

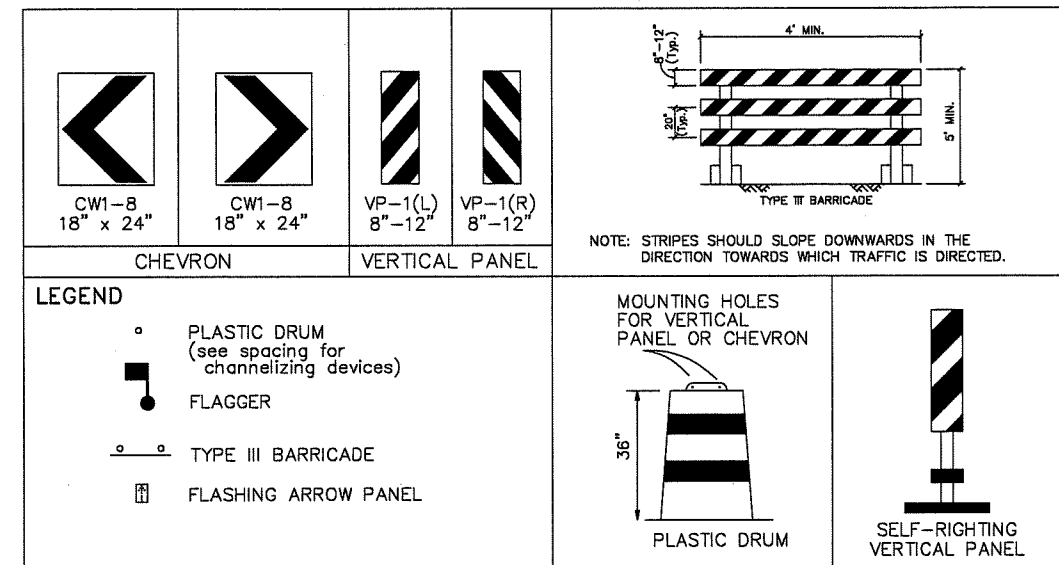
GENERAL NOTES

- The Contractor shall provide and install traffic control devices in conformance with Part VI of the Texas Manual on Traffic Control Devices (TMUTCD)
- All signs and traffic control devices shall conform the latest version of the TMUTCD
- No lanes shall be closed during the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM Monday thru Friday without approval of the City Traffic Engineer.
- No work shall be performed in residential areas from 7:00 PM to 7:00 AM.
- Contractor shall maintain approved number of through lanes of traffic in each direction during construction working hours. Traffic control plans shall include one-way and/or detour plans. Contractor shall maintain ADA compliant pedestrian access to bus stops and adequate bus access to all the bus stops.
- Contractor shall maintain traffic lanes and detours according to traffic control plans during working hours.
- Contractor shall cover open pavement excavations for minor utility work with anchored steel plate during non-working hours, and open lanes for normal traffic flow when feasible.
- If the Contractor chooses to use a different method of "Traffic Control Plans" during the construction than what is outlined in the contract drawings, the Contractor shall be responsible for prepare and submit an alternate set of traffic control plans to the City of Houston Project Manager for approval ten working days prior to implementation. These plans shall be drawn to scale and reproducible in mylars and shall be sealed by a Licensed Engineer in the State of Texas. Transportation & Drainage Operations representative approval is required to accept the proposed changes.
- Contractor shall secure lane/sidewalk/bicycle facility closure permits from Transportation & Drainage Operations (Mobility Permit Section at <http://www.gims.houston.tx.gov/portal/WS/MainPortal.aspx>) before implementing the traffic control plans, construction sequencing, and construction schedule with the application.
- Contractor shall have approved traffic control plan and permit at the job site for inspection at all times.
- During pavement surface restoration projects; the Contractor shall not open closed lanes until the pavement surface has cured enough to allow vehicular traffic according to City of Houston Standard Specifications.
- The Contractor is responsible for scheduling and coordinating all construction activities with stake holders in the vicinity including emergency response agencies such as Houston Police Department, Houston Fire Department, and Metropolitan Transit Authority.
- Contractor shall be responsible for issuing all work directives to all sub-contractors, utility companies, and all other entities performing construction work associated with the project.
- Nothing in these notes or plans shall relieve the Contractor of the responsibility for job site conditions during the course of construction of the project; including safety of all modes of transportation, persons, and property, and that this requirement shall apply continuously and not be limited to working hours.
- The Transportation & Drainage Operations (Mobility Permits Group) per the direction of the City Traffic Engineer have the right to demand the installation of additional traffic control devices or modifications of these plans and notes, as deemed necessary to promote the safe and orderly flow of traffic, including pedestrians and bicycles, through the construction work zone. The Contractor shall comply with these additional requests or modifications with due diligence.
- All existing traffic control signs and pavement markings shall be maintained in visible locations during construction unless prior written approval is obtained from City of Houston Project Manager. The Contractor shall restore or replace (at the discretion of the City Traffic Engineer) any pavement marking or signing damage during construction operations, including Raised Pavement Markers (RPMs).
- When entering or leaving roadways carrying public traffic, the Contractor's equipment whether empty or loaded shall in all cases yield to public traffic with assistance of Contractor provided certified flagger/peace officer.
- Access to driveways adjacent to the construction work zone shall be maintained at all times as much as possible. Additional cones delineators may be required to delineate the driveway access route through the construction zone. A minimum of a travel lane shall be maintained across the driveways, unless prior written approval is obtained from City of Houston Project Manager.
- Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor.
- The Contractor shall submit an application for temporary parking restrictions if there are parking meters located at the proposed lane closures from Parking Management Division (832-393-8690) at least ten business days before implementation of lane closures. In addition, temporary no parking signs shall be posted 24 hours prior to commencement of work.
- Additional off duty officers/flaggers may be requested to direct traffic when lanes are blocked at the discretion of the City Project Manager even if they are not specifically identified on the project plans.
- The Contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction.
- In general, a solar powered flashing arrow board shall be required on all major thoroughfare lanes closures. Exceptions to flashing arrow boards and/or implementation on residential lane closures shall be approved by City Traffic Engineer.
- Approved traffic control plan shall be in place before starting any excavation.

SPACING FOR CHANNELIZING DEVICES

- Plastic drums on merging taper @ 30' c - c with chevron sign @ 60' c - c and warning lights for overnight closure.
- Plastic drums on downstream taper @ 30' c - c (return taper and barricade are optional and divided roadway section)
- Plastic drums on radii @ 35' c - c.
- Plastic drums on tangent @ 35' c - c with vertical panel at 70' c - c and approved warning light @ 70' c - c (for overnight closure).
- Plastic drums in front of construction zone @ 20' c - c with vertical panel at 40' c - c and approved warning light @ 40' c - c (for overnight closure).
- Concrete Traffic Barrier (CTB) or Low Profile Concrete Traffic Barrier (LPCTB) with approved reflectors @ 10' c - c if pavement drop is greater than 1 foot.
- Plastic drums w/Guard rail mounted.
- Self-Righting vertical panel spacing.
 - 4 lanes to 2 lanes undivided roadway section @ 20' c - c.
 - 4 lanes divided roadway to one side two way roadway @ 20' c - c.
 - Left lane and right lane storage bays @ 15' c - c.
- Spacing shown on traffic control shall supersede the above spacing.
- Spacing may be adjusted to provide driveways, intersections and /or median openings.

