MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	1	317
PROJECT FILE NO.	605527		

TITLE SHEET INDEX

75% DESIGN PLAN AND PROFILE OF

RIVER STREET & WESTERN AVENUE BRIDGE REHABILITATION

IN THE CITIES OF

BOSTON/CAMBRIDGE

SUFFOLK/MIDDLESEX COUNTIES

FEDERAL AID PROJECT NO.

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED DATED JUNE 15, 2012, THE MARCH 2012 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY), THE 2009 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.

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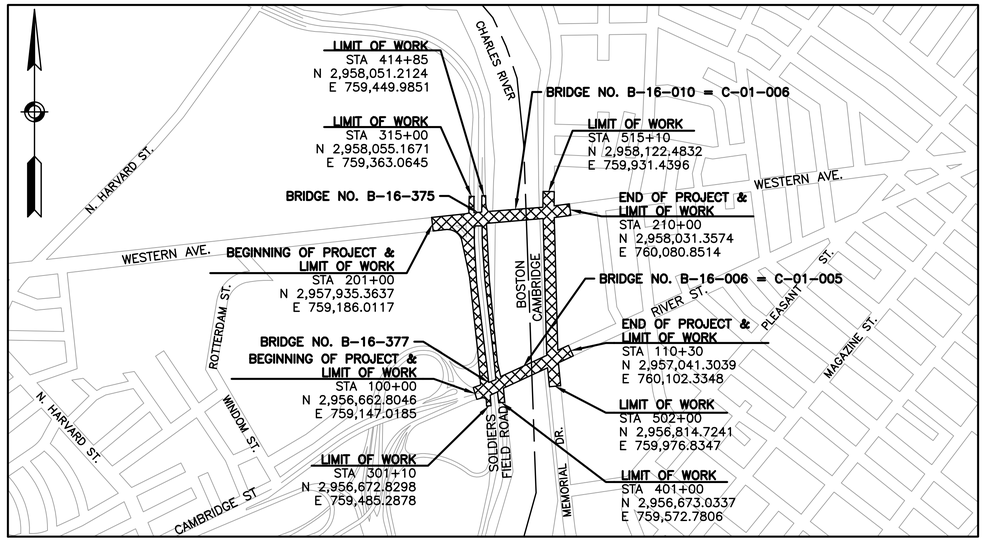

1000 0 1000 2000

SCALE 1" = 1000'

DESIGN DESIGNATION

RIVER STREET			WESTERN AVENUE		
DESIGN SPEED	=	25 miles/hr	DESIGN SPEED	=	30 miles/hr
ADT (CURRENT)	=	21,380	ADT (CURRENT)	=	20,900
ADT (DESIGN YEAR)	=	23,630	ADT (DESIGN YEAR)	=	23,100
K	=	7.9%	K	=	8.6%
D	=	100% EB	D	=	100% WB
T (PEAK HOUR)	=	2.6%	T (PEAK HOUR)	=	0.9%
DHV	=	1,880	DHV	=	1,990
DDHV	=	1,880	DDHV	=	1,990
FUNC CLASS	=	PRINCIPAL ARTERIAL	FUNC CLASS	=	PRINCIPAL ARTERIAL

NOTE:

LENGTH OF PROJECT = 6,015.00 FEET= 1.14 MILES

CONVENTIONAL SIGNS

COUNTY, CITY, OR TOWN BOUNDARY.....

COUNTY, CITY, OR TOWN SIDE LINE.....

FENCE LINE.....

BASE LINE OR SURVEY LINE..... N 57°18'41" E 58.57' 75

RIGHT OF WAY LINE.....

CULVERT.....

ELEVATIONS..... PROPOSED SURFACE / EXISTING SURFACE / PIPE SIZE & TYPE / 98.7 PROP. / 75

UTILITY POLE.....

1/2013	75% HIGHWAY DESIGN PLANS	1
DATE	DESCRIPTION	REV #

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER ____ DATE ____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR ____ DATE ____

APPROVED

HIGHWAY ADMINISTRATOR ____ DATE ____

HARDESTY & HANOVER, LLP
ENGINEERING
60 K STREET, SOUTH BOSTON, MA 02127 617.268.2017

Howard/Stein-Hudson Associates, Inc.
38 Chauncy St., 9th Floor
Boston, MA 02111
617.482.7080

GENERAL NOTES

SURVEY

1. ALL UNDERGROUND UTILITIES, AS SHOWN ON THE PLANS, WERE COMPILED UTILIZING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION PROVIDED BY BSC GROUP ON THE PLAN ENTITLED WESTERN AVENUE AND RIVER STREET BRIDGES, DATED MARCH 2010.

2. THE UNDERGROUND UTILITIES, AS SHOWN ON THE PLANS, HAVE BEEN COMPLIED 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.

3. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

4. ALL EXISTING PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.

5. ELEVATIONS SHOWN REFER TO MDC VERTICAL DATUM. THE COORDINATE INFORMATION INCLUDED ON THESE PLANS IS BASED UPON MASSACHUSETTS GRID SYSTEM, MDC, AS DERIVED FROM GPS CONTROL COORDINATES PROVIDED BY THE MASSDOT HIGHWAY DEPARTMENT SURVEY SECTION.

6. BENCHMARK INFORMATION:
   SEE CONSTRUCTION BASELINE TIES SHEET 15–16 FOR BENCHMARK INFORMATION AND LOCATIONS.

   TEMPORARY BENCHMARKS SET:

TBM #1 DRILL HOLE ELEV = 115.59	TBM #5 ESCUTCHEON PIN LEAD PLUG ELEV = 118.94
TBM #2 DRILL HOLE ELEV = 114.32	TBM #6 ESCUTCHEON PIN LEAD PLUG ELEV = 124.62
TBM #3 DRILL HOLE ELEV = 114.91	TBM #7 DRILL HOLE ELEV = 119.82
TBM #4 MASS HIGHWAY BOUND ELEV = 113.25	TBM #9 MONUMENT ELEV = 118.59

7. MASSDOT HIGHWAY DIVISION SHALL RE–ESTABLISH SURVEY CONTROL PRIOR TO BEGINNING WORK ON THIS CONTRACT.

UTILITIES

1. 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 RESOLUTION OF THE CONFLICT.

2. SIGNIFICANT UTILITY COORDINATION WITH THE CITIES OF BOSTON AND CAMBRIDGE, AND PRIVATE UTILITY COMPANIES, WILL BE REQUIRED. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES AT NO ADDITIONAL COST TO THE OWNER. IF THE CONTRACTOR ADJUSTS UTILITY COVERS IT SHALL BE DEEMED PART OF THE WORK AND THERE WILL BE NO ADDITIONAL COMPENSATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPORT AND PROTECT EXISTING UTILITIES IN AND AROUND EXCAVATION, AND, IN PARTICULAR, WHEN CROSSING UNDER OR OVER ANY DUCT PIPE. ALL PROTECTIVE MEASURES OR SUPPORTS SHALL BE CONSIDERED INCIDENTAL WORK AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM BEING INSTALLED.

3. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS) PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAVING.

4. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.

5. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSE 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. ANY FIELD ADJUSTMENT TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

UTILITIES CONTINUED

6. CONSTRUCTION SCHEDULES SHALL INCLUDE UTILITY ALTERATION, ADJUSTMENT AND RELOCATION DURATIONS AS REQUIRED INCLUDING LEAD TIMES FROM ALL PRIVATE UTILITY COMPANIES; NO TIME EXTENSIONS WILL BE AWARDED IF THE CONTRACTOR FAILS TO PROVIDE THE NECESSARY LEAD TIME AS REQUIRED BY EACH AFFECTED UTILITY.

7. THE CONTRACTOR SHALL COORDINATE THE SEQUENCING OF ALL WORK WITH THE UTILITIES AROUND SEASONAL OR PHYSICAL CONSTRAINTS AND SHALL ANTICIPATE SEASON (WINTER) RESTRICTIONS FOR GAS AND STEAM MAIN RELOCATIONS AND/OR WORKING RESTRICTIONS FOR CABLE AND COMMUNICATION RELOCATIONS DURING PEAK HOURS. THE CONTRACTOR SHALL ALSO SCHEDULE/COORDINATE WORK AROUND WINTER WORK RESTRICTIONS (IF ANY) FROM THE WINTER AND/OR OTHER ENVIRONMENTAL CONSTRAINTS.

8. THE INVERTS SHOWN ARE PROPOSED AND SHOWN FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD.

9. THE CONTRACTOR SHALL NOTIFY MASSACHUSETTS DIG SAFE AND PROCURE A DIG SAFE NUMBER FOR EACH LOCATION PRIOR TO DISTURBING EXISTING GROUND IN ANY WAY. THE TELEPHONE NUMBER OF THE DIG SAFE CALL CENTER IS 1–888–344–7233."

TRAFFIC

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR TRAFFIC MANAGEMENT AND TO COMPLY WITH CONDITIONS OUTLINED WITHIN THE SPECIFICATIONS AND MassDOT HIGHWAY DIVISION STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS MANUAL.

2. THE MINIMUM MOUNTING HEIGHT OF POST–MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.

3. THE CONE OF VISION FOR ALL OPTICALLY PROGRAMMED VEHICLE INDICATIONS SHALL BE FIELD INSPECTED AND APPROVED BY THE RESIDENT ENGINEER.

CONSTRUCTION

1. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK AND AREAS WITIN THE LIMITS OF PROPOSED WORK DAMAGED BY THE CONTRACTOR'S OPERATIONS, INCLUDING STAGING AREAS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE. ALL IMPACTS TO RESERVATION PARKLAND SHALL INCLUDE LANDSCAPE RESTORATION AS APPROVED BY THE DEPARTMENT OF CONSERVATION AND RECREATION (DCR).

2. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO COORDINATE WITH ANY SUCH WORK. NO ADDITIONAL COMPENSATION WILL BE MADE FOR EXTRA WORK DAYS, DELAYS, OR RESCHEDULING OF WORK TO ACCOMMODATE ANY OTHER CONSTRUCTION, PERMIT AND/OR MAINTENANCE OPERATIONS IN THE AREA.

3. JOINTS BETWEEN NEW HOT MIX ASPHALT, ROADWAY PAVEMENT, AND CUTS FOR EXISTING PAVEMENT SHALL BE SEALED WITH HOT POURED RUBBERIZED ASPHALT AND BACKSANDED.

4. ALL GRADING SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG), LATEST EDITION. IN CASE OF CONFLICT BETWEEN REGULATIONS, THE GUIDELINE PROVIDING GREATER ACCESS SHALL APPLY. WHEELCHAIR RAMP INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE MASSDOT WHEELCHAIR RAMP STANDARDS–LATEST EDITION AND THE PLANS.

5. WHERE THE NEW CONSTRUCTION IS WITHIN THE EXISTING TRAVELED WAY, THE CONTRACTOR SHALL PERFORM WORK SO THAT INTERFERENCE TO BUSINESS CONCERNS AND ABUTTERS, IN ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM. THE CONTRACTOR WILL NOT BE ALLOWED TO PARK EQUIPMENT, OR STOCKPILE MATERIAL IN THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND FROM ABUTTING PROPERTIES AT ALL TIMES AT NO ADDITIONAL COST.

6. THE CONTRACTOR SHALL DISPOSE OF APPLICABLE WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AT HIS OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND CONFIRMING THAT ALL ITEMS TO BE REUSED ARE IN SERVICEABLE CONDITION. IF IT IS DEEMED THAT ANY ITEM IS NOT ABLE TO BE REUSED, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING AND INCLUDE ESTIMATED COSTS TO INSTALL NEW.

8. THE MINIMUM MOUNTING HEIGHT OF POST–MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.

TEMPORARY TRAFFIC CONTROL PLANS

1. THIS PLAN DEPICTS IN SCHEMATIC FORM, THE ELEMENTS OF AN APPROACH TO THE LAYOUT AND PLANNING OF THE WORK DURING THE PROGRESS OF THE CONSTRUCTION OPERATIONS.THE PREPARER OF THIS PLAN HAS NO ROLE IN THE OVERSIGHT OR OTHERWISE IN THE IMPLEMENTATION OF THIS PLAN.

2. CONTRACTOR SHALL SUBMIT TO THE RESIDENT ENGINEER TRAFFIC MANAGEMENT PLANS FOR REVIEW AND APPROVAL BY MASSDOT HIGHWAY DIVISION. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION EFFORT WITH OTHER PROJECTS IN THE VICINITY IN ORDER TO MINIMIZE POTENTIAL TRAFFIC AND PARKING IMPACTS.

3. THE TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE CURRENT M.U.T.C.D. AND AS APPROVED OR DIRECTED BY RESIDENT ENGINEER.

4. LANE RESTRICTIONS (OTHER THAN ACTIVE WORK ZONES) MAY NOT REMAIN OVERNIGHT OR DURING NON–WORKING HOURS AND MUST BE REMOVED BY THE END OF EACH WORKING TIME RESTRICTION. AFTER EACH WORKING DAY, TRAFFIC CONTROL DEVICES THAT ARE NOT REQUIRED SHALL BE MOVED OFF THE ROADWAY OR FULL DEPTH CONSTRUCTION AREA AND PLACED SO AS NOT TO IMPEDE PEDESTRIAN AREAS, ABUTTER ACCESS OR CAUSE CONFUSION TO ROADWAY USERS. IN CERTAIN CIRCUMSTANCES, AND ONLY WITH THE APPROVAL OF MASSDOT HIGHWAY DIVISION, CAN LANE RESTRICTIONS REMAIN OVERNIGHT, REFLECTORIZED DRUMS MAY BE FITTED WITH STEADY BURN AND/OR FLASHING WARNING LIGHTS AT ONLY THE RESIDENT ENGINEERS DIRECTION.

5. PLACE ALL CONSTRUCTION SIGNING, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

6. THESE PLANS ARE NOT INTENDED TO LIMIT THE CONTRACTORS RIGHT TO SCHEDULE THE WORK BUT TO OUTLINE ONE WAY OF PROGRESSING. THE CONTRACTOR IS EXPECTED TO USE KNOWLEDGE AND EXPERIENCE TO PERFORM THE WORK IN THE MOST EFFICIENT MANNER IN COMPLIANCE WITH THE DRAWING AND SPECIFICATIONS AND THE REQUIREMENTS OF THE INDIVIDUAL AGENCIES AND ABUTTERS.

7. CONTRACTOR SHALL SECURE WORK AREAS ACCORDING TO CURRENT CONDITIONS TO ENSURE PUBLIC SAFETY AND CONVENIENCE. THIS SHALL INCLUDE ENSURING THAT ALL EXCAVATIONS ARE PROTECTED AT ALL TIMES AND WHEN WORK SHIFT IS COMPLETED.

8. THE CONTRACTOR SHALL SUBMIT TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL BY MASSDOT HIGHWAY DIVISION, TEMPORARY TRAFFIC CONTROL PLANS FOR ANY WORK OUTSIDE THE WORK ZONES INDICATED IN THESE DRAWINGS, INCLUDING ALTERNATIVE PHASING OR MODIFICATION OF ANY ASPECT OF THE TEMPORARY TRAFFIC CONTROL PLANS OR CONSTRUCTION STAGING. THE CONTRACTOR SHALL BEAR RESPONSIBILITY FOR THE SUBMISSION AND REVIEW OF ALTERNATIVE PLANS, AT NO ADDITIONAL COST. NO TEMPORARY TRAFFIC CONTROL WORK SHALL OCCUR UNTIL THE RESIDENT ENGINEER'S APPROVAL IS OBTAINED OF THE TEMPORARY TRAFFIC CONTROL PLANS

9. EXISTING CONDITIONS ARE FOR CONTRACTOR INFORMATION ONLY AND ARE EXISTING CONDITIONS AT THE TIME OF DESIGN. THE CONTRACTOR SHALL VERIFY, AS NECESSARY, ACTUAL FIELD CONDITIONS AT TIME OF CONSTRUCTION.

10. TYPICAL DAYTIME WORK HOURS ARE FROM 9:00 AM TO 3:30 PM ON WEEKDAYS, UNLESS OTHERWISE PERMITTED BY MASSDOT HIGHWAY DIVISION. WORK SHALL NOT BE PERFORMED THE DAY BEFORE, OR THE DAY AFTER, A HOLIDAY WEEKEND,UNLESS OTHERWISE PERMITTED BY MASSDOT HIGHWAY DIVISION . REFER TO TEMPORARY TRAFFIC CONTROL PLANS, SPECIFICATIONS, AND PERMITS FOR MODIFICATION TO ALLOWABLE WORK PERIODS. ALL WORK SCHEDULES, HOWEVER, SHALL BE PRE–APPROVED BY THE DEPARTMENT PRIOR TO BEGINNING WORK. WORK NECESSARY OUTSIDE OF THESE NORMAL WORK HOURS BECAUSE OF TRAFFIC CONDITIONS, AS NOTED IN THE PLANS OR SPECIFICATIONS, SHALL BE APPROVED BY MASSDOT HIGHWAY DIVISION.

11. CONTRACTOR SHALL PROVIDE DETAILS FOR TRAFFIC CONTROL AS DIRECTED BY THE MASSDOT RESIDENT ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR SHALL BE GUIDED BY TEMPORARY TRAFFIC CONTROL LAYOUTS PROVIDED FOR SPECIFIC LOCATIONS, AND BY TYPICAL LAYOUTS AT ALL OTHER LOCATIONS. TYPICAL LAYOUTS SHALL CONFORM TO PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

12. WORK ZONES INDICATED ON THE TEMPORARY TRAFFIC CONTROL PLANS ARE INTENDED FOR THE DURATION OF THE WORK WITHIN THE ZONES ONLY AND SHALL BE RESTORED TO CONDITIONS ACCEPTABLE TO THE MASSDOT HIGHWAY DIVISION AT COMPLETION OF THE WORK INDICATED.

13. CONTRACTOR SHALL COORDINATE WITH MASSDOT HIGHWAY DIVISION CONCERNING ALL SCHEDULED SPECIAL EVENTS WITHIN THE LIMITS OF WORK.

14. THE CONTRACTOR SHALL AT ALL TIMES COORDINATE ROAD AND LANE CLOSURED, AND OTHER DISRUPTIONS IN THE PROJECT AREA, WITH MBTA BUS OPERATIONS.

LANDSCAPING

1. FOR LANDSCAPING NOTES SEE SHEET 111

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

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MASS.	-	2	317
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LEGEND, ABBREVIATIONS, & GENERAL NOTES

CHANNELIZATION:

1. CHANNELIZATION SHALL BE ACCOMPLISHED THROUGH THE USE OF REFLECTORIZED PLASTIC DRUMS WITH LIGHTS IN ACCORDANCE WITH THE CURRENT M.U.T.C.D. ALL LANE TAPERS SHALL BE IN ACCORDANCE WITH THE CURRENT M.U.T.C.D.
2. ALL DRUMS SHALL BE PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS, AND OTHER TRAFFIC CONTROL DEVICES.
3. THE MAXIMUM SPACING BETWEEN CHANNELIZATION DEVICES (DRUMS OR CONES) SHALL BE APPROXIMATELY EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MINIMUM SPACING SHALL BE 20' O.C.
4. METAL DRUMS ARE PROHIBITED AS CHANNELIZATION DEVICES.

GRADE DIFFERENCES:

1. WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN EXISTING PAVEMENT AND COLD PLANED OR NEW PAVEMENT, THE CONTRACTOR SHALL PATCH A TEMPORARY HMA WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR A SMOOTH TRANSITION.
2. CROSS–SECTIONAL GRADE DIFFERENCED IN EXCESS OF 2" DURING NON–WORKING HOURS WILL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS, OR CONES AS DIRECTED BY MASSDOT HIGHWAY DIVISION.
3. CROSS–SECTIONAL GRADE DIFFERENCES IN EXCESS OF 4" DURING NON–WORKING HOURS SHALL BE PROTECTED BY BACKFILLING WITH A WEDGE OF EARTHWORK TO BE COMPACTED AT 4:1 SLOPE AND WILL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
4. A MINIMUM SLOPE OF 4:1 MUST BE MAINTAINED AFTER WORKING HOURS DURING SUBBASE AND BASE COURSE INSTALLATION ALONG EDGE OF THE TRAVEL WAY. A MINIMUM SLOPE OF 8:1 MUST BE MAINTAINED ON ALL ABUTTER ACCESS DRIVES AND A MINIMUM SLOPE OF 12:1 MUST BE MAINTAINED ON ALL SIDEWALKS.

CONSTRUCTION SIGNING:

1. LOCATIONS OF SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL ENSURE THAT SIGNS ARE PLACED IN ACCORDANCE WITH THE CURRENT M.U.T.C.D.
2. EXISTING SIGNING WHICH CONFLICTS WITH PROPOSED CONSTRUCTION TRAFFIC MANAGEMENT SIGNING SHALL BE REMOVED AND STACKED OR COVERED AND RESTORED AT THE END OF THE WORK.
3. ALL SIGNS SHALL BE COVERED OR REMOVED WHEN CONDITION IS NOT IN EFFECT.
4. THE MINIMUM MOUNTING HEIGHT OF POST–MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PAVEMENT MARKINGS:

1. UNLESS OTHERWISE NOTED, ALL PAVEMENT MARKINGS, SIGNS AND OTHER TRAFFIC EQUIPMENT REMOVED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF MASSDOT HIGHWAY DIVISION.
2. CONTRACTOR SHALL INSTALL, RENEW AND MAINTAIN ALL TRAFFIC CONTROL DEVICES INCLUDING PAVEMENT MARKINGS AS SHOWN ON THE DRAWINGS, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY THE MASSDOT RESIDENT ENGINEER.
3. CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS WHICH CONFLICT WITH PROPOSED PAVEMENT MARKINGS. THE METHOD OF REMOVAL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF MASSDOT HIGHWAY DIVISION.
4. ALL TEMPORARY PAVEMENT MARKINGS SHALL BE MAINTAINED THROUGHOUT THE ENTIRE SEQUENCE. ALL EXISTING MARKING WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND REPLACED AS INDICATED ON THE PAVEMENT MARKING PLANS.
5. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE PAINT. BOTH SHALL MEET MASSDOT STANDARDS.

