YIELD	6	36"	3.9	23.4
R3-1	RIGHT TURN PROHIBITION (symbol)	7	24" x 24"	4.0	28.0
R3-2	LEFT TURN PROHIBITION (symbol)	9	24" x 24"	4.0	36.0
R4-7c	(Narrow) KEEP RIGHT (symbol)	30	18" x 30"	3.8	114.0
R9-9	SIDEWALK CLOSED	15	24" x 12"	2.0	30.0
R9-10	SIDEWALK CLOSED (Double Arrow) USE OTHER SIDE	9	24" x 12"	2.0	18.0
R9-11	SIDEWALK CLOSED AHEAD (ARROW L or R) CROSS HERE	2	24" x 18"	3.0	6.0
R11-2	ROAD CLOSED	7	48" x 30"	10.0	70.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	4	60" x 30"	12.5	50.0
W1-4	REVERSE CURVE (L or R)	4	48" x 48"	16.0	64.0
W1-7	LARGE ARROW (two directions)	7	48" x 24"	8.0	56.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W9-3	CENTER LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W11-2	PEDESTRIAN (symbol)	8	36" x 36"	9.0	72.0
W16-7P	DOWNWARD DIAGONAL ARROW (plaque)	4	30" x 21"	4.4	17.6
W16-9P	AHEAD (plaque)	4	30" x 18"	3.8	15.2
W20-1	ROAD WORK AHEAD	9	48" x 48"	16.0	144.0
W20-3	ROAD CLOSED AHEAD	7	48" x 48"	16.0	112.0
W20-4	ONE LANE ROAD AHEAD	6	48" x 48"	16.0	96.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	4	48" x 48"	16.0	64.0
G20-1	ROAD WORK NEXT 2 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					1351.0

ITEMIZED LIST FOR DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	WIDTH RESTRICTION 11 FT MAXIMUM	13	114" x 72"	57.0	741.0
CONVENTIONAL ROAD DETOUR AND RESTRICTION SIGNING SQFT					741.0

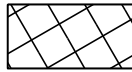
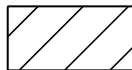

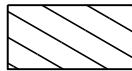
TEMPORARY BUSINESS SIGNING

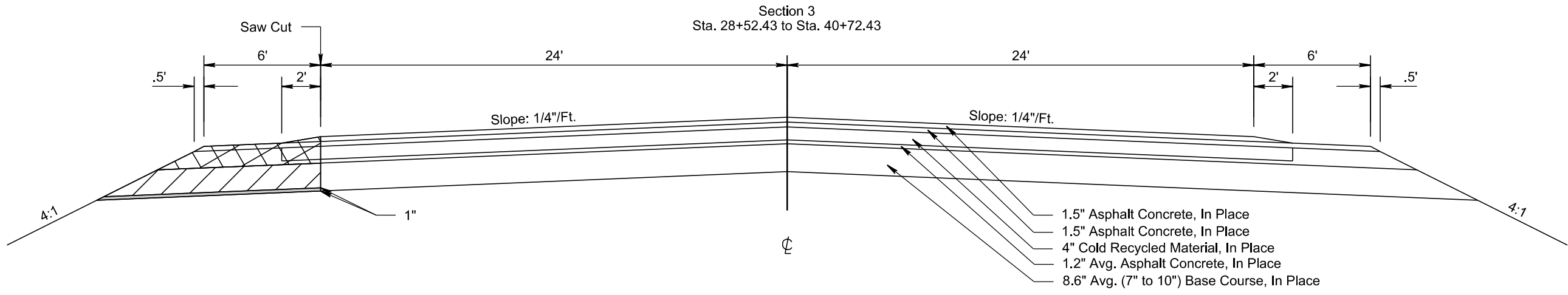
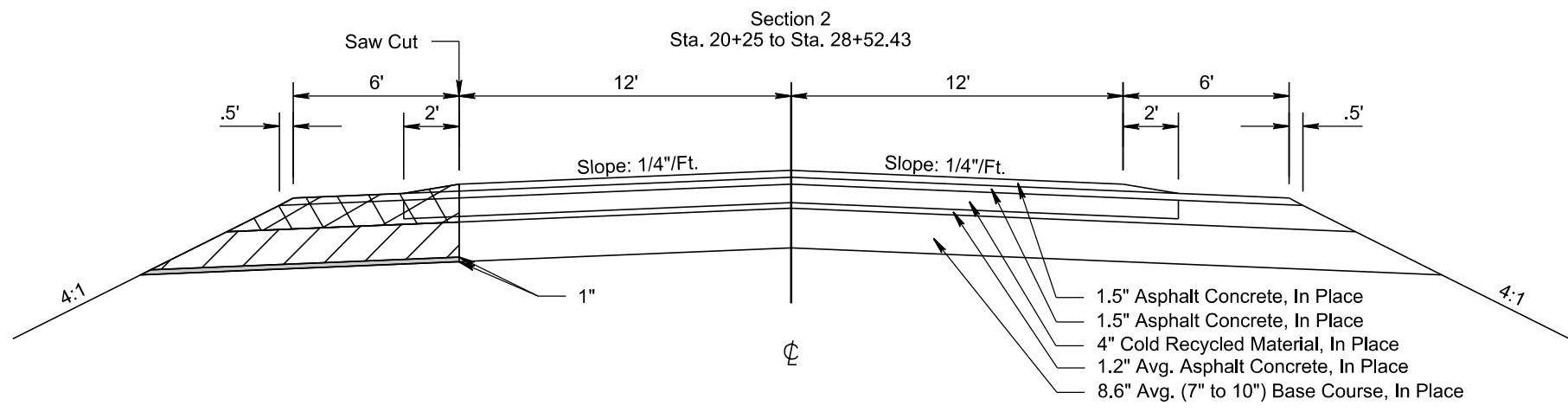
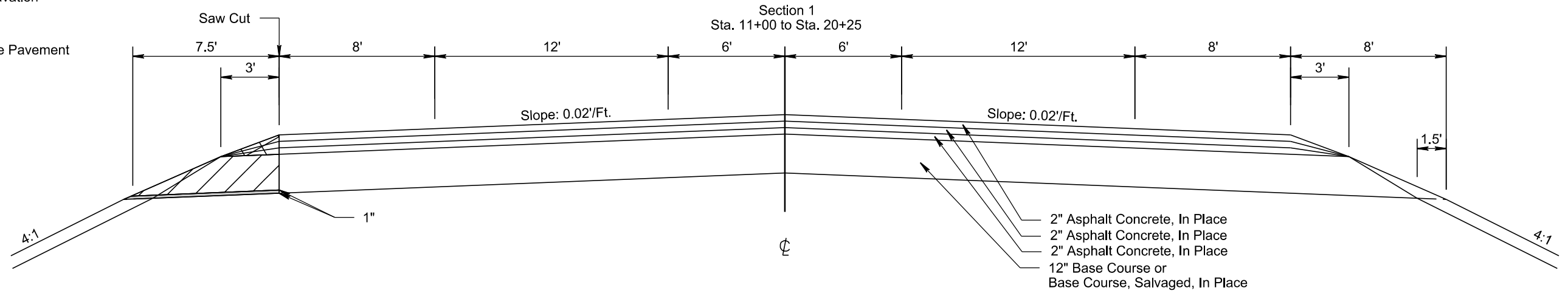
Quantity	Width Inches	Height Inches	Sign Description	Color		Sign SqFt	Total SqFt
				Background	Legend/Border		
2	24	12	ACE HARDWARE	Blue	White	2.0	4.0
2	24	12	BOMGAARS	Blue	White	2.0	4.0
2	24	12	FAMILY DOLLAR	Blue	White	2.0	4.0
2	24	12	JUFFER	Blue	White	2.0	4.0
2	24	12	SUBWAY	Blue	White	2.0	4.0
2	24	12	FT RANDALL PHONE	Blue	White	2.0	4.0
2	24	12	WAGNER MOTEL	Blue	White	2.0	4.0
2	24	12	ROG'S AUTO	Blue	White	2.0	4.0
2	24	12	TWO SPURS	Blue	White	2.0	4.0
2	24	12	CASEY'S	Blue	White	2.0	4.0
2	24	12	BOOM'S	Blue	White	2.0	4.0
2	24	12	WAGNER DENTAL	Blue	White	2.0	4.0
2	24	12	GUS STOP	Blue	White	2.0	4.0
2	24	12	BUCHE'S	Blue	White	2.0	4.0
2	24	12	TACO JOHN'S	Blue	White	2.0	4.0
2	24	12	DOGGERS	Blue	White	2.0	4.0
2	24	12	FIRST DAKOTA	Blue	White	2.0	4.0
2	24	12	WAGNER LIQUOR	Blue	White	2.0	4.0
2	24	12	WAGNER FOODS	Blue	White	2.0	4.0
2	24	12	K's QWIK STOP	Blue	White	2.0	4.0
2	24	12	DOLLAR GENERAL	Blue	White	2.0	4.0
2	24	12	CAR WASH	Blue	White	2.0	4.0
2	24	12	GRIND HOUSE	Blue	White	2.0	4.0
2	24	12	BPUZA	Blue	White	2.0	4.0
2	24	12	FUNERAL HOME	Blue	White	2.0	4.0
2	24	12	MIDTOWNE	Blue	White	2.0	4.0
2	24	12	ARMORY	Blue	White	2.0	4.0
2	24	12	J & R FEEDS	Blue	White	2.0	4.0
2	24	12	MARK'S MACHINERY	Blue	White	2.0	4.0
2	24	12	NORTHWEST VET	Blue	White	2.0	4.0
2	24	12	CAR WASH	Blue	White	2.0	4.0
2	24	12	CHS	Blue	White	2.0	4.0
2	24	12	RUTHIE'S	Blue	White	2.0	4.0
2	24	12	VALLEY PUMP	Blue	White	2.0	4.0
68	24	6	LEFT/RIGHT ARROW	Blue	White	1.0	68.0
Total							204.0

Some business names might have changed since the plans were completed for this project. The Contractor will need to verify the business names prior to ordering the signs.

IN PLACE TRAFFIC CONTROL TYPICAL SECTIONS

(REMOVAL PRIOR TO PLACING TEMPORARY SURFACING)

-  Remove Asphalt Concrete Pavement
-  Salvage & Stockpile Granular Material
-  Unclassified Excavation
-  Remove Concrete Pavement



