ADDENDUM NUMBER 1
Dated: APRIL 25, 2025

MILL AND OVERLAY PROJECT
MnDOT MORRIS MAINTENANCE FACILITY

51 Minnesota Drive, Morris MN 56267

Project ID: TB90820
FY PUMA 25-154128

1.01 NOTICE TO RESPONDERS

A. This Addendum is issued pursuant to the Instructions to Responders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

B. The Responder shall acknowledge receipt of this Addendum in the appropriate space on the Response Form.

C. The date for receipt of bids is **unchanged by this Addendum**.

1.02 ATTACHMENTS

A. This Addendum includes the following attached Documents and Specification Sections:
1. Section 00 4175 “Prime Contractor Response Form” *(reissued)*
2. Section 31 2000 “Earth Moving” *(new issue)*
3. Section 32 1217 “Mill and Overlay Bituminous Paving” *(new issue)*

B. This Addendum includes the following attached Sheets:

(none)

1.03 REVISIONS TO DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

A. Section 00 0110 “Table of Contents.”
1. Add the following sections to the listing:
   a. 31 2000 – Earth Moving
   b. 32 1217 – Mill and Overlay Bituminous Paving

B. Section 00 4173 “Prime Contractor Response Form.” *(reissued)*
1. Section is reissued in its entirety.

1.04 REVISIONS TO DIVISION 01 GENERAL REQUIREMENTS

(none)

1.05 REVISIONS TO DIVISIONS 02 - 49 SPECIFICATION SECTIONS

A. Section 31 2000 “Earth Moving.” *(new issue)*
1. Add section in its entirety.

B. Section 32 1217 “Mill and Overlay Bituminous Paving.” *(new issue)*
1. Add section in its entirety.

1.06 REVISIONS TO DRAWING SHEETS

(none)

1.07 PRODUCTS APPROVED TO BID

(none)

END OF ADDENDUM 1

SECTION 31 2000 - EARTH MOVING

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

A. Conditions of the Contract, DIVISION 00 and General Requirements, DIVISION 01 govern work under this Section.
1. Performance of the Work of this Section shall comply with DIVISION 00 Prevailing Wage Rate Requirements that apply to this Project.
2. Performance of the Work of this Section shall comply with DIVISION 01 for Storm Water Plan “SWPPP” Requirements and SWPPP training requirements that apply to this Project.

1.2 SUMMARY

A. Section Includes:
1. Excavating and filling for rough grading the Site.
2. Preparing subgrades for pavements.
3. Subbase course and base course for asphalt paving.

B. Related Work
1. Section 32 1217 “Mill and Overlay Bituminous Paving.”

1.3 REFERENCE STANDARDS

A. Minnesota Department of Transportation Standard Specifications available at: https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=3869462
1. Where reference is made to a number preceded by "MnDOT", the reference shall be understood to mean that numbered section of the Department of Transportation ‘Standard Specifications for Construction’, latest edition.
2. Provisions for measurement and payment shall not apply except as amended herein and all costs in connection therewith shall be included in the lump sum price bid for the work.
3. References to "Engineer" shall be the MnDOT's Engineer Representative.

B. Subbase course and base course for asphalt paving.
1. All materials, placing, mixing, spreading, and compacting shall be in accordance with MnDOT Standard Specifications Section 2211 and "Materials Lab Supplemental Specifications for Construction" as amended herein and these specifications.
2. References to road or roadbed in 2211 apply to paved areas on this site.

1.4 DEFINITIONS

A. Base Course: Aggregate layer placed between the subgrade and hot-mix asphalt paving and concrete paving.

B. Borrow Soil: Satisfactory soil imported from off-site for use as fill.

C. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.

D. Fill: Soil materials used to raise existing grades.

E. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

1.5 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth moving operations.

C. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Section 31 2500 "Erosion Control," are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Base Course: Base Course shall be Class 5 in accordance with Section 3138 of the Minnesota Department of Transportation, “Standard Specifications for Construction”, Latest Edition.

