



CITY OF DETROIT PAY ITEMS FOR PAVEMENT MARKING

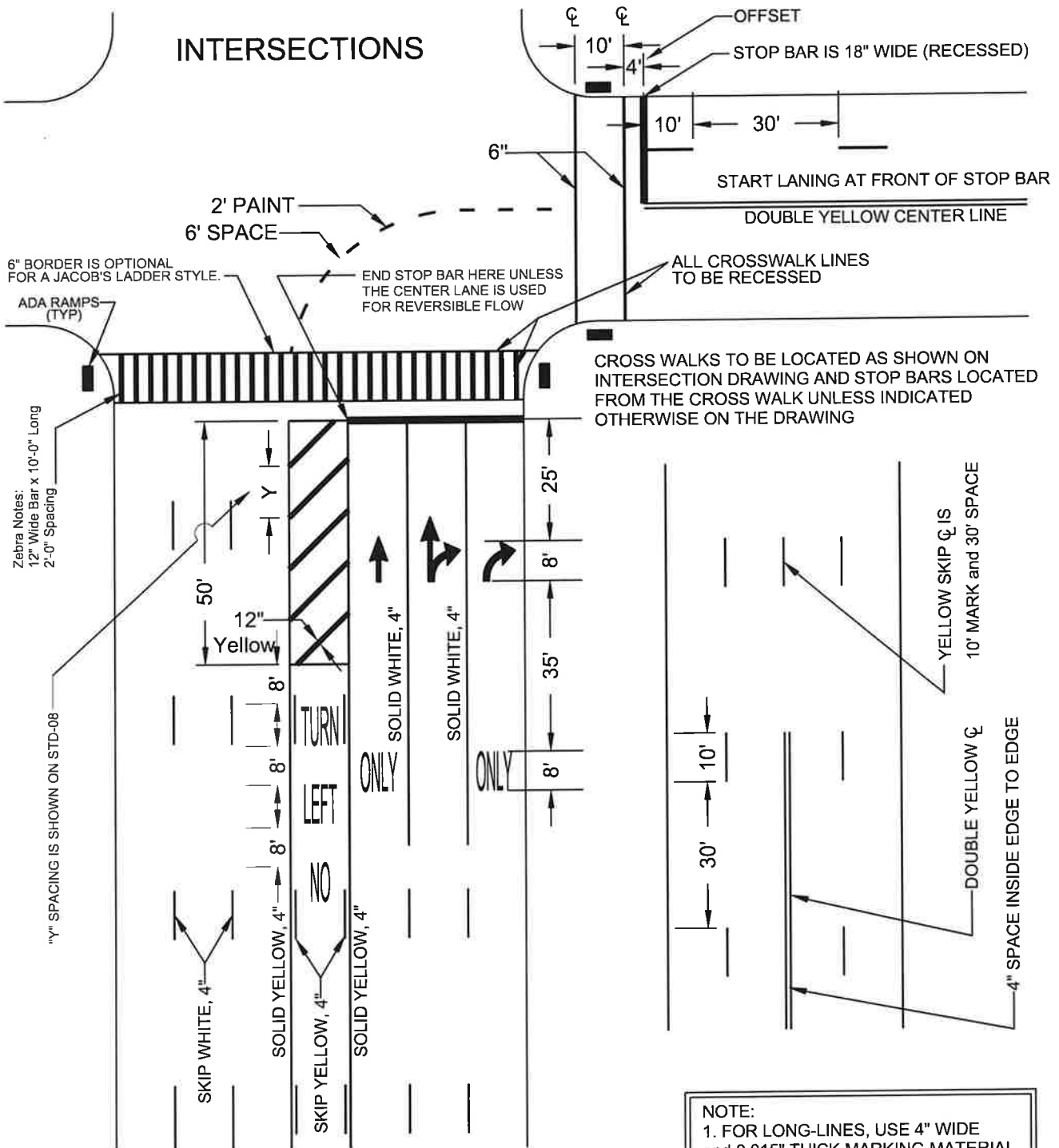
Line	Specs Year	Pay Item	Description	Units
1	2020	1100001	Mobilization, Max	LSUM
2	2020	8110091	Pavt Mrkg, Polyurea, 4 inch, White	Ft
3	2020	8110092	Pavt Mrkg, Polyurea, 4 inch, Yellow	Ft
4	2020	8110093	Pavt Mrkg, Polyurea, 6 inch, Crosswalk	Ft
5	2020	8110105	Pavt Mrkg, Polyurea, Bike, Small Sym	Ea
6	2020	8110108	Pavt Mrkg, Polyurea, 12 inch, Cross Hatching, White	Ft
7	2020	8110109	Pavt Mrkg, Polyurea, 12 inch, Cross Hatching, Yellow	Ft
8	2020	8110110	Pavt Mrkg, Polyurea, 12 inch, Crosswalk	Ft
9	2020	8110110	Pavt Mrkg, Polyurea, 12 inch, Crosswalk	Ft
10	2020	8110113	Pavt Mrkg, Polyurea, 18 inch, Stop Bar	Ft
11	2020	8110114	Pavt Mrkg, Polyurea, 24 inch, Stop Bar	Ft
12	2020	8110115	Pavt Mrkg, Polyurea, Sharrow Sym	Ea
13	2020	8110153	Pavt Mrkg, Sprayable Thermopl, 4 inch, White	Ft
14	2020	8110154	Pavt Mrkg, Sprayable Thermopl, 4 inch, Yellow	Ft
15	2020	8110155	Pavt Mrkg, Sprayable Thermopl, 6 inch, White	Ft
16	2020	8110159	Pavt Mrkg, Sprayable Thermopl, 12 inch, White	Ft
17	2020	8110343	Rem Spec Mrkg	Sft
18	2020	8110400	Pavt Mrkg, Polyurea, Bus	Ea
19	2020	8110404	Pavt Mrkg, Polyurea, Rt and Lt Turn Arrow Sym	Ea
20	2020	8110405	Pavt Mrkg, Polyurea, Lt Turn Arrow Sym	Ea
21	2020	8110410	Pavt Mrkg, Polyurea, Only	Ea
22	2020	8110411	Pavt Mrkg, Polyurea, Railroad Sym	Ea
23	2020	8110412	Pavt Mrkg, Polyurea, Rt Turn Arrow Sym	Ea
24	2020	8110415	Pavt Mrkg, Polyurea, Stop	Ea
25	2020	8110416	Pavt Mrkg, Polyurea, Thru and Lt Turn Arrow Sym	Ea
26	2020	8110417	Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Sym	Ea
27	2020	8110418	Pavt Mrkg, Polyurea, Thru Arrow Sym	Ea
28	2020	8112159	Scarification, for Polyurea Spec Mrkg	Sft
29	2020	8112170	Pavt Mrkg, Polyurea, Bike Thru Arrow Sym	Ea
30	2020	8112173	Pavt Mrkg, Polyurea, Yield Triangle Sym	Ea
31	2020	8117001	_Pavt Mrkg, Waterborne, Curb, 12 inch	Ft



CITY OF DETROIT PAY ITEMS FOR PAVEMENT MARKING

32	2020	8117010	_Recessing Pavt Mrkg, Transv, Modified	Sft
33	2020	8117010	_Pavt Mrkg, Polymer Cement, Base Field, Green	Sft
34	2020	8117010	_Pavt Mrkg, Polymer Cement, Base Field, Red	Sft
35	2020	8117050	_Pavt Mrkg, Polymer Cement, Bike Directional Arrow, White	Ea
36	2020	8117050	_Pavt Mrkg, Polymer Cement, Bike Sharrow Sym, White	Ea
37	2020	8117050	_Pavt Mrkg, Polymer Cement, Bike Sym, Small, White	Ea
38	2020	8117050	_Pavt Mrkg, Polyurea, No Left Turn Legend	Ea
39	2020	8117050	_Pavt Mrkg, Polyurea, Speed Hump Sym	Ea
40	2020	8120140	Lighted Arrow, Type C, Furn	Ea
41	2020	8120141	Lighted Arrow, Type C, Oper	Ea
42	2020	8120170	Minor Traf Devices	LSUM
43	2020	8120210	Pavt Mrkg, Longit, 6 inch or Less Width, Rem	Ft
44	2020	8120350	Sign, Type B, Temp, Prismatic, Furn	Sft
45	2020	8120351	Sign, Type B, Temp, Prismatic, Oper	Sft

INTERSECTIONS



NOTES:

- DO NOT VARY DETAIL STANDARDS UNLESS APPROVED BY A TRAFFIC ENGINEERING REPRESENTATIVE
- ALL CROSSWALKS AND STOP BARS SHALL BE RECESSED

NOTE:

- FOR LONG-LINES, USE 4" WIDE and 0.015" THICK MARKING MATERIAL
- ALL PAINT IS WHITE UNLESS SPECIFIED OTHERWISE
- ALL CL ARE YELLOW

APPROVED BY:

