

CITY OF ATTLEBORO, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS

INTERSECTION IMPROVEMENTS ROUTE 123 AT RATHBUN-WILLARD DRIVE & BLACK OAK DRIVE DECEMBER 2021



CITY COUNCIL OFFICERS

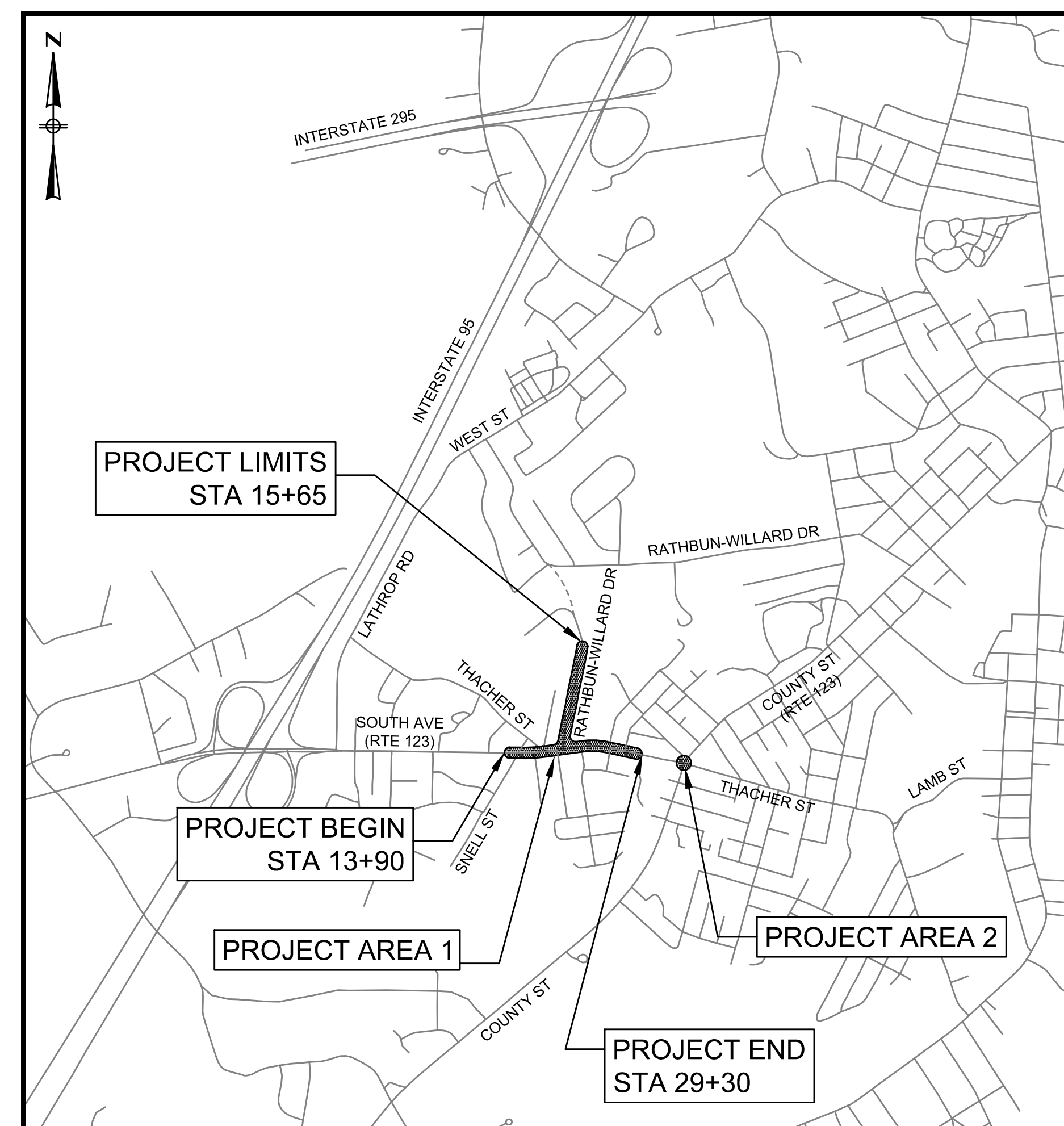
MARK J. COOPER, PRESIDENT
STEPHEN K. WITHERS, CITY CLERK

CITY MAYOR

PAUL HEROUX, MAYOR

PUBLIC WORKS

MICHAEL TYLER, SUPERINTENDENT
BOBBY ARAUJO, ASSISTANT SUPERINTENDENT



PROJECT LOCATION

PROJECT LOCATION
1" = 400'

PREPARED BY:



ISSUE DATE: DECEMBER 23, 2021

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES & TYPICAL SECTIONS
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22	TRAFFIC SIGN SUMMARY
23-25	TRAFFIC SIGNAL PLANS
26-28	TEMPORARY TRAFFIC CONTROL PLANS

100%
SUBMISSION

GENERAL SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists various symbols for infrastructure like manholes, wells, fences, and utility poles.

PAVEMENT MARKINGS AND SIGNING SYMBOLS

Table with columns: PROPOSED, DESCRIPTION. Lists pavement markings like crosswalks, stop lines, and various lane markings.

TRAFFIC SIGNAL SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists symbols for traffic signal components like cabinets, heads, and detectors.

TRAFFIC SIGNAL SYSTEMS

Table with columns: SYMBOL, DESCRIPTION. Lists traffic signal systems like Steady Circular Red, Steady Circular Yellow, etc.

ABBREVIATIONS

Table with columns: GENERAL, DESCRIPTION. Lists abbreviations for materials like asphalt, concrete, and various pipe types.

ABBREVIATIONS (cont.)

Table with columns: GENERAL, DESCRIPTION. Continues abbreviations for terms like Point of Curvature, Profile Grade Line, etc.

12/28/2021 12:54 PM C:\DRAWING FILES\PLANS\SET\7157\LEGEND.DWG (MADOT-D.STB)

Table for project metadata including DATE, MADE BY, CHECKED BY, REVISIONS.

Table for design and drawing information: DRAWN BY: KLJMC, DESIGNED BY: KLJMC, CHECKED BY: DJ.

Professional registration and company information including BETA logo and website URL.

Project title and scale information: Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts. SCALE: NONE.

Table for job and sheet information: BETA JOB NO. 7157, ISSUE DATE 11/10/2021, SHEET NO. 2 of 28.

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 BAYSIDE ENGINEERING, INC. 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.
- TOPOGRAPHICAL FEATURES WITHIN THE PROJECT LIMITS ARE TO BE RETAINED UNLESS OTHERWISE NOTED ON THE PLANS

PAVEMENT NOTES

MILLING AND OVERLAY

SURFACE COURSE 1 3/4" PAVEMENT FINE MILLING
1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

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 DRIVEWAY

SURFACE: 1 1/2" HMA SURFACE COURSE OVER
2 1/2" HMA INTERMEDIATE COURSE OVER

FOUNDATION: 8" GRAVEL BORROW, TYPE b

HMA SIDEWALK

SURFACE: 3" HMA WALK SURFACE PLACED IN TWO EQUAL LAYER

FOUNDATION: 8" GRAVEL BORROW, TYPE b

BOX WIDENING 4.0 FEET OR LESS

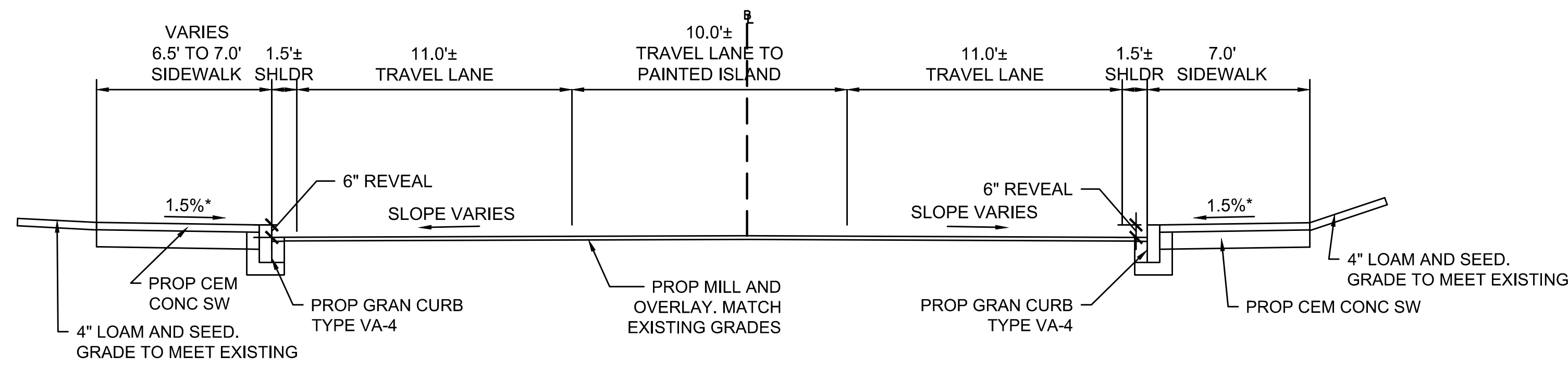
SURFACE COURSE: 1 3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)
INTERMEDIATE COURSE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE COURSE 12.5 (SIC-12.5) OVER
BASE COURSE: 6" HES CEMENT CONCRETE BASE, 3000 PSI 1-1/2", 470 CEM. CONC.
SUB BASE: 8" GRAVEL BORROW TYPE b

CEMENT CONCRETE DRIVEWAY APRON

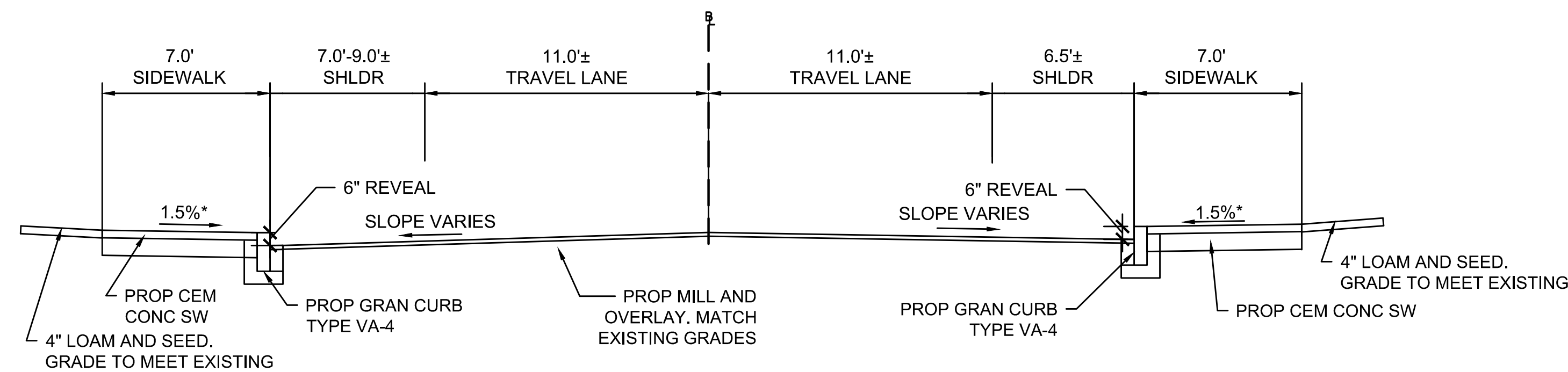
SURFACE: 6" CEMENT CONCRETE
(AIR ENTRAINED 4000 PSI, 3/4", 610)
BASE COURSE: 8" GRAVEL BORROW TYPE b
4000 PSI, 3/4", 610 OVER

PAVEMENT NOTES

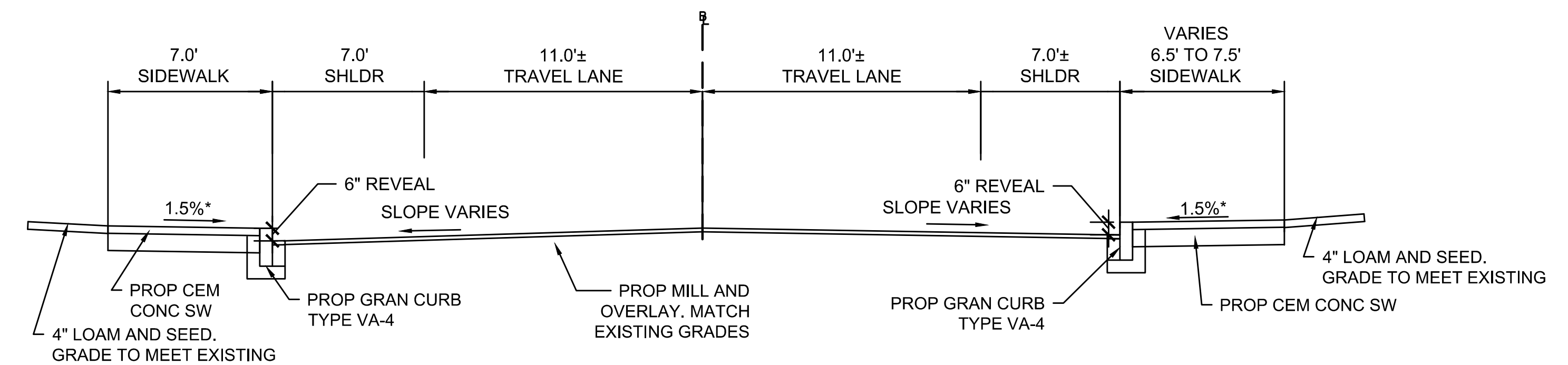
- ALL HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE INSTALLED PER SECTION 450.
- TACK COAT SHALL BE APPLIED FOR UNIFORM COVERAGE OF 90% AT RATE OF 0.07 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER SQUARE YARD FOR MILLED SURFACES AND 0.05 GALLONS PER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



**TYPICAL SECTION: ROUTE 123
HOBBS TO RATHBUN-WILLARD**
NOT TO SCALE



**TYPICAL SECTION: ROUTE 123
GREENHILL AVE TO PRIMROSE**
NOT TO SCALE



TYPICAL SECTION: RATHBUN WILLARD
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KYL
DESIGNED BY:
KYL
CHECKED BY:
DJ

REGISTERED PROFESSIONAL
PREPARED BY



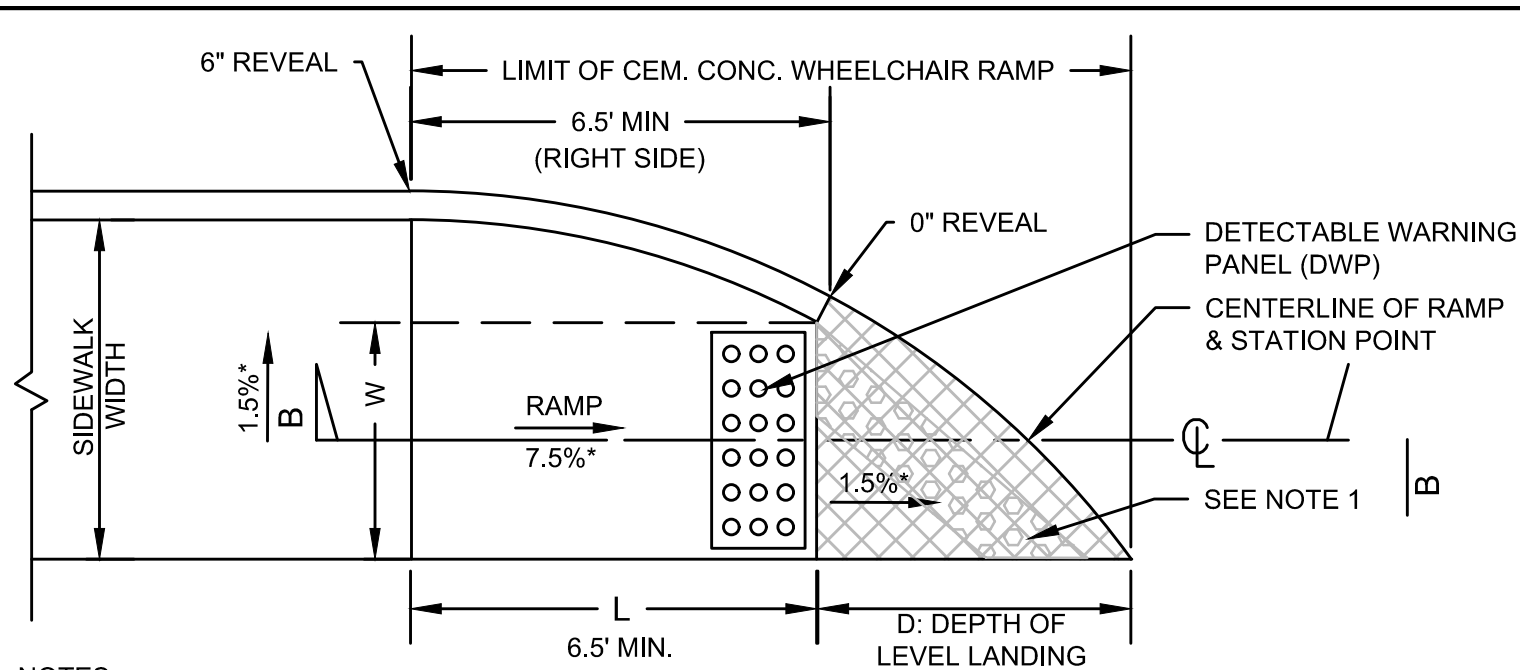
SUBCONSULTANT

SCALE
NONE

TITLE
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**
GENERAL NOTES & TYPICAL SECTIONS

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **3 of 28**

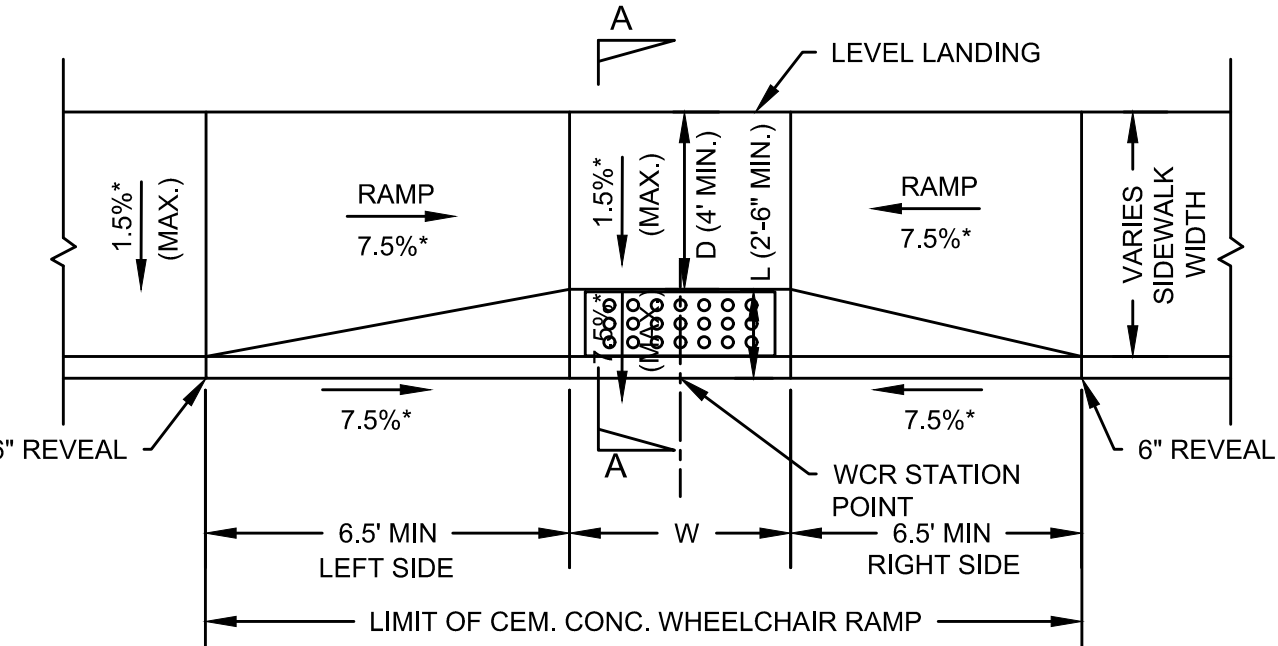
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



NOTES
 1. WHEN EITHER CORNER OF DETECTABLE WARNING PANEL IS 5 FEET OR MORE FROM THE GUTTER LINE, THE PANEL SHOULD BE INSTALLED AT THE LEVEL LANDING

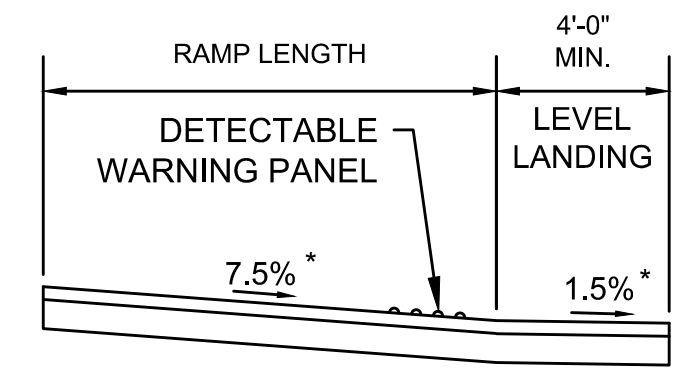
WHEELCHAIR RAMP TYPE "A"

NOT TO SCALE



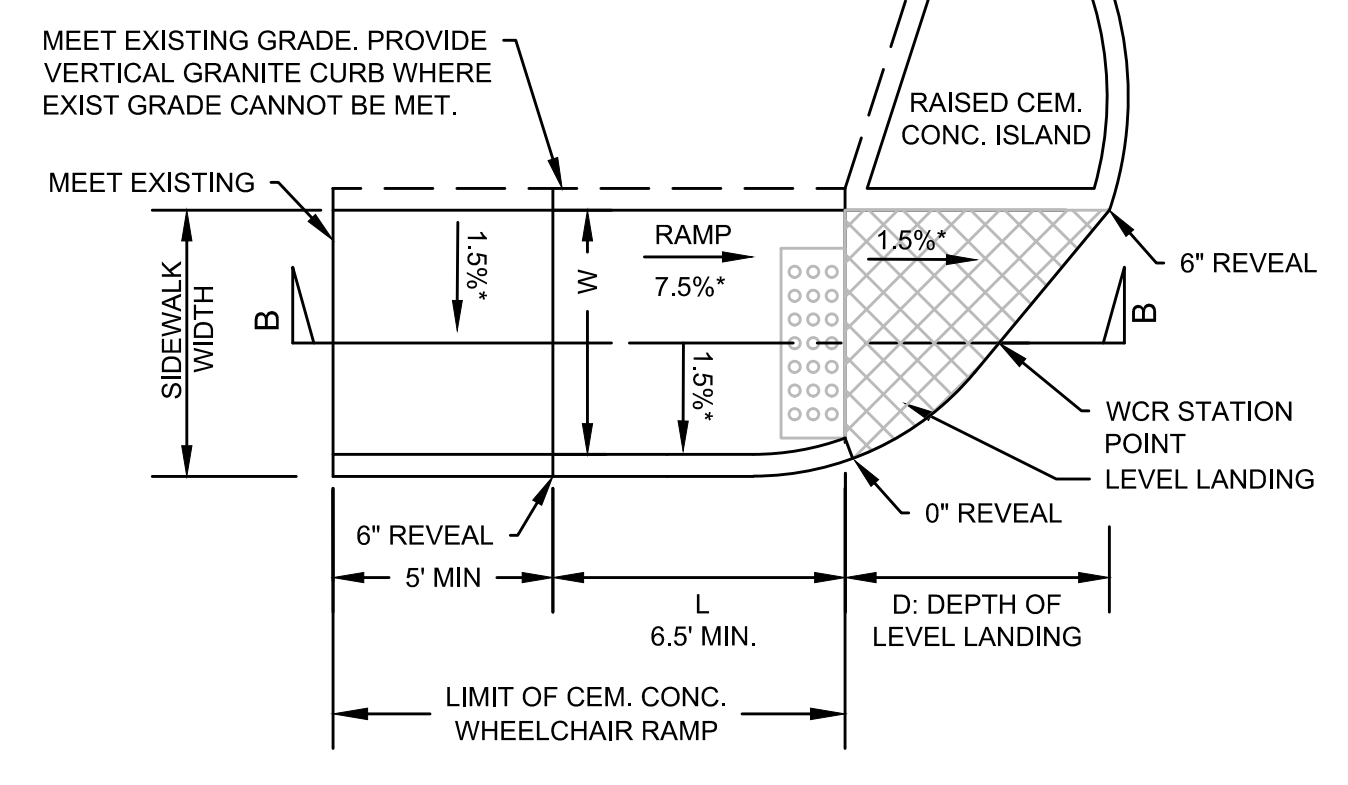
WHEELCHAIR RAMP TYPE "B"

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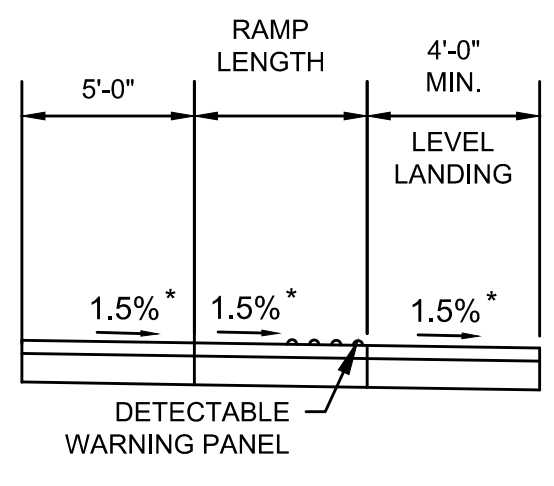
SECTION B-B (RAMP A)

NOT TO SCALE



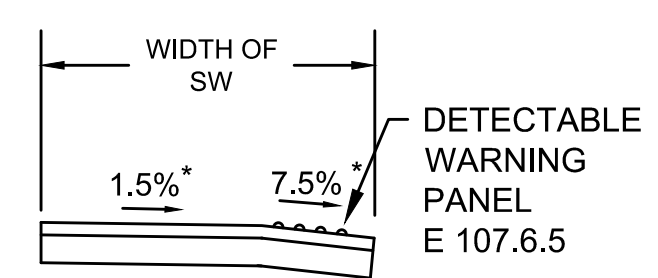
WHEELCHAIR RAMP TYPE "D"

NOT TO SCALE



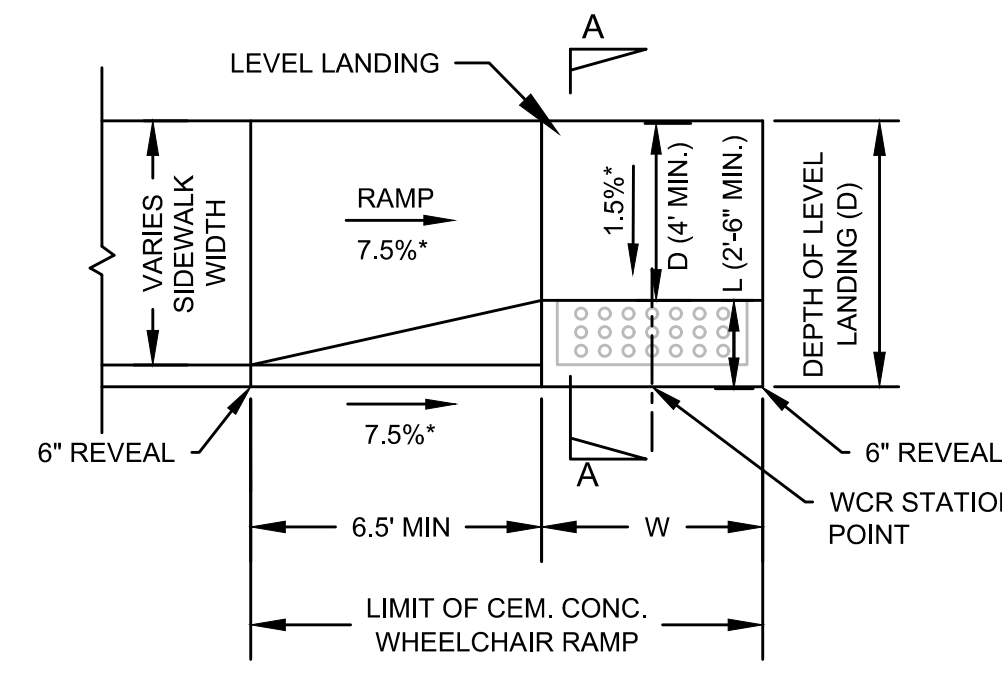
SECTION B-B (RAMP D)

NOT TO SCALE



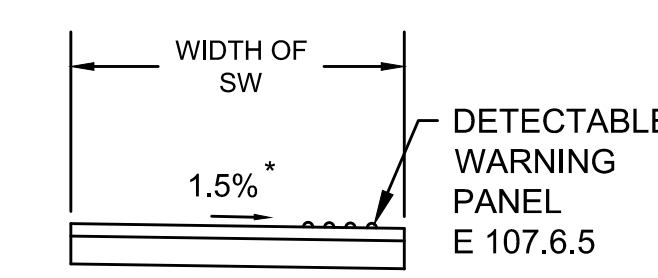
SECTION A-A (RAMP C, B)

NOT TO SCALE



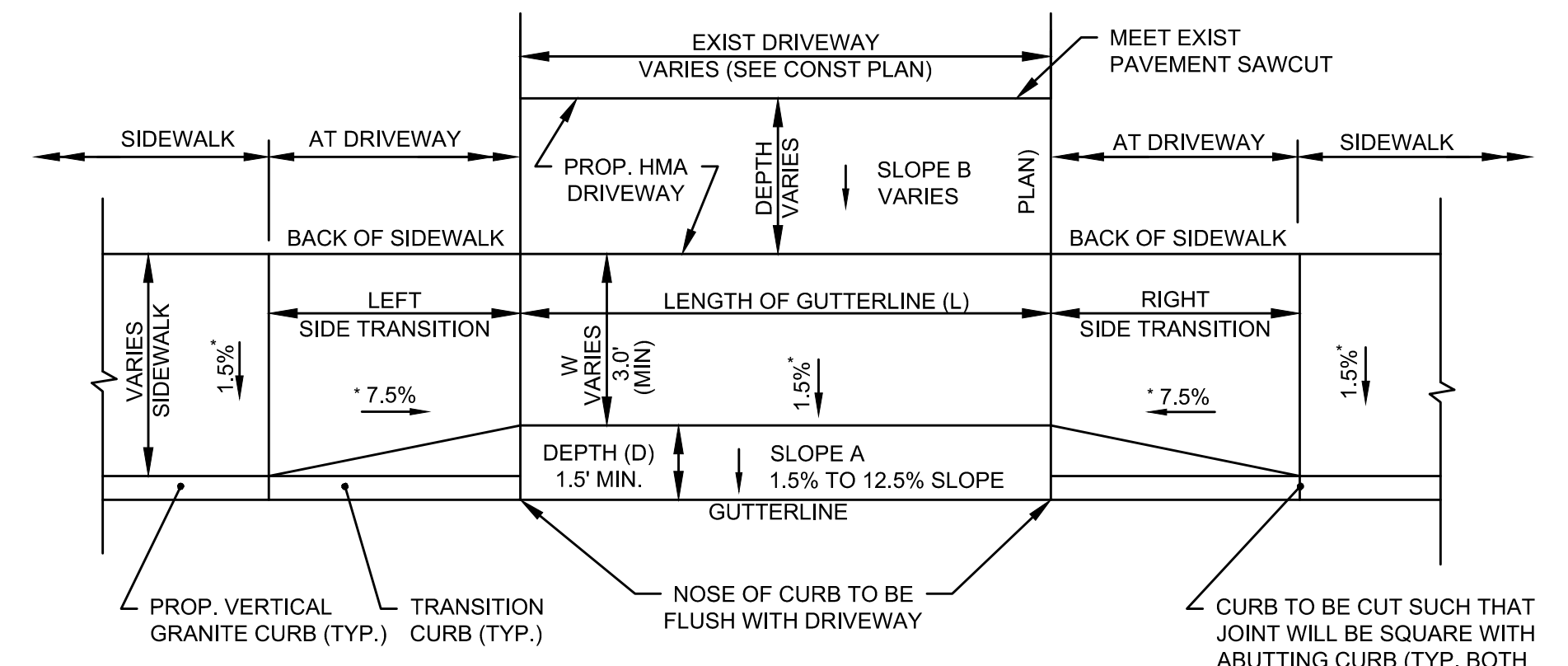
WHEELCHAIR RAMP TYPE "C"

NOT TO SCALE



SECTION B-B (RAMP H)

NOT TO SCALE



TYPICAL DRIVEWAY TYPE A

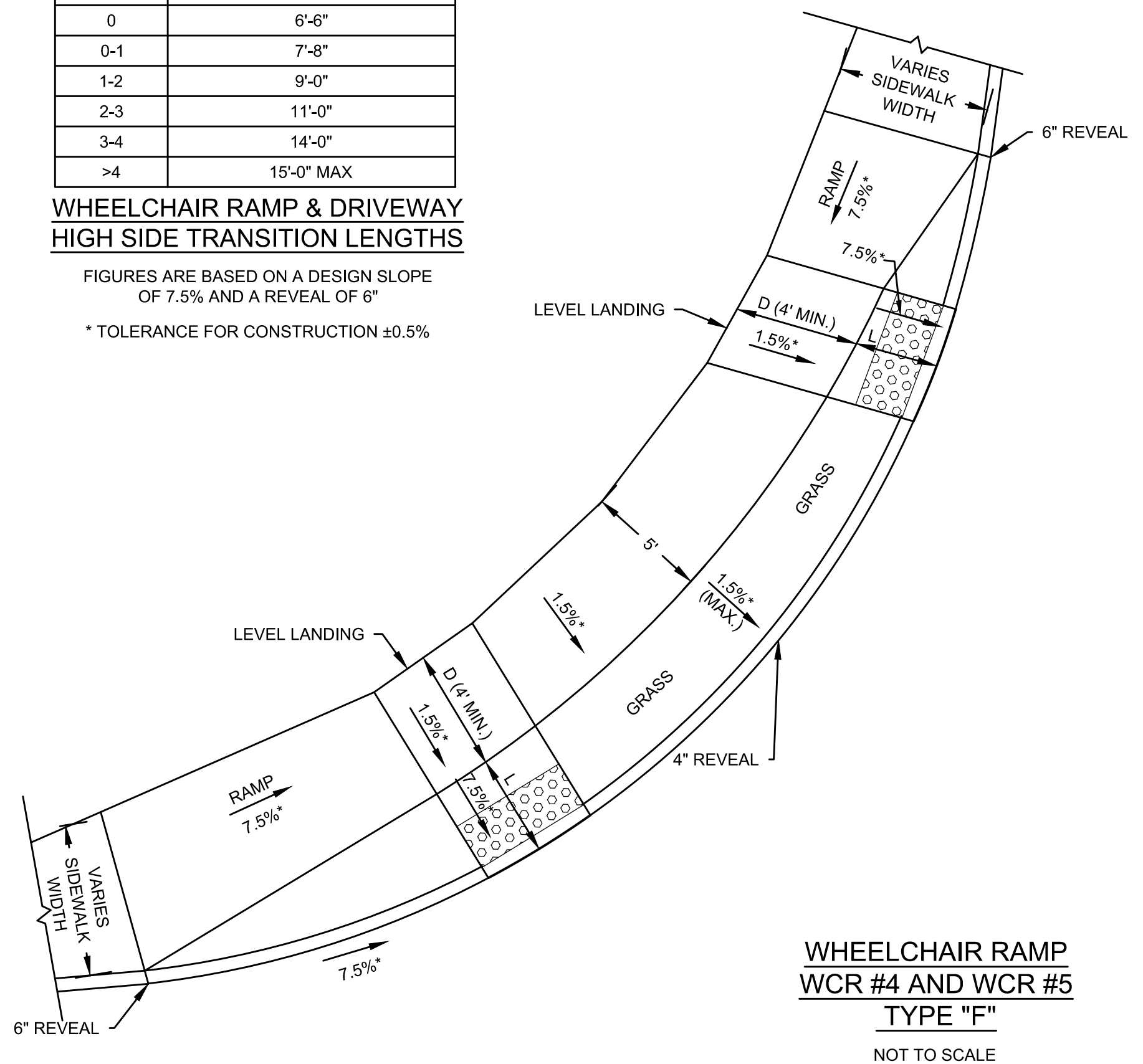
NOT TO SCALE

WHEELCHAIR RAMP DATA							
WCR NO.	SLOPE AT GUTTER (%)	LENGTH OF PRIMARY RAMP (L')	WIDTH OF PRIMARY RAMP (W)	DEPTH OF LEVEL LANDING (D)	TRANSITION LENGTH: LEFT*	TRANSITION LENGTH: RIGHT*	WCR TYPE
1	-1.53%	2'-6"	5'-0"	4'-6"	9'-0"	6'-6"	7'-0"
2	2.34%	2'-6"	4'-6"	6'-6"	6'-6" (3" REV)	11'-0"	7'-0"
3	1.86%	2'-6"	5'-0"	4'-6"	6'-6"	11'-0"	7'-0"
4	-3.07%	4'-0"	5'-0"	5'-0"	14'-0"	7'-6"	7'-0" - 9'-6"
5	1.87%	3'-6"	5'-0"	5'-2"	7'-6"	6'-6"	7'-0"
6	1.79%	2'-6"	4'-6"	4'-0"	6'-6"	9'-0"	7'-0"
7	0.26%	7'-8"	5'-0"	3'-6"	N/A	7'-8"	7'-0"
8	0.43%	6'-6"	5'-0"	5'-6"	6'-6"	N/A	6'-0"
9	-1.19%	9'-0"	5'-0"	2'-3"	9'-0"	N/A	7'-0"
10	-2.25%	6'-6"	5'-0"	0'-6"	N/A	6'-6"	6'-6"
11	6.36%	N/A	5'-0"	6'-0"	N/A	15'-0"	6'-0"
12	-3.63%	5'-6"	5'-0"	5'-6"	14'-0"	6'-6"	5'-6"
13	3.80%	5'-6"	5'-0"	5'-6"	6'-6"	14'-0"	5'-6"
14	-6.87%	N/A	4'-0"	7'-4"	15'-0"	6'-6"	6'-0"
15	0.28%	3'-0"	5'-0"	4'-0"	6'-6"	7'-8"	7'-0"
16	2.59%	3'-0"	5'-8"	4'-0"	6'-6"	11'-0"	7'-0"
17	1.21%	9'-0"	5'-0"	7'-2"	N/A	9'-0"	7'-0"
18	-1.72%	9'-0"	5'-0"	7'-8"	9'-0"	N/A	7'-0"
19	-2.04%	11'-0"	5'-6"	3'-6"	11'-0"	N/A	7'-0"
20	0.37%	7'-8"	5'-0"	2'-4"	N/A	7'-8"	7'-0"
21	1.26%	6'-6"	5'-0"	7'-4"	6'-6"	N/A	5'-6"
22	1.21%	9'-0"	4'-0"	6'-0"	N/A	9'-0"	6'-0"
23	0.19%	6'-6"	5'-0"	4'-0"	6'-6"	N/A	7'-0"
24	-0.13%	6'-6"	5'-0"	6'-6"	N/A	6'-6"	7'-0"
25	0.17%	2'-6"	5'-0"	5'-0"	6'-6"	7'-8"	7'-0"
26	0.36%	6'-6"	5'-0"	7'-3"	6'-6"	N/A	7'-0"
27	N/A	8'-0"	7'-0"	4'-0"	6'-6"	9'-0"	7'-0"
28	N/A	8'-0"	10'-0"	4'-0"	7'-8"	6'-6"	N/A

