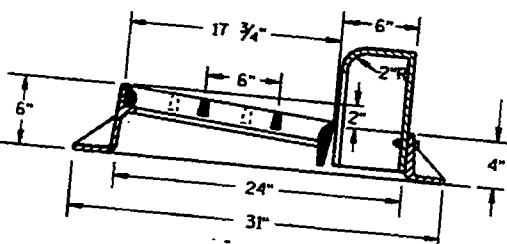
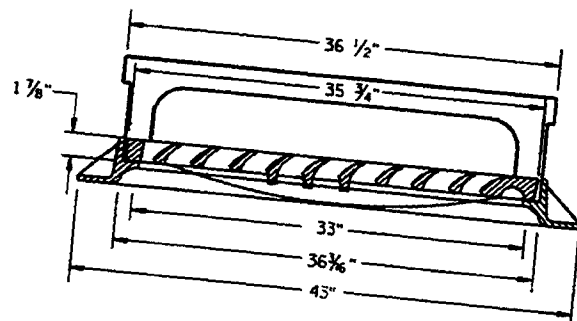
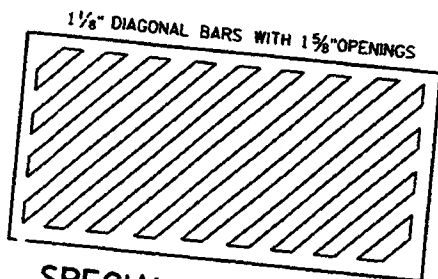


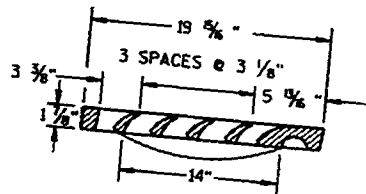
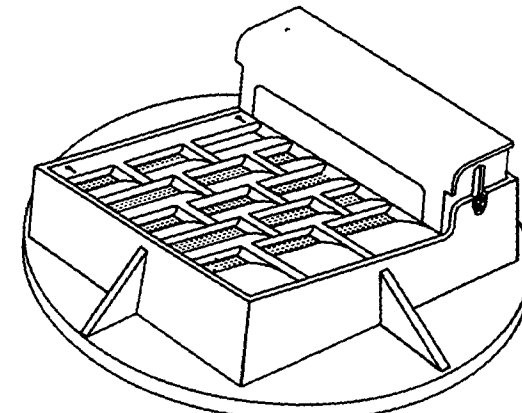
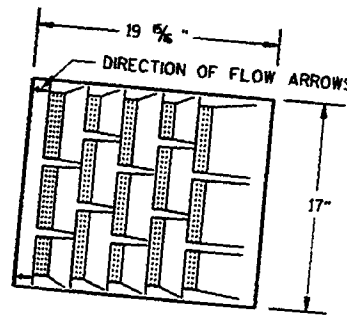
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



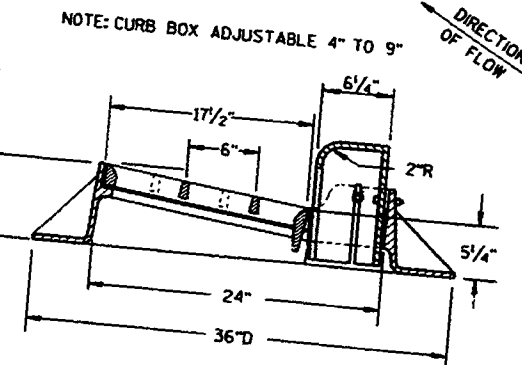
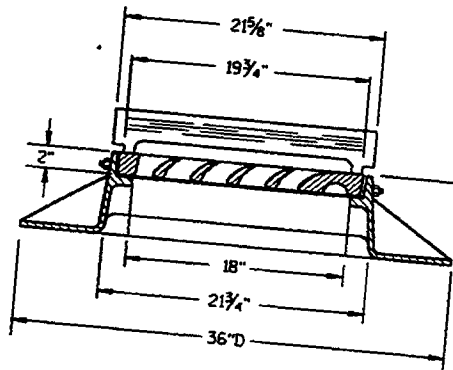
TYPE "H"
 (APPROXIMATE WEIGHT 420 LBS.)
 FRAME..... 170 LBS.
 GRATE..... 135 LBS.
 CURB BOX..... 115 LBS.



SPECIAL GRATE FOR TYPE "H" COVER
 (MEASURES 35 1/2" X 17 3/4" X 2")
 (APPROXIMATE WEIGHT 170 LBS.)
 GRATE..... 170 LBS.
 (NOTED AS TYPE H-S ON DRAINAGE TABLE)



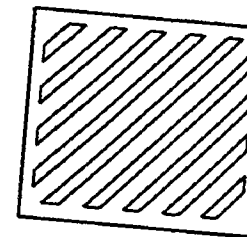
NOTE: CURB BOX ADJUSTABLE 4" TO 9"



TYPE "A"

(APPROXIMATE WEIGHT 355 LBS.)
 FRAME..... 185 LBS.
 GRATE..... 85 LBS.
 CURB BOX..... 85 LBS.

1" DIAGONAL BARS WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER
 (MEASURES 19 5/8" X 17" X 1 9/8")
 GRATE..... 85 LBS.
 (NOTED AS TYPE A-S ON DRAINAGE TABLE)

GENERAL NOTES

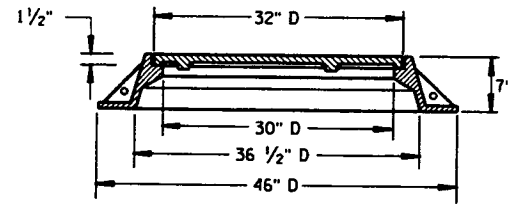
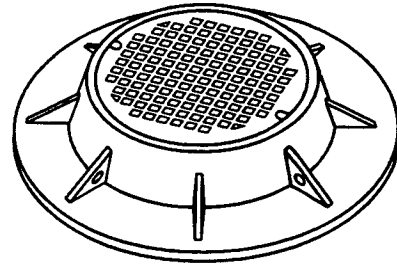
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
 DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH. ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.
 THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

S.D.D. 8 A 5-11a

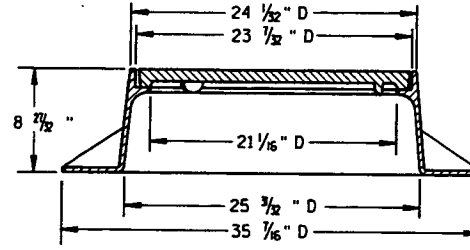
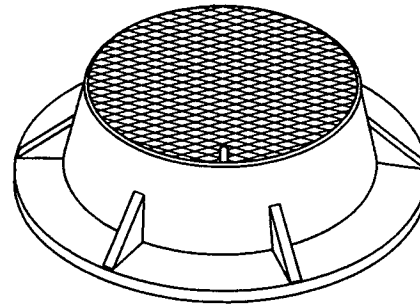


INLET COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 08/02/85	 CHIEF ROADWAY DESIGN ENGINEER
FHWA	

S.D.D. 8 A 5-11a



TYPE "K"
 (APPROXIMATE WEIGHT 535 LBS.)
 FRAME..... 330 LBS.
 LID..... 205 LBS.



TYPE "J"
 (APPROXIMATE WEIGHT 255 LBS.)
 FRAME..... 140 LBS.
 LID..... 115 LBS.

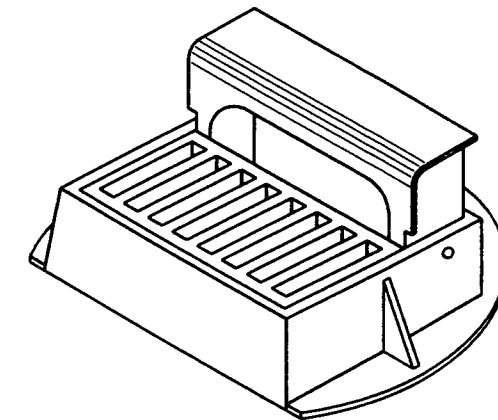
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

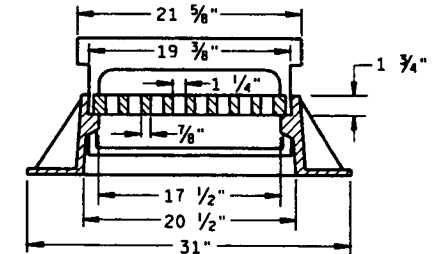
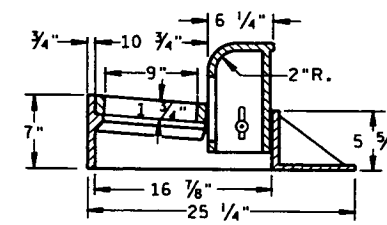
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

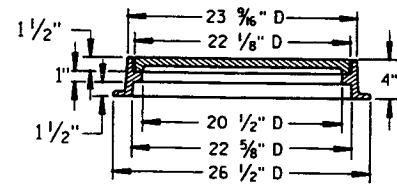
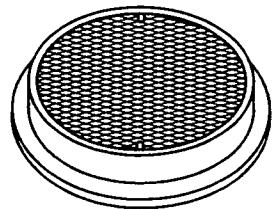
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



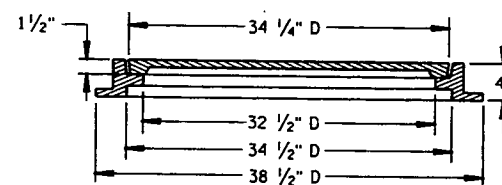
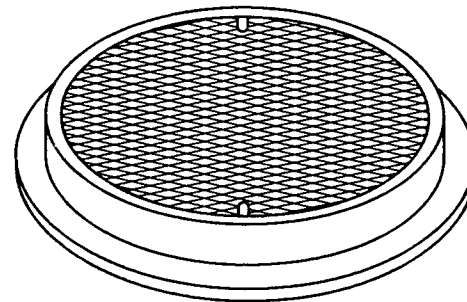
CURB BOX ADJUSTABLE 4" TO 10"



INLET COVER TYPE "Z"
 (APPROXIMATE WEIGHT 280 LBS.)
 FRAME..... 145 LBS.
 GRATE..... 50 LBS.
 CURB BOX..... 85 LBS.



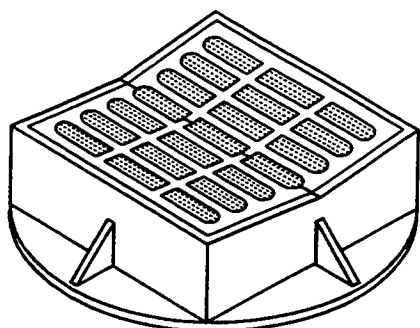
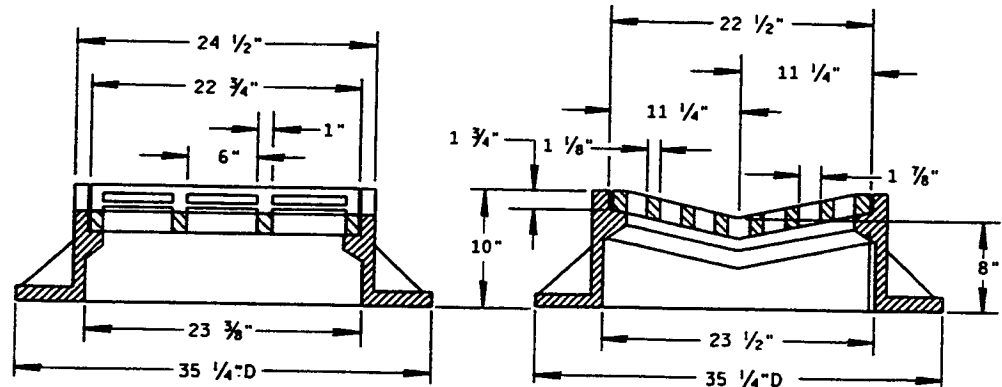
TYPE "L"
 (APPROXIMATE WEIGHT 145 LBS.)
 FRAME..... 75"
 LID..... 70"



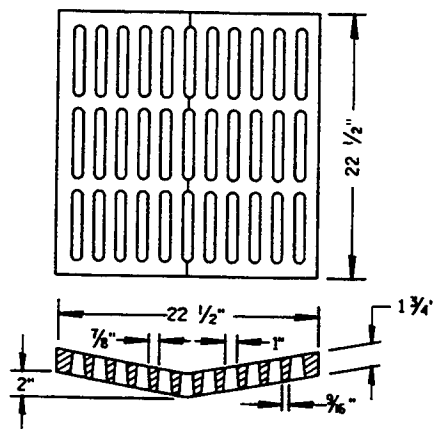
TYPE "M"
 (APPROXIMATE WEIGHT 385 LBS.)
 FRAME..... 125"
 LID..... 260"

S.D.D. 8 A 5-11d

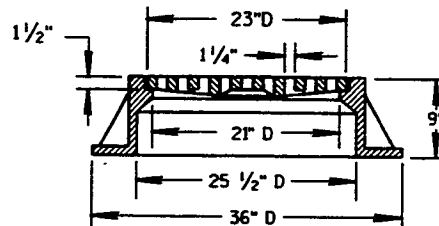
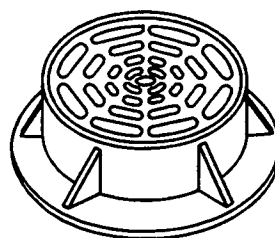
INLET AND MANHOLE COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 08/07/95 DATE	<i>Roy L. Thompson</i> CHIEF ROADWAY DESIGN ENGINEER
FHWA	



TYPE "B"
 (APPROXIMATE WEIGHT 395 LBS.)
 FRAME..... 285 LBS.
 GRATE..... 110 LBS.



**ALTERNATIVE GRATE FOR
 FOR TYPE "B" COVER**
 (APPROXIMATE GRATE WEIGHT 125 LBS.)
 GRATE..... 125 LBS.
 USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
 NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"
 (APPROXIMATE WEIGHT 340 LBS.)
 FRAME..... 235 LBS.
 GRATE..... 105 LBS.

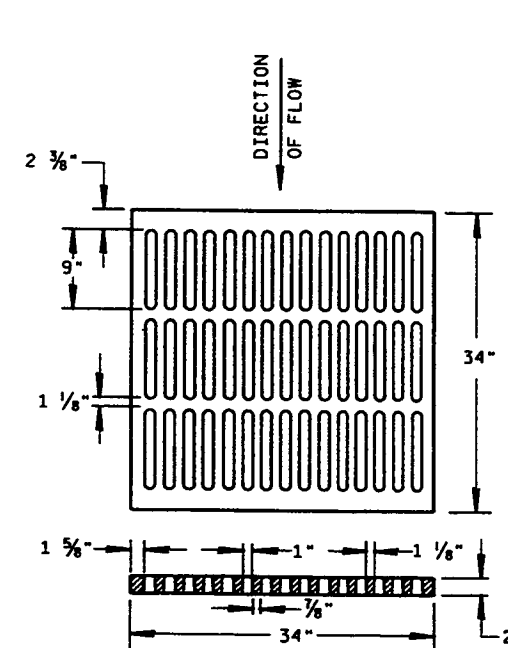
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

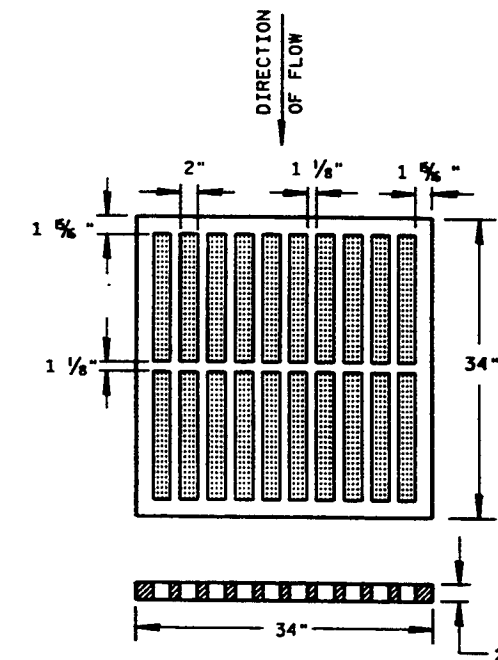
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



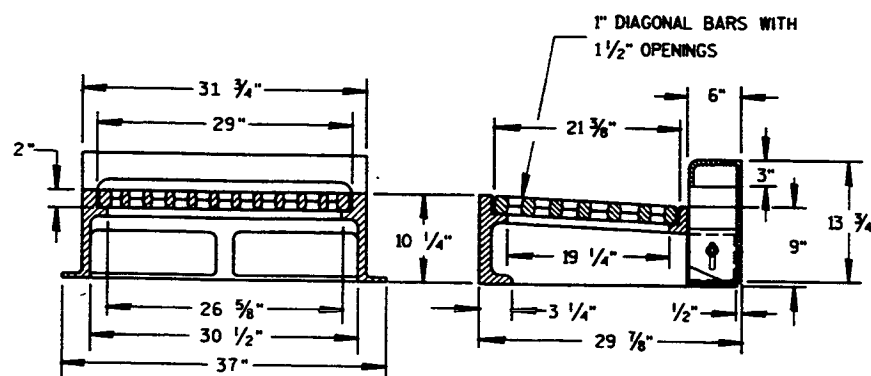
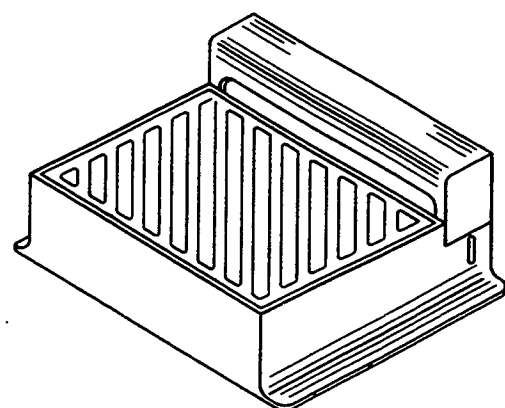
ALTERNATIVE TYPE "MS"
 (APPROXIMATE GRATE WEIGHT 365 LBS.)
 GRATE..... 365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
 NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"
 (APPROXIMATE GRATE WEIGHT 270 LBS.)
 GRATE..... 270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS
 NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"
 (APPROXIMATE WEIGHT 670 LBS.)
 FRAME..... 360 LBS.
 GRATE..... 160 LBS.
 CURB BOX..... 150 LBS.

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION OF FLOW

INLET COVERS

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 12/19/04
 DATE
 CHIEF ROADWAY DESIGN ENGINEER

FHWA

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

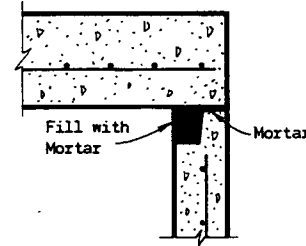
Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches, and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

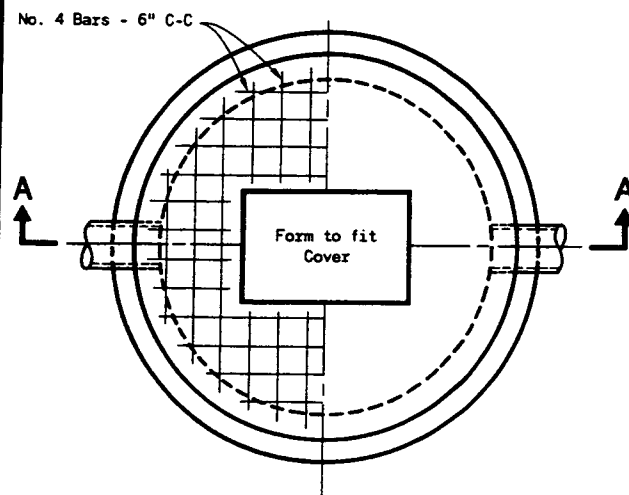
All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers shall be placed with tongue down.

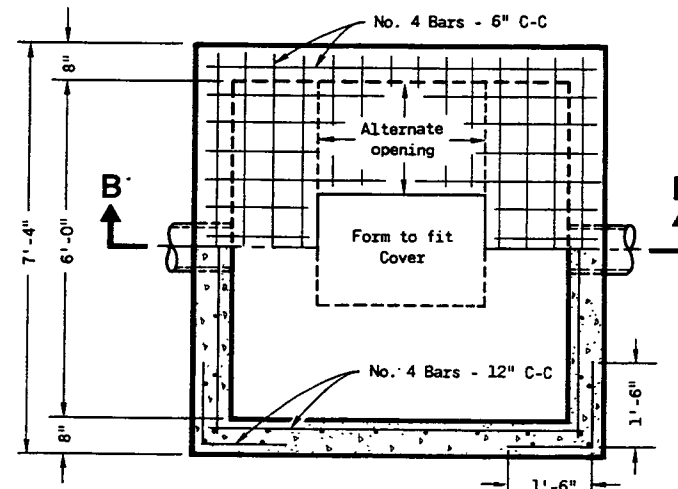
All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.



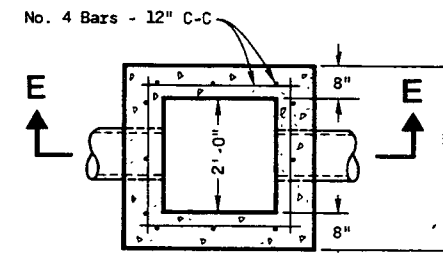
DETAIL "A"



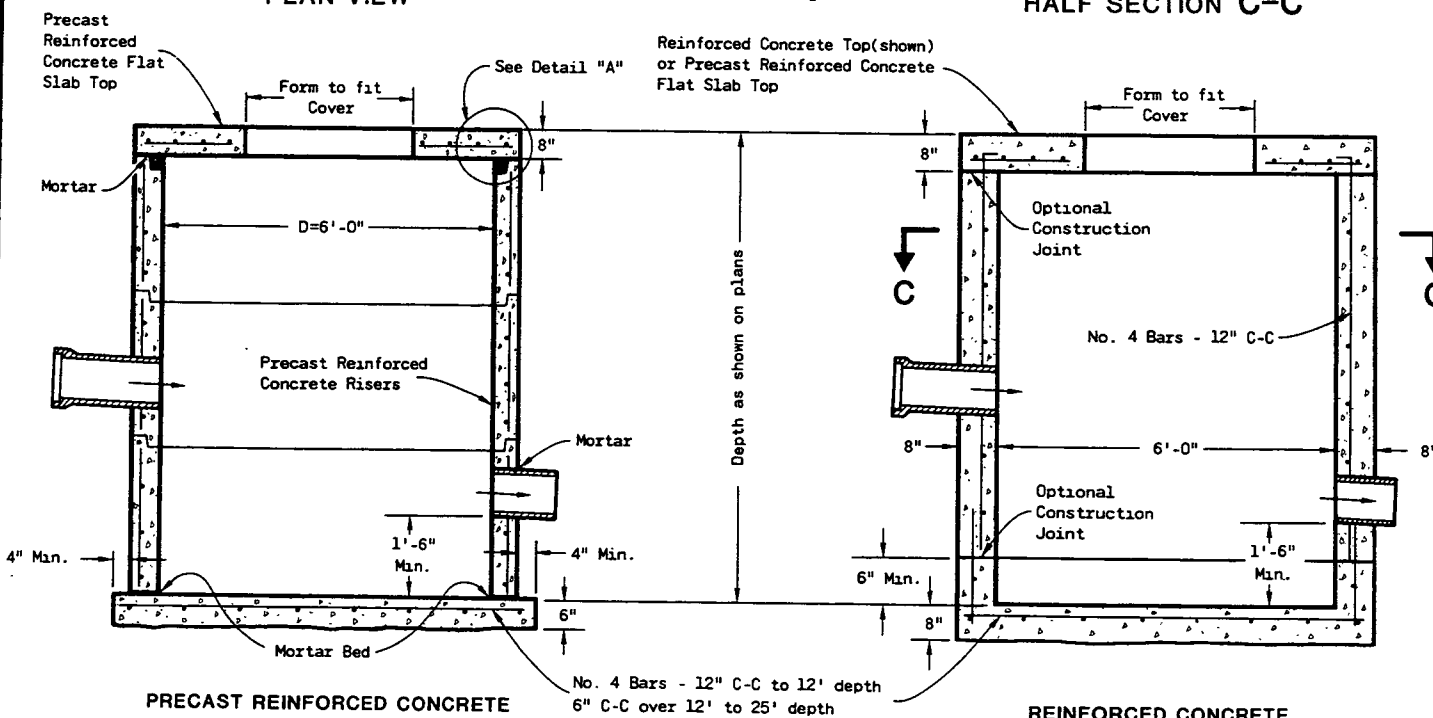
PLAN VIEW



HALF SECTION C-C



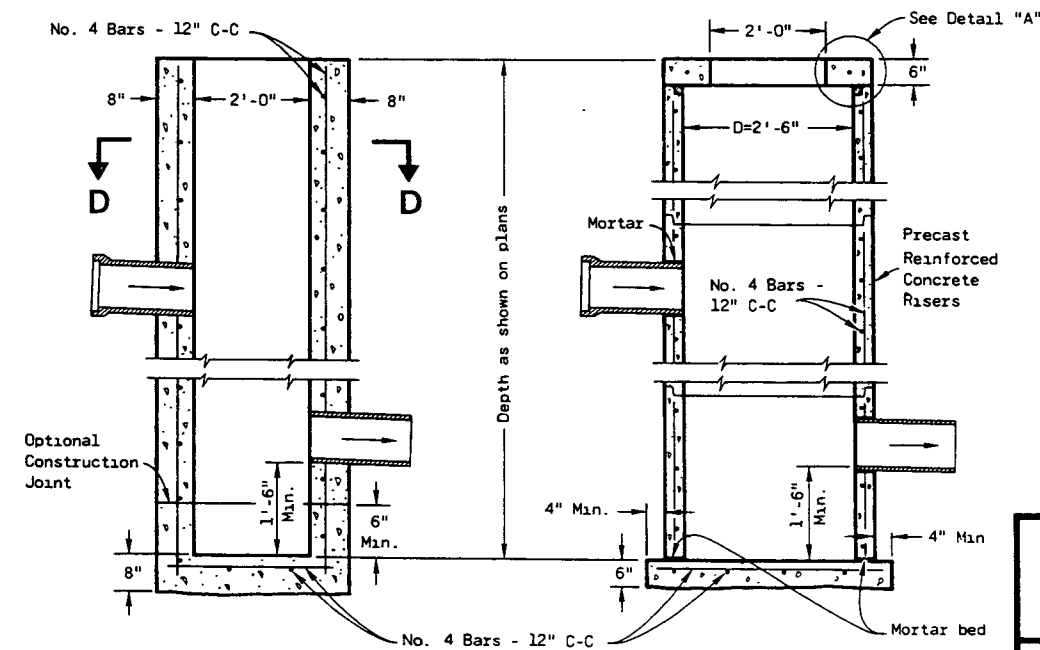
SECTION D-D



SECTION A-A

SECTION B-B

CATCH BASINS TYPE 5



SECTION E-E

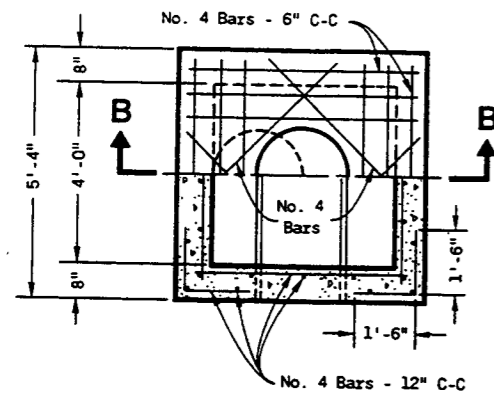
SECTION D-D

CATCH BASINS TYPE 3

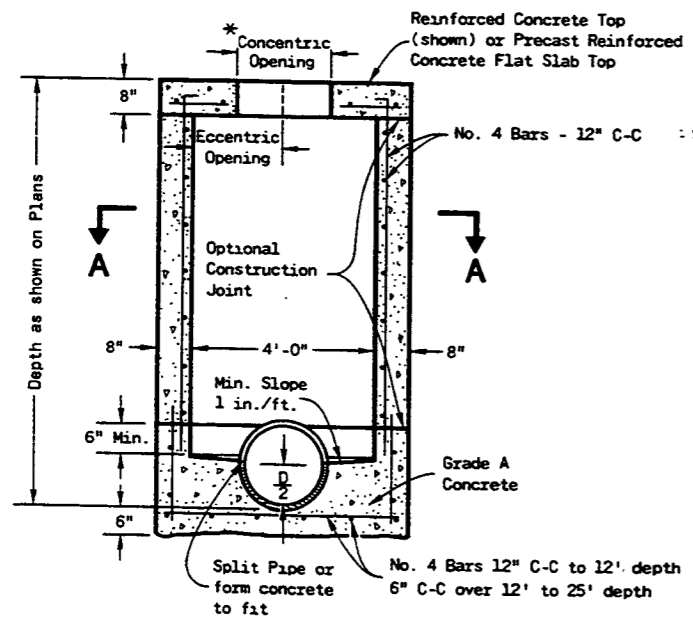
S.D.D. 8 A 7-3

CATCH BASINS TYPE 3 & 5	
State of Wisconsin Department of Transportation	
APPROVED 4-13-82	<i>[Signature]</i>

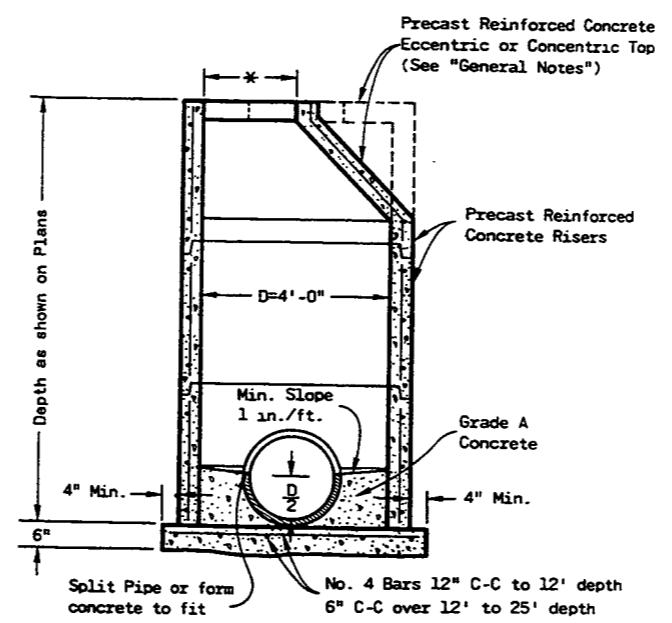
S.D.D. 8 A 7-3



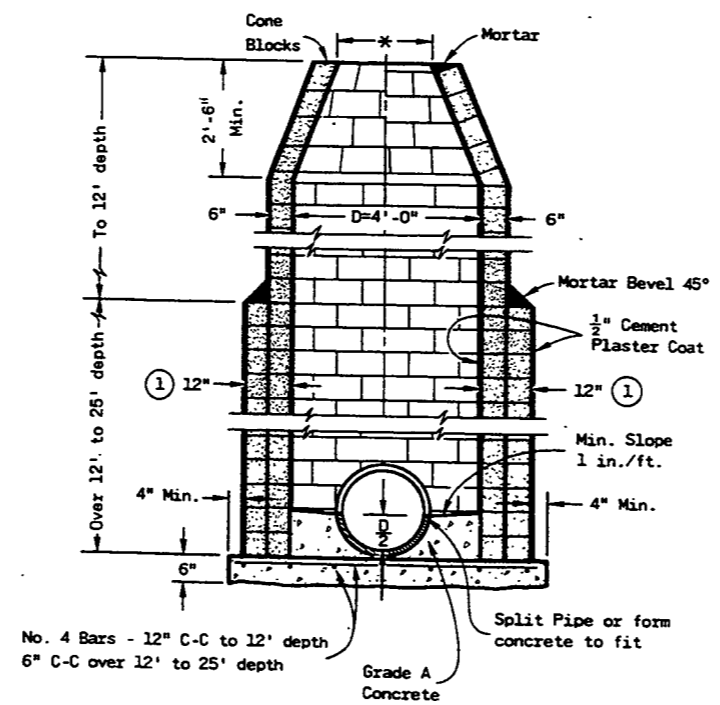
HALF SECTION A-A



SECTION B-B
REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE



CONCRETE BLOCK

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Cone Tops (Eccentric or Concentric) may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to Federal Specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.

