



Roadway Construction Standards and Specifications

General Provisions for Roadways

All roadways within the corporate limits or under the jurisdiction of the Village of Tinley Park shall be constructed in accordance with the provisions listed below and extend to serve each parcel within the development. All subdivisions shall include a minimum of two (2) roadways that provide access to and from the development.

The design of all roadways shall meet the following criteria:

- Current Federal and State Codes and Regulations
- Latest editions of the "Standard Specifications for Road and Bridge Construction", Recurring Local Roads and Streets Special Provisions
- "Manual of Uniform Traffic Control Devices"
- The Supplemental Specification and Recurring Special Provisions
- IDOT BDE Special Provisions
- Village of Tinley Park Subdivision and Development Regulations
- Village of Tinley Park Design Standards and Village Code of Ordinances.

In addition, the following specifications and standards shall apply.

Submittal Requirements

All required submittal requirements entail:

- Plans
- Plats
- Permits
- Easement Requests
- Licensing Agreements, etc.
- Other Agencies (ACOE, MWRD, IDOT, Will and/or Cook County, etc...)

Any initial review requirements by the Village Engineer shall be submitted during the preliminary stages of the project allowing sufficient time for comments, revisions and final approval. All of these finalized, signed and approved items must be submitted to the Village Engineer and allow for review a minimum of two (2) weeks prior to construction beginning.

Coordination and Staging

All roadway and sidewalk work by a Contractor shall be approved by the Village Board then coordinated with the State, County, and/or Railroad along with the Village Engineer and Public Works Director, as required. Owner/Contractor is responsible for maintenance of improvements for one (1) year following acceptance by the Village.

Constructor shall maintain roadway and pedestrian access at all times. Temporary road closures and interruption of access to residents and businesses shall be of short duration with a minimum of forty-eight (48) hour notice to the Streets Department, Mayor, Public Works Director, Police Chief and Fire Chief.

An Erosion Control Plan shall be submitted.

Street Improvements

All streets within a subdivision or development shall be graded and improved with a durable hard surface roadway. Roadway pavement sections shall be in accordance with IDOT designed standards based on the following:

- Soil Conditions
- Location
- Zoning
- Traffic Loading (Current and Proposed)
- Potential Truck Traffic

Hot-Mix Asphalt (HMA) and Portland Cement Concrete (PCC) Pavements

The Geometric and Structural Design have been determined for each Street Classification in the Village. Any modifications to the minimum pavement thicknesses provided shall include a modified Pavement Structural Design meeting the IDOT Pavement Design Procedure.

Note: Binder and Surface (as per IDOT Mixture Design Requirements)

- Street Classification: Residential Street

Aggregate Base Course, Type B	12" CA-6
HMA Binder	2-1/4" IL-19.0, N50
HMA Surface	1-1/2" Mix D, N50
- Street Classification: Collector Street

Aggregate Base Course, Type B	10" CA-6
HMA Binder	4" IL-19.0, N50
HMA Surface	2" Mix D, N50
<u>Or</u>	
Aggregate Base Course	6" of Type B
Portland Cement Concrete	6"
Aggregate Base Course, Type B	12" CA-6
HMA Binder	4-1/2" IL-19.0, N50
HMA Surface	2-1/2" Mix D, N50
<u>Or</u>	
Aggregate Base Course	6" of Type B
Portland Cement Concrete	8" with Wire Fabric
- Street Classification: Commercial and Industrial Streets

Aggregate Base Course, Type B	12" CA-6 (Commercial); 8" (Industrial)
HMA Base Course	N/A (Commercial); 10" (Industrial)
HMA Binder	2-1/4" IL-19.0, N50

HMA Surface

1-1/2" Mix D, N50

***For all the above pavements, additional pavement section may be required based on the 20-year projections and soils report.**

