

**ITEM 614. MAINTAINING TRAFFIC, AS PER PLAN**  
**TEMPORARY TRAFFIC CONTROL**  
All temporary traffic control (TTC) devices shall be furnished, erected, maintained and removed by the contractor in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways (current edition). Copies are available from the Ohio Department of Transportation, Office of Contracts, 1980 West Broad Street, Columbus, Ohio 43223. Note: all devices shall comply, for condition and location, with the current edition of the NCHRP 350 and Mash Crash Testing Guidelines.

Construction operations shall not begin until all traffic control is in place and approved by the Department of Public Service Inspector. If the contractor does not comply with the standards, including the installation of temporary pavement markings and the removal of conflicting traffic controls, their permit shall be revoked and all work shall be terminated. Temporary pavement markings to include, but not limited to, channelizing lines, edge lines, and centerlines shall be installed and maintained on all construction operations lasting a minimum of 14 calendar days or as directed by the temporary traffic control coordinator or the project engineer.

THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE Temporary Traffic Control Coordinator at 614-645-0355 or 614-645-5845, written notification to paving the way at pavingtheway@morpc.org or verbal to (614)233-4200 , Project Engineer, and the Senior Service Planner of COTA at 614-308-4373 or fax 614-275-5933, informing them of all upcoming maintenance of traffic changes on a weekly basis. Notification shall include, but not be limited to, what, where, when, and how pedestrian and vehicular traffic will be affected, and the temporary traffic control procedures the contractor is planning to use. The type of traffic change shall determine the length of advance notification required:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
Detours/Road closures	30-day notification prior to closure.
Lane closures lasting 2 weeks or more	2-weeks
Lane closures of less than 2 weeks	3-days
Lane closures of 2 days or less	1-day

The COTA Senior Service Planner shall be contacted 30 days prior to any planned closure on assigned COTA routes. Any other unforeseen impacts to traffic shall be immediately reported as they occur.

The contractor shall be responsible for the protection and safe movement of pedestrians through, around, or detoured away from the construction site. Traffic control for pedestrian movement shall be as per City of Columbus Construction and Material Specifications, City of Columbus Standard Construction Drawings, and Figures 6H-28 (TA-28) and 6H-29 (TA-29) of Part VI of the Ohio Manual of Uniform Traffic Control Devices. When not shown on a signed plan, all sidewalk diversions and temporary mid-block crossings shall be pre-approved by the project engineer or the temporary traffic control coordinator. access for pedestrian and vehicular traffic to all adjoining properties shall be maintained at all times.

**MAINTAINING TRAFFIC DURING HOLIDAYS AND SPECIAL EVENTS**  
No work shall be performed and all existing lanes shall be open to traffic during designated holidays or special events including the Ohio State football home games. The period of time that the lanes are to be open depends on the day of the week on which the holiday or event falls. contact the City of Columbus Temporary Traffic Control Coordinator, 614-645-5845 or cell, 614-332-7472 for event dates, locations, and schedule. Holidays will consist of Christmas, New Years, Fourth of July-Red, White and Boom fireworks night (6:00am-12midnight), Memorial Day, Labor Day, and Thanksgiving. Red, White and Boom, fireworks celebration and a minimum of one day prior to fireworks night shall require all temporary traffic control devices to be removed from the project area and place either in a pre-determined location approved by the temporary traffic control coordinator or completely removed from the site.

The contractor shall contact the City of Columbus Temporary Traffic Control Coordinator for any additional mot requirements for special events, including OSU footbal home games.

The contractor shall maintain all permanent traffic controls not in conflict with the temporary traffic controls throughout this project. Permanent traffic controls may be temporarily relocated or covered, as approved by the engineer. The contractor shall assume all liability for missing, damaged, or improperly placed signs.

Any work done by the department of public service, including installation, relocation, removal and/or replacement of temporary traffic control devices as a result of work done by the contractor or as a result of negligence of the contractor, shall be at the contractors' expense.

The roadway shall not be opened to non-construction traffic until the critical permanent traffic controls are in place, or until temporary traffic controls approved by the engineer, are installed. The critical permanent traffic controls are stop, yield, one - way, do not enter, restricted turn signs and all street name signs. other critical signs may be noted on the plans as well. the contractor assumes all liability for the premature removal of temporary traffic controls.

In addition to the requirements herein, and the latest edition of the Ohio Manual of Uniform Traffic Control Devices, a uniformed Law Enforcement Officer (LEO) shall be provided for controlling traffic under the following conditions:

- Work within a signalized intersection, defined as the area bounded by the rear x-walk lines
- When flagging within the intersection of two arterial roadways
- When specified in the maintenance of traffic plan or as when directed by the project engineer
- When shifting traffic left of center, through a signalized intersection, without shifting signal heads

A flagger shall be utilized to assist in controlling traffic while equipment is entering or exiting an intersection or work zone. The contractor may utilize his own flagger or LEO under pay Item 614 Maintaining Traffic, Lump Sum.

Flaggers and LEO's shall be equipped according to the standards for flagging traffic contained in the OMUTCD. Flagging operations performed by LEO's or designated flaggers shall only be permitted as long as all traffic control is in place according to figure 6H-10 (TA-10) in the Ohio Manual. Patrol cars shall not be used in flagging operations.

If the contractor wishes to utilize LEO's with or without patrol cars for traffic control other than for that required in the plans, they may do so at their own expense. The contractor shall make arrangement through the Columbus Police Division at (614) 645-4795.

LEO's shall be considered to be employed by the contractor and the contractor shall be responsible for their actions. Although employed by the contractor, the City Representative shall have control over their placement. LEO's shall not have the authority to change, edit or modify any maintenance of traffic scheme without the permission of the Temporary Traffic Control Coordinator or Project Engineer unless an emergency develops.

If a safety hazard develops, a LEO may be assigned by the Columbus Public Safety and/or the Public Service Director at the contractor's expense.

Portable Changeable Message Signs (PCMS) shall be installed a minimum of 7 days prior to closure of a roadway. The message shall advise the motorist of the dates, times,

and duration of the closure. The PCMS shall remain in place for 7 days after the start of the closure.

When not included in a signed plan, a TTC Plan (TTCP) including pedestrian control shall be submitted to the TTC Coordinator at 614-645-0355 or 614-645-5845 at the pre-construction meeting or a minimum of ten (10) working days prior to beginning work for approval. Copies of the approved TTCP shall be given to the project engineer and kept on site along with the street closure/occupancy permit.

Type C steady-burn or Type D 360-degree steady-burn warning lights shall be required on all barricades, drums, and similar traffic control devices in use at night. Only 42" reflectorized channelizing devices (cones) shall be permitted for nighttime work with the approval of the TTC Coordinator at 614-645-0355 or 614-645-5845 per O.D.O.T. standards.

A flashing arrow panel (48" x 96"-Type C) shall be used in lane closures as per the Ohio Manual.

All trenches within the road right of way shall be backfilled or securely plated per (City of Columbus general policy on steel plate usage dated 11/15/2006 and STD. DWG. 1441, latest edition) during non-working hours.

All existing traffic lanes shall be fully open to traffic at all times on: \_\_\_\_\_

All traffic lanes shall be fully open to traffic from 6:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., or 6:00 to 9:00 a.m. and 3:00 to 6:00 p.m. in the Columbus Business District (CBD) parking area, Monday through Friday on \_\_\_\_\_ lane(s) may be closed to traffic during working hours.

One-way \_\_\_\_\_ lane(s) of traffic shall be maintained at all times on \_\_\_\_\_

Two-way, two-lane (one-lane each direction) traffic shall be maintained at all times by use of existing, proposed, or temporary pavement per City of Columbus Maintenance of Traffic, Standard Construction Drawing 1510 and figure 6H-32 typical application 32 (TA-32) of the Ohio Manual of Uniform Traffic Control Devices.

Two-way, one-lane traffic may be maintained during construction operations on \_\_\_\_\_, per the City of Columbus Maintenance of Traffic, Standard Construction Drawing 1550 and figure 6H-10 (TA-10) of the Ohio Manual of Uniform Traffic Control Devices.

\_\_\_\_\_ may be closed between \_\_\_\_\_ and \_\_\_\_\_ for a maximum of \_\_\_\_\_ hour(s)/day(s) between the hours of \_\_\_\_\_ and \_\_\_\_\_ per the City of Columbus Maintenance of Traffic, Standard Construction Drawing 1540 and figure 6H-20 (TA-20) of the Ohio Manual and/or approved by the Department of Public Service. The contractor shall be responsible for all costs in providing detour including the removal and reinstallation of any conflicting traffic control and/or any necessary traffic signal work.

A temporary diversion shall be provided and maintained in good condition on \_\_\_\_\_ during the period of work. All such diversions shall be in accordance with the ohio manual of uniform traffic control devices.

The Department of Public Service will remove or cover all parking meter heads put out of service by this project. There is a \$60.00 dollar charge for the removal and reinstallation of each meter. In addition, a daily meter fee will be charged for all enforcement hours for each meter taken out of service, see the parking meter out of service fees note. These charges will be collected from the contractor in advance with the issuance of the street occupancy/excavation permit from the Department of Public Service's Permit Office. (614-645-7497) The Manager of Parking Services Support (614-645-7890) shall be notified a minimum of forty-eight (48) hours (excluding Sat, Sun, & holidays) prior to beginning work. Call 614-645-8376 if unable to make contact through the prior phone number.