L:\09149\CURRENT\CUTSHEETS\NOTES AND LEGEND.dwg, 1/7/2013 1:06:30 PM

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LEGEND, ABBREVIATIONS, & GENERAL NOTES

LEGEND

EXISTING		PROPOSED
	DECIDUOUS TREE	
	MONUMENT	
S	SEWER MANHOLE	S
D	DRAIN MANHOLE	
T	TELEPHONE MANHOLE	
C	CABLE TV MANHOLE	
M	MBTA MANHOLE	
X	STEAM MANHOLE	
E	ELECTRIC MANHOLE	
W	WATER MANHOLE	
MH	MANHOLE	
	WHEELCHAIR RAMP	
	GAS SHUT OFF	
	WATER SHUT OFF	
	BOSTON WATER VALVE	
	BOSTON WATER AND SEWER COMMISSION VALVE	
	CATCH BASIN & CURB INLET	CBCI
	CATCH BASIN	CB
	DROP INLET	DI
	HYDRANT	
	SIGN	
M	MAIL BOX	
	ELECTRIC HANDHOLE	
	STREET LIGHT CONTROL BOX	
	OBSERVATION WELL	
	LIGHT POLE	

ST-L	STREET LIGHTING
X	FENCE
XX" S	SEWER
XX" D	DRAIN
XX" CS	COMBINED SEWER
XX" W	WATER
XX" G	GAS
XKV E	ELECTRIC
T	TELEPHONE
CATV	CABLE TELEVISION
XX" STEAM	STEAM
P.L.	PROPERTY LINE
BWSC P.S.	BWSC PROPOSED SEWER LINE
BWSC P.D.	BWSC PROPOSED DRAIN LINE
BWSC P.W.	BWSC PROPOSED WATER LINE
	AREAWAY
SURVEY TRAVERSE	SURVEY TRAVERSE
	TEMPORARY BENCHMARK

PROPOSED: X'-X" RCP

PROPOSED: XX" W

PROPOSED: XX" G

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING (TO REMAIN)	REMOVE/ABANDON	DESCRIPTION
			CONTROLLER CABINET
			SIGNAL POST
			MAST ARM
			VEHICULAR SIGNAL
			OPTICALLY PROGRAMMED VEHICULAR SIGNAL
			BICYCLE SIGNAL
			PEDESTRIAN SIGNAL
			VIDEO DETECTION
			PEDESTRIAN PUSH BUTTON
			PULL BOX
			CONDUIT
			LOOP DETECTOR
			PRE-EMPTION DETECTOR
			PRE-EMPTION FLASHER
			PTZ TRAFFIC CAMERA

PAVEMENT MARKING LEGEND

SWEL	6" SOLID WHITE EDGE LINE
SYEL	6" SOLID YELLOW EDGE LINE
SWLL	6" SOLID WHITE LANE LINE
BWLL	6" BROKEN WHITE LANE LINE 10' MARK – 30' SKIP
DWLEx	6" DOTTED WHITE LANE EXTENSION 2' MARK – 4' SKIP
DWLL	6" DOTTED WHITE LANE LINE 3' MARK – 9' SKIP
DWLL	12" DOTTED WHITE LANE LINE 3' MARK – 9' SKIP
SWCHL	8" SOLID WHITE CHANNELIZATION LINE
SYCHL	8" SOLID YELLOW CHANNELIZATION LINE
DYCL	2–6" YELLOW CENTER LINES, 4" O.C.
SL	WHITE STOP LINE (12" UNLESS OTHERWISE SPECIFIED)
CW	WHITE – CROSS WALK (12" LINES, 10' O.C.; 12" LONGITUDINAL LINES, 4' O.C.) (UNLESS OTHERWISE SHOWN)
SWGL	12" SOLID WHITE GORE LINE (5' O.C. @45°).
SYGL	12" SOLID YELLOW GORE LINE (5' O.C. @45°).
DYLEx	6" DOTTED YELLOW LINE EXTENSION 2' MARK – 4' SKIP
	RAISED INTERSECTION MARKING
	BIKE LANE SYMBOL
	SHARED LANE MARKING SYMBOL

* CONTRACTOR SHALL MAINTAIN ALL PAVEMENT MARKINGS SHOWN BOLD ON THE TRAFFIC MANAGEMENT DRAWINGS. NEW PAVEMENT MARKINGS FOR EACH TRAFFIC MANAGEMENT PHASE ARE SHOWN WITH LABELS AND DIMENSIONS. ALL PAVEMENT MARKINGS THAT NEED TO BE MAINTAINED FOR GREATER THAN SIX MONTHS SHALL BE THERMOPLASTIC. PAVEMENT MARKINGS SHOWN ON THE EXISTING CONDITIONS PLANS ARE FOR CONTRACTOR INFORMATION ONLY.

CONSTRUCTION PLAN LEGEND

#	PROPOSED WHEELCHAIR RAMP
#	PROPOSED CATCH BASIN
PDMH#X	PROPOSED DRAINAGE MANHOLE
#	PROPOSED DRIVEWAYS
	PAVEMENT SAWCUT LINE
	PROPOSED FULL DEPTH PAVEMENT
	LINE OF EASEMENT

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
AD	ALGEBRAIC DIFFERENCE
ADT	AVERAGE DAILY TRAFFIC
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
℄	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CL	CLASS (CONCRETE, EXCAVATION, ETC.)
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DDHV	DIRECTIONAL DESIGN HOURLY VOLUME
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK – PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (OR EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (OR EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HES	HIGH EARLY STRENGTH
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HP	HIGH POINT
HSD	HEADLIGHT SIGHT DISTANCE
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACHING BASIN
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MB	MAIL BOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
O.C.	ON CENTER
PBS	PRINTED ON BOTH SIDES
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW

GENERAL (CONT.)

PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISCARD
R&T	REMOVE & TRANSPORT
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REB	REBUILT
REM	REMOVE
REMOD	REMODELED
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT-OF-WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
S	SLOPE
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/ TRUCK PERCENTAGE
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VGC	VERTICAL GRANITE CURVE
WCR	WHEELCHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL

CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	UPRAISED HAND SYMBOL
FDW	FLASHING UPRAISED HAND SYMBOL
FR	FLASHING CIRCULAR RED
FY	FLASHING CIRCULAR YELLOW
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
OP	OPTICOM
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	WALKING PERSON SYMBOL
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW
YR	STEADY YELLOW RIGHT ARROW

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

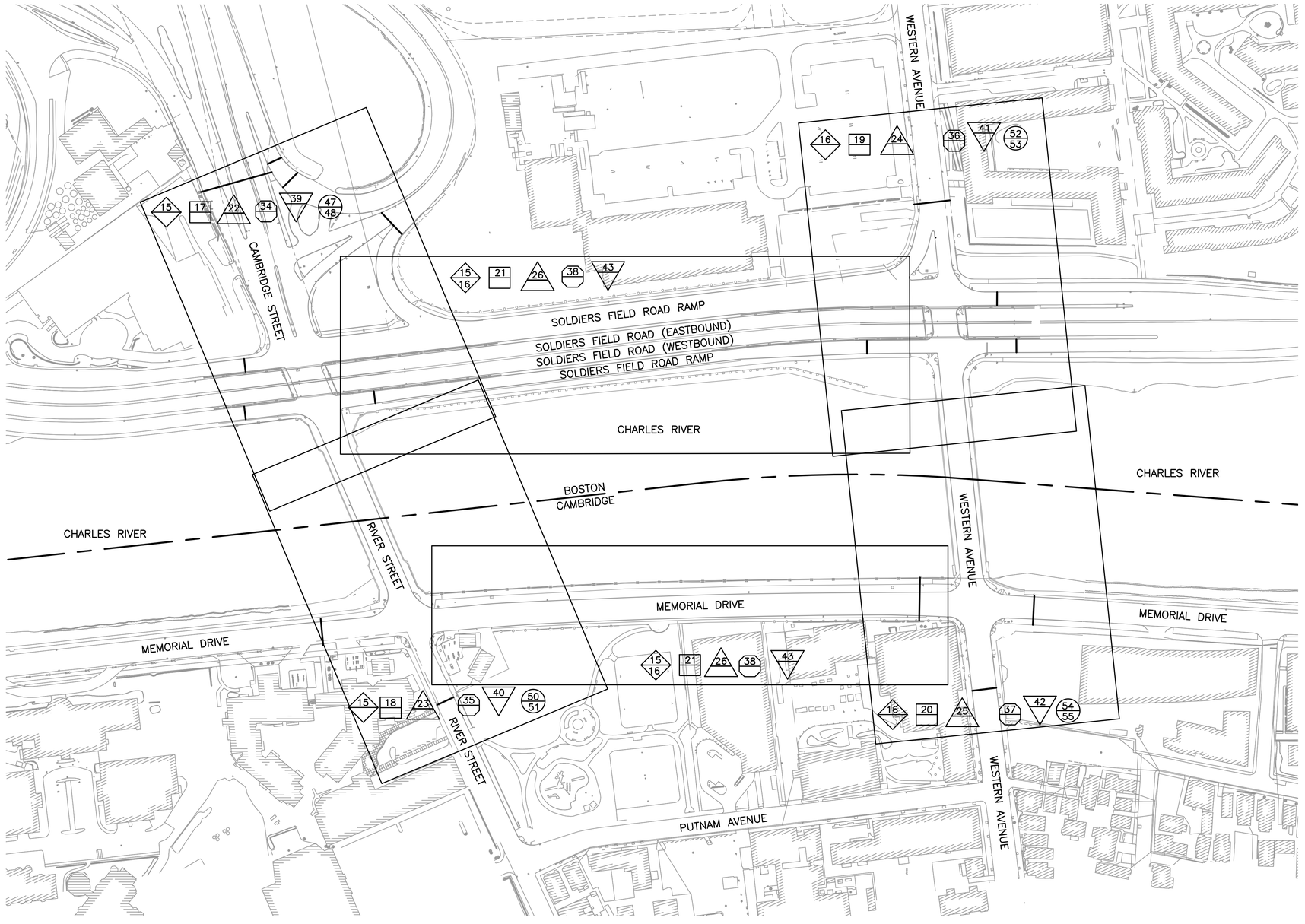
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	4	317
PROJECT FILE NO.	605527		

KEY PLAN

N

LEGEND

- CONSTRUCTION BASELINE TIE PLANS
- CONSTRUCTION PLANS
- UTILITY PLANS
- CURB TIE AND GRADING PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- TRAFFIC SIGNAL PLANS



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SCALE 1" = 100'

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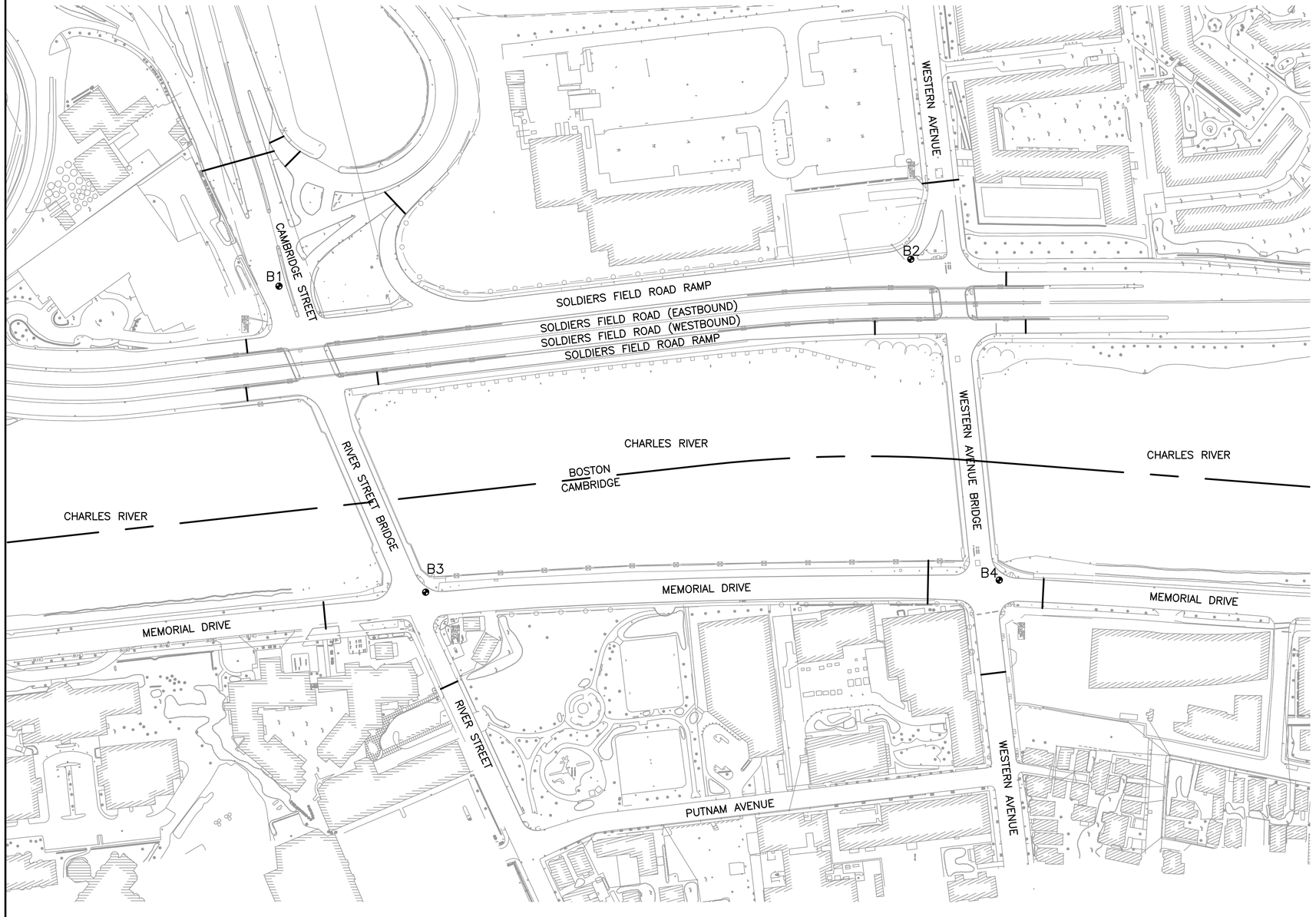
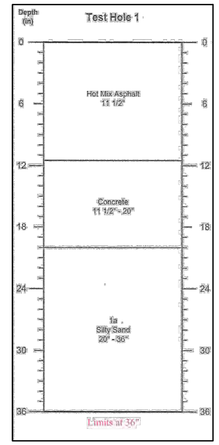
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

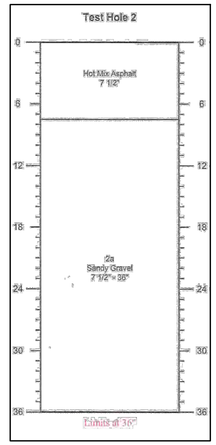
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	5	317
PROJECT FILE NO.	605527		

PAVEMENT BORING PLAN





BORING B–1



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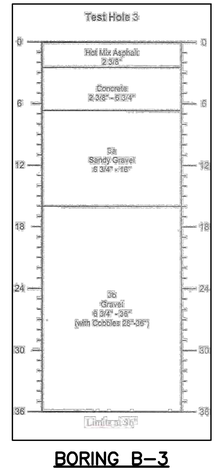

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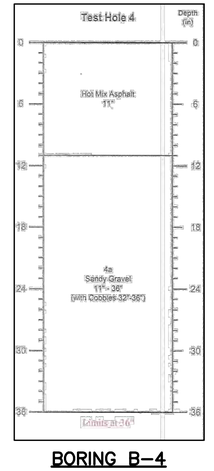

BORING B–4

B# BORING LOCATION

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SCALE 1" = 100'

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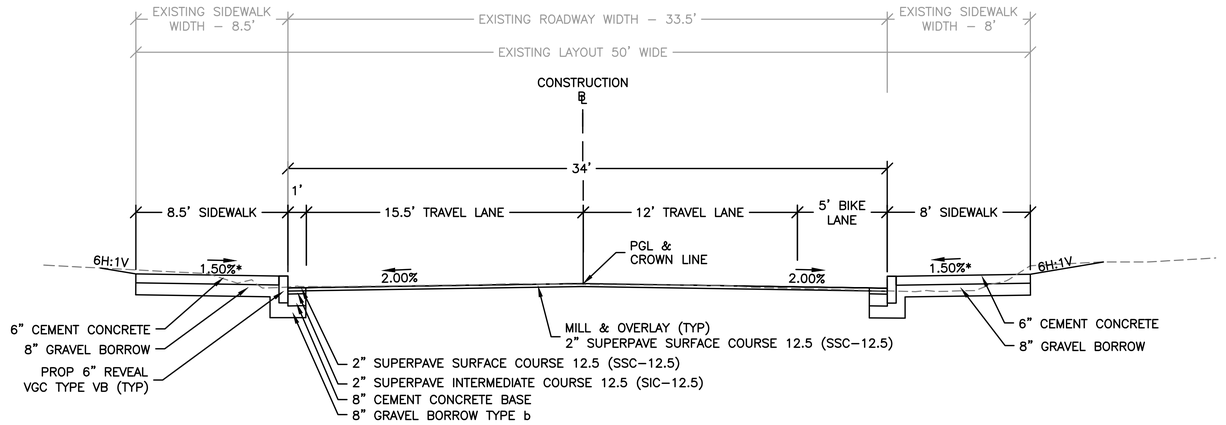
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	6	317
PROJECT FILE NO.	605527		

TYPICAL SECTIONS & PAVEMENT NOTES
CAMBRIDGE STREET & RIVER STREET



RIVER STREET

EASTBOUND APPROACH
MILL AND OVERLAY
STA. 109+00 TO STA. 110+00
NOT TO SCALE

CAMBRIDGE STREET / RIVER STREET

MILL AND OVERLAY/ FULL DEPTH RECONSTRUCTION
STA. 103+25 TO STA. 109+00
SEE BRIDGE PLANS

PAVEMENT NOTES: CAMBRIDGE STREET, RIVER STREET, WESTERN AVENUE, SOLDIERS FIELD ROAD (EASTBOUND & WESTBOUND), AND MEMORIAL DRIVE

PAVEMENT MILL AND OVERLAY:

2" SUPERPAVE SURFACE COURSE (SSC–12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC–12.5) OVER
2" PAVEMENT MICROMILLING

PROPOSED FULL DEPTH CONSTRUCTION AT BRIDGE APPROACHES:

2" SUPERPAVE SURFACE COURSE (SSC–12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC–12.5) OVER
2 ½" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC–19.0) OVER
4" SUPERPAVE BASE COURSE 37.5 OVER
4" DENSE GRADED CRUSHED STONE FOR SUB–BASE OVER
8" GRAVEL BORROW TYPE B

PROPOSED FULL DEPTH CONSTRUCTION GREATER THAN 4 FEET WIDE AND PERMANENT PAVEMENT REPAIR:

2" SUPERPAVE SURFACE COURSE (SSC–12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC–12.5) OVER
2 ½" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC–19.0) OVER
4" SUPERPAVE BASE COURSE 37.5 OVER
4" DENSE GRADED CRUSHED STONE FOR SUB–BASE OVER
8" GRAVEL BORROW TYPE B

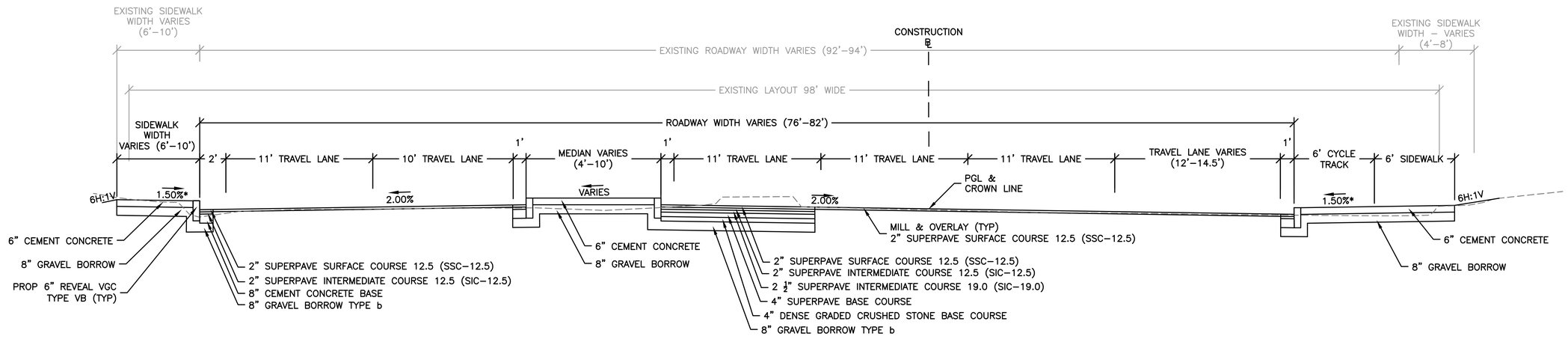
PROPOSED FULL DEPTH CONSTRUCTION LESS THAN 4 FEET WIDE, SETTING VERTICAL CURB, AND TRENCH PAVEMENT:

2" SUPERPAVE SURFACE COURSE (SSC–12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC–12.5) OVER
8" CEMENT CONCRETE BASE COURSE OVER
8" GRAVEL BORROW TYPE B

*NOTE: ALL SUPERPAVE SURFACE AND INTERMEDIATE COUSE SHALL BE WARM MIX ASPHALT (WMA) POLYMER MODIFIED WITH LATEX.

TACK COAT SHALL BE SPRAY APPLIED DOUBLE OVERLAP FOR UNIFORM COVERAGE AT 0.07 GAL/SY OVER MILLED SURFACE AND 0.05 GAL/SY OVER SMOOTH SURFACES (BASE AND INTERMEDIATE COURSES) PRIOR TO PAVING OVERLAY.

PAVEMENT MILLING SHALL BE USED TO ACHIEVE A 2.00% CROSS SLOPE OR TO MAINTAIN EXISTING CROSS SLOPE.



