

# CITY OF REVERE, MA DEPARTMENT OF PUBLIC WORKS

## BROADWAY AND PAGE STREET/TAFT STREET INTERSECTION IMPROVEMENTS

CONTRACT NO. XXXX  
SEPTEMBER 2023



MAYOR

PATRICK M. KEEFE JR. (ACTING)

DEPARTMENT OF PUBLIC WORKS

PAUL ARGENZIO, SUPERINTENDENT

DEPARTMENT OF ENGINEERING

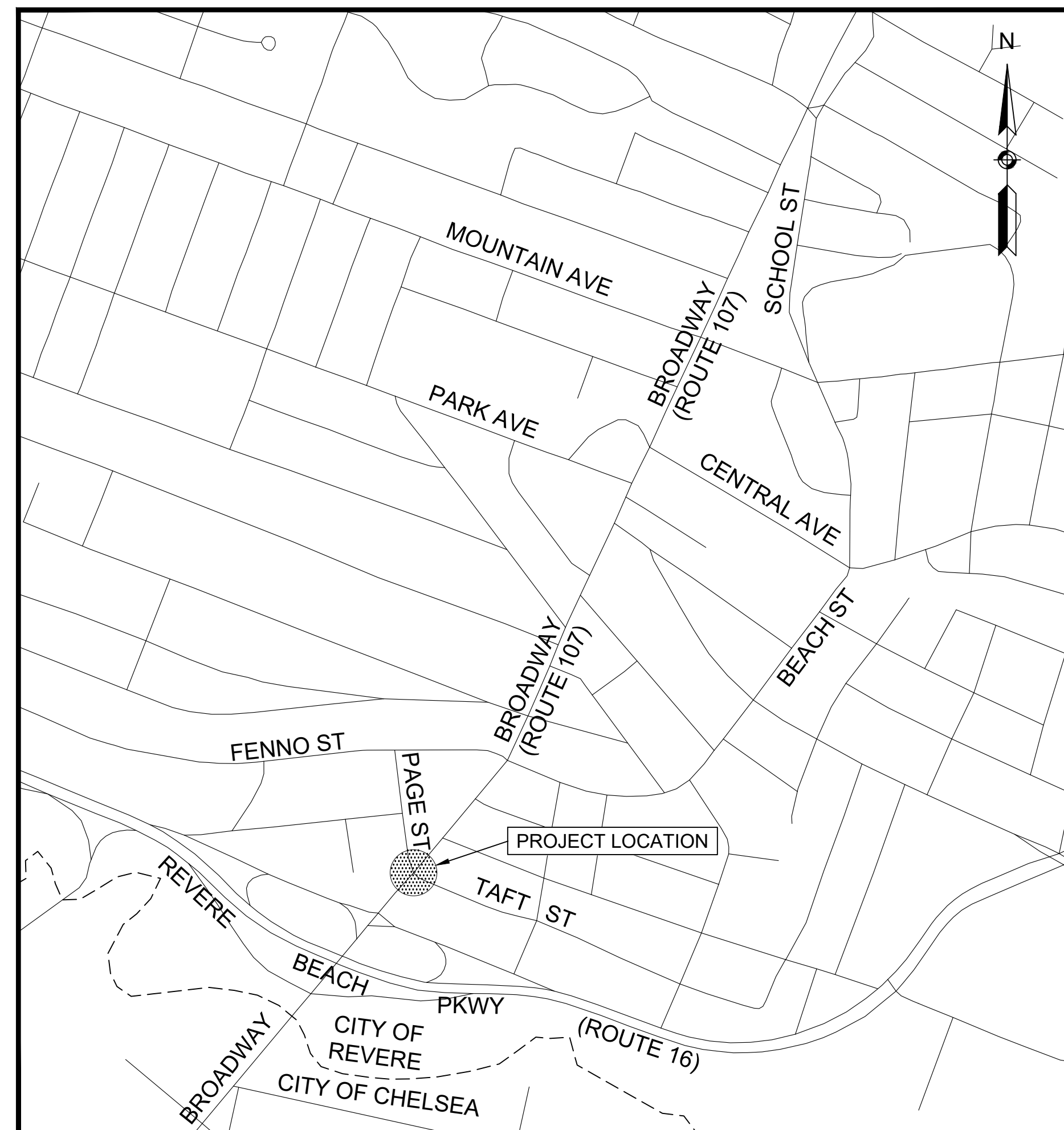
NICHOLAS J. RYSTROM, P.E., CITY ENGINEER

OFFICE OF PLANNING & DEVELOPMENT

TOM SKWIERAWSKI, CHIEF OF PLANNING  
AND COMMUNITY DEVELOPMENT

DEPARTMENT OF HEALTHY COMMUNITY INITIATIVES

JULIE DEMAURO, ACTIVE TRANSPORTATION MANAGER



PROJECT LOCATION

**LOCATION MAP**  
SCALE: 1" = 500'

### PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES AND DETAILS
4	CONSTRUCTION DETAILS
5	CONSTRUCTION PLAN
6-7	TEMPORARY TRAFFIC CONTROL PLANS

PREPARED BY:



ISSUE DATE: 09/01/2023

REGISTERED PROFESSIONAL \_\_\_\_\_ DATE \_\_\_\_\_

# LEGEND

## GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CURB OR BERM (TYPE AS NOTED)
		EDGE OF PAVEMENT
		CATCH BASIN (OR GUTTER INLET, LEACHING BASIN, DROP INLET, CATCH BASIN CURB INLET)
		ELECTRIC HANDHOLE (NUMBER AS NOTED)
		ELECTRIC MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		SEWER MANHOLE
		DRAINAGE MANHOLE
		GAS GATE
		WATER GATE
		CURB STOP
		HYDRANT
		FIRE ALARM BOX
		PARKING METER
		STREET LIGHT POLE
		UTILITY POLE
		UTILITY POLE w/ LIGHT
		SIGN
		GUY POLE
		DRAIN PIPE (SIZE AS NOTED)
		SEWER MAIN (SIZE AS NOTED)
		ELECTRIC DUCT
		GAS MAIN (SIZE AS NOTED)
		WATER MAIN (SIZE AS NOTED)
		TELEPHONE DUCT (SIZE AS NOTED)
		OVERHEAD WIRE
		MAIL BOX
		WOOD GUARD RAIL, STEEL BEAM GUARD, WOOD OR STEEL POSTS (TYPE AS NOTED)
		STEEL GUARD RAIL, STEEL POSTS (TYPE NOTED)
		STONE WALL
		RETAINING WALL (TYPE NOTED)
		HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)
		STATE HIGHWAY LAYOUT LINE (SHLO)
		CITY, TOWN OR COUNTY LAYOUT LINE (R.O.W.)
		CITY, TOWN, COUNTY OR STATE BOUNDARY LINE
		PROPERTY LINE
		EASEMENT LINE (TYPE NOTED)
		CONSTRUCTION BASELINE
		SURVEY LINE
		RAILROAD OR STREET RAILWAY TRACKS WITH SIDELINES
		WHEELCHAIR RAMP
		TREE (SIZE AND TYPE AS NOTED)
		HEDGE/SHRUBS
		FENCE (SIZE AND TYPE AS NOTED)
		EDGE OF WETLAND w/ FLAGGED NUMBER
		EDGE OF RIVER/STREAM LINE
		100-FT. WETLAND BUFFER LIMIT
		100-FT. RIVER FRONT LIMIT
		200-FT. RIVER FRONT LIMIT
		WOODED AREA / LIMIT OF CLEARING
		SPOT GRADE
		SAW CUT LINE
		TEST PIT
		BORING
		EROSION CONTROL BARRIER/COMPOST FILTER TUBES

# ABBREVIATIONS

## GENERAL

ABAN	ABANDON
ADJ	ADJUST
ALT	ALTERATION
APPROX	APPROXIMATE
BB	BASELINE
BC	BITUMINOUS BERM
BD OR BND	BITUMINOUS CURB
BLDG	BOUND
BO	BUILDING
BOS	BY OTHERS
BOW	BOTTOM OF SLOPE
BSW	BOTTOM OF WALL
CC	BACK OF SIDEWALK
CEM	CONCRETE CURB
CLF	CEMENT
CONC	CHAIN LINK FENCE
CONST	CONCRETE
CONT	CONSTRUCTION
DWY	CONTINUOUS
EP, EOP	DRIVEWAY
EL	EDGE OF PAVEMENT
ELECT	ELEVATION
ESMT	ELECTRICAL
EXIST	EASEMENT
FDN	EXISTING
GRAN	FOUNDATION
GC	GRANITE
HOR	GRANITE CURB
IP	HORIZONTAL
JCT	IRON PIPE
LP	JUNCTION
MB	LOW POINT
MHB	MAIL BOX
O.C.	MASSACHUSETTS HIGHWAY BOUND
PCC	ON CENTER
PC	POINT OF COMPOUND CURVATURE
PRC	POINT OF CURVATURE
PI	POINT OF REVERSE CURVATURE
PT	POINT OF INTERSECTION
PVC	POINT OF TANGENCY
PVI	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL INTERSECTION
PERM	POINT OF VERTICAL TANGENCY
PGL	PERMANENT
PROP	PROFILE GRADE LINE
PVC	PROPOSED
PVMT	POINT OF VERTICAL CURVATURE
R	PAVEMENT
R&D	RADIUS OF CURVATURE
R&R	REMOVE AND DISCARD
R&S	REMOVE AND RESET
REM	REMOVE AND STACK
REMOD	REMOVE
RET	REMODEL
RR	RETAIN
RT	RAILROAD
SB	RIGHT
SW	SOUTH BOUND OR STONE BOUND
SHT	SIDEWALK
SHLD	SHEET
STA	SHOULDER
TEMP	STATION
TOS	TEMPORARY
TOW	TOP OF SLOPE
TYP	TOP OF WALL
VAR	TYPICAL
VERT	VARIABLE
VGC	VERTICAL
WCR	VERTICAL GRANITE CURB
	WHEELCHAIR RAMP

## TRAFFIC SIGNAL SYSTEMS

R	STEADY CIRCULAR RED
Y	STEADY CIRCULAR AMBER
G	STEADY CIRCULAR GREEN
FR	FLASHING CIRCULAR RED
FY	FLASHING CIRCULAR AMBER
+FY	FLASHING YELLOW LEFT ARROW
R-	STEADY RED RIGHT ARROW
Y-	STEADY AMBER RIGHT ARROW
G-	STEADY GREEN RIGHT ARROW
+R	STEADY RED LEFT ARROW
+Y	STEADY AMBER LEFT ARROW
+G	STEADY GREEN LEFT ARROW
W	STEADY WALK (PERSON WALKING) - LUNAR WHITE
DW	STEADY DON'T WALK (HAND) - PORTLAND ORANGE
FDW	FLASHING DON'T WALK (FLASHING HAND) - PORTLAND ORANGE

## UTILITIES

ACCOMP	ASPHALT COATED CORRUGATED METAL PIPE
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CMP	CORRUGATED METAL PIPE
C	CONDUIT
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FM	FORCE MAIN
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GG	GAS GATE
HDW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
LP	LIGHT POLE
MH	MANHOLE
PVC	POLY-VINYL-CHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE (CLASS III UNLESS NOTED)
SD	SUBDRAIN
SMH	SEWER MANHOLE
T.S.	TRAFFIC SIGNAL
TSV&B	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE
R&D	UTILITY POLE w/ LIGHT
UPT	UTILITY POLE w/ TRANSFORMER
VCP	VITRIFIED CLAY PIPE
WIP	WROUGHT IRON PIPE
WG	WATER GATE
WM	WATER METER/WATER MAIN

## TRAFFIC SIGNAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROL CABINET GROUND MOUNTED WITH FOUNDATION
		CONTROL CABINET POLE MOUNTED
		CONTROLLER PHASE
		MAST ARM, SHAFT & BASE (ARM LENGTH AS NOTED)
		VEHICULAR SIGNAL HEAD (ALPHA-NUMERIC DESIGNATION AS NOTED)
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		VEHICULAR SIGNAL HEAD (REMOVED & RESET)
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD, OPTICALLY PROGRAMMED
		PULL BOX 12"x12" OR HANDHOLE
		LOOP DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		PRE-EMPTION DETECTOR
		PRE-EMPTION CONFIRMATION STROBE
		SIGNAL CONDUIT (SINGLE RUN)
		SIGNAL CONDUIT (DOUBLE RUN)
		SIGNAL POST & BASE
		MAGNETIC DETECTOR
		SCHOOL ZONE SPEED LIMIT SIGN
		MICROWAVE OR ULTRASONIC DETECTOR
		VIDEO DETECTION CAMERA
		RADAR VIDEO DETECTION CAMERA
		VIDEO DETECTION ZONE

## PAVEMENT MARKINGS AND SIGNING SYMBOLS

### PROPOSED

CW	CROSSWALK, 2 - 12" WHITE LINES (8" WIDTH)
SL	STOP LINE - 12" WHITE LINE 4' BEHIND CW (TYP.)
SWL	SOLID WHITE LINE - 4"
SWCHL	SOLID WHITE CHANNELIZING LINES - 12" (SPACING NOTED)
SWGL	SOLID WHITE GORE LINE 12" @ 45°, (SPACING NOTED)
SWPL	SOLID WHITE PARKING LINE - 4"
BWL	BROKEN WHITE LINE - 4"
DWLex	DOTTED WHITE LANE EXTENSION LINE - 4" (2' LINE & 2' GAP)
DYLex	DOTTED YELLOW LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)
BYL	BROKEN YELLOW LINE - 4"
DBYL	DOUBLE YELLOW LINE - 2 - 4" LINES
SYL	SOLID YELLOW LINE - 4"
SYGL	SOLID YELLOW GORE LINE 12" @ 45°, (SPACING NOTED)
SCHOOL	SCHOOL ZONE - WHITE
	ACCESSIBLE SYMBOL - WHITE
	PAVEMENT ARROW - WHITE
ONLY	LEGEND "ONLY" - WHITE

01/12/2023 12:46 PM C:\10800510826 - REVERE, MA - BROADWAY AND PAGE ST/DRAWING FILES/PLANS/SET1/0826 LEGEND.DWG (MDDOT.D.STB)

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DESIGNED BY:	SD
CHECKED BY:	DM / JM

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SUBCONSULTANT

SCALE  
NONE

TITLE

**INTERSECTION IMPROVEMENTS  
BROADWAY (ROUTE 107) AND  
PAGE STREET / TAFT STREET  
LEGEND & ABBREVIATIONS  
REVERE, MASSACHUSETTS**

