

- PAVEMENT -

PAVEMENT —

STORM SEWER

& GUTTER

MATCH TOPS WHEN -

POSSIBLE, OTHERWISE

MAINTAIN 6" PIPE

CLEARANCES & 1%

CATCH BASIN

PLAN VIEW

TYPICAL CIRCULAR UNDERDRAIN DETAIL

(WITHIN PARKING LOTS OUTSIDE CURB LINES)

NOT TO SCALE

12"——

PLAN VIEW

TYPICAL FINGER TYPE UNDERDRAIN

(WITHIN PARKING LOTS AT CURB LINES)

NOT TO SCALE

──BACK OF CURE

6" PERFORATED

CORRUGATED PVC

UNDER DRAIN W/

GEOTEXTILE WRÁP

DRAINAGE STRUCTURE

BACKFILL WITH MDOT

34R OPEN GRADED AGGREGATE PEA

CONNECTED TO

STONE (TYP)

___ 10 LF 6" EA DIRECTION

MATCH TOPS WHEN

MAINTAIN 6" PIPE

- PLACE 6" PERFORATED

DRAIN TILE AROUND PAVEMENT CATCH BASINS

CORRUGATED PVC UNDER

POSSIBLE, OTHERWISE

CLEARANCES & 1% MIN

— CATCH BASIN

— CATCH BASIN COVER

- PAVEMENT OR

LAWN AREAS

PLUG (TYP) -

-10 LF 6" EA DIRECTION

21AA LIMESTONE BASE

TYPICAL UNDER DRAIN DETAILS

BACKFILL WITH MDOT, 34R OPEN GRADED AGGREGATE

DIAMETER CORRUGATED PVC PERFORATED

LINDER DRAIN WITH GEOTEXTILE WRAP ALONG

ENTIRE LENGTH OF CURB (BOTH SIDES)

(PEA STONE)

1. UNDER DRAIN TO BE 6" PVC AASHTO M 278 SDR-35 WITH PERFORATIONS MEETING

4. PROPOSED UNDER DRAIN PIPE LAYOUT, FLOW LINE ELEV. AND DETAILS SHALL BE

2. ALL UNDER DRAIN PIPES SHALL BE INSTALLED AT A MIN SLOPE OF 1%.

3. PIPE SHALL BE INSTALLED WITH THE PERFORATIONS PLACED DOWN.

APPROVED PRIOR TO CONSTRUCTION.

---- PAVEMENT ---

∠ PLUG (TYP)

PLAN VIEW

SECTION X-X

TYPICAL FINGER TYPE UNDERDRAIN

(WITHIN PARKING LOTS OUTSIDE CURB LINES)

NOT TO SCALE

BITUMINOUS PAVEMENT

TYPICAL UNDER DRAIN SECTION

NOT TO SCALE

CONCRETE OR

AREA

6" PERFORATED—

PEA STONE (TYP)

APPROXIMATELY 36"