CAMBRIDGE STREET

MILL AND OVERLAY & FULL DEPTH
CONSTRUCTION WITH MEDIAN
STA. 101+75 TO STA. 103+25
NOT TO SCALE

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	7	317
PROJECT FILE NO.	605527		

TYPICAL SECTIONS & PAVEMENT NOTES
WESTERN AVENUE

PAVEMENT NOTES:
CAMBRIDGE STREET, RIVER STREET, WESTERN AVENUE, SOLDIERS FIELD ROAD (EASTBOUND & WESTBOUND), AND MEMORIAL DRIVE

STRUCTURAL OVERLAY:

2" SUPERPAVE SURFACE COURSE 12.5 (SSC–12.5)
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC–12.5) OVER BINDER OVER EXISTING ROADWAY SURFACE

*LEVELING COURSE WITH 1 3/4" MIN TO 2 3/4" SUPERPAVE INTERMEDIATE COURSE – DENSE BINDER COURSE (LATEX MODIFIED) SHALL BE PAVED UNDER THE SUPERPAVE OVERLAY AND STRUCTURAL OVERLAY TO MEET GRADING PLAN AND THE CROSS SECTIONS AS REQUIRED.

TEMPORARY PATCH:

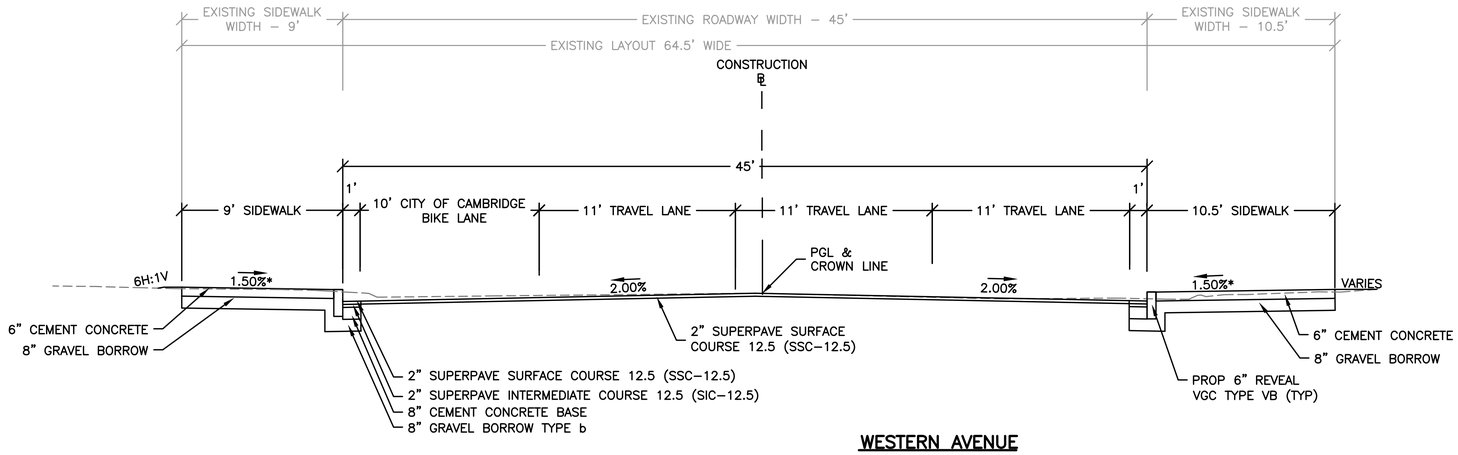
2" SUPERPAVE SURFACE COURSE (SSC–12.5) OVER
8" GRAVEL BORROW TYPE B

CEMENT CONCRETE SIDEWALK, DRIVEWAYS, MEDIANS, AND RAMPS

SURFACE COURSE: 6" CEMENT CONCRETE

SUB–BASE: 8" GRAVEL BORROW TYPE b

*NOTE: * = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND WHEELCHAIR RAMPS.

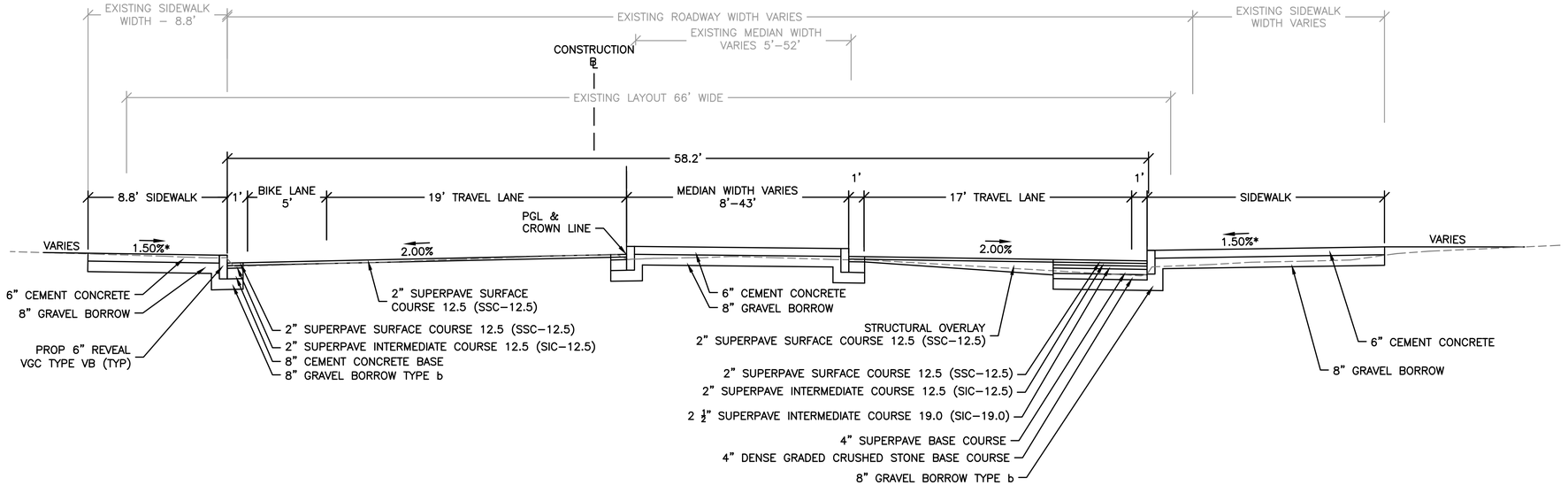


WESTERN AVENUE

EASTBOUND APPROACH
FULL DEPTH RECONSTRUCTION AND MILL AND OVERLAY
STA. 208+50 TO STA. 210+00
NOT TO SCALE

WESTERN AVENUE

FULL DEPTH RECONSTRUCTION AND MILL AND OVERLAY
STA. 202+40 TO STA. 208+50
SEE BRIDGE PLANS



WESTERN AVENUE

WESTBOUND APPROACH BEFORE SOLDIERS FIELD ROAD
MILL AND OVERLAY, STRUCTURAL OVERLAY & FULL DEPTH CONSTRUCTION WITH MEDIAN
STA. 201+40 TO STA. 202+40
NOT TO SCALE

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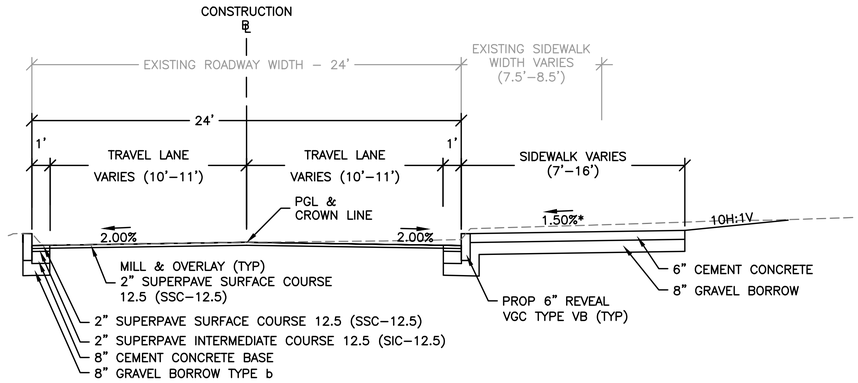
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

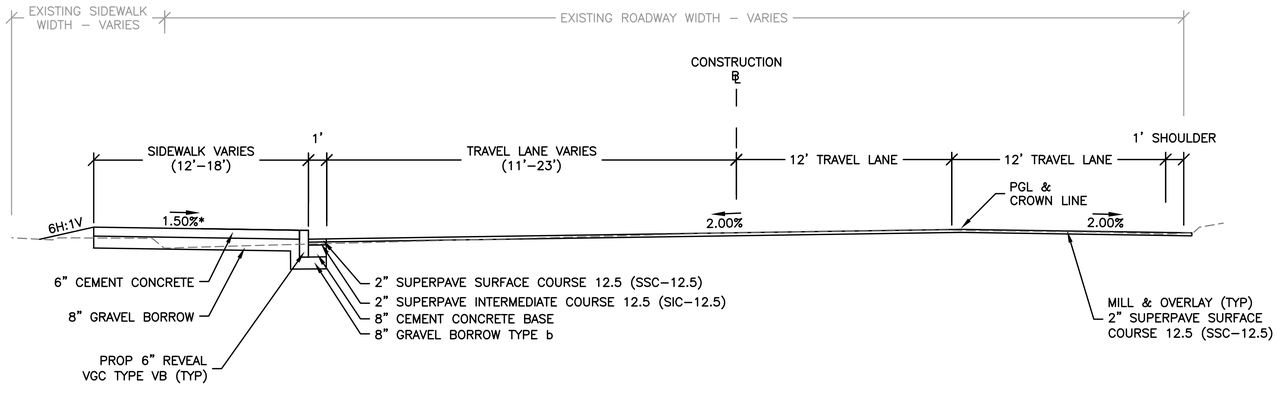
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	8	317
PROJECT FILE NO.	605527		

TYPICAL SECTIONS & PAVEMENT NOTES
SOLDIERS FIELD ROAD



SOLDIERS FIELD ROAD RAMP WESTBOUND

PAVEMENT MILLING & OVERLAY
STA. 401+00 TO STA. 403+40 &
STA. 412+50 TO STA. 414+85
NOT TO SCALE



SOLDIERS FIELD ROAD RAMP EASTBOUND

PAVEMENT MILLING & OVERLAY
STA. 301+00 TO STA. 303+55 &
STA. 312+50 TO STA. 315+00
NOT TO SCALE

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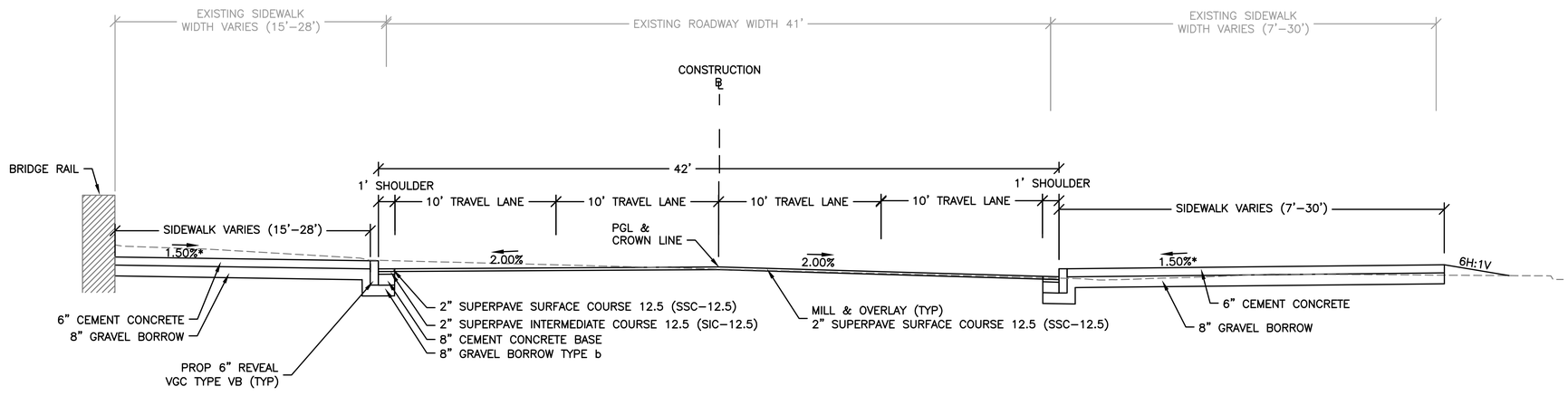
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	9	317
PROJECT FILE NO.	605527		

TYPICAL SECTIONS & PAVEMENT NOTES
MEMORIAL DRIVE



MEMORIAL DRIVE

MILL AND OVERLAY
STA. 502+00 TO STA. 505+40 &
STA. 513+00 TO STA. 515+10
NOT TO SCALE

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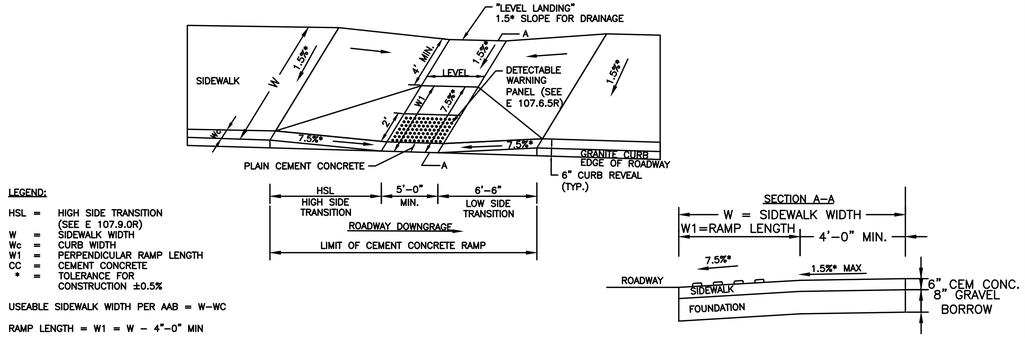


LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
Wc = CURB WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W–WC

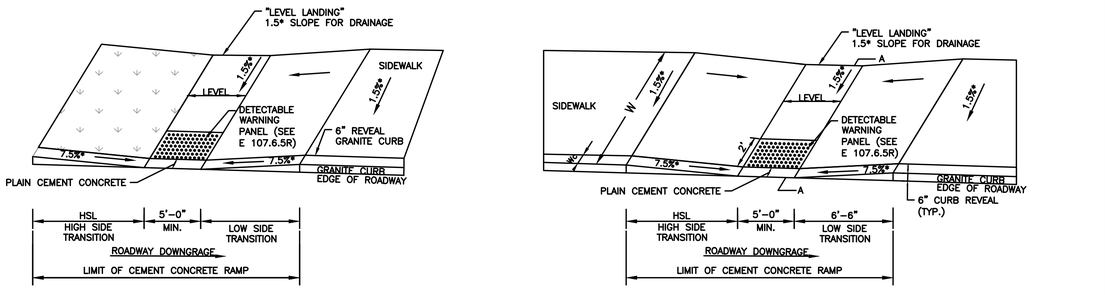
RAMP LENGTH = W1 = W – 4"–0" MIN

WHEELCHAIR RAMP LESS THAN 12'–4" SIDEWALK (E107.2.0R)

NOT TO SCALE

WHEELCHAIR RAMP LESS THAN 12'–4" SIDEWALK (E107.2.0R)

WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
28	116.18	WESTERN AVE	202+23.01	36.63' R	8.3'	9.0'	15.0'	4.0'	6.5'	11.0'	2.86%±
29	115.92	SOLDIERS FIELD ROAD EASTBOUND	313+70.41	35.86' L	8.3'	9.0'	15.0'	4.0'	6.5'	7.7'	0.83%±
31	115.17	WESTERN AVE	202+23.02	24.20' LT	5.0'	9.2'	5.0'	4.2'	6.5'	7.7'	0.84%±
44	118.89	WESTERN AVE	208+92.17	21.98' R	6.0'	10.5'	5.0'	4.5'	6.5'	14.0'	3.70%±
47	112.80	SOLDIERS FIELD ROAD EASTBOUND	304+22.16	55.19' L	8.3'	12.0'	10'	3.7'	–	6.5'	2.90%±



LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
Wc = CURB WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W–WC

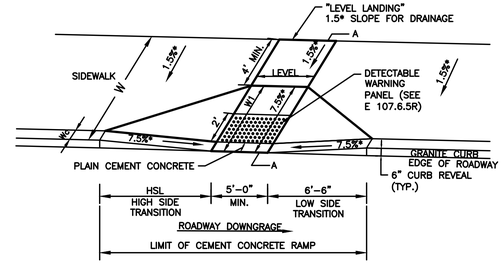
RAMP LENGTH = W1 = W – 4"–0" MIN

WHEELCHAIR RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (E107.2.1R)

NOT TO SCALE

WHEELCHAIR RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (E107.2.1R)

WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
2	113.24	CAMBRIDGE STREET	100+85.92	53.85' R	5.5'	5.5'	5.0'	–	6.5'	9.0'	–1.47%±
49	114.04	CAMBRIDGE STREET	100+00.22	97.73' L	6.3'	6.3'	8.0'	–	6.5'	–	0.87%±



LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
Wc = CURB WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W–WC

RAMP LENGTH = W1 = W – 4"–0" MIN

WHEELCHAIR RAMP GREATER THAN 12'–4" SIDEWALK (E107.3.0R)

NOT TO SCALE

WHEELCHAIR RAMP GREATER THAN 12'–4" SIDEWALK (E107.3.0R)

WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
5	115.43	RIVER STREET	103+02.40	45.37' R	6.4'	12.4'	15.4'	6.0'	9.0'	7.7'	3.75%±
8	115.37	RIVER STREET	104+38.21	30.61' R	8.3'	18.7'	17.8'	12.7'	10.0'***	6.5'	2.69%±
9	119.76	RIVER STREET	104+64.12	16.25' R	7.7'	19.9'	10.0'	13.9'	15.0'	6.5'	4.87%±
20	116.78	MEMORIAL DRIVE	503+97.10	22.30' L	19.5	28.7'	5.0'	>4.0'	14.0'	6.5'	–1.76%±
21	118.10	RIVER STREET	108+35.99	16.25' L	7.8'	21.4'	5.0'	>4.0'	15.0'	6.5'	–5.0%±
22	117.53	RIVER STREET	108+26.81	31.47' R	14.0'	19.0'	14.2'	5.0'	13.3'	25.5'	–5.0%±
23	115.48	MEMORIAL DRIVE	503+34.78	19.88' R	6.0'	24.0'	5.0'	18.0'	7.7'	–	0.84%±
24	114.98	RIVER STREET	109+08.68	16.39' R	6.0'	18.4'	5.0'	12.4'	6.5'	10.5'***	5.00%±
27	115.14	WESTERN AVE	202+13.17	52.17' R	6.0'	16.0'	17.0'	10.0'	7.7'	6.5'	0.84%±
30	115.38	WESTERN AVE	202+22.26	1.75' R	8.3'	>10.5'	5.0'	>4.0'	9.0'	6.5'	0.84%±
32	115.98	SOLDIERS FIELD ROAD EASTBOUND	314+34.25	26.93' L	6.0'	14.7'	5.0'	8.7'	6.5'	11.0'	0.43%±
36	119.71	SOLDIERS FIELD ROAD WESTBOUND	413.69.06	12.04' R	12.2'	17.0'	14.0'	>4.0'	11.0'	7.7'	2.35%±
37	120.62	WESTERN AVE	204+02.06	16.25' R	7.7'	13.0'	10.0'	>4.0'	14.0'	6.5'	3.30%±
39	120.02	SOLDIERS FIELD ROAD WESTBOUND	414+38.70	12.64' R	14.1'	28.0'	5.0'	>4.0'	8.9'	9.8'	2.82%±
41	120.75	MEMORIAL DRIVE	514+33.34	20.62' L	9.7'	21.6'	5.0'	>4.0'	8.1'	7.7'	1.42%±
43	122.13	WESTERN AVE	207+99.24	16.25' R	9.0	16.7'	10.0'	>4.0'	6.5'	19.5'	3.70%±
46	119.55	MEMORIAL DRIVE	514+37.78	21.08' L	6.2'	26.7'	5.0'	20.5'	6.5'	6.5'	1.39%±
48	113.40	SOLDIERS FIELD ROAD EASTBOUND	303+97.30	38.20' L	8.0'	>12.4'	10.0'	>4.0'	–	–	2.90%±
50	114.05	CAMBRIDGE STREET	100+14.73	66.20' L	6.0'	>12.4'	13.5'	>4.0'	6.5'	–	0.87%±

NOTES:
***TRANSITION LENGTH BASED ON A DESIGN SLOPE OF 10% (521 CMR 21.7)

WHEELCHAIR RAMP NOTE:
1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS AND GUIDELINES INCLUDING E 107.6.5R (MARCH 2012 CONSTRUCTION STANDARD DETAILS).