Pavement Construction Criteria

- PCC curb and gutter shall be constructed along the outside edges of all street pavements in accordance with the most recent Village Ordinances and Standard Details.
- All base courses shall be laid on a stabilized subgrade as per Section 301 of the latest edition of IDOT SSRBC and approved by the Village Engineer.
- Storm inlets shall be provided within the roadway at locations specified or approved by the Village Engineer and Director of Public Works.
- Before any paving work begins, all street grading shall be properly completed as shown on the Grading Plan and confirmed by the Village Engineer.
- Street grades shall conform in general to the terrain and shall not be less than 0.4% or more than 5%.
- Street grades shall provide natural surface drainage regardless of the presence or absence of storm sewer to avoid depressions or inverts that flood in flash storms.
- All underground utility work (watermain, sewer, gas mains, electric, house services, etc...) shall be backfilled, settled and compacted prior to the roadway base being laid.
- Any Portland Cement Concrete, HMA Binder or HMA Surface proposed to be constructed after November 1st shall have written approval from the Village Engineer.
- Side strips shall be required on both sides of all streets. These shall be graded and sodded by the Owner or Developer with at least four (4") inches of topsoil.
- Median strips shall be considered as side strips, unless paved.
- Developer shall be responsible to maintain all such right of way (including grass and trees) during the development until the final Village inspection is complete. Once the development is accepted by the Village, the Developer/Contractor is required to guarantee/maintain all work for a period of one (1) year from the final acceptance date.

Street Signs

- Appropriate street signs shall be erected at each intersection.
- Entrances of subdivisions shall have speed limit (20 mph), weight limit (5 tons), snow route, and no parking (2 am to 5 am) per Standard Details.
- Sign type and location(s) shall be subject to approval of Public Works and MUTCD Manual.
- Prior to final inspection all street signs, including stop signs, speed limit signs, etc. shall be installed.

- All subdivision/commercial/industrial exits to Village/State/County roadways (collector, minor, major, etc.) shall have stop signs with corresponding 24" stop bars unless a stoplight is present at the intersection.

Public Utilities

- All utility distribution lines (phone, electric, cable, etc.) shall be in place underground throughout each new subdivision or development.
- Lines shall be placed within easements or dedicated right of way, in a manner which does not conflict with other underground services.
- All transformer boxes shall be located so as not to be unsightly or hazardous to the Public.

Cash Bond Requirements

It is unlawful to make any opening, excavation or tunnel under any public street, alley, sidewalk, parkway or other public area in the Village without securing a permit. Permit applications can be made at to the Village Clerk and shall specify the intended location and purpose of the excavation. Public Works will be notified of the permit application once it is submitted.

Applicant shall agree to pay all cost for the proposed work as well as the cost to restore the project to the condition that existed before the project began. No such permit shall be issued until one of the following cash bonds has been deposited with the Village:

- **\$5,000 Cash Bond:** A \$5,000 cash bond shall be provided for all utility trenches crossing an Alley, Minor Arterial or Residential roadway in the Village.
 - The repair shall include the pavement improvements the width of the trench (as well as an additional five (5') of surface restoration on both sides of the trench), backfill and compaction, curb and gutter, sidewalk, parkway restoration and site clean-up, as needed.

\$10,000 Cash Bond: A \$10,000 cash bond shall be provided for all utility trenches crossing a Secondary and Major Arterial, Collector, Commercial or industrial roadway in the Village.

- The repair shall include the pavement improvements the width of the trench (as well as an additional ten (10') feet of surface restoration on both sides of the trench), backfill and compaction, curb and gutter, sidewalk, parkway restoration and site clean-up, as needed.

The Village has the right to use its own employees and equipment to make reasonable changes or hire other services to do the work and charge the cost for their time and equipment to the applicant. Any balance of said deposit remaining after the deduction of such costs shall be returned to the applicant.

In cases where applicant restores the project to its original condition, the Village shall return the entire deposit one (1) year from the date of application or restoration, whichever is later.

No such permit shall be issued unless the applicant has on file with the Village and in full force and effect, a bond in the amount of \$20,000 with surety to be approved by the Village with conditions to indemnify the Village against any and all loss or liability resulting from the making of such opening and/or excavations.

- Cash bonds will be cashed by the Village and returned as noted after the pavement and parkway have been restored, inspected and approved by the Public Works Department.