OPEN- GRADED

AGGREGATE

WITH 18" MIN MDOT 34R -

CORRUGATED PVC UNDER

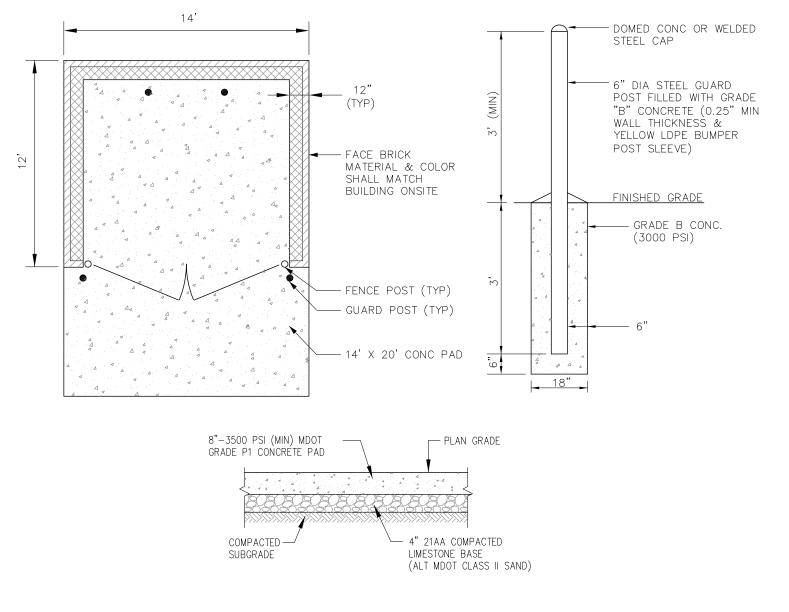
WRAP CONNECTED

BACKFILL WITH MDOT 34F

OPEN GRADED AGGREGATE

DRAIN W/ GEOTEXTILE

DRAINAGE STRUCTURE



TYPICAL SCREENED DUMPSTER ENCLOSURE DETAILS NOT TO SCALE

PAVING NOTES

GENERAL NOTES

- EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS. TREE ROOTS SHALL BE COMPLETELY REMOVED.
- 2. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
- 3. THE PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOF-ROLLED IN THE PRESENCE OF A GEOTECHNICAL/PAVEMENT ENGINEER TO DETERMINE STABILITY, LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH CLASS II SAND OR AS DIRECTED BY THE ENGINEER. ALL FILL MATERIAL AND BASE MATERIAL SHALL BE TESTED AND ITS COMPACTION AND SUITABILITY FOR ACCEPTANCE OF THE BASE MATERIAL AND PAVEMENT SHALL BE CERTIFIED BY SAID TESTING FIRM. THE OWNER SHALL SUPPLY THREE COPIES OF GEOTECHNICAL AND TECHNICAL REPORTS TO LENOX TOWNSHIP.
- 4. IF IN THE OPINION OF THE INSPECTOR/ENGINEER, FIELD CONDITIONS WARRANT ADDITIONAL TESTING, THE DEVELOPER SHALL ARRANGE FOR AND PAY FOR ALL REQUIRED ADDITIONAL TESTING.
- 5. 21AA LIMESTONE AGGREGATE BASE SHALL BE COMPACTED TO ACHIEVE A 95% COMPACTION LEVEL (MODIFIED PROCTOR - ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB OR THE PAVED EDGE. 6. CONCRETE PAVEMENT TESTING SHALL BE REQUIRED FOR ALL PROJECTS.
- 7. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LENOX TOWNSHIP, MACOMB COUNTY DEPARTMENT OF ROADS, AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

8. CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO

AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN

- APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY. 9. FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY
- FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL 10. 1.0 INCH AND 2.0 INCH EXPANSION JOINTS SHALL BE INSTALLED PER MCDR / MDOT STANDARDS.
- 11. FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DRY DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. 12. 6" UNDER DRAIN WRAPPED IN GEOTEXTILE FABRIC FILTER SHALL BE INSTALLED ON
- BOTH SIDES OF ALL ROADWAYS. ALSO, PLACE UNDER DRAINS AT ALL DRAINAGE STRUCTURES WITHIN PARKING AREAS. 13. CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW BITUMINOUS PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, SUBJECT

TO LENOX TOWNSHIP AND MCDR APPROVAL, THE PLACEMENT OF THE FINAL LIFT

SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED BY THE DEVELOPER. PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS. 14 ONLY PLANT MIXED PAVEMENT MATERIAL ALLOWED. MILLINGS OR RECYCLED MATERIAL OF ANY TYPE ARE PROHIBITED (EXCEPT FOR SINGLE / NON-SUBDIVISION

LIMESTONE OR CRUSHED CONCRETE AGGREGATE) MAY BE ALLOWED ONLY WITH

HOMES). APPLICABLE FOR ALL PAVEMENT TYPES INCLUDING DRIVEWAYS (RESIDENTIAL AND NON-RESIDENTIAL). GRAVEL DRIVEWAYS (MIN 6" MDOT 21AA

CONCRETE PAVEMENT

- 1. CONCRETE SHALL CONSIST OF: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DÁY COMPRESSIVE STRENGTH OF 3500 PSI AND A SLUMP OF 11/2 TO 3 INCHES. PAVEMENT SHALL BE PLANT MIXED CONFORMING
- TO MDOT GRADE P1 DESIGNED TO MITIGATE ASR PER ASTM STANDARDS. 2. ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY
- 3. THE CONCRETE BATCH PLANT SHALL BE MDOT CERTIFIED WITH LOCATION APPROVED

CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING

- BY THE TOWNSHIP AND MCDR. 4. NO CONCRETE PAVING SHALL BE ALLOWED PRIOR TO MAY 1, OR AFTER NOVEMBER 1
- 5. AIR TEMPERATURE AT POINT OF PLACEMENT, AWAY FROM ARTIFICIAL HEAT SHALL BE MINIMUM 25° F AND RISING.
- 6. TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT SHALL BE BETWEEN 45° F AND

BITUMINOUS PAVEMENT

(UNLESS APPROVED BY MDOT, MCDR OR LENOX TOWNSHIP).