TABLE 1	
PROFILE GRADE (%)	HIGH SIDE TRANSITION LENGTH FOR 7.5% DESIGN SLOPE (FT)*
0	6'-6"
0-1	7'-8"
1-2	9'-0"
2-3	11'-0"
3-4	14'-0"
>4	15'-0" MAX

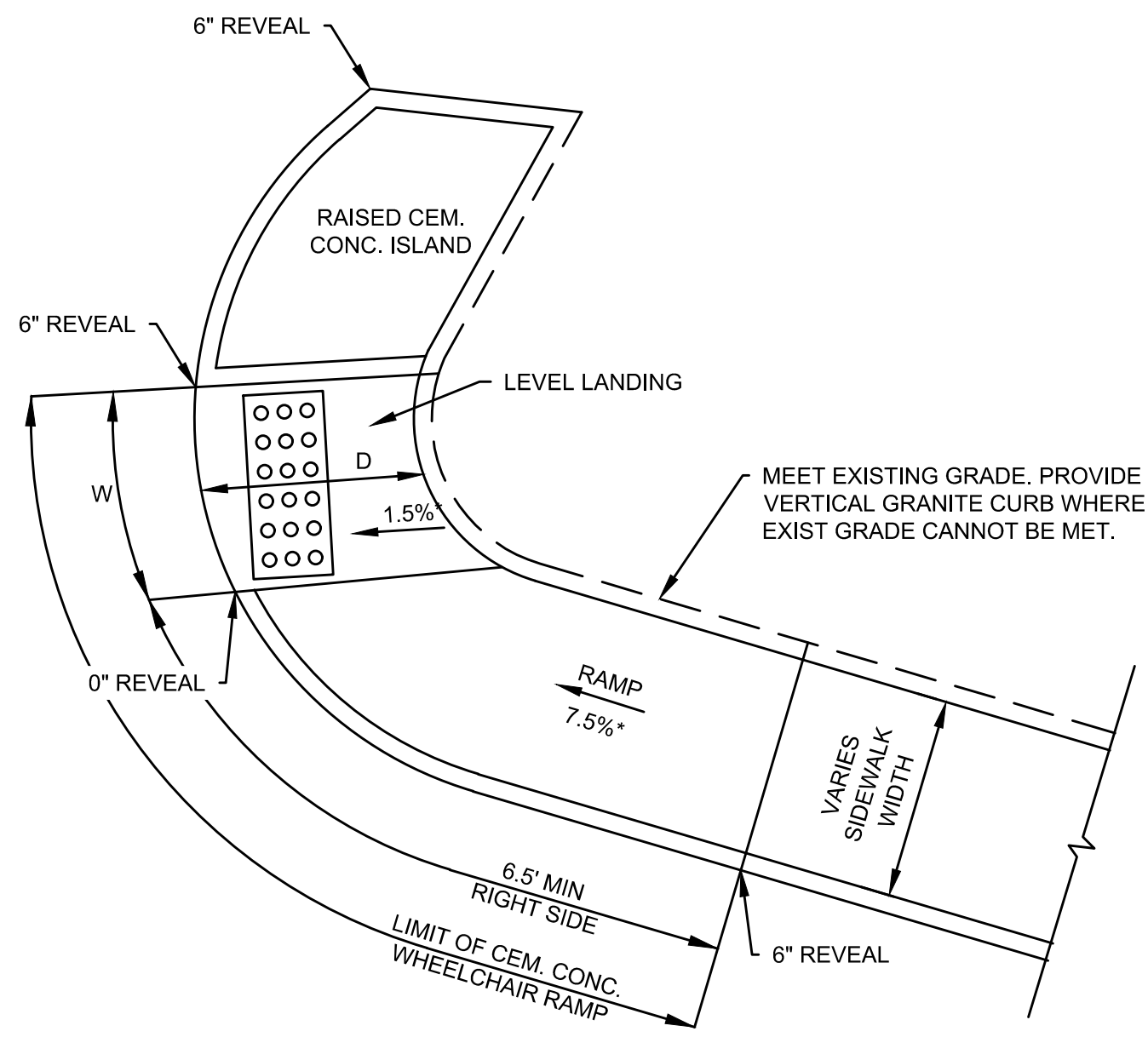
WHEELCHAIR RAMP & DRIVEWAY HIGH SIDE TRANSITION LENGTHS

FIGURES ARE BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"
 * TOLERANCE FOR CONSTRUCTION ±0.5%



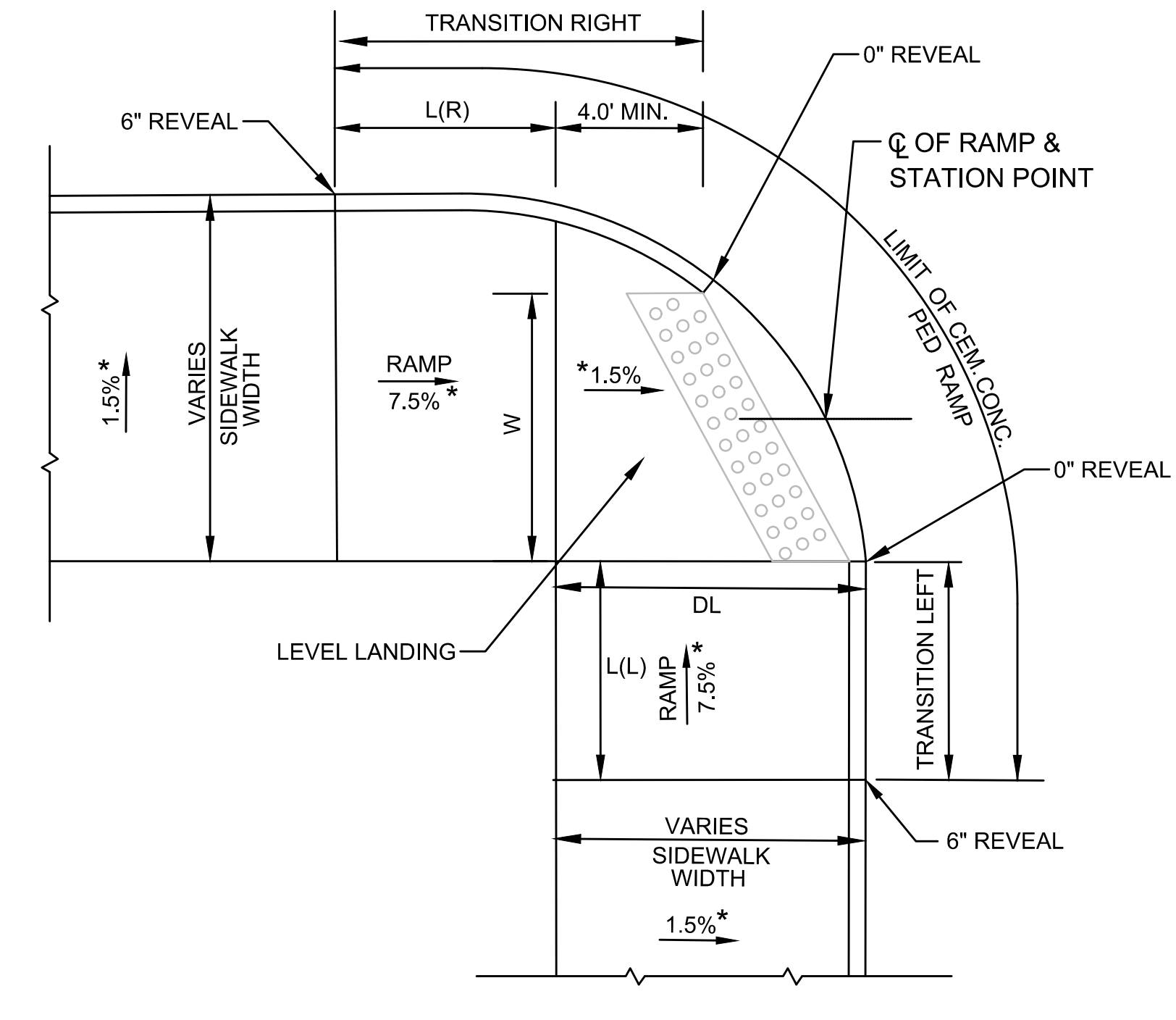
WHEELCHAIR RAMP WCR #4 AND WCR #5 TYPE "F"

NOT TO SCALE



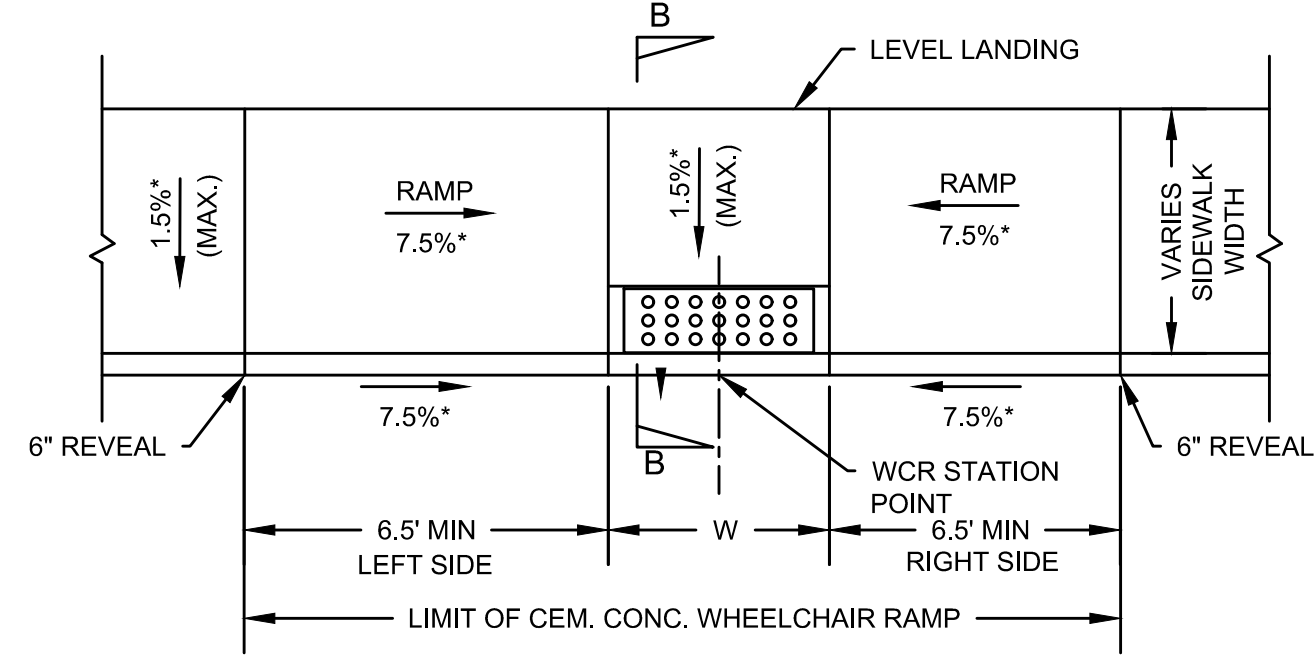
WHEELCHAIR RAMP TYPE "E"

NOT TO SCALE



PEDESTRIAN RAMP DETAIL TYPE "G"

NOT TO SCALE



WHEELCHAIR RAMP TYPE "H"

NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KYL
 DESIGNED BY:
KYL
 CHECKED BY:
DJ

REGISTERED PROFESSIONAL
 PREPARED BY



SUBCONSULTANT

SCALE
NONE

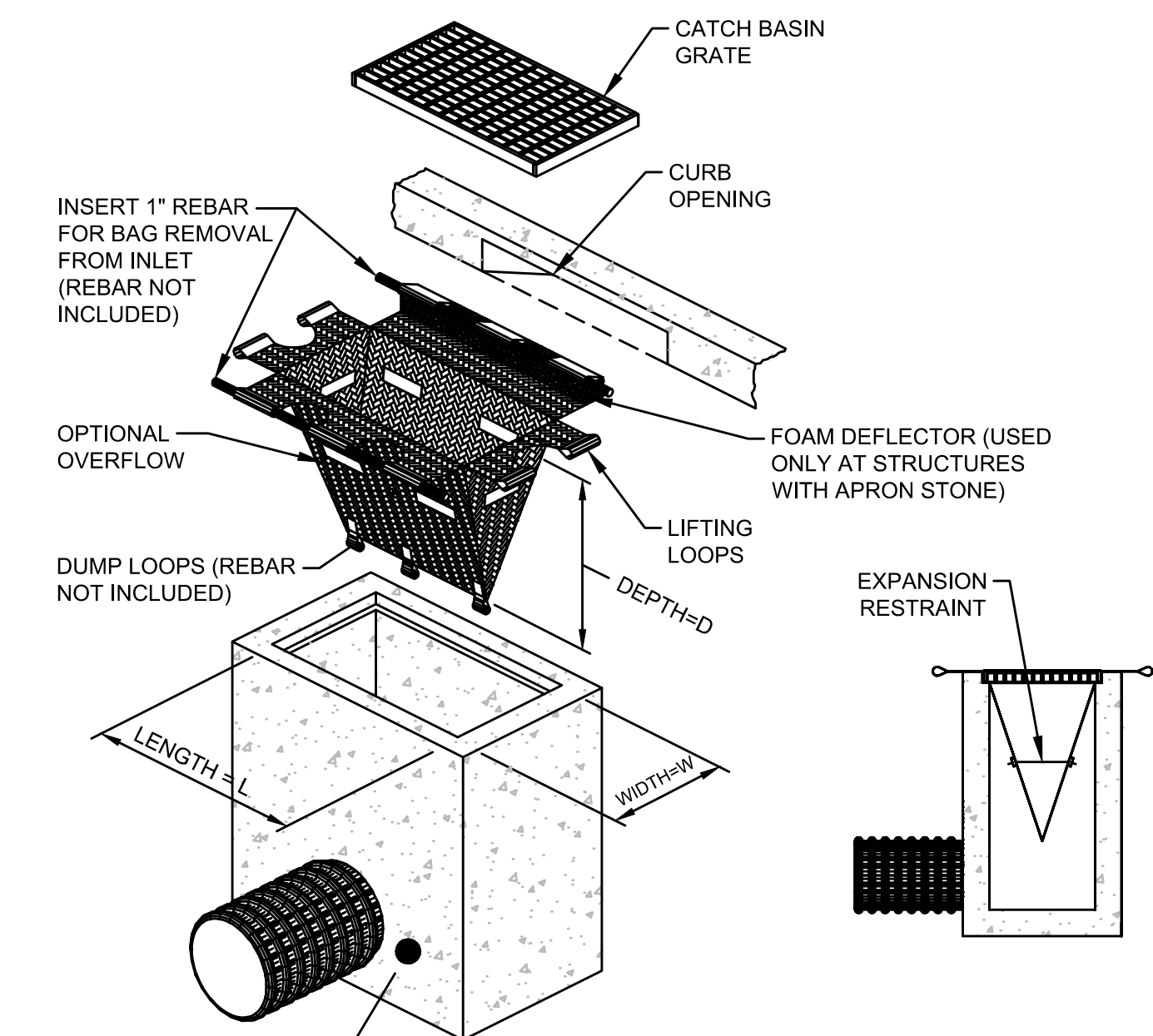
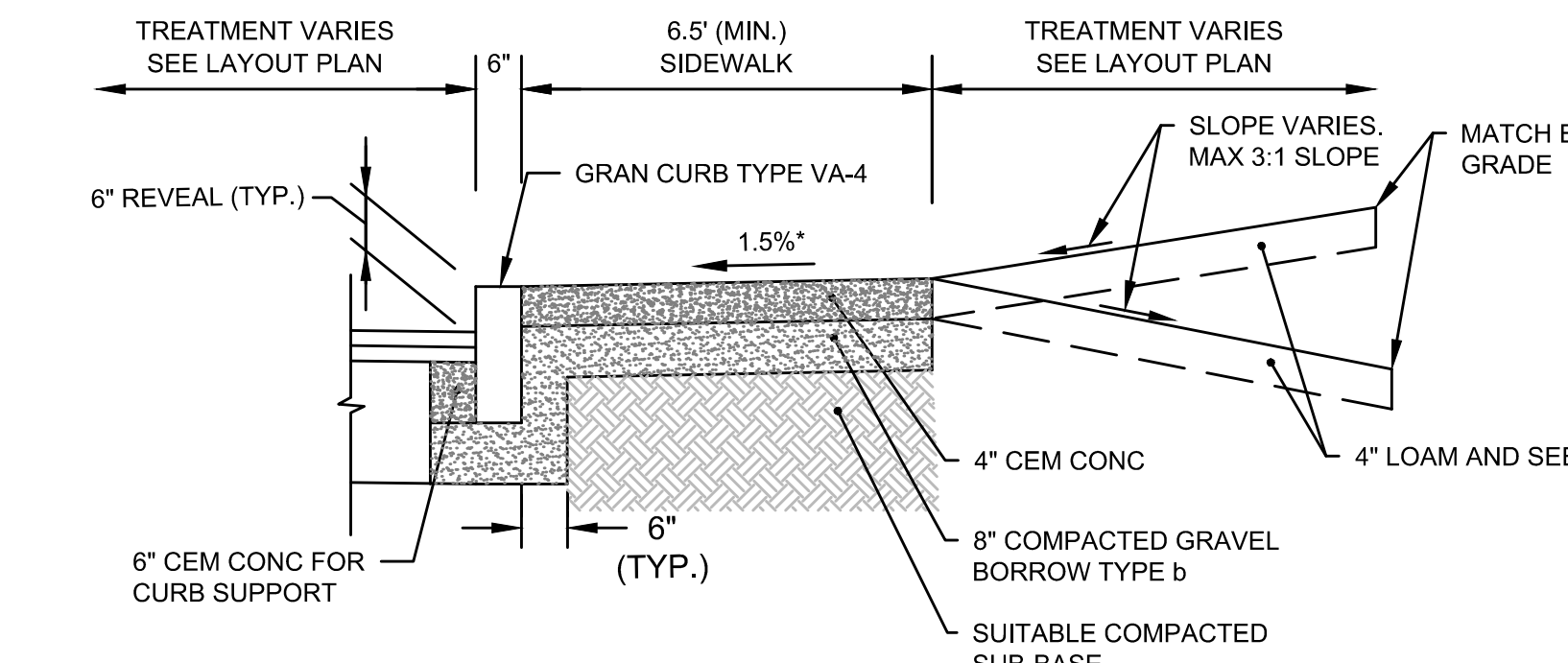
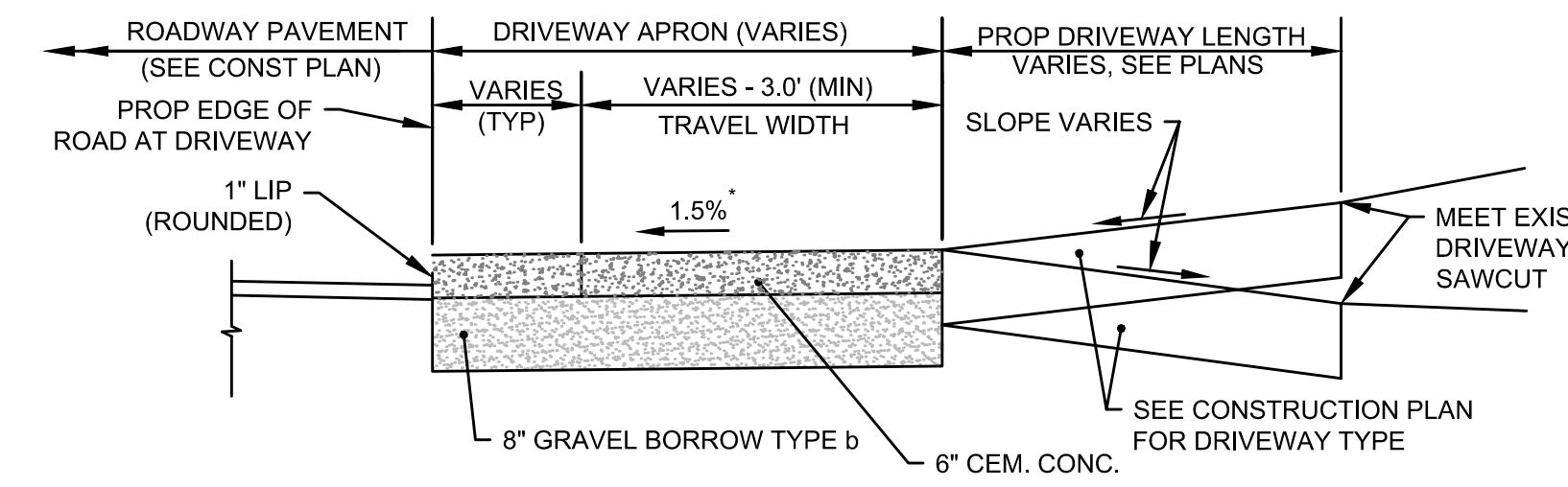
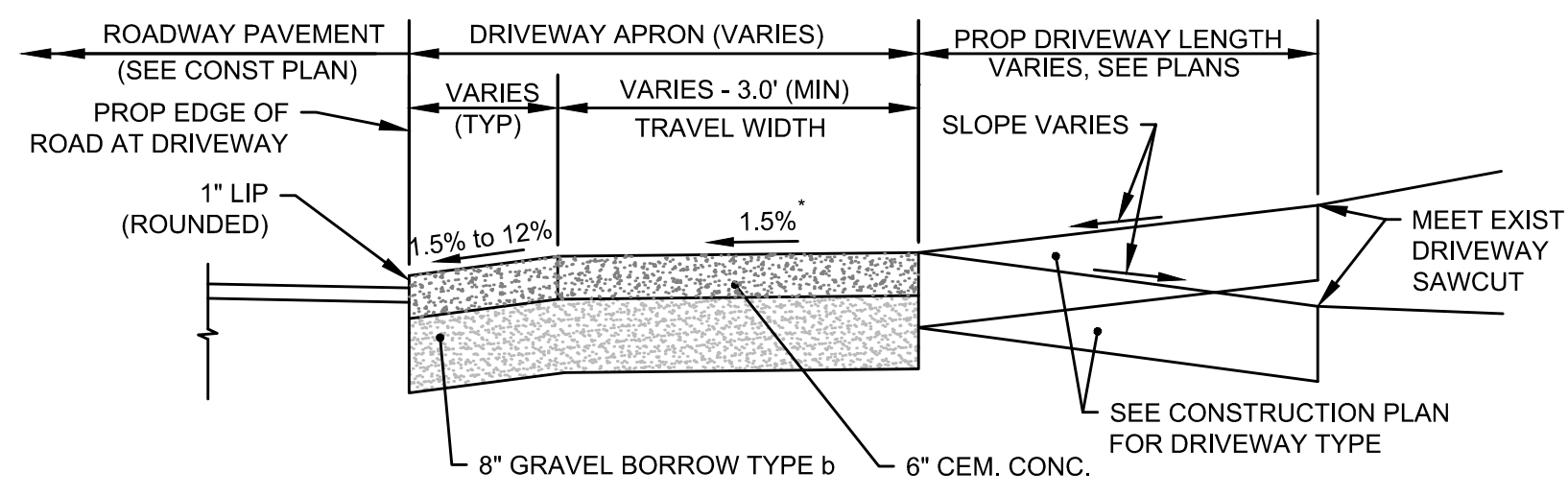
TITLE

**Intersection Improvements
 Route 123 At Rathbun Willard Drive
 And Black Oak Drive
 Attleboro, Massachusetts
 CONSTRUCTION DETAILS**

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 ISSUE DATE 11/10/2021
 SHEET NO. **4 of 28**

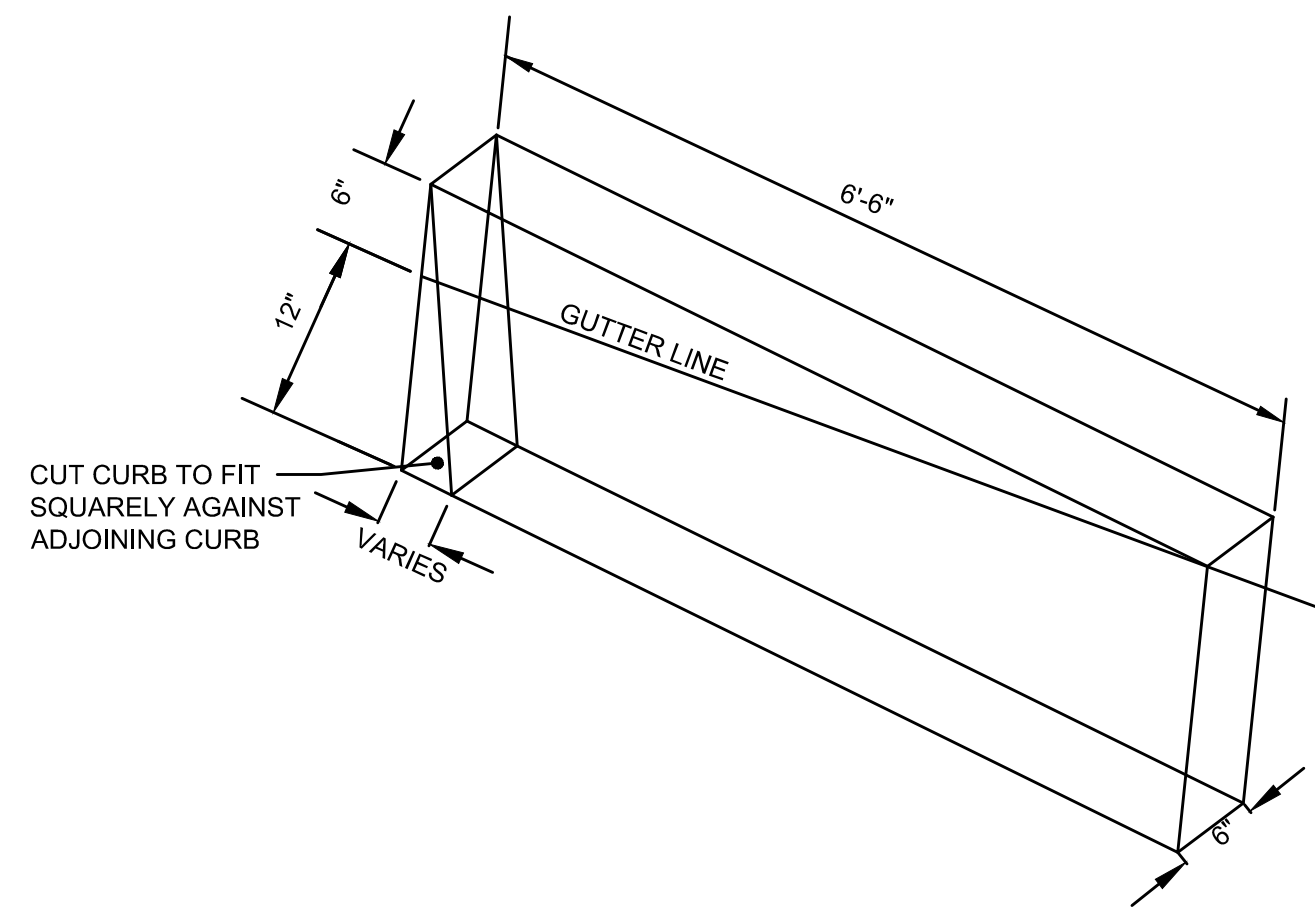
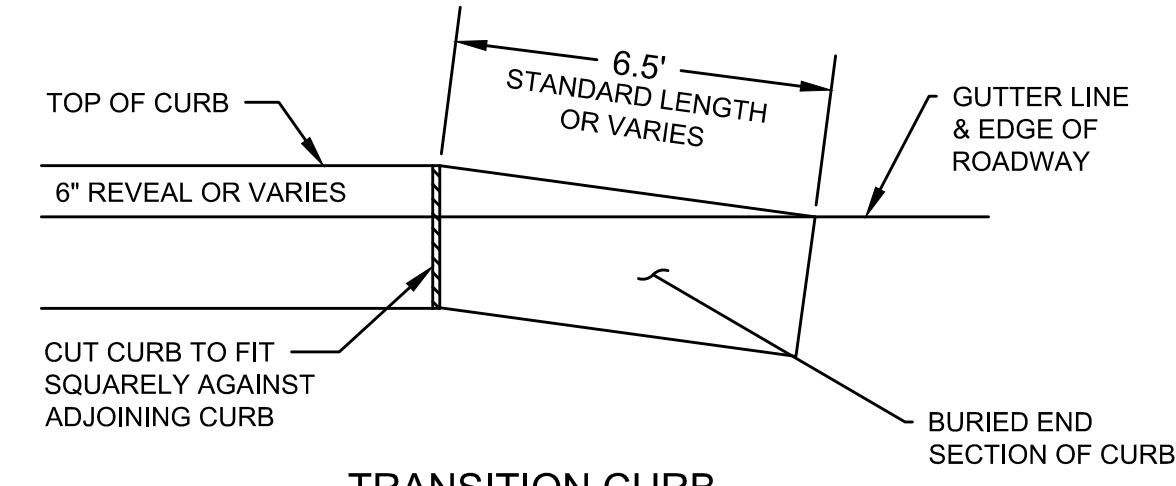
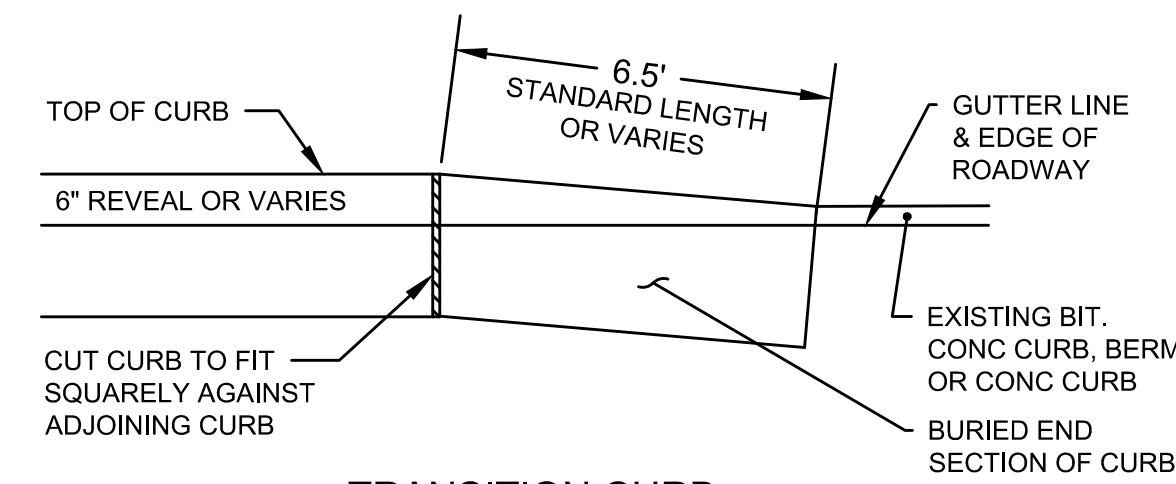
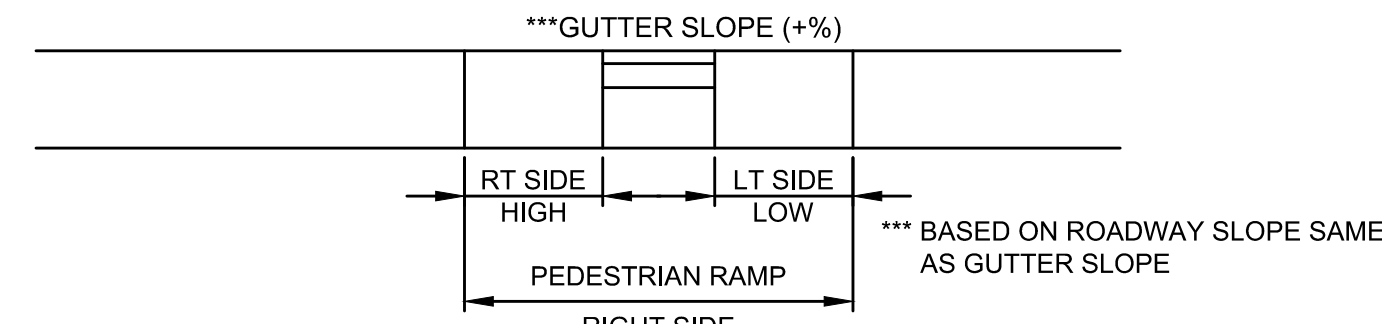
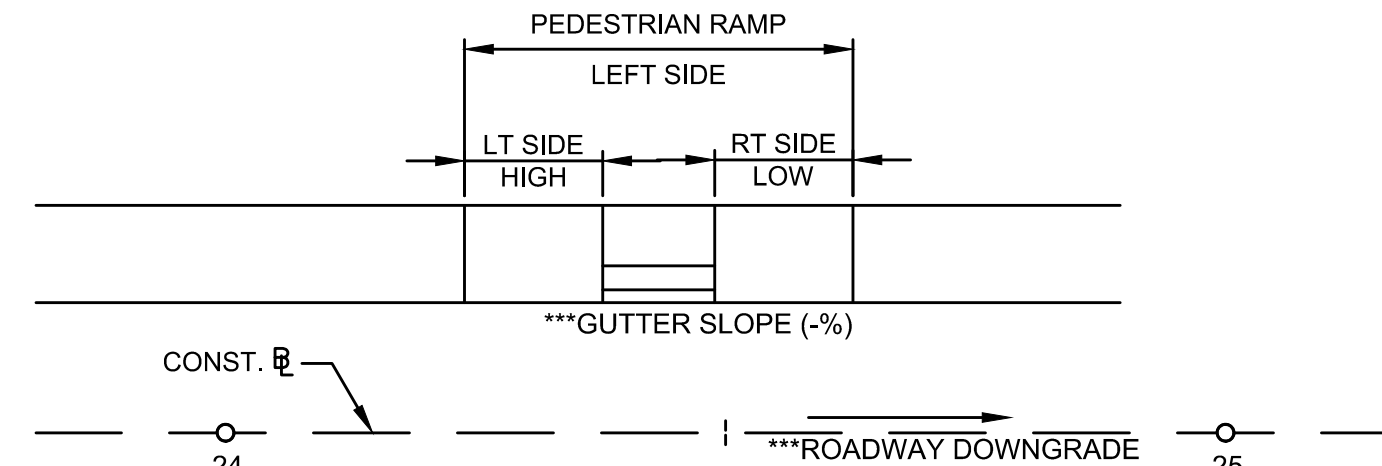
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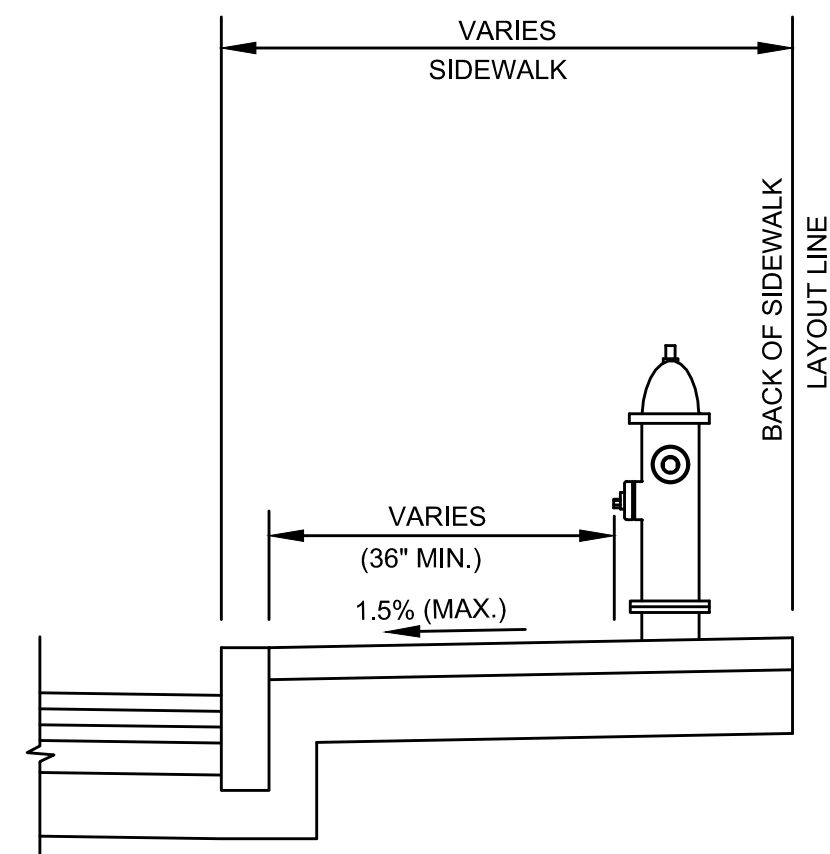
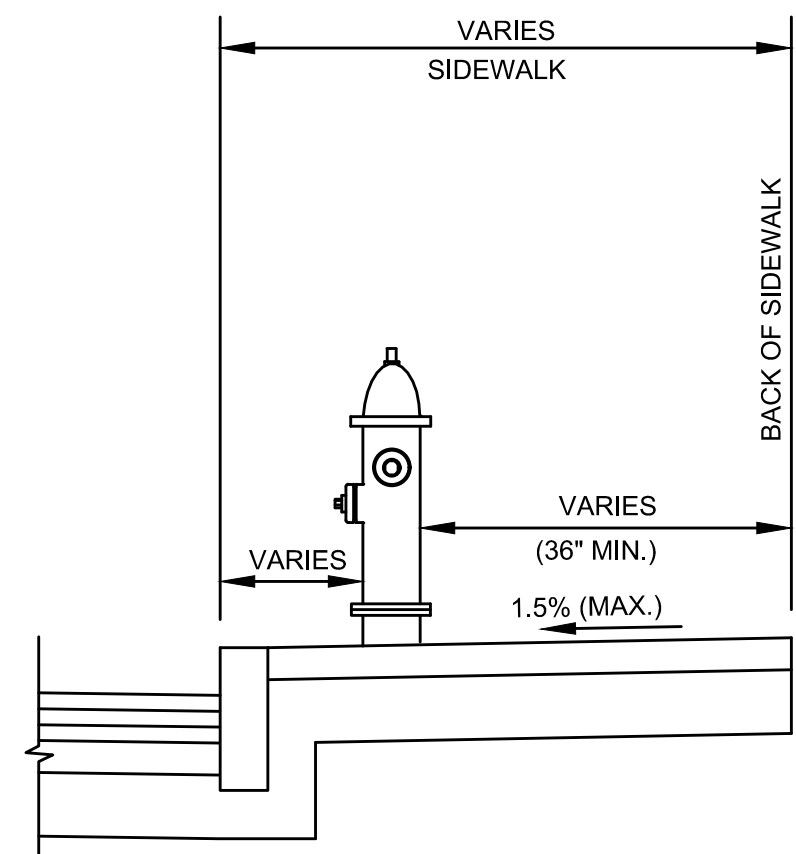
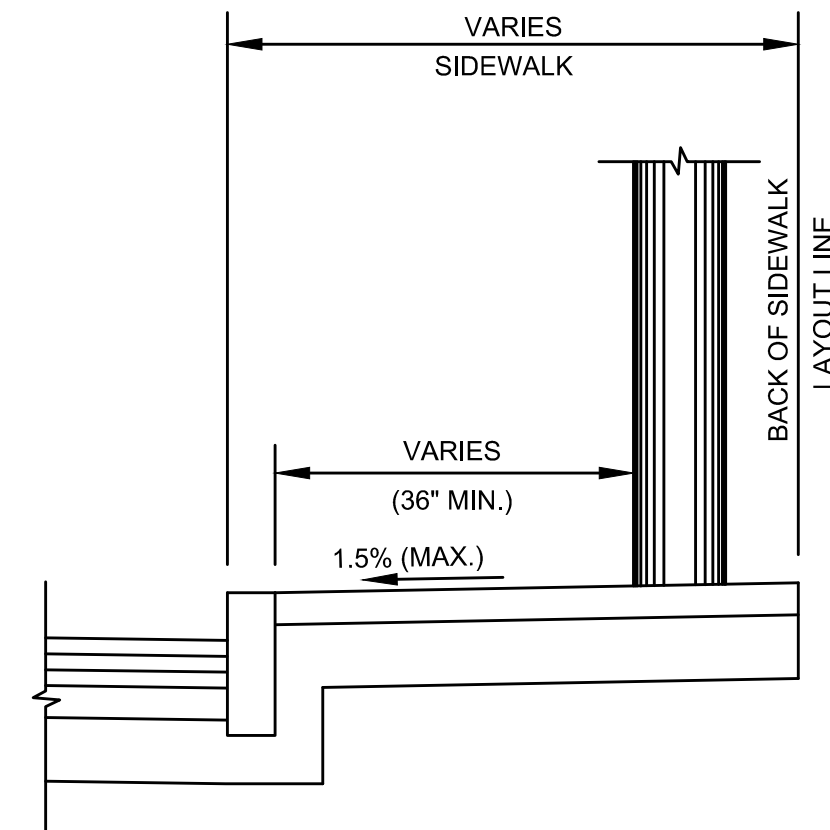
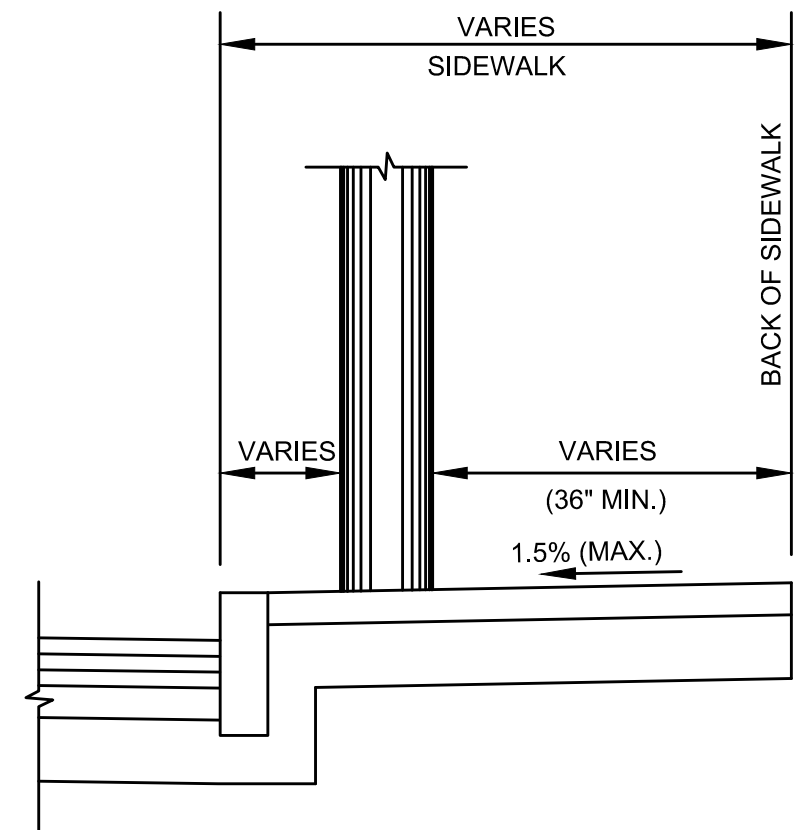
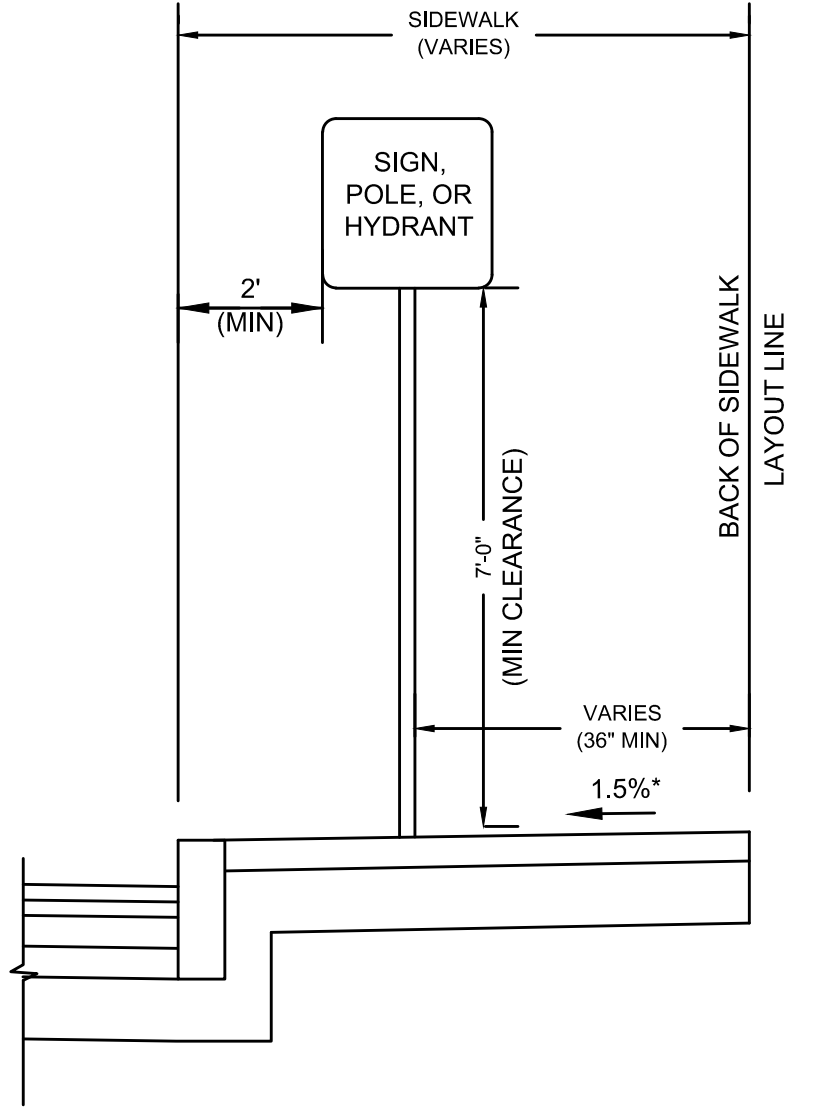
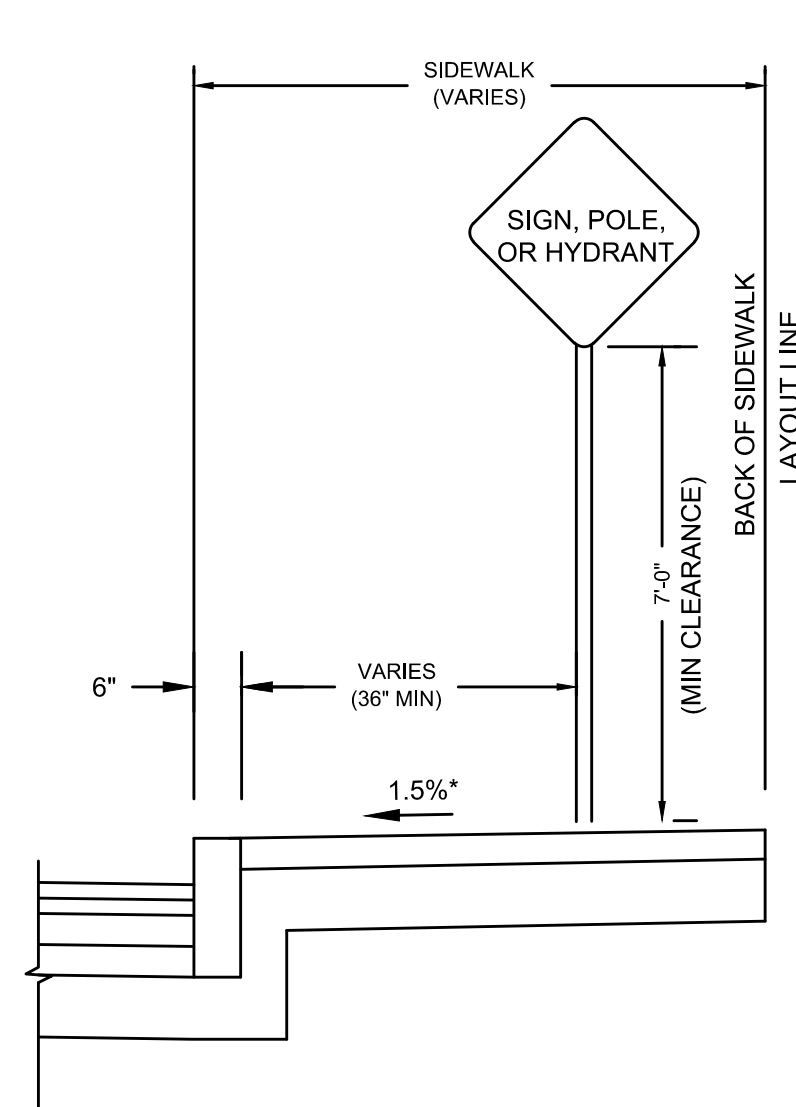


