



2021 Edition – Supplemental Standard Specifications Effective with February 2021 Lettings

Make the following revisions to the standard specifications:

Section 109 Measurement and Payment

Within section 109.2 Accuracy of Pay Units replace the entire text with the following:

Quantities of pay items are measured and reported by the unit of measure, such as cubic yard, square yard, linear foot, square foot, ton, etc., as designated in the contract for the particular item. The engineer is to accurately measure constructed contract items and carefully check the computations before submittal of each pay estimate.

Report measured items to the nearest tenth (0.1) unit of measure in each item for a progress payment unless otherwise specifically required in the contract. For work order based contracts payment will be made with the values on each work order.

Within section 109.7 Final Waiver of Liens replace the entire text with the following:

At the completion of the Contract, and prior to final payment, the Contractor shall submit signed final Waivers of Lien, on the form provided by the Engineer, for themselves, all subcontractors, all suppliers and materials.

Section 303 Excavation

Within Section 303.4 Replace the entire text with the following:

The items of Excavation and Excavation Below Subgrade shall be measured in cubic yards in its original position, computed by the method of average end areas, with no correction for curvature.

The item of Extra Excavation and Stripping Topsoil shall be measured in square yard (stripping topsoil is estimated at a depth of six (6) inches). Additional topsoil encountered will be paid under the excavation bid item with approval of Engineer.

When average end areas are not computed or the contract specifies measurement by the truck-load, the following unit weights will be used in converting weight to volume for the following materials:

Material	Unit Weight In-Truck	Unit Weight In-Place	Max Load In-Truck*	Max Load In-Place**
Sand	1.50 tons/cy	1.75 tons/cy	14.8 cy	12.7 cy
Clay	1.50 tons/cy	1.75 tons/cy	14.8 cy	12.7 cy
Topsoil	1.50 tons/cy	1.65 tons/cy	14.8 cy	13.5 cy

* Based on an average tare for a quad-axle dump truck of 28,500-pounds with a 44,500-pound load.

** Uses the above tare & load weights with a 15% compaction factor, except topsoil which uses a 10% compaction factor.

The contract price for Excavation, Excavation Below Subgrade, Extra Excavation, Stripping Topsoil shall be payment in full for all equipment, tools, labor and incidentals necessary to complete the work of excavation and disposal of materials as specified.

The City will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM #</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
303.01	Excavation	CY
303.02	Excavation Below Subgrade	CY
303.03	Extra Excavation	SY
303.04	Stripping Topsoil	SY

Section 314 Construction Staking

Within Section 314.3 Replace subsection H with the following:

H. Electrical Infrastructure:

The contractor will stake the center of the base and electrical service meter breaker pedestal and the four corners of the pullbox, signal controller base, and streetlight underground service. The contractor shall mark the lath to indicate the center (circular items) or corners of the infrastructure. Locate stakes to within 0.02 feet horizontally and to establish the grade elevation to within 0.01 feet vertically.

Within Section 314.4 Update bid item name for item 314.13 with the following:

<u>ITEM #</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
314.13	Construction Staking Electrical Infrastructure	EACH

Section 414 Sanitary Sewer Pipes and Laterals

Within Section 414.4 Replace subsection B, paragraph 4 with the following:

Reconnect.

Reconnect shall be measured and paid as each upon completion and accepted, and shall include necessary wyes, tees, fittings, and PVC pipe including riser, 4” or larger, for the connection of the lateral and shall not exceed a length of five (5) feet; as measured along the length of the centerline of the pipe. Sanitary laterals that are re-laid, the first five (5) feet will be paid for as a reconnect and the remainder of the sanitary lateral shall be paid by the lineal foot.

Section 415 Storm Sewer Pipes and Laterals

Within Section 415.4 Replace paragraphs 4, 6 and 7 with the following:

Connections.

The contract price shall include furnishing all materials, including required fittings where connections are connected to risers, necessary to perform the work; excavation of the trench; installation and removal of sheeting and bracing; backfilling the trench; and compaction of the backfill material; bedding the pipe; laying the pipe and installing the fittings; jointing and sealing of joints in pipe and fittings; encasement, where specified; cleaning out the connection; restoring the site; and all other work incidental to the installation of storm sewer connections.

Reconnect.

Reconnect shall be measured and paid as each reconstruction is completed and accepted and shall include necessary wyes, tees, fittings, and PVC pipe including riser, 6” or larger, for the connection of the connection and shall not exceed a length of five (5) feet; as measured along the length of the centerline of the pipe. Storm laterals that are re-laid, the first five (5) feet will be paid for as a reconnect and the remainder of the storm lateral shall be paid by the lineal foot.

