

CITY OF QUINCY, MA DEPARTMENT OF PUBLIC WORKS

WASHINGTON STREET & ELM STREET IMPROVEMENTS

CONTRACT NO. #####

MAY 2024



MAYOR

THOMAS P. KOCH

PUBLIC WORKS COMMISSIONER

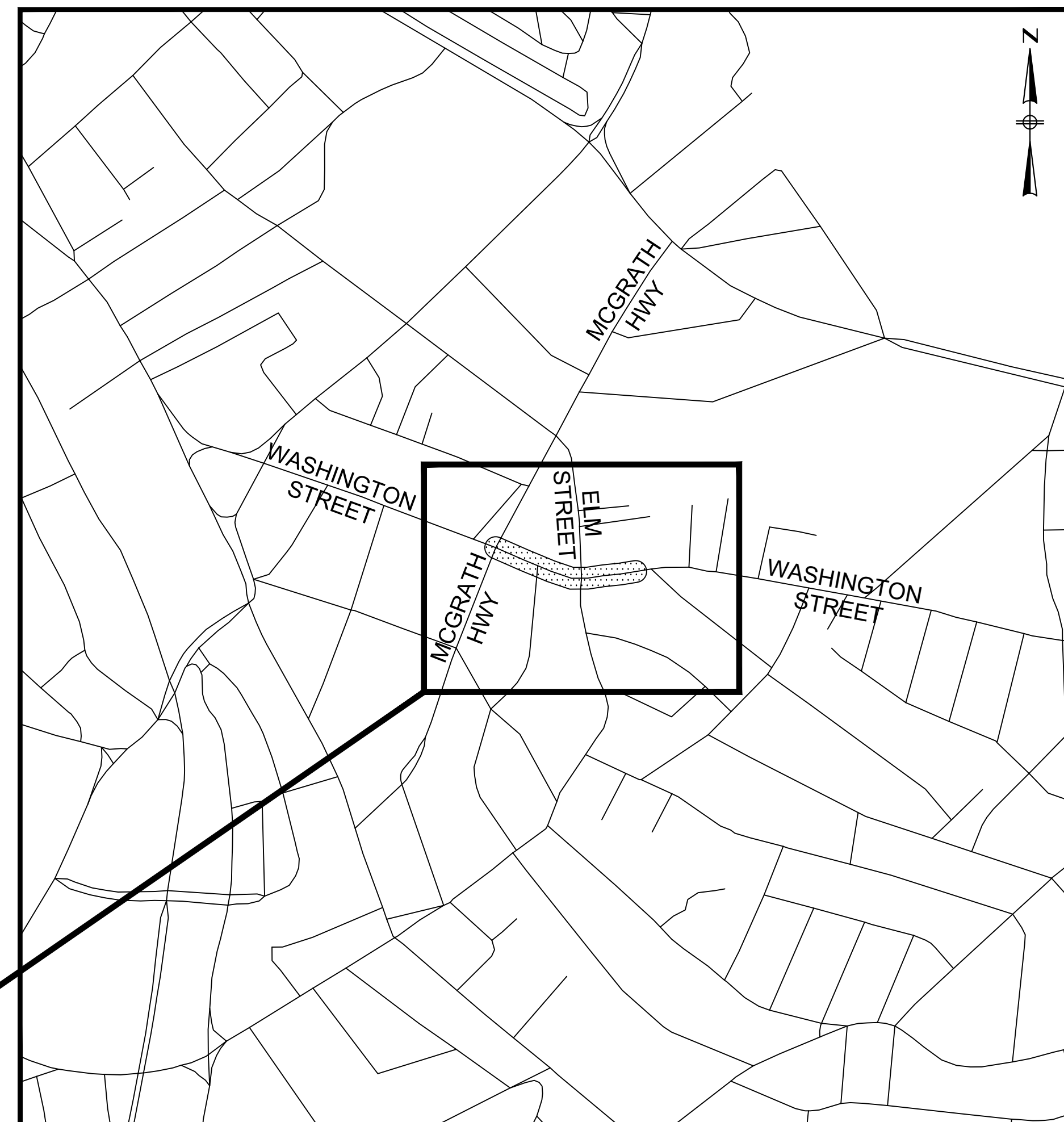
AL GRAZIOSO

CITY ENGINEER

PAUL COSTELLO

TPAL DIRECTOR

EDWARD GRENNON JR.



**Project
Location**

PROJECT LOCATION

LOCATION MAP
SCALE: 1" = 500'

PLAN INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET
2	LEGEND & ABBREVIATIONS
3-5	GENERAL NOTES & CONSTRUCTION DETAILS
6	CONSTRUCTION PLAN
7	CURB TIE PLAN
8	GRADING PLAN
9	SIGN AND PAVEMENT MARKING PLAN

PREPARED BY:



ISSUE DATE: MAY 31, 2024

REGISTERED PROFESSIONAL

DATE

LEGEND

GENERAL SYMBOLS

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

ABBREVIATIONS

GENERAL

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

TRAFFIC SIGNAL SYSTEMS

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

UTILITIES

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

TRAFFIC SIGNAL SYMBOLS

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

PAVEMENT MARKINGS AND SIGNING SYMBOLS

PROPOSED

CW	CROSSWALK, 2 - 12" WHITE LINES (8" WIDTH)
SL	STOP LINE - 12" WHITE LINE 4' BEHIND CW (TYP.)
SWEL	SOLID WHITE EDGE LINE - 4"
SWCHL	SOLID WHITE CHANNELIZING LINES - 12" (SPACING NOTED)
SWGL	SOLID WHITE GORE LINE 12" @ 33°, (SPACING NOTED)
SWLL	SOLID WHITE LANE LINE - 4"
SWPL	SOLID WHITE PARKING LINE - 4"
BWLL	BROKEN WHITE LANE LINE - 4"
DWLEx	DOTTED WHITE LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)
DYLEx	DOTTED YELLOW LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)
BYCL	BROKEN YELLOW CENTERLINE - 4"
DYCL	DOUBLE YELLOW CENTERLINE - 2 - 4" LINES
SYEL	SOLID YELLOW EDGE LINE - 4"
SYGL	SOLID YELLOW GORE LINE 12" @ 33°, (SPACING NOTED)
SYLL	SOLID YELLOW LANE LINE - 4"
SYCTEL	SOLID YELLOW CYCLE TRACK EDGE LINE - 4"
DYCTCL	DOTTED YELLOW CYCLE TRACK CENTERLINE - 4" (3' LINE & 9' GAP)
SCHL	SCHOOL ZONE - WHITE
	HANDICAP SYMBOL - WHITE
	PAVEMENT ARROW - WHITE
	LEGEND "ONLY" - WHITE

5/30/2024 5:37 PM O:\17400\ST1445 - QUINCY - ON-CALL CONTRACT\TASK 6 - WASHINGTON-ELM INTERSECTION\DRAWING FILES\PLANS\SET7445_6 LEGEND.DWG (BETA STB.BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	DRAWN BY: RS	REGISTERED PROFESSIONAL	PREPARED BY: 	SUBCONSULTANT	SCALE NONE	TITLE WASHINGTON STREET/ELM STREET TRAFFIC IMPROVEMENTS LEGEND & ABBREVIATIONS QUINCY, MASSACHUSETTS	BETA JOB NO. 7445_6	ISSUE DATE 5/31/2024	SHEET NO. 2 of 9
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

GENERAL NOTES

- 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 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR EXPLOSIVE WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ABUTTING PROPERTIES AT ALL TIMES AND NOTIFY ALL ABUTTERS IN ADVANCE OF ANY INTERRUPTIONS TO ACCESS.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SANITARY STRUCTURES AS NECESSARY FOR THE CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, CABLE TV, FIRE ALARM AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES. ALL UTILITY CASTING SHALL BE ADJUSTED TO FINISH GRADE BY THEIR RESPECTIVE OWNERS.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 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).
- DRAINAGE STRUCTURES SHALL BE RETAINED UNLESS NOTED OTHERWISE.
- CATCH BASIN AND MANHOLE FRAMES AND GRATES/COVERS SHALL CLEARLY ALIGN WITH THE OPENINGS IN THE PRECAST STRUCTURES AND THE GRADE OF THE ROADWAY.
- WHERE DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE THE CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, DOWN SPOUT FROM BUILDING, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM.
- ALL CURB TIE DIMENSIONS ARE TO THE FACE OF THE CURB (GUTTER LINE) OR EDGE OF TRAVEL WAY.
- CONSTRUCTION BASELINE TIES ARE SHOWN ON CURB TIE & GRADING PLANS.
- 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.
- IN ALL LOCATIONS WHERE PROPOSED SIDEWALK TRANSITIONS DOWN TO MEET EXISTING GRADE, EXISTING SIDEWALK OR PAVED AREA, SLOPE SHALL NOT EXCEED 1:12.
- 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.
- CONTRACTOR SHALL VERIFY EXISTING GRADES. IF ANY ADJUSTMENT IS REQUIRED DUE TO DIFFERENT EXISTING GRADES FOUND IN THE FIELD, THE CONTRACTOR SHALL NOTIFY AND SEEK THE APPROVAL OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
- 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.
- IN FILL AREAS, TOP SOIL SHALL BE REMOVED FOR A DEPTH OF 12" (MIN.) OR AS DIRECTED BY THE ENGINEER. SUBGRADE AREAS WILL BE COMPACTED PRIOR TO THE PLACEMENT OF FILL MATERIAL.
- ALL NEW GRANITE CURB SHALL BE MASSDOT TYPE VA4, UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL EXISTING GRANITE CURB CONFLICTING WITH PROPOSED CONSTRUCTION SHALL BE REMOVED AND DISCARDED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL PROPOSED PAVEMENT MARKINGS ON ROADWAYS SHALL BE REFLECTORIZED WHITE AND YELLOW THERMOPLASTIC.
- SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH MASSDOT REQUIREMENTS AND THE LATEST VERSION OF THE MUTCD.
- TREES TO BE RETAINED WHICH RESTRICT SIGHT DISTANCE OR RESTRICT HORIZONTAL OR VERTICAL CLEARANCES SHALL BE TRIMMED AS REQUIRED BY THE ENGINEER AT NO ADDITIONAL COST.
- NO TREE SHALL BE REMOVED PRIOR TO APPROVAL OF THE CITY OF NEWTON.
- 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. IF ALTERATION TO EXISTING WALLS, BERMS AND OTHER STRUCTURES BECOMES NECESSARY DUE TO THE PROPOSED DESIGN, THE CONTRACTOR SHOULD SEEK THE APPROVAL OF THE ENGINEER.
- ALL PAVEMENT MARKINGS AND/OR SIGN NOTES ARE SHOWN ON THE SIGNS AND PAVEMENT MARKING PLANS.
 - THE EXPOSED EDGES OF ALL LONGITUDINAL AND TRANSVERSE SAW CUT JOINTS SHALL BE TREATED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALANT MEETING MASSDOT SPECIFICATIONS.

WHEELCHAIR RAMP NOTES

- ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B.) AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.). AND THE LATEST MASSDOT STANDARDS.
- THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DETAILS. EXACT LOCATIONS MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
- ALL PROPOSED WHEELCHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS (E 107.65). THE COLOR OF THE PANEL SHALL BE THE CITY STANDARD AND APPROVED BY THE ENGINEER.
- IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP AS DIRECTED BY THE ENGINEER.
- THE TRANSITION SLOPE OF ANY CURB RAMP, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL NOT EXCEED 7.5%, +/-0.5% FOR TOLERANCE OF CONSTRUCTION. PER AAB 521 CMR, FINISHED SLOPE MAY NOT EXCEED 8.33%. PROPOSED WHEELCHAIR RAMP SLOPES, ESPECIALLY HIGH SIDE TRANSITIONS, SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING OF CONCRETE AND ADJUSTED, IF NECESSARY, AT THE DIRECTION OF THE ENGINEER.

SURVEY NOTES

- ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED UTILIZING SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION PROVIDED BY LIGHTHOUSE LAND SURVEYING ON THE PLAN OF TOPOGRAPHIC SURVEY OF QUINCY, DATED MAY, 2023.
- THE UNDERGROUND UTILITIES, AS SHOWN ON THE PLANS, HAVE BEEN COMPILED FROM RECORD PLANS, THE ACCURACY AND COMPLETENESS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT (888)344-7233. ALL CITY OWNED UTILITY STRUCTURES WITHIN AREAS AFFECTED BY THE WORK SHALL BE ADJUSTED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER. ANY UTILITY POLES AND/OR GUY POLES WITHIN AREAS AFFECTED BY THE WORK SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES NOT OWNED BY THE CITY SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS.
- THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
- ALL EXISTING PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- ELEVATIONS SHOWN REFER TO NAVD 88 VERTICAL DATUM. THE COORDINATE INFORMATION INCLUDED ON THESE PLANS IS BASED UPON MASSACHUSETTS GRID SYSTEM, NAD 1983, AS DERIVED FROM GPS CONTROL COORDINATES PROVIDED BY THE MASSDOT HIGHWAY DEPARTMENT SURVEY SECTION.
- BENCHMARK INFORMATION:
SEE CONSTRUCTION BASELINE TIES SHEET 8 FOR BENCHMARK INFORMATION AND LOCATIONS.