C. Suitable Grading Material:
1. Any mineral soil encountered within the project excavations which is not classified as Unsuitable.

D. Unsuitable Materials:
1. Loam, silt loam, silt, peat, muck, marl, topsoil, or other organic material and debris.

E. Excess Materials: Materials that are not suitable to be used on-site shall become the property of the Contractor and the Contractor shall properly dispose of them off-site.

2.2 GEOTEXTILE MATERIALS

A. General: Provide geotextiles as follows:
1. Woven, nonwoven, or knit fabric of polymeric filaments or yarns, such as polypropylene, polyethylene, polyester, or polyamide, that form a stable network.
2. Resistant to biological and chemical environments normally found in soils
3. Free of chemical treatment or coating that may significantly reduce porosity or permeability.

B. Properties: Provide geotextile products meeting the following requirements:
1. B1 Grab Tensile Strength min., ASTM D4632 – 200 lb
2. B3 Seam Breaking Strength min., ASTM D4632 – 180 lb
3. B4 Apparent Opening Size max., ASTM D4751 – 30 U.S. Std. sieve size
4. B5 Permittivity min., ASTM D4491 – 0.05 falling head sec−1

C. Delivery and Handling
1. Deliver rolls of geotextile or geotextile-wrapped perforated pipe with an opaque plastic covering.
2. Protect the material from ultraviolet rays or contamination with mud, dirt, dust, or debris. Replace contaminated geotextile or geotextile exposed to the sun for more than seven days.

PART 3 - EXECUTION

3.1 SUBRGRADE PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.

B. Protect and maintain erosion and sedimentation controls during earth moving operations.

C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

D. Shape and compact the subgrade prior to commencement of Bituminous Paving. Scarify, mix, and compact the top 6 inches of the subgrade of any areas that are unstable.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.4 EXCAVATION FOR PAVEMENTS

A. Excavate surfaces under pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 SUBGRADE INSPECTION

A. Notify Engineer when excavations have reached required subgrade.

B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted fill material as directed.

C. Proof-roll subgrade below pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes) to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h)
2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, and replace with compacted backfill or fill as directed.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities without additional compensation.

F. Quality Compaction – compact each lift until there is no evidence of consolidation during compaction or under traffic, with no:
1. Pumping – vertical displacement of the top surface of the compacted layer, not directly under the vehicle tire.
2. Reaction – a movement back to a former or less advanced condition.
3. Yielding – giving under pressure (flexible)
4. Cracking – cracking of material on visible surface
5. Lateral Movement – sideways movement of the top surface

3.6 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.7 BACKFILL

A. Place and compact fill in excavations promptly, but not before completing the following:
1. Removing trash and debris.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.8 SOIL FILL

A. Place and compact fill material in layers to required elevations as follows:
1. Under pavements, use satisfactory soil material.

B. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.9 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.10 COMPACTION OF SOILS

A. Place soil materials in layers not more than 8 inches (200 mm)in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
1. Under pavement, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of soil material at 95 percent.

3.11 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Pavements: Plus or minus 1/2 inch (13 mm).

3.12 INSTALLATION OF GEOTEXTILE FABRIC.

A. Preparation: Prepare a smooth surface, free of stones, sticks, or other debris or irregularities that may puncture or tear the geotextile.

B. Placement:
1. Place the geotextile with the highest strength direction (usually the "machine" or roll direction) oriented in the direction of the greatest expected field stress
2. Where multiple pieces of geotextile are required, lap, apply adhesives or field or factory sew adjacent strips, with the seams meeting the strength specified and as recommended by the geotextile manufacturer.

C. Protection:
1. Secure the geotextile to prevent displacement during subsequent construction. Permit no traffic or construction equipment to operate directly on the geotextile.
2. Repair damaged geotextile to the by patching and sewing.