The contract price for re-laid connections shall include furnishing all materials, including required fittings where connections are connected to risers, necessary to perform the work; excavation of the trench; installation and removal of sheeting and bracing; backfilling the trench; and compaction of the backfill material; bedding the pipe; laying the pipe and installing the fittings; tracer wire, jointing and sealing of joints in pipe and fittings; encasement, where specified; cleaning out the connection; restoring the site; and all other work incidental to the installation of storm sewer connections.

Section 419 Sewer Structures

Within Section 419.2 Replace subsection B with the following:

B. Manholes.

The following lists of Neenah Foundry castings are acceptable for City construction and are further detailed in the Standard Detail Drawings. Substitutions shall be approved by the Engineer prior to delivery to the job site.

1. R-1500 Heavy-duty, eight (8) inch high, non-rocking manhole frame and R-1710 Type “B”, non-rocking self-sealing manhole covers with concealed pick holes for sanitary covers and open pick holes for storm covers. An R-2100 Type “A”, non-rocking slotted grate will be used if the casting is to provide for storm water drainage.
2. R-1916-D Heavy-duty, manhole frame and self-sealing T-Gasket bolt down cover and frame.

The following lists of Neenah Foundry castings are acceptable for City construction and can be used if shown on plan or approved by the Engineer.

1. R-1510-A Heavy-duty, six (6) inch high, non-rocking manhole frame and Type “B” non-rocking self-sealing manhole covers with concealed pick holes for sanitary covers and open pick holes for storm covers. An R-2050 Type “A”, non-rocking slotted grate will be used if the casting is to provide for storm water drainage.
2. R-1689 Heavy-duty, four (4) inch high, non-rocking manhole frame and R-1550 Type “B” non-rocking self-sealing manhole covers with concealed pick holes for sanitary covers and open pick holes for storm covers. An R-2050 Type “A”, non-rocking slotted grate will be used if the casting is to provide for storm water drainage

Within Section 419.3 Replace subsection B, paragraph 5, third bullet with the following:

- The total height of adjustment rings shall be a minimum of two (2) inches and a maximum of six (6) inches on a manhole cone. The total height of adjustment shall be a minimum of eight (8) inches and a maximum of twelve (12) inches storm manholes with a flat top. All adjustment greater than four (4) inches shall be done with oversized concrete adjustment, securely attached to the structure and made in accordance with Section 420.

Section 602 Concrete Pavement

Within Section 602.2 replace paragraph 1 with the following:

Furnish linseed oil based liquid curing compound conforming to; for white pigmented linseed = ASTM C309, Type 2, class B or clear linseed = ASTM C 309, Type 1, 10, class A.

Section 604 Concrete Sidewalk and Driveways

Within Section 604.3 Add the following:

Where a new sidewalk is to meet an existing sidewalk that is not at proper grade or location the contractor shall ramp to meet the existing sidewalk. Such ramping shall not be greater than one (1) inch per lineal foot and shall be separated from the new sidewalk with an expansion joint.

Where a new sidewalk meets a ramped section of sidewalk, the contractor shall remove the ramped section and place new sidewalk at proper grade. The City will pay the contractor for necessary sidewalk removal and placement of previously ramped sections with approval of the Engineer using contract bid items.

Section 607 Joint and Crack Sealing

Within Section 607.2 replace entire text with the following:

The material shall be an elastic type, hot pour sealer. The joint sealer shall be a material meeting the requirements of ASTM D6690 Type II, (Crafco Inc. RoadSaver 221 or equal) or Type IV, (Crafco Inc. RoadSaver 231 or equal). Backer rod used in conjunction with this sealer must withstand, without damage, the high temperatures inherent to the sealer. The vendor shall supply a complete statement of the origin of the material to the Engineer along with recommendations of the manufacturer including pouring temperature and maximum safe heating temperature, before or at the preconstruction meeting.