PLOT SCALE - 1+6.00001

652R

0559

PLOTTED FROM - TRPR13462

PLOT NAME - 1

FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN

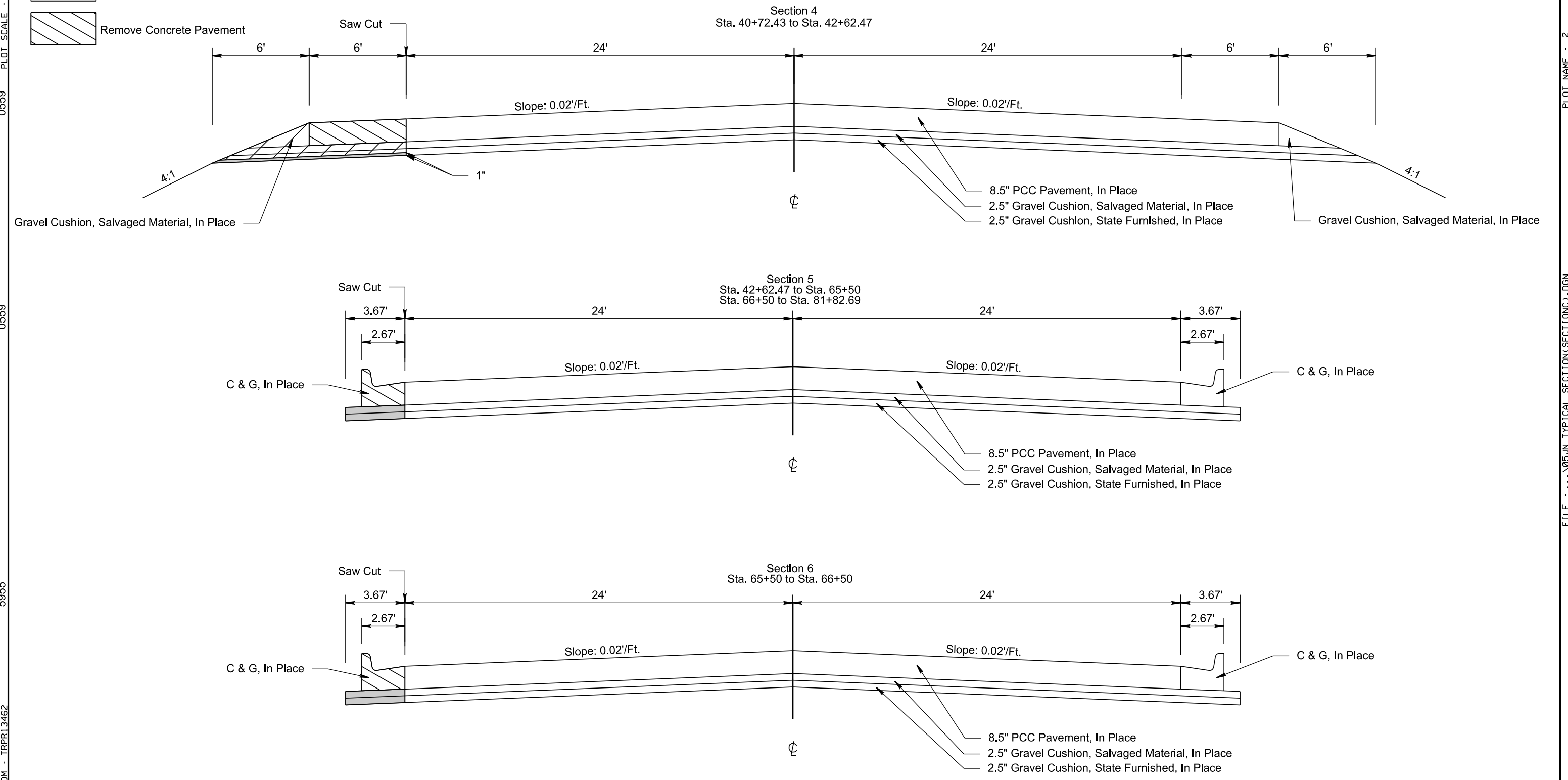
IN PLACE TRAFFIC CONTROL TYPICAL SECTIONS

(REMOVAL PRIOR TO PLACING TEMPORARY SURFACING)

- Remove Asphalt Concrete Pavement
- Salvage & Stockpile Granular Material
- Unclassified Excavation
- Remove Concrete Pavement

0559 PLOT SCALE - 1+6.00001
0559
5955
5955 TIED FROM - TRPR13462

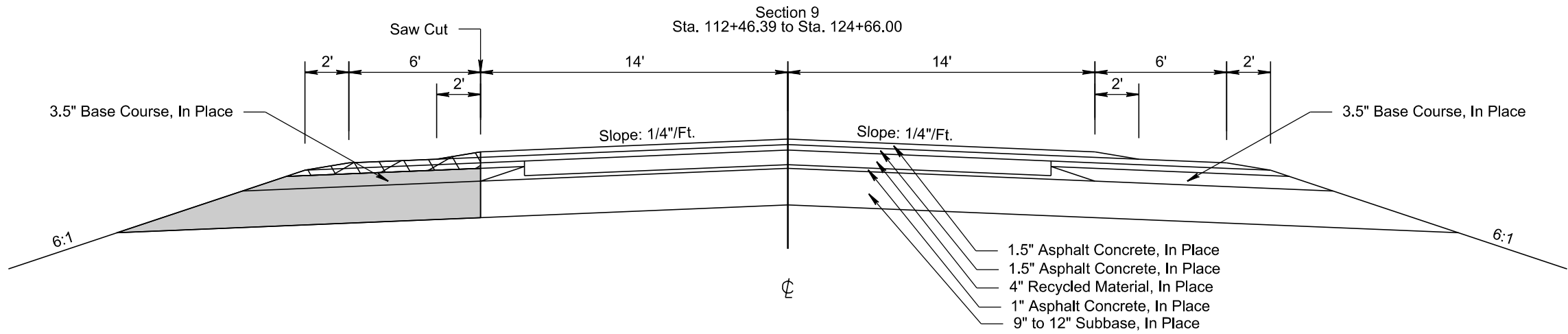
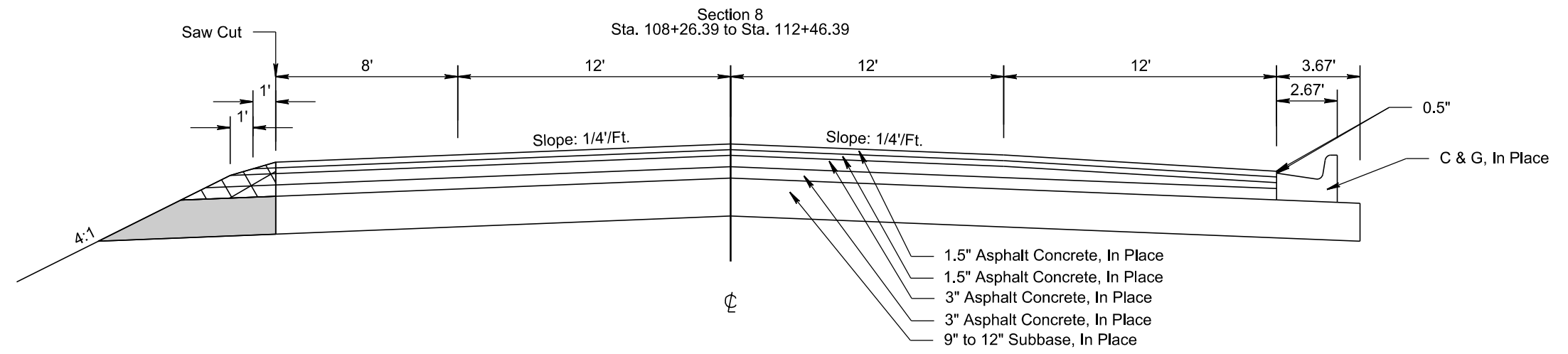
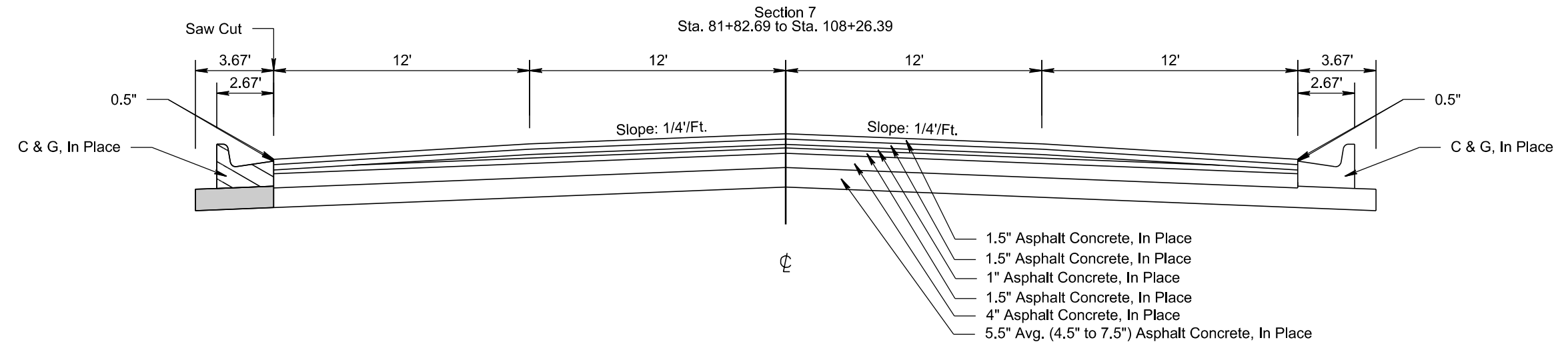
PLOT NAME - 2
FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN



IN PLACE TRAFFIC CONTROL TYPICAL SECTIONS (REMOVAL PRIOR TO PLACING TEMPORARY SURFACING)

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0046(69)288	SHEET C16	TOTAL SHEETS C28
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- Remove Asphalt Concrete Pavement
- Unclassified Excavation



PLOT SCALE - 1+6.00001

5955

5955

PLOTTED FROM - TRPR13462

PLOT NAME - 3

FILE - ... \05JUN.TYPICAL_SECTION(SECTIONC).DGN

TRAFFIC CONTROL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C17	C28

(TEMPORARY SURFACING)

PLOT SCALE - 1+6.00001

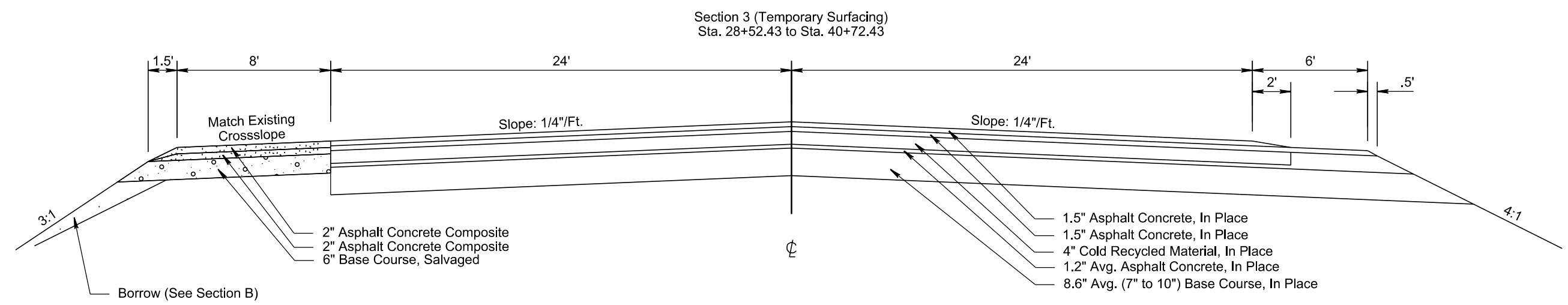
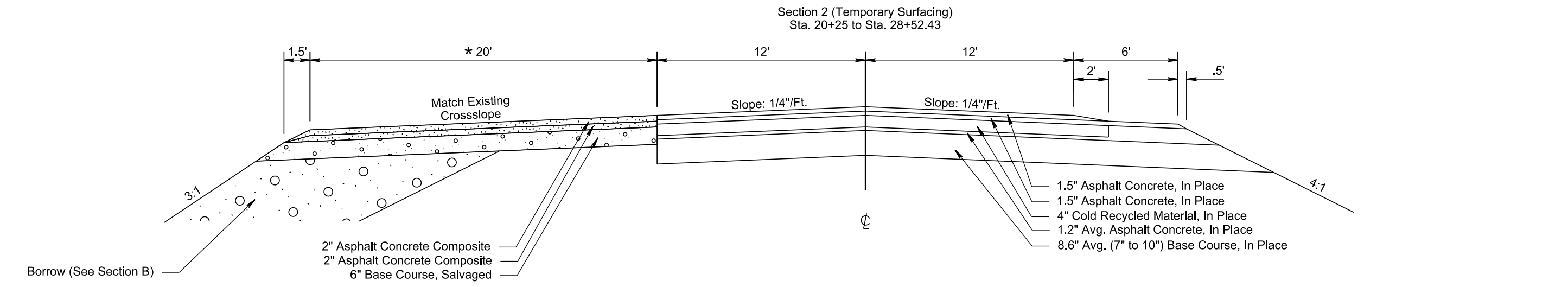
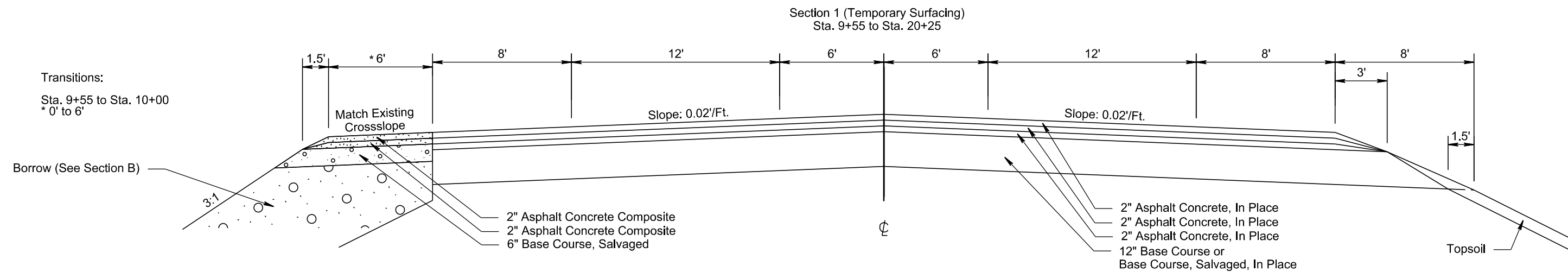
652R

