(Revised July 2024)

OVERVIEW

This guideline pertains to all encroachments into the City of Osage Beach street right-of-ways, street easements and utility easements including: intersections with new roadways to be dedicated to the city, private roadways or parking areas, driveways, trenches for underground utilities such as water or sewer lines and any other underground utility, aerial utility lines, and roadway appurtenances.

PERMITS

A. A City of Osage Beach Road Cut and Utility Trench Permit is required prior to any encroachments into or over city right-of-ways or easements.

B. A City of Osage Beach Excavation Permit is required for any excavation of more than 50 cubic yards and/or cut or fill which change existing elevations by more than 2 feet.

GENERAL

A. Timely notice of work is required:

1. The applicant shall notify the city Building Official not less than twenty-four (24) hours in advance of any work in the city right-of-way or easements.
2. Additional notice shall be given to the City Building Official by telephone (573-302-2030) four (4) hours prior to actual excavation so that a City Inspector can be dispatched to carry out the required inspection.
3. As a general rule inspections will not be made on weekends or official city holidays. In the case of an emergency good judgment shall rule.

B. Timely completion of the work is required:

1. Disruption of public access or use shall be minimized to the maximum extent practicable.
2. Work within the city right-of-way or easement shall be done on a continuous basis, i.e.: once work is started it shall be continuous during normal work hours on a continual basis until completed.
3. Leaving open trenches or other excavations for more than forty-eight (48) hours is prohibited.

C. Traffic control, signs, and barricades:

1. All open trenches or excavations within street right-of-ways or easements shall be provided with appropriate warning signs and barricades.

2. If street traffic is interfered with appropriate flagman shall be provided.
3. All traffic control activities and devices shall conform to the U. S. Department of Transportation Manual of Uniform Control Devices.
4. If the excavated trench is to remain open or surface repairs to the street not completed prior to darkness appropriate warning lights shall be provided.
5. The applicant shall maintain all traffic control devices for the duration of the work.
6. At least one traffic lane shall be maintained in usable condition at all times.
7. All trenches within the traveled way shall be closed during nighttime hours.
8. No work will be permitted within the city right-of-way or easements over weekends or holiday periods.

INTERSECTIONS, PARKING AREAS, AND DRIVEWAYS

A. Prior to construction for all proposed intersections with new streets, parking areas and driveways the applicant shall:

1. Obtain an encroachment permit.
2. Submit a drawing showing horizontal and vertical alignment of the intersecting facility and all storm drainage facilities.

B. Intersecting streets and parking areas shall conform to the City of Osage Beach Design Standards for width, alignment, and grade.

1. Intersecting streets and parking areas shall have curb and gutters.
2. Streets, parking areas and driveways shall intersect perpendicular to the city street to the maximum extent practicable.

C. Minimum width for driveway entrances to commercial properties shall be 12-feet for a one-way entrance and 24-feet for two-way entrances. Minimum radius for flares shall be 15-feet.

D. Driveways for private residences shall be a minimum of 10-feet of driving surface exclusive of flares. Minimum radius for flares shall be 10-feet.

E. All entrances into city streets shall be designed and constructed to accommodate storm drainage run-off.

1. Appropriate catch drains shall be provided to accommodate run-off from or into driveways.
2. Where roadway ditches exist on the city street appropriate culverts, swales, or slotted drains shall be provided.

UTILITY TRENCHES

A. Utility trenches traversing under a city roadway.

1. Saw cut all pavement surfaces.
2. All utility lines, except storm sewer, across city right-of-ways shall be incased in Schedule 40 or SDR 21 PVC sleeve.
3. The sleeve shall be not less 2-inches in inside diameter larger than the maximum outside diameter of the widest dimension of the utility duct or pipe to be run through the sleeve.
4. The minimum depth of cover of the sleeve shall be:

    a. In accordance with Section 2 - Water Systems for waterlines
    b. In accordance with Section 3 - Sewerage Design for sanitary sewer
    c. In accordance with Section 4 - Storm Drainage for storm sewer
    d. 36 inches below finished pavement grade for all others or as described in this Section.

5. The maximum depth of cover shall be in accordance with the appropriate section for the utility.

    a. In accordance with Section 2 - Water Systems for waterlines
    b. In accordance with Section 3 - Sewerage Design for sanitary sewer

6. Select Backfill shall be installed:

    a. From 6-inches below the utility to 18-inches below the finished pavement grade for water, pressure sewer and primary power lines.
    b. From 4-inches below the utility to 9-inches below the finished pavement grade for storm sewer and secondary power lines.

    Select backfill shall be 95% of maximum density crushed rock conforming to MoDOT Type V aggregate, Section 1007. Trench backfill material shall not contain any material with a nominal particle size greater than 6-inches.

7. Concrete Backfill:

    a. Shall be installed from 3-inches below finished pavement grade to the top of the Select Backfill.
    b. The top 6-inches of the concrete backfill shall be extended not less than twelve inches on each side of the utility trench.
    c. Shall conform to MDOT Section 501, Concrete.