- . BITUMINOUS MIXTURE SHALL CONSIST OF: BASE COURSE MDOT BITUMINOUS MIXTURE NO. 2C; LEVELING COURSE - MDOT BITUMINOUS MIXTURE NO. 3C; WEARING COURSE - MDOT BITUMINOUS MIXTURE NO. 4C; ASPHALT CEMENT PENETRATION GRADE 85-100 (PG 64-22) RECLAIMED ASPHALT PAVEMENT (RAP) SHALL NOT BE
- 2. FOR PRIVATE RESIDENTIAL ROADWAYS, COMMERCIAL PARKING LOTS, AND BIKE PATHS ALTERNATE EQUIVALENT MDOT BITUMINOUS MIXTURE MAY BE USED, WITH APPROVAL FROM THE TOWNSHIP ENGINEER.
- 3. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY OF 97% OF THE FIELD CONTROL DENSITY AS DETERMINED BY THE MARSHALL METHOD.
- 4. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE BASE COURSE AND LEVELING COURSE AND BETWEEN THE LEVELING COURSE AND WEARING COURSE WHEN EITHER 48 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.10 GALLON/S.Y. (BETWEEN LEVELING COURSE AND BASE COURSE & 0.05 GALLON/SY BETWEEN WEARING COURSE AND LEVELING COURSE) THE COATS MAY DIFFER. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
- 5. DO NOT PLACE HMA OR APPLY BOND COAT WHEN PRECIPITATION IS IMMINENT OR WHEN MOISTURE ON THE EXISTING SURFACE WILL PREVENT SATISFACTORY CURING. UNLESS OTHERWISE APPROVED BY THE ENGINEER IN WRITING, TEMPERATURE AND SEASONAL REQUIREMENTS FOR PLACING HMA WILL BE ACCORDING TO THE CURRENT MDOT SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING

SIDEWALK STANDARD NOTES

AND ROADWAY INTERSECTION. HANDICAP RAMPS SHALL MEET ADA BARRIER FREE

AREAS AS INDICATED ON THE PLANS.

EXISTING OR PROPOSED SIDEWALK AND CURB.

TRANSVERSE TO THE SLOPE OF RAMP.

REQUIREMENTS.

ADJACENT CONCRETE.

STANDARDS.

1. SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS

SHOWN ON THE PLAN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING

RAMPS SHALL BE PROVIDED AT CORNERS OF AN INTERSECTION WHERE THERE IS

4. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING,

5. SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE

6. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND SHORT GRADE CHANGES. WHERE CONDITIONS PERMIT, IT IS DESIRABLE. THAT THE SLOPE

OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

7. IF POSSIBLE, DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS, EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW

CONSTRUCTION. LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF

9. THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE

GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES"

10. CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE

SIDEWALK CONSTRUCTION NOTES

2. PROVIDE FULL DEPTH TRANSVERSE EXPANSION JOINTS, BY INSTALLING 1/2" THICK

3. PLACE 1/2" FIBER EXPANSION JOINT FILLERS AT EACH SIDE OF DRIVE.

1. PROVIDE TRANSVERSE SAW CUT JOINTS AT APPROX 5' INTERVALS (7' MAX). SAW 1/8" WIDE

8. THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE

SIDEWALK AND PATHWAY RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. DETAILS SHOW SIDEWALK RAMP DETAILS AT PARKING LOT



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LIENT NAME: LENOX TOWNSHIP MACOMB COUNTY

3 WORKING DAYS



Know what's below. Call before you dig.

PRIOR TO CONSTRUCTION, ALL EXISTIN TILITIES LOCATION AND DEPTH WITHIN HE PROJECT AREA SHALL BE FIELD /ERIFIED. CALL MISS DIG SYSTEM 3 WORKING DAYS PRIOR TO CONSTRUCT

> TILITY INFORMATION SHOWN ON THIS RAWING ARE APPROXIMATE AND MAY CCORDING TO AVAILABLE RECORD OF ILITY COMPANIES, PUBLIC AGENCIES R OTHER SOURCES AND THUS MAY T NECESSARILY REFLECT ACTUAL TELD LOCATIONS AND NO GUARANTER GIVEN TO COMPLETENESS OR ACCURAG

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I-COUNTY ENGINEERING CONSULTA

PROJECT NAME:

LENOX TOWNSHIP PAVING

STANDARD DETAILS ROJECT LOCATION:

SEC , TO4N, R13E LENOX TOWNSHIP MACOMB COUNTY

Drawn By: TCEC Checked By: LEDPW Approved By: LENOX

REVISIONS: 06-19-08

09-24-19 08/30/22

04/01/24 01/13/25

PREMOLDED JOINT FILLER SET 1/4" BELOW THE CONCRETE SURFACE IN THE JOINTS AT 50' MAX

4. PROVIDE 1" FIBER EXPANSION JOINT FILLERS AT CURB AND BUILDING OR ROW LINE. 5. AT DRIVEWAYS WITH CURB & GUTTER, PROVIDE CURB DROP PER CURRENT MDOT

AT UNPAVED DRIVE OR PAVED DRIVE WITH POOR CONDITION, INCREASE THE SLAB THICKNESS TO 6" OR EXISTING SLAB THICKNESS WHICHEVER GREATER.