0559

PLOTTED FROM - TRPR13462

PLOT NAME - 4

FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN

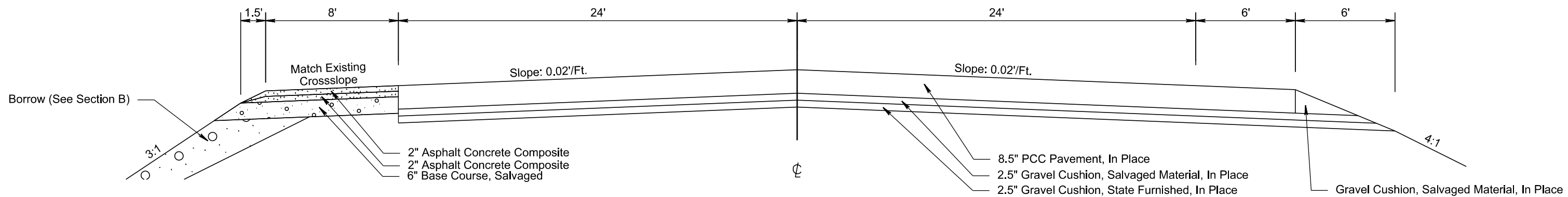


TRAFFIC CONTROL SECTIONS

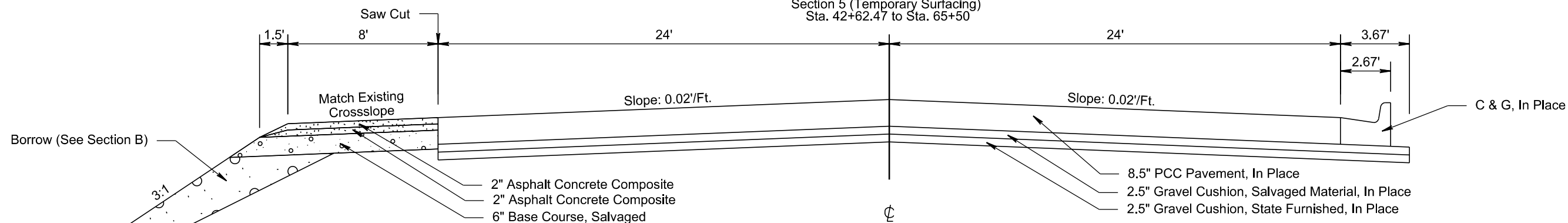
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C18	C28

(TEMPORARY SURFACING)

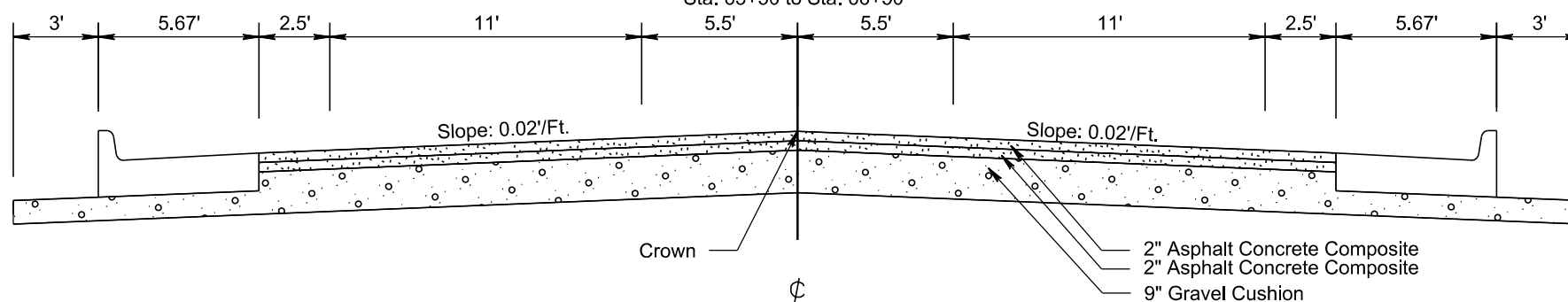
Section 4 (Temporary Surfacing)
Sta. 40+72.43 to Sta. 42+62.47



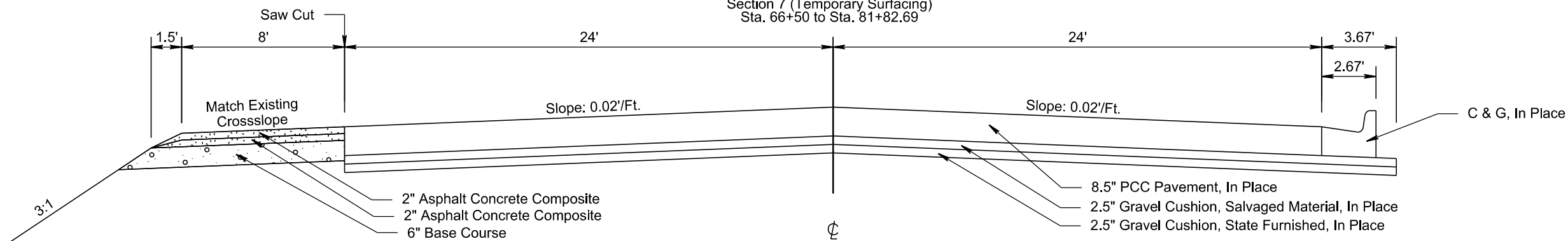
Section 5 (Temporary Surfacing)
Sta. 42+62.47 to Sta. 65+50



Section 6
Sta. 65+50 to Sta. 66+50



Section 7 (Temporary Surfacing)
Sta. 66+50 to Sta. 81+82.69



PLOT SCALE - 1+6.00001

PLOTTED FROM - TRPR13462

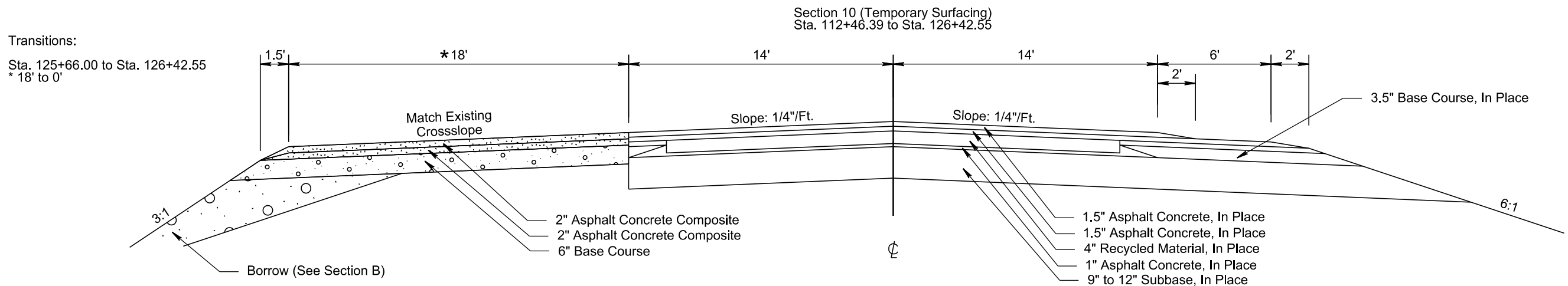
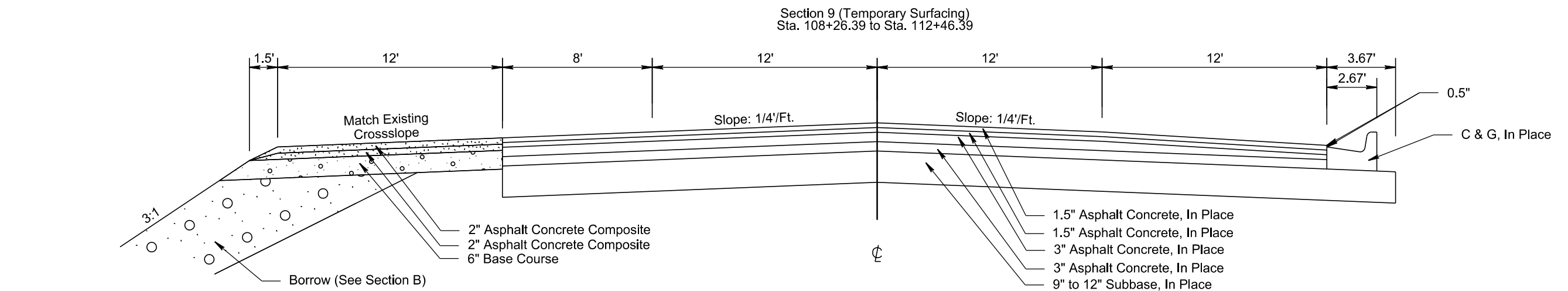
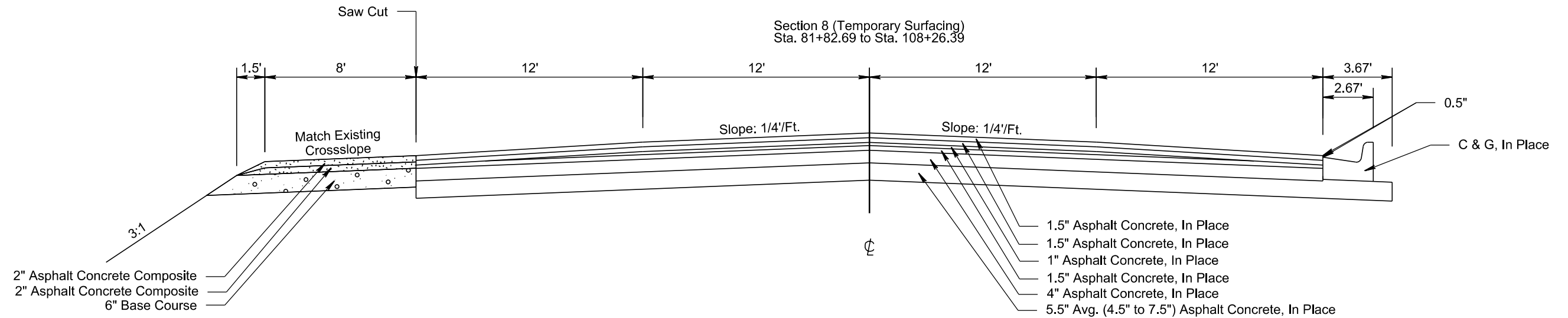
PLOT NAME - 5

FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN

TRAFFIC CONTROL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C19	C28

(TEMPORARY SURFACING)



PLOT SCALE - 1+6.00001

PLOTTED FROM - TRPR13462

PLOT NAME - 6

FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN

TRAFFIC CONTROL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C20	C28

 Remove Traffic Diversion

(REMOVAL OF TEMPORARY SURFACING)

