

NOTES & GUIDELINES

GENERAL INFORMATION

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED. IN PLACE SIGNING MUST ALSO BE MAINTAINED OR TEMPORARILY RELOCATED FOR CONSTRUCTION ACTIVITIES.
2. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
3. ALL DISTANCES ARE APPROXIMATE. PLANS ARE NOT DRAWN TO SCALE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MNMUTCD.
5. SIGN INSTALLATIONS SHALL NOT OBSTRUCT EXISTING SIGNS.

SIGNING

1. ALL TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
2. WHEN SIGNS ARE PLACED, THEY SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED IN THE ATTACHED TYPICAL SIGN FRAMING AND INSTALLATION DETAILS. IF THIS IS NOT POSSIBLE, THEY WILL BE MOUNTED ON PORTABLE SUPPORTS AS APPROVED BY THE ENGINEER. WHEN THE SIGNS ARE REMOVED THE SIGN POSTS SHALL ALSO BE REMOVED WITHIN 2 WEEKS (5-18.4(B)).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXTRA SIGNING NEEDED TO FACILITATE TRAFFIC SWITCHES OR FOR TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER.
4. ALL ORANGE WARNING AND ORANGE GUIDE SIGNS SHALL BE FABRICATED WITH SIGN SHEETING MATERIAL AS LISTED ON THE MN/DOT APPROVED PRODUCT LIST FOR "SHEETING FOR RIGID TEMPORARY WORK ZONE SIGNS".
BARRICADES SHALL BE FABRICATED WITH SIGN SHEETING MATERIAL AS LISTED ON THE MN/DOT APPROVED PRODUCT LIST FOR BARRICADE SHEETING.
NOTE THAT ASTM TYPE VII SHEETING IS NOT ALLOWED ON BARRICADES AFTER JANUARY 1, 2010.
5. LONGITUDINAL DROPOFFS SHALL BE SIGNED AS SHOWN IN THE "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" FIELD MANUAL UNLESS OTHERWISE SPECIFIED IN THESE PLANS.
6. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE FINAL SIGNS TO ASSURE THAT THE FINAL SIGNS ARE PLACED AS NEEDED, OR PROVIDE TEMPORARY SIGNING AT THEIR EXPENSE UNTIL THE FINAL SIGNING IS PLACED.



















PAVEMENT MARKING

1. OBLITERATE ANY CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
2. MULTI-COMPONENT LIQUID, POLYMER LANE TAPE AND/OR TRPM'S ARE ACCEPTABLE TEMPORARY STRIPING ALTERNATIVES ACCORDING TO ACTUAL CONDITIONS ENCOUNTERED AS DIRECTED BY THE ENGINEER. GENERALLY, ONLY PAINT WILL BE USED BEFORE MAY 1ST OR WHEN THE OTHER MANUFACTURERS SPECIFICATIONS CAN NOT BE MET.
3. TRPM'S (TEMPORARY RAISED PAVEMENT MARKERS) SHOULD BE USED TO SUPPLEMENT THE LONG TERM (MORE THE 3 DAYS) EDGELINES ON ALL TRANSITION AREAS WHEN THE CONDITIONS ARE WITHIN THE MANUFACTURERS SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND INSTALLATION OF TEMPORARY AND FINAL STRIPING. MN/DOT TRAFFIC PERSONNEL WILL ASSIST IN THE SPOTTING OF TRANSITION AREAS, GORES AND TAPERS.

PEDESTRIAN CONTROL


1. ALL TEMPORARY WALKWAYS SHALL BE 5' UNLESS OTHERWISE SHOWN IN PLAN.

TRAFFIC CONTROL TITLE SHEET






-  - ARROWBOARD
-  - ARROWBOARD SUPPORT OR TRAILER
-  - PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
-  - PCMS TRAILER
-  - TYPE A FLASHING WARNING LIGHTS
-  - STEADY BURN WARNING LIGHTS
-  - RED FLASHING WARNING LIGHTS
-  - PORTABLE FLOOD LIGHT
-  - CHANNELIZING DEVICE
-  - RETROREFLECTIVE DRUM, TYPE I OR TYPE II BARRICADE, VERTICAL PANEL
-  - SIGN (SHOWN FACING LEFT)
-  - SURFACE MOUNTED DELINEATOR
-  - SIDEWALK BARRICADE
-  - TYPE III BARRICADE
-  - CONCRETE BARRIER WITH BARRIER DELINEATORS AT 30' SPACING
-  - IMPACT ATTENUATOR
-  - PORTABLE SIGNAL SYSTEM
-  - WET REFLECTIVE TAPE

LEGEND

1ST DIGIT WIDTH	2ND DIGIT PATTERN	3RD DIGIT COLOR
4" OR 8"	S - SOLID B - BROKEN D - DOUBLE	W - WHITE Y - YELLOW B - BLACK

EXAMPLE:  = 6" SOLID LINE WHITE
- MULTI-COMPONENT

STRIPING KEY

-  MULTI-COMPONENT
-  PAINT
-  REMOVABLE WET REFLECTIVE PREFORMED PLASTIC MARKING
-  POLY PREFORM
-  POLY PREFORM GROUND IN GR-IN

TRAFFIC CONTROL

SHEET NO.

- T1 TITLE SHEET
- T2 SIGN TABULATION
- T3-T4 CROSS SECTIONS
- T5 STAGE 1 DETOUR
- T6 STAGE 2 DETOUR
- T7-T11 STAGE 3
- T12-T16 STAGE 4
- T17-T23 DETAILS

STAGE 1 NARRATIVE:

- CONSTRUCT CR 16 INTERSECTION
- CONSTRUCT BOX CULVERTS
- CONSTRUCT CULVERTS SOUTH OF CR 7
- TRAFFIC TO BE MANAGED UTILIZING DETOUR ON SHEET T5

STAGE 2 NARRATIVE:

- COMPLETE CONSTRUCTION OF CR 16 INTERSECTION
- COMPLETE CONSTRUCTION OF BOX CULVERTS
- TRAFFIC TO BE MANAGED UTILIZING DETOUR ON SHEET T6

STAGE 3 NARRATIVE:

- CONSTRUCT SIDEWALK ON WEST SIDE OF TH 52

STAGE 4 NARRATIVE:

- CONSTRUCT SIDEWALK ON EAST SIDE OF TH 52

I HEREBY CERTIFY THAT SHEETS T1 THROUGH T23 OF THIS PLAN WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGR. _____ DATE 23-NOV-2021

LICENSE NO. _____

TRAFFIC CONTROL PLAN

DISTRICT #: Metro
 PLOT NAME: APR - TPAR Bypass Sample Plan for reference only
 PATH & FILENAME: OTST\WorkZone\Templates\2020\new 20191230 APAR\APP-TPAR Sample Plan 20210602\APP - TPAR Sample Bypass Plan for reference only.dgn

DISTRICT #: Metro
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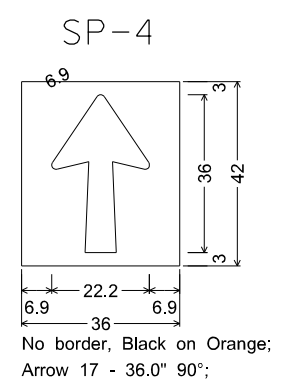
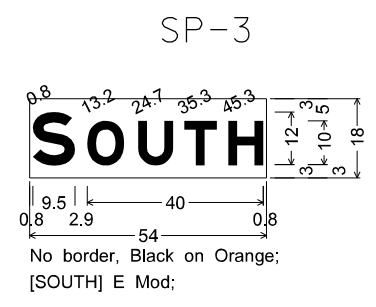
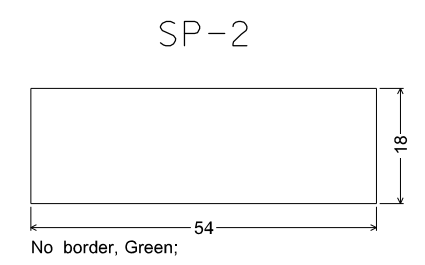
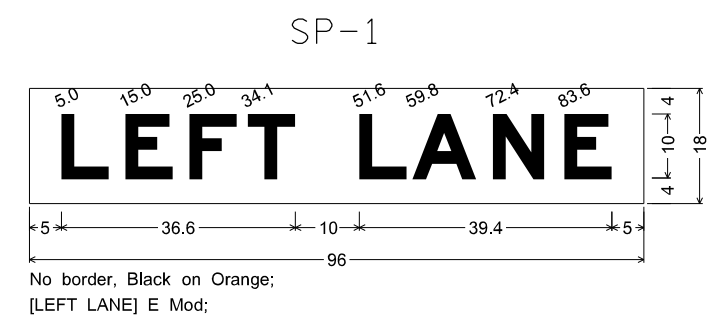
TRAFFIC CONTROL TABULATION (A)										T-A
ITEM	UNIT	STAGE 1		STAGE 2		STAGE 3		STAGE 4		TOTAL
		QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	
TEMPORARY TRUNCATED DOMES	LIN FT					15	85	20	50	170
TEMPORARY PEDESTRIAN RAMP	EACH					3	11			14
PEDESTRIAN CHANNELIZER	LIN FT					510	2200		190	2900
AUDIBLE MESSAGE DEVICE	UNIT DAY					270	630	290	630	1820
REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT						2680	132	2699	5511
PAVEMENT MARKING REMOVAL	LIN FT						400		400	800
ALTERNATE PEDESTRIAN ROUTE	LUMP SUM					.25	.25	.25	.25	1

(A) 80% FEDERAL, 20% STATE FUNDS

ESTIMATE OF TRAFFIC CONTROL DEVICES											
DEVICE	NUMBER	SIZE	COLOR	DEVICE	NUMBER	SIZE	COLOR	DEVICE	NUMBER	SIZE	COLOR
	R1-1	30"X30"	RED/WH		W20-1	48"X48"	BLK/OR		M4-10 L OR R	48"X18"	BLK/WH
	R8-3	24"X24"	BLK/RED ON WHITE		W20-1a	36"X18"	BLK/OR		M5-1 L OR R	① 21"X15" 30"X24"	BLK/WH
	R9-9	30"X18"	BLK/WH		W20-2	48"X48"	BLK/OR		M5-2R	① 30"X24"	BLK/WH
	R9-10	24"X12"	BLK/WH		W20-3	48"X48"	BLK/OR		M6-1 L OR R	① 21"X15" 30"X24"	BLK/WH
	R9-11 R or L	24"X12"	BLK/WH		W20-100F	42"X18"	BLK/OR		M6-2R	① 30"X24"	BLK/WH
	R9-11a R or L	24"X12"	BLK/WH		W20-X11	36"X36"	BLK/OR		M6-3	① 21"X15"	BLK/WH
	R11-2R	48"X30"	BLK/WH		W24-1R/L	36"X36"	BLK/OR		G20-X1	72"X60"	BLK/OR
	R11-4	60"X30"	BLK/WH		M1-4	① 24"X24" 36"X36"	BLK/WH		D9-6	24"X24"	WH/BLU
	W1-6	48"X48"	BLK/OR		M2-1	① 21"X15" 30"X24"	BLK/WH				
	W11-2	30"X30"	BLK/OR		M3-1	① 24"X12" 36"X18"	BLK/WH		AUDIBLE MESSAGE DEVICE		
	W14-3	64"X64" X48"	BLK/OR		M3-3	① 24"X12" 36"X18"	BLK/WH		SIDEWALK BARRICADE		OR & WH
	W16-7mPL	24"X18"	BLK/OR		M4-8	① 24"X12" 36"X18"	BLK/OR		TYPE 3	MIN. 6'	BLK/OR

