

CHAPTER 1207 ZONING DEVELOPMENT AND SITE PLAN STANDARDS

SECTION 1207.13 TRANSPORTATION/CIRCULATION/PEDESTRIAN LINKAGE

(a) Purpose

The purpose of this section is to establish the street design and circulation criteria for development in Hudson, protect the integrity of the existing transportation network, support area design compatibility as established in the Hudson Comprehensive Plan, and provide for safe and efficient roadway and pedestrian systems.

(b) General Criteria

(1) Transportation Plan and Functional Classification System

(A) Establishment of Transportation Plan and Functional Classification System. The location and functional classifications of necessary freeway, arterial and collector roads have been established by Ordinance. All zoning district regulations referencing arterial roads shall be guided by the definition of arterial street found in Section 1213.02 Definitions, Street, arterial.

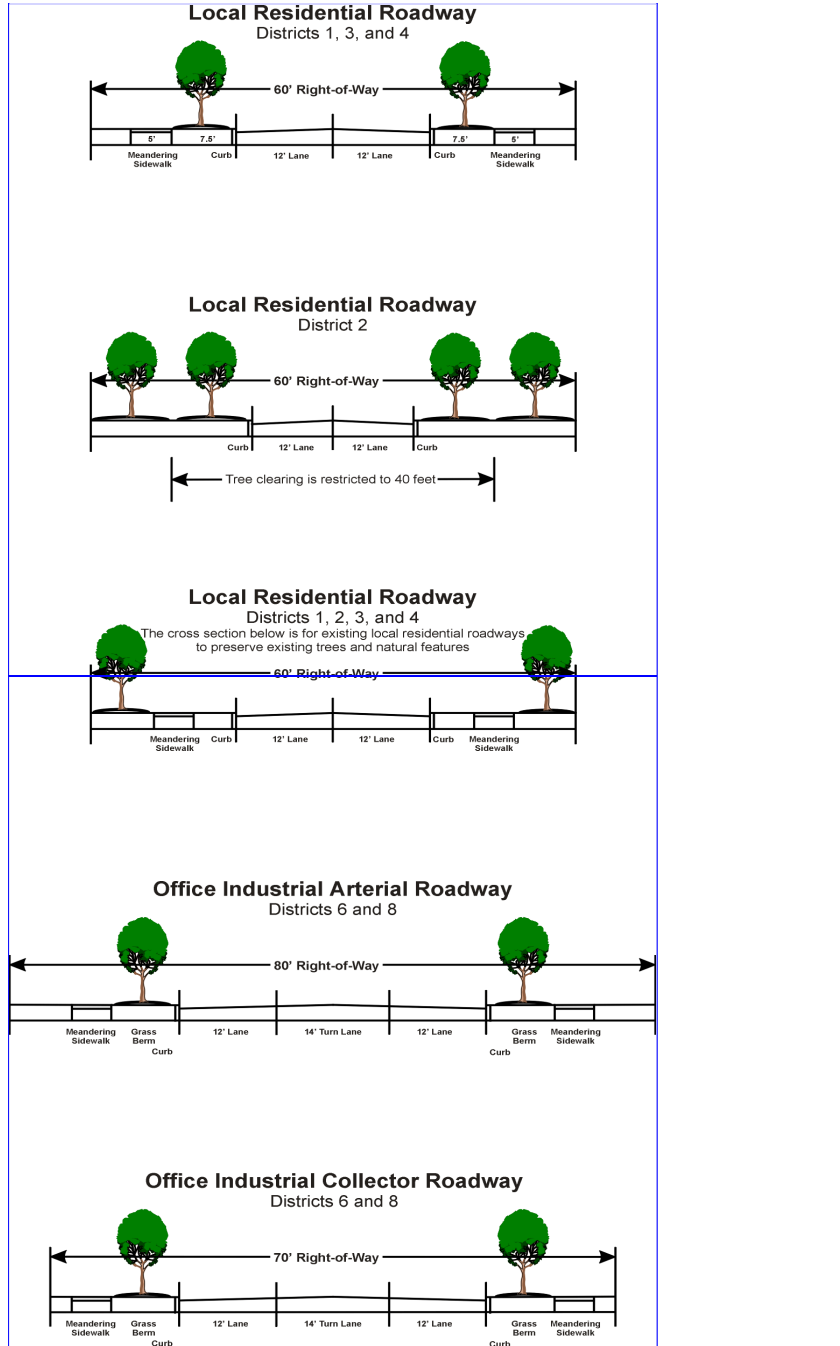
(B) South 91 Corridor Studies.