        1) Concrete shall be Class A-1
        2) Course aggregate shall be Gradation B
        3) Fine aggregate shall be Class A

4) Cement shall be either Type I or III.
5) An accelerator may be used in conformance with MoDOT Section 1054.5.

8. Asphalt Pavement

a. Shall be installed from the surface to 3-inches below finished grade.
b. Asphalt pavement shall conform to MoDOT Section 403; Type 1B
c. Asphalt cement shall be AC-30
d. Concrete backfill as specified above maybe utilized in lieu of asphalt pavement with prior permission of the City Engineer.
e. Finish Tolerance the surface of the finished roadcut shall not exceed ¼-inch below a 10-foot straight edge as measured below the straight edge.

B. Utility trenches paralleling under a city roadway or parking area.

1. Saw cut all pavement surfaces.
2. The minimum depth of cover shall be:

a. In accordance with Section 2 - Water Systems for waterlines
b. In accordance with Section 3 - Sewerage Design for sanitary sewer
c. In accordance with Section 4 - Storm Drainage for storm sewer
d. 24 inches below finished pavement grade for all others or as described in this Section.

3. Select Backfill shall be installed:

a. From 6-inches below the utility to 3-inches below the finished pavement grade.
b. Select backfill shall be 95% of maximum density crushed rock conforming to MoDOT Type V aggregate, Section 1007. Trench backfill material shall not contain any material with a nominal particle size greater than 6-inches.
c. Select backfill shall be placed in maximum 8-inch lifts and mechanically compacted to a compaction of 95% SPT.

4. Asphalt Pavement

a. Shall be installed from the surface to 3-inches below finished grade.
b. Asphalt pavement shall conform to MoDOT Section 403; Type 1B
c. Asphalt cement shall be AC-30
d. Concrete backfill as specified above maybe utilized in lieu of asphalt pavement with prior permission of the City Engineer.
e. Finish Tolerance the surface of the finished roadcut shall not exceed ¼-inch below a 10-foot straight edge as measured below

the straight edge.

C. Utility trenches out of traffic area

1. The minimum depth of cover shall be:

   a. In accordance with Section 2 - Water Systems for waterlines
   b. In accordance with Section 3 - Sewerage Design for sanitary sewer
   c. In accordance with Section 4 - Storm Drainage for storm sewer
   d. 24-inches below finished pavement grade for all others or as described in this Section.

3. Select Backfill shall be installed:

   a. In accordance with Section 2 - Water Systems for waterlines
   b. In accordance with Section 3 - Sewerage Design for sanitary sewer
   c. In accordance with Section 4 - Storm Drainage for storm sewer
   d. 6 inches below the utility line to 12-inches above the utility line for all others.

4. Backfill shall be granular material or select soil excavated from the trench, free of rocks over 6-inch in least dimension, foreign material or frozen earth.

   a. Backfill shall be compacted to 95% of optimum density at optimum moisture content.
   b. The surface shall be graded to smooth flowing lines blending into surrounding slopes.

5. Restore disturbed surface area to pre-construction condition (seed & mulch, decorative rock, etc.).

D. Underground Primary Power Trenches. All electrical power of 480 volts AC or more is considered “primary power”.

1. See Ameren Missouri Specifications for requirements.
2. Where underground primary power crosses city utilities, the primary power shall be a minimum of 1-foot below.
3. Where primary power line parallels a city utility line it shall be separated by a minimum of 4-feet.

E. Underground Secondary Power Trenches, all electrical power less than 480 volts.

1. See Ameren Missouri Specifications for requirements. Where secondary power will be owned by the City, the following shall apply:

   a. Secondary power trenches shall be a minimum of 24-inches of cover in depth.

b. An approved warning tape shall be installed twelve-inches above the duct.
c. Underground secondary power ducts can be co-located with water or sewer lines if they are placed not less than 1-foot to the side and at or below the elevation of the water or sewer line.
d. Where secondary power crosses water or sewer lines, the power shall be in conduit and shall be a minimum of 1-foot below water or sewer lines.

ROAD BORES

In all location where the utility is to be installed under a paved area that has been constructed within the previous five years, as determined by the city engineer, a road bore shall be constructed. The minimum depth of the bore shall be 36-inches. All bores shall be sleeved as specified above.

AERIAL UTILITIES

A. Minimum vertical clearance for aerial utilities shall be a minimum of 18 feet at the lowest point of crossing above the finished pavement grade of any city street.

B. Utility poles shall not be located less than 3-feet from the edge of pavement on city streets or parking areas.

ROADWAY APPURTENANCES

A. Traffic control signs shall be installed in accordance with US Department of Transportation and Federal Highway Administrations Uniform Manual of Traffic Control Devices.

B. Other signs.

1. A City of Osage Beach Sign Permit is required for all signs within city right-of-ways or easements except traffic control signs.