BETA JOB NO. 10826  
ISSUE DATE 09/01/2023  
SHEET NO. **2 of 7**

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



**GENERAL NOTES**

- HORIZONTAL CONTROL, IN FEET, IS BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD 83). THE VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- SURVEY PLAN HAS BEEN PREPARED BY LIGHTHOUSE LAND SURVEYING. THE CONTRACTOR SHALL VERIFY BASEPLAN INFORMATION SHOWN ON THE PLANS TO ENSURE THAT CONSTRUCTION CAN PROCEED AS INTENDED.
- THE LOCATION OF SUBSURFACE UTILITIES SHOWN IS APPROXIMATE AND NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITY LINES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION, DEMOLITION OR EXPLOSION WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDED.
- PROPOSED SIDEWALKS AND WHEELCHAIR RAMPS SHALL BE CONSTRUCTED TO THE NEAREST SCORE LINE OR EXPANSION JOINT IN THE EXISTING ADJACENT WALK SURFACE AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, TREES, GRATE, POLES ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 36" EXCLUDING THE CURB. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.
- SIGNS, POLES AND OTHER FEATURES LOCATED IN PROPOSED CEMENT CONCRETE SIDEWALK SHALL BE BOXED AND PROVIDED FLEXIBLE JOINT FILLER.
- IN AREAS OF NEW SIDEWALK, NEW EDGE OF PAVEMENT OR CURB WITHOUT SIDEWALK OR ANY WORK ADJACENT TO EXISTING GRASS AREAS, EVEN WHEN NO SLOPE-MATCHING OR GRADING IS NECESSARY AND THE EXISTING GRADE IS MET, LOAM BORROW AND SEED SHALL BE PROVIDED AS NECESSARY TO REPAIR AND COMPLETE ANY DAMAGE TO THE GRADE CAUSED BY THE CONSTRUCTION PROCESS.
- SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH MASSDOT REQUIREMENTS AND THE LATEST VERSION OF THE MUTCD.
- WHEN WORKING NEXT TO EXISTING WALLS, BERMS, AND OTHER STRUCTURES, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- ALL PRIVATELY OWNED UTILITY STRUCTURES SHALL BE ADJUSTED BY OTHERS UNLESS OTHERWISE NOTED ON THE PLANS.
- ANY EXISTING GRANITE CURB THAT CAN BE RE-USED SHALL BE R&R AS DIRECTED BY THE ENGINEER. NEW CURB AND EXISTING CURB SHALL NOT BE INTERMIXED.
- ALL NEW GRANITE CURB SHALL BE MASSDOT TYPE VA-4 UNLESS OTHERWISE NOTED ON THE PLAN.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.
- CONTRACTOR SHALL VERIFY EXISTING GRADES. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND OBTAIN THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT SURVEYS INCLUDING UTILITY RELOCATION. THE CONTRACTOR SHALL EMPLOY A COMPETENT REGISTERED SURVEYOR, REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS, TO COMPLETE ALL CONSTRUCTION LAYOUT.

**WHEELCHAIR RAMP NOTES**

- ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B.) AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.), AND THE LATEST MASSDOT STANDARDS.
- THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DETAILS. EXACT LOCATIONS MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
- ALL PROPOSED WHEELCHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS. THE COLOR OF THE PANEL SHALL BE BRICK RED AND APPROVED BY THE ENGINEER.
- IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP AS DIRECTED BY THE ENGINEER.
- THE TRANSITION SLOPE OF ANY CURB RAMP, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL NOT EXCEED 7.5%, +/-0.5% FOR TOLERANCE OF CONSTRUCTION. PER AAB 521 CMR, FINISHED SLOPE MAY NOT EXCEED 8.33%. PROPOSED WHEELCHAIR RAMP SLOPES, ESPECIALLY HIGH SIDE TRANSITIONS, SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING OF CONCRETE AND ADJUSTED, IF NECESSARY, AT THE DIRECTION OF THE ENGINEER.

**PAVEMENT NOTES**

**PROPOSED FULL DEPTH CONSTRUCTION 54' WIDE**

SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER ASPHALT EMULSION TACK COAT RS-1H OVER  
 INTERMEDIATE COURSE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) OVER ASPHALT EMULSION TACK COAT RS-1H OVER  
 BASE COURSE: 6" CEMENT CONCRETE BASE COURSE OVER  
 SUB-BASE: 8" GRAVEL BORROW, TYPE b

**PROPOSED PERMANENT TRENCH PATCH**

SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER ASPHALT EMULSION TACK COAT RS-1H OVER  
 INTERMEDIATE COURSE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) OVER ASPHALT EMULSION TACK COAT RS-1H OVER  
 BASE COURSE: 3 1/2" SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) OVER  
 SUB-BASE: 8" GRAVEL BORROW, TYPE b OVER COMPACTED TRENCH BACKFILL

**CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS**

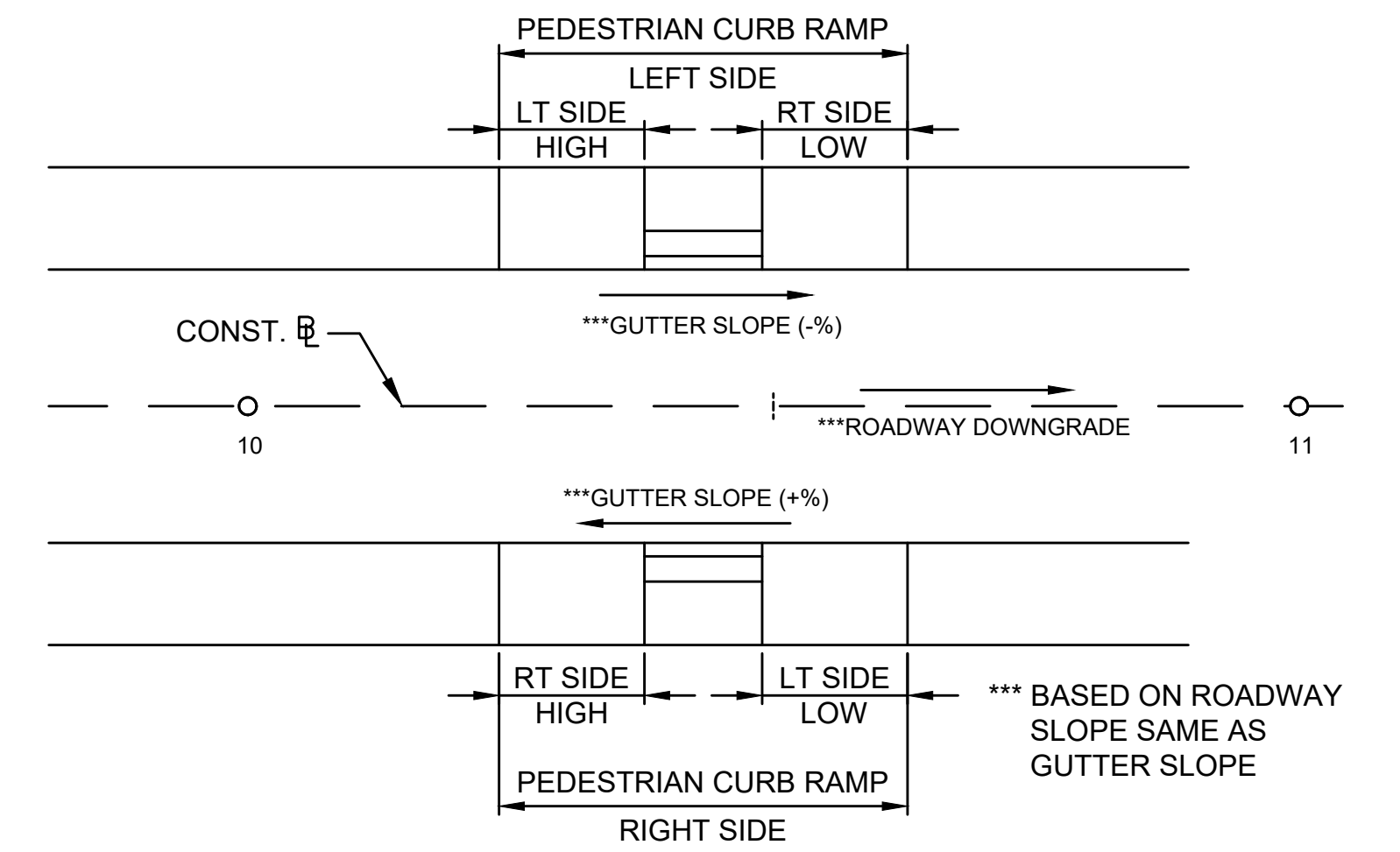
SURFACE: 4" CEMENT CONCRETE WALK SURFACE 4000 PSI, 3/4", 610 OVER  
 FOUNDATION: 8" GRAVEL BORROW, TYPE b

**HMA SIDEWALK**

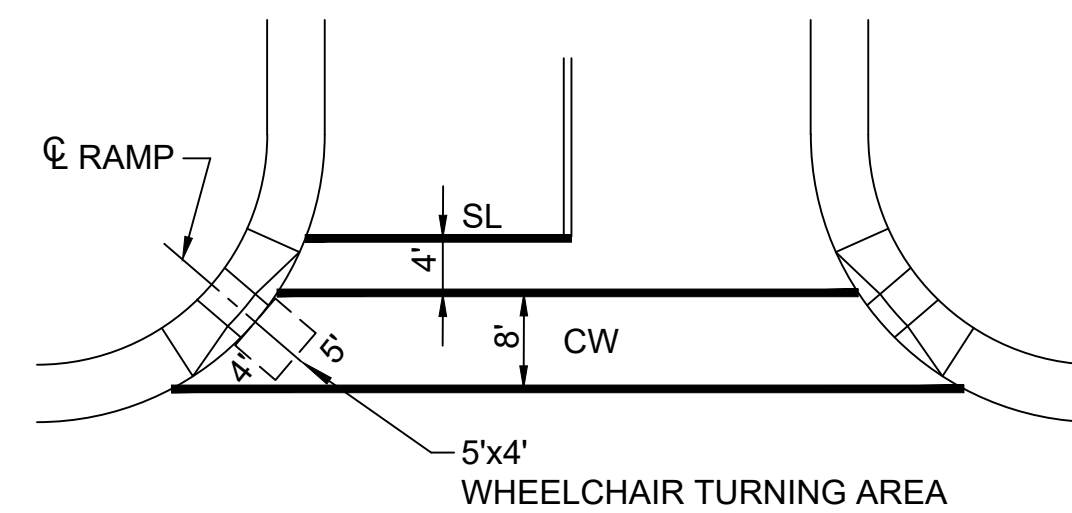
SURFACE: 2 1/2" HMA WALK SURFACE PLACED IN TWO EQUAL LAYER  
 FOUNDATION: 8" GRAVEL BORROW, TYPE b

**PAVEMENT NOTES**

- ALL HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE INSTALLED PER SECTION 450.
- TACK COAT SHALL BE APPLIED FOR UNIFORM COVERAGE OF 90% AT RATE OF 0.07 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER SQUARE YARD FOR SMOOTH TIGHT PAVED SURFACES.

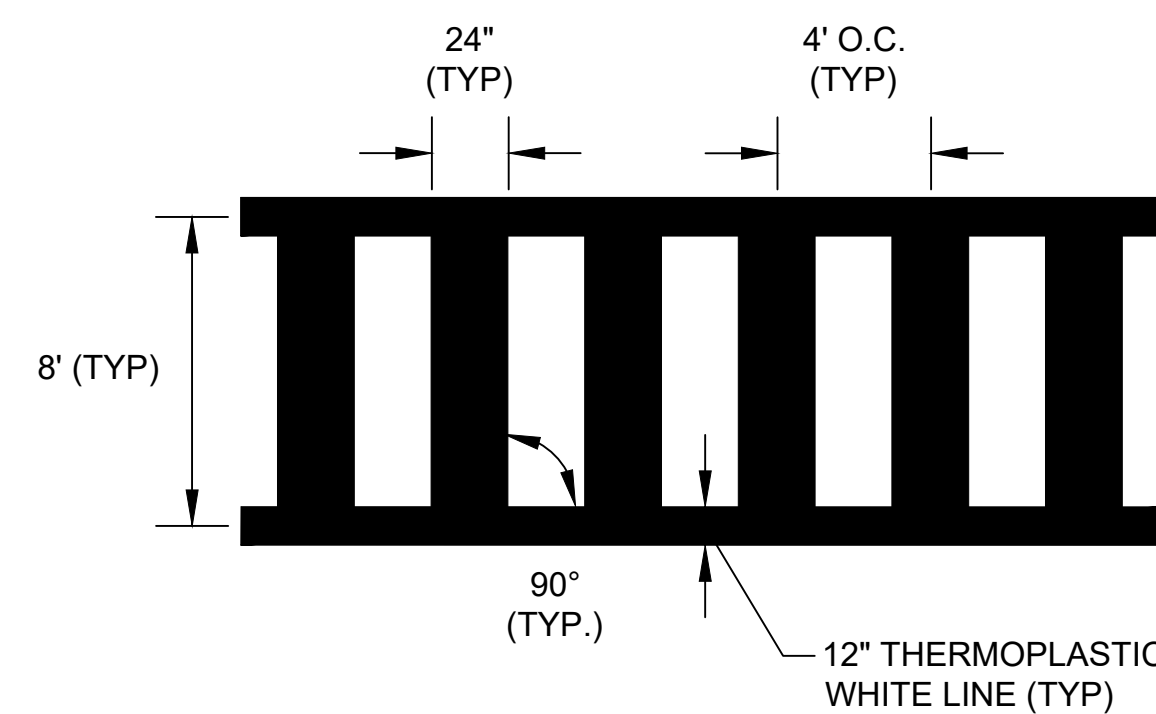


**GUTTER SLOPE DIAGRAM**  
NOT TO SCALE



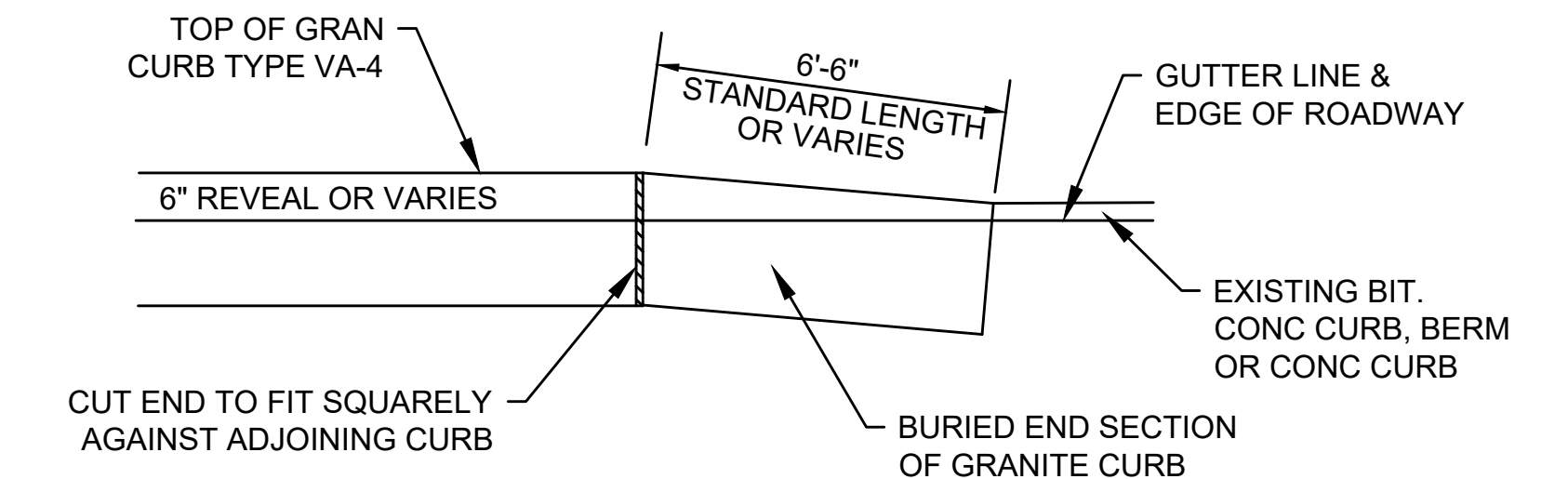
**CROSSWALK LOCATION DETAIL**

NOT TO SCALE



**CROSSWALK STRIPING DETAIL**

NOT TO SCALE



**DETAIL FOR TRANSITION CURB**  
**TRANSITION CURB - PROP CURB TO EXISTING CURB**

NOT TO SCALE

TABLE I	
ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" MAX.

**CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS**

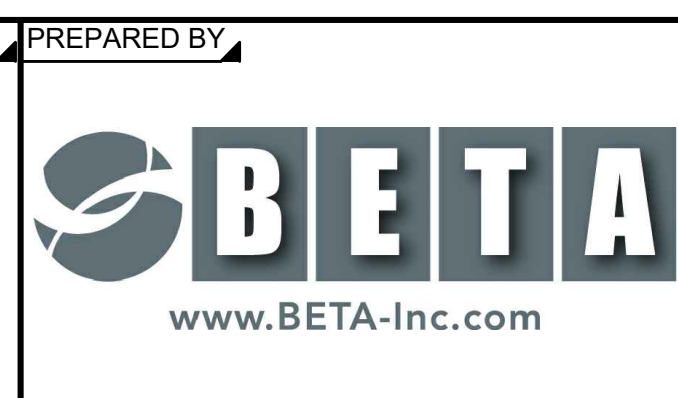
MASSDOT CONST. STD. DWG. NO. E107.9.0  
 \*BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

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SCALE: NONE

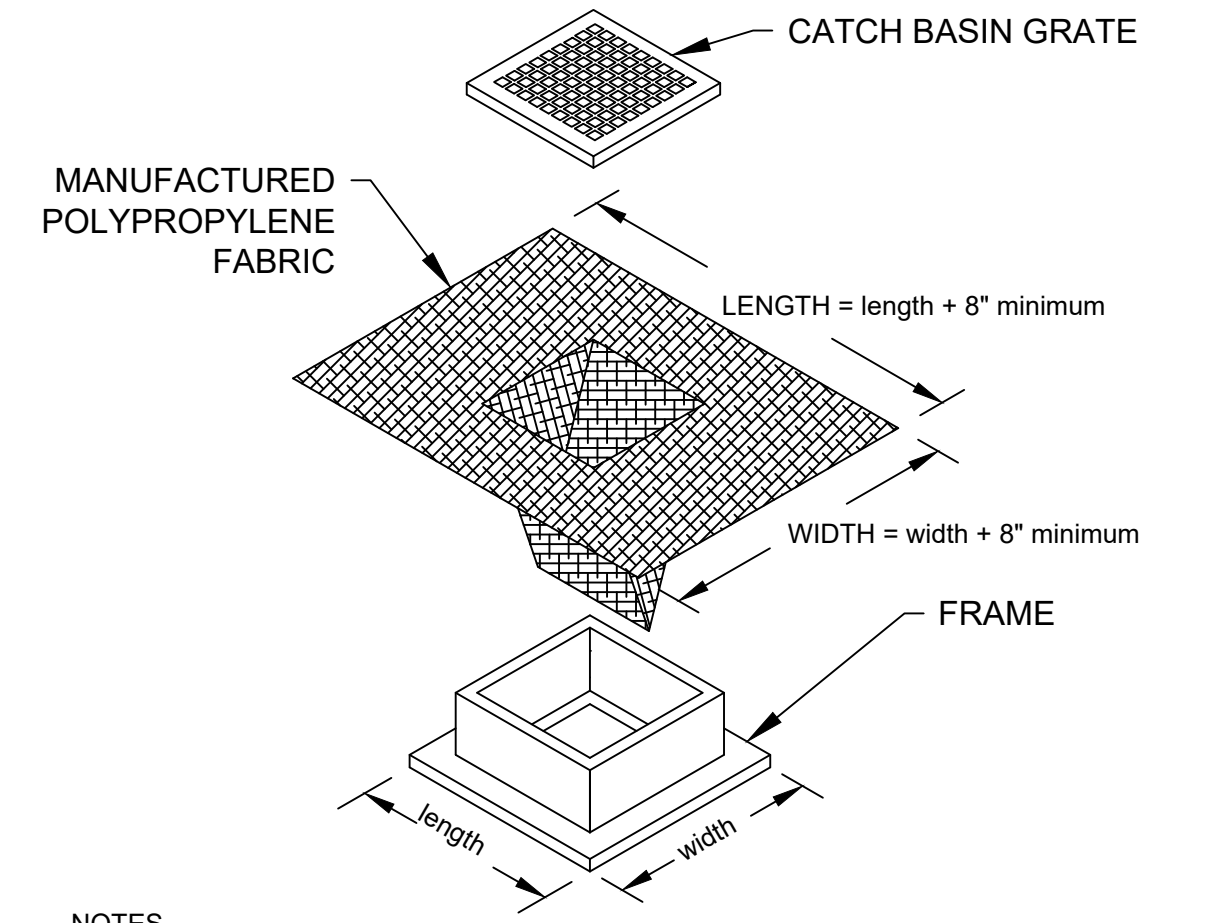
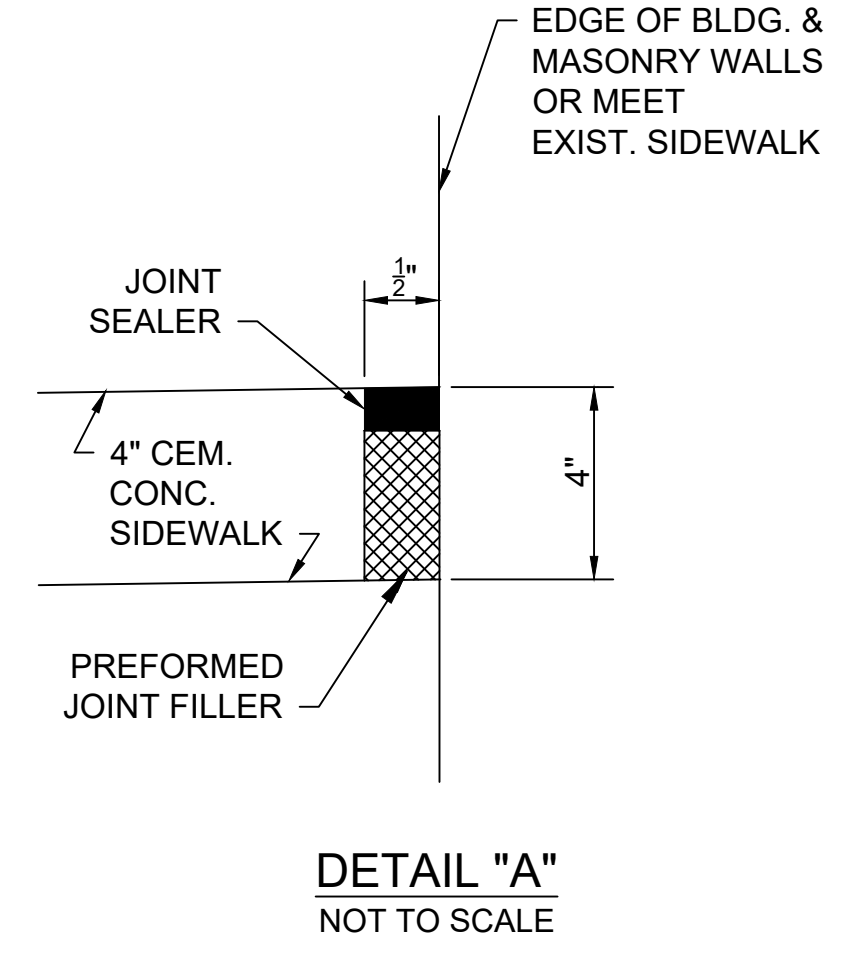
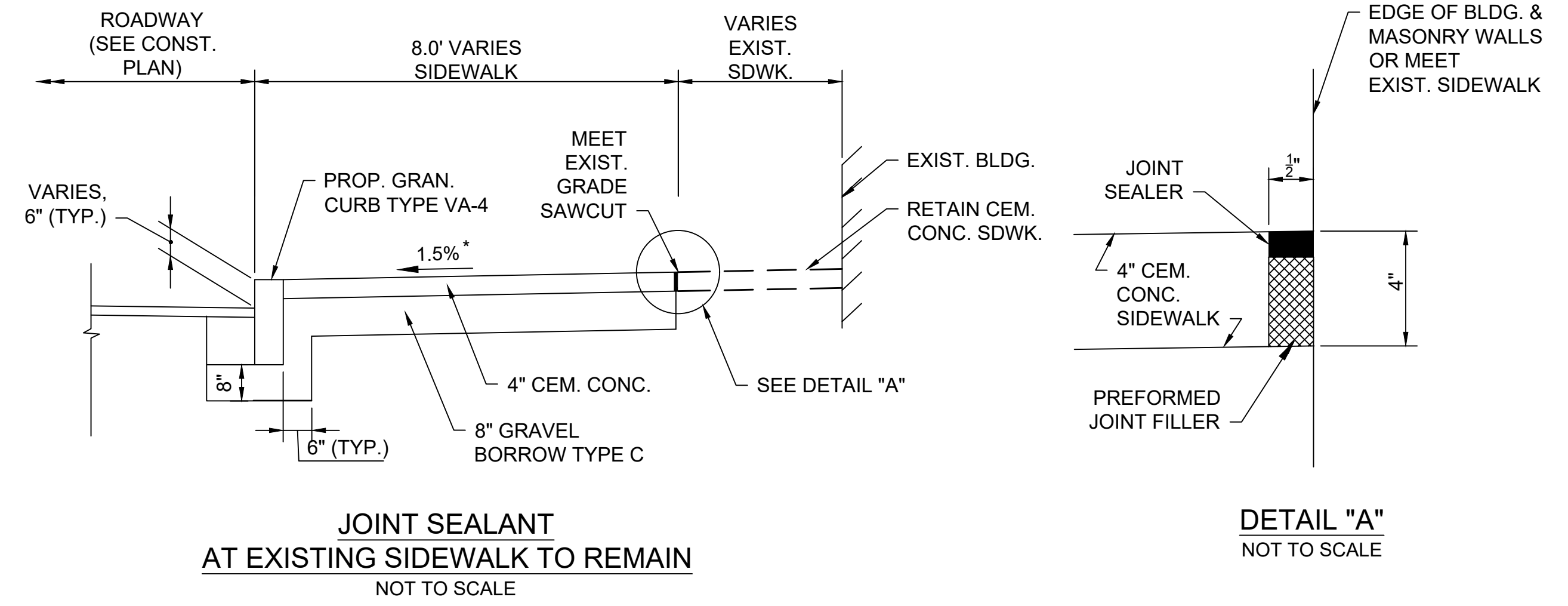
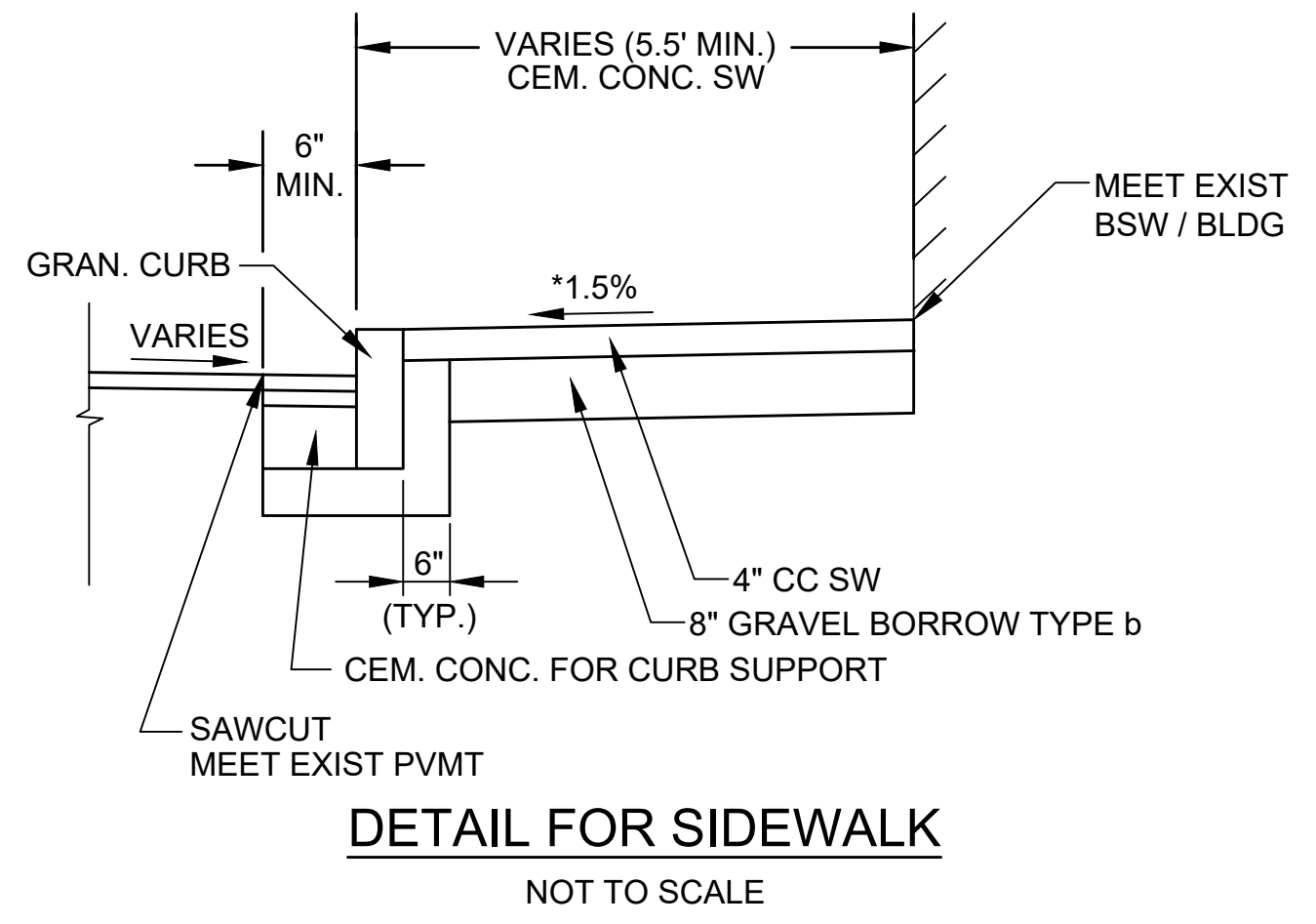
TITLE