All development adjacent to SR-91 from Stoney Hill Drive to Barlow Road necessitating road improvements must be in compliance with the South 91 Corridor Access Management Plan adopted in July, 1997, as amended. All development adjacent to SR91 from Terex Road to Norton Road must be in compliance with the SR91 Traffic Corridor Study adopted in February 2003, as amended.

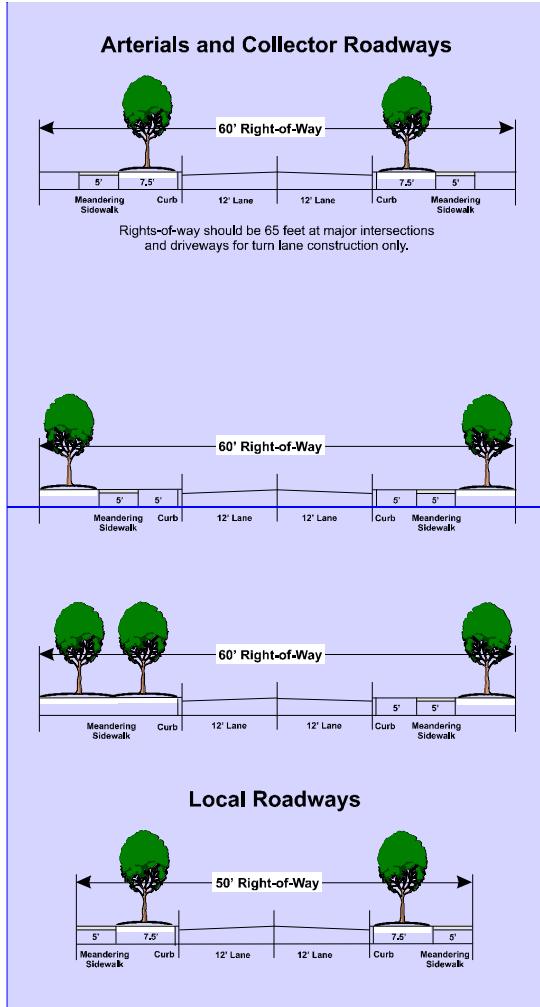
(C) Standard Roadway Cross Section Design and Pavement Specifications. All roadways shall be designed in compliance with the Roadway Cross Sections indicated in Figure 25. All roadways shall be constructed in accordance with Figure 26, Pavement Specifications-City of Hudson Engineering Standards.

(D) State Access Management Standards. In reviewing development projects adjacent to collector and arterial roads, the Planning Commission shall require adherence to the latest edition or revision of the State of Ohio Department of Transportation's State Highway Access Management Manual. Access Management Handbook Standards, dated
September 1, 1998, as amended.

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Comment [HG1]: Relocate to the City of Hudson Engineering Standards



