



# Schoolcraft County Road Commission

## Standards, Specifications and Regulations for Subdivision Streets and Proposed Public Roads

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## DEFINITIONS

Board: The Board of County Road Commissioners.

Engineer: The Engineer of the Board or any of his or her associates designated to act on his or her behalf in performing duties detailed in this document.

Owner: Owner of the land(s) to be platted and or developed.

MDOT: Michigan Department of Transportation.

AASHTO: American Association of State Highway and Transportation Officials.

ROW: Right-of-Way

MMUTCD: Michigan Manual of Uniform Traffic Control Devices

MPH: Miles per Hour

## GENERAL

Requirements and specifications contained herein are subject to change without notice from the Board. The Board reserves the right to impose higher standards and specifications or modify the standards contained in this document when warranted by unique conditions.

Roads subject to commercial traffic due to industrial developments, shall be constructed to all-season standards contained within this document.

These standards and specifications do not supersede state laws or regulations, county or township ordinances, or zoning requirements.

These standards and specifications are effective on the date of adoption by the Board and supersede previously published standards and specifications.

## GENERAL REQUIREMENTS

### DRAINAGE PLAN

A drainage plan shall be submitted indicating the way storm water will be disposed of and how it affects existing or proposed roadways.

Drainage can be accomplished by using ditches, natural waterways, or the construction of tributaries. If the drainage plan includes a drain or storm sewer line crossing private property, an easement shall be provided to maintain or replace the storm sewer components. Easements for drainage work shall be a minimum of 20 feet in width.

The drainage plan is to be submitted on plan and profile sheets and is to supplement a preliminary plat. If submitting a preliminary plat, the drainage plan can also be superimposed on the plat as additional information.

### RIGHT-OF-WAY

The following ROW widths will be required for all roads and streets.

Primary Roads – 86 feet

Local Roads – 66 feet

ROW widths that are less than the quantities listed above will be considered if extenuating circumstances are encountered. The absolute minimum ROW widths shall be 66 feet for primary roads and 50 feet for local roads.

The Board reserves the right to require more ROW width if necessary to maintain the proposed roadway to acceptable standards.

### ROAD LAYOUT

The road layout shall conform to any pattern previously established by adjacent roads. Existing roads that terminate at the boundaries of a proposed plat must connect to the road system of

the proposed plat. Access roads to isolated plats must follow these specifications and standards with one exception; ROW for access roads shall be provided by easement.

Driveway access from lots to primary roads will be restricted to one driveway per lot. Access limitations are to be included in the plat restrictions.

Roadways in the proposed plat shall provide continuous travel, every effort shall be made to eliminate dead ends or cul-de-sacs from the road layout. If continuous travel is not possible due to geographical or physical boundaries, a cul-de-sac can be utilized and must have a ROW of 90 feet minimum with a 66-foot road ROW or 100 feet minimum with an 86-foot road ROW. No more than 5 driveways are permitted within the cul-de-sac. All mailboxes for lots within the cul-de-sac shall be located at the beginning of the cul-de-sac. Mailbox restrictions are to be included in the plat restrictions.

#### ROAD NAMES

Roads and streets included on plats or plans shall be designated by name. Roads and streets that are extensions of, or in line with existing roads, must be named in accordance with those existing roads. Other roads and streets may be named as the Owner chooses, subject to Schoolcraft County Equalization Department's approval. Names of existing roads or streets within the county may not be used for new roads or streets within the plat.

Street name signs and stop signs are to be erected at all intersections within the plat at the expense of the Owner. Signs shall be placed in accordance with MMUTCD guidelines.

### IMPROVEMENT & SPECIFICATION REQUIREMENTS

The Owner, or his agent, are required to grade, drain, and surface all the roads and streets included on the plat or plans in accordance with the standards and specifications of the Board.

#### PLAN & PROFILE

Plan and profile drawings will be completed by the Owner's engineer (professionally licensed in Michigan) and shall be detailed enough to be used as construction plans. Drawings are to include proposed grades, locations for drainage structures, and any other pertinent information.

The maximum grade allowed shall be 8 percent. Cul-de-sacs shall not have a grade greater than 2 percent. Vertical curves are to be designed and used at all grade changes. Sight distance, horizontal and vertical alignments shall be designed in accordance with current AASHTO standards for geometric design. Design speeds are to be determined based on the geometrics of the proposed roads and streets. The minimum and maximum design speed shall be 25 MPH and 55 MPH, respectively. Horizontal and vertical curve data shall be included on the plan and profile drawings.