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	10	317
PROJECT FILE NO.	605527		

CONSTRUCTION DETAILS

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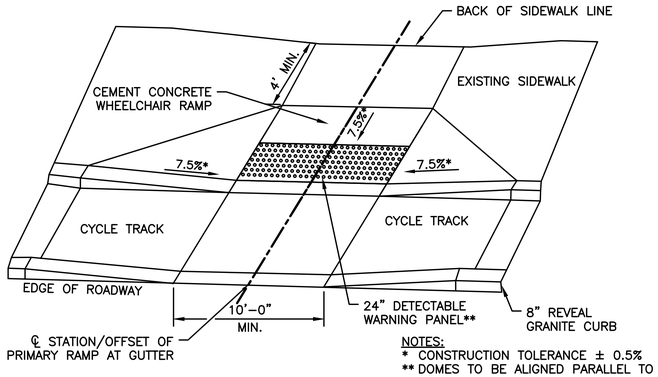
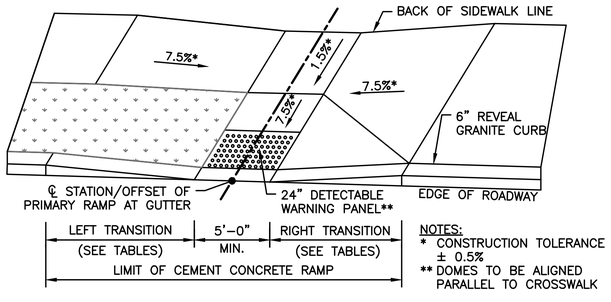


WHEELCHAIR RAMP WITH CYCLE TRACK

NOT TO SCALE

WHEELCHAIR RAMP WITH CYCLE TRACK											
WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
38	120.85	WESTERN AVE	204+09.09	25.87' L	8.0'	17.6'	10.0'	> 4.0'	6.5'	12.4'	3.30%±
42	122.01	WESTERN AVE	207+98.34	23.35' L	11.7'	11.7'	10.0'	–	17.0'	6.5'	−3.70%±
45	119.03	WESTERN AVE	208+93.91	23.34' L	5.4'	10.1'	10.0'	4.7'	11.0'	6.5'	−3.70%±



WHEELCHAIR RAMP LESS THAN 12'-4" SIDEWALK WITH A LANDSCAPED TRANSITION

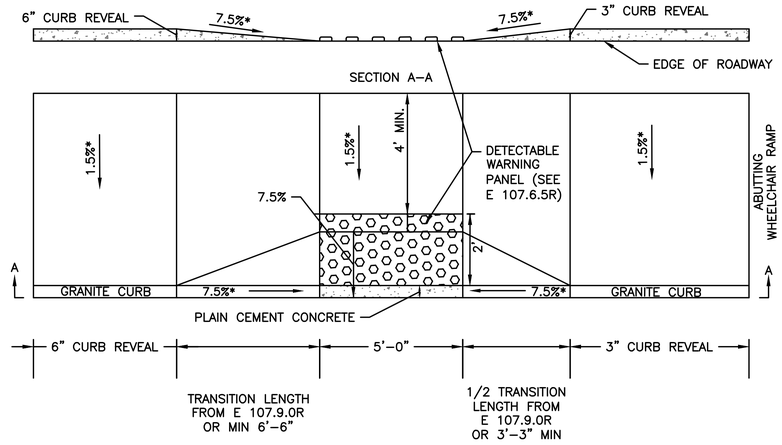
NOT TO SCALE

WHEELCHAIR RAMP LESS THAN 12'-4" SIDEWALK WITH A LANDSCAPED TRANSITION											
WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
1	114.08	CAMBRIDGE STREET	100+80.41	21.97' R	4.5'	10.0'	5.0'	5.5'	9.0'	6.5'	−1.45%±

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	11	317
PROJECT FILE NO.	605527		

CONSTRUCTION DETAILS



LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH SEE E 107.9.0R
** = TOLERANCE FOR CONSTRUCTION ± 0.5%

WHEELCHAIR RAMP WITH 3-INCH CURB REVEAL (107.6.3)

NOT TO SCALE

WHEELCHAIR RAMP WITH 3-INCH CURB REVEAL (107.6.3)											
WCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
10	120.20	RIVER STREET	104+70.26	16.25' L	6.7'	>15.0'	10.4'	>4.0'	3.3'	15.0'	4.87%±
11	119.72	RIVER STREET	104+57.60	26.91' L	15.0'	>15.0'	5.0'	>4.0'	6.5'	4.8'	−0.5%±
14	114.93	RIVER STREET	103+24.93	48.60' L	6.0'	11.0'	5.0'	5.2'	3.3'	6.5'	−1.09%±
15	114.38	RIVER STREET	103+08.78	41.84' L	8.5'	7.5'	5.0'	–	6.5'	4.3'	1.86%±
25	114.24	RIVER STREET	109+14.06	16.72' L	6.0'	–	5.0'	–	7.7'	6.5'	4.25%±
26	114.97	MEMORIAL DRIVE	504+00.24	20.24' R	6.0'	–	5.0'	–	6.5'	4.5'	−1.65%±

WHEELCHAIR RAMP NOTE:

1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS AND GUIDELINES INCLUDING E 107.6.5R (MARCH 2012 CONSTRUCTION STANDARD DETAILS).

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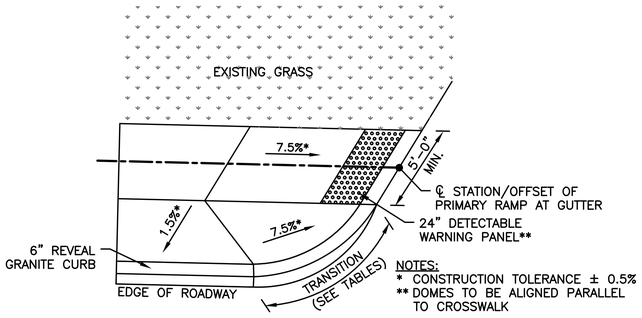
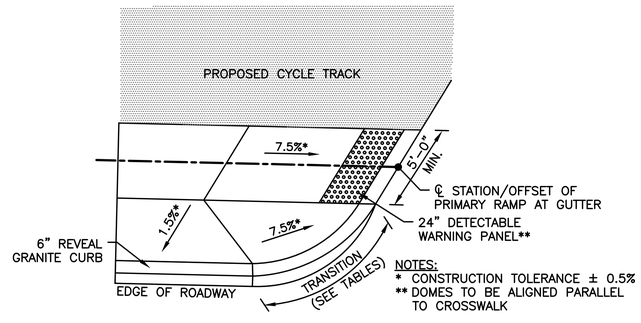


MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R) AT EXISTING GRASS AREA

NOT TO SCALE

MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R)

WCR #	GRASS OR BRIDGE	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
			STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
3	GRASS	113.43	CAMBRIDGE STREET	101+42.27	46.89' R	6.5'	–	5.0'	–	–	7.7'	3.88%±
18	GRASS	113.11	RIVER STREET	101+77.99	64.56' L	15.5'	>10.5'	5.0'	>4.0'	–	6.5'	0.90%±
19	GRASS	113.83	RIVER STREET	101+40.98	63.46' L	5.8'	–	5.0'	4.0'	14.0'	–	−1.93%±



MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R) AT PROPOSED CYCLE TRACK

NOT TO SCALE

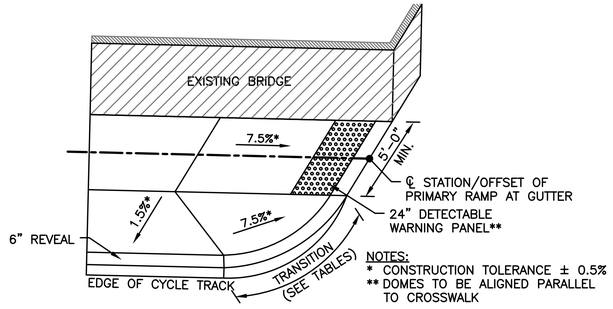
MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R)

WCR #	GRASS OR BRIDGE	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
			STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
4	CYCLE TRACK	113.33	CAMBRIDGE STREET	101+65.13'	42.88' R	5.9'	–	6.0'	–	–	7.7'	0.83%±
7	CYCLE TRACK	115.64	RIVER STREET	104+14.93	32.18' R	6.0'	–	5.0'	–	7.7'	–	−2.65%±

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	12	317
PROJECT FILE NO.	605527		

CONSTRUCTION DETAILS



MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R) AT EXISTING BRIDGE

NOT TO SCALE

MODIFIED WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL (E107.6.0R)

WCR #	GRASS OR BRIDGE	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
			STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
6	BRIDGE	116.87	RIVER STREET	103+47.17	38.29' R	6.0'	–	5.0'	–	7.7'	–	0.64%±
12	BRIDGE	119.34	RIVER STREET	104+34.76	33.01' L	6.5'	–	5.0'	–	7.7'	–	−0.50%±
13	BRIDGE	117.27	RIVER STREET	103+68.07	32.38' L	10.3'	–	5.0'	–	–	–	−1.09%±
33	BRIDGE	117.84	SOLDIERS FIELD ROAD EASTBOUND	314+37.61	12.21' R	14.8'	–	5.0'	–	–	7.3'***	−0.65%±
34	BRIDGE	117.41	SOLDIERS FIELD ROAD EASTBOUND	313+66.03	11.99' R	12.9'	–	5.0'	–	5.2'	–	0.83%±
35	BRIDGE	119.43	SOLDIERS FIELD ROAD WESTBOUND	413+61.99	11.97' L	6.5'	–	5.0'	–	–	4.9'	1.14%±
40	BRIDGE	119.74	SOLDIERS FIELD ROAD WESTBOUND	414+32.81	11.61' L	6.0'	–	5.0'	–	7.2'***	–	−0.65%±

NOTES:
***TRANSITION LENGTH BASED ON A DESIGN SLOPE OF 10% (521 CMR 21.7)

WHEELCHAIR RAMP NOTE:
1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS AND GUIDELINES INCLUDING E 107.6.5R (MARCH 2012 CONSTRUCTION STANDARD DETAILS).

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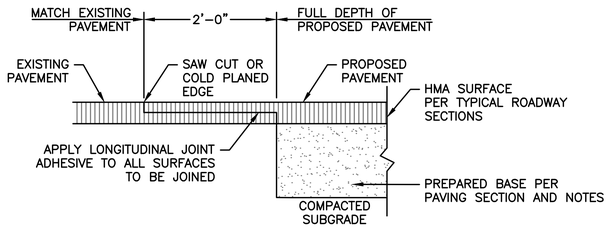
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

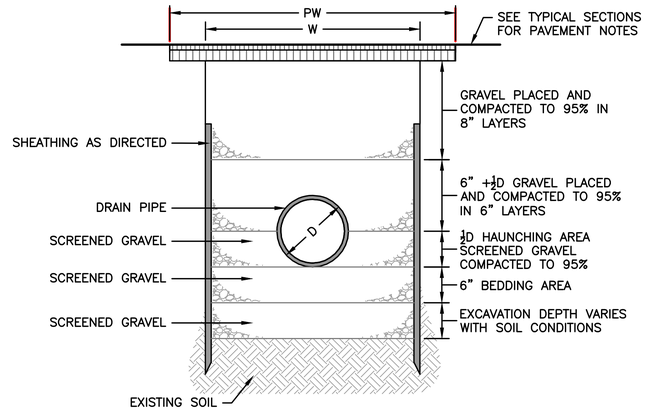
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	13	317
PROJECT FILE NO.	605527		

CONSTRUCTION DETAILS



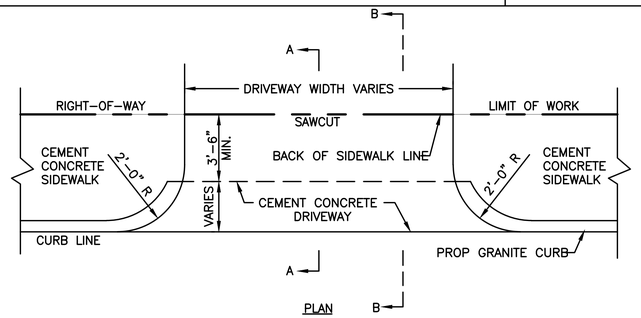
NOTES:
1. CLEAN AREA OF ANY LOOSE DEBRIS. AREA SHOULD BE FREE OF DUST OR DIRT, AND THOROUGHLY DRIED.
2. SAW-CUT AND REMOVE EXISTING PAVEMENT IN A NEAT, STRAIGHT LINE BY COLD PLANING 12" FROM THE EDGE OF THE PREVIOUS SAW-CUT LINE AND WITH A 1" DEPTH.
3. A TACK COAT OF EMULSIFIED ASPHALT SHALL BE APPLIED TO THE SAW CUT AREA PRIOR TO PAVING.

SAW CUT
NOT TO SCALE



NOTES:
1. W = MAXIMUM WIDTH
2. PW = MAXIMUM PAVING WIDTH (W+1'-0")
3. D = OUTSIDE PIPE DIAMETER
4. UNSHEATHED TRENCH: W = D+2'-0" (3'-0" MIN.)
5. SHEATHED TRENCH: W = D+2'-0"+SHEATHING WIDTH
   - 4'-2" MIN. WITHOUT WALERS
   - 5'-0" MIN WITH WALERS
6. TRENCH BOX OR HYDRAULIC SHORING:
   - W = D+2'-0"+[WALL SHIELD WIDTH ≤ 8"] + 1'-0" FOR TRENCH BOX

TRENCH DETAIL FOR RCP OR DICL PIPE
NOT TO SCALE



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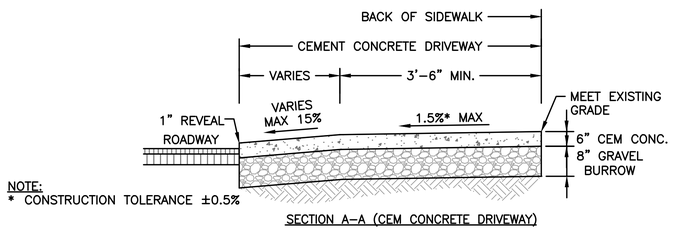
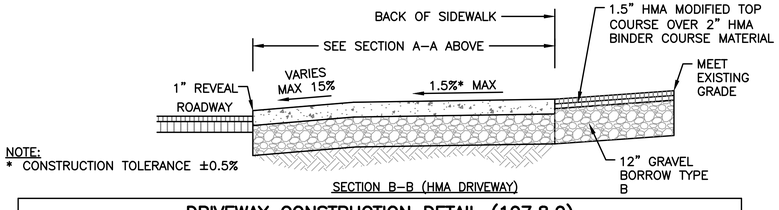


NOTE:
* CONSTRUCTION TOLERANCE ±0.5%

SECTION A-A (CEM CONCRETE DRIVEWAY)



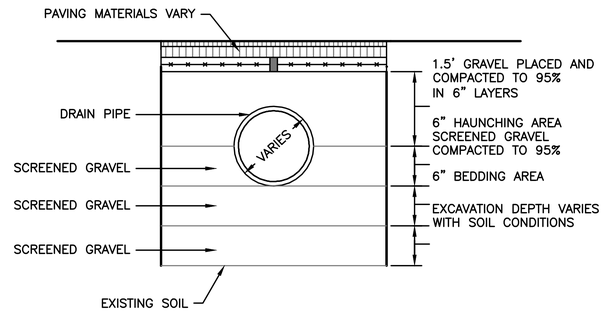
NOTE:
* CONSTRUCTION TOLERANCE ±0.5%

SECTION B-B (HMA DRIVEWAY)

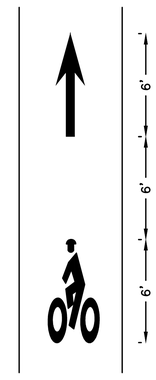
DRIVEWAY CONSTRUCTION DETAIL (107.8.0)

DRIVEWAY #	DRIVEWAY REFERENCE POINT			ROADWAY ELEV. AT DRIVEWAY ℄	WIDTH OF OPENING
	STREET	STATION	OFFSET		
1	RIVER STREET	109+541.57	16.72' LT	113.38	39.32'
2	RIVER STREET	110+10.73	16.84' LT	113.32	33.44'
3	RIVER STREET	109+39.82	16.72' RT	114.01	49.57'
4	RIVER STREET	110+07.55	17.04' RT	113.27	37.63'

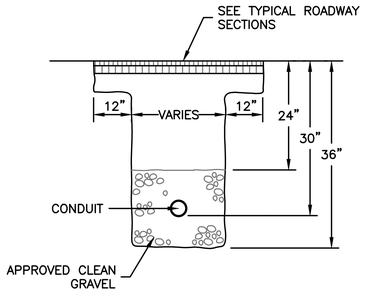
DRIVEWAY CONSTRUCTION DETAIL (E107.8.0)
NOT TO SCALE



DRAINAGE TRENCH DETAIL
NOT TO SCALE



BICYCLE LANE MARKING
NOT TO SCALE



NOTES:
1. 6" REINFORCED CEMENT CONCRETE TRENCH CAP REQUIRED ONLY IN AREAS OF EXIST ROADWAY PAVEMENT THAT DO NOT REQUIRE FULL DEPTH RECONSTRUCTION.
2. WIDTH VARIES, DEPENDENT UPON THE NUMBER OF CONDUITS 18" FOR SINGLE CONDUIT AND 24" FOR THREE CONDUITS.

CONDUIT TRENCHING
NOT TO SCALE

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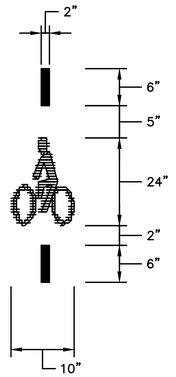
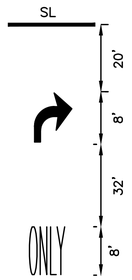
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	14	317
PROJECT FILE NO.	605527		

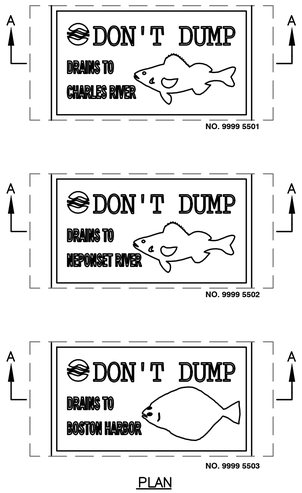
CONSTRUCTION DETAILS



TYPICAL BICYCLE DETECTOR PAVEMENT MARKING
NOT TO SCALE



TURN LANE PAVEMENT MARKING
NOT TO SCALE



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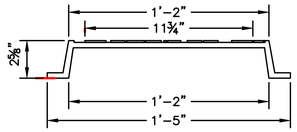
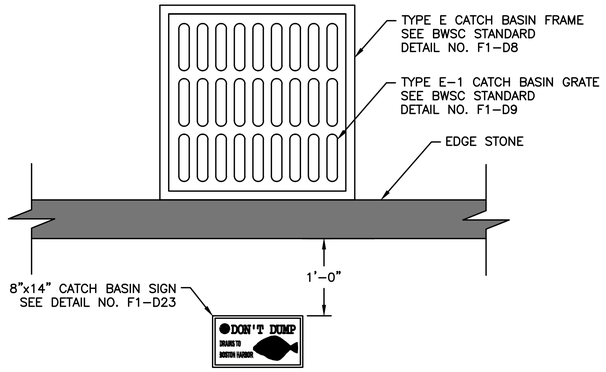
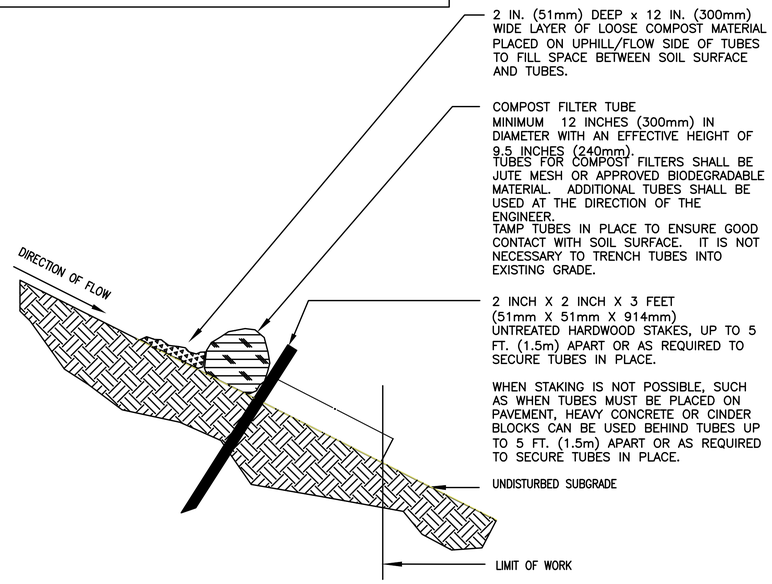


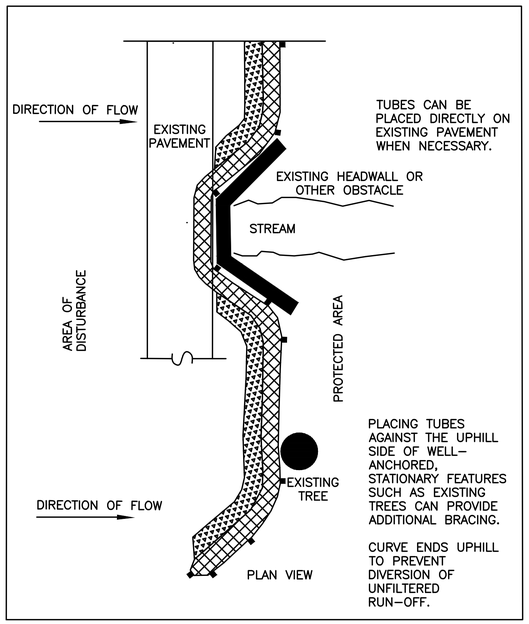
SECTION A–A

8" X 14" CATCH BASIN SIGN
NOT TO SCALE

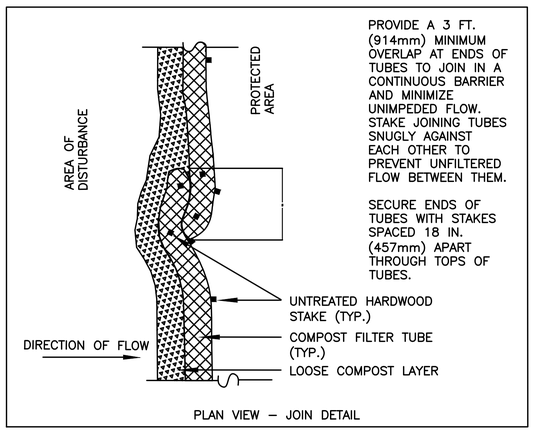


CATCH BASIN SIGN INSTALLATION
NOT TO SCALE





GENERAL NOTES:
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN–OFF.