Comment [HG2]: Relocate to the City of Hudson Engineering Standards

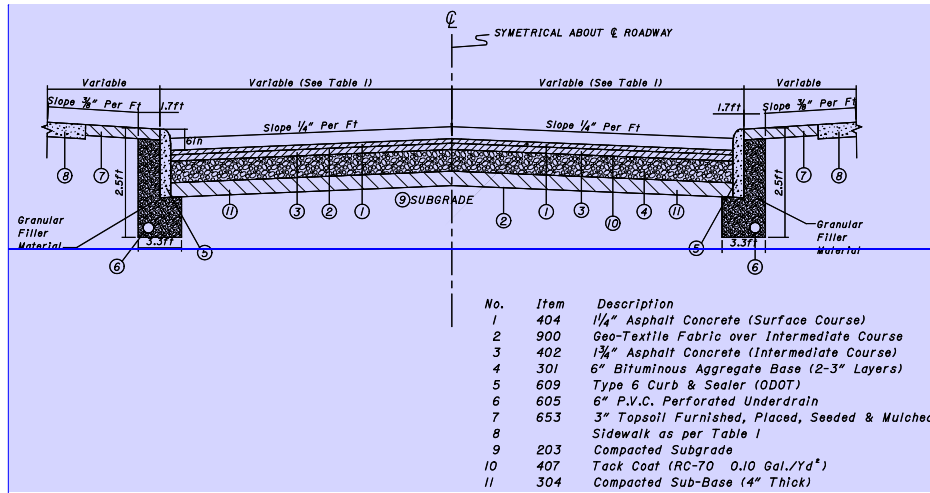


Figure 26: Pavement Specifications

Comment [HG3]: Relocate to the City of Hudson Engineering Standards

(2) Road Widening and Capacity. Any increases in road capacity or proposed widenings shall be in compliance with the Transportation Policy Statements of the current City of Hudson Comprehensive Plan, adopted August 2, 1995.

(3) Traffic Impact Studies. All proposed new residential subdivisions, commercial and industrial development and changes in usage in non-residential structures shall refer to the A Guideline Manual for the Preparation of a Traffic Impact Study on file at the Department of Community Development, City of Hudson Engineering Standards regarding the requirement to and if required by the Manual, prepare and submit a traffic impact study in accordance with the provisions there in.

Comment [HG4]: TMS Engineers has provided suggested text

(4)(3) Level of Service Requirements.

- (A) All developments and subdivisions required to prepare a traffic impact study shall demonstrate compliance with level of service requirements set forth in Section 1207.11 Adequate Public Facilities, Subsection (b)(3), Transportation.
- (B) An applicant or developer shall provide roadway improvements as required by the City to maintain or improve the level of service of an arterial or collector street shown by the traffic impact study to be adversely affected by the proposed development or subdivision.
- (C) If a proposed development or subdivision does not adversely change the level of service, the developer shall pay a proportionate share necessitated by the development of traffic mitigation measures for any proposed roadway segment or intersection improvement within a 1/4 mile radius of a proposed development or subdivision, as outlined in the Transportation Network Traffic Model Analysis dated November 4, 1997, and whose designated level of service is at or below a LOS C as found in the November 4, 1996 Analysis.

(c) *Streets and Easements and Alleyways*

(1) Streets:

- (A) Streets depicted on a subdivision plat shall conform to the Transportation Plan map and Cross Section Design.
- (B) All streets shall be aligned to join with planned or existing streets.
- (C) All streets shall be designed to bear a logical relationship to the topography of the land.
- (D) Streets shall be laid out so as to intersect as nearly as possible at right angles.
- (E) A proposed intersection of two streets, either one new street to an existing street or two new streets, shall not have an angle less than 80 degrees.
- (F) An oblique street should be curved approaching an intersection and shall be approximately at right angles for at least one hundred and fifty feet therefrom.
- (G) No more than two streets shall intersect at any one point.

(2) Cul-de-sacs:

- (A) Cul-de-sacs should be avoided to the maximum extent feasible.
- (B) Cul-de-sacs shall be permitted only if they do not exceed a maximum length of 2600 feet ~~or seven times the average lot width of the lots fronting the cul-de-sac whichever is less.~~ The measurement shall be from the mid-point of the intersection with another street to the center point of the cul-de-sac turnaround. Temporary cul-de-sacs may be longer than the 2600 foot maximum only when classified as a stub street.
- (C) Cul-de-sacs shall have pavement with a turnaround radius of 40 feet.
- (D) Cul-de-sac right-of-ways shall have minimum radius of 60 feet.
- (E) No center islands shall be allowed in cul-de-sacs with a diameter of 60 feet or less.
- (F) Exceptions: ~~Industrial~~ Cul-de-sacs in District 6 and 8 have no maximum length provision provided adequate emergency access is provided as approved by the Fire Department. However, proposed ~~industrial~~ developments must tie into other existing ~~industrial~~ developments where practicable and as required through the site plan review process.