**INTERSECTION IMPROVEMENTS**  
**BROADWAY (ROUTE 107) AND**  
**PAGE STREET / TAFT STREET**  
**GENERAL NOTES AND DETAILS**  
**REVERE, MASSACHUSETTS**

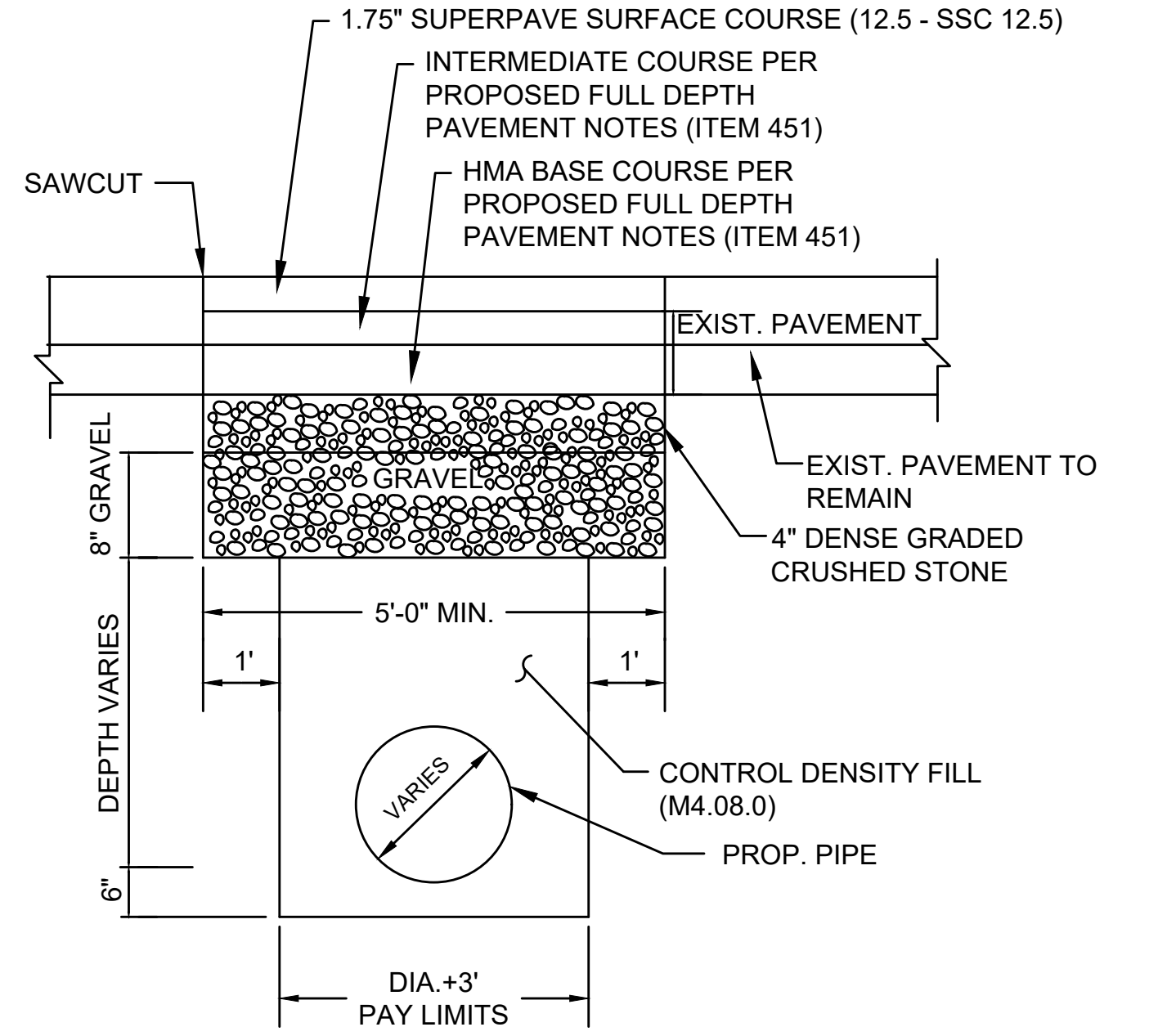
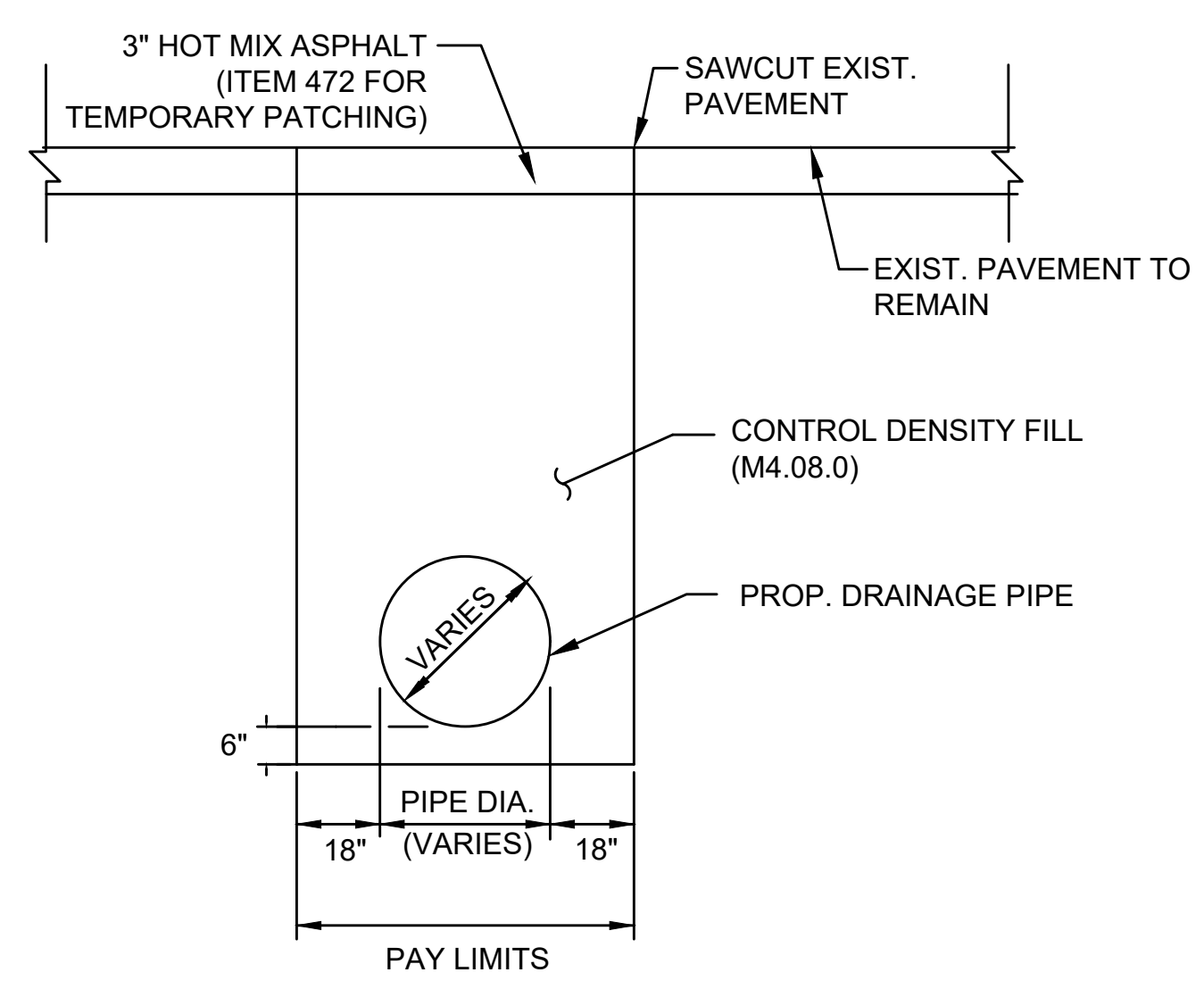
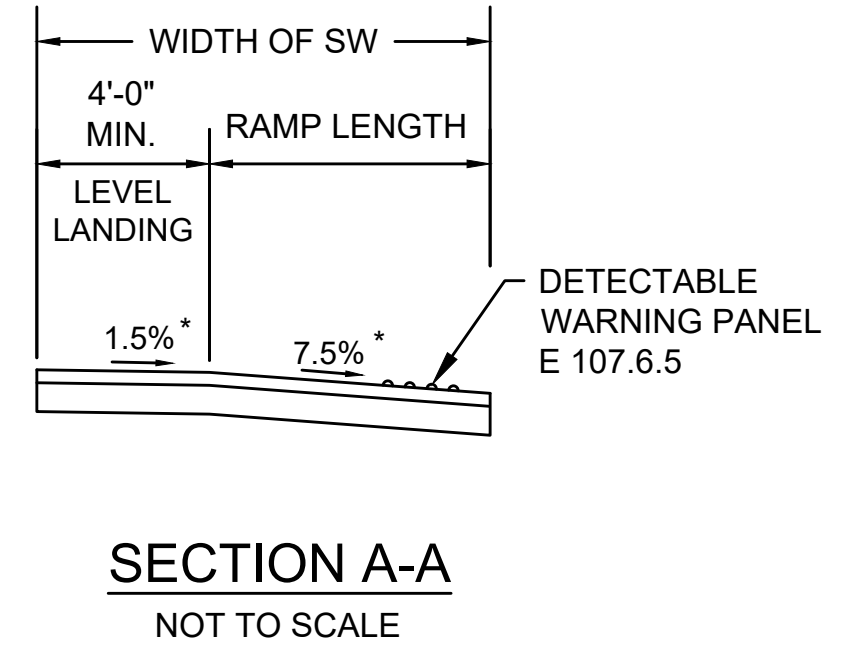
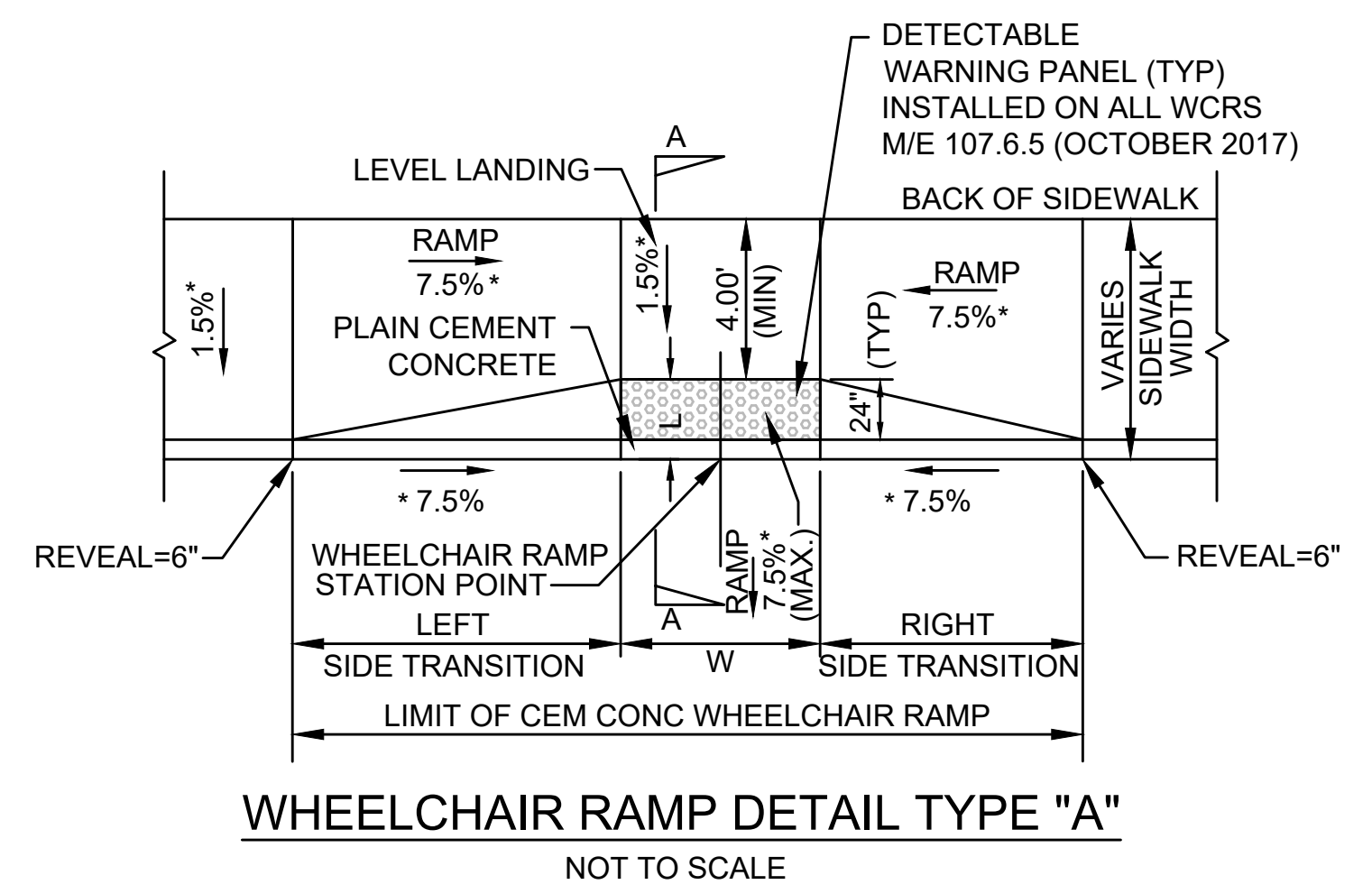
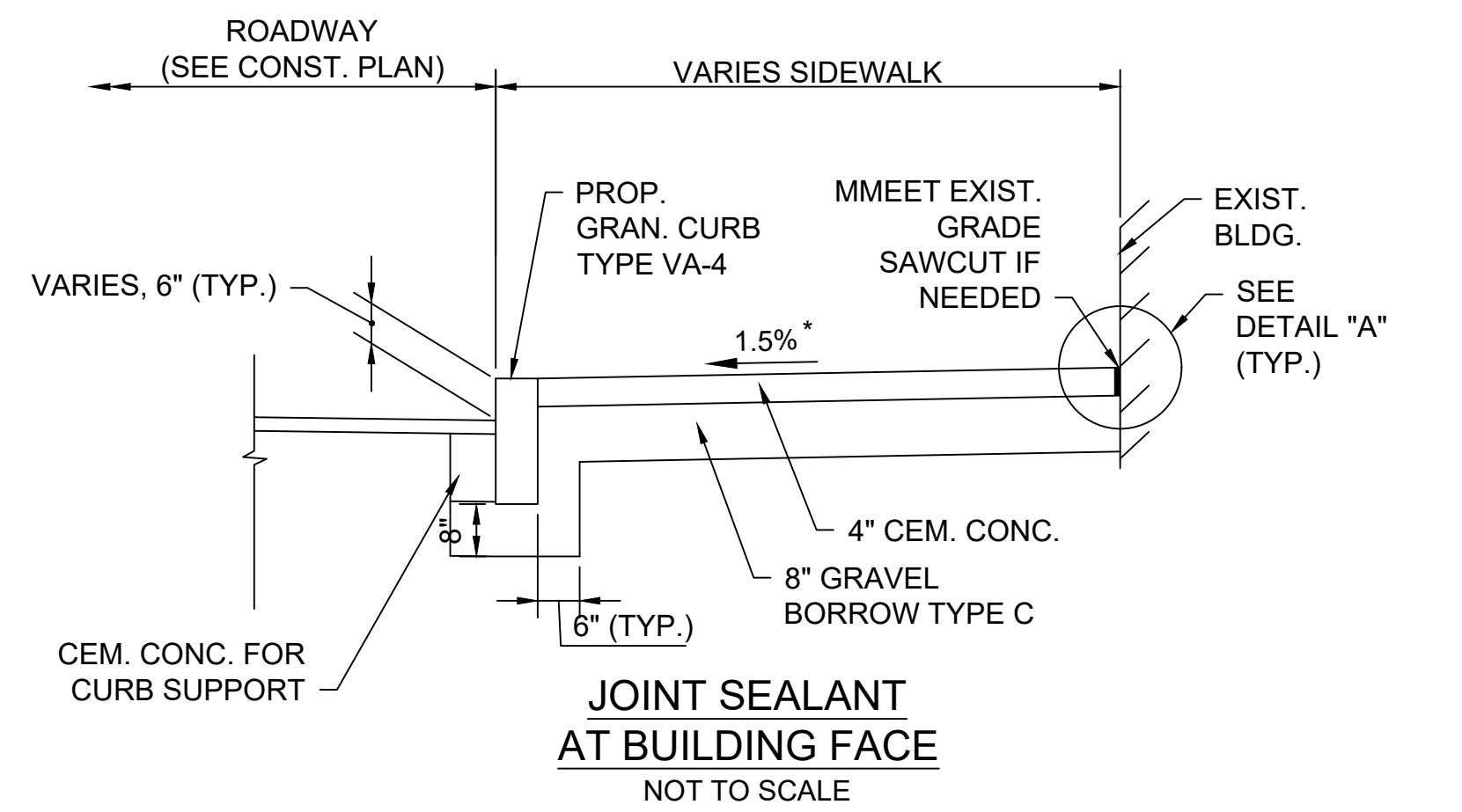
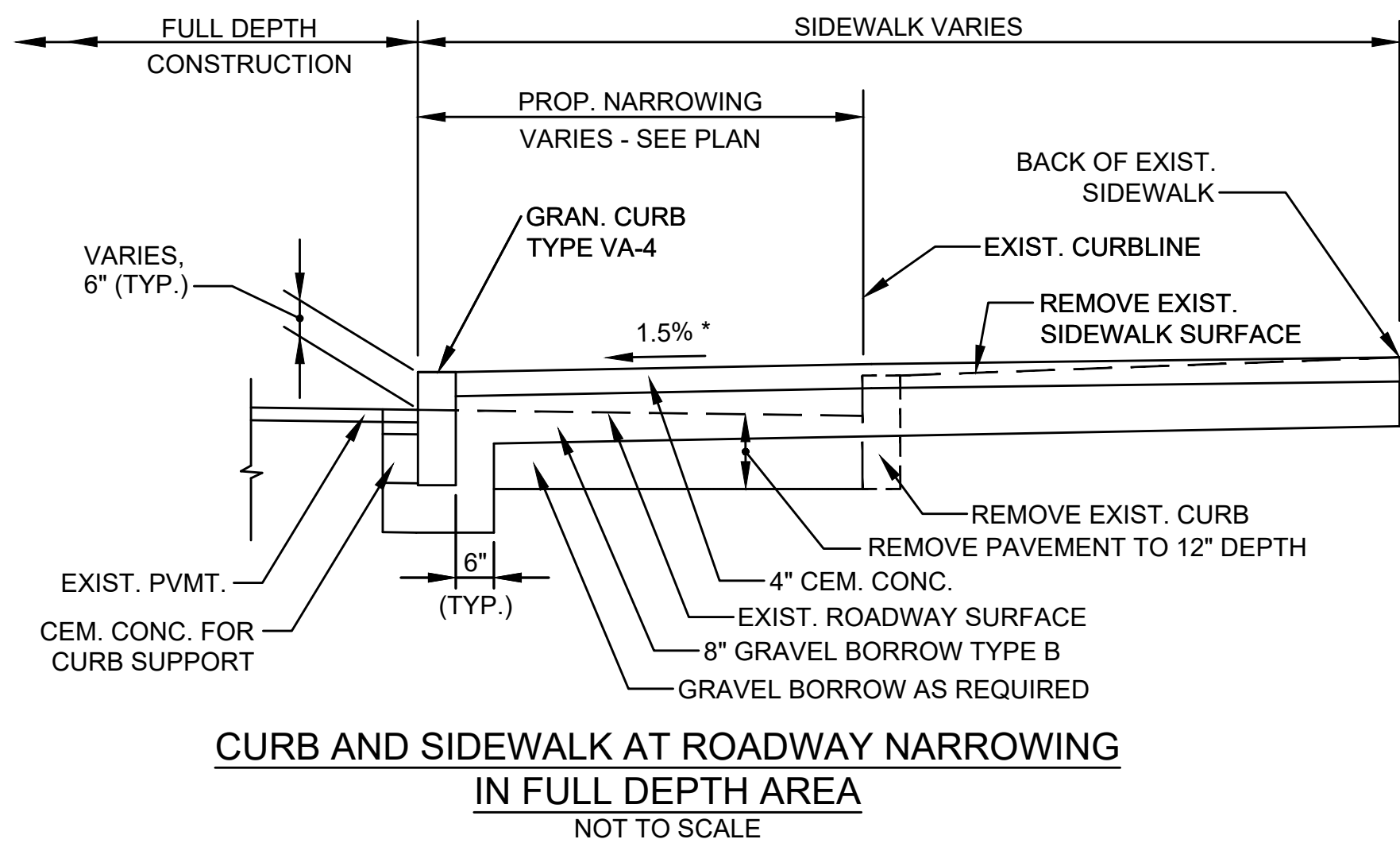
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 SHEET NO. **3 of 7**