CHANNELIZATION AND BARRICADES

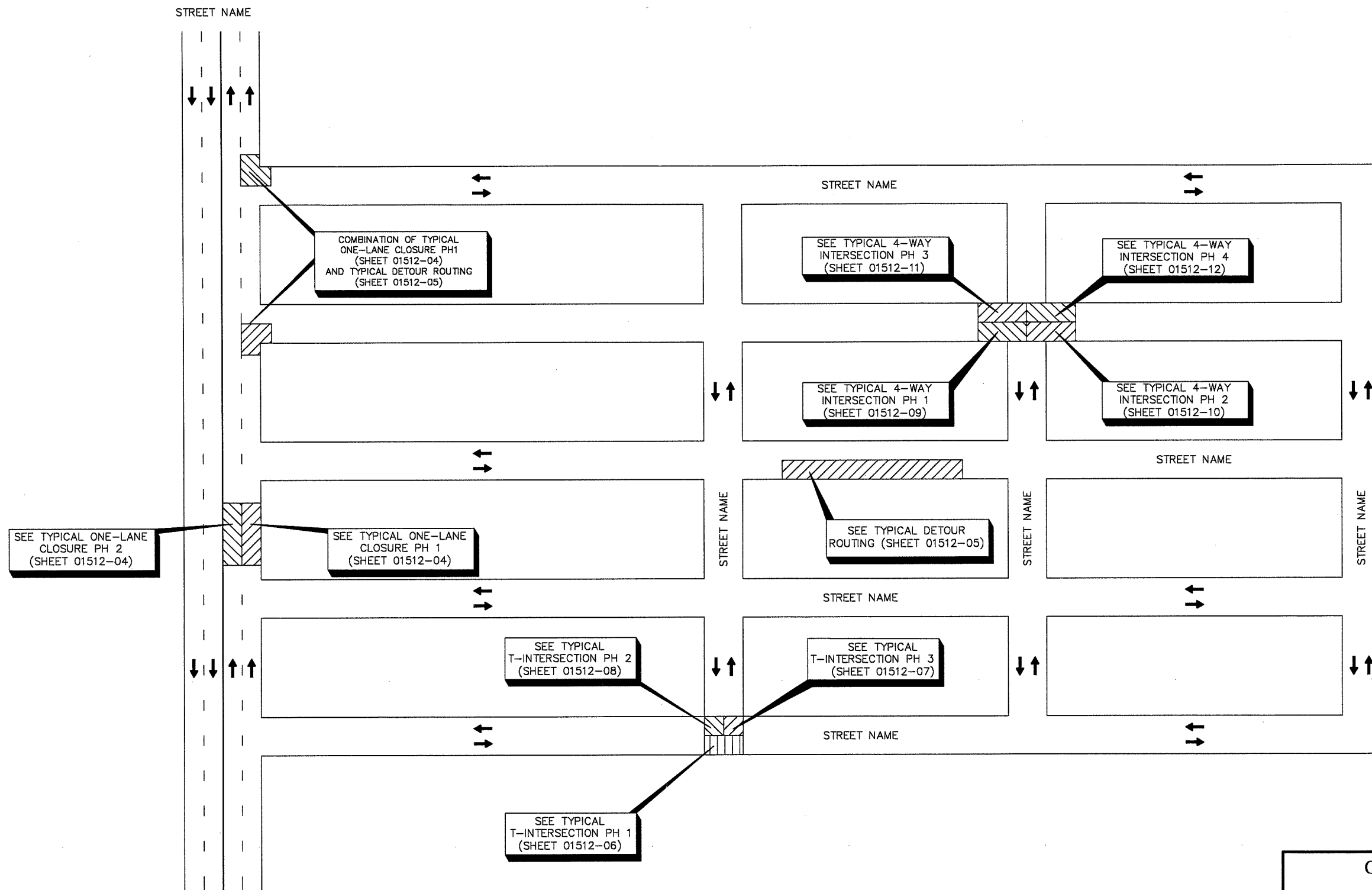


Posted Speed (mph)	Sign Spacing "X"	Min. Desirable Taper Length "L"			Suggested Maximum Spacing Of Device	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30	120'	150'	165'	180'	30'	60' - 75'
35	160'	205'	225'	245'	35'	70' - 90'
40	240'	265'	295'	320'	40'	80' - 100'
45	320'	450'	495'	540'	45'	90' - 110'
50	400'	500'	550'	600'	50'	100' - 125'
55	500'	550'	605'	660'	55'	110' - 140'

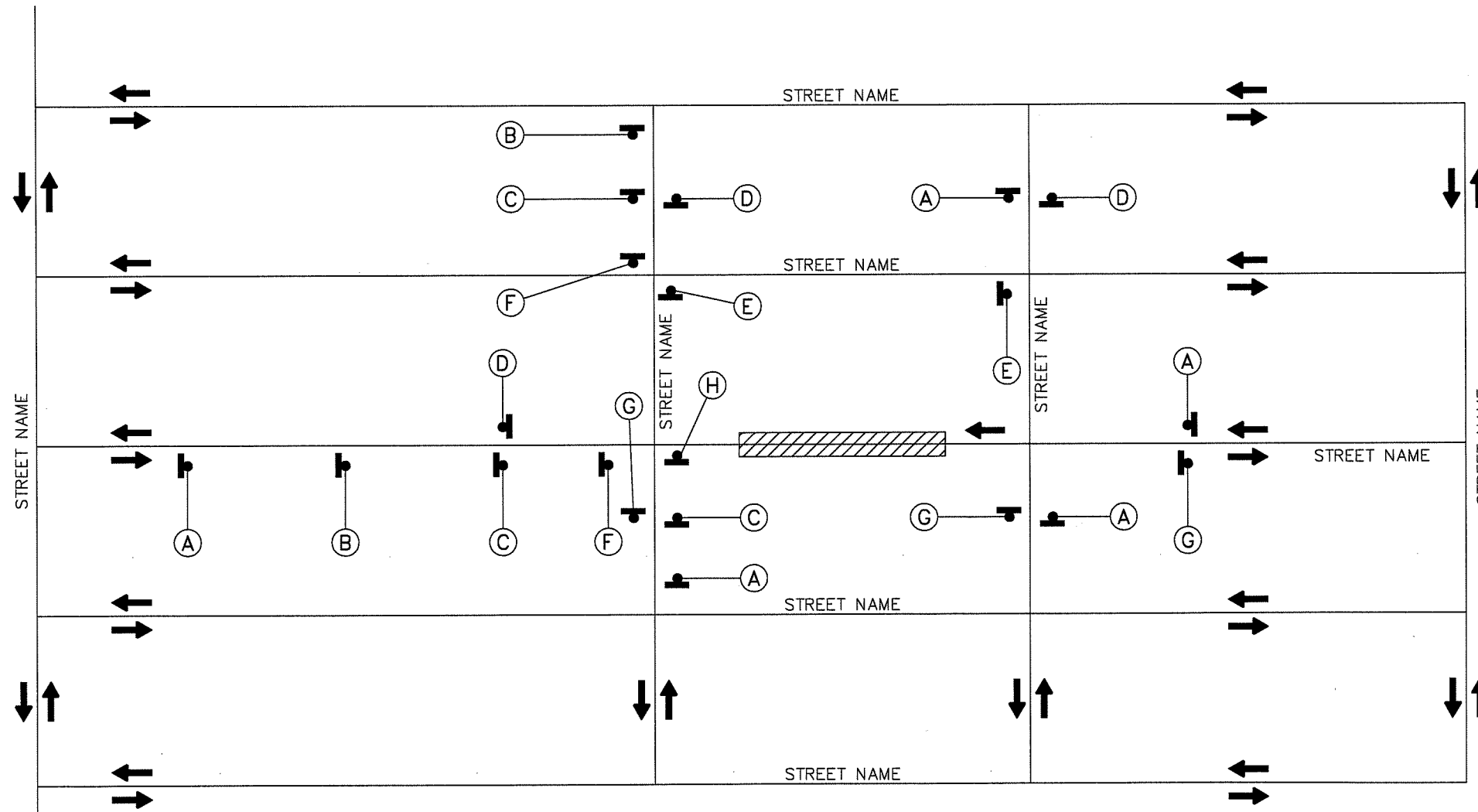
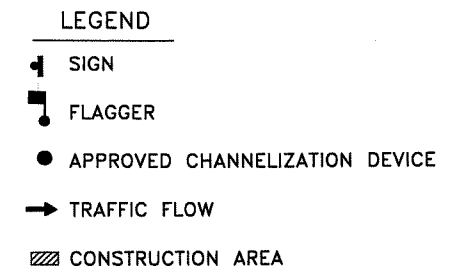
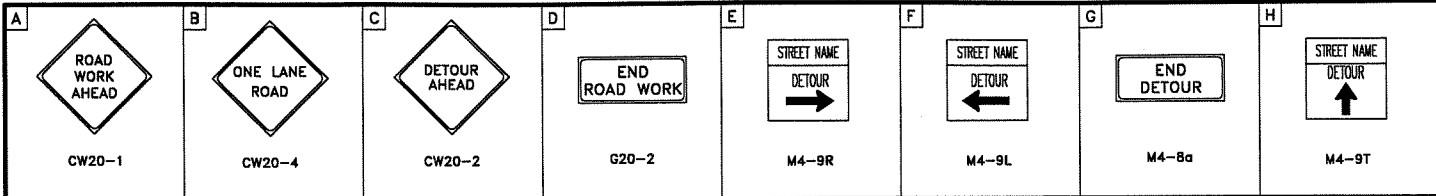
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TCP NOTES
CHANNELIZING DEVICES
AND BARRICADES
(NOT TO SCALE)

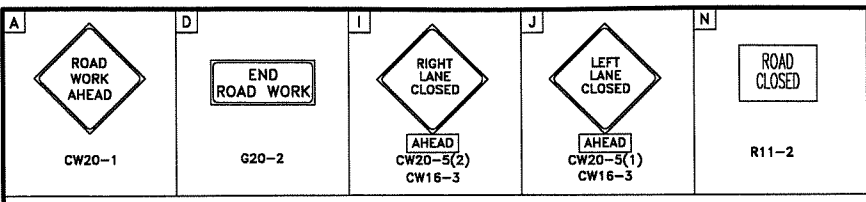
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-01



