

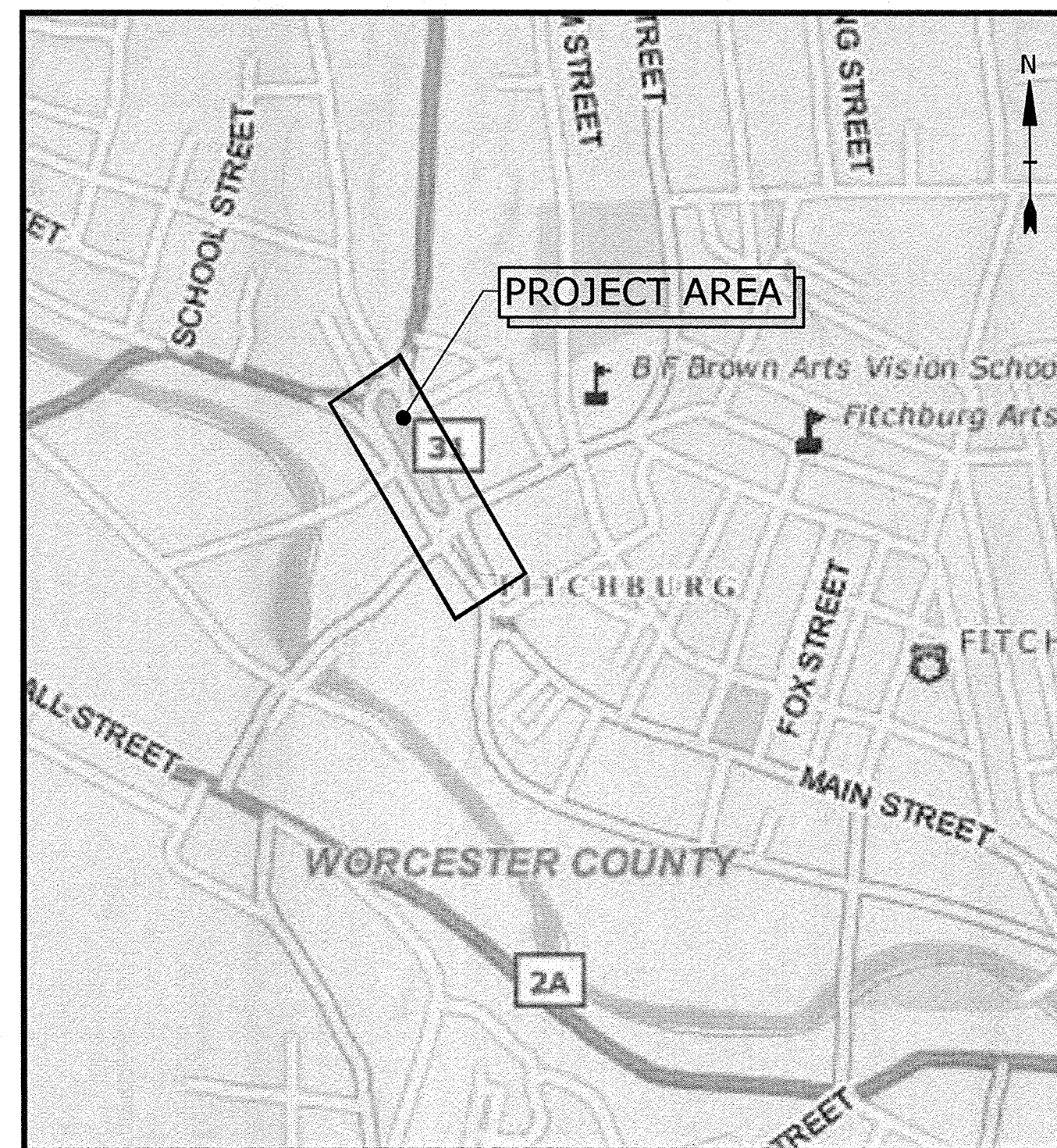
# CITY OF FITCHBURG, MASSACHUSETTS

# COMPLETE STREETS IMPROVEMENTS

# MAIN STREET UPPER COMMON

## NOVEMBER 2018

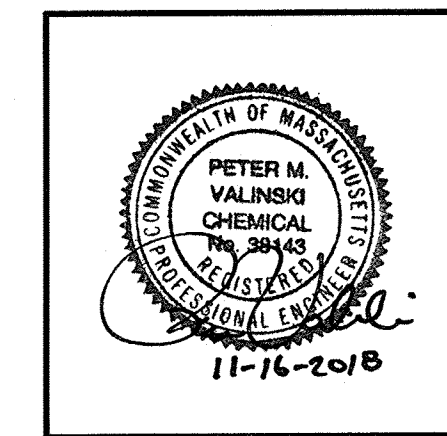
LIST OF DRAWINGS	
SHEET NO.	SHEET TITLE
	COVER
GN.01	GENERAL NOTES & LEGEND
IN.01	INDEX SHEET
EC.01	EXISTING CONDITIONS & DEMOLITION PLAN
EC.02	EXISTING CONDITIONS & DEMOLITION PLAN
PM.01	PAVEMENT MARKING & SIGNING PLAN
PM.02	PAVEMENT MARKING & SIGNING PLAN
DS.01	DETAILS
SN.01	SIGN TEXT LAYOUT



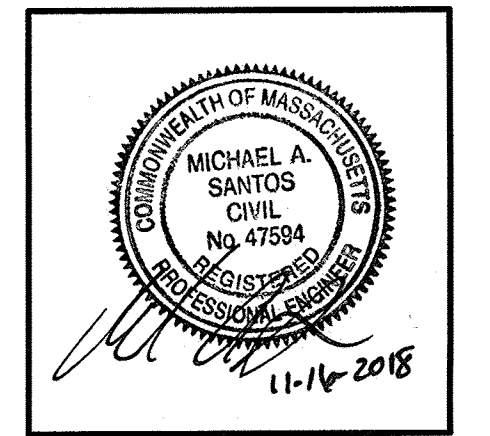
LOCATION MAP  
SCALE: NTS

PROJECT LENGTH = 0.35 MILES

PREPARED BY:  
**Tighe & Bond**  
www.tighebond.com  
446 Main Street  
Worcester, MA 01608  
(508) 754-2201



PETER VALINSKI P.E.



MICHAEL A. SANTOS, P.E., PTOE

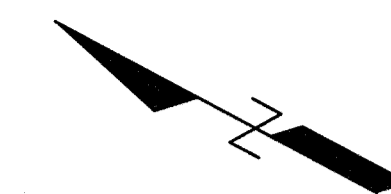
PREPARED FOR:  
CITY OF FITCHBURG  
MAYOR STEPHEN L. DINATALE  
LENNY R. LAAKSO, P.E., DPW COMMISSIONER  
TOM SKWIERAWSKI, DIRECTOR OF COMMUNITY DEVELOPMENT

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

**COMPLETE SET 9 SHEETS**

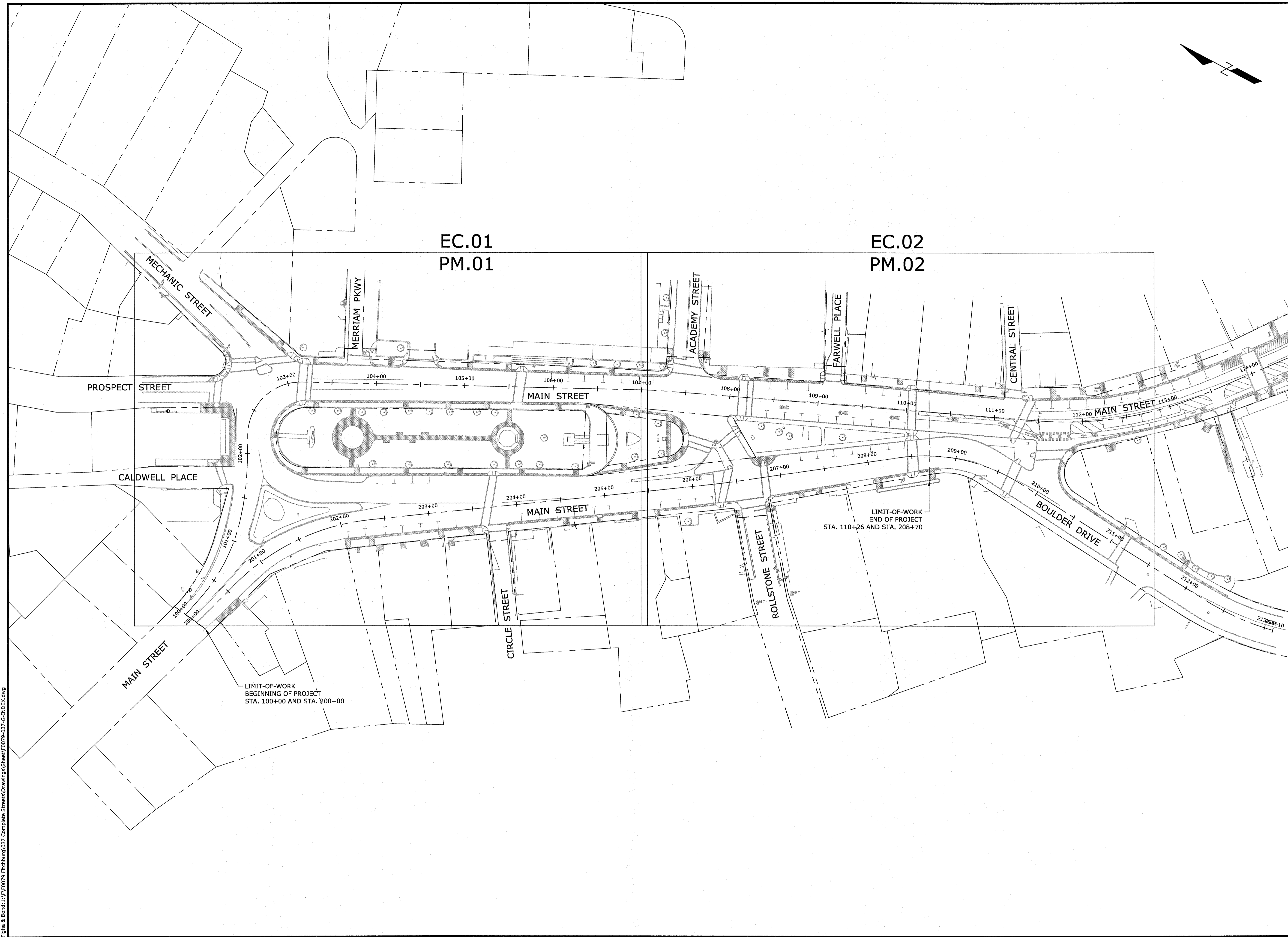
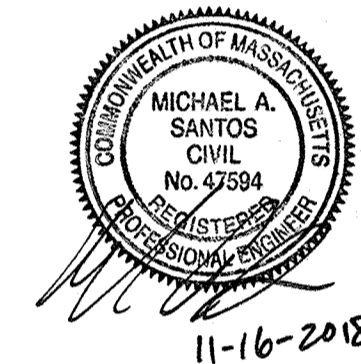
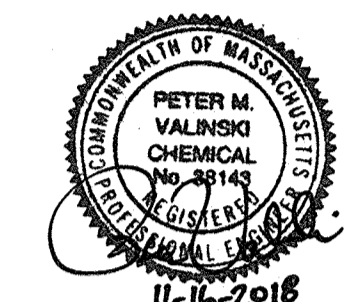






EC.01  
PM.01

EC.02  
PM.02



LIMIT-OF-WORK  
BEGINNING OF PROJECT  
STA. 100+00 AND STA. 200+00

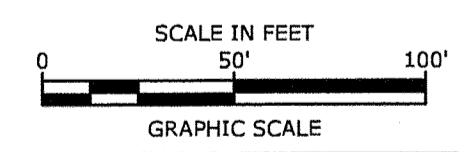
LIMIT-OF-WORK  
END OF PROJECT  
STA. 110+26 AND STA. 208+70

**City of  
Fitchburg**

**Complete  
Streets  
Improvements  
Main Street  
Upper Common**

Fitchburg,  
Massachusetts

November 2018



MARK	DATE	DESCRIPTION

PROJECT NO: F0079-037  
DATE: November 16, 2018  
FILE: F0079-037-G-INDEK.DWG  
DRAWN BY: SCK  
CHECKED: MAS  
APPROVED: PMV

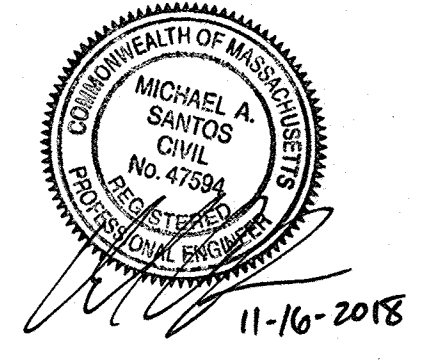
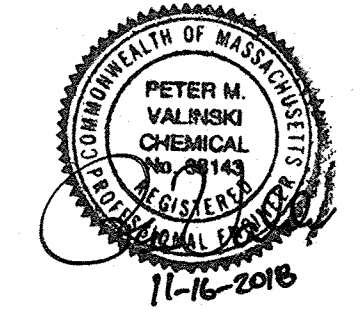
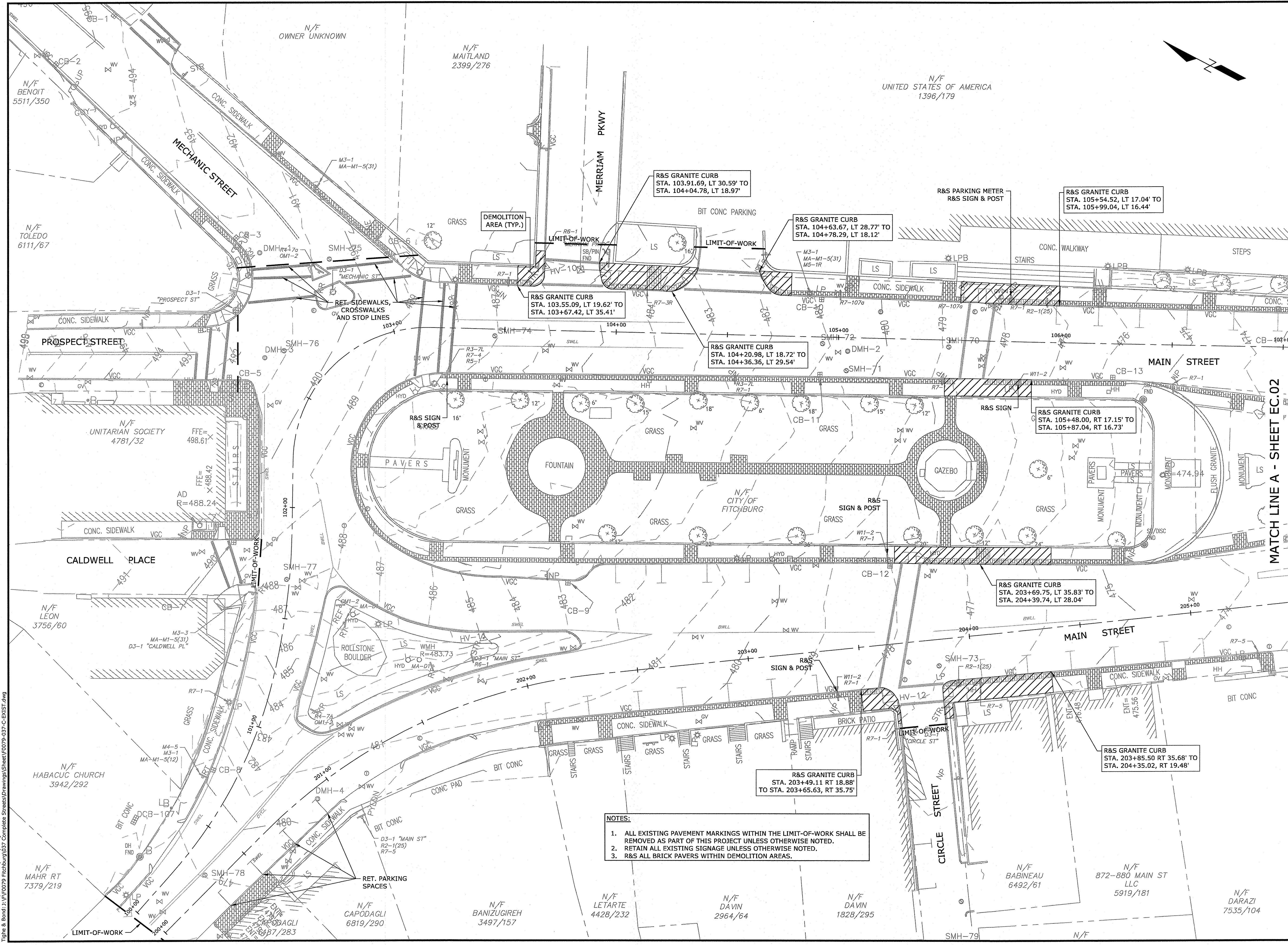
INDEX  
SHEET

SCALE: AS SHOWN

IN.01

Last Saved: 11/16/2018 12:55pm By: Sckellander  
Plotted On: Nov 16, 2018 12:55pm By: Sckellander  
Tighe & Bond: F:\0079 Fitchburg\037 Complete Streets\Drawings\Sheet\F0079-037-G-INDEK.dwg



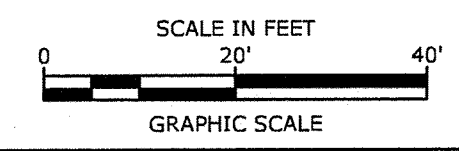


**City of Fitchburg**

**Complete Streets Improvements Main Street Upper Common**

Fitchburg, Massachusetts

November 2018



MARK	DATE	DESCRIPTION
PROJECT NO:	F0079-037	
DATE:	November 16, 2018	
FILE:	F0079-037-C-EXIST.DWG	
DRAWN BY:	SKC	
CHECKED:	MAS	
APPROVED:	PMV	

**EXISTING CONDITIONS & DEMOLITION PLANS**

SCALE: AS SHOWN

**EC.01**

- NOTES:**
1. ALL EXISTING PAVEMENT MARKINGS WITHIN THE LIMIT-OF-WORK SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE NOTED.
  2. RETAIN ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.
  3. R&S ALL BRICK PAVERS WITHIN DEMOLITION AREAS.

Last Saved: 11/16/2018 12:56pm By: SJK/lander  
 Plotted On: Nov 16, 2018 12:56pm  
 Tighe & Bond: J:\F0079 Fitchburg\037 Complete Streets Drawings\Sheet\F0079-037-C-EXIST.dwg



N/F  
ELCEMCH LLC  
6216/162

N/F  
WORKERS CREDIT UNION  
1192/168

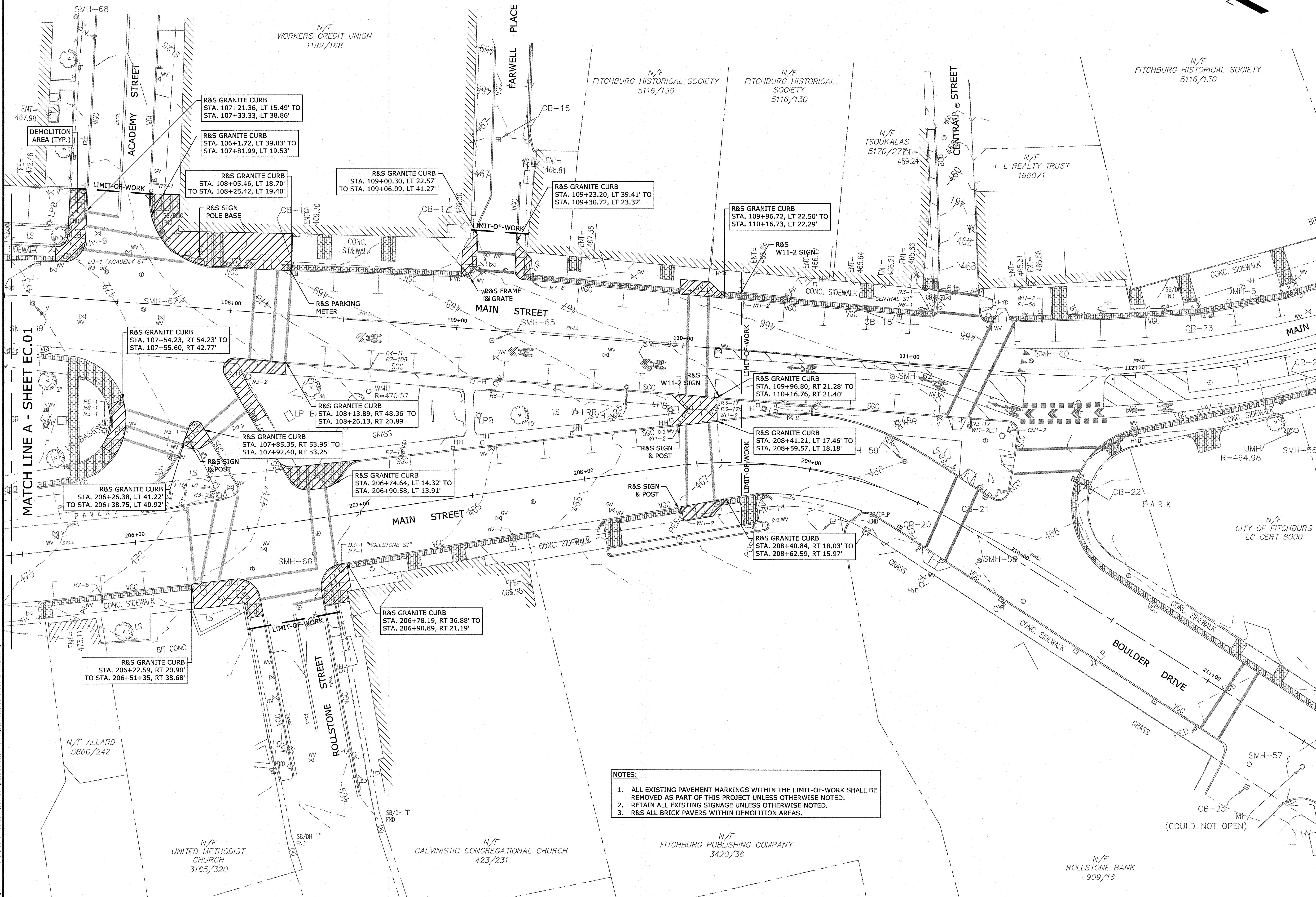
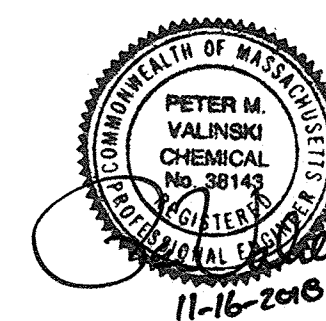
N/F  
FITCHBURG HISTORICAL SOCIETY  
5116/130

N/F  
FITCHBURG HISTORICAL SOCIETY  
5116/130

N/F  
FITCHBURG HISTORICAL SOCIETY  
5116/130

N/F  
TSOUKALAS  
5170/272  
459.24

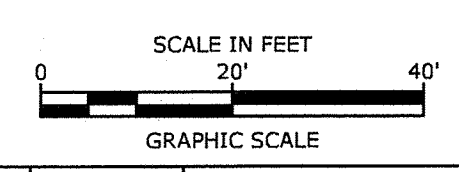
N/F  
+ L REALTY TRUST  
1660/1



MATCH LINE A - SHEET EC.01

- NOTES:**
1. ALL EXISTING PAVEMENT MARKINGS WITHIN THE LIMIT-OF-WORK SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE NOTED.
  2. RETAIN ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.
  3. R&S ALL BRICK PAVERS WITHIN DEMOLITION AREAS.

**City of Fitchburg**  
**Complete Streets Improvements Main Street Upper Common**  
Fitchburg, Massachusetts  
November 2018

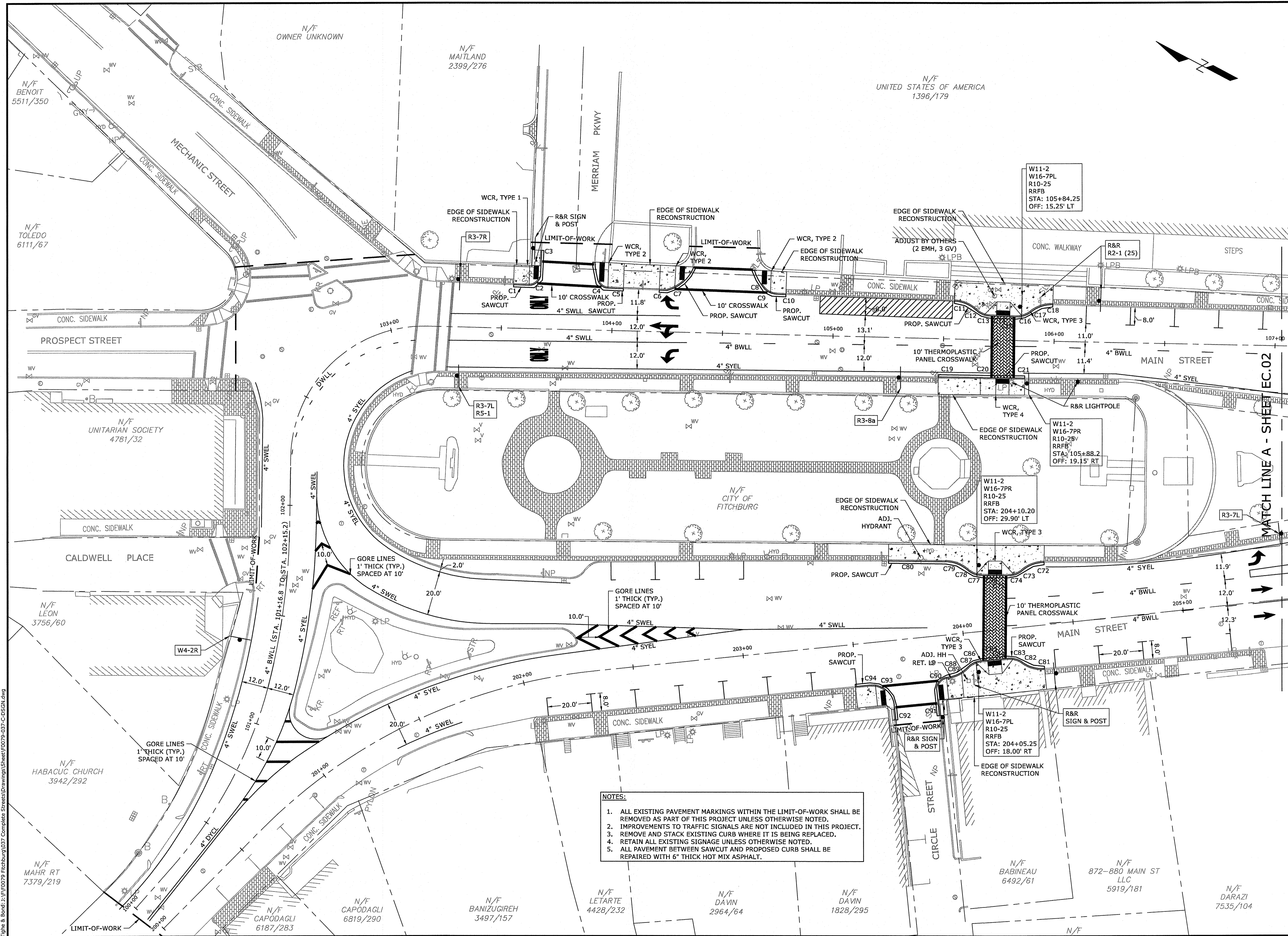


MARK	DATE	DESCRIPTION
PROJECT NO:	F0079-037	
DATE:	November 16, 2018	
FILE:	F0079-037-C-EXIST.DWG	
DRAWN BY:	SCK	
CHECKED:	PMV	
APPROVED:	PMV	

**EXISTING CONDITIONS & DEMOLITION PLANS**  
SCALE: AS SHOWN  
**EC.02**

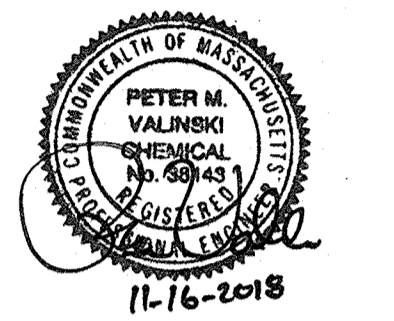
Last Saved: 11/16/2018 12:56pm By: Skjelander  
Printed On: Nov 16, 2018 12:56pm  
Tighe & Bond 31 Fitchburg 037 Complete Streets Improvements Main Street Upper Common





**NOTES:**

1. ALL EXISTING PAVEMENT MARKINGS WITHIN THE LIMIT-OF-WORK SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE NOTED.
2. IMPROVEMENTS TO TRAFFIC SIGNALS ARE NOT INCLUDED IN THIS PROJECT.
3. REMOVE AND STACK EXISTING CURB WHERE IT IS BEING REPLACED.
4. RETAIN ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.
5. ALL PAVEMENT BETWEEN SAWCUT AND PROPOSED CURB SHALL BE REPAIRED WITH 6" THICK HOT MIX ASPHALT.

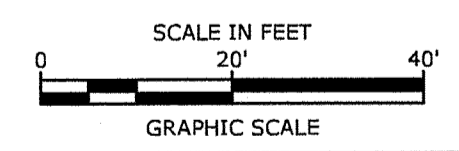


**City of Fitchburg**

Complete Streets Improvements Main Street Upper Common

Fitchburg, Massachusetts

November 2018



MARK	DATE	DESCRIPTION

PROJECT NO: F0079-037  
DATE: November 16, 2018  
FILE: F0079-037-C-D5GN.DWG  
DRAWN BY: SCK  
CHECKED: MAS  
APPROVED: PMV

**PAVEMENT MARKING & SIGNING PLANS**

SCALE: AS SHOWN

**PM.01**

Last Saved: 11/16/2018 11:22:56pm By: SKjellander  
Plotted On: Nov 16, 2018 12:56pm  
Tighe & Bond, Inc. F0079 Fitchburg 037 Complete Streets Drawings/Sheet/F0079-037-C-D5GN.dwg



N/F  
ELCEVICH LLC  
6216/162

N/F  
WORKERS CREDIT UNION  
1192/168

N/F  
FITCHBURG HISTORICAL SOCIETY  
5116/130

N/F  
FITCHBURG HISTORICAL SOCIETY  
5116/130

N/F  
TSOUKALAS  
5170/277

N/F  
+ L REALTY TRUST  
1660/1

N/F ALLARD  
5860/242

N/F  
UNITED METHODIST CHURCH  
3165/320

N/F  
CALVINISTIC CONGREGATIONAL CHURCH  
423/231

N/F  
FITCHBURG PUBLISHING COMPANY  
3420/36

N/F  
ROLLSTONE BANK  
909/16

**NOTES:**

1. ALL EXISTING PAVEMENT MARKINGS WITHIN THE LIMIT-OF-WORK SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE NOTED.
2. IMPROVEMENTS TO TRAFFIC SIGNALS ARE NOT INCLUDED IN THIS PROJECT.
3. REMOVE AND STACK EXISTING CURB WHERE IT IS BEING REPLACED.
4. RETAIN ALL EXISTING SIGNAGE UNLESS OTHERWISE NOTED.
5. ALL PAVEMENT BETWEEN SAWCUT AND PROPOSED CURB SHALL BE REPAIRED WITH 6" THICK HOT MIX ASPHALT.

CURB TABLE			
CURB NOTE	ITEM #	LENGTH (FT)	RADIUS (FT)
C1	509.	7.0	-
C2	509.1	2.6	5.0
C3	509.	7.0	-
C4	509.1	5.4	5.0
C5	509.	7.1	-
C6	509.	3.7	-
C7	509.1	9.2	17.3
C8	509.	2.1	-
C9	509.1	6.4	8.0
C10	509.	4.3	-
C11	506.1	10.6	15.0
C12	506.1	4.7	10.0
C13	509.1	2.4	10.0
C14	509.	3.0	-
C15	509.	3.0	-
C16	509.1	2.4	10.0
C17	506.1	4.7	10.0
C18	506.1	10.6	15.0
C19	506.	19.0	-
C20	509.	7.0	-
C21	509.	7.0	-
C22	509.	3.0	-
C23	509.1	15.5	10.0
C24	509.	7.0	-
C25	509.	7.7	-
C26	509.1	3.3	19.7
C27	509.	10.9	-
C28	509.	7.0	-
C29	509.	7.0	-
C30	509.1	4.3	11.0
C31	509.	7.0	-
C32	509.	7.0	-
C33	509.1	5.2	4.0
C34	509.	3.2	-
C35	509.	7.0	-
C36	509.	7.0	-
C37	509.	7.0	-
C38	509.	7.0	-
C39	509.	7.0	-
C40	509.	7.0	-
C41	509.	7.0	-
C42	509.	7.0	-
C43	509.1	4.5	12.3
C44	509.	0.8	-
C45	509.	0.8	-
C46	509.1	4.5	10.4
C47	509.	3.0	-
C48	509.1	3.0	10.0
C49	509.1	1.5	10.0
C50	509.	5.5	-
C51	509.	6.8	-
C52	509.1	6.6	10.0
C53	509.	6.2	-
C54	506.	13.2	-
C55	509.	7.0	-
C56	509.	7.0	-
C57	506.	2.3	-
C58	506.1	11.0	5.0
C59	506.	4.4	-
C60	509.	7.0	-
C61	509.	7.0	-
C62	510.	3.9	-
C63	510.	2.2	-
C64	510.1	6.9	3.0
C65	510.	2.0	-
C66	510.	4.1	-
C67	510.	4.1	-
C68	510.1	4.8	5.0
C69	510.	4.8	-
C70	509.	9.4	-
C71	509.	9.4	-
C72	506.1	10.6	15.0
C73	506.1	4.7	10.0
C74	509.1	2.4	10.0
C75	509.	3.0	-
C76	509.	3.0	-
C77	509.1	2.4	10.0
C78	506.1	4.7	10.0
C79	506.1	10.6	15.0
C80	506.	26.0	-
C81	506.1	10.6	15.0
C82	506.1	4.7	10.0
C83	509.1	2.4	10.0
C84	509.	3.0	-
C85	509.	3.0	-
C86	509.1	2.4	10.0
C87	506.1	4.7	10.0
C88	506.1	3.7	15.0
C89	509.1	6.9	15.0
C90	509.1	5.7	5.0
C91	509.	10.0	-
C92	509.	5.0	-
C93	509.1	7.5	10.0
C94	509.	6.7	-

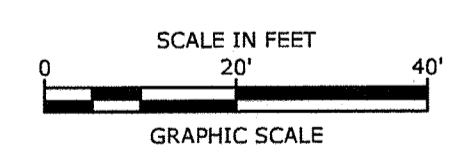


**City of Fitchburg**

**Complete Streets Improvements Main Street Upper Common**

Fitchburg, Massachusetts

November 2018



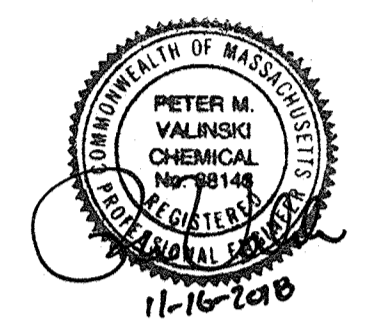
MARK	DATE	DESCRIPTION
PROJECT NO:	F0079-037	
DATE:	November 16, 2018	
FILE:	F0079-037-C-DSGN.DWG	
DRAWN BY:	SCK	
CHECKED:	MAS	
APPROVED:	PMV	
<b>PAVEMENT MARKING &amp; SIGNING PLANS</b>		
SCALE:	AS SHOWN	
<b>PM.02</b>		

Last Saved: 11/16/2018 12:56pm By: SKjallander  
 Plotted On: Nov 16, 2018 12:56pm By: SKjallander  
 Tighe & Bond: \\f0079-fitchburg\037-Complete Streets Drawings\Sheet\F0079-037-C-DSGN.dwg



**WHEELCHAIR RAMP NOTES:**

1. ROADWAY SIDEWALK CROSS SLOPES, FOR BRICK, CEMENT CONCRETE AND BITUMINOUS CONCRETE, AS INDICATED IN THE STANDARD SPECIFICATIONS, WILL BE 1.5%. A CONSTRUCTION TOLERANCE OF 0.5% IS ACCEPTABLE ON ROADWAY SIDEWALKS. SIDEWALKS ON BRIDGES WILL BE CONSTRUCTED TO A CROSS SLOPE OF 1.0% IN ACCORD WITH BRIDGE POLICY. (REFER TO STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, SECTION 700.) IN ACCORDANCE WITH 521 CMR THE RULES AND REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD (AAB), THE SIDEWALK CROSS SLOPE CANNOT EXCEED 2.0%.
2. LOW SIDE TRANSITION LENGTH SHALL BE A MINIMUM OF 6'-6".
3. HIGH SIDE TRANSITION LENGTH DETERMINED FROM PROVIDED TABLE.
4. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-3" SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, SIGNS, SIGNAL FOUNDATIONS AND MASTS, MAILBOXES, ALONG DRIVE OPENINGS, ETC.).
5. THE WHEELCHAIR RAMP SLOPES AND SIDE SLOPES (TRANSITIONS) WILL BE 7.5% WITH A CONSTRUCTION TOLERANCE OF 0.5%±. HOWEVER, THESE SLOPES MAY BE FLATTER WHEN WARRANTED BY SURROUNDING CONDITIONS.
6. WHERE THE ROAD PROFILE EXCEEDS 4%, THE HIGH SIDE TRANSITION LENGTH UNDER ANY CONDITIONS NEED NOT EXCEED 15-FEET.
7. IN NO CASE WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED ON THE TRAFFIC APPROACH SIDE OF THAT STOP LINE.
8. FIXED OBJECTS (I.E. UTILITY POLES, HYDRANTS, SIGN, SIGNAL FOUNDATIONS, ETC.) MUST NOT ENCRUCH ON ANY PART OF THE WHEELCHAIR RAMP INCLUDING TRANSITION SLOPES.
9. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP, EXCLUDING CURB TRANSITIONS, TO BE LOCATED OUTSIDE THE CROSSWALK. THE WHEELCHAIR RAMP ENTRANCE IS TO BE CENTERED IN THE CROSSWALK WHENEVER POSSIBLE.
10. THE ENTRANCE OF A WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
11. TESTING SURFACE: WHEN TESTING WITH A STRAIGHTEDGE PLACED PARALLEL TO THE LINE OF SLOPE THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF 1/4".
12. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL OF THE PROPOSED WHEELCHAIR RAMP AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION STANDARD M/E 107.6.5R.



**City of Fitchburg**  
Complete Streets Improvements Main Street Upper Common  
Fitchburg, Massachusetts  
November 2018

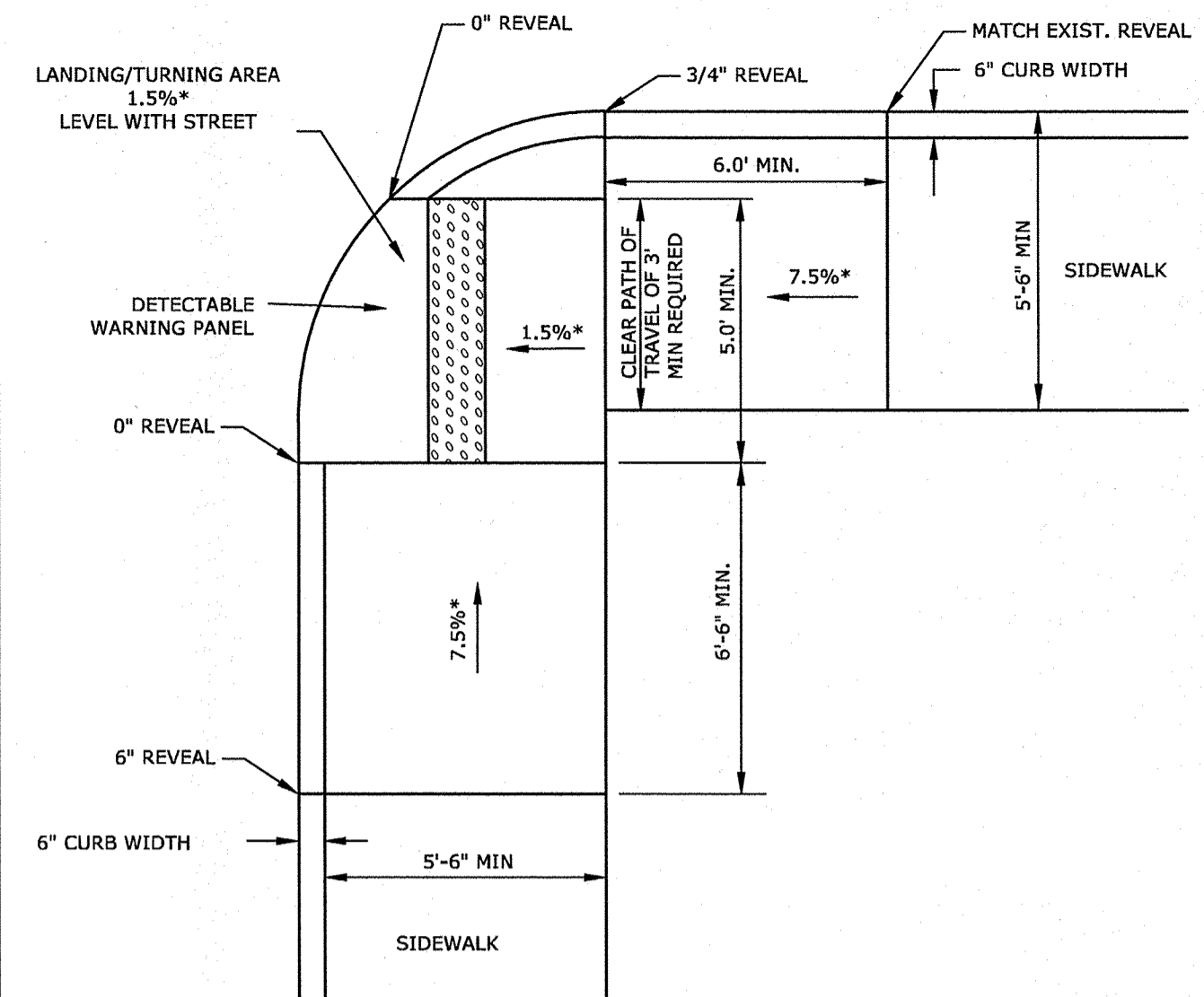
MARK	DATE	DESCRIPTION

PROJECT NO: F0079-037  
DATE: November 16, 2018  
FILE: F0079-037-C-DTLS.DWG  
DRAWN BY: SCK  
CHECKED: MAS  
APPROVED: PMV

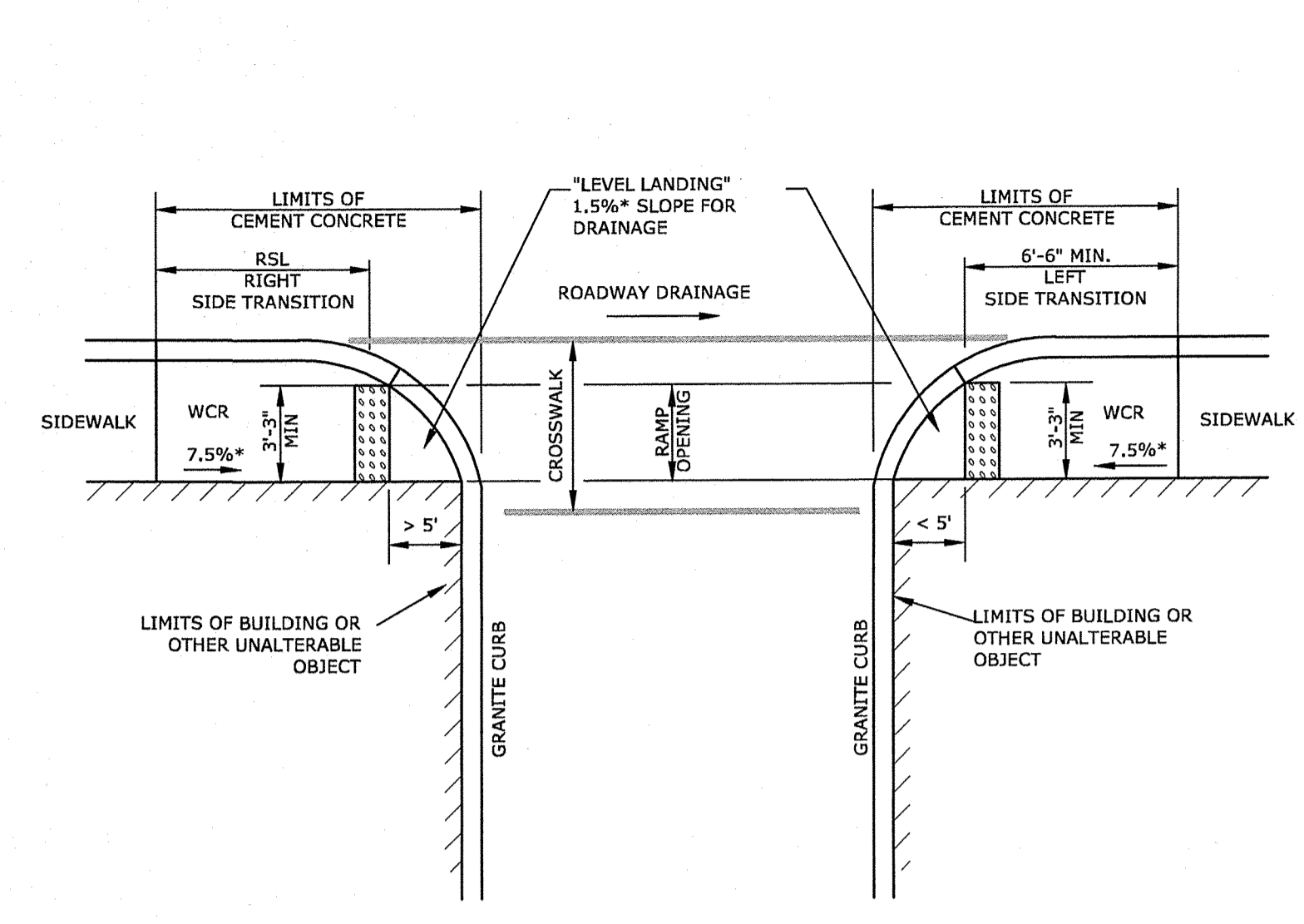
DETAILS

SCALE: AS SHOWN

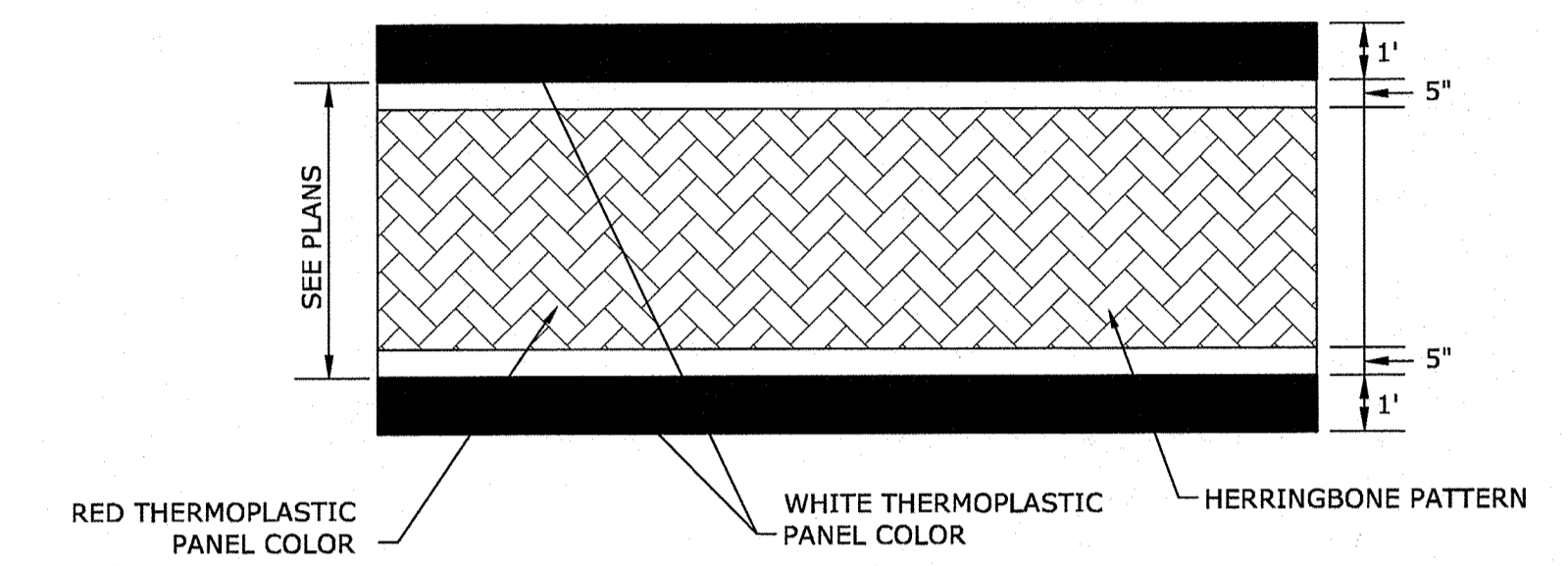
**DS.01**



**TYPICAL WHEELCHAIR RAMP - TYPE 1**  
NO SCALE



**TYPICAL WHEELCHAIR RAMP - TYPE 2**  
NO SCALE



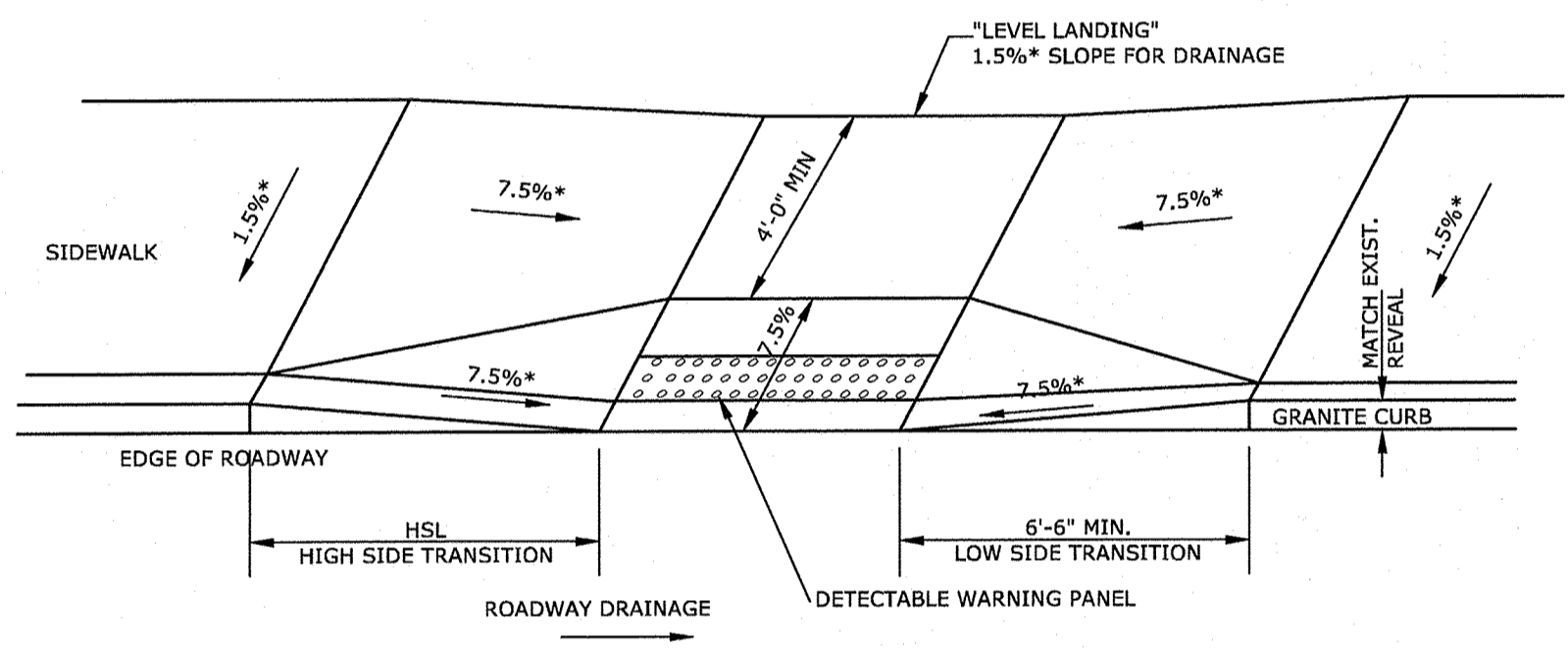
**THERMOPLASTIC PANEL ASPHALT CROSSWALK ON RIVER AND MAIN STREETS**  
NO SCALE

**\*\* HIGH SIDE TRANSITION LENGTH**

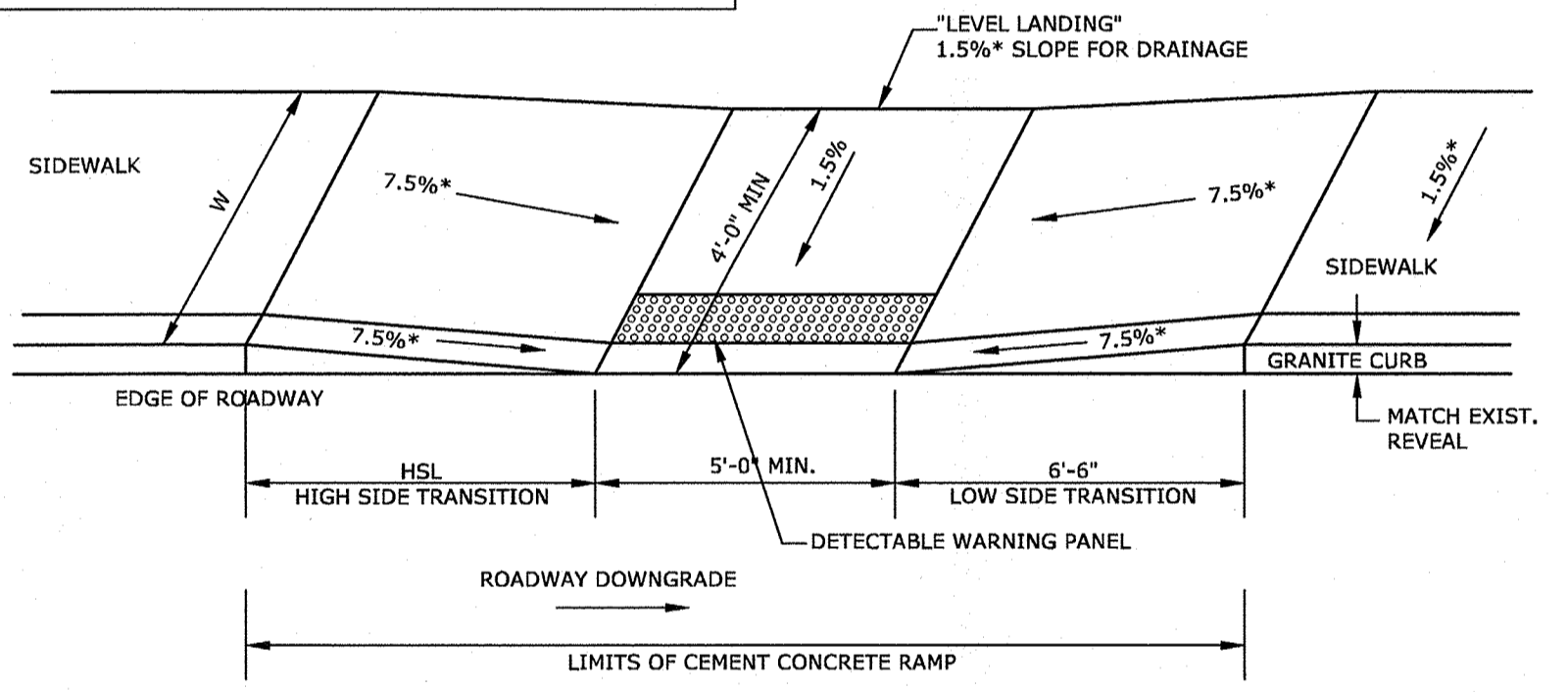
ROADWAY PROFILE GRADE, %	TRANSITION LENGTH
0	6'-6"
>0-1	7'-8"
>1-2	9'-0"
>2-3	11'-0"
>3-4	14'-0"
>4	15'-0" MAX

**NOTE:**  
\*\* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

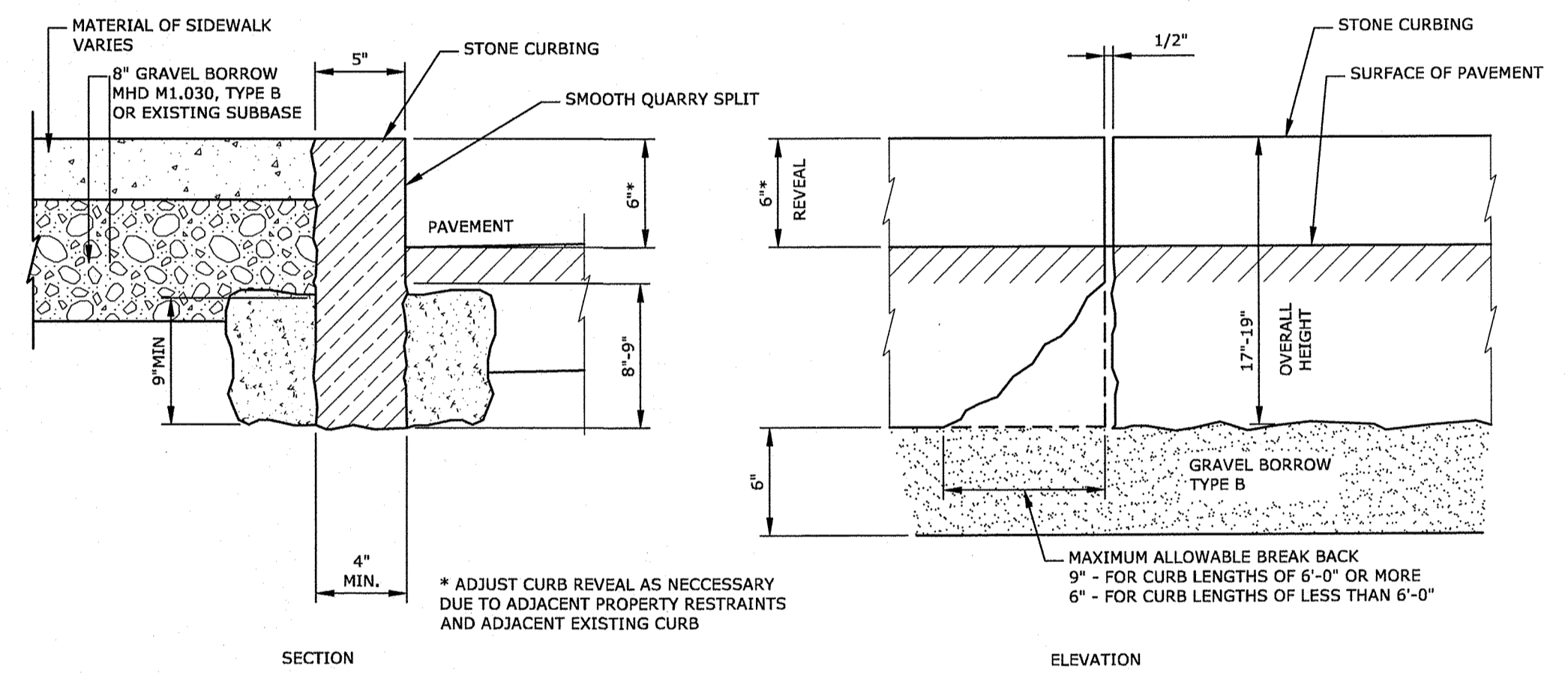
**HIGH SIDE TRANSITION TABLE**



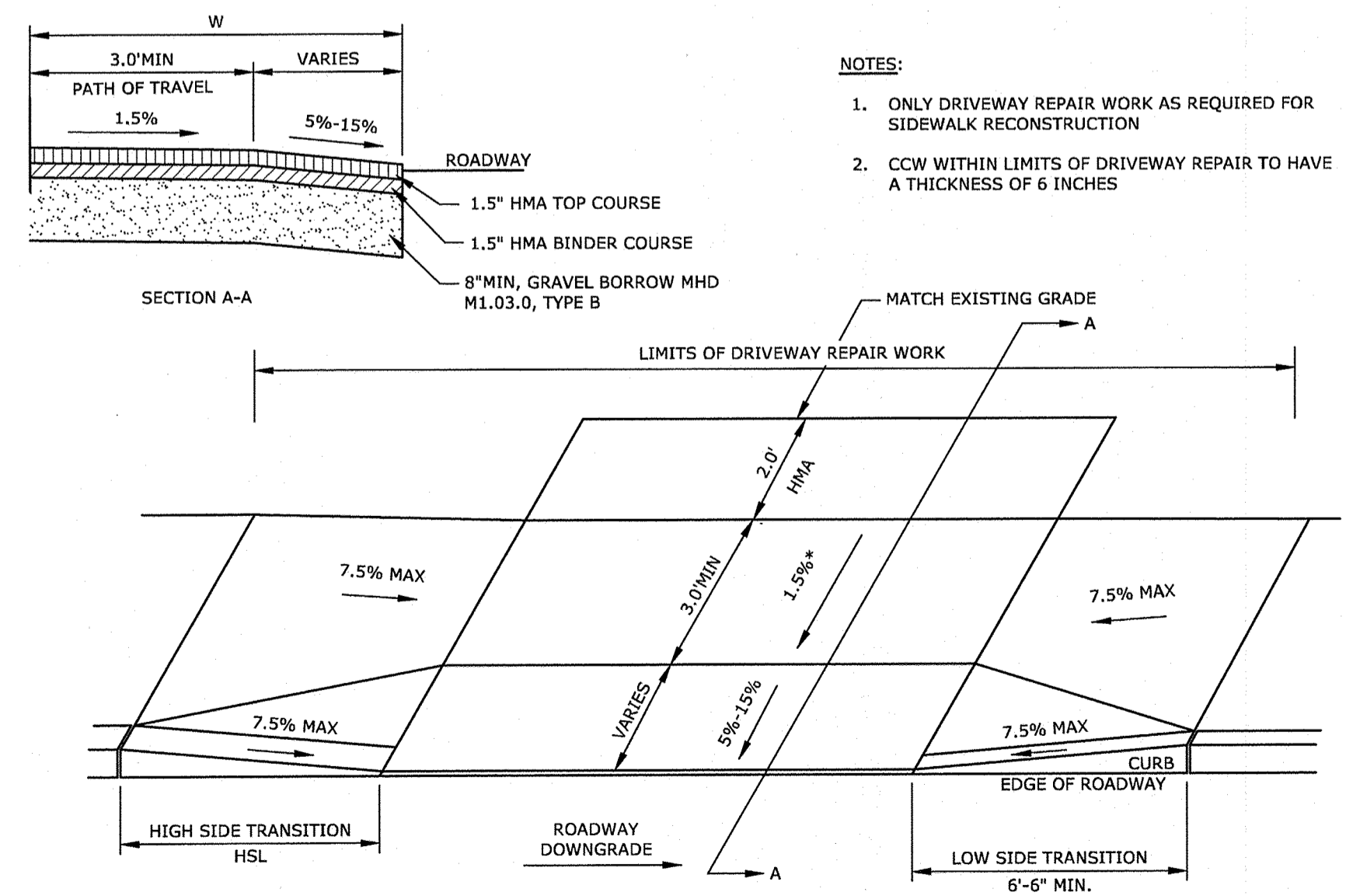
**TYPICAL WHEELCHAIR RAMP - TYPE 3**  
NO SCALE



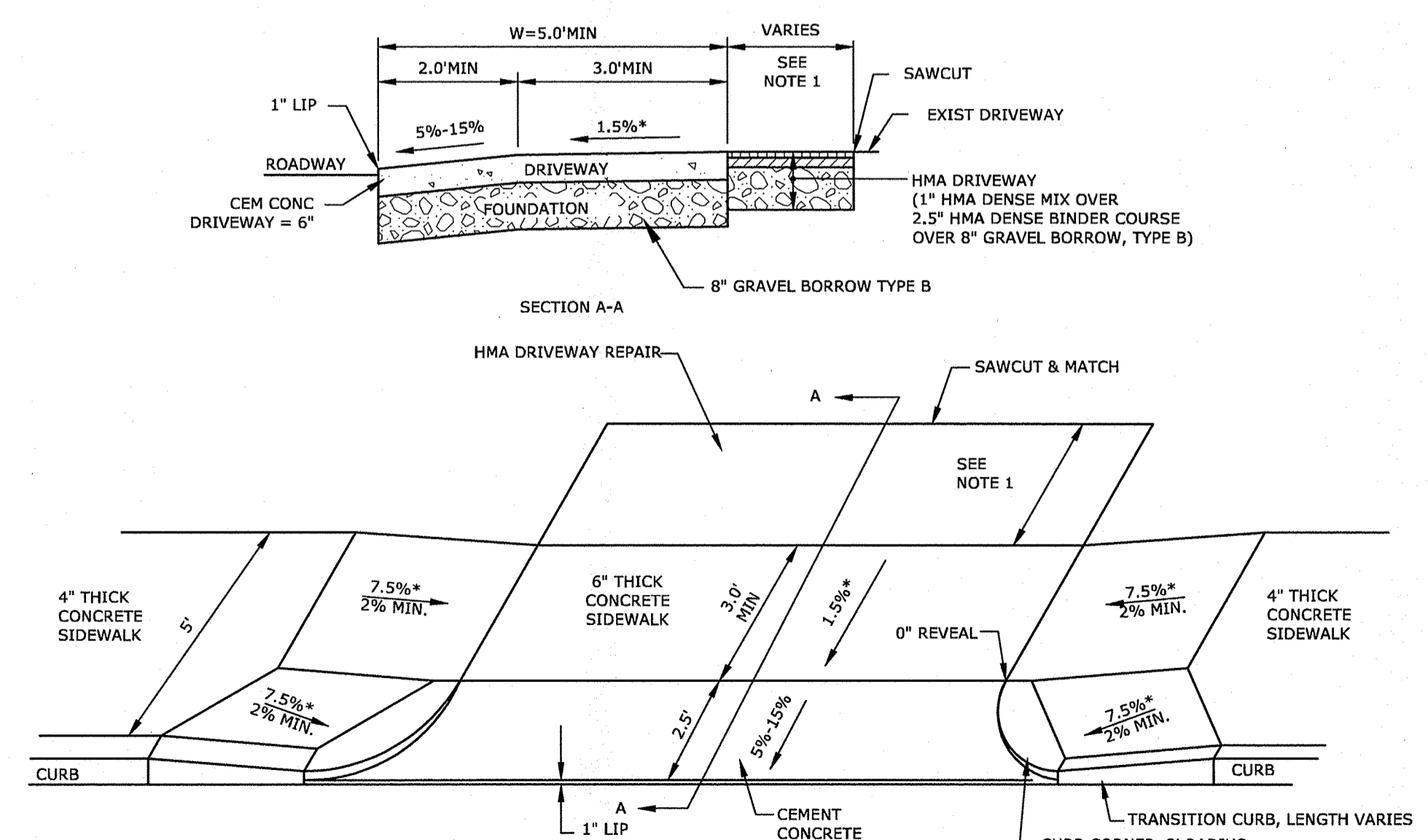
**TYPICAL WHEELCHAIR RAMP - TYPE 4**  
NO SCALE



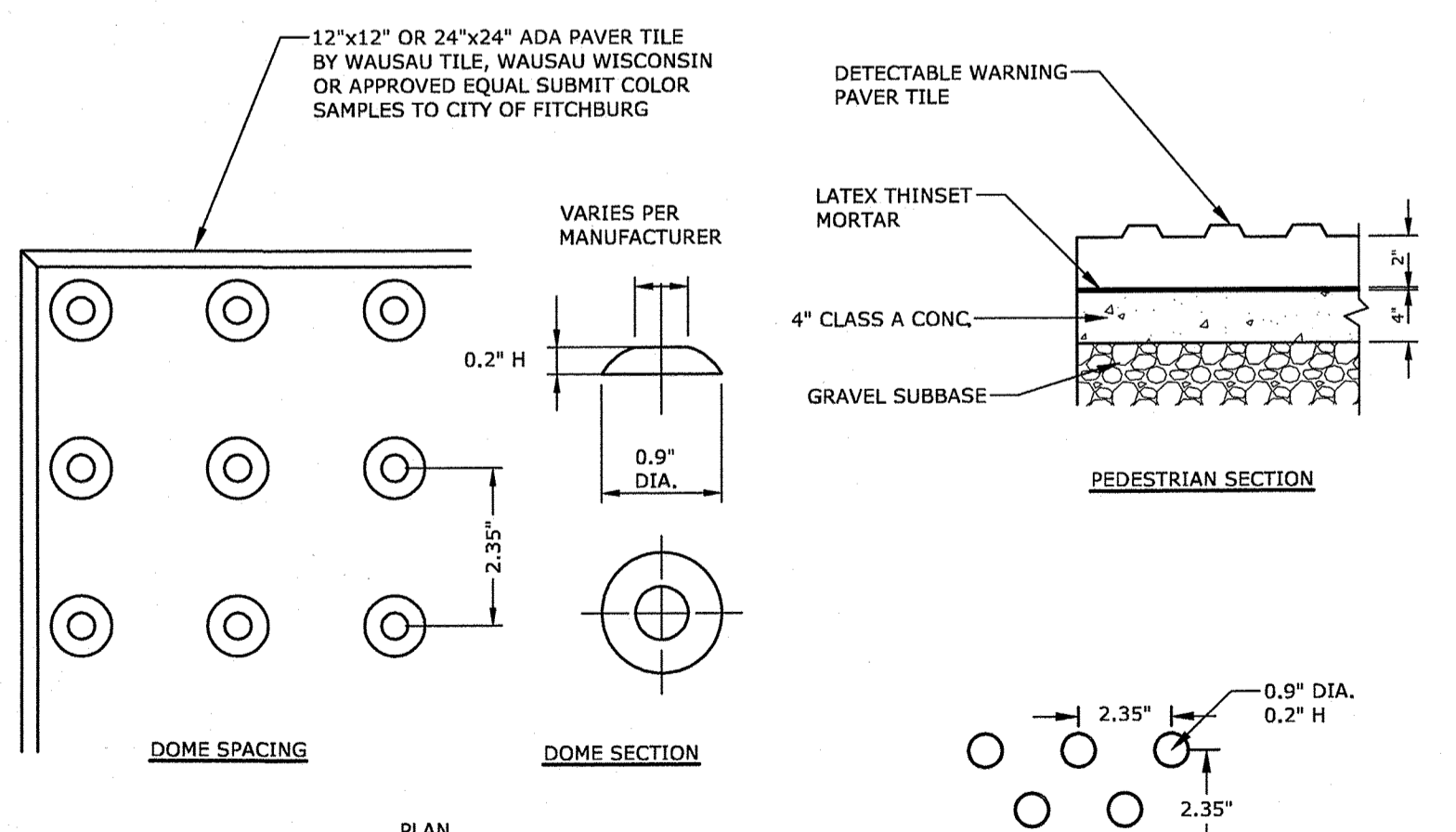
**GRANITE CURB**  
NO SCALE



**SIDEWALK ADJACENT TO CURB THROUGH DRIVEWAY - TYPE 2**  
NO SCALE



**SIDEWALK ADJACENT TO CURB THROUGH DRIVEWAY**  
NO SCALE

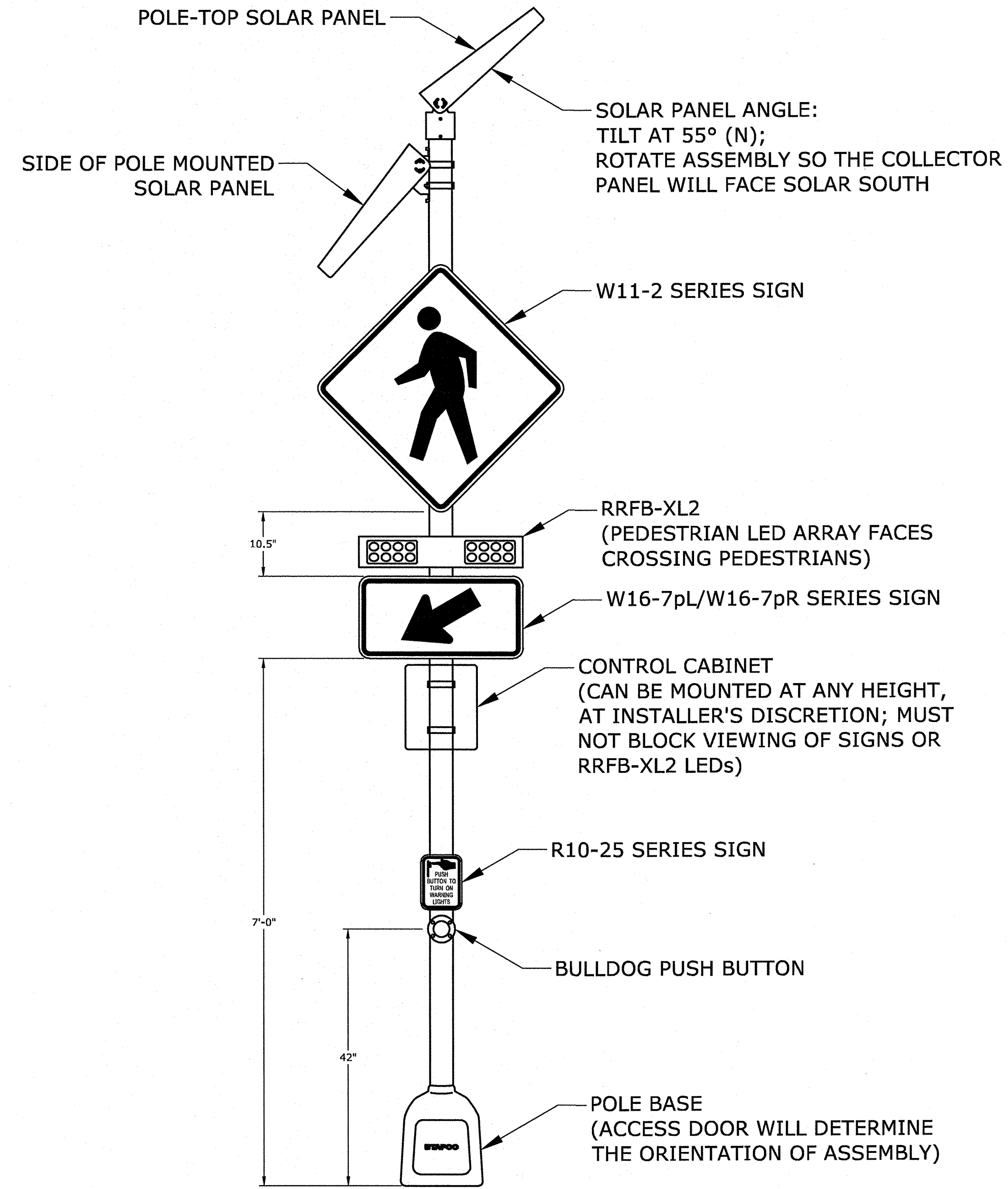


**DETECTABLE WARNING PAVER**  
NO SCALE

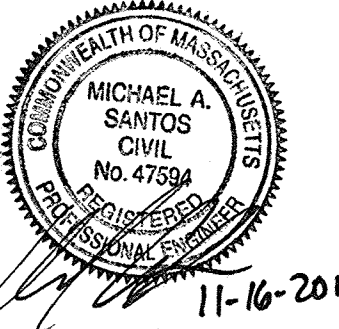
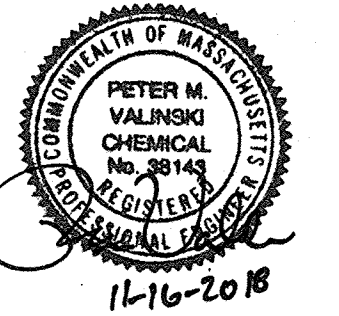
Last Saved: 11/16/2018 12:56pm By: SKjellender Plotted On: Nov 16, 2018 12:56pm Tighe & Bond: J:\F0079 Fitchburg\037 Complete Streets Drawings\Sheet\F0079-037-C-DTLS.dwg



I.D. NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQ'D	COLOR			POST SIZE AND NO. REQ'D	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACK-GROUND	LEGEND	BORDER		
R3-7L	30	30	LEFT LANE MUST TURN LEFT	SEE MUTCD STANDARDS			1	WHITE	BLACK	BLACK	U-CHANNEL 1	6.25
R3-7R	30	30	RIGHT LANE MUST TURN RIGHT				2	WHITE	BLACK	BLACK	U-CHANNEL 2	12.5
R3-8a	44	30					1	WHITE	BLACK	BLACK	U-CHANNEL 1	9.17
R5-1	30	30	DO NOT ENTER				1	WHITE	RED	BLACK	MOUNT W/R3-7L	6.25
R10-25	9	12	PUSH BUTTON TO TURN ON WARNING LIGHTS				4	WHITE	BLACK	BLACK	MOUNT W/RRFB	3.0
W4-2R	30	30					1	YELLOW	BLACK	YELLOW	U-CHANNEL 1	6.25
W11-2	30	30					4	YELLOW	BLACK	YELLOW	U-CHANNEL 4	25.0
W11-2	30	30					4	YELLOW	BLACK	YELLOW	MOUNT W/RRFB	25.0
W16-7PL	24	12					2	YELLOW	BLACK	YELLOW	MOUNT W/W11-2	8.0
W16-7PL	24	12					2	YELLOW	BLACK	YELLOW	MOUNT W/RRFB	8.0
W16-7PR	24	12					2	YELLOW	BLACK	YELLOW	MOUNT W/W11-2	8.0
W16-7PR	24	12					2	YELLOW	BLACK	YELLOW	MOUNT W/RRFB	8.0
RRFB	-	-		↓	↓	↓	4				4" TUBULAR ROUND STEEL	EACH



**RAPID RECTANGULAR FLASHING BEACON (RRFB)**  
NO SCALE



**City of Fitchburg**

Complete Streets Improvements Main Street Upper Common

Fitchburg, Massachusetts

November 2018

MARK	DATE	DESCRIPTION
PROJECT NO:	F0079-037	
DATE:	November 16, 2018	
FILE:	F0079-037-C-SIGN.DWG	
DRAWN BY:	SCK	
CHECKED:	MAS	
APPROVED:	PMV	

SIGN TEXT LAYOUT

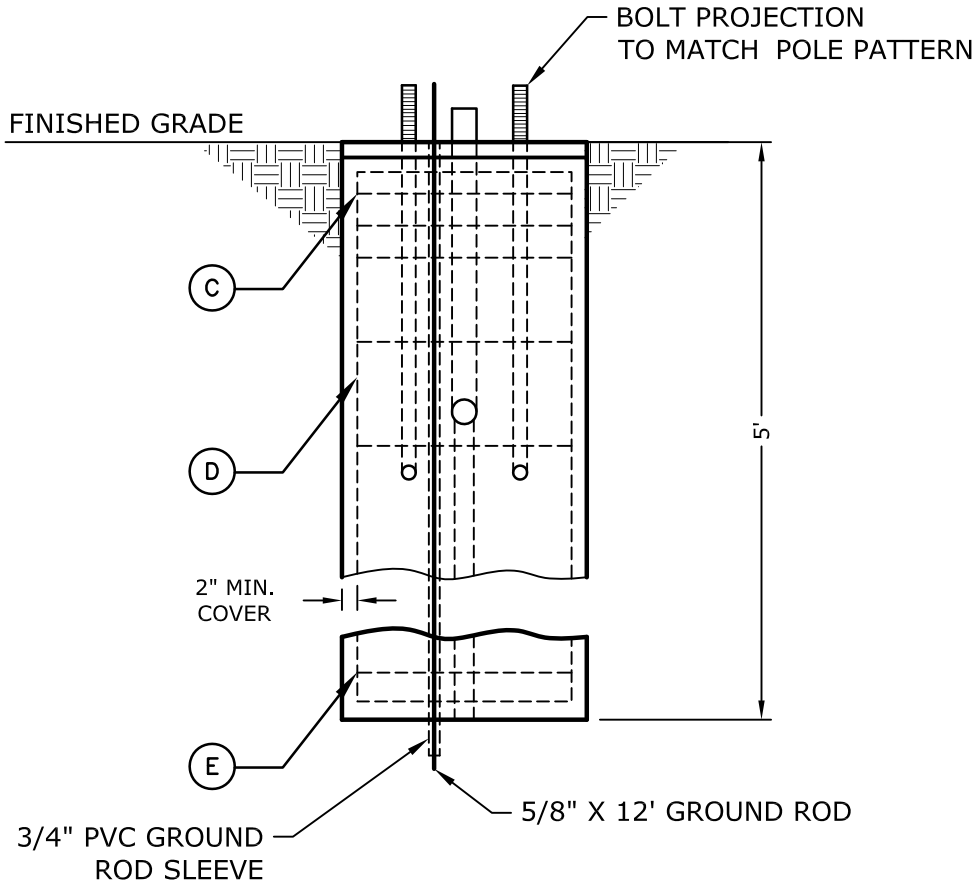
SCALE: AS SHOWN

SN.01

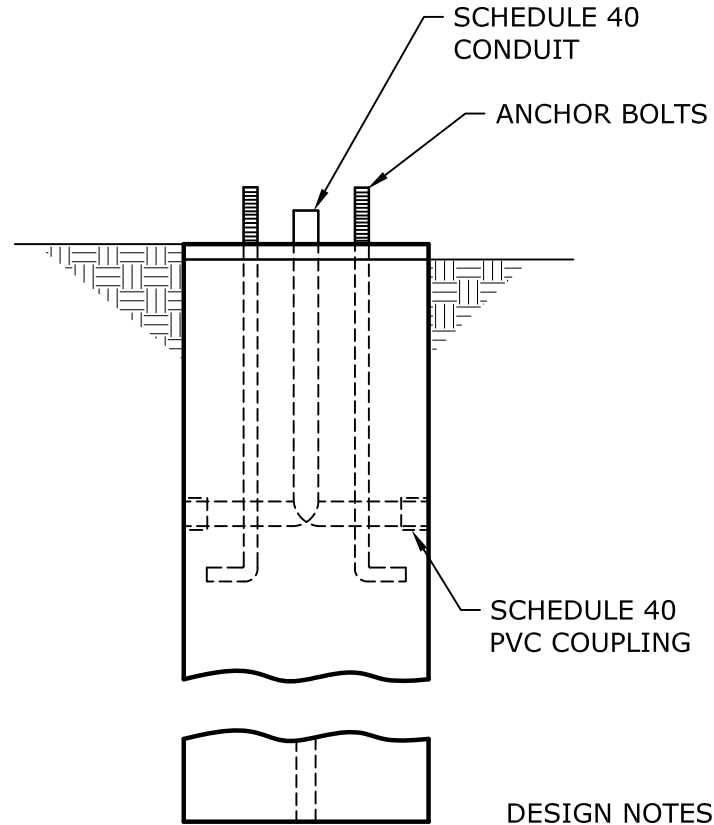


# RRFB Foundation

## PLAN



## SECTION



## ELEVATION

### DESIGN NOTES:

- A. CONCRETE - 5000 PSI, 28 DAYS
- B. ANCHOR BOLTS PER SPEC. REINFORCEMENT
- C. (3) #3 REBAR WRAP HORIZONTAL 2" O.C.
- D. (8) #7 REBAR VERTICAL
- E. # 3 REBAR WRAP HORIZONTAL 12" O.C.

## LIGHT STANDARD FOUNDATION

NO SCALE