If possible, all intersecting roads and streets will meet at 90-degree angles. Intersection angles can be less than 90-degrees, if necessary, but in no instance shall they be less than 70-degrees. Easements for clear vision shall be provided and based on the proposed design speed, horizontal and vertical alignments.

Approaches of secondary roads or streets in the plat shall be a minimum of 50 feet in length. The grade for the approach shall be flat if possible; however, a maximum grade of 1% (sloping away from the main road or street) will be allowed.

Two copies of the plan and profile sheets shall be submitted to the Engineer for approval. One copy will be returned to the Owner's engineer approved or with comments for revisions marked. Approval from the Engineer must be obtained prior to construction.

#### CLEARING & GRUBBING

All trees, stumps, and brush shall be removed entirely from grading limits of all the roads and streets in the proposed plat. Additional clearing may be required, at the Engineer's discretion, to increase the amount of sunlight that hits the roads or streets. This addition will improve the melting and drying capability of the roadways creating safer driving conditions for users.

#### GRADING & DRAINAGE

Proposed roads and streets are to be centered on the ROW and constructed according to typical cross sections contained in this document.

Roadbeds for local roads shall have a minimum width of 26 feet and primary roads shall have a minimum roadbed width of 32 feet. Flatter slopes than the maximum allowable are recommended whenever possible to provide safer roadsides.

Depth of subgrade granular material shall be a minimum of 2 feet and full roadbed width. Subgrade granular material may be less than 2 feet in depth if approved by the Engineer, however, other special treatments may need to be installed to counter the lack of depth. All peat and muck beneath the roadbed shall be excavated to a depth of 5 feet and replaced with granular material for the full width.

The finished subgrade elevation shall be at least 2.5 feet above the high-water table.

Ditches shall be constructed in cut sections in accordance with the typical sections contained herein. Ditches in fill sections may be required and will be up to the Engineer's discretion. Ditches shall have a minimum depth of 2 feet from the shoulder hinge point. Deeper ditches may be required if driveway culvert installation is necessary. Integral hot-mix asphalt curb and spillways are an acceptable alternative to conventional ditching; however, asphalt curb and spillways are to be used on vertical grades of 4% or greater only. Hot-mix asphalt curb and spillways are to be constructed in accordance with the typicals and details included in these specifications.

Driveways located in cut sections are to be graded during construction to a maximum grade of 5%. The grade is to be based on the elevations of the finished shoulder and the driveway at the ROW line.

#### DRAINAGE STRUCTURES & EROSION CONTROL

Culverts to be placed in roadways shall be corrugated metal pipe meeting MDOT standards, specifications, and shall be a minimum of 15 inches in diameter. Driveway culverts shall also be corrugated metal pipe meeting MDOT standards but may be as small as 12 inches in diameter. All culverts are to have a minimum of 12 inches of sand fill (free of stones) for cover. All cross culverts are to have guard posts and delineators marking their location.

If a bridge is required within the proposed roads or streets, it shall be designed to current AASHTO and MDOT bridge standards with a HL-93 modified loading design.



Driveway culverts shall be provided by the Owner or the lot owners. Driveway permits will be required for all driveways installed after roads are accepted and taken over by the Board.

All areas of disturbed soil are to be treated with erosion control measures. Minimum requirements include 4 inches of topsoil, seeding, fertilizing, and mulching. Seeding and fertilizing shall comply with MDOT roadside standards and specifications. Slopes that are steeper than a 1:3 (V:H) and subject to erosive velocities may require special treatments including, but not limited to, high-velocity mulch blankets, riprap, and check dams. Non-woven geotextile fabric shall be placed prior to the installation of riprap.

All necessary EGLE permits are to be completed by the Owner or Owner's engineer. The Owner is also responsible for obtaining all pertinent SESC permits from the Schoolcraft County Conservation District. Copies of the completed and approved permits are to be submitted to the Board prior to the start of construction.

#### ROAD SURFACE

A minimum depth of 6 inches of surfacing aggregate (compacted) shall be placed as shown on the typicals included herein. Surface aggregate shall meet MDOT specifications for 22A or 21AA. If the roads are to be paved, the minimum depth for the surfacing aggregate shall be 8 inches.

Hot-mix asphalt surface course shall be an MDOT 4EL mix design with a performance grade binder of 58-28, or an alternate mix design approved by the Engineer. Hot-mix asphalt shall be placed in accordance with the typicals included in this document. Local roads shall be paved at an application rate of 250 pounds per square yard; primary roads shall be paved at an application rate of 330 pounds per square yard unless otherwise approved by the Engineer. Asphalt paving shall be at a minimum of 22 feet wide unless otherwise approved by the Engineer. Hot-mix asphalt surfacing shall be placed within 12 months of the aggregate surface course being completed. All paving operations shall be in accordance with MDOT specifications for construction.