Section 705 Electrical Service

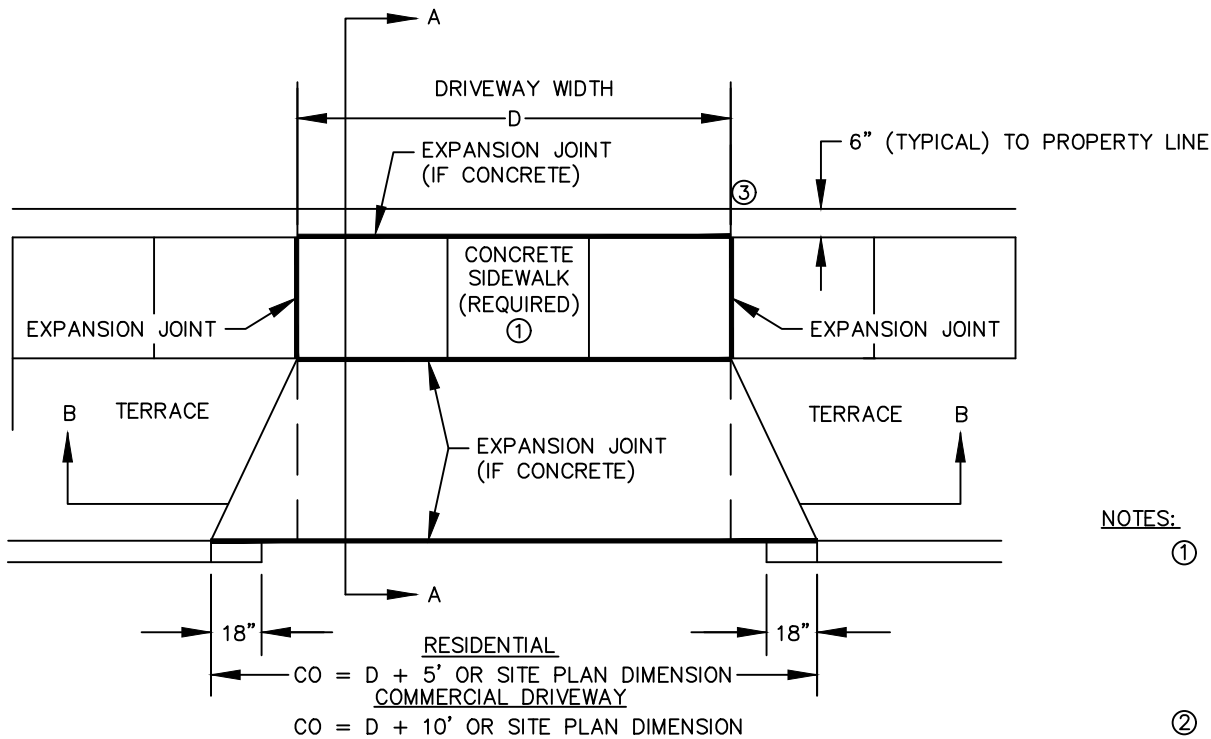
Within Section 705.4 Update bid item name for item 705.01 with the following:

<u>ITEM #</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
705.01	Electrical Service Breaker Pedestal	EACH

Standard Detail Drawings

The following drawings shall be replaced with revised details as named:

- Urban Driveway
- Curb and Gutter Sections – 18”
- Curb and Gutter Sections – 24”
- Curb and Gutter Sections – 30”
- Sidewalk & Curb Ramp Construction
- Sidewalk & Curb Ramp Construction (Continued)

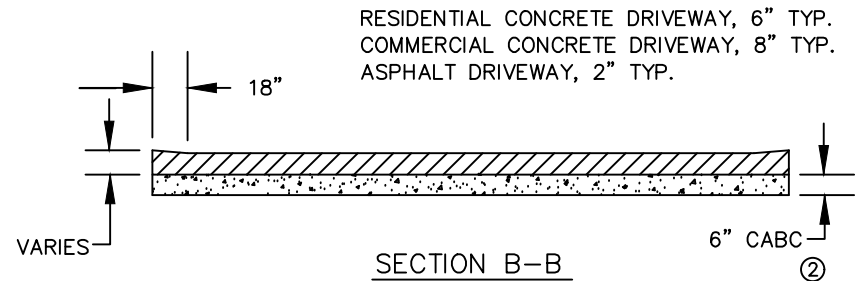
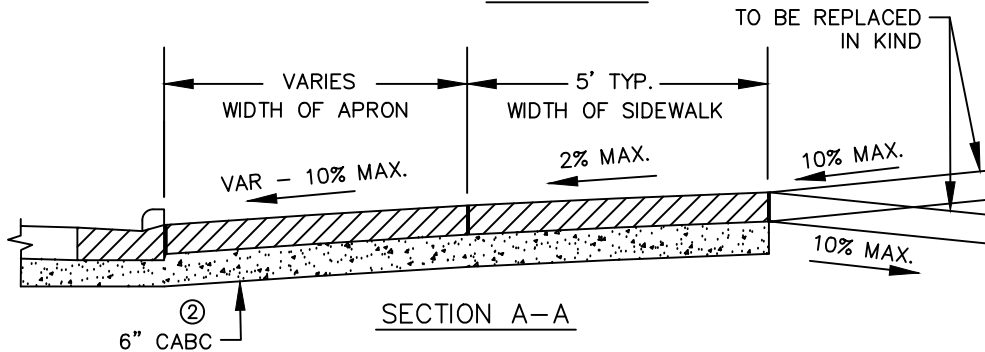