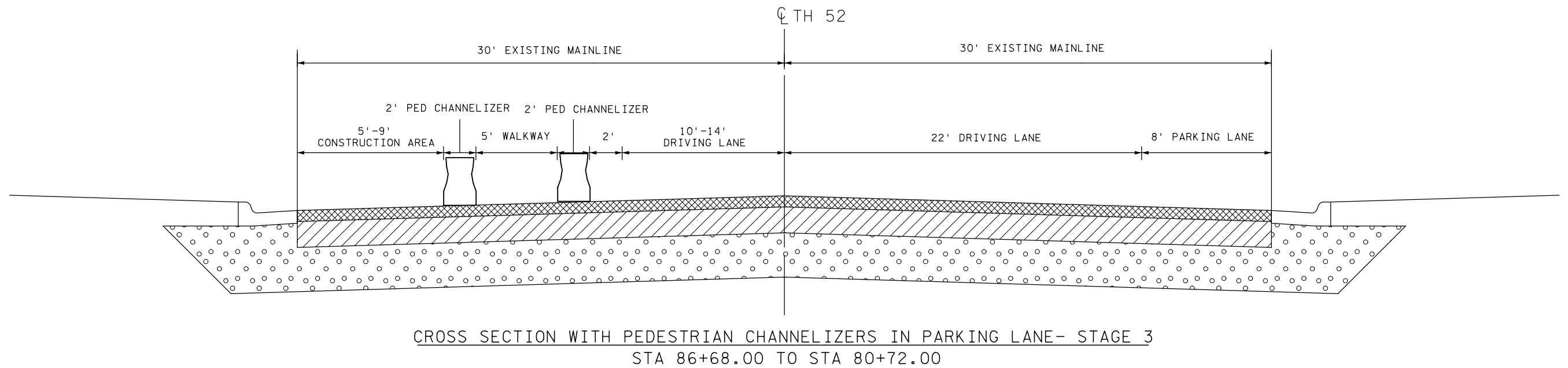
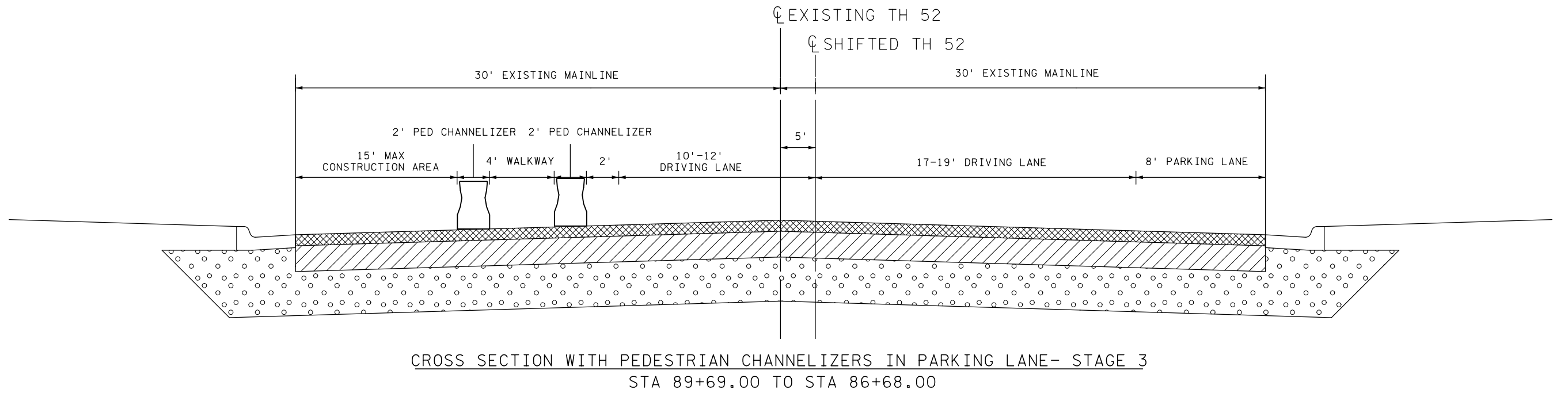
① USE 36" ASSEMBLIES ON TH 52 AND TH 90

STAGE	TAPE WIDTH	COLOR		4" EQUIVALENCE	TOTAL AS 4"	TOTAL QTY
		WHITE	YELLOW			
3	4"	537	1150	1	1687	2680
	12"	267		3	801	
	24"	32		6	192	
4	4"	948	1547	1	2495	2831
	12"	112		3	336	
	24"			6	0	

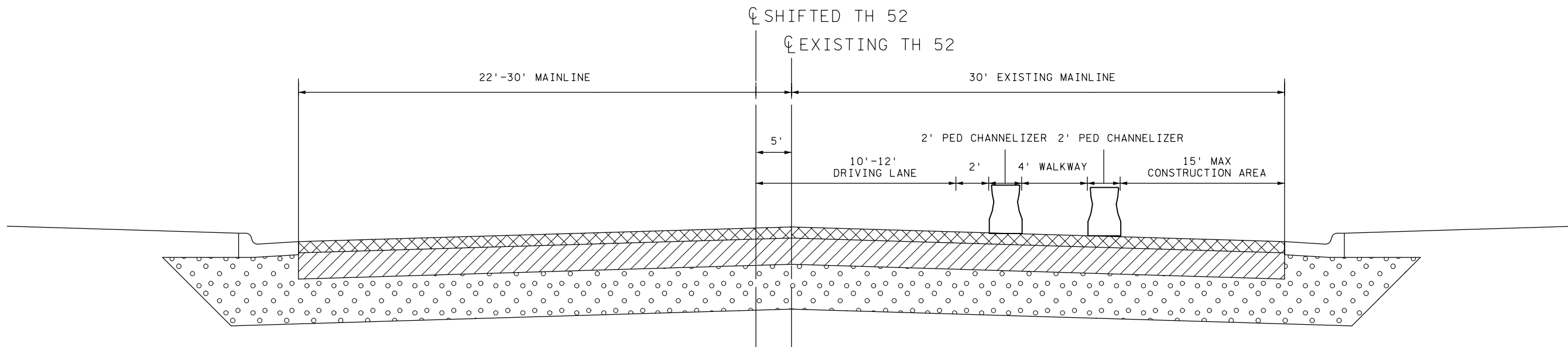


ALL SIGN DIMENSIONS ARE IN INCHES

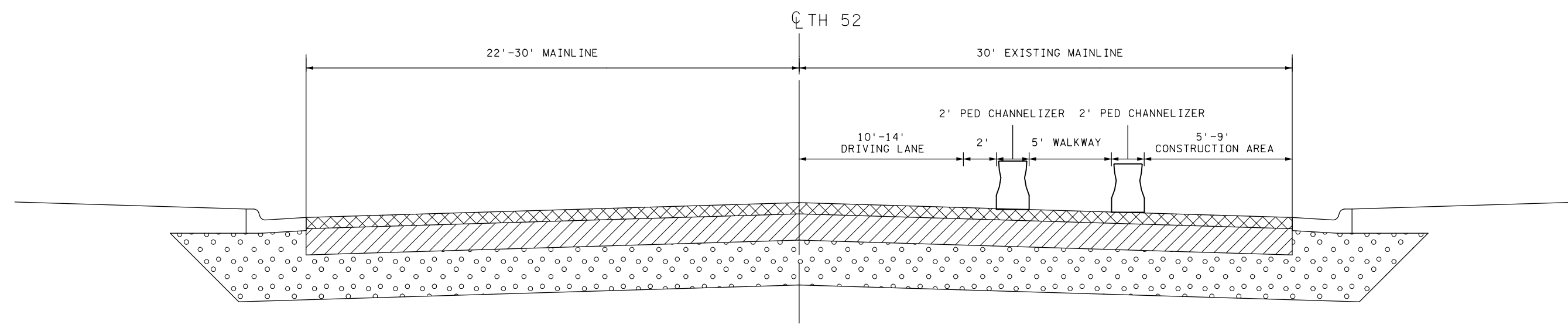
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CROSS SECTION WITH PEDESTRIAN CHANNELIZERS IN PARKING LANE- STAGE 4
 STA 87+74.00 TO STA 84+61.00

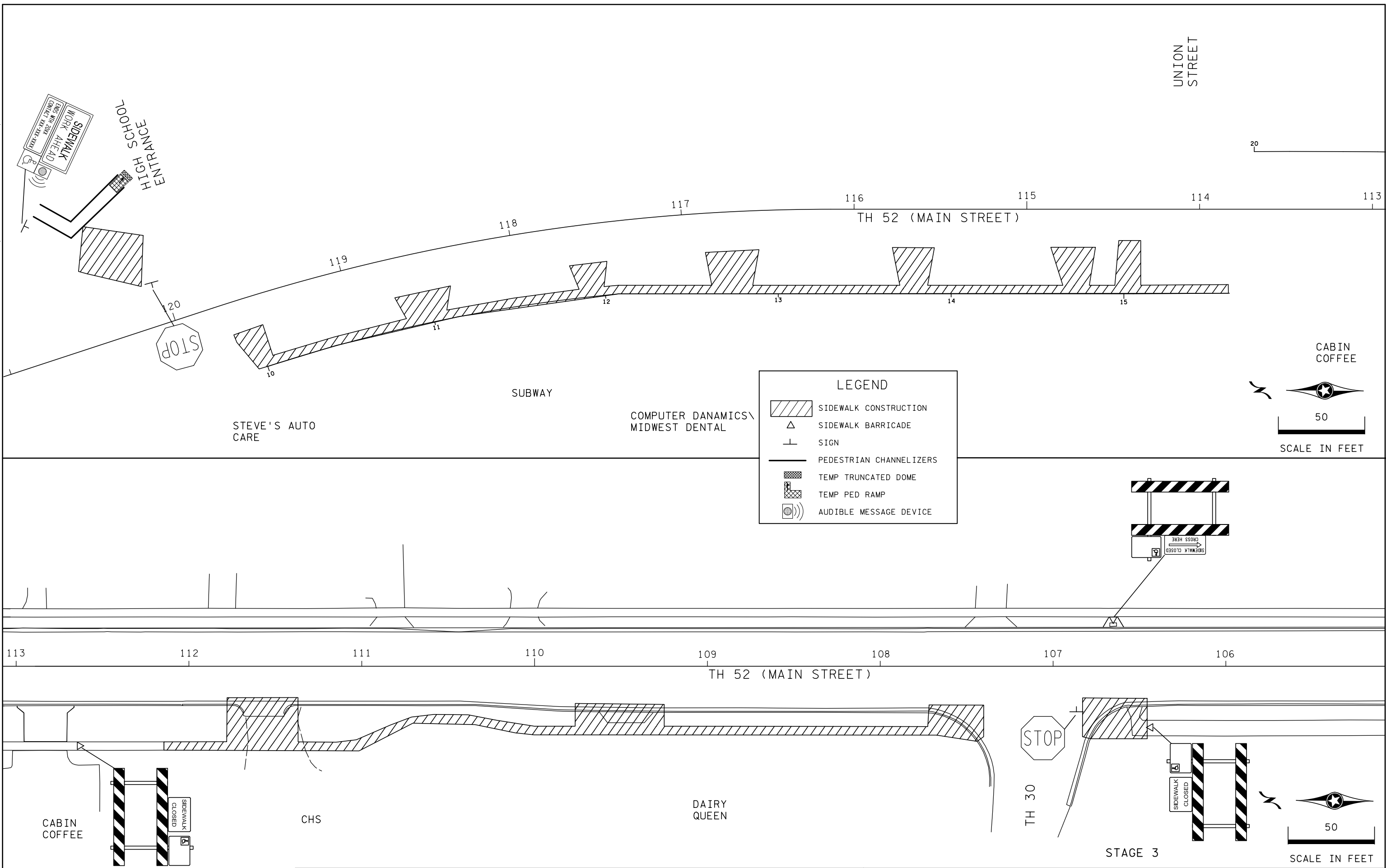


CROSS SECTION WITH PEDESTRIAN CHANNELIZERS IN PARKING LANE- STAGE 4
 STA 84+61.00 TO STA 80+72.00

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 LICENSED PROFESSIONAL ENGINEER - ADAM WELLNER

TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH 52) SHEET NO. T4 OF T23 SHEETS

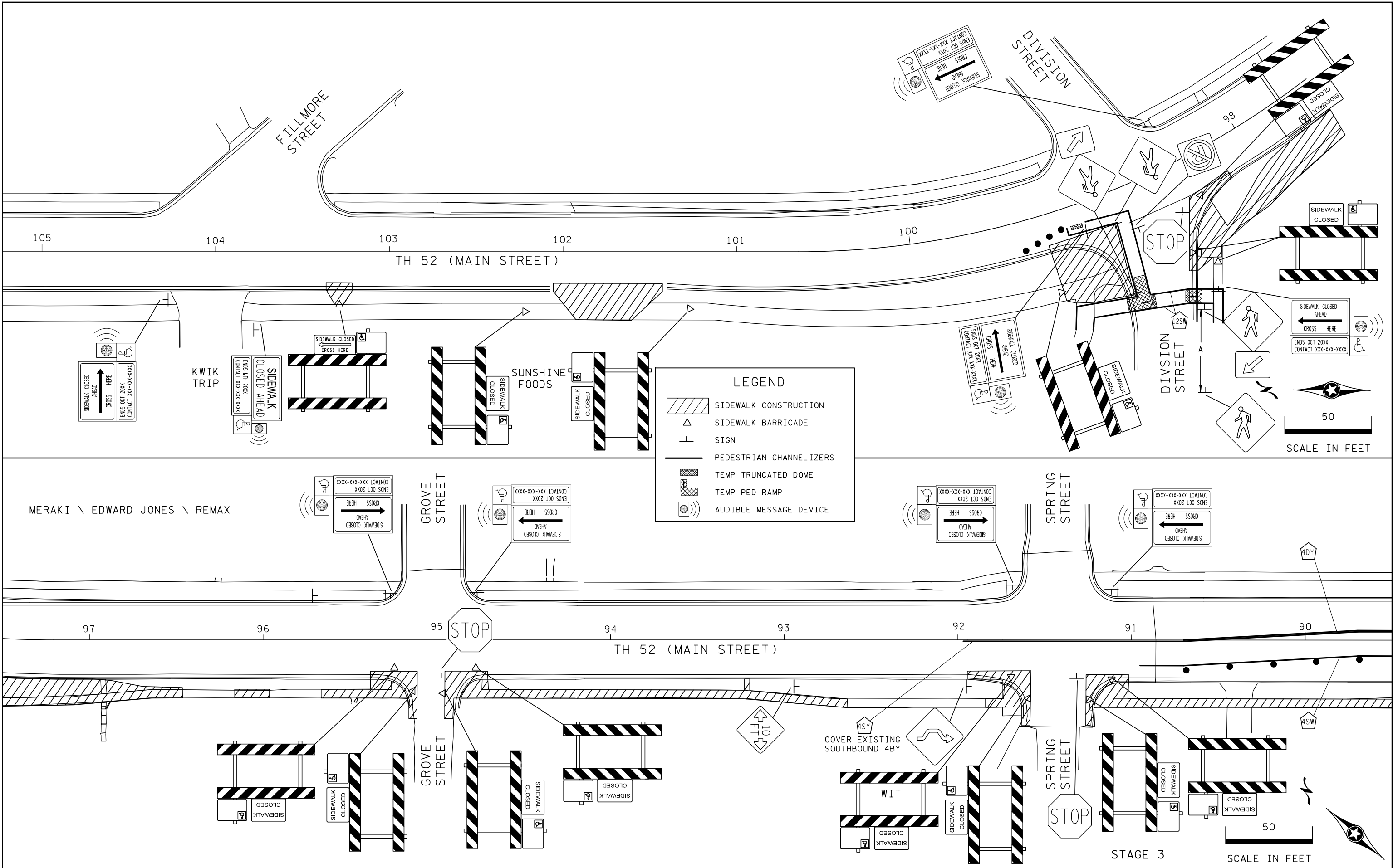
DISTRICT #: Metro
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 LICENSED PROFESSIONAL ENGINEER

TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T7 OF T23 SHEETS

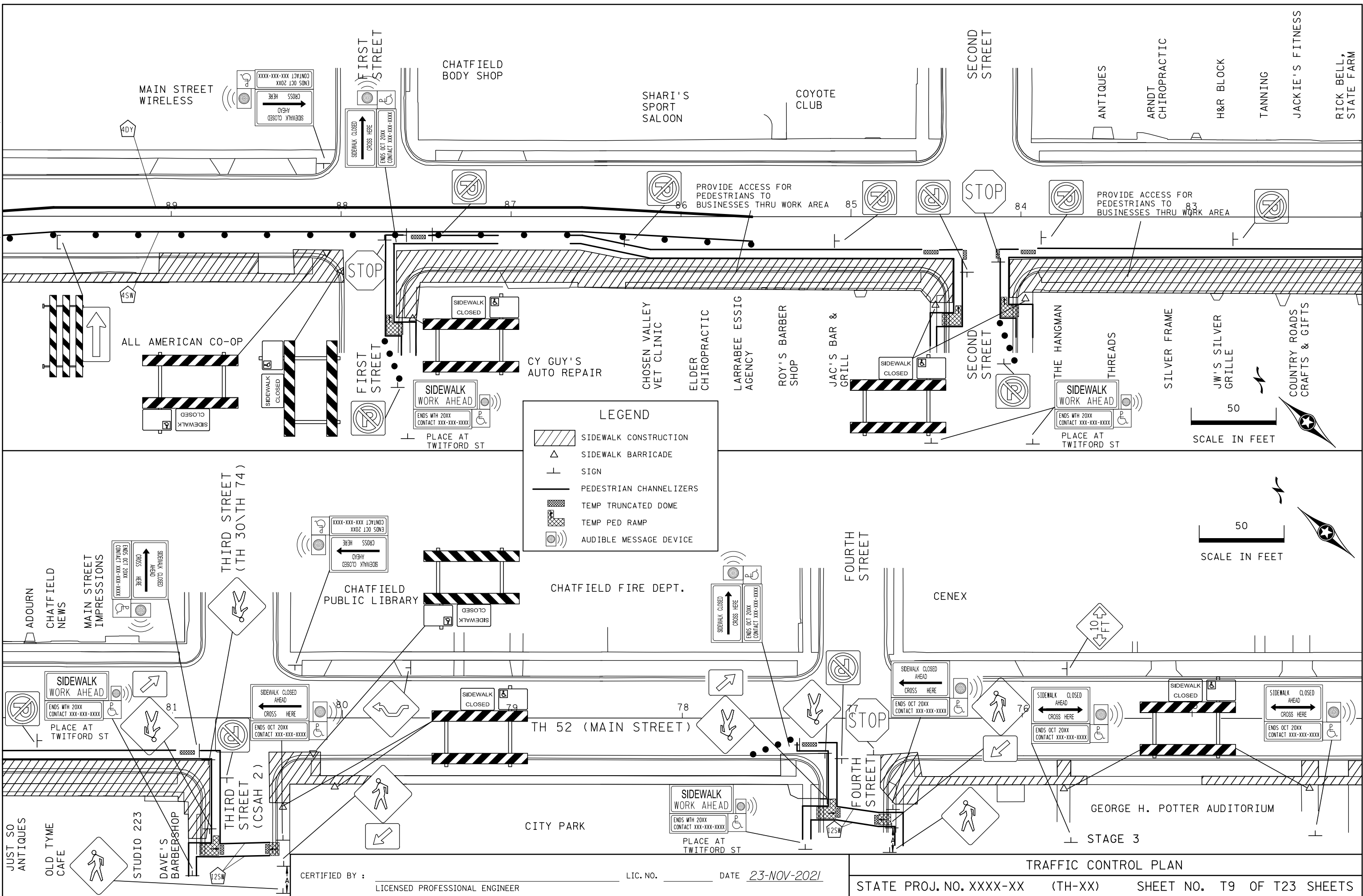
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TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T8 OF T23 SHEETS

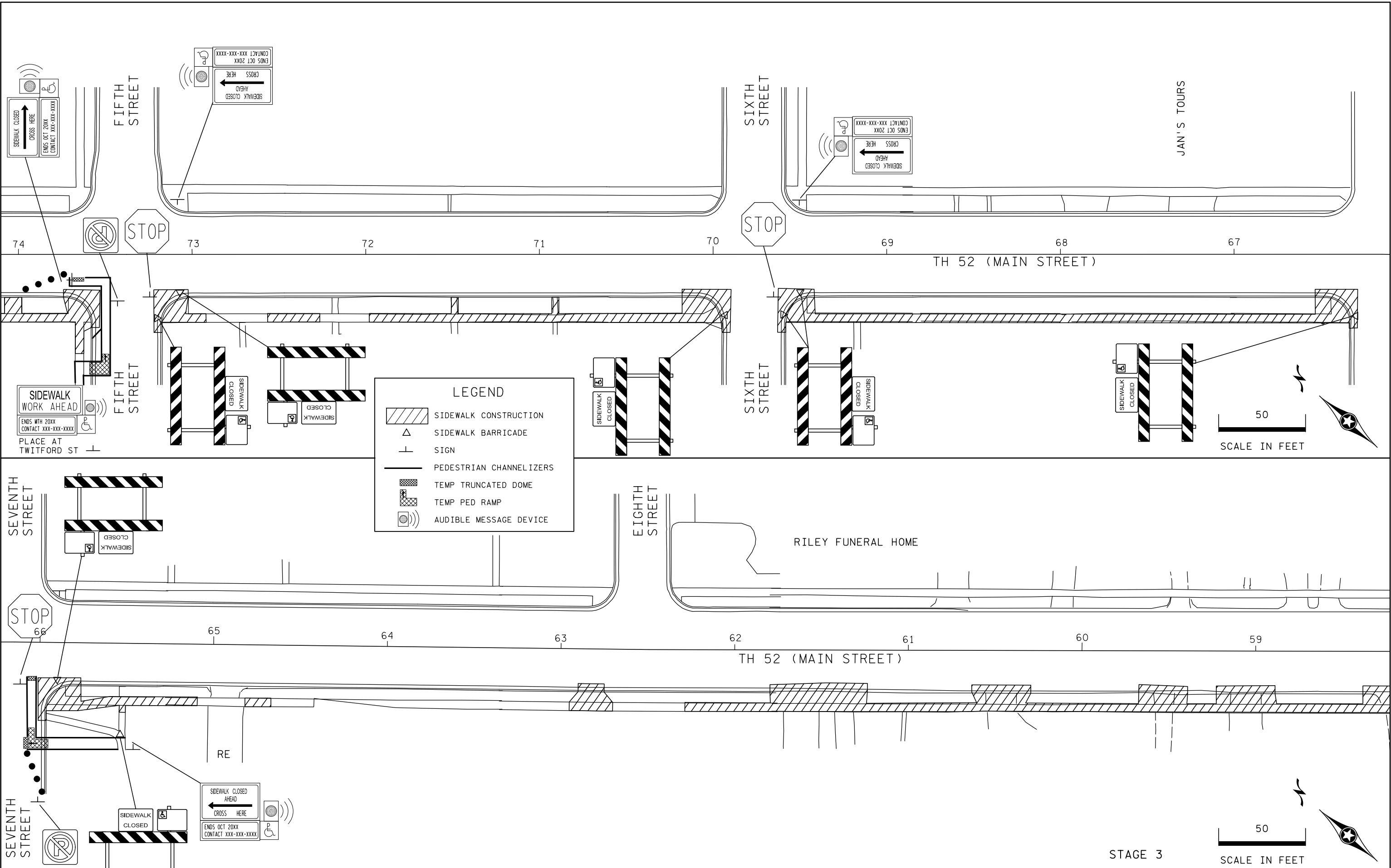
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TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T9 OF T23 SHEETS

DISTRICT #: Metro
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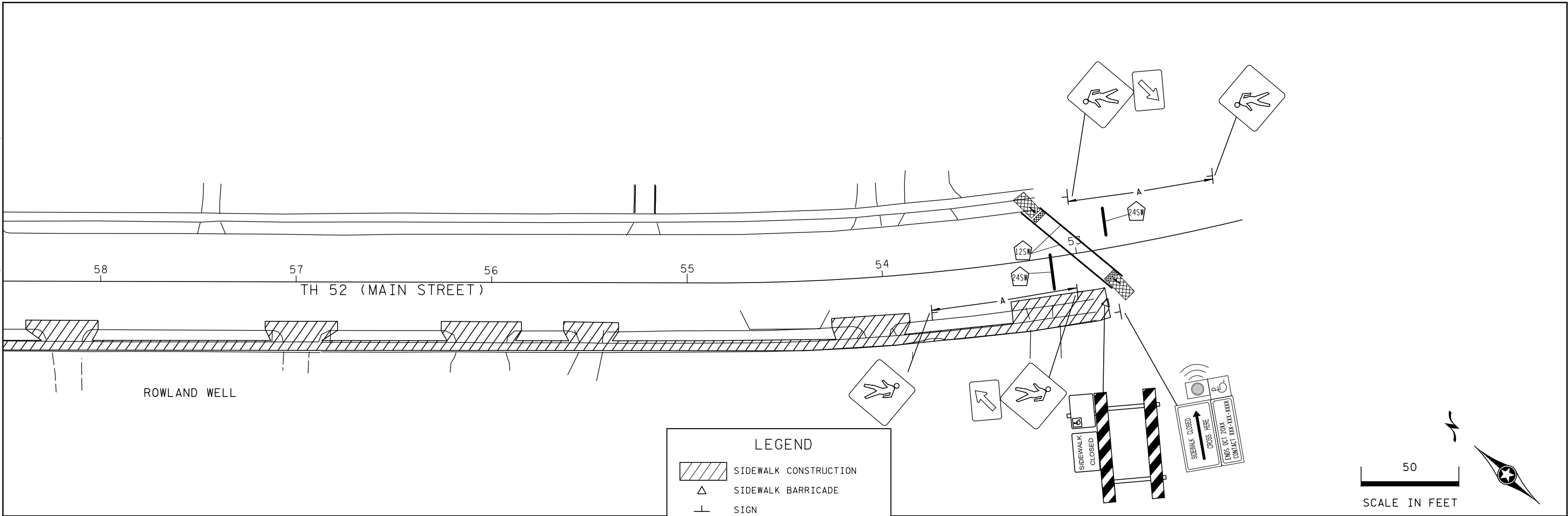
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TRAFFIC CONTROL PLAN

STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T10 OF T23 SHEETS

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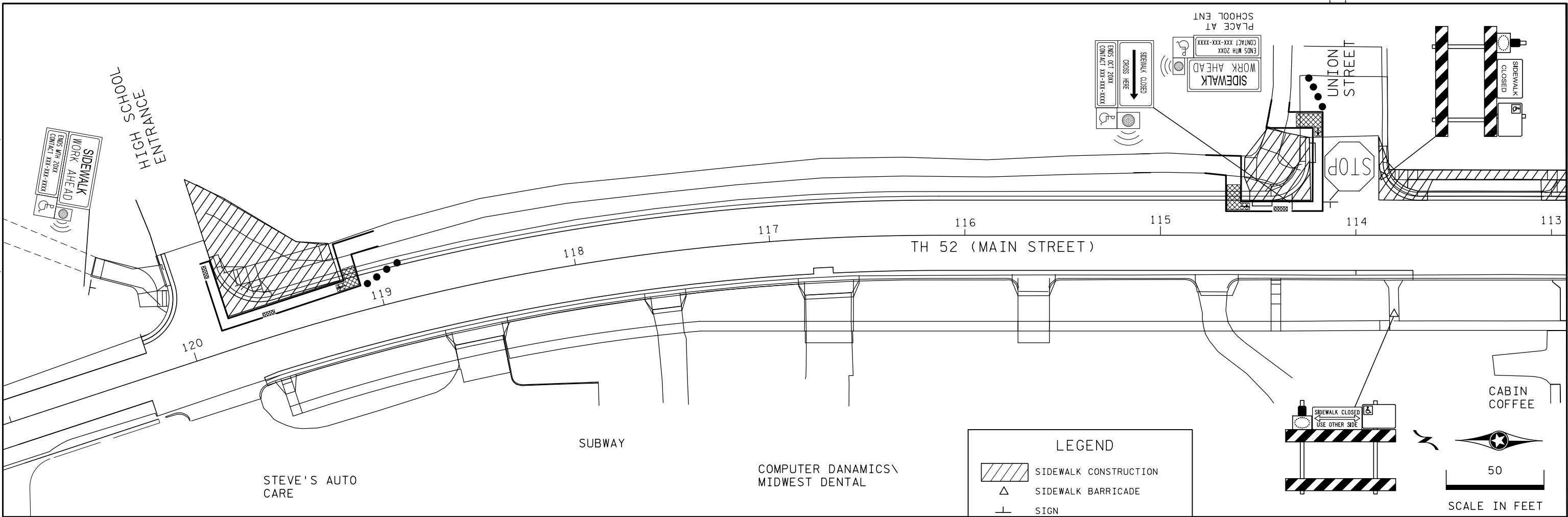
LEGEND	
	SIDEWALK CONSTRUCTION
	SIDEWALK BARRICADE
	SIGN
	PEDESTRIAN CHANNELIZERS
	TEMP TRUNCATED DOME
	TEMP PED RAMP
	AUDIBLE MESSAGE DEVICE

STAGE 3

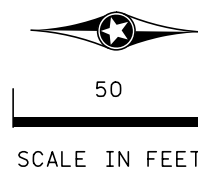
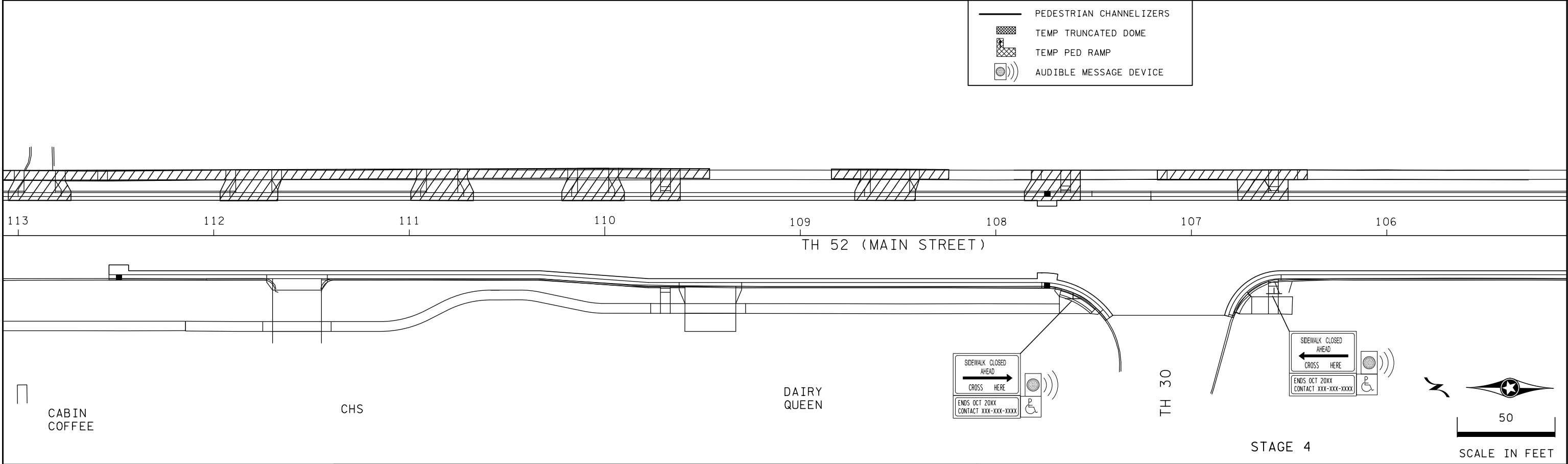
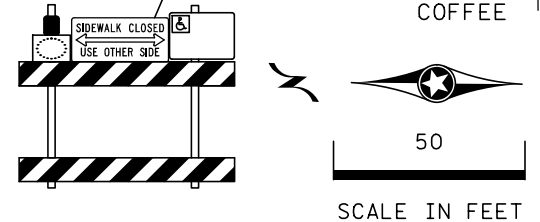
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 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T11 OF T23 SHEETS

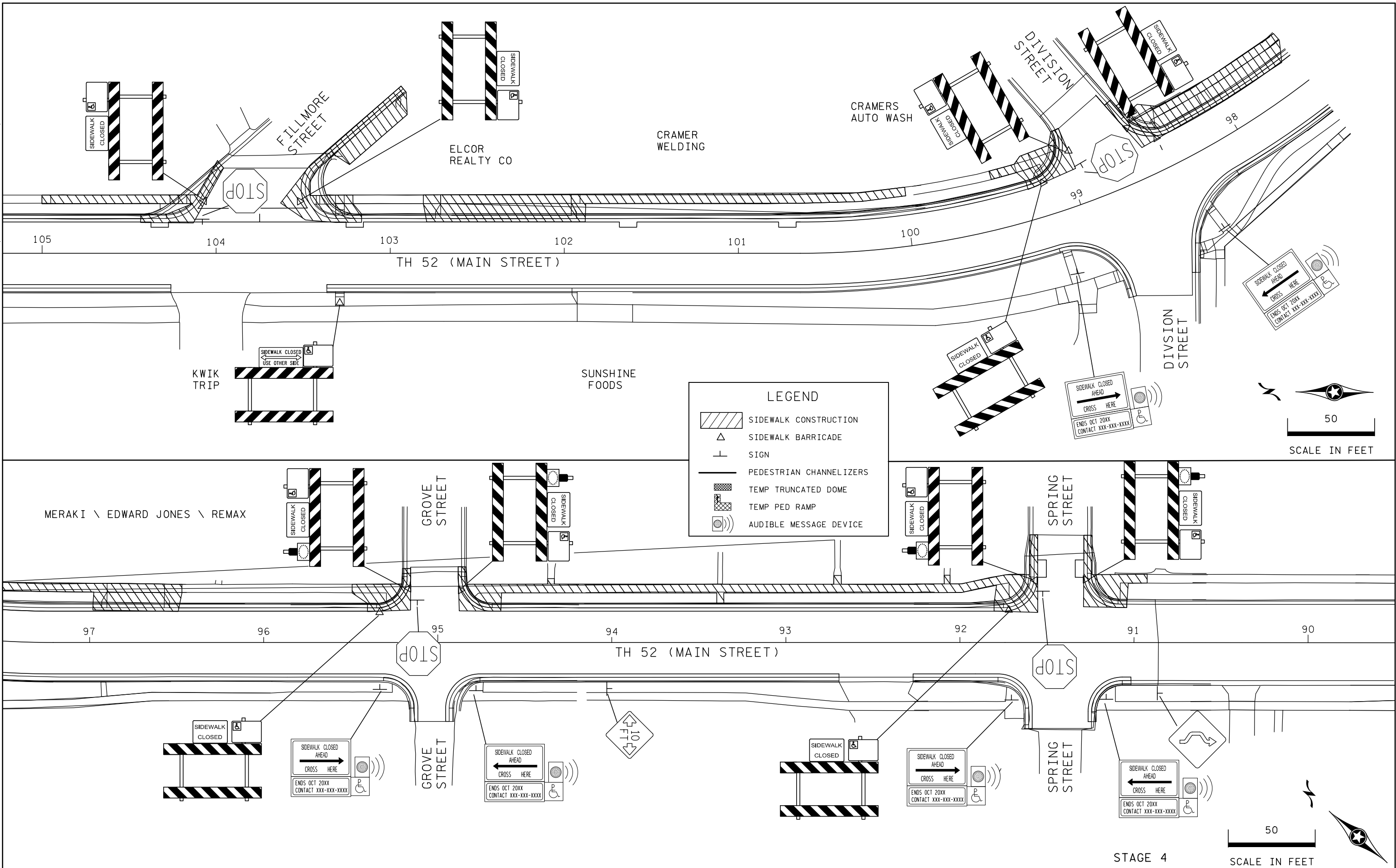
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LEGEND	
	SIDEWALK CONSTRUCTION
	SIDEWALK BARRICADE
	SIGN
	PEDESTRIAN CHANNELIZERS
	TEMP TRUNCATED DOME
	TEMP PED RAMP
	AUDIBLE MESSAGE DEVICE



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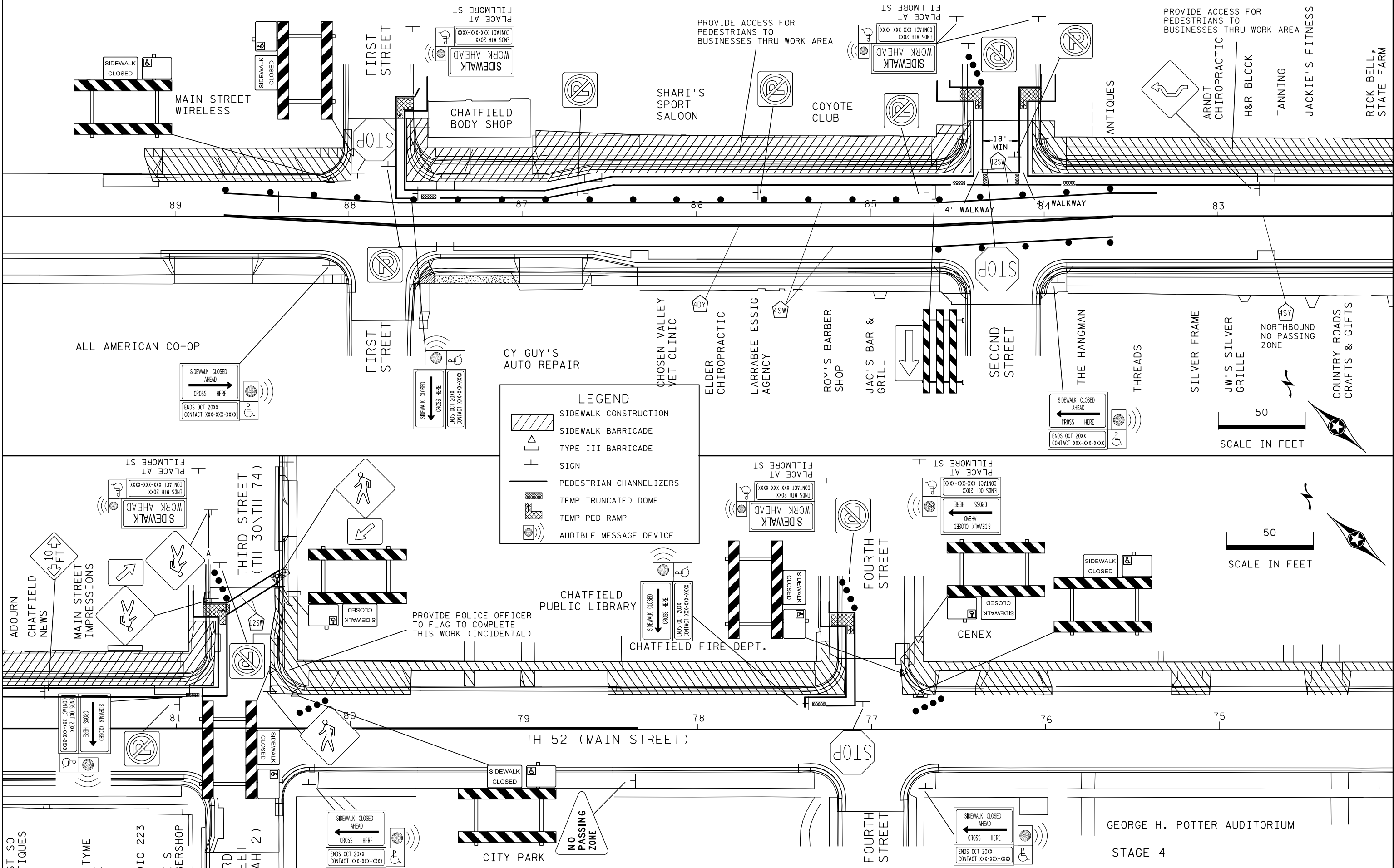
LICENSED PROFESSIONAL ENGINEER