#### INTERSECTIONS

Access to the proposed subdivision or roadway from an existing public road shall have an intersection in accordance with the detail included in this document. All concrete shall follow MDOT specifications.

## MAINTENANCE

It is the responsibility of the Owner to maintain all roads and streets in good condition until they are taken over by the Board. Eroded areas are to be promptly repaired and maintained until permanent erosion and sedimentation controls are established.

## INSPECTION & TESTING

The Engineer will inspect the subdivision roads in the following manner.

1. Prior to approving the Preliminary Plat (if platted subdivision)
2. After subbase grading has been completed and prior to aggregate base course placement
3. After aggregate base course is completed and prior to hot-mix asphalt paving
4. Immediately before hot-mix asphalt paving
5. After all work is completed
6. Prior to the acceptance of the finished roads or Final Plat (if platted subdivision)

Additional fees shall be charged to cover the costs of each additional inspection. Fees will include the hourly rate of the Engineer including his or her fringe benefits.

It is the Owner's responsibility to provide construction engineering inspection while construction is taking place. Construction engineering inspection shall include density testing, material testing (including QA/QC tests), and inspector daily reports. All testing will be performed to MDOT standards. The Engineer shall receive copies of all testing reports and inspector daily reports.

## CERTIFICATION

When construction is completed, the Owner's engineer shall certify that all work has been completed in accordance with the approved plans and specifications. Certification letters must be stamped by the Owner's engineer. If field changes are approved, revised construction plans shall also be submitted to the Engineer.

## PLATTED ROADS & SUBDIVISIONS

### THE PLAT ACT

Plats to be recorded with the Register of Deeds must be in conformity with the Subdivision Control Act (Act 288, Public Acts of 1967, as amended).

Section 183 of the Subdivision Control Act states that county road commissions may require the following conditions of approval for the final plat of all highways, streets, and alleys in its jurisdiction or to come under its jurisdiction and for all private roads in unincorporated areas.

1. Conformance to the general plan and location requirements that the board may have adopted and or published.
2. Adequate provisions for traffic safety in driveway layout entering county roads and streets, as provided in the board's published construction standards.
3. Proper drainage, grading and construction of approved materials to a thickness and width provided in the road commission's current published construction standards.
4. Submission of complete plans for grading, drainage and construction prepared and sealed by a civil engineer registered in the state.
5. Installation of bridges, culverts, and drainage structures where deemed necessary.

### UNPLATTED ROADS

When the proposed road is in an unplatted area, the Owner shall provide the Board with an executed easement and a legal centerline description of the entire road. Both documents must be provided before the road will be accepted into the public road system, at no cost to the Board.

### FEES

In conformity with Section 246 of the Subdivision Act, the Board may adopt a schedule of fees to be charged to Owners seeking approval of plats. Following adoption, the schedule of fees shall be included as part of these standards and specifications.

### PRELIMINARY PLAT

The Owner shall have a prepared preliminary plat of the area that is to be platted. Plats shall be prepared under the supervision of a Licensed Land Surveyor and drawn to a scale not less than 1-inch equals 200 feet. All plats must be in conformity with the general highway and street plans of the Board.

Preliminary plats shall provide the name of the subdivision and the location in reference to the section and township in which the area resides. The proposed road or street layout, lots and plat dimensions (to the nearest foot is acceptable for the preliminary plat), and governing factors shall be included on the plat. Governing factors include adjoining subdivisions, proposed future developments, bodies of water, highways, railroads, parks, cemeteries, and sewers.

Two copies of the preliminary plat, prepared in the manner outlined above, shall be submitted to the Board along with a letter requesting preliminary approval of the plat. The Board shall approve or deny the proposed preliminary plat within 30 calendar days. One copy of the preliminary plat will be returned to the Owner indicating approval or denial of the plat with applicable comments.

## ADMINISTRATIVE PROCEDURE

### BOARD CONSIDERATION

The Owner must submit all copies of the plat prepared in accordance with Section 164 and Section 165 of the Subdivision Control Act and all copies must conform to the requirements of this Act. All copies shall be submitted to the Board at least one week before the Board's next regular meeting. The Board will consider and either approve or reject the plat within 15 calendar days after it is received.

If the Board approves the plat, they shall transcribe their certificate of approval on the plat and return the approved plat to the Owner.