J. F. Lind

DRAWN : A.D. BOLTON
 SCALE : 1" = 30'
 DATE : 08 - 04 - 2020

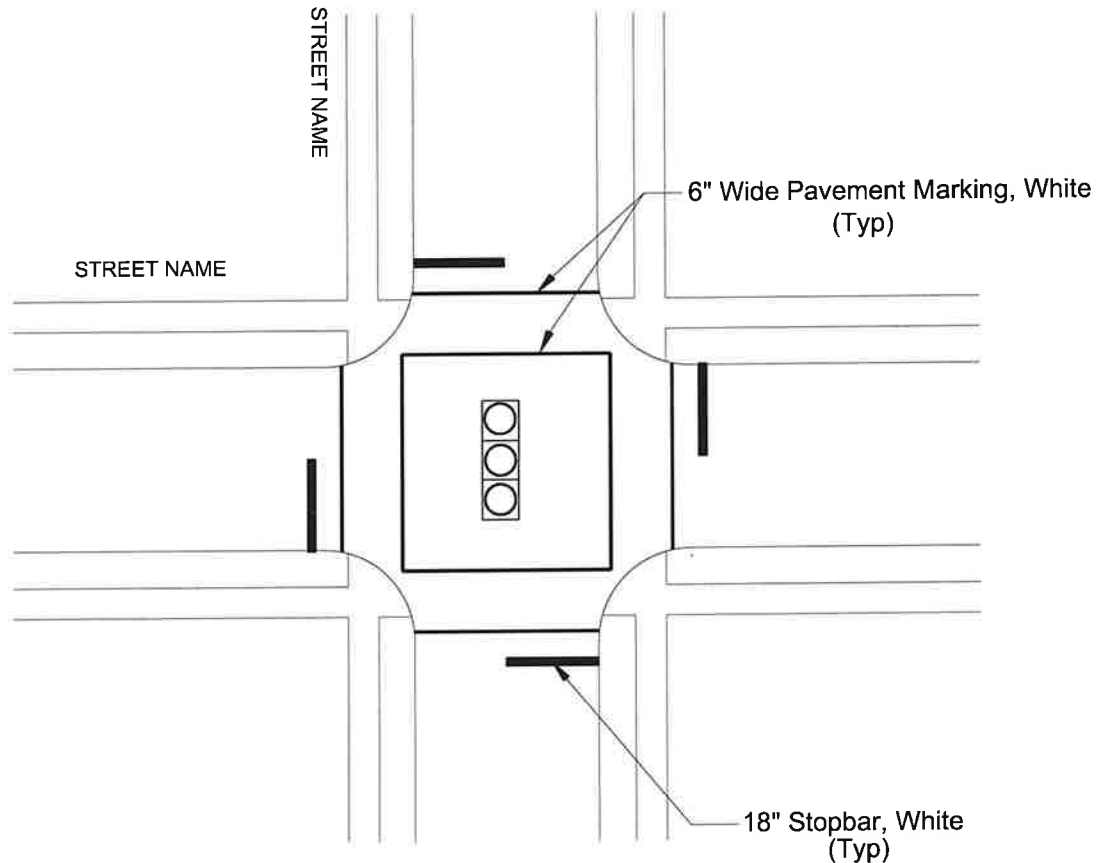
NO. STD-01

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
 TRAFFIC ENGINEERING DIVISION

FIELD MARKING
 STANDARDS

Basic 6" BORDER CROSSWALK



For Signal Controlled Intersections
Which Do Not Meet Zebra Crosswalk criteria
Listed On STD-03

APPROVED BY:

J. Flint

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

CROSSWALKS

FIELD MARKING
STANDARDS

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-02

ZEBRA CROSSWALK - 12" BANDS

Install Zebra Crosswalk When:

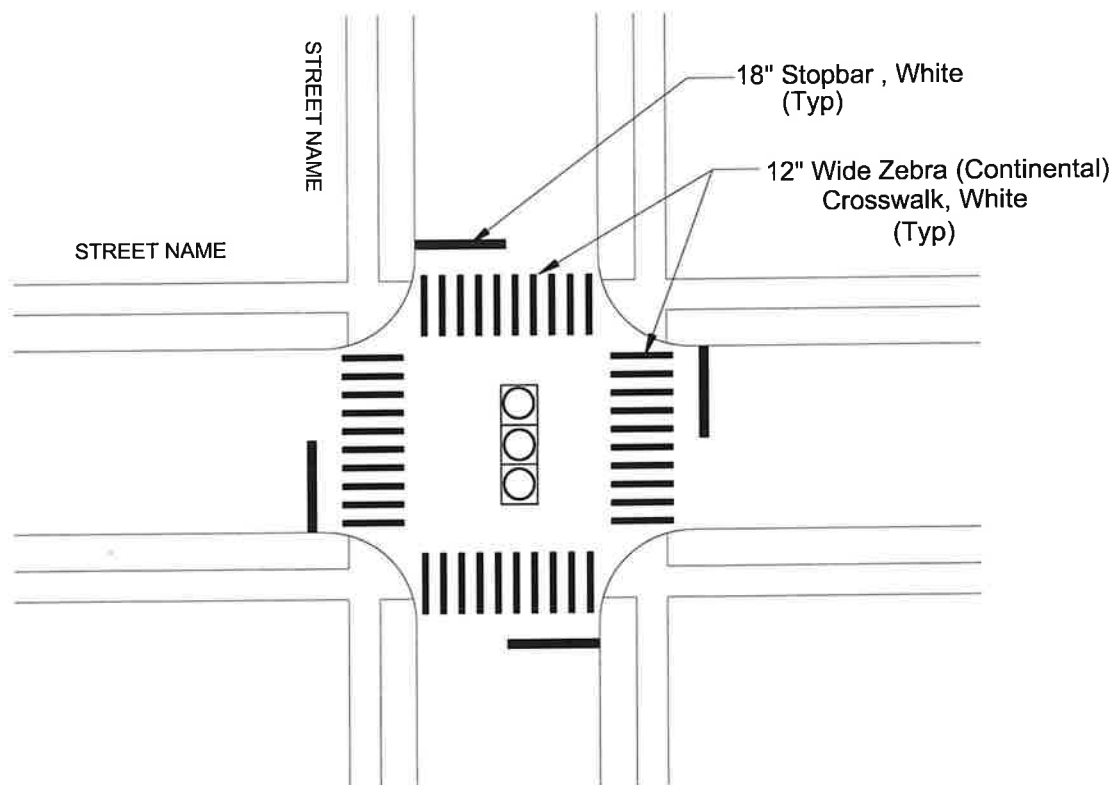
Minimum Pedestrian Volume Thresholds Per MDOT Guidelines

- 1) 20 pedestrians* per hour, in any one hour, or
- 2) 18 pedestrians* per hour, in any two hours, or
- 3) 15 pedestrians* per hour, in any three hours or
- 4) 10 school age (grades K-12) pedestrians per hour, traveling to or from school, where the crossing is a designated school walking route.

Notes:

Counts are per direction, e.g. East / West or North / South

* Young, elderly, and disabled persons count double



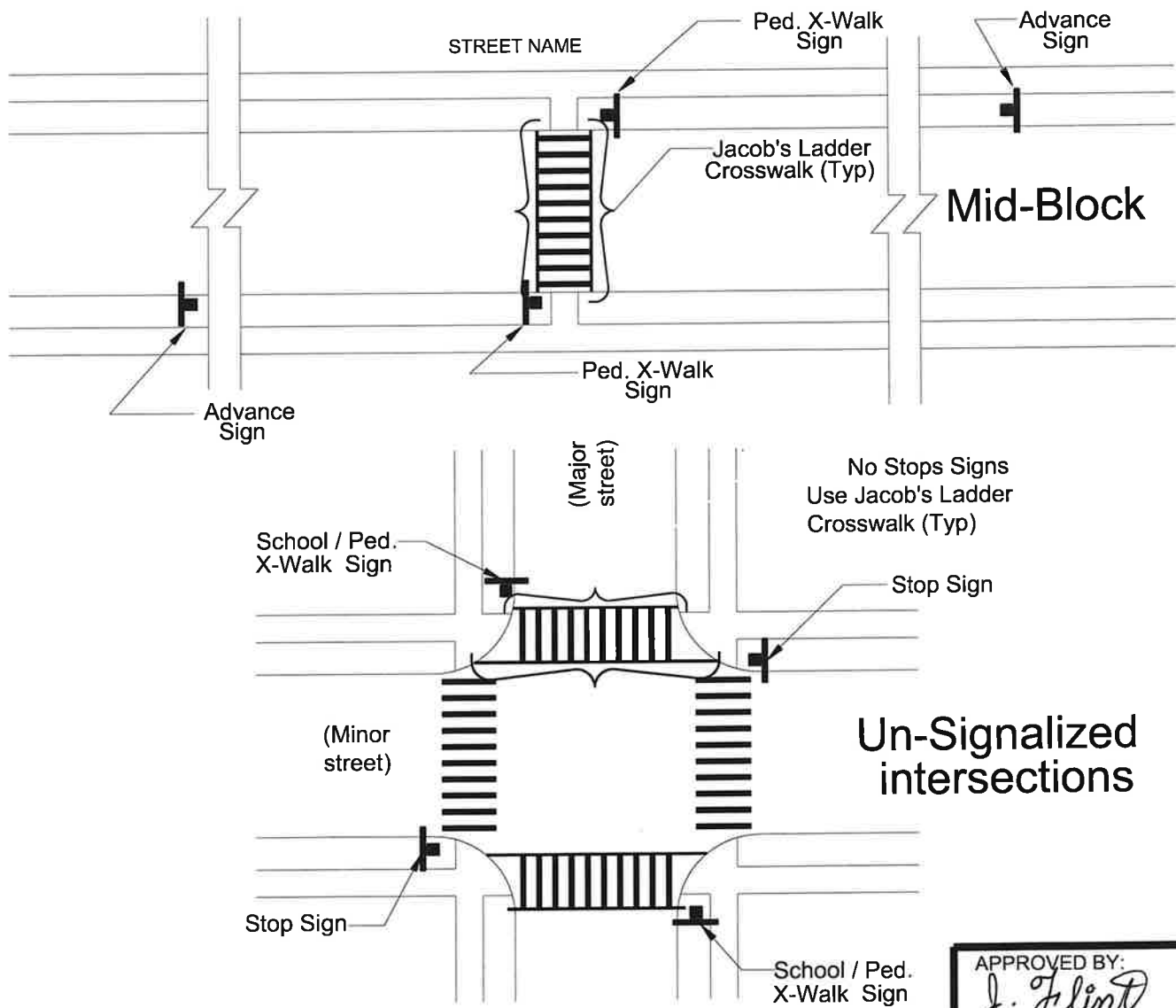
Note: Select Crosswalk Type According To Pedestrian Demand

CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS TRAFFIC ENGINEERING DIVISION	CROSSWALKS	APPROVED BY: <i>J. Flint</i> DRAWN : A.D. BOLTON SCALE : 1" = 30' DATE : 08 - 04 - 2020
	FIELD MARKING STANDARDS	
		NO. STD-03

CROSSWALKS AT UNSIGNALIZED LOCATIONS JACOB'S LADDER

For Minor and Major Collector Roads and also at Intersections Adjacent to Schools
Install a Zebra Crosswalk if it meets the following criteria:

- 1) The pedestrian volume exceeds the minimum threshold. see STD-03
- 2) It is at least 300 feet from the nearest crossing or
- 3) 200 feet from the nearest crossing, when the block is only 400 feet long, or
- 4) A crossing is needed for a shared-use path



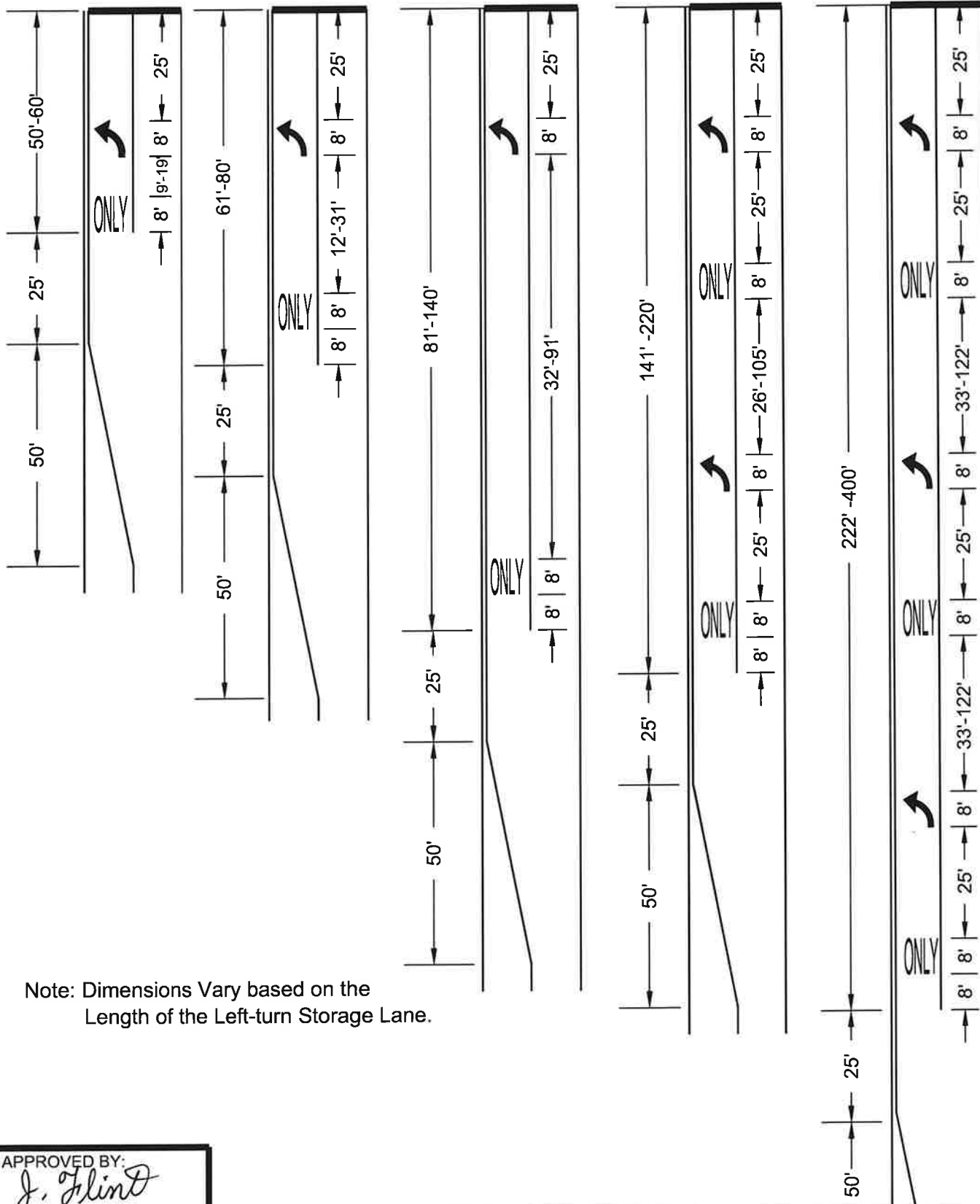
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

**CROSSWALKS
FIELD MARKING
STANDARDS**

APPROVED BY:
J. Flint

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-04



Note: Dimensions Vary based on the Length of the Left-turn Storage Lane.

APPROVED BY:

J. Flint

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TRAFFIC ENGINEERING DIVISION

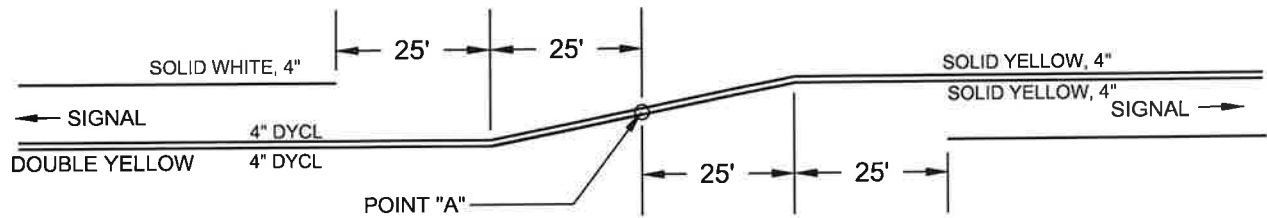
LEFT TURN STORAGE LANES

FIELD MARKING
STANDARDS

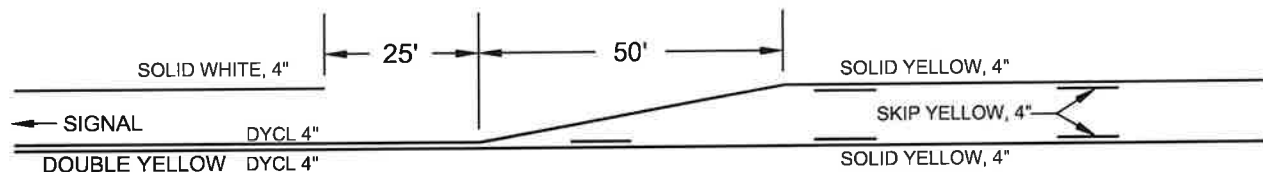
DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-05

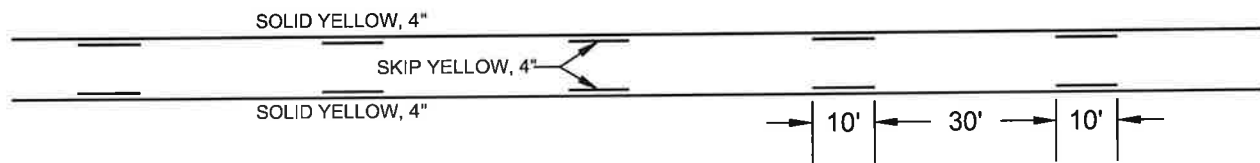
CENTER LEFT TURN LANE CROSSOVER DETAILS



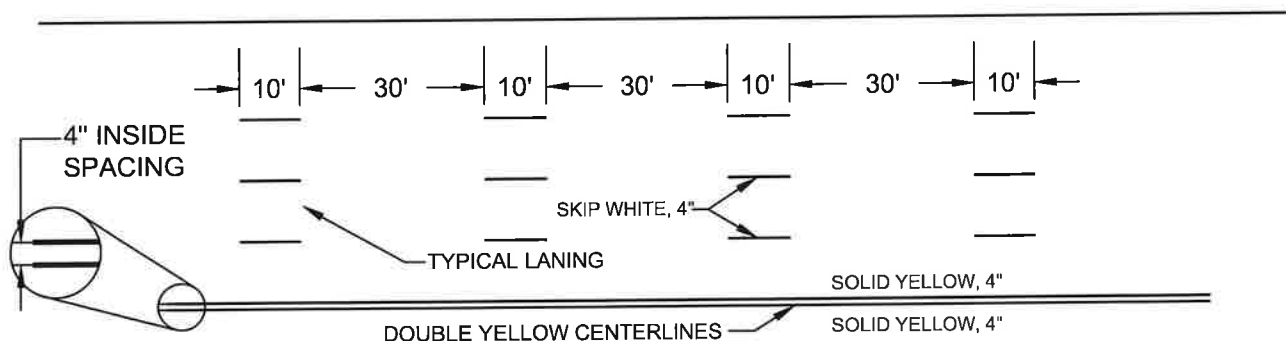
BETWEEN TWO SIGNALIZED INTERSECTIONS



BETWEEN SIGNALIZED AND NON-SIGNALIZED INTERSECTIONS



BETWEEN TWO NON-SIGNALIZED INTERSECTIONS



DETAILS

NOTE:
POINT "A" IS LOCATED MID - BLOCK UNLESS OTHERWISE NOTED.
ALL LANE LINES AND CENTERLINES BEGIN OR END AT FRONT OF
INTERSECTIONAL STOP BARS UNLESS OTHERWISE NOTED.