SINGLE COMPOST FILTER TUBE DETAIL
NOT TO SCALE

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RIVER ROAD CONSTRUCTION BASELINE DATA

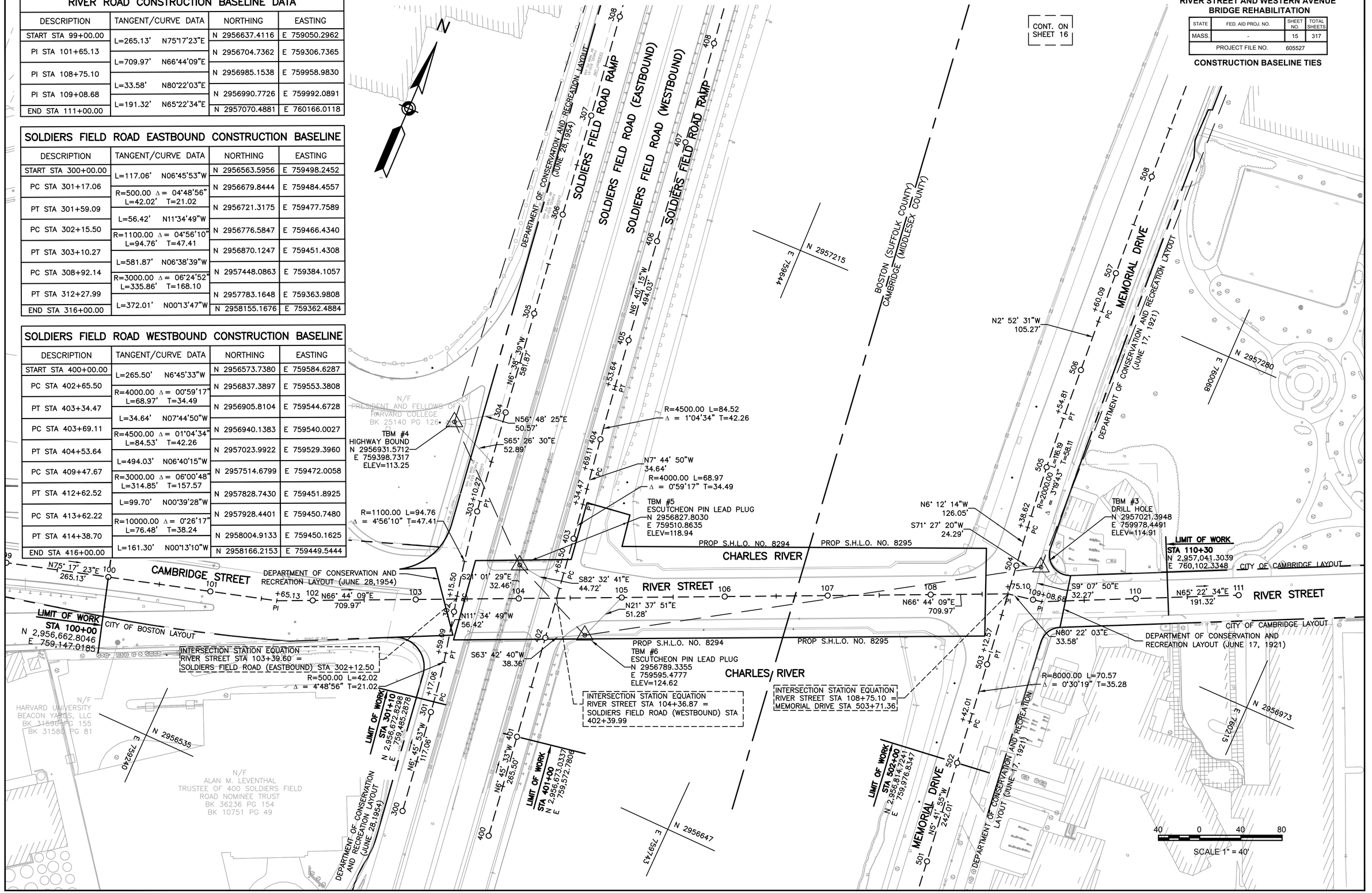
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 99+00.00	L=265.13' N75°17'23"E	N 2956637.4116	E 759050.2962
PI STA 101+65.13	L=709.97' N66°44'09"E	N 2956704.7362	E 759306.7365
PI STA 108+75.10	L=33.58' N80°22'03"E	N 2956985.1538	E 759958.9830
PI STA 109+08.68	L=191.32' N65°22'34"E	N 2956990.7726	E 759992.0891
END STA 111+00.00		N 2957070.4881	E 760166.0118

SOLDIERS FIELD ROAD EASTBOUND CONSTRUCTION BASELINE

DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 300+00.00	L=117.06' N06°45'53"W	N 2956563.5956	E 759498.2452
PC STA 301+17.06	R=500.00 Δ= 04°48'56" L=42.02' T=21.02	N 2956679.8444	E 759484.4557
PT STA 301+59.09	L=56.42' N11°34'49"W	N 2956721.3175	E 759477.7589
PC STA 302+15.50	R=1100.00 Δ= 04°56'10" L=94.76' T=47.41	N 2956776.5847	E 759466.4340
PT STA 303+10.27	L=581.87' N06°38'39"W	N 2956870.1247	E 759451.4308
PC STA 308+92.14	R=3000.00 Δ= 06°24'52" L=335.86' T=168.10	N 2957448.0863	E 759384.1057
PT STA 312+27.99	L=372.01' N00°13'47"W	N 2957783.1648	E 759363.9808
END STA 316+00.00		N 2958155.1676	E 759362.4884

SOLDIERS FIELD ROAD WESTBOUND CONSTRUCTION BASELINE

DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 400+00.00	L=265.50' N6°45'33"W	N 2956573.7380	E 759584.6287
PC STA 402+65.50	R=4000.00 Δ= 00°59'17" L=68.97' T=34.49	N 2956837.3897	E 759553.3808
PT STA 403+34.47	L=34.64' N07°44'50"W	N 2956905.8104	E 759544.6728
PC STA 403+69.11	R=4500.00 Δ= 01°04'34" L=84.53' T=42.26	N 2956940.1383	E 759540.0027
PT STA 404+53.64	L=494.03' N06°40'15"W	N 2957023.9922	E 759529.3960
PC STA 409+47.67	R=3000.00 Δ= 06°00'48" L=314.85' T=157.57	N 2957514.6799	E 759472.0058
PT STA 412+62.52	L=99.70' N00°39'28"W	N 2957828.7430	E 759451.8925
PC STA 413+62.22	R=10000.00 Δ= 0°26'17" L=76.48' T=38.24	N 2957928.4401	E 759450.7480
PT STA 414+38.70	L=161.30' N00°13'10"W	N 2958004.9133	E 759450.1625
END STA 416+00.00		N 2958166.2153	E 759449.5444



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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	16	317
PROJECT FILE NO.	605527		

CONSTRUCTION BASELINE TIES

N

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 202+78.28 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 313+99.02

CITY OF BOSTON LAYOUT

WESTERN AVENUE

LIMIT OF WORK
STA 201+00
N 2,957,935.3637
E 759,186.0117

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)

CITY OF BOSTON LAYOUT

200 — 134.65' N83° 23' 09"W — 201 — 165.01' N83° 33' 57"E — PI +65.01 — 202

TBM #2
DRILL HOLE
N 2957908.6484
E 759220.3923
ELEV=114.32

N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
1 WESTERN AVENUE

LIMIT OF WORK
STA 315+00
N 2,958,055.1671
E 759,363.0845

316 — N0° 13' 10"W 167.30' — 416

LIMIT OF WORK
STA 414+85
N 2,958,031.2124
E 759,449.9851

415 — 38.70' PT — R=10000.00 L=76.48 Δ = 0°26'17" T=38.24 — 414

203 — S88° 36' 32"E 143.14' — 204 — N84° 09' 04"E 634.93' — 205 — 206 — 207 — 208 — PI +99.93

PROP S.H.L.O. NO. 8294

CHARLES RIVER

PROP S.H.L.O. NO. 8295

WESTERN AVENUE

CHARLES RIVER

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 208+43.79 =
MEMORIAL DRIVE STA 513+99.98

N 2958213
E 759535

LIMIT OF WORK
STA 515+10
N 2,958,122.4832
E 759,931.4596

516 — N3° 08' 19"E 153.57' — 515 — +46.42 PT — 514

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

N 2958232
E 760075

N/F
PRESIDENT AND FELLOWS OF
HARVARD COLLEGE
880 MEMORIAL DRIVE

LIMIT OF WORK
STA 210+00
N 2,958,031.3574
E 760,080.8514

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

TBM #9
MONUMENT
N 2958087.9365
E 760242.7221
ELEV=118.59

CITY OF CAMBRIDGE LAYOUT

S65° 45' 26"W 123.22'

210 — 211

WESTERN AVENUE

S54° 32' 30"W 76.85'

CITY OF CAMBRIDGE LAYOUT

TBM #7
DRILL HOLE
N 2957986.5615
E 759955.9960
ELEV=119.82

N37° 57' 02"E 41.59'

N83° 06' 30"E 300.07'

S53° 00' 45"W 39.77'

209 — R=3000.00 L=179.19 T=89.62 Δ = 3°25'20" — 513 — N0° 17' 01"W +67.23 PC 132.18' — 512

N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
24 BLACKSTONE STREET

TBM #1
DRILL HOLE
N 2957840.4245
E 759314.4596
ELEV=115.59

N15° 17' 49"W 109.58'

N73° 28' 10"E 51.49'

N/F
PRESIDENT AND
FELLOWS
OF HARVARD
COLLEGE
BK 25140 PG
126

N/F
HARVARD REAL ESTATE
ALLSTON INC.
BK 25140 PG 126

COMMONWEALTH
OF MASSACHUSETTS - DCR
PERMANENT 50' WIDE
SUBSURFACE EASEMENT
(CITY TUNNEL EXTENSION)
BK 8372 PG 692

N 2957601
E 759168

N 2957735
E 759619

N0° 39' 28"W 99.70' — 413 — +62.52 PT — 412 — +47.67 PC — 411 — 410 — 409 — +27.98 PT — 312 — 311 — 310 — 309 — PC +92.14 — 308 — 408

R=3000.00 L=335.86 Δ = 6°24'52" T=168.10

R=3000.00 L=314.85 Δ = 6°00'48" T=157.57

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SOLDIERS FIELD ROAD RAMP

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 203+65.85 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 413+96.90

N0° 17' 01"W +35.05 PT — 511 — MEMORIAL DRIVE — 510 — R=10500.00 L=474.97 T=237.52 Δ = 2°35'30" — 509

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

CONT. ON SHEET 15

WESTERN AVENUE CONSTRUCTION BASELINE DATA

DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 200+00.00	L=165.01' N83°33'57"E	N 2957924.1576	E 759086.6416
PI STA 201+65.01	L=634.93' N84°09'04"E	N 2957942.6484	E 759250.6080
PI STA 207+99.93	L=300.07' N83°06'30"E	N 2958007.3504	E 759882.2293
END STA 211+00.00		N 2958043.3566	E 760180.1270

MEMORIAL DRIVE WESTBOUND CONSTRUCTION BASELINE DATA

DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 500+00.00	L=242.01' N5°41'55"W	N 2956615.7114	E 759996.6829
PC STA 502+42.01	R=8000.00 Δ = 00°30'19" L=70.56' T=35.28	N 2956856.5217	E 759972.6529
PT STA 503+12.57	L=126.05' N06°12'14"W	N 2956926.7064	E 759965.3365
PC STA 504+38.62	R=2000.00 Δ = 03°19'43" L=116.19' T=58.11	N 2957052.0160	E 759951.7147
PT STA 505+54.81	L=105.28' N02°52'31"W	N 2957167.8291	E 759942.8291
PC STA 506+60.09	R=10500.00 Δ = 2°35'30" L=474.96' T=237.52	N 2957272.9712	E 759937.2387
PT STA 511+35.05	L=132.18' N00°17'01"W	N 2957747.7159	E 759924.1488
PC STA 512+67.23	R=3000.00 Δ = 03°25'20" L=179.19' T=89.62	N 2957879.8954	E 759923.4948
PT STA 514+46.42	L=153.58' N03°08'19"E	N 2958059.0017	E 759927.9584
END STA 516+00.00		N 2958212.3437	E 759936.3672

40 0 40 80

SCALE 1" = 40'

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HIGHWAY GUARDRAIL

GUARD RAIL STA 401+15R TO STA 401+94R

TRAFFIC SIGNAL CONDUIT

SEE SHEETS 47 & 48

WATER SUPPLY ALTERATIONS

SEE SHEET 22 & SEE BRIDGE PLANS

DRAINAGE DETAILS

SEE SHEET 22

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	17	317
PROJECT FILE NO.	605527		

CONSTRUCTION PLANS

NOTE:
1. SEE LANDSCAPE PLAN FOR WETLAND BUFFERS
2. SEE BASELINE TIE PLAN FOR THE PROPOSED STATE HIGHWAY LAYOUT

CONT. ON SHEET 21

LIMIT OF WORK
STA 601+00
N 2,956,726.6334
E 759,109.9662

LIMIT OF WORK
STA 100+00
N 2,956,662.8046
E 759,147.0185

LIMIT OF WORK
STA 301+10
N 2,956,672.8298
E 759,485.2878

LIMIT OF WORK
STA 401+00
N 2,956,673.0337
E 759,572.7806

I-90 OFF-RAMP
I-90 ON-RAMP
SOLDIERS FIELD ROAD RAMP
SOLDIERS FIELD ROAD (EASTBOUND)
SOLDIERS FIELD ROAD (WESTBOUND)
CAMBRIDGE STREET
RIVER STREET
CHARLES RIVER
CITY OF BOSTON LAYOUT
LAYOUT LINE
DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)
N/F PRESIDENT AND FELLOWS OF HARVARD COLLEGE BK 25140 PG 126
SUBJECT TO RESERVED RAMP EASEMENT SEE BK 25140 PG 133 EXHIBIT B AND SCHEDULE B-1
N/F HARVARD UNIVERSITY BEACON YARDS, LLC BK 31596 PG 155 BK 31580 PG 81
N/F DOUBLETREE HOTEL ALAN M. LEVENTHAL TRUSTEE OF 400 SOLDIERS FIELD ROAD NOMINEE TRUST BK 36236 PG 154 BK 10751 PG 49
NO PARKING

LIMIT OF WORK
LIMIT OF MILL & OVERLAY
PROP MILL & OVERLAY
LIMIT OF GRADING
MEET EXISTING
MEET EXIST
REM
REM PAVEMENT FROM EXISTING I-90 ON-RAMP
SAWCUT
REBUILD
PROP 12' CEM CONC SIDEWALK
PROP CEM CONC SIDEWALK (TYP)
PROP CEM CONC SIDEWALK
PROP 6" REVEAL
PROP VGC (TYP)
PROP VGC
PROP CEM CONC MEDIAN
REM EXISTING MEDIAN
PROP 6' HMA CYCLE TRACK
PROP 5' CYCLE TRACK
PROP BICYCLE RAMP (TYP.)
PROP 3" REVEAL GRANITE EDGING
PROP BRIDGE RAIL (TYP)
PROP BRIDGE WALL
PROP FULL DEPTH BRIDGE CONSTRUCTION # B-16-377
PROP FULL DEPTH BRIDGE CONSTRUCTION #B-16-006=C-01-005
TRANSITION FROM 8" REVEAL ON BRIDGE TO 6" VGC
PROP 2' BUFFER
PROP 7.5' CEM CONC SIDEWALK
PROP 30" GAS LINE (BO)
PROP 8" REVEAL
3" REVEAL VGC
R&R LP
R&S
R&D GUARDRAIL
PROP GUARDRAIL
PROP PULL BOX (TYP)
TEMPORARY CONSTRUCTION EASEMENT
PROP COMPOST FILTER TUBES
PROP CEM CONC SIDEWALK (TYP)
SLOPED CONC. FOR GRADING
PROP STRAIN POLE (TYP)
EXIST BRIDGE ABUTMENT
EXIST BRIDGE PIER
PROP 10' CEM CONC SIDEWALK
PROP 30" WATER PIPES
PROP STREET LIGHTING (TYP)
EDGE OF WETLAND
EDGE OF WATER
PROP TREES (TYP)
REM CB
PROP 6" CEM CONC SIDEWALK
ADJ (BO)
RET
SAWCUT
BICYCLE RAMP
MEET EXISTING
MEET EXIST
APPROX. LOC. ONLY 115KV E
115KV E
115KV W
12"W
24" G
30" G
36" G
42" G
60" WATER MAIN
30" MWRA
36" MWRA
+10.53 PC
+25.00 PT
+65.13 PI
+53.64 PT
+69.11 PC
+34.47 PT
+16.50 PC

INTERSECTION STATION EQUATION
RIVER STREET STA 103+39.60 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 302+12.26

INTERSECTION STATION EQUATION
RIVER STREET STA 104+36.84 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 402+39.75

CONT. ON SHEET 18

PROP FULL DEPTH PAVEMENT

FOR PROFILES:
SEE SHEETS 27, 28, 31, & 32

20 0 20 40
SCALE 1" = 20'

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HIGHWAY GUARDRAIL
NONE

TRAFFIC SIGNAL CONDUIT
SEE SHEETS 50 & 51

WATER SUPPLY ALTERATIONS
SEE SHEET 23 & SEE BRIDGE PLANS

DRAINAGE DETAILS
SEE SHEET 23

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	18	317
PROJECT FILE NO.	605527		

CONSTRUCTION PLANS

NOTE:
1. SEE LANDSCAPE PLAN FOR WETLAND BUFFERS
2. SEE BASELINE TIE PLAN FOR THE PROPOSED STATE HIGHWAY LAYOUT

N

CONT. ON SHEET 20

CONT. ON SHEET 17

CHARLES RIVER

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

RIVER STREET

MEMORIAL DRIVE

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

CITY OF CAMBRIDGE LAYOUT

RIVERSIDE PRESS PARK
N/F
CITY OF CAMBRIDGE
2 BLACKSTONE STREET

N/F
SHELL OIL COMPANY
820 MEMORIAL DRIVE
MAP 129 LOT 55

808 MEMORIAL DRIVE
N/F
808 MEMORIAL DRIVE ASSOCIATION
808 MEMORIAL DRIVE

MOBIL

LIMIT OF WORK
STA 110+30
N 2,957,041.3039
E 760,102.3348

LIMIT OF WORK
STA 502+00
N 2,956,814.7241
E 759,976.8347

INTERSECTION STATION EQUATION
RIVER STREET STA 108+75.10 =
MEMORIAL DRIVE STA 503+71.36

EXIST BRIDGE PIER
PROP STREET LIGHTING (TYP)
PROP BRIDGE #B-16-006=C-01-005
PROP 30" WATER PIPES
PROP 8" REVEAL
PROP FULL DEPTH BRIDGE CONSTRUCTION
PROP 2' BUFFER
TRANSITION FROM 8" REVEAL ON BRIDGE TO 6" VGC
PROP 5' CYCLE TRACK
PROP 30" GAS LINE (BO)
PROP 7.5' CEM CONC SIDEWALK
PROP 10' CEM CONC SIDEWALK
EXIST BRIDGE ABUTMENT
ELEC. CONDUIT OVER BRIDGE
PROP CEM CONC SIDEWALK
LIMIT OF MILL & OVERLAY
EDGE OF WATER
MEET EXISTING
PROP MILL & OVERLAY
PROP VGC
PROP CURB CORNER (TYP)
PROP CEM CONC DRIVEWAY
MEET EXISTING
SAWCUT
PROP MAST ARM (TYP)
PROP HAYBALES
PROP TREES (TYP)
PROP LOAM & SEED
PROP CEM CONC SIDEWALK
PROP 3" REVEAL VGC
PROP 30" GAS LINE (BO)
PROP 7.5' CEM CONC SIDEWALK
PROP 30" GAS LINE (BO)
LIMIT OF MILL & OVERLAY

R=2000.00 L=116.19
R=8000.00 L=70.57
N2° 52' 31"W 105.27
N65° 22' 34"E 191.32
N61° 12' 14"W 136.05
N5° 41' 55"W 242.01

+54.81 PT
+38.62 PC
+75.10 PI
+08.68 PT
+12.57 PT
+42.01 PC

REM
R&S
ADJ
ADJ (BO)

FOR PROFILES:
SEE SHEETS 27, 28, & 33

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	19	317
PROJECT FILE NO.	605527		

CONSTRUCTION PLANS

NOTE:
1. SEE LANDSCAPE PLAN FOR WETLAND BUFFERS
2. SEE BASELINE TIE PLAN FOR THE PROPOSED STATE HIGHWAY LAYOUT

HIGHWAY GUARDRAIL
NONE

TRAFFIC SIGNAL CONDUIT
SEE SHEETS 52 & 53

WATER SUPPLY ALTERATIONS
SEE SHEET 24 & SEE BRIDGE PLANS

DRAINAGE DETAILS
SEE SHEET 24

N

HARVARD UNIVERSITY
GRADUATE STUDENT APARTMENTS

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE

LIMIT OF WORK
STA 315+00
N 2,958,055.1671
E 759,363.0645

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

LIMIT OF WORK
STA 415+25
N 2,958,051.2124
E 759,449.9851

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 202+78.28 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 313+99.02

LIMIT OF WORK
STA 201+00
N 2,957,935.3637
E 759,186.0117

CITY OF BOSTON LAYOUT

WESTERN AVENUE

CHARLES RIVER

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 203+65.85 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 413+96.90

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126

N/F
HARVARD REAL ESTATE/ALLSTON INC.
BK 25140 PG 126

COMMONWEALTH OF MASSACHUSETTS – DCR
PERMANENT 50' WIDE SUBSURFACE EASEMENT
(MTA TUNNEL EXTENSION)
BK 8372 PG 692

FOR PROFILES:
SEE SHEETS 29, 30, 31, & 32

CONT. ON SHEET 20

CONT. ON SHEET 21

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	20	317
PROJECT FILE NO.	605527		

CONSTRUCTION PLANS

NOTE:
1. SEE LANDSCAPE PLAN FOR WETLAND BUFFERS
2. SEE BASELINE TIE PLAN FOR THE PROPOSED STATE HIGHWAY LAYOUT

HIGHWAY GUARDRAIL
NONE

TRAFFIC SIGNAL CONDUIT
SEE SHEETS 54 & 55

WATER SUPPLY ALTERATIONS
SEE SHEET 25 & SEE BRIDGE PLANS

DRAINAGE DETAILS
SEE SHEET 25

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

EXIST BRIDGE PIER
EXIST BRIDGE PIER
PROP 30" WATER PIPES
EXIST BRIDGE PIER
PROP STREET LIGHTING (TYP)
EXIST BRIDGE ABUTMENT
PROP 7.5' CEM. CONC. SIDEWALK
PROP 5' CYCLE TRACK
R&S
REM
REM
R&S
BICYCLE RAMP

WESTERN AVENUE

205 PROP FULL DEPTH BRIDGE CONSTRUCTION 206 207 208 209 210 211

(6)-5" PVC
(1)-2"PVC

PROP 8" REVEAL
TRANSITION FROM 8" REVEAL ON BRIDGE TO 6" VGC
ADJ(BO)
10" STEAM
8" CONDENSATE
30"W MWRA
42" MWRA WATER MAIN
54" INTAKE (ABAN.)