- MAX D = 12' SINGLE WIDTH RESIDENTIAL
- MAX D = 25' DOUBLE WIDTH RESIDENTIAL
- MAX D = 15' COMMERCIAL ONE-WAY
- MAX D = 25' COMMERCIAL TWO-WAY
- MAX CO = 17' SINGLE WIDTH RESIDENTIAL
- MAX CO = 25' DOUBLE WIDTH RESIDENTIAL
- MAX CO = 30' COMMERCIAL ONE-WAY OR AS SHOWN ON APPROVED SITE PLAN
- MAX CO = 35' COMMERCIAL TWO-WAY OR AS SHOWN ON AN APPROVED SITE PLAN

NOTES:

- ① ALL DRIVEWAYS, CONCRETE AND ASPHALT, REQUIRE A 5' CONCRETE SIDEWALK SECTION WITH 6" OF CABC AS LEVELING COURSE. SIDEWALK DEPTH MUST BE SAME DEPTH OF ADJACENT CONCRETE APRON. SIDEWALK TO BE 6" THICK WHEN INSTALLED THROUGH AN ASPHALT APRON.
- ② ALL DRIVEWAYS, CONCRETE OR ASPHALT, REQUIRE 6" OF CABC AS LEVELING COURSE.
- ③ ALL PARKING LOT CURBING MUST BE TAPERED TO MEET THE BACK OF THE SIDEWALK.

PLAN VIEW



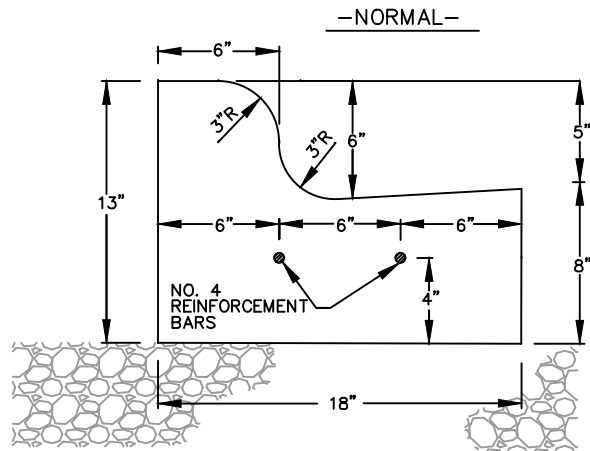
RESIDENTIAL CONCRETE DRIVEWAY, 6" TYP.
COMMERCIAL CONCRETE DRIVEWAY, 8" TYP.
ASPHALT DRIVEWAY, 2" TYP.



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URBAN DRIVEWAY

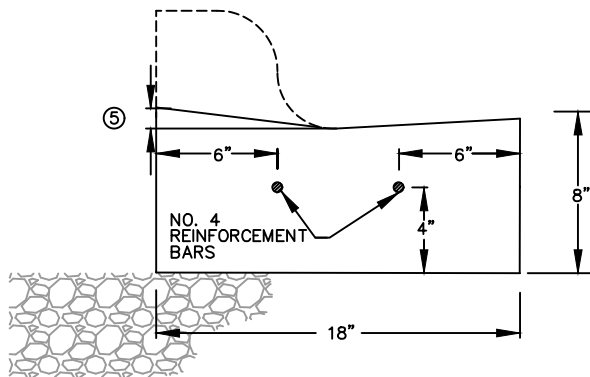
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SUPPLEMENTAL