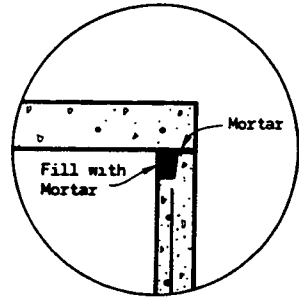
* Use 2'-0" diameter opening with Type "C", "L" and "J" covers, or 3'-0" diameter with Type "K" and "M" covers.

① 2 courses 6" block.

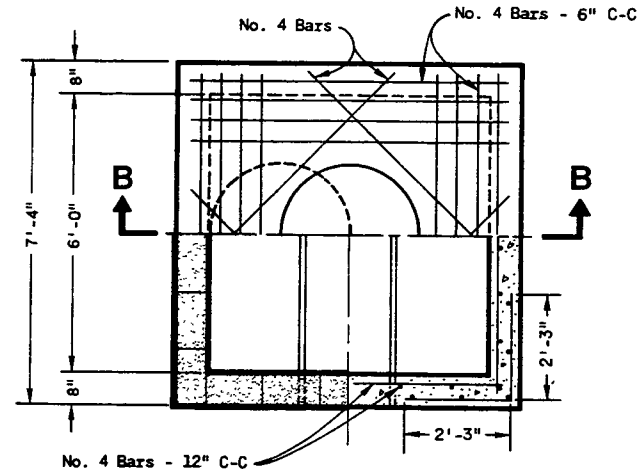
MANHOLES TYPE 1

MANHOLES TYPE 1	
State of Wisconsin Department of Transportation	
APPROVED 4-13-82	<i>D. J. Strand</i>
S.D.D. 8 B 6-3	

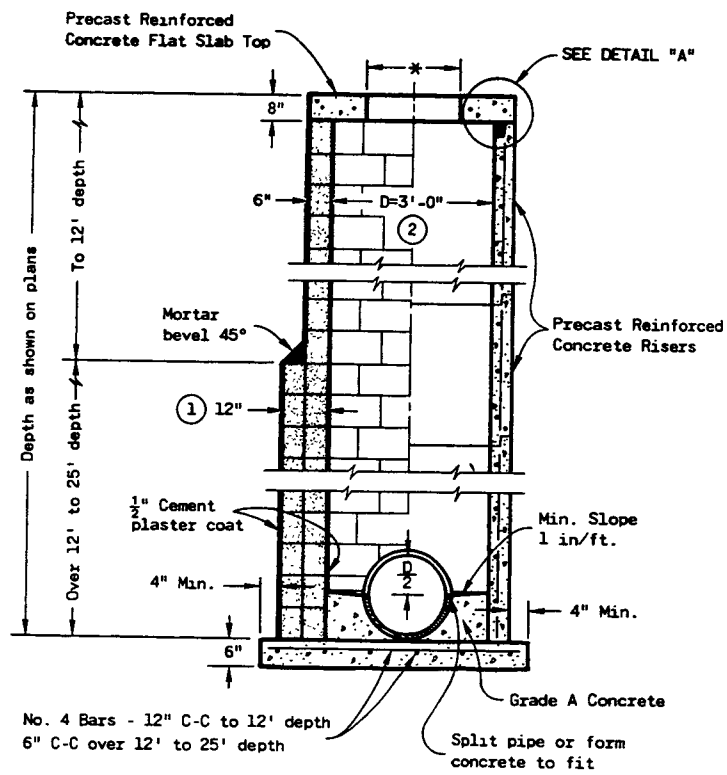
S.D.D. 8 B 6-3



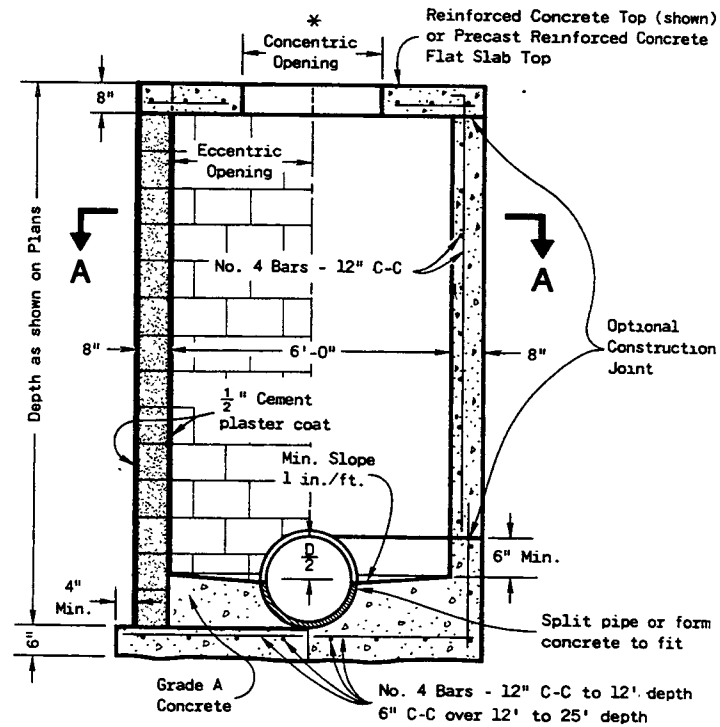
DETAIL "A"



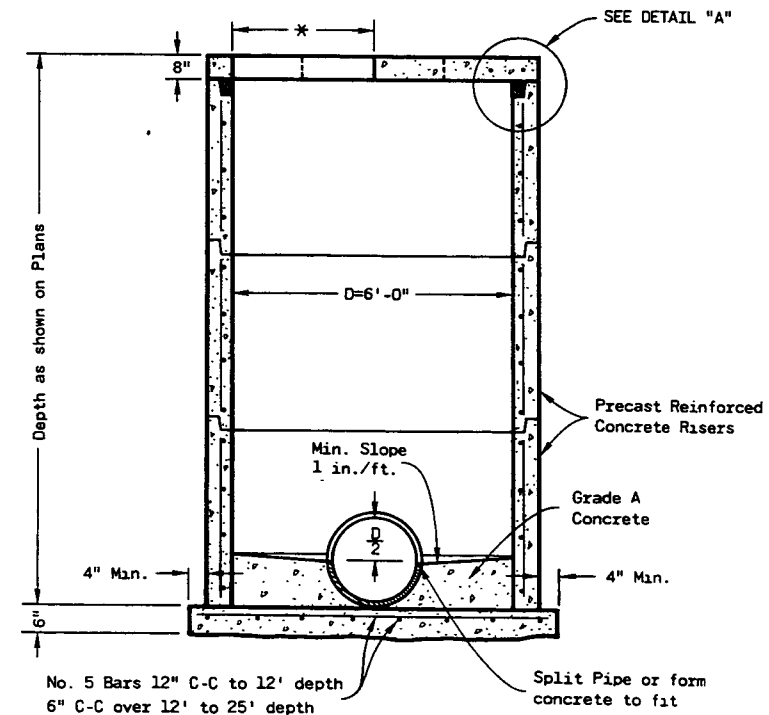
HALF SECTION A-A



CONCRETE BLOCK
 PRECAST REINFORCED CONCRETE
 MANHOLES TYPE 2



SECTION B-B
 CONCRETE BLOCK REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE
 MANHOLES TYPE 3

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6" in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches, minimum wall embedment of 3 inches; and capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar are acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers shall be placed with tongue down.

All precast inlet units shall conform to the pertinent requirements of AASHTO Designation M 199.

* Use 2'-0" diameter opening with type "C", "L", and "J" covers, or 3'-0" diameter with type "K" and "M" covers.

① 2 courses 6" block.

② When connecting pipes are 24" or larger the Precast Manholes may be increased to 42" diameter.

S.D.D. 8 B 7-3

MANHOLES TYPE 2 & 3

State of Wisconsin
 Department of Transportation

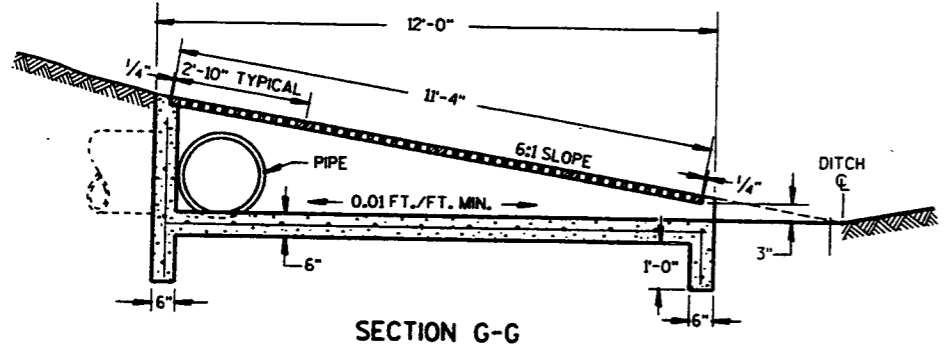
APPROVED
 4-13-82

DATE

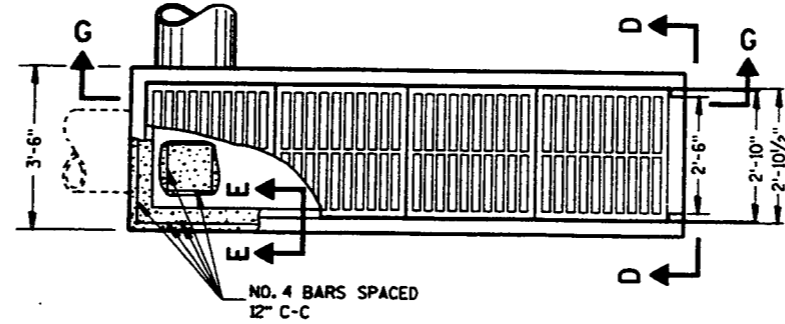
[Signature]

FHWA

S.D.D. 8 B 7-3



SECTION G-G



PLAN VIEW

REINFORCED CONCRETE INLET TYPE II

GENERAL NOTES

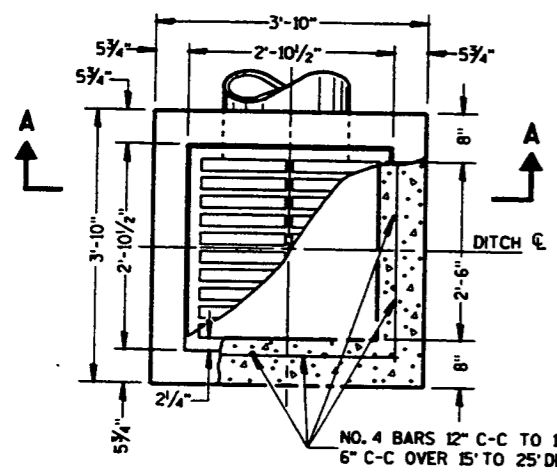
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

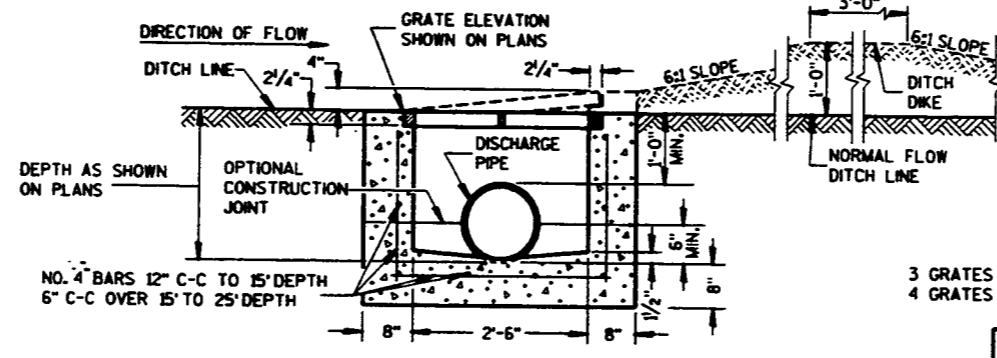
PRECAST REINFORCED CONCRETE INLET UNITS, IF USED, SHALL CONFORM TO THE REQUIREMENTS OF THE CATCH BASINS, MANHOLES AND INLETS SECTION OF THE STANDARD SPECIFICATIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A CORRECTED LIST OF SIZES IS FURNISHED BY THE ENGINEER.

ALL INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 8-MS", ETC. THIS DESIGNATION IS INTERPRETED TO MEAN THAT THE NUMBER, OR FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER OR IRON CASTING TO BE USED THEREWITH TO COMPRISE THE COMPLETE UNIT.

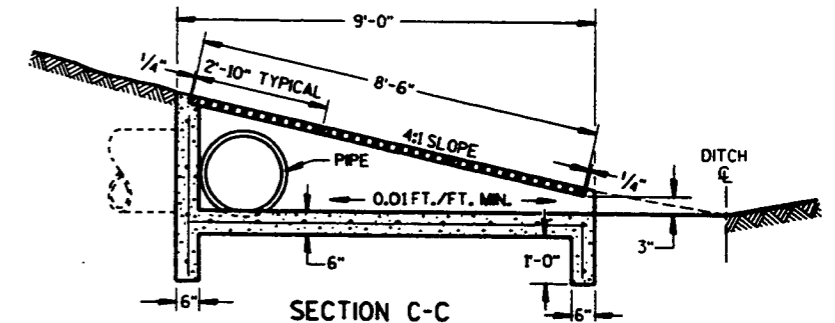
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.



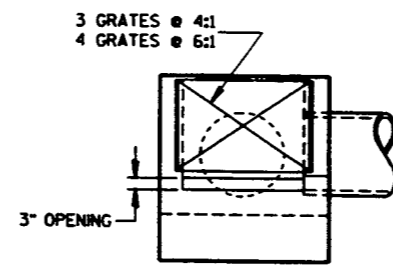
PLAN VIEW



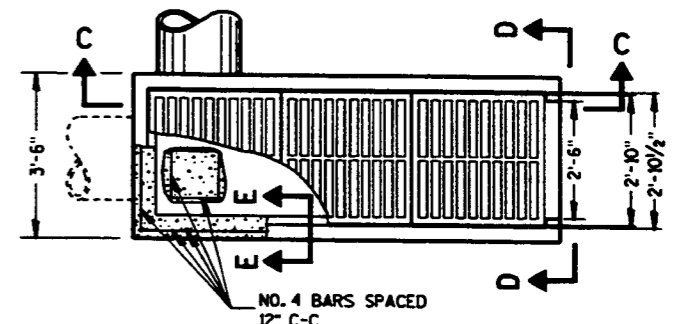
SECTION A-A



SECTION C-C

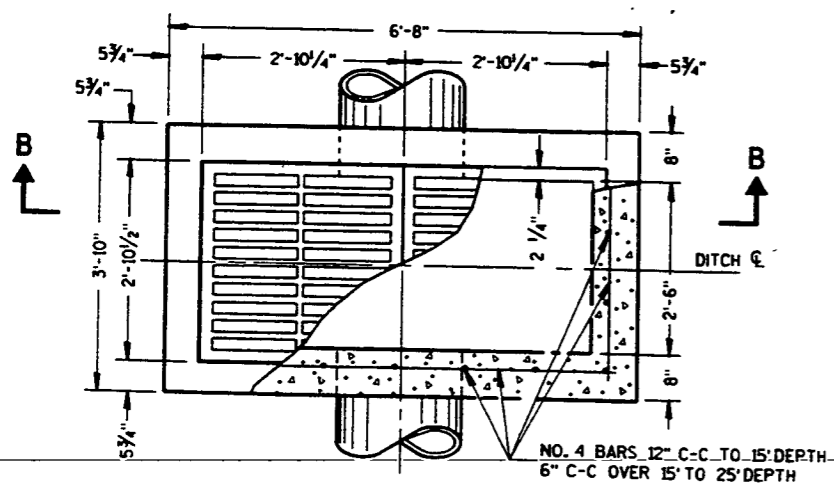


SECTION D-D

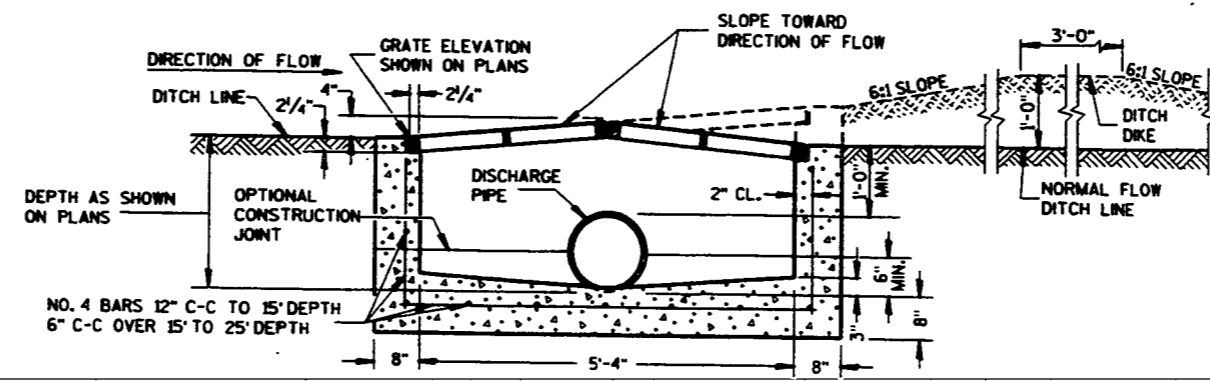


PLAN VIEW

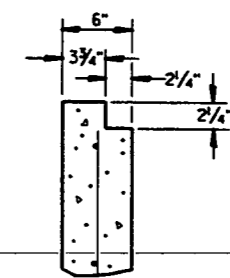
REINFORCED CONCRETE INLET TYPE 10



PLAN VIEW



SECTION B-B



SECTION E-E

REINFORCED CONCRETE INLET TYPE 9

INLETS TYPE 8, 9, 10 AND II

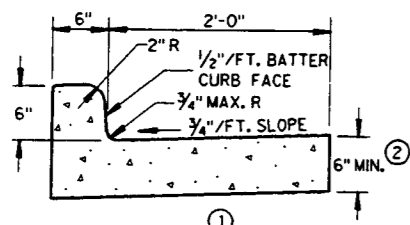
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/10/94
DATE
[Signature]
CHIEF ROADWAY DEVELOPMENT ENGINEER

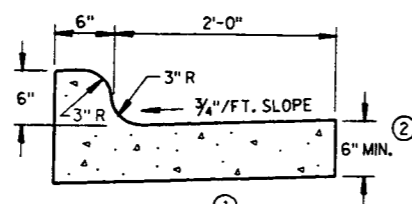
FHWA

S.D.D. 8 C 5-2

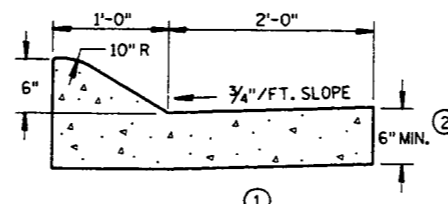
S.D.D. 8 C 5-2



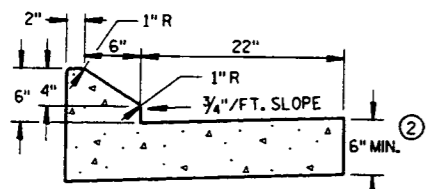
TYPES A & D



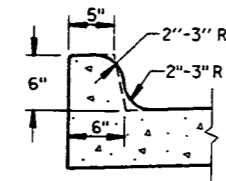
TYPES K & L



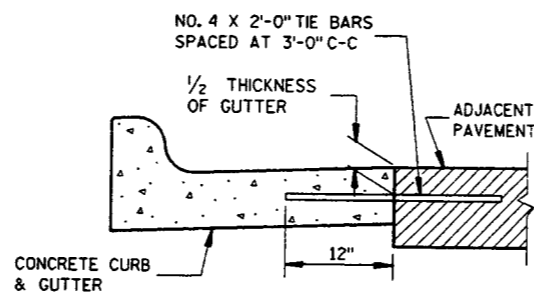
TYPES A & D
CONCRETE CURB & GUTTER 36"



TYPES G & J



OPTIONAL CURB SHAPE
FOR TYPES K & L



TYPICAL TIE BAR LOCATION

CONCRETE CURB & GUTTER 30"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEALANT IS NOT REQUIRED IN THE JOINTS OF CONCRETE CURB OR CONCRETE CURB & GUTTER EXCEPT AS REQUIRED FOR INTEGRAL GUTTER.

PAVEMENT TIES ARE REQUIRED, WHEN INCLUDED IN THE CONTRACT, WHERE CONCRETE CURB, CONCRETE CURB AND GUTTER OR CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

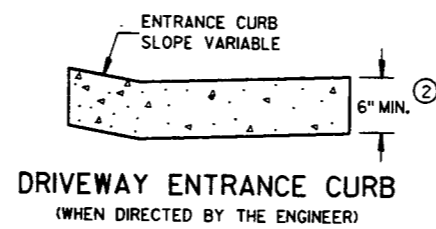
INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE, TIE BARS AND A LONGITUDINAL CONSTRUCTION JOINT ARE NOT REQUIRED WITH THIS ALTERNATE.

PAVEMENT JOINTS SHALL BE EXTENDED THROUGH INTEGRAL CURB & GUTTER. JOINTS IN INTEGRAL GUTTER SHALL HAVE THE SAME DIMENSIONS AS THE JOINTS IN THE ADJACENT PAVEMENT. JOINTS IN INTEGRAL CURB SHALL BE 1/8" WIDE.

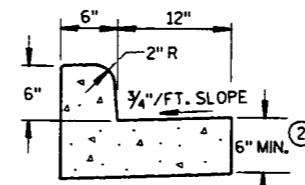
JOINTS IN INTEGRAL CURB & GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME SEALANT SPECIFIED FOR THE PAVEMENT JOINT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB & GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE TWO FEET BEHIND THE BACK OF CURBS.

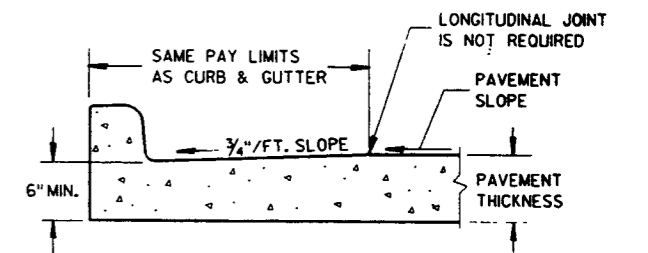
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATIONS WILL BE SHOWN ELSEWHERE IN THE PLAN.



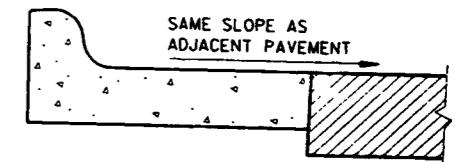
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



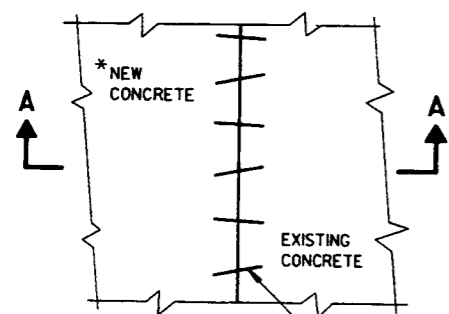
TYPES A & D
CONCRETE CURB & GUTTER 18"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



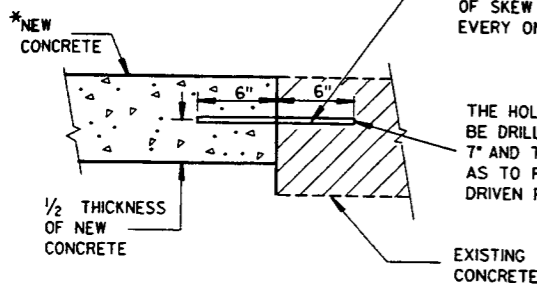
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PLAN VIEW

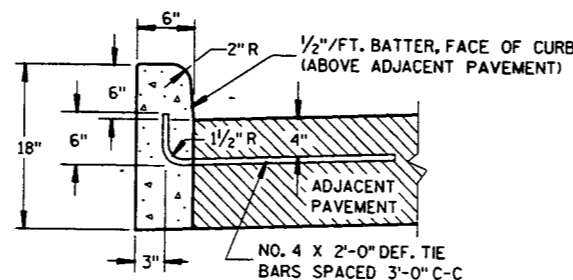
*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 X 12" DEF. BARS
SPACED 3'-0" C-C,
INSTALLED ON 6:1 SKEW
HORIZONTALLY. DIRECTION
OF SKEW ALTERNATING AFTER
EVERY ONE OR TWO BARS.

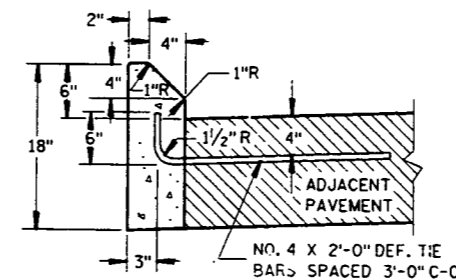


SECTION A-A
PAVEMENT TIES

THE HOLE FOR THE BAR SHALL
BE DRILLED TO A DEPTH OF
7" AND TO SUCH A DIAMETER
AS TO PROVIDE A TIGHT
DRIVEN FIT



TYPES A & D



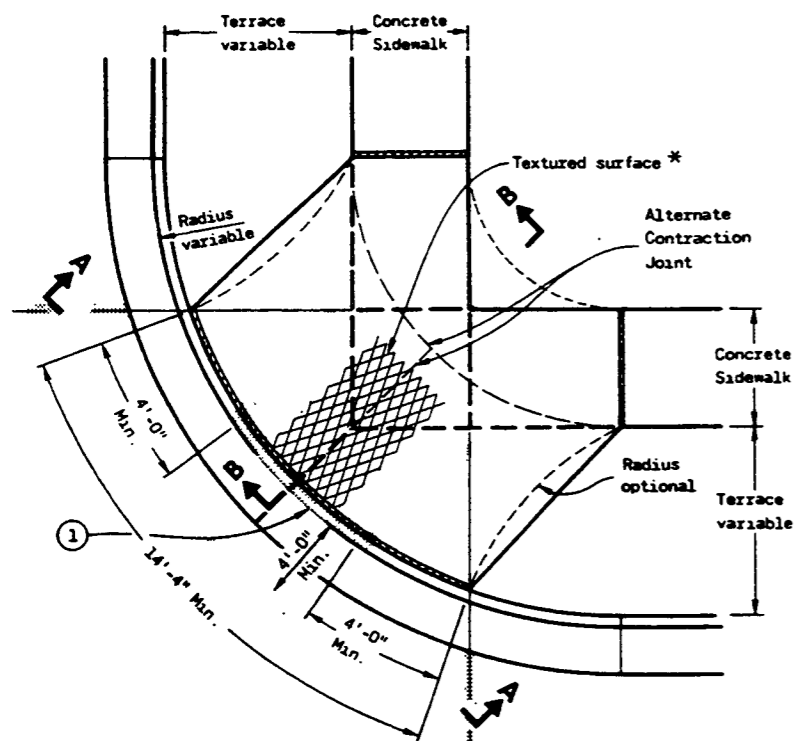
TYPES G & J

CONCRETE CURB

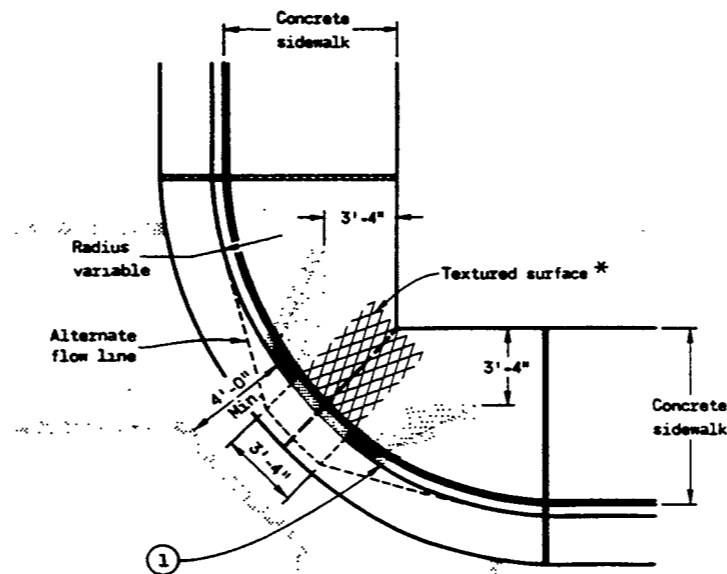
CONCRETE CURB, CONCRETE
CURB & GUTTER AND
PAVEMENT TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

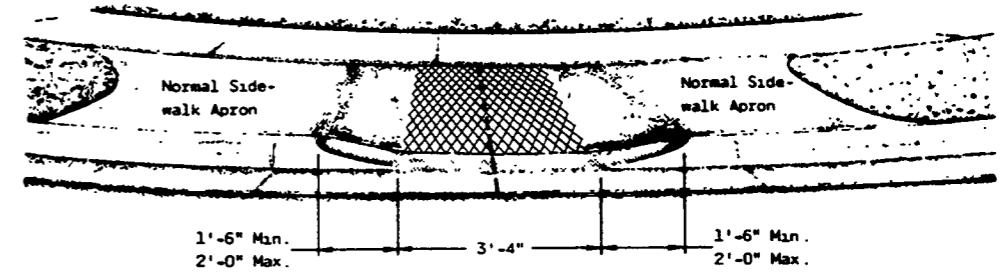
APPROVED
10-23-86
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA



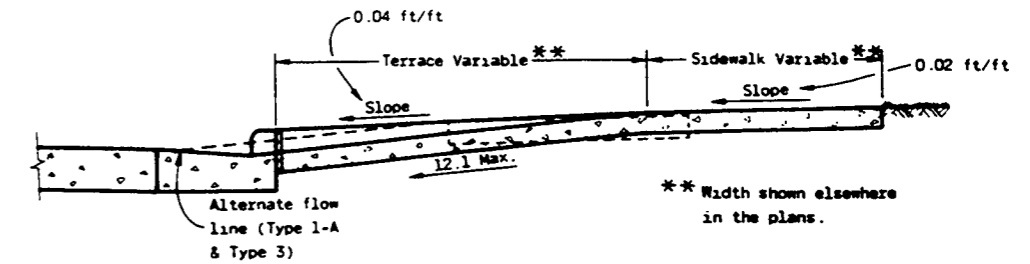
PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)

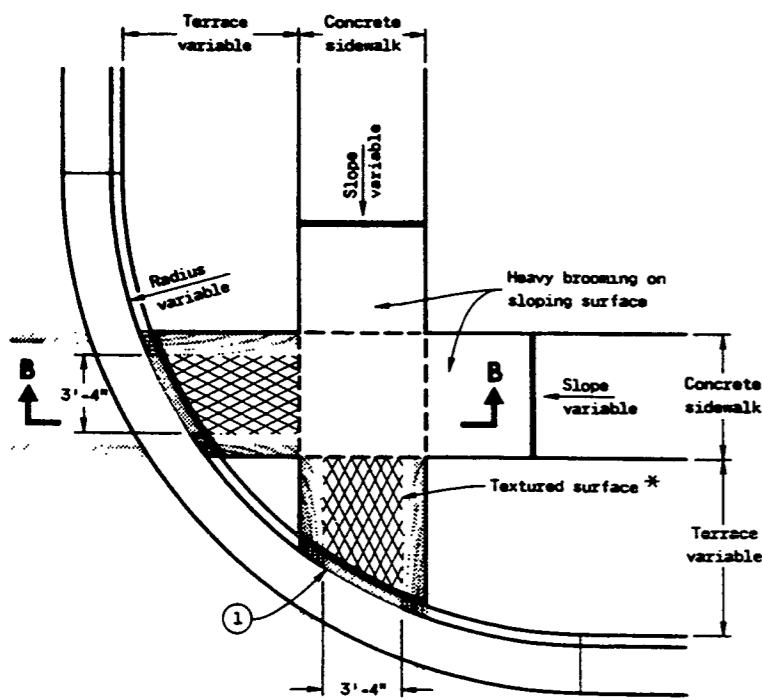


VIEW A-A

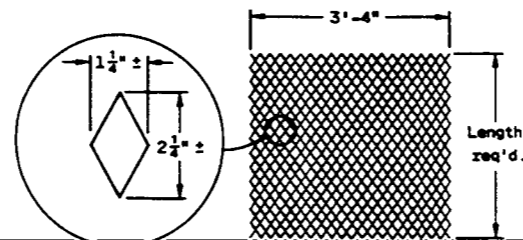


SECTION B-B

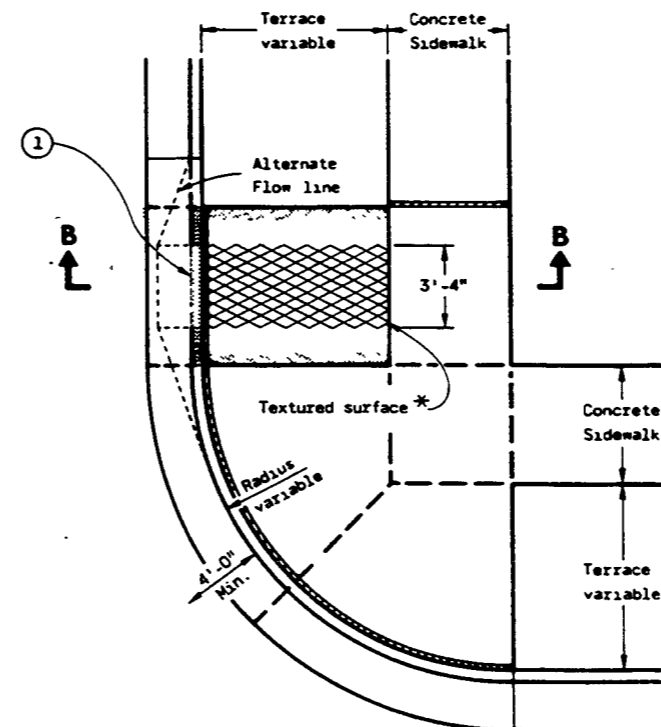
1/2" EXPANSION JOINTS - SIDEWALK
 --- CONTRACTION JOINTS
 Location of joints may be varied from those shown to better fit site conditions and/or local government preference.