C. No sign shall be installed within 3-feet of the edge of pavement

D. Mailbox.

1. Mailboxes and/or newspaper boxes shall not be located within 12-inches of the edge of pavement on city streets.
2. If the street has concrete curb and gutter the face of the mailbox shall not protrude into the roadway past the back of the curb.
3. Mail and newspaper boxes shall be removed within thirty days of cessation of delivery service. If the box is unused and not removed the city will remove it at the owner's expense.

E. Guard Rail or Crash Barrier

1. Shall only be installed at locations where a severe traffic safety hazard exists and only with the approval of the City Engineer.
2. Installation shall conform to MoDOT Specifications.

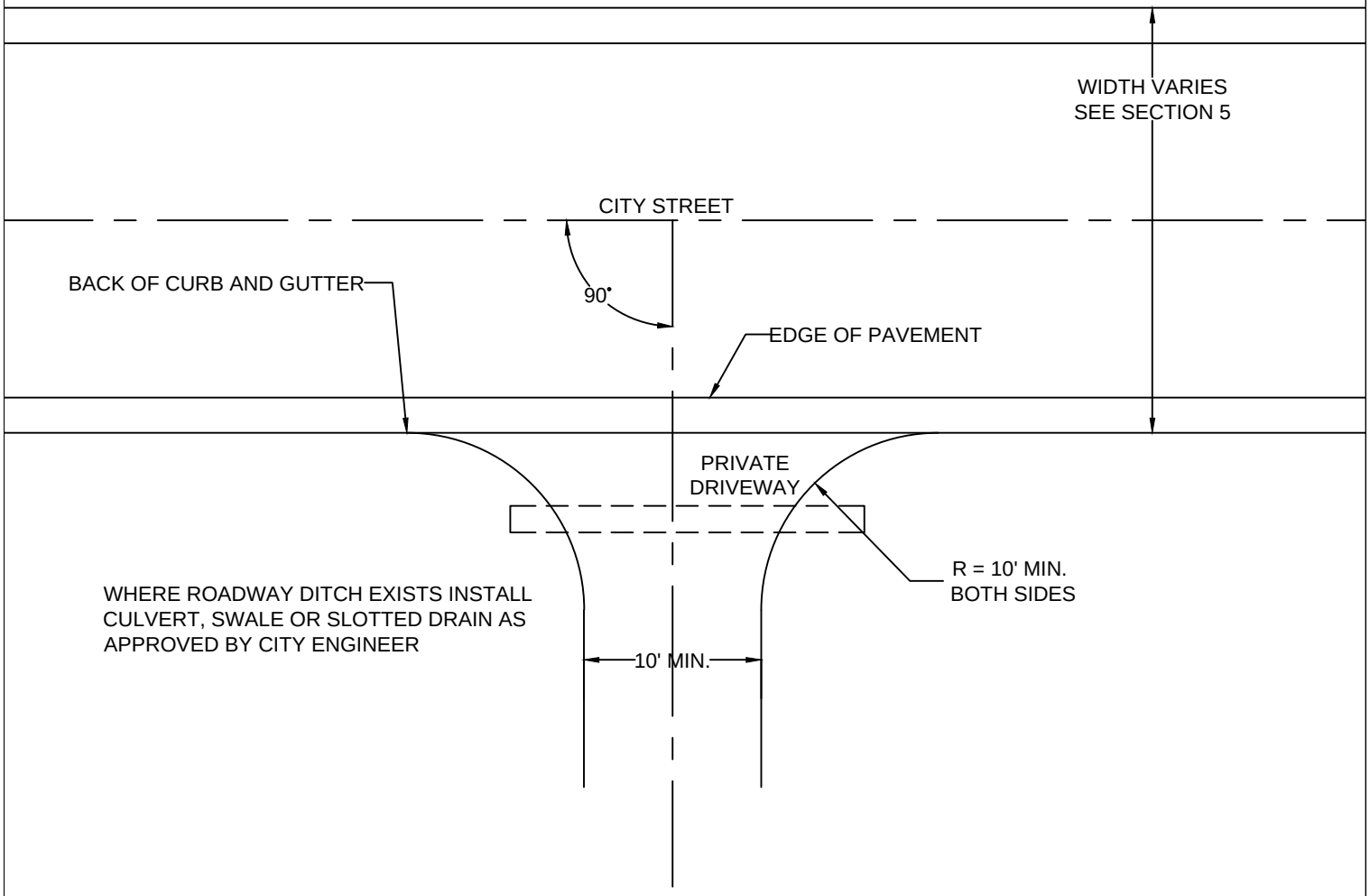
INSPECTIONS

During the progress of the work each utility line shall be inspected by the Engineering Department prior to trench backfill.

