INDEX OF SHEETS

TOTAL SHEETS = 20

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

DRAPER STREET, CITY OF BARABOO

(EIGHTH AVENUE INTERSECTION)

LOCAL STREET

SAUK COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5988-02-03	STP 5699(26)	1

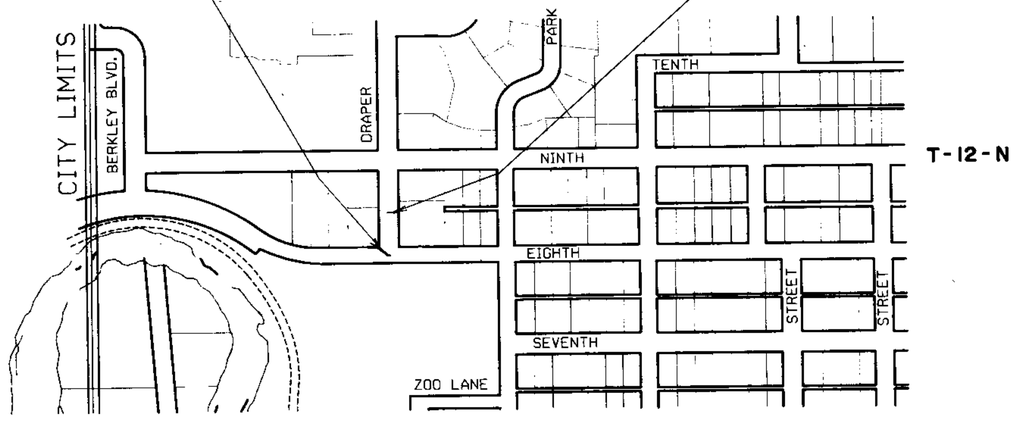
AS BUILT CONSTRUCTION PLAN

WORK TYPE INSTALLATION OF TRAFFIC SIGNALS
CONTRACTOR DARWIN ELECTRIC INC
PROJECT MANAGER KENNETH N NWANKWO
WORK START-COMPLETED JULY 12, 1994 - AUGUST 16, 1994

STATE PROJECT NUMBER
5988-02-03

BEGIN CONSTUCTION
STATION 10"D"+00
Y 537,600 ± 100'
X 2,065,200 ± 100'

END CONSTRUCTION
STATION 11"D"+10



CONVENTIONAL SIGNS

COUNTY LINE		COMBUSTIBLE FLUIDS (UNDER PRESSURE)	
CORPORATE LIMITS		UNDERGROUND UTILITIES	
PROPERTY LINE		GAS	G
LOT LINE		ELECTRIC	E
LIMITED EASEMENT		TELEPHONE	T
EXISTING RIGHT OF WAY		SERVICE PEDESTAL	
NEW RIGHT OF WAY		CABLE MARKER	
REFERENCE LINE		POWER POLE	
SLOPE INTERCEPT		TELEPHONE POLE	
ORIGINAL GROUND		RAILROADS	
MARSH OR ROCK PROFILE		MARSH	
CULVERT IN PLACE		WOODED AREA	
CULVERT REQUIRED			
CULVERT REQUIRED (Profile)			

LAYOUT
SCALE 0 100 200 300 FEET

NET LENGTH OF CENTERLINE = 0.000 MI. URBAN 5988-02-03

Coordinates Scaled From U.S.G.S. Topographic Map, Baraboo West Wisconsin, Quadrangle For Identification Only.

WISCONSIN PROFESSIONAL ENGINEER — TERRY M. KRAMER — 17723 — BARABOO, WIS

ACCEPTED FOR

City of BARABOO

Jan 4, 1994 Dean D. Stanko (Mayor)

DATE: (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Surveyor CITY OF BARABOO
Designer CITY OF BARABOO
District Examiner WAYNE JOLIVETTE
District Supervisor MUNZER HAIDAR
Proj. Dev. Engineer
C.O. Examiner RON CALKINS

APPROVED FOR DISTRICT OFFICE
DATE: 1-11-94 Robert J. Stone (Signature)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1 WISCONSIN DIVISION

APPROVED:

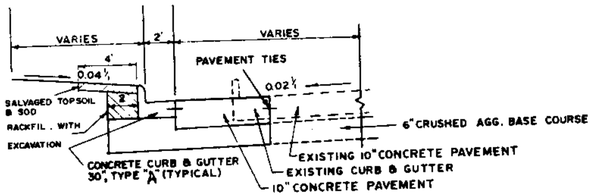
DATE: DIVISION ADMINISTRATOR

WISDOT/CADDS SHEET

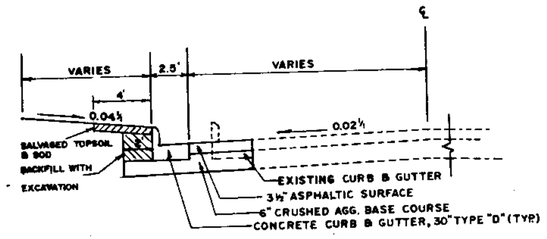
FILE NAME:

SAUK
160-7
40-0
2-Full
5988-2-03
HP

STATE PROJECT NO.	SHEET NO.
5988-02-03	2.0



DRAPER STREET WIDENING
TYPICAL CONCRETE



DRAPER STREET WIDENING
TYPICAL ASPHALTIC

GENERAL NOTES —

ASPHALTIC SURFACE SHALL BE 1½" SURFACE COURSE & 2" BINDER COURSE.

STANDARD DETAIL DRAWINGS

S.D.D. 8D 1-11	CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES
S.D.D. 8D 5-8	CURB RAMPS
S.D.D. 9B 2-5	CONDUIT
S.D.D. 9B 4-1	PULL BOX
S.D.D 9C 2-1	CONCRETE BASES
S.D.D. 9C 3-1	CAST BASES
S.D.D 9C 5-1	CONCRETE CONTROL CABINET BASES
S.D.D. 9E 1-1a	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
S.D.D. 9E 1-1e	HARDWARE DETAILS FOR POLE MOUNTINGS
S.D.D. 9F 8-1	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE
S.D.D 9F 12-1	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT
S.D.D. 9F 13-1	LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

GENERAL NOTES

LOCATIONS, LENGTH AND WIDTHS SHALL BE AS SHOWN ON THE TRAFFIC SIGNAL AND CONDUIT LAYOUT PLAN SHEETS.

ALL THREAD ASSEMBLIES AND METALLIC PARTS SHALL BE PROTECTED FROM RUST, CORROSION, AND SEIZING BY COATING THE MATING SURFACES WITH AN APPROVED COMPOUND.

ALL CONNECTIONS SHALL BE WATER TIGHT.

BORING UNDER CURB AND GUTTER AND/OR SIDEWALK SHALL BE CONSIDERED AS INCIDENTAL TO THE ITEM OF LOOP DETECTOR CONDUIT AND NON-METALLIC CONDUIT.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

UTILITIES

BARABOO SEWER DEPARTMENT
135-4th Street
Baraboo, WI 53913
608-356-3389
T.M. Kramer, P.E.

BARABOO WATER DEPARTMENT
135-4th Street
Baraboo, WI 53913
608-356-4145
David Lawrence

WISCONSIN POWER & LIGHT CO.
P.O. Box 447
Baraboo, WI 53913
800-862-0222
Ron Silverthorn

TCI CABLEVISION OF WISCONSIN (South Central)
413 Oak Street
Baraboo, WI 53913
608-356-4836
Tom Maitland

AMERITECH, INC.
316 W. Washington Avenue, Room 601
Madison, WI 53703
608-257-2734
OSP Engineering
Sam Williams

DIGGERS HOTLINE
8112 W. Bluemound Road
Wauwatosa, WI 53213-3356
800-242-8511

— CYCLE LENGTH —

INTERVAL	8TH AVE EAST BOUND VEH. (SEC)	8TH AVE EAST BOUND PED. (SEC)	8TH AVE WEST BOUND VEH. (SEC)	8TH AVE WEST BOUND PED. (SEC)	DRAPER ST. VEH. (S=C)	DRAPER ST. PED. (SEC)	INT. LENGTH %	KEY SETTING
1	G-7		R-10		R-26	DW-26		
2	Y-3							
3	G-15		G-15					
4	Y-3		Y-3					
4*	R-2		R-2		R-2			
5	R-13		R-13	DW-13	G-10			
6					Y-3			
6*	R-2		R-2		R-2			

* ALL RED

G GREEN
G GREEN LEFT TURN
Y YELLOW
Y YELLOW LEFT TURN
R-RED
W-WALK
DW- STEADY DON'T WALK
FDW-FLASHING DON'T WALK

— SIGNAL PHASING —

PHASE NO.	1	2	3	4	5	6	FLASHING
1,5,7	G G	Y G	G	Y	R	R	Y
3,6,9	R	R	G	Y	R	R	Y
2,4,8	R	R	R	R	G	Y	R

USE SAME LEGEND AS CYCLE LENGTH

NO.	REVISION	DATE

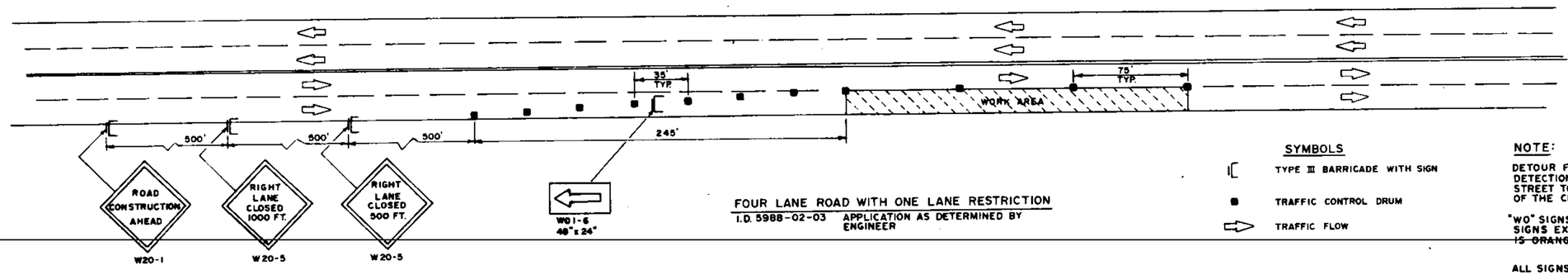
SIGNAL PHASING & CYCLE LENGTHS, 8th AVE. & DRAPER ST. PROPOSED SIGNALS

DRAPER STREET WIDENING DETAILS

T.M. KRAMER, P.E.
CITY ENGINEER
MUNICIPAL BUILDING
135 FOURTH STREET
BARABOO, WIS. 53913

SCALE: NO SCALE
DATE:
SHEET: — OF —
DRAWN BY: D. A. J.
FILE NO.

STATE PROJECT NO.	SHEET NO.
5988-02-03	2.1



FOUR LANE ROAD WITH ONE LANE RESTRICTION
I.D. 5988-02-03 APPLICATION AS DETERMINED BY ENGINEER

SYMBOLS
- TYPE III BARRICADE WITH SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC FLOW

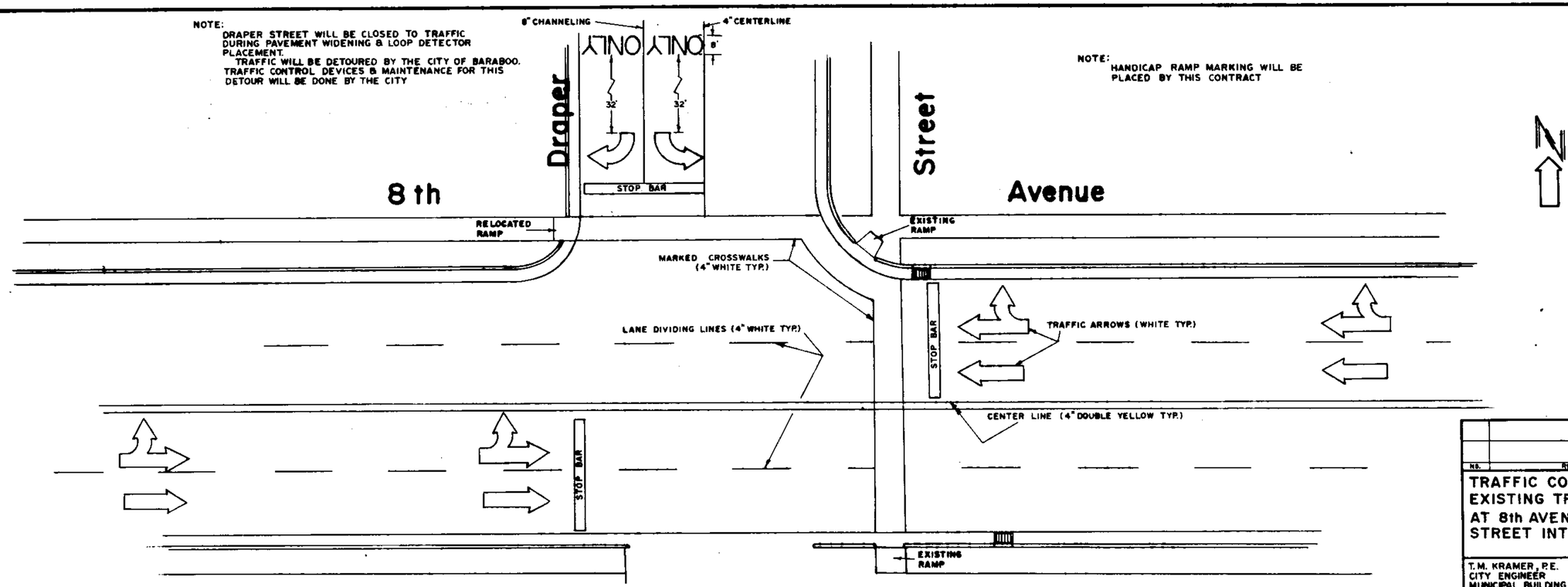
NOTE:
DETOUR FOR INSTALLATION OF DETECTION LOOPS ON DRAPER STREET TO BE THE RESPONSIBILITY OF THE CITY OF BARABOO.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED

— TRAFFIC CONTROL —
(DAYTIME ONLY)

NOTE:
DRAPER STREET WILL BE CLOSED TO TRAFFIC DURING PAVEMENT WIDENING & LOOP DETECTOR PLACEMENT.
TRAFFIC WILL BE DETOURED BY THE CITY OF BARABOO. TRAFFIC CONTROL DEVICES & MAINTENANCE FOR THIS DETOUR WILL BE DONE BY THE CITY



NOTE:
HANDICAP RAMP MARKING WILL BE PLACED BY THIS CONTRACT

— PROPOSED TRAFFIC MARKINGS — (BY CITY)

NO.	REVISION	DATE

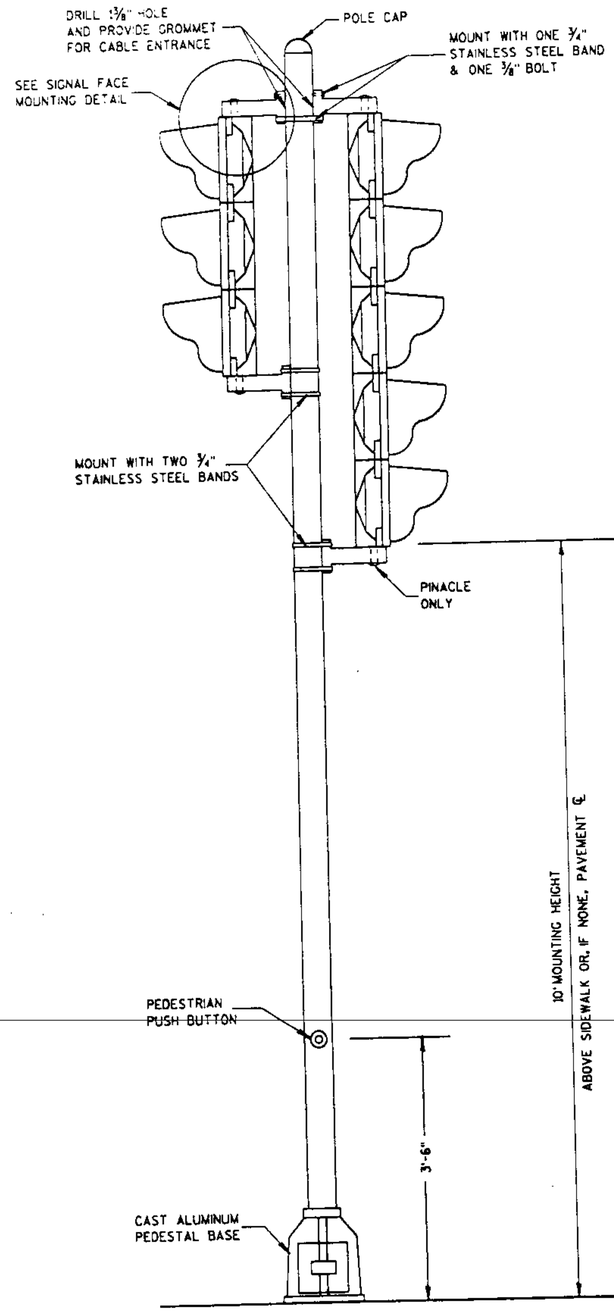
TRAFFIC CONTROL SCHEME & EXISTING TRAFFIC MARKINGS AT 8th AVENUE & DRAPER STREET INTERSECTION

T. M. KRAMER, P.E.
CITY ENGINEER
MUNICIPAL BUILDING
135 FOURTH STREET
BARABOO, WIS. 53913

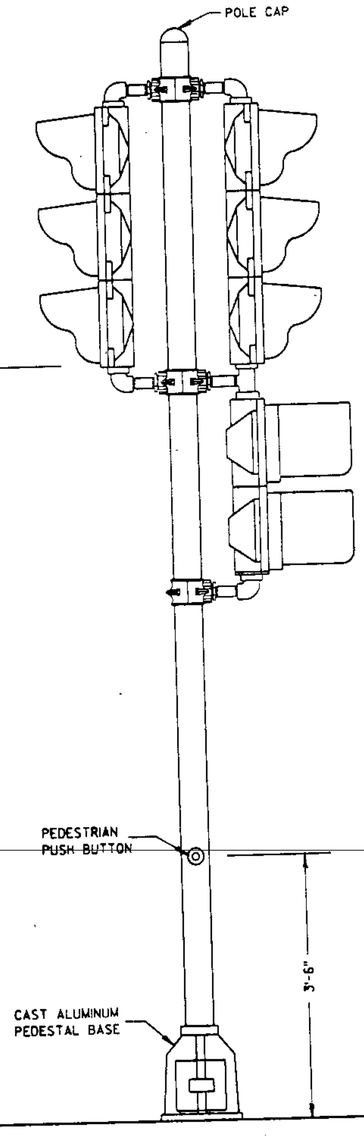
SCALE	SHEET
No Scale	— OF —
DATE	
DRAWN BY D. A. J.	FILE NO.

STATE PROJECT NUMBER	SHEET NO.
5988 - 02 - 03	2.2

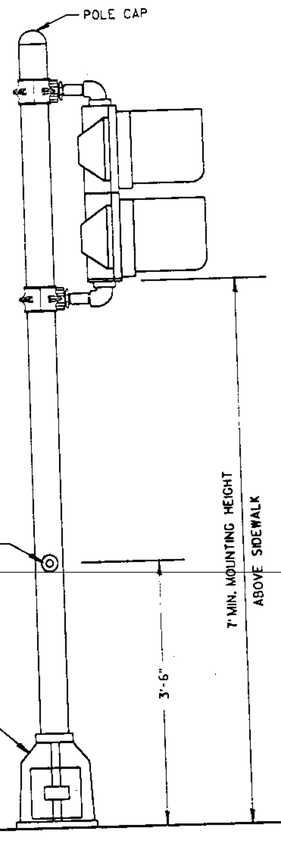
TRAFFIC SIGNAL STANDARD 9', 13' & 15'



TRAFFIC SIGNAL STANDARD-15'



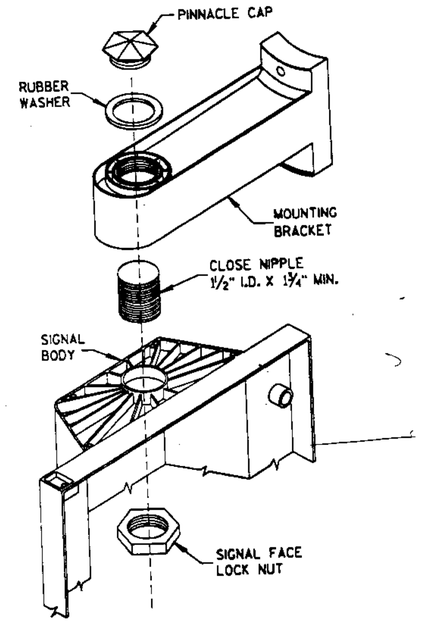
TRAFFIC SIGNAL STANDARD-13'



TRAFFIC SIGNAL STANDARD-9'

GENERAL NOTES

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



SIGNAL FACE MOUNTING DETAIL

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

FILE NAME: HDGN:

WISDOT/CADDS SHEET 42

DATE 02/22/94

ESTIMATE OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5988-02-03 QUANTITY
20405	REMOVING CURB AND GUTTER	L.F.	130.00	130.00
20406	REMOVING CONCRETE SIDEWALK	S.Y.	5.00	5.00
21301	FINISHING ROADWAY	L.S.	1.00	1.00
30403	CRUSHED AGGREGATE BASE COURSE	C.Y.	14.00	14.00
41101	ASPHALTIC SURFACE	TON	12.00	12.00
41510	CONCRETE PAVEMENT, 10-INCH	S.Y.	8.00	8.00
41571	PAVEMENT TIES	EACH	6.00	6.00
60123	CONCRETE CURB AND GUTTER, 30-INCH, TYPE A	L.F.	30.00	30.00
60133	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	L.F.	100.00	100.00
60204	CONCRETE SIDEWALK, 4-INCH	S.F.	16.00	16.00
61331	NONMETALLIC CONDUIT, 1-INCH	L.F.	394.00	394.00
61334	NONMETALLIC CONDUIT, 2-INCH	L.F.	62.00	62.00
64002	POLES, TYPE 2	EACH	2.00	2.00
64012	CONCRETE BASES, TYPE 1	EACH	4.00	4.00
64013	CONCRETE BASES, TYPE 2	EACH	2.00	2.00
64301	TRAFFIC CONTROL	L.S.	1.00	1.00
64493	PAVEMENT MARKING, CURB RAMP, EPOXY	L.F.	45.00	45.00
90001	ELECTRICAL SERVICE, TRAFFIC SIGNALS, METER BREAKER PEDESTAL, EIGHTH AND DRAPER	L.S.	1.00	1.00
90002	NONMETALLIC CONDUIT 3", SCHEDULE 80	L.F.	4.00	4.00
90338	GRADING, SHAPING & FINISHING INTERSECTION, EIGHTH AND DRAPER	L.S.	1.00	1.00
90660	ELECTRICAL WIRE, TRAFFIC SIGNALS, NO. 10	L.F.	594.00	594.00
90786	CONCRETE CONTROL CABINET BASES, TYPE 10	EACH	1.00	1.00
90792	PULL BOXES, 12X24-INCH	EACH	4 X.00	4 X.00
90797	PULL BOXES, 24X36-INCH	EACH	5 X.00	5 X.00
90800	PEDESTAL BASES	EACH	4.00	4.00

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5988-02-03 QUANTITY
90801	TRANSFORMER BASES	EACH	3.00	3.00
90808	TRAFFIC SIGNAL STANDARDS, STEEL, 9-FT.	EACH	1.00	1.00
90810	TRAFFIC SIGNAL STANDARDS, STEEL, 13-FT.	EACH	2.00	2.00
90811	TRAFFIC SIGNAL STANDARDS, STEEL, 15-FT	EACH	1.00	1.00
90814	MAST ARMS, TRAFFIC SIGNAL TROMBONE, 20-FT.	EACH	2.00	2.00
90817	TRAFFIC SIGNAL FACES, 3-12 VERTICAL	EACH	6.00	6.00
90819	TRAFFIC SIGNAL FACES, 5-12 VERTICAL	EACH	1.00	1.00
90823	TRAFFIC SIGNAL FACES, 3-12 HORIZONTAL	EACH	1.00	1.00
90825	TRAFFIC SIGNAL FACES, 5-12 HORIZONTAL	EACH	1.00	1.00
90829	PEDESTRIAN SIGNAL FACES, 9-INCH	EACH	4.00	4.00
90833	PEDESTRIAN PUSH BUTTONS	EACH	4.00	4.00
90834	TRAFFIC SIGNAL MOUNTING HARDWARE, EIGHTH AND DRAPER	L.S.	1.00	1.00
90838	BACKPLATES	EACH	2.00	2.00
90845	TRAFFIC SIGNAL CABLE, 19 CONDUCTOR, NO. 14	L.F.	297.00	297.00
90858	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 4 PHASE	EACH	1.00	1.00
90869	LOOP DETECTOR SLOTS	L.F.	296.00	296.00
90870	LOOP DETECTOR AMPLIFIER, EIGHTH AND DRAPER	L.S.	1.00	1.00
90871	LOOP DETECTOR CONDUIT, 1-INCH	L.F.	310.00	310.00
90872	LOOP DETECTOR WIRE	L.F.	733.00	733.00
90873	LOOP DETECTOR LEAD IN CABLE	L.F.	791.00	791.00