(3) Stub Streets

Stub Streets are required to provide continued access to future development. Provisions shall be made to establish stub streets to provide for the continuation of a development between adjacent properties if the adjacent property is undeveloped, ~~is in the same zone district, and the adjacent property is~~ not subject to a permanent conservation easement. A temporary cul-de-sac ~~with an outside roadway dimension of 80 feet and a temporary property line/right of way line of 120 feet shall be provided until such time as it will be extended.~~ At no time shall the roadway or temporary property line/right of way line be placed on the adjacent undeveloped parcel. The permanent right-of-way line shall extend to the end of the property with a 5 foot reservation strip along the width of the right-of-way. The party

responsible for the extension of the stub street shall be responsible for the restoration, grading, and the securing of all necessary temporary agreements to complete the work for each property abutting the temporary property line/right-of-way line as approved by the City Engineer. On streets serving less than 12 residences, hammerhead turnarounds and cul-de-sacs may be used instead of stub streets.

- (4) Controlled Access Median Strips. Controlled Access Median Strips are permissible for residential streets only along entrance roads to subdivisions ~~in excess of 30 lots~~. The maximum length of the median strip shall be 350 feet.
- (5) Curb Cuts and Intersections:
- (A) Curb cuts on corner lots must be setback the maximum distance feasible from adjacent intersections.
- (B) Residential lots in a subdivision adjacent to an arterial street are not permitted curb cut access to arterial streets.
- (A) Residential development is permitted a maximum of two curb cuts per lot with a maximum width at the right of way of ~~XX~~20 feet per curb cut and a combined maximum of ~~XX~~30 feet per lot.
- (B) Curb cuts for commercial or industrial development shall be limited to one access point on arterial and collector streets. All development adjacent to SR.91 between Stoney Hill Drive and Barlow Roads shall be subject to the provisions of the South 91 Corridor Access Management Plan.
- ~~(B)~~(C) (C) Curb cuts and new Intersections for ~~development new streets~~ along arterial and collector streets should be a minimum of 400 lineal feet from any intersection.
- (6) Signalized Intersections along Arterials. A Traffic Signal Warrant Analysis shall be performed according to the State of Ohio Department of Transportation Manual of Uniform Traffic Control Devices, for all residential, commercial and industrial developments creating an intersection with any street designated as an arterial or collector street in the City of Hudson Comprehensive Plan.
- (7) Alleys
Alleys shall not be allowed except as part of a design element for proposed residential development in Zone Districts 1, 3, and 4, or as warranted by unique access conditions within District 5. Where permitted, alleys must be designed to a minimum width of 16 feet with a 2 foot strip for utility easements on each side of the alley. Accessory garages that access an alley shall be set back a minimum 8 feet from the edge of the alley.
- (8) Utility Easements
Utility easements of a minimum of 5 feet shall be required on the sides and rear of all residential, commercial or industrial lots together with a 10 foot wide utility easement outside the right-of-way line on all properties that abut the right-of-way. All other public utility easements for specific locations as required to serve a residential, commercial or industrial subdivision shall be a

Comment [HG5]: Proposed text would replace the current curb cut regulations in the Section 1205 District Regulations

minimum of 30 feet unless otherwise specified by the city.

(9) Street Design Standards

~~In addition to the pavement and right of way widths standards in Section 1207.13(b)(1)(C), streets must adhere to the following design standards:~~

(A) Cross Slopes

~~The cross slopes on all streets including intersections, shall be a maximum of 3% and a minimum of 1.5%.~~

(B) Minimum Centerline Radius:

<u>Road Classification</u>	<u>Radii in Feet</u>
Arterial	600
Collector	360
Local	200

(C) Stopping Site Distance

~~Horizontal and vertical alignments shall be designed according to the following Stopping Site Distance:~~

<u>Design Speed</u>	<u>Minimum Stopping Site Distance</u>	<u>Preferred Stopping Site Distance</u>
25 mph	150	150
35 mph	225	250
45 mph	325	400
60 mph	525	650

(D) Curbed and Uncurbed Minimum Radii Returns

~~The turn radius for any commercial or industrial development must be based on the classification of vehicle projected for the development. Compound curves, tapers with curb radii or curb radii shall dictate the layout of the proposed curb based upon the vehicle classification. The turn radius for residential areas shall be in accordance with the curb radius.~~

~~The curb radius for a residential subdivision with two local streets shall be a minimum of 20 feet. The curb radius between a local street and a collector shall be a minimum of 25 feet. The right of way lines shall follow the curb radius/turn radius.~~