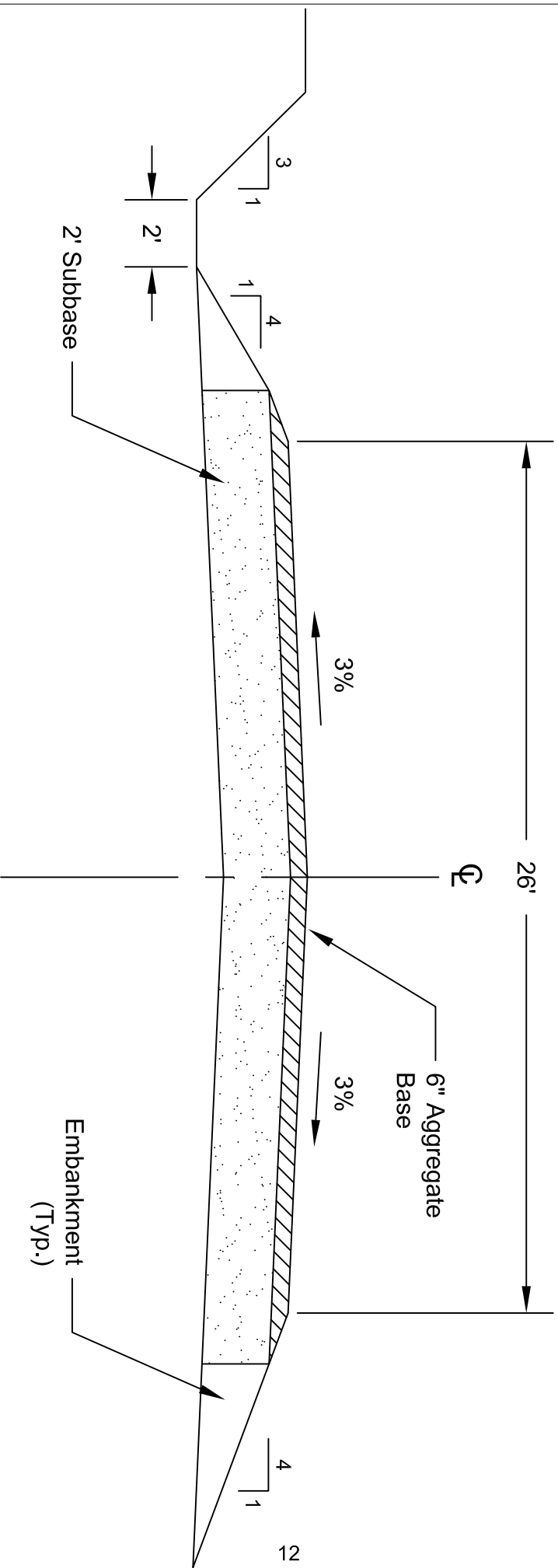
If the Board rejects the plat for any reason, written notice of the rejection and the reason shall be given to the Owner. A copy of the notice will also be sent to the clerk of the township in which the plat resides.

### GUARANTEE OF COMPLETION

If the Owner has not completed the construction of the roads and streets in the proposed plans in accordance with these specifications prior to submitting to the Board for final approval, the roads and streets will not be accepted into the county road system.

The Owner or the Owner's engineer shall submit a construction schedule to the Engineer prior to the start of construction. The Engineer shall be notified by the Owner or Owner's engineer of the progress as it pertains to the scheduled inspections outlined in the Inspection & Testing section.