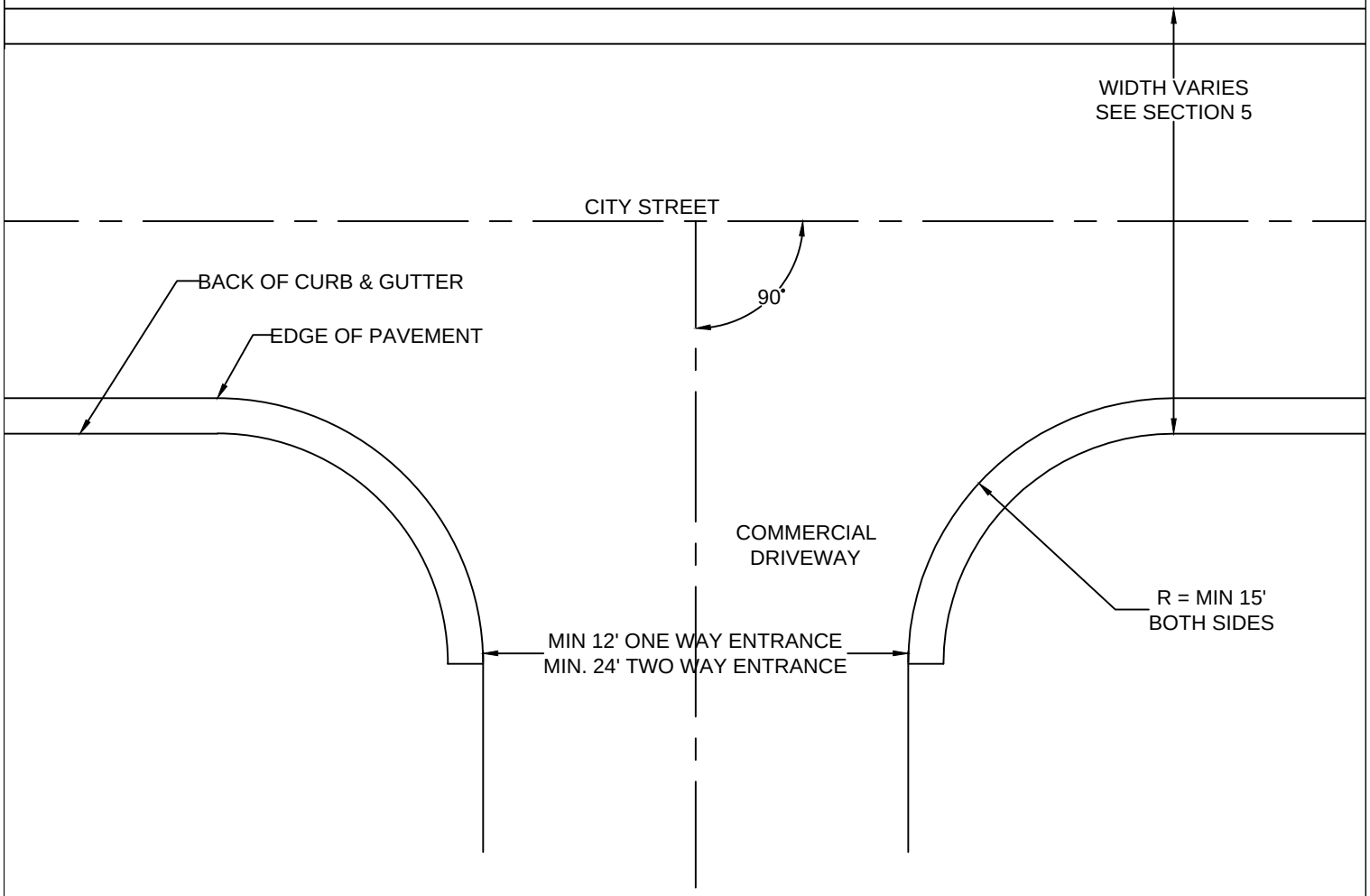
ROADCUT AND UTIITY TRENCH CONSTRUCTION DETAIL DRAWINGS

Construction details and sketches are attached.