STAGE 4

TRAFFIC CONTROL PLAN

STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T13 OF T23 SHEETS

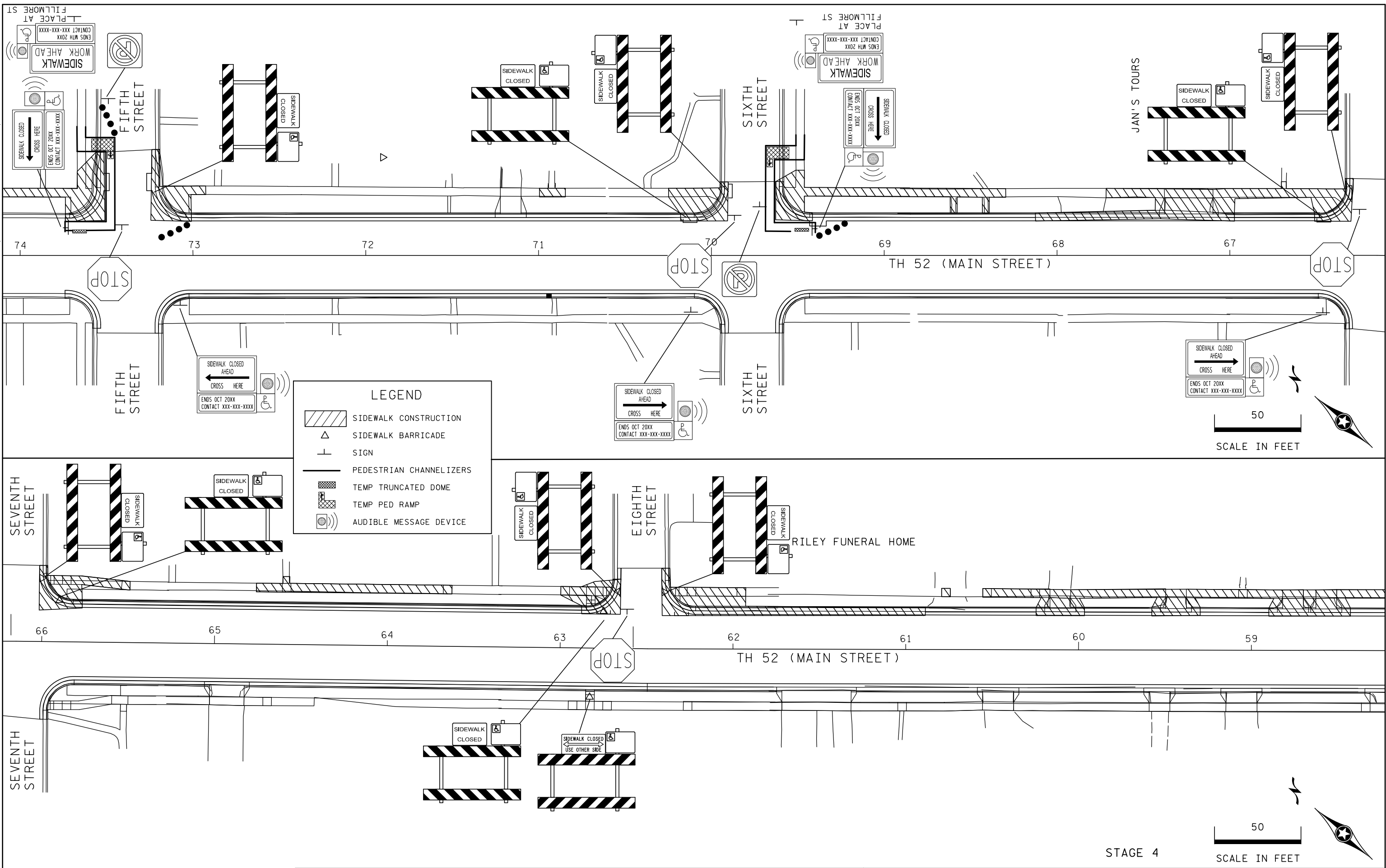
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TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T14 OF T23 SHEETS

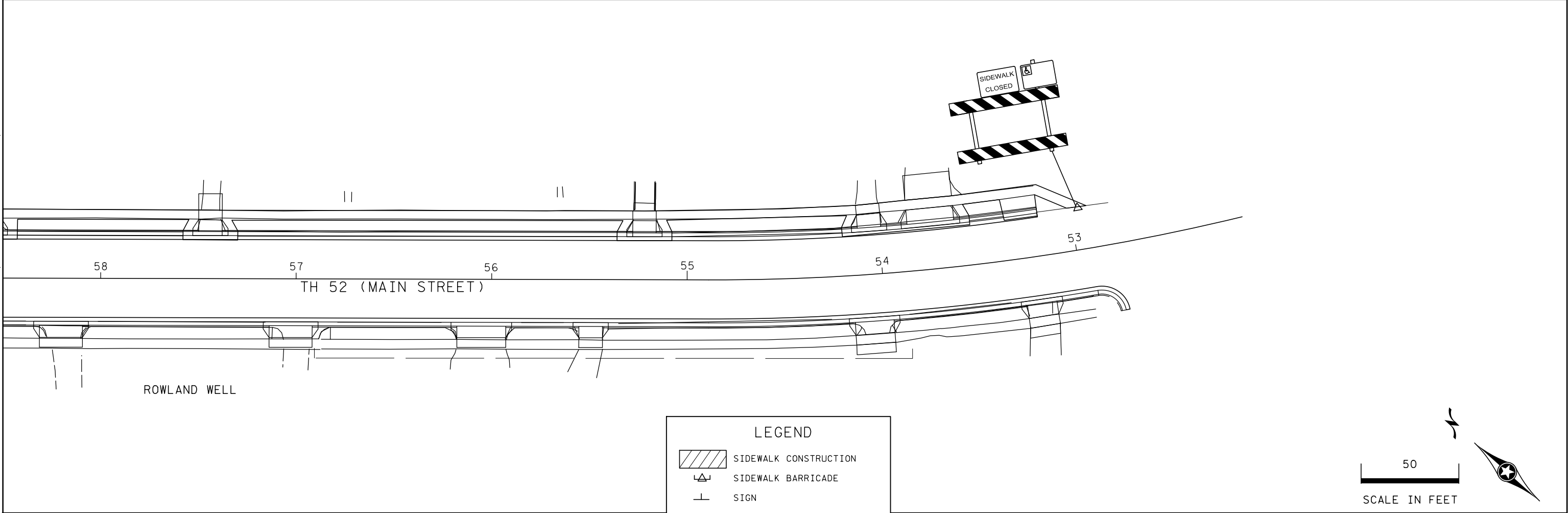
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TRAFFIC CONTROL PLAN
 STATE PROJ. NO. XXXX-XX (TH-XX) SHEET NO. T15 OF T23 SHEETS

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LEGEND	
	SIDEWALK CONSTRUCTION
	SIDEWALK BARRICADE
	SIGN
	PEDESTRIAN CHANNELIZERS
	TEMP TRUNCATED DOME
	TEMP PED RAMP
	AUDIBLE MESSAGE DEVICE

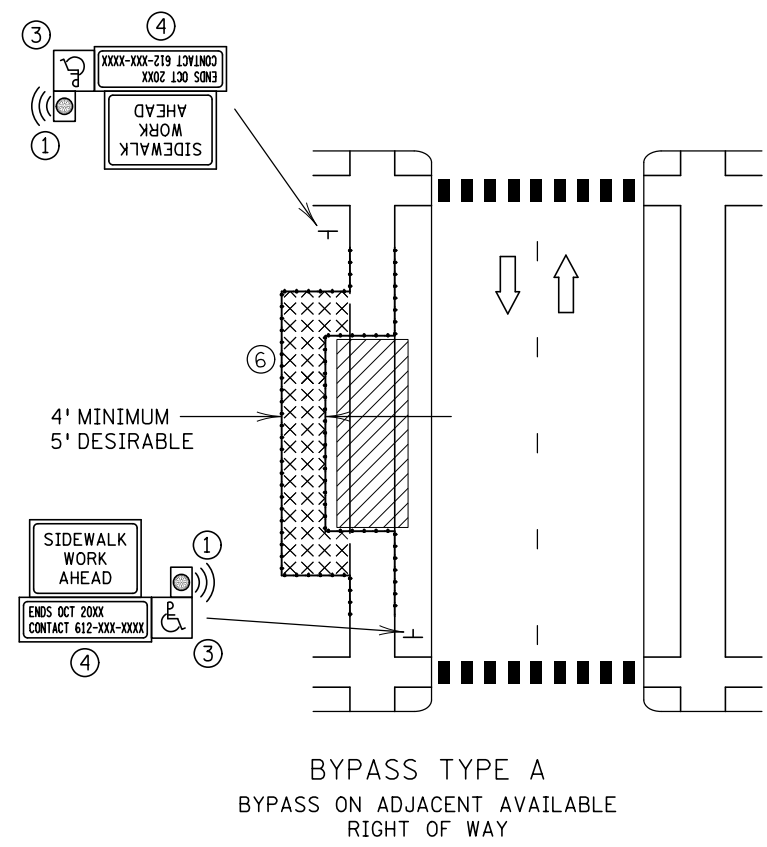


STAGE 4

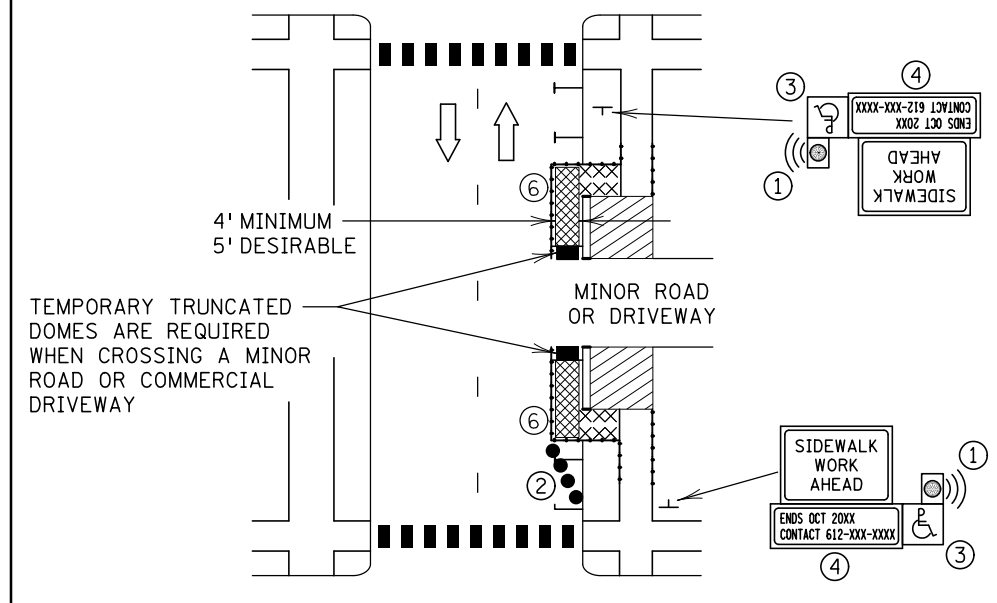
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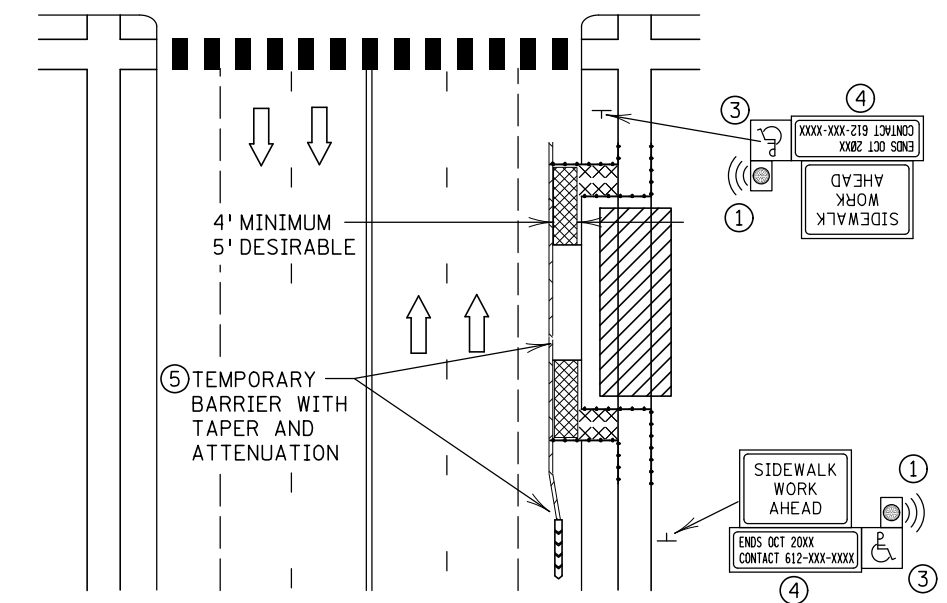
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 PLOTTED/REVISED: 23-NOV-2021



BYPASS TYPE A
 BYPASS ON ADJACENT AVAILABLE
 RIGHT OF WAY



BYPASS TYPE B
 SIDEWALK BYPASS USING PARKING OR
 SHOULDER ON LOW-SPEED ROADWAY



BYPASS TYPE C
 SIDEWALK BYPASS USING SHOULDER
 OR PARKING LANE ON A MULTI-LANE
 OR HIGH-SPEED ROADWAY

NOTES:

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES. THE ALTERNATE PEDESTRIAN ROUTE (APR) MUST REMAIN OPEN AT ALL TIMES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY TO PROVIDE AN APR AT ALL TIMES FOR ROADWAYS WITH NO AVAILABLE DETOURS. PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR.