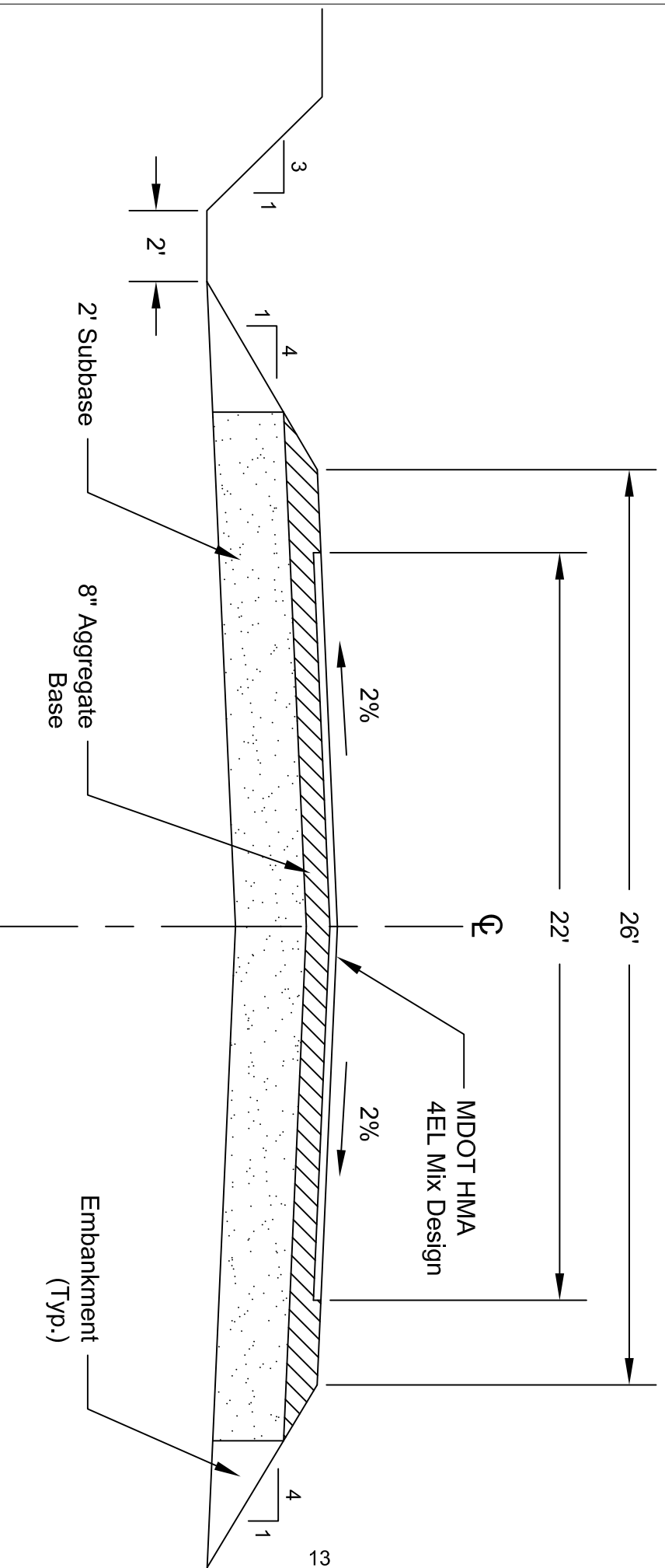
# LOCAL ROAD TYPICAL GRAVEL SURFACE



Notes:

1. MDTOT steel beam guardrail with approved terminals is required in sections where the slope is greater than a 1:3 (V:H).