- NOTES
- CONTRACTOR SHALL MAINTAIN ALL CATCH BASIN SEDIMENT CONTROL DEVICE INSTALLATIONS AND REPLACE WHEN SATURATED WITH SEDIMENT BASED ON MANUFACTURER RECOMMENDATIONS. SILT SACK SHALL BE INSPECTED AFTER EVERY RAIN EVENT BUT NO LONGER THAN EVERY TWO WEEKS.
 - SILT SACK SHALL BE DOUBLE NEEDLE SEWN POLYPROPYLENE GEOTEXTILE FABRIC AND RATED FOR HIGH FLOW UNLESS OTHERWISE DIRECTED.
 - CONTRACTOR SHALL PROVIDE CURB OPENING DEFLECTOR AT ALL CATCH BASINS AS NECESSARY.

CATCH BASIN SEDIMENT CONTROL PROTECTION
NOT TO SCALE



PRECAST TRANSITION CURB
NOT TO SCALE



- NOTES
- MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL BE 36 INCHES, EXCLUDING THE CURB.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, POLES, ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 36 INCHES NOT INCLUDING CURB. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LOCATION WHICH CANNOT MEET THE CLEARANCE REQUIREMENTS.

* TOLERANCE FOR CONSTRUCTION ±0.5%

MIN. SIDEWALK CLEARANCE
NOT TO SCALE

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

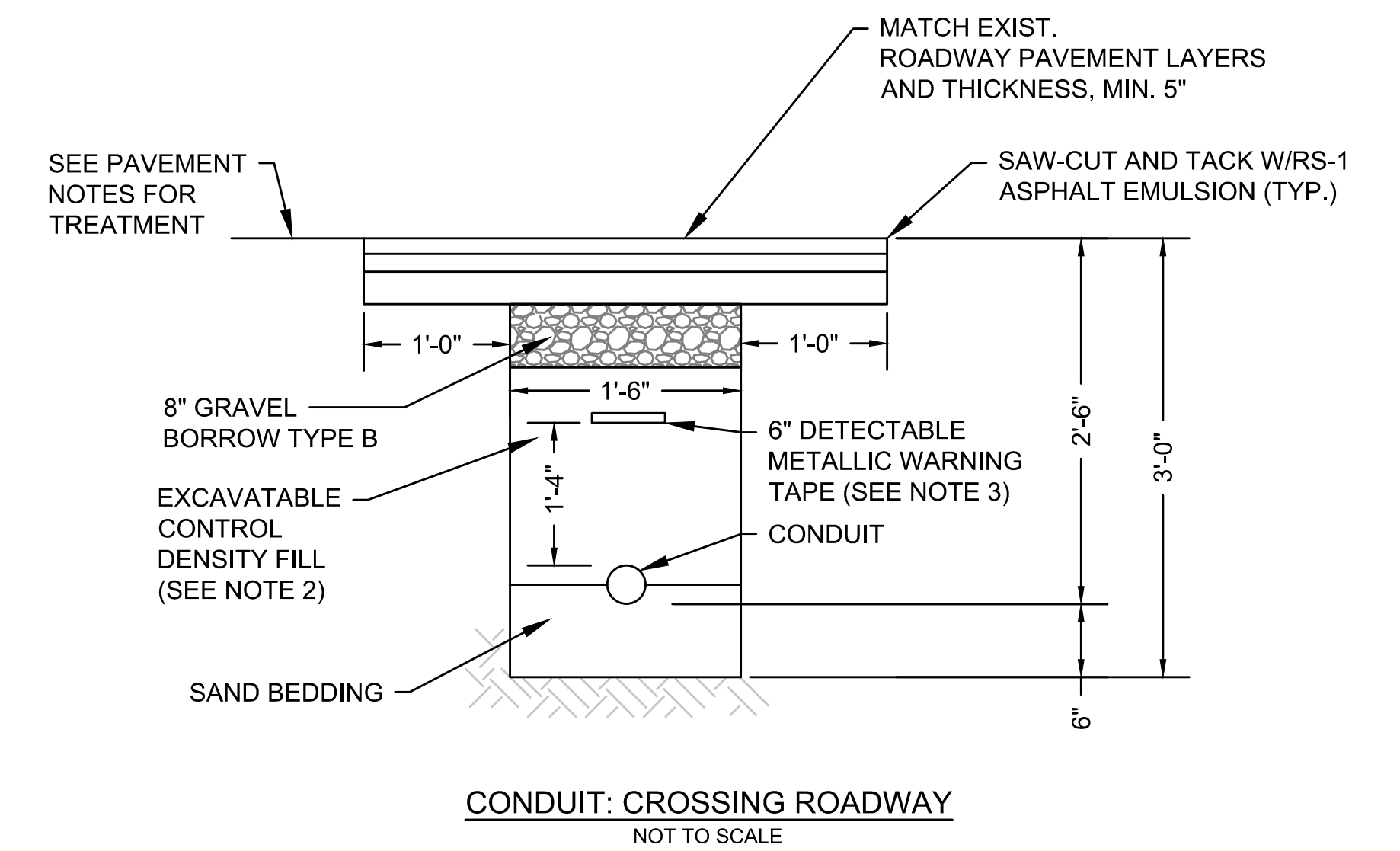
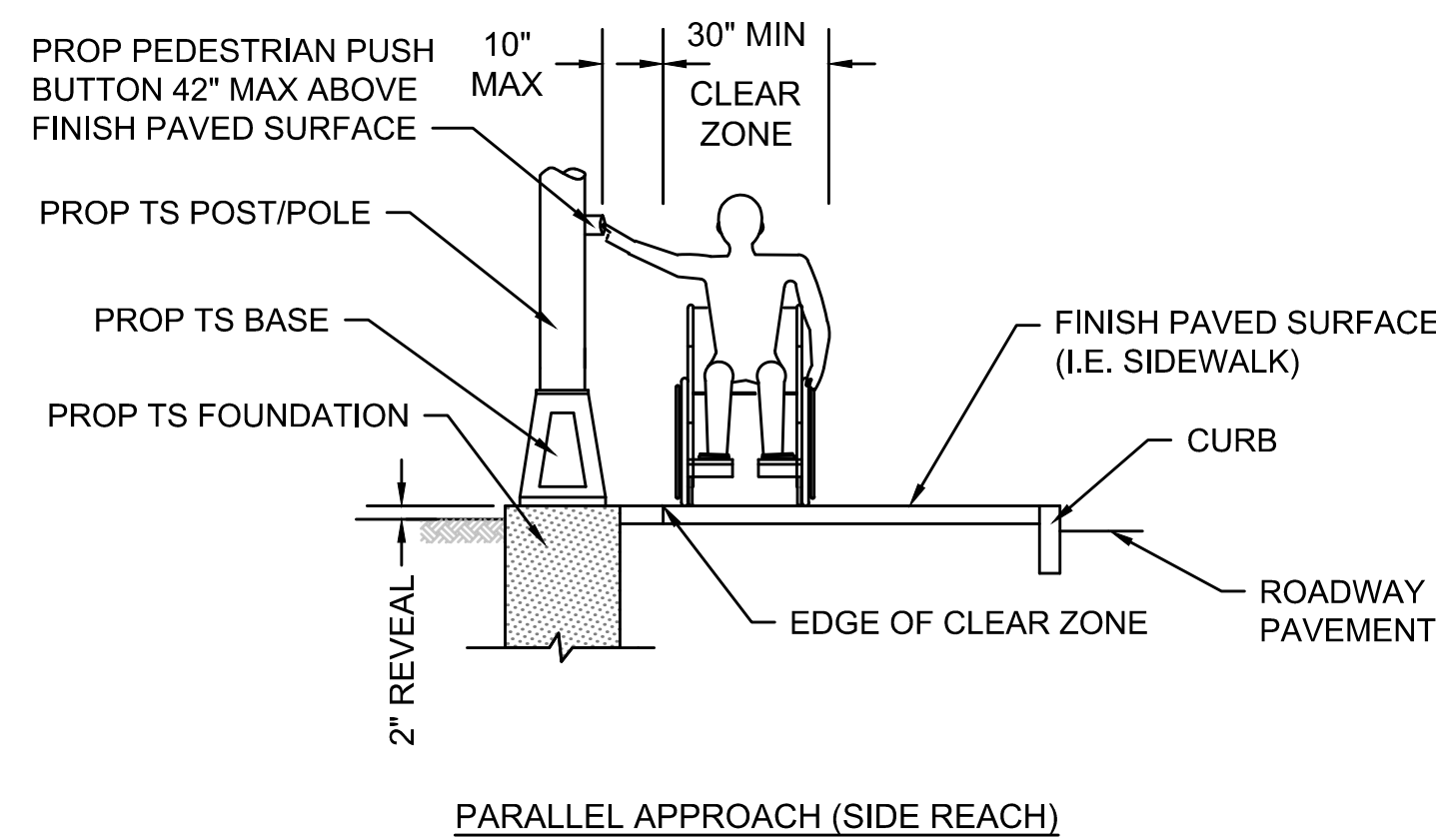
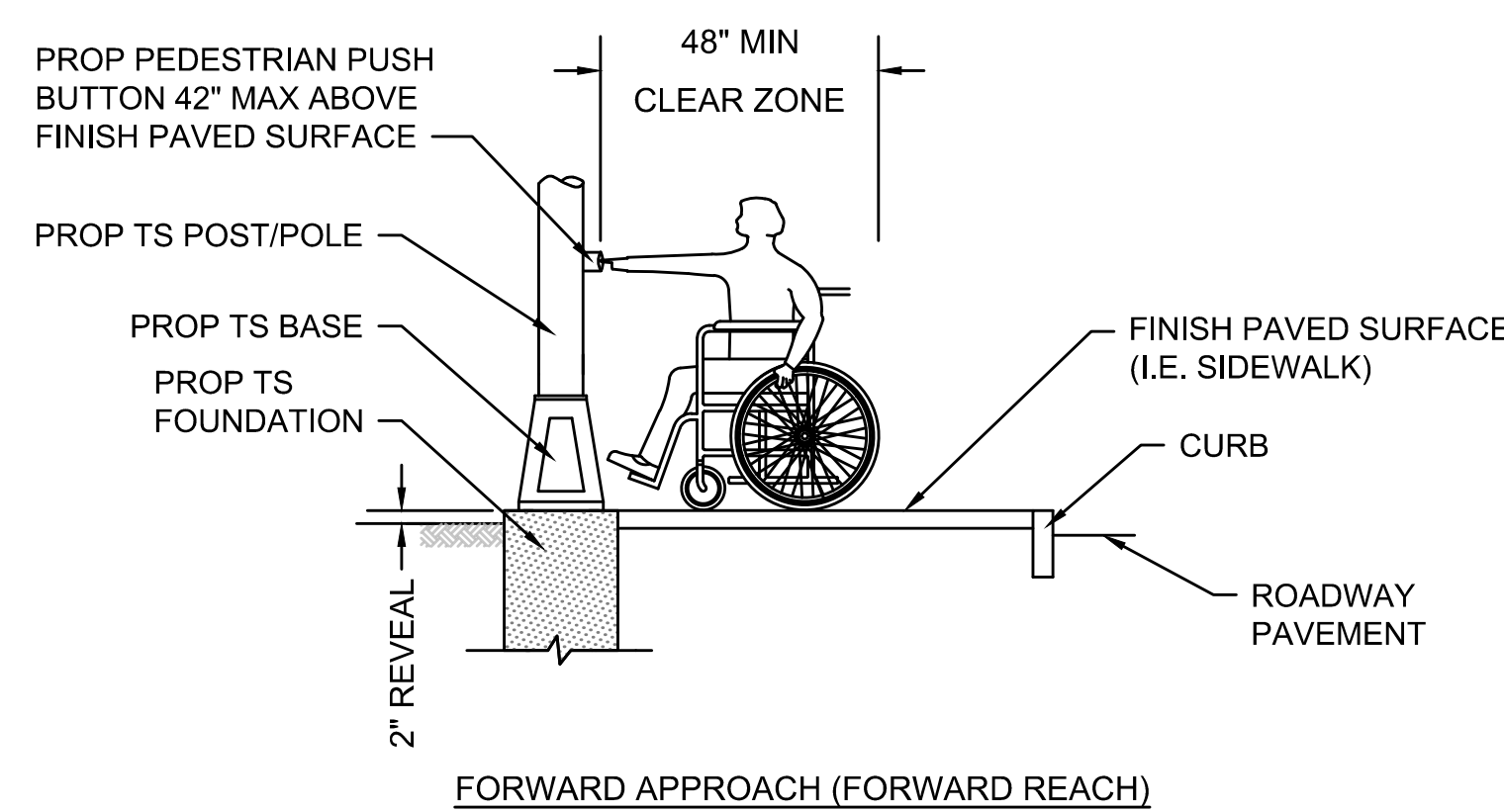
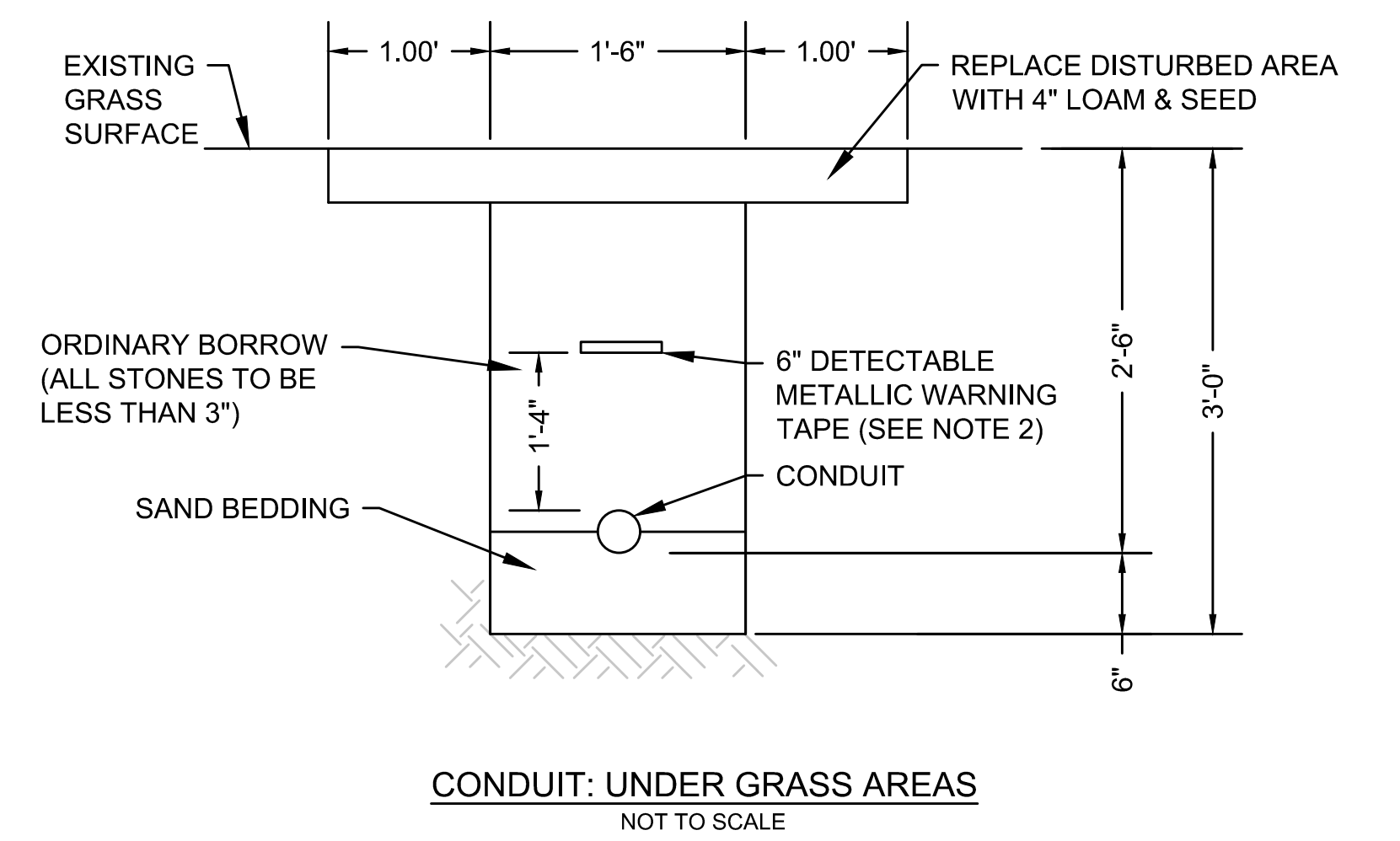
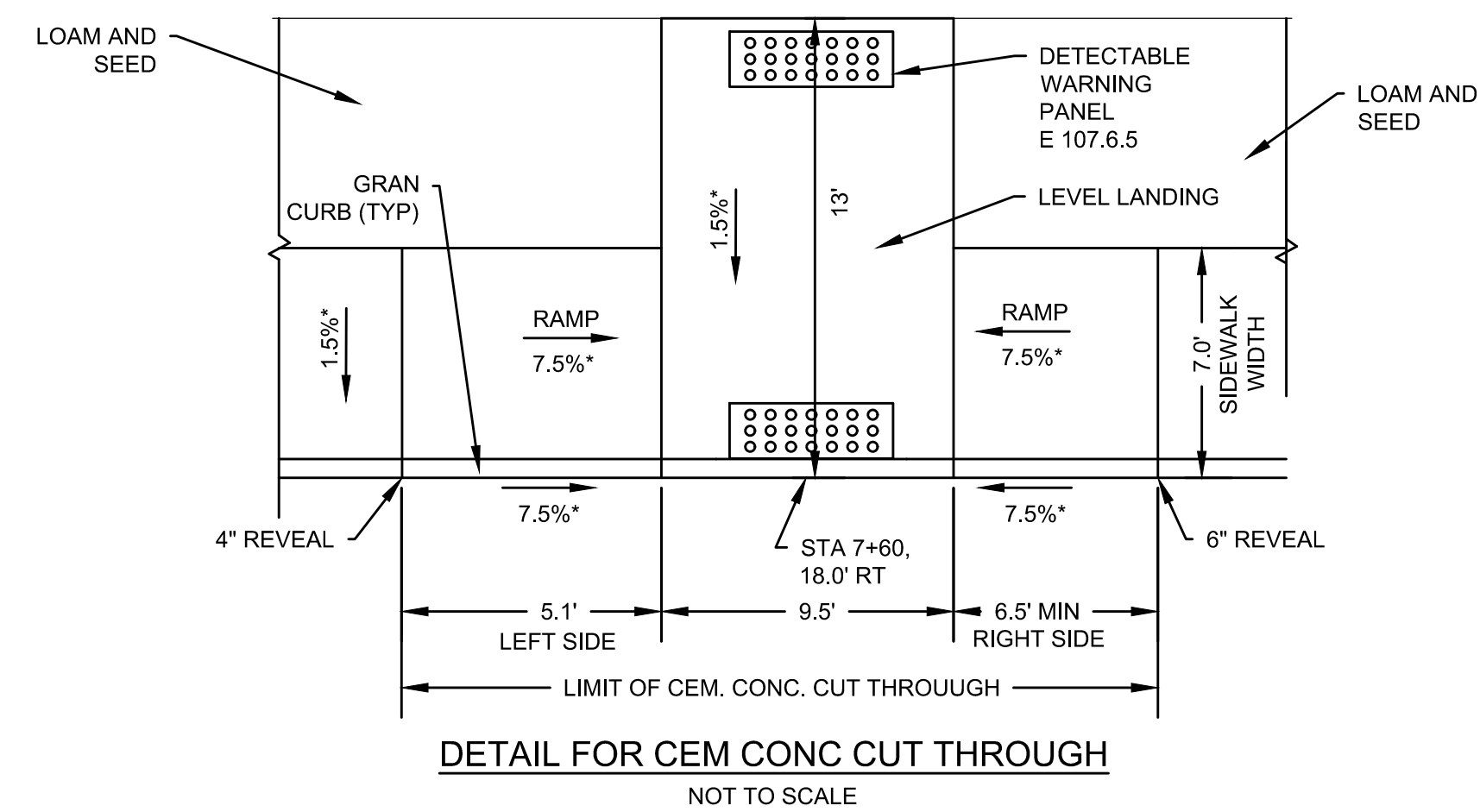
DRAWN BY: KYL	REGISTERED PROFESSIONAL
DESIGNED BY: KYL	PREPARED BY
CHECKED BY: DJ	SUBCONSULTANT



SCALE NONE	TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts CONSTRUCTION DETAILS
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BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. 5 of 28

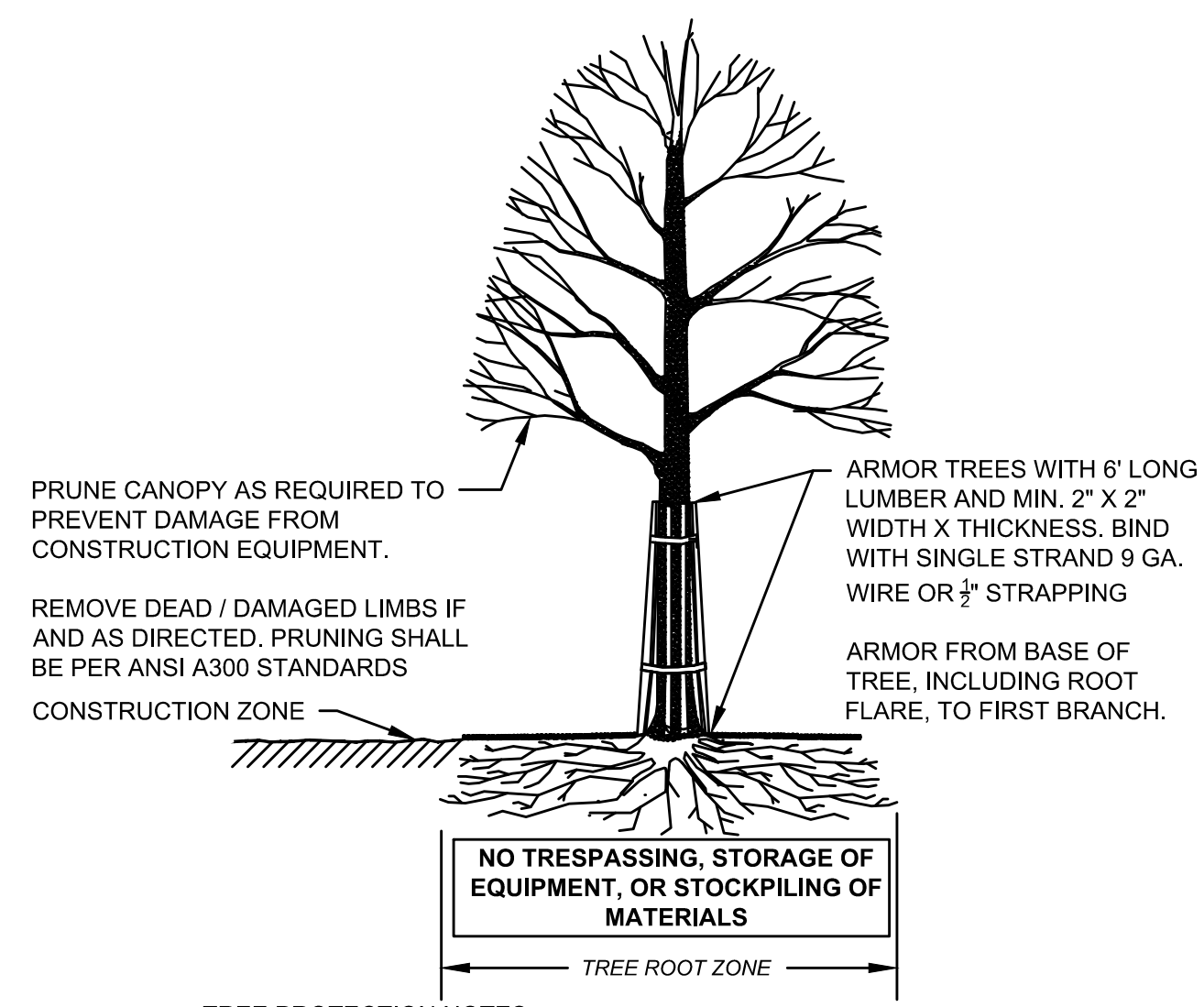
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NOTES:

1. A CLEAR GROUND SPACE SHALL CONSIST OF A STABLE AND FIRM AREA, COMPLYING WITH 521 CMR 6.5 (FORWARD REACH) OR 521 CMR 6.6 (SIDE REACH) AND SHALL BE PROVIDED AT EACH OF THE PEDESTRIAN PUSH BUTTONS.
 - a. WHERE A FORWARD APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL ABUT AND BE CENTERED ON THE CLEAR GROUND SPACE.
 - b. WHERE A PARALLEL APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN TEN INCHES (10") HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.

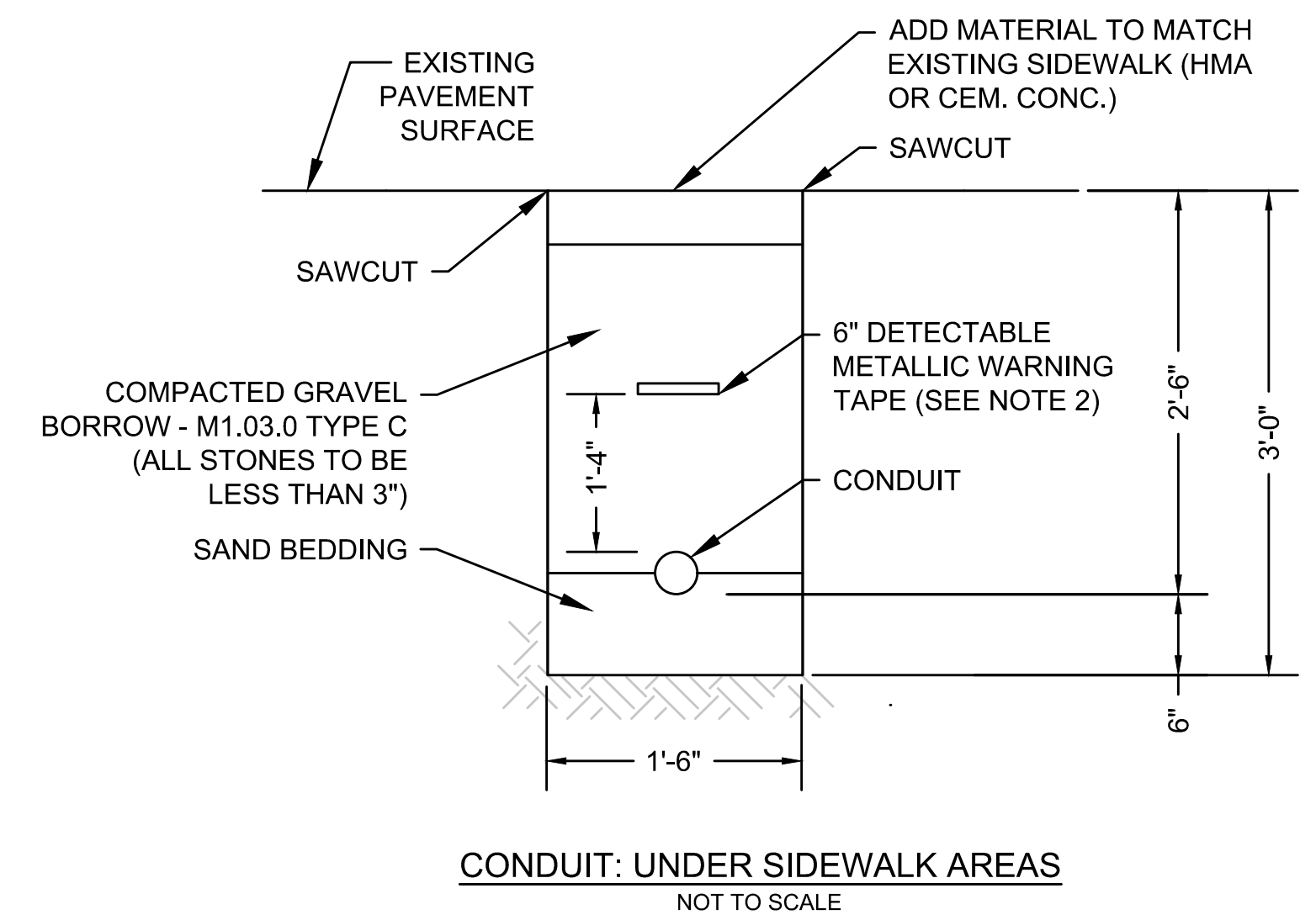
PEDESTRIAN PUSH BUTTON CLEAR ZONE
NOT TO SCALE



TREE PROTECTION NOTES:

1. TREE PROTECTION SHALL BE APPLIED TO ALL TREES TO REMAIN WITHIN 10 FEET OF THE LIMITS OF WORK AND AS DIRECTED BY THE ENGINEER.

TREE PROTECTION
NOT TO SCALE



CONDUIT NOTES

1. SCHEDULE 80 ELECTRICAL CONDUIT TYPE NM-PLASTIC (UL) WITH PULL ROPE UNLESS OTHERWISE APPROVED BY MASSDOT.
2. CONTROL DENSITY FILL SHALL MEET THE REQUIREMENTS OF SUBSECTION M4.08.0.
3. WARNING TAPE SHALL BE PER CURRENT APWA STANDARDS.

