

SECTION 2 -- ROADWAY REQUIREMENTS

2.1 General

2.1.1 The typical cross section of new roadways shall conform to Fig. II-1.

2.2 Horizontal Alignment

2.1.1 The alignment design shall be consistent with acceptable engineering practices and should be such that the safety of the facility is not compromised. Every effort should be made to meet the requirements for a minimum design speed of 30 m.p.h.

2.1.1.1 Street curves shall be designed with as large a radius as feasible, the minimum radius being 200 feet.

2.1.1.2 Streets shall preferably intersect at a 90 degree angle, but in no case, less than 70 degrees.

2.1.1.3 No more than two proposed streets shall intersect at any one location. Closely spaced offset intersections shall also be avoided.

2.1.1.4 Right-of-way bounds shall be required at all angle points, at the PC and PT points of all curves and at the PC and PT points of right-of-way radii at intersections. Bounds shall conform to Section 622 of the Standard Specifications.

2.1.2 At street intersections, the minimum radius of curb return where curbs are used or the outside edge of pavement where curbs are not used, shall be 25 feet.

2.1.2.1 The minimum right-of-way radii at intersections shall be 18 feet.

2.1.2.2 Sight distance calculations may be required for intersections and changes in alignment on a case-by-case basis. Sight distance analysis shall be as outlined in "A Policy on Geometric Design of Highways and Streets 1984", as amended and published by AASHTO.

2.1.3 Cul-de-sacs shall be of the circular, all-paved type and shall have a minimum curb radius of 50 feet (See Fig. II-2).

2.1.3.1 The maximum length for roadways ending at cul-de-sacs shall be 600 feet, measured from the curb line of the intersecting roadway to the beginning of the pavement transition at the cul-de-sac.

2.1.3.2 Turnarounds other than the specified cul-de-sac will be allowed only as a temporary measure (See Fig. II-3).

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2.3 Vertical Alignment

2.3.1 Grades shall be no flatter than 0.75 percent. Desirable maximum grades shall be 6 percent with an absolute maximum of 9 percent.

2.3.1.1 Except for stop conditions at intersections, the minimum K values for vertical curves shall be 40 for sags and 30 for crests. The length of vertical curve and corresponding K value shall be shown on the profile.

2.3.1.2 Existing ground elevations and proposed finished centerline grades, shall be shown on the profile at increments of 50' or less.

2.3.2 The gradients of intersecting roadways shall be as flat as practical, in order to provide approach platforms for stopped vehicles.

2.3.2.1 Approach platforms shall extend back from the intersecting roadway a minimum of 100 feet. The platforms shall not exceed a grade of 3 percent unless approved by the Director of Public Works.

2.4 Cross Sections

2.4.1 Cross sections shall be required for all new construction and for improvements to existing roadways for projects 500 linear feet or greater in length. The necessity for cross sections for projects less than 500 linear feet in length shall be at the discretion of the Department of Highways.

2.4.1.1 Cross sections shall be required at intervals no greater than 50 feet. Cross sections shall also be required for all intersecting streets and at all proposed driveways. Additional cross sections may be required at the discretion of the Public Works Director.

2.4.1.2 The roadway template shall conform to the City of Manchester, Department of Highways typical roadway section for all subdivision and site improvement projects. (See Fig. II-1) Any change in or variation from the typical roadway section relative to improvements of existing roadways shall be submitted for review and approval.

2.4.1.3 Sufficient cross section data shall be obtained and gutter line grades shown in those areas where the normal cross slope of the roadway changes.