D. Fill:
1. Place fill onto the fabric in uniform lifts as required, do not exceed 12 inches per lift.

3.13 BASE COURSE UNDER PAVEMENTS

A. Place base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place base course under pavements as follows:
1. Place base course under hot-mix asphalt pavement.
2. Shape base course to required crown elevations and cross-slope grades.
3. Place base course 6 inches (150 mm) or less in compacted thickness in a single layer.
4. Place base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
5. Compact base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.14 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
2. Determine that fill material and maximum lift thickness comply with requirements.
3. Determine, at the required frequency, that in-place density of compacted fill complies with requirements.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

C. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.15 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
   1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

D. Protecting Sensitive Areas: All construction activities are prohibited in the area of the existing septic system and all wetland areas surrounding the construction site.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Engineer.
   1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 2000

SECTION 32 1217 – MILL AND OVERLAY BITUMINOUS PAVING

PART 1 – GENERAL

1.1 CONDITIONS OF THE CONTRACT

A. Conditions of the Contract, DIVISION 00 and General Requirements, DIVISION 01 govern work under this Section.
   1. Performance of the Work of this Section shall comply with DIVISION 00 Prevailing Wage Rate Requirements that apply to this Project.
   2. Performance of the Work of this Section shall comply with DIVISION 01 for Storm Water Plan "SWPPP" Requirements and SWPPP training requirements that apply to this Project.

1.2 SUMMARY

A. Section Includes:
   1. Removing the existing pavement by cold milling.
   2. Plant mixed hot-mix asphalt pavement.
   3. Bituminous tack coat.
   4. Storm drain inlet protection.

1.3 REFERENCE STANDARDS

A. Minnesota Department of Transportation Standard Specifications available at: https://edocs-Public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=38694602
   1. Where reference is made to a number preceded by "MnDOT", the reference shall be understood to mean that numbered section of the Department of Transportation 'Standard Specifications for Construction', latest edition.
   2. Provisions for measurement and payment shall not apply except as amended herein and all costs in connection therewith shall be included in the lump sum price bid for the work.
   3. References to "Engineer" shall be the MnDOT's Engineer Representative.

B. All materials, placing, mixing, spreading, and compacting shall be in accordance with MnDOT 2357, MnDOT 2360, MnDOT 3151 as amended herein and these specifications.
   1. References to road or roadbed in 2357 or 2360 apply to paved areas on this site.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

A. Material Certificates: For each paving material.

PART 2 - PRODUCTS.

2.1 ASPHALT MATERIALS

A. Bituminous Pavement Materials
   1. Meeting the requirements of MnDOT Section 2360.

B. Tack Coat: Emulsified asphalt, in accordance with MnDOT Section 2357

2.2 MIX DESIGNATIONS

A. Type SP 12.5 Wearing Course: [SPWEA340C].
   1. Mixture design type: Gyratory Mixture Design.
   2. Course: Wearing [and shoulder wearing] course.
   3. Maximum aggregate size: [1/2-in, SP 9.5] [5/8-in, SP 4.75] [3/4-in, SP 12.5] [1-in, SP19.0]

4. Traffic Level [2: 20 Year Design ESALs of < 1.] [3: 20 Year Design ESALs of 1 - <3.) [4: 20 Year Design ESALs of 3 - <10.] [5: 20 Year Design ESALs of 10 - < 30.]
5. Air void requirement: [3.0 percent for non-wear and shoulder] [4.0 percent for wear mixtures]
6. Asphalt binder grade: [C].

2.3 MINIMUM TEMPERATURE CONTROL

A. Follow requirements of MnDOT Table 2360-26 Minimum Temperature Control for the minimum laydown temperatures in all courses of the asphalt mixture as measured behind the paver or spreading machine. Do not pave when the air temperature is less than 32° F [0° C] unless otherwise directed by the Engineer in writing.