12/28/2021 12:54 PM 01710037167 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\SET\157 DETAILS.DWG (MADOT-D.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY: KYL
CHECKED BY: DJ

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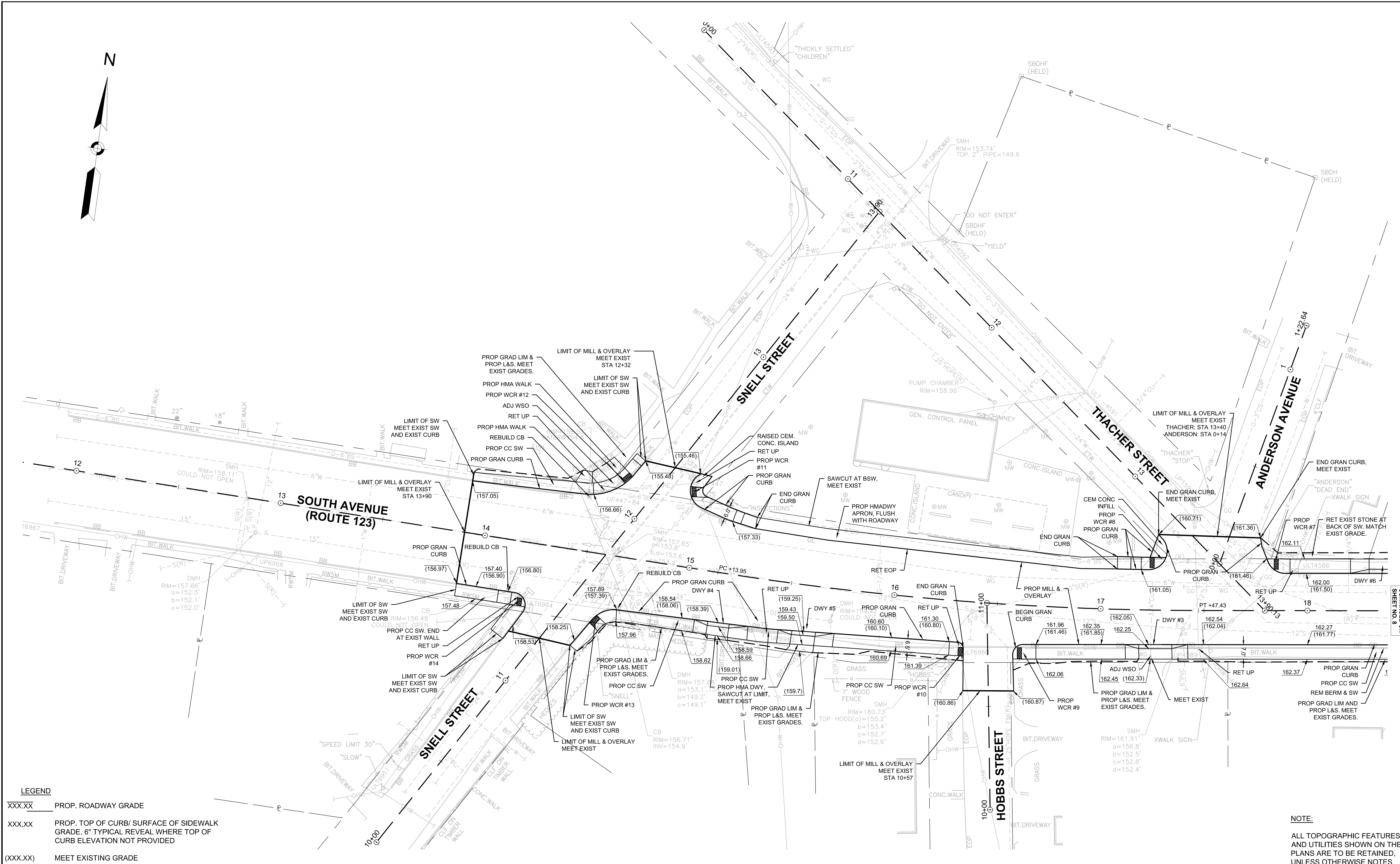
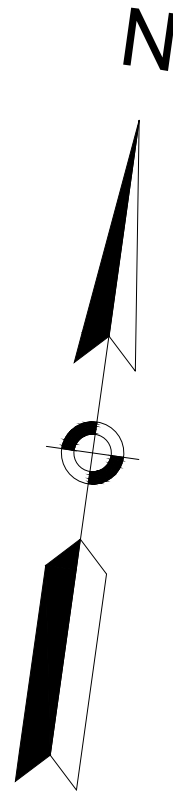
SUBCONSULTANT

SCALE
NONE

TITLE
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
CONSTRUCTION DETAILS**

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **6 of 28**

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- LEGEND**
- XXX.XX PROP. ROADWAY GRADE
 - XXX.XX PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
 - (XXX.XX) MEET EXISTING GRADE

NOTE:
ALL TOPOGRAPHIC FEATURES AND UTILITIES SHOWN ON THE PLANS ARE TO BE RETAINED, UNLESS OTHERWISE NOTED

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CONTINUED ON SHEET NO. 8

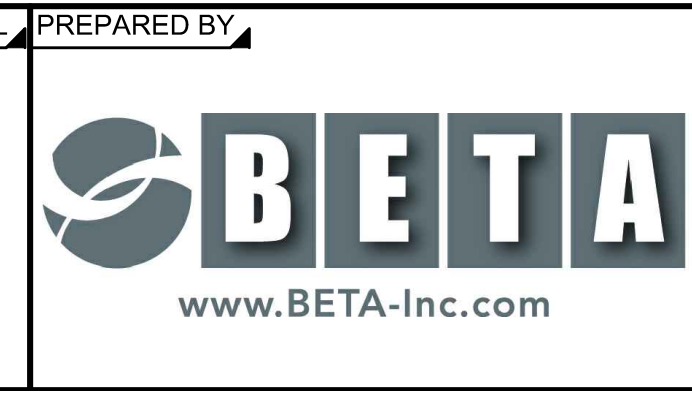
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KLJMC

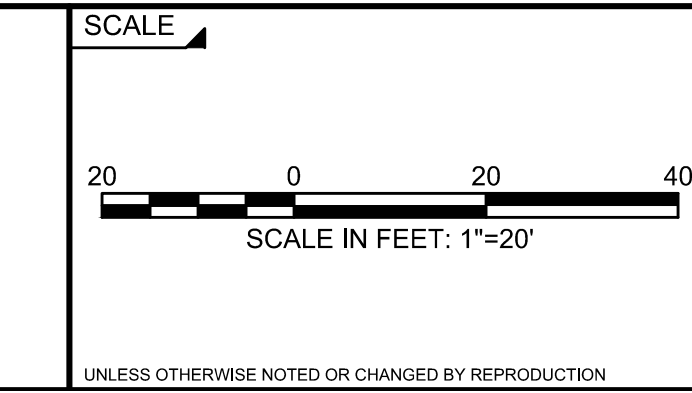
DESIGNED BY:
KLJMC

CHECKED BY:
DJ

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**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

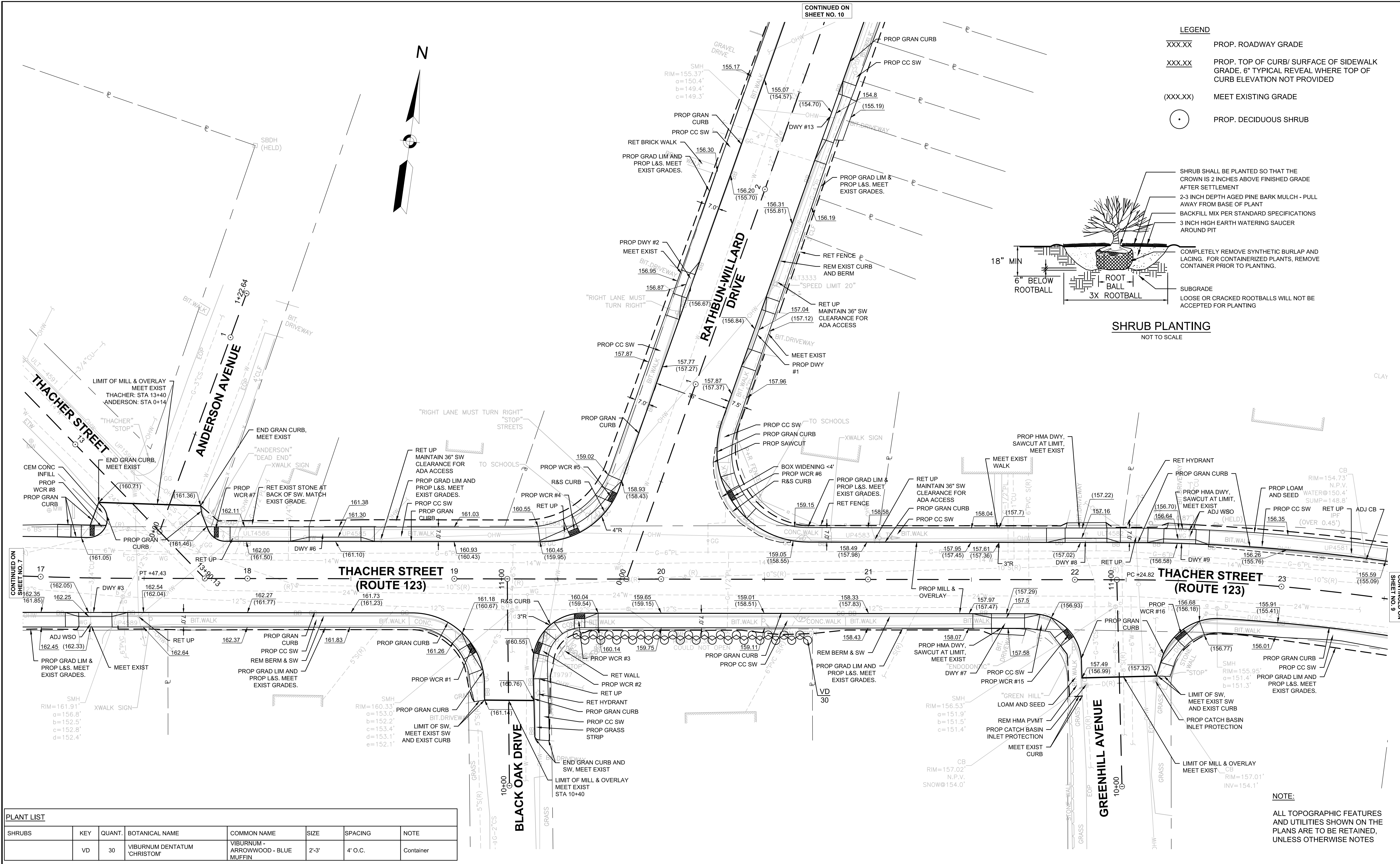
GENERAL PLAN

BETA JOB NO. 7157

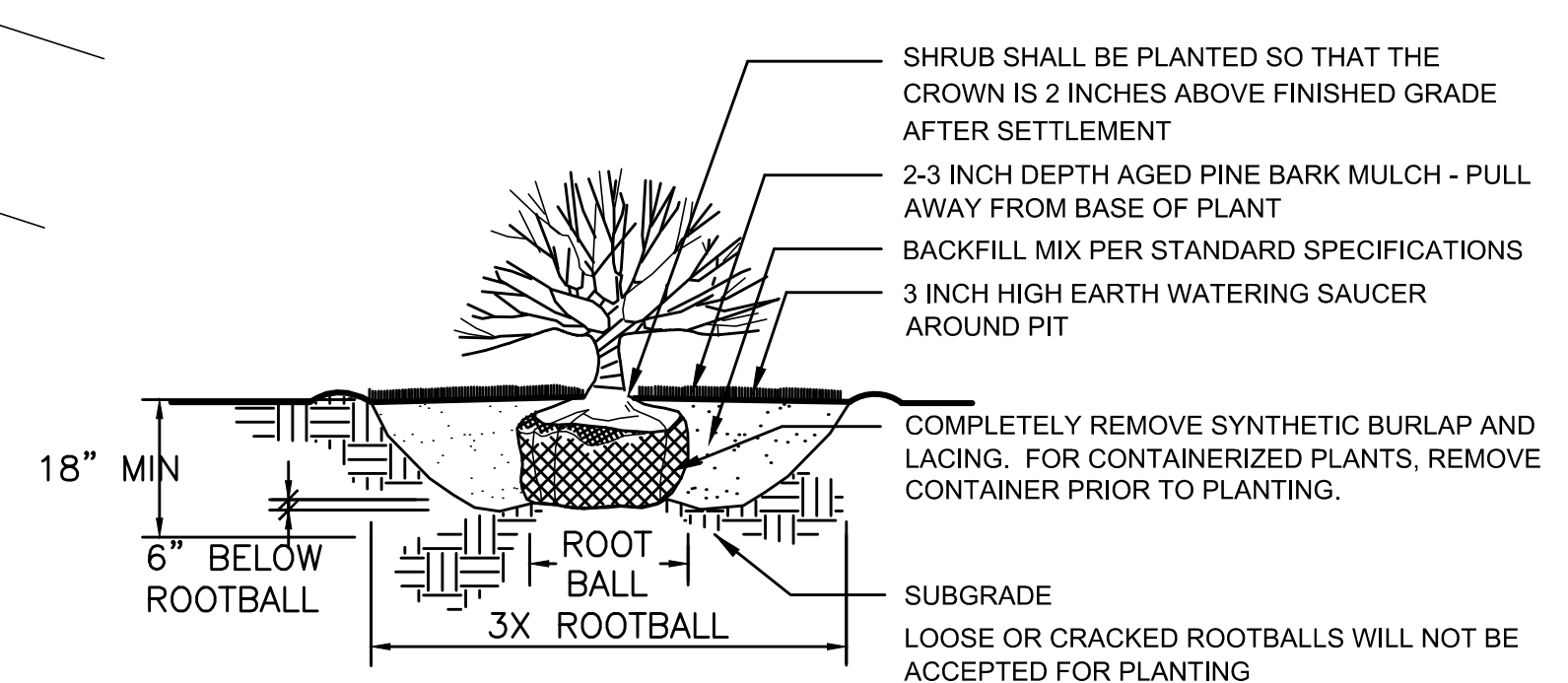
ISSUE DATE 11/10/2021

SHEET NO. **7 of 28**

12/28/2021 12:55 PM 01710051767 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\217517 GENERAL.DWG (MADOT-D.STB)





- LEGEND**
- XXX.XX PROP. ROADWAY GRADE
 - XXX.XX PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
 - (XXX.XX) MEET EXISTING GRADE
 - (○) PROP. DECIDUOUS SHRUB

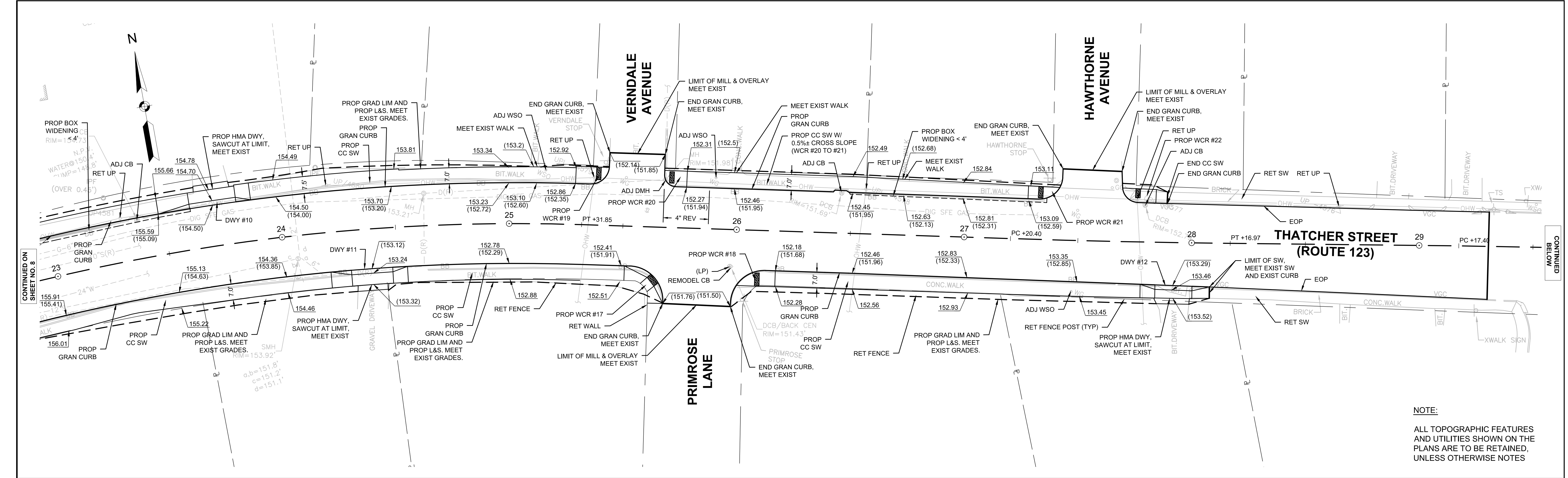


PLANT LIST

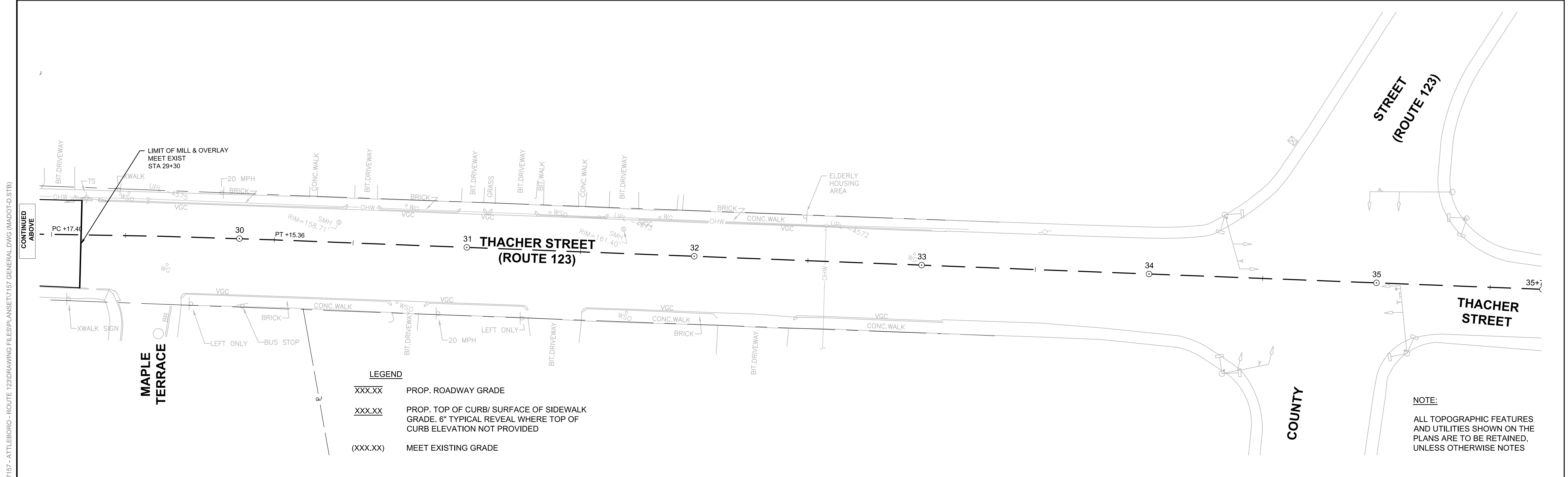
SHRUBS	KEY	QUANT.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTE
	VD	30	VIBURNUM DENTATUM 'CHRISTOM'	VIBURNUM - ARROWWOOD - BLUE MUFFIN	2'-3'	4' O.C.	Container

NOTE:
ALL TOPOGRAPHIC FEATURES AND UTILITIES SHOWN ON THE PLANS ARE TO BE RETAINED, UNLESS OTHERWISE NOTES

DRAWN BY: KLJMC DESIGNED BY: KLJMC CHECKED BY: DJ	REGISTERED PROFESSIONAL  www.BETA-inc.com	PREPARED BY SUBCONSULTANT	SCALE  SCALE IN FEET: 1"=20' <small>UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION</small>	TITLE Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts GENERAL PLAN	BETA JOB NO. 7157 ISSUE DATE 11/10/2021 SHEET NO. 8 of 28
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NOTE:
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LEGEND

XXX.XX	PROP. ROADWAY GRADE
XXX.XX	PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
(XXX.XX)	MEET EXISTING GRADE

NOTE:
ALL TOPOGRAPHIC FEATURES AND UTILITIES SHOWN ON THE PLANS ARE TO BE RETAINED, UNLESS OTHERWISE NOTES

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KLJMC

DESIGNED BY:
KLJMC

CHECKED BY:
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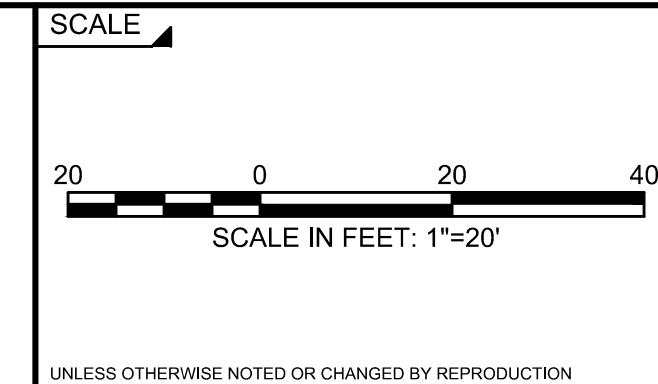
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Intersections Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts

GENERAL PLAN

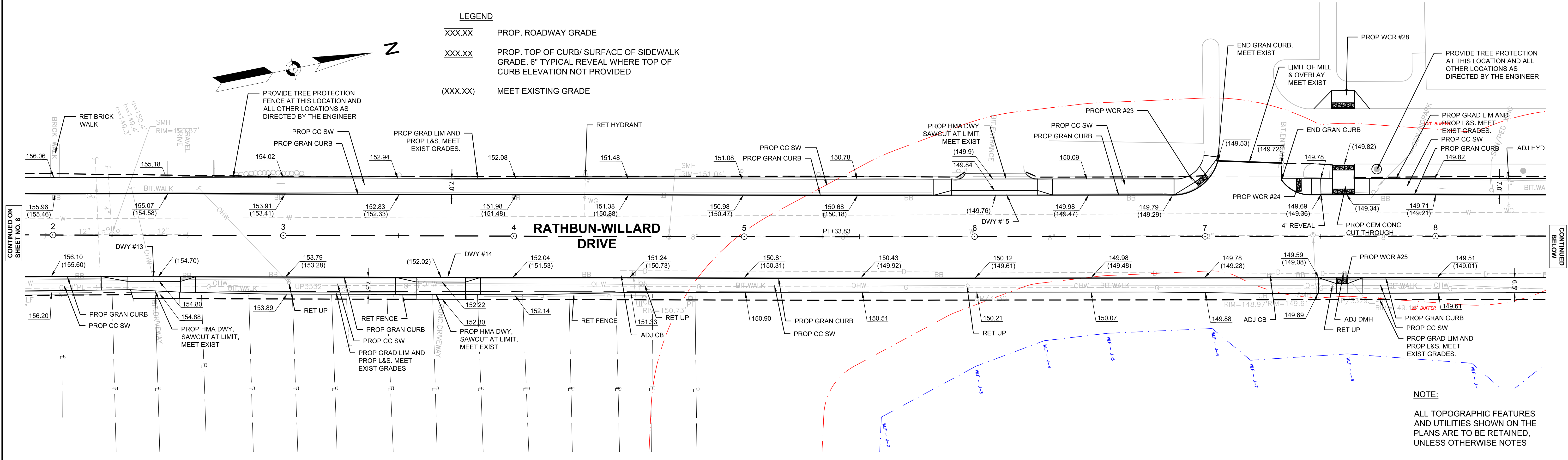
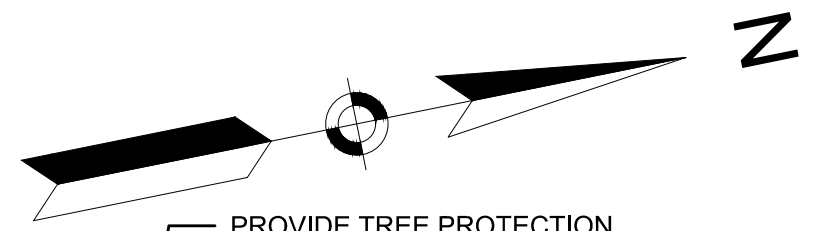
BETA JOB NO. 7157

ISSUE DATE 11/10/2021

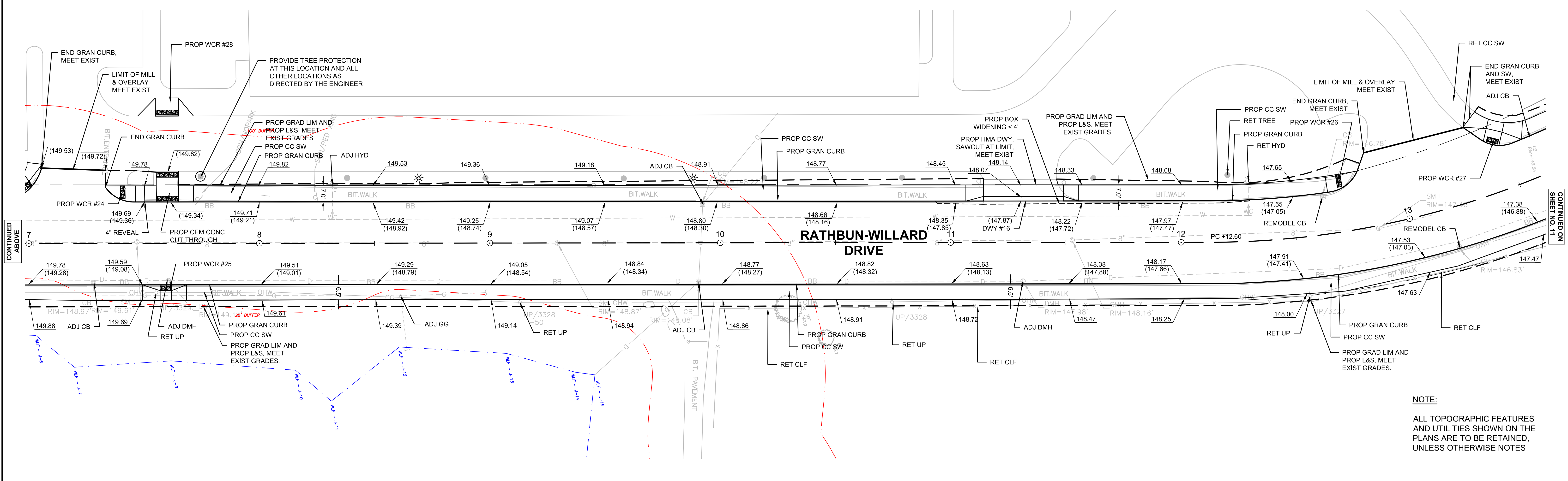
SHEET NO. **9 of 28**

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LEGEND
 XXX.XX PROP. ROADWAY GRADE
 XXX.XX PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
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NOTE:
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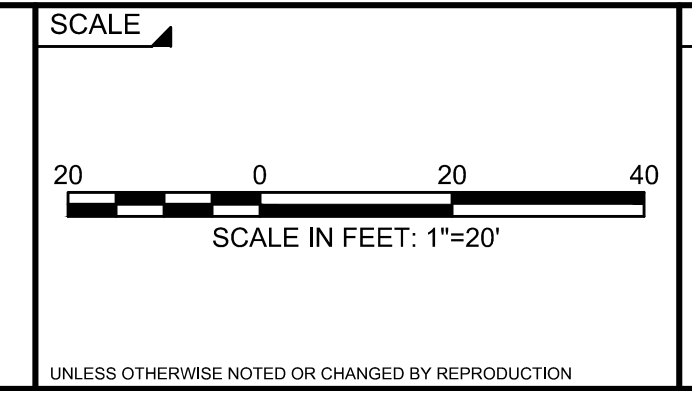
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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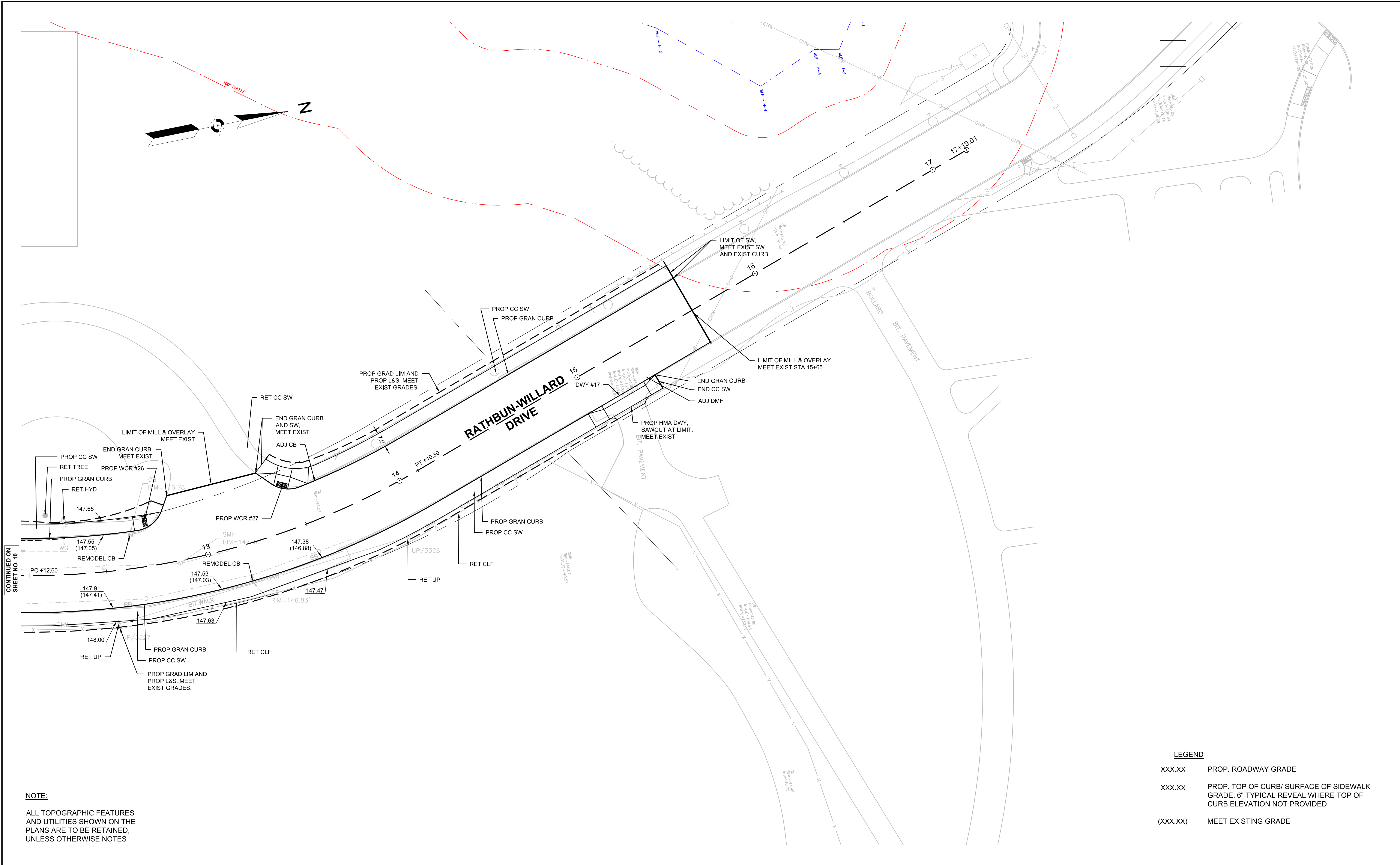
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Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
GENERAL PLAN

BETA JOB NO. 7157
 ISSUE DATE 11/10/2021
 SHEET NO. **10 of 28**

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NOTE:
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LEGEND

XXX.XX	PROP. ROADWAY GRADE
XXX.XX	PROP. TOP OF CURB/ SURFACE OF SIDEWALK GRADE. 6" TYPICAL REVEAL WHERE TOP OF CURB ELEVATION NOT PROVIDED
(XXX.XX)	MEET EXISTING GRADE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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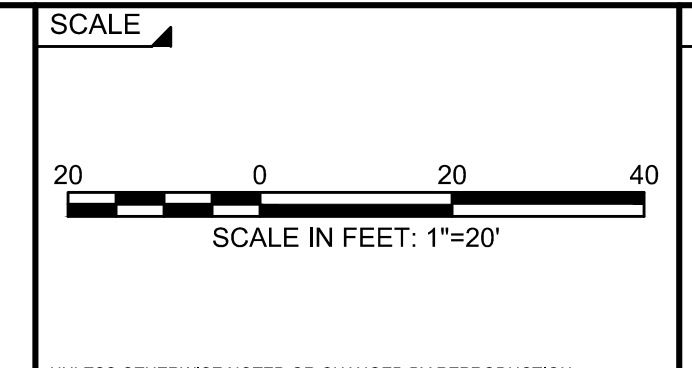
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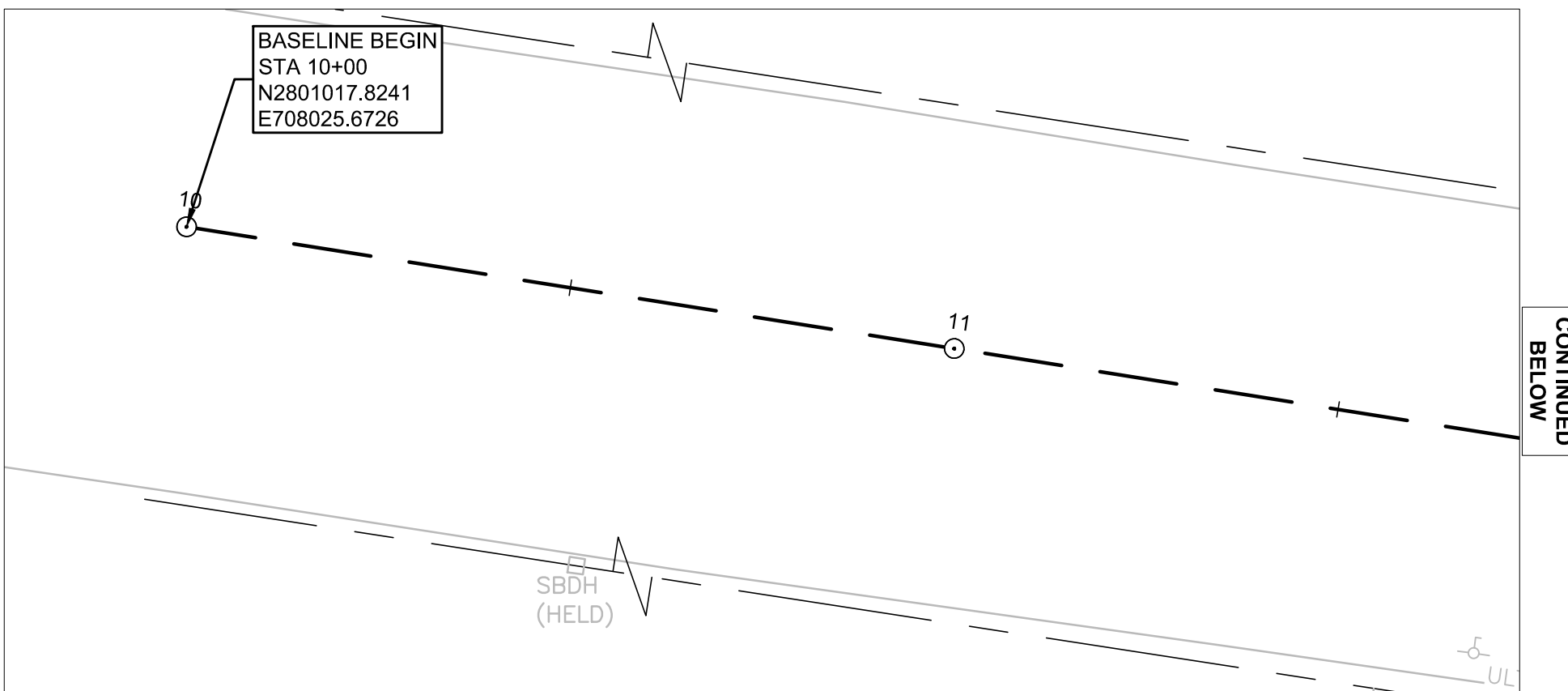
Intersections
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts

GENERAL PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **11 of 28**



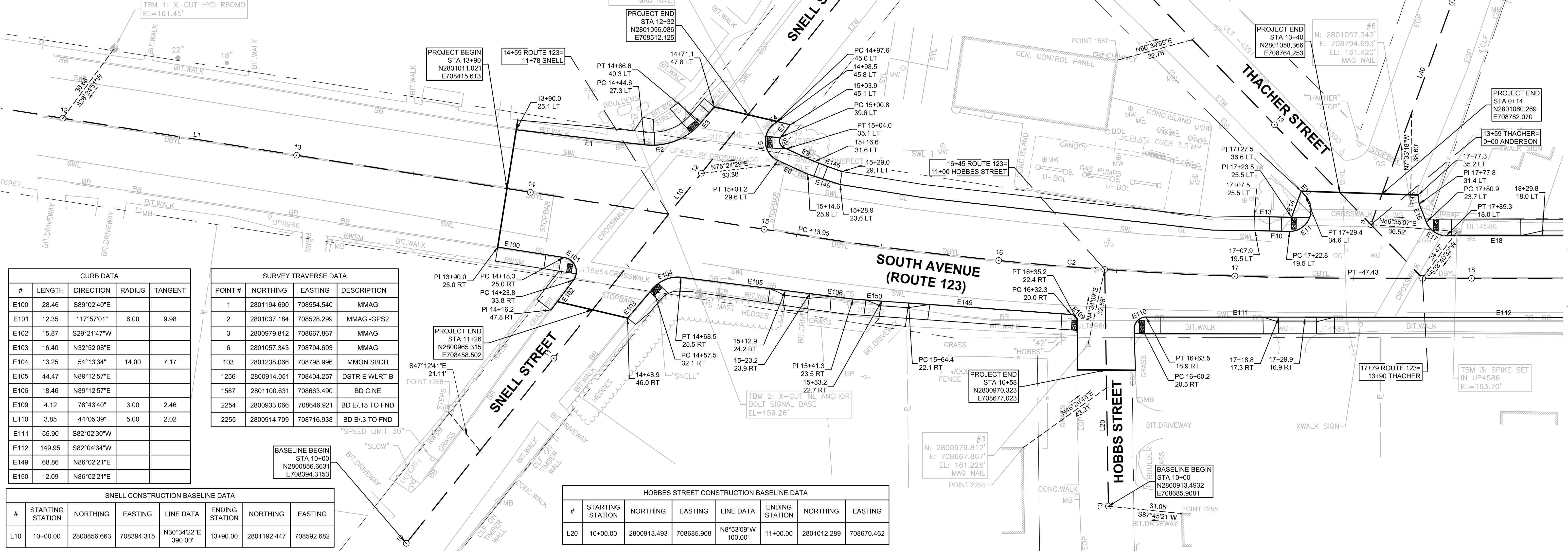
#	LENGTH	DIRECTION	RADIUS	TANGENT
E1	54.66	S88°40'08"W		
E2	26.60	S6°26'30"	27.00	14.49
E3	8.72	S32°13'38"W		
E4	1.31	S48°54'50"W		
E5	19.24	122°29'48"	9.00	16.40
E6	13.88	S73°34'58"E		
E7	6.74	N29°09'11"E		
E8	6.33	110°40'52"	3.28	4.74
E9	13.06	S73°34'58"E		
E10	14.86	0°18'04"	2827.50	7.43
E11	20.81	132°28'19"	9.00	20.44
E12	2.76	S49°26'33"E		
E13	23.17	0°42'40"	1867.34	11.59
E14	11.78	N12°26'48"E		
E15	3.84	S15°30'35"E		
E16	8.27	S29°37'58"E		
E17	10.73	68°17'09"	9.00	6.10
E18	40.57	N82°04'53"E		
E145	14.31	S80°11'02"E		
E146	12.37	S77°59'01"E		