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**NOTES**  
1. LENGTH AND WIDTH OF POLYPROPYLENE FABRIC MUST EXCEED EXISTING CATCH BASIN FRAME DIMENSIONS BY A MINIMUM OF 8".  
2. REMOVE CATCH BASIN GRATE AND INSTALL POLYPROPYLENE FABRIC OVER CATCH BASIN FRAME. REPLACE CATCH BASIN GRATE TO SECURE POLYPROPYLENE FABRIC IN PLACE.



WHEEL CHAIR RAMP DATA										
WCR NO.	RAMP REFERENCE POINT		GUTTER PROFILE SLOPE	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	DEPTH OF LEVEL LANDING (MIN. 4.0')	TRANSITION LENGTH		SIDEWALK WIDTH	WCR TYPE
	STATION	OFFSET					LEFT	RIGHT		
1	11+28.2	23.9' LT	+1.41%	4.5'	5.0'	5.0'	6.5'	9.0'	10.7' - 19.4'	A
2	11+50.3	30.0' LT	+0.70%	4.8'	5.0'	5.0'	6.5'	6.5'	23.8'	A
3	11+91.9	30.2' LT	+0.60%	4.8'	5.0'	5.0'	6.5'	6.5'	31.5'	A

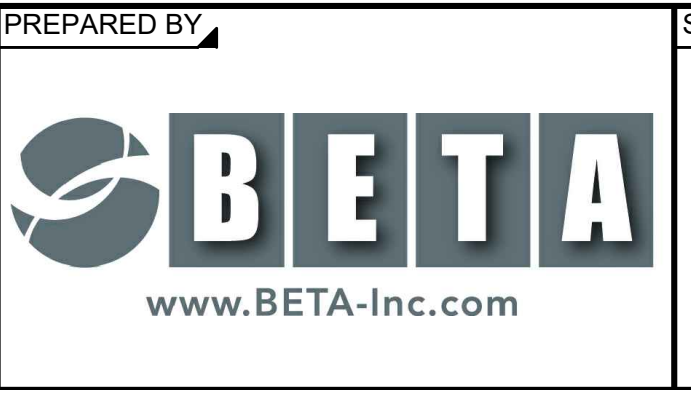
\* TOLERANCE FOR CONSTRUCTION ±0.5%

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SCALE  
NONE

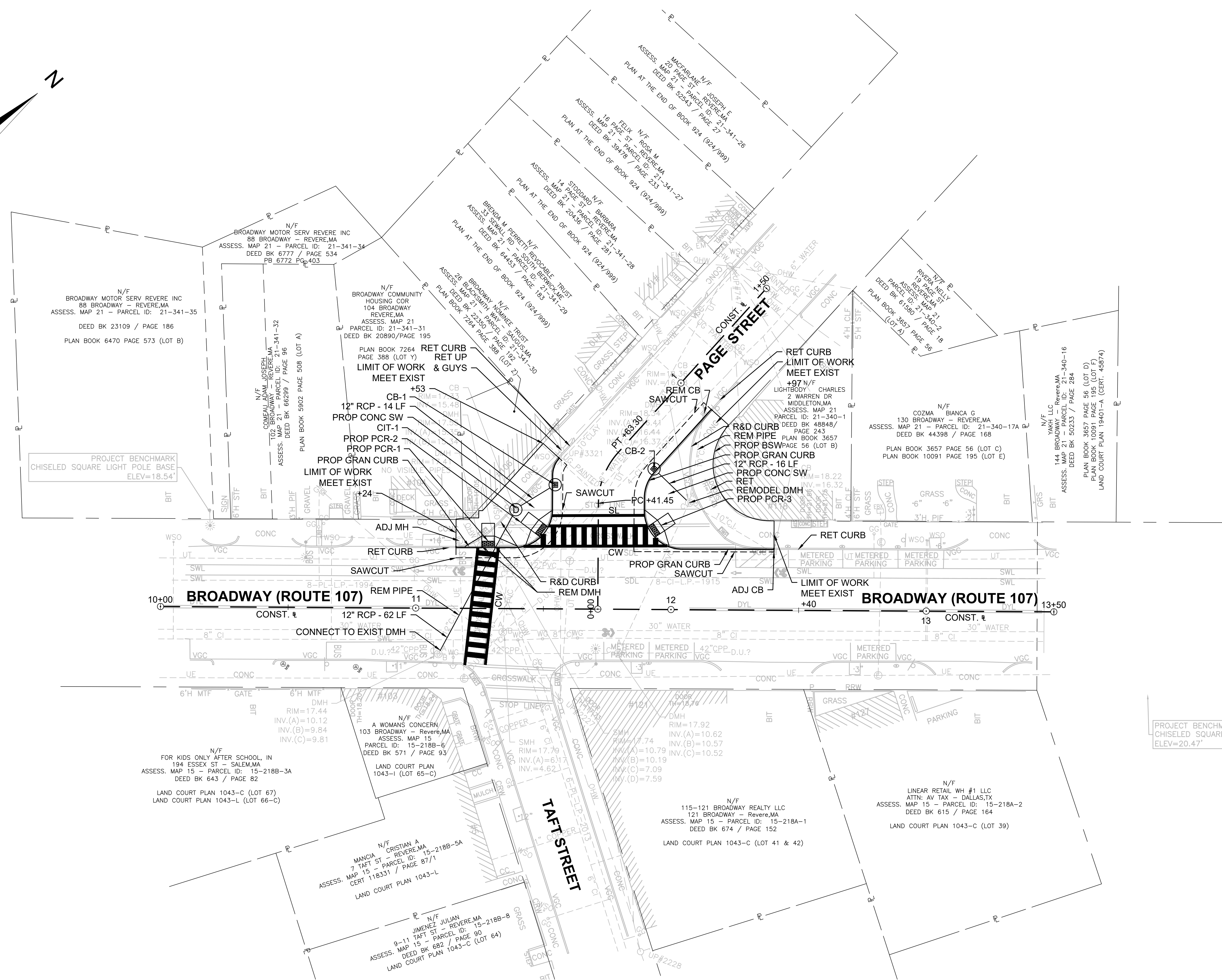
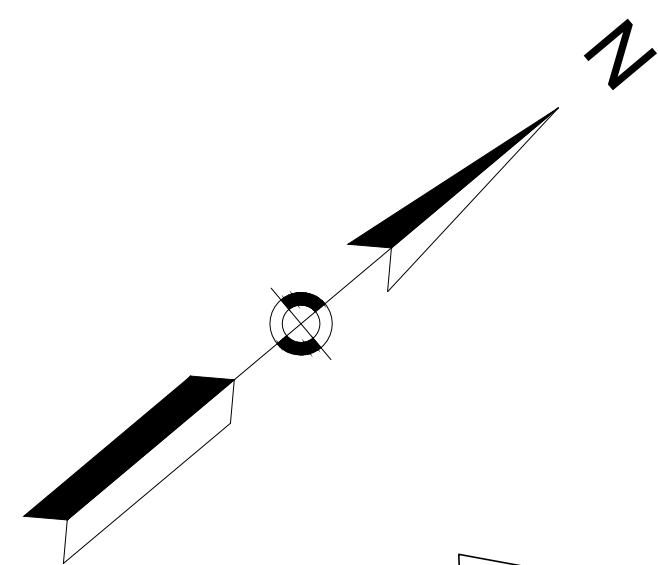
TITLE