Sheet 3.1

STATE PROJECT NO.	SHEET NO.
5988-02-03	3A
MISCELLANEOUS QUANTITIES	

SIGNAL POLES, MAST ARMS, BASES, & CONCRETE BASES

SIGNAL BASE NUMBER	LOCATION	CONCRETE BASES			PEDESTAL BASES	TRANSFORMER BASES	TRAFFIC SIGNAL STDS.			POLES	MAST ARMS TRAFFIC SIGNAL TROMBONE 20 FEET	PED. PUSH BUTTON	BACK-PLATES
		TYPE 1 EACH	TYPE 2 EACH	CONTROL CABINET TYPE 10 EACH	EACH	EACH	9 FT. EACH	13 FT. EACH	15 FT. EACH	TYPE 2 EACH	EACH	EACH	EACH
SB 1	38+74 27'RT.	1			1			1					
SB 2	39+34 26'RT.		1			1				1	1	1	1
SB 3	39+41 27'LT.	1			1				1			1	
SB 4	39+25 35'LT.	1			1		1					1	
SB 5	38+73 41'LT.	1			1			1				1	
SB 6	38+59 27'LT.		1			1				1	1		1
CONTROLLER	38+60 27'RT.			1		1							
TOTAL		4	2	1	4	3	1	2	1	2	2	4	2

NONMETALLIC CONDUIT

LOCATION	PVC 1- INCH LIN. FEET	PVC 2 - INCH LIN. FEET	PVC 3 - INCH SCHEDULE 80 LIN. FEET	CONSTUCTION METHOD
PB8 - PB7	100			TRENCH
PB7 - CONTROLLER	35			TRENCH
CONTROLLER - PB 1			4	TRENCH
PB 1 - SB 1		10		TRENCH
SB6 - PB6		9		TRENCH
PB6 - PB5		9		TRENCH
PB5 - SB5		5		TRENCH
PB5 - PB9	105			TRENCH
PB4 - SB4		4		TRENCH
PB4 - PB3		14		TRENCH
PB3 - SB3		8		TRENCH
PB3 - PB10	154			TRENCH
SB2 - PB2		3		TRENCH
TOTAL	394	62	4	

PULL BOXES

PULLBOX NUMBER	LOCATION	12 X 24 INCH EACH	24 X 36 INCH EACH
PB 1	38+64 26'RT.		1
PB 2	39+37 26'RT.		1
PB 3	39+34 28'LT.		1
PB 4	39+22 36'LT.		1
PB 5	38+71 36'LT.		1
~~PB 6~~	~~38+68 37'LT.~~		X
PB 7	38+24 27'RT.	1	
PB 8	37+24 27'RT.	1	
PB 9	38+78 139'LT.	1	
PB 10	40+88 27'LT.	1	
	TOTAL	4	6

TRAFFIC DETECTOR LOOPS

LOOP NO.	LOCATION (a)	SIZE	TURNS	LOOP DETECTOR SLOTS LIN. FEET	LOOP DETECTOR WIRE LIN. FEET	LOOP DETECTOR LEAD-IN CABLE LIN. FEET	LOOP DETECTOR CONDUIT LIN. FEET
◊ 11	38+15 5' RT.	6'x 6'	4	46	120	48	46
◊ 21	40+88 11' LT.	6'x15'	3	50	136	285	54
◊ 22	37+18 11' RT.	6'x15'	3	50	136	148	54
◊ 41	38+80 34' LT.	6'x20'	2	53	114	70	58
◊ 42	38+91 34' LT.	6'x20'	2	57	122	70	57
◊ 43	38+93 139' LT.	6'x10'	3	40	105	170	41
TOTAL				296	733	791	310
(a) LOCATION IS TO FRONT, CENTER OF DETECTOR LOOP						PB TO CURB	

BOX NUMBERS	ELECTRIC WIRE TRAFFIC SIGNAL # 10 (XLP) LIN. FEET	TRAFFIC SIGNAL CABLE 19 COND. # 14 (AWG) LIN. FEET
C-PB1-SB1 CUT	50	25
SB1-PB1-PB6-SB6 CUT	150	75
SB6-PB6-PB5-SB5 CUT	56	28
SB5-PB5-PB4-SB4 CUT	132	66
SB4-PB4-PB3-SB3 CUT	66	33
SB3-PB3-PB2-SB2 CUT	140	70
TOTALS	594	297

GRADING, SHAPING, & FINISHING - INTERSECTION, EIGHTH AVE. & DRAPER - 1 LUMP SUM

UNCLASSIFIED * EXCAVATION	FERTILIZER *	SODDING *	SALVAGED TOPSOIL *
60 CUBIC YARDS	3 POUNDS	35 SQUARE YARDS	35 SQUARE YARDS

*QUANTITIES ARE AN ESTIMATE FOR THE ITEM OF GRADING, SHAPING & FINISHING INTERSECTION, EIGHTH AVE. & DRAPER ONLY.

MISCELLANEOUS QUANTITIES

ITEM	QUANTITY
NONMETALLIC CONDUIT 1"	394 L.F.
NONMETALLIC CONDUIT 2"	62 L.F.
NONMETALLIC CONDUIT 3", SCHEDULE 80	4 L.F.
POLES, TYPE 2	2 EACH
CONCRETE BASES, TYPE 1	4 EACH
CONCRETE BASES, TYPE 2	2 EACH
TRAFFIC CONTROL	1 LUMP SUM
ELECTRICAL WIRE, NO. 10	594 L.F.
CONCRETE CONTROL CABINET BASES, TYPE 10	1 EACH
PULL BOXES, 12X24-INCH	4 EACH
PULL BOXES, 24X36-INCH	6 EACH
PEDESTAL BASES	4 EACH
TRANSFORMER BASES	3 EACH
TRAFFIC SIGNAL STANDARD, STEEL, 9 FEET	1 EACH
TRAFFIC SIGNAL STANDARD, STEEL, 13 FEET	2 EACH
TRAFFIC SIGNAL STANDARDS, STEEL, 15-FT	1 EACH
MAST ARMS, TRAFFIC SIGNAL TROMBONE, 20-FT	2 EACH
TRAFFIC SIGNAL FACES 3-12 VERTICAL	6 EACH
3-12 HORIZONTAL	1 EACH
TRAFFIC SIGNAL FACES 5-12 VERTICAL	1 EACH
5-12 HORIZONTAL	1 EACH
PEDESTRIAN SIGNAL FACES, 9"	4 EACH
PEDESTRIAN PUSH BUTTONS	4 EACH
TRAFFIC SIGNAL MOUNTING HARDWARE	1 LUMP SUM
BACKPLATES	2 EACH
TRAFFIC SIGNAL CABLE 19 CONDUCTOR, NO. 14	297 L.F.
TRAFFIC SIGNAL CONTROLLER FULLY ACTUATED, 4 PHASE	1 EACH
ELECTRICAL SERVICE TRAFFIC SIGNALS, METER BREAKER, REMOTE, E-WIRE & DRAPER	1 LUMP SUM
LOOP DETECTOR SLOTS	296 L.F.
LOOP DETECTOR AMPLIFIERS	1 LUMP SUM
NONMETALLIC CONDUIT, 1"	310 L.F.
LOOP DETECTOR WIRE	733 L.F.
LOOP DETECTOR LEAD IN CABLE	791 L.F.
REMOVING CURB AND GUTTER	130 L.F.
REMOVING CONCRETE SIDEWALK	5 SQ. YARDS
CRUSHED AGGREGATE BASE COURSE	14 CU. YARDS
ASPHALTIC SURFACE	12 TON
CONCRETE PAVEMENT	8 SQ. YARDS
CONCRETE CURB AND GUTTER, TYPE A / TYPE D	20 L.F. / 100 L.F.
CONCRETE SIDEWALK, 4-INCH	16 SQ. FEET
PAVEMENT TIES	6 EACH
GRADING, SHAPING & FINISHING INTERSECTION, EIGHTH & DRAPER	1 LUMP SUM

NO.	REVISION	DATE

DRAPER STREET & 8th AVE.
SIGNAL PROJECT PULL BOX & SIGNAL BASE CHARTS -
NONMETALLIC CONDUIT CHART -
TRAFFIC DETECTOR LOOPS CHART -

T. M. KRAMER, P.E.
CITY ENGINEER
MUNICIPAL BUILDING
135 FOURTH STREET
BARABOO, WIS. 53913

SCALE	SHEET
DATE	OF
DRAWN BY	FILE NO.

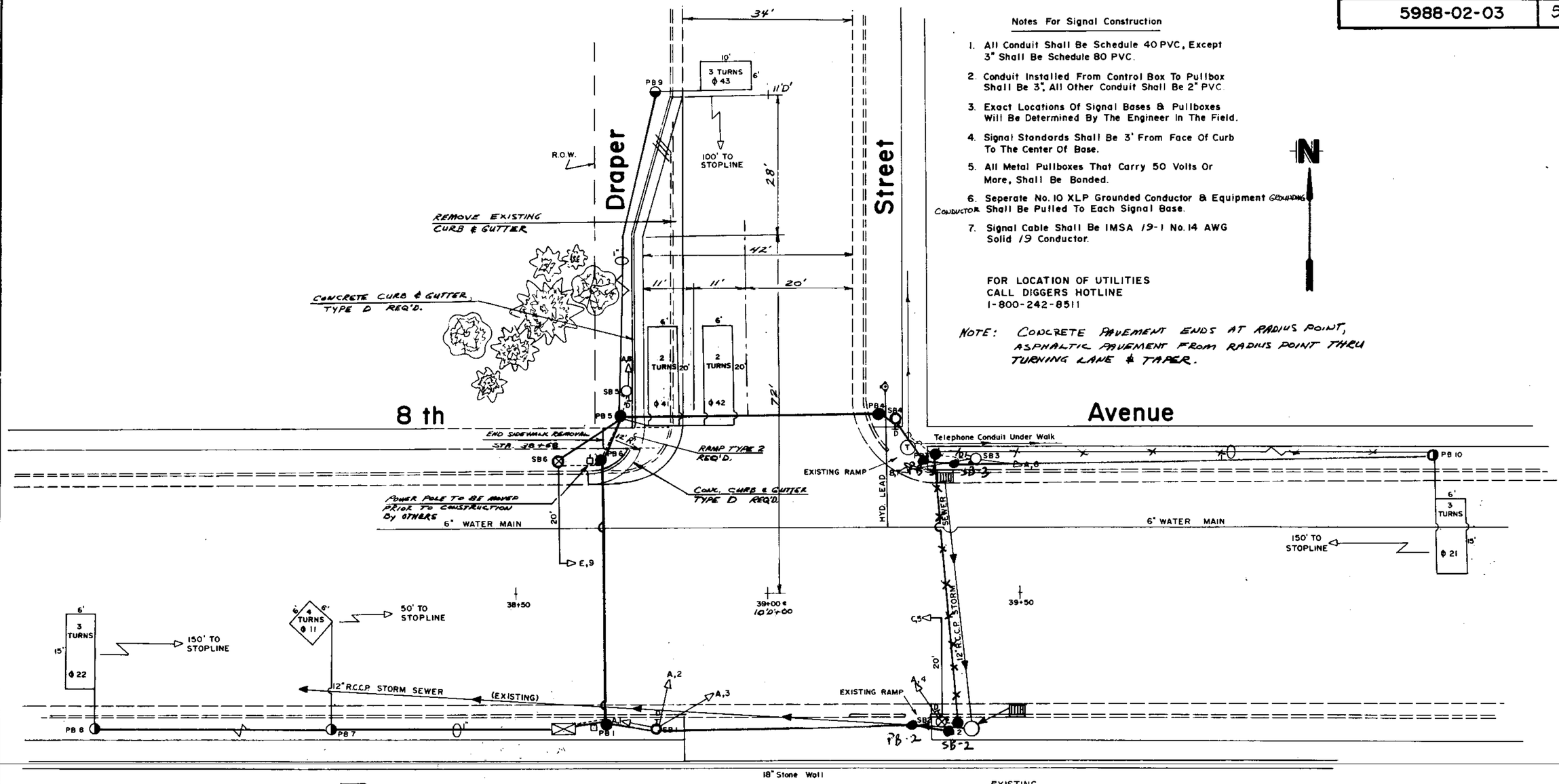
STATE PROJECT NO.	SHEET NO.
5988-02-03	5,0

Notes For Signal Construction

1. All Conduit Shall Be Schedule 40 PVC, Except 3" Shall Be Schedule 80 PVC.
2. Conduit Installed From Control Box To Pullbox Shall Be 3", All Other Conduit Shall Be 2" PVC.
3. Exact Locations Of Signal Bases & Pullboxes Will Be Determined By The Engineer In The Field.
4. Signal Standards Shall Be 3' From Face Of Curb To The Center Of Base.
5. All Metal Pullboxes That Carry 50 Volts Or More, Shall Be Bonded.
6. Seperate No. 10 XLP Grounded Conductor & Equipment Grounding Conductor Shall Be Pulled To Each Signal Base.
7. Signal Cable Shall Be IMSA 19-1 No. 14 AWG Solid 19 Conductor.