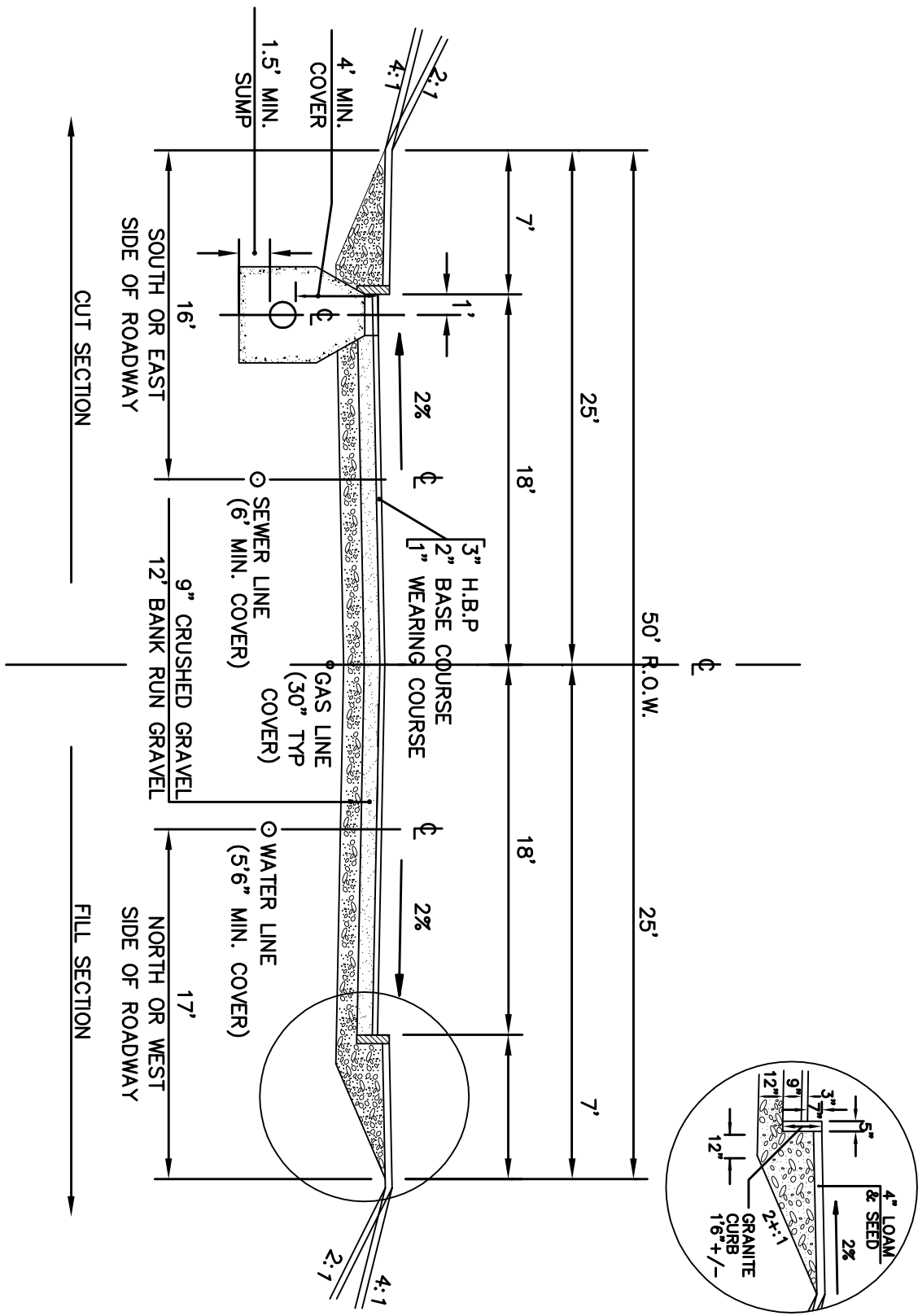
2.5 Driveways

2.5.1 Driveways shall conform to the requirements of the City of Manchester Building Department and the State of New Hampshire Department of Transportation "Policy and Procedure for Driveways and Other Accesses."

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2.5.1.1 All driveways shall have a minimum positive pitch of 2 percent for a distance of 7 feet from the gutter line. Driveway treatment for cut and fill conditions, shall be as shown in Fig. 610-1.