PLOT SCALE - 1+6.00001

652R

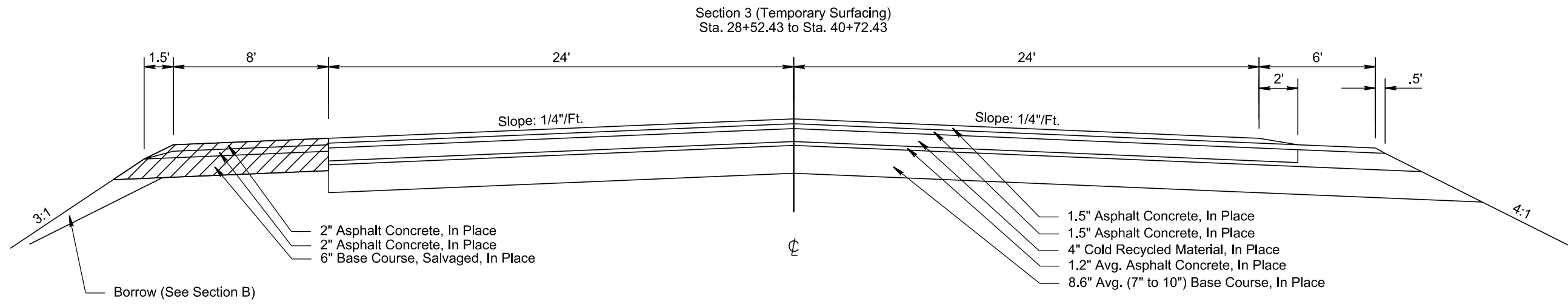
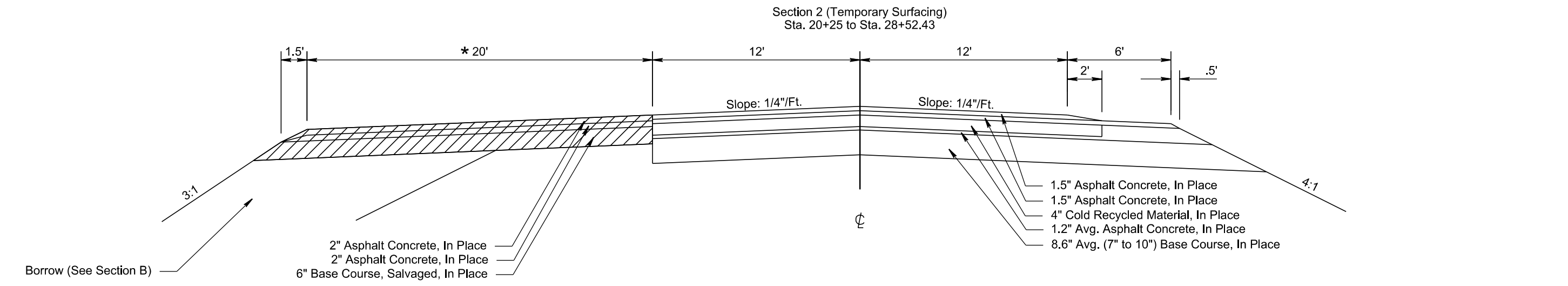
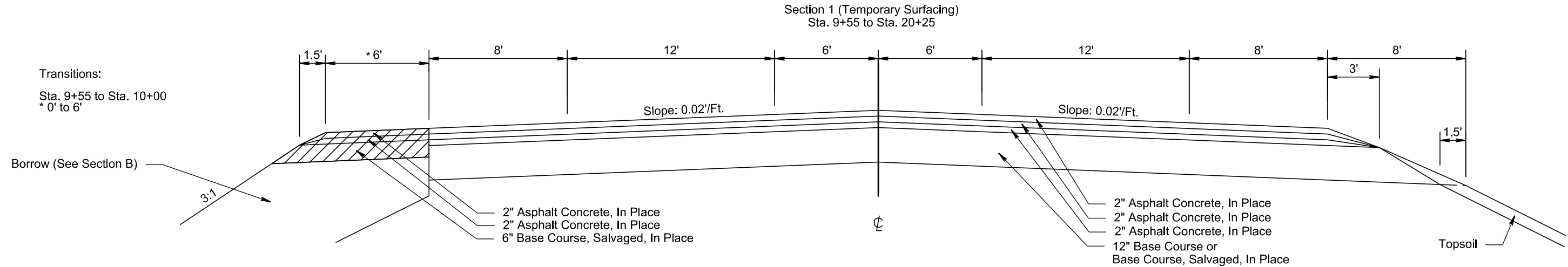
652R

0559

PLOTTED FROM - TRPR13462


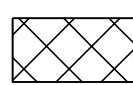
PLOT NAME - 7

FILE - ... \05JUN.TYPICAL SECTION(SECTIONC).DGN



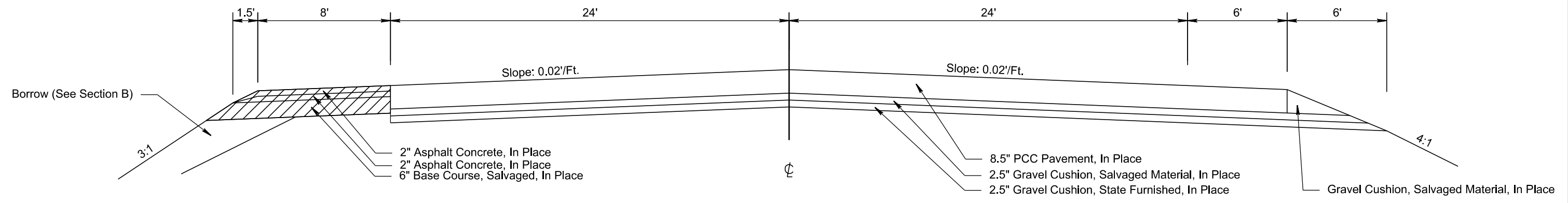
TRAFFIC CONTROL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C21	C28

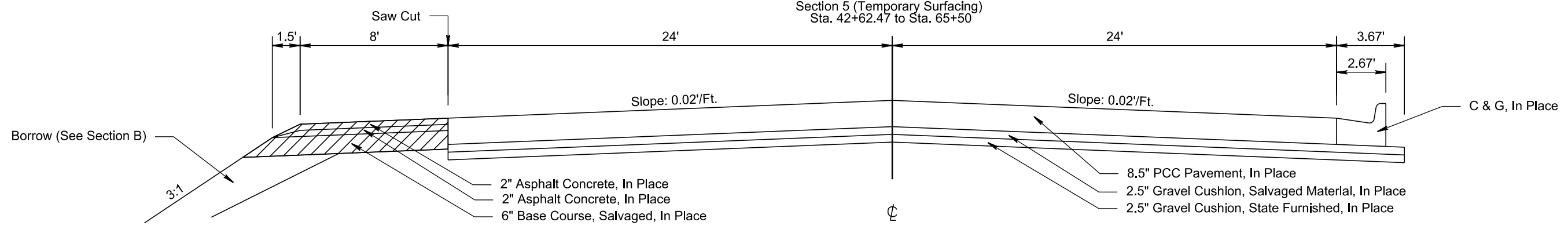
-  Remove Traffic Diversion
-  Salvage & Stockpile Asphalt Mix and Granular Base Material

(REMOVAL OF TEMPORARY SURFACING)

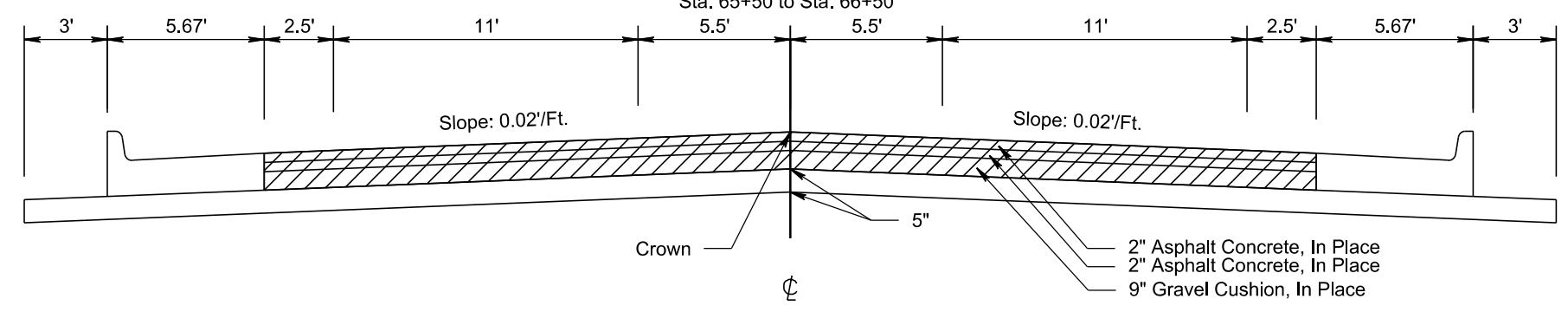
Section 4 (Temporary Surfacing)
Sta. 40+72.43 to Sta. 42+62.47



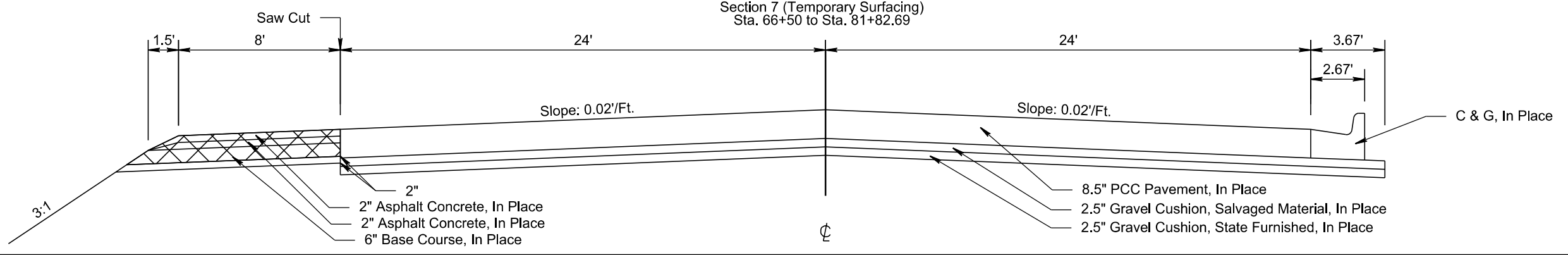
Section 5 (Temporary Surfacing)
Sta. 42+62.47 to Sta. 65+50



Section 6
Sta. 65+50 to Sta. 66+50



Section 7 (Temporary Surfacing)
Sta. 66+50 to Sta. 81+82.69



PLOT SCALE - 1/8" = 1'-0"

PLOTTED FROM - TRPR13462

PLOT NAME - 8

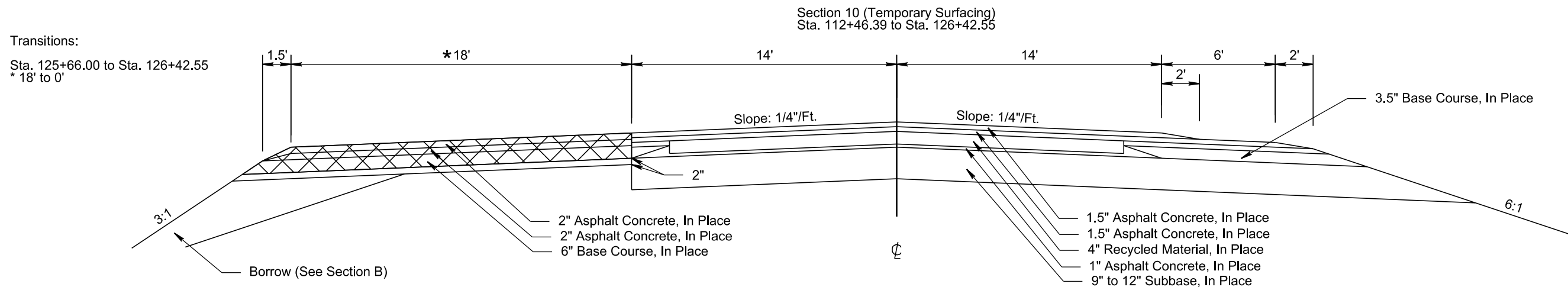
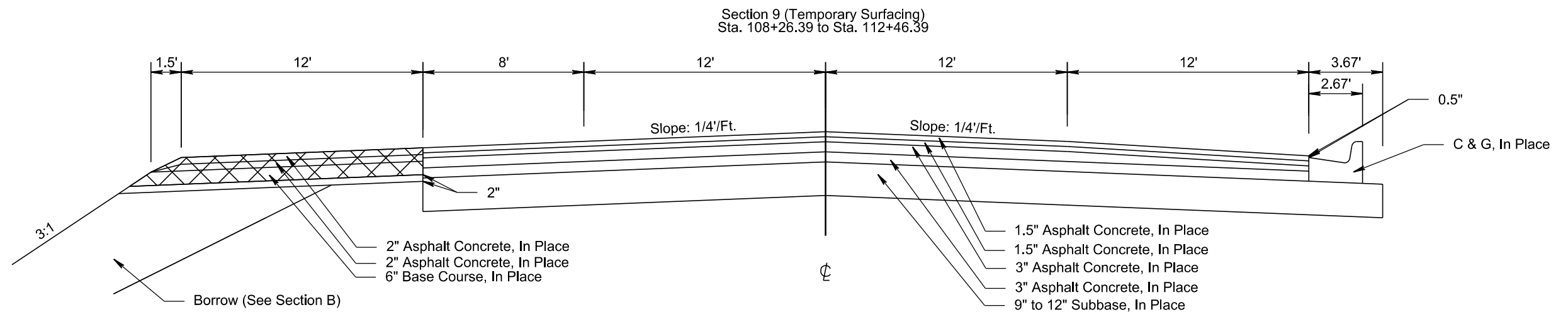
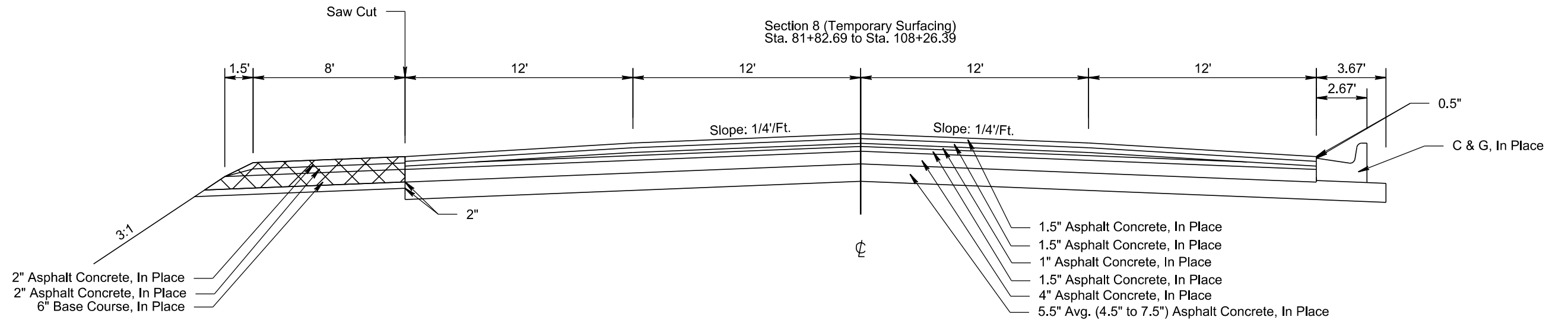
FILE - ... \09JUN_TYPICAL_SECTION(SECTIONC).DGN

TRAFFIC CONTROL SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0046(69)288	C22	C28

(REMOVAL OF TEMPORARY SURFACING)

 Salvage & Stockpile Asphalt Mix and Granular Base Material



PLOT SCALE - 1+6.00001

PLOTTED FROM - TRPR13462

PLOT NAME - 9

FILE - ... \05JUN_TYPICAL_SECTION(SECTIONC).DGN

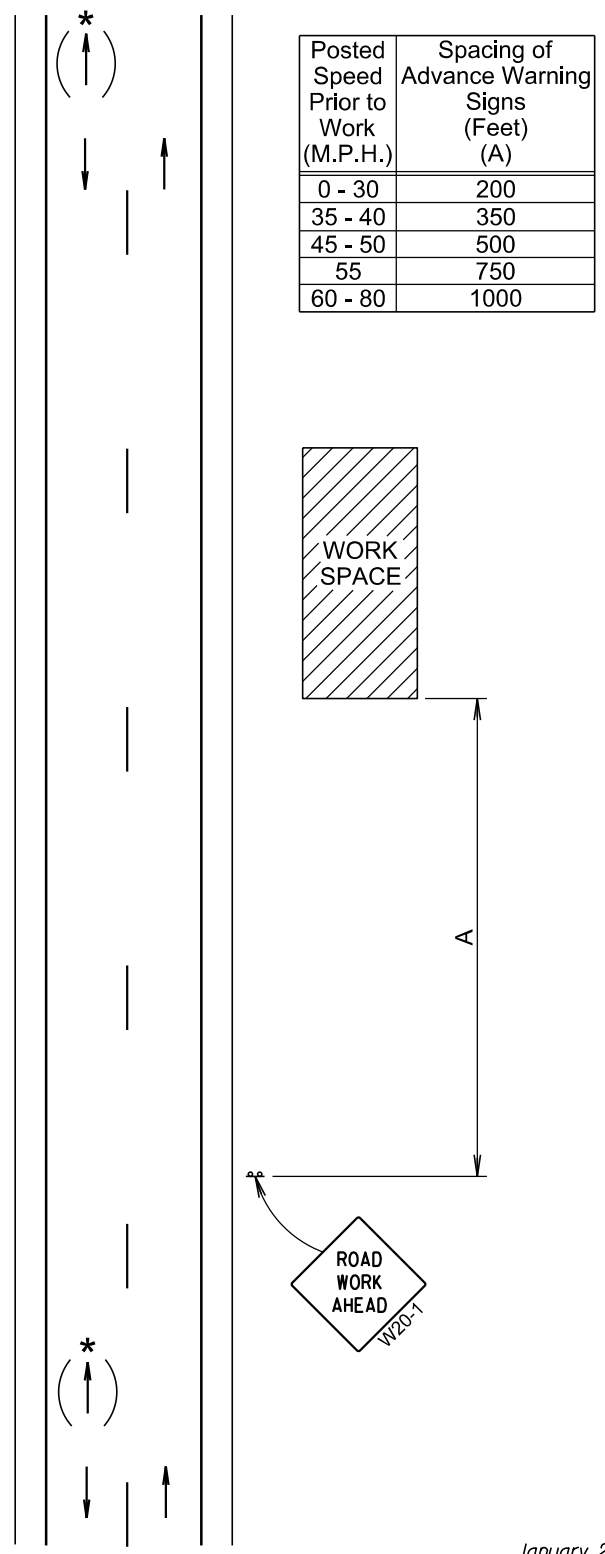
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

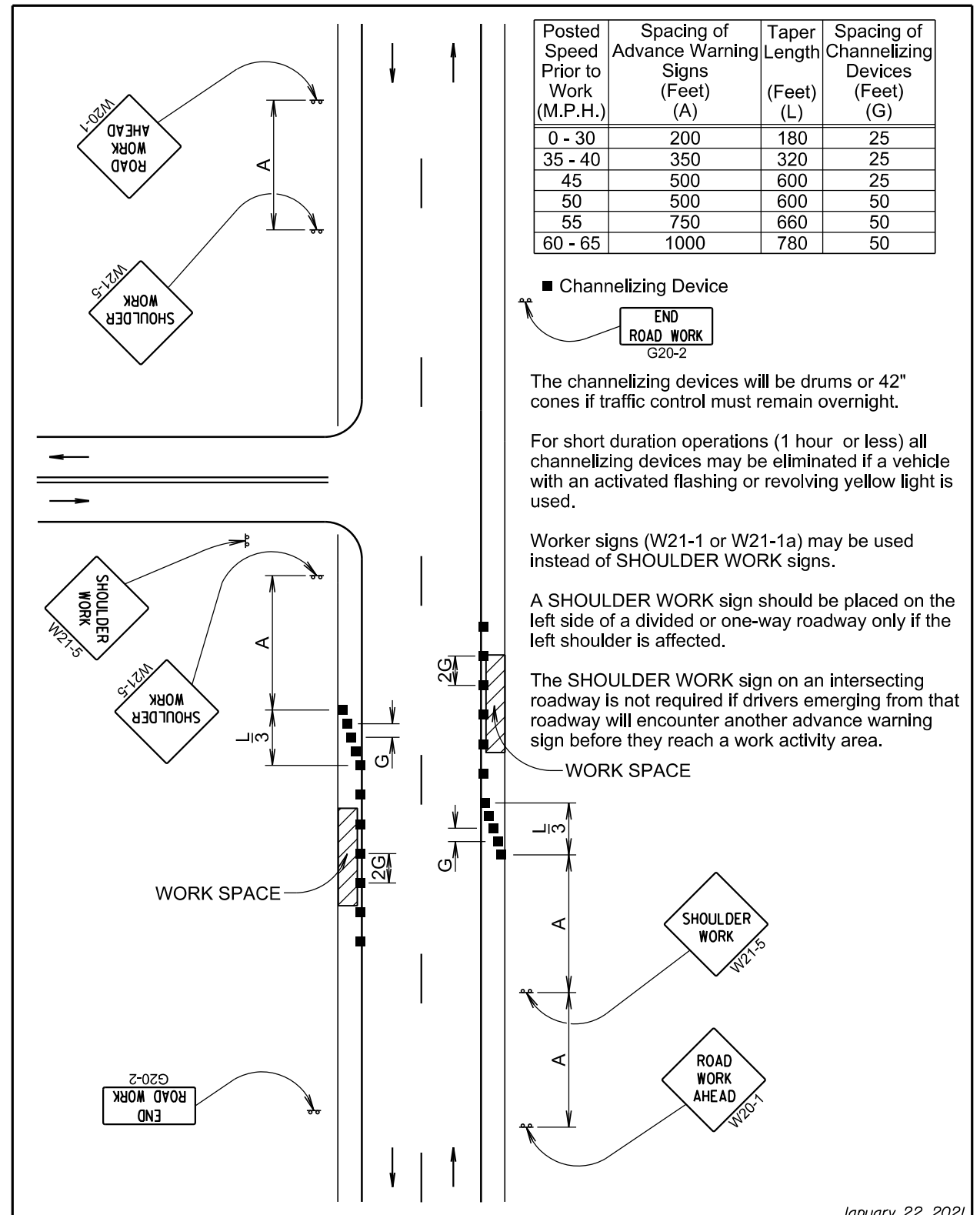
The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* 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.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



January 22, 2021



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Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

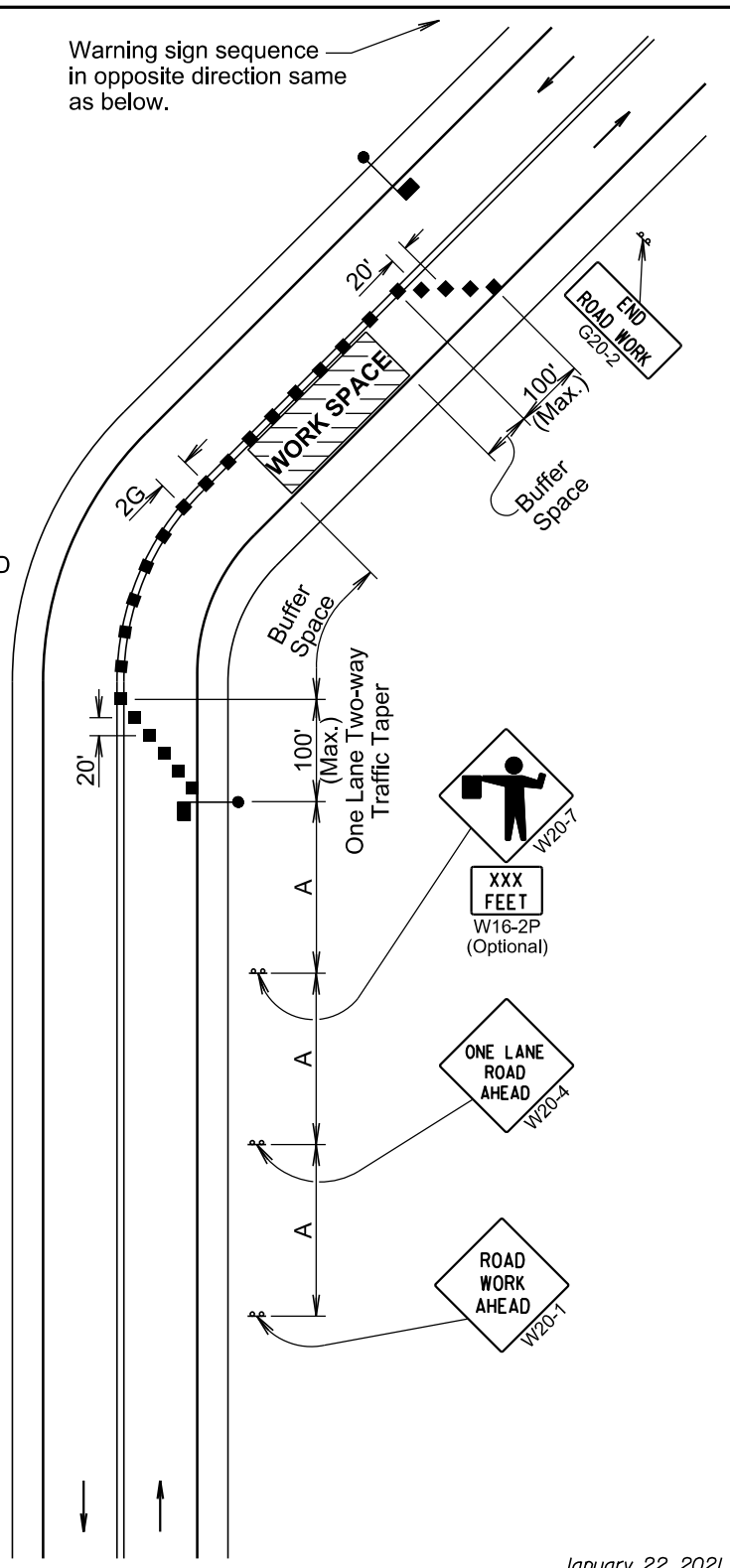
The channelizing devices will be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

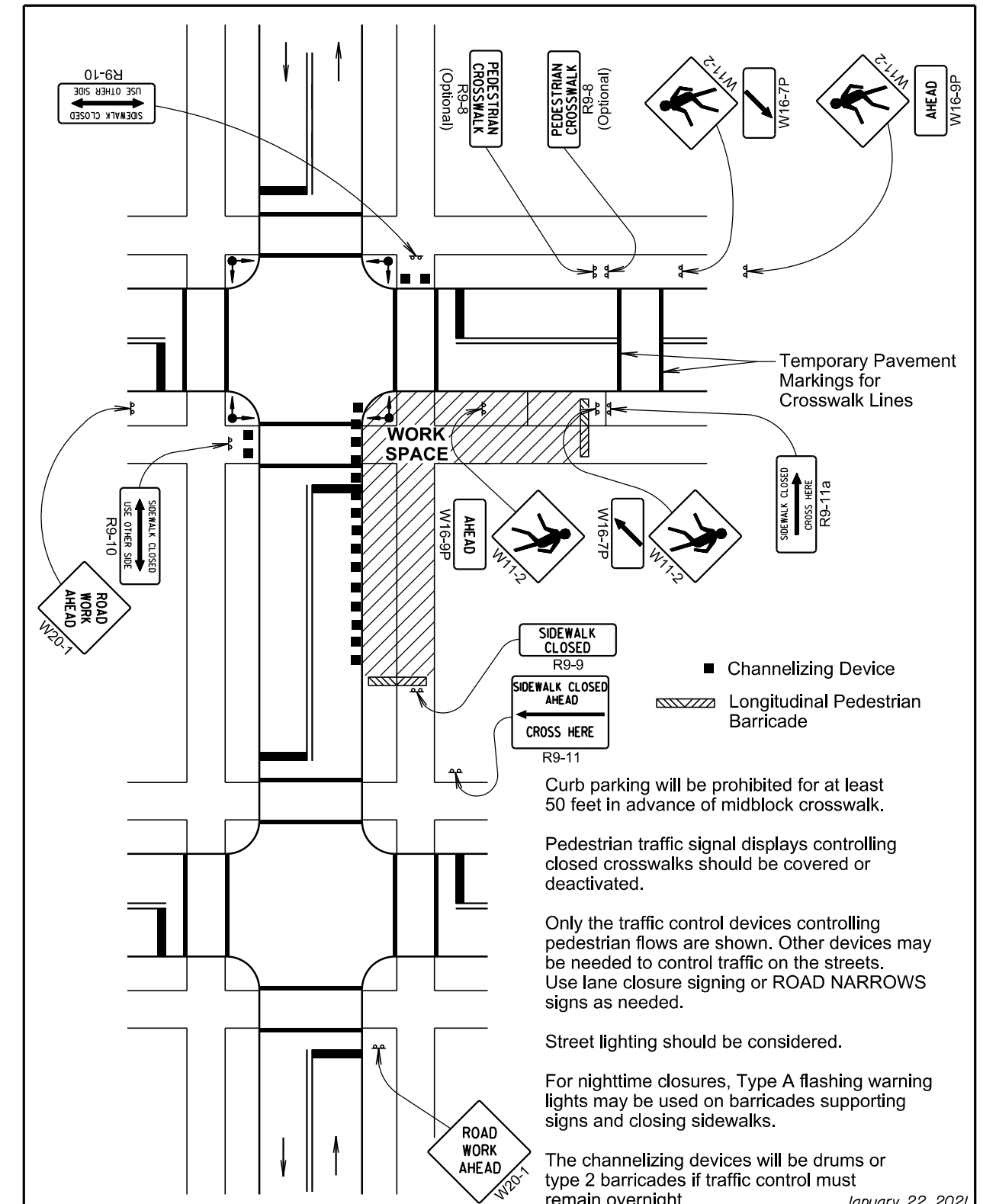
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
	Published Date: 2025	Sheet 1 of 1



Curb parking will be prohibited for at least 50 feet in advance of midblock crosswalk.

Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs as needed.

Street lighting should be considered.

For nighttime closures, Type A flashing warning lights may be used on barricades supporting signs and closing sidewalks.

The channelizing devices will be drums or type 2 barricades if traffic control must remain overnight.

January 22, 2021

S D D O T	SIDEWALK CLOSURES AND PEDESTRIAN DETOURS	PLATE NUMBER 634.33
	Published Date: 2025	Sheet 1 of 1

Only the traffic control devices controlling pedestrian flows are shown. Other devices may be needed to control traffic on the streets. Use lane closure signing or ROAD NARROWS signs, as needed.

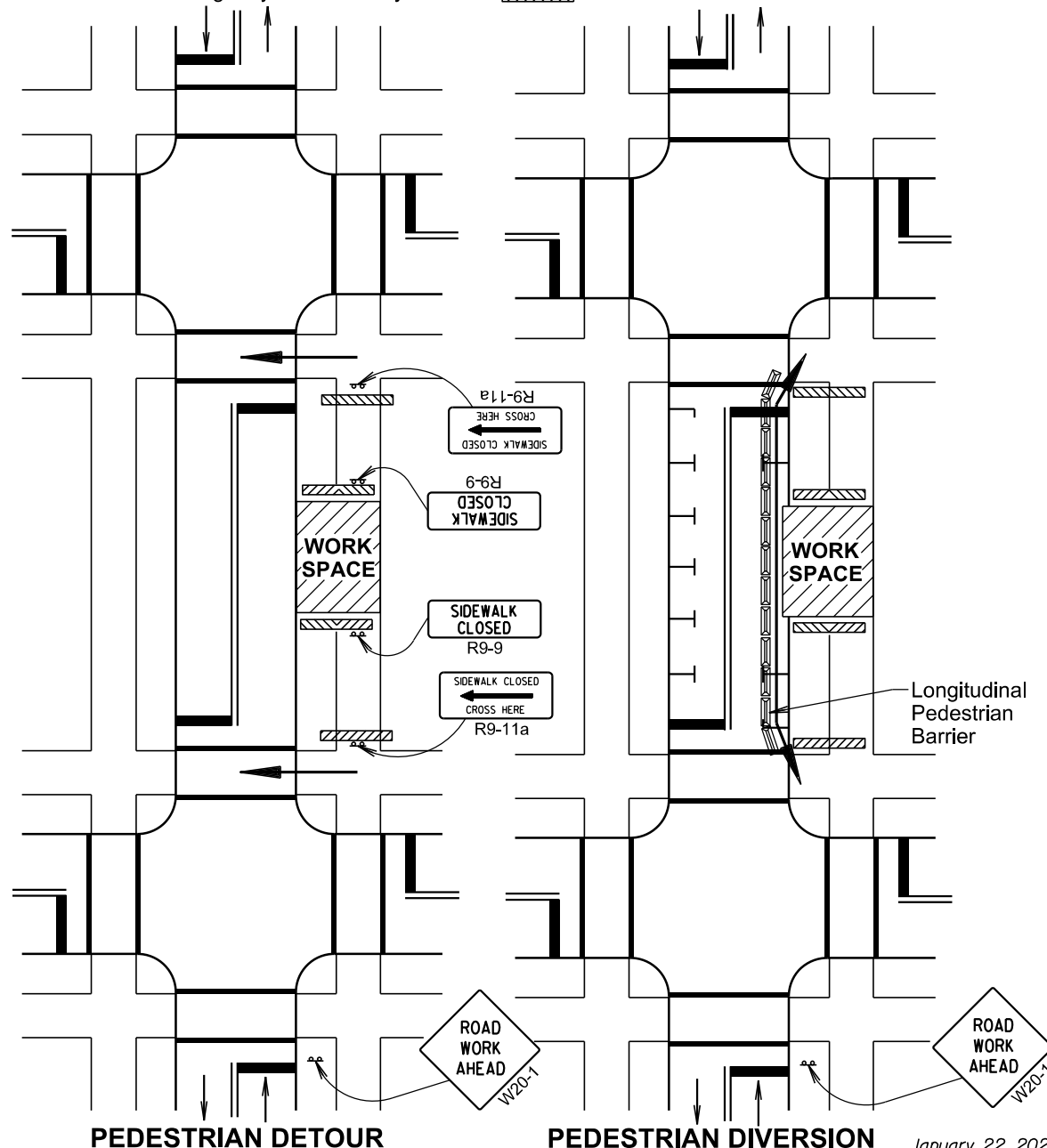
Signs may be placed along a temporary diversion to guide or direct pedestrians. Examples include KEEP RIGHT and KEEP LEFT signs.

Additional advance warning may be necessary.

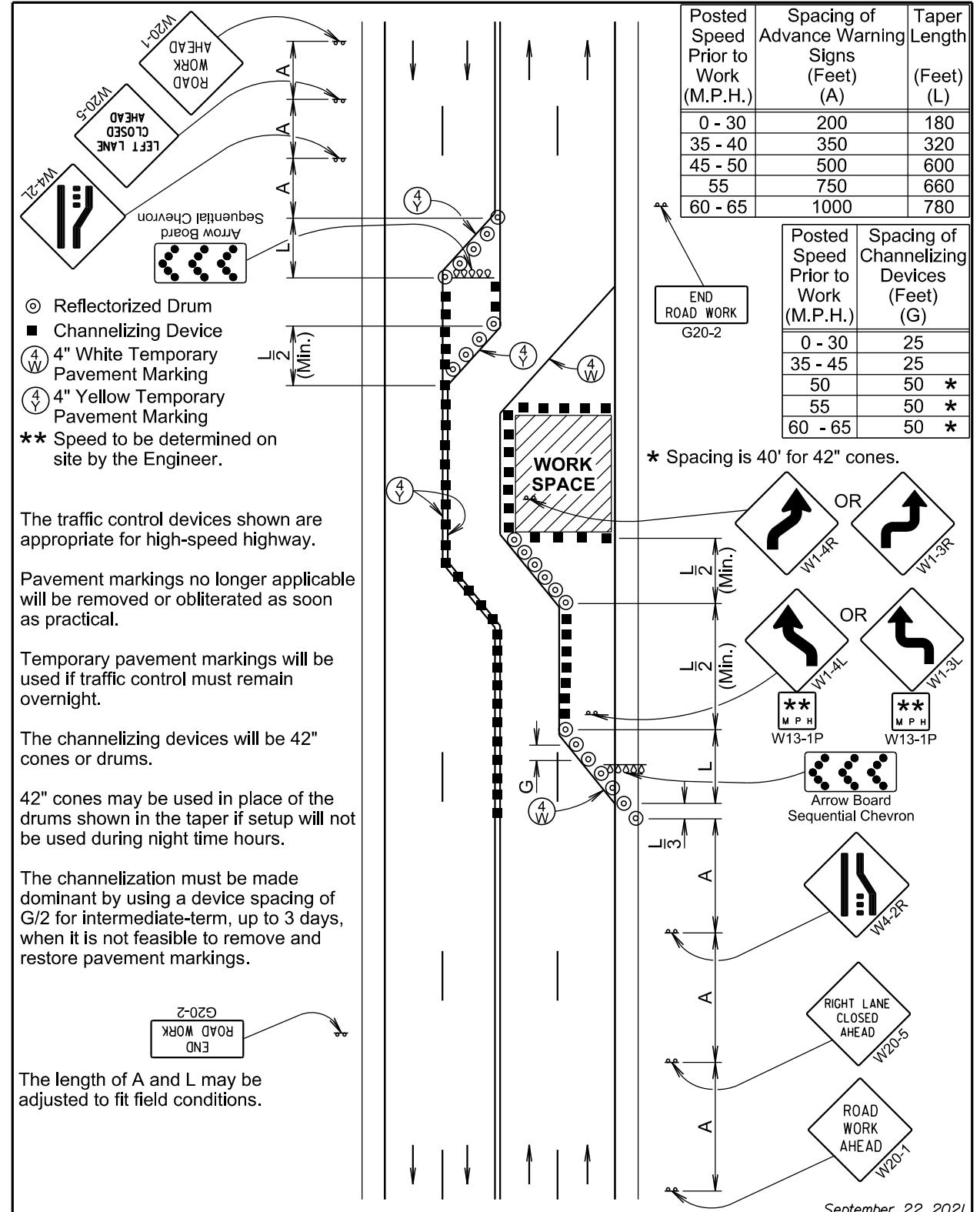
For nighttime closures, Type A flashing warning signs and closing sidewalks. Type C steady-burn lights may be used on channelizing devices separating the temporary pedestrian diversion from vehicular traffic.

Street lighting should be considered.

Longitudinal Pedestrian Barricade and



PEDESTRIAN DETOUR PEDESTRIAN DIVERSION January 22, 2021



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *

* Spacing is 40' for 42" cones.

ReflectORIZED Drum
 Channelizing Device
 4" White Temporary Pavement Marking
 4" Yellow Temporary Pavement Marking
 ** Speed to be determined on site by the Engineer.

The traffic control devices shown are appropriate for high-speed highway.

Pavement markings no longer applicable will be removed or obliterated as soon as practical.

Temporary pavement markings will be used if traffic control must remain overnight.

The channelizing devices will 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.

The channelization must be made dominant by using a device spacing of G/2 for intermediate-term, up to 3 days, when it is not feasible to remove and restore pavement markings.

The length of A and L may be adjusted to fit field conditions.

HALF ROAD CLOSURE ON MULTILANE HIGHWAY September 22, 2021

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

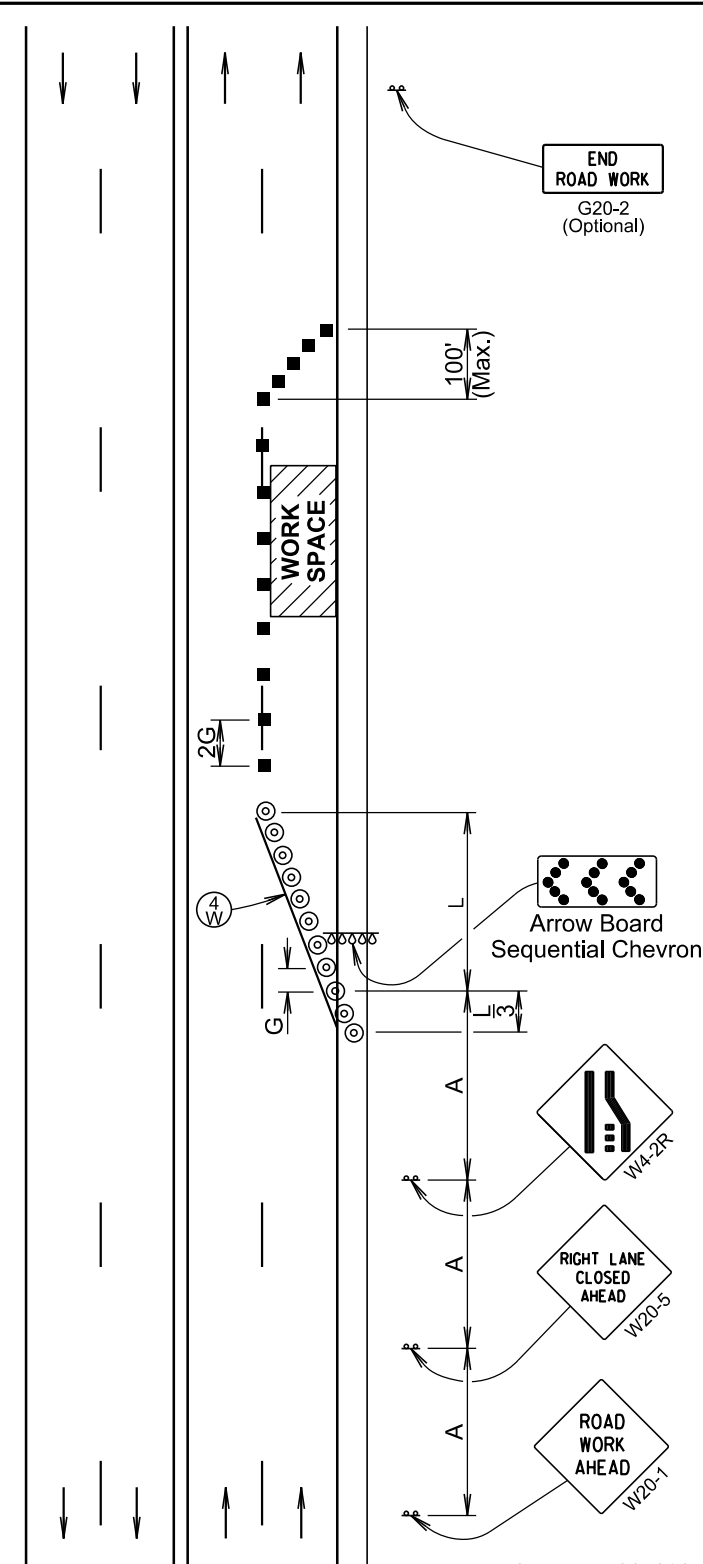
- ⊙ Reflectorized Drum
- Channelizing Device
- ④ 4" White Temporary Pavement Marking

The channelizing devices will be 42" cones or drums.

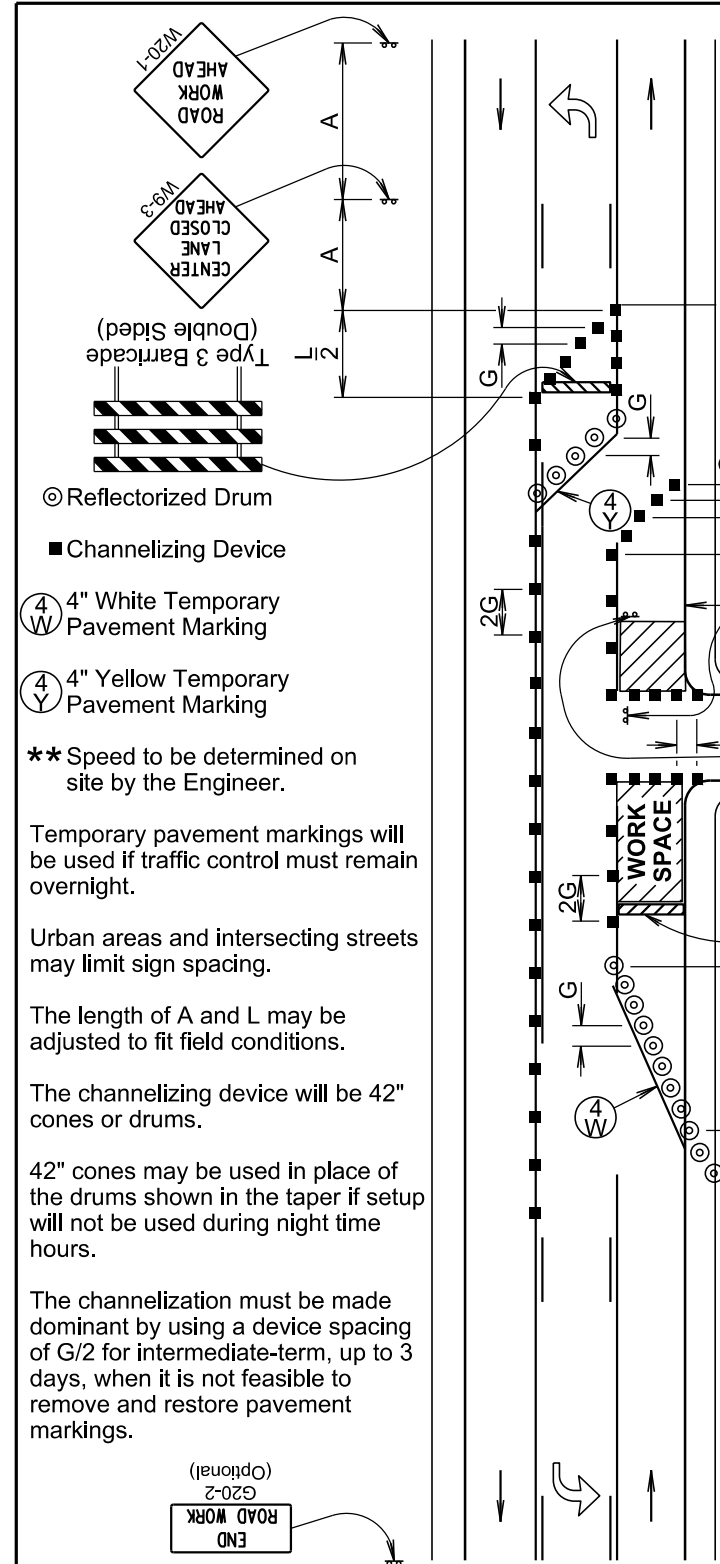
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

Temporary pavement markings will be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.



September 22, 2021



January 22, 2021

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

- ⊙ Reflectorized Drum
- Channelizing Device
- ④ 4" White Temporary Pavement Marking
- ④ 4" Yellow Temporary Pavement Marking

** Speed to be determined on site by the Engineer.

Temporary pavement markings will be used if traffic control must remain overnight.

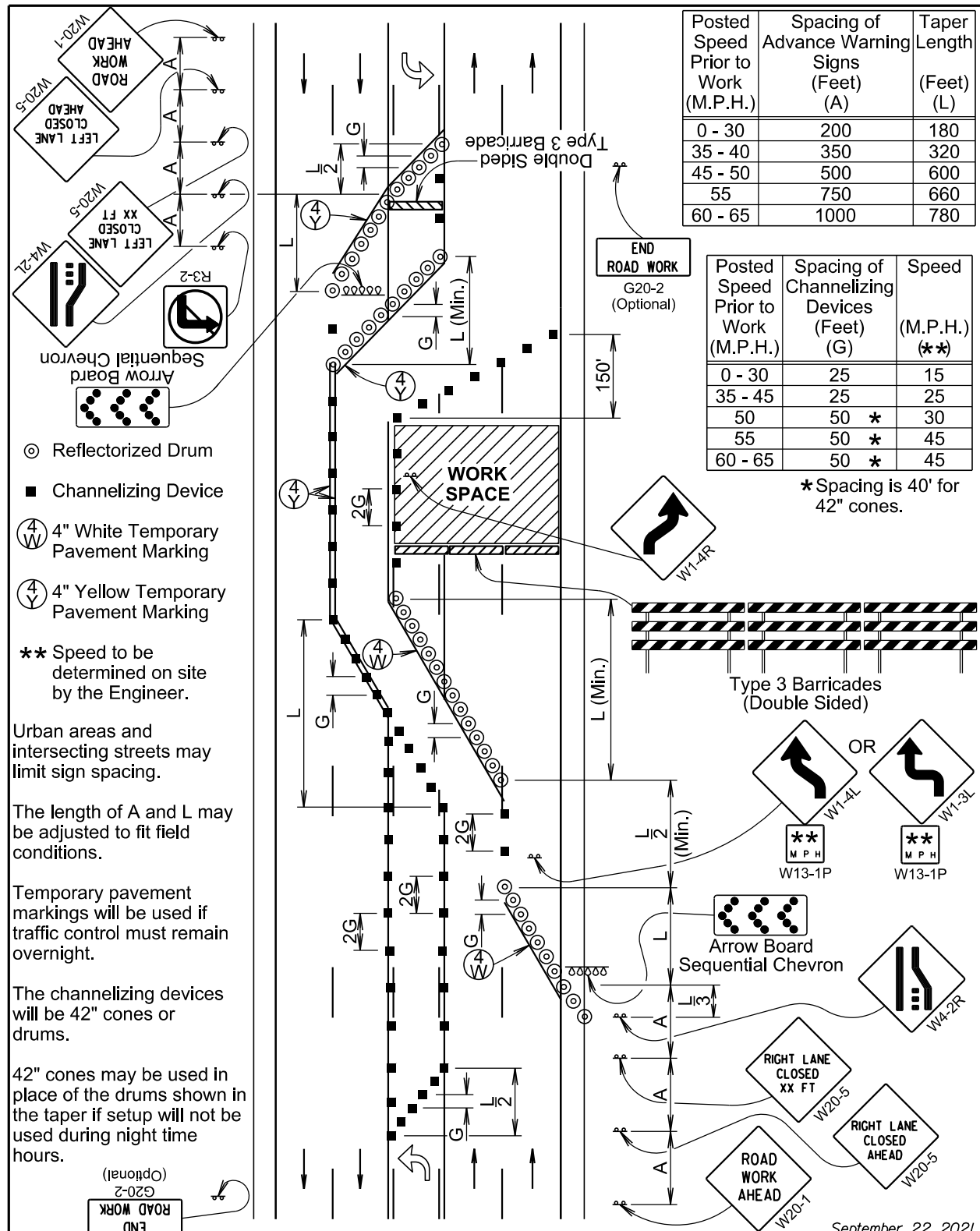
Urban areas and intersecting streets may limit sign spacing.

The length of A and L may be adjusted to fit field conditions.

The channelizing device will 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.

The channelization must be made dominant by using a device spacing of G/2 for intermediate-term, up to 3 days, when it is not feasible to remove and restore pavement markings.



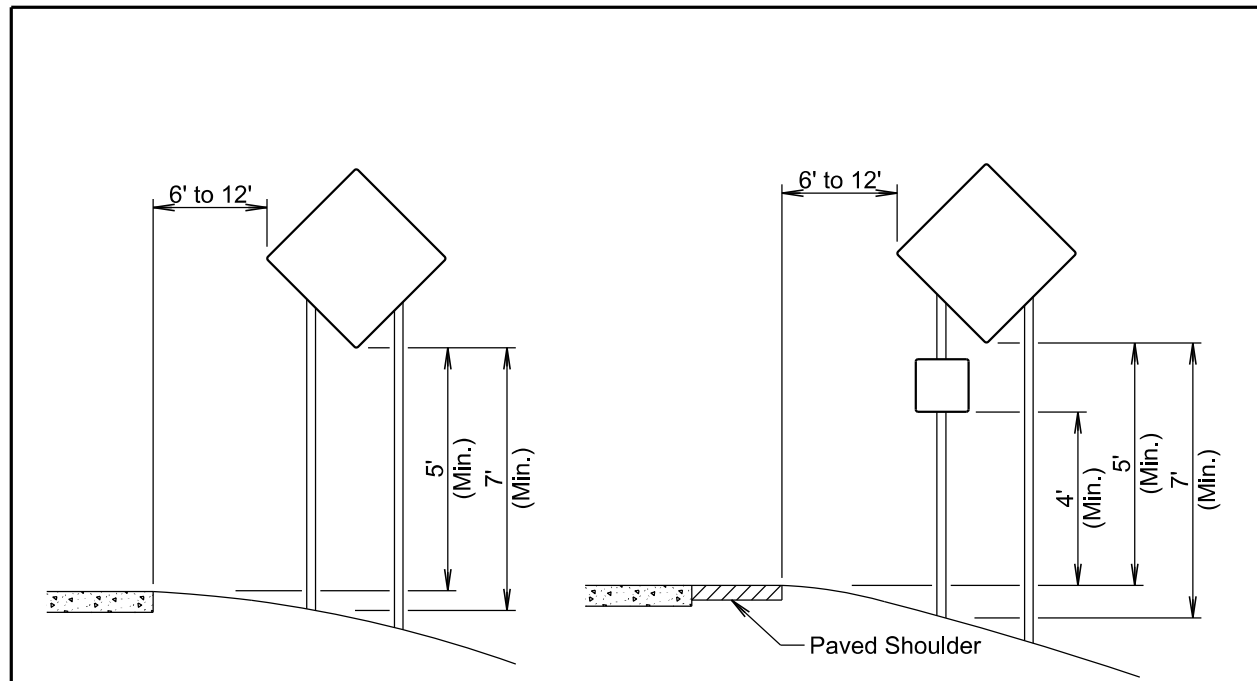
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Speed (M.P.H.) (**)
0 - 30	25	15
35 - 45	25	25
50	50 *	30
55	50 *	45
60 - 65	50 *	45

* Spacing is 40' for 42" cones.

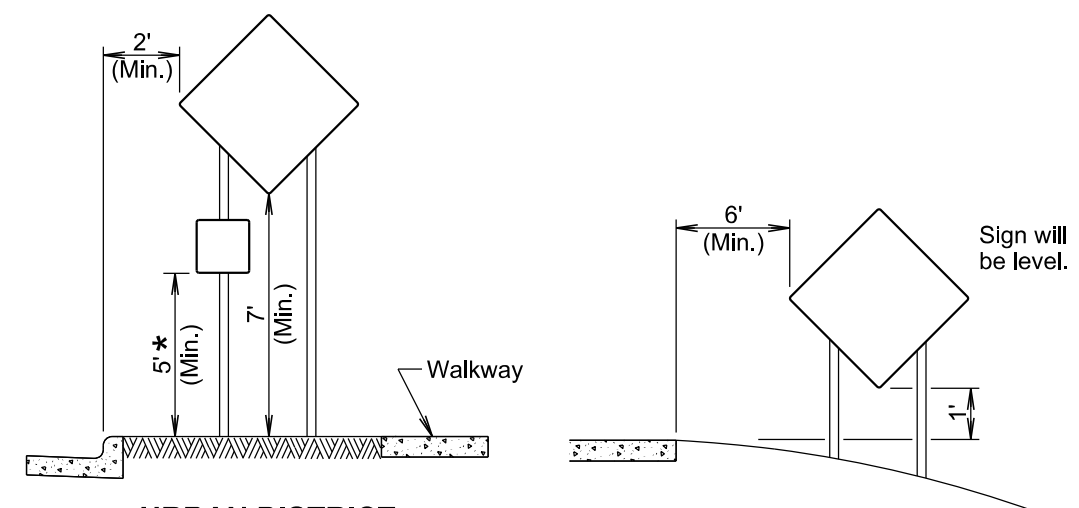
- ⊙ Reflectorized Drum
 - Channelizing Device
 - Ⓞ 4" White Temporary Pavement Marking
 - Ⓞ 4" Yellow Temporary Pavement Marking
 - ** Speed to be determined on site by the Engineer.
- Urban areas and intersecting streets may limit sign spacing.
- The length of A and L may be adjusted to fit field conditions.
- Temporary pavement markings will be used if traffic control must remain overnight.
- The channelizing devices will 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.

September 22, 2021



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



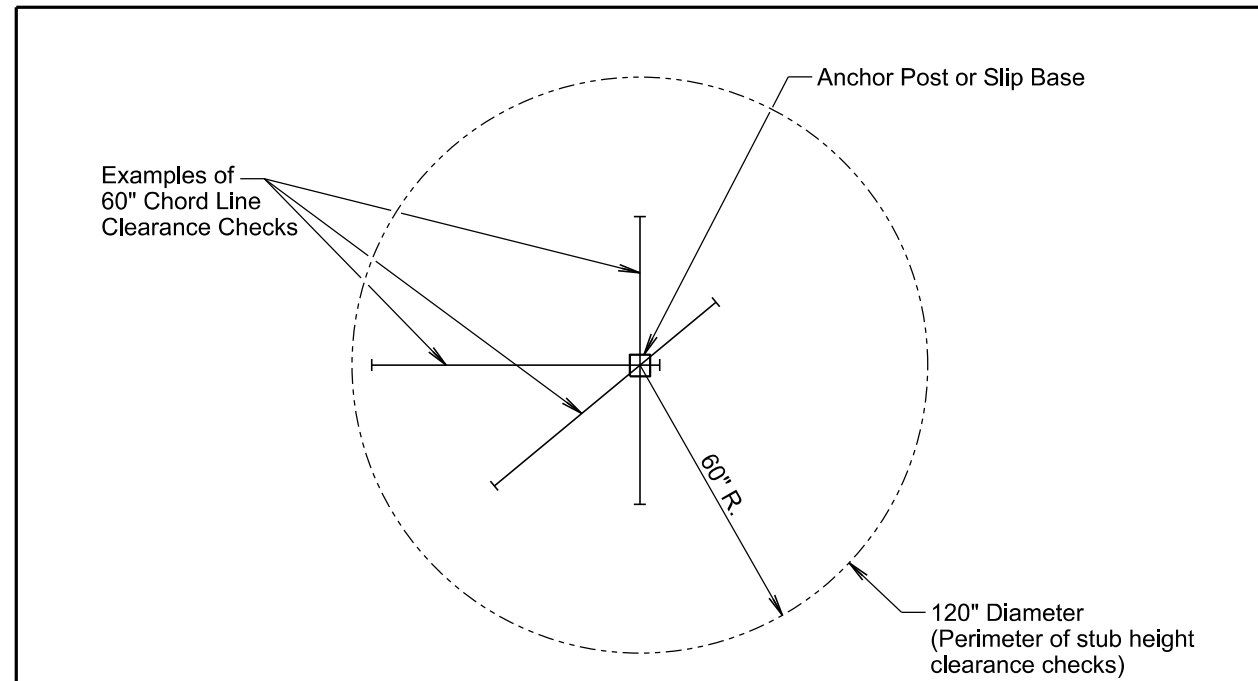
URBAN DISTRICT

RURAL DISTRICT 3 DAY MAXIMUM
(Not applicable to regulatory signs)

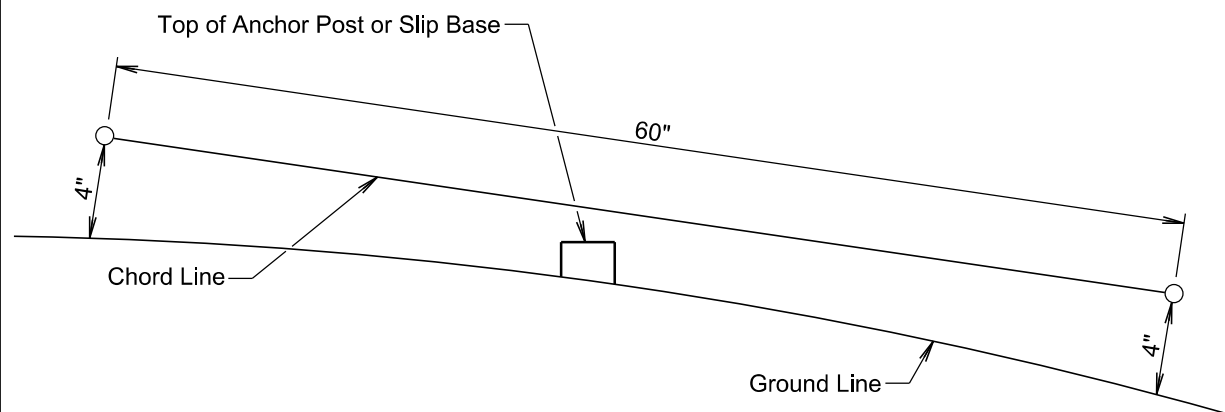
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	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 WILL 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 will 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.

January 22, 2021

Published Date: 2025	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1