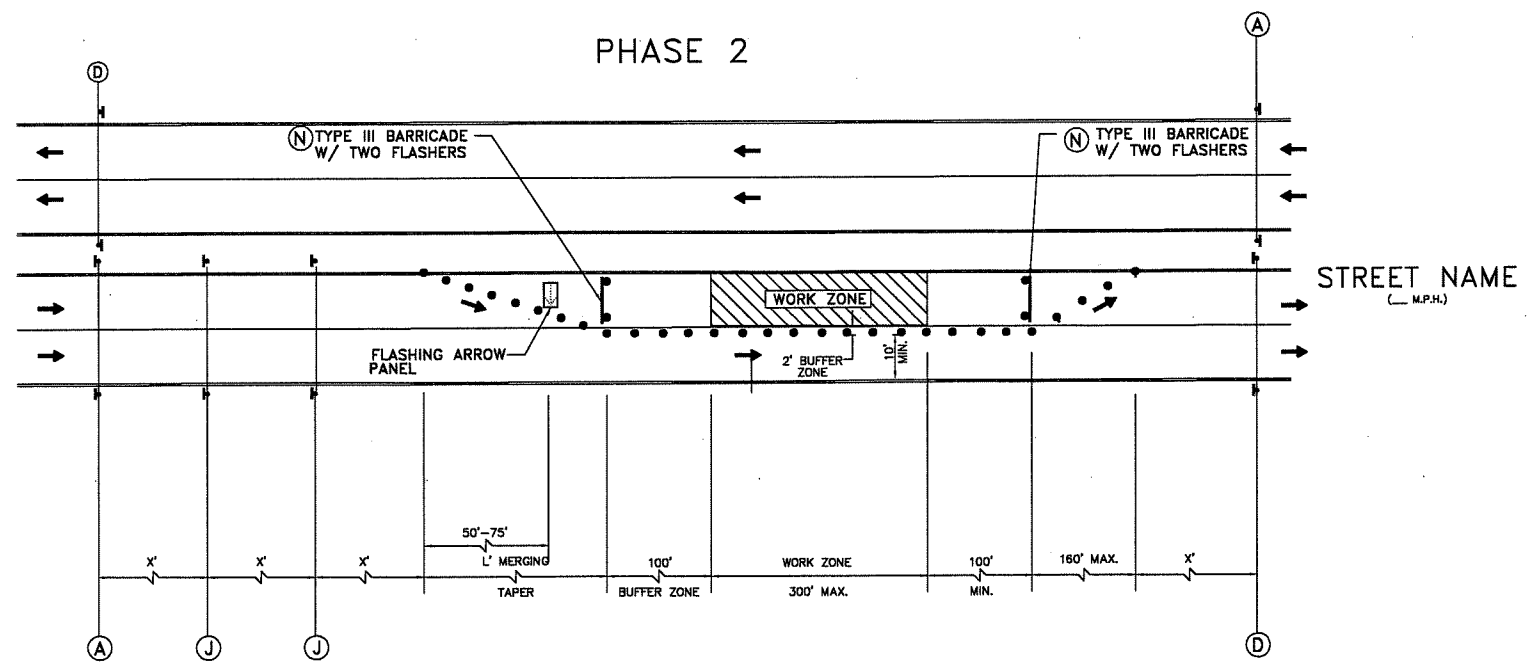
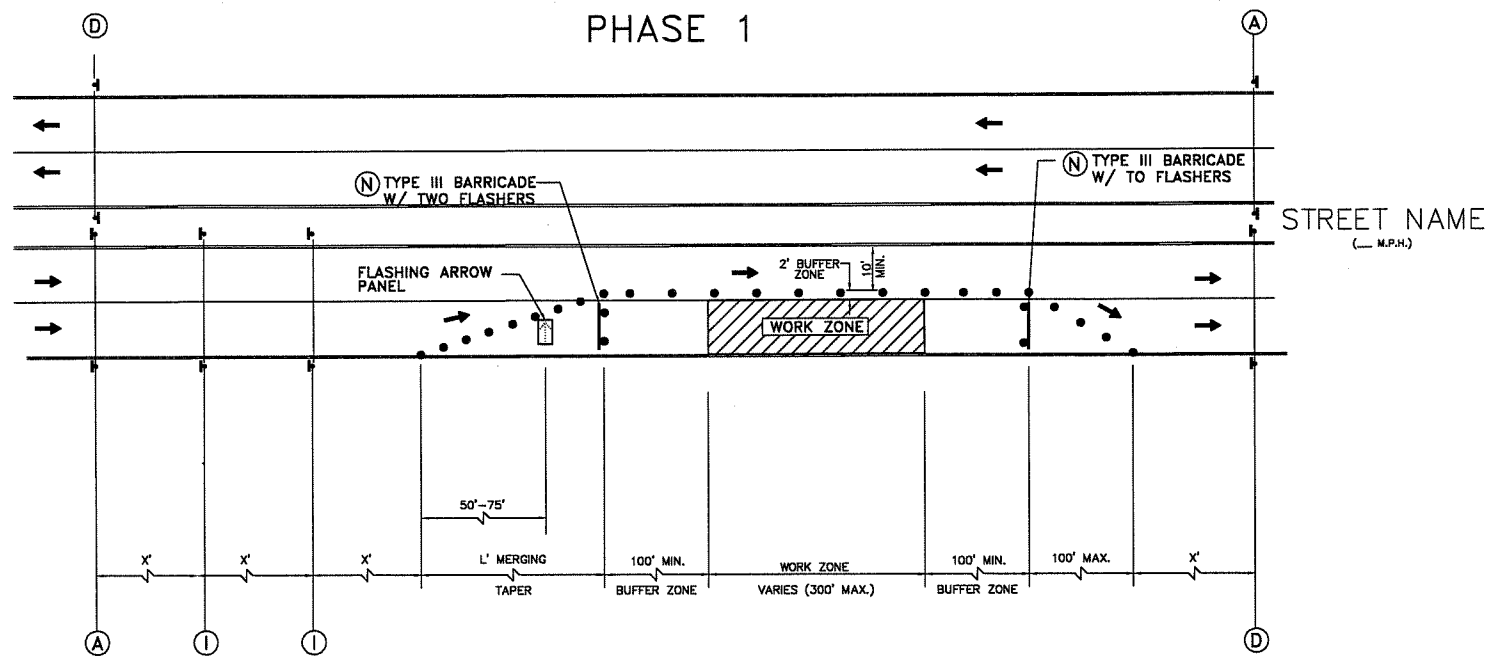
CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP OVERALL TRAFFIC CONTROL LAYOUT (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-02



CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TRAFFIC CONTROL LAYOUT (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-03

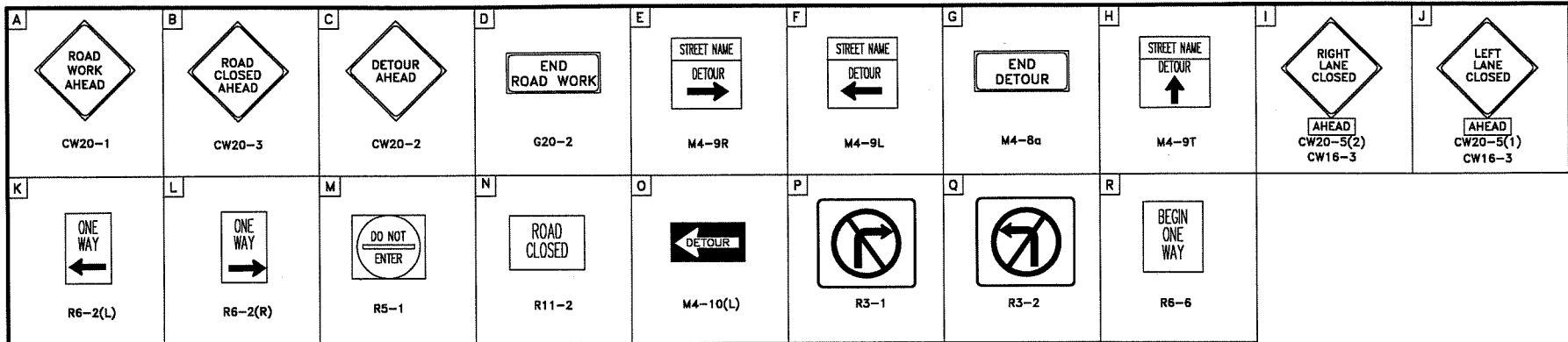


- LEGEND**
- ⬆ SIGN
 - ⬆ FLAGGER
 - APPROVED CHANNELIZATION DEVICE
 - ➔ TRAFFIC FLOW
 - ▨ CONSTRUCTION AREA



- NOTE:**
1. RETURN TAPERS AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.
 2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIANS.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP ONE LANE CLOSURE PHASE 1 & 2 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF. DATE: JUL-01-2018	DWG NO: 01512-04