FOR LOCATION OF UTILITIES
CALL DIGGERS HOTLINE
1-800-242-8511

NOTE: CONCRETE PAVEMENT ENDS AT RADIUS POINT, ASPHALTIC PAVEMENT FROM RADIUS POINT THRU TURNING LANE & TAPER.



C - W/BACKPLATE

E - W/BACKPLATE

A

B

- CONTROL BOX & CONCRETE BASE, TYPE 10
- TYPE 1 STANDARD & BASE, TYPE 1
- TYPE 2 POLE & BASE, TYPE 2
- 24"x36" PULL BOX
- 12"x24" PULL BOX
- PUSHBUTTON & SIGN
- EXISTING CONDUIT (To Be Located By City)
- NEW 2" PVC
- NEW 3" PVC
- 1" PVC
- D — WALK 9" / DON'T WALK 9" PEDESTRIAN

EXISTING

- T – TELEPHONE MANHOLE
- FIRE HYDRANT
- MANHOLE
- CATCHBASIN
- UTILITY POLE

WATER & SEWER AS LABELED

NO.	REVISION	DATE

DRAWING OF 8th AVENUE AND DRAPER STREET INTERSECTION TRAFFIC SIGNAL PLAN

T.M. KRAMER, P.E.
CITY ENGINEER
MUNICIPAL BUILDING
135 FOURTH STREET
BARABOO, WIS. 53913

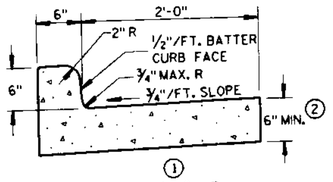
SCALE 1" = 10'

DATE

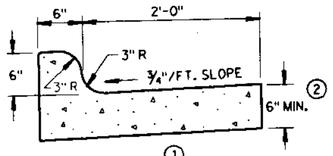
DRAWN BY D.A. JONES

SHEET 1 OF 2

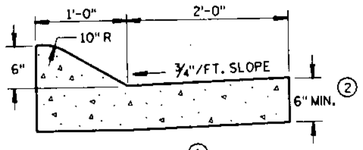
FILE NO.



① TYPES A & D

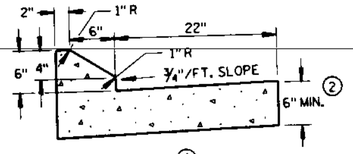


① TYPES K & L

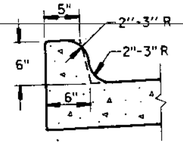


① TYPES A & D

CONCRETE CURB & GUTTER 36"

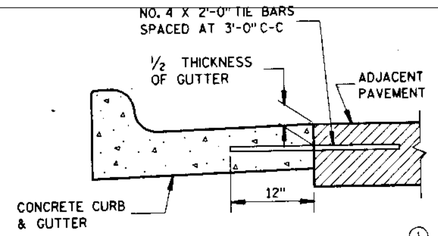


① TYPES G & J



OPTIONAL CURB SHAPE FOR TYPES ① K & L

CONCRETE CURB & GUTTER 30"



① TYPICAL TIE BAR LOCATION

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 ⅛" WIDE.

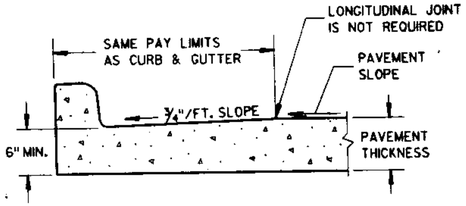
JOINTS IN INTEGRAL CURB & GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME SEALANT SPECIFIED FOR THE PAVEMENT JOINT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB & GUTTER.

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

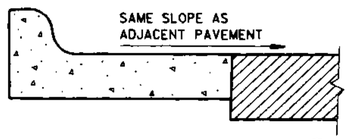
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.

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.

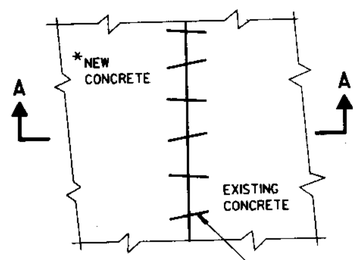


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



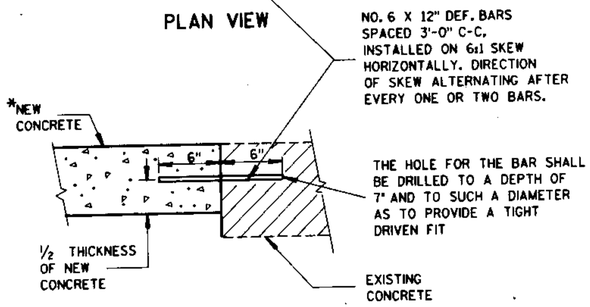
③ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



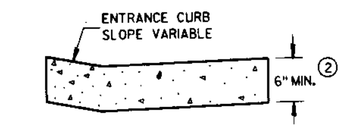
PLAN VIEW

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



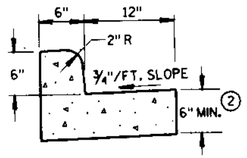
SECTION A-A

PAVEMENT TIES



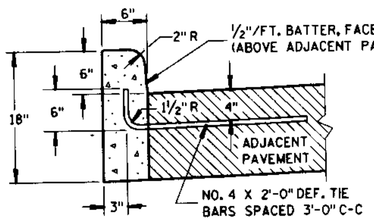
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

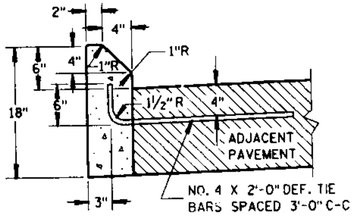


① TYPES A & D

CONCRETE CURB & GUTTER 18"



① TYPES A & D



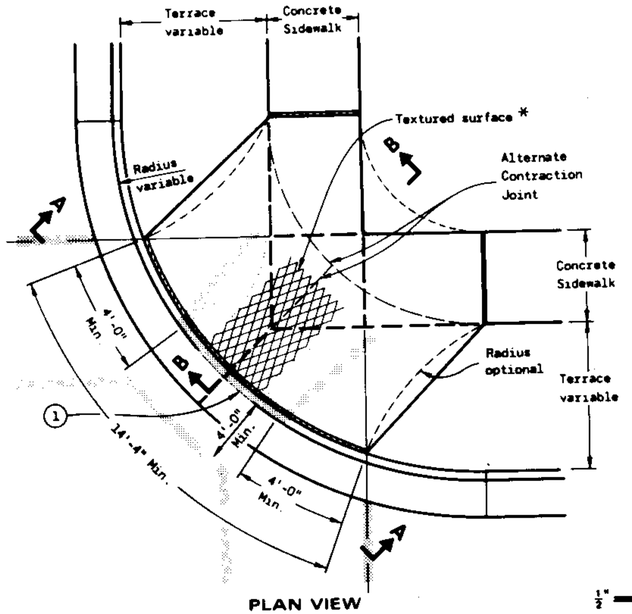
① TYPES G & J

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	

S.D.D. 8 D 1-11

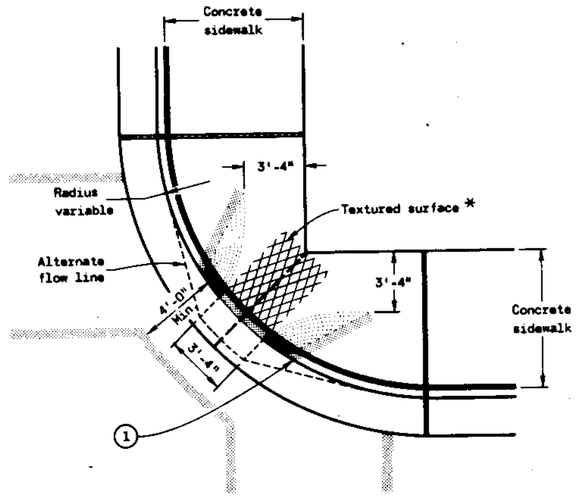
S.D.D. 8 D 1-11



PLAN VIEW

TYPE 1 RAMP

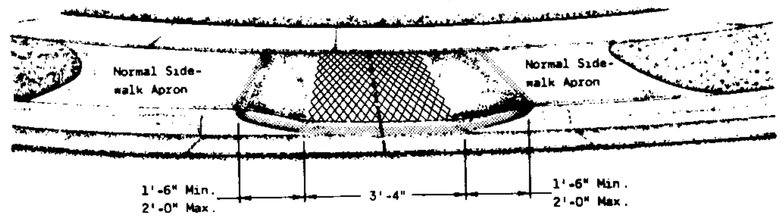
(CENTER OF CORNER RADIUS)



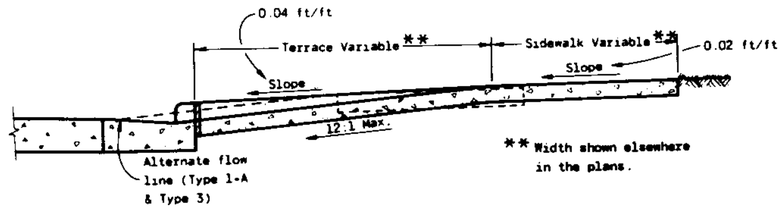
PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)



VIEW **A-A**



SECTION **B-B**

$\frac{1}{2}$" ═══ EXPANSION JOINTS - SIDEWALK

– – – CONTRACTION JOINTS

Location of joints may be varied from those shown to better fit site conditions and/or local government preference.

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.

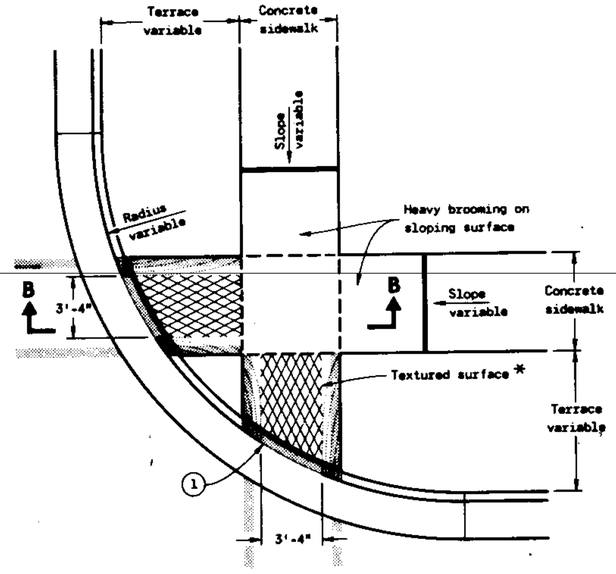
Type 1 or Type 1-A Ramps shall have a normal sidewalk apron and curb on both sides of ramp

Curb ramps shall be measured and paid for as Concrete Sidewalk and Concrete Curb and Gutter.

Surface texturing shall consist of linear impressions approximately $\frac{1}{4}$ inch to $\frac{3}{8}$ inch in depth and width, oriented to provide a uniform pattern of diamond shapes measuring approximately $1\frac{1}{4}$ inches in width by $2\frac{1}{4}$ 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

(1) 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 municapality or the department will apply this striping unless otherwise specified in the contract.

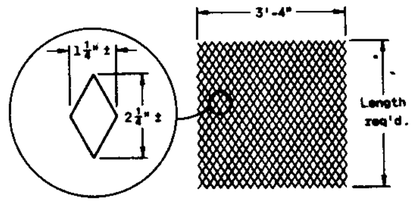
If a municapality requires the brick alternate, special details and provisions are shown elsewhere in the plans.



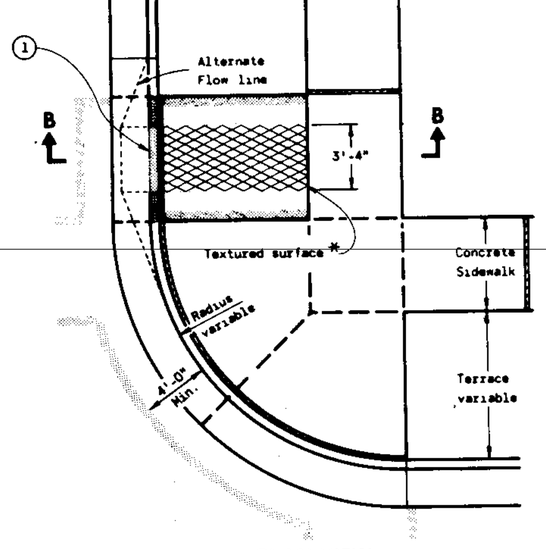
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



DETAIL OF DIAMOND PATTERN * .



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS

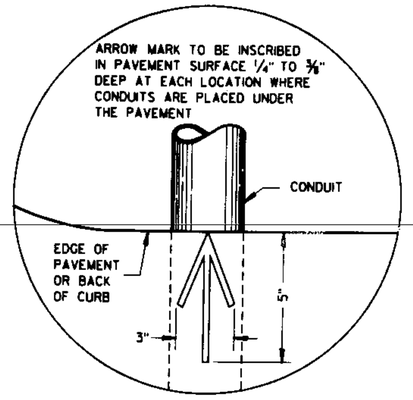
State of Wisconsin
Department of Transportation

APPROVED 10-23-84 DATE — CHIEF DESIGN ENGINEER

FHWA

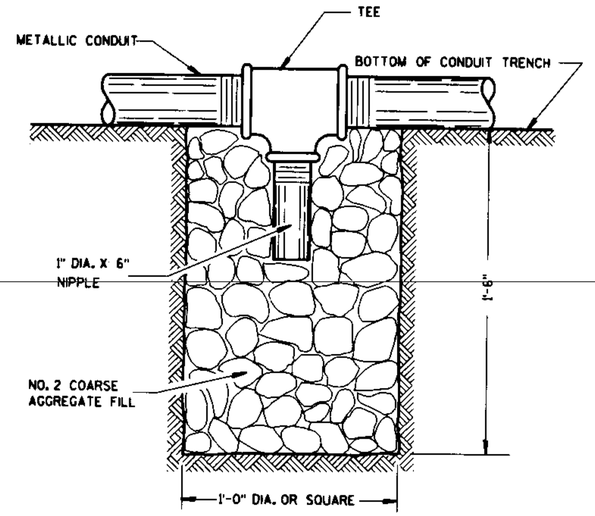
S.D.D. 8 D 5-8

S.D.D. 8 D 5-8



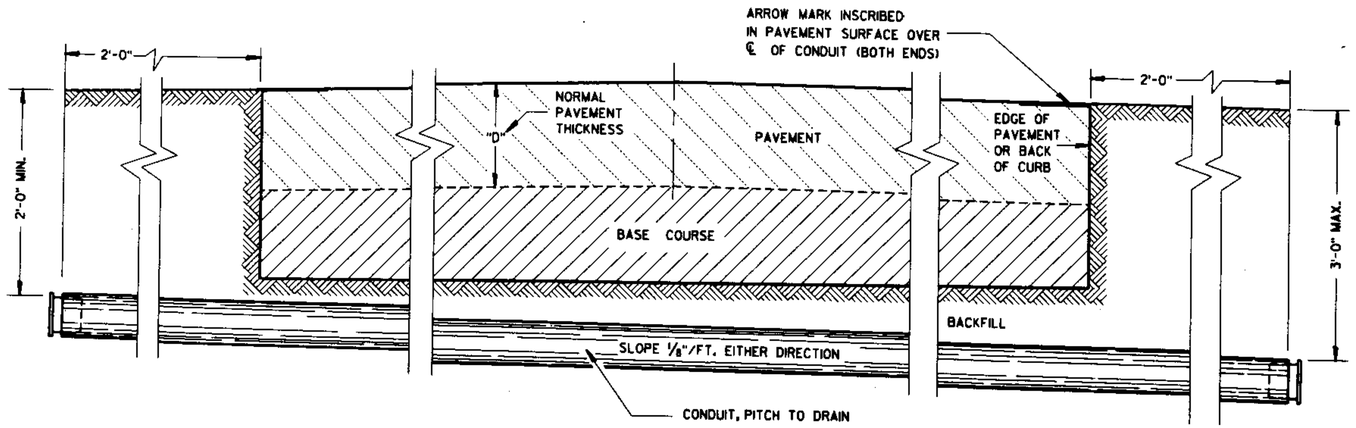
PLAN VIEW

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)

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/92 DATE — Dale Gittel — STATE ELECTRICAL ENGR FOR HWYS

9/15/92 DATE — James C. Rusch — STATE TRAFFIC ENGINEER FOR HWYS

FHWA

S.D.D. 9 B 2-5

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.

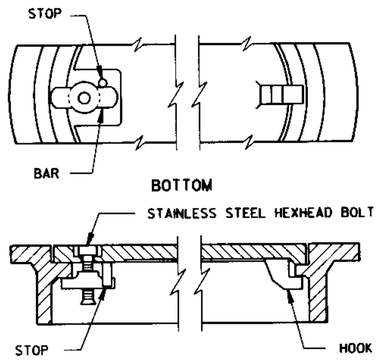
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

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.

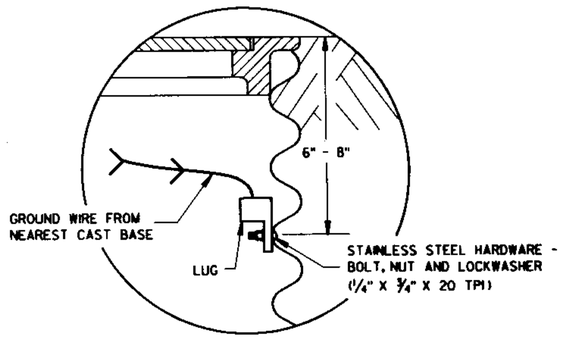
RODENT SCREEN SHALL BE 1/8" GALVANIZED STEEL MESH AND BE INSTALLED WITH A STAINLESS STEEL HOSE CLAMP OF SUFFICIENT SIZE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

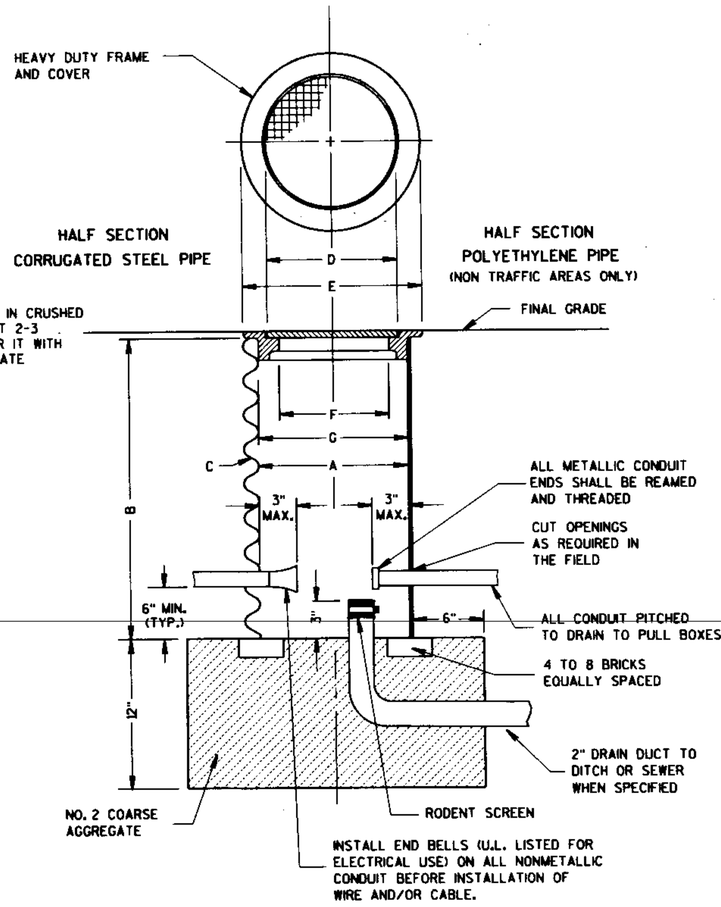


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

PULL BOX

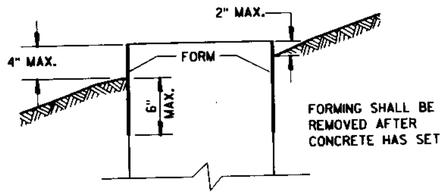
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

S.D.D. 9 B 4-1

S.D.D. 9 B 4-1

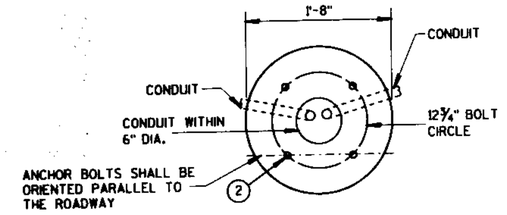
FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE

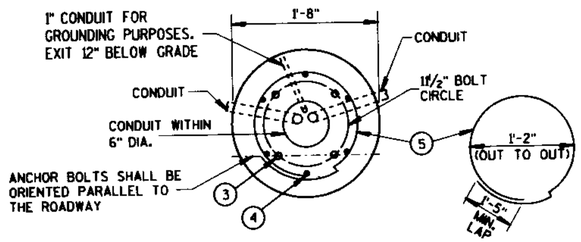


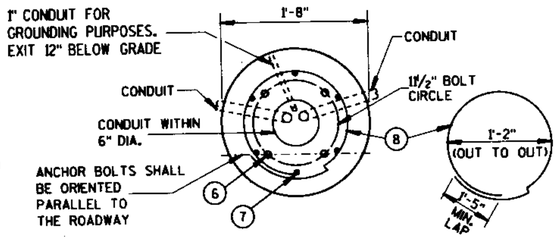
FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	.32	.57	.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

WELDING ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.



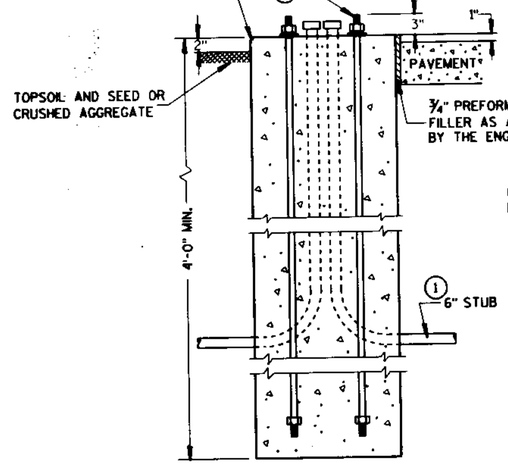




FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)

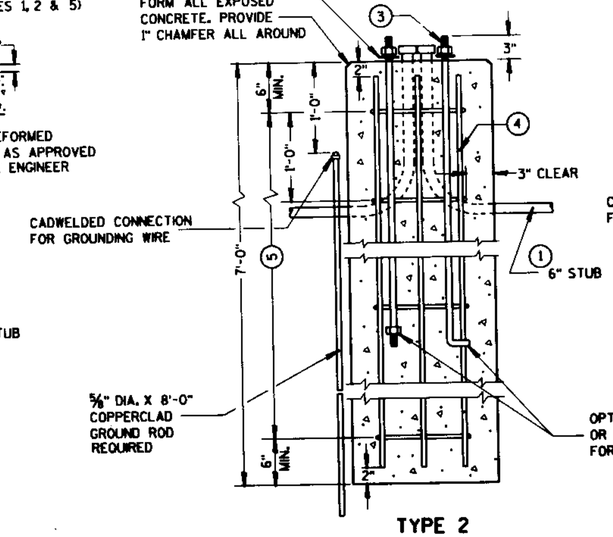
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)



TYPE 1

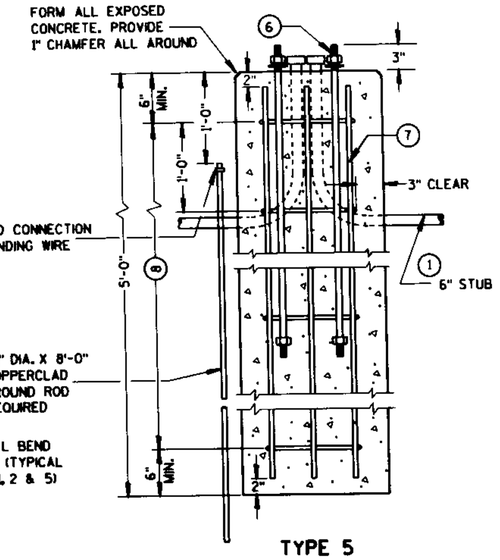
LOCK WASHER (TYPICAL)

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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 CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL BE PLUGGED.

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 INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 6 AWG, STRANDED COPPER GROUNDING WIRE SHALL BE CADWELDED TO THE GROUND ROD FOR TYPE 2 AND TYPE 5 BASES.

THE GROUNDING WIRE SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE GROUNDING WIRE SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR BOLTS SHALL BE THREADED 8" IN LENGTH ON EACH END OF THE BOLT, AND BE MANUFACTURED IN ACCORDANCE WITH SECTION 640.2.9 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WHEN ANCHOR BOLTS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR BOLT BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR BOLTS.

(3) (4) 1" DIA. X 5'-0" ANCHOR BOLTS.

(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

(6) (4) 1" DIA. X 3'-6" ANCHOR BOLTS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

CONCRETE BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

S.D.D. 9 C 2-1

S.D.D. 9 C 2-1

GENERAL NOTES

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

FOUR (4) BOLTS TO BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM A-449, AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

4" BOLTS SHALL BE IN ACCORDANCE WITH SECTION 640.2.9 OF THE STANDARD SPECIFICATIONS, ASTM A-449 OR ASTM A-687 (GRADE 105).