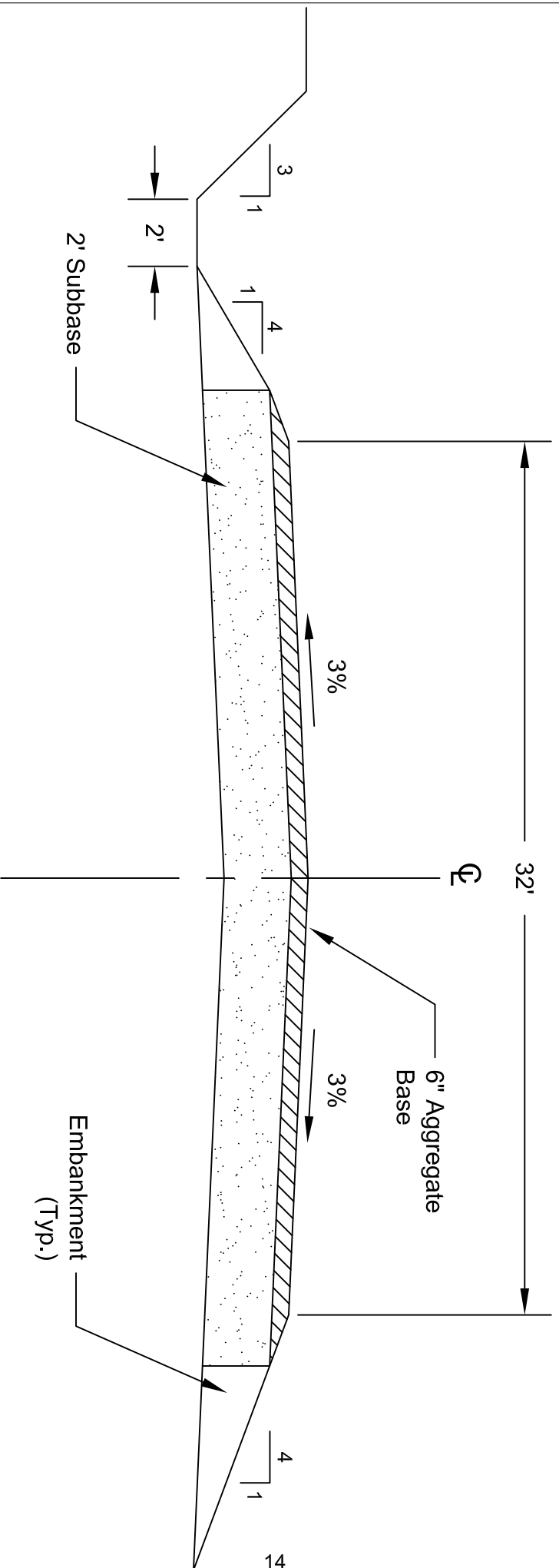
# LOCAL ROAD TYPICAL PAVED SURFACE



**Notes:**

1. MDOT steel beam guardrail with approved terminals is required in sections where the slope is greater than a 1:3 (V:H).
2. HMA is to be applied at a rate of 250 pounds per square yard.
3. HMA curb height shall be 6" tall and at least 1' wide.
4. HMA spillways shall be installed at 45-degree angles to the direction of travel unless approved by the Engineer.

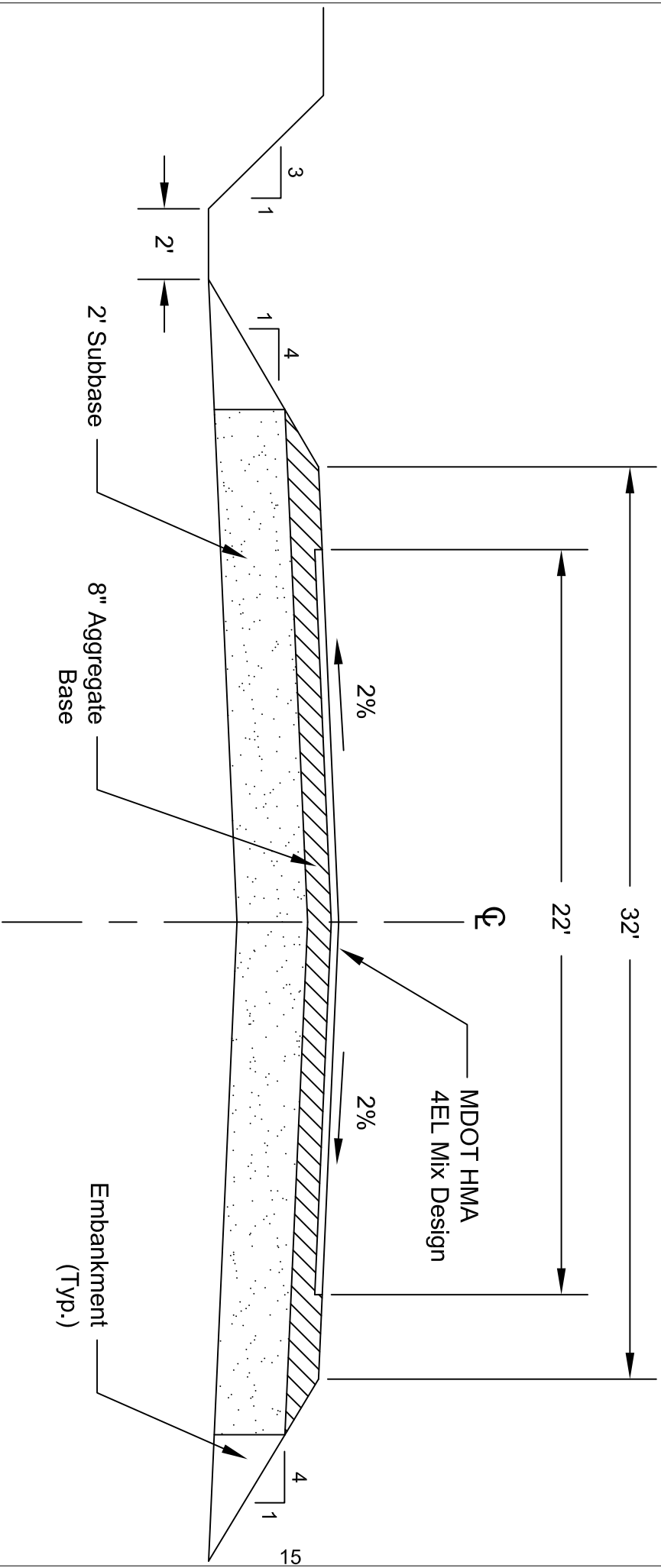
# PRIMARY ROAD TYPICAL GRAVEL SURFACE



- Notes:
1. MDOT steel beam guardrail with approved terminals is required in sections where the slope is greater than a 1:3 (V:H).



