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EXISTING GROUND APPROX. HEIGHT = 12"
TO BE REMOVED

EXISTING GROUND APPROX. HEIGHT = 12"
TO BE REMOVED

EXISTING 48" RCP

EXISTING 30" RCP

PIEVE CULVERT CLEANOUT
TRUMAN BLVD, STATION 46+35
APPROX. 32' TOTAL LENGTH

PIEVE CULVERT CLEANOUT
TRUMAN BLVD, STATION 46+05
APPROX. 63' TOTAL LENGTH

EXISTING BOX CULVERT OR PIPE
PROPOSED CONSTANT SLOPE

FILL CAVITIES WITH
EXISTING SLEEPER GRAVEL
EXISTING GROUND

CHANNEL LENGTH VARIES. SEE PLANS FOR LENGTH

TYPICAL CHANNEL CLEANOUT CLASS A EXCAVATION

TYPICAL CREEK BED CLEANOUT
GRADING AT EACH END OF CULVERT
**CULVERT CLEANOUT**

<table>
<thead>
<tr>
<th>SHEET NO</th>
<th>STRUCTURE</th>
<th>LOCATION</th>
<th>1-7 CLEA</th>
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**TOTAL**

| 3 |

**SURVEYED CLEA:**

| 3 |

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<table>
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<th>QTY</th>
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<th>TOTAL QTY</th>
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**TOTAL CONSTRUCTION SIGNS:** 4

**RELOCATED SIGNS:** 4

**TOTAL:** 8

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NOT TO SCALE

SHOULDER WORK
WORK BEYOND THE SHOULDER DIVIDED AND UNDIVIDED

7 CHANNELIZERS AT 60" MAX SPACING
5 CHANNELIZERS AT 50" MAX SPACING

NOTES:

- PROVIDE SIGNS ON LEFT AND RIGHT SIDES OF DIVIDED HIGHWAYS.
- ROAD WORK AHEAD SIGN NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY POSTED.

SEE EPS 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S ROTATING LIGHTS OR STrobe LIGHTS.

WHEN CLOSED SHOULDERs HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED, AT LEAST THE ADVANCE WARNING SIGN SHALL BE USED. IN ADDITION, CHANNELIZING DEVICES SHALL BE USED TO GUIDE THE TRAFFIC IN ADVANCE TO DETECT THE RESTRICTED WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELLED PATH.

SEE TRAFFIC CONTROL SHEET 8 OF 8 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

TRAFFIC CONTROL LEGEND

- SHOULDER WORK
- TEMPORARY
- TRAFFIC CONTROL
- SHEET 1 OF 8

SHOULDER WORK

TEMPORARY

TRAFFIC CONTROL

SHEET 1 OF 8
NOT TO SCALE

STATIONARY LANE CLOSURE ON DIVIDED HIGHWAY
TEMPORARY TRAFFIC CONTROL

SHOWN ON SHEET 3 OF 8

SEE TRAFFIC CONTROL SHEET 8 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

REVISE AND/OR MODIFY ANY EXISTING PAVEMENT MARKING AS NEEDED.

TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM CLOSURES.

THIS INFORMATION ALSO SHALL BE USED WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN IN A DIVIDED HIGHWAY. IN THIS CASE, THE LEFT LANE CLOSED SIGNS AND THE CORRESPONDING MERGE OR LANE END SIGNS SHALL BE SUBSTITUTED.

WHEN A SIDE ROAD INTERSECTS THE HIGHWAY WITHIN THE TTC ZONE ADDITIONAL TTC DEVICES SHALL BE PLACED AS NEEDED.

TEMPORARY TRAFFIC BARRIERS. IF USED, SHALL COMPLY WITH THE PROVISIONS IN EPG 616.6.65 TEMPORARY TRAFFIC BARRIER.

AN ARROW BOARD SHALL BE USED WHEN A FREEWAY LANE IS CLOSED. WHEN MORE THAN ONE FREEWAY LANE IS CLOSED, A SEPARATE ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

REVIEW EPG 616.6.67 WARNING LIGHTS WHEN SEQUENTIAL OR WARNING LIGHTS SHOULD BE USED ON NIGHTTIME OPERATIONS.