2.5.1.2 All driveways shall be paved to the limits of the right-of-way with a minimum of 3" of pavement.

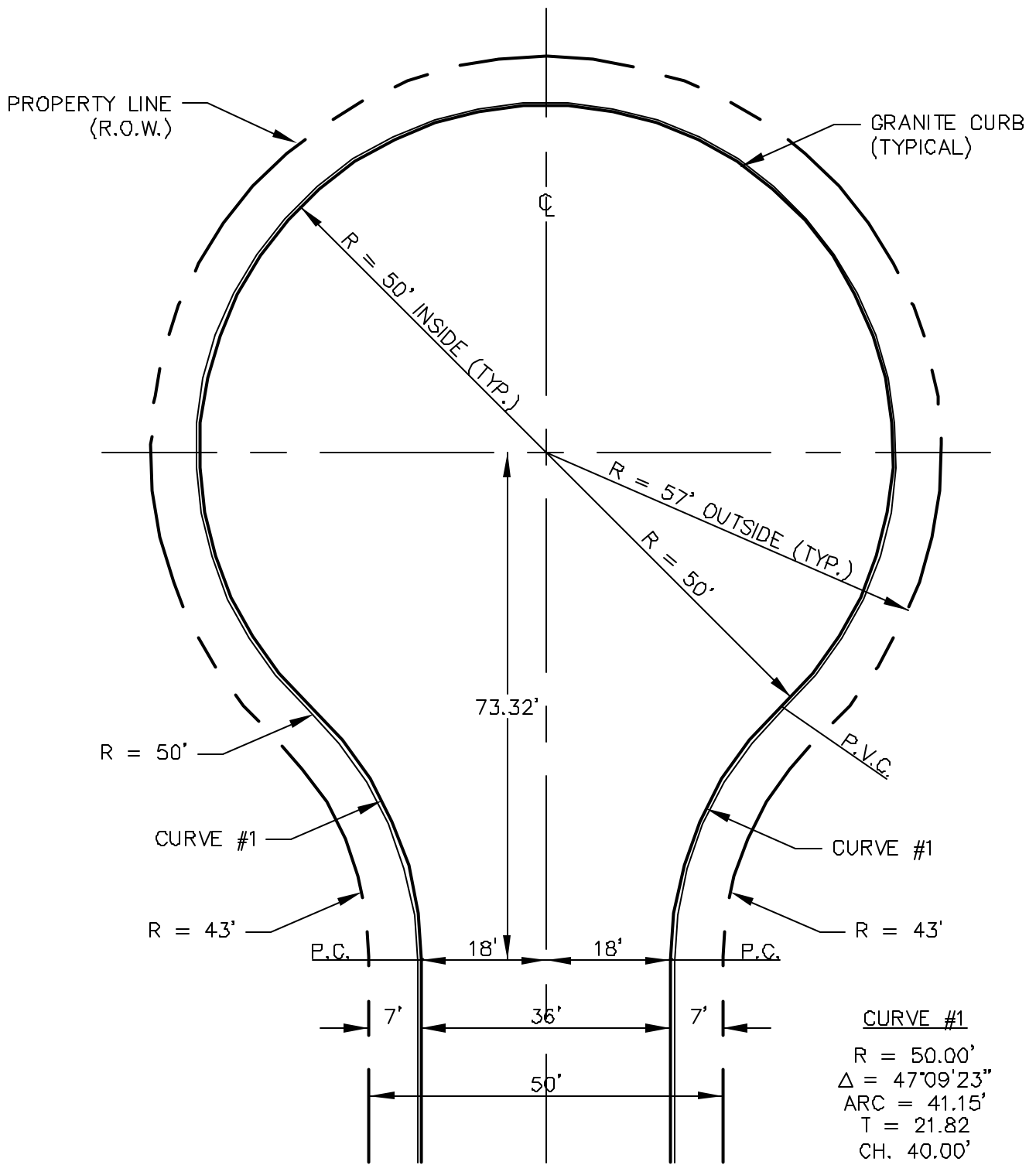


TYPICAL ROADWAY SECTION

S:\DWG\DETAILS\2-1 ROADWAY.DWG

STATIONING
 SOUTH TO NORTH
 WEST TO EAST