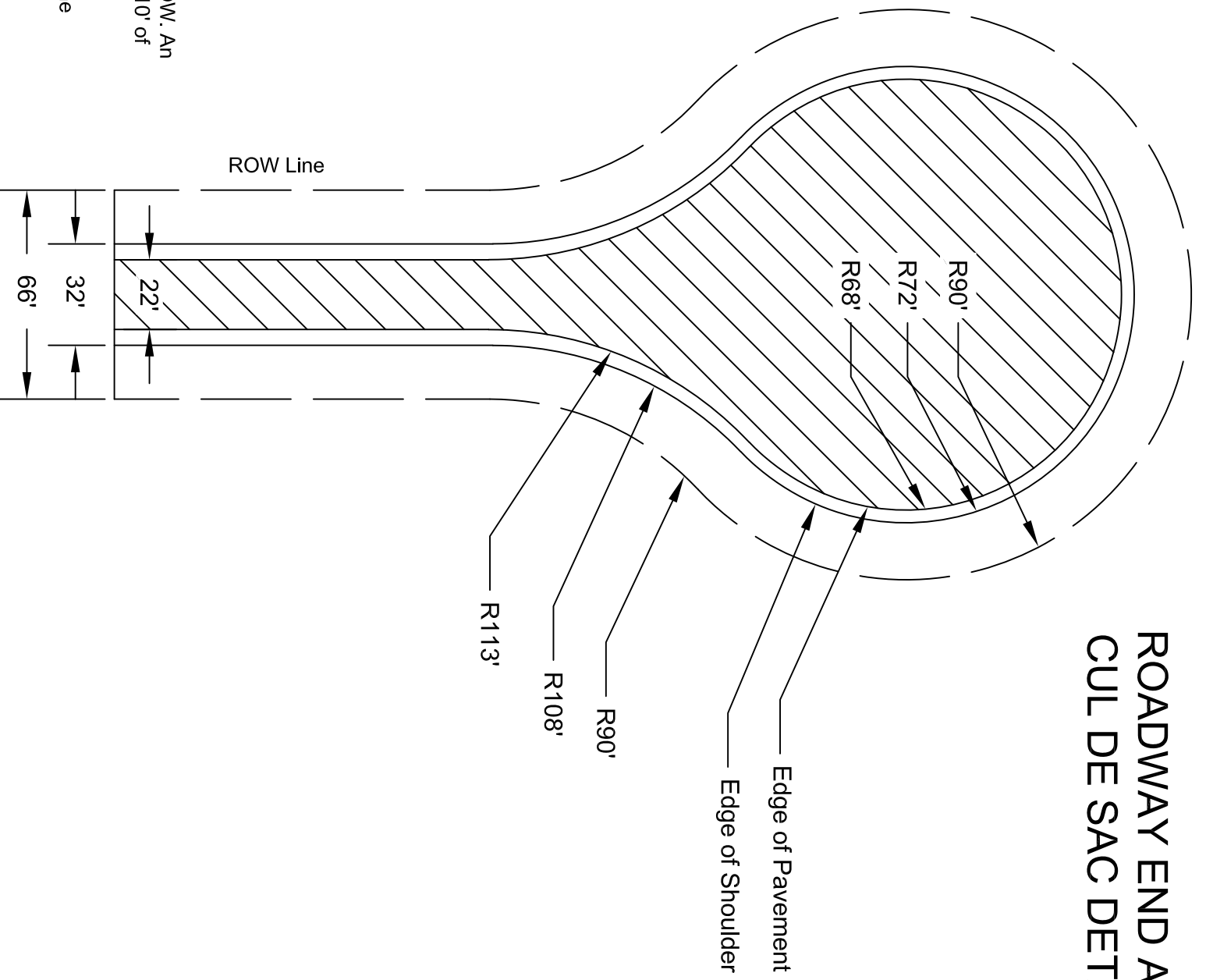
# PRIMARY ROAD TYPICAL PAVED SURFACE



**Notes:**

1. MDOT steel beam guardrail with approved terminals is required in sections where the slope is greater than a 1:3 (V:H).
2. HMA is to be applied at a rate of 165 pounds per square yard. Two courses of HMA pavement are to be applied for a total rate of 330 pounds per square yard.
3. HMA curb height shall be 6" tall and at least 1' wide.
4. HMA spillways shall be installed at 45-degree angles to the direction of travel unless approved by the Engineer.