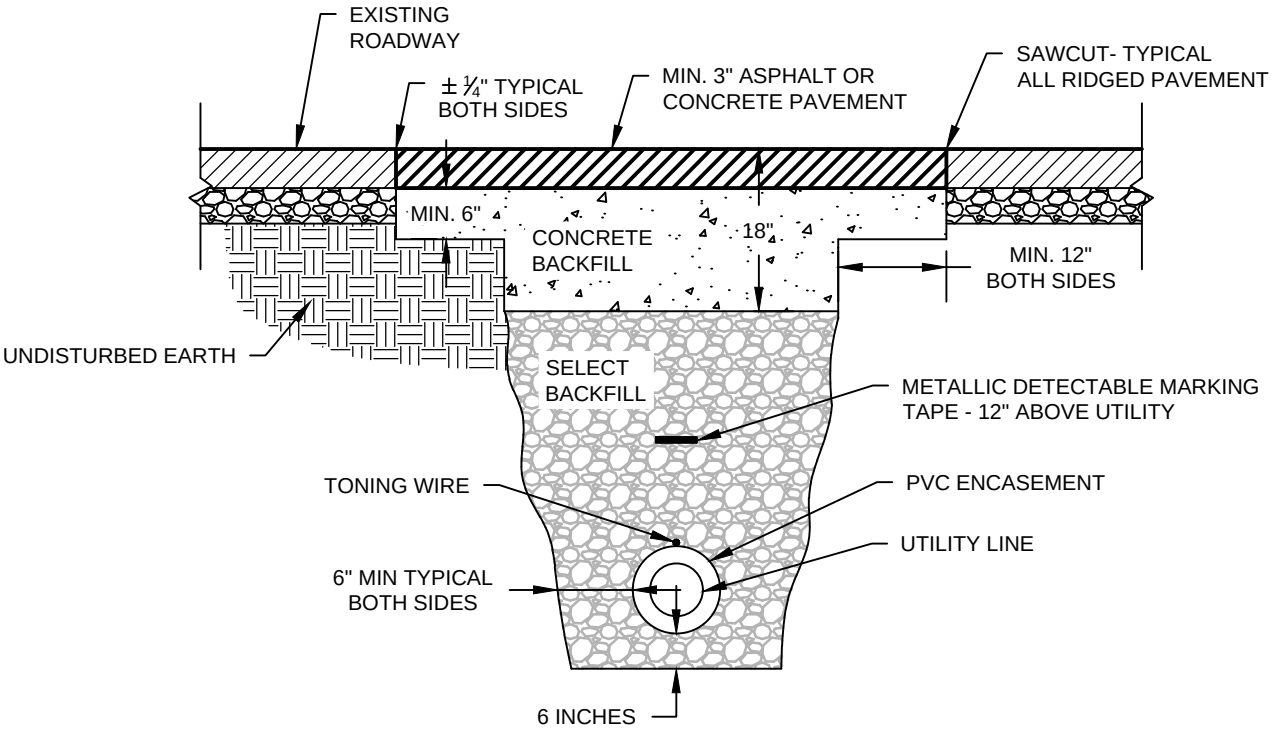
END



Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL PRIVATE RESIDENCE ENTRANCE INTERSECTING CITY STREET	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-1

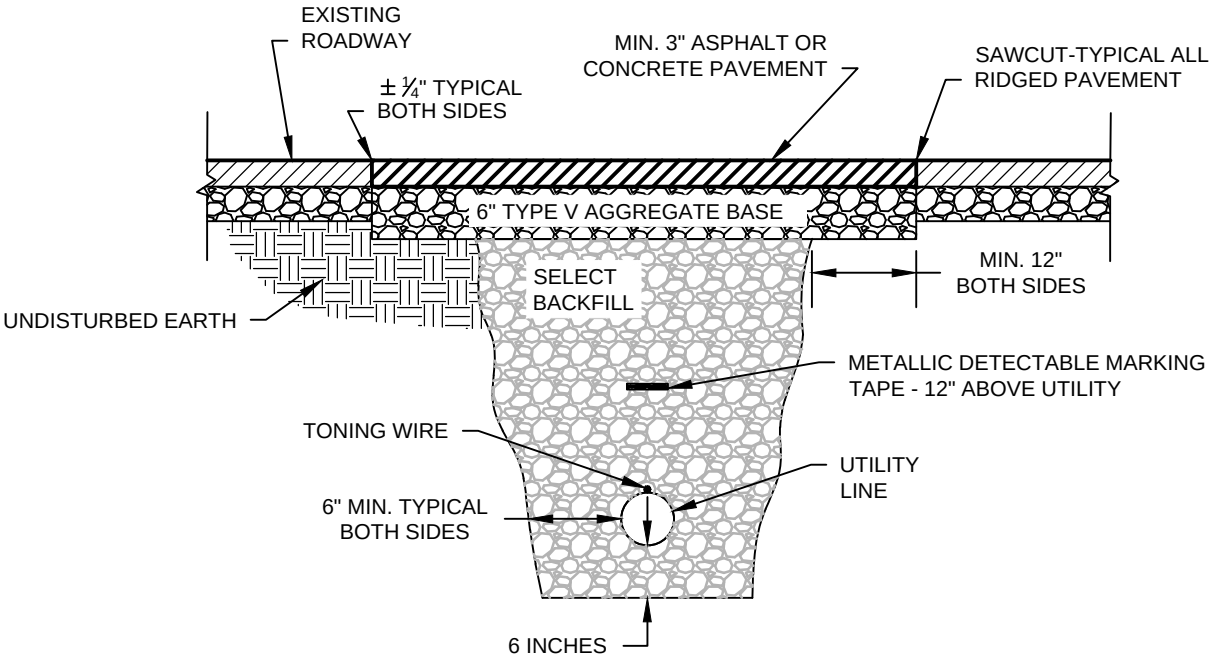


Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL COMMERCIAL ENTRANCE INTERSECTING CITY STREET	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-2



NOTE: SAWCUT SHALL BE CONTINUOUS WITH SMOOTH, TAPERED TRANSITIONS IN WIDTH IN ORDER TO MAINTAIN A CONSISTENT PAVEMENT RESTORATION WIDTH.