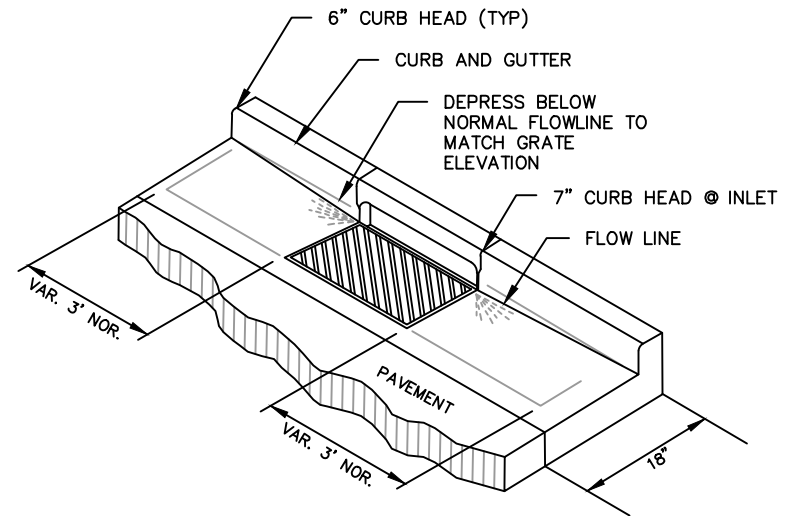
NOTES:

- ① CONTRACTION JOINTS SHALL BE SAWED EVERY 15' MAXIMUM OR AS DESIGNATED BY ENGINEER IN FIELD.
- ② EXPANSION JOINTS SHALL BE PLACED AT END OF RADII, AND AS DESIGNATED BY ENGINEER IN FIELD.
- ③ NO. 4 REINFORCEMENT BARS SHALL BE 20' LONG WITH A EXPANSION TUBE REQUIRED ON ONE END AT EXPANSION JOINTS.
- ④ NO. 4 REINFORCEMENT BARS SHALL BE OVERLAPPED A MINIMUM OF 1'.
- ⑤ 1-1/2" AT DRIVEWAY OPENINGS, 1/2" AT CURB RAMPS.

-AT DRIVEWAY OPENING & CURB RAMPS-



STANDARD CURB AND GUTTER 18"



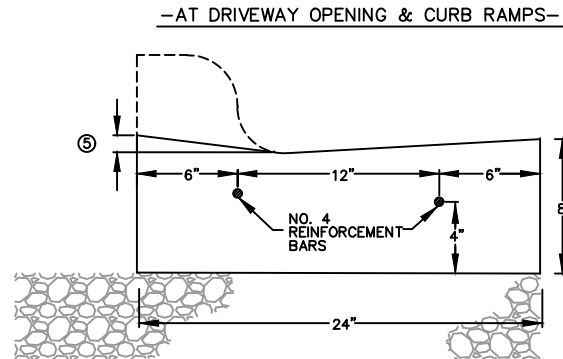
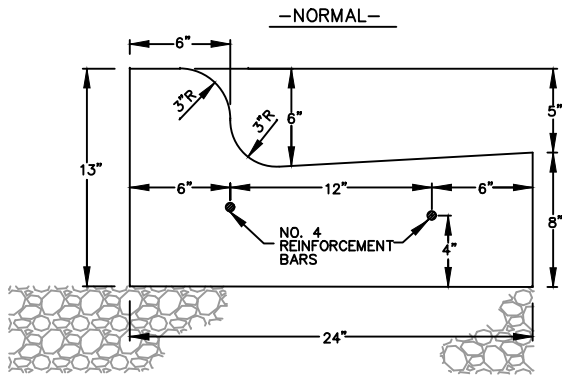
CURB AND GUTTER AT SPECIAL INLET



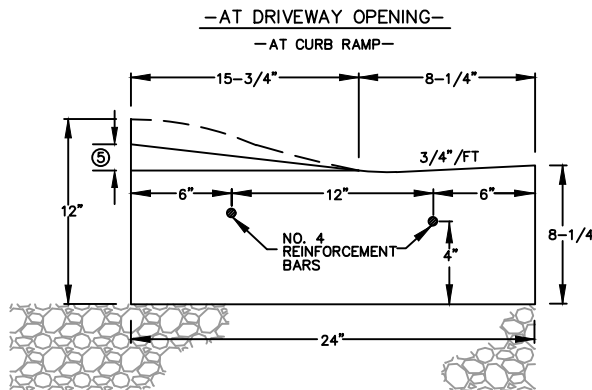
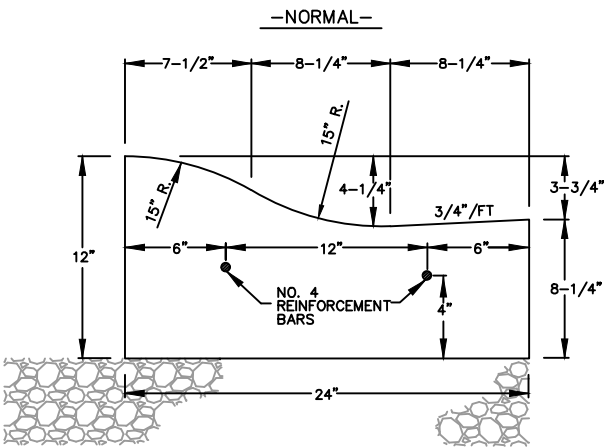
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CURB AND GUTTER
SECTIONS - 18"