A Certificate of Insurance will be required from utility companies doing work in Village Right of Way

Steel Plate Requirements for Roadway Excavations

- The use of steel plates is required for all projects requiring the cutting of roadway pavement. These standards ensure that the Village pavements are left in the same, if not better, condition than they were found before the project. This will reduce congestion and roadway hazards, as well as increase safety in and out of the construction limits.
- The use of steel plates by Contractors and Utility Companies as a temporary cover over an excavated area in the roadway can present safety hazards and other problems if allowed to remain in place for extended periods and not properly secured or maintained.
- When backfill operations of an excavated area in the traveled way cannot be properly completed within a work day, steel plate bridging will be required. In such instances the following shall apply:
 - Steel plates must be able to withstand H-20 (wheel loading of 16,000 lbs) traffic loading without movement.
 - Steel plates shall be fabricated to meet ASTM A36 steel requirements.
 - When two (2) or more plates are required, vertical movement shall not occur. This may require the plates to be tack-welded.
 - Steel plates shall be placed to resist bending and vibration under traffic loads and anchored to prevent movement.
 - Steel plates must extend a minimum of twelve (12") inches beyond the edges of the excavation.
 - Before steel plates are installed, the excavation shall be adequately shored to support the bridging and traffic loads.
 - Temporary paving with a cold asphalt mix should be used to feather the edges of the plate to form a wedged taper to cover the edges of the steel plate. Other alternative methods to accomplish this will be considered for approval.
 - Wedges or other non-asphaltic devices shall be used for leveling to eliminate rocking of the plates. Compacted temporary asphalt shall be used to fill all gaps between the plates and the existing pavement surfaces.

- One (1") inch thick steel plates shall be used in areas where backfilling operations of an excavation in the traveled way, whether traverse or longitudinal cannot be properly completed within the same day, and the posted speed limit is 35 MPH or less.
- One and a quarter (1-1/4") inch thick steel plates shall be used in areas where backfilling operations of an excavation in the traveled way cannot be properly completed within the same day and the posted speed limit is greater than 35 MPH. These steel plates shall be recessed by milling or saw cutting into the existing asphalt to set flush with the surface of the existing asphalt. The pavement shall be cut and cold patched to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate. Full depth cutting of the asphalt section of excavation is not allowed. The steel plate shall be anchored securely to prevent movement. The gap between the edge of the plate and the adjacent existing asphalt pavement must be filled with temporary asphalt patch (cold mix). Wedges or other non-asphaltic devices shall be used for leveling as required to eliminate rocking of the plates. Compacted temporary asphalt shall be used to fill all gaps between the plates and existing pavement surfaces.
- The excavation, backfill and pavement restoration shall be as follows:
 - The surface of the roadway to be excavated for the utility work shall be saw-cut in reasonably straight and parallel lines. The cutting excavation should not be done with a backhoe, grade all or any other type of ripping equipment.
 - Existing pavements, bases, curb and gutters and sidewalks shall be cut and brought to a straight line. Expansion joints removed shall be replaced. The cutting and replacement of concrete curb and gutters and sidewalks shall be from joint to joint.
 - Backfill material shall meet the applicable requirements of the current edition of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction for backfill material. Unsuitable material will not be allowed for backfill.
 - Pavement removed shall be replaced with in-kind material (i.e. PCC or HMA).
 - Replacement of surface pavement shall extend a minimum of three (3') feet on both sides of the trench.
 - When the pavement remaining between the excavation and the edge of the roadway is with two (2') feet, the remaining area shall be removed and replaced as well.
 - Any disturbed pavement markings shall be restored to match adjacent striping.
 - Crack sealing around the HMA patch may be required.
 - If permanent pavement restoration cannot be completed within three (3) days, then temporary patchwork of two (2") inches of cold asphalt mix over the compacted granular base will be allowed. Permanent pavement repair will be required within two (2) weeks.

Expansion Joints

Expansion joints used for curb shall meet IDOT standards for Preformed Expansion Joint Fillers (Section 1051). Expansion joints used for sidewalks, driveway aprons, and at curb interfaces shall meet IDOT standards for Preformed Flexible Foam Expansion Joint Fillers (1051.09). One (1) inch expansion joints shall be used between new and existing curb and gutter. One-half (1/2) inch expansion joints shall be used where concrete driveways, walks, etc. meet curbs, on one end of replacement sidewalk, and between the curb and all steel castings. Expansion joints shall be full depth. Expansion joints are not allowed in ADA ramps. Maximum distance between transverse expansion joints shall be eighty (80) feet and contraction joints provided uniformly not to exceed fifteen (15) feet.