Temporary "Emergency No Parking" signs shall be installed at 50' c/c minimum by use of any of the following items: existing sign posts, existing utility poles, drums and/or 42" cones and removed by the contractor in areas with no parking meters. The signs shall have the installation date, working dates, and hours of restriction shown on each sign. These signs may be obtained from the Department of Public Service's Permit Office. The Police Division requires the "Emergency No Parking" signs be posted a minimum of seventy-two (72) hours prior to any vehicles being towed. Within twenty-four (24) hours of posting, the contractor shall supply the Department of Public Service with a written record of posted locations (fax: 614-645-3298).

The contractor shall contact Uho Utility Protection Service (OUPS) to locate and mark all underground traffic control cables prior to the beginning of any work within 450 feet of any signalized intersection(s) or within any posted area where the department has underground cable. The signal operation engineer (614-645-6418) shall be notified six (6) weeks in advance for signal revisions or pole relocations.

No excavation shall be made within five (5) feet of any foundation that supports signal poles, traffic signal displays or signs by mast arm or signal span. Excavation within eight (8) feet, but more than five (5) feet shall require additional support (down guy, head guy, base guy, etc.). The contractor shall contact signal operation personnel at 614-645-0423 (cell 614-419-4501) at least forty-eight (48) hours (excluding Sat. & Sun.) Prior to the beginning of such excavation so that the city can approve the stabilization setup by the contractor. If unable to make contact through above numbers, call 614-645-7393. stabilization will be done by the contractor at the owners'/contracting agency's expense.

Signal conduit clearance 3' horizontal and 1' vertical from adjacent utilities shall be maintained at all times.

When any traffic control device, conduit, or cable is damaged, the contractor shall notify signal operation personnel at 614-645-0423 (cell 614-419-4501) between 7:00 am and 4:00 pm, Monday through Friday. If unable to make contact through the other numbers, call 614-645-7393.

The roadway or any section of roadway shall not be opened to non-construction traffic until all temporary, non-reflective, blackout tape has been completely removed from non-conflicting permanent pavement markings for that area of the roadway, or unless otherwise directed in writing by the engineer. This is supplemental to City of Columbus, CMS-614.11-G, and shall be paid for through the 614-Lump Sum.

Whenever yellow centerlines or turn-lane lines are paved over, removed, or otherwise unserviceable, the contractor shall install class ii temporary striping (minimum 4' long segments). Temporary paint shall be used on all milled surfaces. temporary tape shall be used on all final courses of asphalt. Paint or tape may be used on intermediate courses of asphalt. If approved by the engineer, drums with steady burning Type C or Type D 360 degree warning lights and "keep right" signs may be substituted for centerline markings.

Class II temporary striping (minimum 4' long segments) shall be as per Item 614 - Work Zone Pavement Marking and shall be placed within one (1) foot longitudinal tolerance of the permanent stripe(s). All temporary striping not to within one (1) foot tolerance shall be removed and replaced in the proper location by the contractor. Class II temporary striping shall be of the appropriate color and spaced a maximum of forty (40) feet center to center.

Payment

All costs that consist of maintaining and protecting vehicular and pedestrian traffic according to the latest edition of the City of Columbus Construction and Material Specifications, the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways (OMUTCD), and per the requirements designated in the plan including all Law Enforcement Officer (LEO) and Flagger hours shall be included in the Lump Sum Item 614.

**ITEM 614 - LAW ENFORCEMENT OFFICER (LEO) WITH PATROL CAR, AS PER PLAN**  
In addition to LEO and flagger hours included in Item 614 Maintaining Traffic, Lump Sum; the following quantities have been carried to the General Summary to be used as directed by the engineer or an acceptable representative for the City of Columbus. The official patrol car with top mounted emergency flashing lights shall be a public safety vehicle as required by the Ohio Revised Code. The contractor shall be paid for this bid item only if directed by the engineer.

Item 614, Law Enforcement Officer with Patrol Car, As Per Plan- \_\_\_\_\_ Hours

**ITEM 614 - LAW ENFORCEMENT OFFICER (LEO) WITHOUT PATROL CAR, AS PER PLAN**  
In addition to LEO and flagger hours included in Item 614 Maintaining Traffic, Lump Sum; the following quantities have been carried to the General Summary to be used as directed by the engineer or an acceptable representative for the City of Columbus. The contractor shall be paid for this bid item only if directed by the engineer.

Item 614, Law Enforcement Officer without Patrol Car, As Per Plan - \_\_\_\_\_ Hours

**EXISTING PERMANENT TRAFFIC CONTROL**  
Any work done by the Department of Public Service, including installation, relocation, removal and/or replacement of permanent traffic control devices as a result of work done by the contractor or as a result of negligence of the contractor, shall be at the contractors' expense.

The contractor shall be responsible for reinstallation and/or replacement of all permanent traffic control devices damaged or removed during construction. Permanent traffic control no longer in conflict with temporary traffic control shall be replaced immediately.

The contractor shall replace all pavement markings, including raised pavement markers (rpm) shown in conflict, removed due to construction or maintenance of traffic set up, destroyed, or rendered unserviceable by the Project Engineer or the Public Service Pavement Marking Manager. All pavement marking materials shall be replaced in-like kind if not shown in the plan or permit including raised pavement markers. all pavement markings shall be replaced in full. No partial length or sections of pavement markings shall be replaced without removing the entire marking by use of the water blast method. Removal by abrasive wheel grinding shall only be approved by the Public Service Pavement Marking Manager.

All overhead cable, and down guys or back guys shall not block any portion of a traffic signal, traffic control sign, or other traffic control device such that visibility or operation of the traffic control device is impaired.

All permanent pavement markings and traffic control signs as shown on this plan shall be installed by the contractor at the projects expense. The project engineer shall be notified to direct appropriate personnel a minimum of forty-eight (48) hours (excluding Sat. & Sun.) prior to the installation of permanent markings to inspect and approve the pavement marking layout prior to placing the permanent markings.

Permanent striping or Class I temporary striping shall be installed no later than fourteen (14) calendar days after the final paving course is completed. the paving contractor shall be responsible to notify the striping contractor to insure the permanent striping is installed within the fourteen (14) calendar day limit.

If the Department of Public Service is to install permanent striping, the project engineer shall be notified to direct appropriate personnel a minimum of ten (10) working days prior to the application of the final course of pavement.

At any location where the contractor damages detectors and/or their lead-in cables the contractor shall replace them. At any location where detection is changed from mag probe units to loops, the contractor shall replace the probe lead-in with loop lead-in cable. All repairs to detection shall be completed within 21 days from damage to detection on a per intersection basis. If the 21day repair requirement cannot be satisfied at any location where the contractor damages detectors and/or their lead-in cables, the contractor, at the discretion of signal operations personnel, may be required to install a Versicam Flex Camera System, a Wavetronix Radar System, or temporary loop detection. Any contractor failing to comply with these guidelines shall be subject to penalty to the sum of \$100.00 per day for each day beyond the 21 day repair period on a per intersection basis, until conditions are met to the satisfaction of the signal operations personnel. This penalty deduction shall be specific for each signalized intersection effected by this project and separate from any liquidated damages for the project as a whole. The work to install the detection shall conform to the City of Columbus Standard Drawing 4300 and the City of Columbus Construction and Material Specifications, latest edition, with the following provisions:

The contractor shall provide the Department of Public Service's Inspector, prior to the commencement of work, the IMSA (International Municipal Signal Association) certification papers for all signal technicians working on this project.

Locations of the replacement detection shall be field marked or dimensioned drawings shall be submitted to the construction section by department of public service personnel. Location of final pavement markings or the markings themselves shall be clearly indicated on the asphalt prior to detector locations being marked. The contractor shall layout the loops on the pavement if drawings are submitted. If drawings have not been provided, contact signal operations personnel at 614-645-0423 (cell 614-419-4501) at least two working days prior to needing the location marked. If unable to make contact through the above numbers, call 614-645-7393.

The saw slot depth for loop wire installation shall be four (4) inches with six (6) inches at the conduit entrance. If adverse pavement conditions warrant, depth may be increased to six (6) inches throughout and shall be determined by the department of public service inspector.

Each loop shall have its own conduit from edge of pavement to pull box unless specified otherwise by the department of public service inspector.

The pull box assembly shall be rated as medium to heavy duty, to be installed in concrete walkways, and shall have all stainless steel hardware. The pull box cover shall have the word "Traffic" on it. The cover shall be bolted to the box and shall be polymer concrete. The cover plus housing as a unit shall be rated to withstand a

Minimum 20,000 lb. static load over a 10"x10" area as per ASTM C-857. The box depth shall be 15 inches minimum to 30 inches maximum. If the project does not specify 725.06 polymer concrete pull boxes, the supplied assemblies shall be as follows: CDR Systems Model SA32-1015-18, or Synertech Model S1118B18FA. Six (6) inches of #57 aggregate shall be placed at the bottom of the pull box. No conduit shall protrude more than three (3) inches inside the pull box. Conduit ells or extensions may be used to align the conduit with the housing. The cost for extensions or ells if needed shall be incidental to the per unit price.

When a pull box is not used, the soldered splice shall be made in an anchor base strain pole or a conduit riser specified by the department of public service's representative, except where a controller cabinet is mounted on that pole in which case the loop wire shall be routed directly into the cabinet.

The contractor shall not make any wiring connections or adjustments inside the control cabinet. When such connections are required, the contractor shall notify the Traffic Operations Shop 614-645-7393, Mon.- Fri., 8 am to 4 pm, to schedule city forces for making the actual connections. The contractor shall be available at the agreed time. The contractor will be billed for any time that city forces are required to wait for the contractors' work to be completed.