#	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2801017.824	708025.673		S89°00'02"E 513.95'	15+13.95	2801008.859	708539.549
C2	15+13.95	2801008.859	708539.549	R=1500.00 Δ=8°55'05" L=233.47' T=116.97'		17+47.43	2801022.933	708772.362

BENCHMARK #	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM 1	2801046.597	708243.096	161.45	HYD MBMK-1.XCUT.LBOM
TBM 2	2800978.299	708502.340	159.26	MBMK-2.XCUT.TSIGBOLT
TBM 3	2801048.865	708815.618	163.70	MBMK-3.SPK.IN.UP
TBM 4	2801114.819	709241.565	159.58	MBMK 4

ANDERSON CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L40	0+00.00	2801046.707	708779.173	N12°03'31"E 122.64'	1+22.64	2801166.636	708804.793

THACHER CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L30	10+00.00	2801267.546	708496.584	S51°59'35"E 390.13'	13+90.13	2801027.320	708803.981



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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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KLJMC

DESIGNED BY:
KLJMC

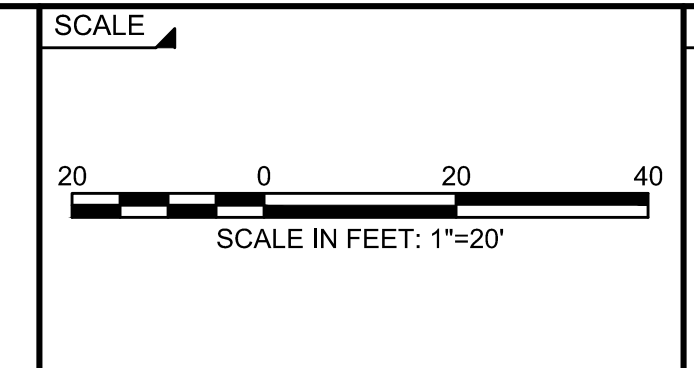
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TITLE

**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

TIE PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **12 of 28**

CONTINUED ON SHEET NO. 15

ANDERSON CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	EASTING
L40	0+00.00	2801046.707	708779.173	N12°03'31"E 122.64'	1+22.64	2801166.636

THACHER CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	EASTING
L30	10+00.00	2801267.546	708496.584	S51°59'35"E 390.13'	13+90.13	2801027.320

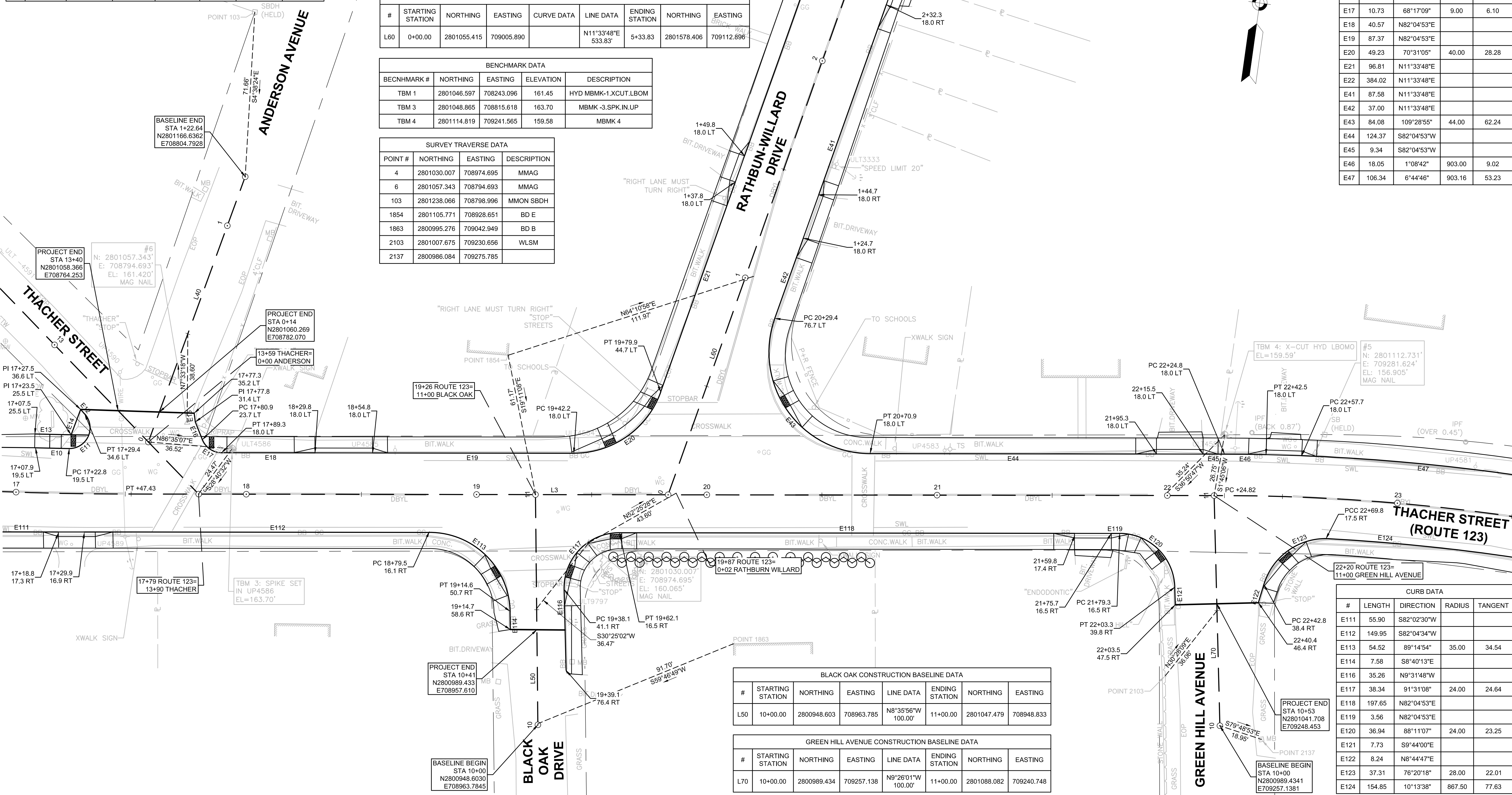
ROUTE 123 CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION
C2	15+13.95	2801008.859	708539.549	R 1500.00' Δ=8°55'05" L=233.47' T=116.97'		17+47.43
L3	17+47.43	2801022.933	708772.362		N82°04'53"E 477.39'	22+24.82
C4	22+24.82	2801088.701	709245.199	R 885.00' Δ=19°52'40" L=307.03' T=155.08'		25+31.85

RATHBURN WILLARD CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION
L60	0+00.00	2801055.415	709005.890		N11°33'48"E 533.83'	5+33.83

BENCHMARK DATA			
BENCHMARK #	NORTHING	EASTING	DESCRIPTION
TBM 1	2801046.597	708243.096	HYD MBMK-1.XCUT.LBOM
TBM 3	2801048.865	708815.618	MBMK -3.SPK.IN.UP
TBM 4	2801114.819	708241.565	MBMK 4

SURVEY TRAVERSE DATA			
POINT #	NORTHING	EASTING	DESCRIPTION
4	2801030.007	708974.695	MMAG
6	2801057.343	708794.693	MMAG
103	2801238.066	708798.996	MMON SBDH
1854	2801105.771	708928.651	BD E
1863	2800995.276	709042.949	BD B
2103	2801007.675	709230.656	WLSM
2137	2800986.084	709275.785	

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E10	14.86	0°18'04"	2827.50	7.43
E11	20.81	132°28'19"	9.00	20.44
E12	2.76	S49°26'33"E		
E13	23.17	0°42'40"	1867.34	11.59
E14	11.78	N12°26'48"E		
E15	3.84	S15°30'35"E		
E16	8.27	S29°37'58"E		
E17	10.73	68°17'09"	9.00	6.10
E18	40.57	N82°04'53"E		
E19	87.37	N82°04'53"E		
E20	49.23	70°31'05"	40.00	28.28
E21	96.81	N11°33'48"E		
E22	384.02	N11°33'48"E		
E41	87.58	N11°33'48"E		
E42	37.00	N11°33'48"E		
E43	84.08	109°28'55"	44.00	62.24
E44	124.37	S82°04'53"W		
E45	9.34	S82°04'53"W		
E46	18.05	1°08'42"	903.00	9.02
E47	106.34	6°44'46"	903.16	53.23



BLACK OAK CONSTRUCTION BASELINE DATA					
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION
L50	10+00.00	2800948.603	708963.785	N8°35'56"W 100.00'	11+00.00

GREEN HILL AVENUE CONSTRUCTION BASELINE DATA					
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION
L70	10+00.00	2800989.434	709257.138	N9°26'01"W 100.00'	11+00.00

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E111	55.90	S82°02'30"W	38.4 RT	
E112	149.95	S82°04'34"W		
E113	54.52	89°14'54"	35.00	34.54
E114	7.58	S8°40'13"E		
E116	35.26	N9°31'48"W		
E117	38.34	91°31'08"	24.00	24.64
E118	197.65	N82°04'53"E		
E119	3.56	N82°04'53"E		
E120	36.94	88°11'07"	24.00	23.25
E121	7.73	S8°44'00"E		
E122	8.24	N8°44'47"E		
E123	37.31	76°20'18"	28.00	22.01
E124	154.85	10°13'38"	867.50	77.63

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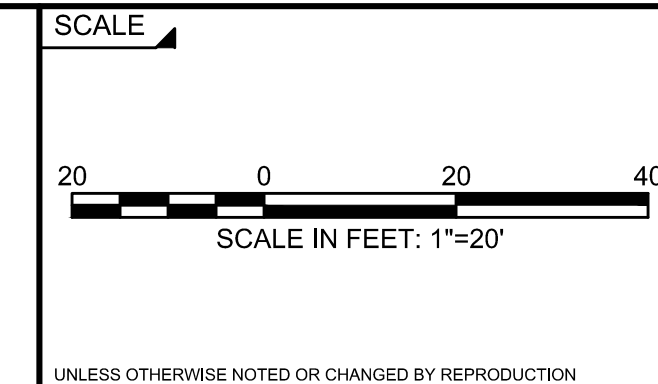
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DESIGNED BY:	KLJMC
CHECKED BY:	DJ

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: KLJMC
 REGISTERED PROFESSIONAL
 DESIGNED BY: KLJMC
 CHECKED BY: DJ

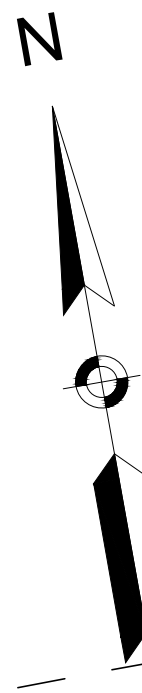


PREPARED BY: _____
 SUBCONSULTANT



SCALE: 1"=20'
 TITLE: Intersection Improvements
 Route 123 At Rathbun Willard Drive
 And Black Oak Drive
 Attleboro, Massachusetts
 TIE PLAN

BETA JOB NO. 7157
 ISSUE DATE: 11/10/2021
 SHEET NO. 13 of 28



CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E47	106.34	6°44'46"	903.16	53.23
E48	152.89	9°42'00"	903.08	76.63
E49	3.37	S78°02'27"E		
E50	12.45	89°10'54"	8.00	7.89
E51	6.11	N12°46'39"E		

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E52	9.04	S11°52'20"W		
E53	7.85	89°54'47"	5.00	4.99
E54	69.35	S78°02'27"E		
E55	1.04	S52°17'24"W		
E56	5.15	N76°58'40"W		
E57	1.30	N45°55'08"W		
E58	83.54	N77°52'57"W		

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E59	15.61	89°27'55"	10.00	9.91
E60	3.73	S12°39'08"W		
E61	6.87	S8°19'49"W		
E62	10.53	86°12'46"	7.00	6.55
E63	12.87	S78°08'07"E		

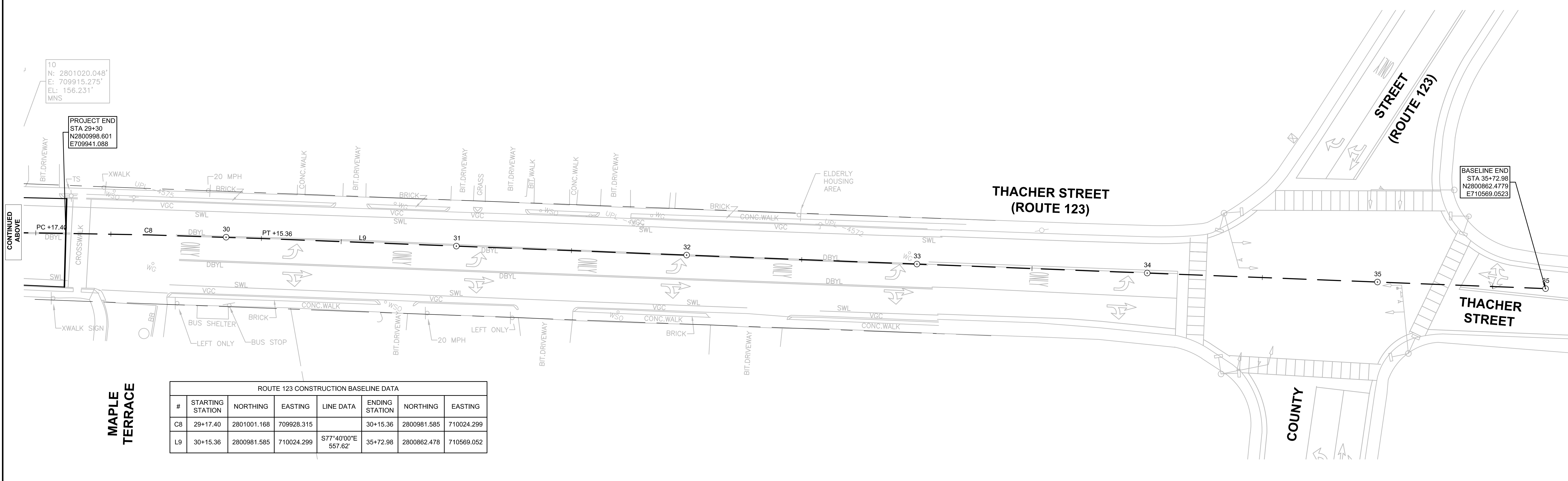
CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E124	154.85	10°13'38"	867.50	77.63
E125	82.47	5°24'04"	874.84	41.27
E126	21.73	N78°02'27"W		
E127	24.12	92°08'16"	15.00	15.57
E128	1.44	N12°23'54"E		
E129	23.45	89°33'39"	15.00	14.89
E130	36.43	S78°02'27"E		
E131	134.74	S77°42'52"E		
E132	7.67	S77°51'23"E		

BENCHMARK DATA			
BENCHMARK #	NORTHING	EASTING	ELEVATION
TBM 6	2801028.109	709879.895	156.71

ROUTE 123 CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING
C4	22+24.82	2801088.701	709245.199		25+31.85	2801077.931
L5	25+31.85	2801077.931	709550.506	S78°02'27"E 188.55'	27+20.40	2801038.861
C6	27+20.40	2801038.861	709734.962		28+16.97	2801019.866
L7	28+16.97	2801019.866	709829.642	S79°16'13"E 100.43'	29+17.40	2801001.168

CONTINUED ON SHEET NO. 13

CONTINUED BELOW



ROUTE 123 CONSTRUCTION BASELINE DATA						
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING
C8	29+17.40	2801001.168	709928.315		30+15.36	2800981.585
L9	30+15.36	2800981.585	710024.299	S77°40'00"E 557.62'	35+72.98	2800862.478

12/28/2021 12:57 PM C:\710031767-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANS\SET157 BASE LINE.DWG (MADDT-D.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KLJMC
DESIGNED BY:
KLJMC
CHECKED BY:
DJ

REGISTERED PROFESSIONAL PREPARED BY

SUBCONSULTANT

SCALE

SCALE IN FEET: 1"=20'

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

TITLE

**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

TIE PLAN

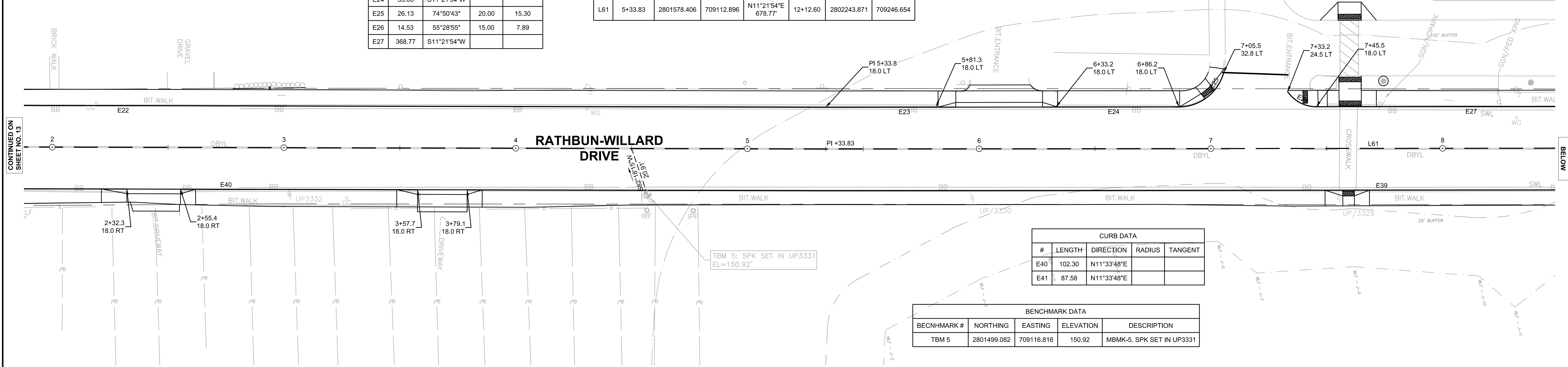
BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **14 of 28**

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E22	384.02	N11°33'48"E		
E23	47.51	S11°21'54"W		
E24	53.06	S11°21'54"W		
E25	26.13	74°50'43"	20.00	15.30
E26	14.53	55°28'55"	15.00	7.89
E27	368.77	S11°21'54"W		

RATHBURN WILLARD CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L60	0+00.00	2801055.415	709005.890	N11°33'48"E 533.83'	5+33.83	2801578.406	709112.896
L61	5+33.83	2801578.406	709112.896	N11°21'54"E 678.77'	12+12.60	2802243.871	709246.654

CONTINUED ON SHEET NO. 13

CONTINUED BELOW



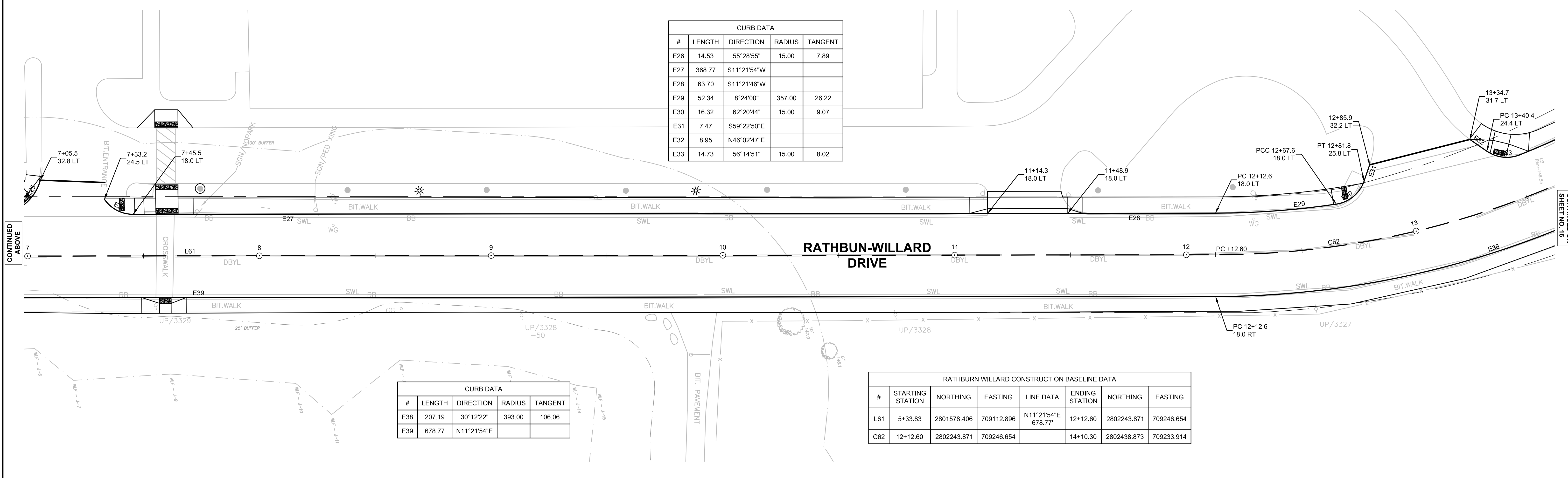
CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E40	102.30	N11°33'48"E		
E41	87.58	N11°33'48"E		

BENCHMARK DATA				
BENCHMARK #	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM 5	2801499.082	709116.816	150.92	MBMK-5. SPK SET IN UP3331

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E26	14.53	55°28'55"	15.00	7.89
E27	368.77	S11°21'54"W		
E28	63.70	S11°21'46"W		
E29	52.34	8°24'00"	357.00	26.22
E30	16.32	62°20'44"	15.00	9.07
E31	7.47	S59°22'50"E		
E32	8.95	N46°02'47"E		
E33	14.73	56°14'51"	15.00	8.02

CONTINUED ABOVE

CONTINUED ON SHEET NO. 16



CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E38	207.19	30°12'22"	393.00	106.06
E39	678.77	N11°21'54"E		

RATHBURN WILLARD CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L61	5+33.83	2801578.406	709112.896	N11°21'54"E 678.77'	12+12.60	2802243.871	709246.654
C62	12+12.60	2802243.871	709246.654		14+10.30	2802438.873	709233.914

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
KLJMC

DESIGNED BY:
KLJMC

CHECKED BY:
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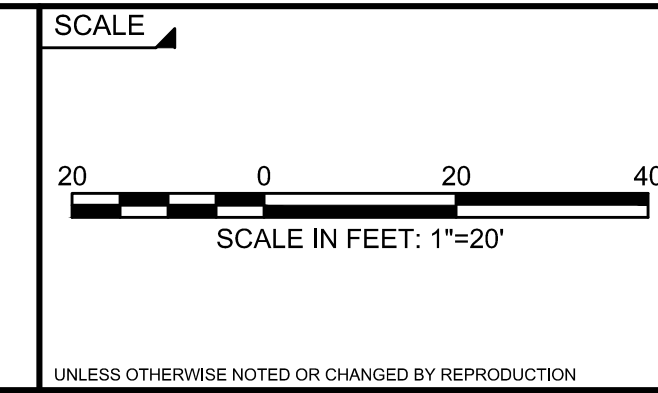
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TITLE

**Intersection Improvements
Route 123 At Rathburn Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

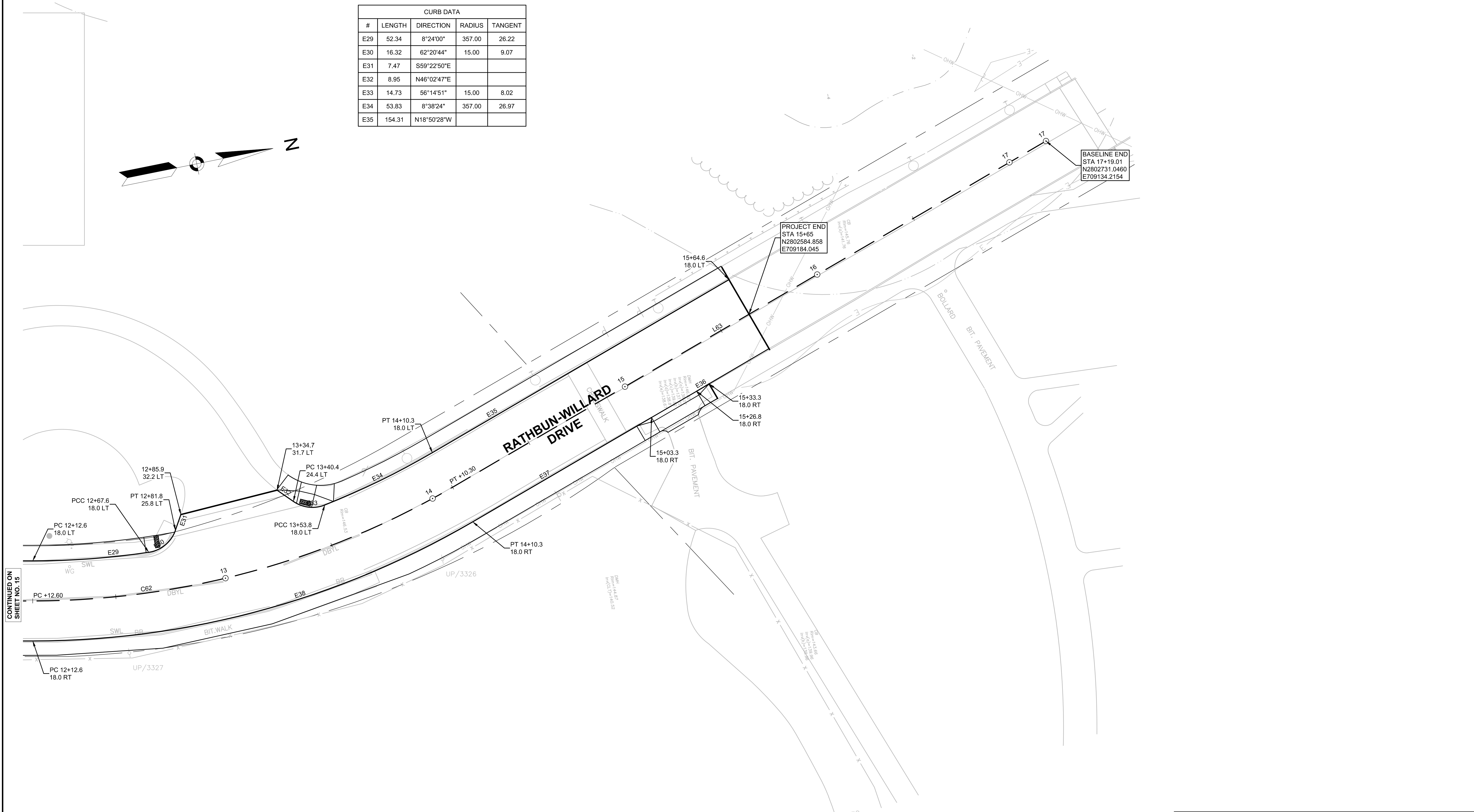
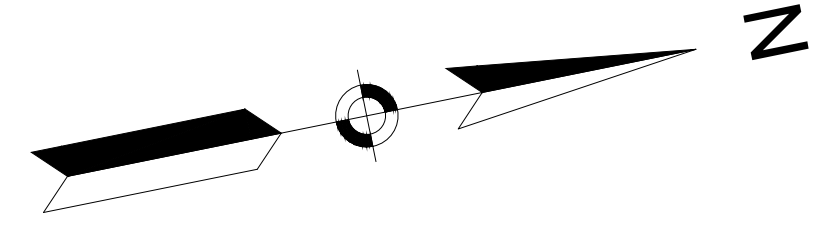
TIE PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **15 of 28**

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E29	52.34	8°24'00"	357.00	26.22
E30	16.32	62°20'44"	15.00	9.07
E31	7.47	S59°22'50"E		
E32	8.95	N46°02'47"E		
E33	14.73	56°14'51"	15.00	8.02
E34	53.83	8°38'24"	357.00	26.97
E35	154.31	N18°50'28"W		



CONTINUED ON SHEET NO. 15

CURB DATA				
#	LENGTH	DIRECTION	RADIUS	TANGENT
E36	6.53	S18°55'23"E		
E37	93.01	N18°50'28"W		
E38	207.19	30°12'22"	393.00	106.06

RATHBURN WILLARD CONSTRUCTION BASELINE DATA							
#	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
C62	12+12.60	2802243.871	709246.654		14+10.30	2802438.873	709233.914
L63	14+10.30	2802438.873	709233.914	N18°50'28"W 308.71'	17+19.01	2802731.046	709134.215

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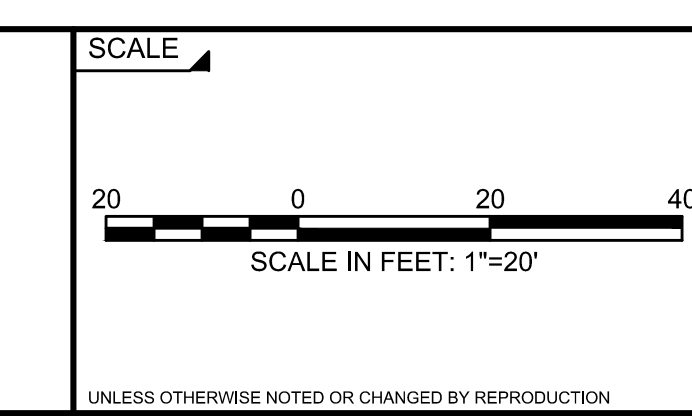
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TITLE

**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

TIE PLAN

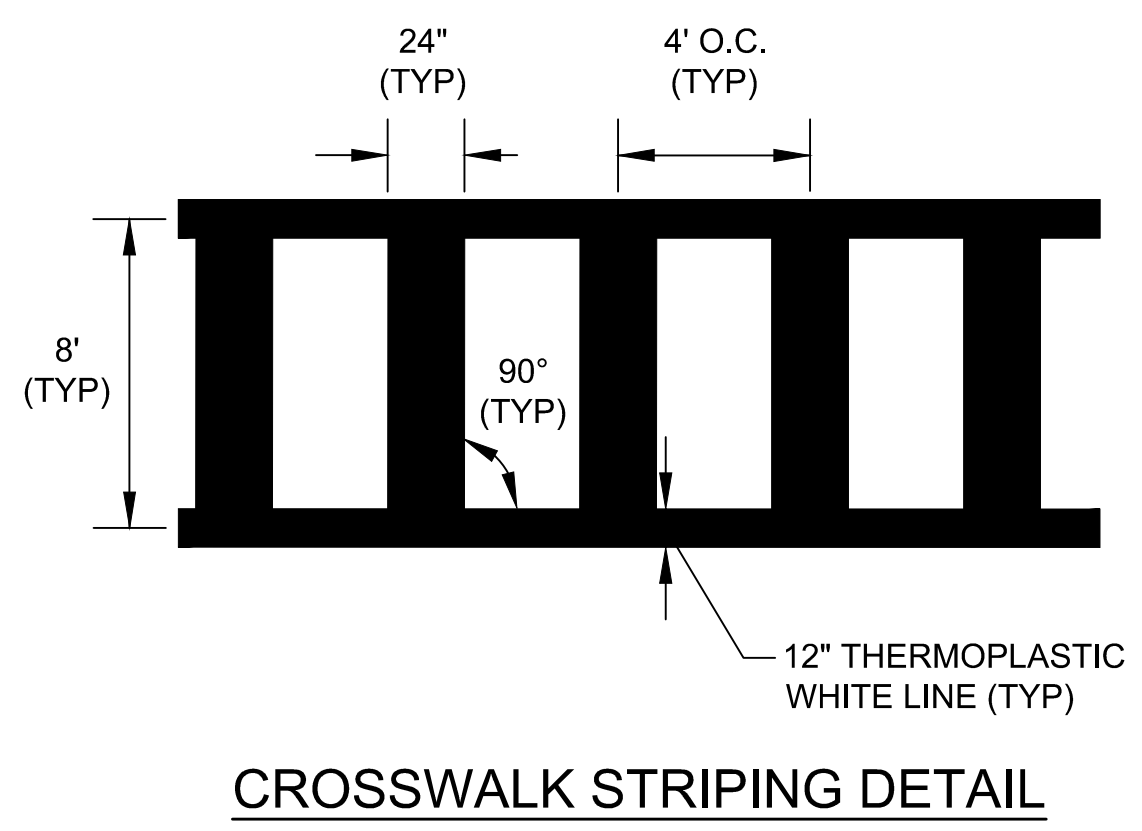
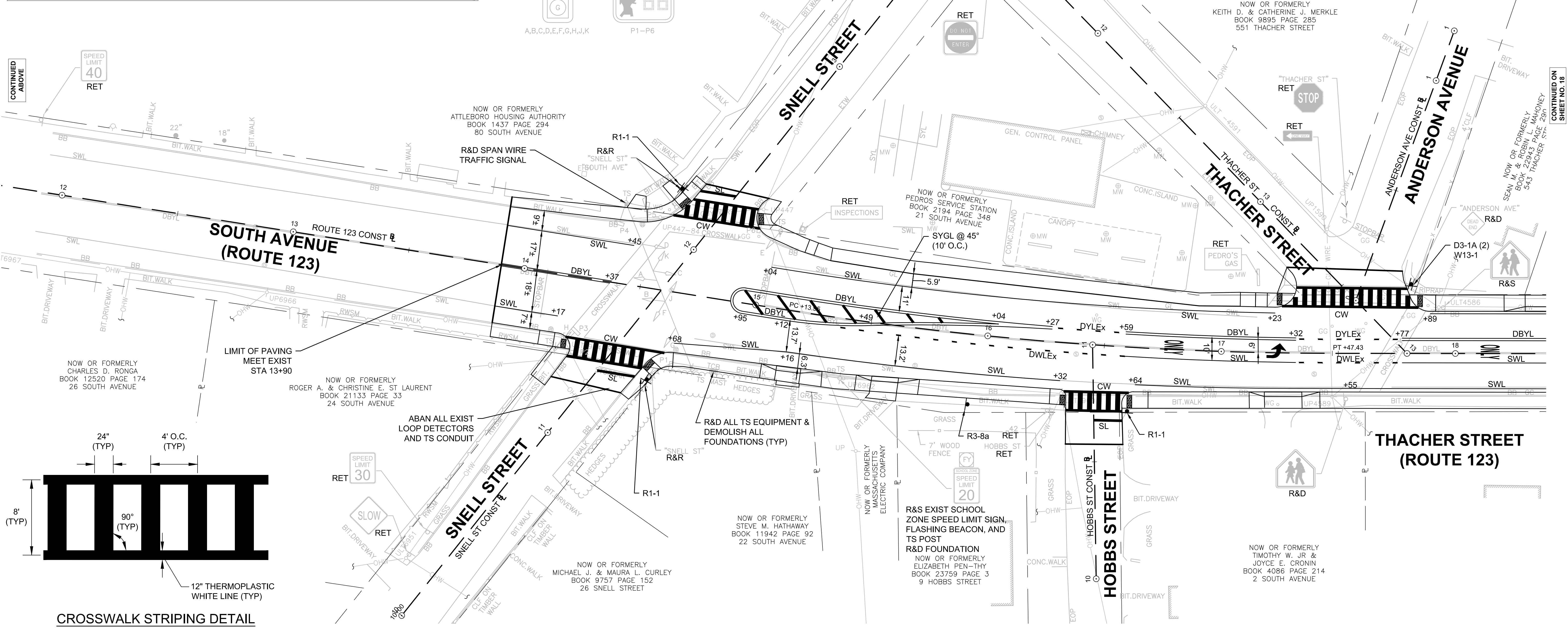
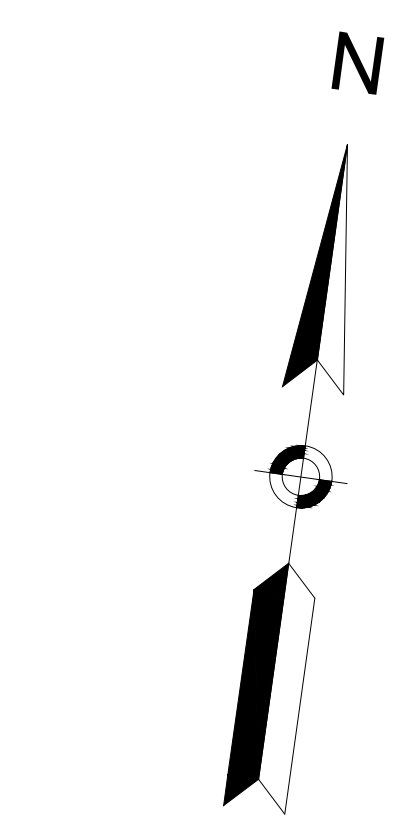
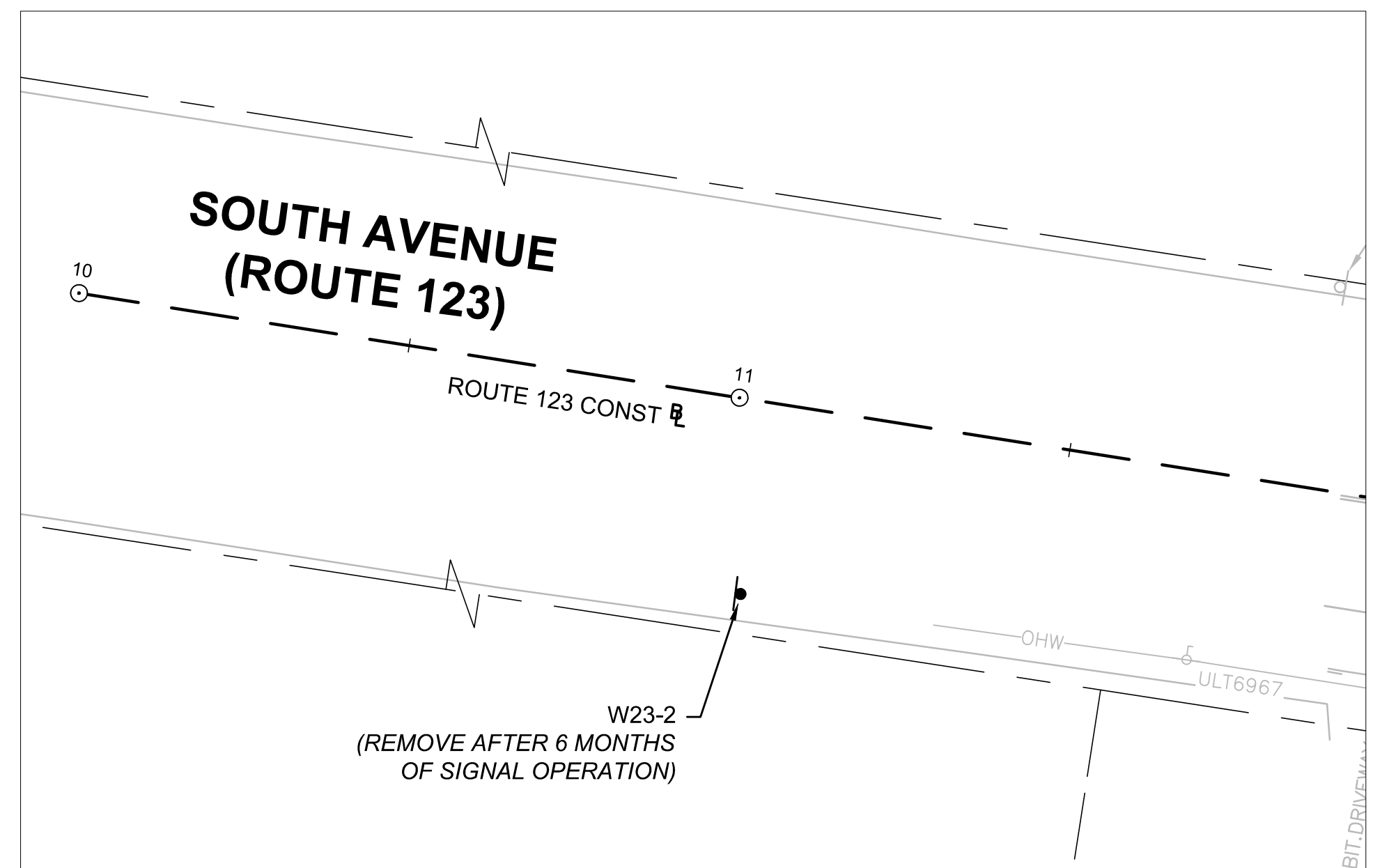
BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **16 of 28**

PAVEMENT MARKINGS & SIGNS NOTES

1. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&D UNLESS OTHERWISE NOTED ON PLANS.
2. ALL R&S TRAFFIC SIGNS AND SIGNAL EQUIPMENT SHALL BE REMOVED AND TRANSPORTED TO A LOCATION DEFINED BY THE CITY.
3. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
4. CONTRACTOR TO COORDINATE FINAL PAVEMENT MARKING LAYOUT OF RATHBUN-WILLARD DRIVE WITH THE CITY IN ACCORDANCE WITH THE HIGH SCHOOL PROJECT.
5. POSTS SHALL BE P-5 TYPE (TELESCOPIC POST).
6. UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC. ALL R7 SIGNS SHALL BE MOUNTED AT AN ANGLE OF 45° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
7. STREET NAME SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
8. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
9. SIGNS TO BE MOUNTED NEAR THE CURB LINE IN AREAS WITHOUT SIDEWALK SHALL BE SET BACK 2' FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
10. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.
11. RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLIES SHALL BE PROCURED AND INSTALLED IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.