**INTERSECTION IMPROVEMENTS  
BROADWAY (ROUTE 107) AND  
PAGE STREET / TAFT STREET  
CONSTRUCTION DETAILS  
REVERE, MASSACHUSETTS**

BETA JOB NO. 10826  
ISSUE DATE 09/01/2023  
SHEET NO. **4 of 7**

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION





PROJECT BENCHMARK  
CHISELED SQUARE LIGHT POLE BASE  
ELEV=18.54'

PROJECT BENCHMARK  
CHISELED SQUARE ON CONC RET WALL  
ELEV=20.47'

9/1/2023 12:46 PM C:\10800S\10826 - REVERE, MA - BROADWAY AND PAGE ST\DRAWING FILES\PLANSET\10826 CONST.DWG (MADOT-D.STB)

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DESIGNED BY:  
SD

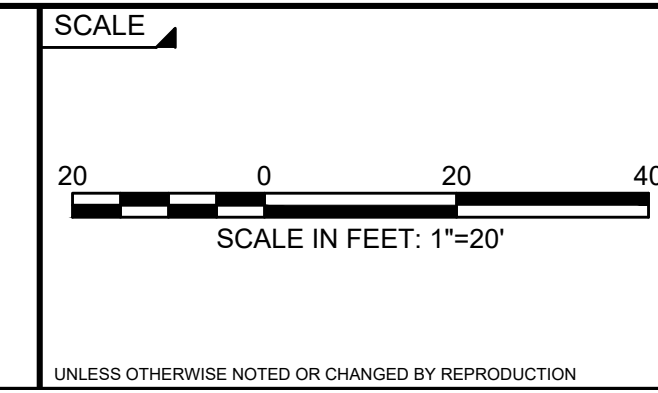
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TITLE

**INTERSECTION IMPROVEMENTS  
BROADWAY (ROUTE 107) AND  
PAGE STREET / TAFT STREET  
CONSTRUCTION PLAN  
REVERE, MASSACHUSETTS**

BETA JOB NO. 10826

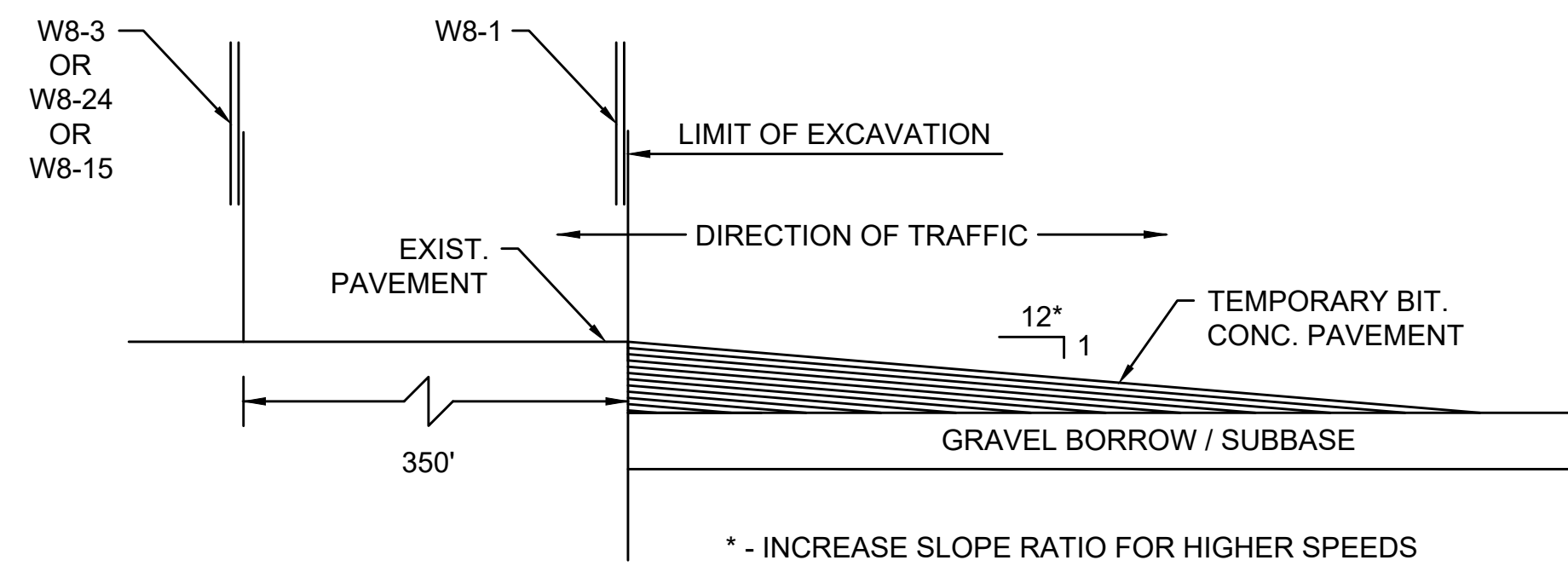
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SHEET NO. **5 of 7**

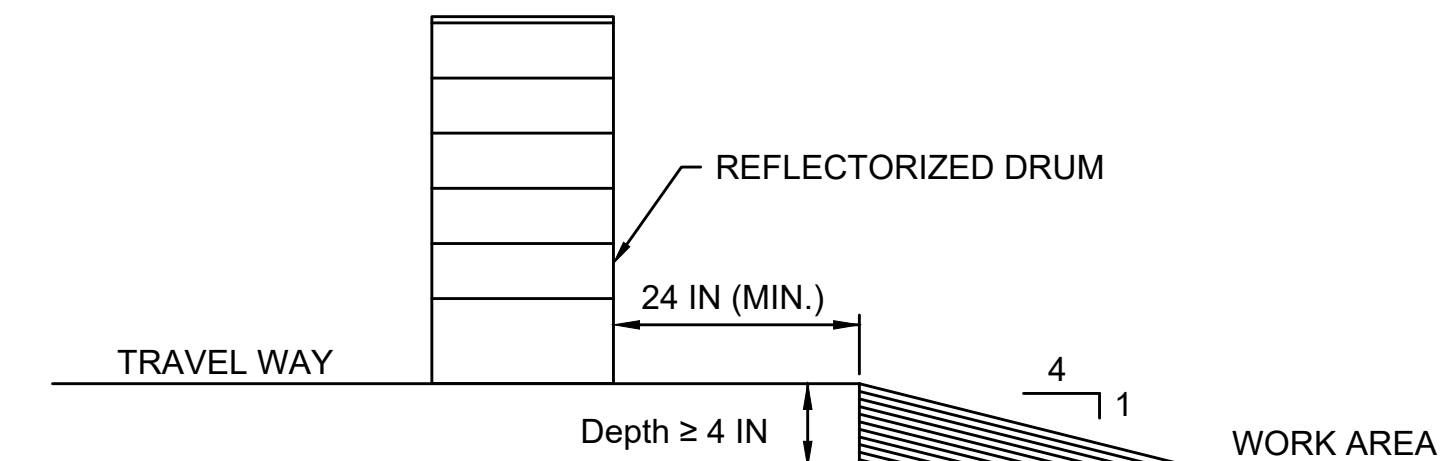


**NOTES:**

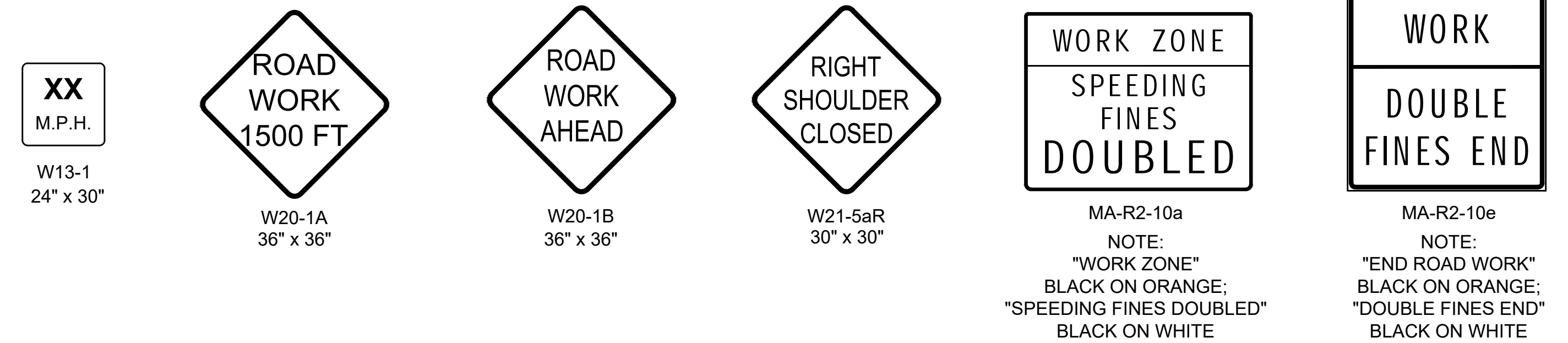
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER MAY BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".



**LONGITUDINAL DROP-OFF DETAIL**  
NOT TO SCALE



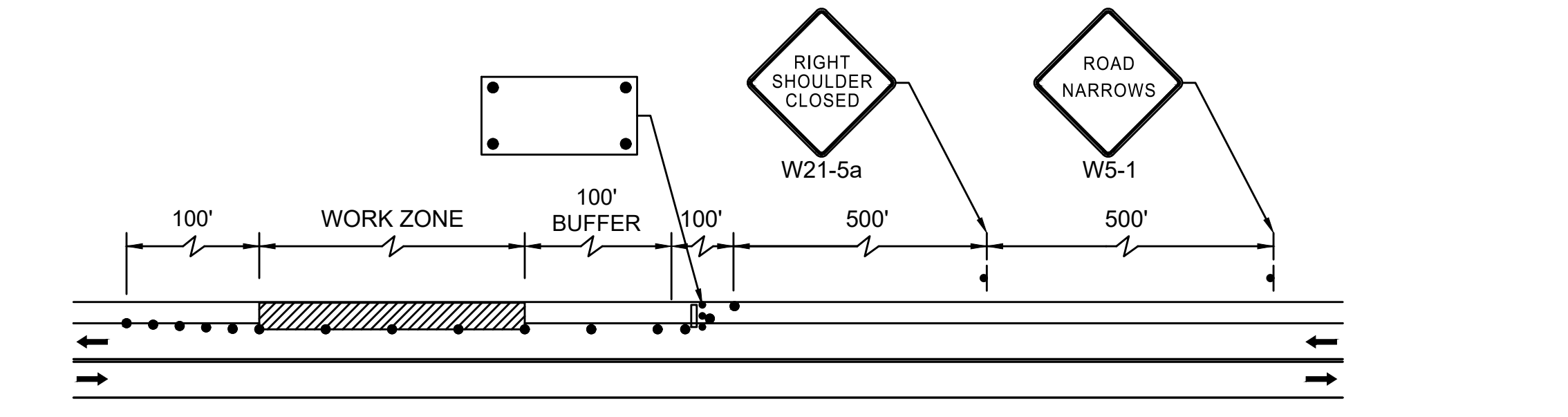
**LATERAL DROP-OFF DETAIL**  
NOT TO SCALE