Conduit placed in "right of way" areas bearing no traffic for detector lead in shall be Item 725.051, City of Columbus Construction and Material Specifications, latest edition. conduit placed under a roadway or in areas that may bear traffic shall be concrete encased (sizes and type to be determined by the department of public service's representative). All conduits shall be placed at a minimum depth of 24".

Loop wire shall be identified with a plastic tag (WBLT, EBRT, etc.) at the splice point or at entrance to the cabinet if lead-in cable is not used.

The items and estimated quantities for the replacement of the Department of Public Service's detection items shall be included in these plans when directed by the plan reviewer. These estimates are for the purpose of bidding the project. The following is a list of the items and quantities projected for use in detector replacement for this project:

Item	Quantity	Unit	Item Description
202	XX	SF	Walk Removed
608	XX	SF	4" Concrete Walk
632	XX	LF	Conduit Riser, 1 or 2 Inch Diameter
625	XX	LF	Conduit 1, 1 1/2, or 2 Inch, (As Per Plan)
625	XX	LF	Trench
625	XX	Each	Pull Box, 12"x18", (As Per Plan)
632	XX	Each	Detector Loop
632	XX	LF	Loop Detector Lead-In Cable
632	XX	LF	Lash / Unlash Cable

The contractor shall notify Signal Operation Personnel at 614-645-0423 (cell 614-419-4501) after all loops have been installed at each intersection. If unable to make contact through the above number, call 614-645-7393. The Department of Public Service shall inspect all sensors and test as necessary. The contractor shall replace all loops not meeting specifications.

DESIGNER NOTE:  
MAINTENANCE OF TRAFFIC NOTES ILLUSTRATED ON THIS SHEET WERE CURRENT AT THE TIME OF PLAN DEVELOPMENT. THE DESIGN CONSULTANT IS REQUIRED TO OBTAIN THE MOST RECENT VERSION OF THESE NOTES FROM THE CITY OF COLUMBUS FOR USE ON INDIVIDUAL PROJECTS. NOTES MAY BE OBTAINED BY DOWNLOADING FROM [HTTPS://WWW.COLUMBUS.GOV/PUBLICSERVICE/DESIGN-AND-CONSTRUCTION/DOCUMENT-LIBRARY/](https://www.columbus.gov/publicservice/design-and-construction/document-library/). ALL NOTES SHALL BE REVIEWED ON A PROJECT BY PROJECT BASIS AND ONLY NOTES APPLICABLE TO THE GIVEN PROJECT SHALL BE INCLUDED.

CALCULATED  
ABC

CHECKED  
ABC

MAINTENANCE OF TRAFFIC GENERAL NOTES

IMPROVEMENTS OF ...  
STREET A FROM STREET B TO STREET C

XXXX-E

X

XX



ITEM 614 SPECIAL – WORK ZONE TRAFFIC SIGNAL

Under this item of work, the Contractor shall furnish, install, relocate, modify and subsequently remove: temporary signal supports, down guys, ground rods, signal cable, power cable, service cable, conduit risers, messenger wire, signal heads, covering of vehicular signal heads and a temporary controller as needed to render a fully functional temporary signalized intersection.

As detailed within, temporary traffic signals or traffic signal modifications to accommodate individual maintenance of traffic phases shall be installed at the intersections listed below.

- list intersection #1
- list intersection #2

All temporary traffic signal equipment shall comply with the specifications outlined for the permanent signal installation including grounding and bonding and "Traffic Signal Plan And Specification Compliance". All methods of traffic control shall be approved by the Engineer and shall be in place and operating prior to the deactivation and removal and/or relocation of any existing signal equipment. Reference is made to the requirements of item 614. All modifications to signalization shall be done under the protection of a Law Enforcement Officer. Reference is made to item 614 Maintaining Traffic, As Per Plan.

Any vehicular traffic signal head that will be out of operation shall be covered in accordance with 632.25. Any existing vehicular or pedestrian head that is not functional shall be removed immediately or covered. Any pedestrian buttons not in use shall also be covered.

Each temporary signal pole location shall be staked and the location approved by the City of Columbus. The Contractor may reuse existing span and pigtails or install new as required. The Contractor shall transfer existing signal items and extend existing cable as needed. Weatherproof cable splicing is permitted. Down guys shall be specified for all temporary wood poles. One down guy per pole shall be used for a layout that contains a maximum of 2 vehicular signal heads per span. Two down guys per pole shall be specified for 3 or more vehicular signal heads per span. Down guys shall be positioned to counteract the moment created by the span configuration. Any change to shall be approved by the City documented in a plan sheet and a diagram to be submitted with the plan.

Install the sign no closer than the direction of travel shall meet the sign.

USE THE CURRENT VERSION OF THE TEMPORARY TRAFFIC SIGNAL NOTES

Attach the sign or head in each of the vehicular head of the sign.

USE THE CURRENT VERSION OF THE  
TEMPORARY TRAFFIC SIGNAL NOTES  
AVAILABLE ON THE CITY OF  
COLUMBUS WEBSITE.

The Contractor shall maintain access to the Columbus Website. The Contractor shall provide for each phase of work the location of construction including unloading and minimum of 2

Vehicular detouring is required during all phases of construction and operation.

Locate the non-fused power supply voltage (120 volt) in a separate conduit. In addition, locate the loop detector, push button, and video detection cables in a separate conduit from all other cables.

This item of work shall include all labor, equipment and material necessary to provide power to the traffic signal controller from the proposed or existing power sources as determined by construction sequencing.

## Payment

This item of work shall include all labor, equipment and materials necessary to furnish, install, modify, remove, store, erect, relocate, adjust and repair temporary traffic signal items as described above.

All costs for the above work, except temporary video detection, shall be included in the price bid for item 614 work zone traffic signal, as per plan and shall be per each intersection.

10/23/15

### SEQUENCE OF CONSTRUCTION

Pre-Phase 1

Pre-Phase 1 shall construct the storm sewer by utilizing a detour of Street A. The Pre-Phase 1 detour shall be restricted to the times listed below.

## Phase 1

Phase 1 shall construct the full depth pavement and utilities on the west side of Street A. This work shall be completed with one lane maintained in each direction on the east side of Street A. Phase 1 shall not be constructed concurrent with Phase 2. The Traffic Signal at Street A and Street B shall be temporarily modified during this phase.

## Phase 2

Phase 2 shall construct the full depth pavement and utilities on the east side of Street A. This work shall be completed with one lane maintained in each direction on the west side of Street A. During this work, Street C shall be closed to all traffic north of Street E. The Traffic Signal at Street A and Street B shall be temporarily modified during this phase.

**DESIGNER NOTE:**

THE NEED FOR TEMPORARY SIGNALIZATION DETAILS SHALL BE AS IDENTIFIED IN THE CITY OF COLUMBUS TRAFFIC SIGNAL DESIGN MANUAL, [HTTPS://WWW.COLUMBUS.GOV/PUBLICSERVICE/DESIGN-AND-CONSTRUCTION/DOCUMENT-LIBRARY/TRAFFIC-SIGNAL-DESIGN-MANUAL/](https://www.columbus.gov/publicservice/design-and-construction/document-library/traffic-signal-design-manual/). IF TEMPORARY SIGNALIZATION IS INCLUDED, APPLICABLE NOTES SHALL BE INCLUDED IN THE PLANS. OBTAIN CURRENT TEMPORARY SIGNAL NOTES FROM THE SIGNAL PLAN REVIEWERS.

**DESIGNER NOTE:**

## MAINTENANCE OF TRAFFIC NOTES

MAINTENANCE OF TRAFFIC NOTES FURNISHED IN THESE SAMPLE PLANS ONLY ILLUSTRATE CITY OF COLUMBUS MAINTENANCE OF TRAFFIC NOTES. ADDITIONAL NOTES MAY BE REQUIRED TO ACCOMMODATE SPECIAL REQUIREMENTS OR MAINTENANCE OF TRAFFIC SPECIFICATIONS FROM OTHER JURISDICTIONS. WHEN A PROJECT IS LOCATED BOTH IN THE CITY OF COLUMBUS AND AN ADJACENT JURISDICTION, THE DESIGN CONSULTANT SHALL INCLUDE THE ADJACENT JURISDICTION SPECIFICATIONS AND CLEARLY IDENTIFY WHERE THESE SPECIFICATIONS APPLY AND ENSURE THERE ARE NO CONFLICTS IN DIRECTION.

## DROP-OFF POLICY

THE DESIGNER SHALL FOLLOW THE ODOT PAVEMENT DROP-OFF POLICY AND SHALL INCLUDE ODOT SCD MT-97.10 ON THE TITLE SHEET. ANYTIME THE ODOT POLICY IS NOT APPLICABLE (I.E. FOR ROADS LESS THAN 45 MPH), ENGINEERING JUDGEMENT SHOULD GOVERN AND THE CONSULTANT SHOULD COORDINATE WITH THE CITY OF COLUMBUS PROJECT MANAGER.