PROVIDE A FIRM, STABLE, FREE-DRAINING, NON-SLIP, TEMPORARY WALKWAY SURFACE REGARDLESS OF WEATHER CONDITIONS. SUPPORT THE TEMPORARY WALKWAY SURFACE WITH A SOLID BASE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND. THE TEMPORARY WALKWAY SURFACE WILL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, AND OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR THE TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, AND OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES.

IF A 60" PEDESTRIAN WALKWAY WIDTH ISN'T PROVIDED FOR THE ROUTE, THEN A 60" BY 60" PASSING SPACE IS REQUIRED EVERY 200'. THE MINIMUM WIDTH OF THE WALKWAY IS 48".

COVER OR DEACTIVATE ANY PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS.

POST-MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SIDEWALK SURFACE. SHARED-USE PATH SHALL HAVE 8' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SHARED USE PATH SURFACE.

APR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

ANY PORTABLE SIGN OR BARRICADE PLACED OR STORED IN A PEDESTRIAN WALKWAY THAT COULD POSE A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN SHALL HAVE A DETECTABLE EDGE TO GUIDE THE PEDESTRIAN AROUND THE HAZARD. FOR ADDITIONAL GUIDANCE, SEE THE "DETECTABLE EDGE FOR SIGN ON PORTABLE STAND" DETAIL ON STANDARD PLAN 5-297.813.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

2. BYPASSES.
 - WHERE NOT FEASIBLE TO PROVIDE A SAME-SIDE APR, PROVIDE AN APR DETOUR ON THE OTHER SIDE OF THE ROADWAY.
 - WHERE NOT FEASIBLE TO PROVIDE AN APR ON EITHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.
- ① CONSIDER PROVIDING AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE FOR PEDESTRIANS WITH VISUAL DISABILITIES.
- ② RECOMMENDED TAPER WHEN THE CLOSED AREA WAS PREVIOUSLY USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE IS 25' LONG USING FIVE EQUALLY-SPACED CHANNELIZING DEVICES.
- ③ FOR FULLY-ACCESSIBLE WALKWAYS THROUGH WORKZONES, CONSIDER DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
- ④ INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24/7 QUESTIONS OR REPORTING HAZARDS ON SIGNS FOR TEMPORARY PEDESTRIAN DETOURS.
- ⑤ SEE THE MOST CURRENT EDITION OF THE MNDOT TEMPORARY BARRIER GUIDANCE MANUAL FOR GUIDANCE ON PLACEMENT AND USAGE OF TEMPORARY BARRIER.

⑥ PROVIDE SOIL STABILIZATION AROUND TEMPORARY SURFACES TO PREVENT EROSION, IF NEEDED.

LEGEND

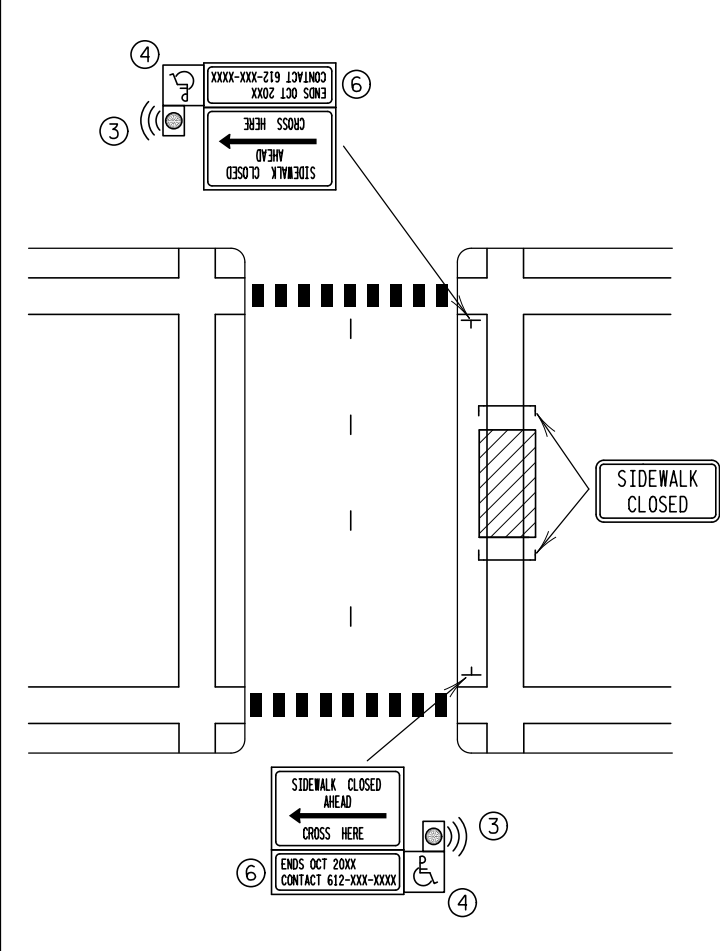
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- SIGN
 WORK AREA
 PEDESTRIAN CHANNELIZATION DEVICE
 TEMPORARY BARRIER
 DIRECTION OF TRAFFIC
 CHANNELIZER
 AUDIBLE MESSAGE DEVICE (AMD)
 TEMPORARY CURB RAMP WITH DETECTABLE EDGES
 TEMPORARY WALKWAY SURFACE

REVISION:
 APPROVED: 03-18-2021
 BRIAN SOBERSON
 STATE TRAFFIC ENGINEER

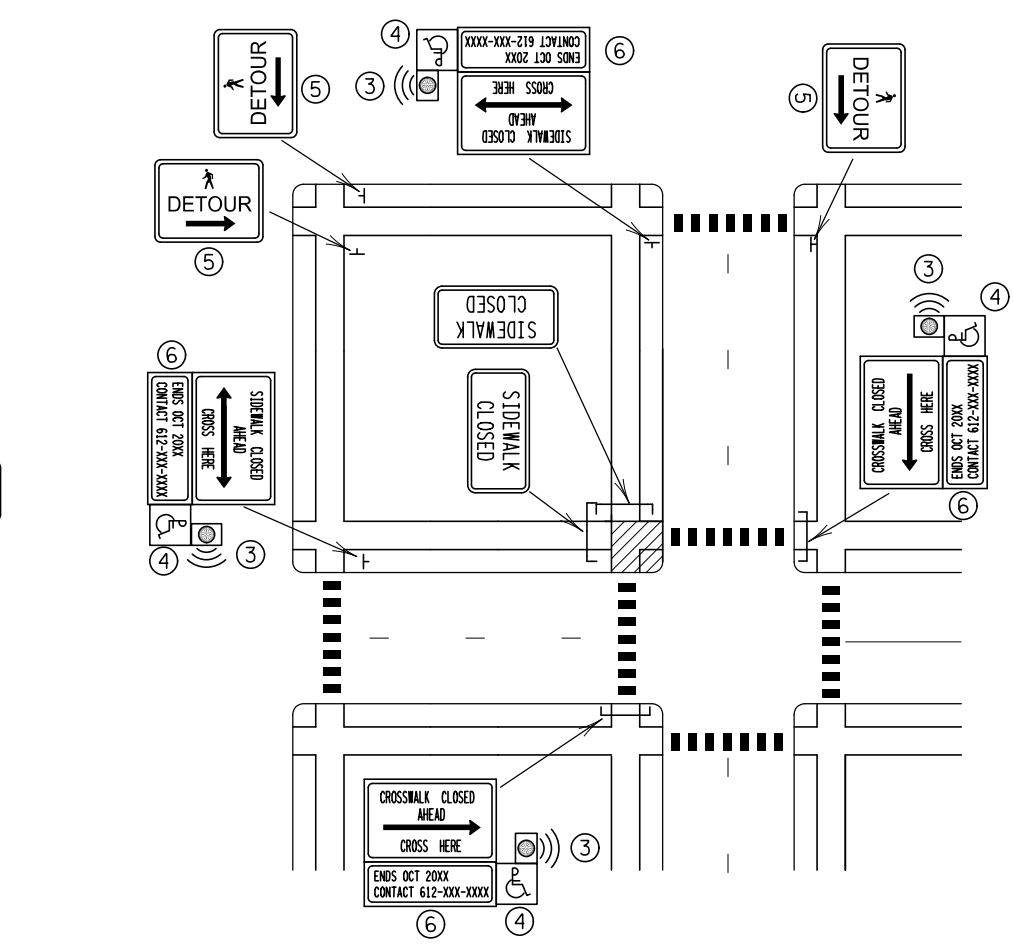
m MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.811
 1 OF 2
 APPROVED: 03-18-2021
 REVISED:
 THOMAS STYRBICKI
 STATE DESIGN ENGINEER

ALTERNATE PEDESTRIAN ROUTE (APR) LAYOUTS
 STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

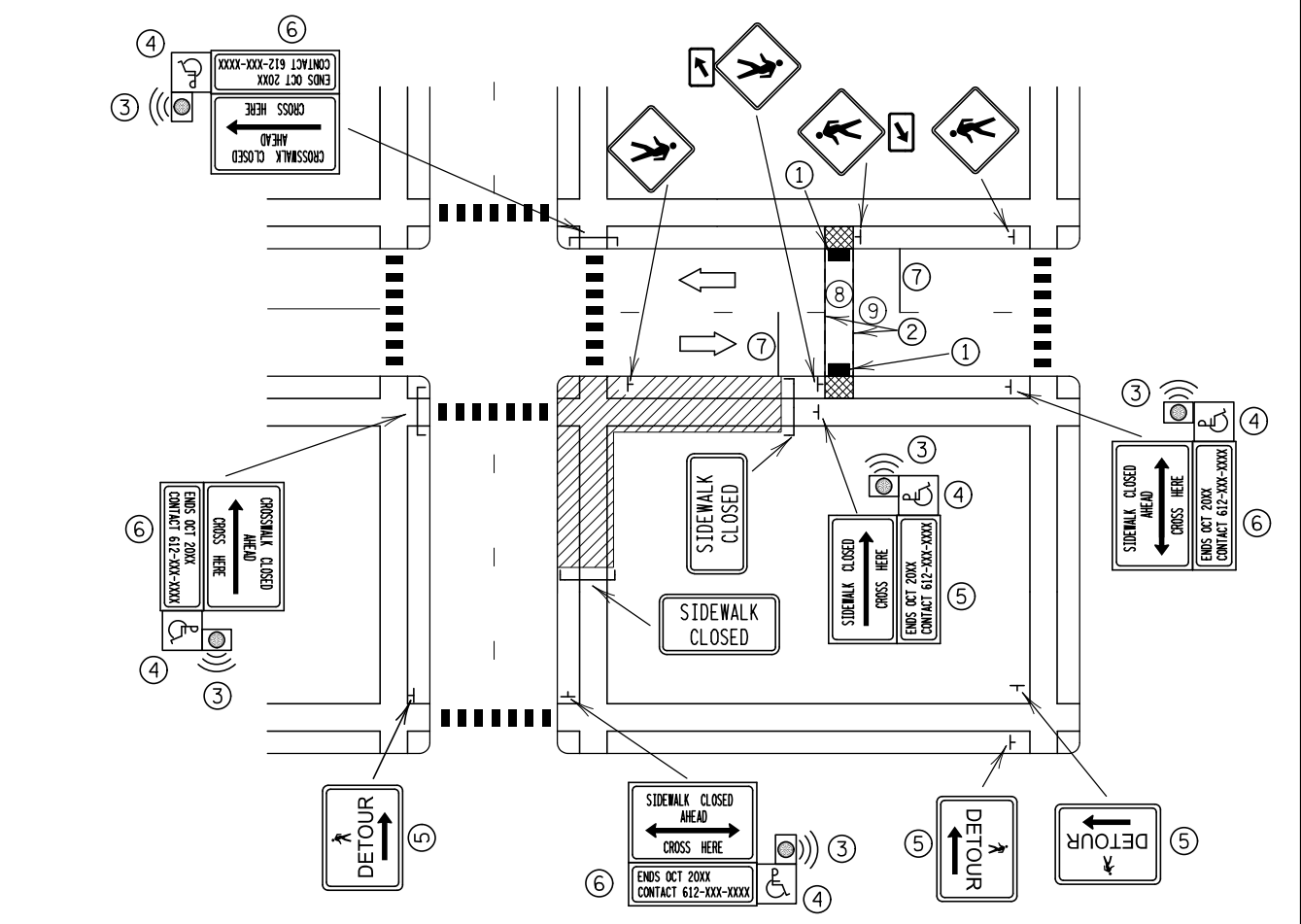
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 PLOTTED/REVISED: 23-NOV-2021



OTHER SIDE OF ROADWAY DETOUR FOR MID-BLOCK CLOSURE



ONE QUADRANT CLOSED



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK

NOTES:
 WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES. THE MINIMUM TEMPORARY WALKWAY WIDTH SHOULD BE THE WIDTH OF THE EXISTING FACILITY. IF THE EXISTING FACILITY HAS A WIDTH GREATER THAN 60", THE WIDTH OF THE TEMPORARY FACILITY MAY BE 60". IF THE WIDTH OF THE DETOUR IS LESS THAN 60", A 60"-WIDE PASSING SPACE IS REQUIRED EVERY 200'.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER TRAILBLAZING SIGNS OR DEVICES MAY BE NEEDED FOR ADEQUATE ROUTING. STAGE WORK AS NECESSARY TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. PROVIDE A FIRM, STABLE, FREE-DRAINING, NON-SLIP, TEMPORARY WALKWAY SURFACE REGARDLESS OF WEATHER CONDITIONS. SUPPORT THE TEMPORARY WALKWAY SURFACE WITH A SOLID BASE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND. THE TEMPORARY WALKWAY SURFACE WILL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, AND OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR THE TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, OR OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS. IF NEEDED, PROVIDE SOIL STABILIZATION TO PREVENT EROSION AROUND TEMPORARY SURFACES.