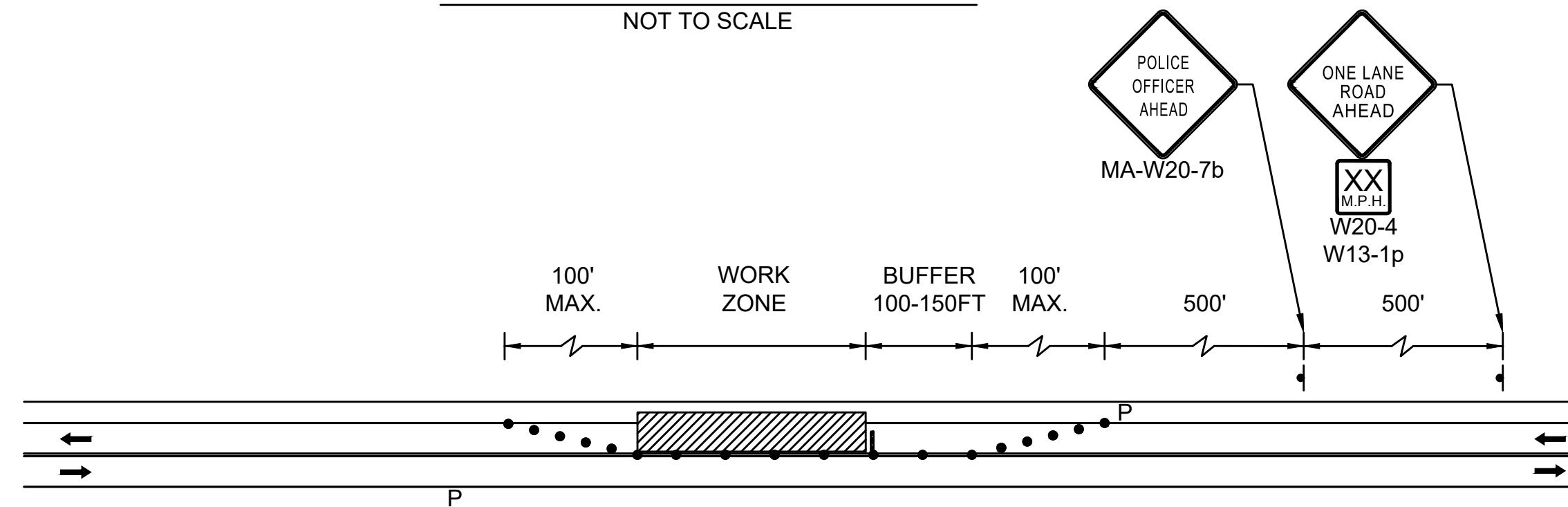
**CONSTRUCTION SIGNS**  
NOT TO SCALE

**LEGEND:**

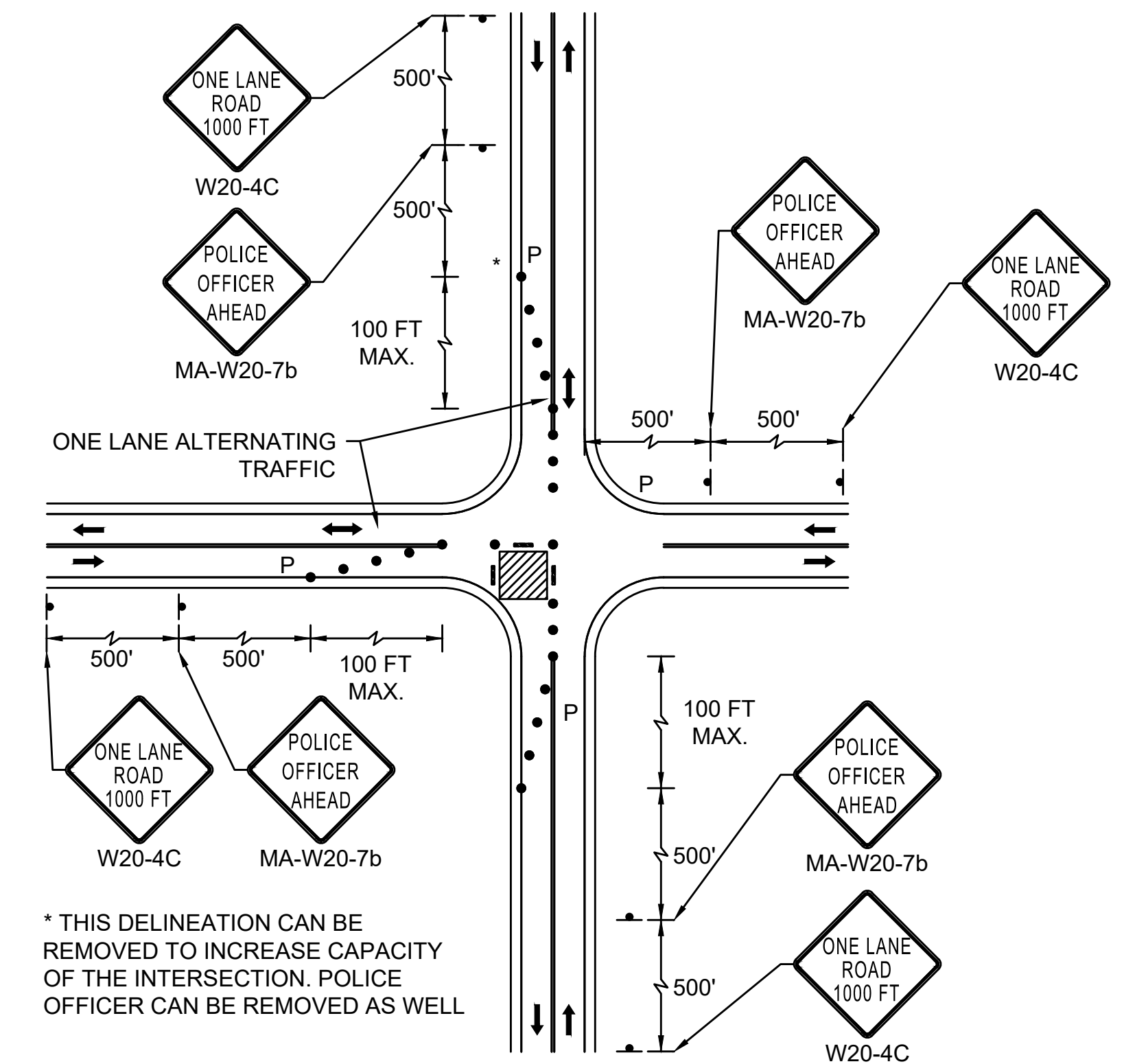
- REFLECTORIZED PLASTIC DRUM
- ▨ TYPE III BARRICADE
- ⬇️ FLASHING ARROW PANEL
- ⬆️ FLASHING ARROW PANEL
- ▨ WORK ZONE
- ➔ DIRECTION OF TRAFFIC
- ⊘ IMPACT ATTENUATOR
- ▭ MEDIAN BARRIER
- ⊘ MEDIAN BARRIER WITH WARNING LIGHTS
- 🚚 WORK VEHICLE
- ⊘ TRUCK MOUNTED ATTENUATOR
- ➔ TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN
- P POLICE DETAIL
- F FLAGGER



**TWO-LANE ROAD - SHOULDER CLOSED**  
NOT TO SCALE



**TWO-LANE ROAD - ONE LANE ALTERNATING TRAFFIC WITH POLICE DETAIL**  
NOT TO SCALE



**INTERSECTION WITH LANE CLOSURE**  
NOT TO SCALE

\* THIS DELINEATION CAN BE REMOVED TO INCREASE CAPACITY OF THE INTERSECTION. POLICE OFFICER CAN BE REMOVED AS WELL

**TAPER LENGTH**

SPEED LIMIT	FORMULA
40 MPH or Less	$L = WS^2/60$
45 MPH or Greater	$L = W \times S$

L = TAPER LENGTH IN FEET  
W = WIDTH OF OFFSET IN FEET  
S = POSTED SPEED IN MPH

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CHECKED BY: DM / JM

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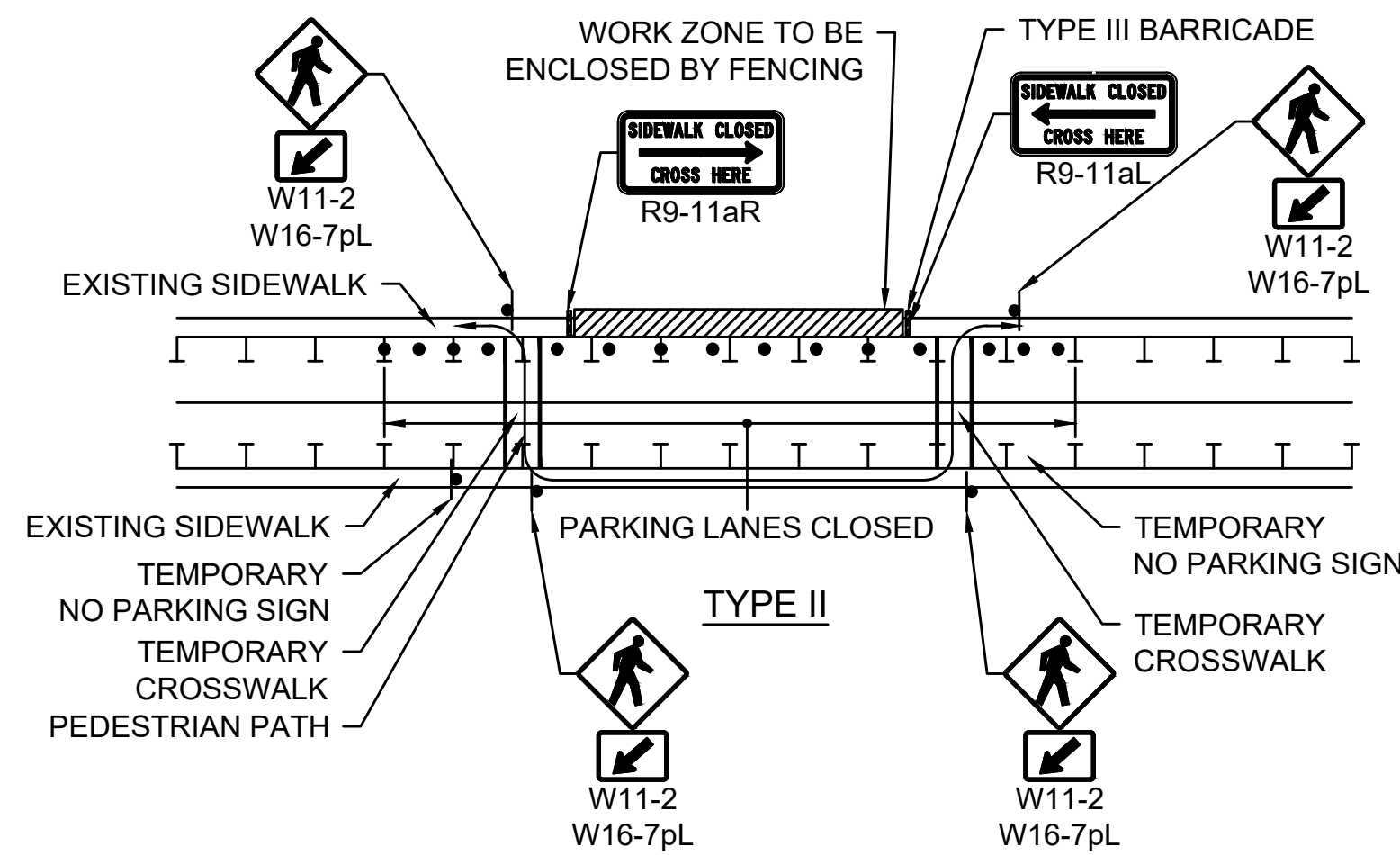
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TITLE  
**INTERSECTION IMPROVEMENTS  
BROADWAY (ROUTE 107) AND  
PAGE STREET / TAFT STREET  
TEMPORARY TRAFFIC CONTROL PLAN  
REVERE, MASSACHUSETTS**

BETA JOB NO. 10826  
ISSUE DATE 09/01/2023  
SHEET NO. **6 of 7**

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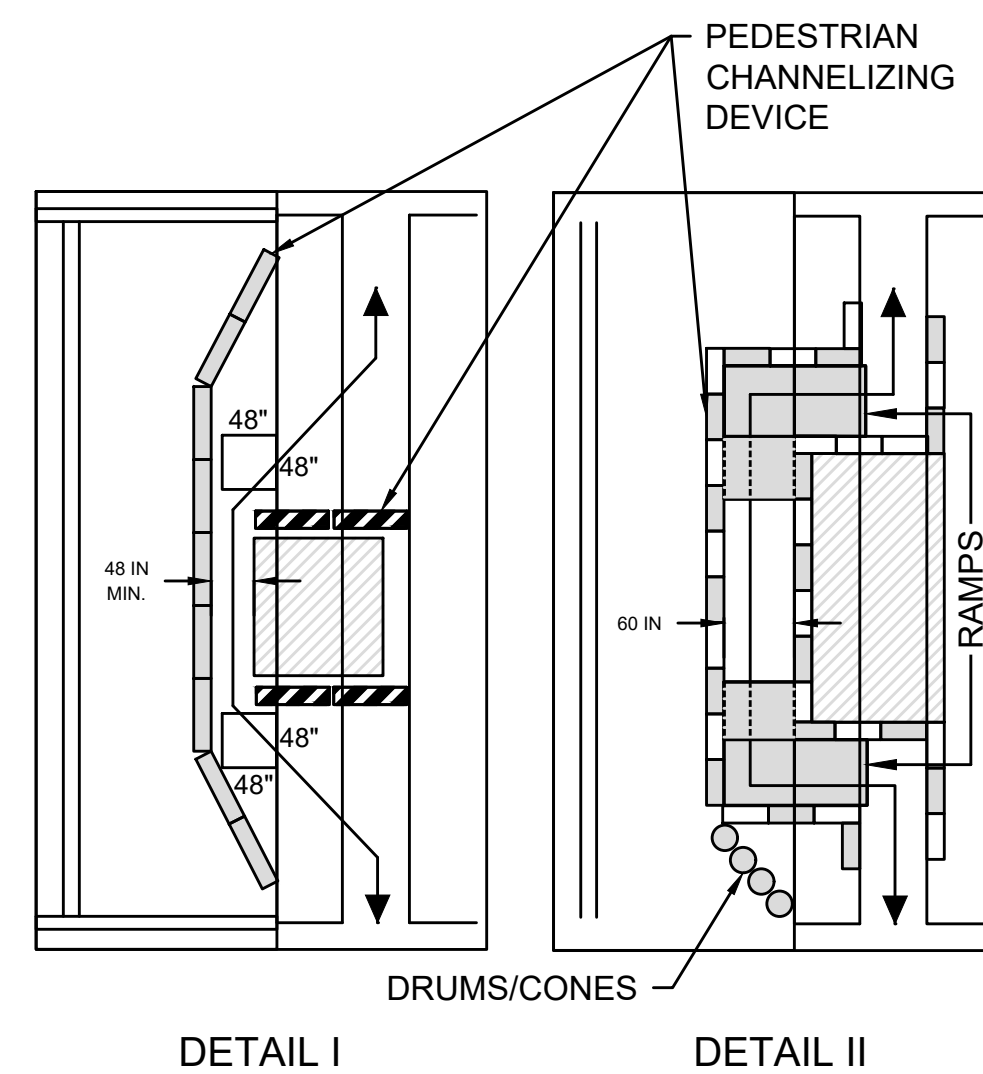




**NOTES:**

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE.