(E) Maximum/Minimum Grades

~~The maximum grade for residential streets shall be 6%. The maximum grade for commercial and industrial streets shall be 5%. The minimum grade for all streets is 0.5%.~~

(F) ~~All reasonable attempts shall be made to minimize the impact to the surrounding contours of the existing topography of the proposed development site. The City reserves the right to require proposed grades designed to minimize the impact to the surrounding area.~~

(G) Intersection Profile Grade Approach Limits

~~Intersections shall be designed to match cross slopes and shall be designed with a flat grade wherever possible. In areas not allowing flat grades, a leveling area shall be provided having no greater than a 2% grade for a distance of a minimum of 60 feet as measured from~~

~~(H) Reverse Curves and Tangents
Tangents of at least 100 feet long shall be provided between reverse curves on residential and collector streets and at least 250 feet long on arterial streets. A transitional spiral is a suitable alternative.~~

~~(I) Monuments The developer must place permanent reference monuments with monument boxes in the subdivision as required by the City and in accordance with the design specifications and as approved by a licensed and registered Land Surveyor with the State of Ohio. Monuments shall be located on roadway centerlines at all street intersections, angle points of curvature, at the center of a permanent cul-de-sac and at all other locations required by the City. They shall be spaced so as to be within sight of each other, the sight lines being contained wholly within the street limits.~~

~~External boundaries of a subdivision shall have monuments placed in the field by iron rods at least thirty inches long and one inch in diameter with a fluorescent colored cap set no more than six inches above grade. These monuments shall be placed not more than 1000 feet apart in any straight line and at all corners, at each end of all curves, at the point where a curve changes its radius, at all angle points in any line, and at all angle points along the meander line of a stream, river or creek, those points to be not less than twenty feet back from the bank of any stream, river, or creek.~~

(J) Emergency Access

(i) Purpose. This section is intended to ensure that emergency vehicles can gain access to and maneuver at every facility, building, or portion of a building within the project so that emergency personnel can provide fire protection and emergency services without delays.

(ii) General Standard. All developments shall provide adequate access for emergency vehicles and for those persons rendering fire protection and emergency services.

(iii) Fire Protection Requirements.

All portions of the exterior wall of the first story of any structure(s)-building or portion of a building must be located within 150 feet of a public street (except major arterial streets) or a fire access road in which fire apparatus can be maneuvered, as approved by the Fire Department. Fire access roads shall comply with applicable standards of the Ohio Fire Code, current edition.

Fire access roads may be public streets (except major arterial limited access streets) and alleys, parking lots, private streets, or similar vehicular access roads. Driveways serving detached, individual dwelling units need not meet fire access road criteria if they do not exceed 100 feet in length.

(iv) Fire Access Road Width. The minimum Fire Access Road width shall be reviewed and approved by the Fire Department.