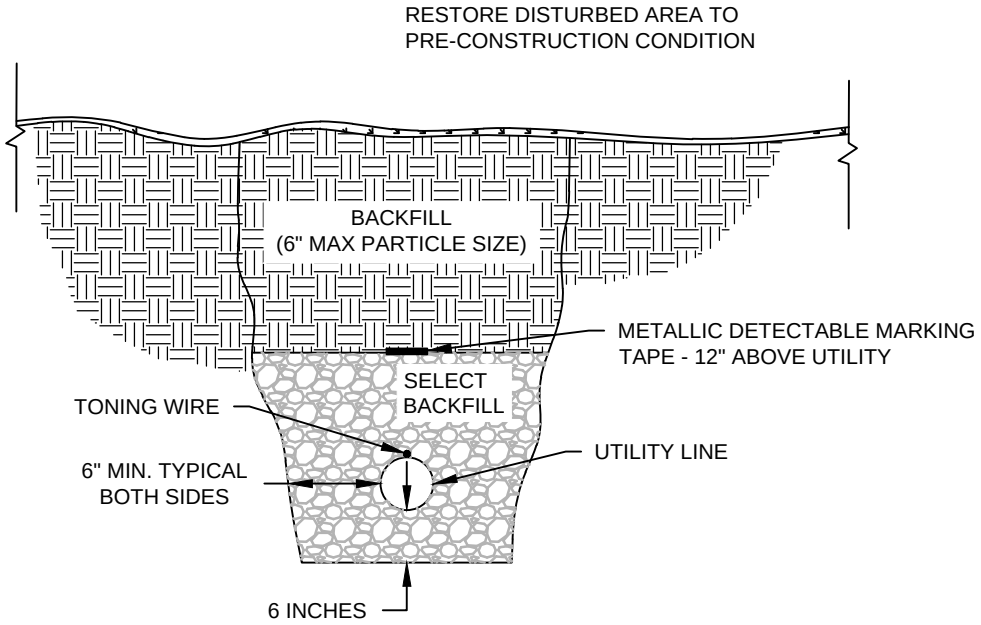
Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL UTILITY TRENCH TRAVERSING A CITY ROADWAY	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-3



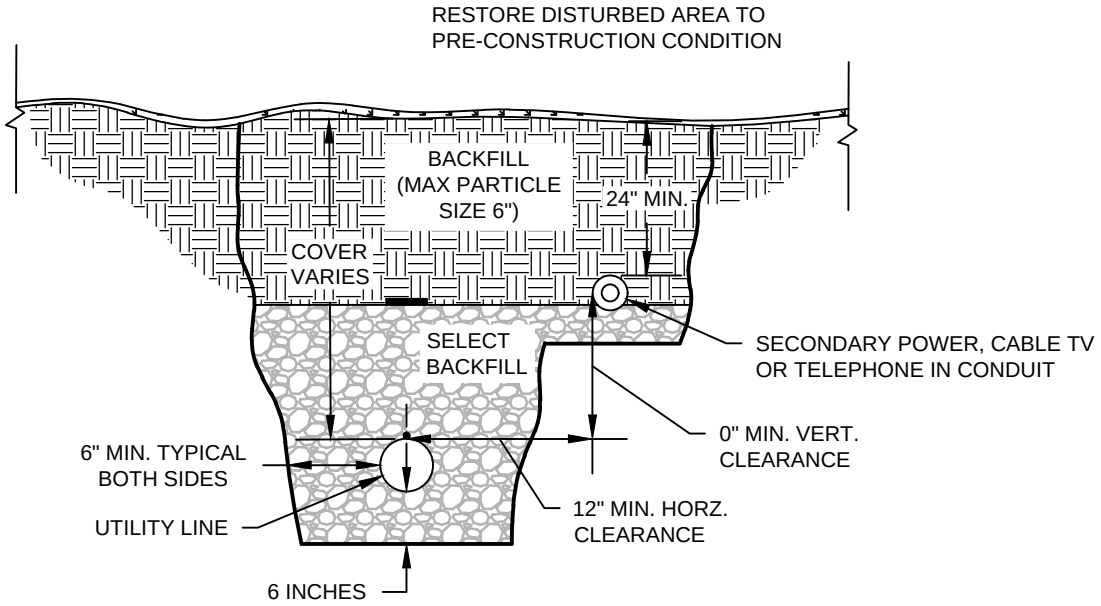
NOTE: SAWCUT SHALL BE CONTINUOUS WITH SMOOTH, TAPERED TRANSITIONS IN WIDTH IN ORDER TO MAINTAIN A CONSISTENT PAVEMENT RESTORATION WIDTH.

Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL UTILITY TRENCH PARALLELING CITY ROADWAY	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-4

NOTE: THE MINIMUM DEPTH OF COVER VARIES PER UTILITY. REFER TO INDIVIDUAL SECTION FOR COVER REQUIREMENTS.

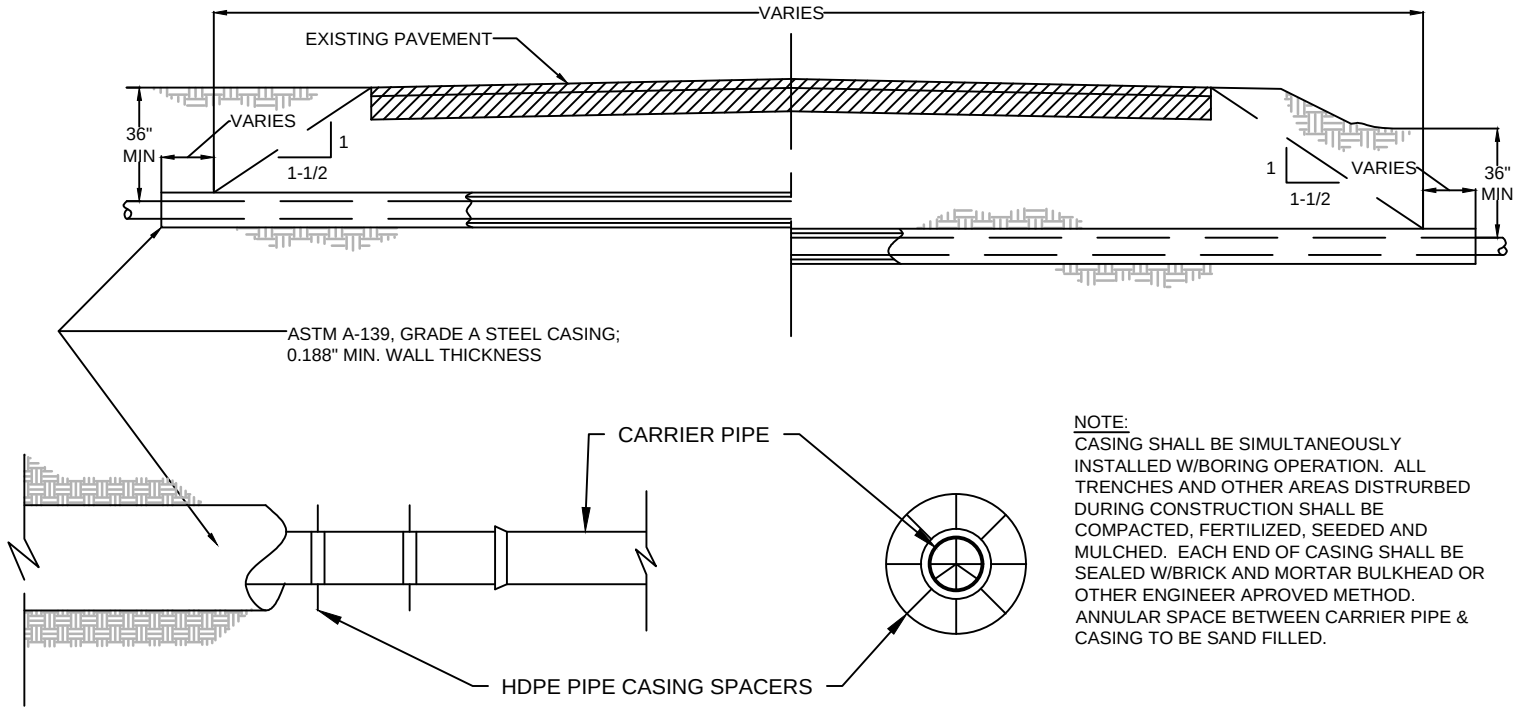


Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL UTILITY TRENCH OUT OF TRAFFIC AREA	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-5