**PEDESTRIAN BYPASS DETAILS**  
NOT TO SCALE

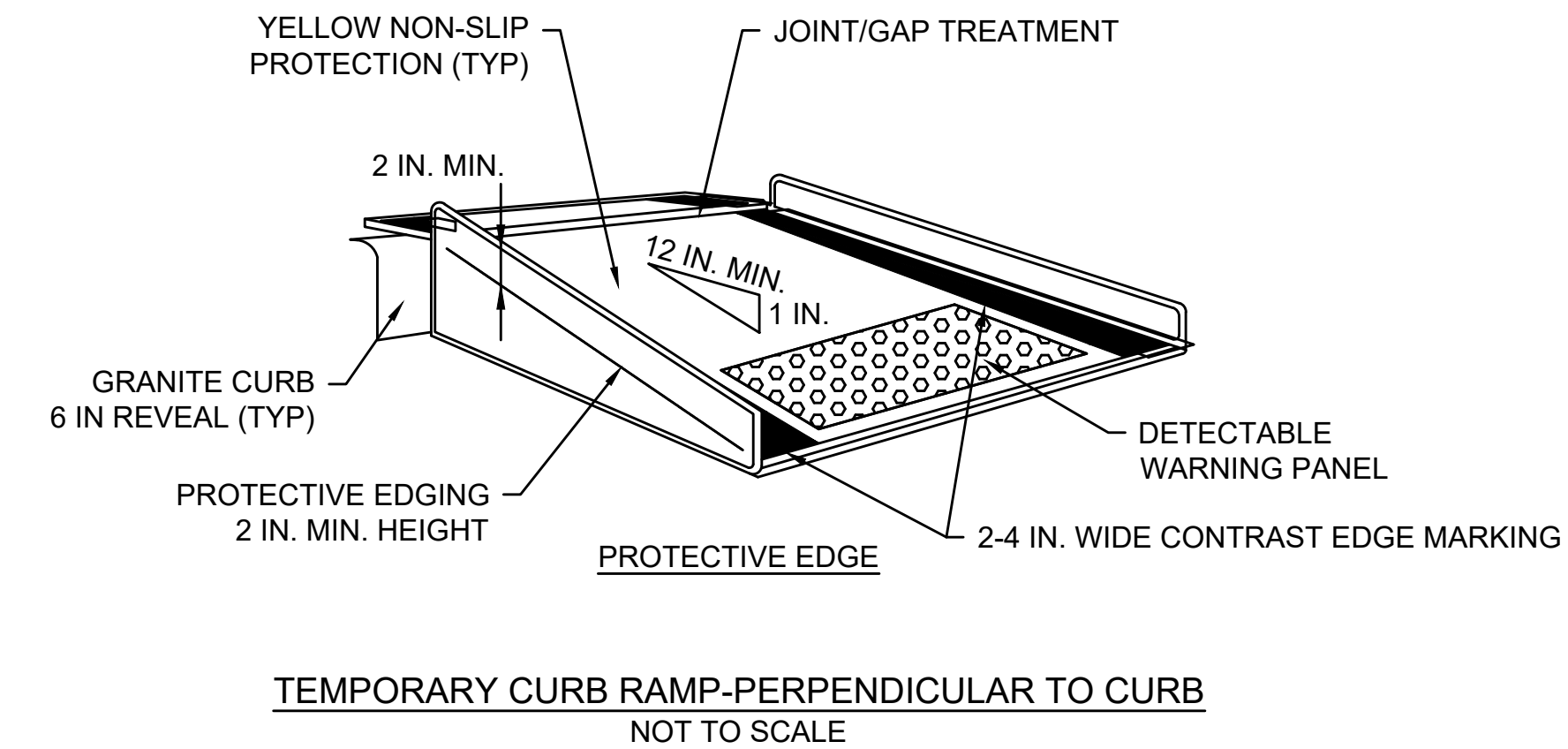


**NOTES:**

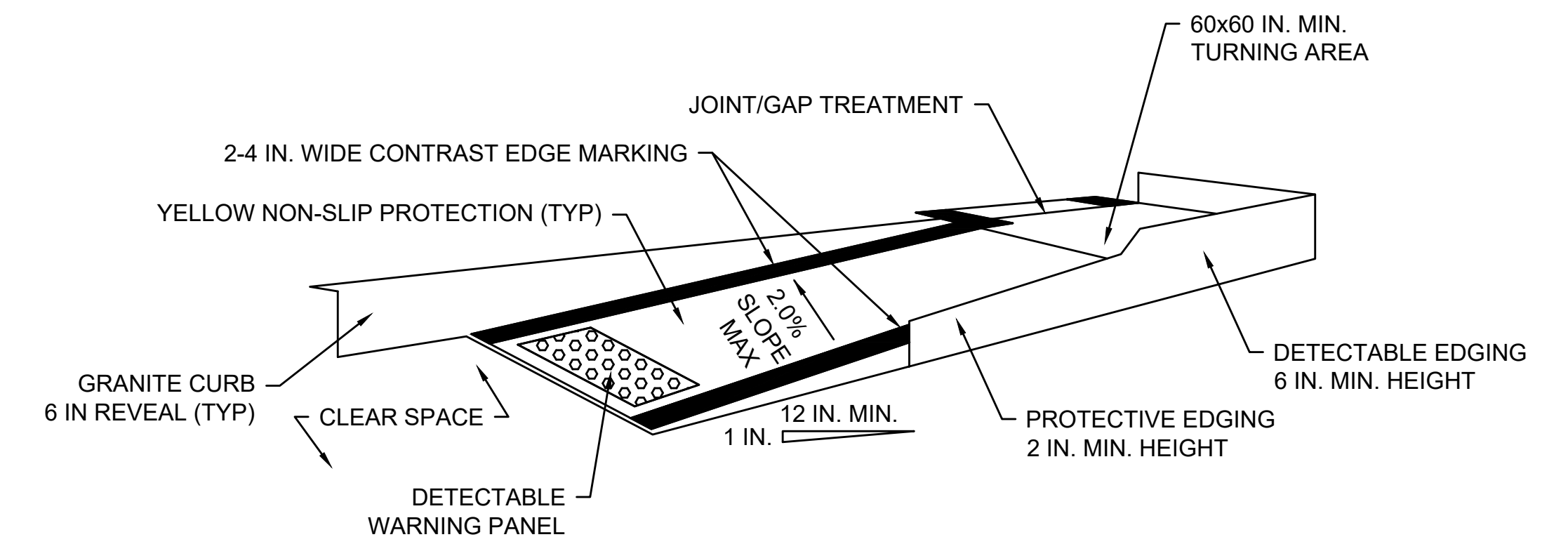
- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT.
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

**AUDIBLE DEVICES:**

- FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.



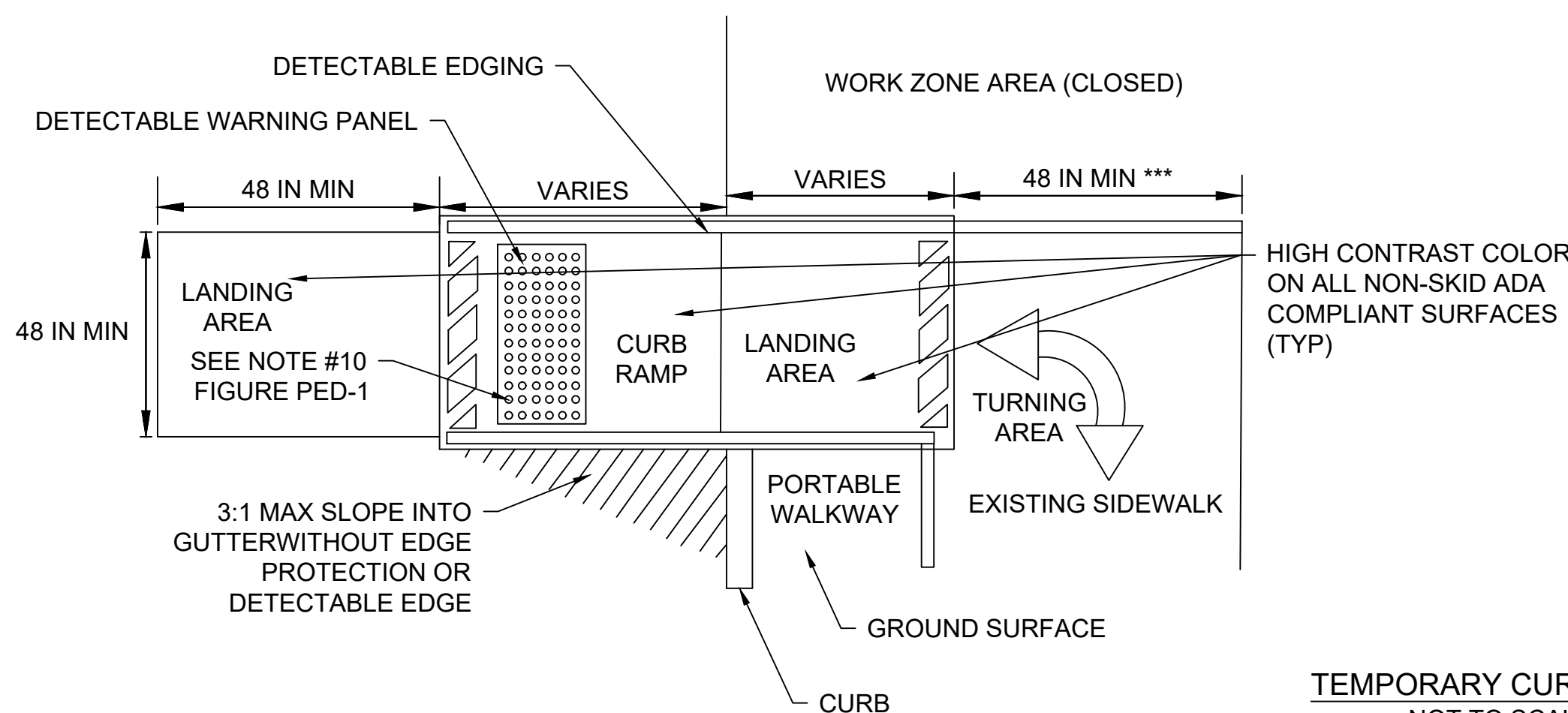
**TEMPORARY CURB RAMP-PERPENDICULAR TO CURB**  
NOT TO SCALE



**TEMPORARY CURB RAMP-PARALLEL TO CURB**  
NOT TO SCALE

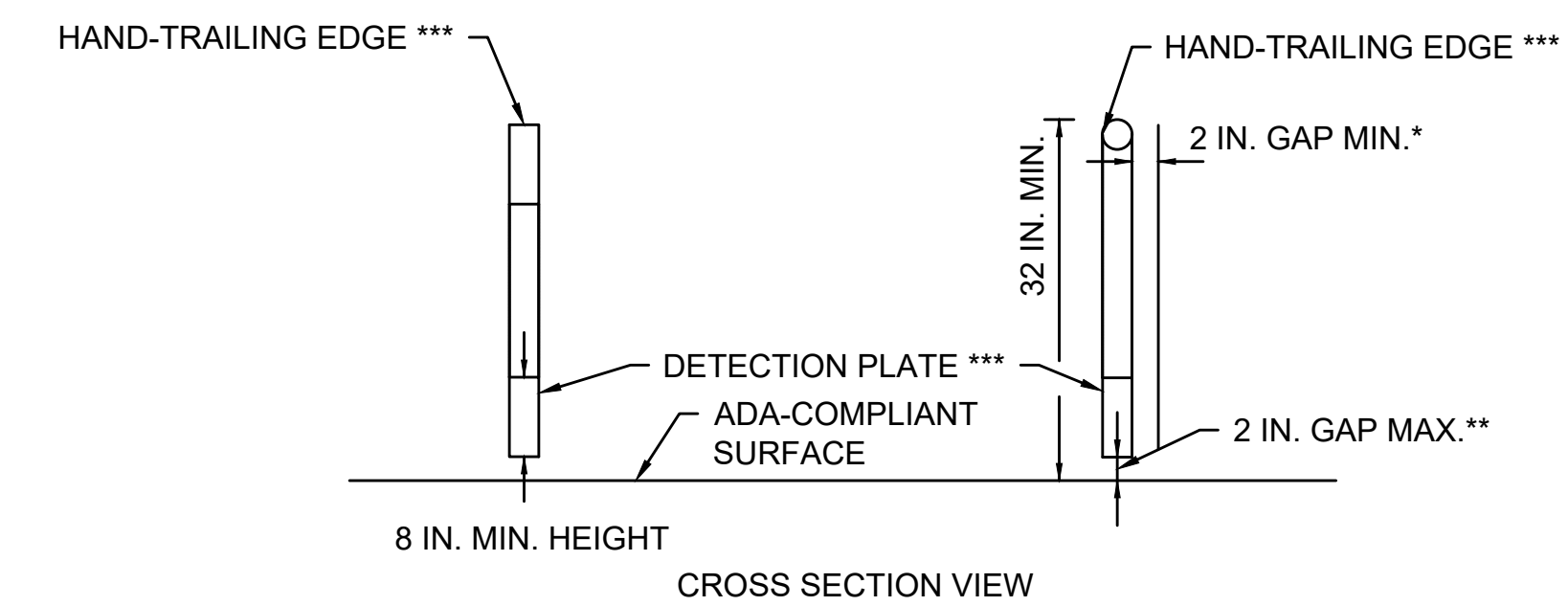
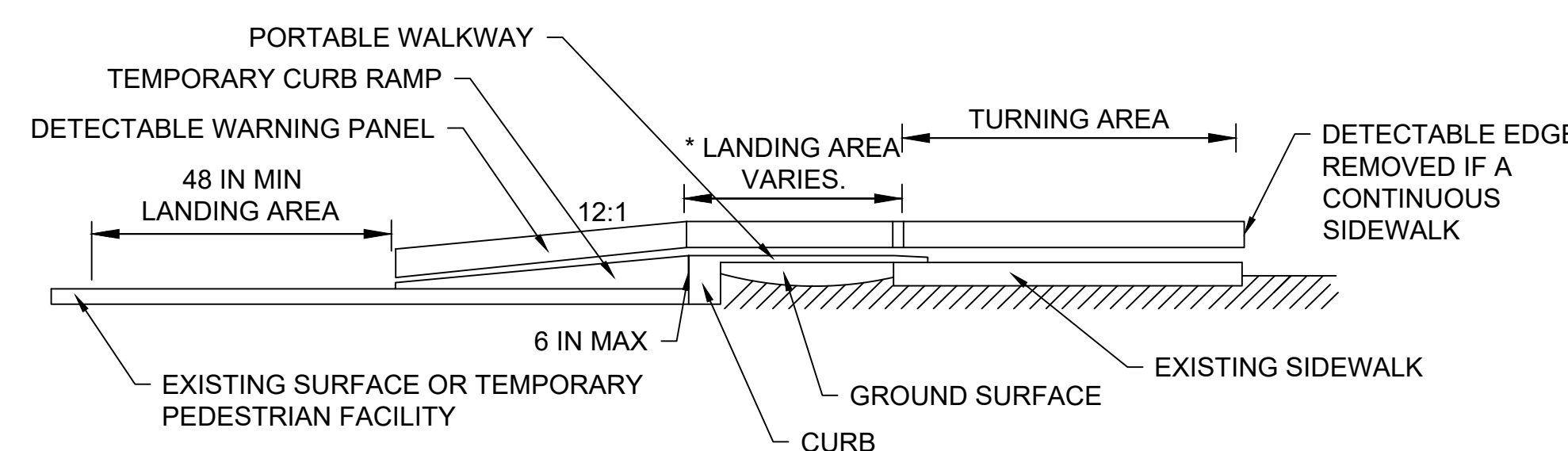
**NOTES:**

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



**TEMPORARY CURB RAMP**  
NOT TO SCALE

- \* LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.
- \*\* DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.
- \*\*\* 60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK



**PEDESTRIAN CHANNELIZING DEVICE**  
NOT TO SCALE

**NOTES:**

- \* THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.
- \*\* A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.
- \*\*\* THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.

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