REM REM REM REM REM REM REM REM REM REM

PROP BRIDGE #B-16-10=C-01-006
PROP (2)-10" STEAM (BO)
PROP (1)-8" CONDENSATE (BO)
PROP 10' CEM CONC SIDEWALK
LANDSCAPED AREA
MEET EXISTING
LIMIT OF MILL & OVERLAY

CONT. ON SHEET 19

CHARLES RIVER

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

EDGE OF WETLAND
EDGE OF WATER
PROP HAYBALES

LIMIT OF WORK
STA 515+10
N 2,958,122.4832
E 759,931.4396

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 208+43.79 =
MEMORIAL DRIVE STA 513+99.98

MEMORIAL DRIVE
N3° 08' 19"E
153.57'

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

LANDSCAPED AREA
MEET EXISTING
LIMIT OF MILL & OVERLAY
PROP TEMP EASEMENT
PROP CEM CONC SIDEWALK (TYP)
PROP MAST ARM (TYP)
MEET EXISTING
RET
R&S
+46.42 PT
41 42 43 44 45 46
515 514 513 512

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
880 MEMORIAL DRIVE

LIMIT OF WORK
STA 210+00
N 2,958,031.3574
E 760,080.8514

CITY OF CAMBRIDGE LAYOUT
PROP WORK (BO) CITY OF CAMBRIDGE
DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)
N83° 06' 30"E
300.07'
PROP MILL & OVERLAY
LIMIT OF MILL & OVERLAY
ADJ (BO)
ADJ
RET
MEET EXISTING
CITY OF CAMBRIDGE LAYOUT
ET
PROP CEM CONC SIDEWALK (TYP)
PROP TEMP EASEMENT
MEET EXISTING

R=3000.00 L=179.19
SAWCUT
PROP VGC
RET
MEET EXISTING
LIMIT OF MILL & OVERLAY

MEMORIAL DRIVE
+67.23 PC
N0° 17' 01"W
132.18'

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
24 BLACKSTONE STREET

CONT. ON SHEET 21

FOR PROFILES:
SEE SHEETS 29, 30 & 33

20 0 20 40
SCALE 1" = 20'

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HIGHWAY GUARDRAIL

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

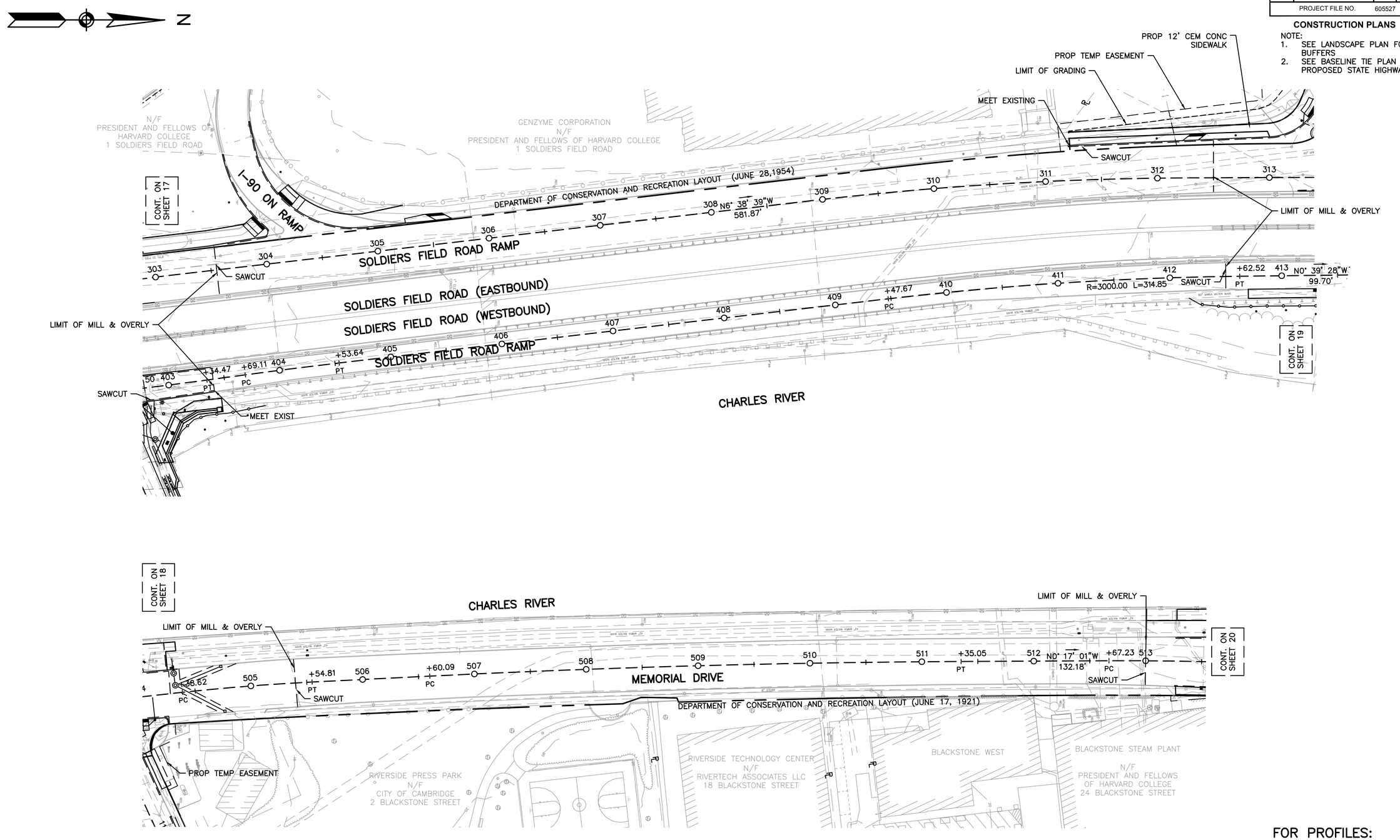
SEE BELOW

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	21	317
PROJECT FILE NO.	605527		

CONSTRUCTION PLANS

NOTE:
1. SEE LANDSCAPE PLAN FOR WETLAND BUFFERS
2. SEE BASELINE TIE PLAN FOR THE PROPOSED STATE HIGHWAY LAYOUT



FOR PROFILES:
SEE SHEETS 31, 32, & 33

40 0 40 80

SCALE 1" = 40'

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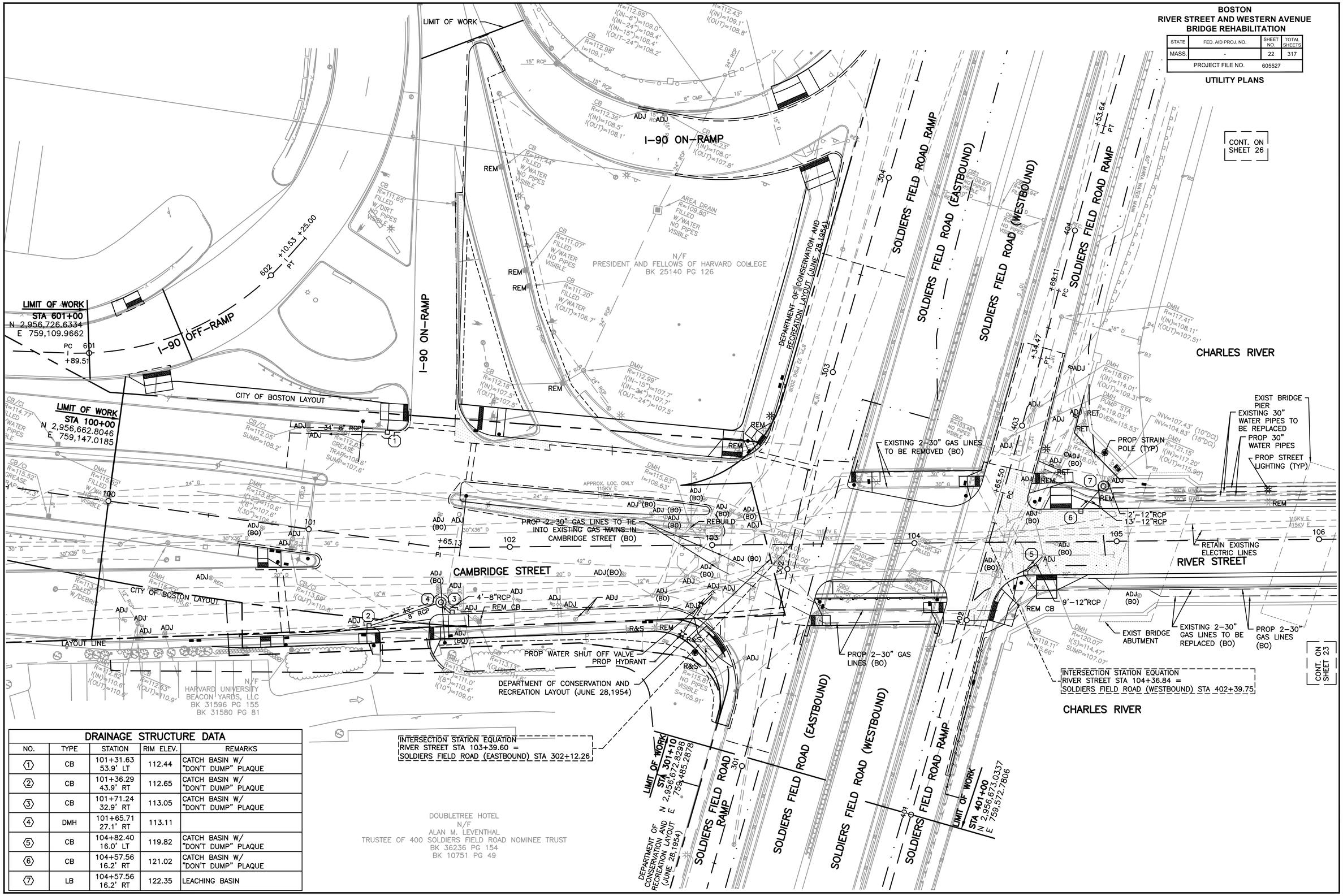
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	22	317
PROJECT FILE NO.	605527		

UTILITY PLANS



DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	REMARKS
1	CB	101+31.63 53.9' LT	112.44	CATCH BASIN W/ "DON'T DUMP" PLAQUE
2	CB	101+36.29 43.9' RT	112.65	CATCH BASIN W/ "DON'T DUMP" PLAQUE
3	CB	101+71.24 32.9' RT	113.05	CATCH BASIN W/ "DON'T DUMP" PLAQUE
4	DMH	101+65.71 27.1' RT	113.11	
5	CB	104+82.40 16.0' LT	119.82	CATCH BASIN W/ "DON'T DUMP" PLAQUE
6	CB	104+57.56 16.2' RT	121.02	CATCH BASIN W/ "DON'T DUMP" PLAQUE
7	LB	104+57.56 16.2' RT	122.35	LEACHING BASIN

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	23	317
PROJECT FILE NO.	605527		

UTILITY PLANS

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	REMARKS
⑧	CB	108+48.85 16.00' LT	117.89	CATCH BASIN W/ "DON'T DUMP" PLAQUE
⑨	CB	503+17.13 26.75' LT	118.44	CATCH BASIN W/ "DON'T DUMP" PLAQUE
⑩	LB	502+91.70 30.77' LT	117.93	LEACHING BASIN
⑪	CB	504+76.22 20.59' LT	115.24	CATCH BASIN W/ "DON'T DUMP" PLAQUE
⑫	CB	504+76.22 21.52' RT	115.24	CATCH BASIN W/ "DON'T DUMP" PLAQUE
⑬	DMH	504+32.91 6.96' LT	115.86	
⑭	LB	504+32.91 17.83' LT	115.61	LEACHING BASIN

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

EXIST BRIDGE PIER

PROP STREET LIGHTING (TYP)

PROP BRIDGE #B-16-006=C-01-005

PROP 30" WATER PIPES

ELEC. CONDUIT OVER BRIDGE

EXISTING 30" WATER PIPES TO BE REPLACED

NEW 30" WATER MAINS TO TIE INTO EXISTING 48" MWRA WATER MAIN

EXIST BRIDGE ABUTMENT

CONT. ON SHEET 26

CONT. ON SHEET 22

EXISTING 30" GAS LINE TO BE REPLACED (BO)

PROP 7.5' CEM CONC SIDEWALK

PROP 30" GAS LINE (BO)

PROP 5' CYCLE TRACK

RIVER STREET

MEMORIAL DRIVE

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

N/F SHELL OIL COMPANY 820 MEMORIAL DRIVE MAP 129 LOT 55

RIVERSIDE PRESS PARK N/F CITY OF CAMBRIDGE 2 BLACKSTONE STREET

808 MEMORIAL DRIVE N/F 808 MEMORIAL DRIVE ASSOCIATION 808 MEMORIAL DRIVE

MOBIL

CITY OF CAMBRIDGE LAYOUT

INTERSECTION STATION EQUATION
RIVER STREET STA 108+75.10 =
MEMORIAL DRIVE STA 503+71.36

LIMIT OF WORK
STA 110+30
N 2,957,041.3039
E 760,102.3348

LIMIT OF WORK
STA 502+00
N 2,956,814.7241
E 759,976.8347

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	24	317
PROJECT FILE NO.	605527		

UTILITY PLANS

HARVARD UNIVERSITY
GRADUATE STUDENT APARTMENTS

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 202+78.28 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 313+99.02

LIMIT OF WORK
STA 201+00
N 2,957,935.3637
E 759,186.0117

LIMIT OF WORK
STA 315+00
N 2,958,055.1671
E 759,363.0645

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)

CITY OF BOSTON LAYOUT

WESTERN AVENUE

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SOLDIERS FIELD ROAD RAMP

N0° 13' 47"W 372.01'

N0° 13' 10"W 161.30'

LIMIT OF WORK
STA 414+85
N 2,958,051.2124
E 759,449.9851

CHARLES RIVER

PROP 30" WATER MAINS TO TIE INTO EXIST 60" MWRA LINE

PROP STRAIN POLE (TYP)

EXIST BRIDGE ABUTMENT

EXIST BRIDGE PIER

PROP 30" WATER MAINS

PROP 60" WATER MAIN TO EXTEND FROM EXIST 60" MAIN TO PROP 30" MAINS

N83° 33' 57"E 165.01'

N84° 09' 04"E 634.93'

3"-12" RCP

8"-12" RCP

SAWCUT

RIGHT OF WAY

PROP CEM CONC SIDEWALK (TYP)

LIMIT OF GRADING (TYP)

PROP LOAM & SEED

60" MWRA WATER MAIN

PROP STREET LIGHTING (TYP)

EXIST 30" WATER MAINS TO BE REMOVED

PROP BRIDGE #B-16-10=C-01-006

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 203+65.85 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 413+96.90

CONT. ON SHEET 25

CONT. ON SHEET 26

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126

N/F
HARVARD REAL ESTATE/ALLSTON INC.
BK 25140 PG 126

COMMONWEALTH OF MASSACHUSETTS – DCR
PERMANENT 50' WIDE SUBSURFACE EASEMENT (CITY TUNNEL EXTENSION)
BK 8372 PG 692

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 28,1954)

SOLDIERS FIELD ROAD RAMP R=3000.00 L=314.85

+62.52 N0° 39' 28"W 99.70' PT

+62.22 PC

R=3000.00

L=276.48

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	REMARKS
15	CB	204+19.30 16.00' LT	121.72	CATCH BASIN W/ "DON'T DUMP" PLAQUE
16	CB	204+13.20 16.00' RT	121.66	CATCH BASIN W/ "DON'T DUMP" PLAQUE
17	DMH	203+94.98 10.40' LT	121.06	
18	LB	204+18.27 34.33' LT	122.21	LEACHING BASIN
19	CB	201+51.82 27.39' RT	114.51	CATCH BASIN W/ "DON'T DUMP" PLAQUE

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	25	317
PROJECT FILE NO.	605527		

UTILITY PLANS

CHARLES RIVER BASIN

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 208+43.79 =
MEMORIAL DRIVE STA 513+99.98

EXIST BRIDGE PIER
EXIST BRIDGE PIER
PROP 30" MWRA WATER MAINS
EXIST BRIDGE PIER
PROP STREET LIGHTING (TYP)
EXIST BRIDGE ABUTMENT
REPLACE 10"VC PIPE WITH 10" RCP

EDGE OF WATER
CONC WALL (W/ CONC CAP)
30"W MWRA
R&S
CONC WALK
GC
REM
CONC WALL
BIT CONC
6"W
WC

WESTERN AVENUE
205
206
207
208
209
210
211
ADJ N83° 06' 30"E 300.07'

(6)–5" PVC
(1)–2"PVC

21'–10" RCP
19'–10" RCP
40'–10" RCP
ADJ(BO)
EXTEND 42" WATER MAIN TO CONNECT TO PROP 30" MAINS
10" STEAM
8" CONDENSATE
STEAM MANHOLE WA-1
ADJ (BO)

PROP BRIDGE #B-16-10=C-01-006
PROP (2)–10" STEAM (BO)
PROP (1)–8" CONDENSATE (BO)
EXIST 30" MWRA WATER MAINS TO BE REMOVED
CONTROL BOX

CONT. ON SHEET 24

CHARLES RIVER

CHARLES RIVER BASIN

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

LIMIT OF WORK
STA 515+10
N 2,958,122.4832
E 759,931.4396

N3° 08' 19"E
153.57'

MEMORIAL DRIVE

BIT BIKE PATH
GRASS
CONC WALK
BIT CONC
515
516
514
513
512
+46.42 PT
+67.23 PC
L=179.19
R=300.00
(3)–3" PVC
(4)–3" PVC

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT
(JUNE 17, 1921)
RIGHT OF WAY

N/F
PRESIDENT AND FELLOWS OF
HARVARD COLLEGE
880 MEMORIAL DRIVE
MAP 130 LOT 1

BM #4 ELEV: 121.64'
X-CUT IN HYDRANT
BONNET BOLT UNDER
"K" IN KENNEDY

LIMIT OF WORK
STA 210+00
N 2,958,031.3574
E 760,080.8514

CITY OF CAMBRIDGE LAYOUT
RIGHT OF WAY
CONC WALK
GC
GATE
ET
31 STAND PIPES
STEAM MANHOLE WA-1
STONE PILLAR

N/F
PRESIDENT AND FELLOWS OF
HARVARD COLLEGE
24 BLACKSTONE STREET
BK 38730 PG 577
MAP 129 LOT 47

N0° 17' 01"W
132.18'

54" INTAKE (ABAN.)

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (JUNE 17, 1921)

CONT. ON SHEET 26

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	REMARKS
20	CB	207+86.52 16.20' RT	122.49	CATCH BASIN W/ "DON'T DUMP" PLAQUE
21	CB	207+91.09 16.43' LT	122.22	CATCH BASIN W/ "DON'T DUMP" PLAQUE
22	DMH	208+13.61 19.43' LT	121.49	

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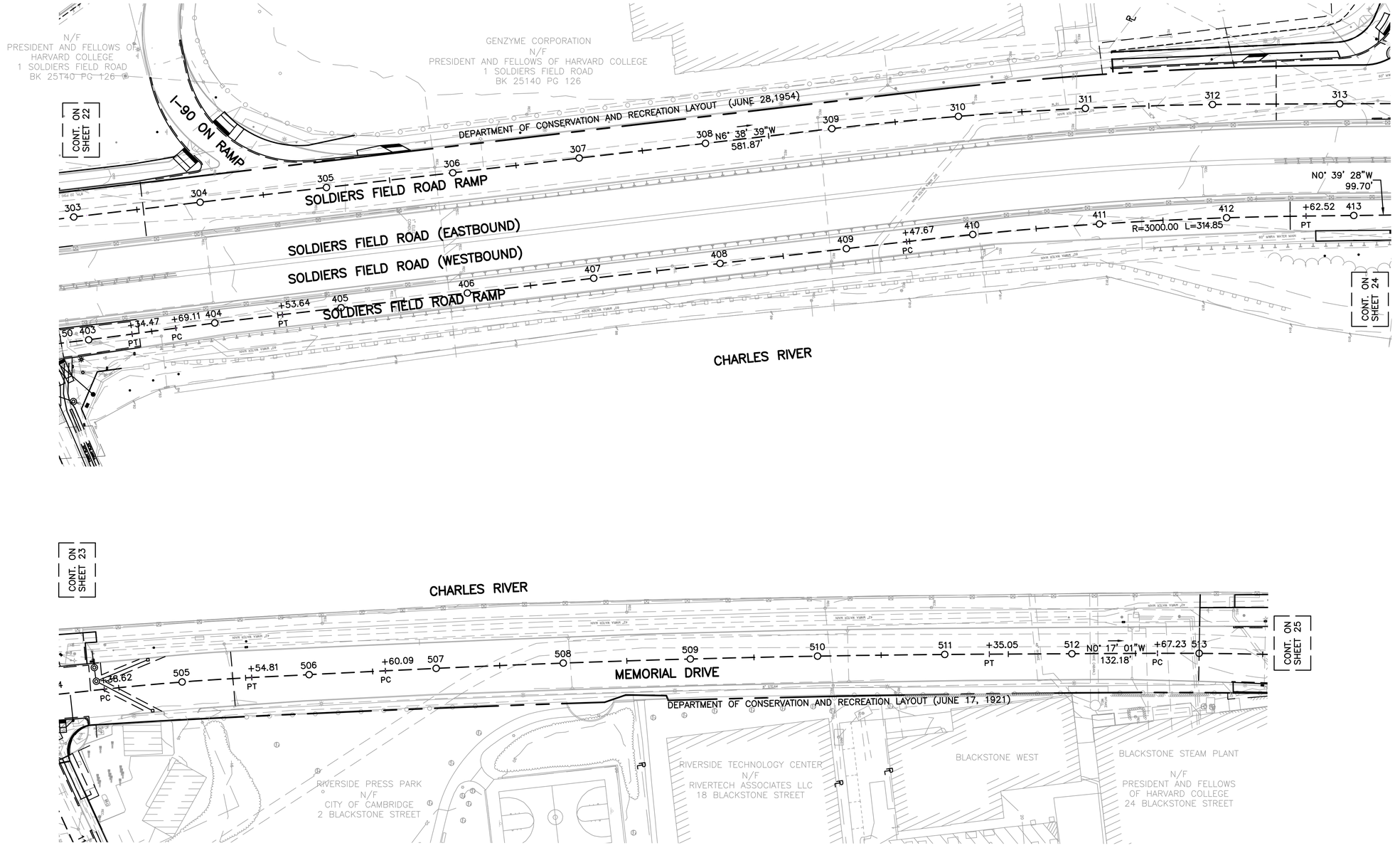
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	26	317
PROJECT FILE NO.	605527		