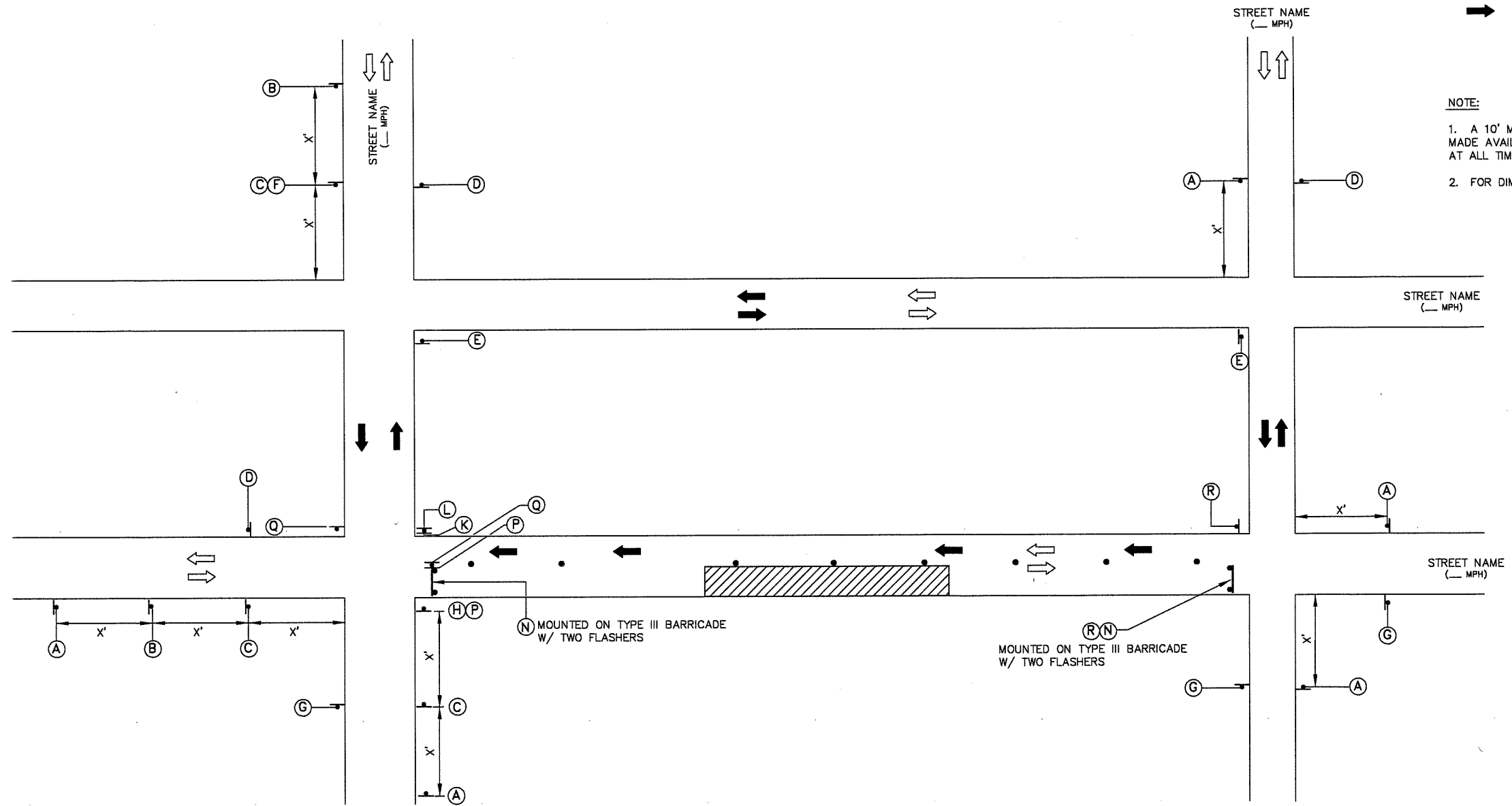


LEGEND

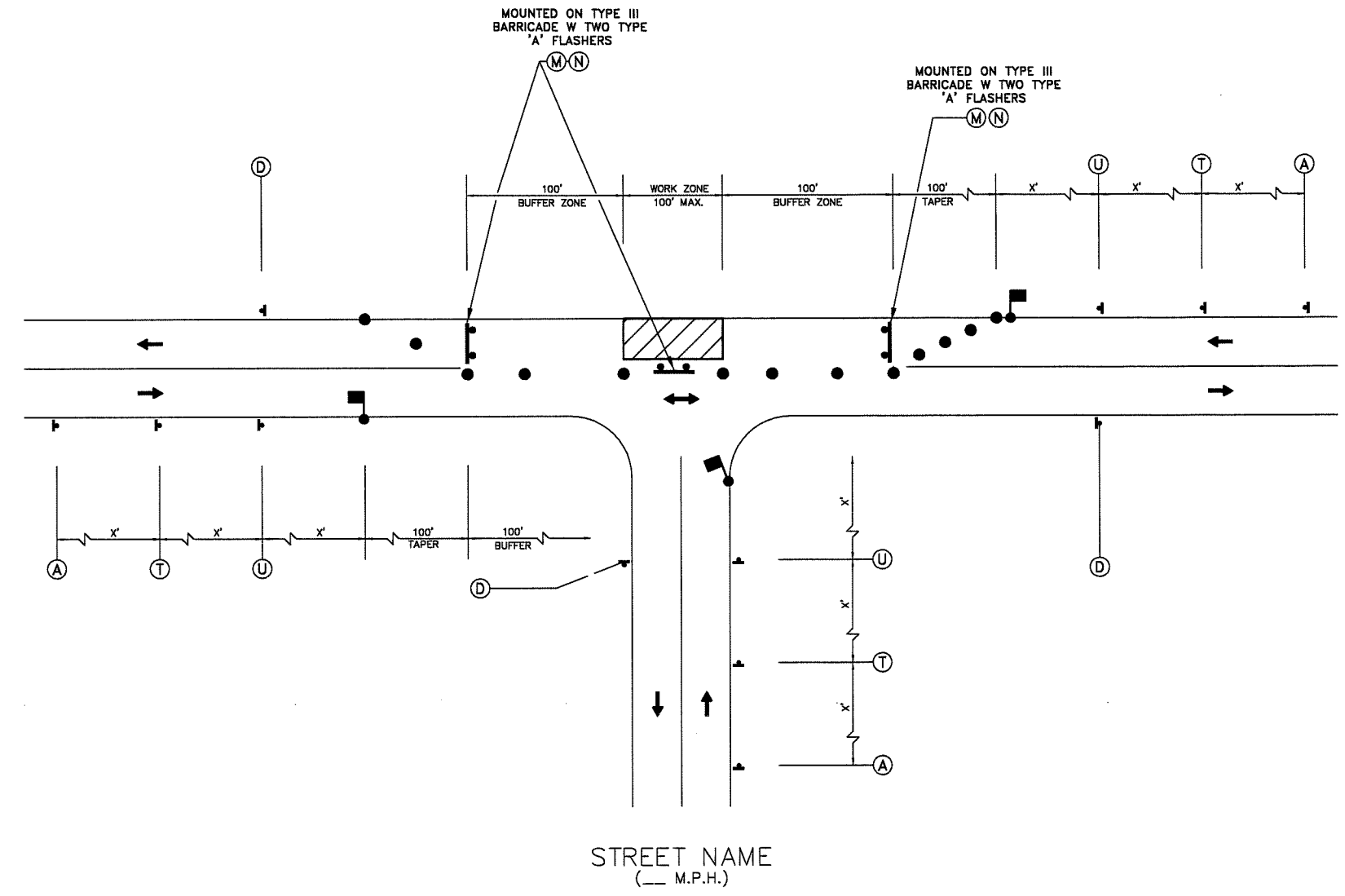
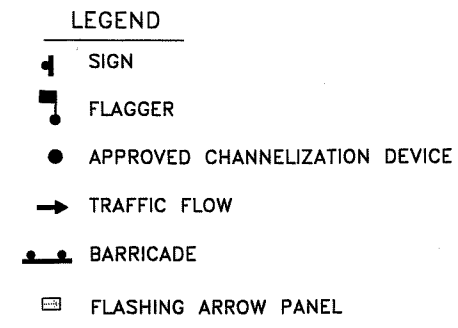
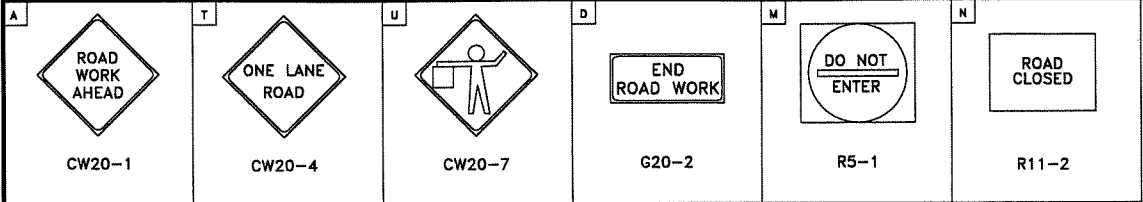
- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVELWAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTE:

1. A 10' MINIMUM LANE WIDTH FOR EMERGENCY SHALL BE MADE AVAILABLE AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES.
2. FOR DIMENSIONS REFER TO SHEET 01512-01.



CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP ONE LANE CLOSURE	
(NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-05



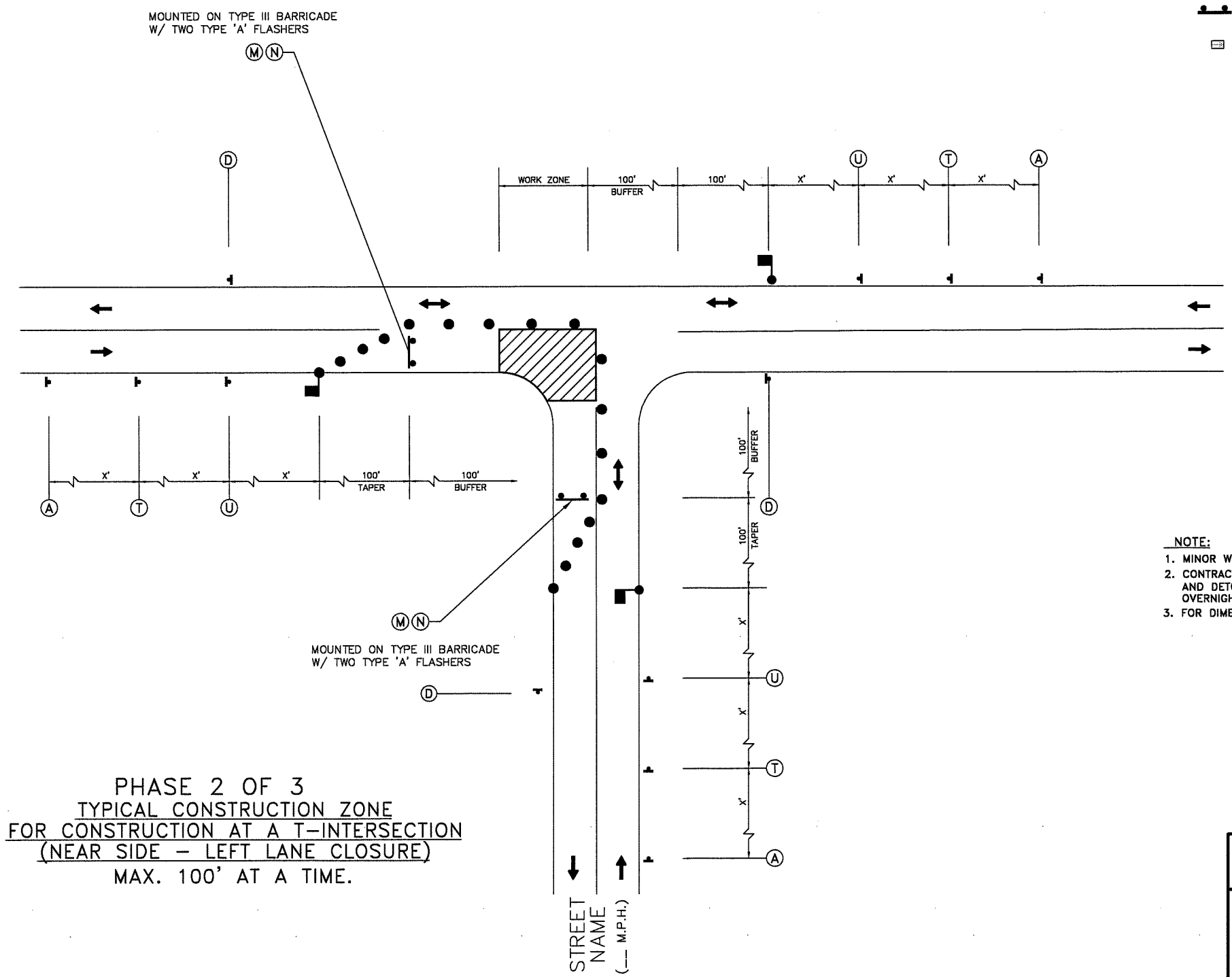
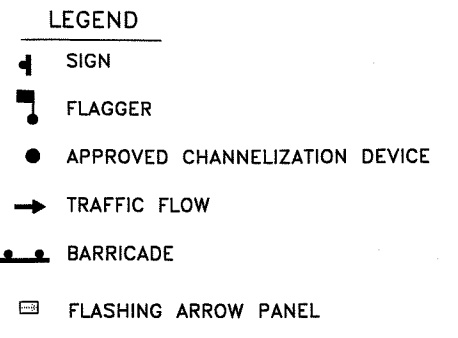
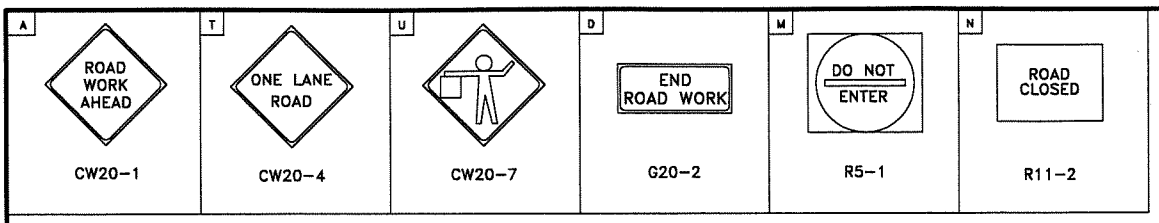
STREET NAME
(___ M.P.H.)

STREET NAME
(___ M.P.H.)

**PHASE 1 OF 3
TYPICAL CONSTRUCTION ZONE
AT A T-INTERSECTION**

- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP TYPICAL 3-WAY INTERSECTION PHASE 1 OF 3 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-06



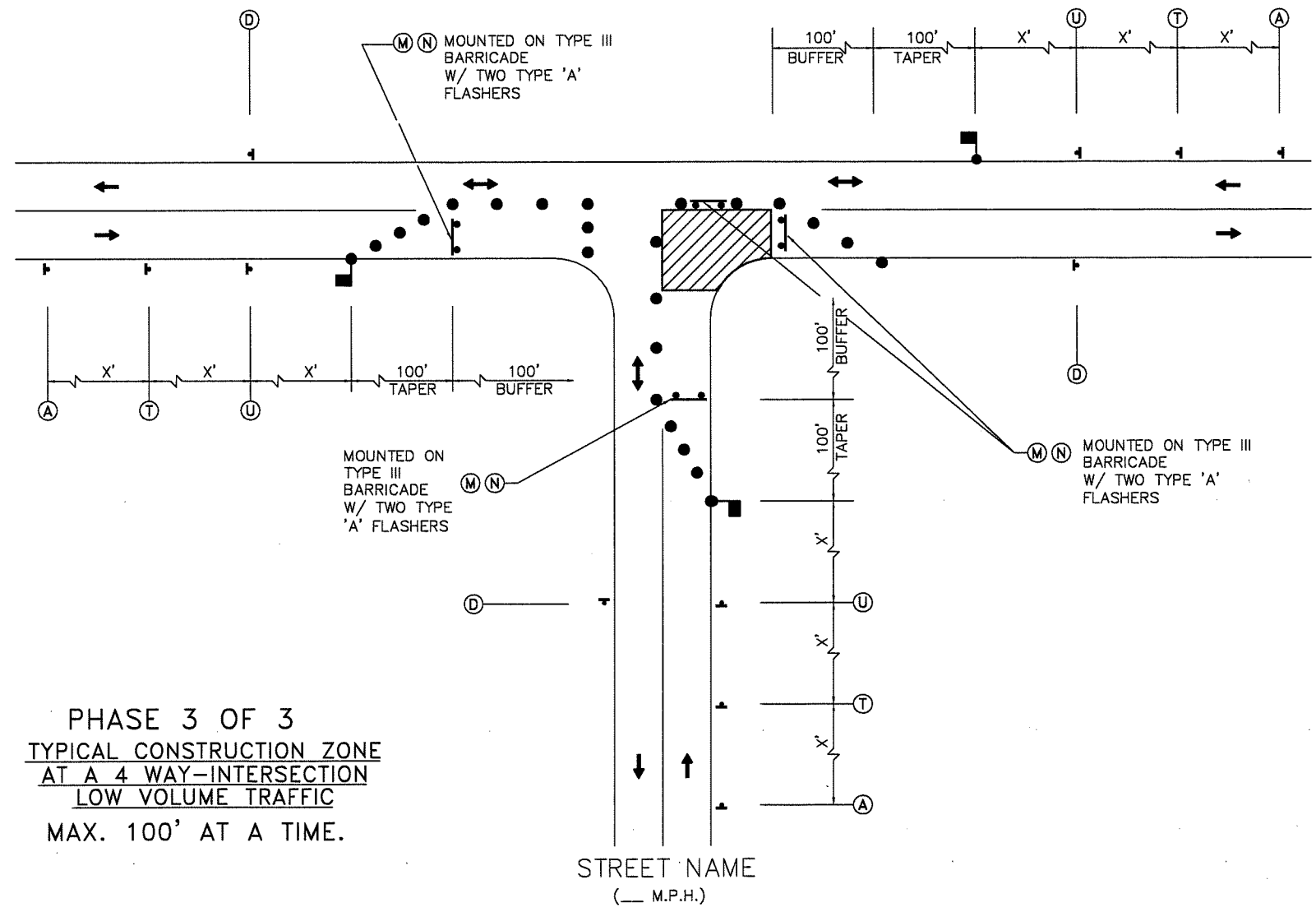
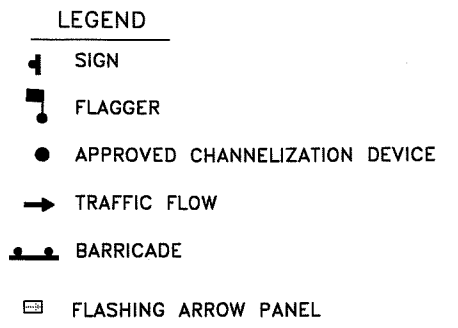
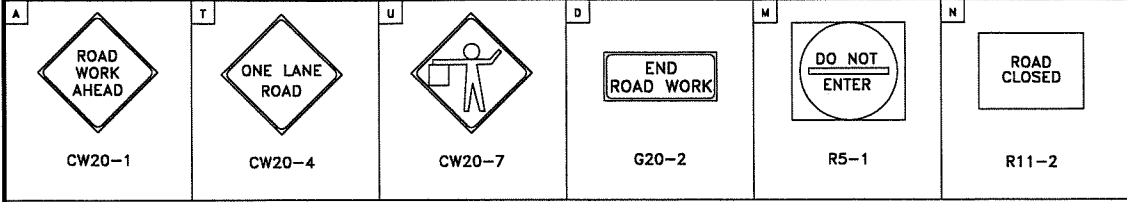
(__ M.P.H.)

- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

PHASE 2 OF 3
 TYPICAL CONSTRUCTION ZONE
 FOR CONSTRUCTION AT A T-INTERSECTION
 (NEAR SIDE - LEFT LANE CLOSURE)
 MAX. 100' AT A TIME.




STREET NAME
 (__ M.P.H.)

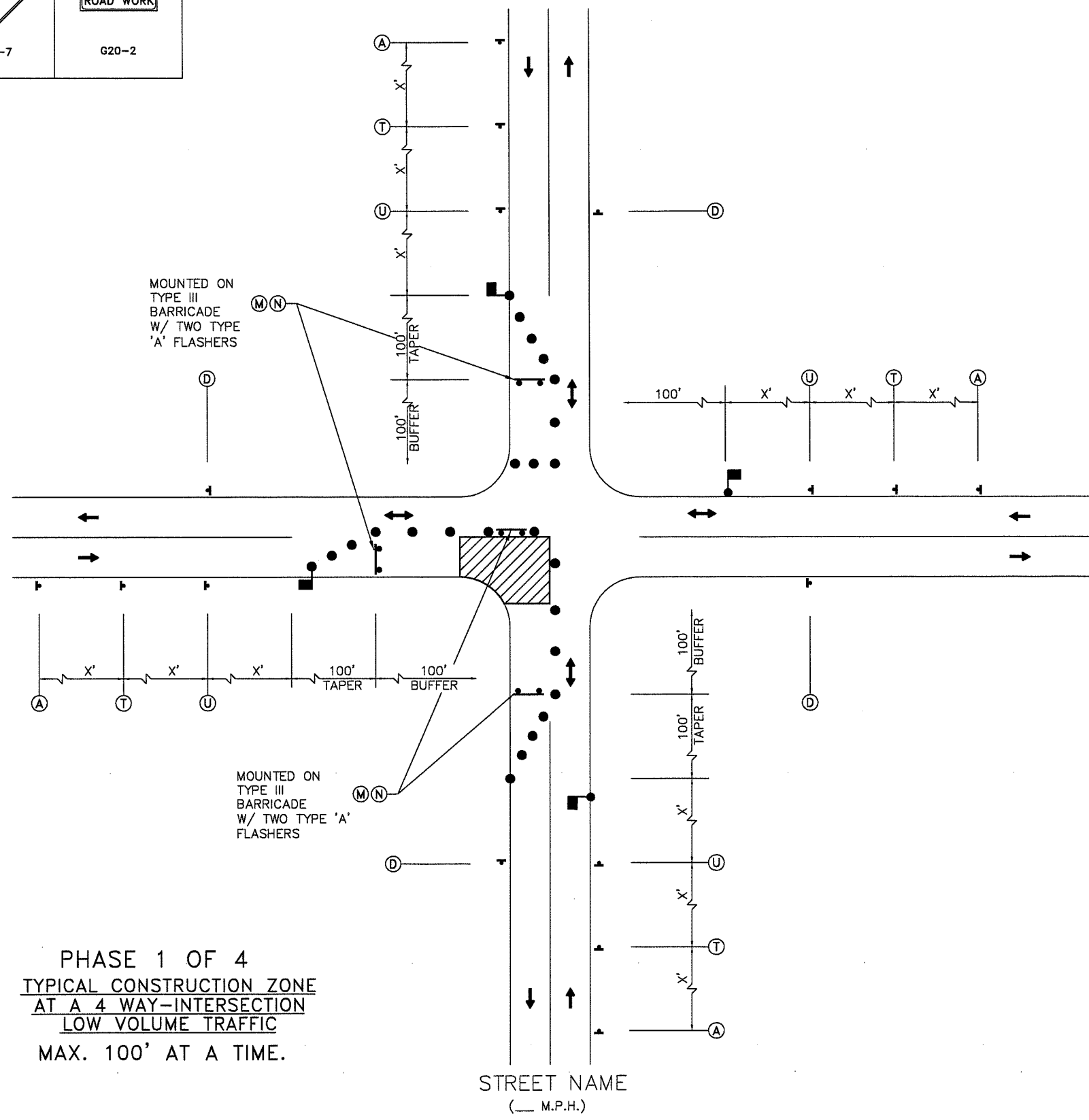
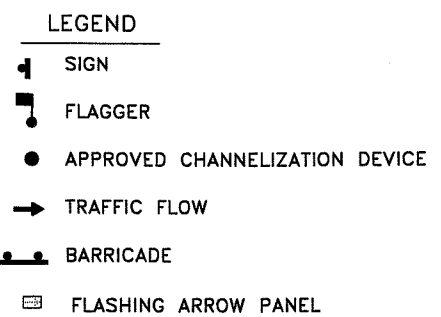
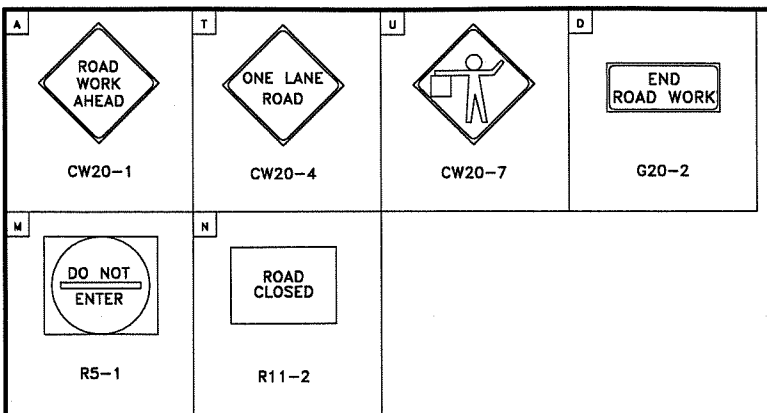
CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP TYPICAL 3-WAY INTERSECTION PHASE 2 OF 3 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
CITY ENGINEER 	
EFF DATE: JUL-01-2018	DWG NO: 01512-07



PHASE 3 OF 3
 TYPICAL CONSTRUCTION ZONE
 AT A 4 WAY-INTERSECTION
 LOW VOLUME TRAFFIC
 MAX. 100' AT A TIME.

- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP TYPICAL 3-WAY INTERSECTION PHASE 3 OF 3 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER  CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-08

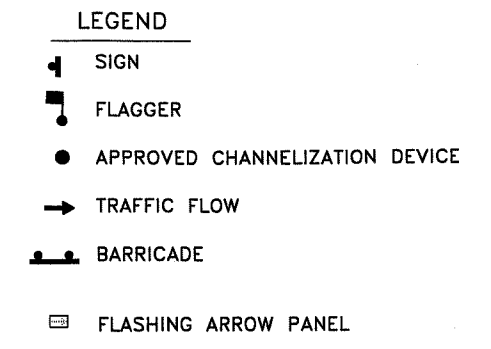
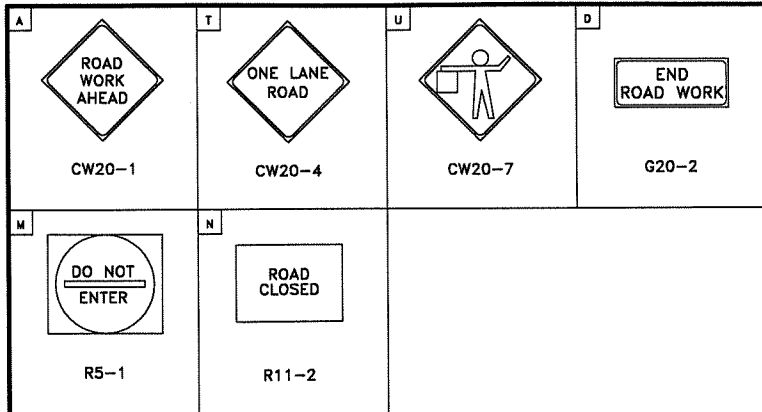


STREET NAME
(___ M.P.H.)