PAVEMENT NOTES

CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS

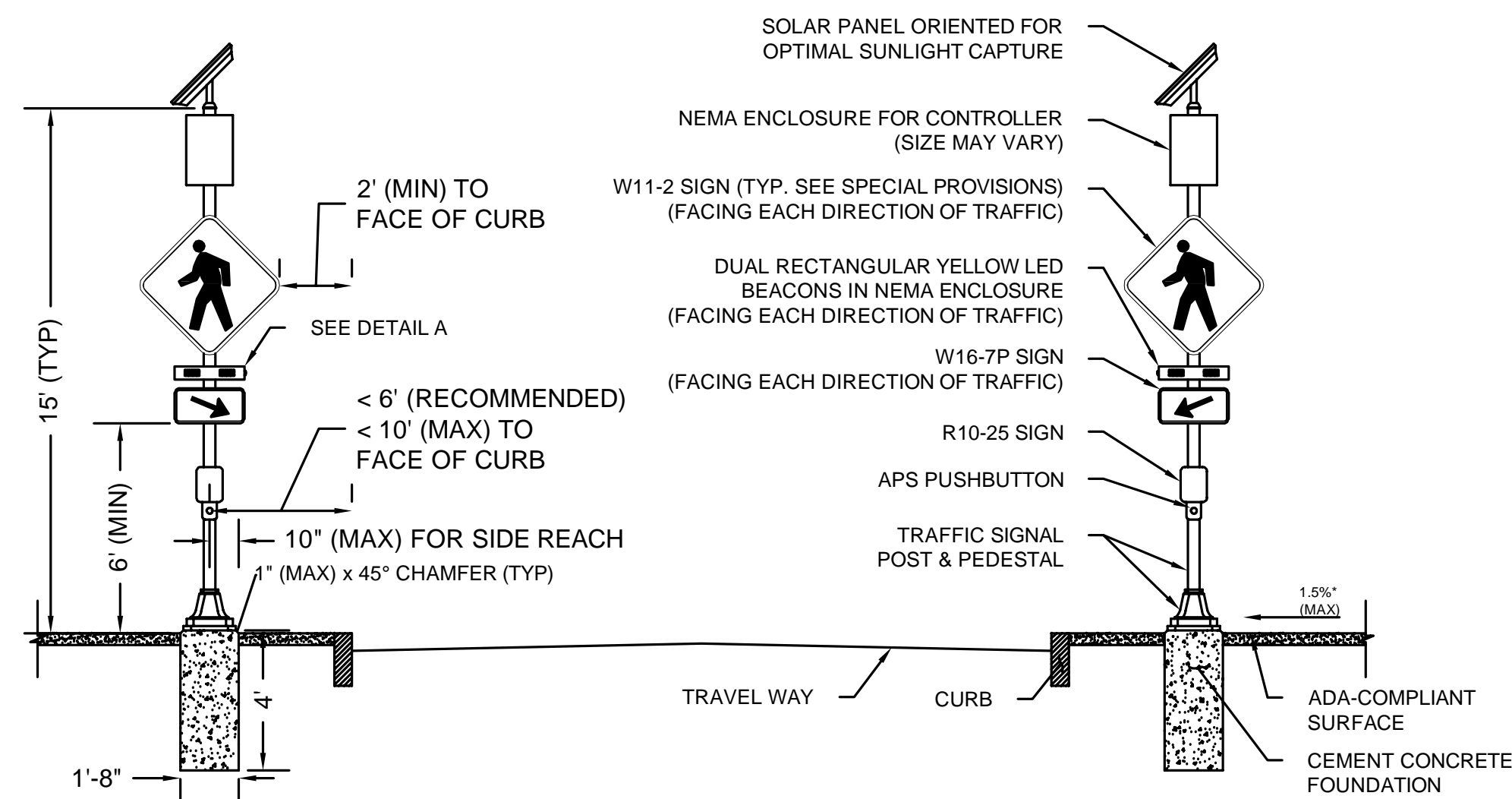
SURFACE: 4" CEMENT CONCRETE WALK SURFACE
4000 PSI, 3/4", 610 OVER
FOUNDATION: 8" GRAVEL BORROW, TYPE b

HMA DRIVEWAYS

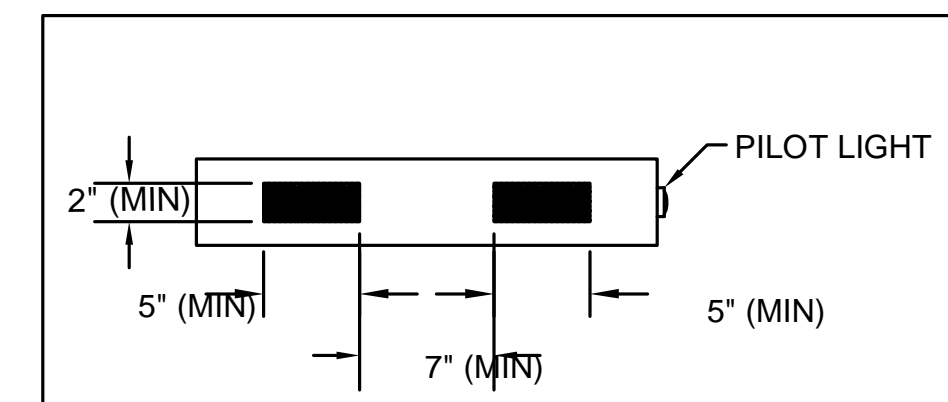
SURFACE: 1.5" SUPERPAVE SURFACE COURSE- 9.5 MM OVER
2.5" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
SUBBASE: 8" GRAVEL BORROW, TYPE b

NOTES:

- CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
- REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
- ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER ARE NOT REQUIRED.
- ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
- *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.



DETAIL FOR RECTANGULAR RAPID FLASHING BEACON (RRFB)
MASSDOT STANDARD DETAIL 824.21.1



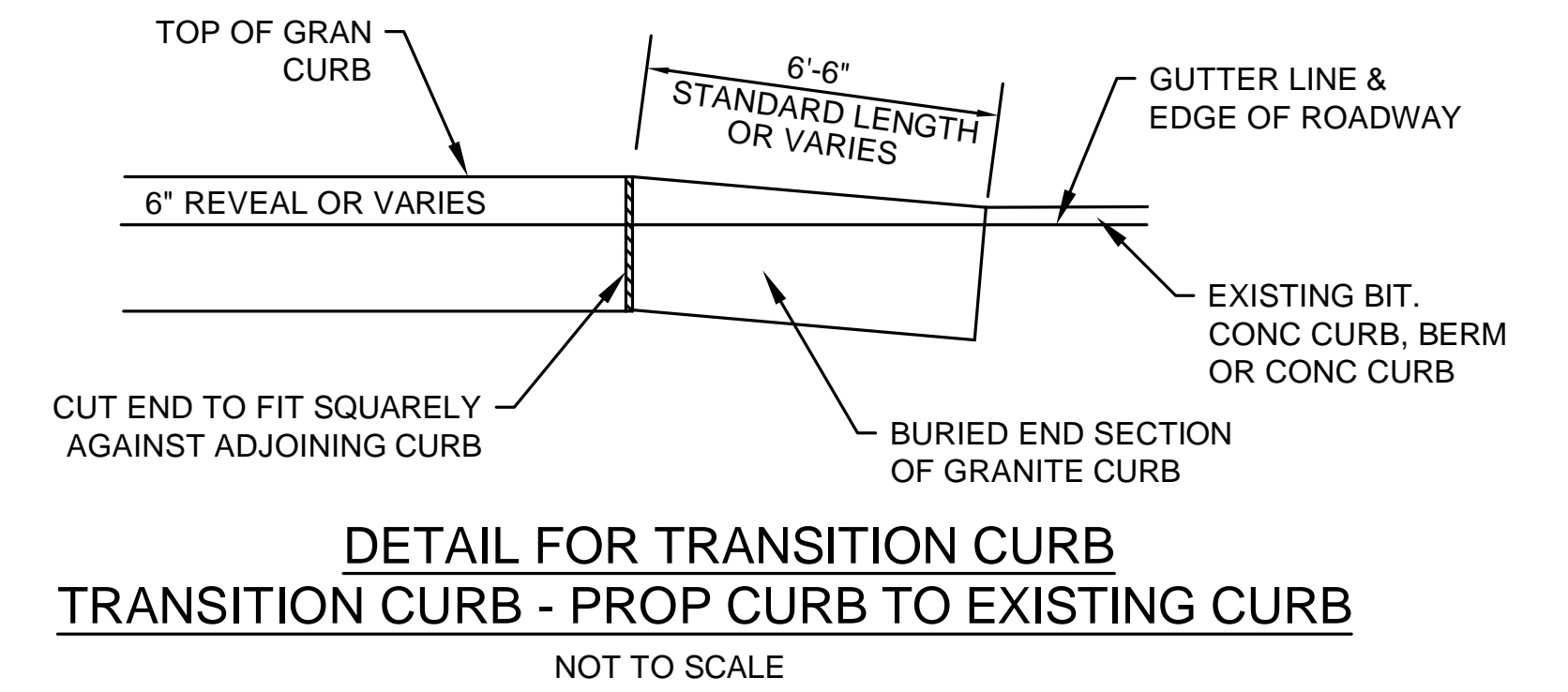
DETAIL A: DUAL YELLOW BEACON

MAJOR ITEMS	
QUANTITY	DESCRIPTION
2	CEMENT CONCRETE FOUNDATIONS PER 812.30.1
2	15' TRAFFIC SIGNAL POSTS & PEDESTALS
2	APS PUSHBUTTON SYSTEMS
4	DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2	R10-25 SIGNS
4	W11-2 SIGNS
2	W16-7PR SIGNS
2	W16-7PL SIGNS
2	SOLAR PANEL SYSTEMS
2	NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS FOR SPECIAL PROVISIONS
2	BATTERY SYSTEMS
PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.	

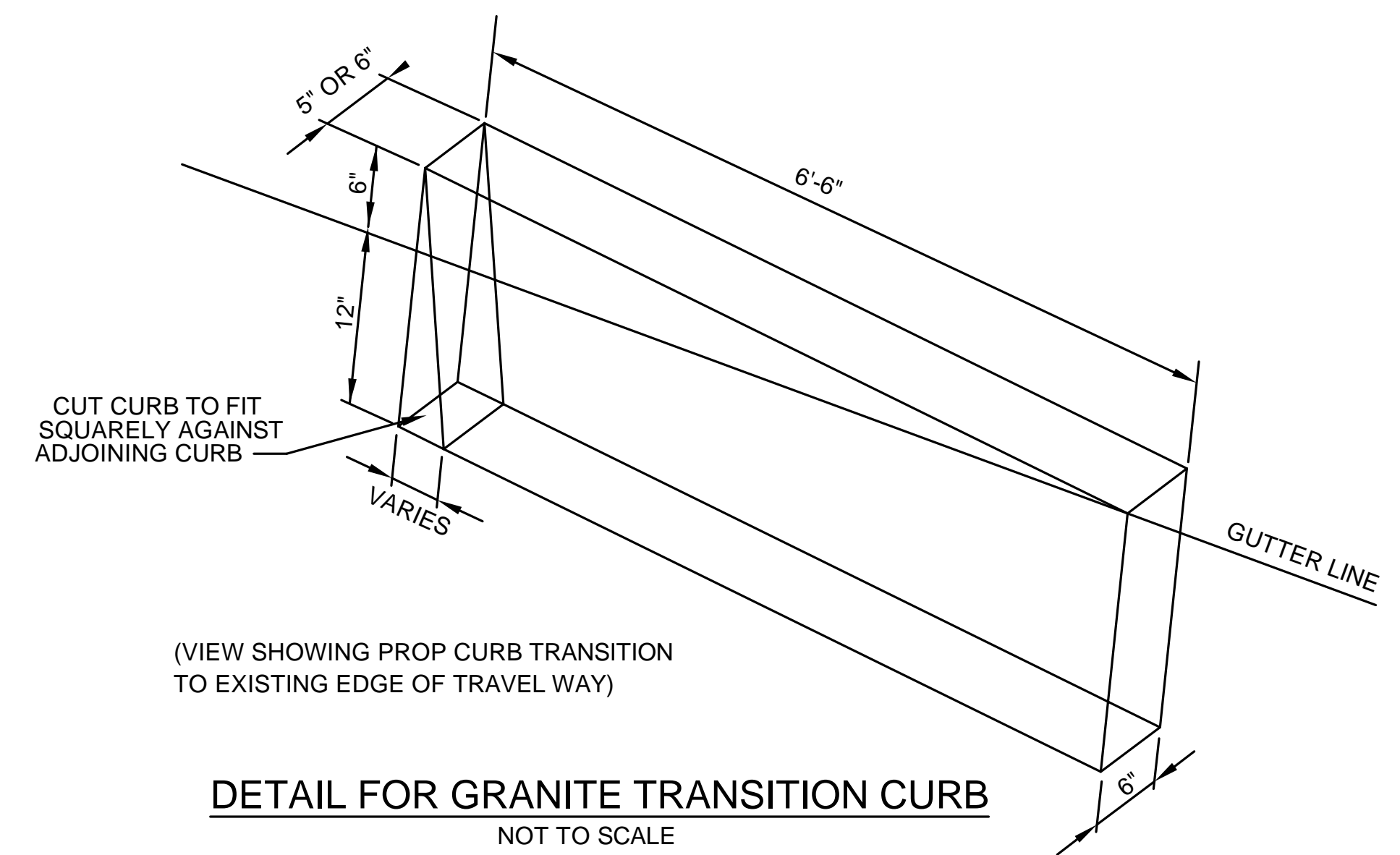
5/31/2024 9:31 AM 01740057446 - WASHINGTON-ELM INTERSECTION DRAWING FILES\PLANS\SET7446_6 DETAILS.DWG (BETA STB BIV) (STB)