UTILITY PLANS



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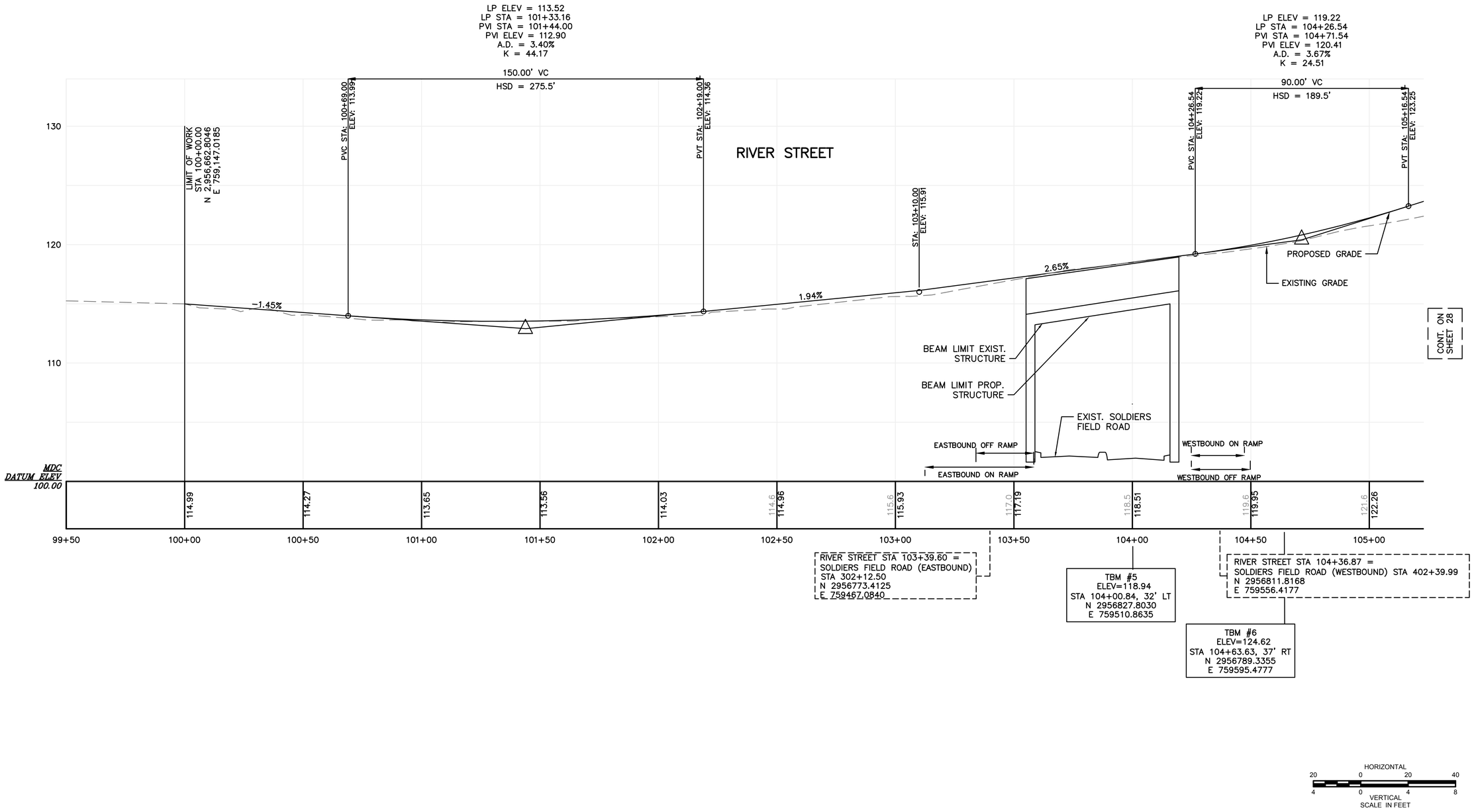
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	27	317
PROJECT FILE NO.	605527		

PROFILE
RIVER STREET



HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEETS 17 & 18

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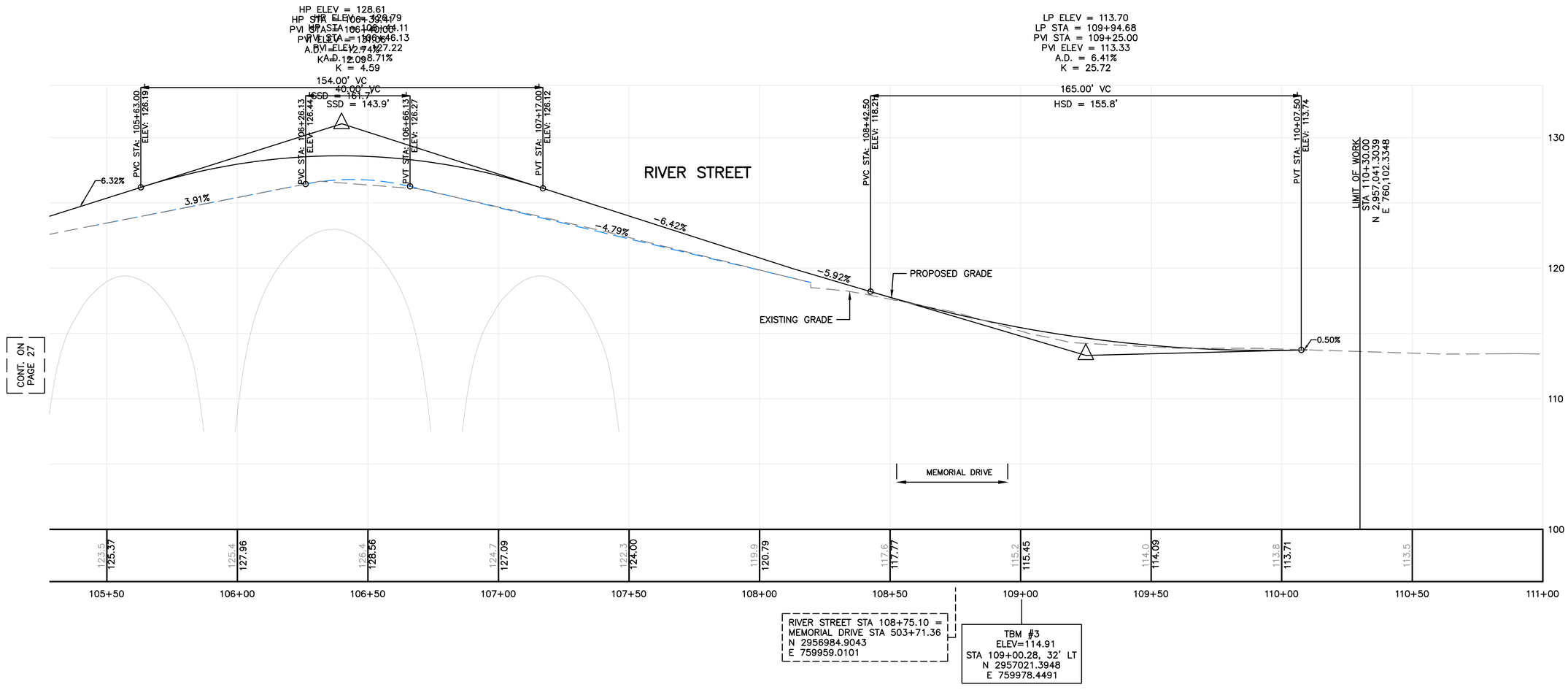
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	28	317
PROJECT FILE NO.	605527		

PROFILE
RIVER STREET



HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEETS 16 & 18

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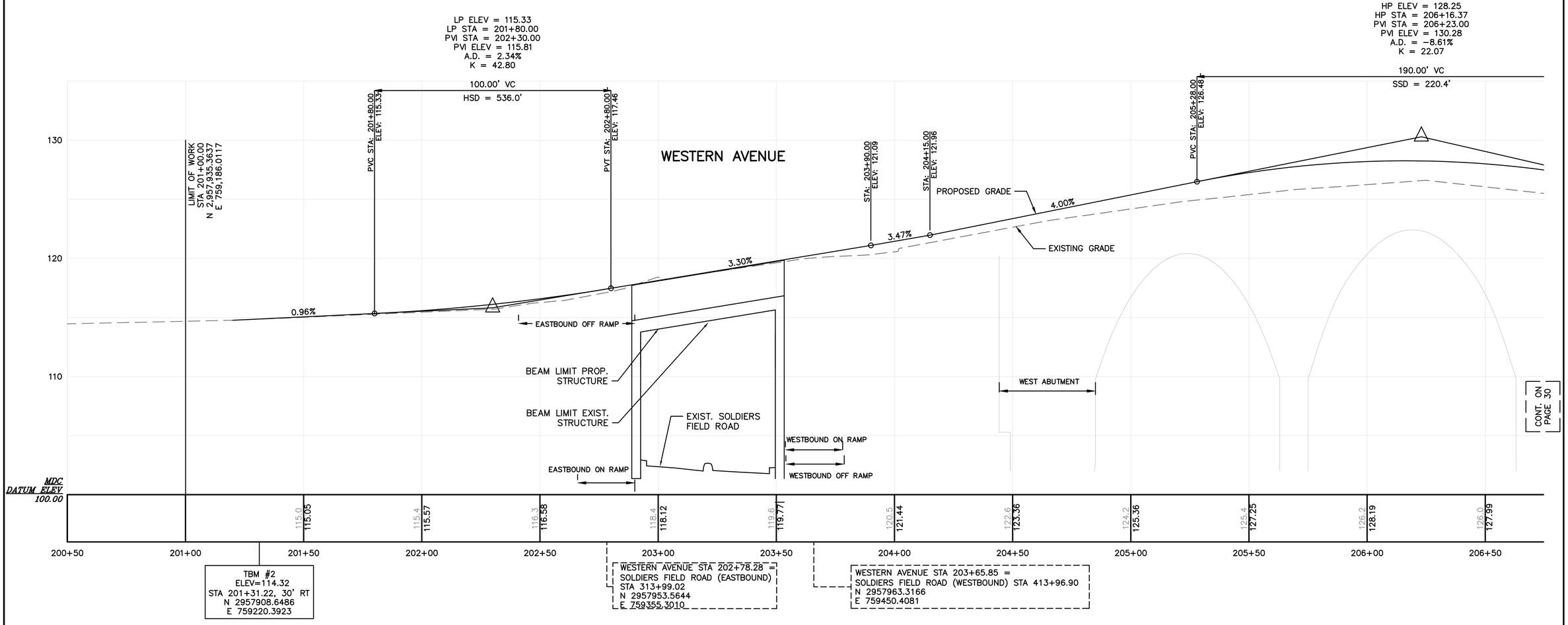
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	29	317
PROJECT FILE NO.	605527		

PROFILE
WESTERN AVENUE



TBM #2
ELEV=114.32
STA 201+31.22, 30' RT
N 2957908.6486
E 759220.3923

WESTERN AVENUE STA 202+78.28 =
SOLDIERS FIELD ROAD (EASTBOUND)
STA 313+99.02
N 2957953.5644
E 759355.3010

WESTERN AVENUE STA 203+65.85 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 413+96.90
N 2957963.3166
E 759450.4081

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEETS 19 & 20

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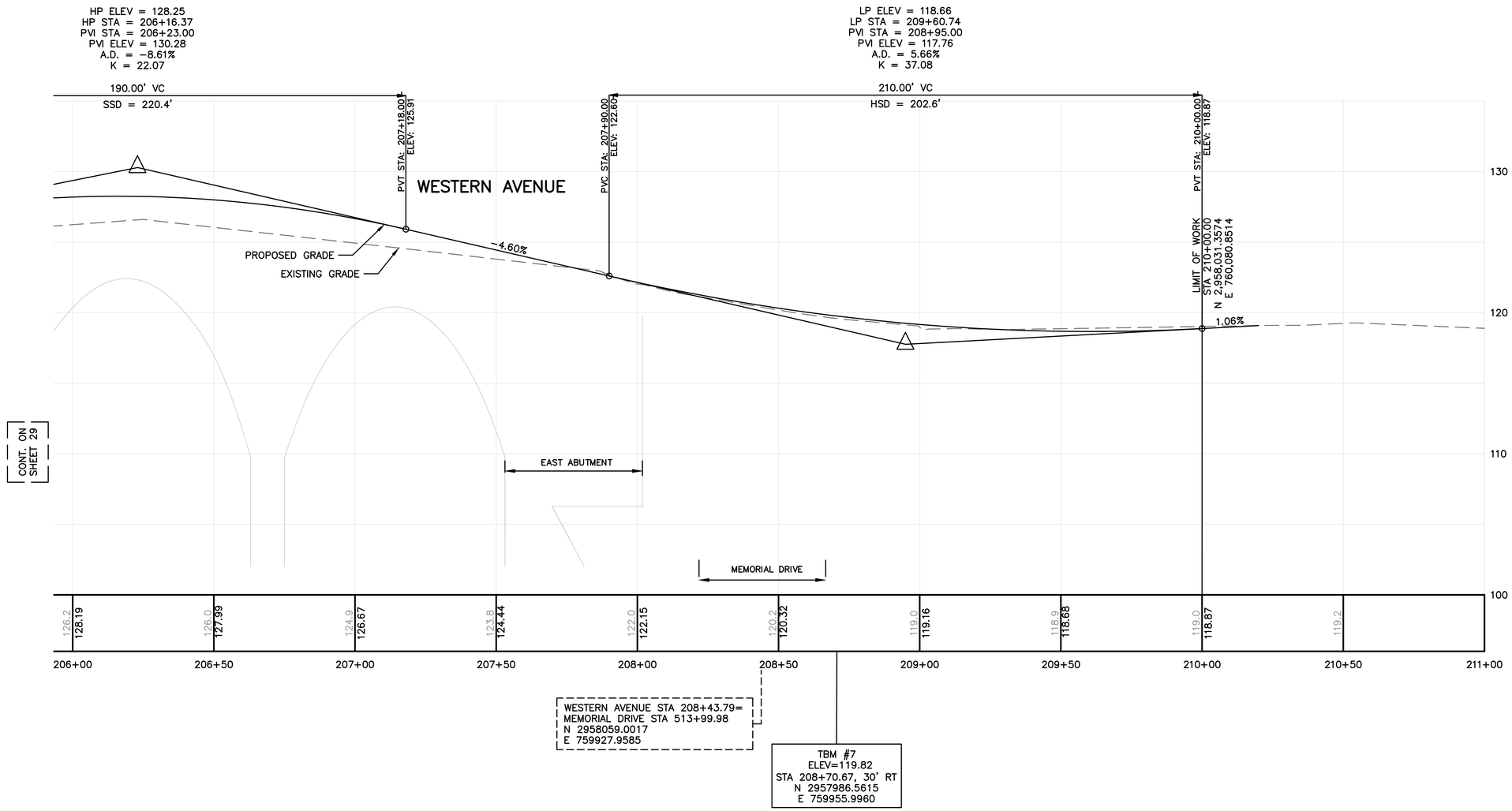
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	30	317
PROJECT FILE NO.	605527		

PROFILE
WESTERN AVENUE



HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEETS 19 & 20

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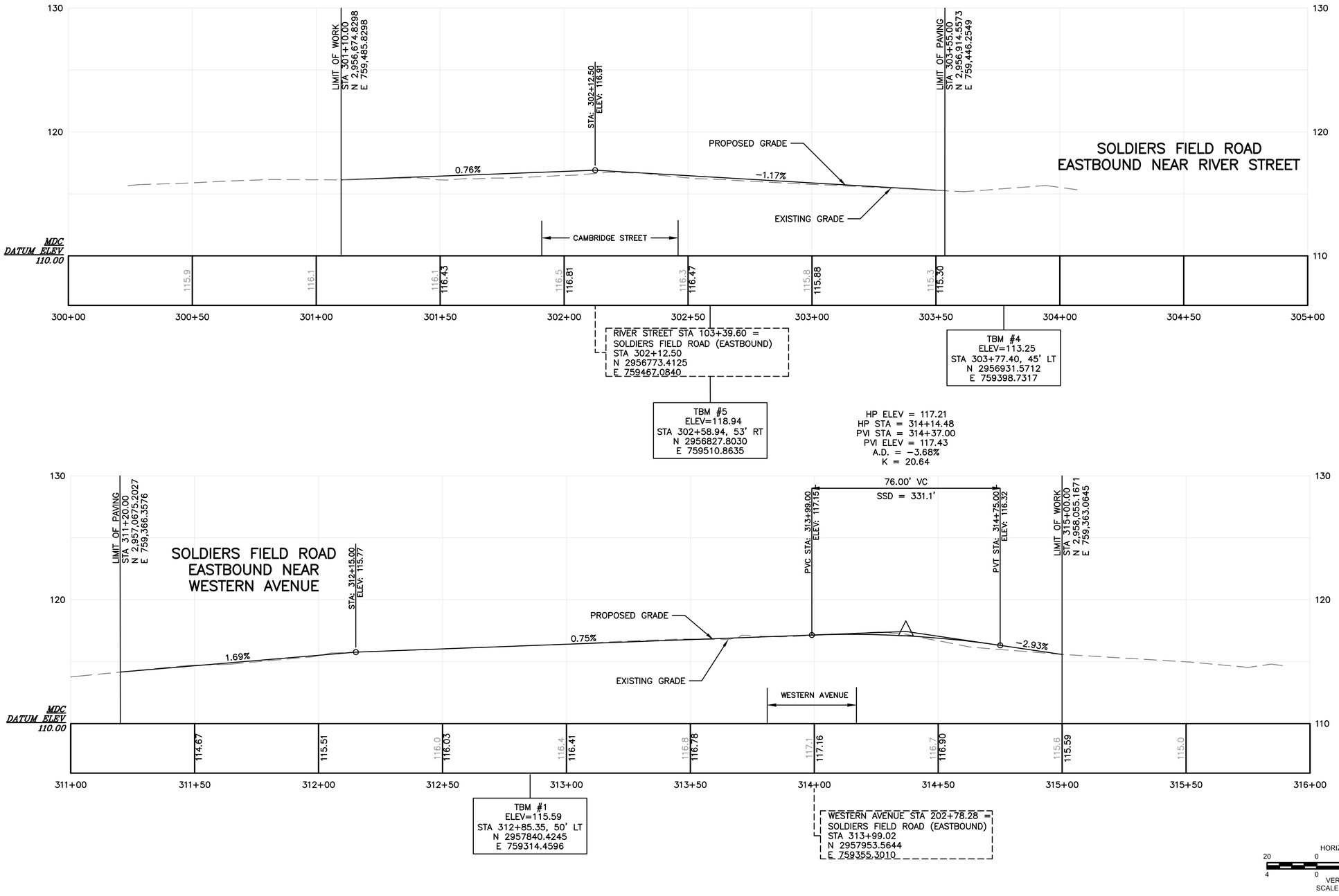
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	31	317
PROJECT FILE NO.	605527		

PROFILE
SOLDIERS FIELD ROAD EASTBOUND



FOR CONSTRUCTION PLANS:
SEE SHEETS 17 – 21

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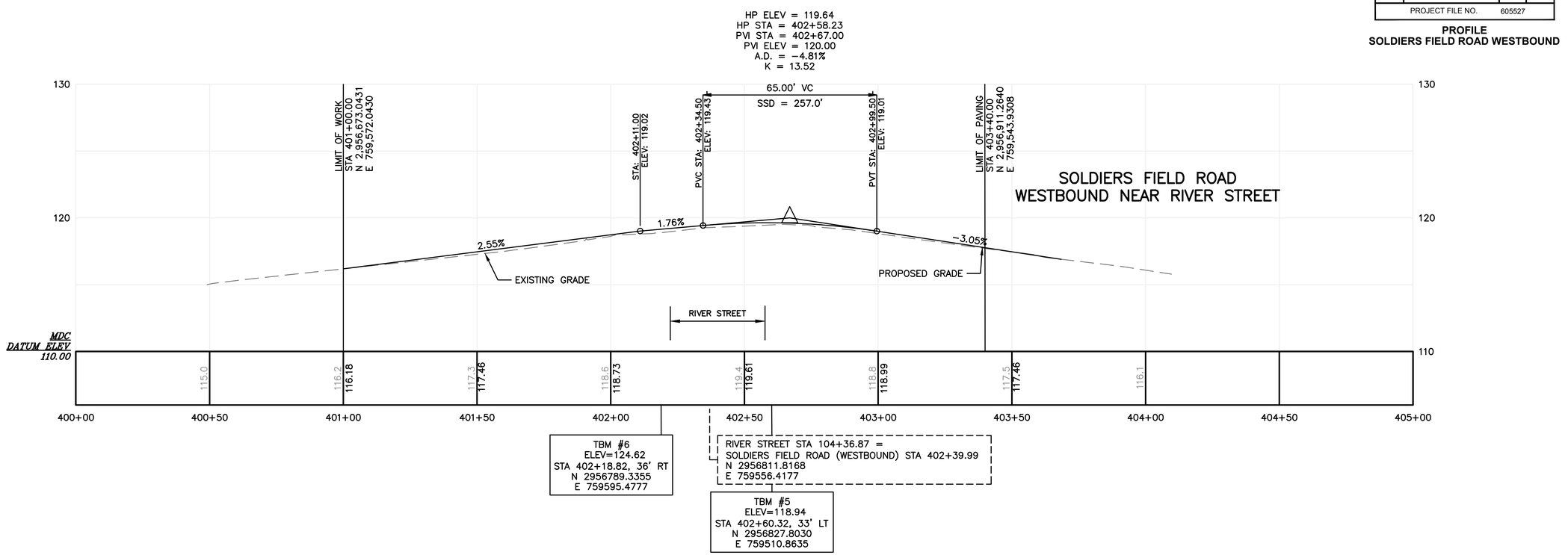
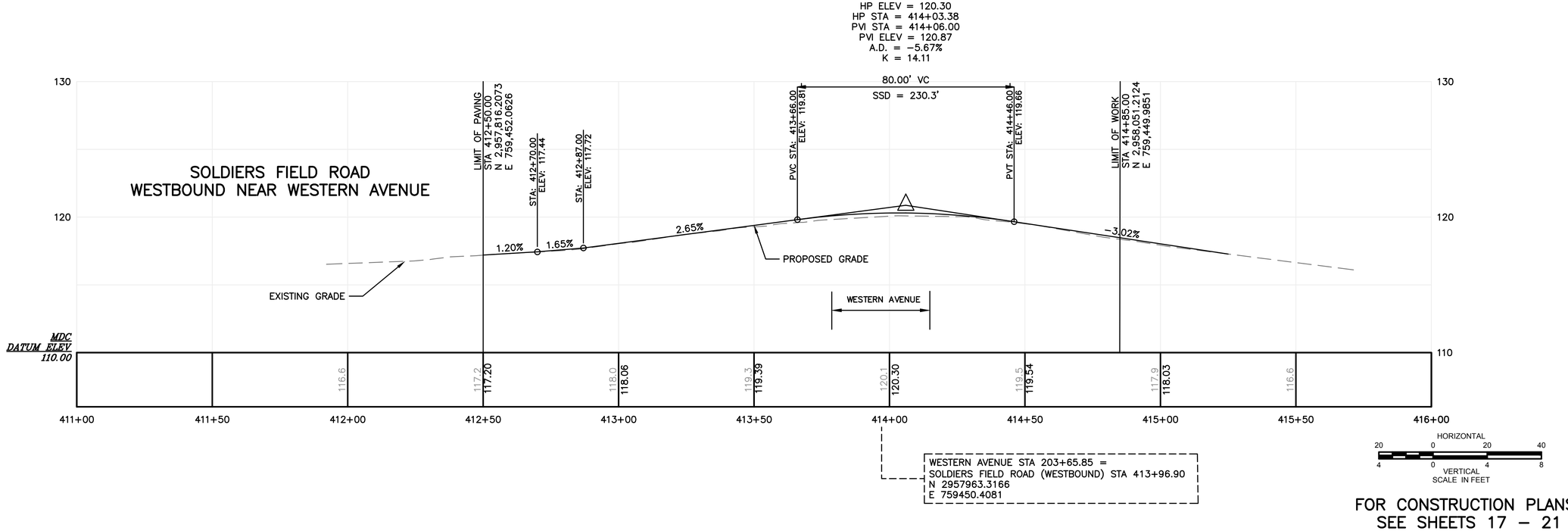
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	32	317
PROJECT FILE NO.	605527		