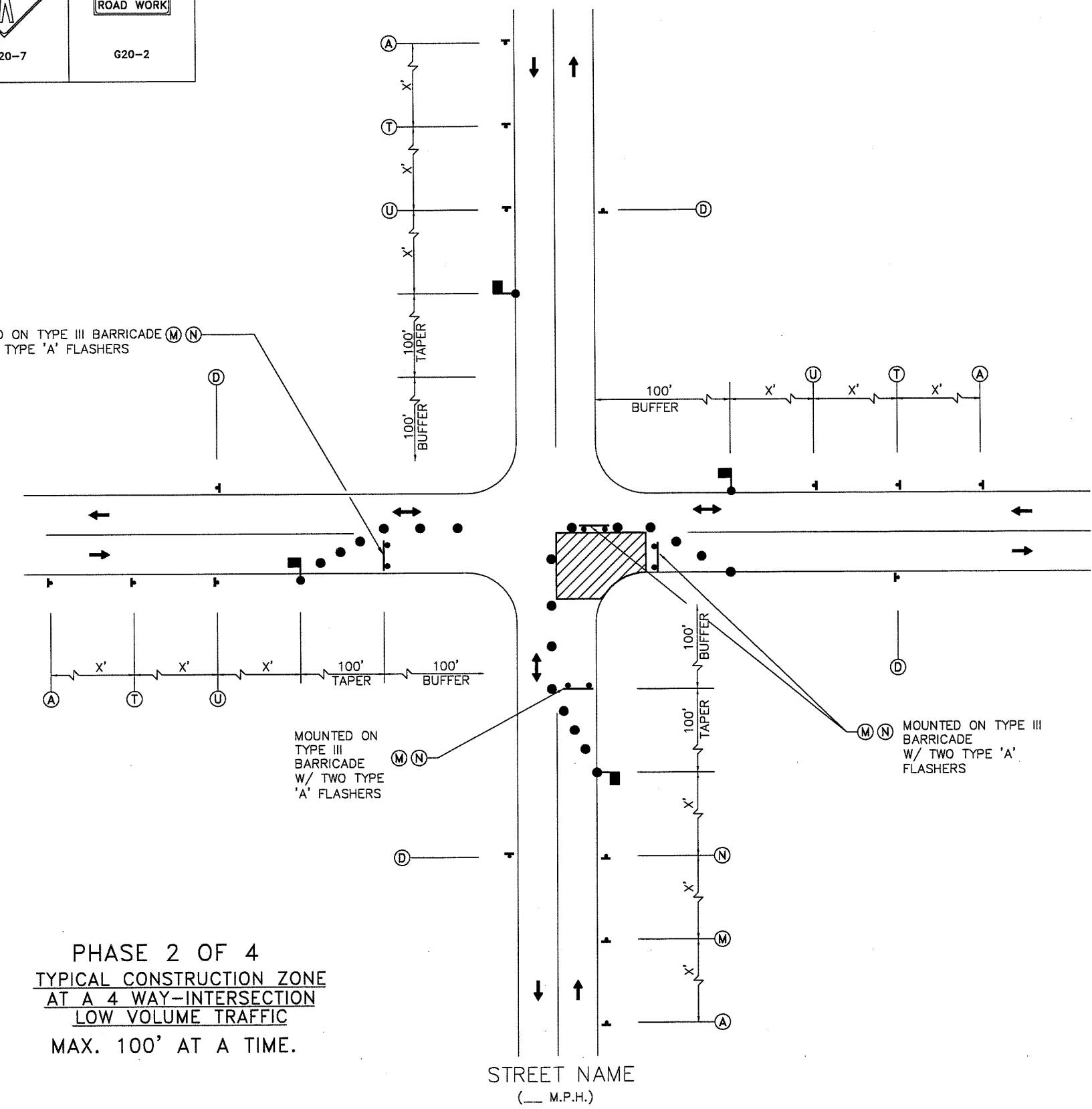
- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

PHASE 1 OF 4
 TYPICAL CONSTRUCTION ZONE
 AT A 4 WAY-INTERSECTION
 LOW VOLUME TRAFFIC
 MAX. 100' AT A TIME.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP 4-WAY INTERSECTION PHASE 1 OF 4 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-09



MOUNTED ON TYPE III BARRICADE (M) (N)
 W/ TWO TYPE 'A' FLASHERS



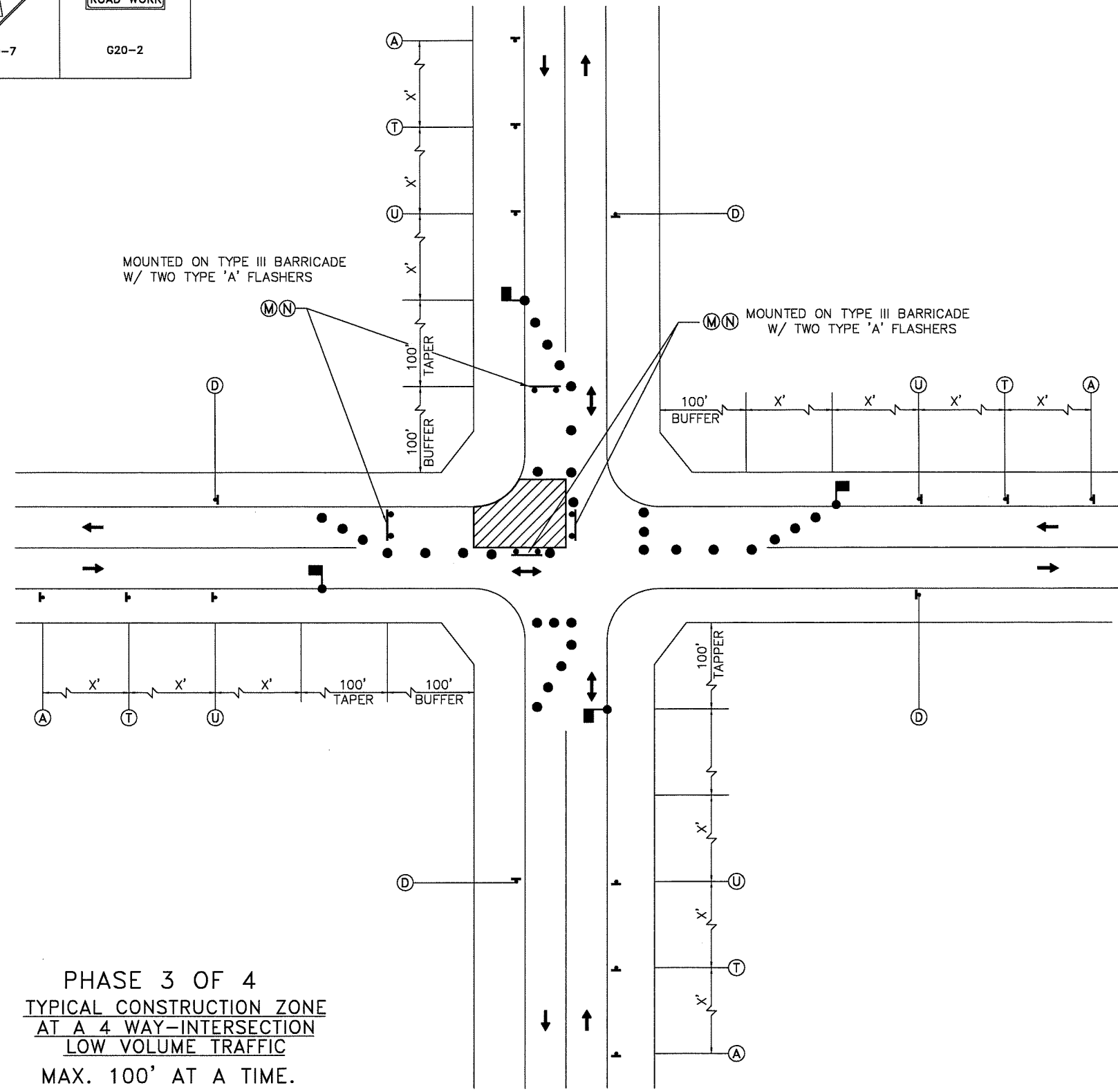
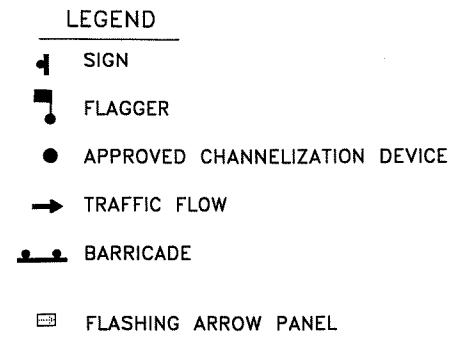
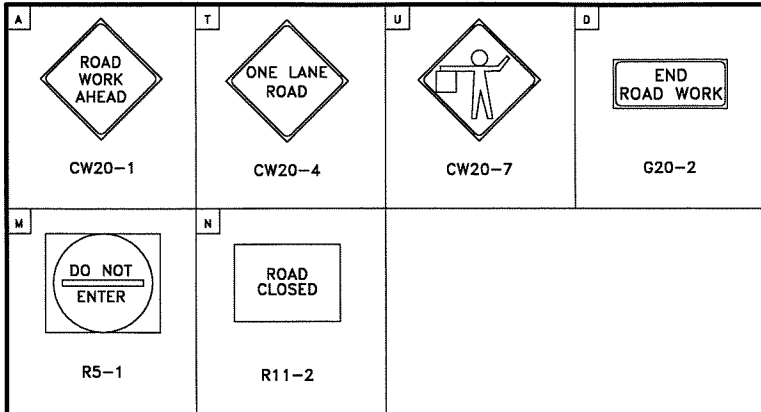
MOUNTED ON TYPE III BARRICADE (M) (N)
 W/ TWO TYPE 'A' FLASHERS