[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/ENGINEERING/ROADWAY/DESIGNSTANDARDS/TRAFFIC/SCD/DOCUMENTS/MT\\_10190\\_2017-07-21.PDF](http://www.dot.state.oh.us/divisions/engineering/roadway/designstandards/traffic/scd/documents/MT_10190_2017-07-21.pdf)

## MAINTENANCE OF PEDESTRIANS

PEDESTRIAN TRAFFIC SHALL BE ACCOMMODATED WITH ALL MAINTENANCE OF TRAFFIC PLANS CONSISTENT WITH THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CHAPTER 6D AND FIGURES TA-28 AND TA-29.  
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/ENGINEERING/ROADWAY/DESIGNSTANDARDS/TRAFFIC/OHIOMUTCD/PAGES/OMUTCD2012\\_CURRENT\\_DEFAULT.ASPX.](http://www.dot.state.oh.us/divisions/engineering/roadway/designstandards/traffic/ohiomutcd/pages/omutcd2012_current/default.aspx)

EXISTING PEDESTRIAN FACILITIES INCLUDING CROSSWALKS SHALL BE MAINTAINED WHEN PRACTICAL. IF A TEMPORARY CROSSWALK NEEDS TO BE PROVIDED TO ACCOMMODATE PEDESTRIANS IN A MAINTENANCE OF TRAFFIC SET UP, ADVANCED AUTHORIZATION IS REQUIRED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR.

Lane Closure Restriction		
Phase	Roadway	Allowable Working Hours
Pre-Phase 1	Street A	8:00 pm Fri. – 6:00 am Mon.
PHASE 1	Street A	Not Restricted
PHASE 2	Street A	Not Restricted

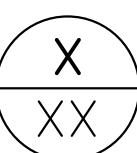
**DESIGNER NOTE:**

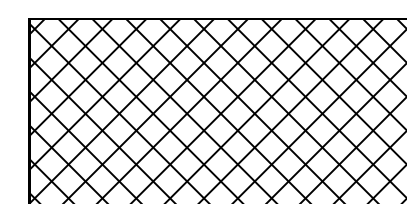
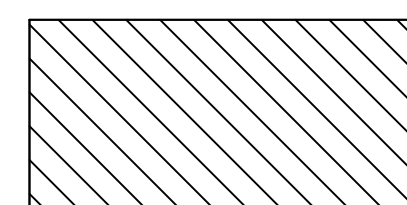
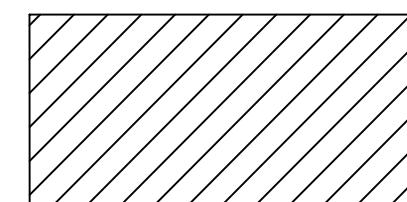
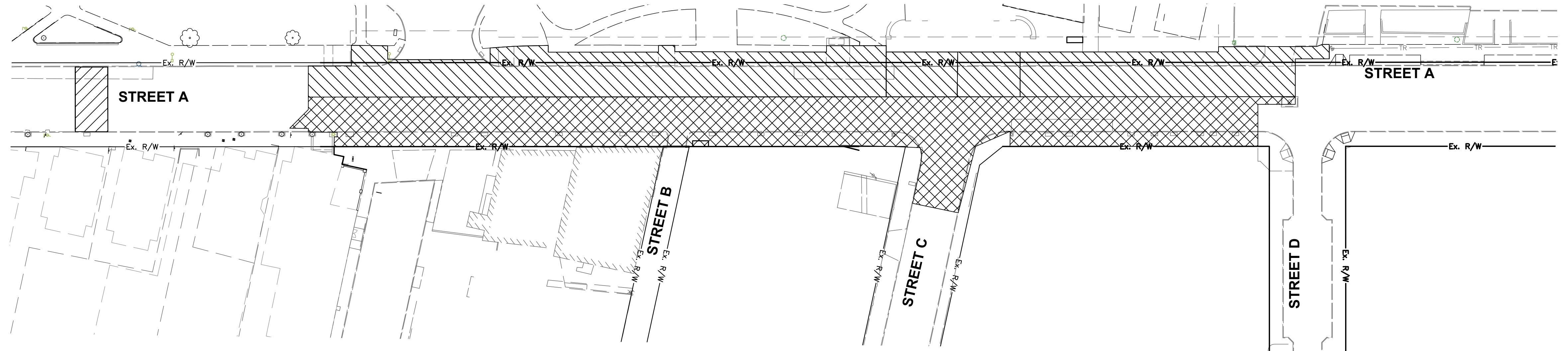
**AN HOUR RESTRICTION TABLE SHALL BE INCLUDED FOR EACH PROJECT. THIS TABLE IS INTENDED TO IDENTIFY THE ALLOWABLE WORKING HOURS FOR EACH PHASE AND SUB-PHASE OF A PROJECT.**

## MAINTENANCE OF TRAFFIC GENERAL NOTES

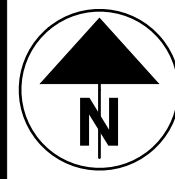
IMPROVEMENT IS OF ...  
STREET A FROM STREET B TO STREET C

**XXXX-1**







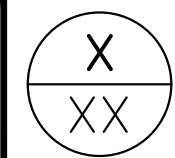


CALCULATED	ABC
CHECKED	ABC

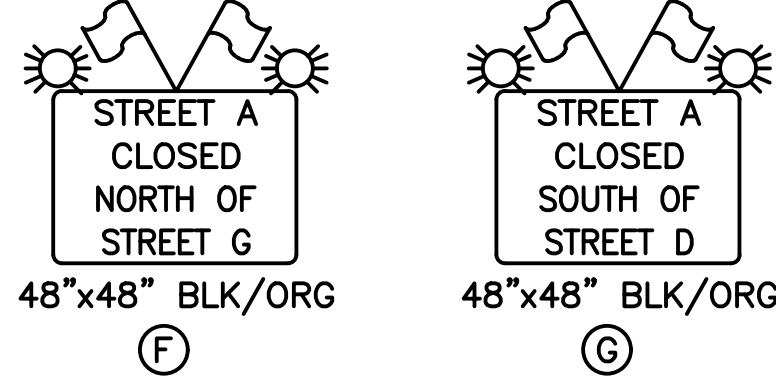
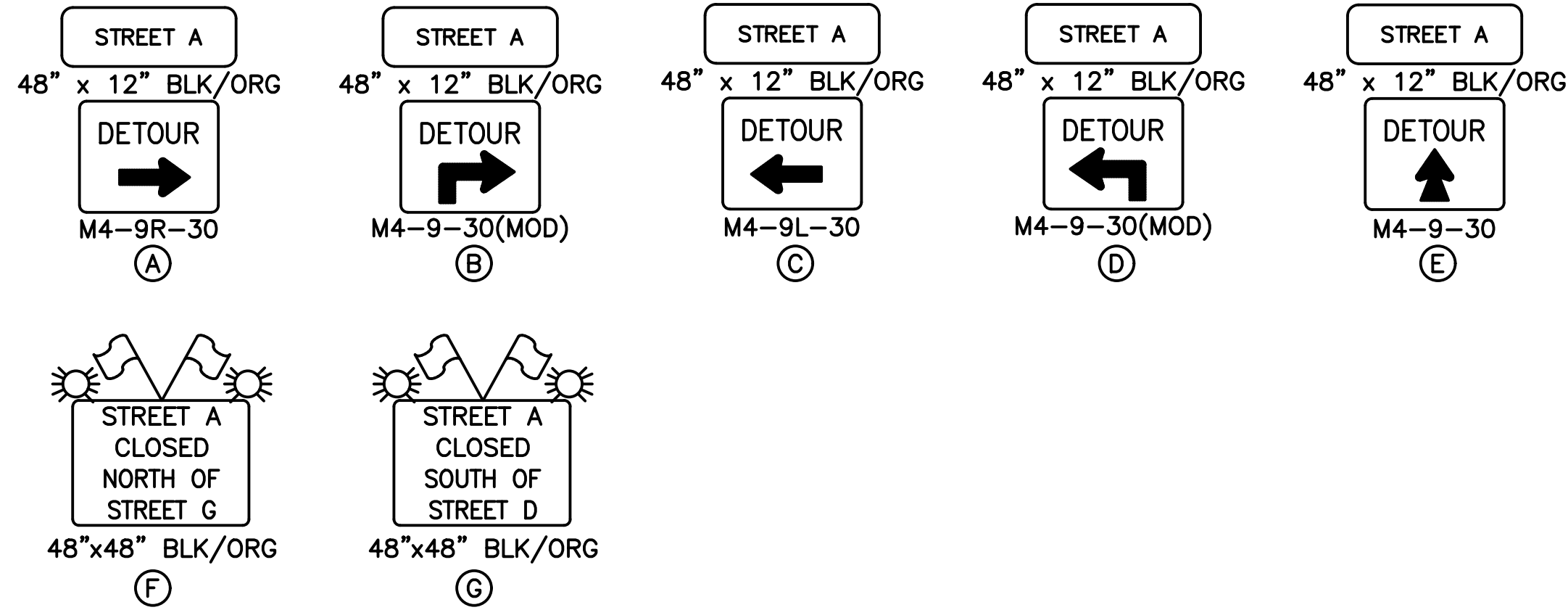
MAINTENANCE OF TRAFFIC DETOUR PLAN  
PRE-PHASE 1