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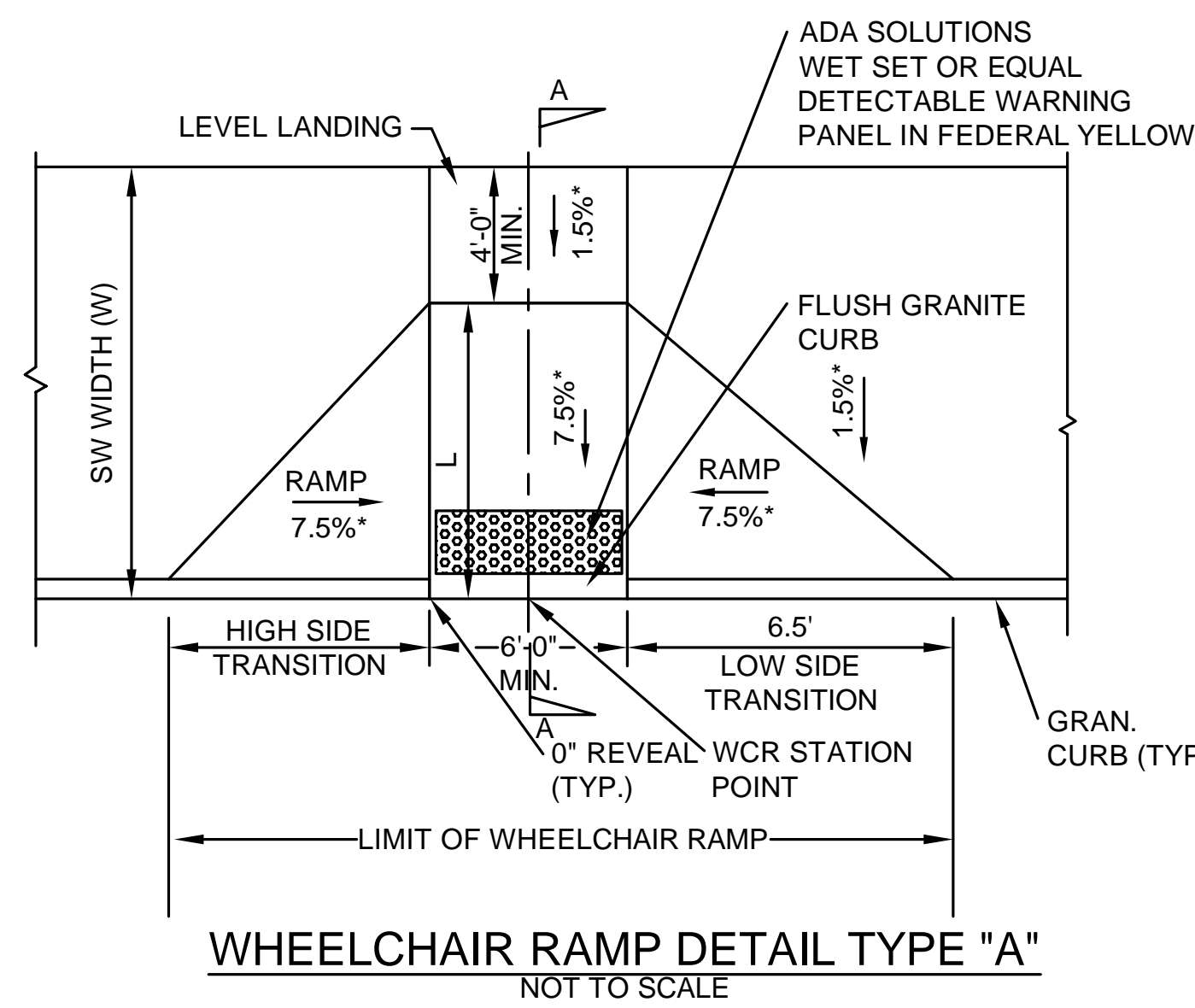
PEDESTRIAN CURB RAMP DATA											
PCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER PROFILE SLOPE	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	DEPTH OF LEVEL LANDING (MIN. 4.0')	TRANSITION LENGTH		SIDEWALK WIDTH	WCR TYPE
		STATION	OFFSET					LEFT	RIGHT		
1	WASHINGTON ST	1+72.6	-38.54	5.1%	2.5'	5.0'	4.5'	15.0'	6.5'	5.2' - 7.9'	C
2	WASHINGTON ST	1+95.1	-38.86	0.7%	-	5.0'	-	-	7.67'	-	A
3	WASHINGTON ST	2+22.1	-29.75	5.3%	9.8'	5.0'	4.0'	15.0'	6.5'	-	A
4	WASHINGTON ST	2+44.7	-58.27	2.2%	5.1'	5.0'	6.2'	11.0'	6.5'	7.2' - 13.3'	C
5	WASHINGTON ST	6+91.0	-34.98	8.4%	-	5.0'	6.2'	6.5'	-	7.0'	B
6	WASHINGTON ST	7+13.0	-31.75	7.5%	-	5.0'	9.0'	-	14.0'	-	A
7	WASHINGTON ST	7+38.5	-18.39	2.1%	2.5'	5.0'	6.0'	6.5'	9.0'	15.6'	A
8	WASHINGTON ST	7+37.4	18.03	2.6%	2.5'	5.0'	6.0'	11.0'	6.5'	14.0' - 17.8'	A
9	WASHINGTON ST	7+03.0	35.82	2.8%	6.8'	5.0'	6.6'	7.67'	11.0'	9.3' - 20.7'	C
10	WASHINGTON ST	6+58.7	34.59	5.0%	2'-7.200"	5.0'	6.0'	15.0'	6.5'	9.2' - 16.3'	A



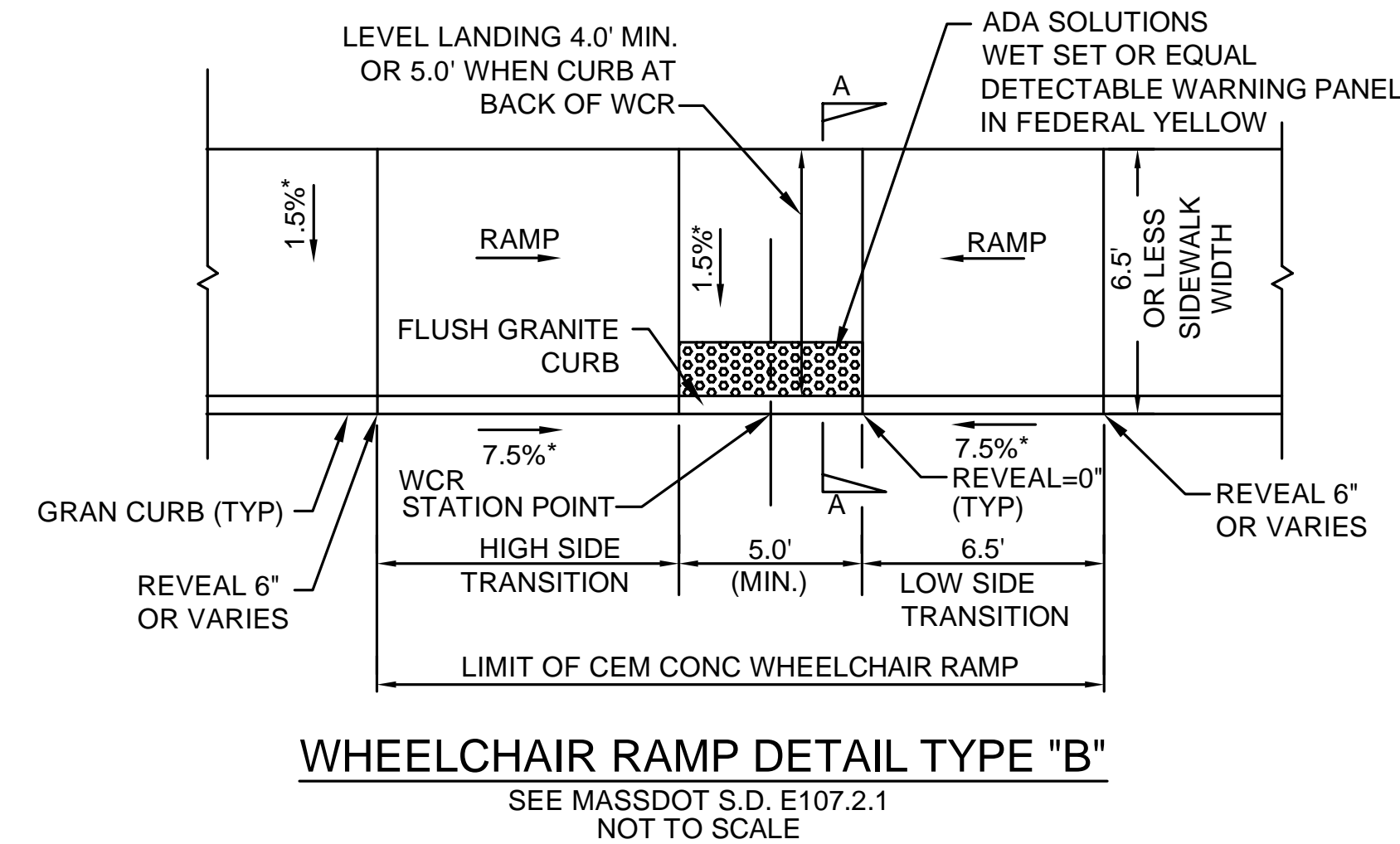
DETAIL FOR TRANSITION CURB
TRANSITION CURB - PROP CURB TO EXISTING CURB
 NOT TO SCALE