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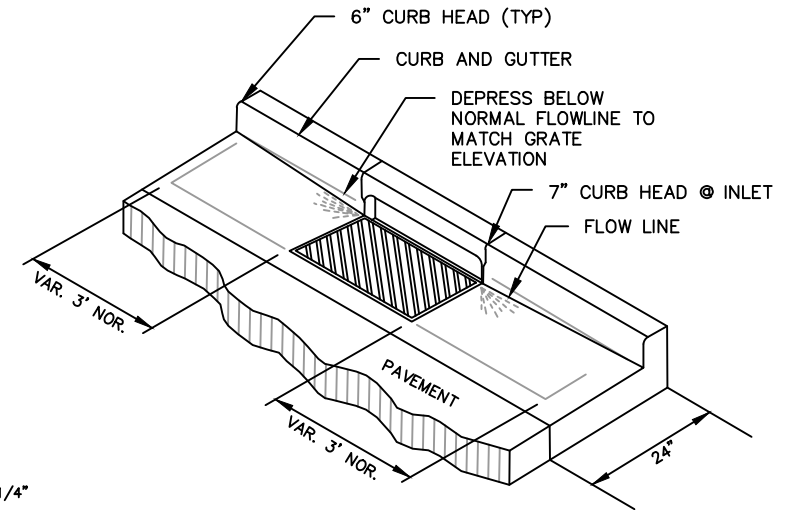


STANDARD CURB AND GUTTER 24"



ROLLED CURB AND GUTTER, 24"

- NOTES:
- ① CONTRACTION JOINTS SHALL BE SAWED EVERY 15' MAXIMUM OR AS DESIGNATED BY ENGINEER IN FIELD.
 - ② EXPANSION JOINTS SHALL BE PLACED AT END OF RADII, AND AS DESIGNATED BY ENGINEER IN FIELD.
 - ③ NO. 4 REINFORCEMENT BARS SHALL BE 20' LONG WITH A EXPANSION TUBE REQUIRED ON ONE END AT EXPANSION JOINTS.
 - ④ NO. 4 REINFORCEMENT BARS SHALL BE OVERLAPPED A MINIMUM OF 1'.
 - ⑤ 1-1/2" AT DRIVEWAY OPENINGS, 1/2" AT CURB RAMPS.



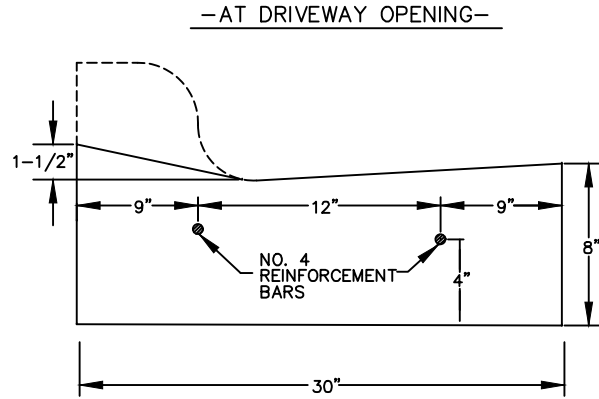
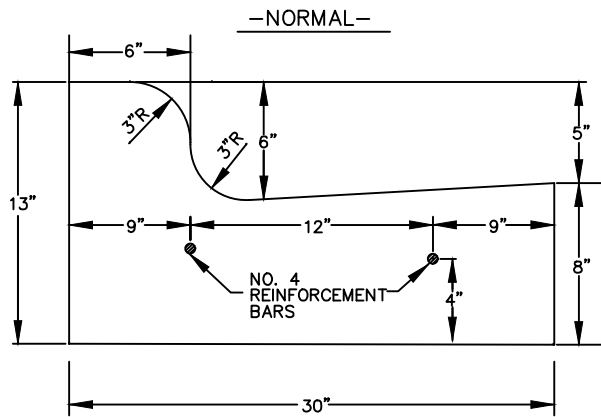
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CURB AND GUTTER
SECTIONS - 24"