Comment [HG6]: Relocate to the City of Hudson Engineering Standards

- ~~The minimum unobstructed width shall be 30 feet for fire access roads, unless serving one detached, individual dwelling unit then may be reduced to 18 feet comprised of at least 12 feet of pavement width and an additional 3 feet kept clear of vegetation and obstruction to each side to allow passage of an emergency vehicle 18 feet wide. Such driveways of less than 30 feet width must provide vehicle turnouts every 200 feet of driveway length if the driveway length exceeds 300 feet.~~
- (v) Turnarounds. Any fire access road shall ~~be provided with a minimum 80 foot diameter turnaround if a dead end street,~~ have a turnaround with a proper turning radius, as approved by the Fire Department if within a parking lot, or must continue to a public street.
- ~~(vi) Turning Radius. The minimum turning radius for fire access roads and in parking lots shall be 20 feet inside and 40 feet outside.~~
- (vii) Parking Control. Approved ~~A~~No parking - Fire Lane~~@~~ signs shall be provided ~~along curbs~~ where parking would obstruct the minimum width and turning radius. Curbs in these areas shall be painted red.
- (viii) Road Surface. The surface of all fire access roads shall be of an approved hard surface or compacted road base capable of supporting fully loaded fire apparatus engineered to provide a bearing weight of ~~5060~~,000 lbs. All surfaces shall be maintainable in all weather conditions including snow removal.
- ~~(ix) Dead end Length. Any fire access road that serves structures beyond 600 ft from a second point of access shall be provided with an approved connection to another public street.~~
- ~~(x) Fire Lanes. Fire lanes may be used in commercial and multi-family projects when they can be designed into the normal traffic circulation patterns. All fire lanes shall conform to all other fire access road criteria. Approval of any fire lane shall be contingent upon the ability of the fire lane to be maintained continuously and under all weather conditions. Fire lanes serving single family projects are prohibited.~~
- (xi) Easements. Any private fire access road that serves multiple properties or crosses properly lines shall have proper emergency access easements.
- ~~(xii) Vertical Clearance. The minimum vertical clearance shall be 13-60.~~
- ~~(xiii) Grade. The maximum grade of a fire access road shall be 4%.~~
- (xiv) Access. Temporary fire access roads, turnarounds, and second points of access may be used as part of an approved phased project ~~or imminent public street improvements~~ as confirmed by listing in ~~an approved capital improvement plan, or subdivision plan.~~ Any temporary access shall meet all other fire access road criteria.
- ~~All projects shall have access from a public street network~~

~~with multiple points of access. If the project exceeds 600 feet from a single point of access, sufficient off-site improvements must be made to provide multiple points of access.~~

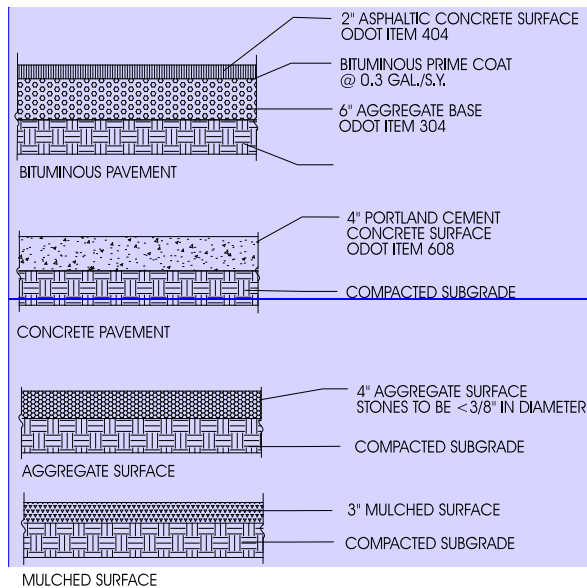
All required fire access roads, including public streets, shall be installed and serviceable before commencement of aboveground construction.

(xv) Signs. A reflective distance marker shall be required for fire access roads greater than 900 feet in length. A marker supplied and installed by the Hudson Fire Department shall be located every 900 feet of length from the main entrance of the structure to the street.

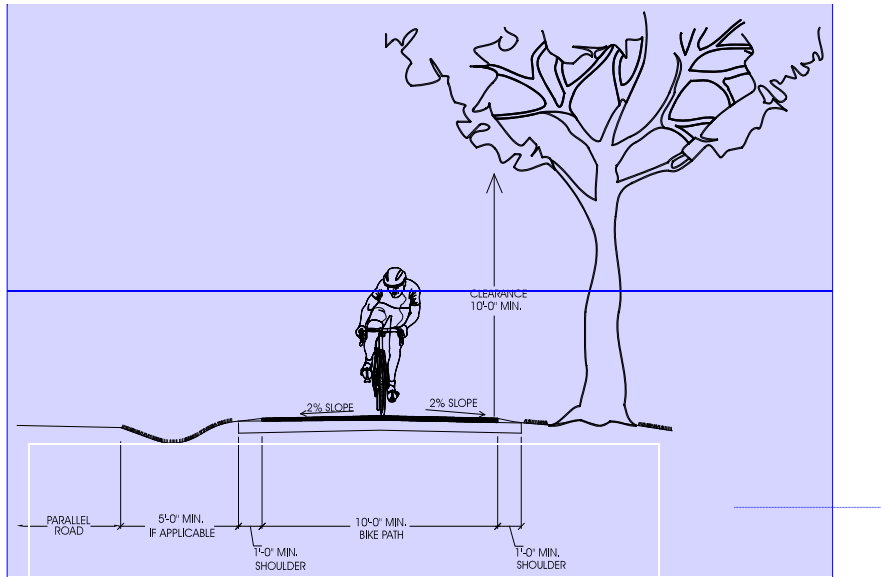
(d) Pedestrian and Bicycle Paths

(1) To the maximum extent feasible, all residential, commercial, and industrial subdivisions shall provide pedestrian linkages, including bikeways, to existing trail system, parks, schools, adjacent developments, and to the Village Core where applicable. (See [Figures 27a & 27b](#).) [City of Hudson Engineering Standards](#)

Comment [HG8]: The text is generally appropriate; however should the construction details be placed in the engineering standards



Comment [HG7]: Relocate to the city of Hudson Engineering Standards



Comment [HG10]: Relocate to the City of Hudson Engineering Standards

Comment [HG9]: Relocate to the City of Hudson Engineering Standards

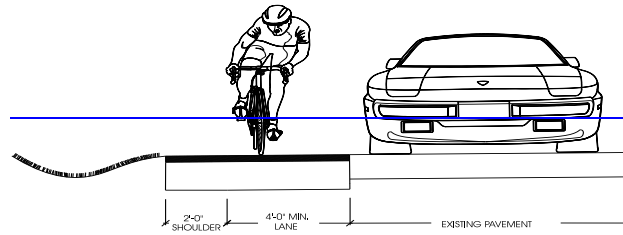
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Figure 27a: Typical Pedestrian Path

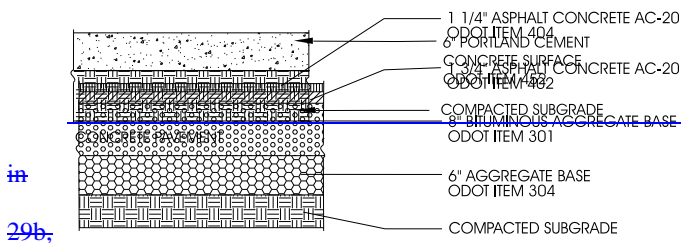
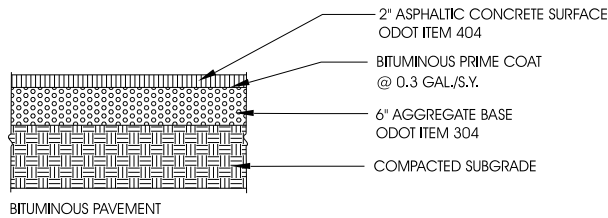
Figure 27b: Typical Construction Pavement Sections for Pedestrian Paths

Figure 28a: Typical Bicycle Paths

Figure 28b: Typical Construction Pavement Sections for Bicycle Paths



(2) **Bicycle Paths.** Where linkages are provided through the development of dedicated off-road bicycle paths, the minimum right of way will be 18 feet, and the pavement width will be 10 feet. All bicycle paths will be constructed in accordance to design standards approved by the City Engineer and illustrated in Figures 28a & 28b and in conformance with any Trail Plan adopted by the City of Hudson Park Board. Bike lanes constructed as part of roadway improvements will be designed and constructed

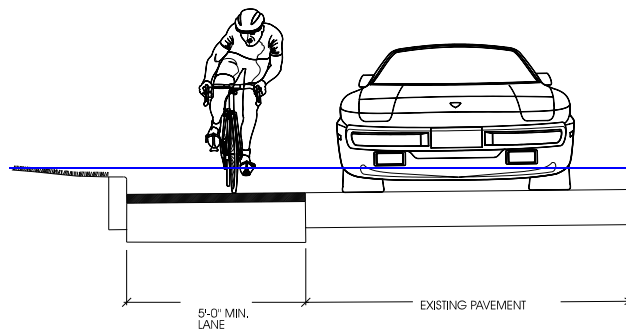


in
29b,

accordance with
Figures 29a &
and 29c.

FIGURE 29a: OPEN DRAINAGE SECTION

FIGURE 29b: CURBED STREET SECTION



—FIGURE 29C: TYPICAL CONSTRUCTION PAVEMENT SECTIONS FOR BICYCLE LANES