IMPROVEMENTS OF ...  
STREET A FROM STREET B TO STREET C

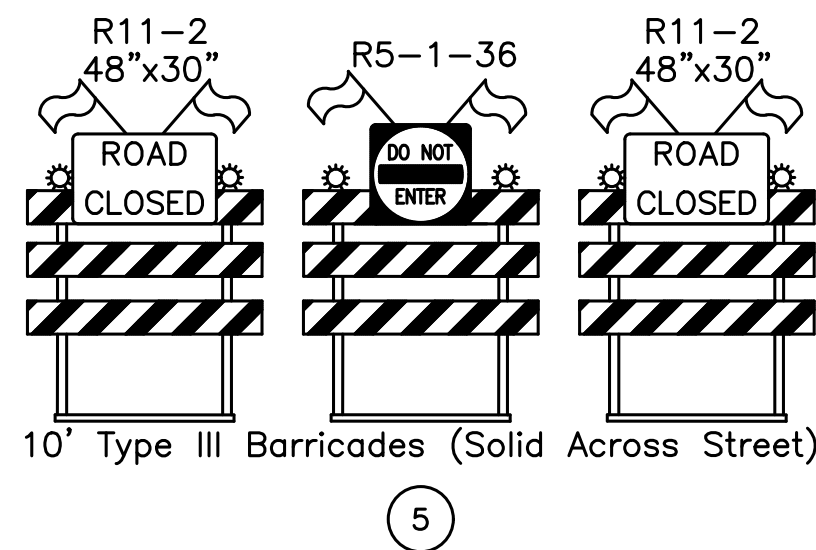
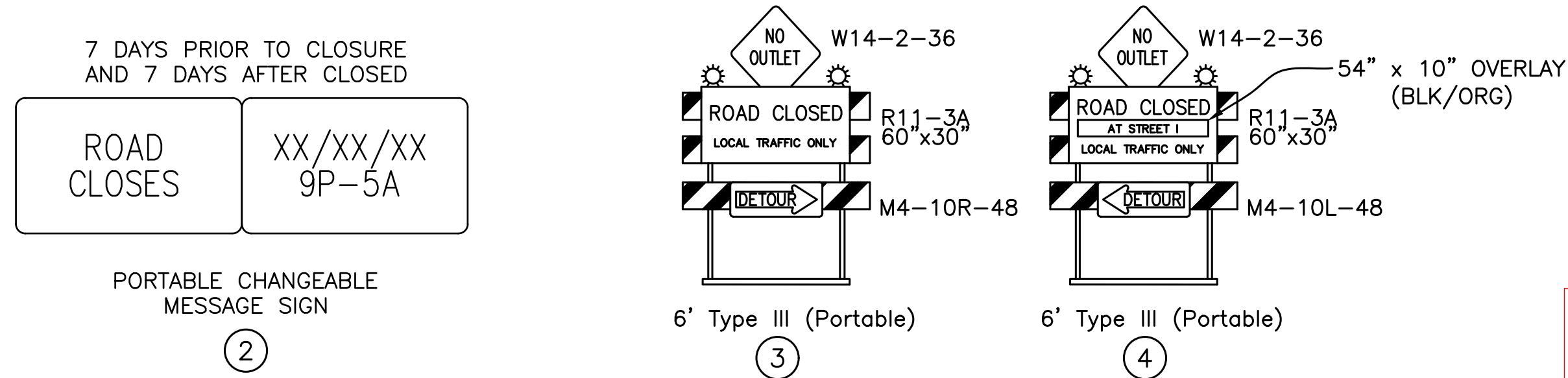
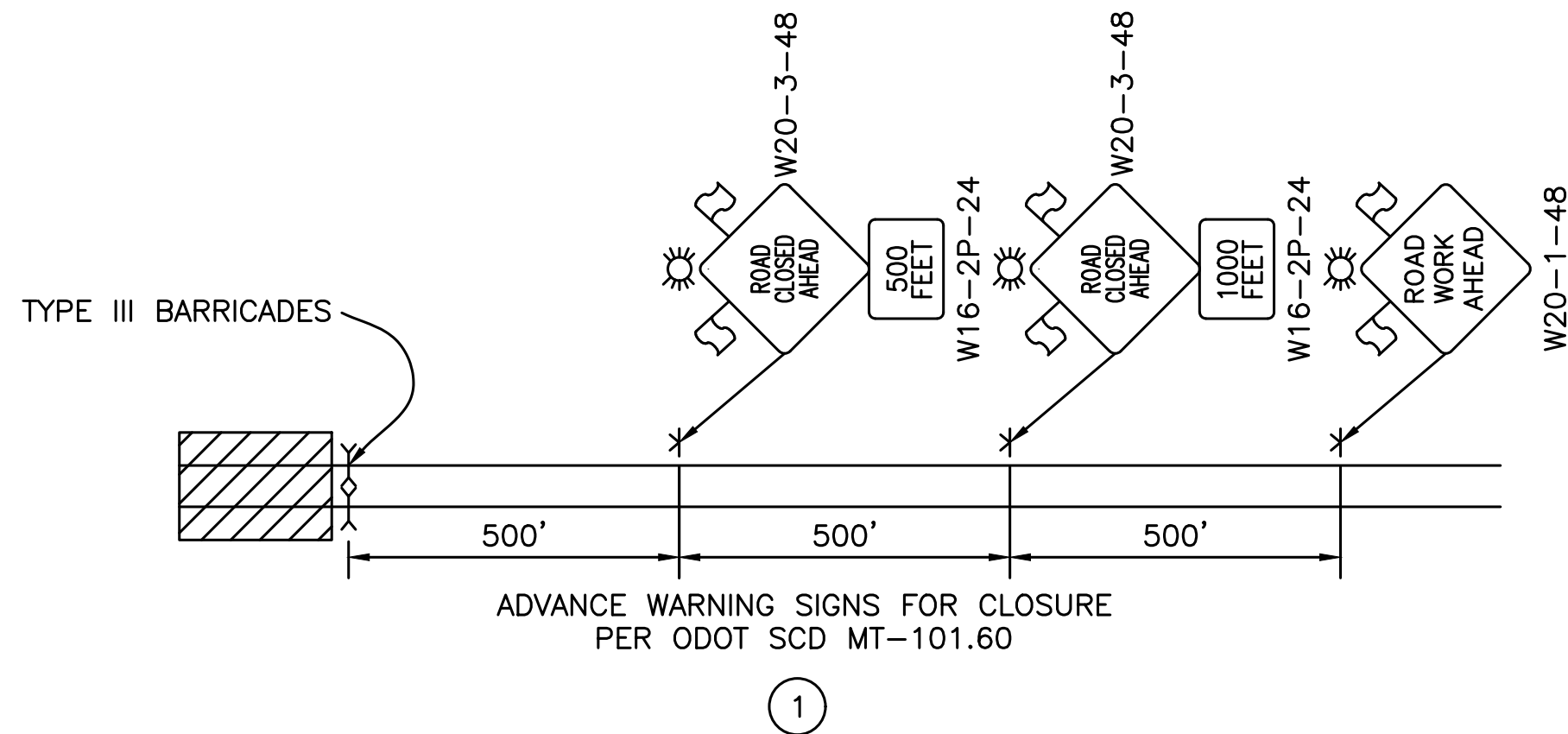
XXXX-E



**Note:**  
During Pre-Phase 1 only, Northbound Street A may be closed between the hours of 9PM and 5AM. This phase is only for the construction of the proposed storm sewer at Station 105+50. During Daytime and Non-Working hours, Street A shall be re-opened to traffic. This detour shall not be used for widening or resurfacing.