PLAN-VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



DETAIL OF DIAMOND PATTERN *



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

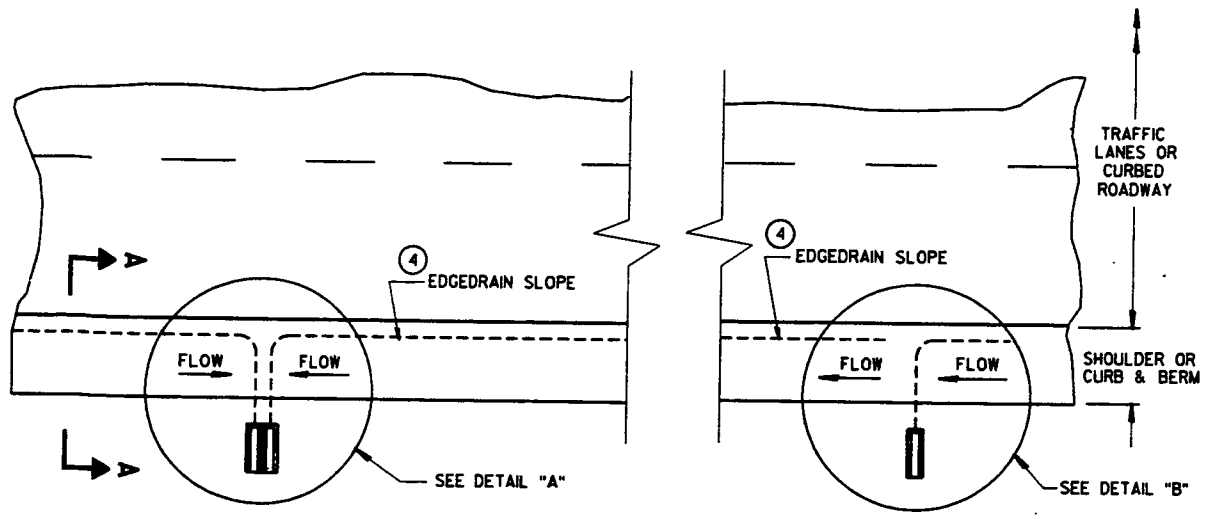
GENERAL NOTES

- Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.
- Ramps shall be built at 12:1 or flatter. When necessary, the sidewalk elevation may be lowered to meet the high point on the ramp.
- Type 1 or Type 1-A Ramps shall have a normal sidewalk apron and curb on both sides of ramp.
- Curb ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.
- Surface texturing shall consist of linear impressions approximately 1/4 inch to 3/8 inch in depth and width, oriented to provide a uniform pattern of diamond shapes measuring approximately 1 1/4 inches in width by 2 1/4 inches in length, with the length being parallel to the direction of pedestrian movement. This surface texture may be achieved by impressing and removing a piece of expanded metal regular industrial mesh into the surface of the ramp while the concrete is in a plastic state.
- The ramp shall be bordered on both sides and on the curb line with a 4 inch wide yellow stripe or with brick of a contrasting color. Normally the paint stripe alternate will be used. The municipality or the department will apply this striping unless otherwise specified in the contract.
- If a municipality requires the brick alternate, special details and provisions are shown elsewhere in the plans.

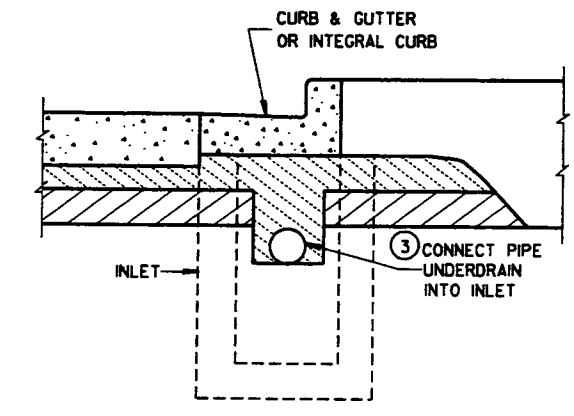
S.D.D. 8 D 5-8

CURB RAMPS	
State of Wisconsin Department of Transportation	
APPROVED 10-23-84 DATE	 CHIEF DESIGN ENGINEER
FHWA	

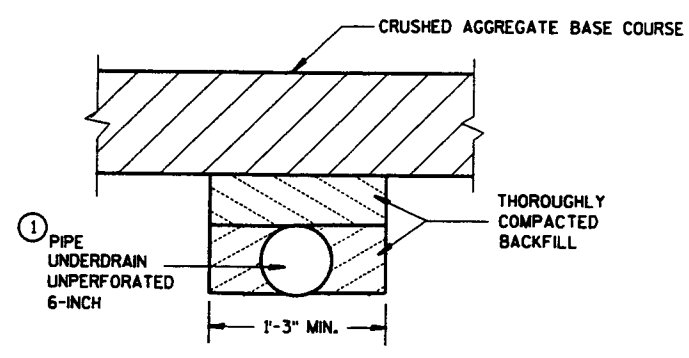
S.D.D. 8 D 5-8



PLAN VIEW
ROADWAY WITH SHOULDERS OR CURBS
 (EDGEDRAIN OUTLETS TO ROADSIDE) ②



SECTION B-B
URBAN CROSS SECTION

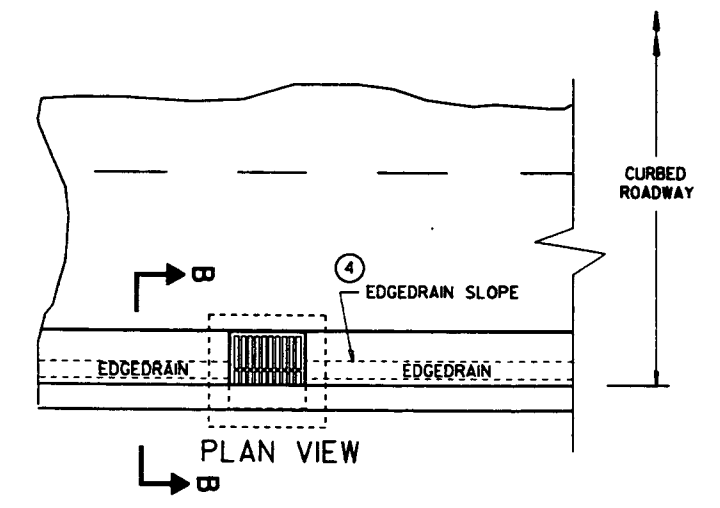


SECTION C-C
(TRENCH FOR OUTFALL PIPE)

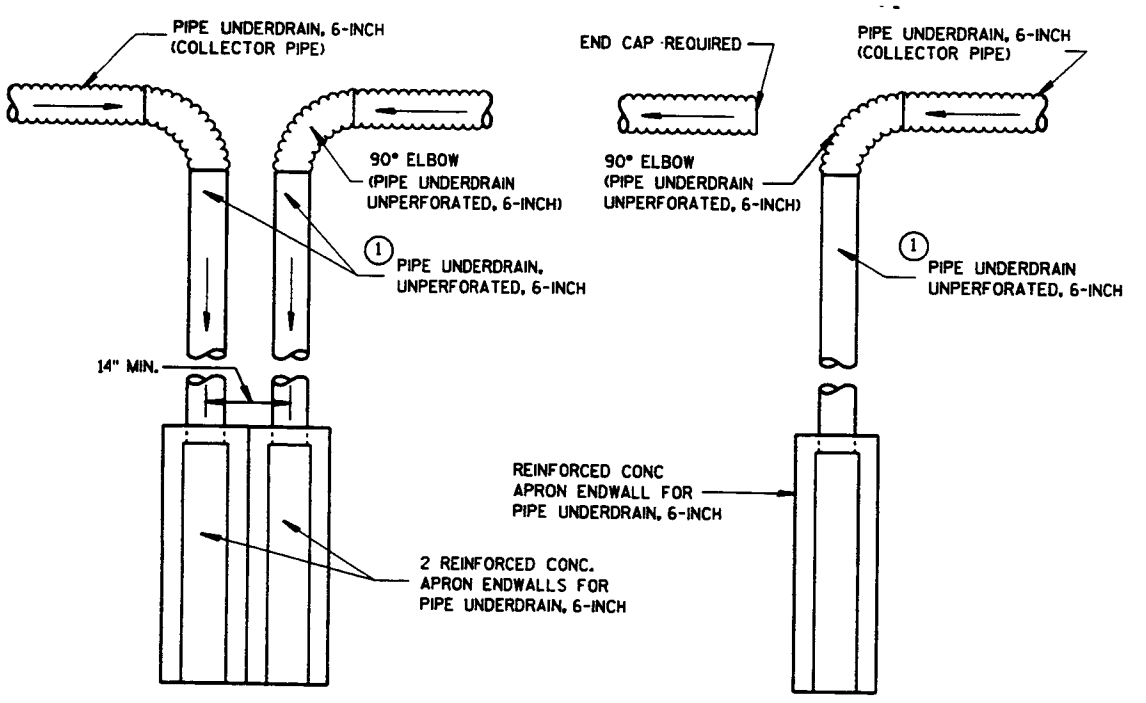
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:
 POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.
 TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



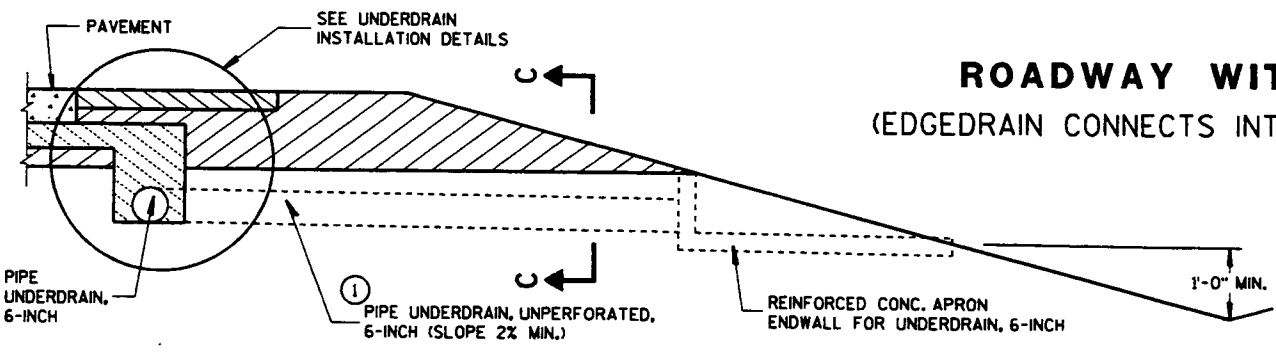
PLAN VIEW
ROADWAY WITH CURBS
 (EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



DETAIL "A"
 TO BE USED AT LOW POINT LOCATIONS

DETAIL B
 TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



SECTION A-A
RURAL CROSS SECTION

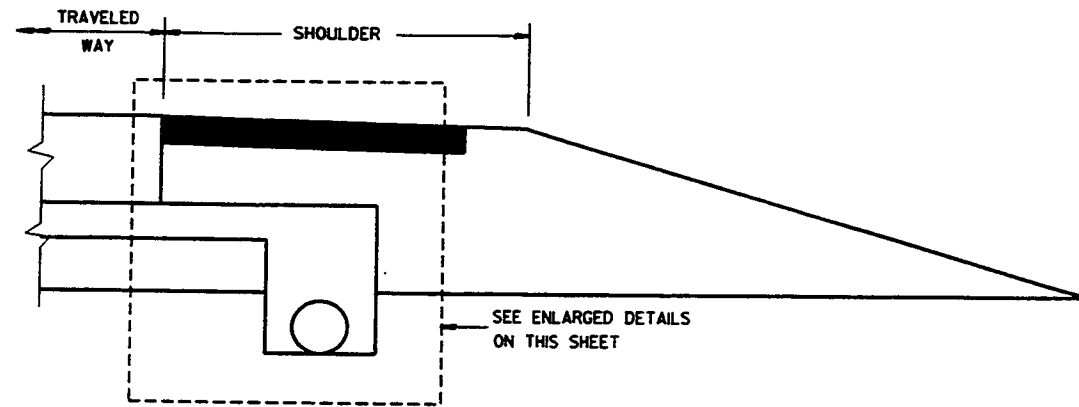
NOTE:
 SDD BFG-X AND SDD BD15-1b or SDD BD15-1c ARE REQUIRED WITH THIS DRAWING IN CONTRACT PLANS.

EDGEDRAIN OUTLET DETAILS

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 15-10

S.D.D. 8 D 15-10



RURAL CROSS SECTION

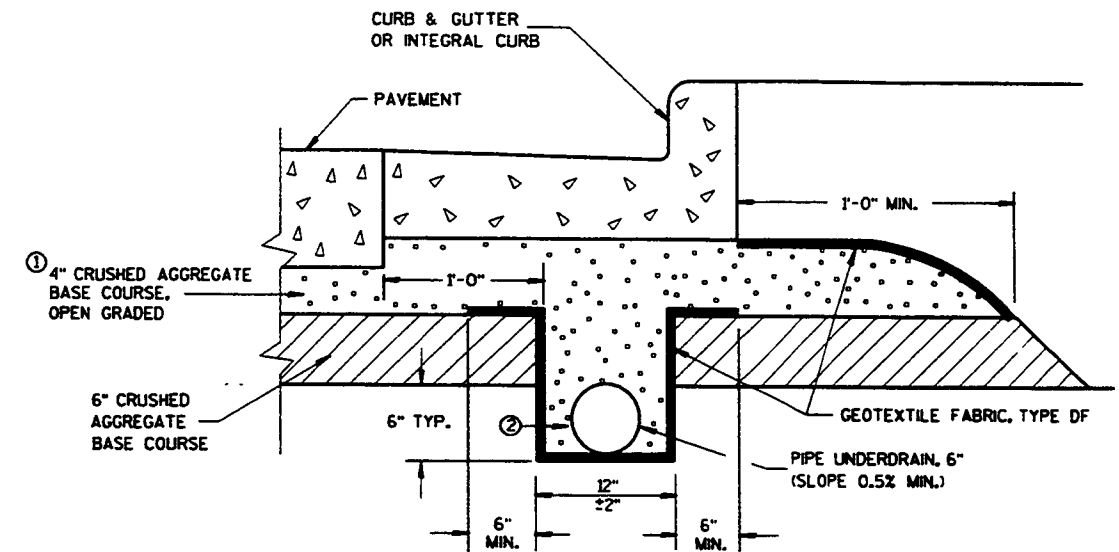
NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

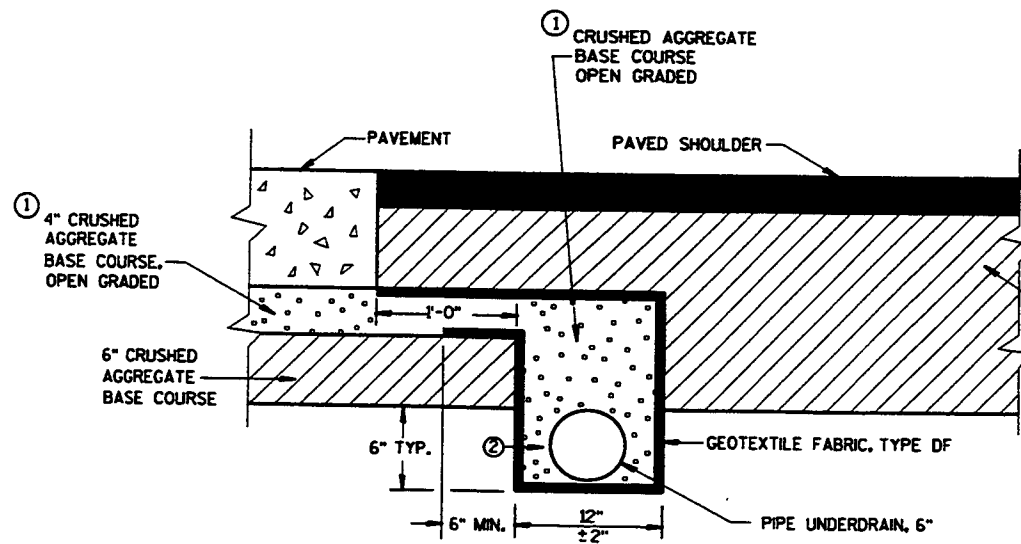
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

① THE GRADATION OF THE OPEN GRADED BASE COURSE SHALL BE EITHER NO. 1 OR NO. 2 AS SPECIFIED ELSEWHERE IN THE CONTRACT.

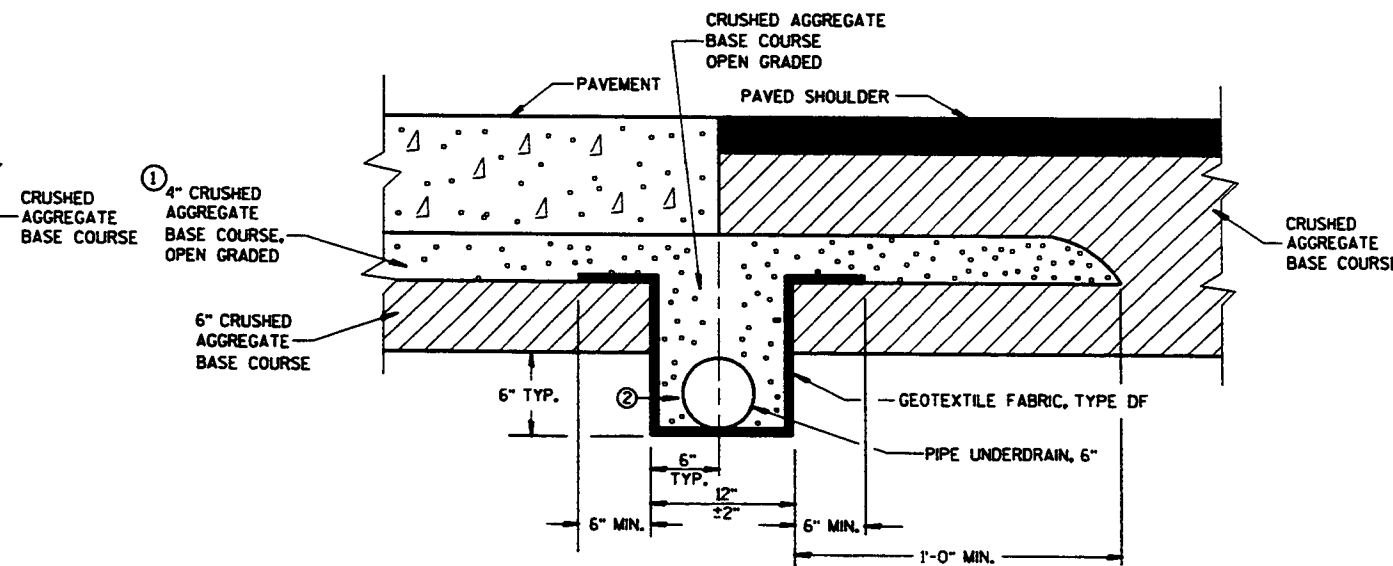
② TRENCH BACKFILL WILL BE PAID FOR AS CRUSHED AGGREGATE BASE COURSE, OPEN GRADED NO. 1 OR NO. 2 AS SPECIFIED.



EDGEDRAIN IN URBAN ROADWAY



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

NOTE:
SDD 8D15-1a IS REQUIRED WITH THIS
DRAWING IN CONTRACT PLANS.

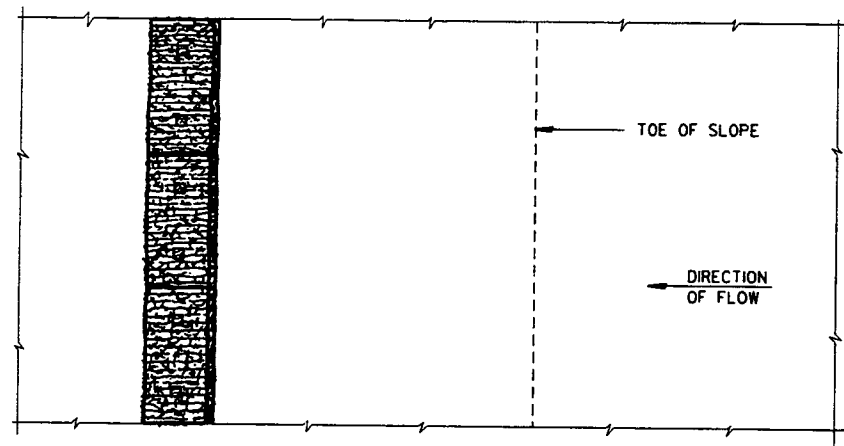
**EDGEDRAIN AND CRUSHED
AGGREGATE BASE COURSE,
OPEN GRADED NO. 1 OR NO. 2**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

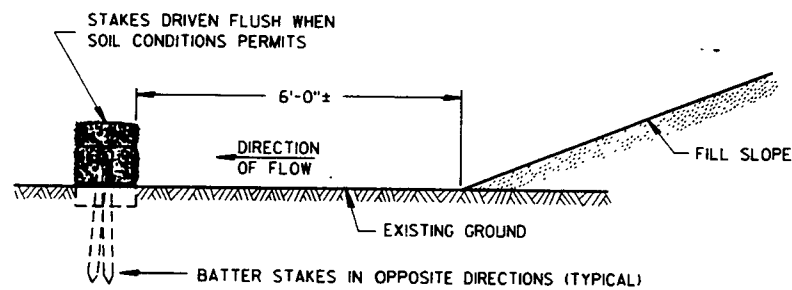
APPROVED
12/7/93 *Roy A. Thompson*
DATE *CHW* METHODS DEVELOPMENT ENGINEER
FWA

S.D.D. 8 D 15-1b

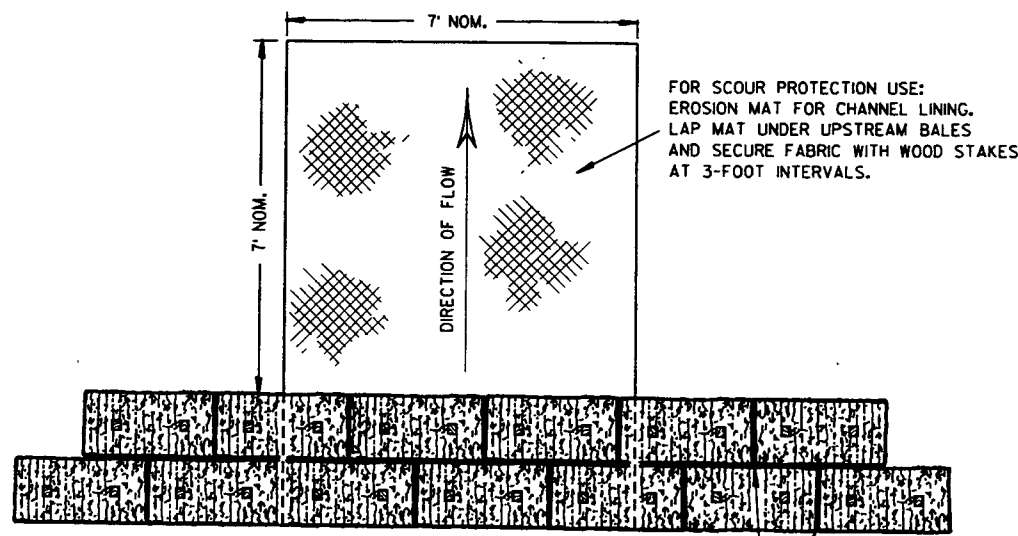
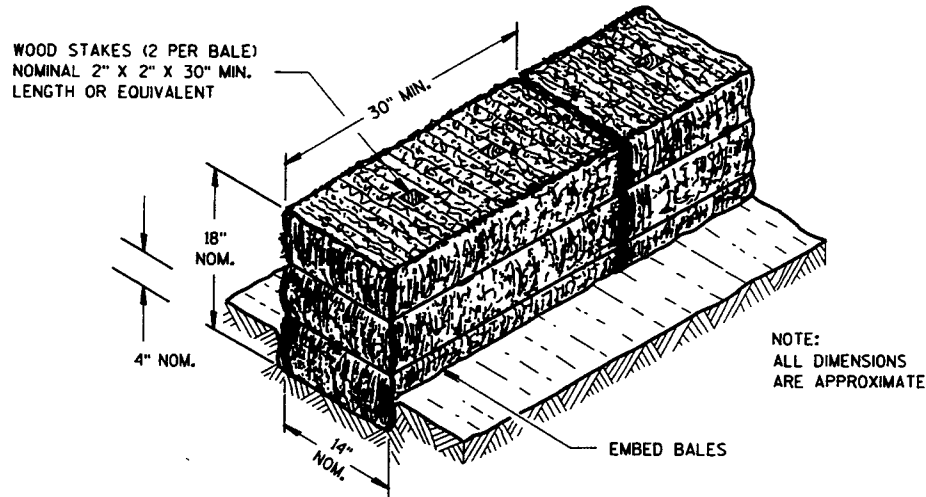
S.D.D. 8 D 15-1b



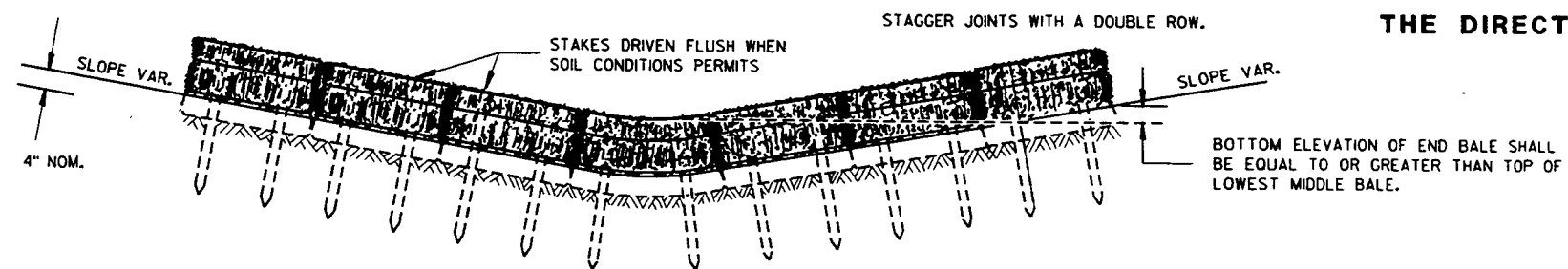
PLAN VIEW



FRONT ELEVATION
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE
EROSION BALES FOR SHEET FLOW



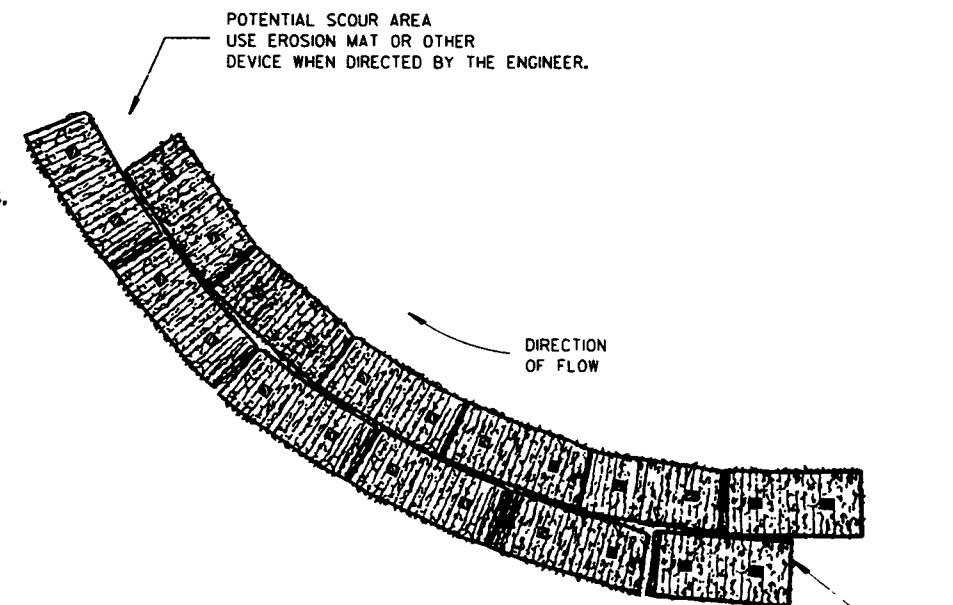
PLAN VIEW



FRONT ELEVATION
EROSION BALES FOR CHANNEL FLOW

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



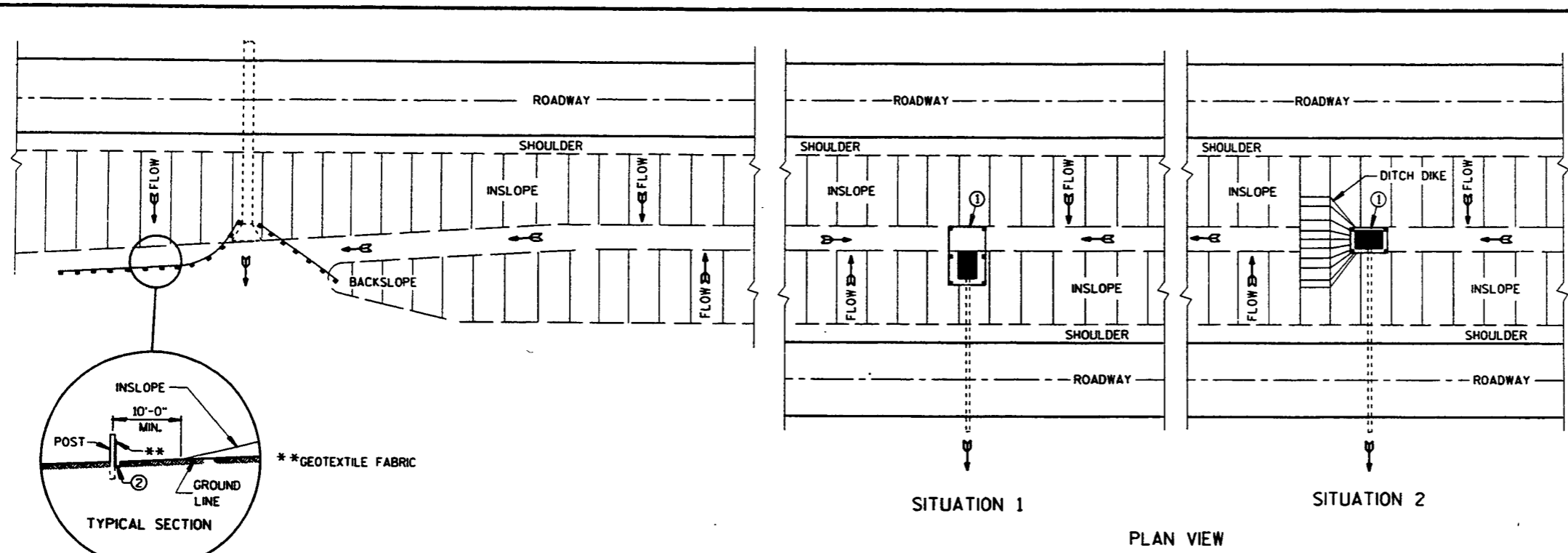
PLAN VIEW

EROSION BALES WHEN ALTERING
THE DIRECTION OF FLOW

TYPICAL INSTALLATIONS
OF EROSION BALES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 4/29/94
DATE
FHW A
CHIEF ROADWAY DEVELOPMENT ENGINEER



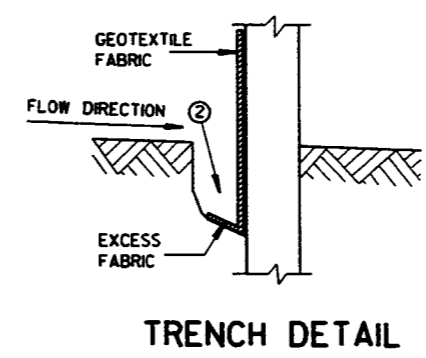
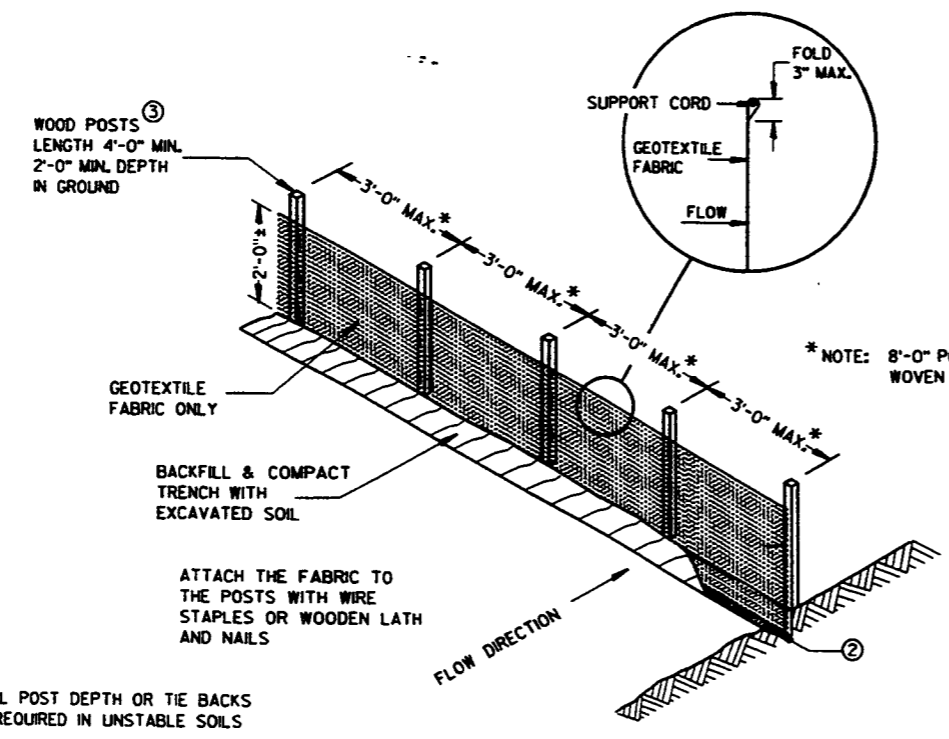
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

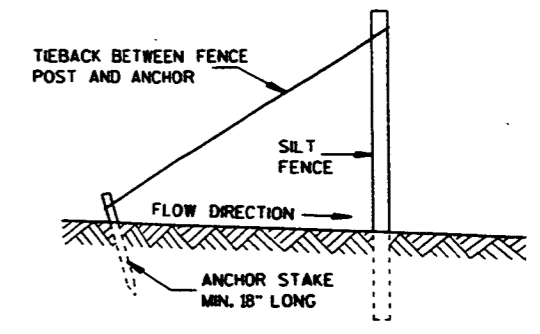
- ① HORIZONTAL BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.
- ② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.

SITUATION 1
SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

TYPICAL APPLICATIONS OF SILT FENCE
PLAN VIEW



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

SILT FENCE
(NON-REINFORCED)

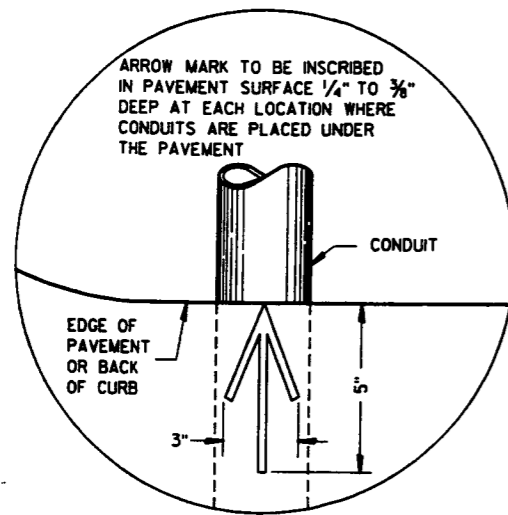
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

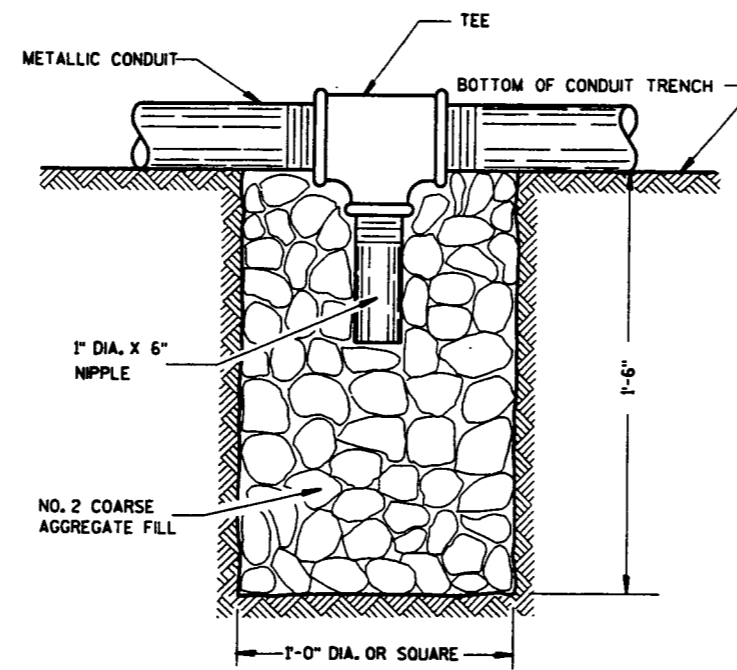
APPROVED
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 9-4

S.D.D. 8 E 9-4

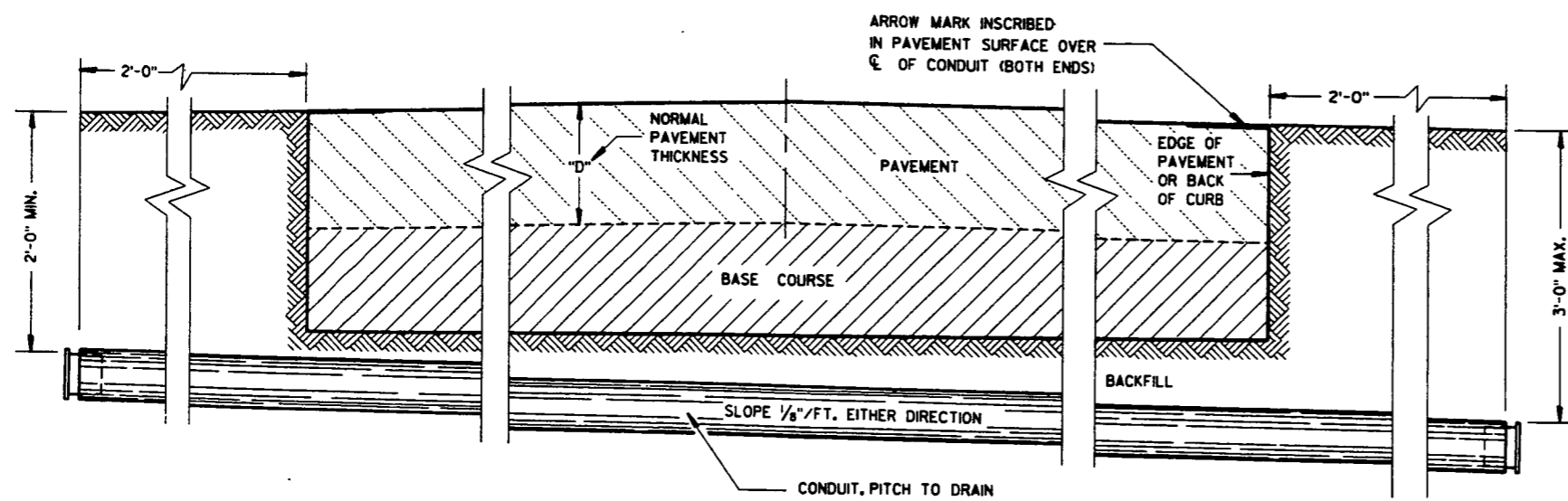


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR CONDUIT



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- METALLIC (STANDARD SPECIFICATION 613.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 613.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.
- DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.
- DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.
- ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.
- ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.
- ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.
- ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.
- ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION.
- NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
- WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.
- PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.
- ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.
- CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX).
- A #12 GAUGE, GALVANIZED PULL WIRE SHALL BE INSTALLED IN EACH RUN OF CONDUIT THAT DOES NOT RECEIVE CABLE OR WIRE UNDER THIS CONTRACT. THE PULL WIRE SHALL BE DOUBLED BACK 2 FEET AT EACH END CAP OF THE CONDUIT RUN.
- BENDING OF PVC SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.
- ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.
- ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

S.D.D. 9 B 2-5

CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 9/15/92	<i>Dale J. Miller</i> STATE ELECTRICAL ENGINEER FOR HWYS <i>Robert R. Ruch</i> STATE TRAFFIC ENGINEER FOR HWYS
FWA	

S.D.D. 9 B 2-5

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

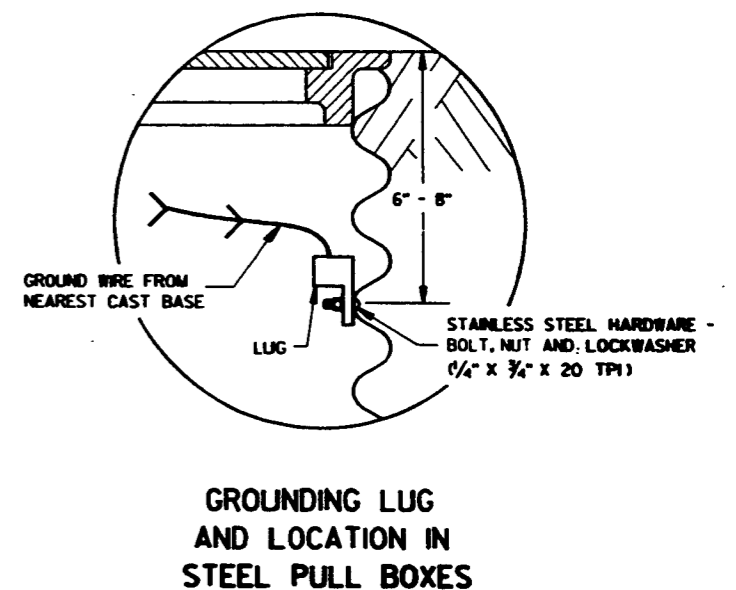
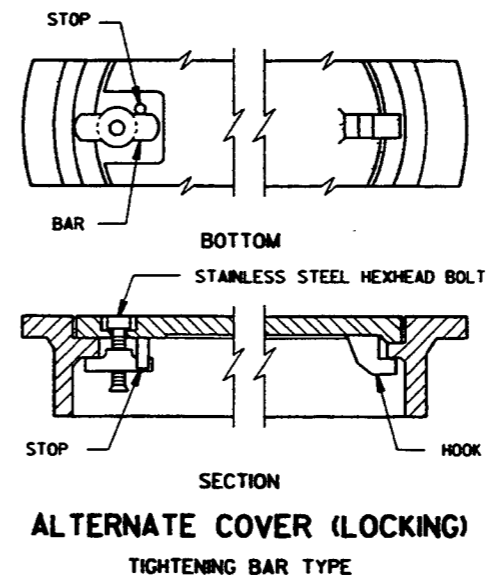
DIMENSION IN INCHES		TYPE OF PIPE						
		CORRUGATED STEEL						POLYETHYLENE SDR 32.5
PIPE DIAMETER (INSIDE)	A	12	12	18	18	24	24	12
PIPE LENGTH **	B	24	36	24	36	24	36	24
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.4
COVER	D	10 1/4	10 1/4	16 1/4	16 1/4	22 1/4	22 1/4	10 1/4
FRAME	E	14 1/2	14 1/2	20 1/2	20 1/2	26 1/2	26 1/2	14 1/2
FRAME	F	8 1/2	8 1/2	14 1/2	14 1/2	20 1/2	20 1/2	8 1/2
FRAME	G	11 1/2	11 1/2	17 1/2	17 1/2	23 1/2	23 1/2	11 1/2
		WEIGHT IN POUNDS *						
FRAME AND COVER		60	60	110	110	155	155	60

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

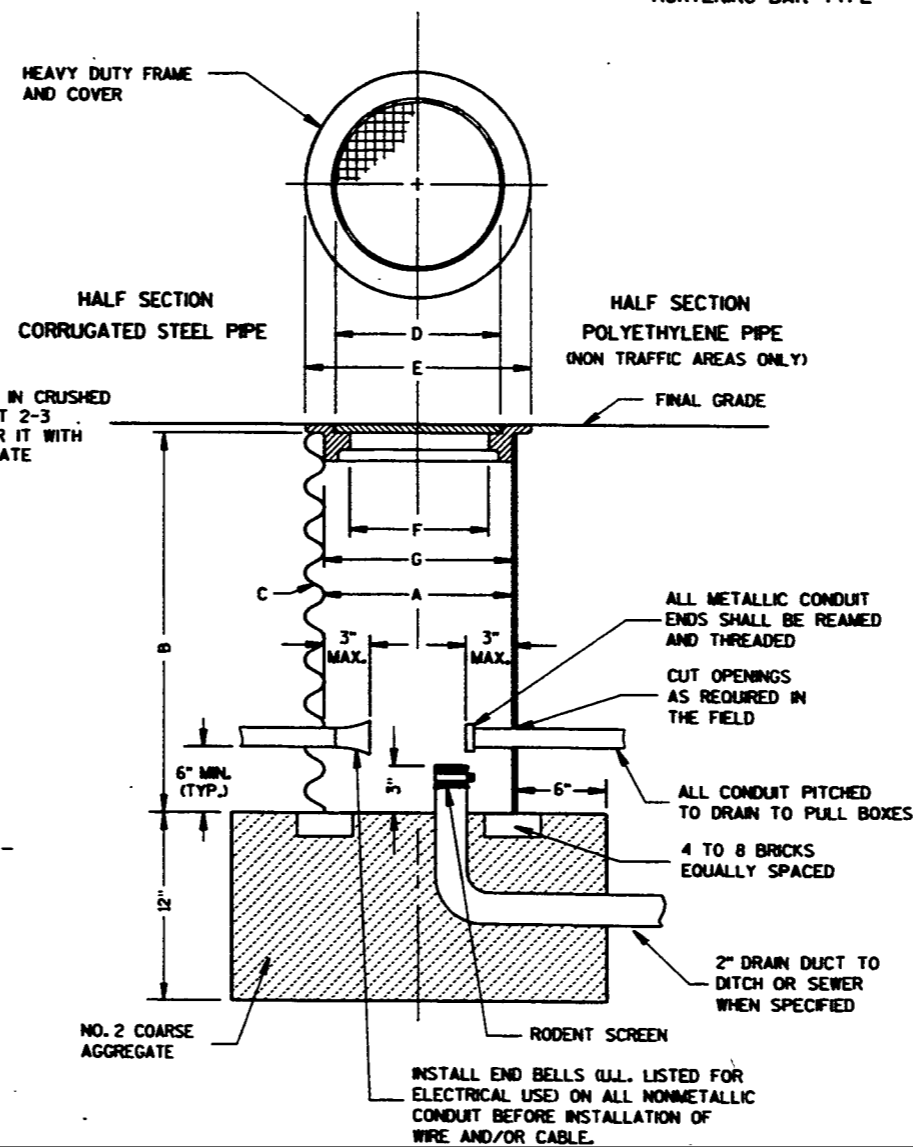
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48' (CONTINUOUS LENGTH, NON-SPLICED)

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.
- POLYETHYLENE PULL BOXES SHALL NOT BE INSTALLED IN CONCRETE OR ASPHALTIC PAVEMENT. PULL BOXES LOCATED IN THE ROADWAY SHALL HAVE LOCKING COVERS.
- ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".
- THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.
- GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.
- GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.
- DRAIN DUCT SHALL BE MEASURED AND PAID FOR SEPARATELY.
- RODENT SCREEN SHALL BE 1/8" GALVANIZED STEEL MESH AND BE INSTALLED WITH A STAINLESS STEEL HOSE CLAMP OF SUFFICIENT SIZE.
- ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

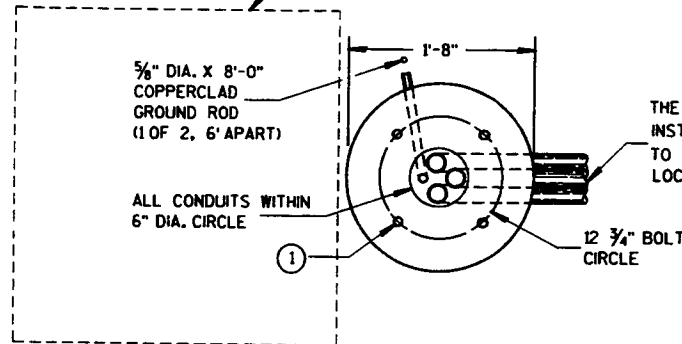


PULL BOX

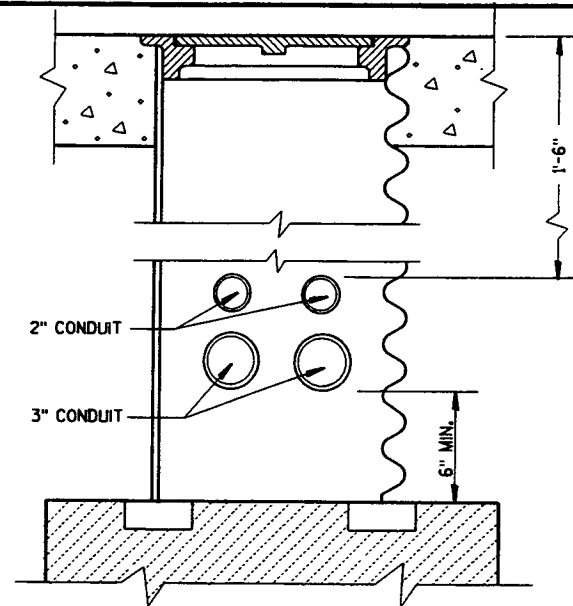
PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/21/93 DATE	<i>Bahn</i> STATE ELECTRICAL ENGINEER FOR HWY'S

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.32

TYPICAL 3'-0" X 3'-0"
MAINTENANCE PLATFORM.
LOCATION TO BE DETERMINED
IN THE FIELD.



THE THREE CONDUITS SHALL BE
INSTALLED FROM THE CABINET BASE
TO THE FIRST (NEAREST) PULL BOX
LOCATED AS SHOWN ON THE PLAN



CONDUIT LOCATIONS IN 24" X 36" PULL BOX
(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR BOLTS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

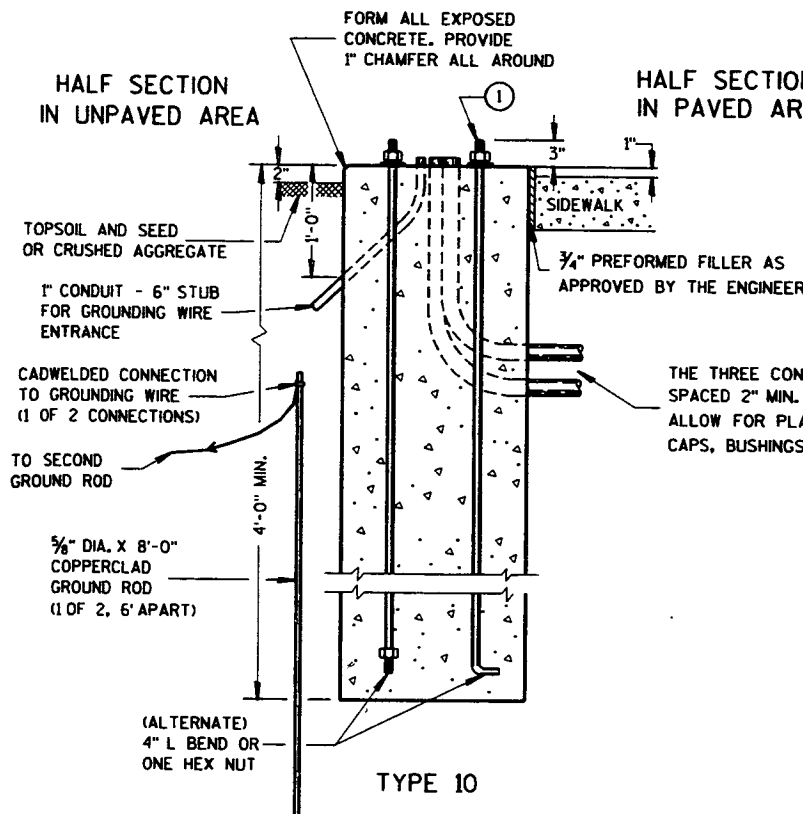
WHEN ANCHOR BOLTS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR BOLT BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

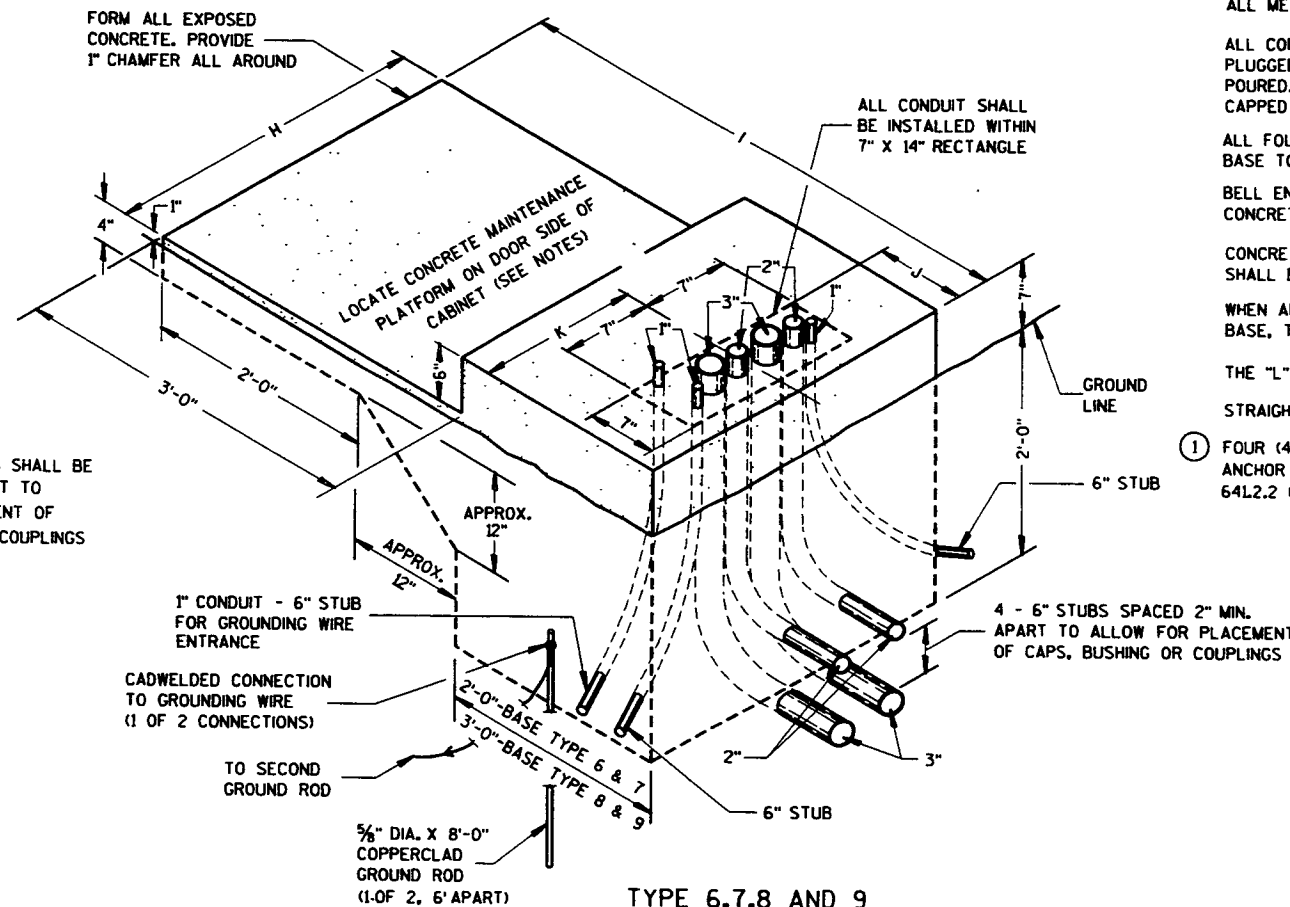
STRAIGHT ANCHOR BOLTS SHALL BE THREADED 8" IN LENGTH ON EACH END OF THE BOLT.

① FOUR (4) ANCHOR BOLTS, 1" DIA. X 3'-6" ANCHOR BOLTS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 640.2.9 AND 641.2.2 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A-449.

HALF SECTION
IN UNPAVED AREA



HALF SECTION
IN PAVED AREA



CONCRETE CONTROL CABINET BASES

TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

CONCRETE CONTROL CABINET
BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/21/93 DATE
4/21/93 DATE
STATE ELECTRICAL ENGR FOR HWYS
STATE TRAFFIC ENGINEER FOR HWYS
FHWA

GENERAL NOTES

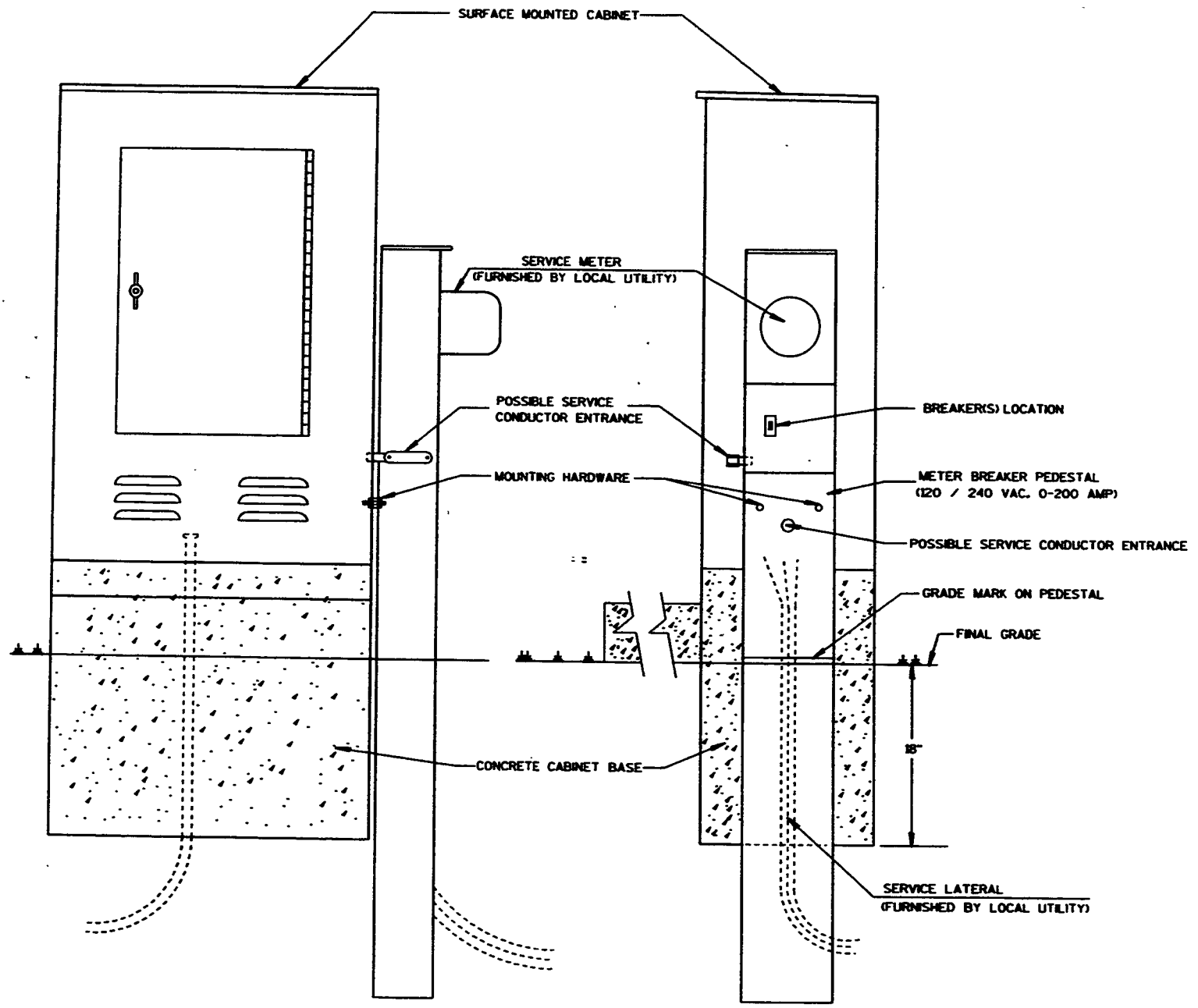
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AS REQUIRED AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.



TYPICAL CABINET SERVICE INSTALLATION

CABINET SERVICE INSTALLATION

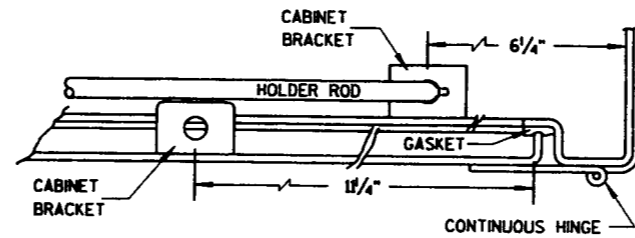
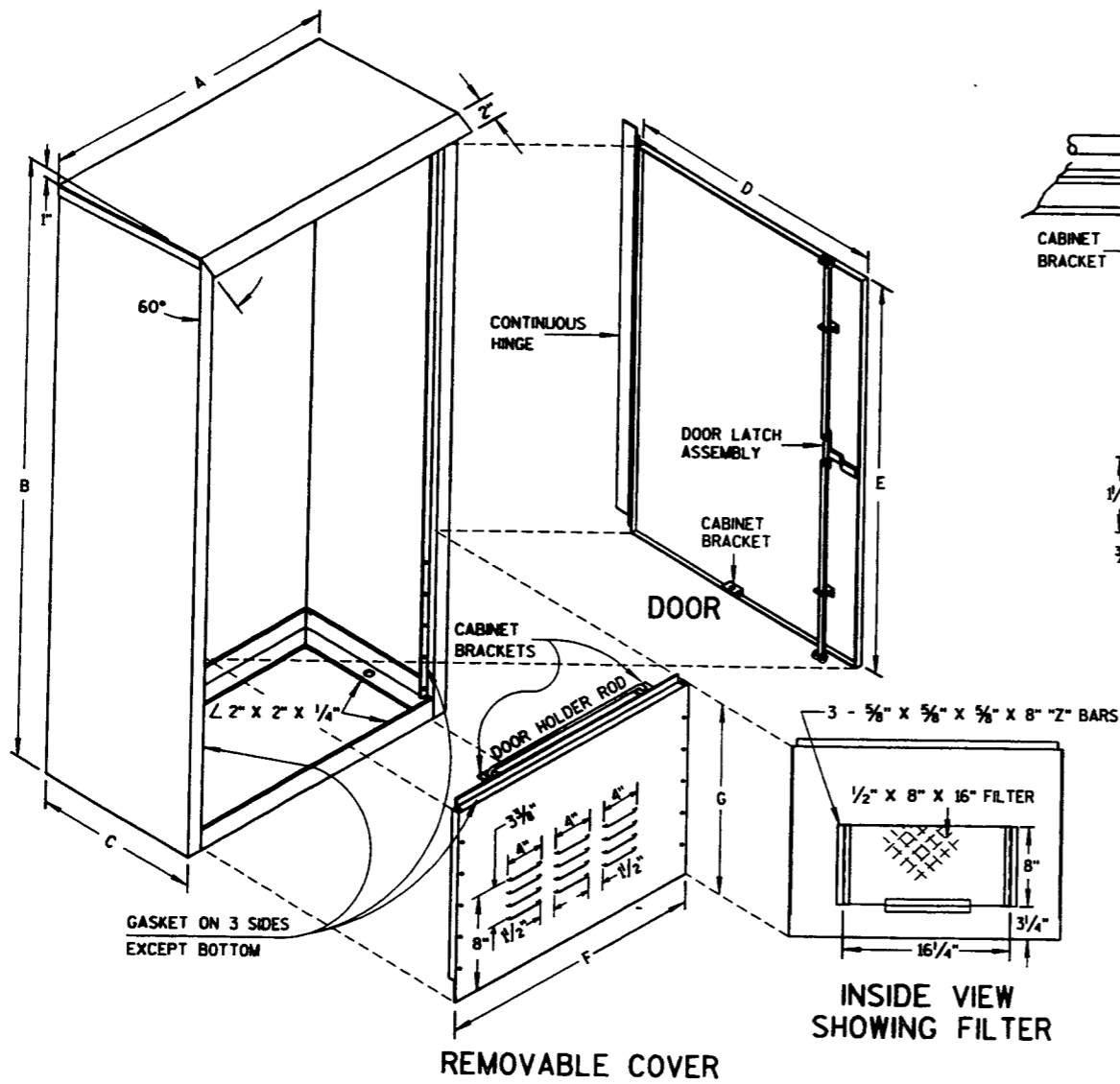
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/21/93
DATE
4/21/93
DATE
FWHA

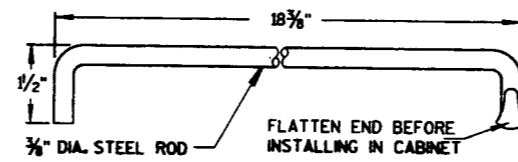
Bala
STATE ELECTRICAL ENGR FOR HWYS

John
STATE TRAFFIC ENGINEER FOR HWYS

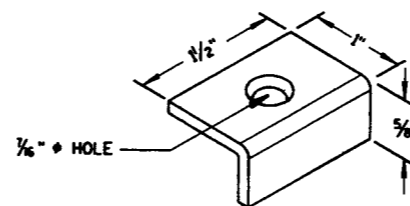
S.D.D. 9 D 1-1



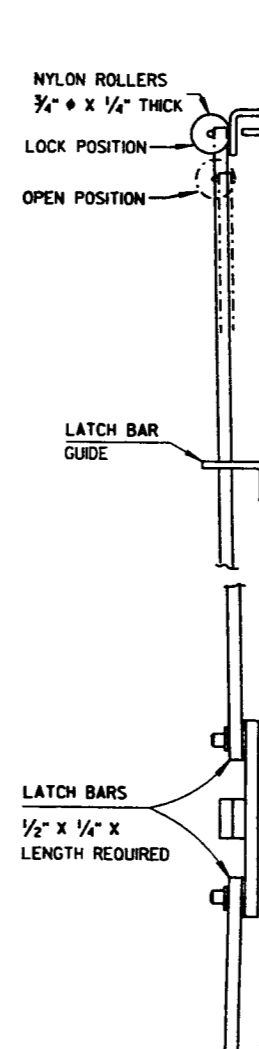
HINGE & DOOR HOLDER



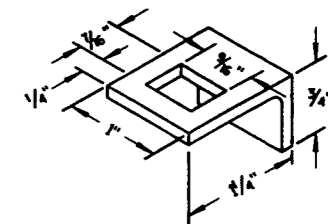
HOLDER ROD



CABINET BRACKET



LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

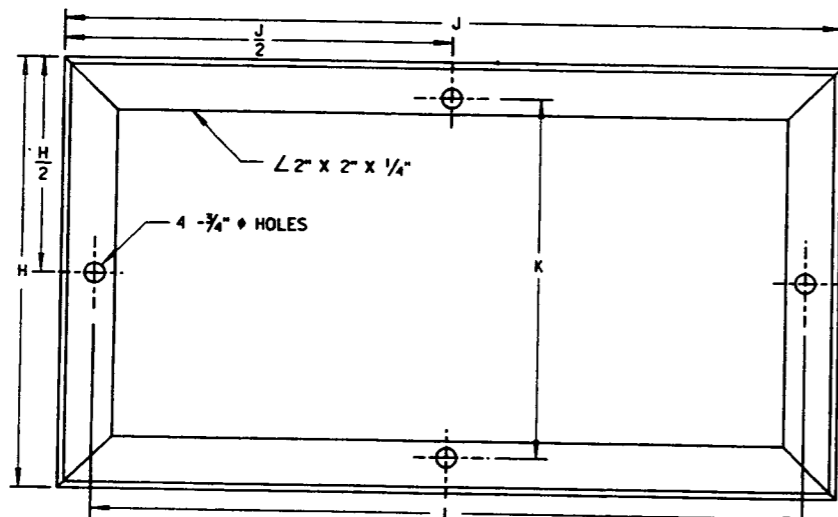
FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE 12 GA. HRP&O.

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



MOUNTING BASE

S.D.D. 9 D 2-1

SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

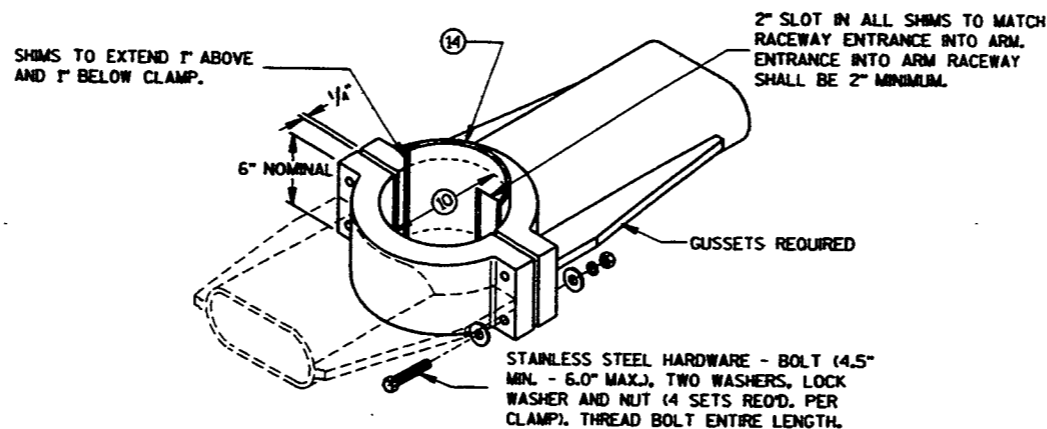
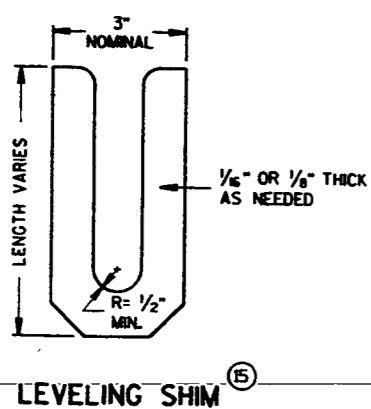
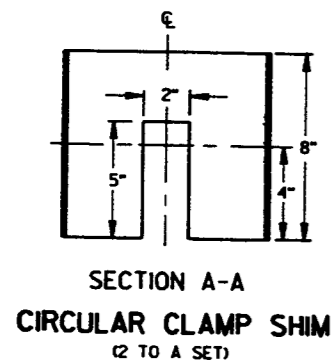
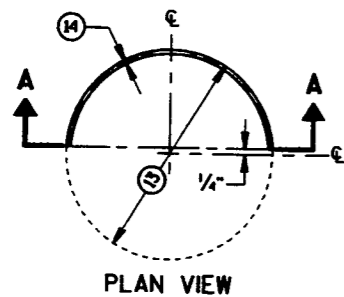
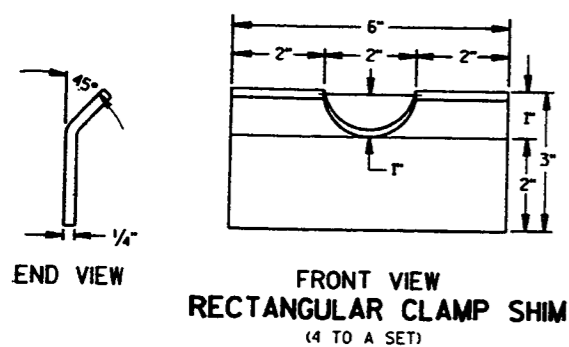
APPROVED
4/21/93
DATE

APPROVED
4/22/93
DATE

STATE ELECTRICAL ENGR. FOR HWYS
STATE TRAFFIC ENGINEER FOR HWYS

FNWA

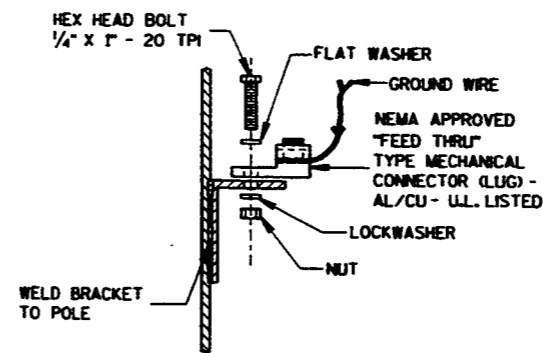
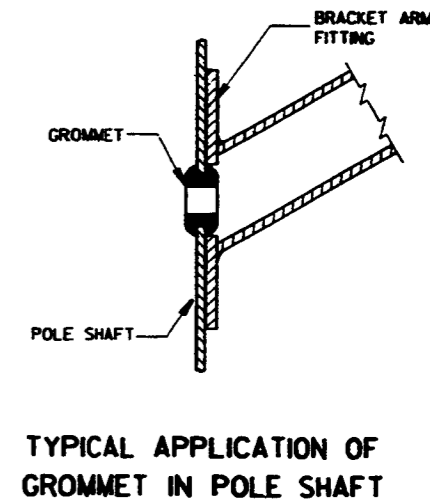
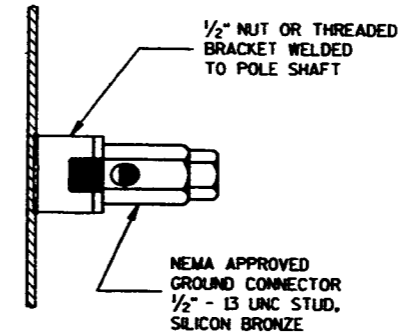
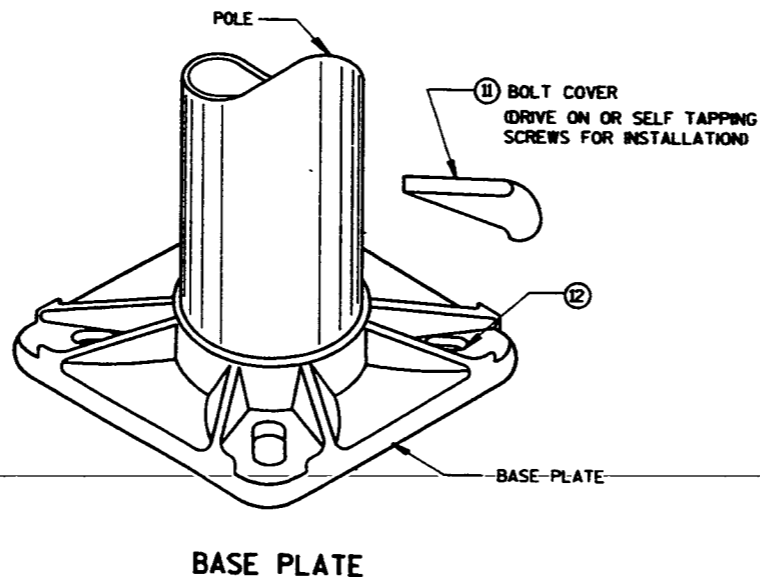
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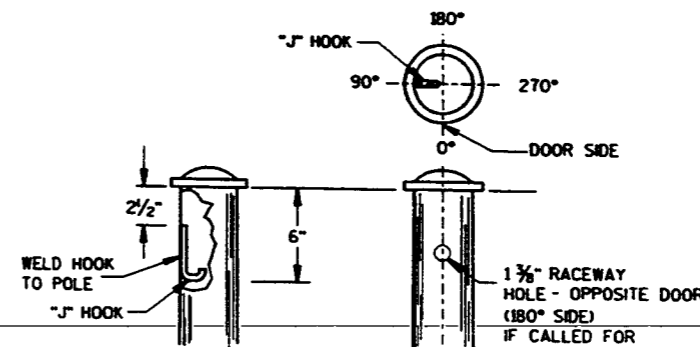
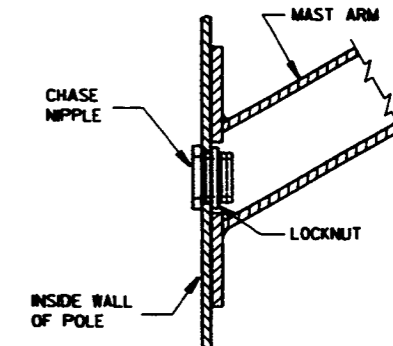
TYPICAL TROMBONE MAST ARM AND LUMINAIRE MAST ARM MOUNTING CLAMP

GENERAL NOTES

- (10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- (11) INDIVIDUAL BASE PLATE ANCHOR BOLT COVERS. (4 REQUIRED)
- (12) BASE PLATE SLOTTED TO ACCEPT 12" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR BOLTS.
- (13) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM 6.625" O.D. FOR TROMBONE MAST ARM)
- (14) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")
SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.35", 0.53" OR 0.70".
SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.
SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
- (15) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



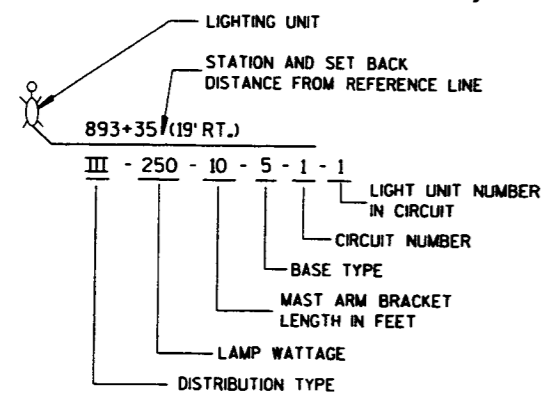
TYPICAL "J" HOOK LOCATION

NOTE:
THIS DRAWING IS REQUIRED WHEN DRAWINGS SDD 9 E 1-10, b.c. OR d IS CALLED FOR IN THE PLANS.

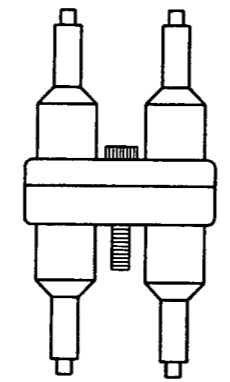
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

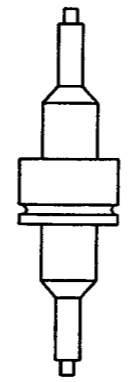
APPROVED
9/21/93 DATE
1/21/93 DATE
STATE ELECTRICAL ENGR FOR HWYS
STATE TRAFFIC ENGINEER FOR HWYS



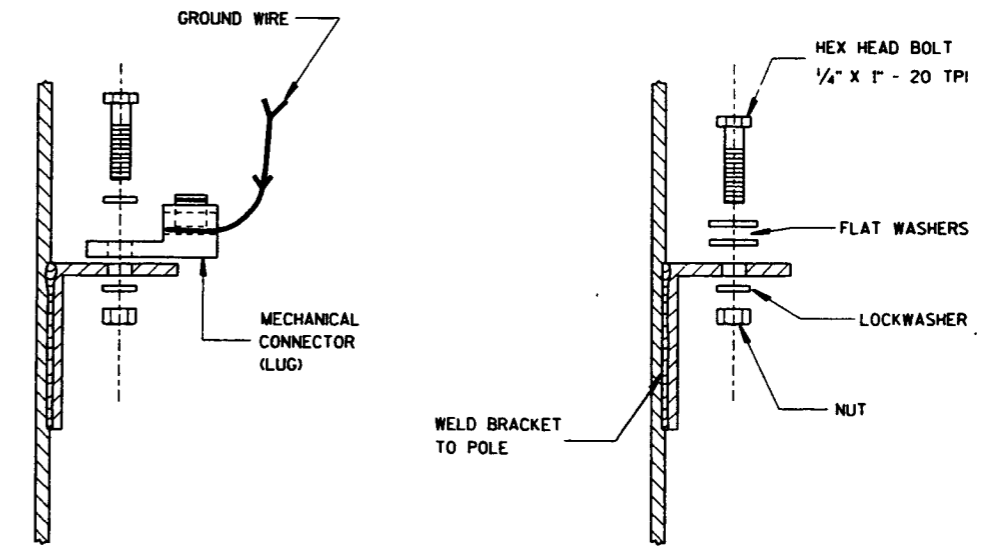
LIGHTING UNIT CODE



**DETAIL "A"
DOUBLE POLE**



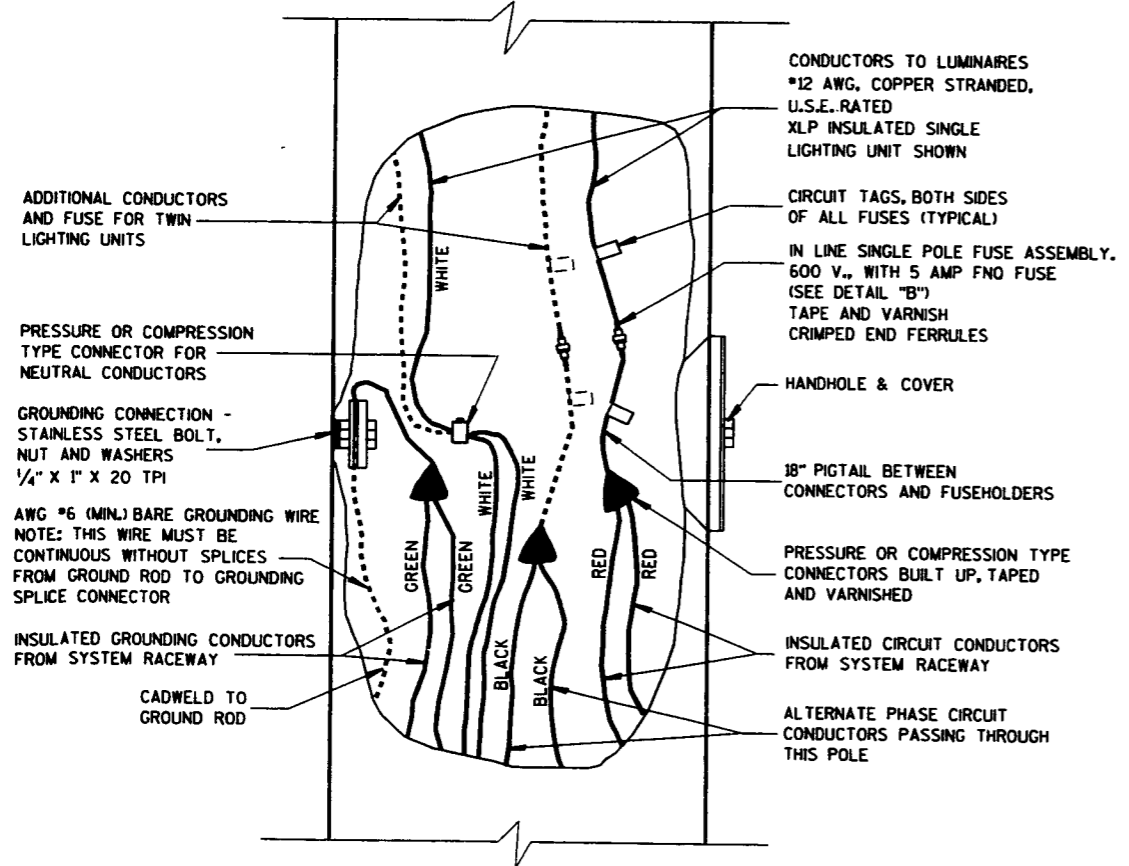
**DETAIL "B"
SINGLE POLE**



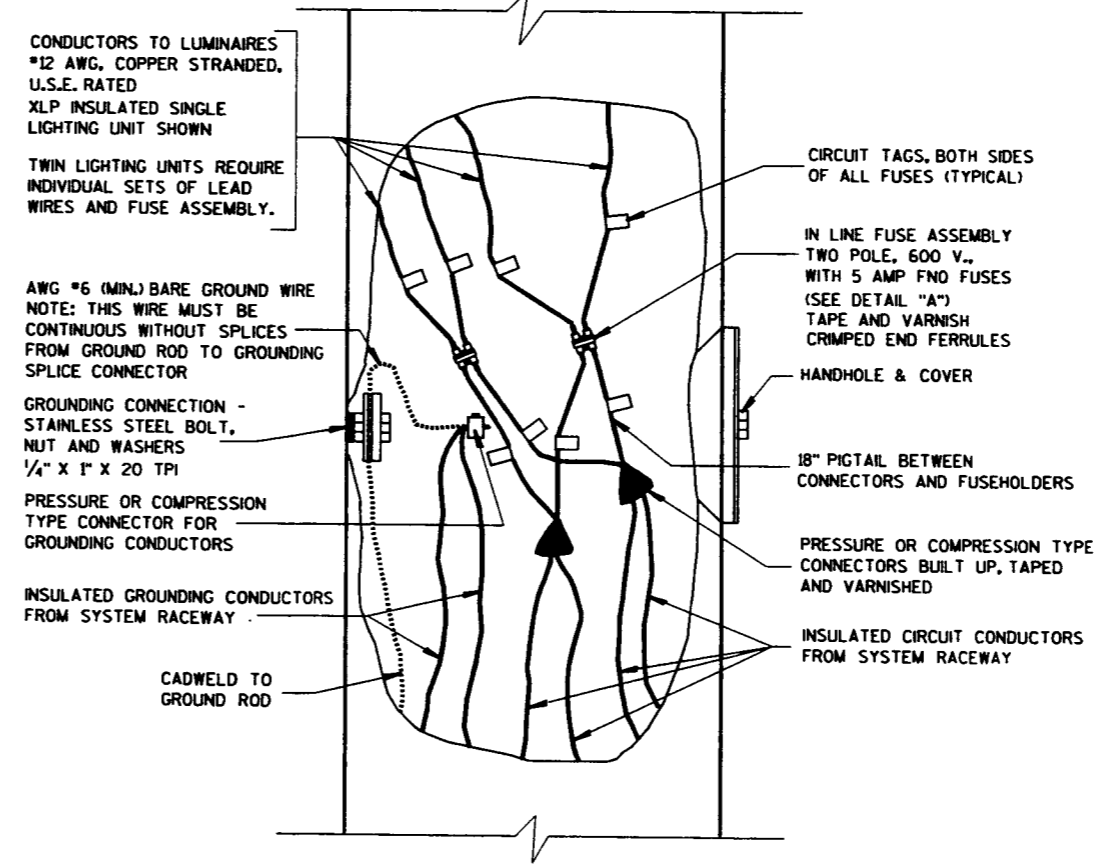
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

GENERAL NOTES

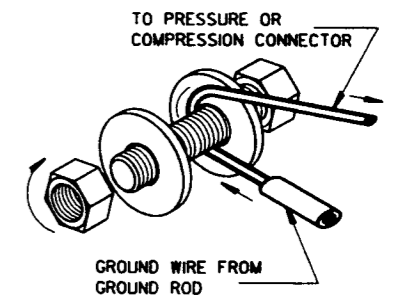
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.



3 WIRE - 120, 240 OR 480 VOLTS TO GROUND
2 WIRE - 120 VOLTS TO GROUND



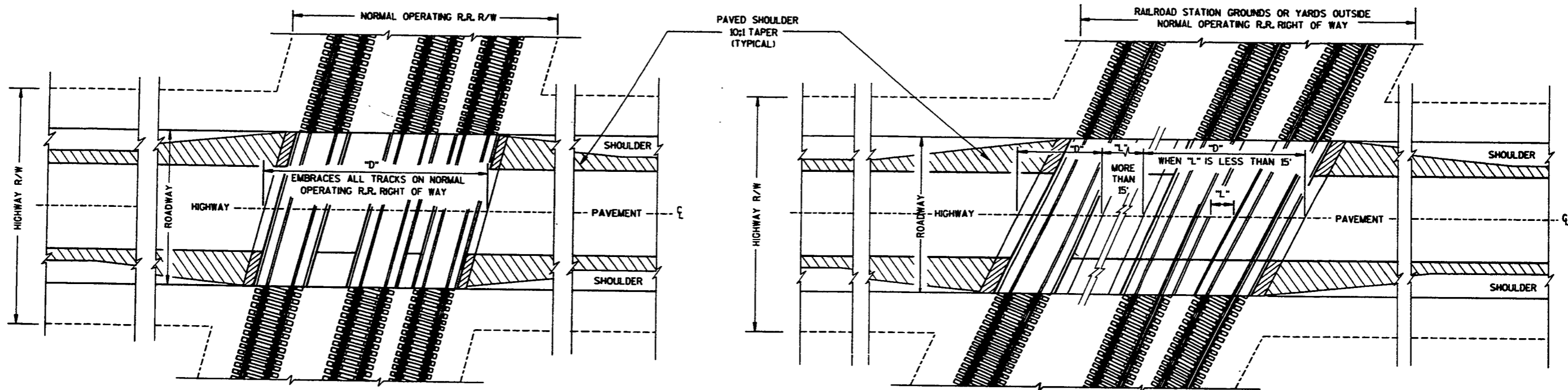
2 WIRE - 240 OR 480 VOLTS (UNGROUND)



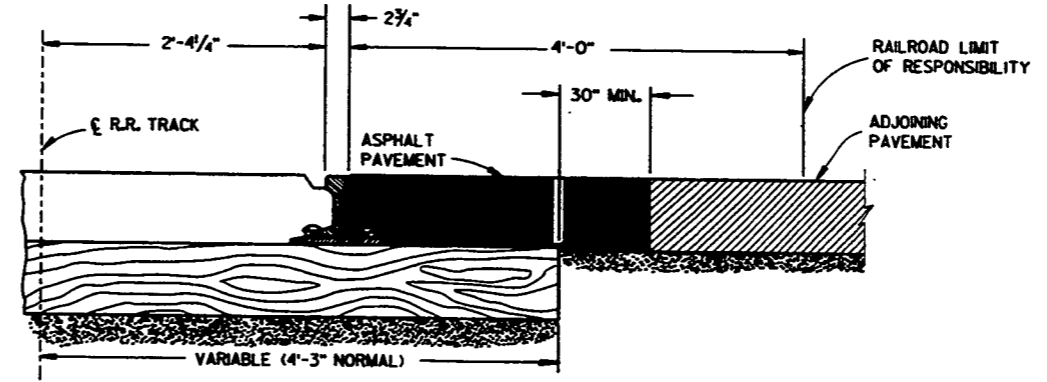
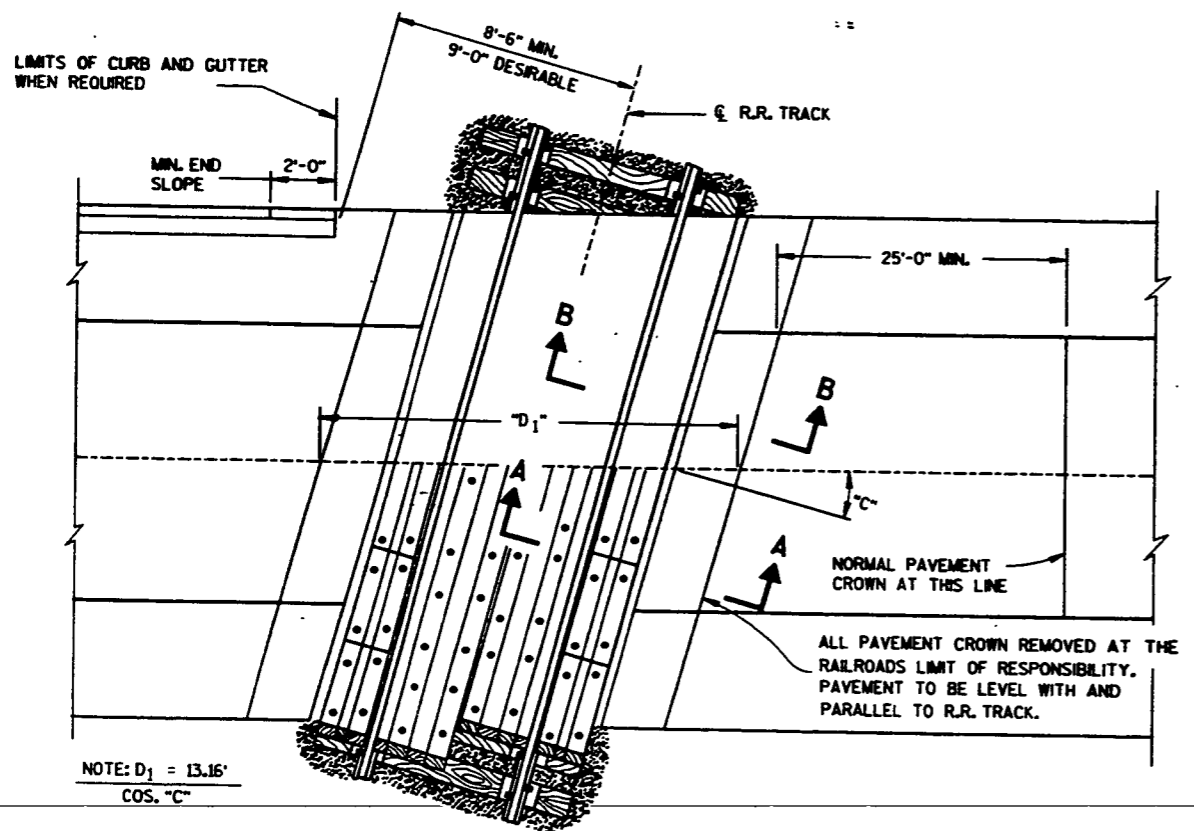
GROUND WIRE INSTALLATION BETWEEN TWO WASHERS

NON-FREWAY LIGHTING UNIT POLE WIRING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/21/93 DATE	<i>Bob Aron</i> STATE ELECTRICAL ENGR FOR HWYS
4/21/93 DATE	<i>Steve Rusk</i> STATE TRAFFIC ENGINEER FOR HWYS
FHWA	

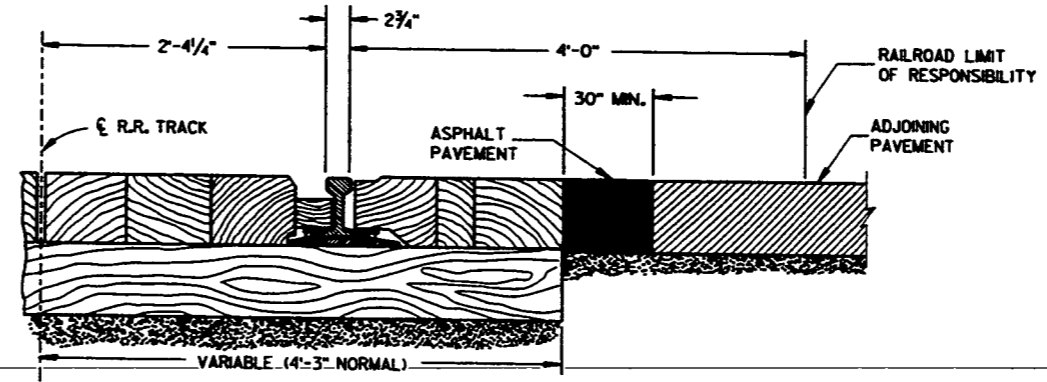
S.D.D. 9 E 3-1



**TYPICAL TYPES OF RAILROAD GRADE CROSSING
SHOWING THE RAILROAD'S LIMIT OF RESPONSIBILITY
AND MEASUREMENT DETAILS**



SECTION B-B



SECTION A-A

RAILROAD APPROACH CONSTRUCTION DETAILS

GENERAL NOTES

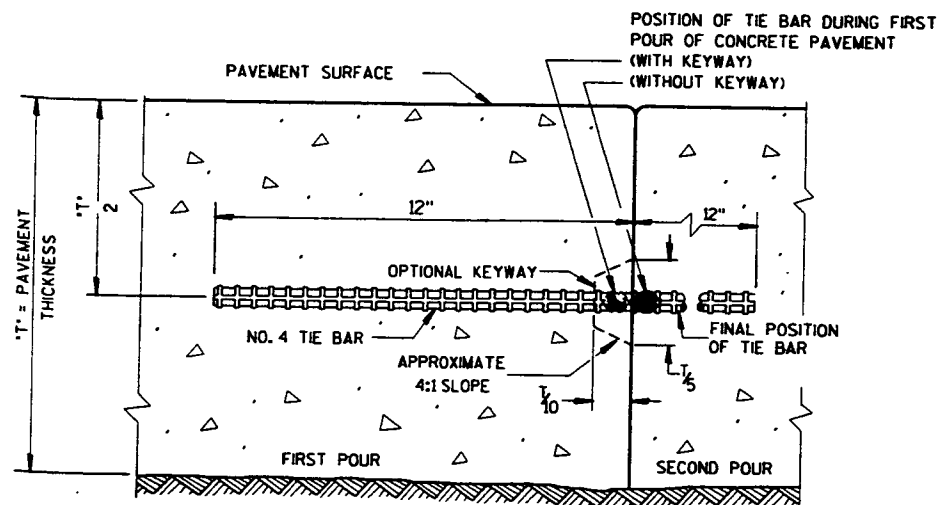
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

"D" & "D₁" = EXCEPTION TO NET LENGTH OF ϵ . PAVING OR SURFACING AND SHOULDER MATERIAL WITHIN LIMITS DESIGNATED BY "D" OR "D₁" TO BE AT EXPENSE OF RAILROAD COMPANY. TRACKAGE TO INDUSTRIAL SITES TO BE TREATED SAME AS TRACKAGE TO R.R. STATION GROUNDS OR YARDS OUTSIDE OF NORMAL OPERATING R/W.

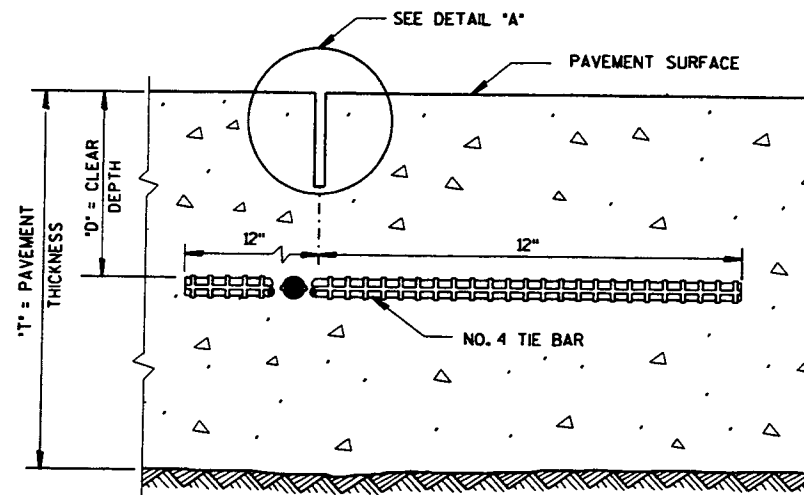
MODULAR CROSSINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PAVEMENT DETAILS FOR RAILROAD APPROACH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/08/64 DATE	<i>Roy A. Harrison</i> CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

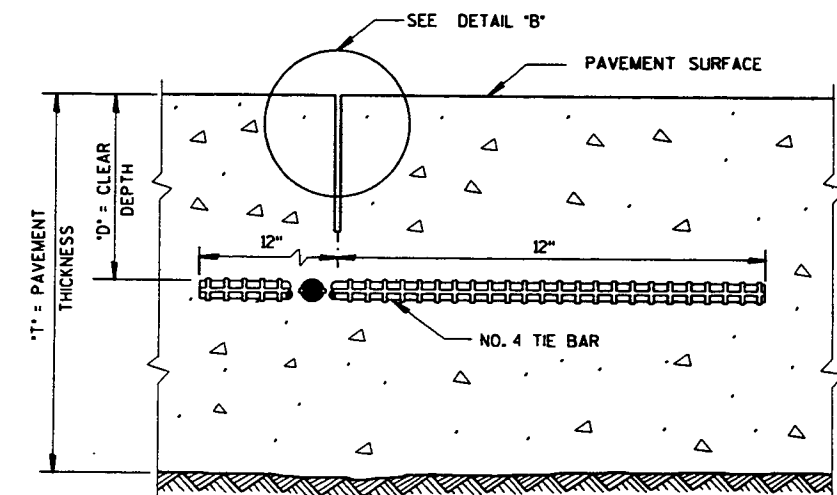
S.D.D. 13 B 1-4



CONSTRUCTION JOINT



SAWED JOINT



RIBBON JOINT

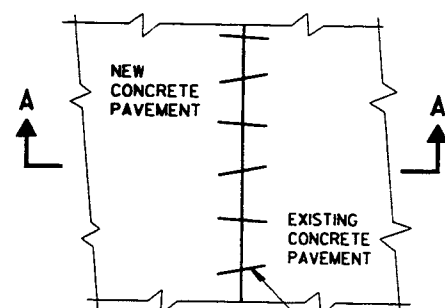
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILS "A" AND "B" ARE EQUAL ALTERNATES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

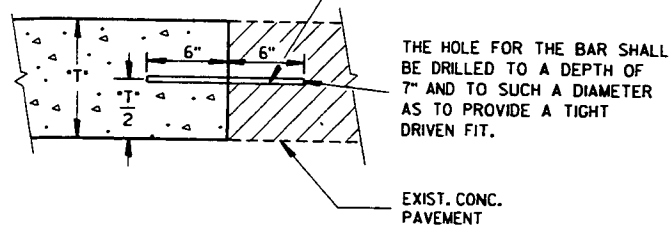
LONGITUDINAL JOINTS SHALL NOT BE SEALED OR FILLED.

TIE BAR SPACINGS ARE VALID ONLY FOR PAVEMENT WIDTHS IN THE TABLE. FOR WIDER PAVEMENTS, TIED CONCRETE SHOULDERS OR RAMPS, THE TIE BAR SPACING SHALL BE AS SHOWN ON THE PLANS.

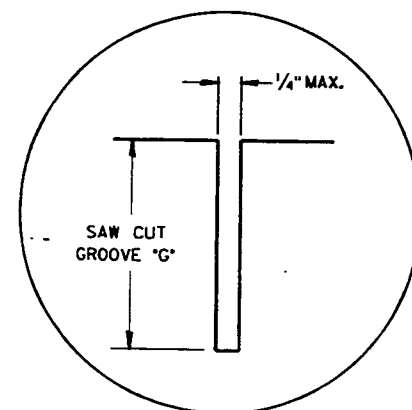


PLAN VIEW

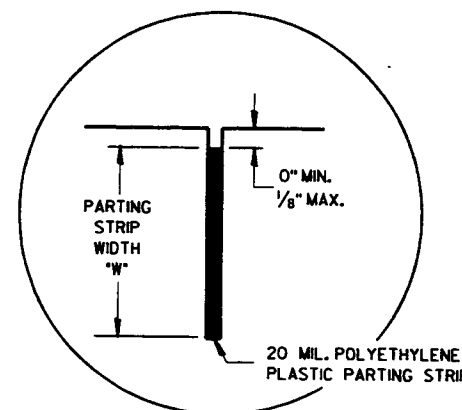
NO. 6 TIE BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



SECTION A-A PAVEMENT TIES

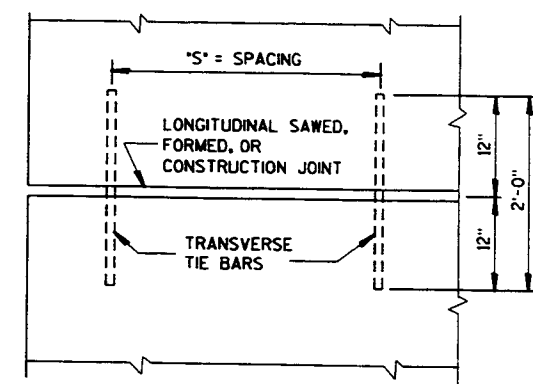


DETAIL 'A'



DETAIL 'B'

PAVEMENT THICKNESS "T"	CLEAR DEPTH "D"	SAW CUT GROOVE "G"	MAXIMUM TIE BAR SPACING "S" PAVEMENT WIDTH		PARTING STRIP WIDTH "W"
			24' OR 26'	30'	
6"	3" ± 1/2"	1 1/2"	48"	42"	2"
7"	3 1/4" ± 1"	1 3/4"	45"	36"	2 1/4"
8"	3 3/4" ± 1"	2"	39"	30"	2 1/2"
9"	4 1/4" ± 1"	2 1/4"	33"	27"	3"
10"	4 3/4" ± 1"	2 1/2"	30"	24"	3 1/4"
11"	5 1/4" ± 1"	2 3/4"	27"	21"	3 3/4"
12"	5 3/4" ± 1"	3"	24"	21"	4"



PLAN VIEW SHOWING LOCATION OF TIE BARS

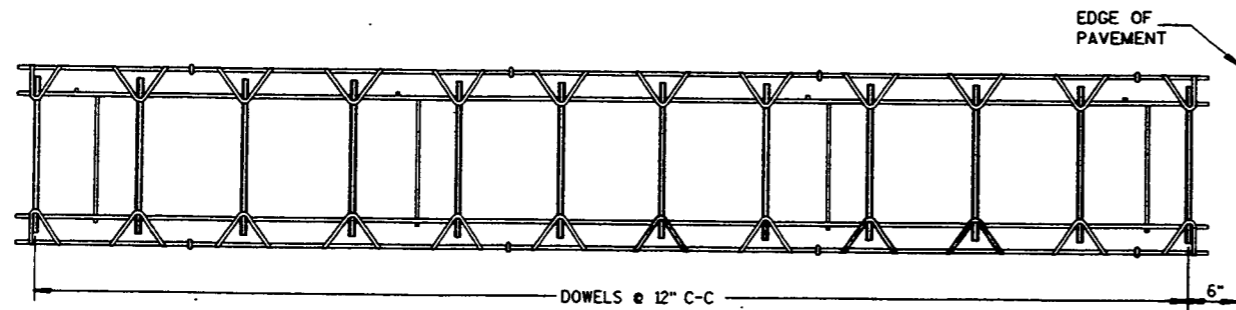
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 3/16/92 DATE

STATE DESIGN ENGINEER FOR HWYS

FHWA



PLAN VIEW



SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY^①

DOWEL BAR SIZE TABLE

PAVEMENT DEPTH	DOWEL BAR DIAMETER
9" OR LESS	1 1/4"
MORE THAN 9"	1 1/2"

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

CONTRACTION JOINTS

UNLESS OTHERWISE SPECIFIED OR SHOWN IN THE CONTRACT, CONTRACTION JOINTS MAY BE ORIENTED EITHER NORMAL TO THE CENTERLINE AS SHOWN OR SKEWED 6:1 RIGHT HAND FORWARD. THE LOCATION OF CONTRACTION JOINTS THRU INTERSECTIONS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONTRACTION JOINTS SHALL NOT BE SEALED OR FILLED.

DOWEL BARS SHALL BE INSTALLED PARALLEL TO THE PAVEMENT CENTERLINE AND SURFACE.

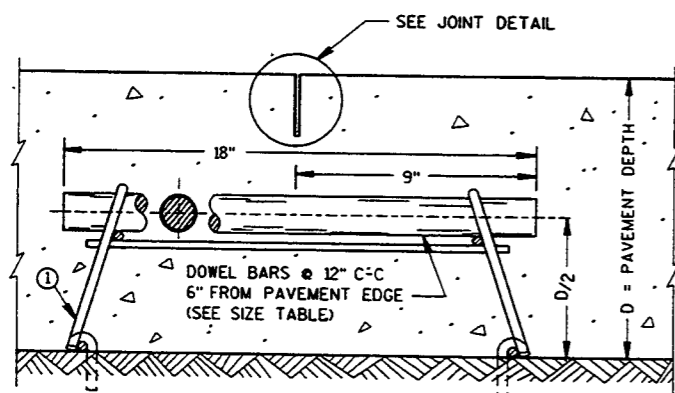
CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL BE A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGNED EITHER PARALLEL TO CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

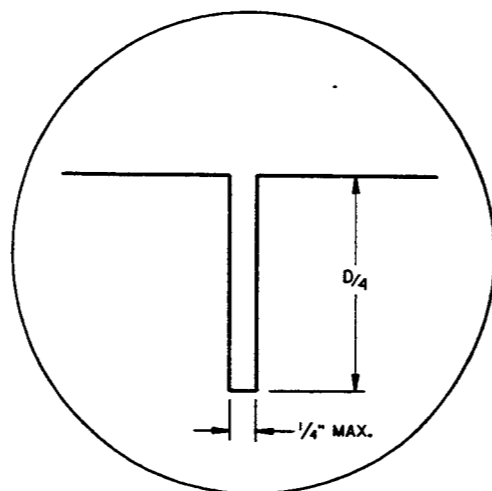
TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN POURED.

TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

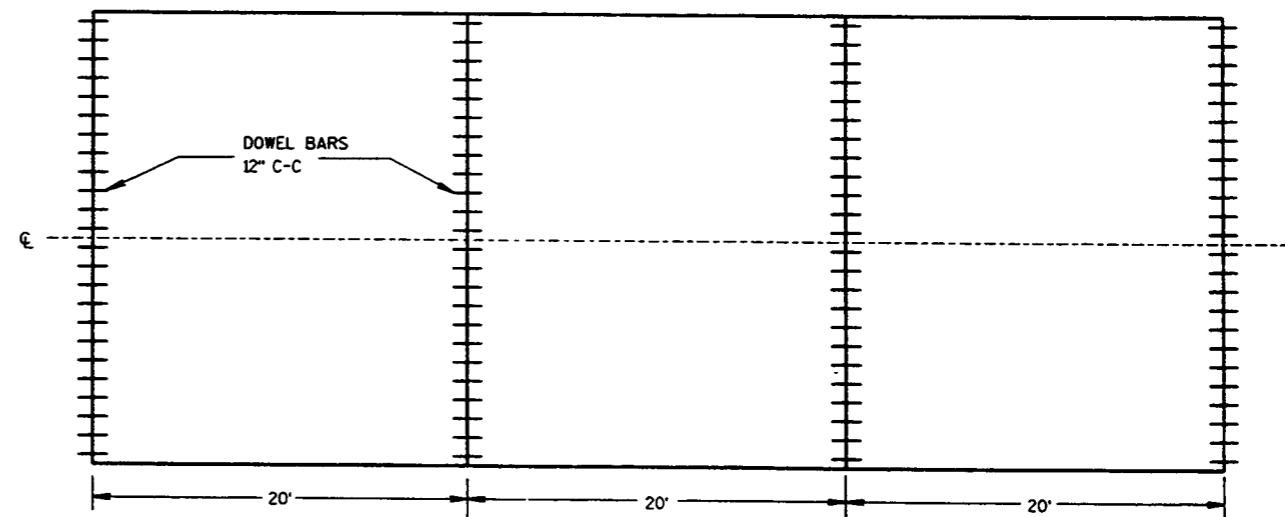
^① ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY MAY BE USED WHEN APPROVED BY THE ENGINEER. MECHANICAL DOWEL BAR IMPLANTERS MAY BE USED INSTEAD OF DOWEL ASSEMBLIES.



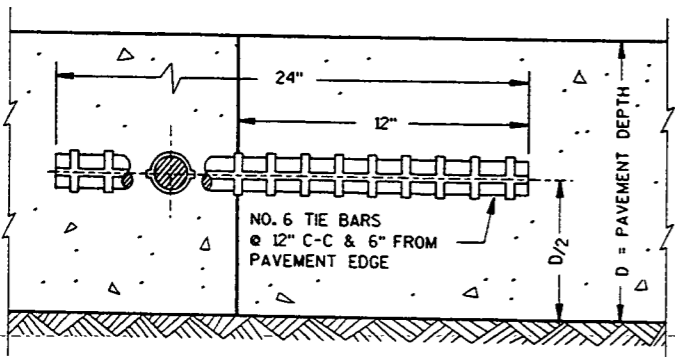
DOWELED CONTRACTION JOINT



JOINT DETAIL



CONTRACTION JOINT LOCATIONS



CONSTRUCTION JOINT

**DOWELED NON-REINFORCED
CONCRETE PAVEMENT**
(TRANSVERSE JOINTS SPACED AT 20' & NORMAL)

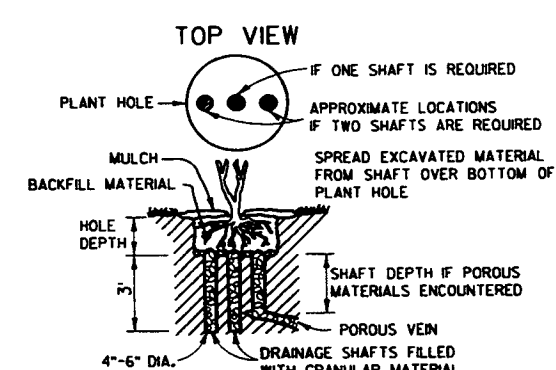
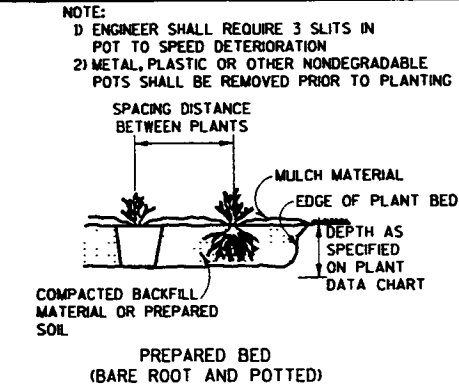
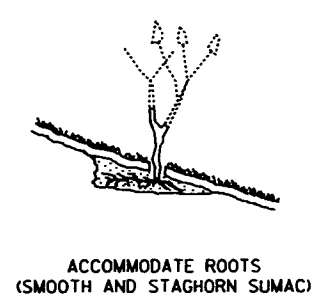
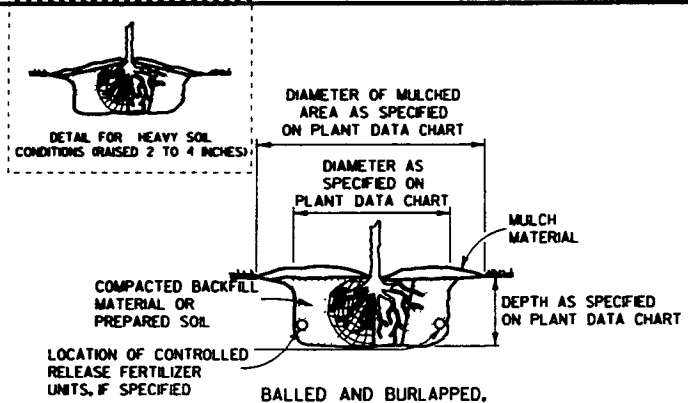
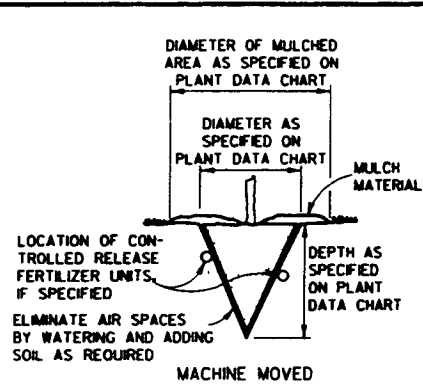
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/90
DATE

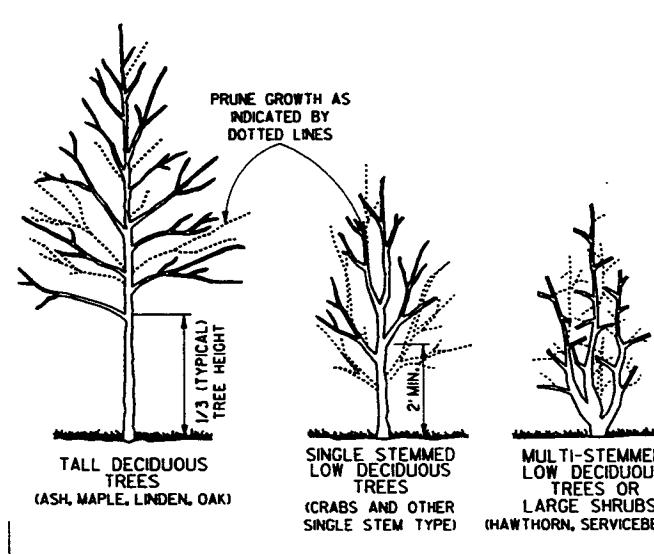
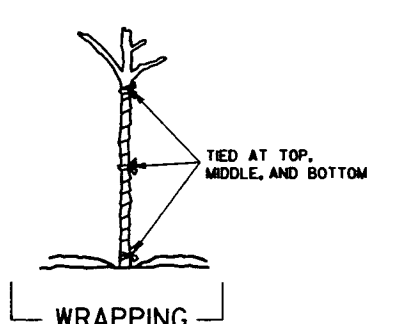
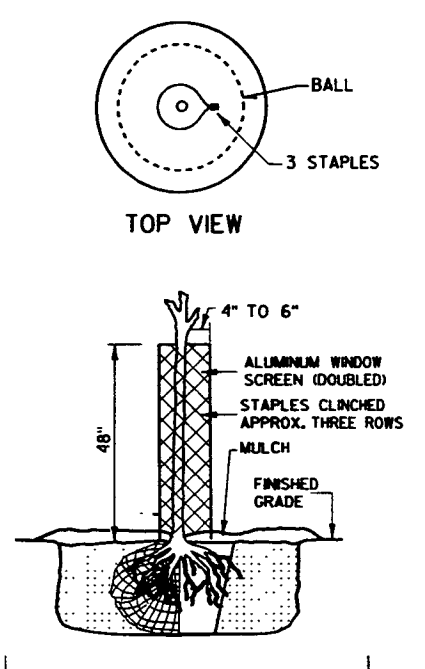
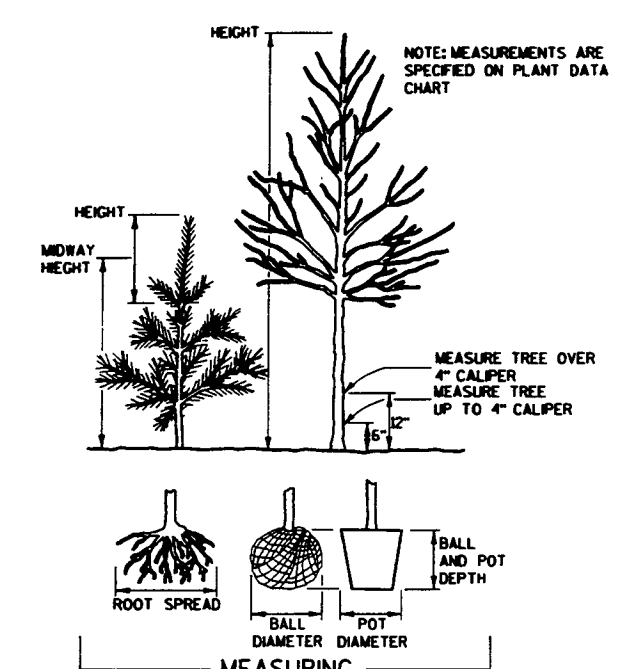
[Signature]
STATE DESIGN ENGINEER FOR HWYS

FHWA

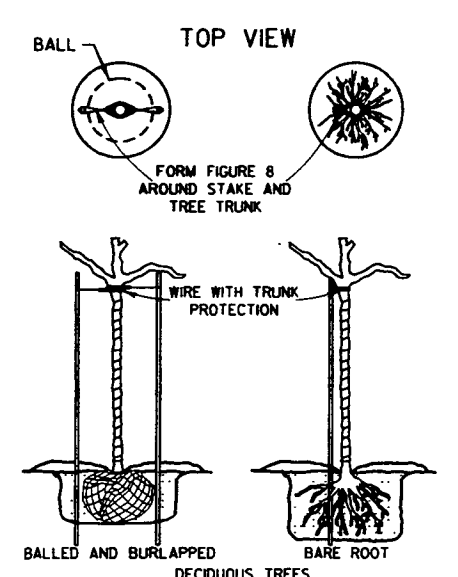
S.D.D. 13 C 13-1



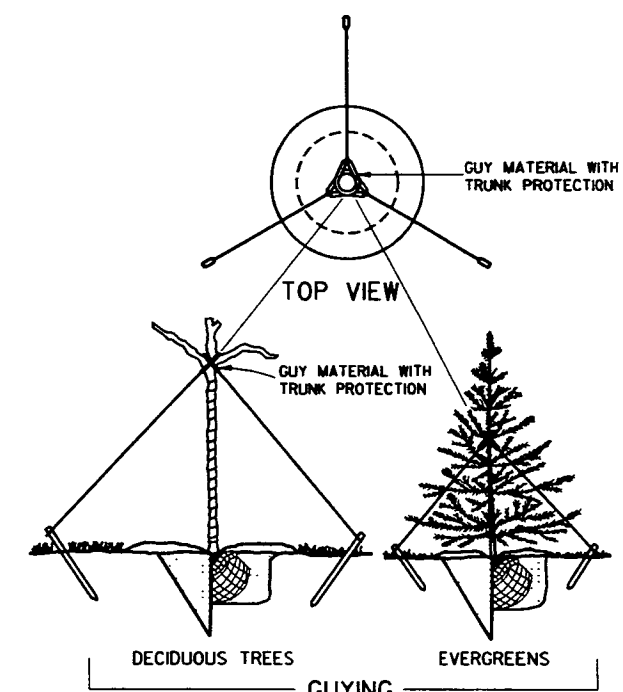
PLANTING



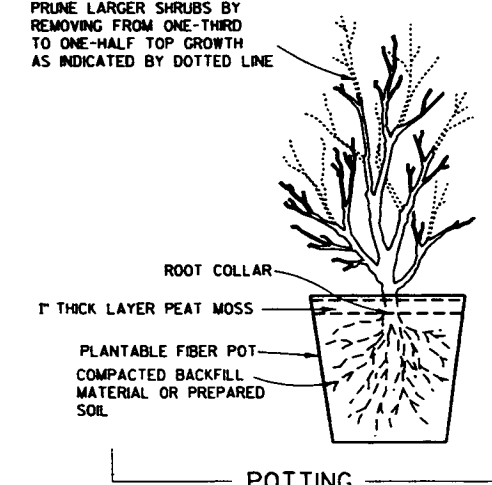
PRUNING



NOTE: BRACING STAKE
 1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
 2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
 3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
 4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.



PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



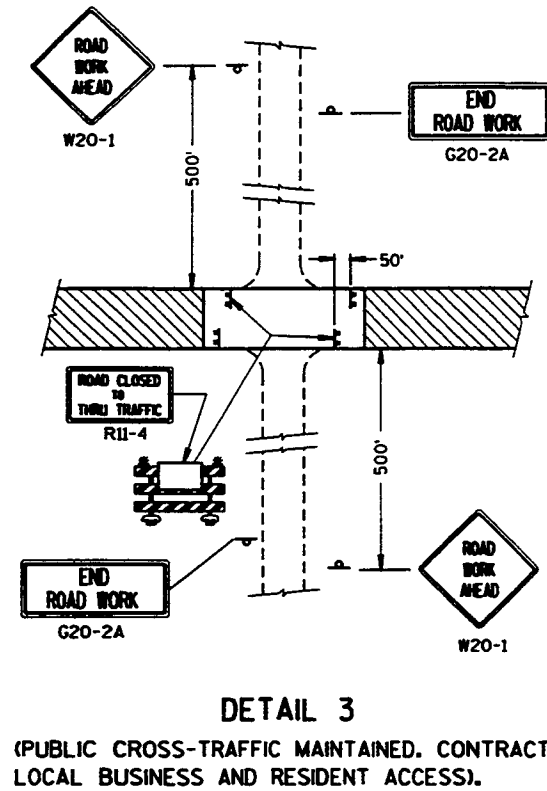
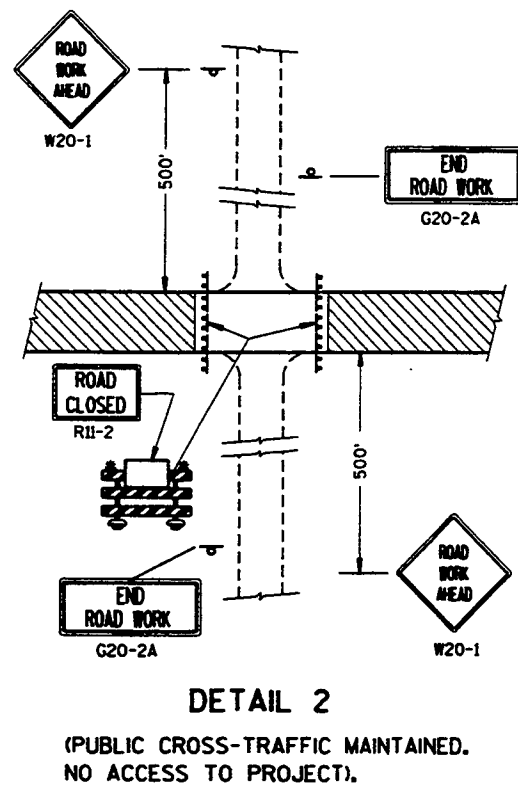
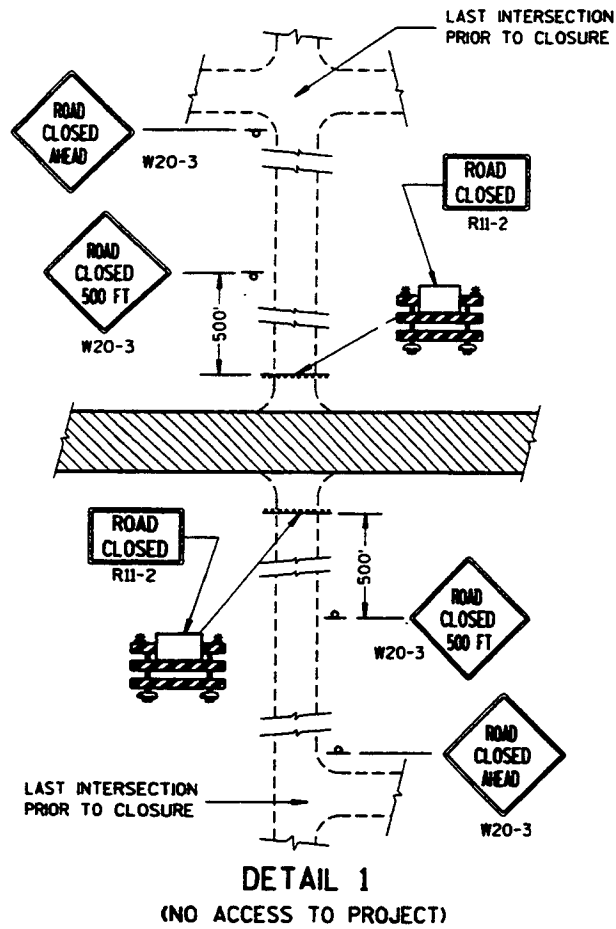
POTTING

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
 BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/11/94 DATE	<i>Roy J. Thomas</i> CHIEF, METHODS DEVELOPMENT ENGINEER
FHWA	

S.D.D. 14 A 2-1



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

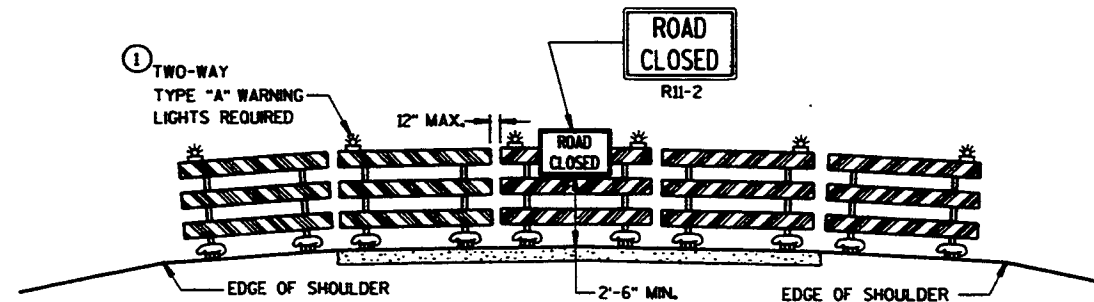
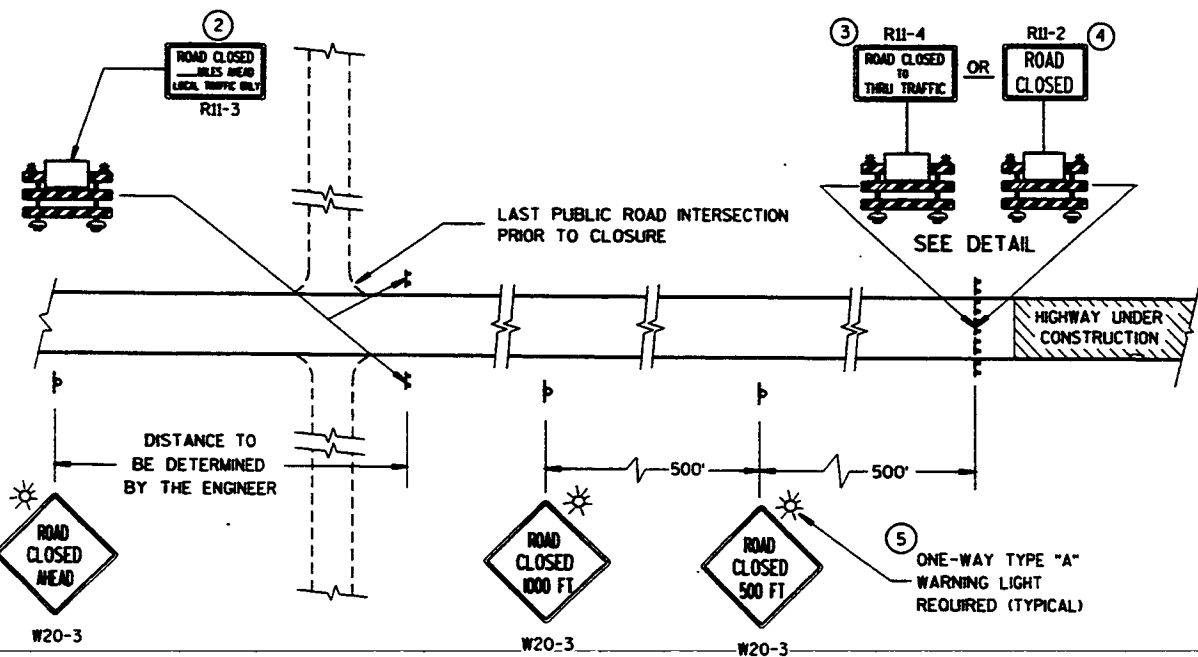
THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED _____ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

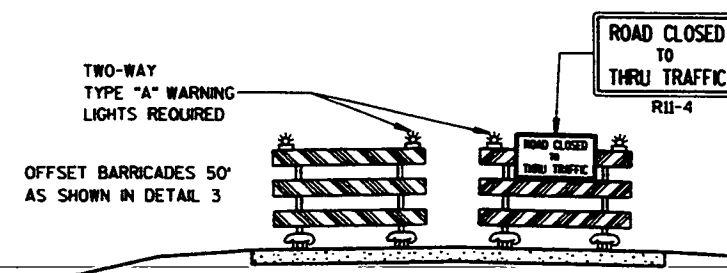
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
 R11-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30".
 R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".
 G20-2A SIGNS SHALL BE 48" X 24".

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN.
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- ③ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT. SEE LANE CLOSURE BARRICADE DETAIL.
- ④ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL.
- ⑤ ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

SIDEROAD CLOSURES



ROAD CLOSURE BARRICADE DETAIL



LANE CLOSURE BARRICADE DETAIL

- LEGEND**
- ⊥ POST MOUNTED WARNING SIGN
 - ⊥ TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING
 - ⊙ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
 - ▨ WORK AREA

BARRICADES AND SIGNS FOR ROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 8-10-95
 DATE
 [Signature]
 DIRECTOR, OFFICE OF TRAFFIC

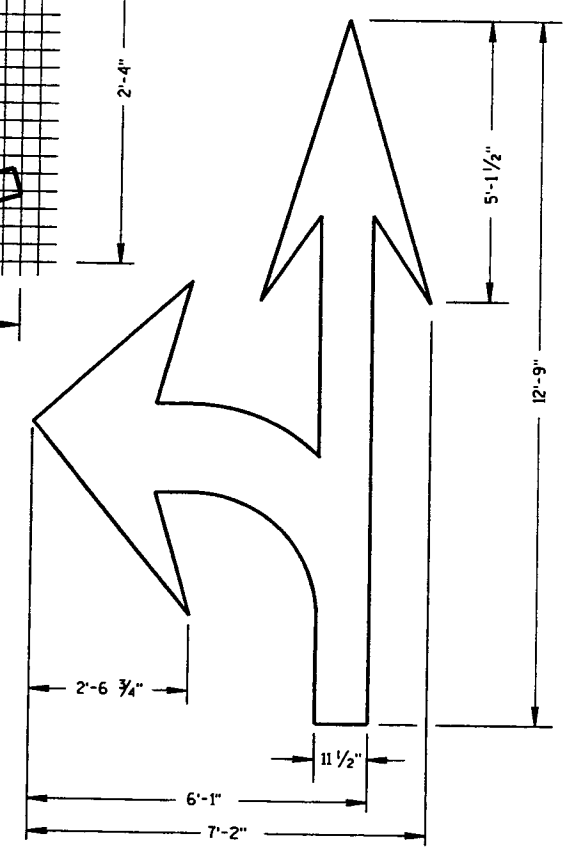
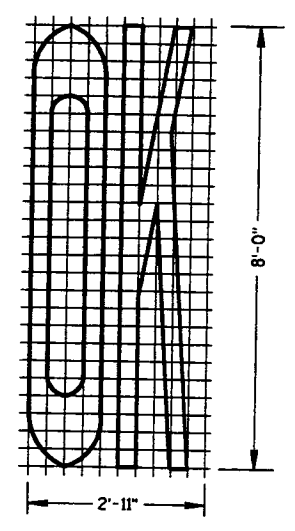
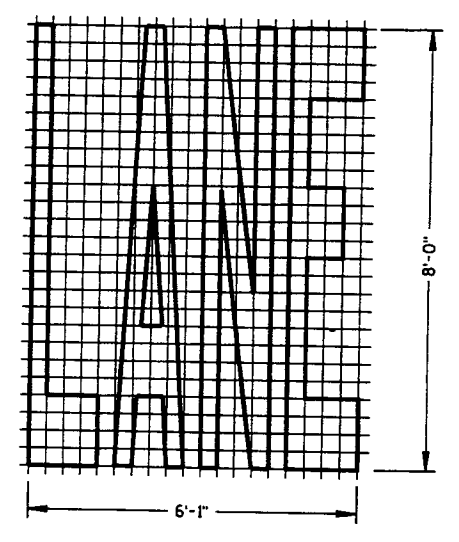
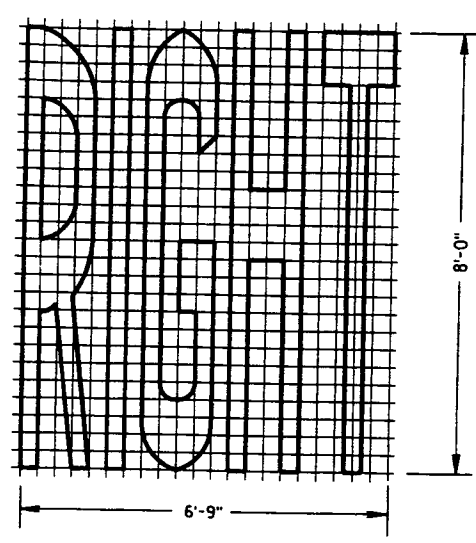
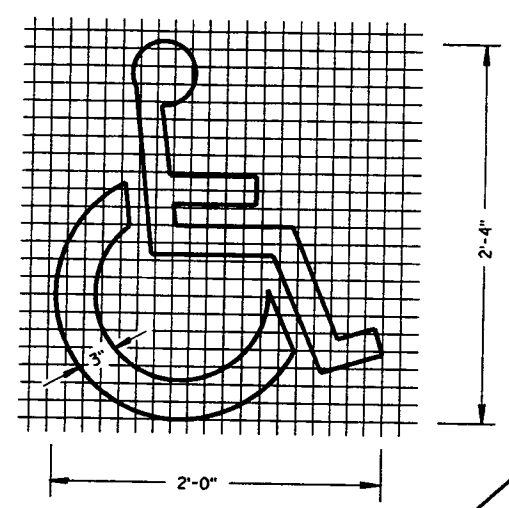
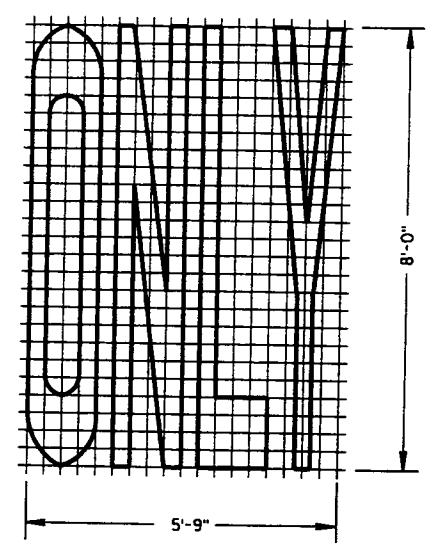
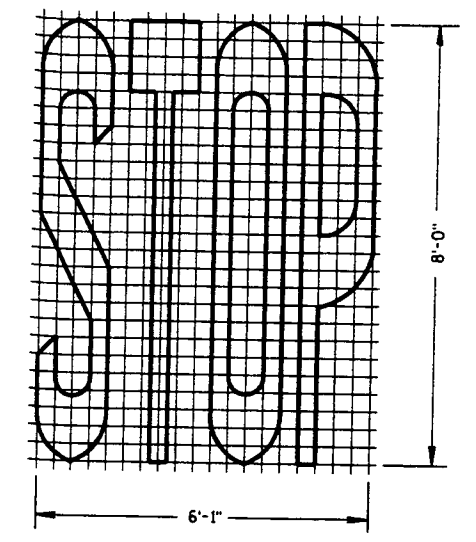
FHWA

GENERAL NOTES

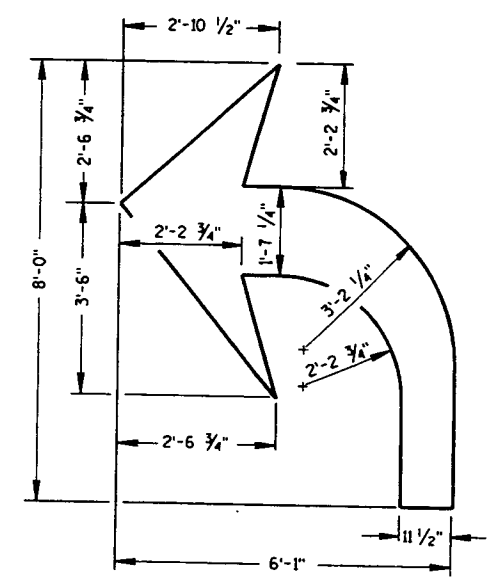
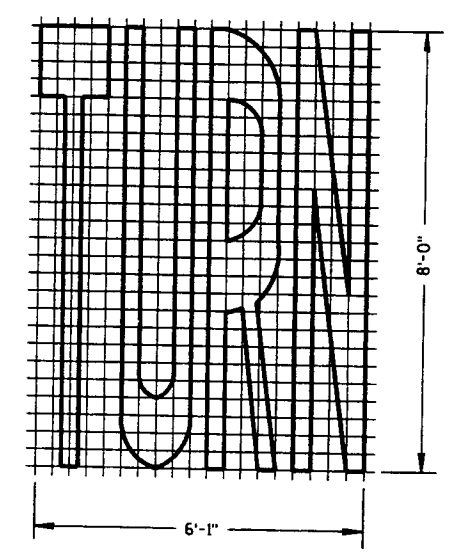
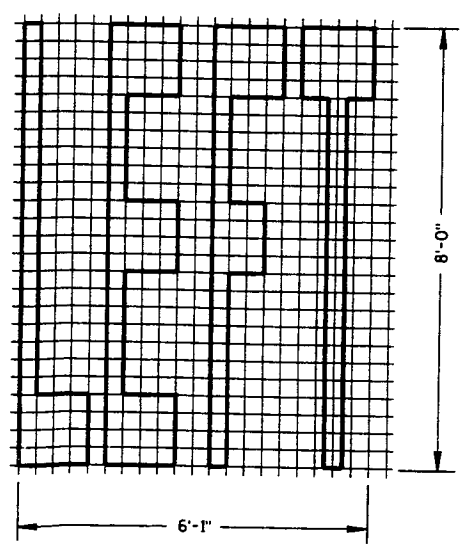
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED.

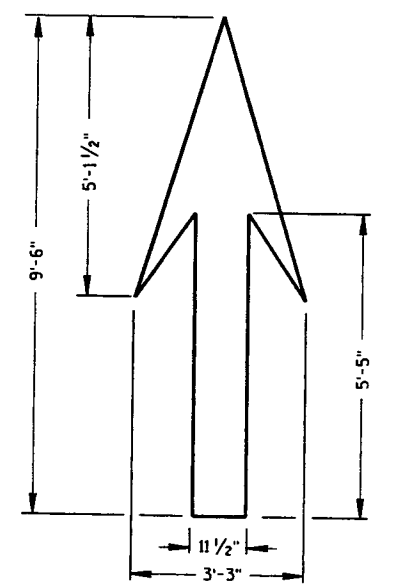
A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.



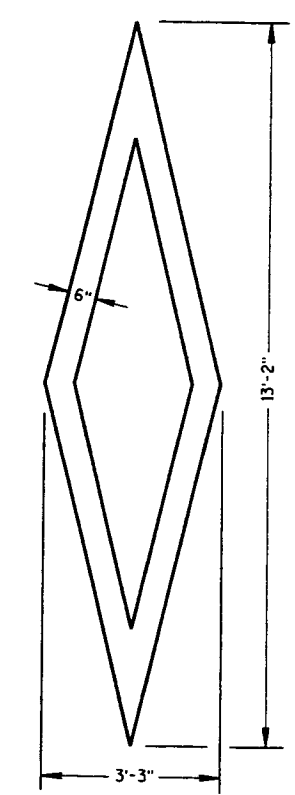
TYPE 3



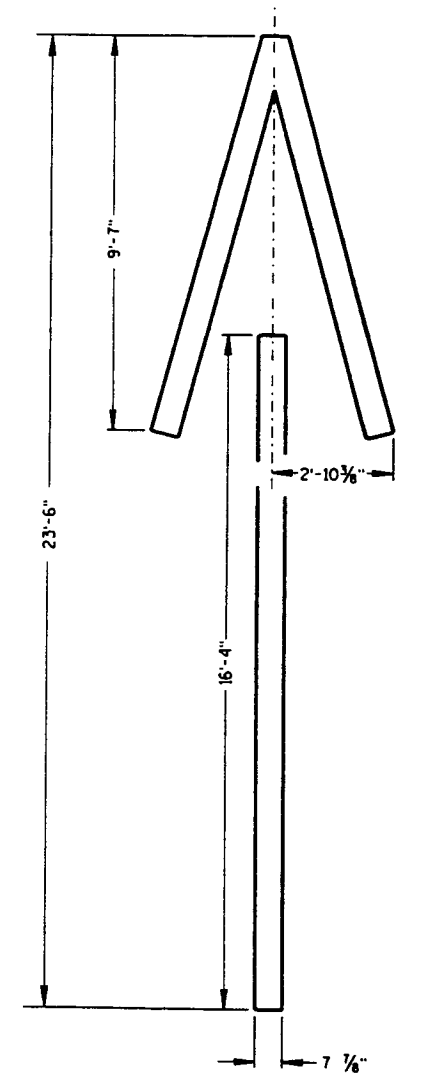
TYPE 2



TYPE 1



PREFERENTIAL LANE SYMBOL

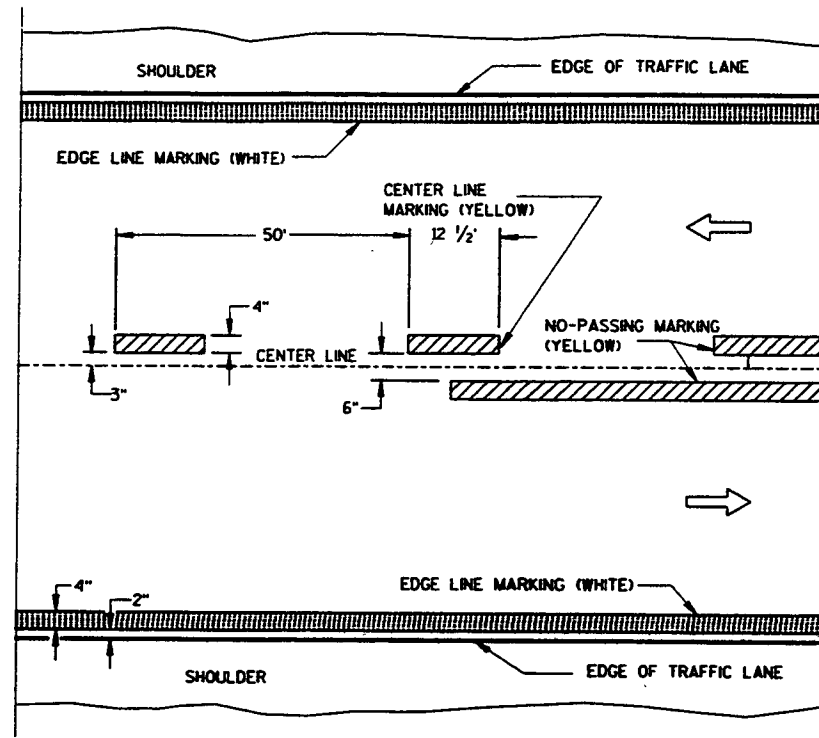


TYPE 4

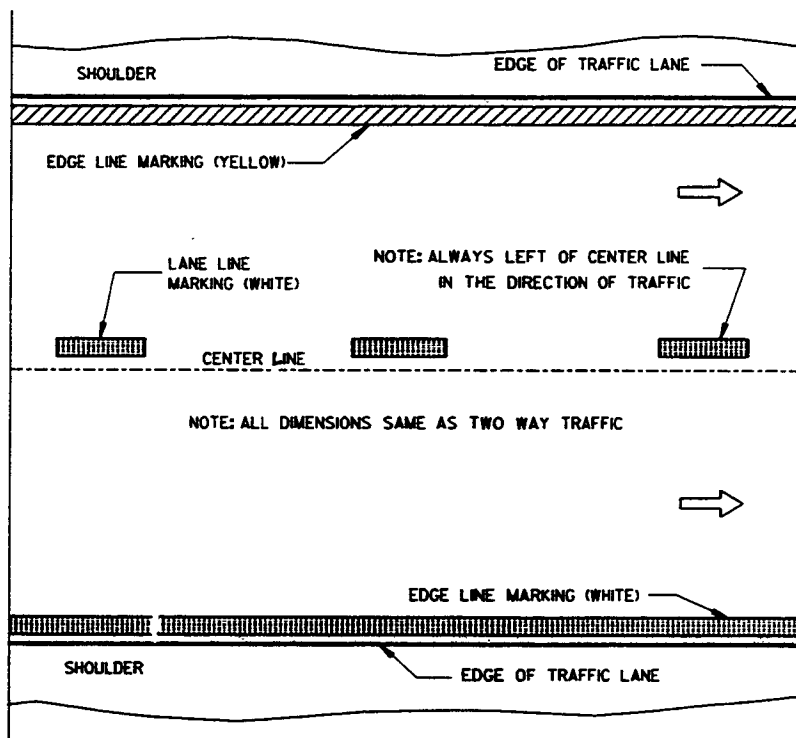
S.D.D. 15 C 7-40

PAVEMENT MARKING SYMBOLS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 6-29-94	 STATE TRAFFIC ENGINEER FOR HWYS
FHWA	

S.D.D. 15 C 7-40



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

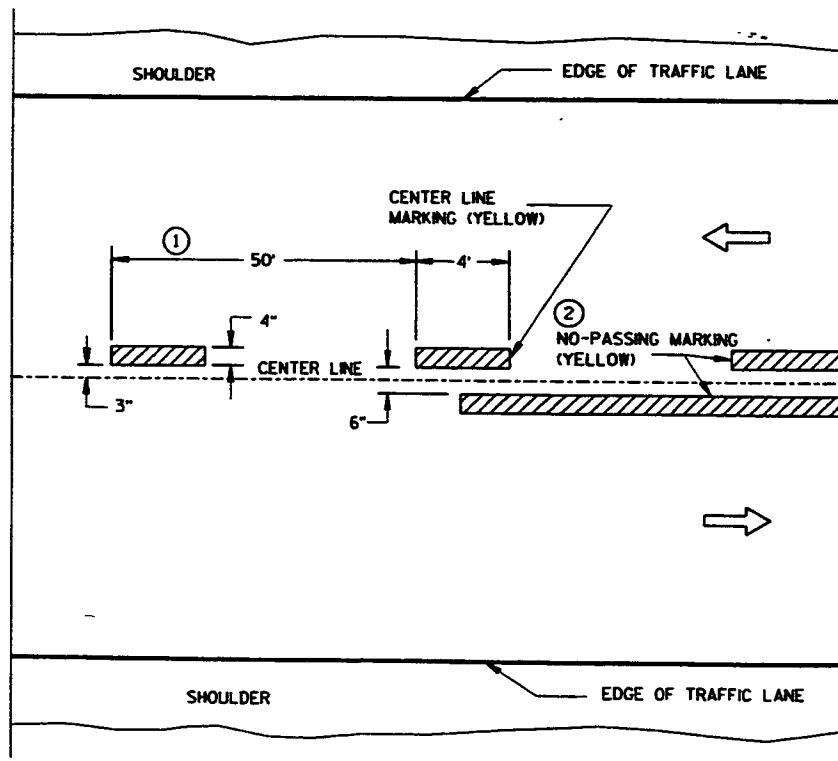
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

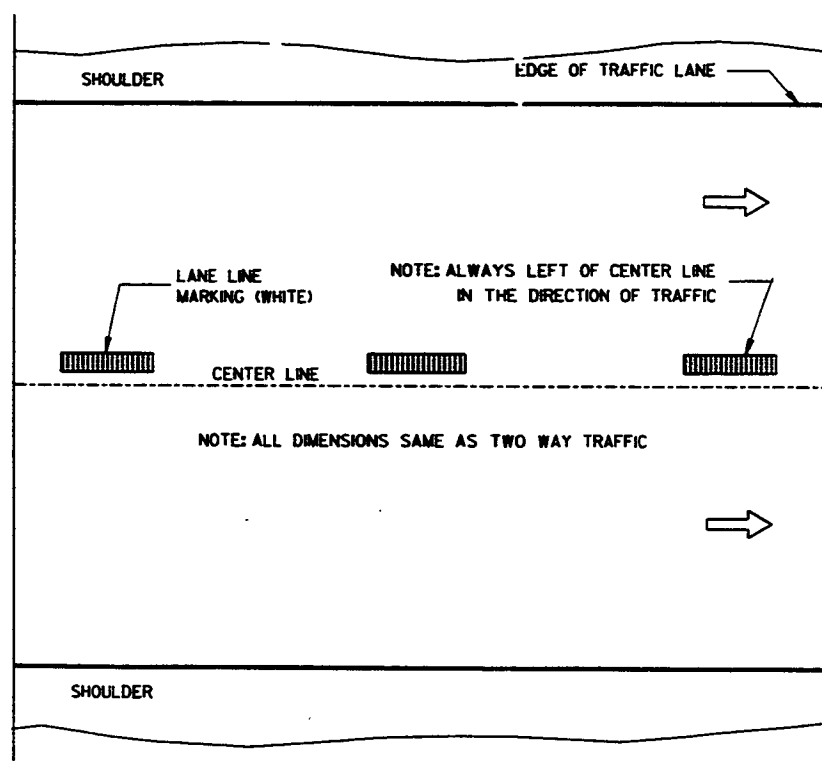
- ① HALF CYCLE LENGTHS (25'-±) WITH 2" MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



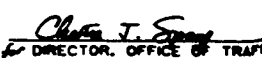
TWO WAY TRAFFIC



ONE WAY TRAFFIC

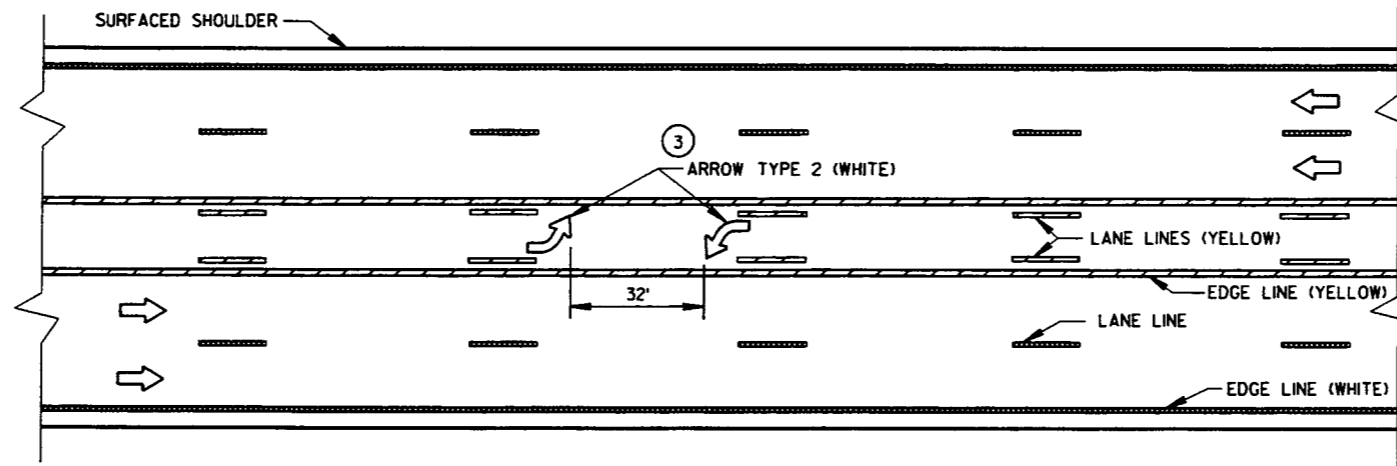
TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

S.D.D. 15 C 8-70

PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-7-93 DATE	 DIRECTOR, OFFICE OF TRAFFIC <small>FWBA</small>

S.D.D. 15 C 8-70

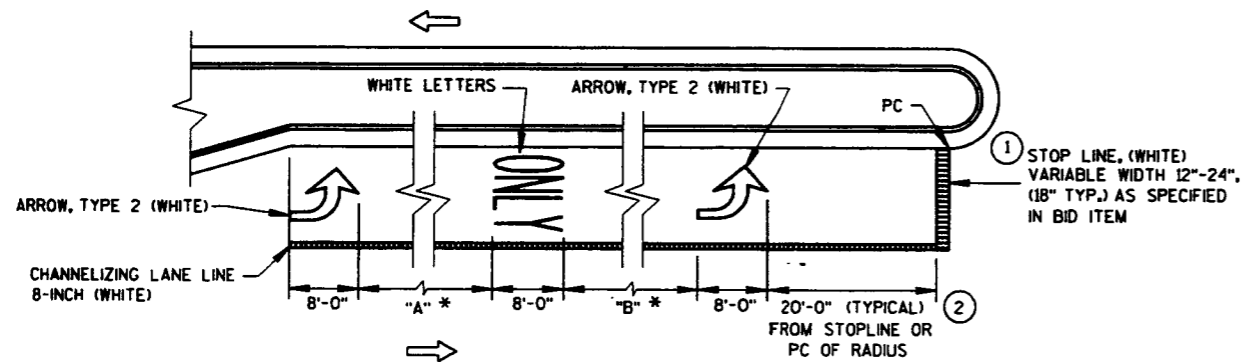
NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL



TWO WAY LEFT TURN LANE

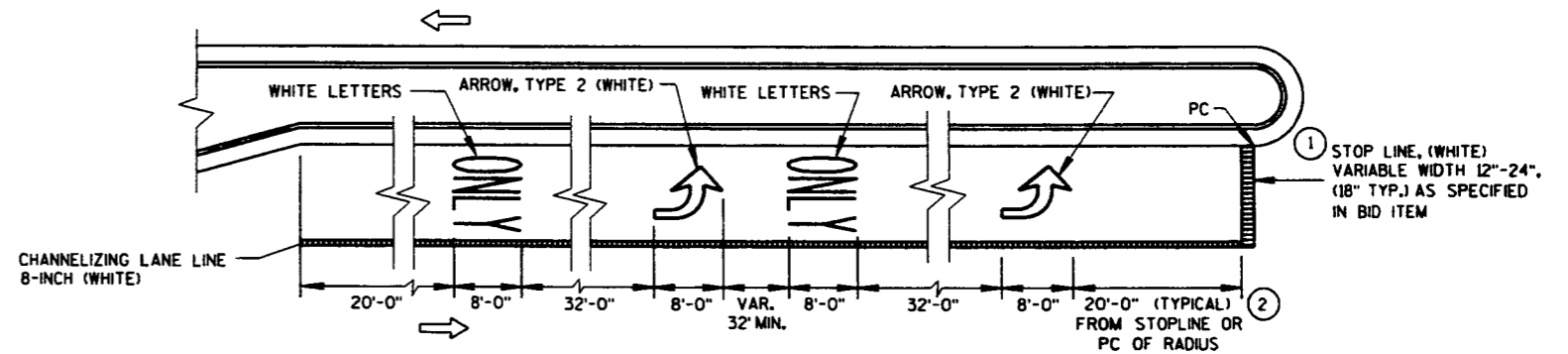
NOTES:

- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

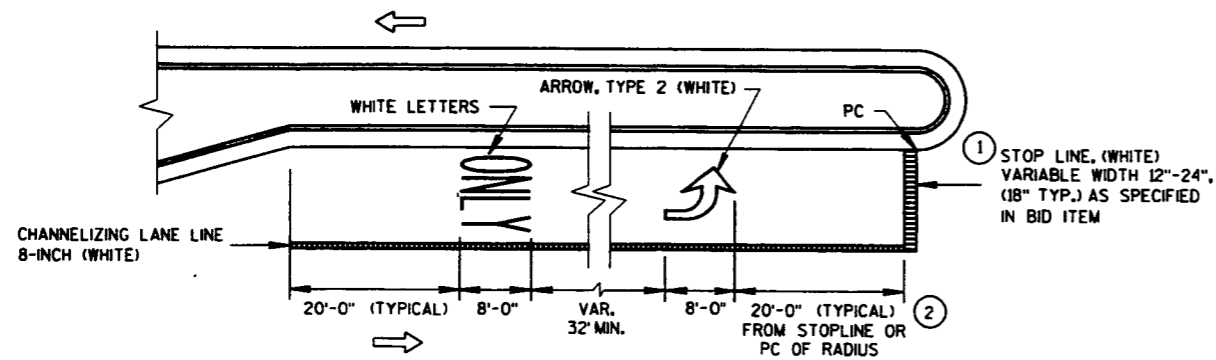


* VARIABLE, 32' MIN.
"A" = "B" (TYPICAL)

LEFT TURN LANE
(LENGTH 108' TO 167')



LEFT TURN LANE
(LENGTH OVER 167')

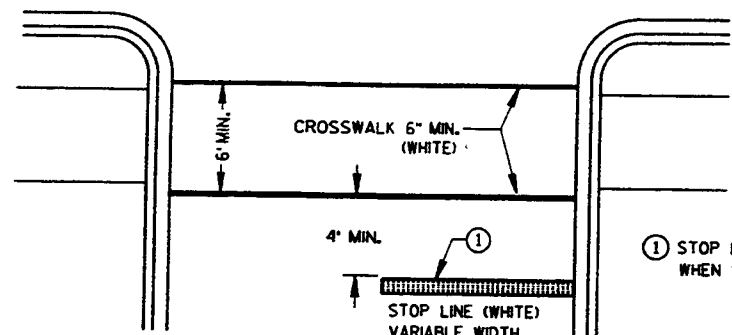


LEFT TURN LANE
(LENGTH UNDER 108')

NOTE:
SDD 15 C 8-7a AND SDD 15 C 7 IS REQUIRED
WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

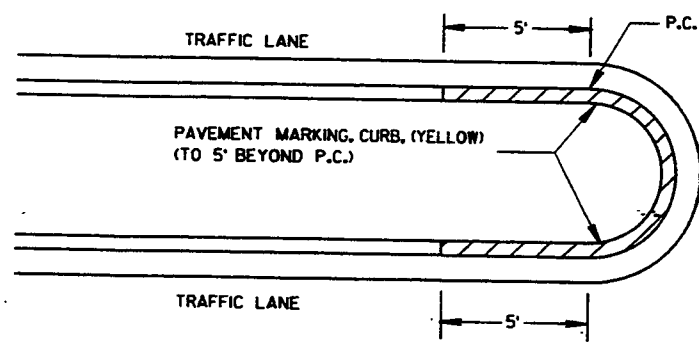
PAVEMENT MARKING
(LEFT TURN LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

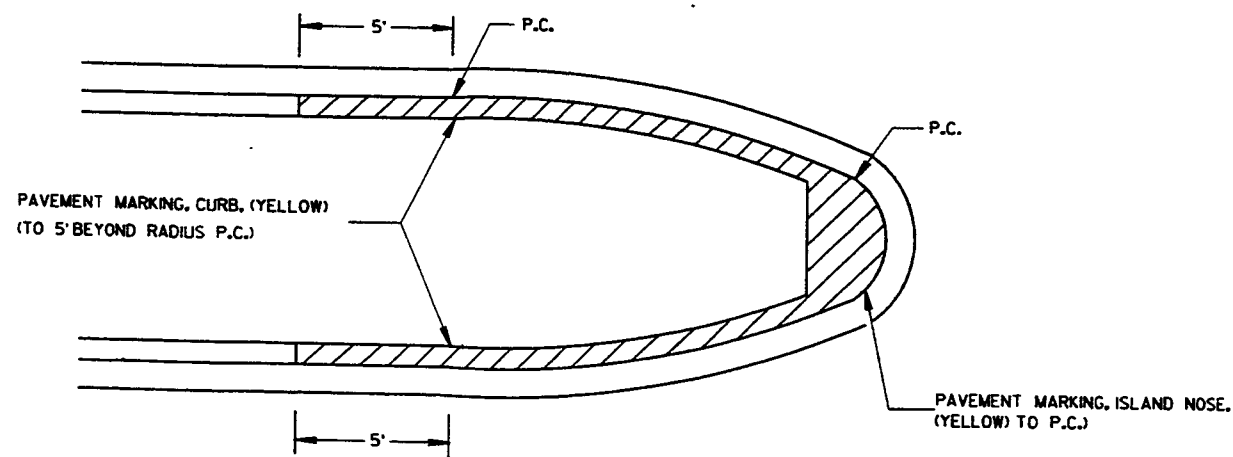


STOP LINE AND CROSSWALK

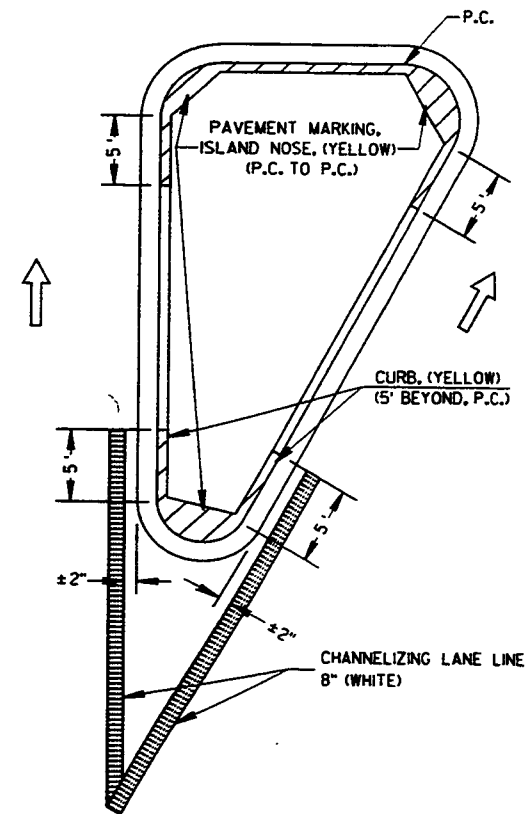
① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT



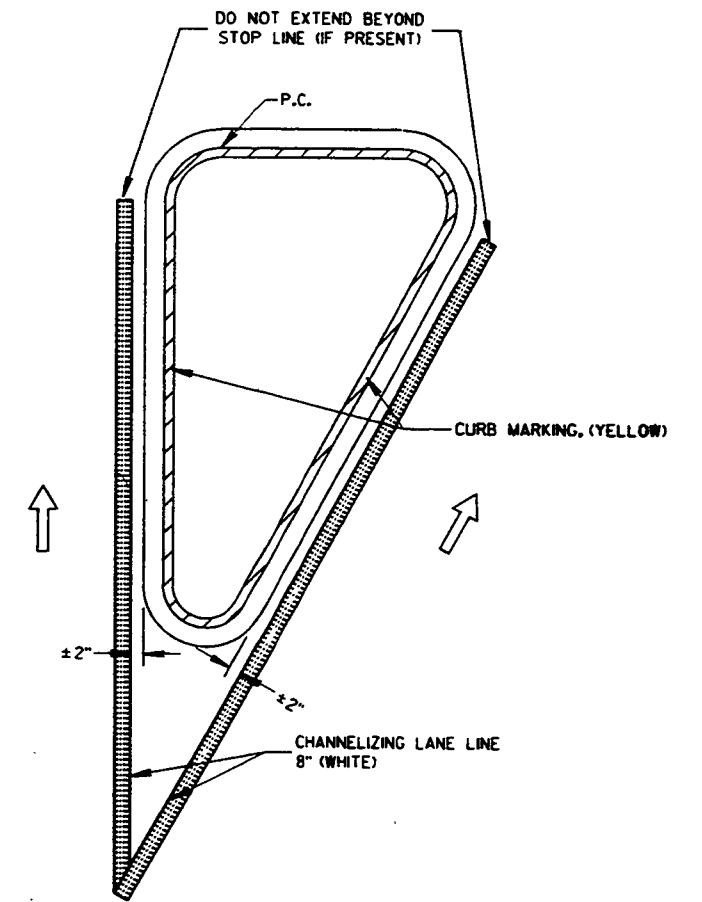
MEDIAN CURB



BULLET NOSE ISLAND



LARGE ISLAND
(GREATER THAN 50' PERIMETER OR ANY SIDE
GREATER THAN 25' BETWEEN CURVES)



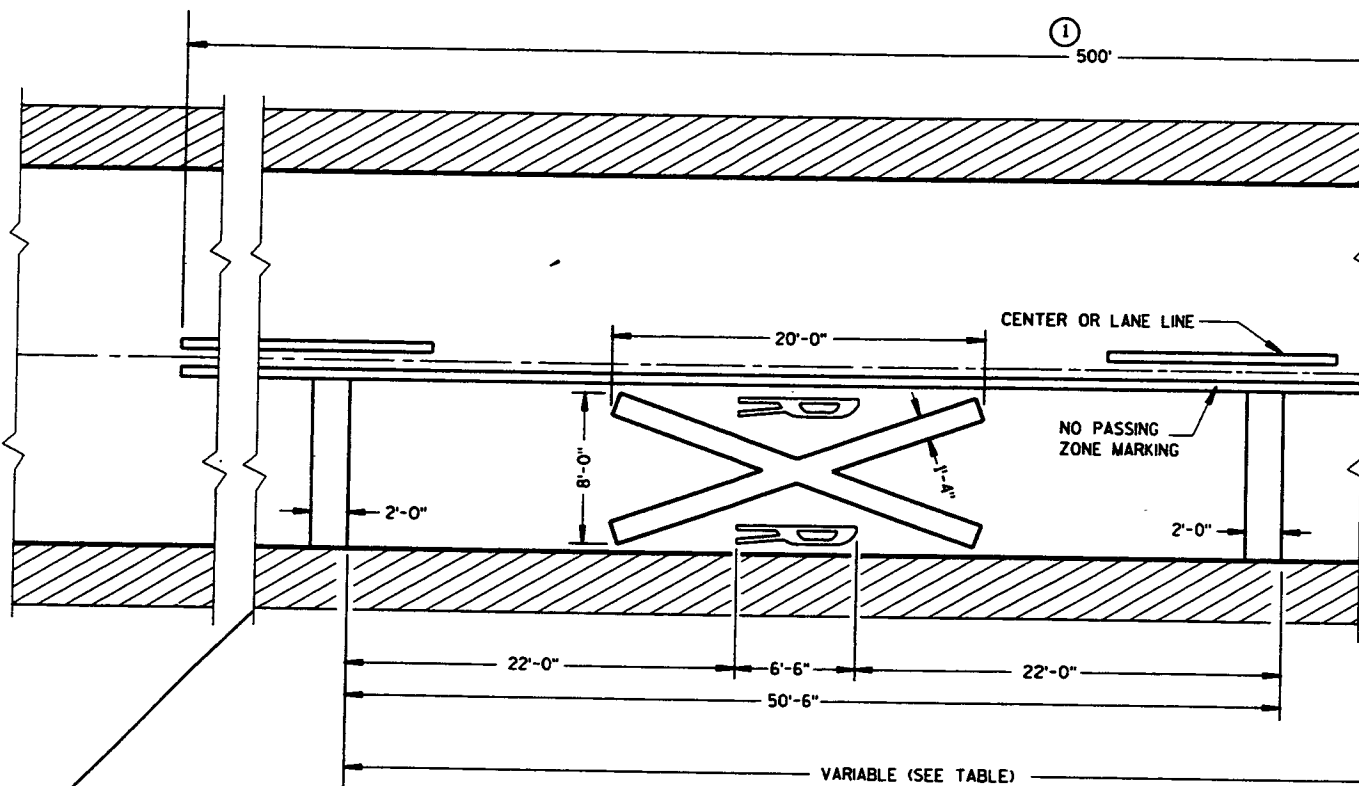
SMALL ISLAND
(LESS THAN 50' PERIMETER OR ANY SIDE
LESS THAN 25' BETWEEN CURVES)

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

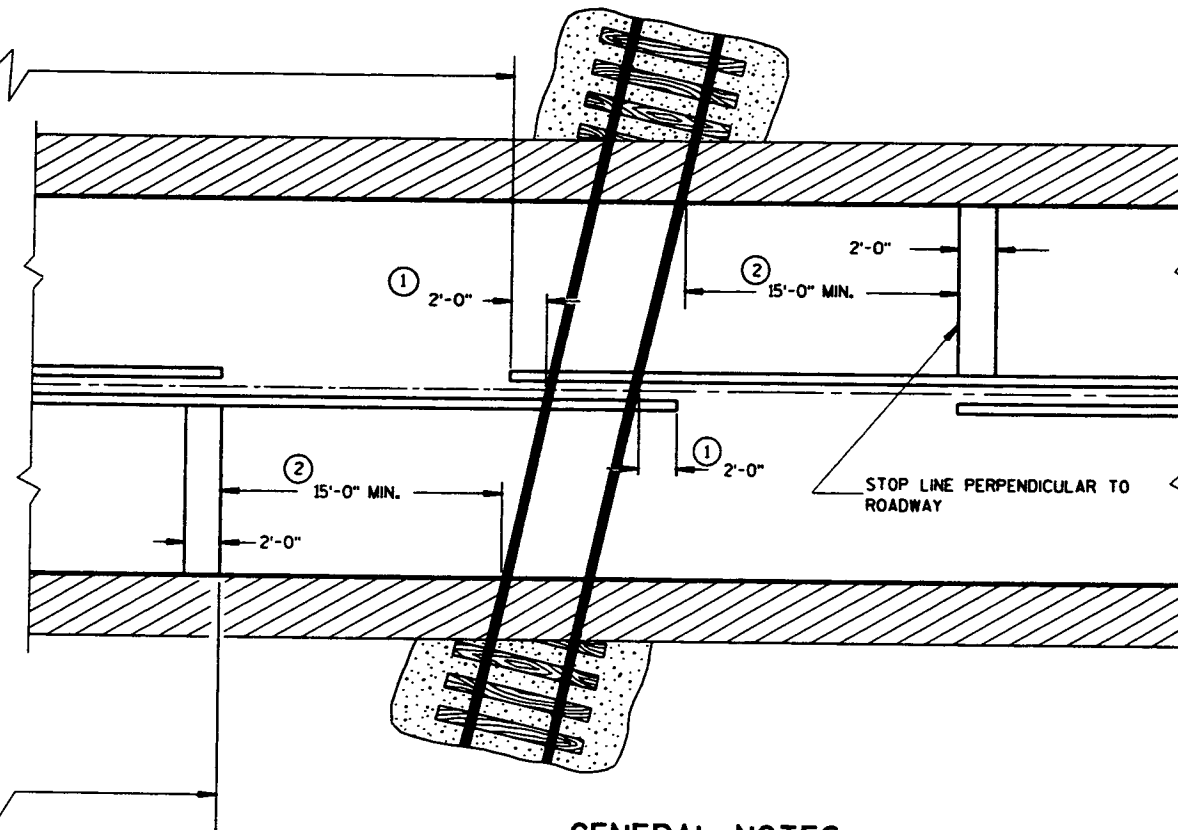
S.D.D. 15 C 8-7d

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-7-93 DATE	<i>Christie J. Spang</i> DIRECTOR, OFFICE OF TRAFFIC
FHWA	

S.D.D. 15 C 8-7d



PAVEMENT MARKING



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC. DIMENSIONS SHOWN IN THE TABLE SHALL BE USED UNLESS OTHERWISE SHOWN ON THE PLANS.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

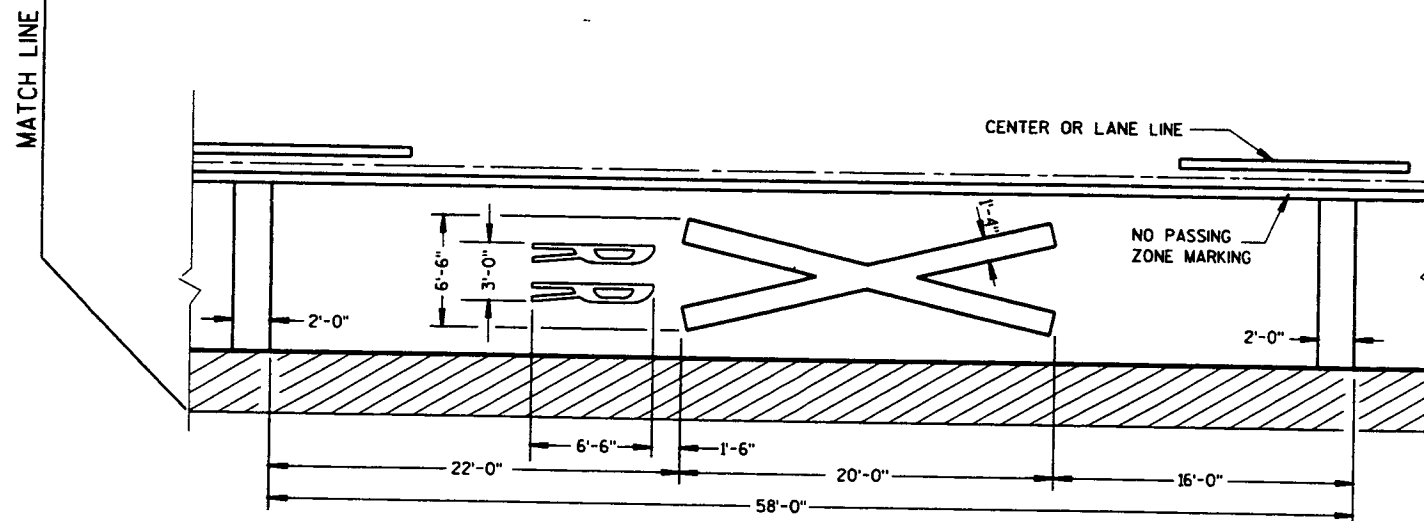
TRANSVERSE BANDS AND R X R SYMBOL ARE REFLECTIVE WHITE. SOLID LONGITUDINAL LINE IS REFLECTIVE YELLOW ON BIDIRECTIONAL TRAVELED WAYS AND IS OMITTED ON UNIDIRECTIONAL TRAVELED WAYS. DASHED LONGITUDINAL LINE IS REFLECTIVE YELLOW WHEN IT IS BETWEEN LANES OF TRAFFIC MOVING IN OPPOSITE DIRECTIONS AND REFLECTIVE WHITE WHEN IT IS BETWEEN LANES OF TRAFFIC MOVING IN THE SAME DIRECTION.

CENTER OR LANE LINES AND NO PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

① MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO PASSING ZONE MARKINGS.

② MINIMUM 8' TO GATE IF PRESENT.

Posted Speed (M.P.H.)	Variable Dimension (Feet)
25	150
30	200
35	250
40	325
45	400
50	475
55	550



ALTERNATE PAVEMENT MARKING

S.D.D. 15 C 9-3

PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

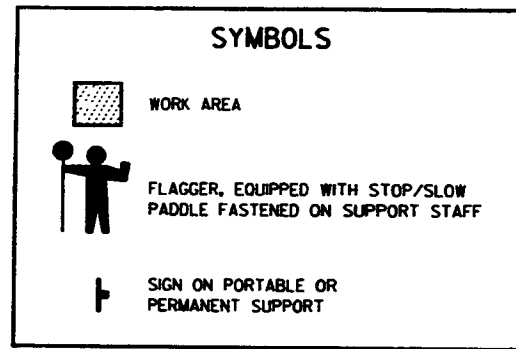
8-10-95 DATE

Director, Office of Traffic

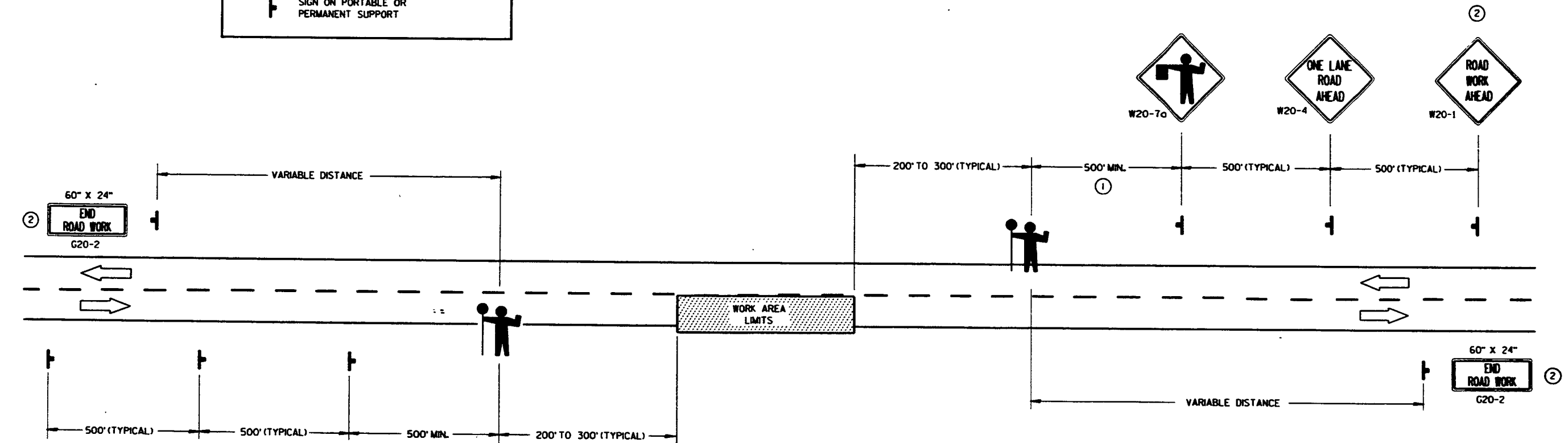
FHWA

S.D.D. 15 C 9-3

TWO-LANE ROADWAY



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

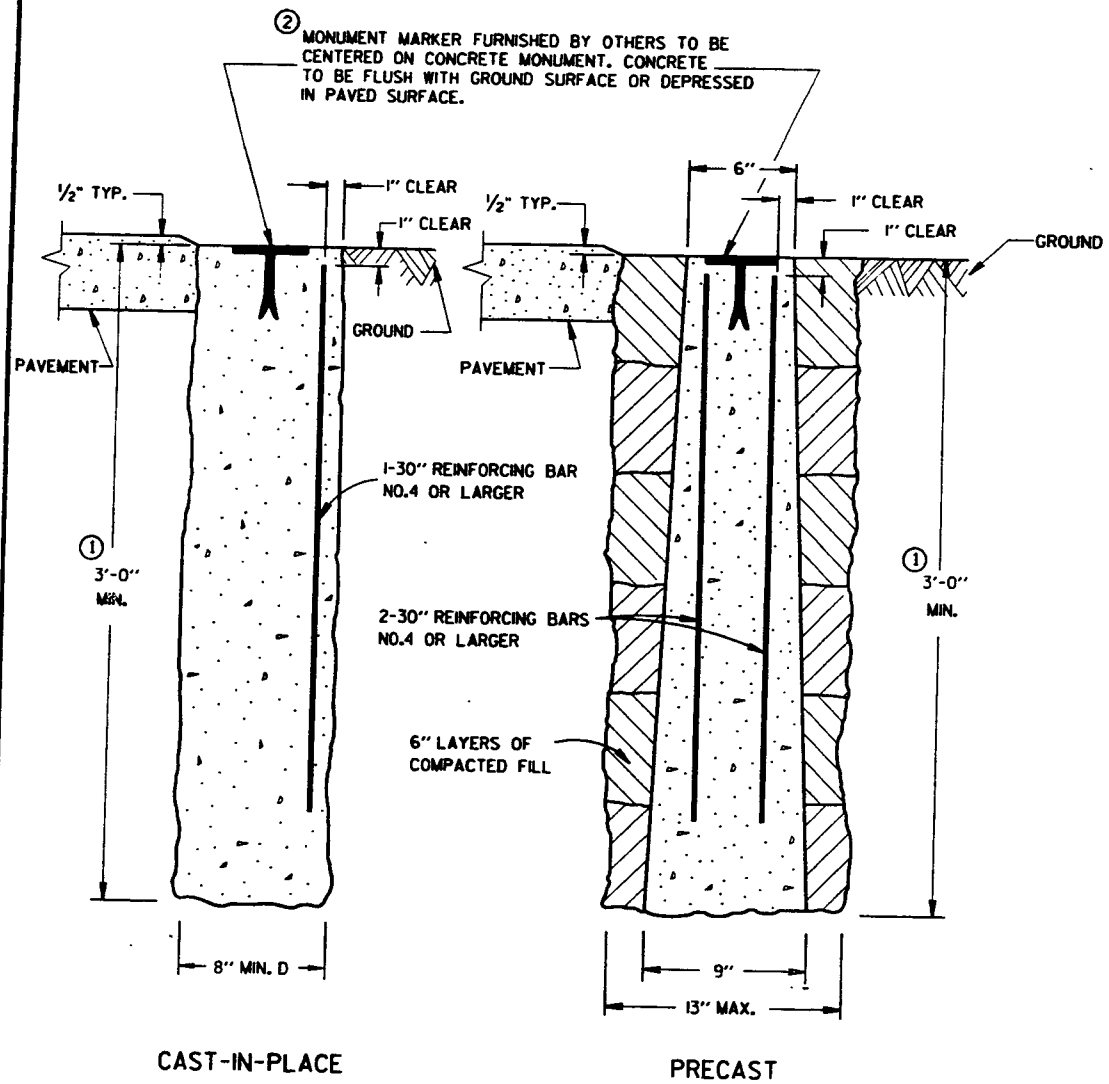
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE "ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

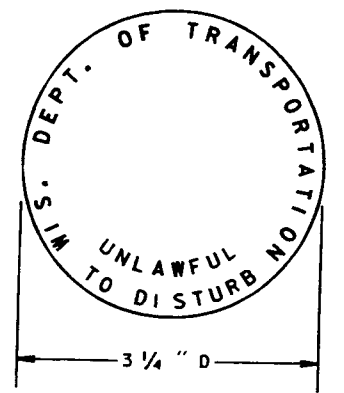
① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS DIRECTED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

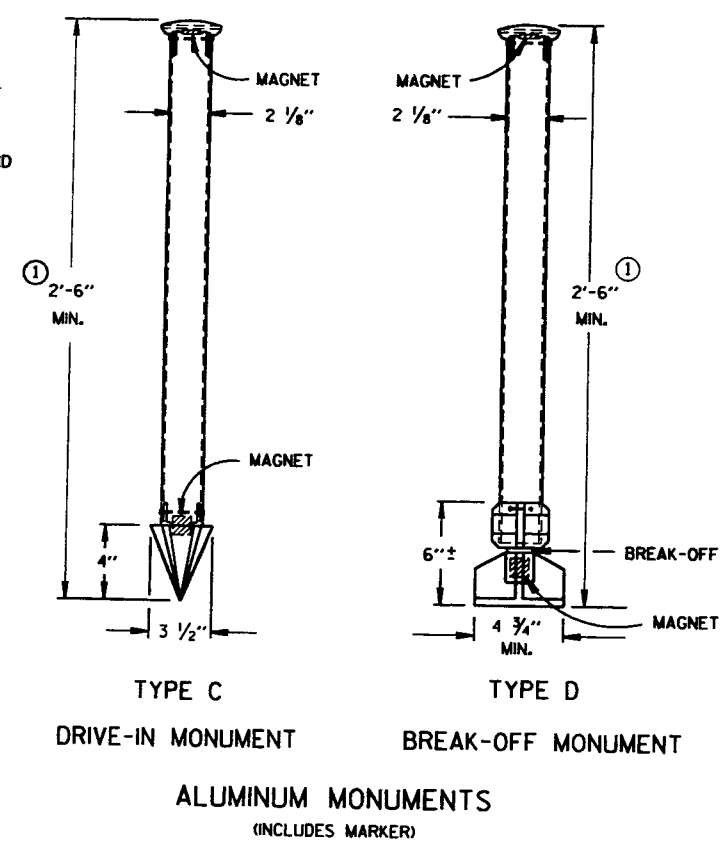
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2/17/94 DATE	<i>Edward F. Rusch</i> STATE TRAFFIC ENGINEER FOR HWYS
FHWA	



CAST-IN-PLACE
PRECAST
CONCRETE MONUMENTS
TYPE A



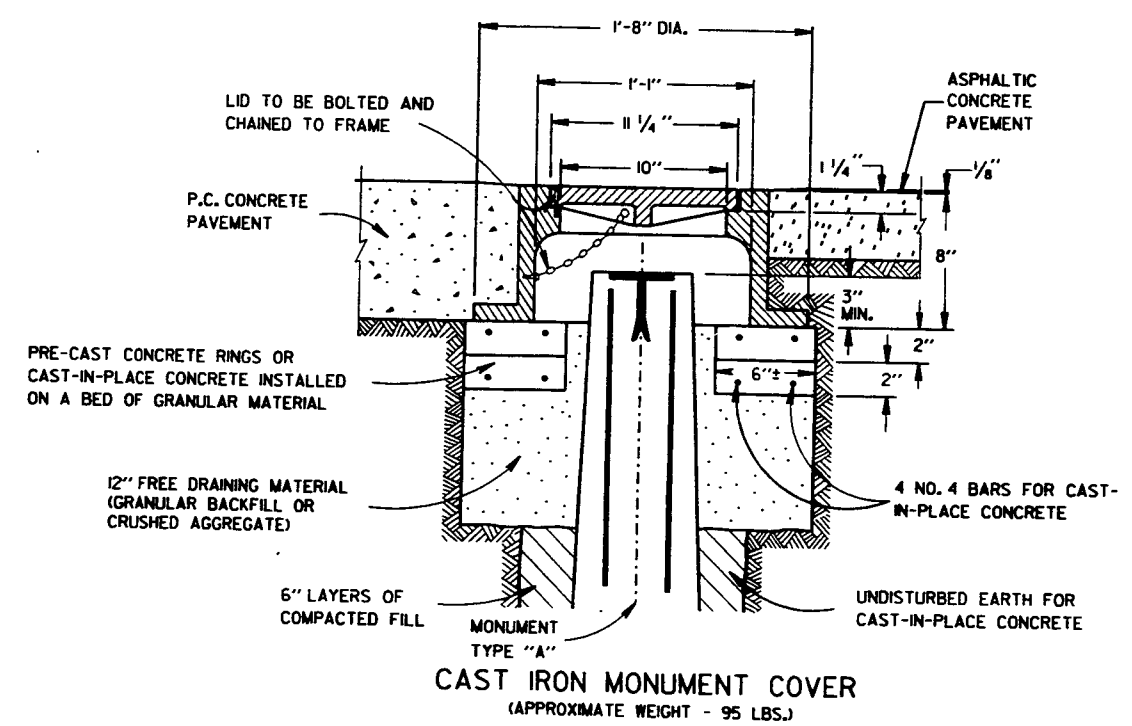
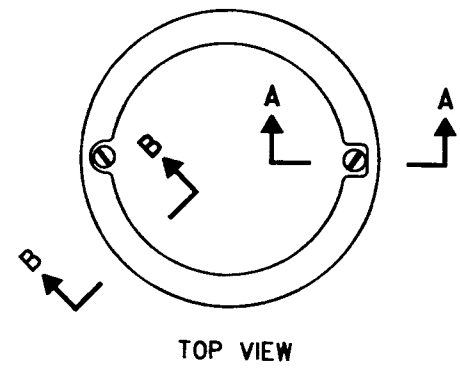
WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



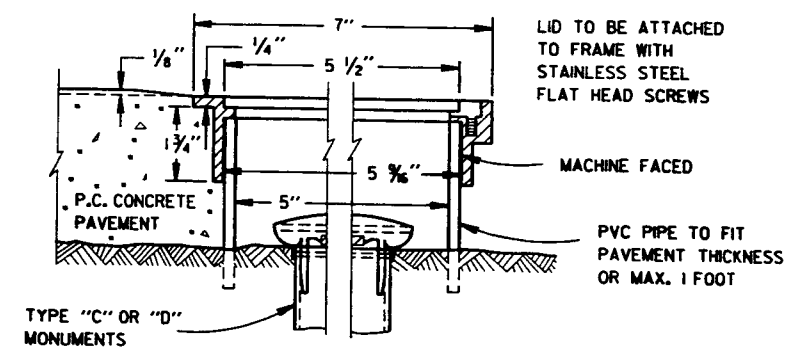
TYPE C DRIVE-IN MONUMENT
TYPE D BREAK-OFF MONUMENT
ALUMINUM MONUMENTS
(INCLUDES MARKER)

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.
- THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.
- MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.
- ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.
- THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.
- MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.
- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/31/92 DATE	 STATE DESIGN ENGINEER FOR HWYS
FHWA	

S.D.D. 16 A 1-5