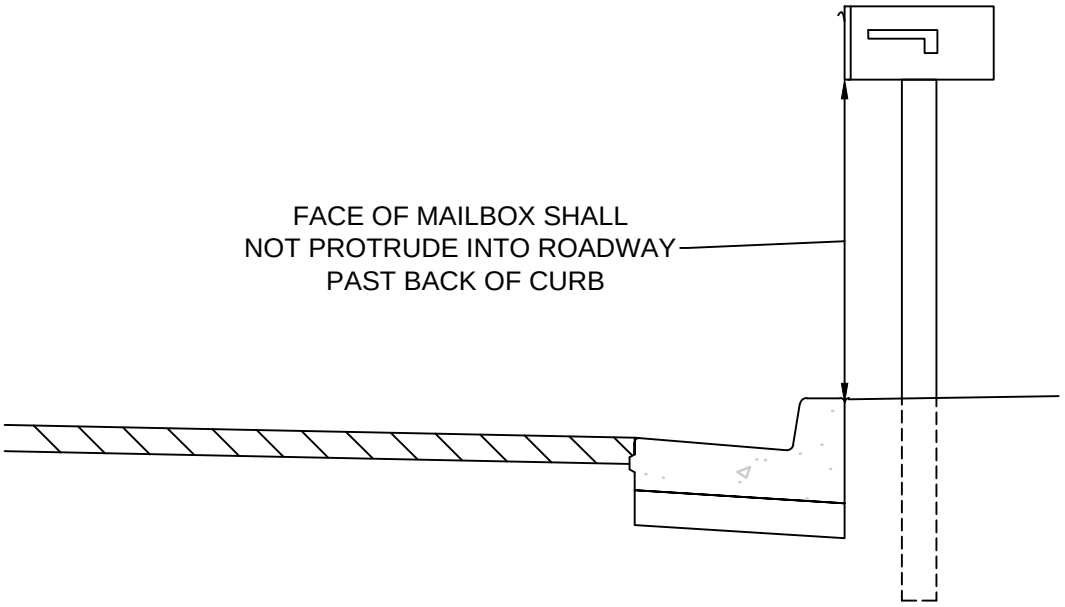
NOTES:
1. WARNING TAPE TO BE PLACED 12" ABOVE BOTH UTILITIES.
2. TONING WIRE TO BE PLACED TAPED TO THE TOP OF THE WATER/SEWER UTILITY.
3. DETAIL IS FOR OUT OF TRAFFIC AREAS. IF UTILITIES ARE LOCATED WITHIN THE CITY STREET BACKFILL SHALL BE AS DETAILED IN TRAVERSING OR PARALLELING CITY ROADWAY WHICH EVER MAY APPLY.

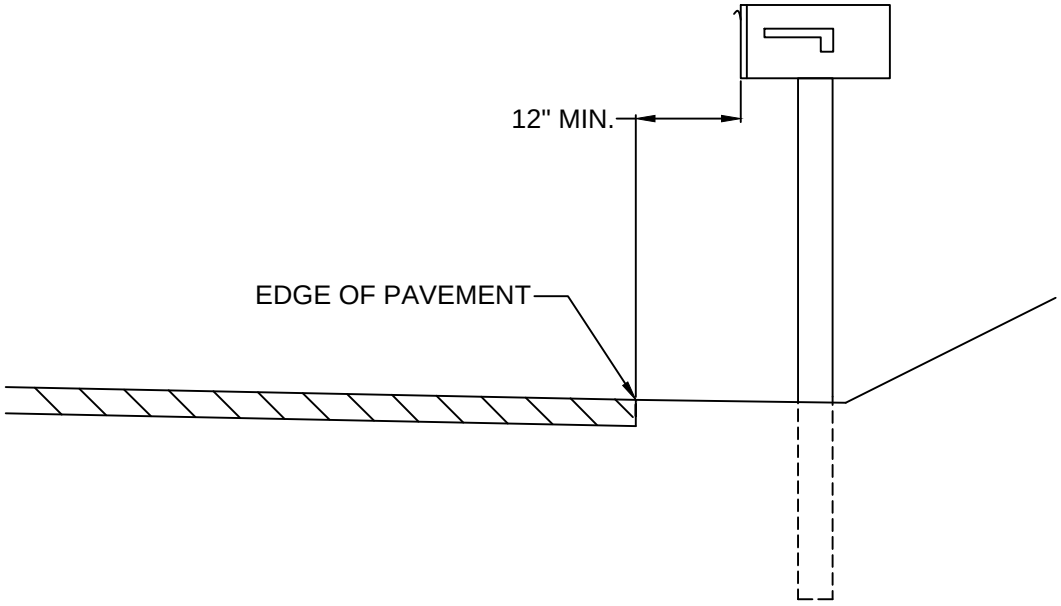
Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL WATER & SEWER IN SAME TRENCH AS SECONDARY POWER	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-6



NOTE:
CASING SHALL BE SIMULTANEOUSLY INSTALLED W/BORING OPERATION. ALL TRENCHES AND OTHER AREAS DISTRURBED DURING CONSTRUCTION SHALL BE COMPACTED, FERTILIZED, SEEDED AND MULCHED. EACH END OF CASING SHALL BE SEALED W/BRICK AND MORTAR BULKHEAD OR OTHER ENGINEER APROVED METHOD. ANNULAR SPACE BETWEEN CARRIER PIPE & CASING TO BE SAND FILLED.

Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL HIGHWAY CROSSING BORE/ENCASEMENT	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No: VI-7





Date Revised: APRIL 2014	CITY OF OSAGE BEACH TYPICAL DETAIL MAILBOX LOCATION	Design Guideline: SECTION 6
By: JMY		ROAD CUTS, UTILITY TRENCHES, AND EXCAVATION
Checked By: SLB		Drawing No.: VI-8