MOUNTED ON TYPE III BARRICADE (M) (N)
 W/ TWO TYPE 'A' FLASHERS

PHASE 2 OF 4
TYPICAL CONSTRUCTION ZONE
AT A 4 WAY-INTERSECTION
LOW VOLUME TRAFFIC
MAX. 100' AT A TIME.

- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

CITY OF HOUSTON	
HOUSTON PUBLIC WORKS	
TCP 4-WAY INTERSECTION PHASE 2 OF 4	
(NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-10



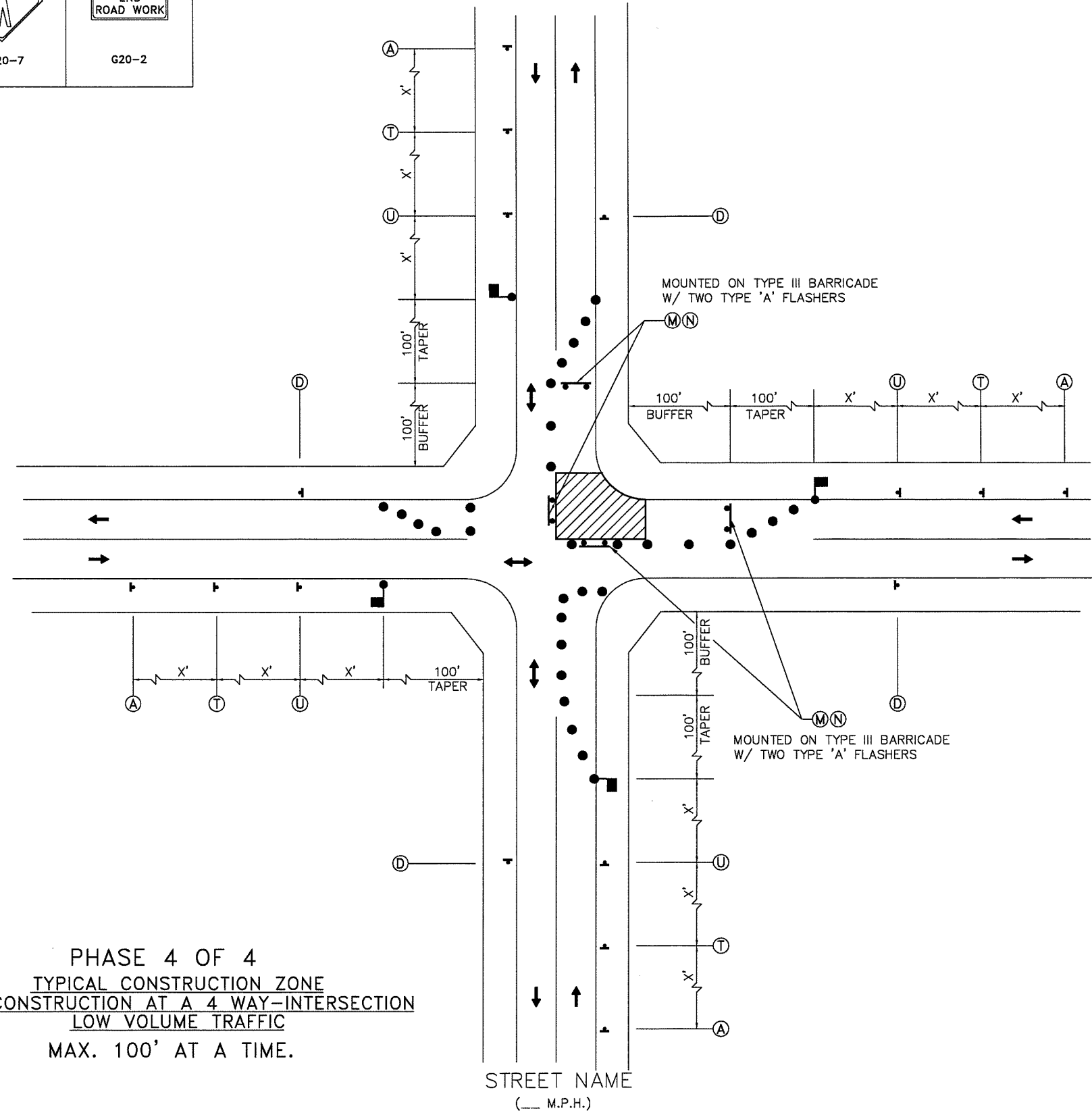
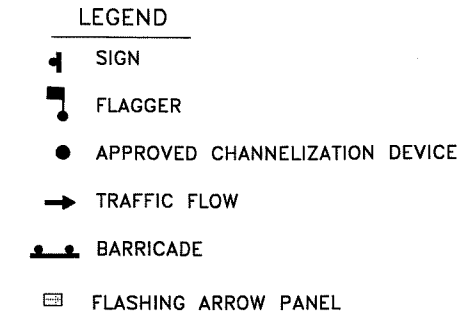
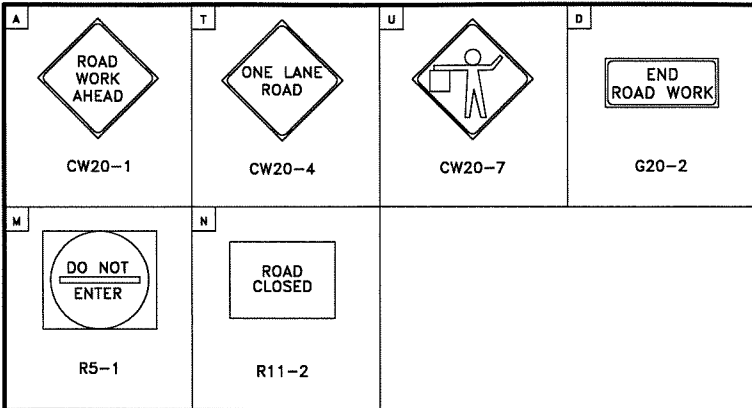
STREET NAME
(__ M.P.H.)

STREET NAME
(__ M.P.H.)

PHASE 3 OF 4
 TYPICAL CONSTRUCTION ZONE
 AT A 4 WAY-INTERSECTION
 LOW VOLUME TRAFFIC
 MAX. 100' AT A TIME.

- NOTE:**
1. MINOR WORK ONLY.
 2. CONTRACTOR SHALL USE ONE-LANE ROAD CLOSURE AND DETOUR ROUTING FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
 3. FOR DIMENSIONS REFER TO SHEET 01512-01

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP 4-WAY INTERSECTION PHASE 3 OF 4 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER CITY ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01512-11



STREET NAME
(___ M.P.H.)

- NOTE:**
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 3. FOR DIMENSIONS REFER TO SHEET 01512-01

PHASE 4 OF 4
 TYPICAL CONSTRUCTION ZONE
 FOR CONSTRUCTION AT A 4 WAY-INTERSECTION
 LOW VOLUME TRAFFIC
 MAX. 100' AT A TIME.

STREET NAME
(___ M.P.H.)

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TCP 4-WAY INTERSECTION PHASE 4 OF 4 (NOT TO SCALE)	
 CITY TRAFFIC ENGINEER	 DIRECTOR OF HOUSTON PUBLIC WORKS
CITY ENGINEER 	
EFF DATE: JUL-01-2018	DWG NO: 01512-12