APPROVED BY:

J. Flind

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

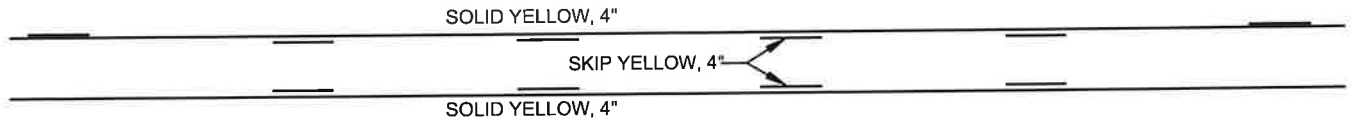
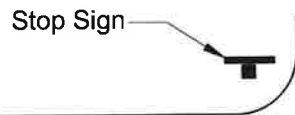
CITY OF DETROIT

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TRAFFIC ENGINEERING DIVISION

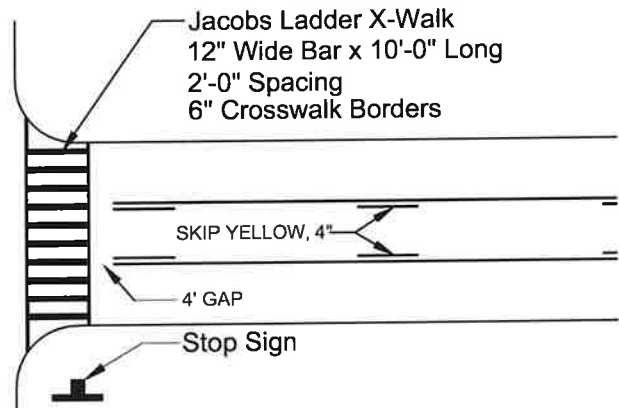
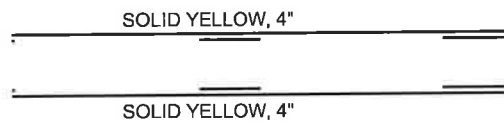
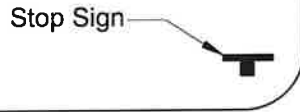
FIELD MARKING
STANDARDS

NO. STD-06

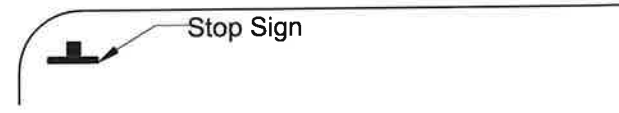
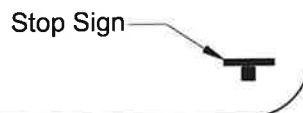
PAVEMENT MARKING AT STOP CONTROLLED INTERSECTIONS



TWO - WAY LEFT-TURN LANE MARKING



TWO - WAY LEFT-TURN LANE MARKING WITH Jacob's Ladder CROSSWALK



DOUBLE YELLOW LINES

APPROVED BY:

J. Flint

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-07

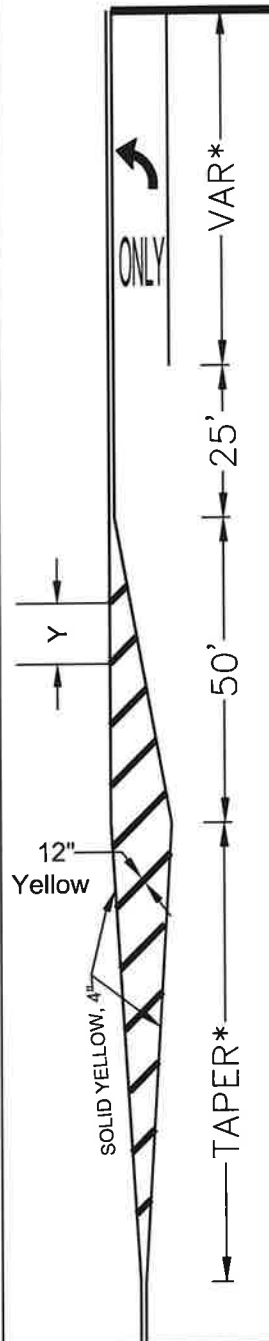
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKING
STANDARDS

TAPER EXAMPLE LEFT TURN LANE

POSTED SPEED LIMIT (MPH)	"Y" FT *
30 OR LESS	10
35-40	20
45	30

* Except where noted on plan



Note:
TAPER*: For Taper length, refer to STD-09
VAR*: The length of storage for left turn
Lanes is shown by STD-05

APPROVED BY:

J. J. J.

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-08

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKING
STANDARDS

TAPER LENGTH TABLE

Length, "L"

SPEED (mph)	15	20	25	30	35	40	45
Offset (ft)							
1	4	7	10	15	20	27	45
2	8	13	21	30	41	53	90
3	11	20	31	45	61	80	135
4	15	27	42	60	82	107	180
5	19	33	52	75	102	133	225
6	23	40	63	90	123	160	270
7	26	47	73	105	143	187	315
8	30	53	83	120	163	213	360
9	34	60	94	135	184	240	405
10	38	67	104	150	204	267	450
11	41	73	115	165	225	293	495
12	45	80	125	180	245	320	540
13	49	87	135	195	265	347	585
14	53	93	146	210	286	373	630
15	56	100	156	225	306	400	675
16	60	107	167	240	327	427	720
17	64	113	177	255	347	453	765
18	68	120	188	270	368	480	810
19	71	127	198	285	388	507	855
20	75	133	208	300	408	533	900
21	79	140	219	315	429	560	945
22	83	147	229	330	449	587	990
23	86	153	240	345	470	613	1,035
24	90	160	250	360	490	640	1,080

$$S \leq 40 \text{ mph } L = \frac{W \cdot S^2}{60}$$

$$S \geq 45 \text{ mph } L = S \cdot W$$

Where L=Taper Length in feet
W = width of offset in feet
S = posted speed limit, or off-peak
85th-percentile speed prior to
work starting, or the anticipated
operating speed in mph

APPROVED BY:

J. Flinn

DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

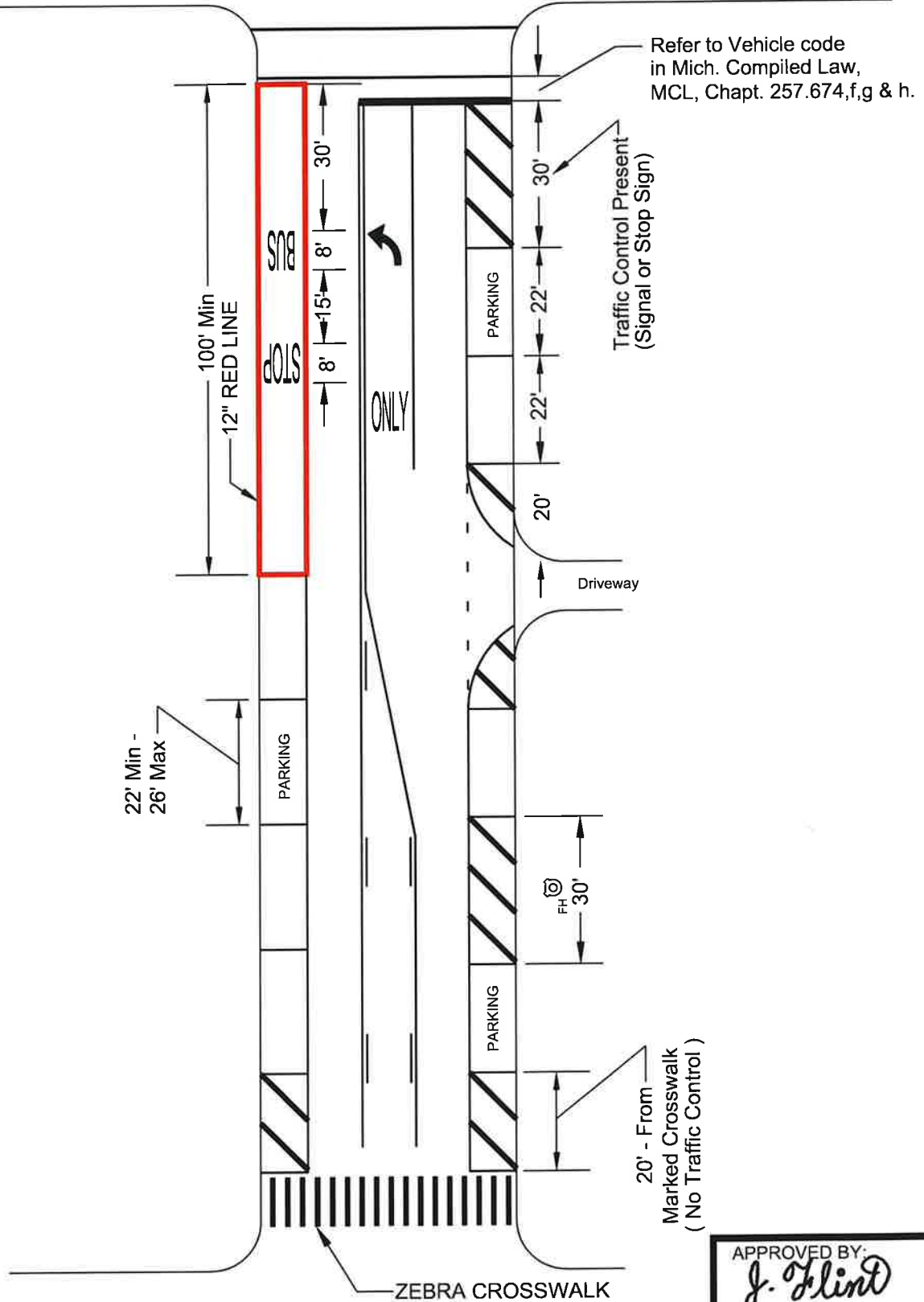
NO. STD-09

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKING
STANDARDS

TYPICAL PARKING LAYOUT



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKING STANDARDS

APPROVED BY:

J. Flint

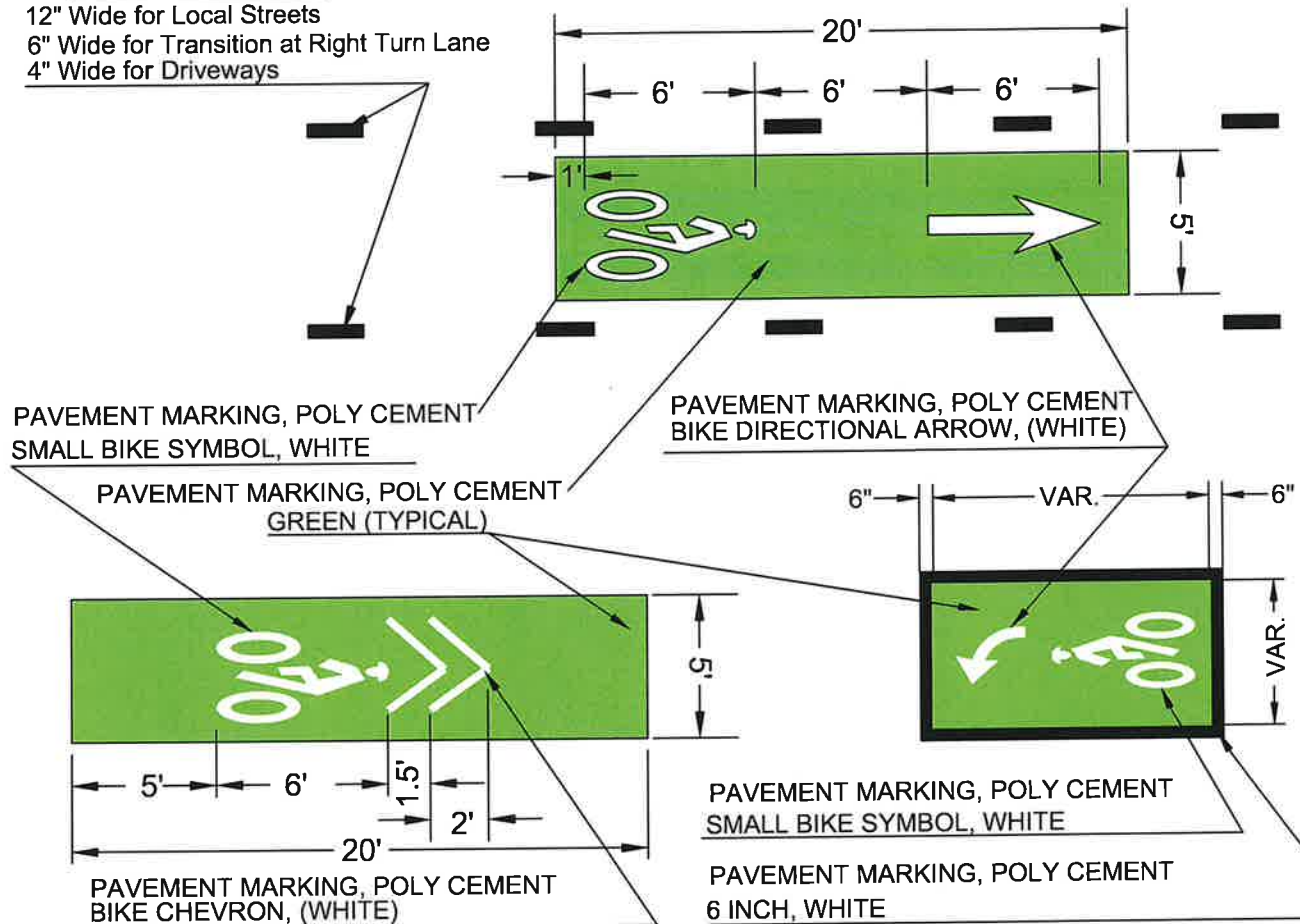
DRAWN : A.D. BOLTON
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-10

PROTECTED BIKE LANE MARKINGS, SHT. 1

DOTTED WHITE
(2ft Solid + 6ft Gap)

12" Wide for Local Streets
6" Wide for Transition at Right Turn Lane
4" Wide for Driveways



Green:
Protected Bike Lanes Only

5 ft DOTTED Green
(2 ft solid + 6 ft Gap)

12" DOTTED WHITE
(2 ft solid + 6 ft Gap)

Note:
Non-Protected Bike-Lane
has no green marks.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

**FIELD MARKING
STANDARDS**

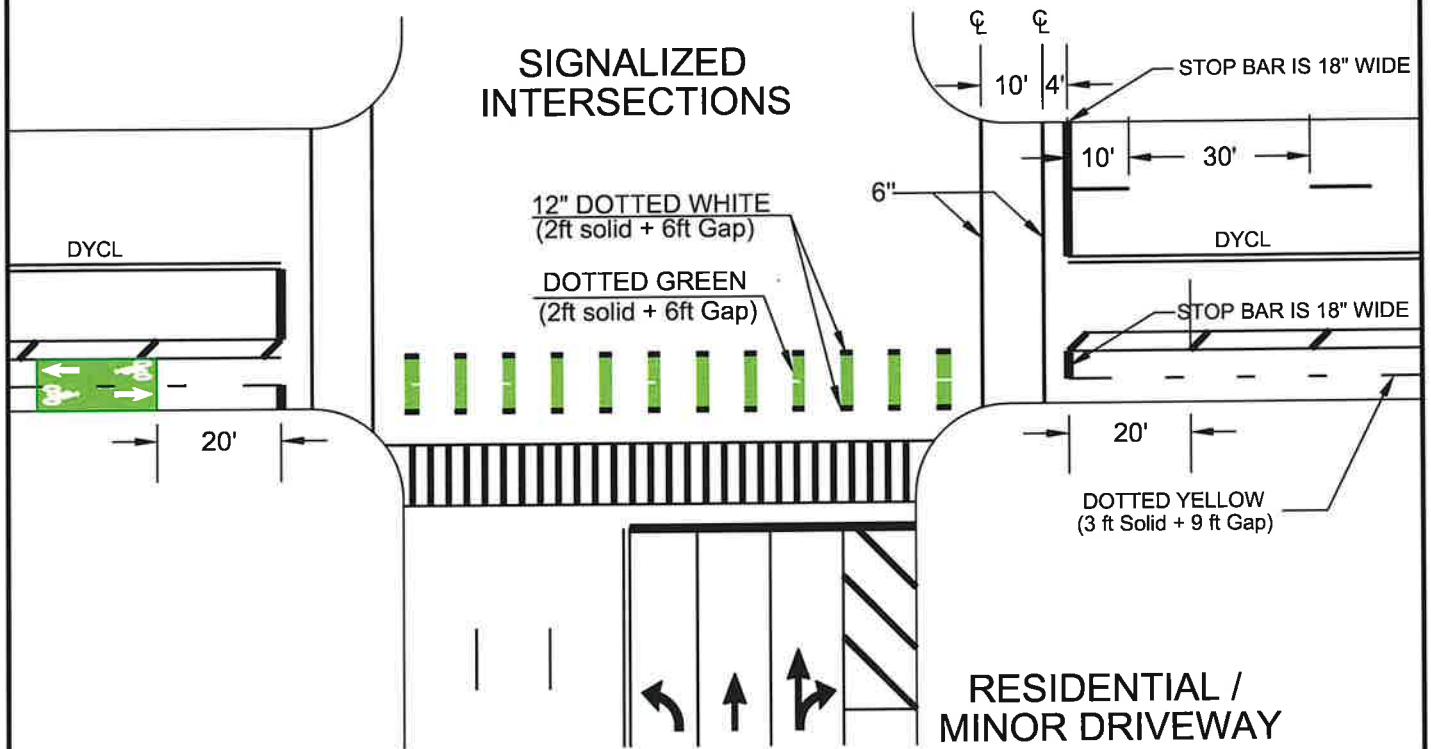
APPROVED BY:

J. Flint

DRAWN : DUC DUONG
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

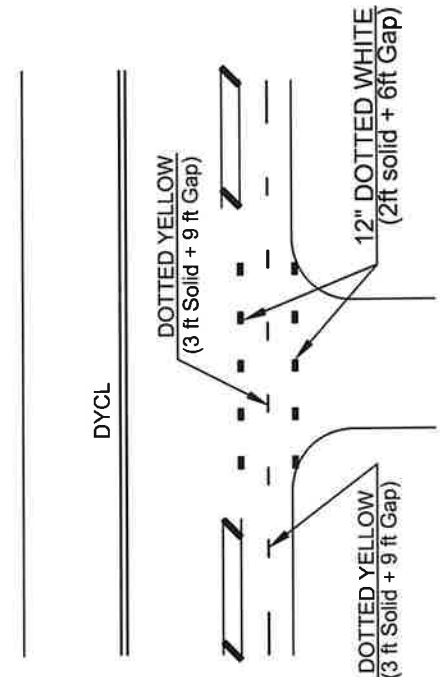
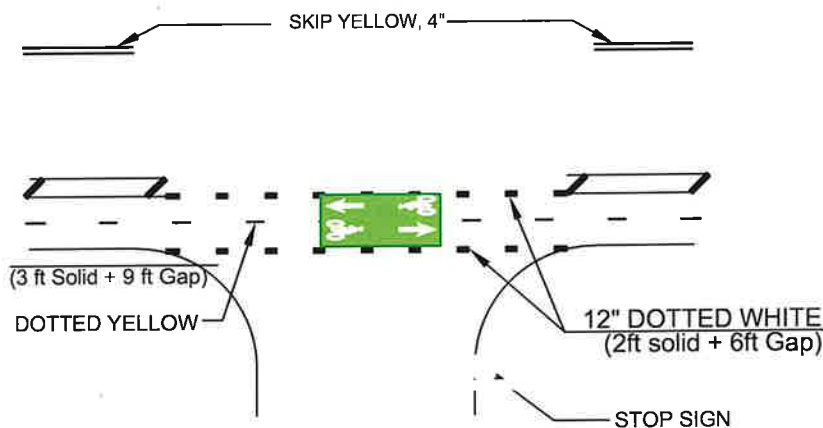
NO. STD-11

PROTECTED BIKE LANE MARKINGS, SHT. 2



NOTE:
DO NOT VARY DETAIL STANDARDS UNLESS
APPROVED BY A TRAFFIC ENGINEERING
REPRESENTATIVE

LOCAL STREET/ MAJOR DRIVEWAY



APPROVED BY:

J. Flint

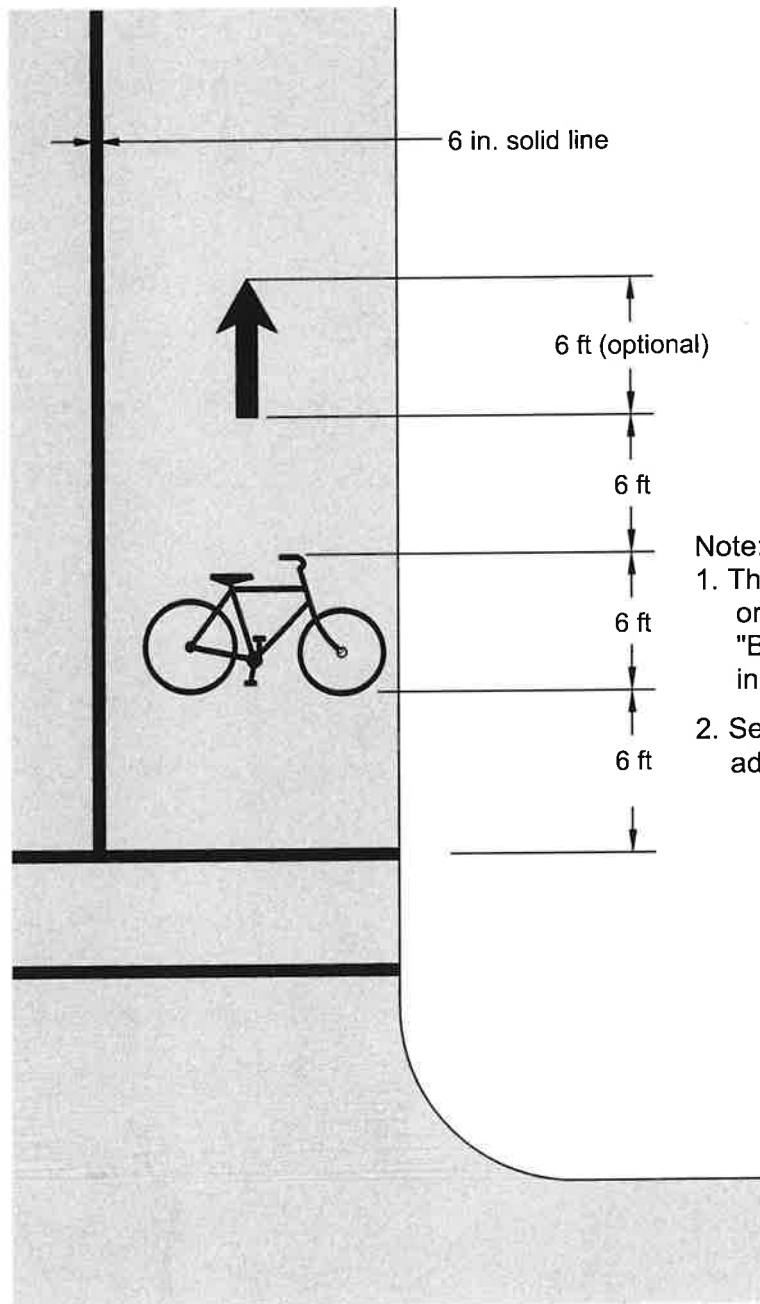
DRAWN : DUC DUONG
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO. STD-12

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

**FIELD MARKING
STANDARDS**

TYPICAL BIKE LANE MARKING ON FAR SIDE OF INTERSECTION



Note:

1. The bicycle rider symbol or the word pavement marking "BIKE LANE" may be used instead of the bicycle-only symbol.
2. See NMS-003 and NMS-007 for additional information.

APPROVED BY:

J. Flint

DRAWN : A.D.BOLTON
SCALE : N.T.S
DATE : 08 - 04 - 2020

NO. STD-13

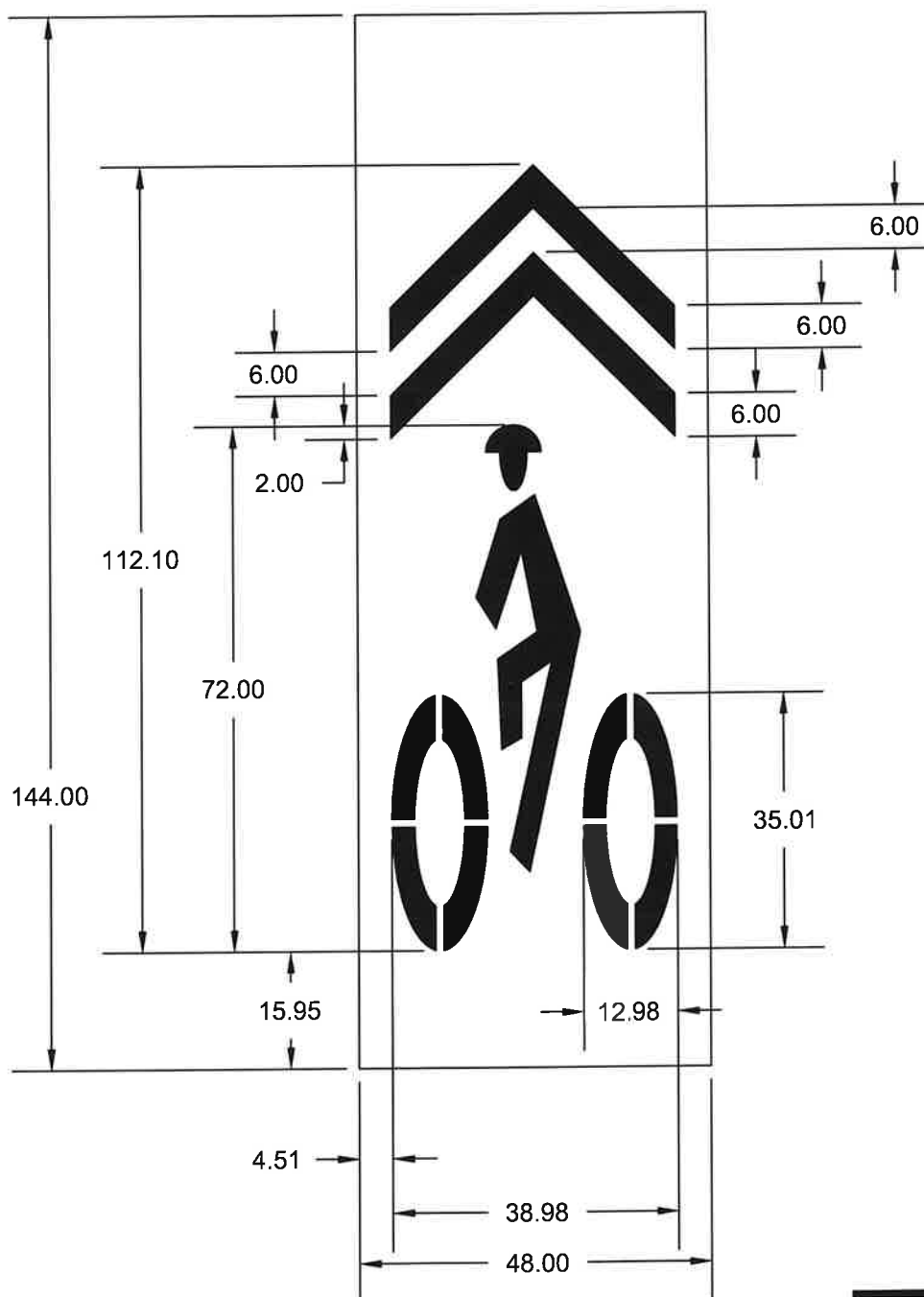
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKINGS
MISCELLANEOUS
DETAILS

BIKE LANING MARKINGS

SHARROW SYMBOL

NON MOTORIZED STANDARD



APPROVED BY:

J. Flint

DRAWN : A.D. BOLTON
SCALE : N.T.S.
DATE : 01 - 10 - 2014

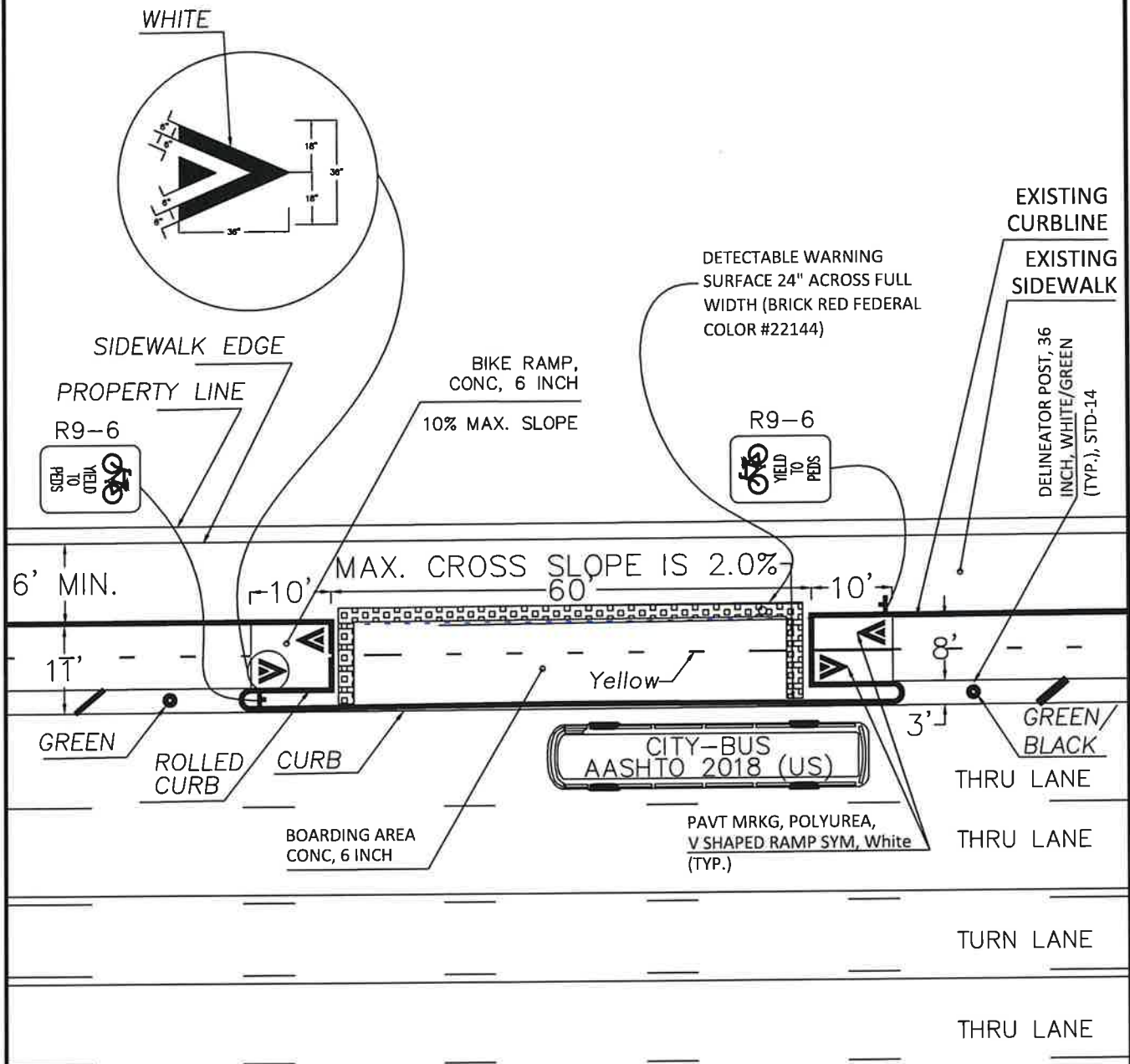
NO. STD-14

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKINGS
MISCELLANEOUS
DETAILS

CURBSIDE TRANSIT WITH INTEGRATED CYCLE TRACK



NOTES:

1. The engineer will designate in the field, prior to construction, the locations of new drainage structures at proposed bulb-out bus stops.
2. Proposed sidewalk, sidewalk ramps or curb / curb and gutter to be placed in accordance with MDOT standard details plans R-28-series and R-30-series.
3. Do not vary unless approved by the engineer of signs and markings.

APPROVED BY:

J. Flint

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

**FIELD MARKINGS
MISCELLANEOUS
DETAILS**

DRAWN : DUC DUONG
SCALE : 1" = 20'
DATE : 08 - 13 - 2020

NO. STD-15

DELINEATOR POST

HIGH-PERFORMANCE SURFACE MOUNT POST

☒ SELECT DESIRED POST:

☒ EFX GRADE

☒ SPECIFY DESIRED HEIGHT:

☐ 18"

☒ 36"

☐ 24"

☐ 42"

☐ 28"

☐ 48"

☐ CUSTOM (SEE NOTE 4)

☒ SELECT DESIRED POST COLOR:

☒ WHITE

☒ YELLOW for Center-Lines

☒ SELECT DESIRED REFLECTIVE SHEETING:

☒ REFLEXITE AR 1000

☐ 3M HIGH INTENSITY GRADE

☐ 3M FHIP

☒ SELECT DESIRED SHEETING COLOR:

☒ CUSTOM (GREEN)

☒ YELLOW for Center-Lines

☒ SELECT DESIRED BASE

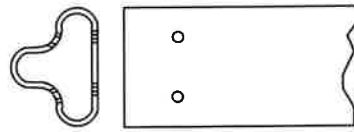
☐ 1 LB. LITE BASE - BLACK ONLY

☒ 1.5 LB. HEAVY DUTY BASE
- COLORS ONLY

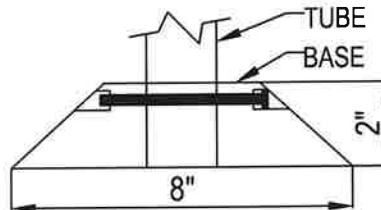
☐ 10 LB GREEN CROSS BASE

☐ INVISI-BASE (FLUSH MOUNT)

☐ METRO BASE



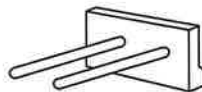
MATERIAL:
POLYURETHANE ALLOY



SECTION



QUICK RELEASE PINS

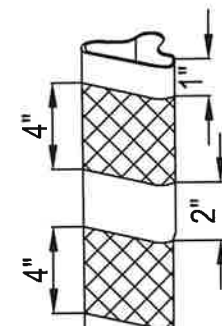
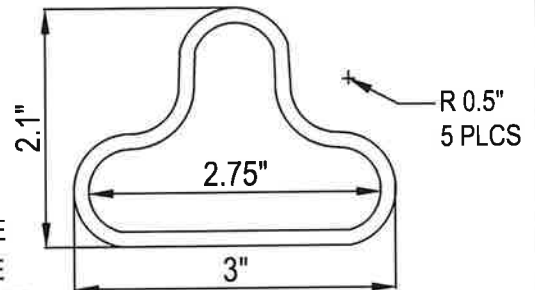


PIN REMOVAL TOOL

BASE OPTIONS:



1.5 LB HEAVY DUTY
BASE COLORS ONLY



TYPICAL POST
SHOWS REFLECTIVE TAPE

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DRAWING IS NOT TO SCALE

APPROVED BY:

J. H. Lind

DRAWN : DUC DUONG
SCALE : 1" = 30'
DATE : 08 - 04 - 2020

NO.: STD-16

CITY OF DETROIT

DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKINGS
MISCELLANEOUS
DETAILS