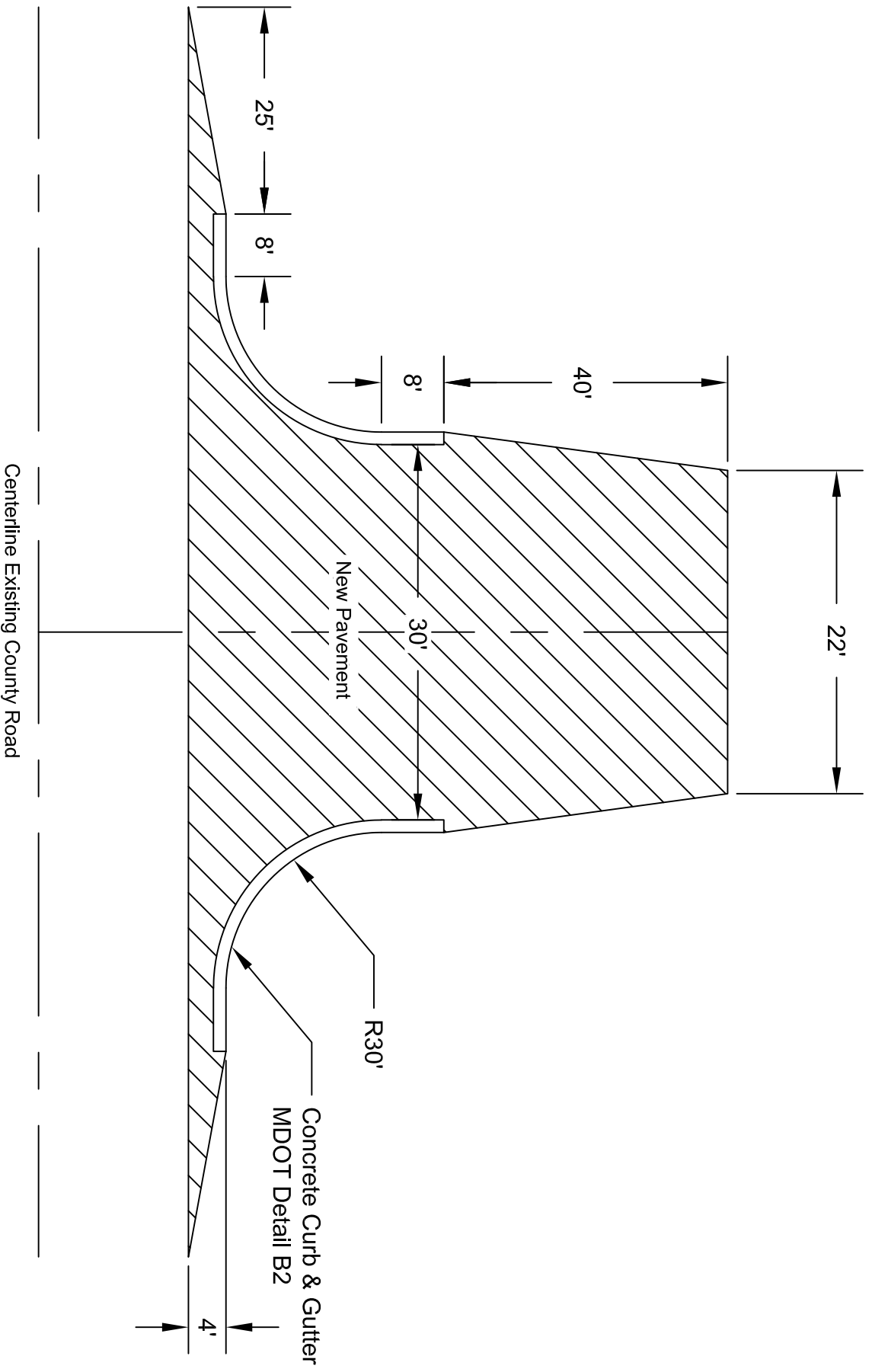
# ROADWAY END AND CUL DE SAC DETAIL



**Notes:**

1. Dimensions shown are for a 66' ROW. An 86' ROW will require an additional 10' of ROW along the roadside.
2. HMA application rate shall match the appropriate typical.

# APPROACH TO EXISTING PAVED COUNTY ROAD DETAIL



Note:

8" of aggregate base shall be placed constructed to 1' outside of proposed pavement and concrete curb.