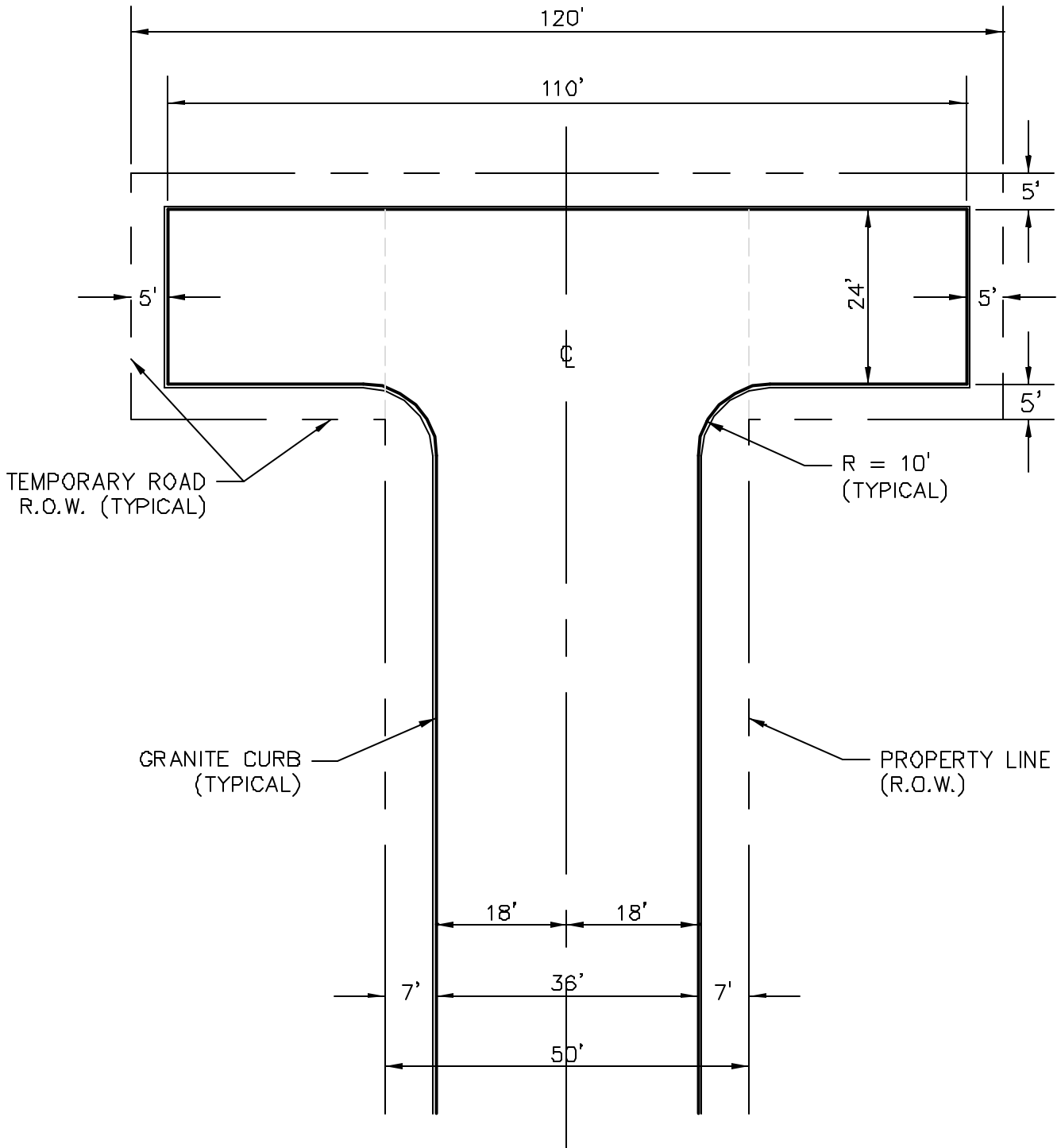
NOT TO SCALE
 FIGURE II, 2-1



TYPICAL CUL-DE-SAC

SR:\DWG\DETAILS\2-2 CULDESAC.DWG

NOT TO SCALE
 FIGURE II, 2-2



TYPICAL TEMPORARY TURNAROUND

S:\DWG\DETAILS\2-3 HMRHEAD.DWG

NOT TO SCALE
 FIGURE II, 2-3