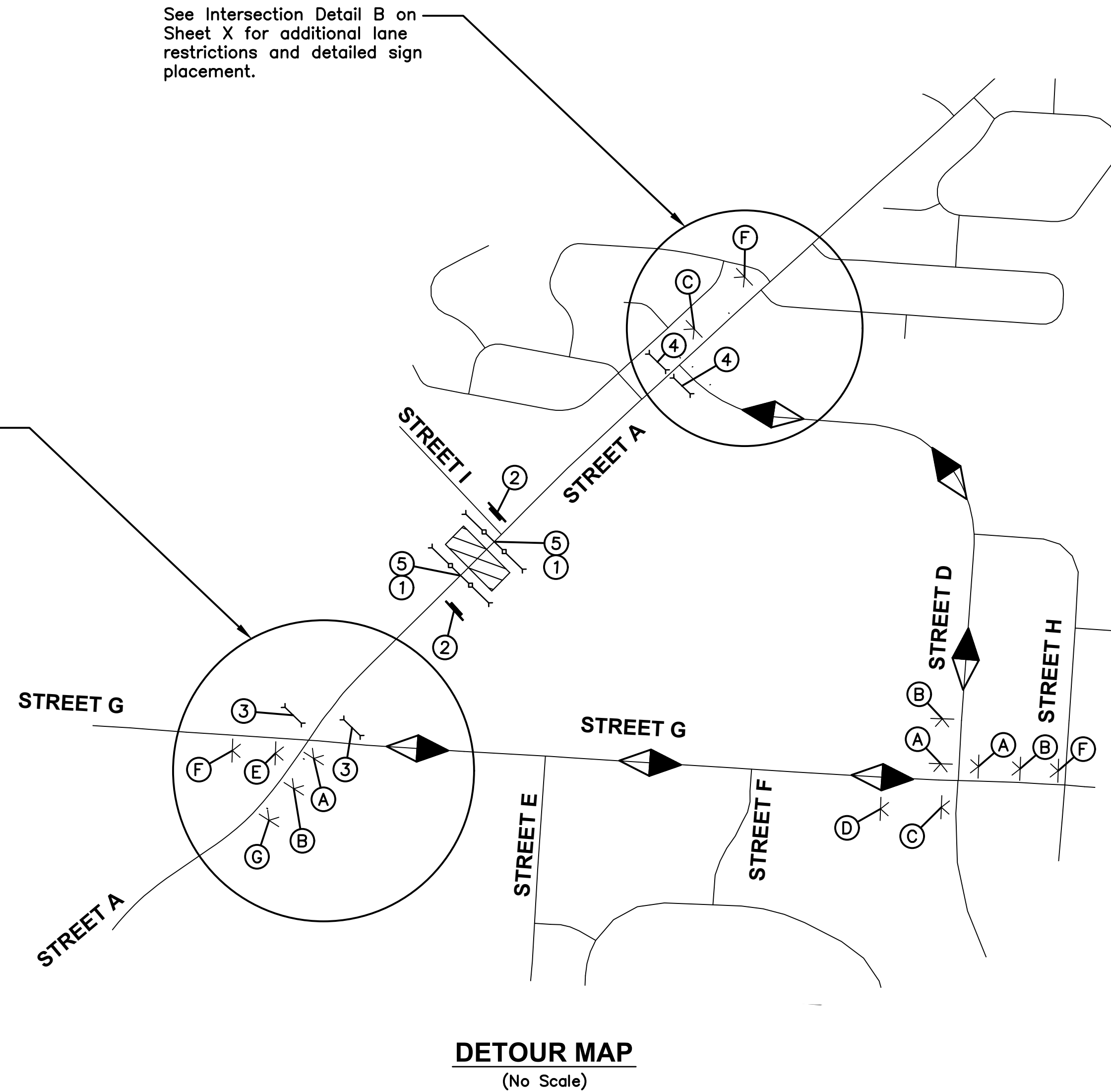


**DESIGNER NOTE:**  
SPECIAL DETOUR SIGNS (F & G) SHALL BE 48" X 48" BLACK ON ORANGE FOR 4 LINES OF TEXT. FOR FIVE LINES OF TEXT, THE SIGN SIZE SHALL BE 48" X 60".



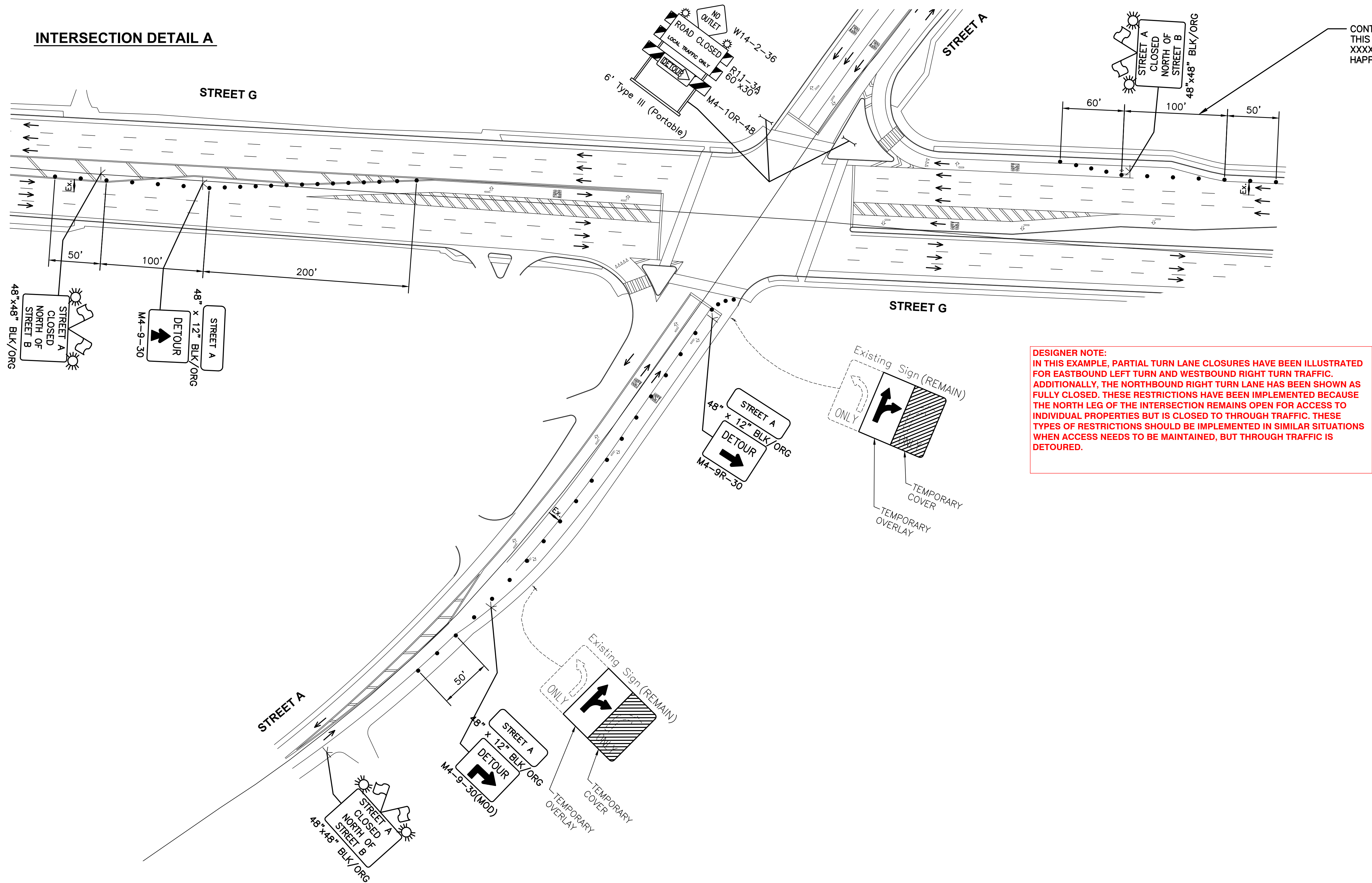
**DESIGNER NOTE:**  
INTERSECTION DETAILS ARE NOT TYPICALLY NEEDED FOR DETOUR PLANS. HOWEVER, THEY SHOULD BE PROVIDED IF LANE MODIFICATIONS ARE NEEDED. EXAMPLES OF POSSIBLE TRIGGERS ARE LISTED BELOW:

- PARTIAL TURN LANE CLOSURES
- FULL TURN LANES CLOSURES
- THROUGH LANE CLOSURES
- LANE SHIFTS
- BIKE LANE TERMINATION
- ETC.



- LEGEND**
- = Work Zone
  - = Temporary Sign Support
  - = Northbound Detour Route
  - = Southbound Detour Route
  - = Type III Barricade

INTERSECTION DETAIL A



CONTRACTOR TO COORDINATE THIS LANE RESTRICTION WITH XXXX-E IF THIS WORK IS HAPPENING AT THE SAME TIME.

**DESIGNER NOTE:**  
IN THIS EXAMPLE, PARTIAL TURN LANE CLOSURES HAVE BEEN ILLUSTRATED FOR EASTBOUND LEFT TURN AND WESTBOUND RIGHT TURN TRAFFIC. ADDITIONALLY, THE NORTHBOUND RIGHT TURN LANE HAS BEEN SHOWN AS FULLY CLOSED. THESE RESTRICTIONS HAVE BEEN IMPLEMENTED BECAUSE THE NORTH LEG OF THE INTERSECTION REMAINS OPEN FOR ACCESS TO INDIVIDUAL PROPERTIES BUT IS CLOSED TO THROUGH TRAFFIC. THESE TYPES OF RESTRICTIONS SHOULD BE IMPLEMENTED IN SIMILAR SITUATIONS WHEN ACCESS NEEDS TO BE MAINTAINED, BUT THROUGH TRAFFIC IS DETOURED.

LEGEND

- ← = Direction Of Travel
- ✕ = Temporary Sign Support
- = Drum
- = Barricade

Drum Spacing Chart	
Tangent	25' c/c
Taper	15' c/c
Radii	8' c/c

Notes:  
1. For clarity, underground utilities have not been shown. See plan and profile sheets for underground utility locations. Contractor shall contact the Ohio Utility Protection Service to have all utilities marked prior to any excavation.




Drum Spacing Chart	
Tangent	25' c/c
Taper	15' c/c
Radii	8' c/c

LEGEND

← = Direction Of Travel

✂ = Temporary Sign Support

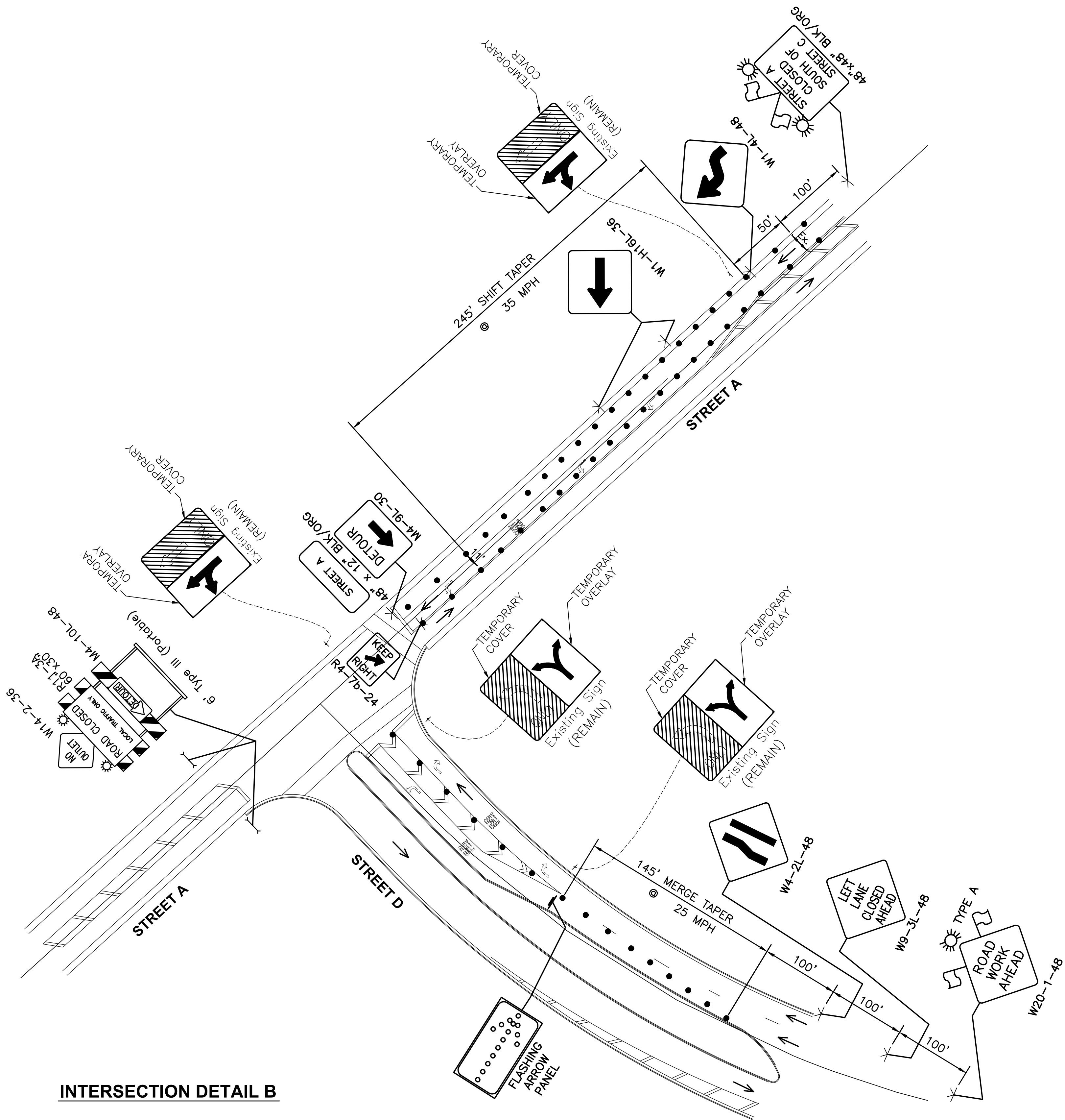
• =  Drum

— = Barricade

— = Flashing Arrow Panel

Notes:

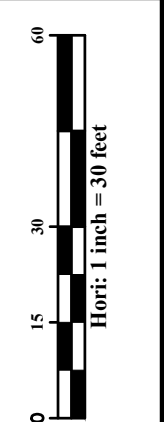
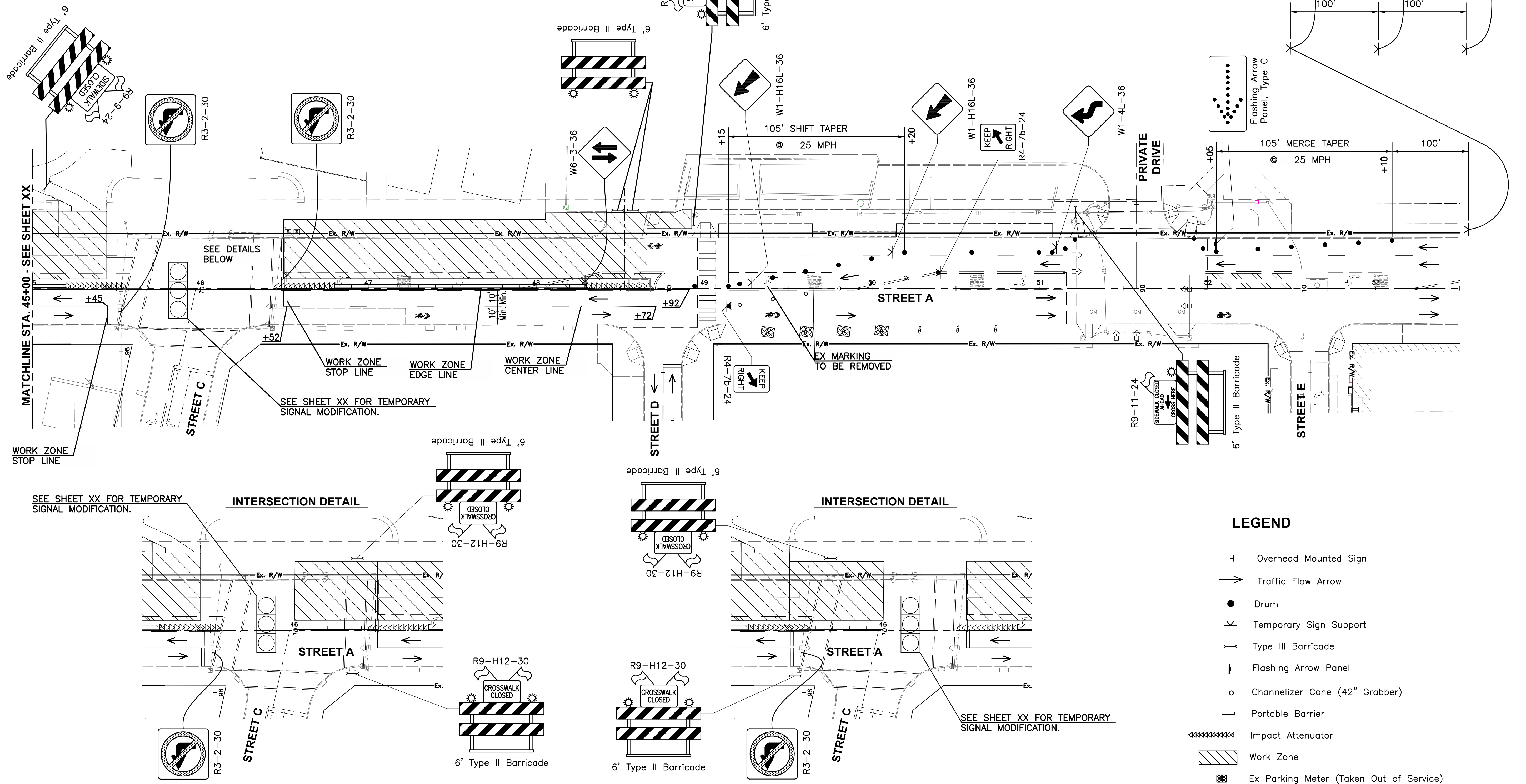
- For clarity, underground utilities have not been shown. See plan and profile sheets for underground utility locations. Contractor shall contact the Ohio Utility Protection Service to have all utilities marked prior to any excavation.



INTERSECTION DETAIL B





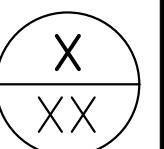


ABC	CHECKED
ABC	ABC

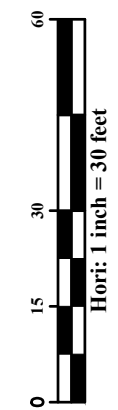
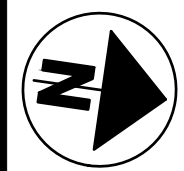
# MAINTENANCE OF TRAFFIC PLAN PHASE 1

IMPROVEMENT IS OF...  
STREET A FROM STREET B TO STREET C

XXX-E





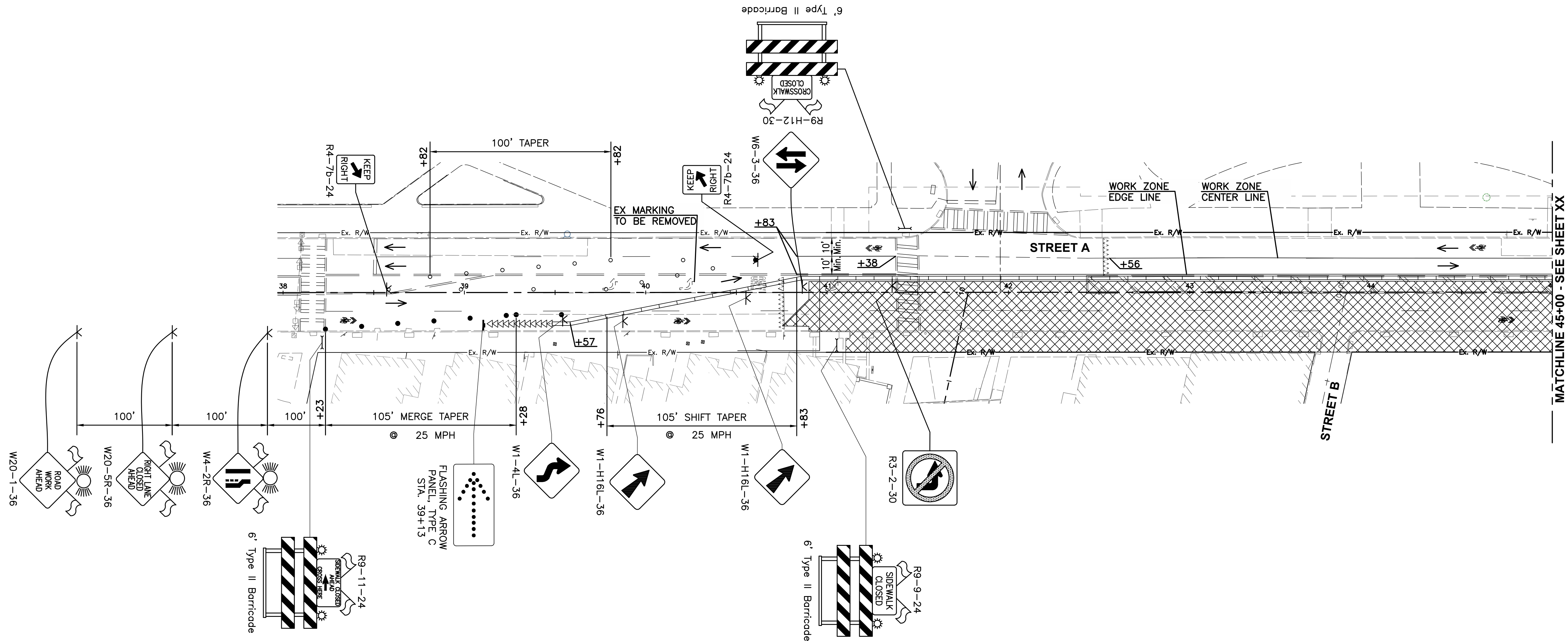
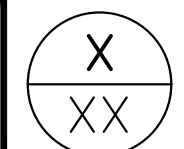