CROSSWALK STRIPING DETAIL
NOT TO SCALE

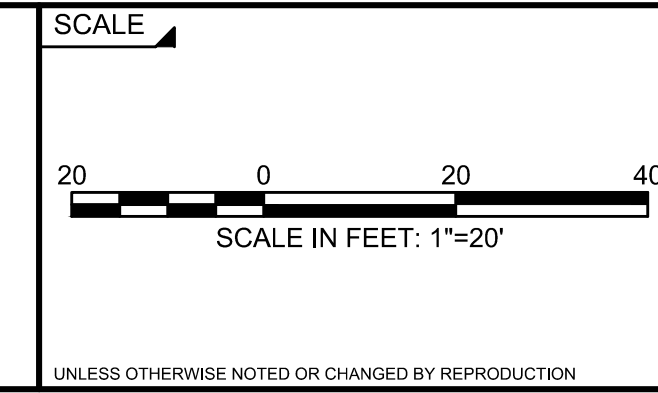
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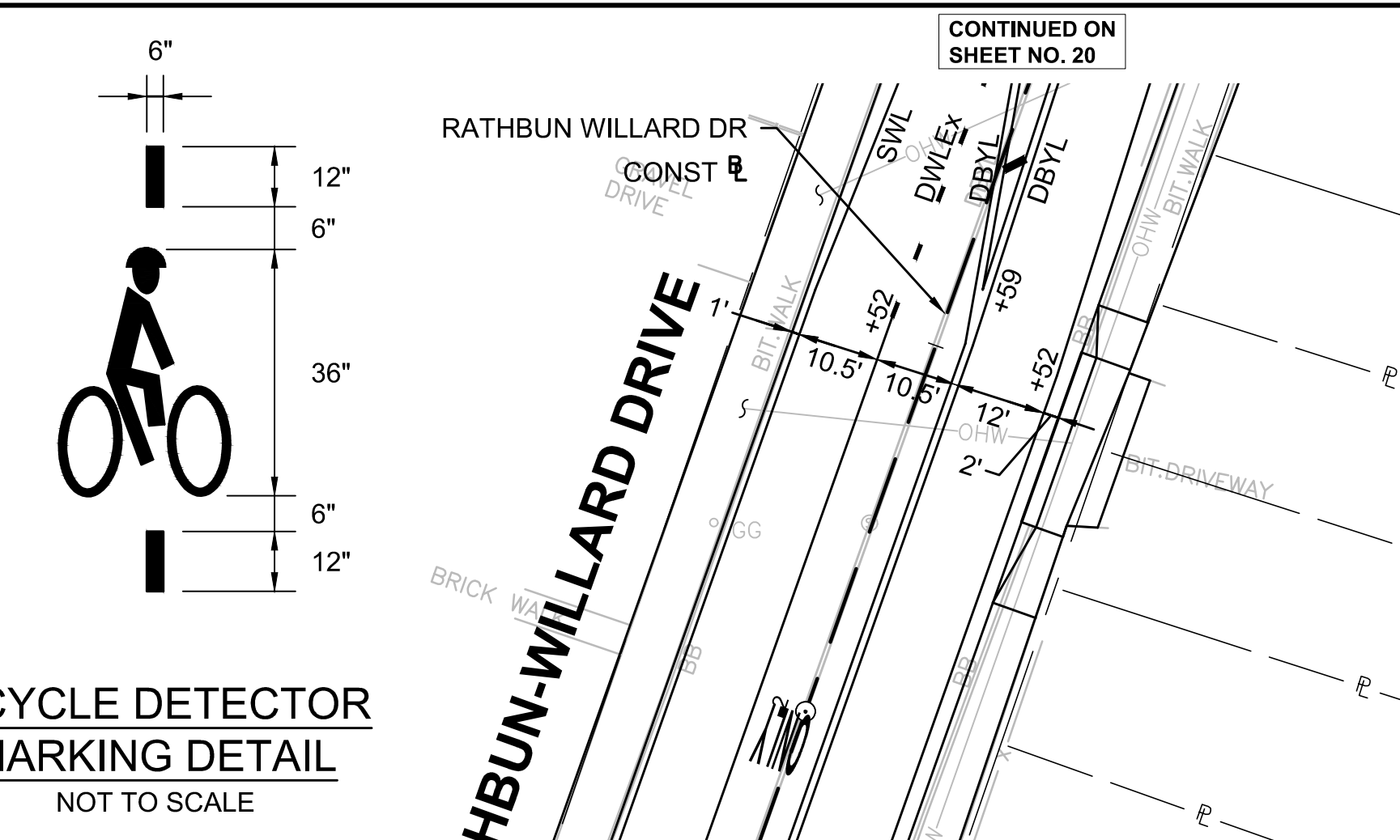
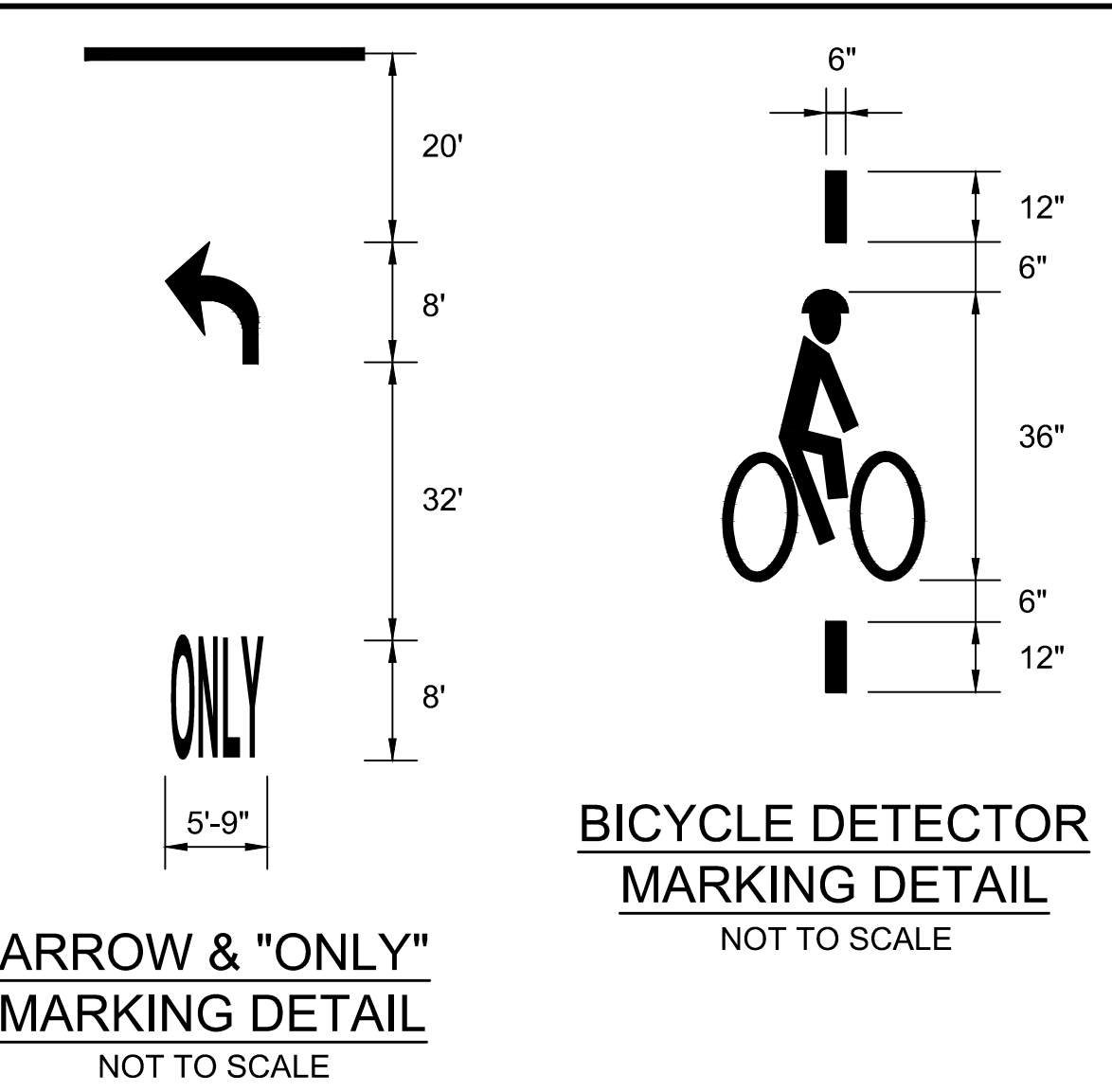
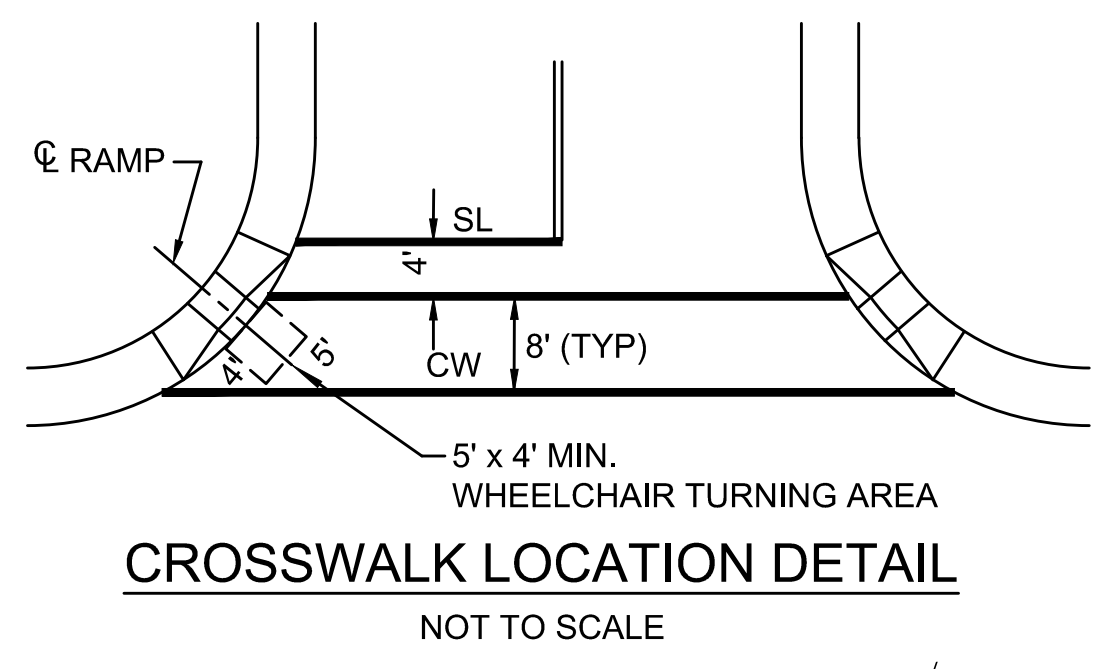
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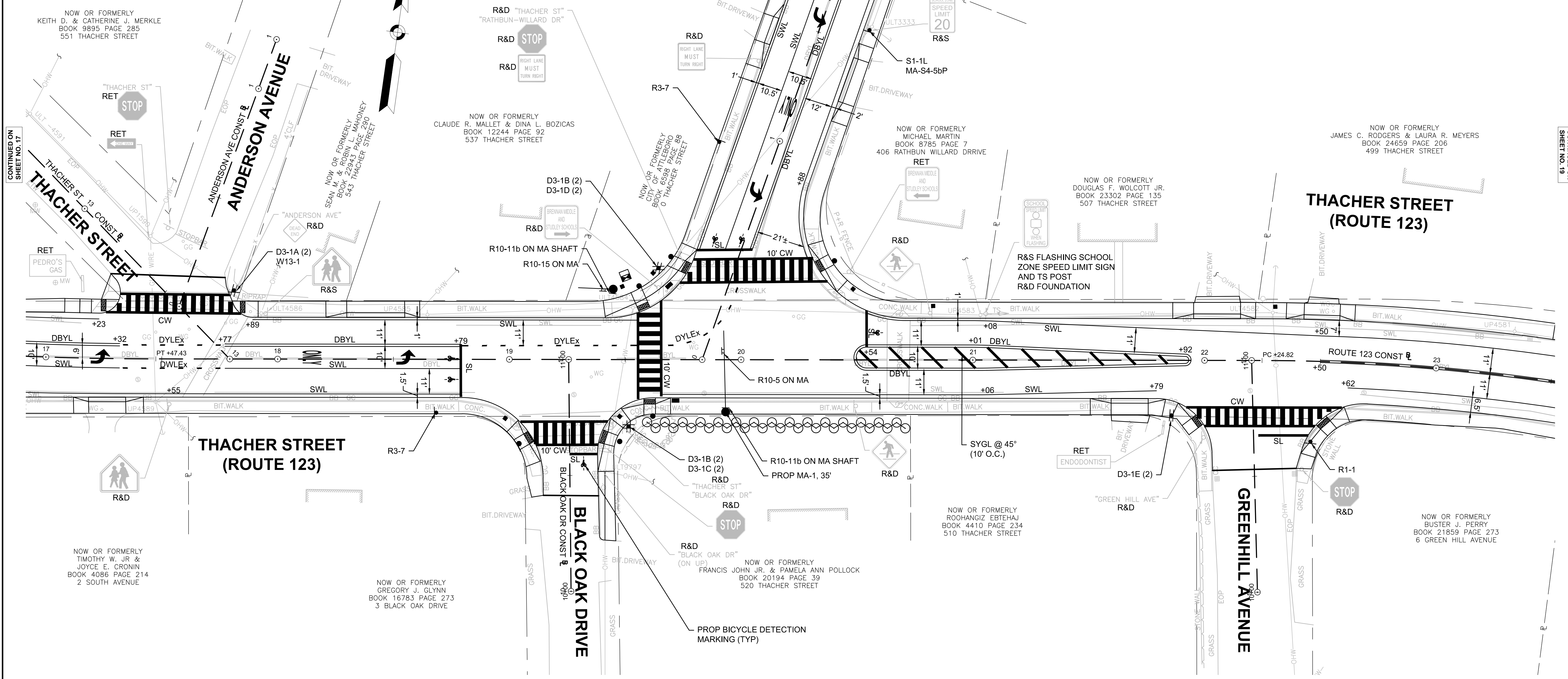


TITLE
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**
PAVEMENT MARKING AND SIGN PLAN

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **17 of 28**



CONTINUED ON SHEET NO. 20



CONTINUED ON SHEET NO. 17

CONTINUED ON SHEET NO. 19

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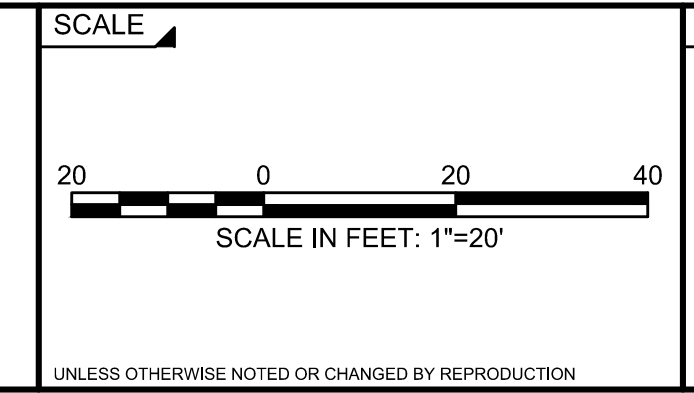
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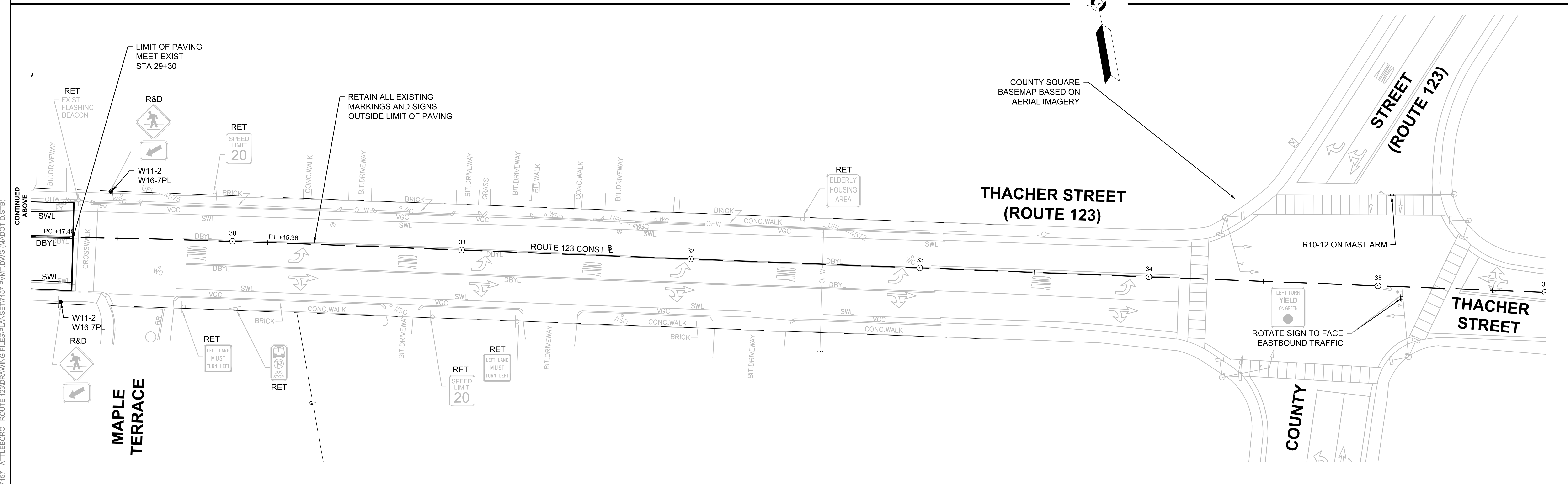
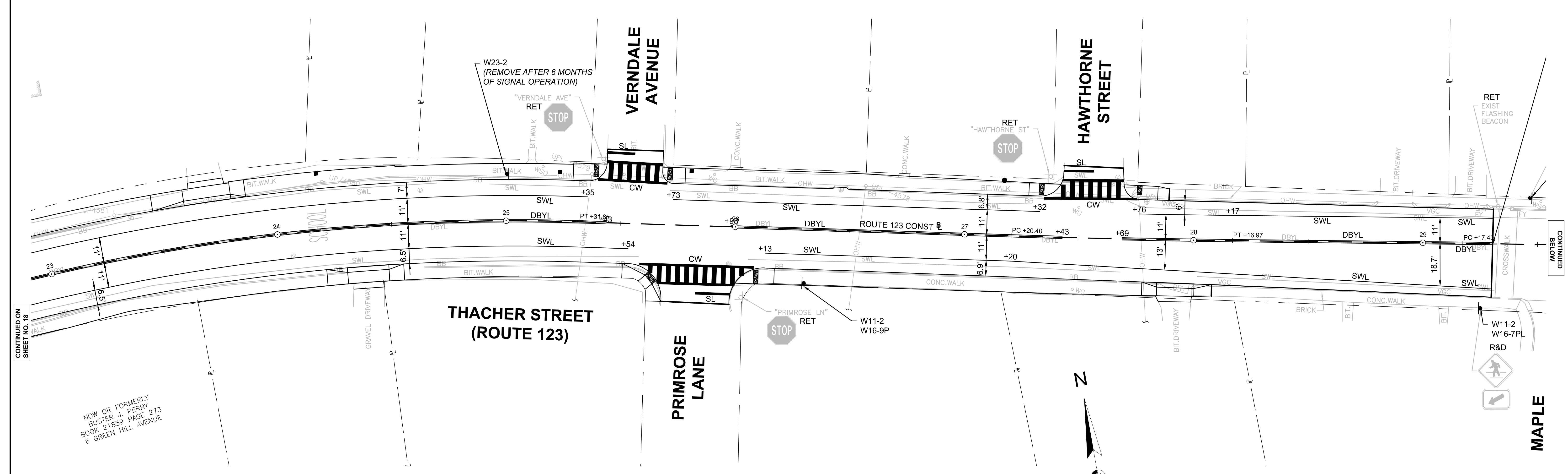
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

PAVEMENT MARKING AND SIGN PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **18 of 28**



NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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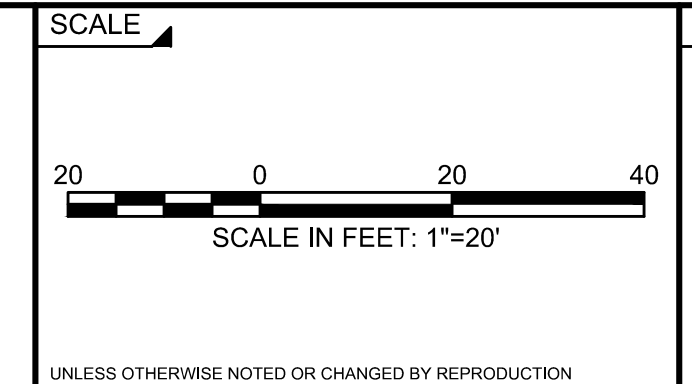
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TITLE

**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

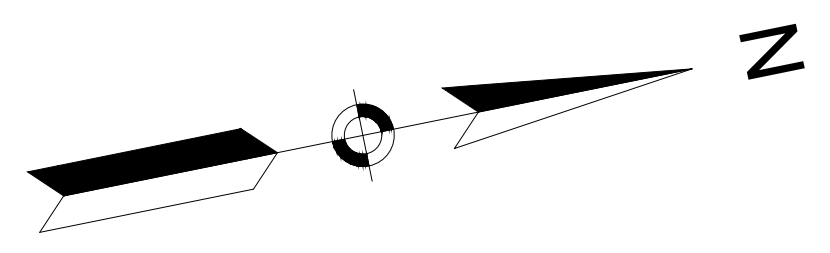
PAVEMENT MARKING AND SIGN PLAN

BETA JOB NO. 7157

ISSUE DATE 11/10/2021

SHEET NO. **19 of 28**

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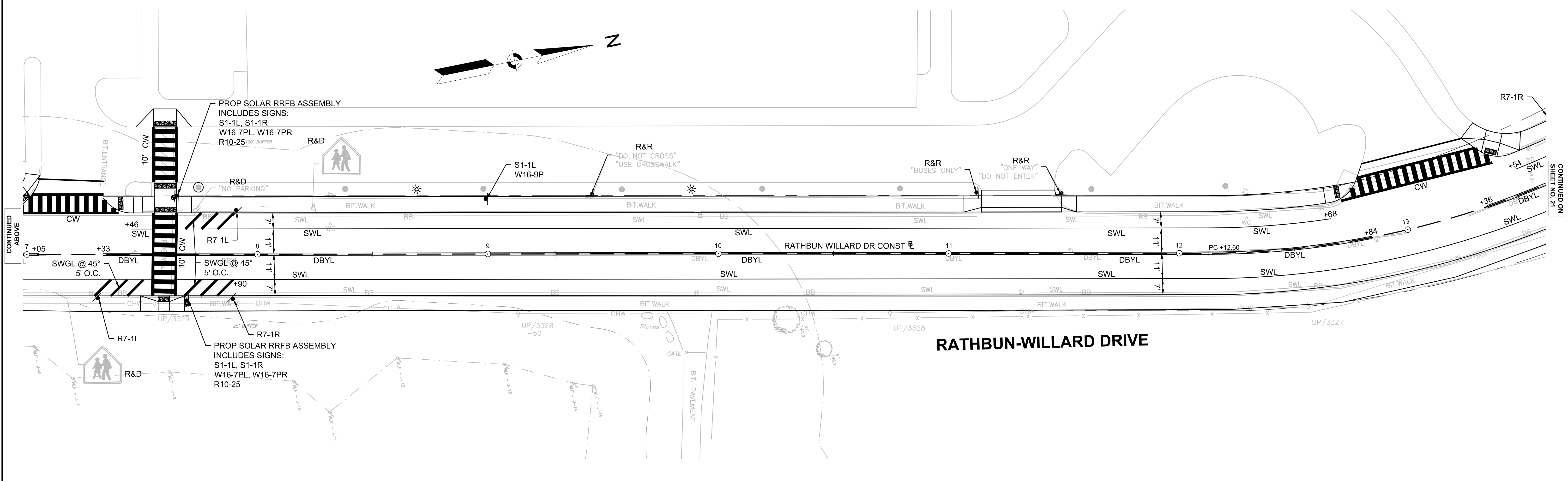
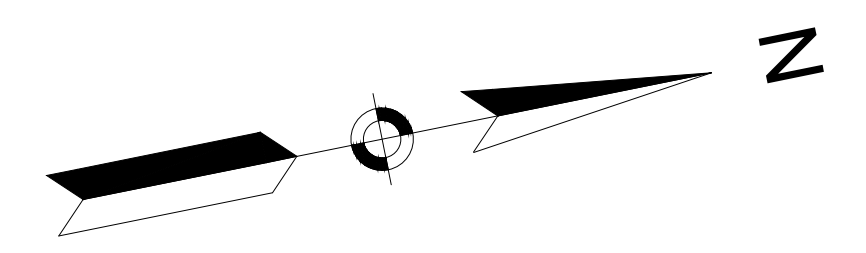
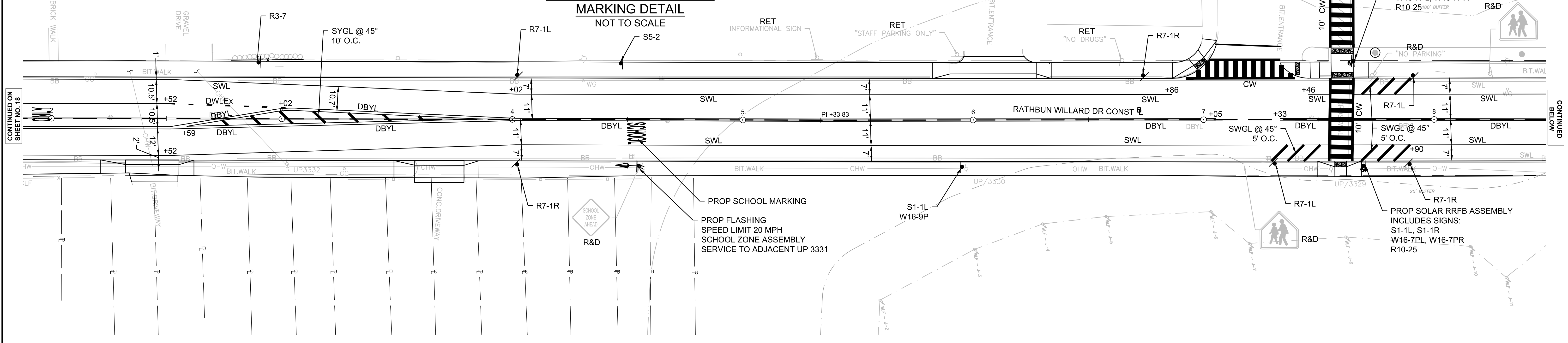


VARIES, WIDTH OF TRAVEL LANE

SCHOOL
6'-0"

SCHOOL ZONE PAVEMENT MARKING DETAIL
NOT TO SCALE

RATHBUN-WILLARD DRIVE



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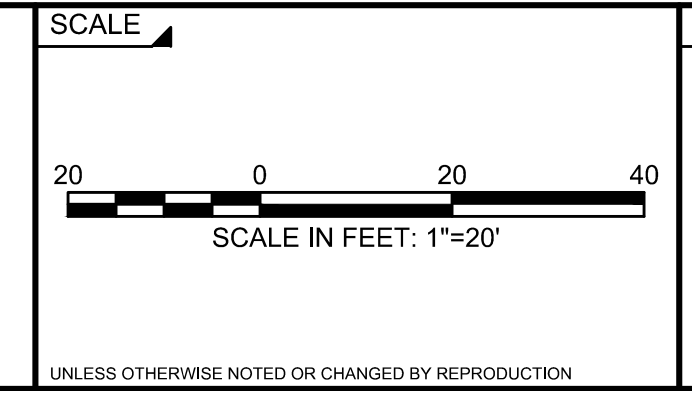
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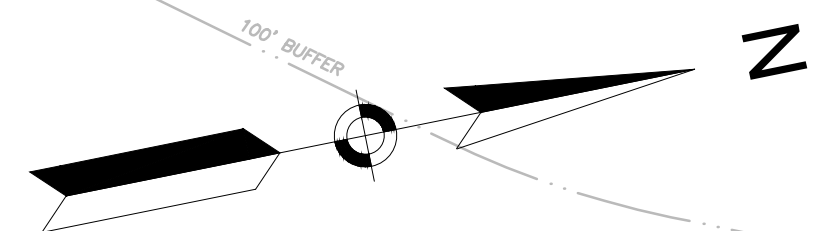
TITLE

Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
PAVEMENT MARKING AND SIGN PLAN

BETA JOB NO. 7157

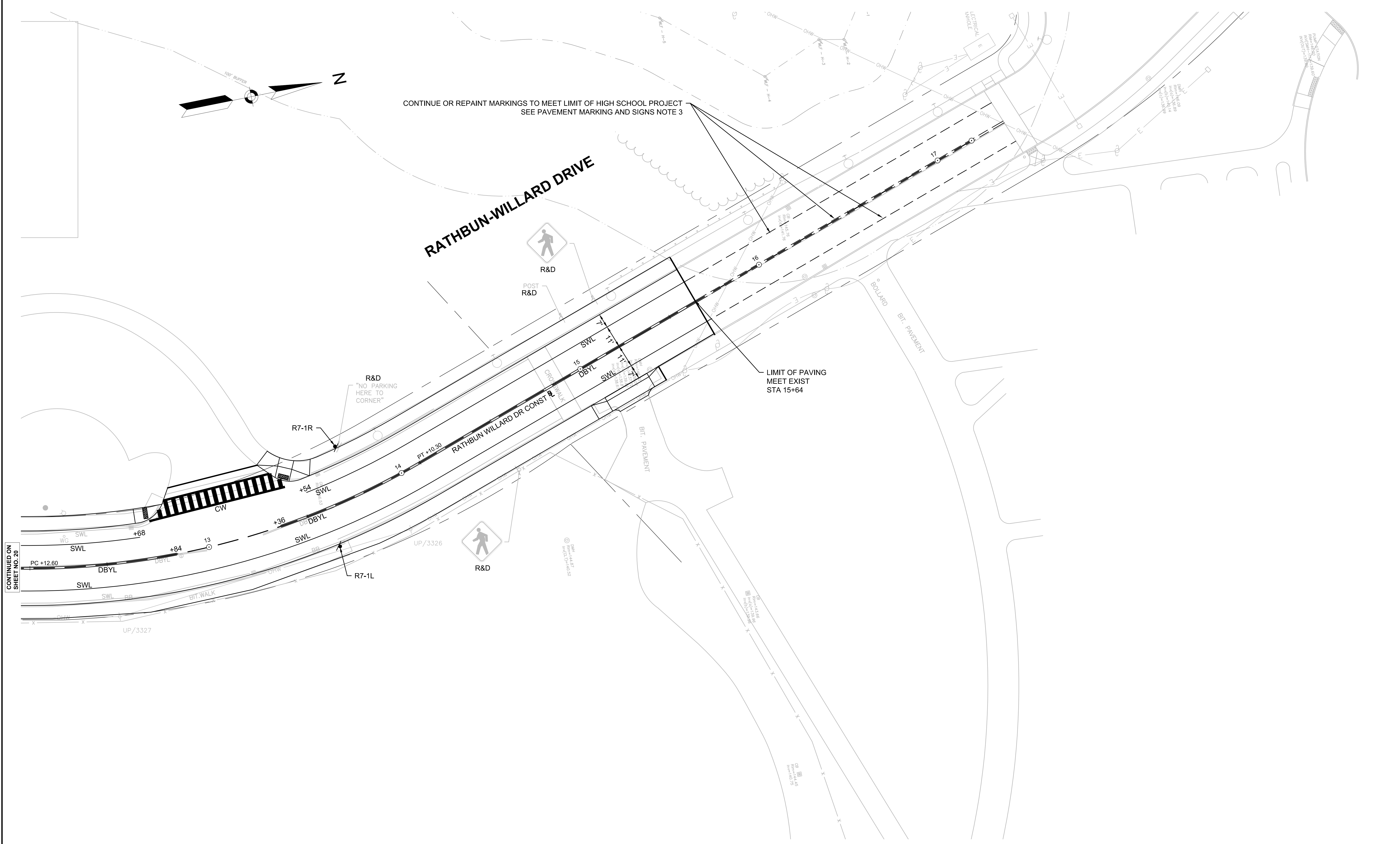
ISSUE DATE 11/10/2021

SHEET NO. **20 of 28**



CONTINUE OR REPAINT MARKINGS TO MEET LIMIT OF HIGH SCHOOL PROJECT
SEE PAVEMENT MARKING AND SIGNS NOTE 3

RATHBUN-WILLARD DRIVE

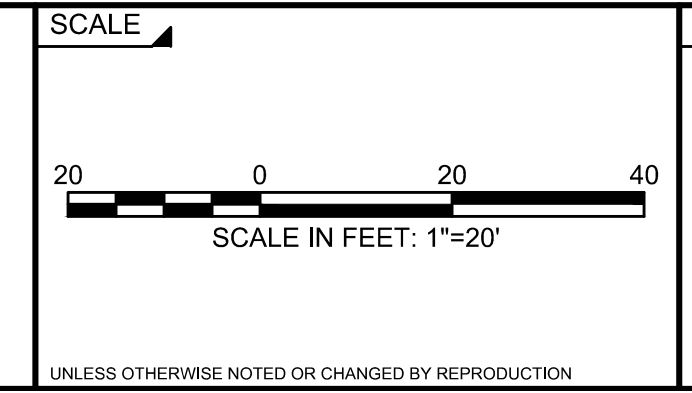


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SHEET NO. 20

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DESIGNED BY: TD	PREPARED BY
CHECKED BY: DF	SUBCONSULTANT



**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts**

PAVEMENT MARKING AND SIGN PLAN

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. 21 of 28

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACKGROUND	LEGEND	BORDER			
R1-1	30 in	30 in		SEE 2009 MUTCD STANDARDS			4	RED	WHITE	WHITE	P-5 4	6.25	25.0
R3-7	24 in	30 in					3	WHITE	BLACK	BLACK	P-5 3	5.0	15.0
R3-8a	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0
R7-1L	12 in	18 in					4	WHITE	RED	RED	P-5 4	1.5	6.0
R7-1R	12 in	18 in					4	WHITE	RED	RED	P-5 4	1.5	6.0
R10-5	30 in	36 in					1	WHITE	BLACK	BLACK	MOUNT ON MA	7.5	7.5
R10-11b	36 in	36 in					2	WHITE	BLACK	BLACK	MOUNT ON MA SHAFT	9.0	18.0
R10-12	30 in	36 in					1	WHITE	BLACK GREEN	BLACK	MOUNT ON MA	7.5	7.5
R10-15	30 in	30 in					1	YELLOW WHITE	BLACK RED	BLACK	MOUNT ON MA	6.25	6.25
R10-25	9 in	12 in					2	WHITE	BLACK	BLACK	MOUNT ON RRFB PUSHBUTTON	0.75	--
W11-2	30 in	30 in					3	FYG	BLACK	BLACK	P-5 3	6.25	18.75
W13-1	30 in	30 in					1	YELLOW	BLACK	BLACK	MOUNT W/ D3-1A	6.25	6.25
W16-7PL	24 in	12 in					4	FYG	BLACK	BLACK	MOUNT 2 W/ W11-2 2 ON RRFB	2.0	4.0
W16-7PR	24 in	12 in					2	FYG	BLACK	BLACK	MOUNT 2 ON RRFB	2.0	--
W16-9P	24 in	12 in					3	FYG	BLACK	BLACK	MOUNT 1 W/ W11-2 2 W/ S1-1L	2.0	6.0
W23-2	36 in	36 in				2	YELLOW	BLACK	BLACK	P-5 2	9.0	18.0	
S1-1L	36 in	36 in				7	FYG	BLACK	BLACK	MOUNT 5 ON P-5 2 ON RRFB	9.0	45.0	
S1-1R	36 in	36 in				2	FYG	BLACK	BLACK	MOUNT 2 ON RRFB	9.0	--	
MA-S4-5bP	24 in	24 in		4C	3.5		1	FYG	BLACK	BLACK	MOUNT W/ S1-1L	4.0	4.0
				4C	2.5								
				4C	2.5								
					3.5								
S5-2	24 in	30 in		SEE 2009 MUTCD STANDARDS			1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACKGROUND	LEGEND	BORDER			
D3-1A	48 in	9 in		6B,3B	1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	P-5 1	--	--
D3-1B	40 in	9 in		6B,3B	1.5	6" CITY SEAL	4	BLUE	WHITE	WHITE	P-5 2	--	--
D3-1C	48 in	9 in		6B,3B	1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	MOUNT W/ D3-1B	--	--
D3-1D	48 in	9 in		5B,3B	1.5	6" CITY SEAL	2	BLUE	WHITE	WHITE	MOUNT W/ D3-1B	--	--

NOTES:

- SIGNS TO BE MOUNTED ON RECTANGULAR RAPID FLASHING BEACON (RRFB) WILL BE PAID FOR UNDER SEPARATE ITEM 824.211.
- HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9:30.0, TYPE III OR IV, OF THE MASSDOT STANDARD SPECIFICATIONS SHALL BE USED FOR ALL SIGNS.
- ALL P5 POSTS SHALL BE TELESCOPIC, RECTANGULAR TYPE POSTS, CONFORMING TO THE DIMENSIONS AND REQUIREMENTS OF THE MASSDOT "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS" (LATEST EDITION) AND CITY OF ATTLEBORO STANDARDS.
- SEE THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" FOR THE LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR. (ALSO SEE SECTION M9.30.0 TYPE III MASSDOT STANDARD SPECIFICATION, THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS) BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION).
- ALL STREET NAME SIGNS SHALL BE PAINTED ONE SIDE AND SHALL USE TWO SIGNS MOUNTED BACK TO BACK WITH BOLT-THROUGH METHOD.
- FYG: FLUORESCENT YELLOW GREEN

12/28/2021 12:58 PM C:\710037167 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\SET\7157 TSS.DWG (MADOT-D.STB)

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DESIGNED BY: TD	
CHECKED BY: DF	

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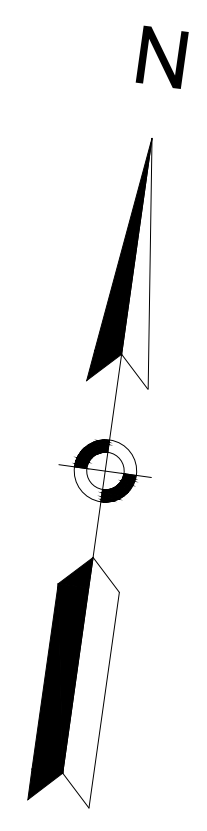


SCALE	NONE
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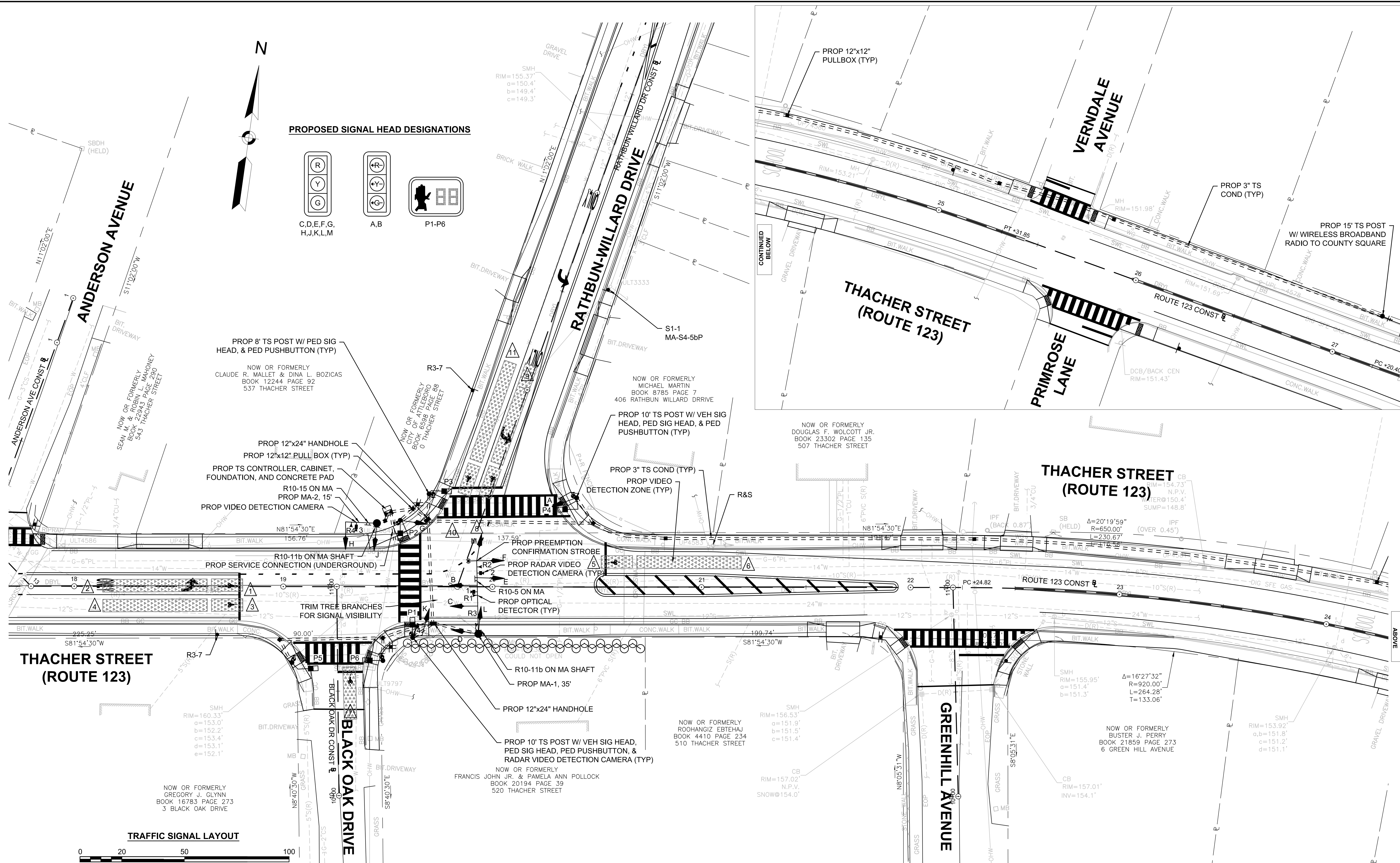
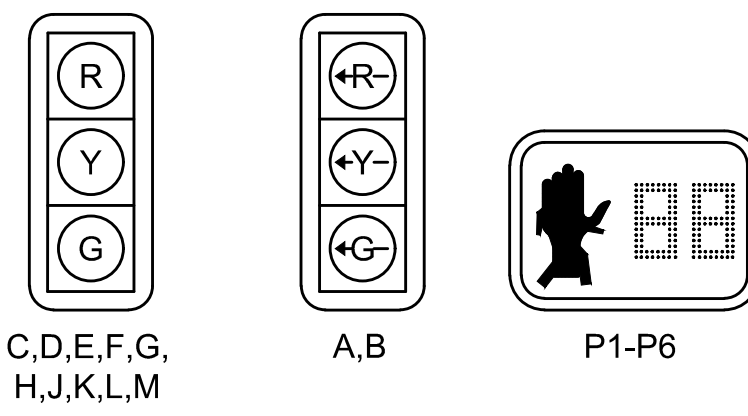
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BETA JOB NO.	7157
ISSUE DATE	11/10/2021
SHEET NO.	22 of 28

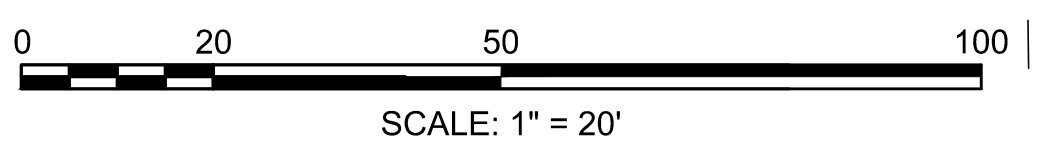
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



PROPOSED SIGNAL HEAD DESIGNATIONS



TRAFFIC SIGNAL LAYOUT



12/28/2021 12:59 PM C:\1710037167-ATTLEBORO-ROUTE 123\DRAWING FILES\PLANS\TS157.SIG.DWG (MADOT-D.SB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
TD/LF
DESIGNED BY:
TD
CHECKED BY:
DF

REGISTERED PROFESSIONAL
PREPARED BY

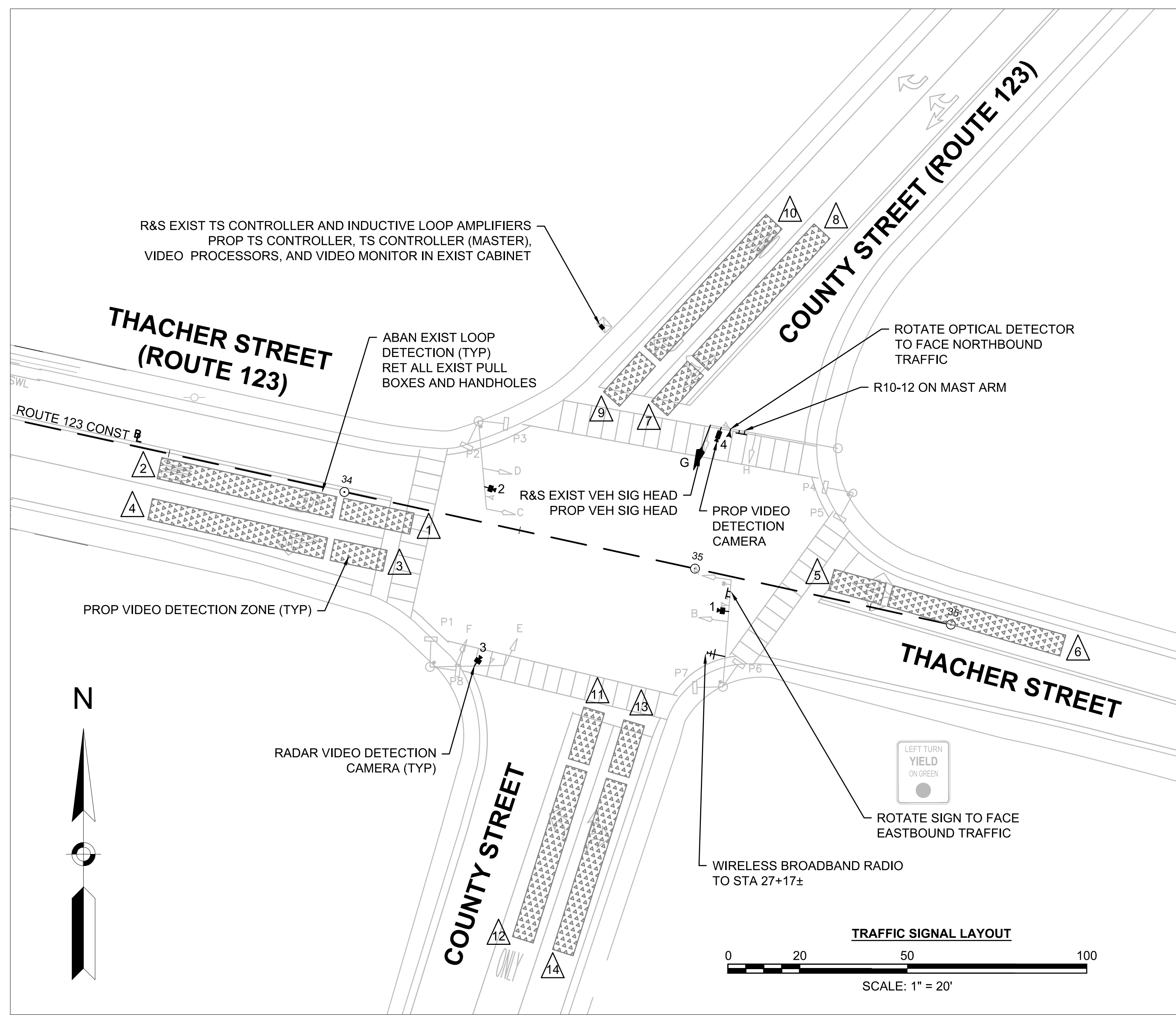


SUBCONSULTANT

SCALE
AS SHOWN

TITLE
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
TRAFFIC SIGNAL PLAN**

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **23 of 28**



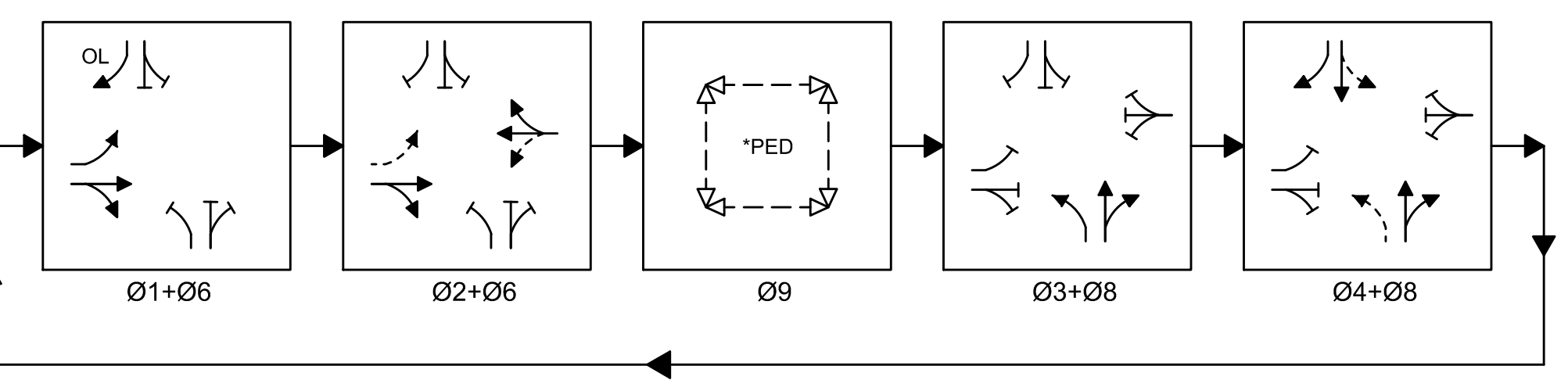
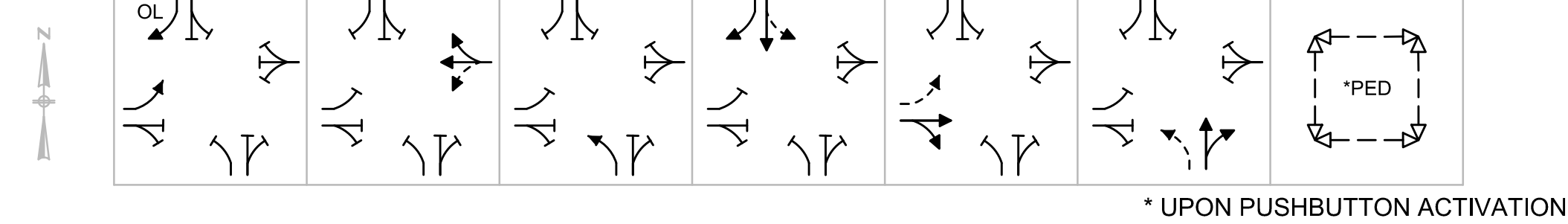
SEQUENCE AND TIMING FOR FULLY ACTUATED TRAFFIC SIGNAL CONTROL (COORDINATED)

PHASE	DIRECTION	HOUSINGS	Ø1	Ø2	Ø3	Ø4	Ø6	Ø8	Ø9	FLASH OPER.
THACHER STREET	EB	A	R	R	R	R	R	R	R	FY
THACHER STREET	EB	B	R	R	R	R	R	R	R	FY
THACHER STREET	WB	C,D	R	R	G	Y	R	R	R	FY
COUNTY STREET	SB	E	R	R	R	R	R	R	R	FR
COUNTY STREET	SB	F	R	R	R	R	R	R	R	FR
COUNTY STREET	NB	G	R	R	R	R	R	R	R	FR
COUNTY STREET	NB	H	R	R	R	R	R	R	R	FR
PEDESTRIAN	ALL	P1-P8	DW	DW	DW	DW	DW	DW	DW	OFF

TIMING IN SECONDS	Ø1	Ø2	Ø3	Ø4	Ø6	Ø8	Ø9
MINIMUM GREEN	6	10	6	10	10	10	
VEHICLE EXTENSION	2	2	3	2	2	2	
MAXIMUM GREEN I (0600-1000 MON-FRI / 1000-1900 SAT-SUN)	39	31	6	16	75	27	
MAXIMUM GREEN II (1000-1600 MON-FRI)	21	36	6	19	62	30	
MAXIMUM GREEN III (ALL OTHER TIMES)	30	25	20	20	25	20	
CLEARANCE INTERVAL	4	1	4	1	4	1	4
WALK/CLEARANCE/BUFFER INTERVAL							7
DETECTOR MEMORY	NON-LOCK OFF	NON-LOCK SOFT	LOCK OFF	NON-LOCK OFF	NON-LOCK SOFT	NON-LOCK OFF	NON-LOCK OFF
RECALL SWITCH							7

COORDINATION DATA

	PLAN 1	PLAN 2	PLAN 3
CYCLE LENGTH	140	130	145
OFFSET	0	0	0
SPLIT Ø1	44	26	34
SPLIT Ø2	36	41	42
SPLIT Ø3	11	11	11
SPLIT Ø4	21	24	30
SPLIT Ø6	80	67	76
SPLIT Ø8	32	35	41
SPLIT Ø9	28	28	28
COORDINATED PHASE	Ø2+Ø6	Ø2+Ø6	Ø2+Ø6



PREFERENTIAL PHASE SEQUENCE

MAJOR ITEMS (COUNTY SQUARE)

ITEM NO.	QUANTITY	DESCRIPTION
816.01	1	TRAFFIC SIGNAL CONTROLLER (ATC NEMA)
	1	TRAFFIC SIGNAL CONTROLLER (ATC NEMA) - MASTER
	1	VIDEO DETECTION CAMERA
	3	VIDEO DETECTION CAMERA WITH RADAR
	2	VIDEO PROCESSOR (2 CHANNEL)
	1	9" VIDEO MONITOR
	1	WIRELESS BROADBAND RADIO
	1	8-PORT ETHERNET SWITCH
	1	SIGNAL HEAD, 1-WAY, 5 SECTION, 12" LENSES
	1	5" 5-SECTION BACKPLATE WITH 3" YELLOW RETROREFLECTIVE YELLOW BORDER

PLUS ALL MISCELLANEOUS EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL.

- NOTES
- RETAIN ALL EXISTING TRAFFIC SIGNAL EQUIPMENT, PAVEMENT MARKINGS, AND SIGNS, UNLESS OTHERWISE NOTED ON PLAN.
 - EXISTING TRAFFIC SIGNAL PHASING WILL BE RETAINED. TRAFFIC SIGNAL ADJUSTMENT RELATED TO COORDINATION SPLITS ONLY.
 - INFORMATION BASED ON AERIAL IMAGERY. ALL PROPOSED AND EXISTING LOCATIONS SHALL BE VERIFIED BY FIELD ENGINEER.

DETECTOR DATA

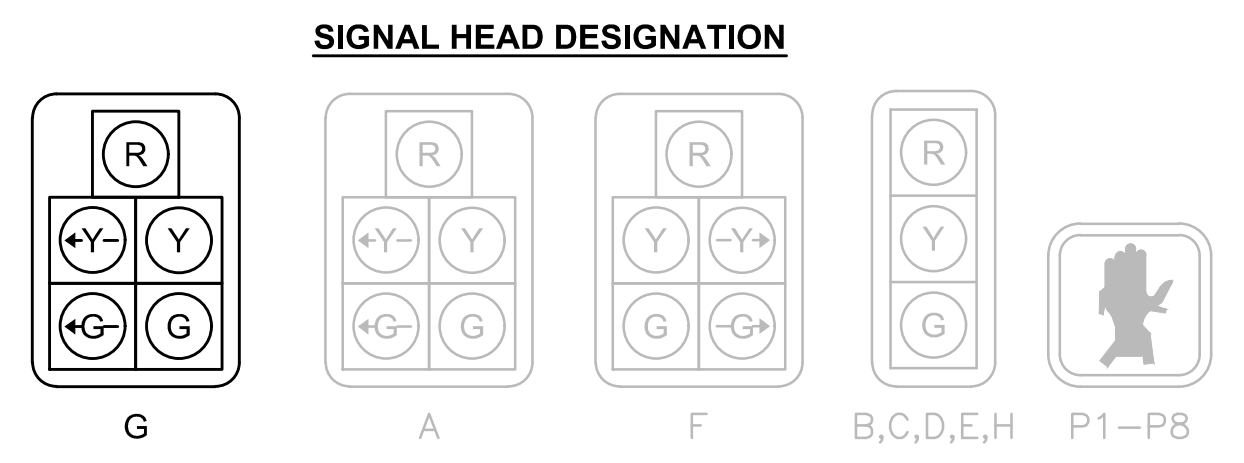
DETECTOR GROUP NO.	CAMERA NO.	NO. SECTION/ SIZE	OPERATIONS	CALL DELAY (SECONDS)	CALL PHASE	EXTEND PHASE
1	1	1 - 6'x20'	PRESENCE/BICYCLE	0	Ø1	Ø1
2	1	1 - 6'x50'	PRESENCE	0	Ø1	Ø1
3	1	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø6	Ø6
4	1	1 - 6'x50'	PRESENCE	0	Ø6	Ø6
5	2	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø2	Ø2
6	2	1 - 6'x50'	PRESENCE	0	Ø2	Ø2
7	3	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
8	3	1 - 6'x50'	PRESENCE	0	Ø4	Ø4
9	3	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø4	Ø4
10	3	1 - 6'x50'	PRESENCE	0	Ø4	Ø4
11	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø9	Ø8+Ø9
12	4	1 - 6'x50'	PRESENCE	0	Ø9	Ø8+Ø9
13	4	1 - 6'x15'	PRESENCE/BICYCLE	0	Ø8	Ø8
14	4	1 - 6'x50'	PRESENCE	0	Ø8	Ø8

COORDINATION NOTES

- SHALL BE COORDINATED WITH RATHBUN-WILLARD DRIVE VIA RADIO BROADBAND TO STA 27+17± AND HARDWARE THEREAFTER.
- OFFSET TO BEGINNING OF Ø2+Ø6 (WB+EB) YELLOW.
- ALL COORDINATION SPLIT TIMES INCLUDE YELLOW AND RED CLEARANCE TIME.
- PHASE 2 & 6 DETECTORS SHALL BE DISABLED DURING COORDINATION.
- COORDINATION MODE SHALL BE YIELD. FLOATING FORCE OFFS SHALL BE IN EFFECT DURING COORDINATION.
- INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
- OFFSET SEEKING SHALL BE THE SHORTWAY METHOD.

MASTER SCHEDULE

	PLAN 1	PLAN 2	PLAN 3	FREE	FLASHING
MONDAY - FRIDAY	0600-1000	1000-1600	1600-2000	0000-0600 2000-2400	EMERGENCY ONLY
SATURDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY
SUNDAY	1000-1900			0000-1000 1900-2400	EMERGENCY ONLY



12/28/2021 12:59 PM 01710037167 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\SET157.SIG.DWG (MADOT-D.STB)

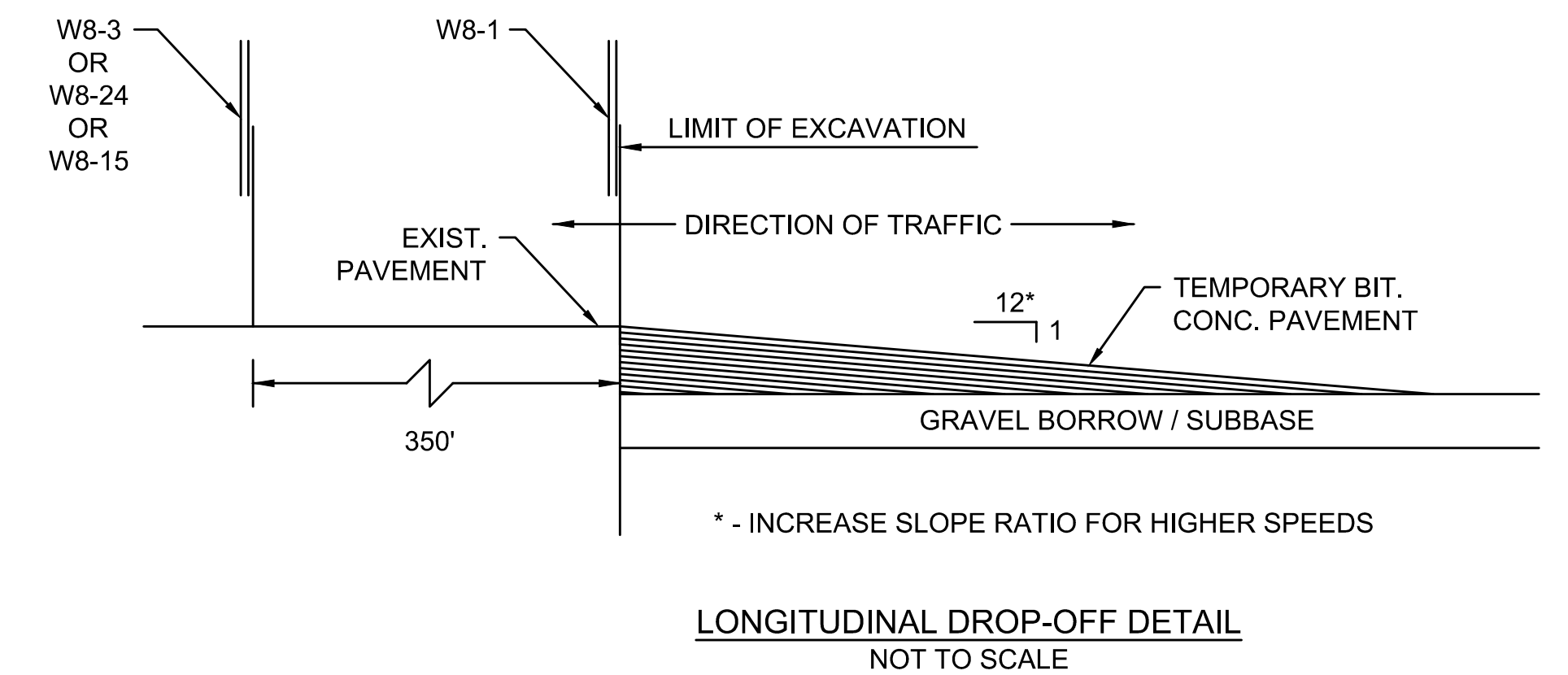
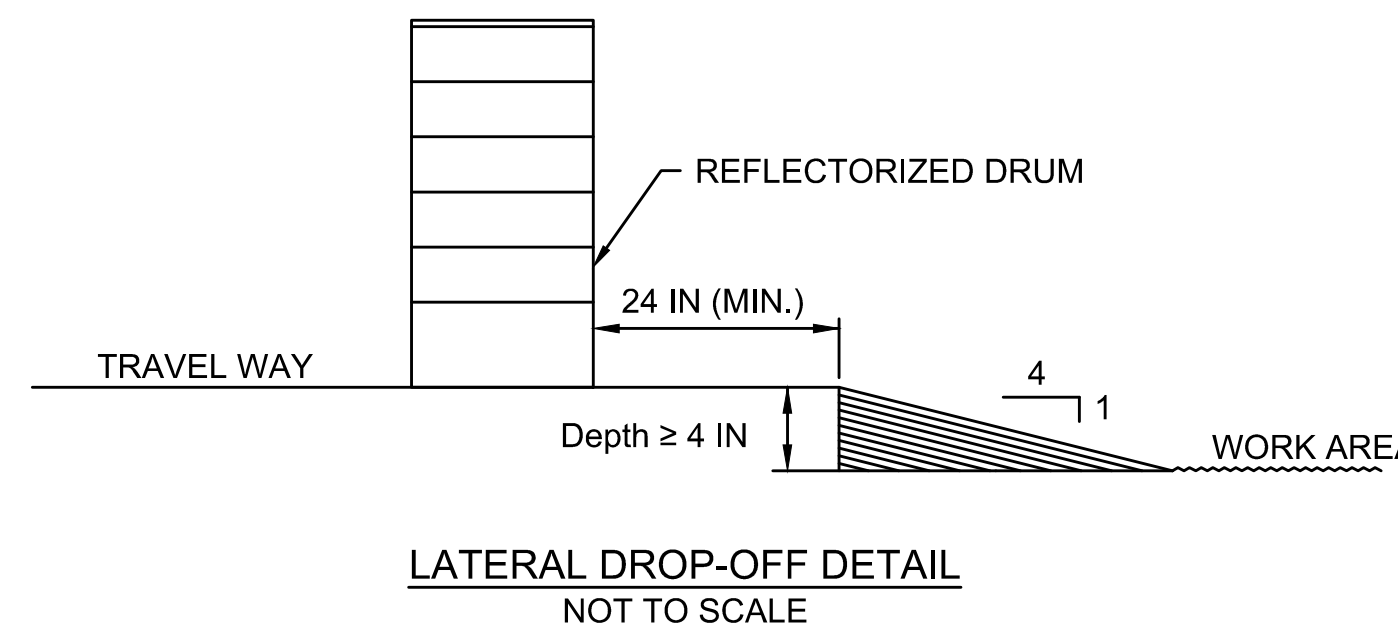
DRAWN BY: TD/LF DESIGNED BY: TD/LF CHECKED BY: DF	REGISTERED PROFESSIONAL www.BETA-inc.com	PREPARED BY: SUBCONSULTANT	SCALE: AS SHOWN <small>UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION</small>	TITLE: Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TRAFFIC SIGNAL PLAN	BETA JOB NO. 7157 ISSUE DATE 11/10/2021 SHEET NO. 25 of 28
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NOTES:

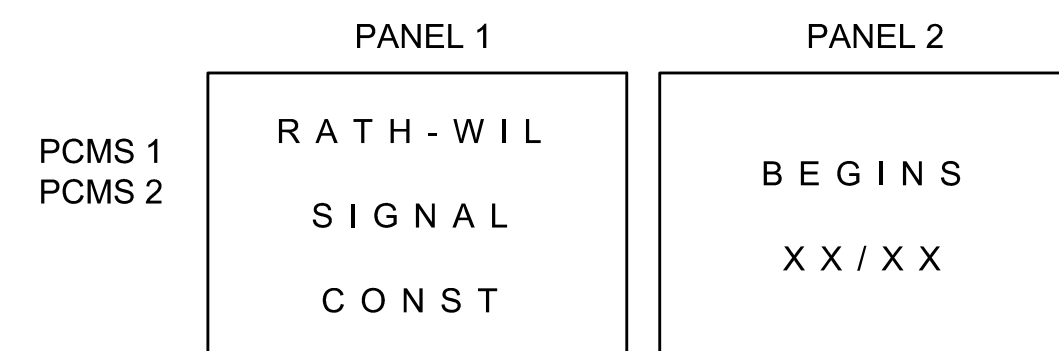
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE 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 SHALL 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".

LEGEND:

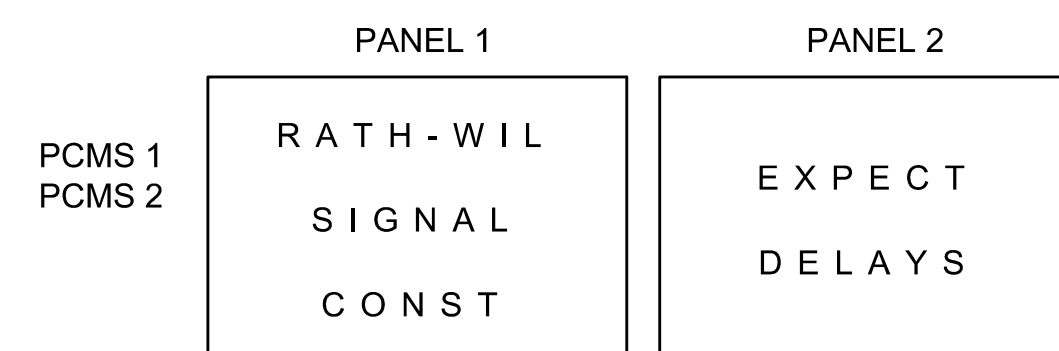
- REFLECTORIZED PLASTIC DRUM
- ▨ TYPE III BARRICADE
- ⬇️ FLASHING ARROW PANEL
- ⬆️ FLASHING ARROW PANEL
- ▨ WORK ZONE
- ➔ DIRECTION OF TRAFFIC
- ⊘ IMPACT ATTENUATOR
- ▭ MEDIAN BARRIER
- ▭ MEDIAN BARRIER WITH WARNING LIGHTS
- 🚚 WORK VEHICLE
- ⊠ TRUCK MOUNTED ATTENUATOR
- ➔ TRAFFIC OR PEDESTRIAN SIGNAL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



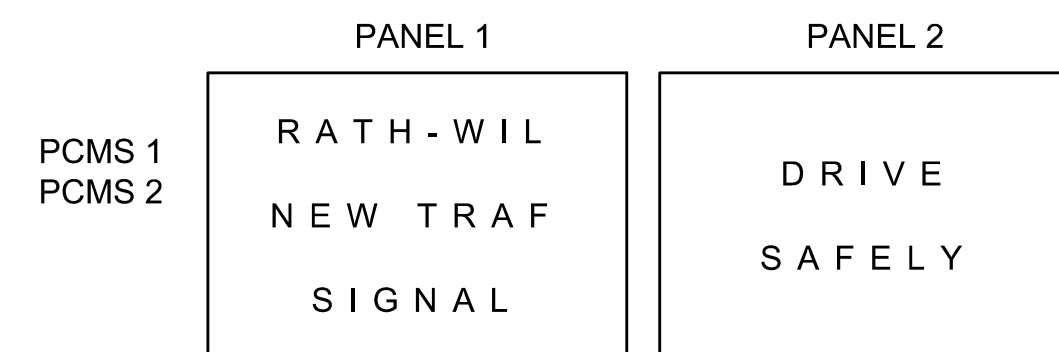
PRIOR TO CONSTRUCTION



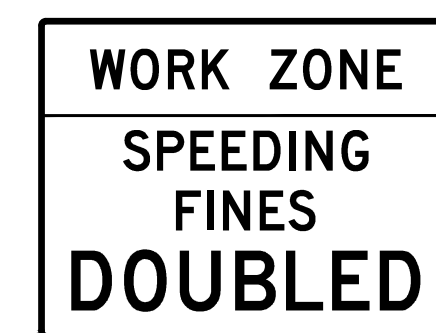
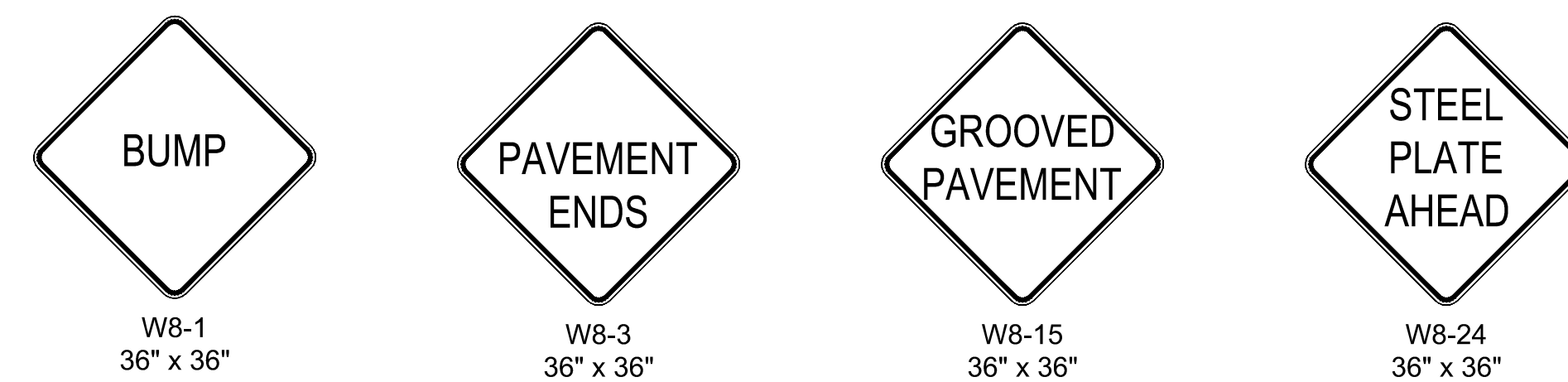
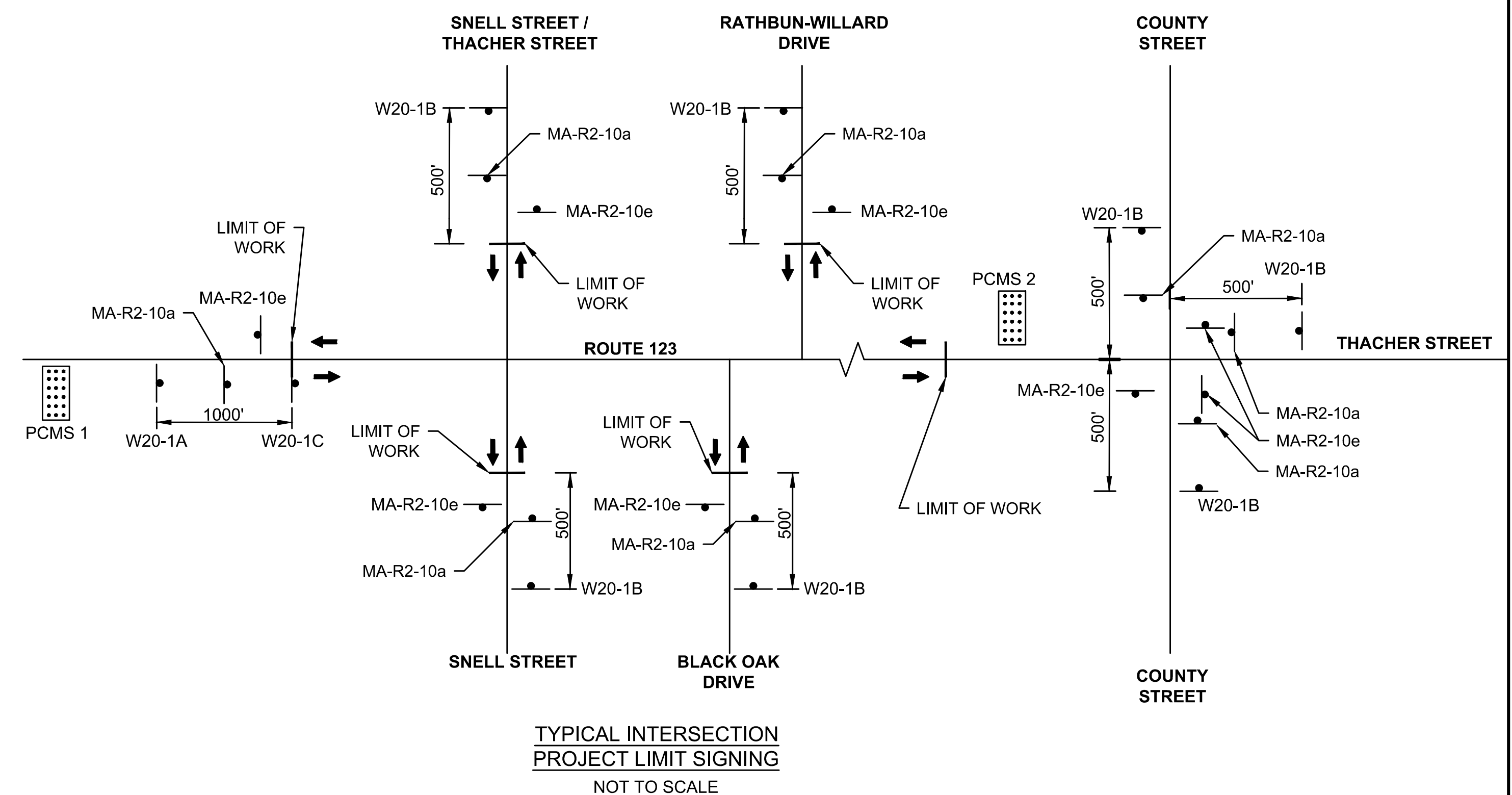
DURING CONSTRUCTION



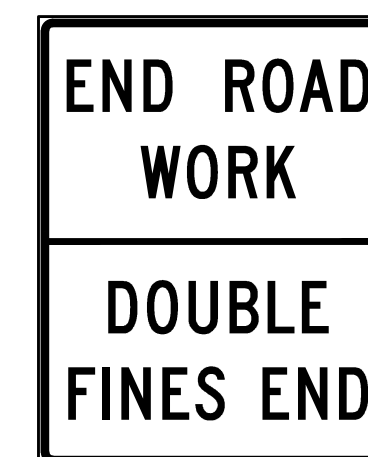
AFTER CONSTRUCTION (2 WKS)



- NOTES:**
- INSTALL PCMS TWO WEEKS PRIOR TO CONSTRUCTION TO INFORM MOTORISTS OF UPCOMING WORK.
 - PCMS SHALL BE ACTIVE FOR THE DURATION OF WORK.