Air Temperature, *°F [°C]*	**Compacted Mat Thickness, †**			
	1 in [25 mm]	**1½ in [40 mm]**	**2 in [50 mm]**	**>3 in [75 mm]**
32 – 40 [0-5]	—	265[129] ‖	255 [124]	250 [121]
41 – 50 [6-10]	270[130] ‖	260 [127]	250 [121]	245 [118]
51 – 60 [11-15]	260 [127] ‖	255 [124]	245 [118]	240 [115]
61 – 70 [16-21]	250[121] ‖	245 [118]	240 [115]	235 [113]
71 – 80 [22-27]	245 [118]	240 [115]	235 [113]	235 [113]
81 – 90 [28-32]	235 [113]	230 [110]	230 [110]	230 [110]
≥ 91 [33]	230 [110]	230 [110]	230 [110]	225 [107]

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that survey bench marks and intended elevations for the work are as indicated.

B. Contractor shall provide construction field surveying / staking, with spot checks by the Owner.

3.2 PREPARATION

A. Mechanically sweep pavement surfaces immediately prior to commencement of Work. Clean pavement surfaces of loose foreign matter. Verify that surfaces are dry.

B. Protect utility structure lids and castings (e.g., manholes, inlets, valve boxes).

C. Protect existing improvements (e.g., buildings, walks, curbs), overhanging trees, and adjacent plantings from heat damage by movable shielding or building paper. Restore damaged areas resulting from Contractor operations to preexisting or better condition.

3.3 REMOVAL BY MILLING

A. Equipment
1. Mill the existing pavement with a power operated self-propelled cold milling machine capable of removing concrete and bituminous materials to the profile, cross-slope, grade, and elevation uniformly across the pavement surface as shown on the plans.
2. Use automatic controls to control grade, elevation, cross-slope, and profile. Use a machine with ski, matching shoe, or an independent grade control to reference the existing pavement and automatically establish profile grades along each edge of the machine within ±1/4-in [6 mm].

B. Operations
1. Mill the pavement surface to the depth, width, grade, and cross-slope as indicated on Drawings. **In lieu of milling, the contractor may elect to reclaim the existing bituminous pavement with the underlying base to a depth of 10" and stockpile this material.**

a. Reference milling operation from an independent grade control in areas directed by the Engineer.
b. Establish and maintain grade control as approved by the Engineer.
   1) Surface irregularities exceeding ½ in [6 mm] under a 10-foot [3-meter] straightedge laid transversely and longitudinally after milling is complete are unacceptable.
c. Avoid disturbing or damaging existing drainage or utility structures on the project. Repair damage resulting from the milling operations at no additional cost to the Department.

2. Perform milling without tearing or gouging the underlying material. Keep the milled pavement surface free of all loose materials and dust.
   a. Mill areas inaccessible to the milling machine using other equipment or methods as approved by the Engineer.
   b. Mill previously patched areas to the specified depth below the pavement surface that existed before placement of the previous patch, and not from the surface of the patch.
   c. Where maintenance of a minimum clearance and/or the matching of an existing elevation are necessary, mill existing surface to the depth of the overlay thickness.
   d. Where overlay areas abut pavements (e.g., walks, concrete gutter), taper edges of pavement by milling so that pavements will be flush and will drain positively.

3. End of Work Periods
   a. Mill the entire pavement width to a flush surface at the end of each work period. If uncompleted operations result in a vertical or near vertical longitudinal face, re- slope the longitudinal face to provide a taper, construct a temporary bituminous taper or provide protective measures, as approved by the Engineer.
   b. Taper transverse cutting faces at the end of each working period where pavement is open to traffic. Construct temporary bituminous tapers at intersecting streets, around utility appurtenances, and appropriated entrances during the milling operations, as directed by the Engineer.

4. Millings
   a. The Contractor [shall] stockpile the surfacing removed by the milling operations at the Morris Truck Station.

5. Clean Up and Preparation for Asphalt
   a. After milling to the depth indicated on Drawings, sweep or vacuum clean the milled area with equipment approved by the Engineer.
   b. Remove loose or deteriorated bituminous surfacing with minimum 100 psi air blasting.
   c. Dispose of debris from milling and cleaning operations off of the Project Site in accordance with 2104.3 “Removing Pavement and Miscellaneous Structures, Construction Requirements.”
   d. Cracks or depressions resulting after surface repair, air blasting, sweeping or milling operations, which are greater than 1-1/2" in depth and width, shall be patched with bituminous patching mixture. Patching of these areas shall be performed ahead of the paving operation and compacted with a small vibratory or pneumatic roller. Depressions of lesser dimensions shall be filled with bituminous course mixture, in front of the paver, as directed by engineer.
   e. Provide joint and crack filler in accordance with the following Joint and Cracks Mixing Requirements.
   f. Remove loose, unstable, or deteriorated portions of the existing pavement to provide a stable surface after completion of the patching operation. Remove waste or surplus material from the project. Repair and fill the holes and depressions with mix. Compact the mix using conventional pneumatic tire roller or mechanical tampers in areas inaccessible to conventional roller equipment.

3.4 PREPARATION – TACK COAT

A. Apply tack coat in accordance with manufacturer's instructions.

B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 0.05 gal/sq yd.

C. Apply tack coat to contact surfaces of curbs, gutters and existing bituminous edges.
1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.5 PLANT MIXED ASPHALT PAVEMENT

A. Asphalt Pavement: Install Work in accordance with MNDOT, Section 2360; except as modified herein:
1. Pavement Smoothness
a. The requirements of MnDOT 2360.3.E apply.

2. Compaction
a. Compact using the "Ordinary Compaction" with Nuclear gage at 95% for rolling patterns is required.

B. Equipment:
1. Trucks: Provide trucks with tight, clean, and smooth truck haul beds. Do not allow mixture to adhere to the truck beds.
2. Use an asphalt paver to place the mixture. When necessary, the Contractor may use a motor grader, when approved by the Engineer, to spread mixtures in areas that are inaccessible to a paver or when the quantity of mixture makes it impractical to place with a paver.

C. Spread all mixtures without segregation to the cross sections shown on the plans (excluding tight blade and scratch course applications) to secure a smooth base of uniform grade and cross section so that subsequent courses will be uniform in thickness.
1. The Contractor may spread the leveling layer with a properly equipped paver or, when approved by the Engineer, a motor grader equipped with a leveling device or with other means for controlling the surface elevation of the leveling layer.
2. Place each course over the full width of the section under construction on each day's run, unless the Engineer directs otherwise.

D. Lift thickness:
1. After compaction, the thickness of each lift shall be within a tolerance of ¼ inch of the thickness shown on the plans, except that, if automatic grade controls are used, this thickness requirement will not apply to the first lift placed. This thickness requirement will not apply to a leveling lift whether or not automatic grade controls are required.

E. Rolling
1. Compact each lift of asphalt to the density required.
2. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.
a. Use rollers that meet the requirements in MnDOT 2360.3.B.2.e.
b. Use the same equipment type and weight on the remainder of the pavement course that was used to construct the control strip. Provide at least two rollers.
c. Provide a tandem steel wheeled roller for final rolling.
d. The Contractor may use trench rollers or mechanical tampers to compact areas inaccessible to the conventional type rolling equipment.

F. Surface Requirements
1. Using a screed or strike-off assembly, produce a finished surface of the required evenness and texture without tearing, shoving, or gouging. For mainline paving, if the paving width is greater than the basic screed, auger and mainframe extensions, which meet manufacturer‘s recommendations for the paving width, are required unless otherwise

directed by the Engineer.

2. After compaction, the finished surface of each lift shall be reasonably free of segregated, open and torn sections, and shall be smooth and true to the grade and cross section shown on the plans with the following tolerances:
   a. Leveling 1st lift using automatics: 1/2-inch
      1) Tolerance also applies to 1st lift placed other than leveling when automatics are used.
   b. Wear: 1/4-inch
      1) Tolerance of final 2 lifts from the edge of a 10-foot straightedge laid parallel to or at right angles to the centerline.

3.2 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Replace and compact hot-mix asphalt where core tests were taken.

C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.3 WASTE HANDLING

A. General: Handle asphalt-paving waste according to Section 01 7419 "Construction Waste Management and Disposal."

END OF SECTION 32 1217