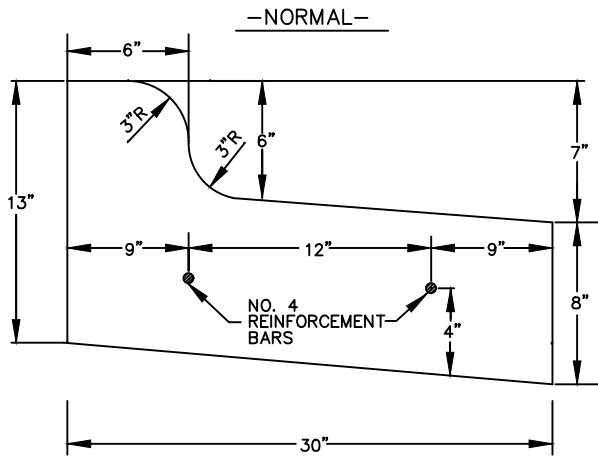
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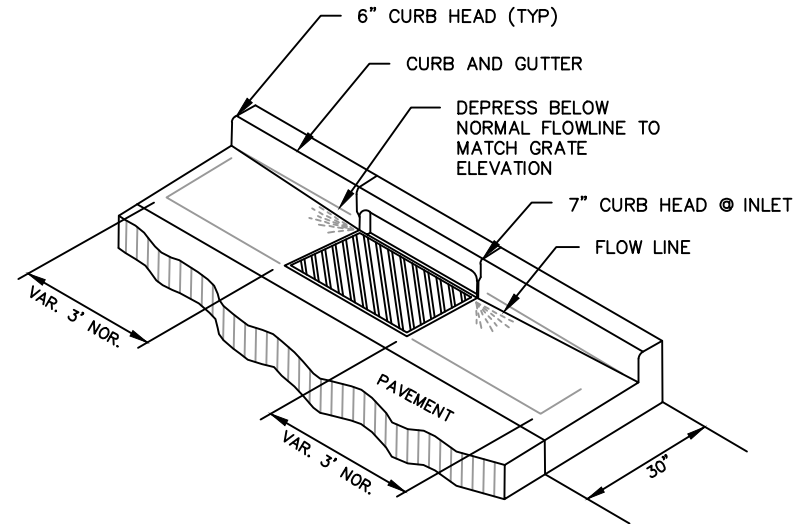
CURB AND GUTTER 30"

NOTES:

- ① CONTRACTION JOINTS SHALL BE EVERY 15' MAXIMUM OR DESIGNATED BY ENGINEER IN FIELD.
- ② 6"x6" EXPANSION JOINTS SHALL BE PLACED AT CURB HEAD AT END OF RADII.
- ③ NO. 4 REINFORCEMENT BARS SHALL BE 20' LONG WITH A EXPANSION TUBE REQUIRED ON ONE END AT EXPANSION JOINTS
- ④ NO. 4 REINFORCEMENT BARS SHALL BE OVERLAPPED A MINIMUM OF 1'.



REJECT CURB AND GUTTER 30"



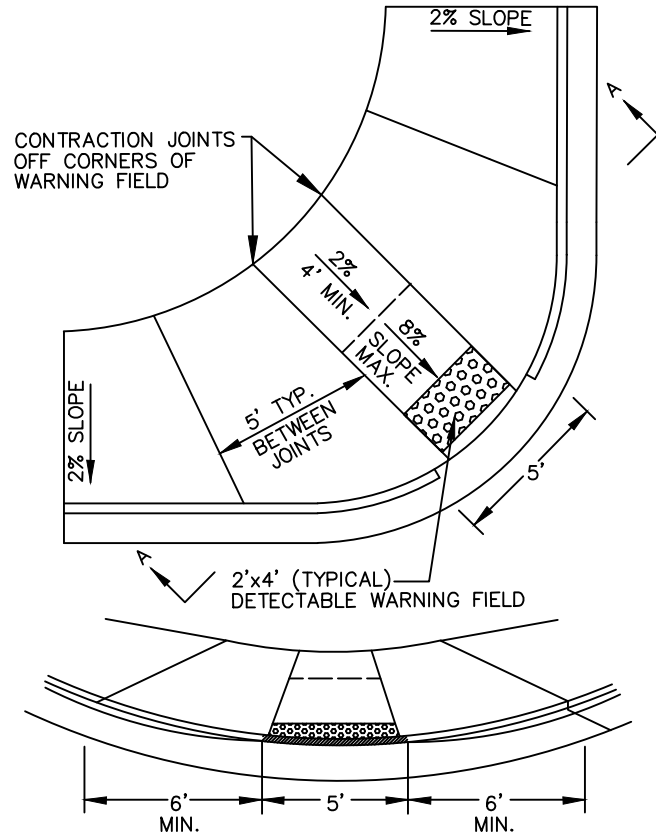
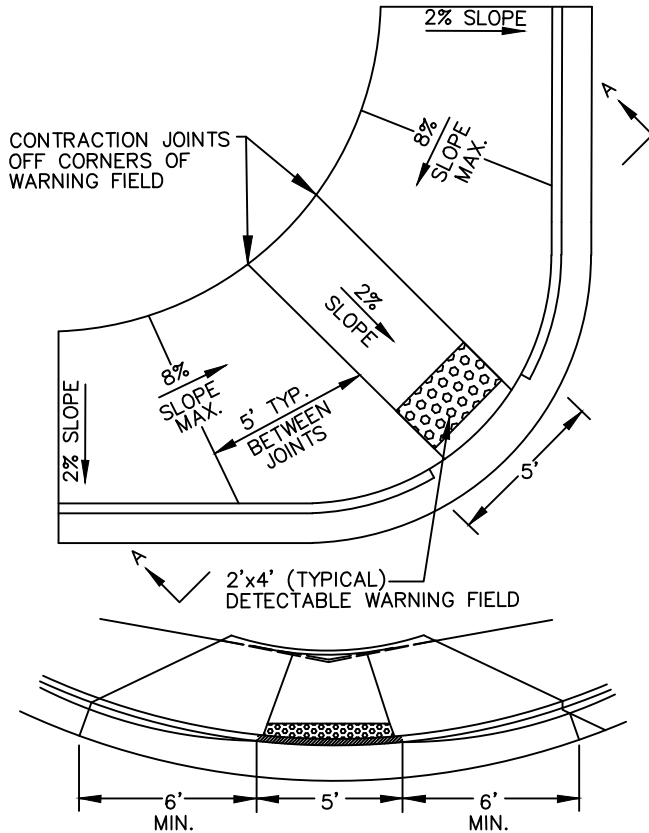
CURB AND GUTTER AT SPECIAL INLET



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CURB AND GUTTER
SECTIONS - 30"

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NOTES:

- 1) EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM SPACING OF 120', AT THE BACK OF CURB, AT THE INTERSECTION OF SIDEWALKS, AND AT ALL CHANGES IN DEPTH OF SIDEWALK, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 2) CURB RAMP ARE REQUIRED IN EACH QUADRANT OF ALL INTERSECTIONS, WHERE SIDEWALKS ARE PRESENT.
- 3) THE EDGES OF SIDEWALK ALONG FORMS AND JOINTS SHALL BE ROUNDED WITH AN EDGER OF 1/4" RADIUS.
- 4) ALL SIDEWALK ADJACENT TO CURB IN RADIUS SHALL BE 6" THICK IN RESIDENTIAL AND 8" THICK IN COMMERCIAL OR INDUSTRIAL AREAS.
- 5) THE AREA BETWEEN TWO RAMP MAY BE GRASS WITH THE APPROVAL OF THE ENGINEER.
- 6) PLACE NEAREST EDGE OF DETECTABLE WARNING FIELD 6" FROM THE EXPANSION FELT AT THE BACK OF CURB.
- 7) THE CONTRACTOR SHALL NOT JOINT THE CONCRETE SIDEWALK IN SUCH A WAY THAT CREATES NARROW SLIVERS LESS THAN 1 FOOT IN WIDTH.
- 8) THE CONTRACTOR SHALL NOT CREATE ACUTE ANGLES WITH JOINTING WITHOUT APPROVAL OF THE ENGINEER.
- 9) DETECTABLE WARNING FIELDS SHALL HAVE 3/8-INCH CARRIAGE BOLTS INSTALLED IN THE SURFACE HOLES. THE BOLT SHALL BE A MINIMUM OF 3-INCHES LONG.
- 10) LIP CURB IN THE PEDESTRIAN RAMP OPENING SHALL BE CONSTRUCTED AT A HEIGHT OF ONE-HALF INCH (1/2") ABOVE THE GUTTER



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SIDEWALK & CURB RAMP
CONSTRUCTION
(CONTINUED)

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