MA-R2-10a
NOTE:
"WORK ZONE"
BLACK ON ORANGE;
"SPEEDING FINES DOUBLED"
BLACK ON WHITE



MA-R2-10e
NOTE:
"END ROAD WORK"
BLACK ON ORANGE;
"DOUBLE FINES END"
BLACK ON WHITE



W13-1
24" x 24"

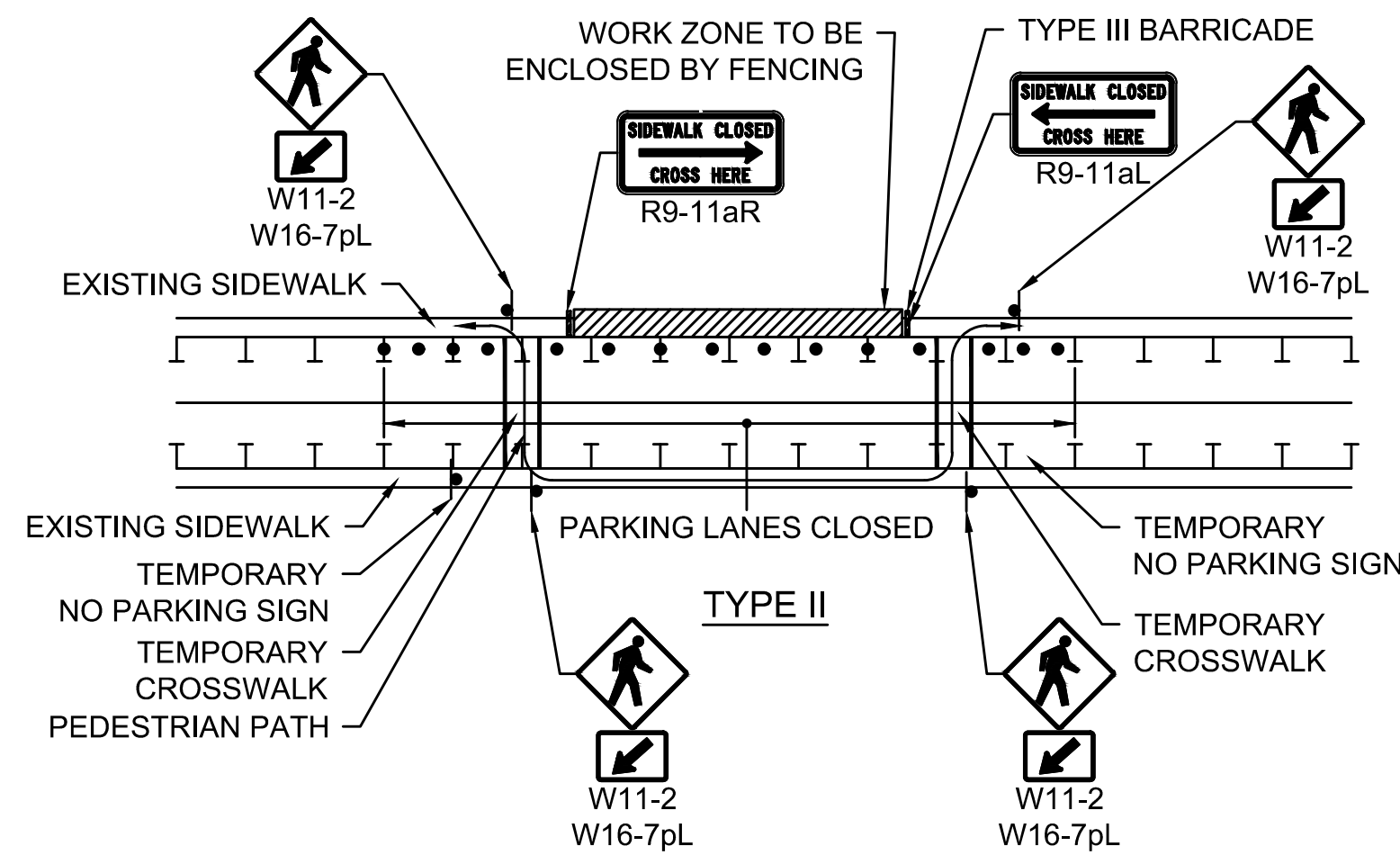
TAPER LENGTH

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

CONSTRUCTION SIGNS
NOT TO SCALE

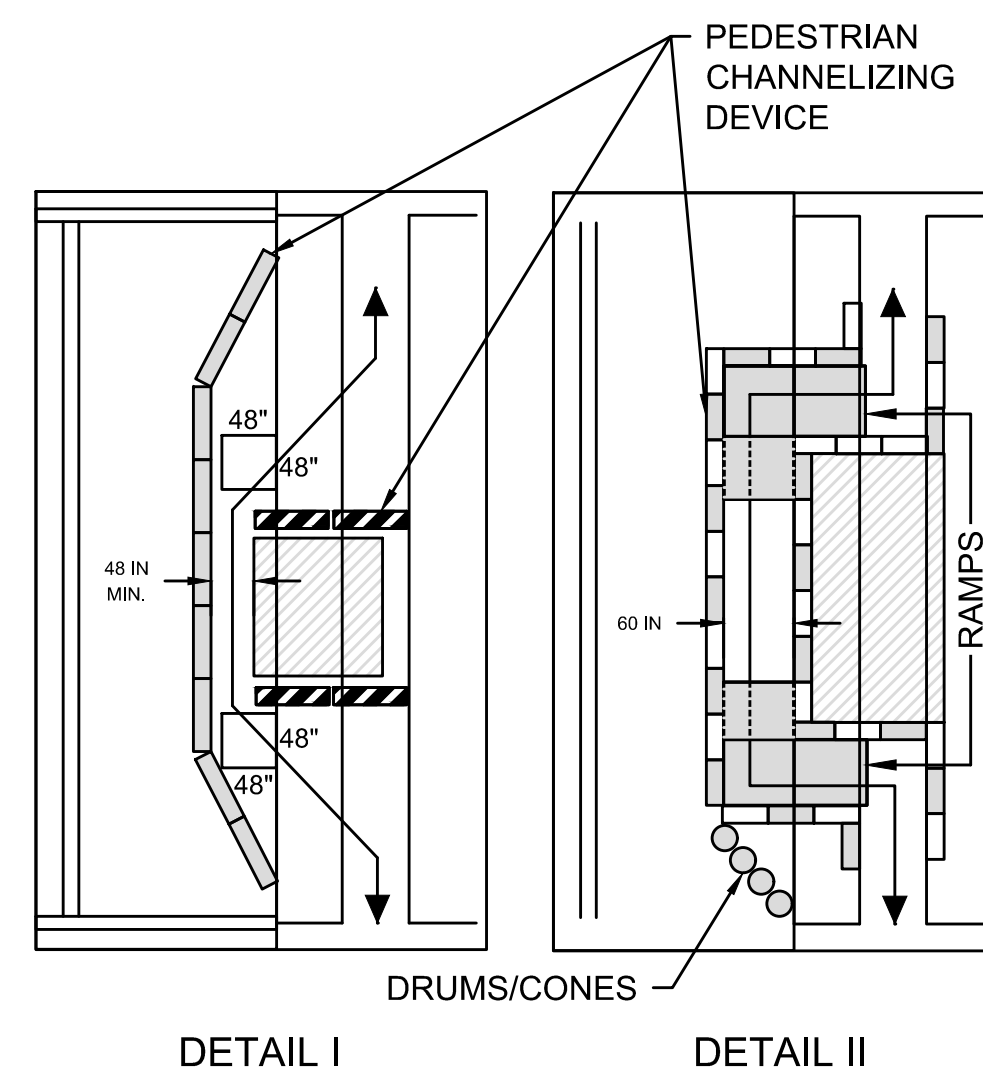
12/28/2021 12:59 PM 01710037167 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\SET\7157 TMP.DWG (MADOT-F.D.STB)	DRAWN BY: TD	REGISTERED PROFESSIONAL	PREPARED BY: 	SUBCONSULTANT	SCALE: NONE	TITLE: Intersection Improvements Route 123 At Rathbun Willard Drive And Black Oak Drive Attleboro, Massachusetts TEMPORARY TRAFFIC CONTROL PLAN	BETA JOB NO. 7157
	DESIGNED BY: TD						ISSUE DATE 11/10/2021
	CHECKED BY: DF						SHEET NO. 26 of 28
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION		



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

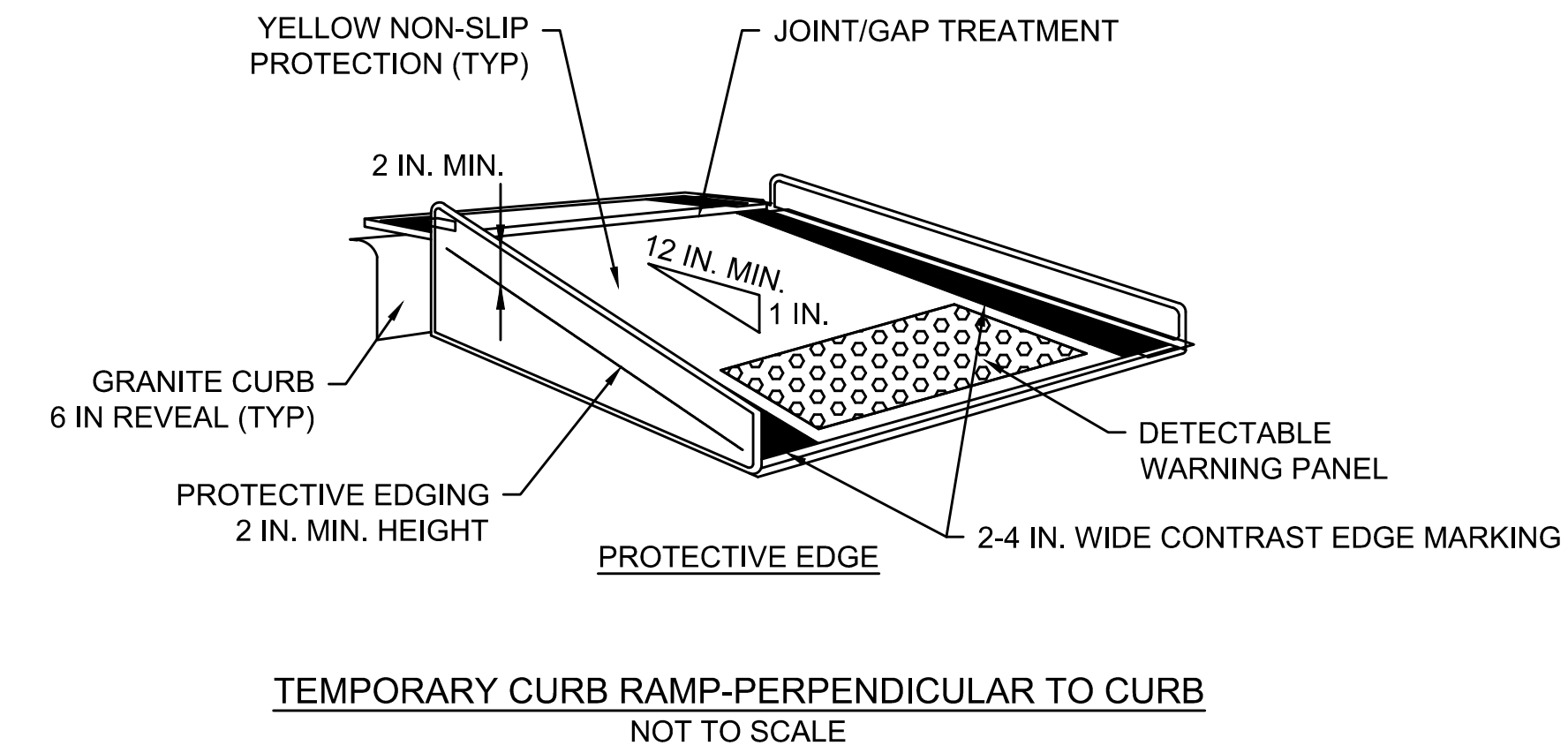


NOTES:

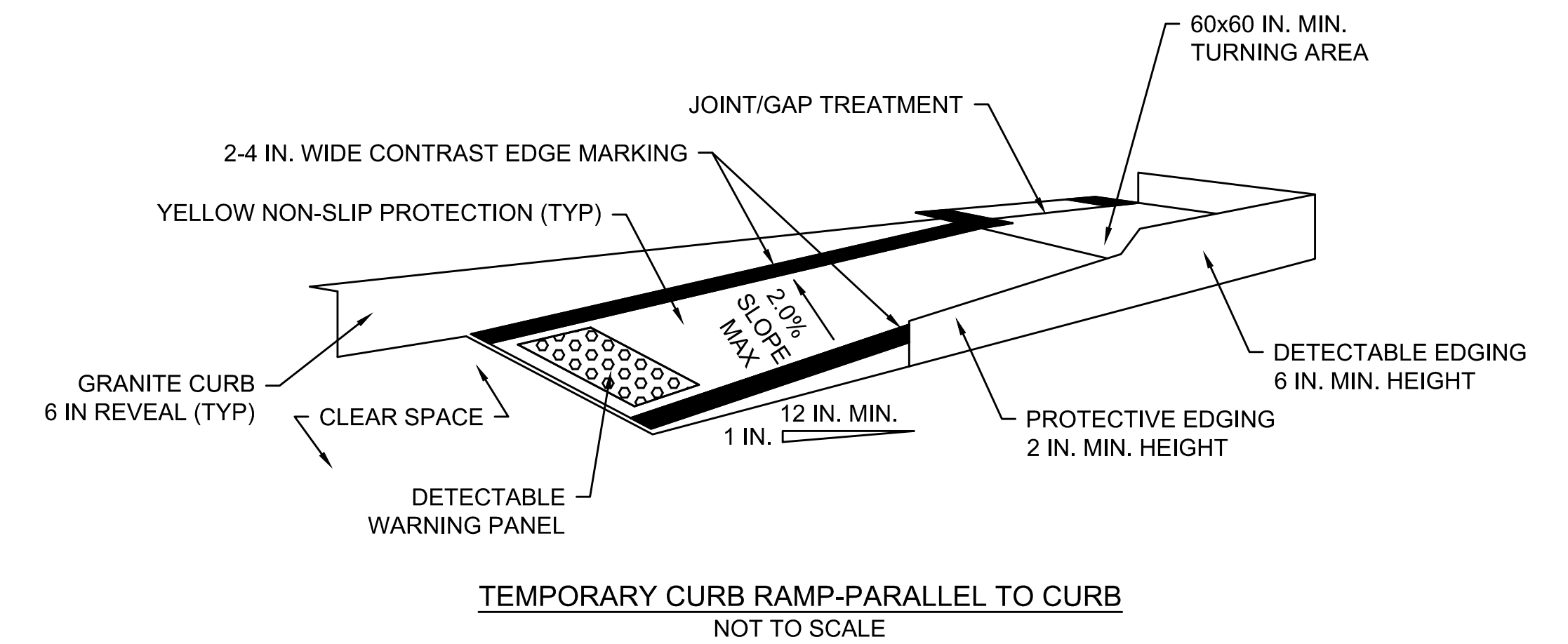
- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB 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 BE 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.



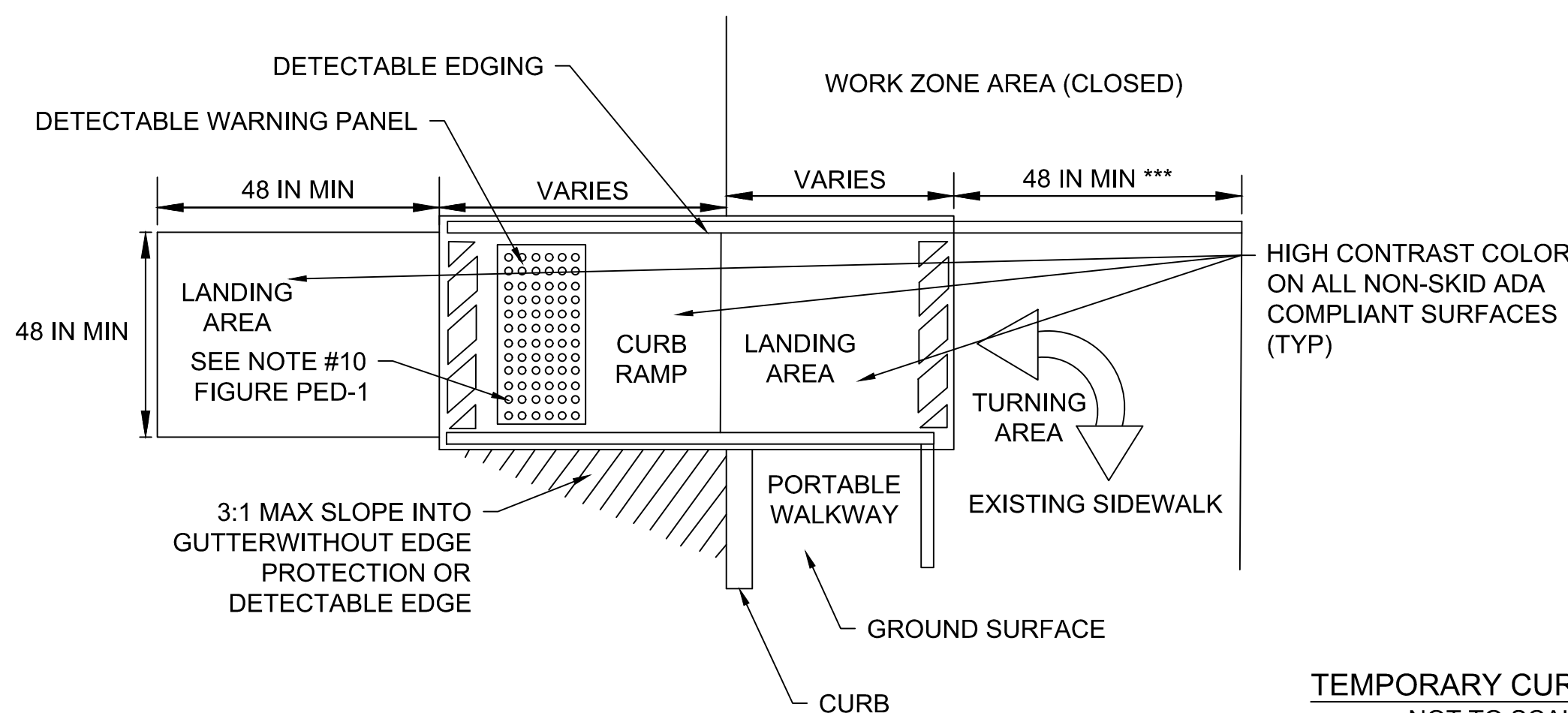
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB
NOT TO SCALE



TEMPORARY CURB RAMP-PARALLEL TO CURB
NOT TO SCALE

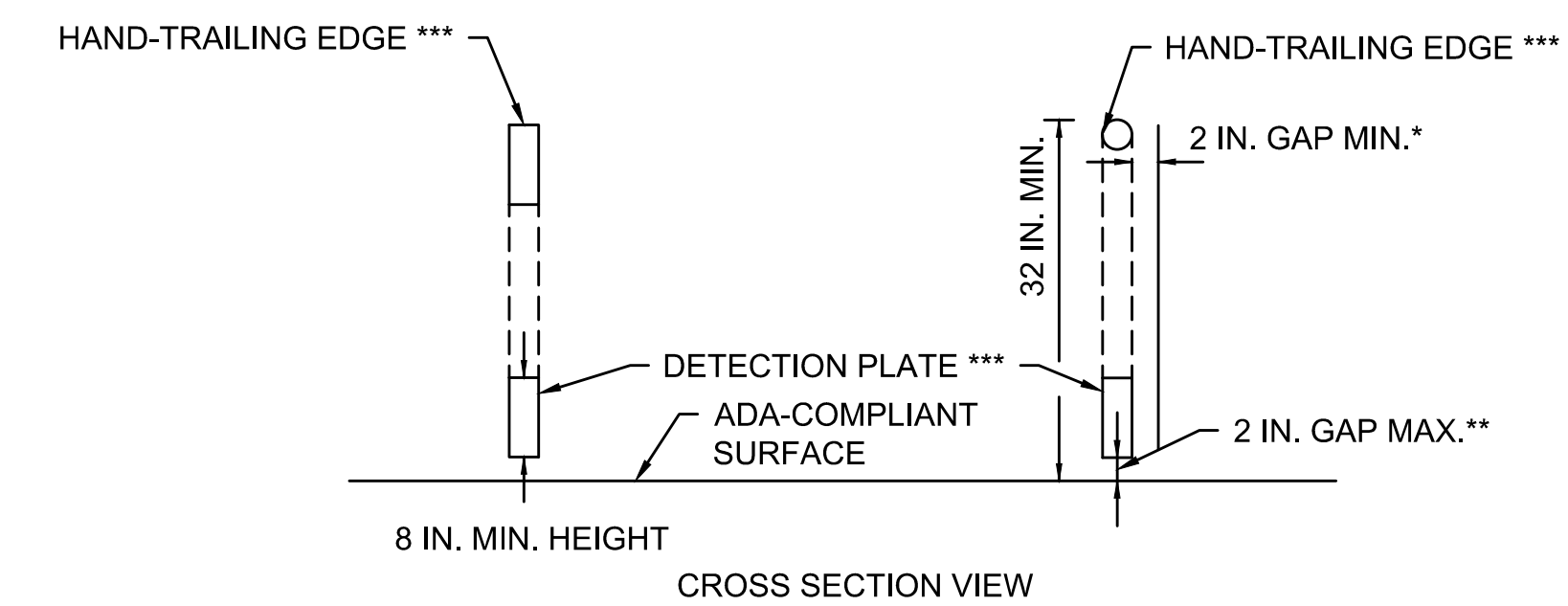
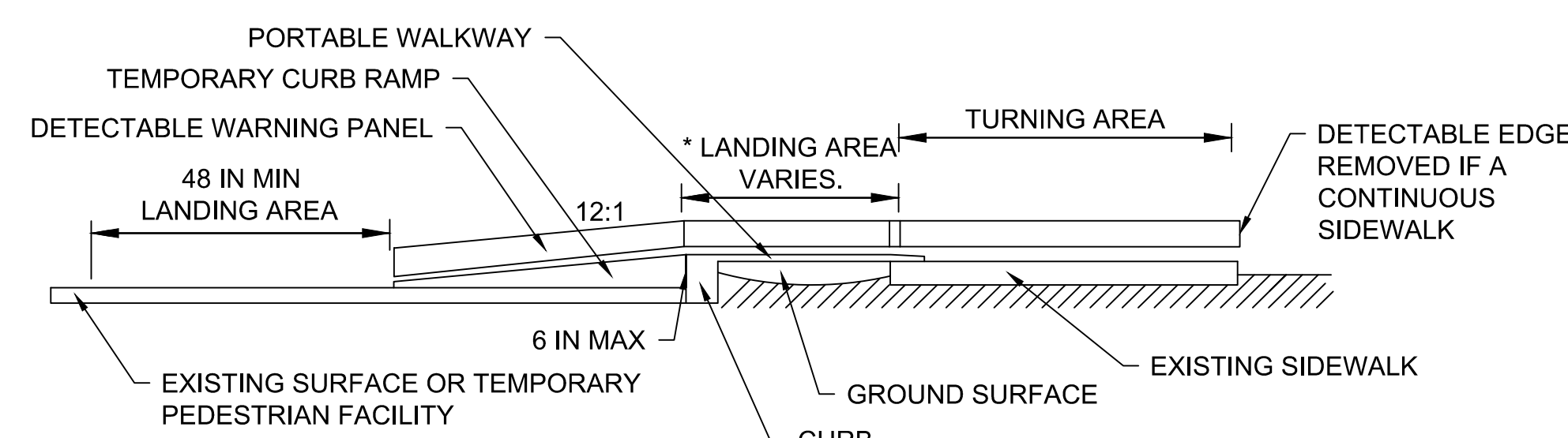
NOTES:

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.

12/28/2021 12:59 PM 01710037167 - ATTLEBORO - ROUTE 123 DRAWING FILES\PLANS\SET157.TMP.DWG (MADOT-F.D.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:	TD
DESIGNED BY:	TD
CHECKED BY:	DF

REGISTERED PROFESSIONAL
PREPARED BY



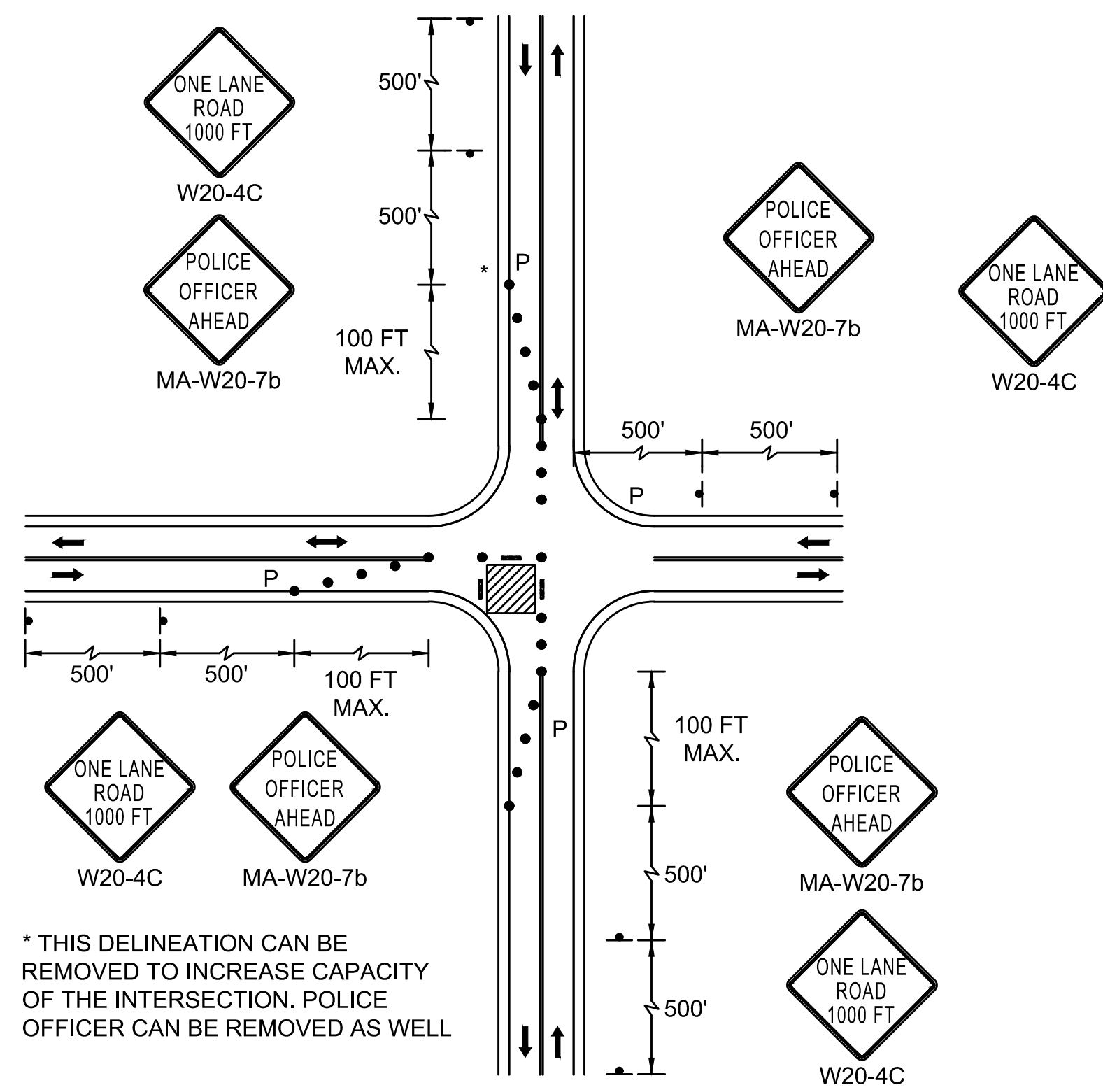
SUBCONSULTANT

SCALE
NONE

Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
TEMPORARY TRAFFIC CONTROL PLAN

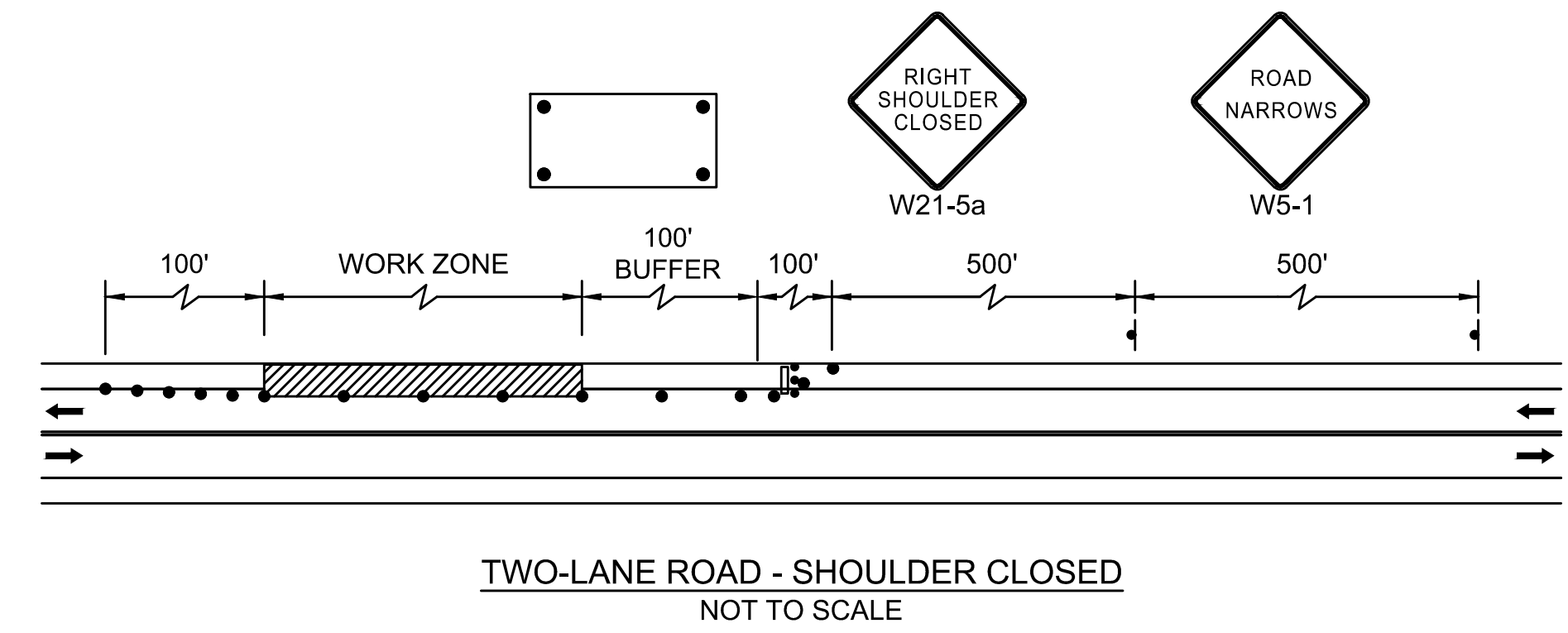
BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **27 of 28**

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

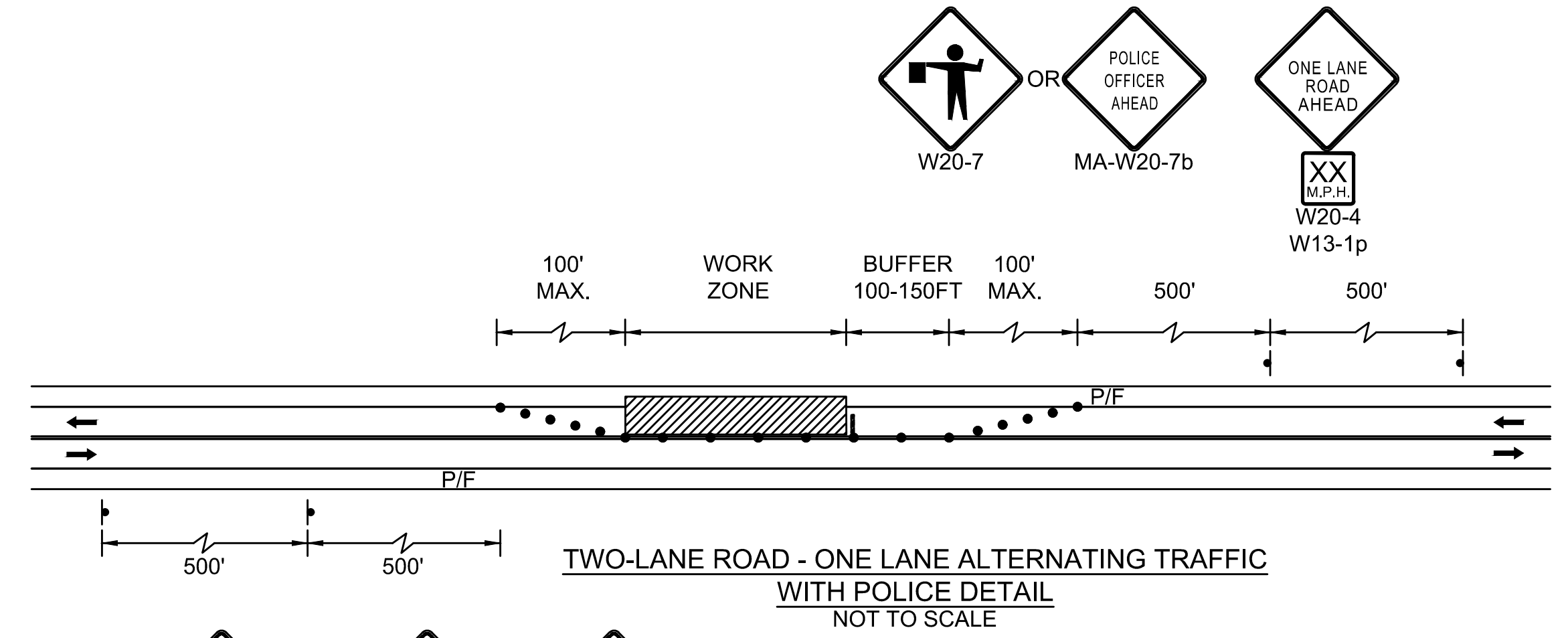


* THIS DELINEATION CAN BE REMOVED TO INCREASE CAPACITY OF THE INTERSECTION. POLICE OFFICER CAN BE REMOVED AS WELL

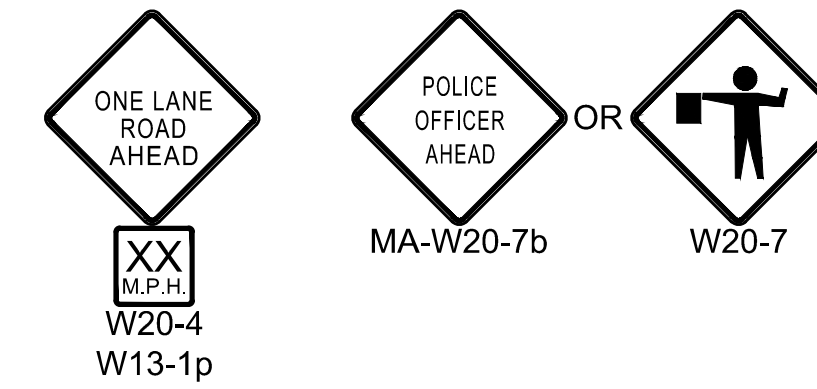
INTERSECTION WITH LANE CLOSURE
NOT TO SCALE



TWO-LANE ROAD - SHOULDER CLOSED
NOT TO SCALE



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



SAFETY SIGNING FOR CONSTRUCTION OPERATIONS

LEGEND	TYPE	SIZE	COLOR			UNIT AREA	NO. SIGNS	TOTAL AREA
			BACKGROUND	LEGEND	BORDER			
WORK ZONE SPEEDING FINES...	MA-R2-10a	48" x 36"	WHITE/ORANGE**	BLACK	BLACK	12 SF	8	96 SF
END ROAD WORK	MA-R2-10e	36" x 48"	WHITE/ORANGE**	BLACK	BLACK	12 SF	8	96 SF
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	WHITE	BLACK	BLACK	8 SF	2	16 SF
ROAD NARROWS	W5-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
BUMP	W8-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
PAVEMENT ENDS	W8-3	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
GROOVED PAVEMENT	W8-15	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
STEEL PLATE AHEAD	W8-24	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
PEDESTRIAN	W11-2	30" x 30"	FYG***	BLACK	BLACK	6.3 SF	2	12.6 SF
ADVISORY SPEED	W13-1	24" x 24"	ORANGE**	BLACK	BLACK	4 SF	2	8 SF
DOWNWARD LEFT DIAGONAL ARROW	W16-7pL	24" x 12"	FYG***	BLACK	BLACK	2 SF	2	4 SF
ROAD WORK 1000 FT	W20-1A	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
ROAD WORK 500 FT	W20-1B	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	7	63 SF
ROAD WORK AHEAD	W20-1C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	1	9 SF
ONE LANE ROAD AHEAD	W20-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
ONE LANE ROAD 1000 FT	W20-4C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
FLAGGER	W20-7	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
POLICE OFFICER AHEAD	MA-W20-7b	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
RIGHT SHOULDER CLOSED	W21-5aR	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
SQUEEZE RIGHT	MA-W30-8R	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF
TOTAL AREA OF SIGNS:							521 SF	

* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY

** ALL CONSTRUCTION SIGNAGE SHALL HAVE FLUORESCENT ORANGE BACKGROUND

*** FLUORESCENT YELLOW GREEN

12/28/2021 12:59 PM C:\710031767 - ATTLEBORO - ROUTE 123\DRAWING FILES\PLANS\SET1\57 TMP.DWG (MADOT-F.D.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY: TD
DESIGNED BY: TD
CHECKED BY: DF

REGISTERED PROFESSIONAL

PREPARED BY

SUBCONSULTANT

SCALE
NONE

TITLE
**Intersection Improvements
Route 123 At Rathbun Willard Drive
And Black Oak Drive
Attleboro, Massachusetts
TEMPORARY TRAFFIC CONTROL PLAN**

BETA JOB NO. 7157
ISSUE DATE 11/10/2021
SHEET NO. **28 of 28**

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION