Road and Street Design and Construction Criteria
New Garden Town Center

The following construction criteria shall apply to road improvements:

Streets and roads are to be designed in accordance with the current Pennsylvania Department of Transportation Publication 70M entitled Guidelines for the Design of Local Roads and Streets, December 2002 Edition with revisions, if any, including all references and updates in Appendix A.

Sharp Road Relocation (from north side of Route 41 to the north property line of the age restricted community as shown on Exhibit C)

35 mph minimum design speed

Classification – collector

Pavement width – 20 feet minimum

Shoulder width – 2 feet

Shoulder material – Type 1-SP

Sidewalk – non curbed shoulder as depicted on the Road Improvement Plan

Pavement courses as follows:

(1) Subbase PADOT Number 2A aggregate 7-inch minimum depth
(2) SUPERPAVE Asphalt Mixture Design, HMA Base Course, PG 64-22, 0.3 to <3.0 million ESALS, 25.0 MM mix, 6-inch depth installed on top of the subbase course and placed in two equal lifts.
(3) SUPERPAVE Asphalt Mixture Design, HMA Binder Course, PG 64-22, 0.3 to <3.0 million ESALS, 19.0 MM mix, 2-inch depth installed on top of the base course prior to opening the street or roadway to construction traffic.
(4) SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 9.5 MM mix, SRL-H 1½-inch depth installed on top of the binder course; however, prior to installing the wearing course, a tack coat shall be applied to the binder course at the direction of the Township Engineer at the rate of 0.04 gallons per square yard.

Right-of-way width – 50 feet.

Sharp Road will not be curbed

Shoulders can be paved in the same manner as the road if appropriate

Sheehan Road (for areas of improvement per Exhibit C)

35 mph minimum design speed

Classification – local road

Pavement width – 20 feet minimum

Pavement material as follows:

(1) Prior to installing a 2-inch HMA Wearing Course on an existing pavement, apply a tack coat at the rate of 0.04 gallons per square yard and place a leveling course consisting of SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 12.5 MM mix, SRL-H at a rate to achieve ¼"/foot cross-slope (leveling course to be minimum 1-inch depth).

(2) SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 12.5 MM mix, SRL-H 2 inch depth installed on top of the leveling course; however, prior to installing the wearing course, a tack coat shall be applied to the binder course at the direction of the Township Engineer at the rate of 0.04 gallons per square yard.

The same mixes can be used if appropriate.

Shoulder width – 2 foot

Shoulder material – Type 4 (excavate unsuitable soil prior to installing the shoulder)

Prior to placing the leveling course on the existing pavement, as necessary, remove distressed pavement and soils and install base repairs.

Sharp Road (from Sharp Road relocation to new cul-de-sac)

35 MPH minimum design speed

Classification Local Road

Pavement width 18 feet minimum

Shoulder width – 2 foot

Shoulder material – Type 4 (excavate unsuitable soil prior to installing the shoulder)

Pavement material as follows:

Cul-de-sac to be new construction see items 1 through 4 above.

(1) Prior to installing a 2-inch HMA Wearing Course on an existing pavement, apply a tack coat at the rate of 0.04 gallons per square yard and place a leveling consisting of SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 12.5 MM mix, SRL-H at a rate to achieve ¼"/foot cross-slope (leveling course to be minimum 1-inch depth).

(2) SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 12.5 MM mix, SRL-H 2 inch depth installed on top of the leveling course; however, prior to installing the wearing course, a tack coat shall be applied to the binder course at the direction of the Township Engineer at the rate of 0.04 gallons per square yard.

(3) Cul-de-sac to be new construction using items 1 through 4 under Sharp Road Relocation above.

Prior to placing the leveling course on the existing pavement, as necessary, remove distressed pavement and soils and install base repairs as directed by the engineer.

Streets A, B, and C Within Age Restricted Community

25 mph minimum

Classification – Local Street

Pavement width – 24 feet

Standard – designed per ordinance

Pavement courses as follows:

(1) Subbase PADOT Number 2A aggregate 7-inch minimum depth.
(2) SUPERPAVE Asphalt Mixture Design, HMA Base Course, PG 64-22, 0.3 to <3.0 million ESALS, 25.0 MM mix, 6-inch depth installed on top of the subbase course and placed in two equal lifts.
(3) SUPERPAVE Asphalt Mixture Design, HMA Binder Course, PG 64-22, 0.3 to <3.0 million ESALS, 19.0 MM mix, 2-inch depth installed on top of the base course prior to opening the street or roadway to construction traffic.
(4) SUPERPAVE Asphalt Mixture Design, HMA Wearing Course, PG 64-22, 0.3 to <3.0 million ESALS, 9.5 MM mix, SRL-H 1½-inch depth installed on top of the binder course; however, prior to installing the wearing course, a tack coat shall be applied to the binder course at the direction of the Township Engineer at the rate of 0.04 gallons per square yard.

Sidewalks designed per the ordinance

Right-of-way – 50 feet

Street Signs and Posts

In accordance with Manual on Uniform Traffic Control Devices (current edition).

Street signs shall be in accordance with PADOT Publications 212 and 236M.

Posts in accordance with PADOT Standards TC 7700; Type B, System A.

Street name signs shall be extruded aluminum with 6-inch lettering with green background and white lettering and include reflective sheeting. Use Type III or higher type retroreflective sheeting.

Other Requirements

(1) Use either reinforced concrete pipe or thermoplastic pipe both with watertight joints. Material and installation shall be in accordance with Publication 408 and Publication 72M. Backfill trenches within the existing and proposed rights-of-way with 2A aggregate to the subgrade. Minimum depth from crown of reinforced concrete pipe to roadway subgrade shall be 6 inches. Minimum depth from crown of thermoplastic pipe to roadway subgrade shall be 18 inches.

(2) Prior to backfilling using PADOT No. 2A aggregate around inlets, seal the inside and outside of pipe connections with non-shrink grout unless directed otherwise by the Township Engineer.

(3) Place subgrade drains along sag profiles. The drain shall extend a minimum of 100 feet from the low point in either direction. Minimum pipe size shall be 4 inches. The pipe may be connected to an inlet or outlet through a subsurface drain outlet endwall. Refer to PADOT RC-30M and RC-31M (current version).

(4) A separate drawing showing the street sign locations and pavement markings shall be included for all streets and roads.

(5) At least one permanent construction benchmark shall be set on the construction site and shown and described on the land development plan. The benchmarks shall be placed outside the limits of the construction.