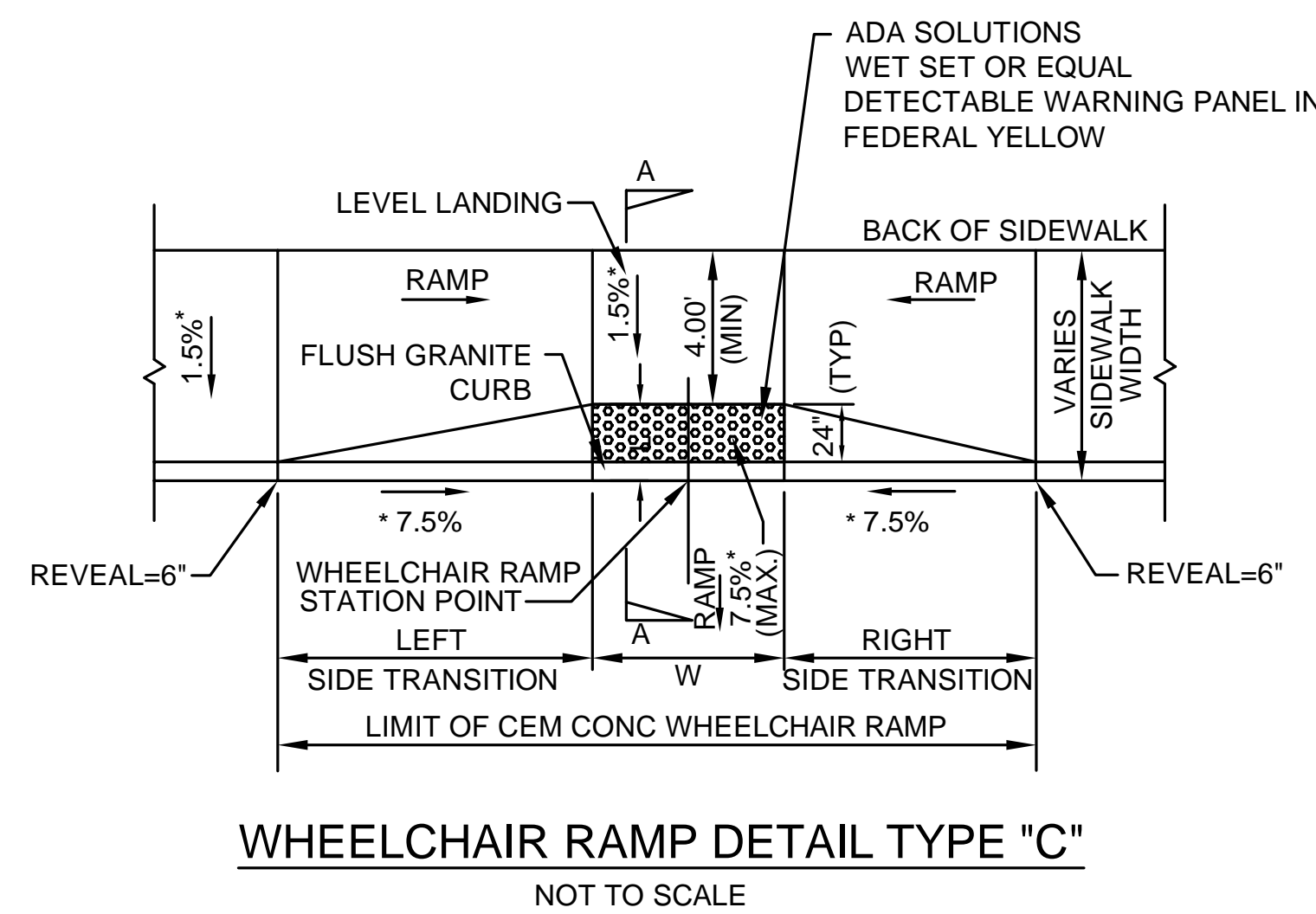
DETAIL FOR GRANITE TRANSITION CURB
 NOT TO SCALE



WHEELCHAIR RAMP DETAIL TYPE \"A\"
 NOT TO SCALE



WHEELCHAIR RAMP DETAIL TYPE \"B\"
 SEE MASSDOT S.D. E107.2.1
 NOT TO SCALE



WHEELCHAIR RAMP DETAIL TYPE \"C\"
 NOT TO SCALE

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

CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS

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

* TOLERANCE FOR CONSTRUCTION ±0.5%

5/30/2024 5:50 PM 01740057445 - QUINCY - ON-CALL CONTRACT/TASK 6 - WASHINGTON/ELM INTERSECTION/DRAWING FILES/PLANS/SET/7445_6 DETAILS.DWG (BETA STB BIV/STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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DESIGNED BY:	RS
CHECKED BY:	CR

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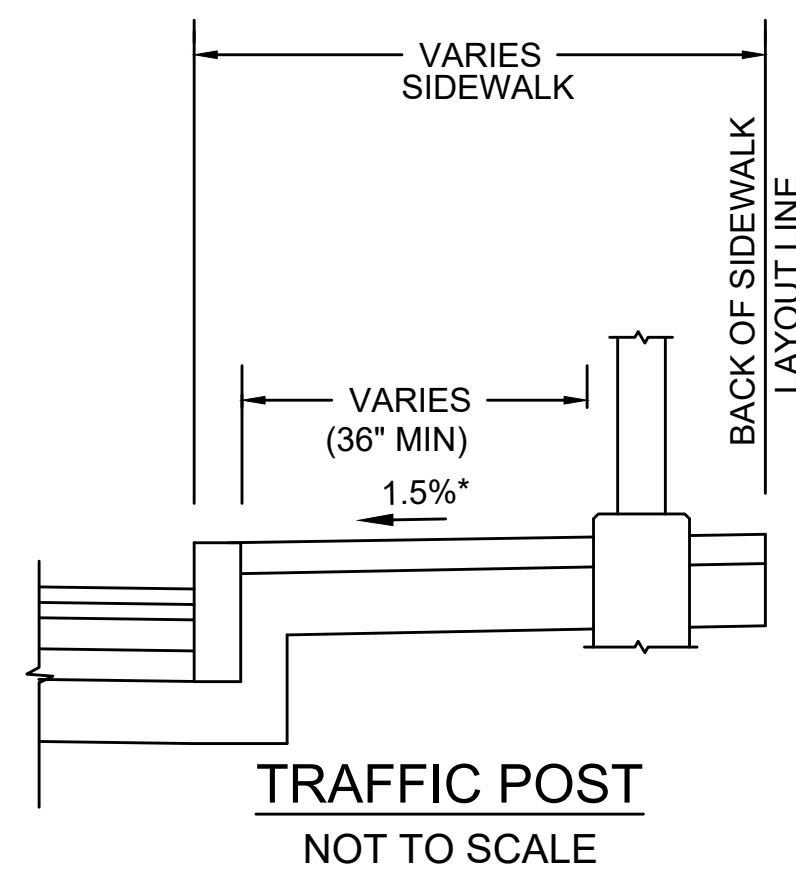
SUBCONSULTANT

SCALE
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TITLE
**WASHINGTON STREET/ELM STREET
 TRAFFIC IMPROVEMENTS
 CONSTRUCTION DETAILS
 QUINCY, MASSACHUSETTS**

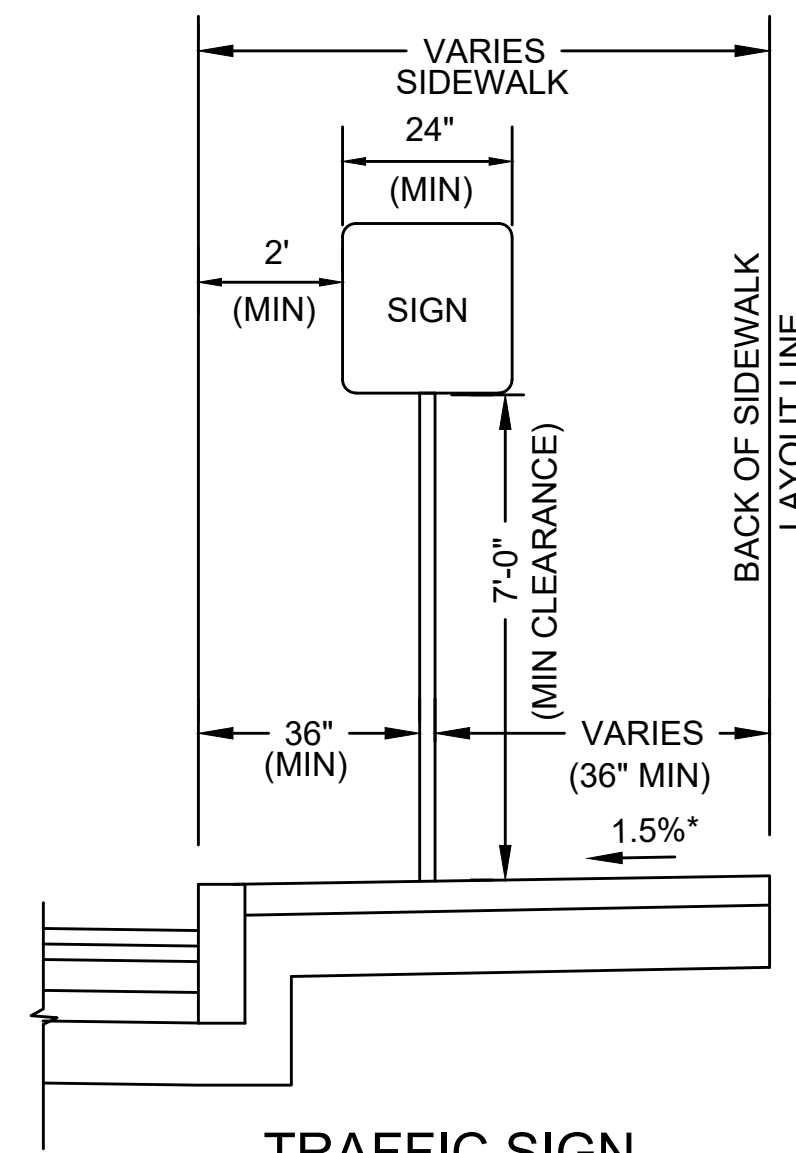
BETA JOB NO. 7445_6
 ISSUE DATE 5/31/2024
 SHEET NO. **4 of 9**

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION



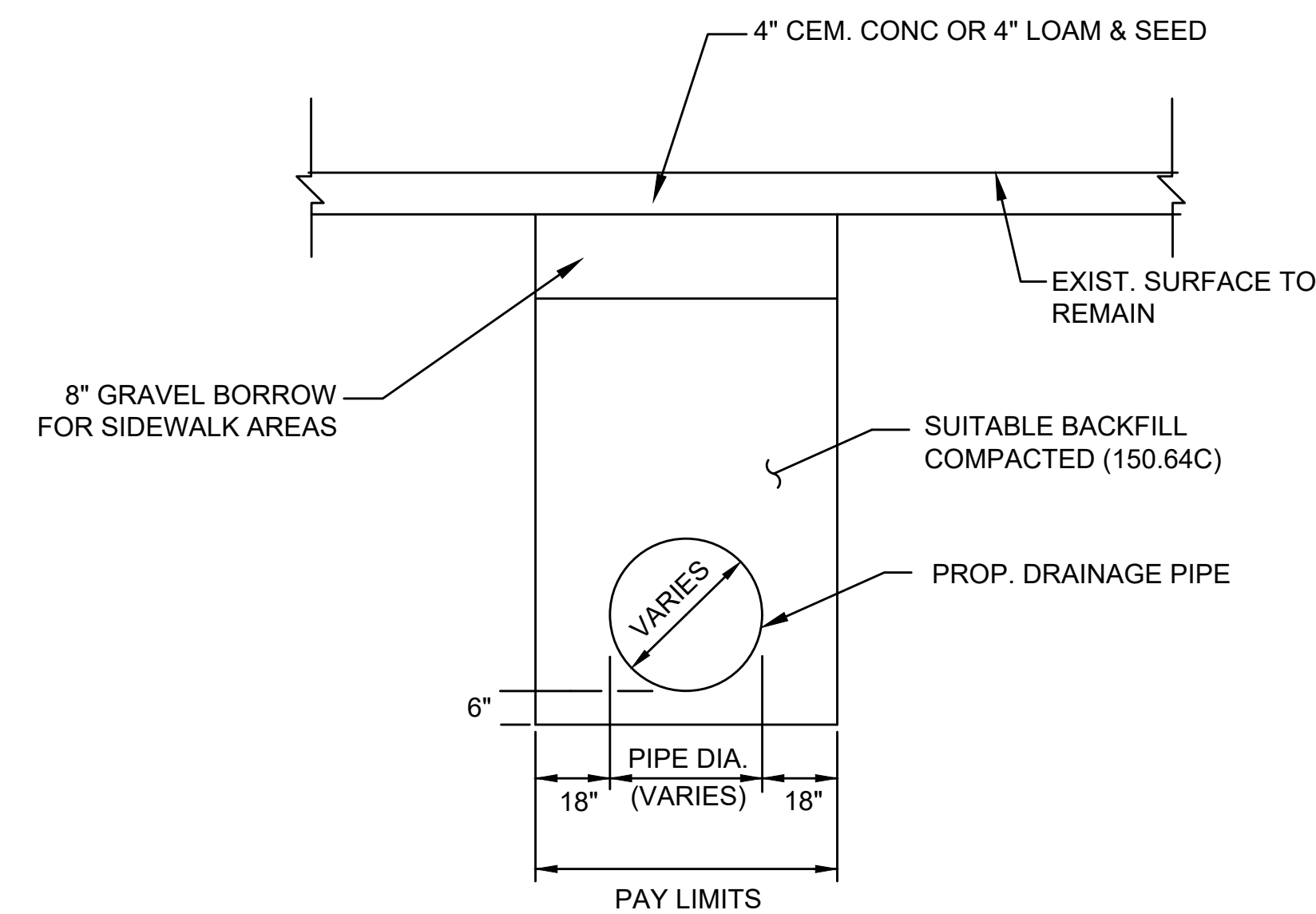
TRAFFIC POST
NOT TO SCALE

- NOTES:
1. MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL BE 36 INCHES, EXCLUDING THE CURB.
 2. 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.

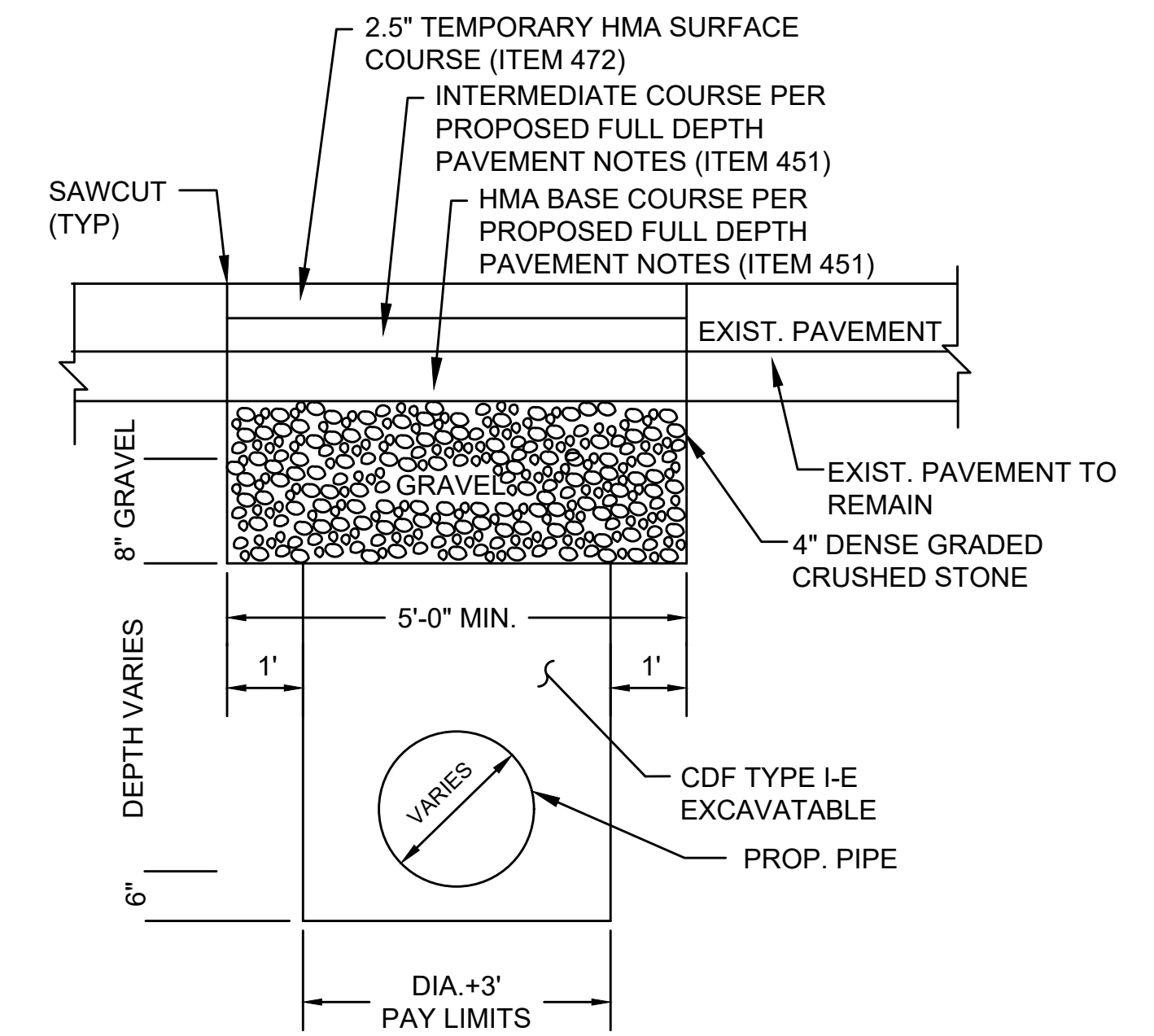


TRAFFIC SIGN
NOT TO SCALE

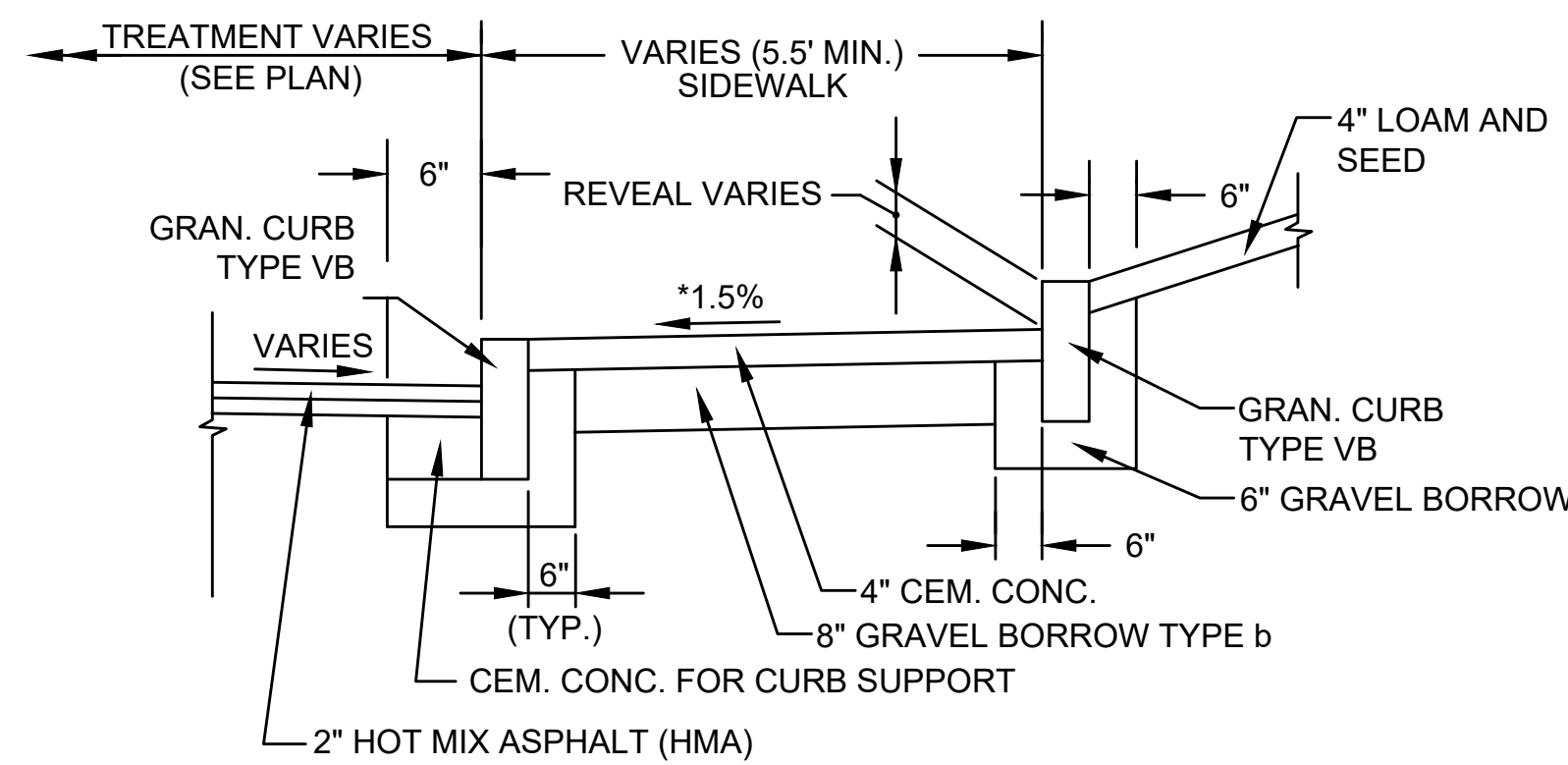
- NOTES:
1. MINIMUM CLEAR PATH ON ALL SIDEWALKS SHALL BE 36 INCHES, EXCLUDING THE CURB.
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL OBJECTS (SIGNS, POLES ETC.) TO BE SET WITHIN SIDEWALK PRIOR TO FINAL PLACEMENT TO PROVIDE A MINIMUM CLEAR PATH OF 36 INCHES NOT INCLUDING CURB. CONTRACTOR SHALL NOTIFY THE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



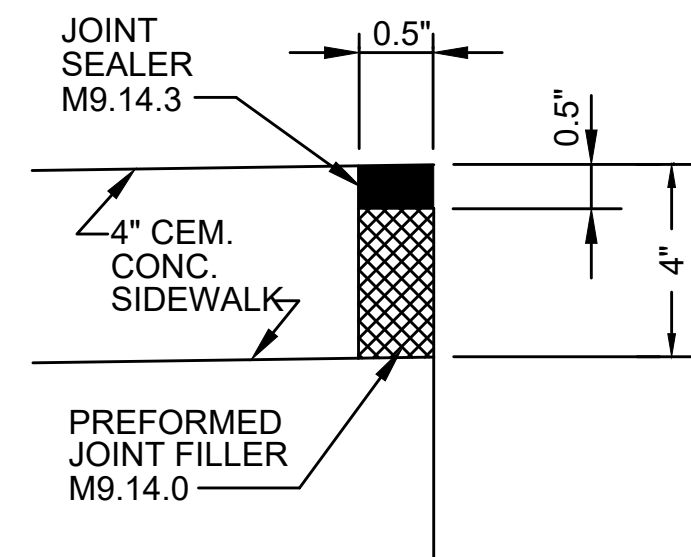
DETAIL FOR PERMANENT TRENCH FOR DRAINAGE PIPE IN SIDEWALK/ GRASS AREAS
NOT TO SCALE



PERMANENT TRENCH PATCH DETAIL IN MILLED AREAS
NOT TO SCALE



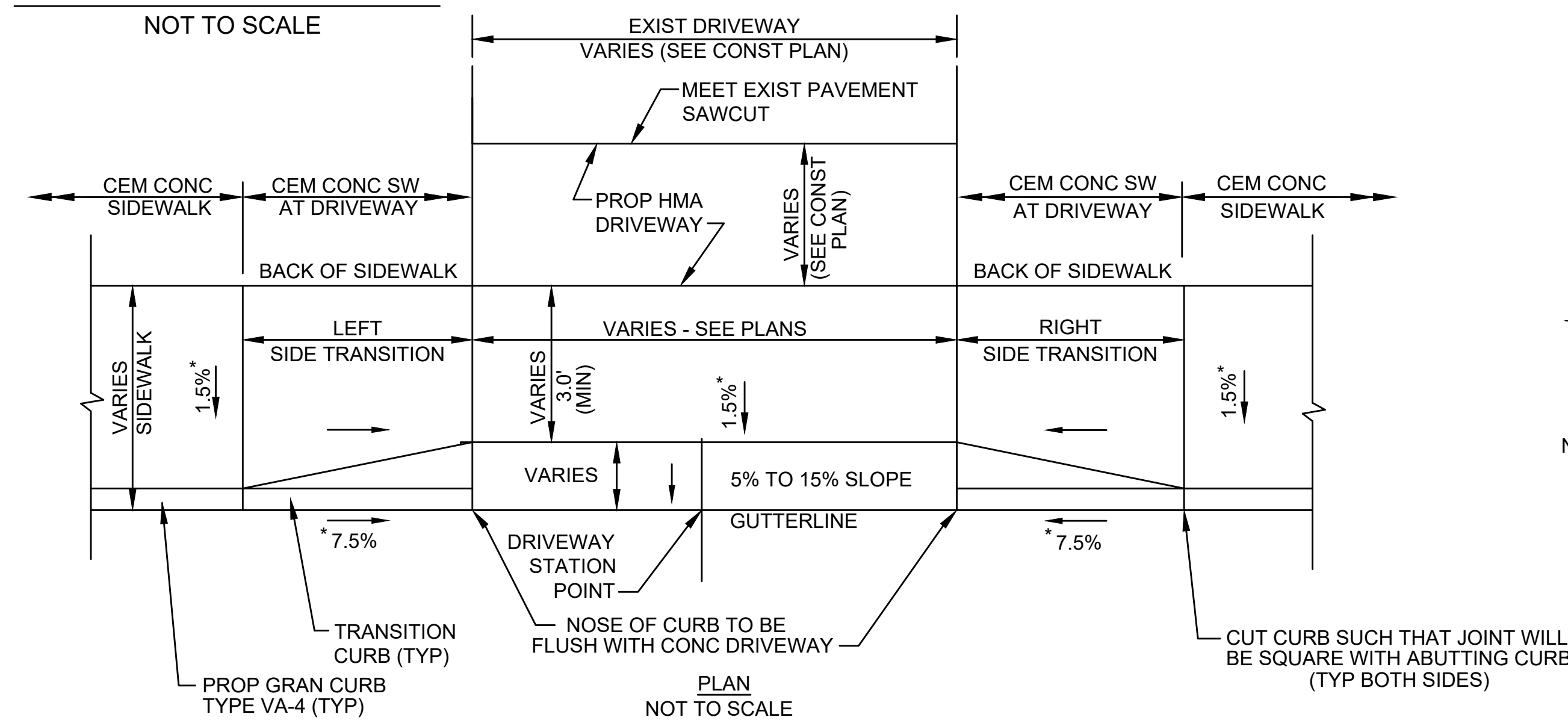
DETAIL FOR GRANITE CURB AT BACK OF SIDEWALK
NOT TO SCALE