COVER OR DEACTIVATE ANY PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS.

APR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

POST-MOUNTED SIGNS ADJACENT TO SIDEWALKS SHALL HAVE 7' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SIDEWALK SURFACE. SHARED-USE PATHS SHALL HAVE 8' MINIMUM CLEARANCE FROM THE BOTTOM OF THE LOWEST SIGN TO THE SHARED-USE PATH SURFACE.

ANY PORTABLE SIGN OR BARRICADE PLACED OR STORED IN A PEDESTRIAN WALKWAY THAT COULD BE A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN SHALL HAVE A DETECTABLE EDGE TO GUIDE THE PEDESTRIAN AROUND THE HAZARD. FOR ADDITIONAL GUIDANCE SEE THE "TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES" STANDARD PLAN, "DETECTABLE EDGE FOR SIGN ON PORTABLE STAND" DETAIL.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE ROADWAY AS THE DISRUPTED ROUTE UTILIZING BYASSES.
 2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME-SIDE APR, PROVIDE AN APR DETOUR ON THE OTHER SIDE OF THE ROADWAY.
 3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON EITHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS.
- ① TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.
 - ② TEMPORARY PAVEMENT MARKINGS FOR CROSSWALKS MAY USE CROSSWALK BLOCKS, TWO TRANSVERSE LINES OR TWO STRIPS OF 18" PREFORMED MARKING MATERIAL TO FORM 36" WIDE CROSSWALK BLOCKS.
 - ③ PROVIDE AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE FOR PEDESTRIANS WITH VISUAL DISABILITIES.

- ④ FOR FULLY ACCESSIBLE WALKWAYS THROUGH WORKZONES, CONSIDER DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
- ⑤ USE PEDESTRIAN DETOUR TRAILBLAZING SIGNS IF THE PEDESTRIAN DETOUR IS NOT LOCATED ACROSS THE ROADWAY FROM THE SIDEWALK CLOSURE.
- ⑥ TYPICAL SIGN MESSAGE FOR AN ALTERNATE PEDESTRIAN ROUTE SHOULD INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24/7 QUESTIONS OR REPORTING HAZARDS. TYPICAL INFORMATION INCLUDED IN AN AUDIBLE MESSAGE CAN BE FOUND IN "TPAR - AUDIBLE MESSAGE CONTENT GUIDELINES" AVAILABLE ON THE MNDOT TRAFFIC ENGINEERING WEBSITE ON THE PEDESTRIAN ACCOMMODATIONS THROUGH WORK ZONES WEB PAGE. ADDITIONALLY, A SUMMARY OF THE MESSAGE CONTENT GUIDELINES CAN BE FOUND WITHIN THE PEDESTRIAN ACCOMMODATIONS THROUGH WORK ZONES DESIGN GUIDANCE DOCUMENT.
- ⑦ LOCATE STOP BAR 20' TO 50' BEFORE THE CROSSWALK. RESTRICT PARKING BETWEEN THE STOP BAR AND THE CROSSWALK. ON TWO-WAY ROADWAYS, RESTRICT PARKING BOTH BEFORE AND AFTER THE CROSSWALK FOR BOTH DIRECTIONS.
- ⑧ CONSIDER LIGHTING AT MID-BLOCK CROSSINGS IN ORDER TO ILLUMINATE PEDESTRIANS, IF NOT ALREADY LIT.
- ⑨ CONSIDER THE ADDITION OF R1-6a SIGNS AS MOTORISTS ARE NOT EXPECTING MID-BLOCK CROSSING.

LEGEND

—	SIGN	→	DIRECTION OF TRAFFIC
▨	WORK AREA	♿	AUDIBLE MESSAGE DEVICE (AMD)
⌋	SIDEWALK BARRICADE	⊠	TEMPORARY CURB RAMP WITH DETECTABLE EDGES

R1-6a

REVISION:

APPROVED: 03-18-2021

Brian Sobenson
 BRIAN SOBENSON
 STATE TRAFFIC ENGINEER

m MINNESOTA
 DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.811 **2 OF 2**

APPROVED: 03-18-2021
 REVISED:

Tom Styrbicki
 THOMAS STYRBICKI
 STATE DESIGN ENGINEER

STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

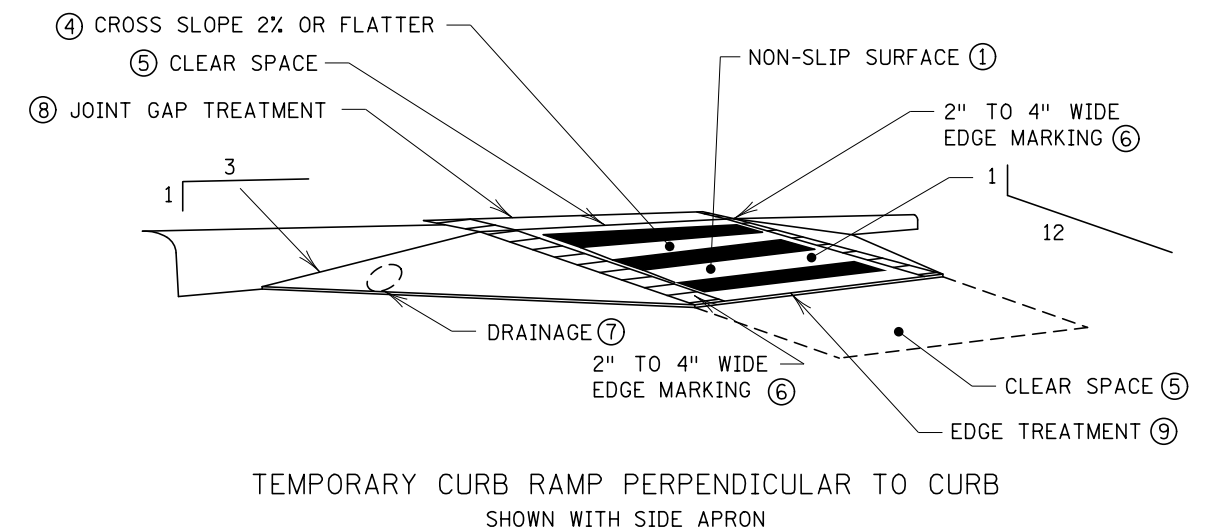
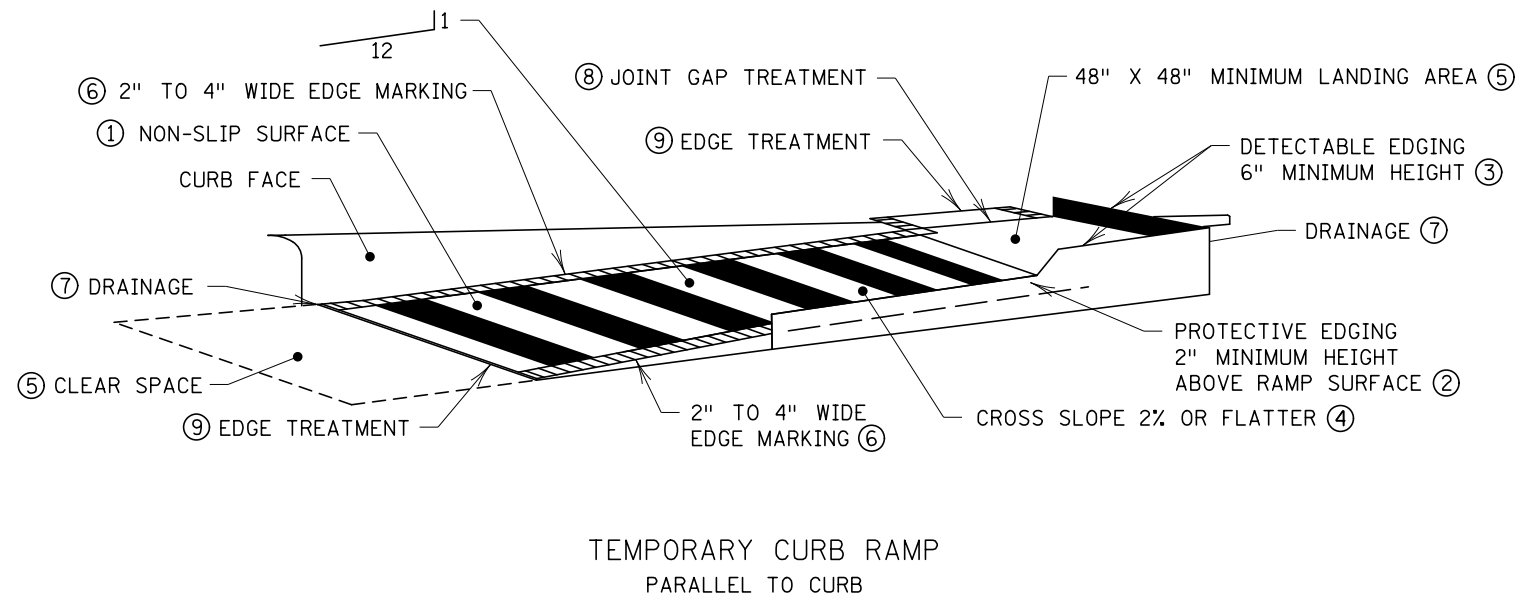
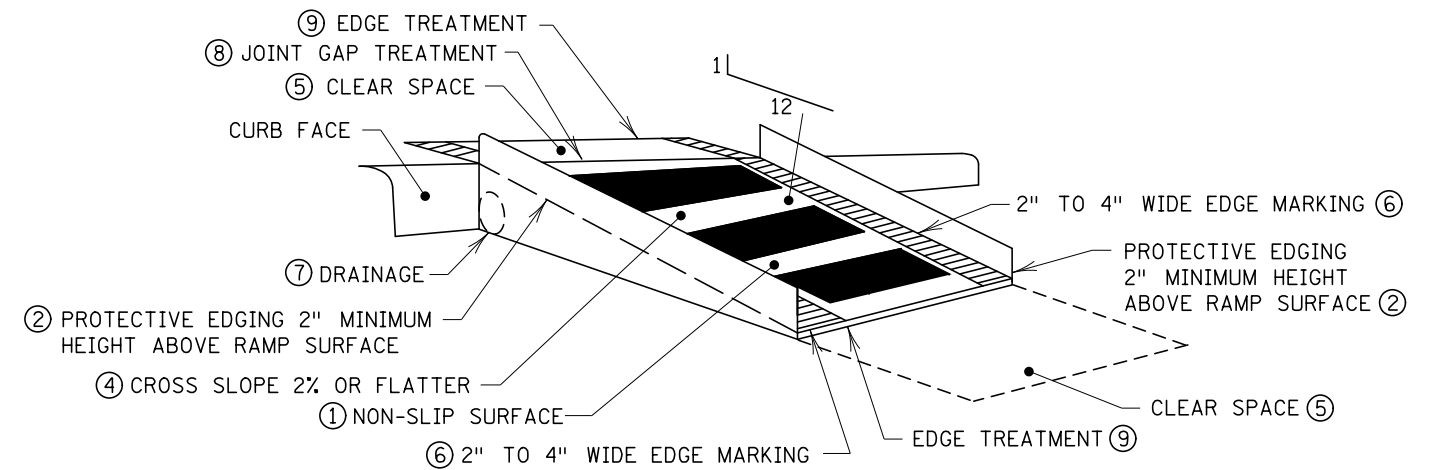
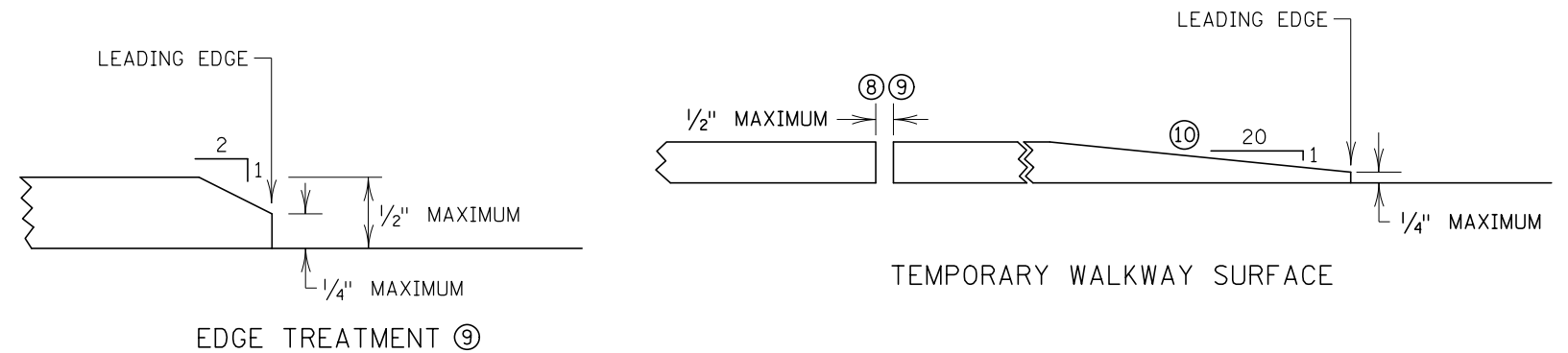
ALTERNATE PEDESTRIAN ROUTE (APR) LAYOUTS

NOTES:

CONSTRUCT SLOPES AS INDICATED OR FLATTER, BUT NOT STEEPER.

TPAR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

- ① CONSTRUCT CURB RAMPS AT LEAST 48" WIDE WITH A FIRM, STABLE, AND SLIP-RESISTANT SURFACE.
- ② PLACE PROTECTIVE EDGING WITH A 2" MINIMUM HEIGHT WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1V:3H. CONSIDER PROTECTIVE EDGING WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ PLACE DETECTABLE EDGING WITH 6" MINIMUM HEIGHT AND CONTRASTING COLOR ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION.
- ④ CONSTRUCT CURB RAMPS AND LANDINGS WITH A 2% OR FLATTER CROSS SLOPE.
- ⑤ PROVIDE A CLEAR SPACE OF AT LEAST 48" X 48" ABOVE AND BELOW THE CURB RAMP.
- ⑥ MARK THE CURB RAMP WALKWAY EDGE WITH A 2" TO 4" WIDE MARKING OF CONTRASTING COLOR. THE MARKING IS OPTIONAL WHERE COLOR-CONTRASTING EDGING IS USED.
- ⑦ DO NOT IMPEDE WATER FLOW IN THE GUTTER SYSTEM.
- ⑧ NO LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL EXCEED 1/2" WIDTH.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". USE VERTICAL LATERAL EDGES UP TO 1/4" HIGH, AND BEVELED AT 1V:2H FOR LATERAL EDGES BETWEEN 1/4" AND 1/2" HEIGHT.
- ⑩ BEVEL THE EDGE OF TEMPORARY WALKWAY SURFACES 1/2" OR THINNER AT 1V:2H. FOR THICKER WALKWAY SURFACE BEVEL EDGE 1V:20H OR FLATTER.



REVISION:
 APPROVED: 03-18-2021
 BRIAN SOBERSON
 STATE TRAFFIC ENGINEER

MINNESOTA
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STANDARD PLAN 5-297.813 2 OF 2
 APPROVED: 03-18-2021
 THOMAS STYRBICKI
 STATE DESIGN ENGINEER

TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES
 TEMPORARY CURB RAMPS AND WALKWAY SURFACES
 STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

NOTES;

TPAR SHOULD BE KEPT FREE OF TRASH, SEDIMENT, AND DEBRIS.

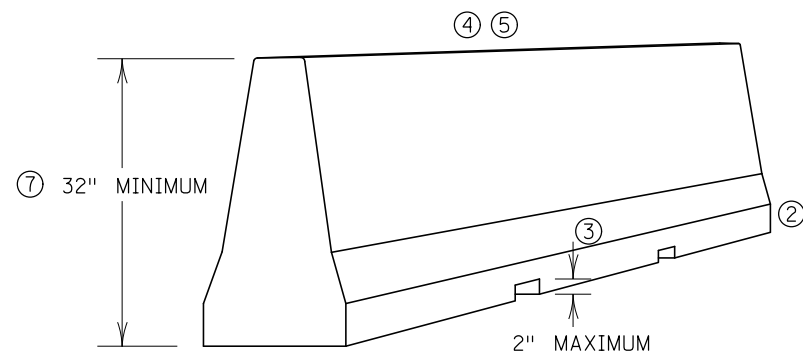
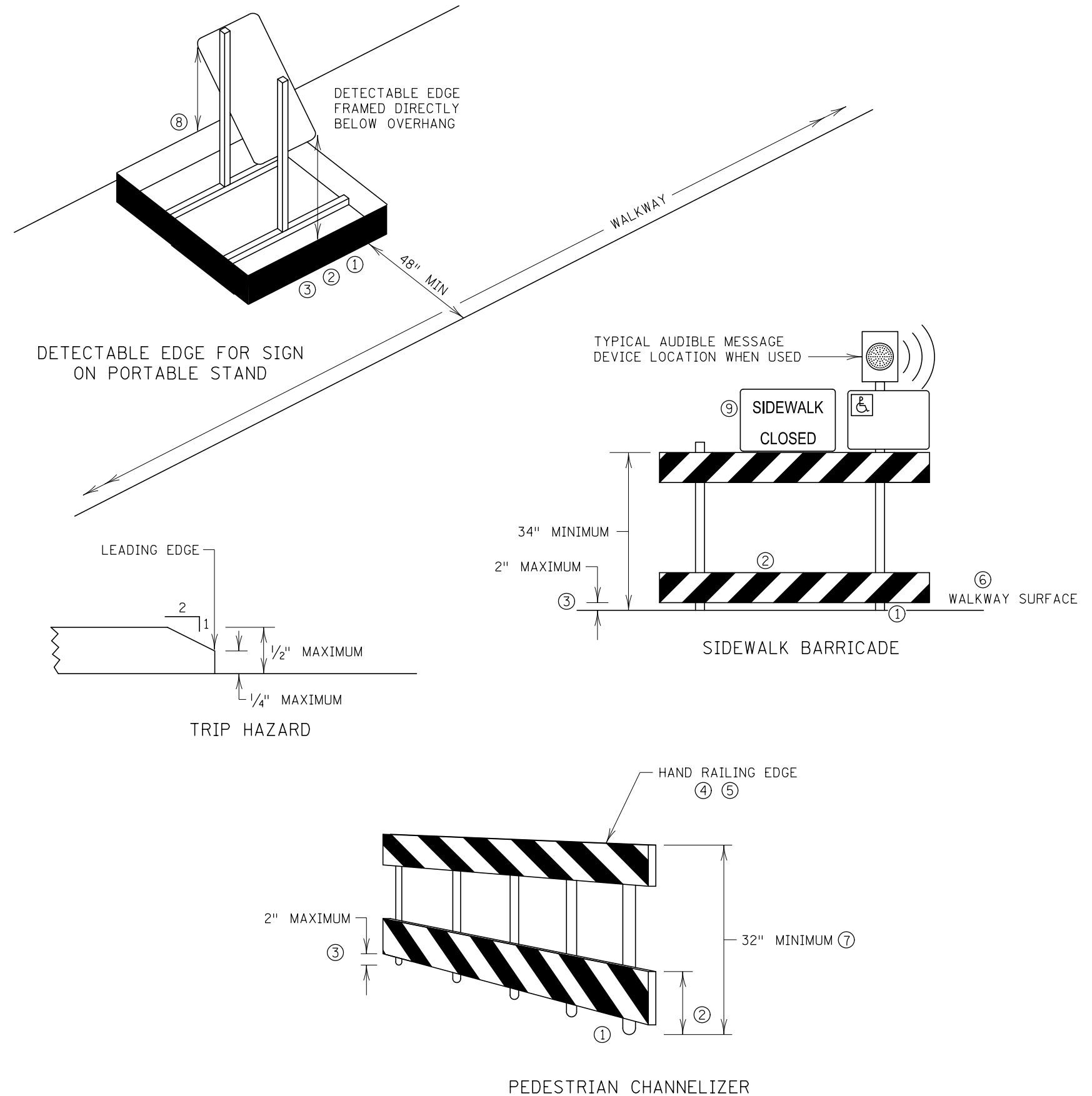
RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4" INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27" ABOVE THE WALKWAY SURFACE.

USE CRASHWORTHY TEMPORARY BARRIERS WHEN USED AS A PEDESTRIAN CHANNELIZERS.

PLACE SIDEWALK BARRICADES ACROSS THE ENTIRE WIDTH OF THE WALKWAYSURFACE, WHEN USED.

USE INTERLOCKING DEVICES TO CHANNELIZE PEDESTRIAN FLOW TO PREVENT GAPS THAT COULD ALLOW PEDESTRIANS TO STRAY FROM THE CHANNELIZED PATH.

- ① PROVIDE DETECTABLE EDGE TO ANY TRIPPING HAZARD IN THE WALKWAY. LOCATE BALLAST BEHIND THE DETECTABLE EDGE OR INTEGRAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHOULD NOT EXTEND INTO THE 48" MINIMUM WALKWAY CLEAR SPACE. ANY SUPPORT THAT EXTENDS INTO THE WALKWAY SHALL NOT EXCEED 1/2" HEIGHT ABOVE THE WALKWAY SURFACE; IF GREATER THAN 1/4", BEVEL AS SHOWN IN THE TRIP HAZARD DETAIL.
- ② PROVIDE CONTINUOUS DETECTABLE EDGES EXTENDING AT LEAST 6" ABOVE THE WALKWAY SURFACE. MARK DETECTABLE EDGES WITH A COLOR THAT CONTRASTS WITH THE WALKWAY SURFACE. PLACE THE DETECTABLE EDGE AROUND ANY PORTABLE SIGN STAND IN THE WALKWAY AREA WHERE THE SIGN POSES A HAZARD TO A VISUALLY-IMPAIRED PEDESTRIAN.
- ③ DEVICES AND DETECTABLE EDGES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2" IS ALLOWED FOR DRAINAGE PURPOSES.
- ④ USE HAND AND GUIDE RAILS WHEN REQUIRED. INSTALL TOP RAIL OR TOP SURFACE IN A VERTICAL PLANE PERPENDICULAR TO THE WALKWAY, ABOVE THE DETECTABLE EDGE. PROVIDE CONTINUOUS RAIL AT A HEIGHT OF 34" TO 38" ABOVE THE WALKWAY SURFACE. USE RAIL SUPPORTS THAT MINIMIZE CONTACT WITH PEDESTRIAN'S HANDS AND FINGERS. SEE "PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG) 2005" FOR ADDITIONAL GUIDANCE ON USE OF HAND AND GUIDE RAILS.
- ⑤ USE DEVICES FREE OF SHARP OR ROUGH EDGES, AND USE ROUNDED FASTENERS (BOLTS) TO PREVENT HARM TO A PEDESTRIAN'S HANDS, ARMS, AND CLOTHING.
- ⑥ REGARDLESS OF WEATHER CONDITIONS PROVIDE FIRM, STABLE, FREE-DRAINING, AND NON-SLIP TEMPORARY WALKWAY SURFACES. TEMPORARY WALKWAY SURFACES SHALL ALLOW NORMAL USAGE OF WHEELCHAIRS, WALKERS, STROLLERS, OR OTHER MOBILITY DEVICES. CONCRETE, BITUMINOUS, STEEL, RUBBER, WOOD (3/4" OR THICKER), AND PLASTIC ARE ACCEPTABLE SURFACE MATERIALS FOR A TEMPORARY WALKWAY SURFACE. GRAVEL, MILLINGS, AND OTHER UNEVEN SURFACES ARE NOT ACCEPTABLE SURFACE MATERIALS.
- ⑦ PROVIDE 32" HIGH OR GREATER LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS.
- ⑧ AN EDGE OF THE FRAMING MAY BE REMOVED IF IT IS NOT NEEDED FOR PEDESTRIAN GUIDANCE. STABILITY OF THE DETECTABLE EDGE SHOULD BE MAINTAINED.
- ⑨ TYPICAL. SEE SIGNING PLAN FOR DETAILS.



PEDESTRIAN CHANNELIZER DEVICE USING A PORTABLE CONCRETE BARRIER

REVISION:
APPROVED: 03-18-2021
<i>Brian Sobenson</i> BRIAN SOBENSON STATE TRAFFIC ENGINEER

	STANDARD PLAN 5-297.813	1 OF 2	TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) DEVICES CHANNELIZERS, SIDEWALK BARRICADES, AND PORTABLE STANDS		
	 THOMAS STYRBICKI STATE DESIGN ENGINEER	APPROVED: 03-18-2021 REVISED:			