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

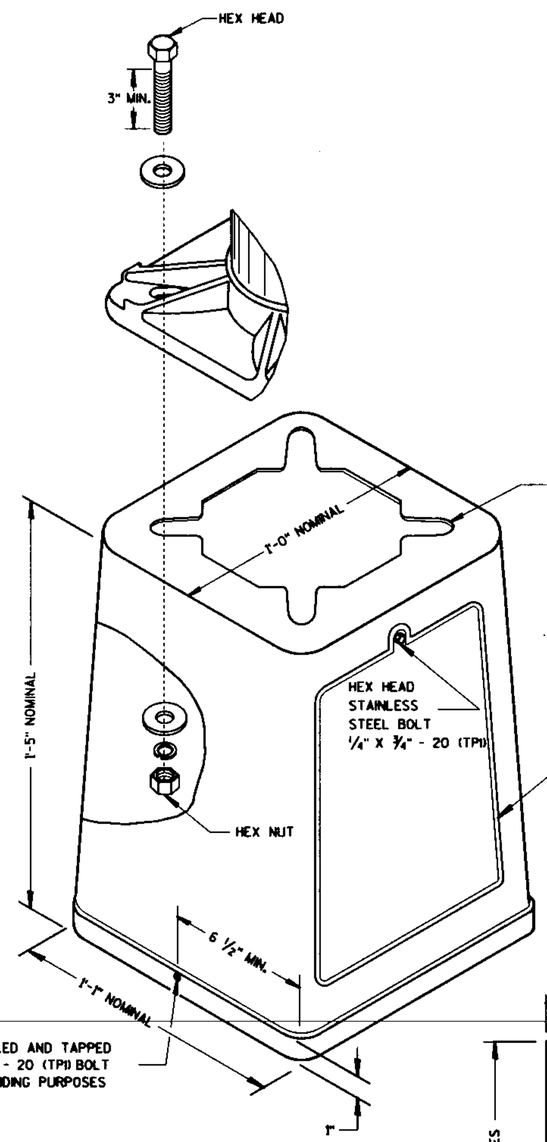
A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

TEST REPORTS FROM AN FHWA APPROVED INDEPENDENT LABORATORY SHALL BE PROVIDED CERTIFYING THAT THE BASE HAS BEEN TESTED AND MEETS OR EXCEEDS ALL OF THE APPLICABLE 1985 AASHTO BREAKAWAY REQUIREMENTS. A STATEMENT OF CERTIFICATION FROM FHWA ATTESTING THAT SUCH TESTS HAVE BEEN ACCEPTED AND APPROVED SHALL BE SUPPLIED ALONG WITH THE BID.

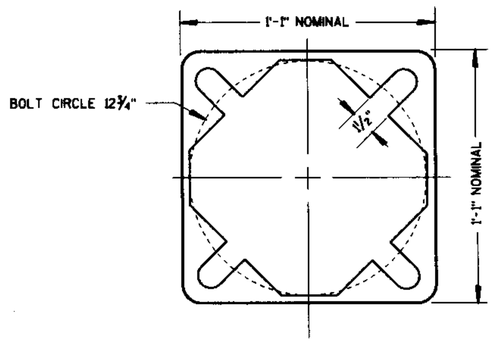
BOTTOM VIEW
(TRANSFORMER BASE)



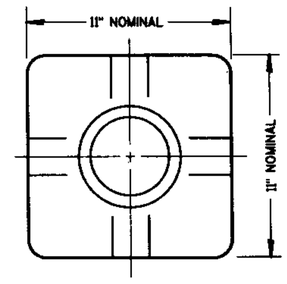
ISOMETRIC VIEW

TRANSFORMER BASE

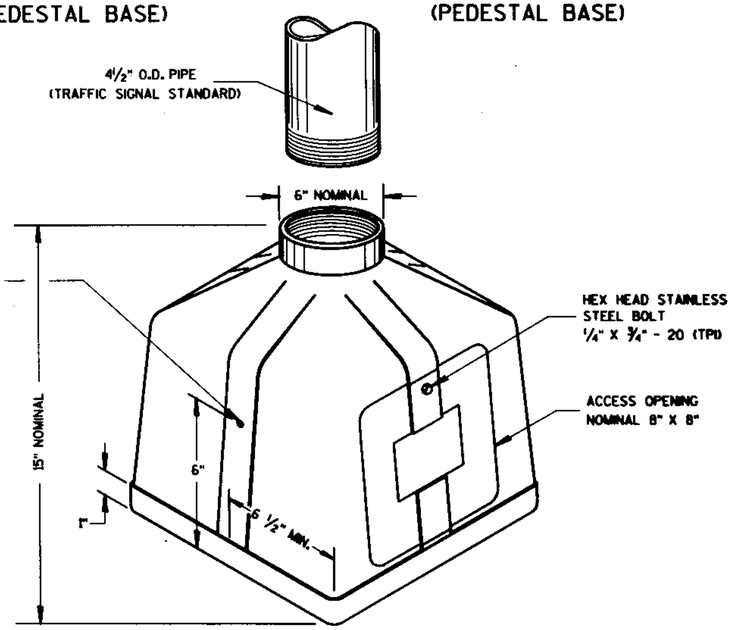
INTENDED FOR USE WITH TYPE 2, 3, 4 & 5 POLES



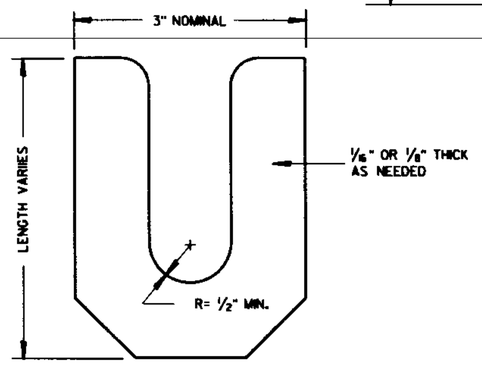
BOTTOM VIEW
(PEDESTAL BASE)



TOP VIEW
(PEDESTAL BASE)



ISOMETRIC VIEW
PEDESTAL BASE



LEVELING SHIM

CAST BASES

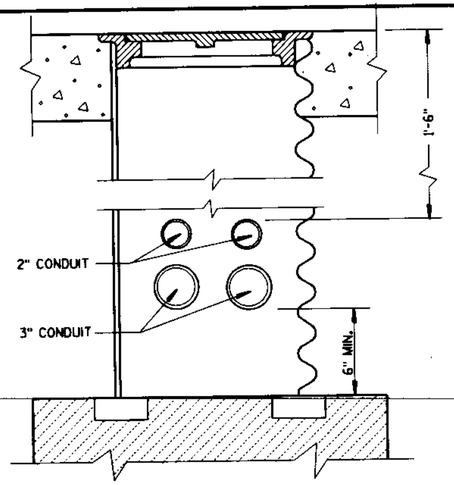
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

S.D.D. 9 C 3-1

S.D.D. 9 C 3-1

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



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 ½ 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.

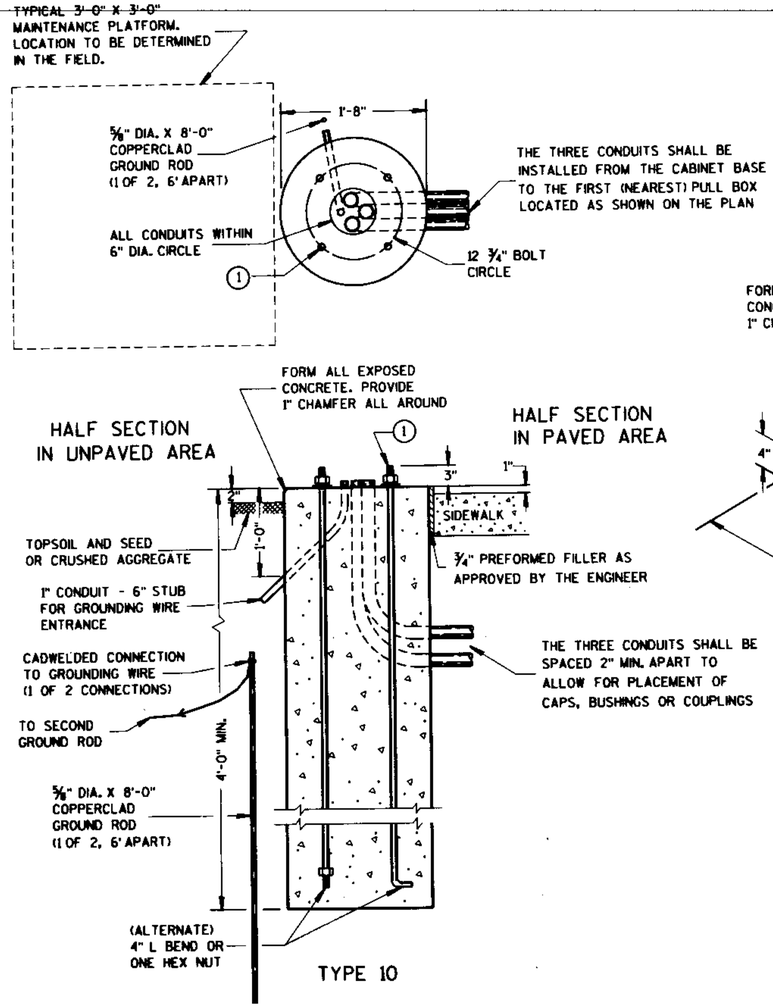
CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

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.



CONCRETE CONTROL CABINET BASES

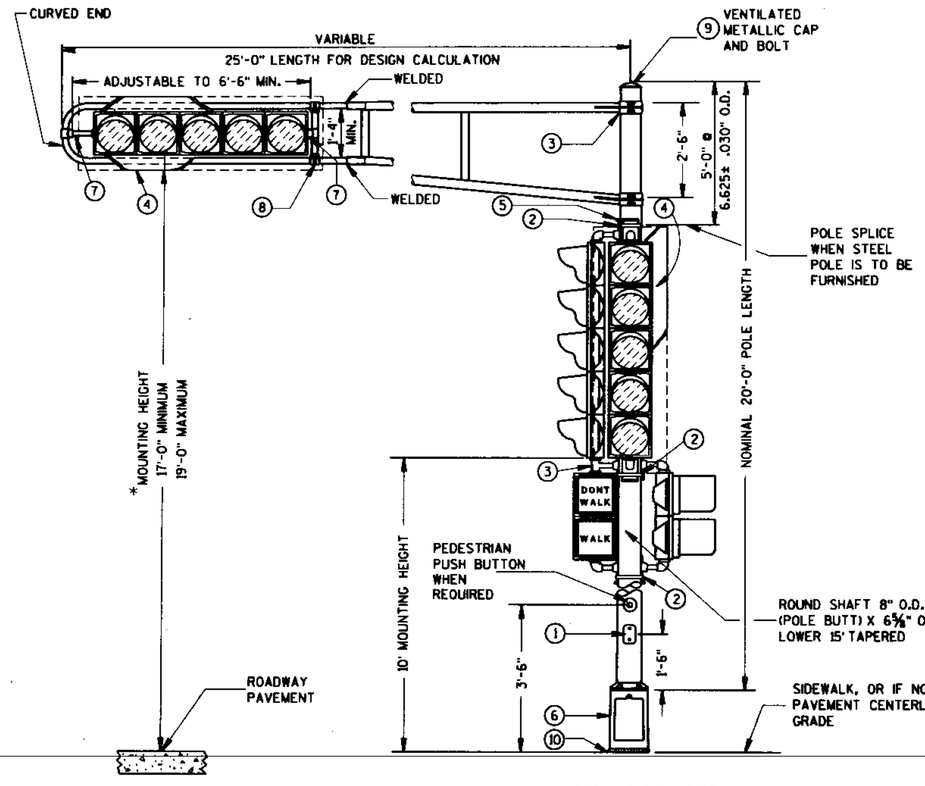
CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

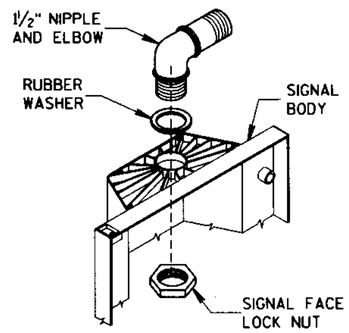
APPROVED
4/21/93 DATE — STATE ELECTRICAL ENGR FOR HWYS
4/21/93 DATE — STATE TRAFFIC ENGINEER FOR HWYS
FHWA

S.D.D. 9 C 5-1

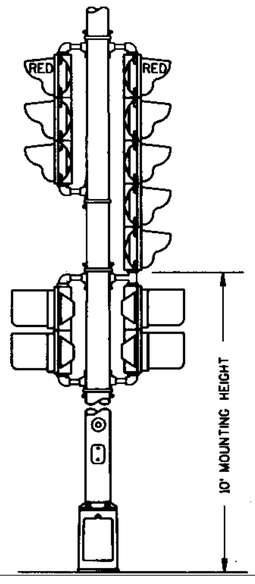
S.D.D. 9 C 5-1



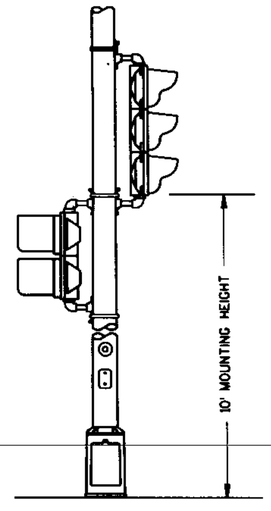
(MAXIMUM LOAD)



SIGNAL FACE MOUNTING DETAIL



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

GENERAL NOTES

(L) 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2.) SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE SPECIAL PROVISIONS).