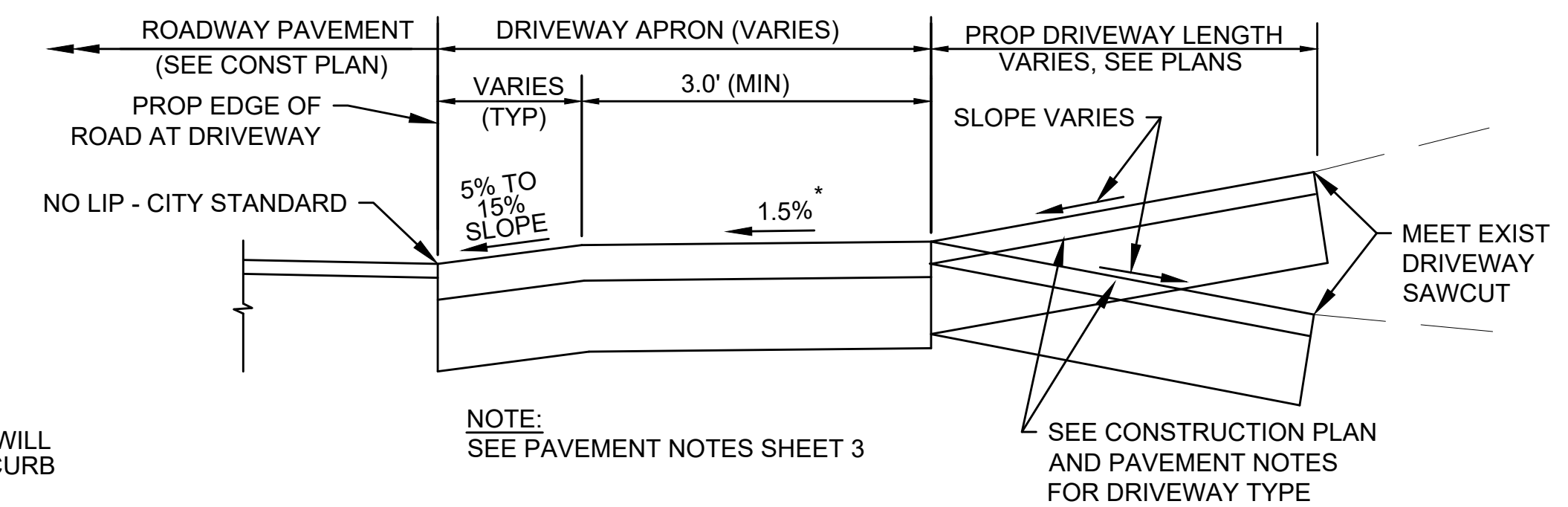
DETAIL FOR PREFORMED JOINT FILLER AND SEALER
NOT TO SCALE

DRIVEWAY OPENING DATA										
DWY NO.	LOCATION	ε DRIVEWAY OPENING AT GUTTER		OPENING WIDTH AT GUTTER	GUTTER PROFILE SLOPE	DEPTH OF GUTTER TO BACK OF SIDEWALK	PATH OF TRAVEL WIDTH ACROSS DRIVEWAY	TRANSITION LENGTH		DW TYPE
		STATION	OFFSET					LEFT	RIGHT	
1	ELM STREET	50+94.6'	15.3' RT	71.75'	+3.1%	6.0'	4.0'	6.5'	6.5'	A

NOTE:
WHEN PROPOSED SIDEWALK ABUTS AN EXISTING WALL, USE PRE-FORMED JOINT FILLER AND SEALER AT BACK OF SIDEWALK AND WALL INTERFACE. (SEE JOINT DETAIL)



DETAIL FOR TYPICAL DRIVEWAY WITH SIDEWALK - TYPE A
PLAN NOT TO SCALE



SECTION FOR TYPICAL DRIVEWAY WITH SIDEWALK - TYPE A
NOT TO SCALE

5/30/2024 5:38 PM 017400517445 - QUINCY - ON-CALL CONTRACT/TASK 6 - WASHINGTON-ELM INTERSECTION/DRAWING FILES/PLANSET/44E_6 DETAILS.DWG (BETA STB BW.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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CHECKED BY:	CR

REGISTERED PROFESSIONAL



PREPARED BY

SUBCONSULTANT

SCALE

NONE

TITLE

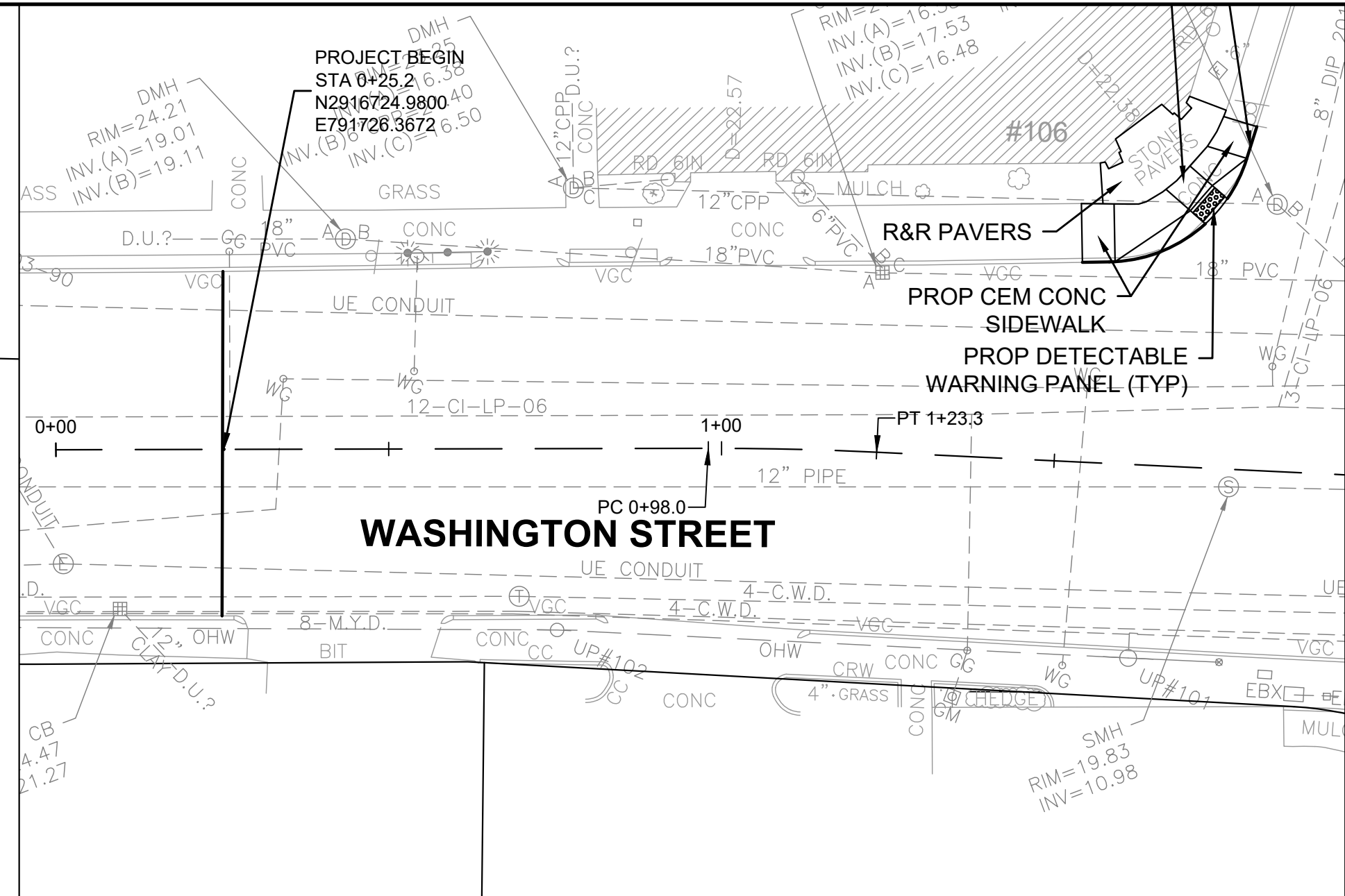
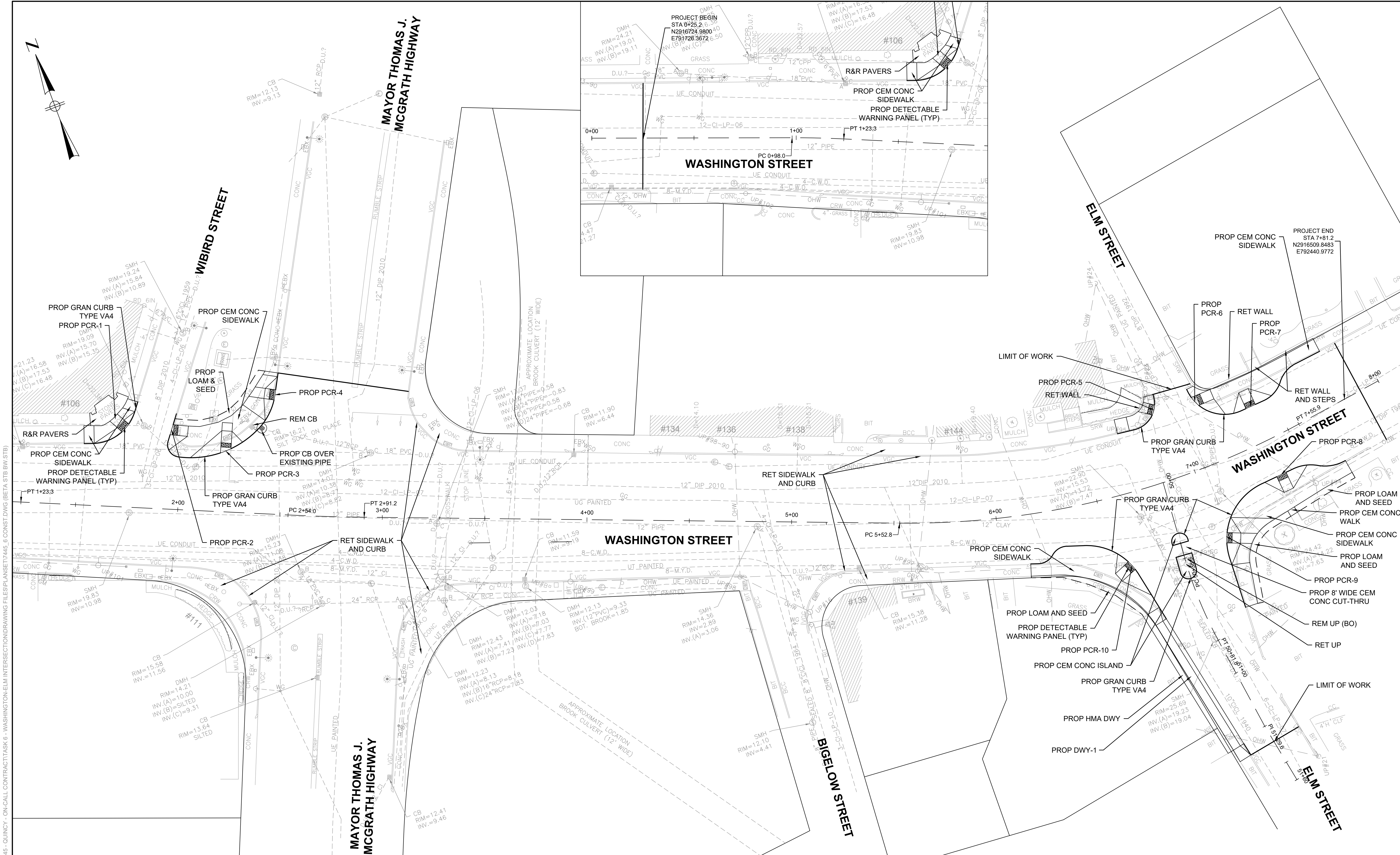
WASHINGTON STREET/ELM STREET TRAFFIC IMPROVEMENTS CONSTRUCTION DETAILS QUINCY, MASSACHUSETTS

BETA JOB NO. 7445_6

ISSUE DATE 5/31/2024

SHEET NO. 5 of 9

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5/30/2024 5:39 PM O:\1740051\445 - QUINCY - ON-CALL CONTRACT\TASK 6 - WASHINGTON-ELM INTERSECTION\DRAWING FILES\PLANSET\7445_6 CONST.DWG (BETA STB BIV STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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RS

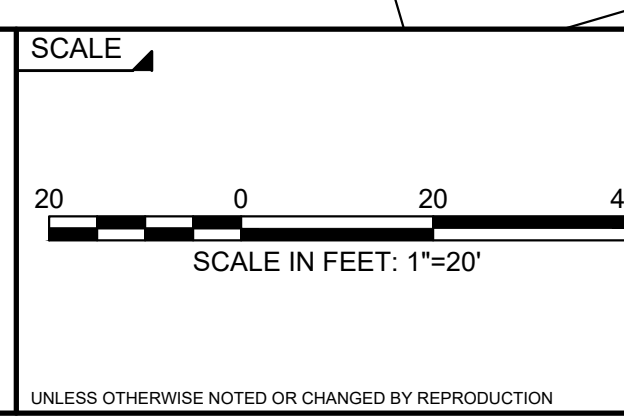
DESIGNED BY:
RS

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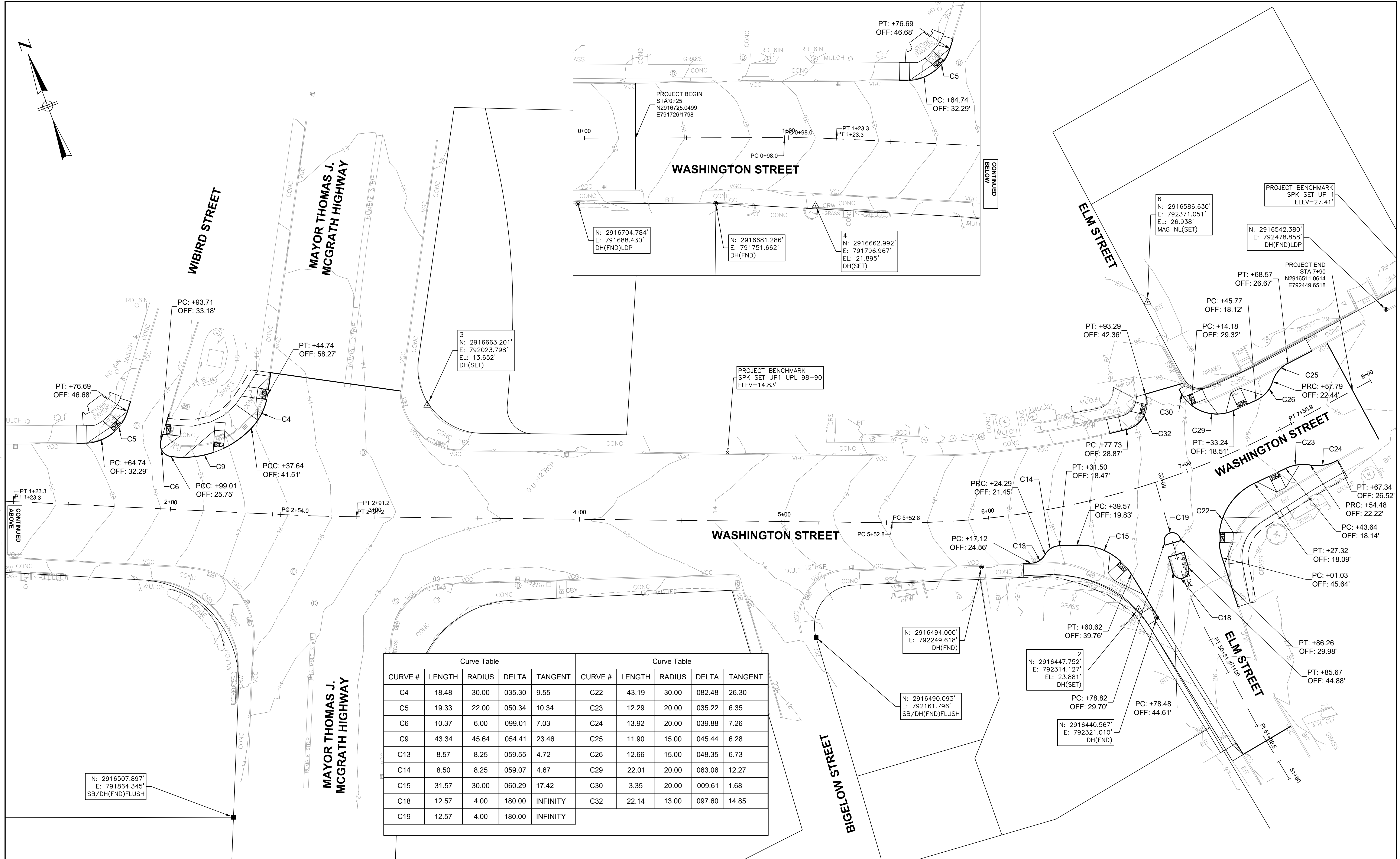
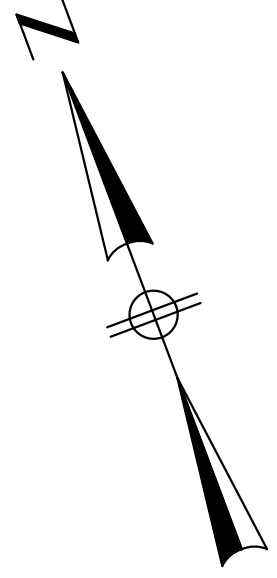
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**WASHINGTON STREET/ELM STREET
TRAFFIC IMPROVEMENTS
CONSTRUCTION PLAN
QUINCY, MASSACHUSETTS**

BETA JOB NO. 7445_6

ISSUE DATE 5/31/2024

SHEET NO. **6 of 9**



Curve Table					Curve Table				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C4	18.48	30.00	035.30	9.55	C22	43.19	30.00	082.48	26.30
C5	19.33	22.00	050.34	10.34	C23	12.29	20.00	035.22	6.35
C6	10.37	6.00	099.01	7.03	C24	13.92	20.00	039.88	7.26
C9	43.34	45.64	054.41	23.46	C25	11.90	15.00	045.44	6.28
C13	8.57	8.25	059.55	4.72	C26	12.66	15.00	048.35	6.73
C14	8.50	8.25	059.07	4.67	C29	22.01	20.00	063.06	12.27
C15	31.57	30.00	060.29	17.42	C30	3.35	20.00	009.61	1.68
C18	12.57	4.00	180.00	INFINITY	C32	22.14	13.00	097.60	14.85
C19	12.57	4.00	180.00	INFINITY					

5/30/2024 5:40 PM O:\17400\ST\7445 - QUINCY - ON-CALL CONTRACT\TASK 6 - WASHINGTON-ELM INTERSECTION\DRAWING FILES\PLANS\7445_6 TIE-DWG (BETA STB BW/STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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RS

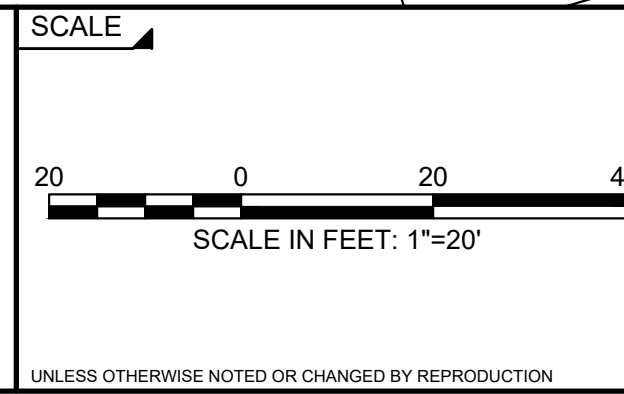
CHECKED BY:
CR

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SUBCONSULTANT



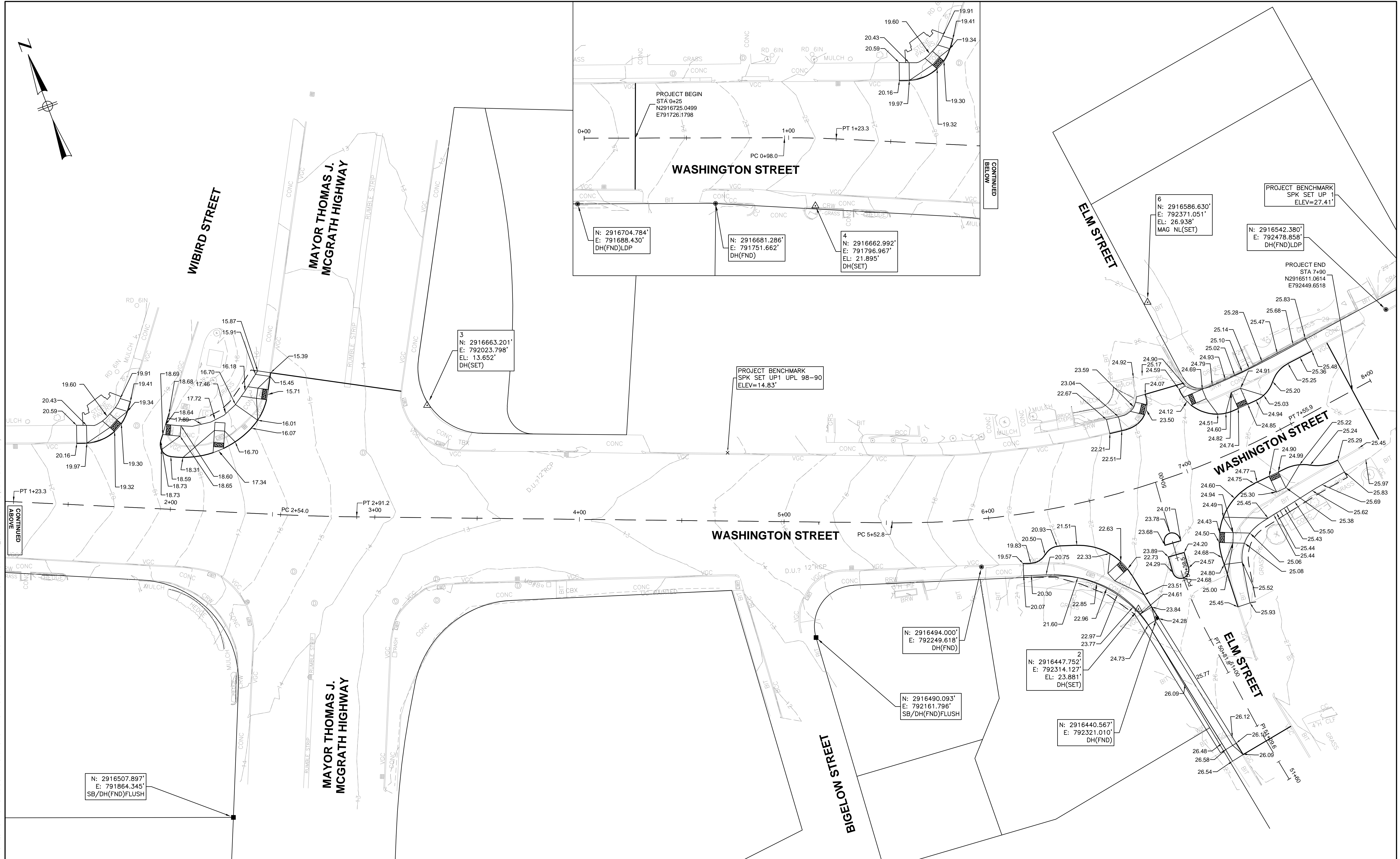
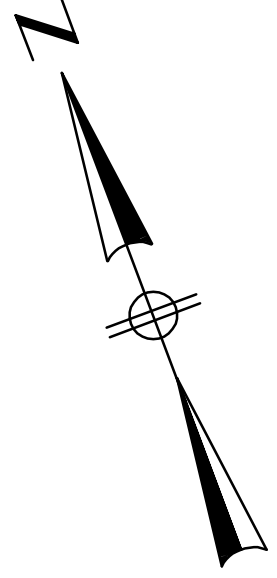
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**WASHINGTON STREET/ELM STREET
TRAFFIC IMPROVEMENTS
CURB TIE PLAN
QUINCY, MASSACHUSETTS**

BETA JOB NO. 7445_6

ISSUE DATE 5/31/2024

SHEET NO. **7 of 9**



5/31/2024 2:54 PM O:\17400\S17445 - QUINCY - ON-CALL CONTRACT\TASK 6 - WASHINGTON-ELM INTERSECTION\DRAWING FILES\PLANS\7445_6 GRADING.DWG (BETA STB BV.STB)

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

DRAWN BY:
RS

DESIGNED BY:
RS

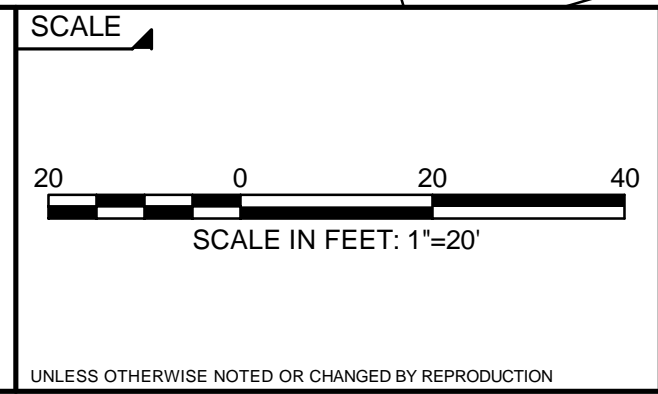
CHECKED BY:
CR

REGISTERED PROFESSIONAL

PREPARED BY



SUBCONSULTANT



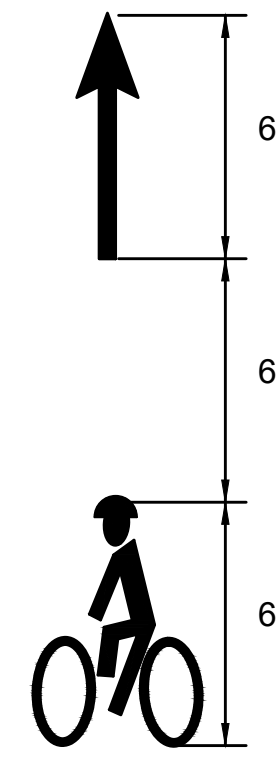
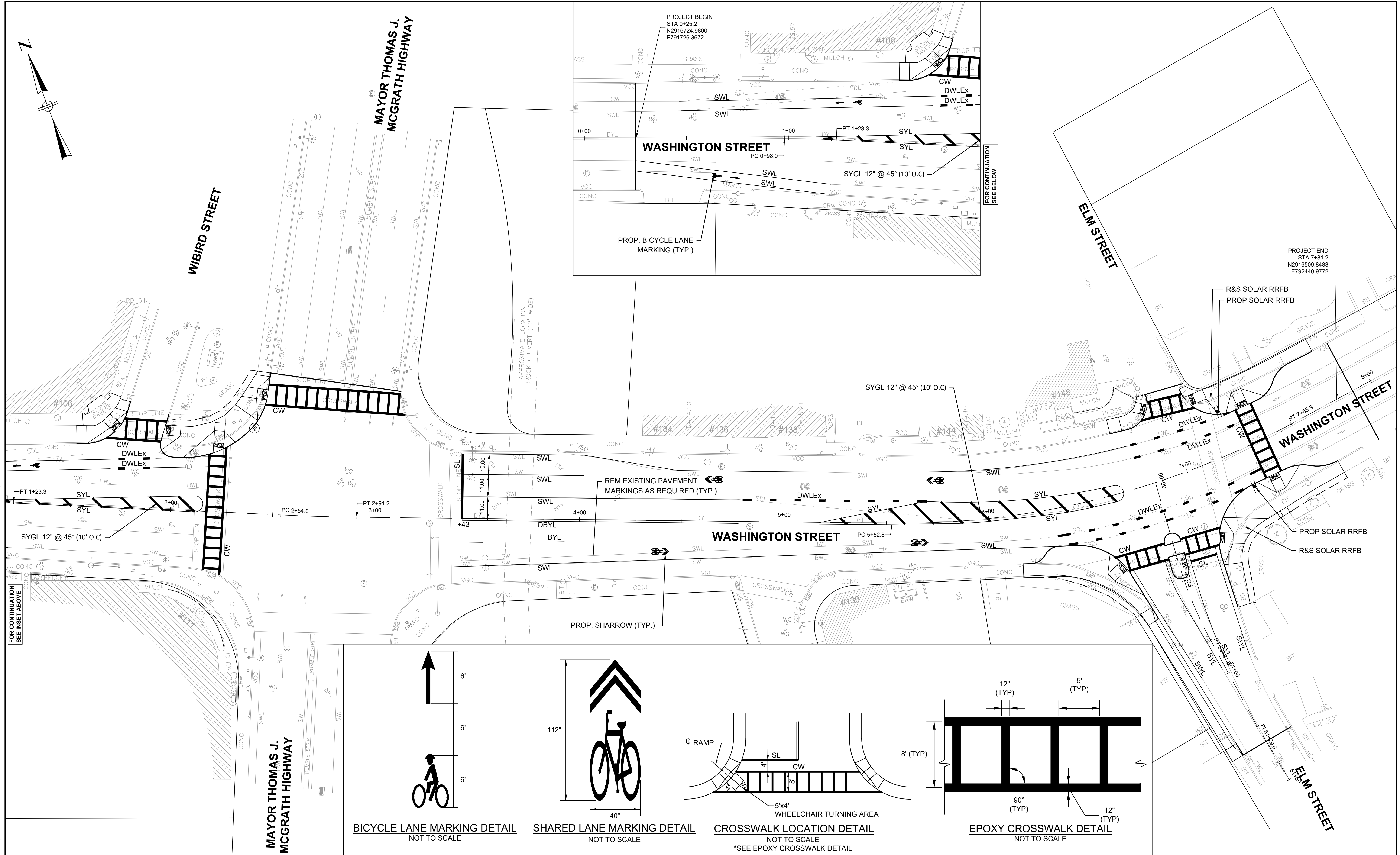
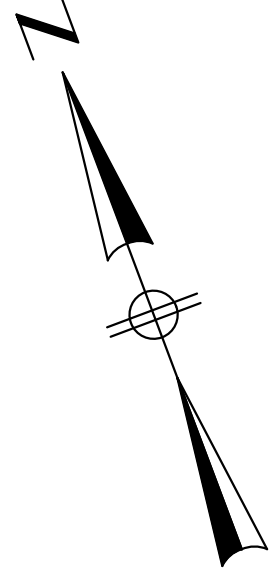
TITLE

**WASHINGTON STREET/ELM STREET
TRAFFIC IMPROVEMENTS
GRADING PLAN
QUINCY, MASSACHUSETTS**

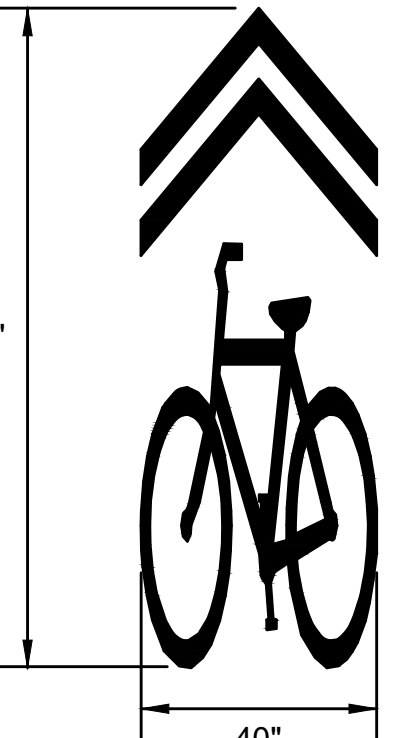
BETA JOB NO. 7445_6

ISSUE DATE 5/31/2024

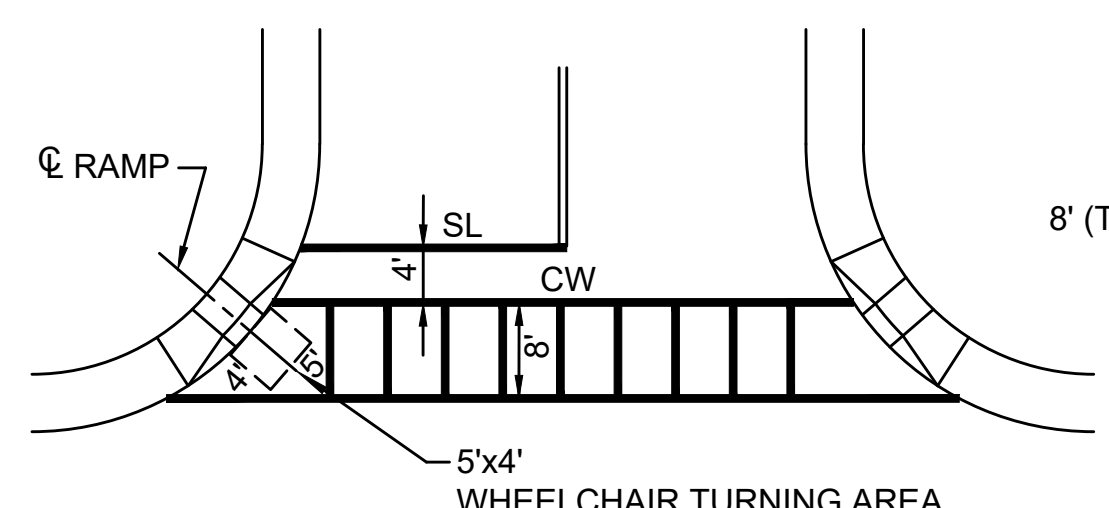
SHEET NO. **8 of 9**



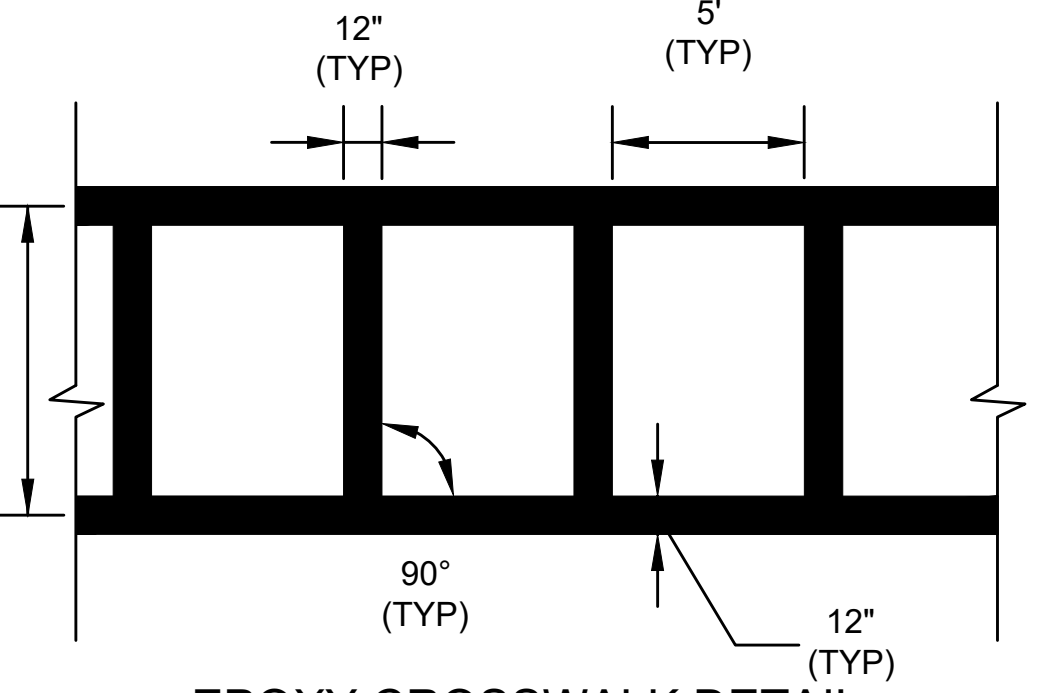
BICYCLE LANE MARKING DETAIL
NOT TO SCALE



SHARED LANE MARKING DETAIL
NOT TO SCALE



CROSSWALK LOCATION DETAIL
NOT TO SCALE
*SEE EPOXY CROSSWALK DETAIL



EPOXY CROSSWALK DETAIL
NOT TO SCALE

FOR CONTINUATION SEE INSET ABOVE

FOR CONTINUATION SEE BELOW

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS

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RS

DESIGNED BY:
RS

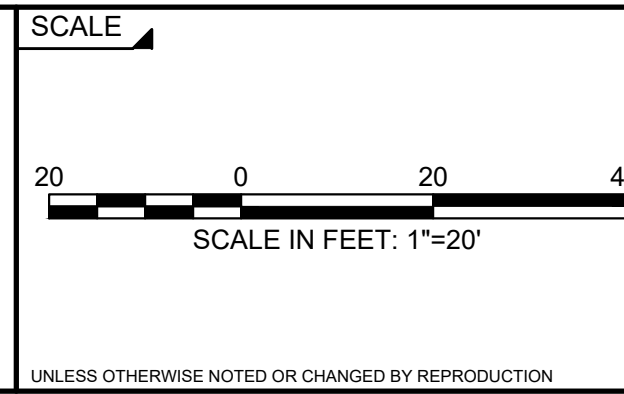
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CR

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PREPARED BY

SUBCONSULTANT



**WASHINGTON STREET/ELM STREET
TRAFFIC IMPROVEMENTS
SIGN AND PAVEMENT MARKING PLAN
QUINCY, MASSACHUSETTS**

BETA JOB NO. 7445_6

ISSUE DATE 5/31/2024

SHEET NO. **9** of 9