7. PROVIDE 10' BET EDGE OF SIDEWALK TO TOP OF BANK FOR DETENTION BASINS, OPEN

8. ADJACENT FINISHED GRADE SHALL BE SET 2" BELOW TO ACCOMMODATE SOD.

9. MAX GRADE ALONG SIDEWALK SHALL NOT EXCEED 1 ON 12.

X 1" DEEP JOINTS. TOOLED JOINTS NOT ACCEPTABLE.

10. SIDEWALK CROSS SLOPE SHALL BE 2% FOR DRAINAGE.

11. A MIN 95' SIDEWALK CENTERLINE RADII SHALL BE PROVIDED FOR HORIZONTAL ALIGNMENT. PROVIDE MIN 3' HORIZONTAL CLEARANCE AND MIN 10' VERTICAL CLEARANCE FROM ALL FIXED OBJECTS AND AS DIRECTED BY THE OWNER.

13. PROVIDE HANDICAP ACCESSIBLE RAMPS AT STREET INTERSECTIONS AND AS INDICATED ON

14. HANDICAP ACCESSIBLE RAMPS SHALL BE CONSTRUCTED PER CURRENT MDOT STANDARDS. 15. CLEAN SAW CUT JOINTS SHALL BE PROVIDED WHENEVER NEW PAVEMENT MATCHES EXISTING

16. UTILITY STRUCTURES SHALL BE ADJUSTED PER CURRENT MUNICIPALITY STANDARDS AND SHALL MATCH PROPOSED SIDEWALK GRADE.

CALE VERIFICATION:

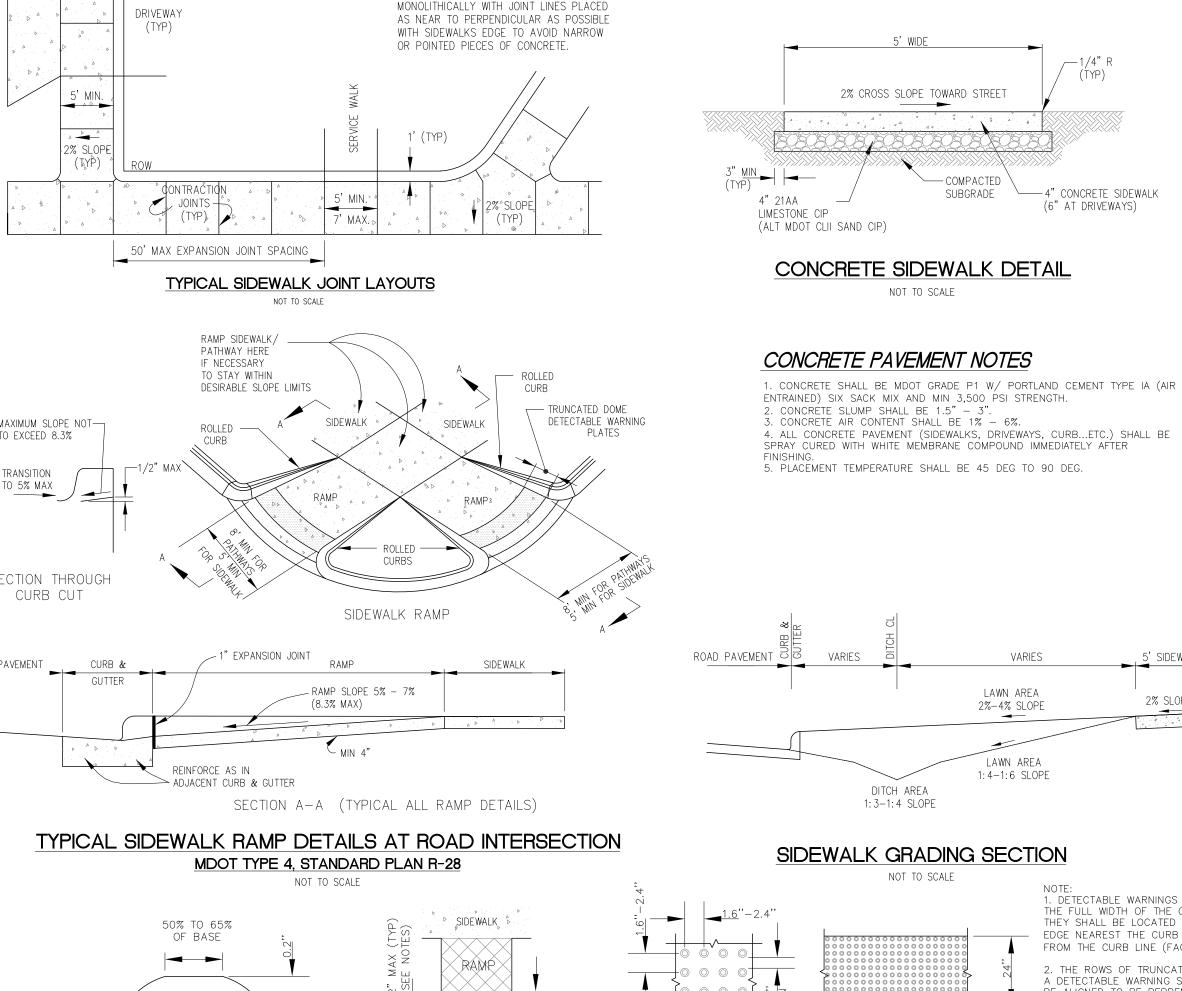
BAR IS ONE-INCH UST SCALES ACCORDINGLY IF