(3.) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(4.) BACKBOARDS ARE REQUIRED AT ALL TIMES ON TROMBONE MAST ARM MOUNTED SIGNAL FACES. VERTICAL MOUNTED SIGNAL FACES WITH BACKBOARDS REQUIRED ARE LOCATED AS SHOWN ON THE PLANS. BACKBOARDS ARE REQUIRED TO SURROUND SIGNAL FACES. BACKBOARDS SHALL EXTEND 5" BEYOND EXTREMITIES OF THE SIGNAL FACE.

(5.) POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.

(6.) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(7.) 1½" PIPE THREAD ON THE MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE. NIPPLE SHALL BE 1½" X 2".

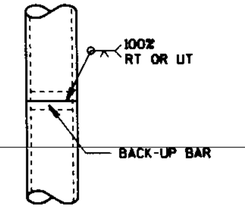
(8.) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" LONG- 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9.) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10.) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF CERTIFICATION OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO SHIPMENT OF THE POLES. VERIFICATION AND APPROVAL OF THE TESTING CERTIFICATION FROM THE MANUFACTURER SHALL BE COMPLETED BY THE CENTRAL OFFICE BRIDGE SECTION.



TYPE 2 POLE MOUNTING CONFIGURATION

NOTE:
SHEET SDD 9 E 1-1a IS REQUIRED WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

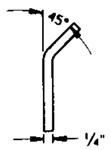
DESIGN NOTE: (WILL NOT APPEAR ON CONTRACT PLANS)
THIS DETAIL IS APPLICABLE WHEN SIGNALS ARE MOUNTED ON A TROMBONE ARM. DO NOT USE FOR LIGHTING.

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

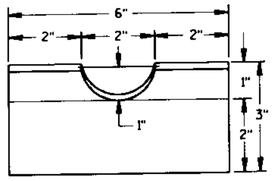
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 9 E 1-1a

S.D.D. 9 E 1-1a



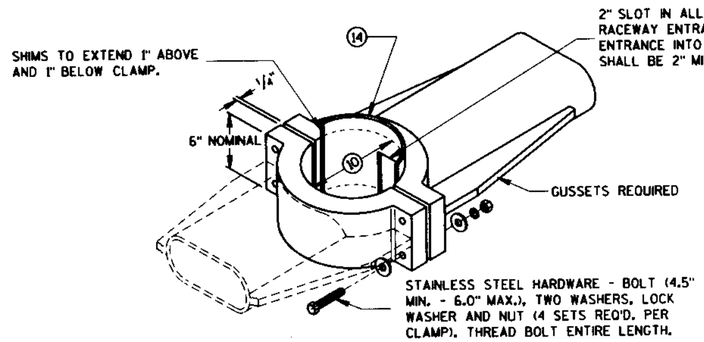
END VIEW



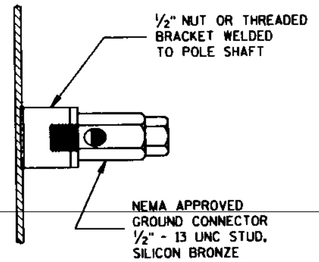
FRONT VIEW

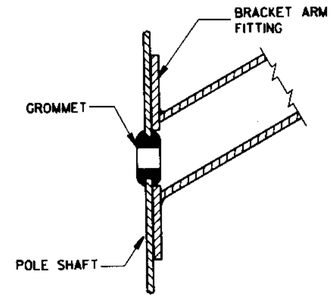
RECTANGULAR CLAMP SHIM

(4 TO A SET)

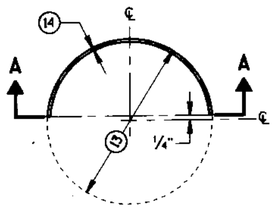


TYPICAL TROMBONE MAST ARM AND LUMINAIRE MAST ARM MOUNTING CLAMP

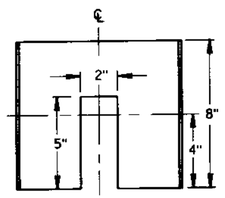




TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



PLAN VIEW



SECTION A-A

CIRCULAR CLAMP SHIM

(2 TO A SET)

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 11" 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".

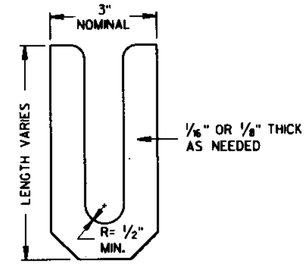
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

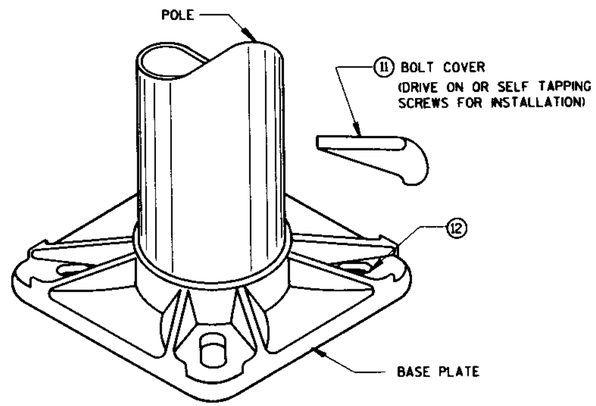
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(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.

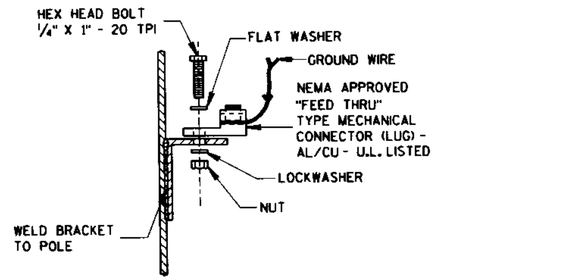
SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



LEVELING SHIM (15)

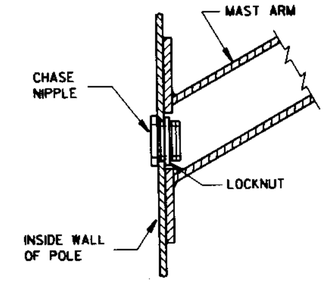


BASE PLATE

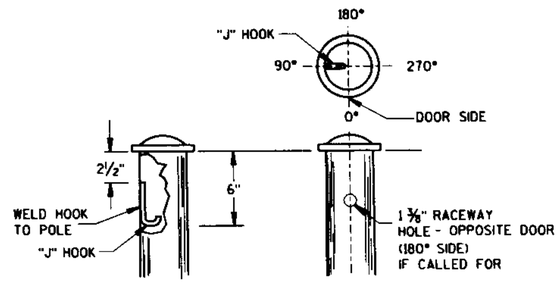


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT



TYPICAL "J" HOOK LOCATION

NOTE:

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

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

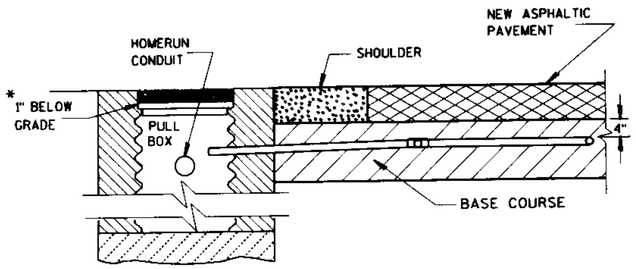
4/21/93 DATE — STATE ELECTRICAL ENGR FOR HWYS

4/21/93 DATE — STATE TRAFFIC ENGINEER FOR HWYS

FHWA

S.D.D. 9 E 1-1e

S.D.D. 9 E 1-1e

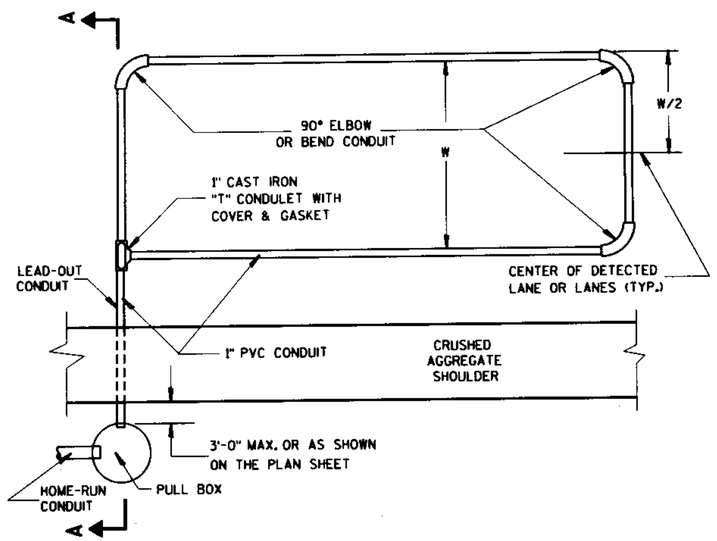


SECTION A-A

NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFINITY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1 MEGOHM AND AN INPUT RESISTANCE OF 11 MEGOHMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TURNS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

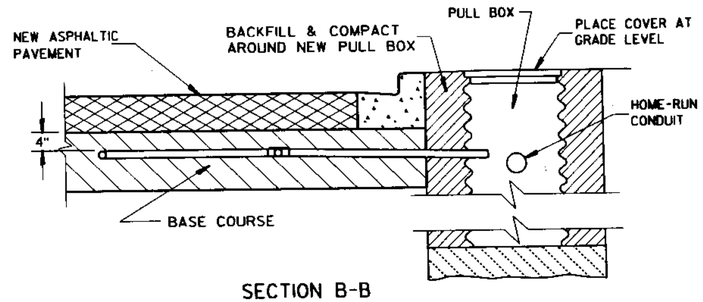
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE, PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT SHALL BE SEALED AS STATED IN THE SPECIAL PROVISIONS.

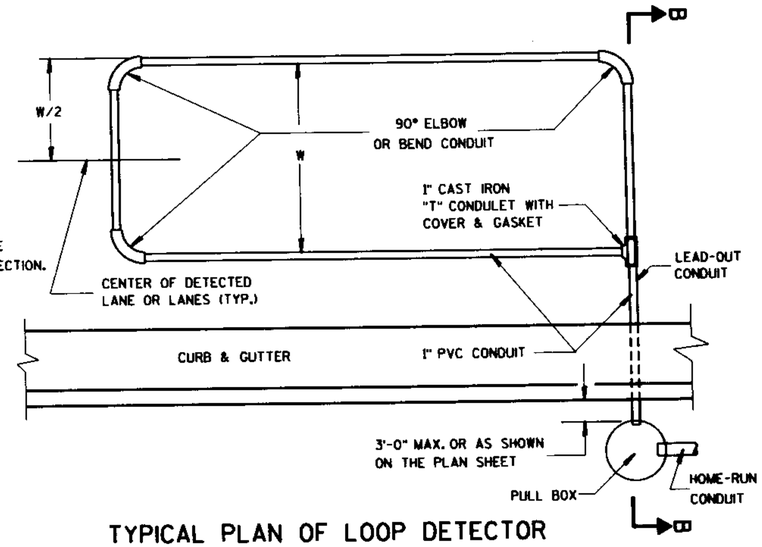
DRIVE A 1½" MAX. PK NAIL INTO THE NEW ASPHALTIC PAVEMENT AND DIRECTLY ABOVE THE CONDULET AFTER THE FINAL LAYER OF NEW ASPHALTIC PAVEMENT IS COMPLETELY INSTALLED, IF REQUIRED BY THE DISTRICT TRAFFIC SECTION.



SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

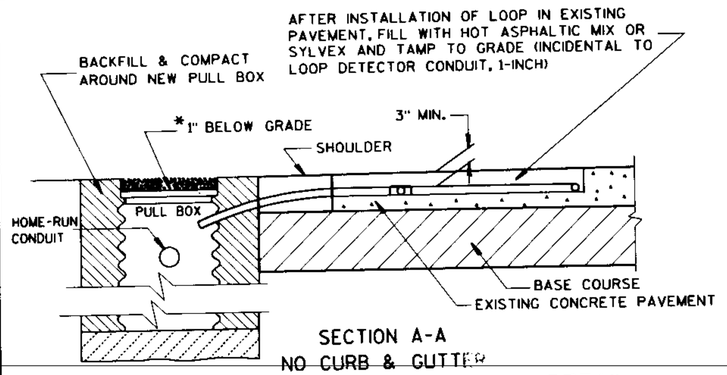
4/21/93 DATE — STATE ELECTRICAL ENGR FOR HWYS

4/21/93 DATE — STATE TRAFFIC ENGINEER FOR HWYS

FHWA

S.D.D. 9 F 8-1

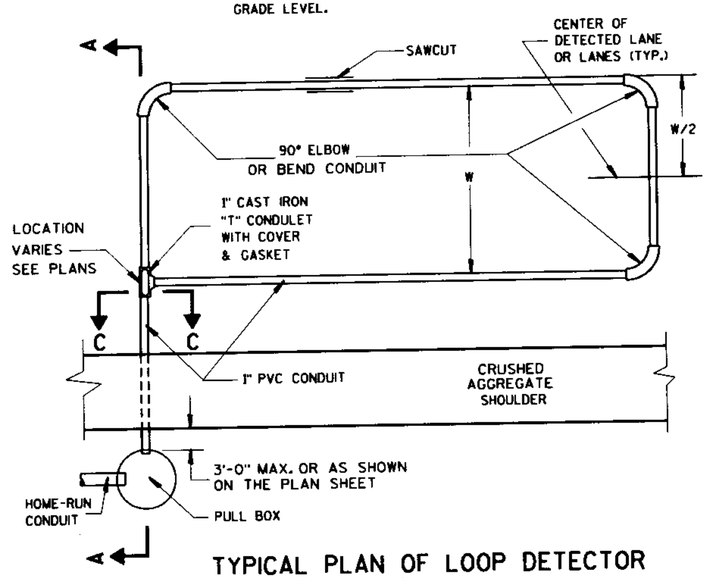
S.D.D. 9 F 8-1



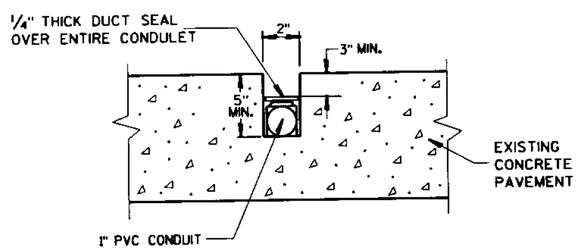
SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

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PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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IN THE EVENT EPOXY IS USED AS A LOOP SLOT FILLER, THE SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

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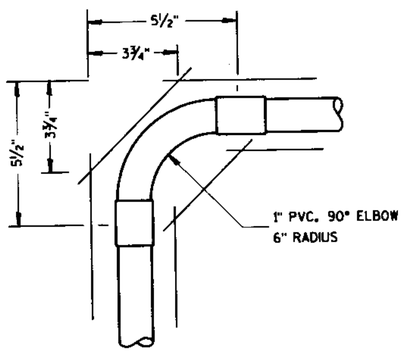
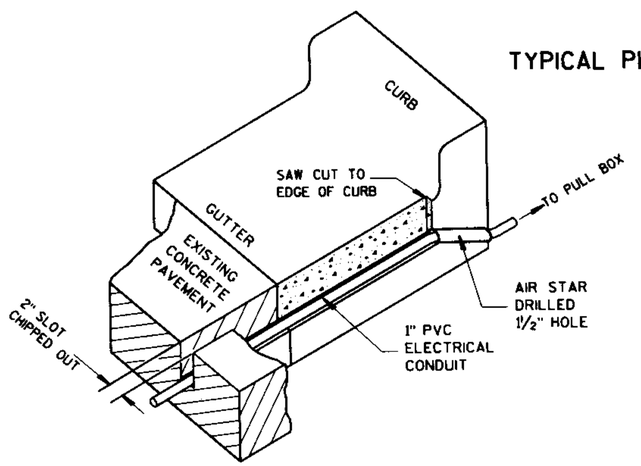
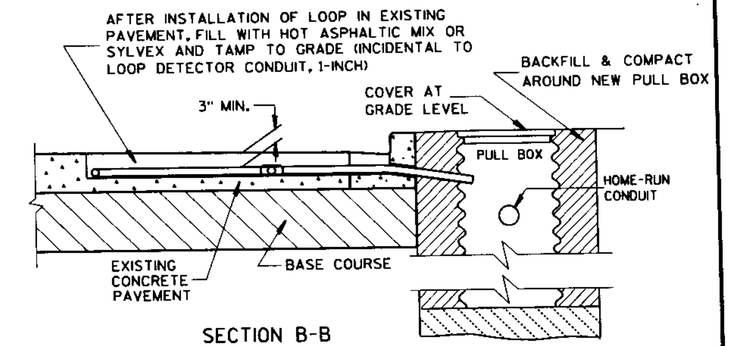


TOP VIEW
CORNER SAW SLOT DETAIL



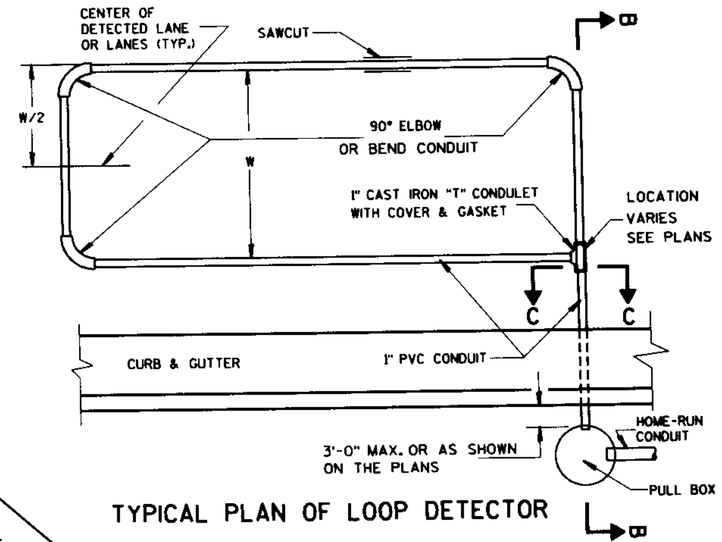
ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/21/93 — STATE ELECTRICAL ENGR FOR HWYS
DATE

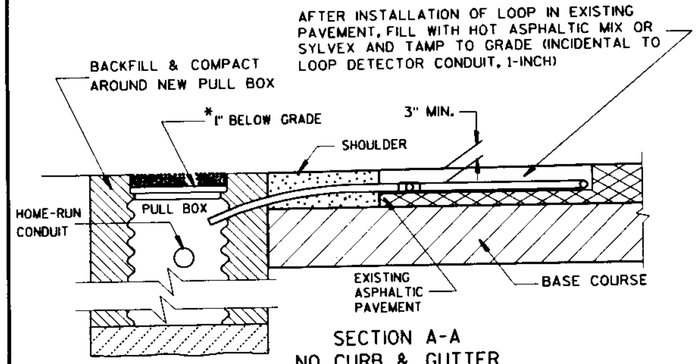
4/21/93 — STATE TRAFFIC ENGINEER FOR HWYS
DATE

FHWA

S.D.D. 9 F 12-1

S.D.D. 9 F 12-1

6.10



SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

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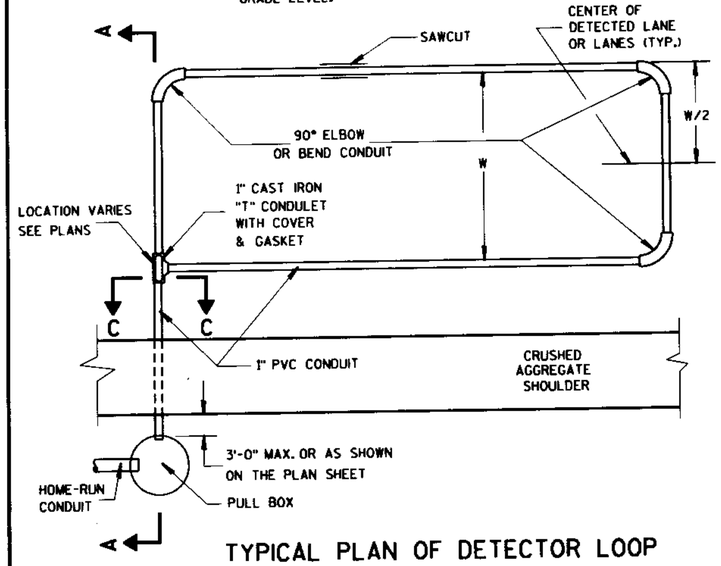

TYPICAL PLAN OF DETECTOR LOOP

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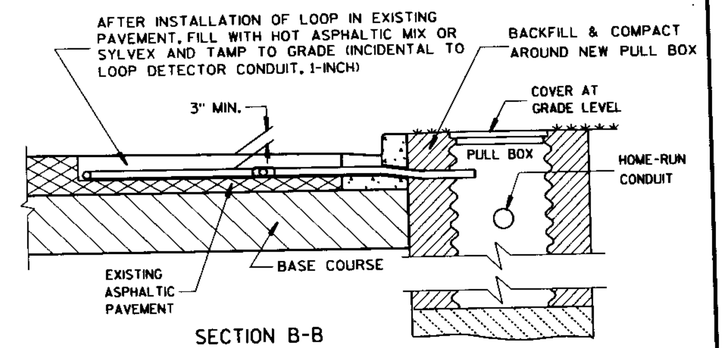
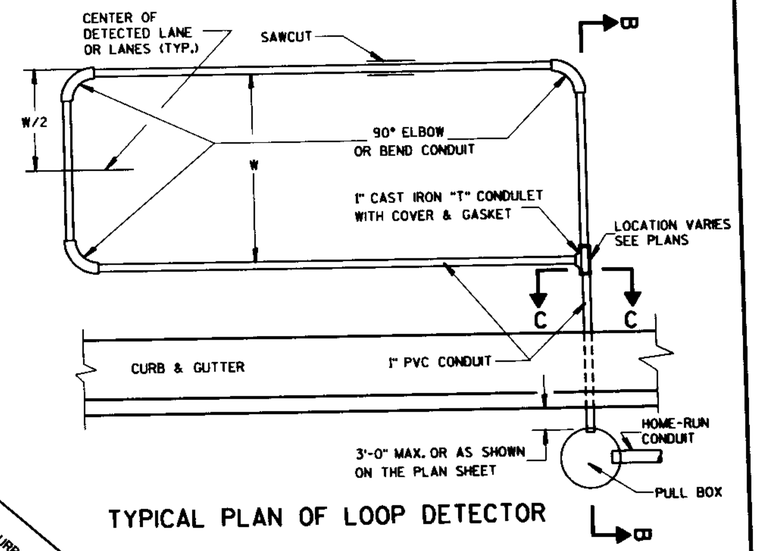
IN THE EVENT THAT THE EXISTING PAVEMENT IS MORE THAN 5 INCHES THICK, AND THEREFORE , THE 1 INCH CONDUIT DOES NOT REQUIRE INSTALLATION BELOW THE PAVEMENT INTO THE BASE COURSE, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY ½ INCH BEFORE INSTALLATION OF THE CONDUIT. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

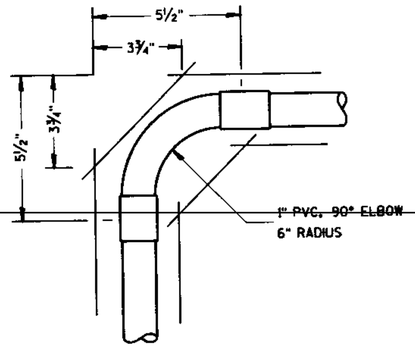


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

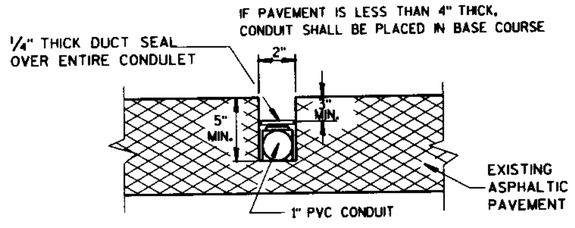


TYPICAL PLAN OF LOOP DETECTOR



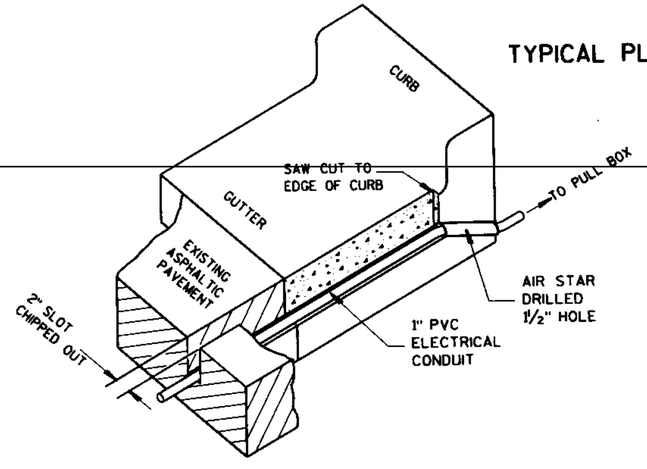
TOP VIEW

CORNER SAW SLOT DETAIL



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL



ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT

LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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