IF RHOMBUS STRIPES ARE USED, REVIEW EPG 616.6.67 RHOMBUS STRIPES.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEM, REFER TO EPG 616.6.2.2 FLAG AND ADVANCE WARNING RAIL SYSTEM.

REVIEW EPG 616.6.63 CHANNELIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICES.
NOT TO SCALE

SHOULDER WORK ON DIVIDED HIGHWAY
REDUCED LANE WIDTHS

NOTES:

SEE TRAFFIC CONTROL SHEET 8 OF 8 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING TAPER LENGTHS.

ROAD WORK AHEAD NOT REQUIRED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AREA IS ALREADY USED.

IF SHOULDER IS SUITABLE FOR CARRYING TRAFFIC, THE LANES MAY BE SHIFTED TO THE SHOULDER WITH APPROPRIATE PAYMENT MARKING.

ROAD NARROWS SIGN SHOULD BE USED WHEN THE LANE #3TH IS REDUCED.

O N UNDIVIDED HIGHWAYS PROVIDE SIGNS ONLY ON THE RIGHT SIDE OF EACH APPROACH.

TEMPORARY TRAFFIC BARRIERS, IF USED, SHALL COMPLY WITH THE PROVISIONS OF EPG 616.6.85.

FOR FLAGS AND ADVANCE WARNING RAIL SYSTEMS, REFER TO EPG 616.6.2.2

FLAGS AND ADVANCED WARNING RAIL SYSTEM

11. SIGN #44 NOT REQUIRED FOR NARROW LANE SECTIONS LESS THAN ONE MILE.

12. FLARE BARRIER TO EXTEND BEYOND CLEAR ZONE OR FLARE BARRIER TO EDGE LINE AND USE APPROVED END TREATMENT.

CONCRETE BARRIER MAY BE INSTALLED AT AN 8:1 FLARE RATE FROM THE SHOULDER POINT TO THE LIMITS OF THE CLEAR ZONE WHERE THE SIDE SLOPE IS 6:1 OR FLATTER.

BARRIER HEIGHT TRANSITIONS MAY BE USED WHEN THE POSTED SPEED LIMIT PRIOR TO ROAD WORK IS LESS THAN 40 MPH.

APPROVED CRASH CUSHIONS ARE TO BE USED WHEN THE POSTED SPEED LIMIT PRIOR TO ROAD WORK IS GREATER THAN OR EQUAL 40 MPH.
NOT TO SCALE

NOTES:

1. SEE TRAFFIC CONTROL SHEET 6 OF 8 FOR SIGN SPACING, DEVICE SPACING AND CHANNELEDIZING TAPE LENGTHS.

2. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKING AS NEEDED.

3. TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

4. IF RUMBLE STRIPS ARE USED, REFER TO EPG 116.6.87 RUMBLE STRIPS.

5. FOR NIGHT TIME OPERATIONS, REFER TO EPG 616.6.83 WARNING LIGHTS FOR USE OF SEQUENTIAL LIGHTS.

6. REFER TO EPG 616.6.63 CHANNELEDIZING DEVICES FOR DIFFERENT TYPES AND GUIDELINES FOR THE DEVICE.

7. RAMP NARROWS SIGN IS REQUIRED WHEN RAMP WIDTH IS REDUCED.

8. YIELD SIGN SHOULD BE PLACED ON THE RAMP TO PROVIDE ADEQUATE VISIBILITY OF MAINLINE TRAFFIC. WHERE INADEQUATE ACCELERATION DISTANCE EXISTS FOR THE TEMPORARY ENTRANCE, THE YIELD SIGN SHALL BE REPLACED WITH STOP SIGNS ON EACH SIDE OF THE APPROACH.

9. THE LOCATION OF THE YIELD SIGN AND MERGE TAPER SHOULD BE ADJUSTED SO THAT THE ARROW PANEL LOCATION IS NOT CONFUSING TO MOTORISTS ON THE RAMP.