NONE

RAWING NO:

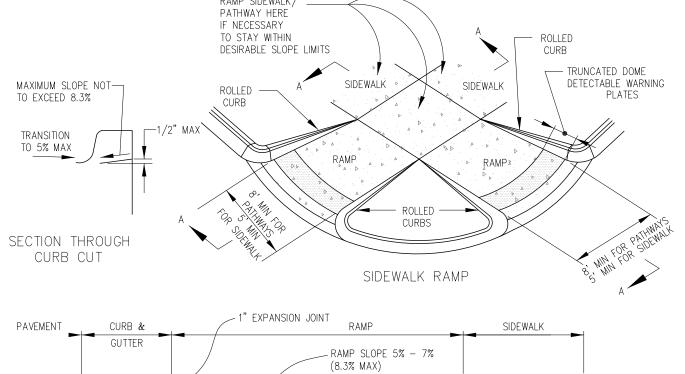
LenoxStdPAV

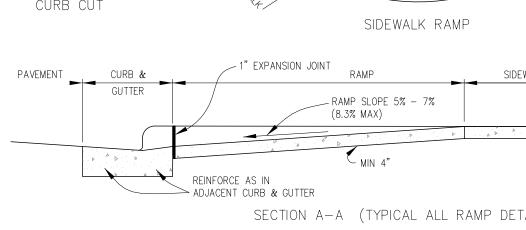
TYPICAL CONCRETE SIDEWALK DETAILS



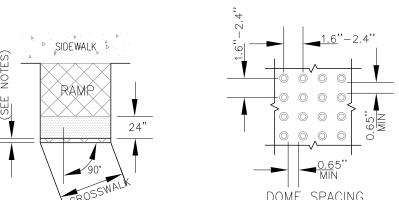
SIDEWALK INTERSECTIONS SHALL BE CAST

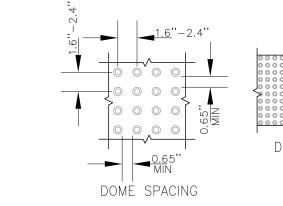
---- 4" CONCRETE SIDEWALK (6" AT DRIVEWAYS) CONCRETE SIDEWALK DETAIL



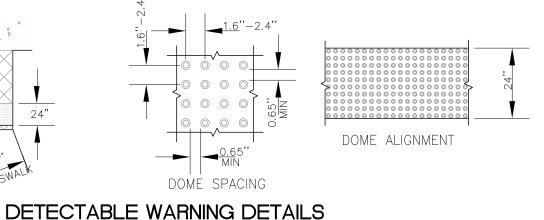


DOME SECTION





MDOT STANDARD PLAN R-28



THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE

EDGE NEAREST THE CURB LINE IS 2" FROM THE CURB LINE (FACE OF CURB). THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL (PERPENDICULAR SHOWN) TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND

3. THE TRUNCATED DOMES SHALL BE RED COLOR, ARMOR-TILE OR APPROVED EQUAL. STAMPED CONCRETE NOT ACCEPTABLE.

I. DETECTABLE WARNINGS SHALL EXTEND

5' SIDEWALK

2% SLOPE

Sheet