CALCULATED	ABC
CHECKED	ABC

MAINTENANCE OF TRAFFIC PLAN  
PHASE 2

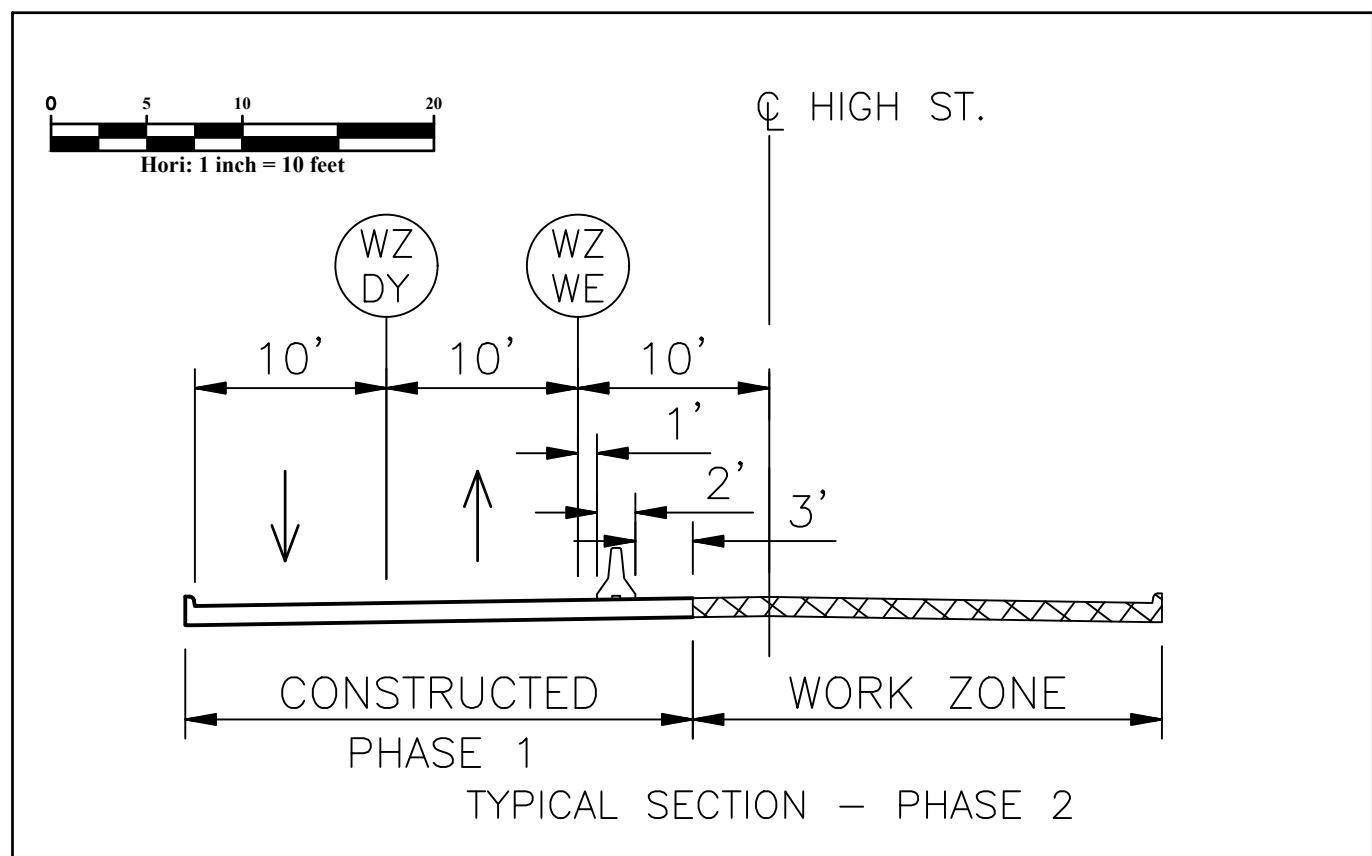
IMPROVEMENTS OF ...  
STREET A FROM STREET B TO STREET C

XXXX-E

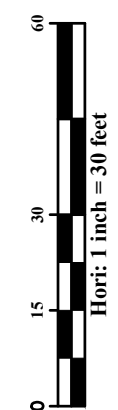
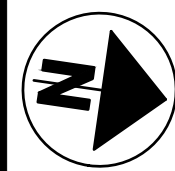


LEGEND

- Traffic Flow Arrow
- Drum
- Temporary Sign Support
- Type III Barricade
- Flashing Arrow Panel
- Channelizer Cone (42" Grabber)
- Portable Barrier
- Impact Attenuator
- Work Zone





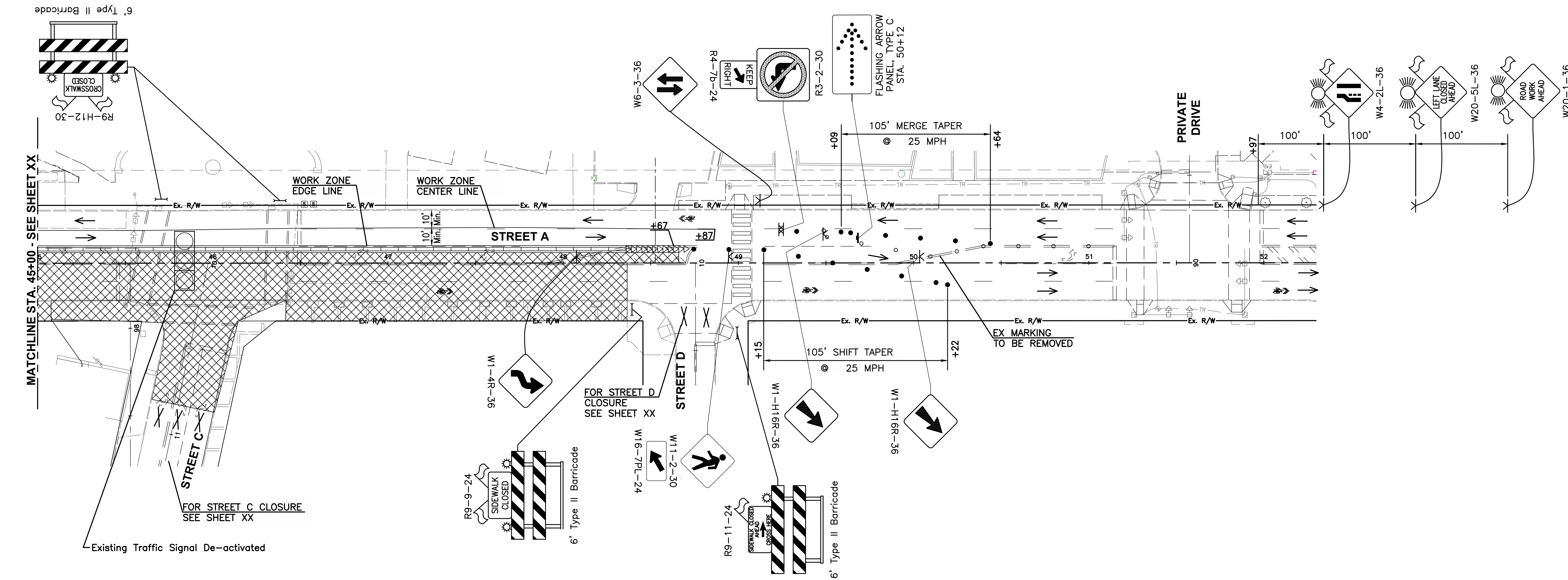
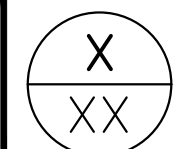


CALCULATED	ABC
CHECKED	ABC

MAINTENANCE OF TRAFFIC PLAN  
PHASE 2

IMPROVEMENTS OF ...  
STREET A FROM STREET B TO STREET C

XXXX-E



LEGEND

- Traffic Flow Arrow
- Drum
- Temporary Sign Support
- Type III Barricade
- Flashing Arrow Panel
- Channelizer Cone (42" Grabber)
- Portable Barrier
- Impact Attenuator
- Work Zone