10. THE YIELD SIGN SHOULD BE PLACED ON THE RAMP TO PROVIDE ADEQUATE VISIBILITY OF MAINLINE TRAFFIC.

11. FOR WORK ZONES WHERE DEVICES ARE IN PLACE OVER NIGHT, USE TRIM-LINE CHANNELIZERS.

WORK IN VICINITY OF ENTRANCE RAMP
TEMPORARY TRAFFIC CONTROL SHEET 5 OF 8
GENERAL NOTES:

WHEN A ROAD USES EXCLUSIVELY AS A MALL ROAD IS NOT IN USE, THE MALL ROAD SHALL BE CLOSED WITH TYPE 3 BARREL. THE ROAD WORK AHEAD, BE PREPARED TO STOP, TRUCK ENTRANCE, TRUCK CROSSING, EQUIPMENT CROSSING OR ENTRANCE SIGNS COVERED.

THE FLAGGER SHALL FOLLOW THE PROCEDURES PROVIDED IN EPG 616.9.07 AND 616.9.08.

AT NIGHT, FLAGGER STATIONS SHALL BE ILLUMINATED WITH AT LEAST 4, TYPE 3 BARRELS 12V, 16.5 LUM.

SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.

IF RUMBLE STRIPS ARE USED, REVIEW 616.6.07 RUMBLE STRIPS.

SEE TRAFFIC CONTROL SHEET 8-8 FOR SIGN SPACING, DEVICE SPACING AND CHANNELIZING YIELD LENGTHS.

NOTES:

ON NON-DIVIDED HIGHWAYS, PROVIDE SIGNS ONLY ON THE RIGHT SIDE.

APPLICABLE ONLY WHEN LICENSED VEHICLES ARE ENTERING OR CROSSING TRAFFIC WITHOUT THE AID OF A FLAGGER.

SIGN 9020-1 NOT NEEDED IF CROSSING OR ENTRANCE IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER SIGN 9020-1 IS ALREADY IN USE.

SEE EPG 616.8.14B TEMPORARY MEDIAN OPENING FOR TEMPORARY MEDIAN OPENING DETAIL.

NOT TO SCALE
### Spacing and Taper Lengths for Work Zone Signs, Channelizers, and Concrete Barrier

#### Sign Spacing for Advance Sign Series (1) (2)

<table>
<thead>
<tr>
<th>Permanent Posted Speed</th>
<th>Undivided Highways</th>
<th>Divided Highways</th>
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<tbody>
<tr>
<td>MPH</td>
<td></td>
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</tr>
<tr>
<td>20-25</td>
<td>800</td>
<td>200</td>
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<tr>
<td>30-45</td>
<td>160</td>
<td>320</td>
</tr>
<tr>
<td>50-60</td>
<td>500</td>
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<td>60-70</td>
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<tr>
<td>80-90</td>
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</tbody>
</table>

**NOTE:**
- (1) Spacing between signs and spacing between last sign and flagger, beginning of taper, of signed condition.
- (2) Spacing may be adjusted as necessary to meet field conditions.
- (3) Taper lengths shown include length required for lane and 10' shoulder.
- (4) Concrete barrier may be installed at 8'-1' flare rate from the shoulder point of the limits of the clear zone where the side slope is 6:1 or flatter.

#### Taper Lengths and End Treatments for Concrete Barrier

<table>
<thead>
<tr>
<th>Permanent Posted Speed</th>
<th>Minimum Lane Taper Length (5)</th>
<th>END TREATMENT (4)</th>
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<tr>
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<td>40-45</td>
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#### Taper Lengths and Spacing for Channelizers

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<tr>
<th>Permanent Posted Speed</th>
<th>Minimum Lane Taper Length (5')</th>
<th>Minimum Shoulder Taper Length Based in 10' Shoulder FT</th>
<th>Buffer Length Through Taper FT</th>
<th>Maximum Channelizer Spacing Through Work Area</th>
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<tr>
<td>MPH</td>
<td>10'</td>
<td>11'</td>
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