Post Type:	
X	With Cap
	Open Top

Post Colors:	
	(W) White
	(Y) Yellow
	(O) Orange
	(B) Black
X	(G) Green

Base Colors:	
	(W) White
	(Y) Yellow
	(O) Orange
	(B) Black
X	(G) Green

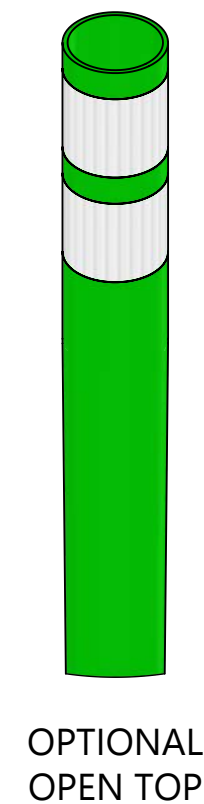
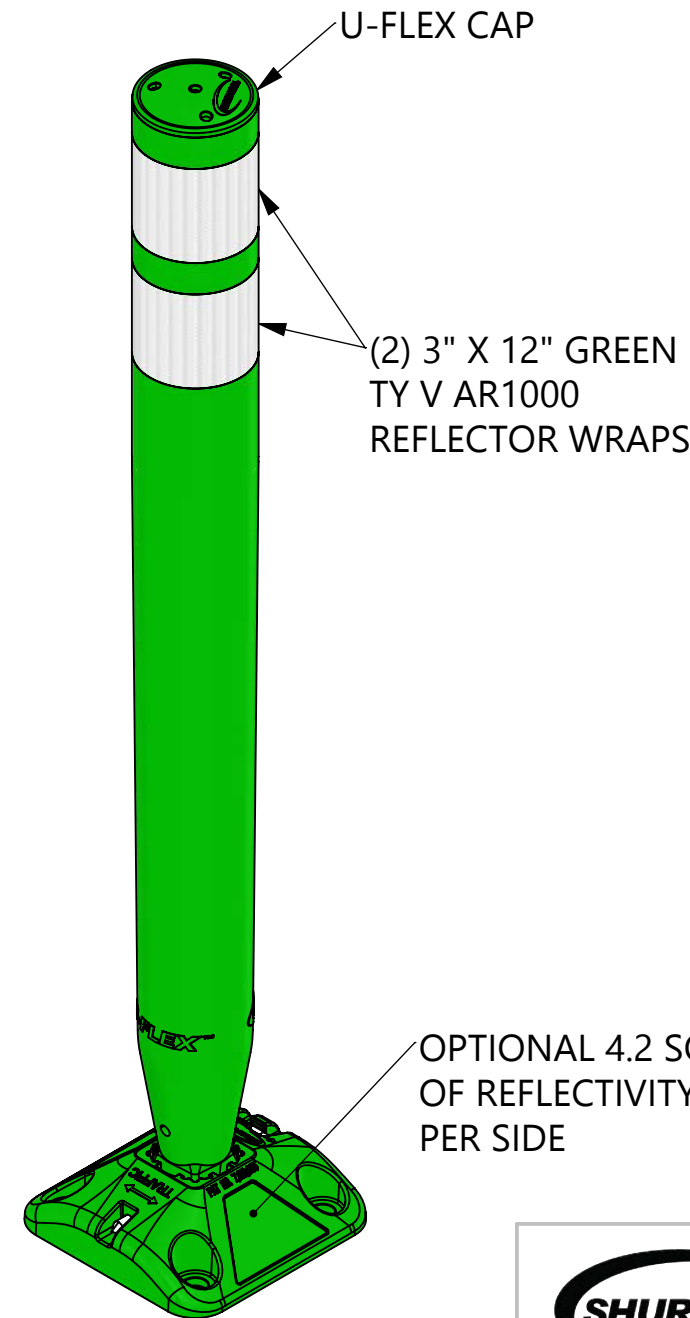
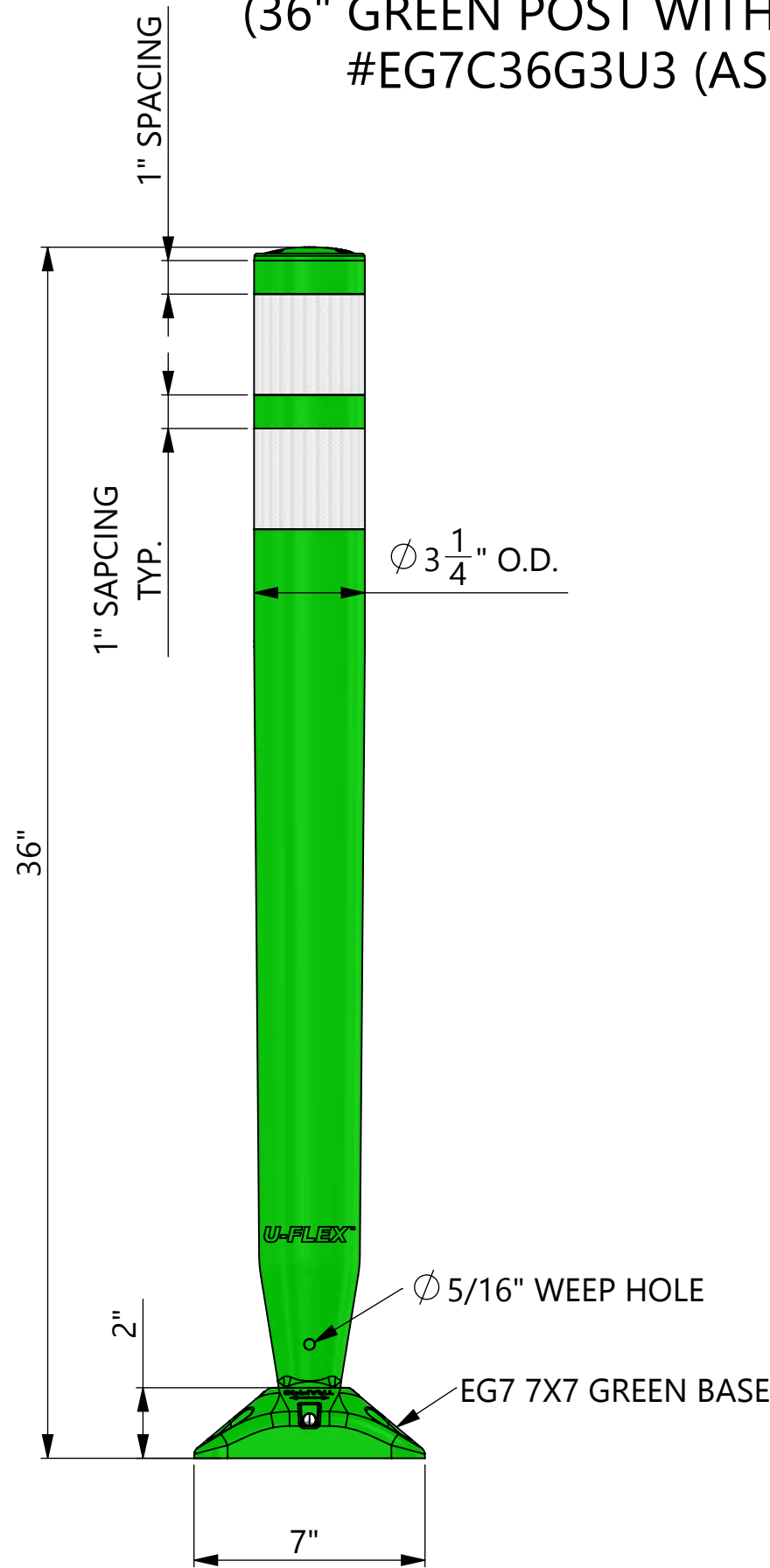
Post Height:	
	18"
	24"
	28"
X	36"
	42"
	48"

Sheeting Size:	
	Type III/IV High Intensity
X	Type V AR1000
	Type XI Diamond Grade

Sheeting Wraps Size:	
X	3" X 12"
	4" X 12"
	6" X 12"
	10" X 12"
	12" X 12"

Sheeting Colors:	
X	(W) White
	(Y) Yellow
	(O) Orange
	(R) Red
	(G) Green
	(B) Blue

GREEN U-FLEX SURFACE MOUNT (36" GREEN POST WITH 7X7" GREEN BASE) #EG7C36G3U3 (AS CONFIGURED)





SHUR-TITE® PRODUCTS

(512) 218-9500

www.shur-tite.com

Title:

36" GREEN U-FLEX SURFACE MOUNT

Date:

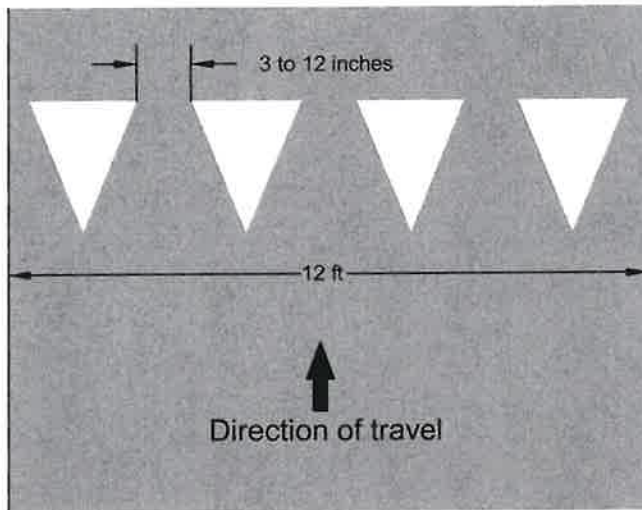
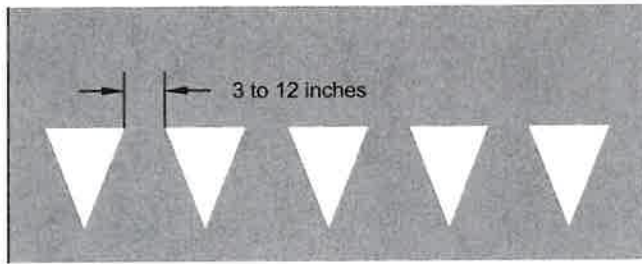
10/20/23

Item #:

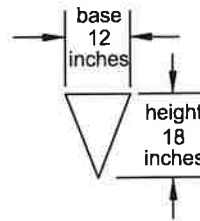
EG7C36G3U3

YIELD LINE SYMBOLS

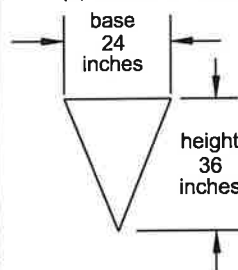
Layouts



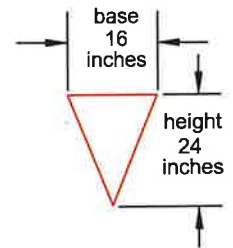
(a) Minimum Dimensions



(b) Maximum Dimensions



City of Detroit Standard



Note:

Triangle height is equal to 1.5 times the base dimension.

Yield lines may be smaller than suggested when installed on much narrower slow-speed facilities such as shared-use paths.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

FIELD MARKINGS
MISCELLANEOUS
DETAILS

APPROVED BY:

J. Hlin

DRAWN : A.D. BOLTON
SCALE : N.T.S
DATE : 08 - 04 - 2020

NO. STD-17