PROFILE
SOLDIERS FIELD ROAD WESTBOUND





HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEETS 17 – 21

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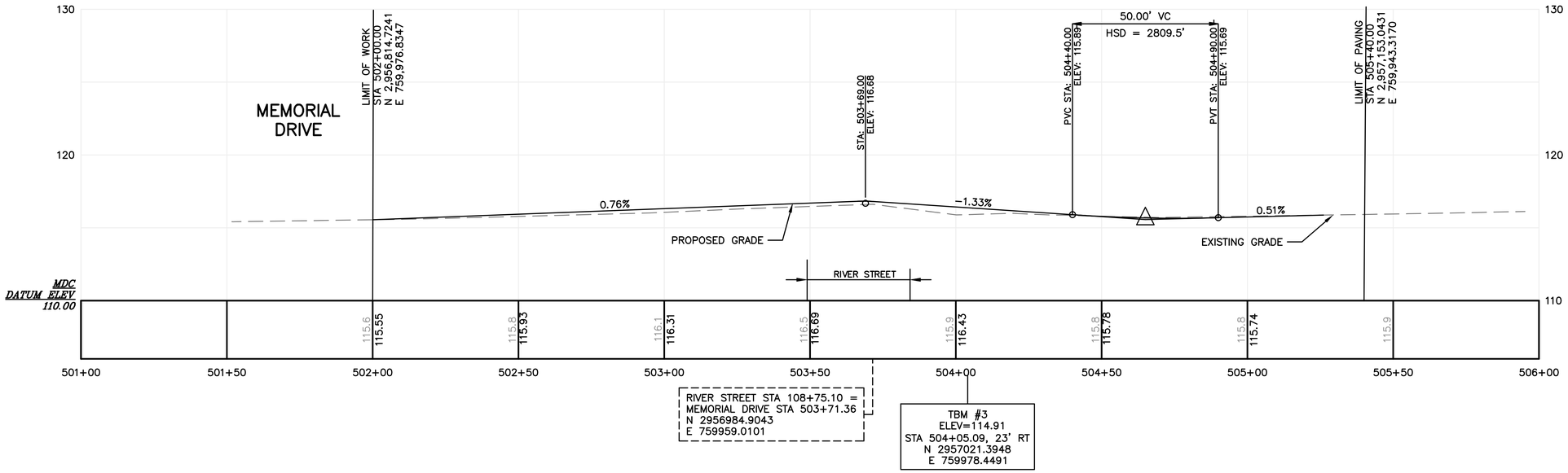
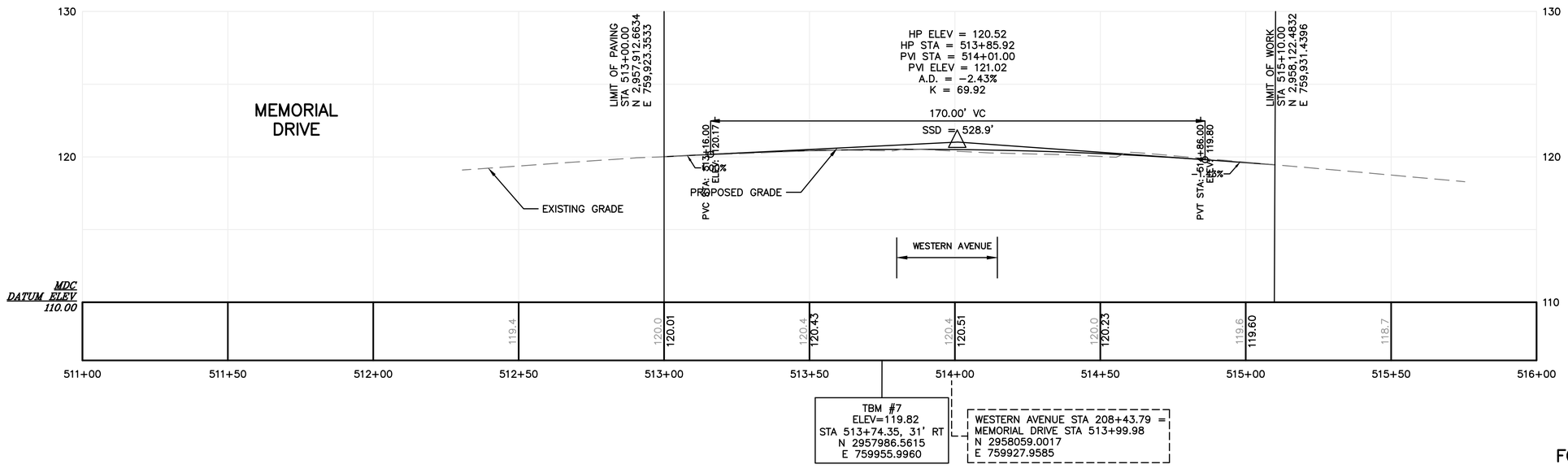
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	33	317
PROJECT FILE NO.	605527		

PROFILE
MEMORIAL DRIVE





FOR CONSTRUCTION PLANS:
SEE SHEETS 17 – 21

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	34	317
PROJECT FILE NO.	605527		

CURB TIE AND GRADING PLAN

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STA	OFFSET	STA	OFFSET
C1	5.42	8.13	5.05	85.92	101+37	54' LT	101+41	60' LT
C2	20.00	30.15	18.77	86.37	101+75	76' LT	101+93	55' LT
C3	3.00	8.95	37.76	170.91	101+04	12' RT	101+05	18' RT
C4	4.59	5.53	3.16	69.05	101+37	44' RT	101+42	46' RT
C5	20.00	18.51	9.98	53.02	101+67	59' RT	101+65	43' RT
C6	5.00	7.67	4.82	87.94	101+65	38' RT	101+65	33' RT
C7	2.00	3.14	2.00	90.00	101+78	32' LT	101+76	31' LT
C8	2.00	3.11	1.97	88.99	101+76	25' LT	101+77	23' LT
C9	999.00	119.79	59.97	6.87	101+77	23' LT	102+97	15' LT
C10	489.00	28.61	14.31	3.35	102+69	23' LT	102+97	19' LT
C11	2.00	5.96	24.82	170.79	102+97	15' LT	102+97	19' LT
C12	20.00	27.77	16.65	79.55	102+08	43' LT	302+65	23' LT
C13	40.00	75.33	54.95	107.90	102+70	30' LT	301+26	12' LT
C14	2.00	3.32	2.19	95.25	103+69	27' LT	302+48	21' RT
C15	10.00	12.86	7.49	73.68	103+61	18' RT	301+90	16' RT
C16	17.00	25.19	15.55	84.91	104+14	18' LT	402+68	12' LT
C17	10.00	18.72	13.57	107.23	104+06	18' RT	402+05	12' LT

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STA	OFFSET	STA	OFFSET
C18	5.00	9.26	6.65	106.12	104+61	16' LT	402+67	12' RT
C19	20.00	25.69	14.96	73.61	104+57	16' RT	402+11	10' RT
C20	90.00	131.62	80.74	83.79	304+90	23' LT	304+02	105' LT
C21	4.00	9.05	8.51	129.65	304+00	25' LT	304+03	31' LT
C22	120.00	78.48	40.70	37.47	304+03	31' LT	303+72	102' LT
C23	6.00	15.74	22.62	150.29	101+46	244' LT	101+94	246' LT

CONT. ON SHEET 38

CONT. ON SHEET 35

INTERSECTION STATION EQUATION
RIVER STREET STA 103+39.60 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 302+12.50

INTERSECTION STATION EQUATION
RIVER STREET STA 104+36.87 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 402+39.99

CAMBRIDGE STREET

RIVER STREET

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

CHARLES RIVER

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126

N/F
HARVARD UNIVERSITY
BEACON YARDS, LLC
BK 31596 PG 155
BK 31580 PG 81

N/F
ALAN M. LEVENTHAL
TRUSTEE OF 400 SOLDIERS FIELD ROAD NOMINEE TRUST
BK 36236 PG 154
BK 10751 PG 49

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	35	317
PROJECT FILE NO.	605527		

CURB TIE AND GRADING PLAN

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STA	OFFSET	STA	OFFSET
C1	10.00	12.54	7.24	71.83	108+50	16' LT	503+89	22' LT
C2	5.00	9.59	7.13	109.90	109+03	16' LT	503+94	20' RT
C3	40.00	75.33	54.95	107.90	107+95	16' RT	502+94	20' LT
C4	20.00	25.22	14.60	72.26	109+08	17' RT	503+37	20' RT

N

CHARLES RIVER

CHARLES RIVER

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

RIVER STREET

MEMORIAL DRIVE

CONT. ON SHEET 38

CONT. ON SHEET 34

INTERSECTION STATION EQUATION
RIVER STREET STA 108+75.10 =
MEMORIAL DRIVE STA 503+71.36

N/F
CITY OF CAMBRIDGE
2 BLACKSTONE STREET

RIGHT OF WAY

SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	36	317
PROJECT FILE NO.	605527		

CURB TIE AND GRADING PLAN

N

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 202+78.28 =
SOLDIERS FIELD ROAD (EASTBOUND) STA 313+99.02

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 203+65.85 =
SOLDIERS FIELD ROAD (WESTBOUND) STA 413+96.90

WESTERN AVENUE

WESTERN AVENUE LAYOUT LINE

RIGHT OF WAY

SOLDIERS FIELD ROAD LAYOUT LINE

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

CHARLES RIVER

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STA	OFFSET	STA	OFFSET
C1	55.00	80.58	49.47	83.95	202+19	24' LT	314+72	12' LT
C2	5.00	8.34	5.52	95.62	202+98	18' LT	314+24	12' RT
C3	5.00	7.36	4.53	84.37	203+51	18' LT	414+18	12' LT
C4	15.00	24.91	16.41	95.15	203+97	23' LT	414+38	12' LT
C5	5.00	7.37	4.54	84.43	203+81	16' LT	413+77	12' RT
C6	15.00	24.94	16.45	95.27	203+36	18' LT	413+61	12' LT
C7	15.00	22.19	13.69	84.77	203+02	18' LT	323+68	12' RT
C8	50.00	56.06	31.39	64.25	413+00	37' LT	202+07	48' RT
C9	200.00	76.84	38.90	22.01	202+07	48' RT	201+33	25' RT
C10	4.00	11.95	51.60	171.13	201+48	1' RT	201+48	9' RT
C11	4.00	9.37	9.49	134.27	202+31	44' RT	202+39	43' RT
C12	10.00	16.11	10.41	92.32	202+30	2' RT	202+40	12' RT
C13	218.00	70.13	35.37	18.43	201+48	9' RT	202+14	12' RT
C14	68.00	22.90	11.56	19.29	202+14	12' RT	202+31	44' RT

N/F
HARVARD REAL
ESTATE/ALLSTON INC.
BK 25140 PG 126

COMMONWEALTH OF MASSACHUSETTS – DCR
PERMANENT 50' WIDE
SUBSURFACE EASEMENT
(MTA TUNNEL EXTENSION)
BK 8372 PG 692

N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
BK 25140 PG 126

CONT. ON SHEET 37

CONT. ON SHEET 38

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	37	317
PROJECT FILE NO.	605527		

CURB TIE AND GRADING PLAN

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STA	OFFSET	STA	OFFSET
C1	10.00	14.11	8.52	80.85	208+18	23' LT	514+28	21' LT
C2	10.00	16.92	11.29	96.95	208+80	33' LT	514+39	51' RT
C3	5.00	8.34	5.51	95.60	208+13	17' RT	513+74	23' LT
C4	5.00	7.02	4.23	80.44	208+68	22' RT	513+77	24' RT

N

CHARLES RIVER

CHARLES RIVER

BOSTON (SUFFOLK COUNTY) / CAMBRIDGE (MIDDLESEX COUNTY)

WESTERN AVENUE

MEMORIAL DRIVE

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
880 MEMORIAL DRIVE

INTERSECTION STATION EQUATION
WESTERN AVENUE STA 208+43.79 =
MEMORIAL DRIVE STA 513+99.98

+46.42 PT

+67.23 PC

205 125.36 | 127.25 | 127.86 | 206 128.19 | 128.23 | 127.99 | 127.47 | 207 126.67 | 125.59 | 124.44 | 123.35 | 208 122.15 | 121.54 | 209 119.16 | 210 | 211

516 120.18 | 119.55 | 119.74 | 515 | 119.5 | 120.08 | 120.23 | 119.67 | 119.6 | 119.3 | 118.81 | 118.62 | 514 120.51 | 513 120.01 | 512

123.29 | 123.31 | 123.24 | 123.17 | 122.50 | 122.13 | 122.2 | 122.1 | 121.98 | 121.82 | 121.94 | 121.85 | 121.47 | 121.10 | 120.99 | 121.22 | 120.42 | C1 | C2

122.86 | 122.02 | 121.77 | 121.48 | C3 | 123.22 | 123.72 | 122.87 | 122.45 | 122.72 | 121.41 | 121.26 | 119.9 | 120.43 | 119.82 | 120.1

C4 119.22 | 118.84 | 118.69 | 118.6 | 120.51 | 119.92 | 119.4

CONT. ON SHEET 36

CONT. ON SHEET 38

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
24 BLACKSTONE STREET

20 0 20 40
SCALE 1" = 20'

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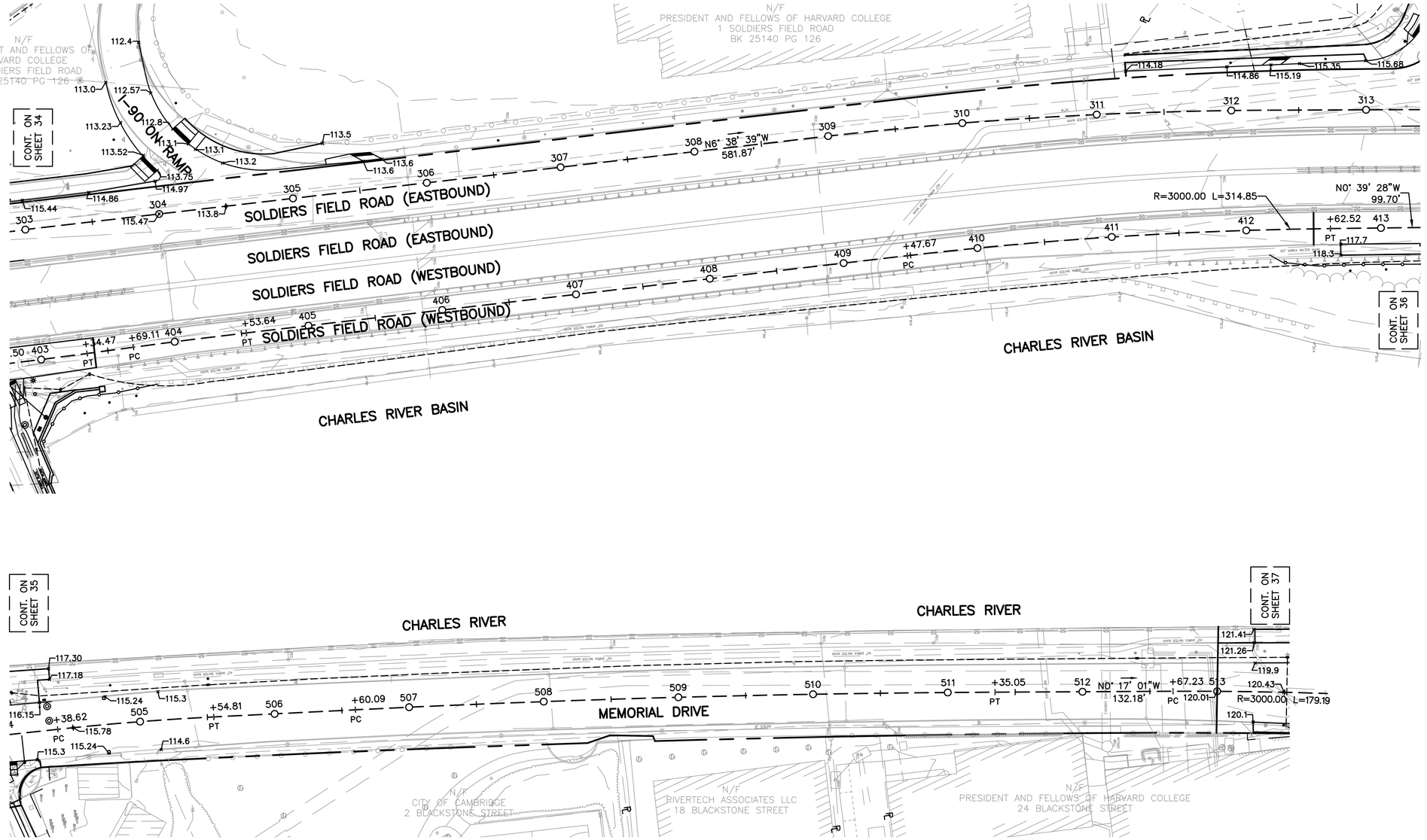
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	38	317
PROJECT FILE NO.	605527		

CURB TIE AND GRADING PLAN

N



40 0 40 80

SCALE 1" = 40'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	39	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N

WRONG WAY
RET R5-9

STOP
RET R1-1

DO NOT ENTER
RET R5-1

I-90 ON-RAMP

R&S W11-2
R&S W16-7P
R&S "MASS PIKE"
R&S M1-1
R&S M6-2
R&S OM1-1

R&S "EASTBOUND DANGEROUS CARGOES PROHIBITED FROM MASS PIKE"

MATCH TO EXISTING PAVEMENT MARKINGS.

CONT. ON SHEET 43

SOLDIERS FIELD ROAD RAMP
SOLDIERS FIELD ROAD (EASTBOUND)
SOLDIERS FIELD ROAD (WESTBOUND)
SOLDIERS FIELD ROAD RAMP

BWLL
12" DWLL
SWEL
SWGL
SYGL
SYEL
SWLL (100')
SWLL (50')
DWLEx
CW
SL

R&S R6-1
R&S R3-3
R&S OM1-1
R&S R1-2

R&S M1-1
R&S PED/BIKE SIGN

R&S PED/BIKE SIGN

N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
BK 25140 PG 126

R&R GUIDE SIGN

RIGHT LANE MUST TURN RIGHT
R3-7R

River St
D3-1

Cambridge St
D3-2

R4-7

R&S R-21

R&S R14-3E
R&S M1-1
R&S M6-1

R&S R5-1

ONE WAY
R6-1

DO NOT ENTER
R5-1

R&S R3-7L

LEFT LANE MUST TURN LEFT
R3-7L

Soldiers Field Rd
D3-3

R&S "WILLIAM A. REILLY MEMORIAL SQUARE"

Dwntn Boston 3.0
Cambridge 0.1
Allston Village 0.9
D1-2bl

Newton 4.0
Allston Village 0.9
D1-2bE

BICYCLE SIGNAL
SP-1

CHARLES RIVER

CAMBRIDGE STREET

I-90 OFF-RAMP

RIVER STREET

N/F
HARVARD UNIVERSITY
BEACON YARDS, LLC
BK 31596 PG 155
BK 31580 PG 81

CW (10')

R&S R3-7R

BICYCLE SIGNAL
SP-1

DOUBLETREE HOTEL
N/F
ALAN M. LEVENTHAL
TRUSTEE OF 400 SOLDIERS FIELD ROAD NOMINEE TRUST
BK 36236 PG 154
BK 10751 PG 49

NO PARKING

Allston Village 0.9
Newton 4.0
Cambridge 0.1
D1-2bK

Cambridge 0.1
Newton 4.0
Dwntn Boston 3.0
D1-2bN

Dwntn Boston3.0
Cambridge 0.1
D1-2bC

R3-8d

MATCH TO EXISTING PAVEMENT MARKINGS.

CONT. ON SHEET 40

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	40	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CONT. ON SHEET 39

CONT. ON SHEET 43

CHARLES RIVER

RIVER STREET

MEMORIAL DRIVE

SWLL (100')

DYCL

BWLL

SYEL

DWLL

SWEL

DWLEx

SL

CW

10.5'

10'

15'

5'

N/F
SHELL OIL COMPANY
820 MEMORIAL DRIVE
MAP 129 LOT 55

RIVERSIDE PRESS PARK
N/F
CITY OF CAMBRIDGE
2 BLACKSTONE STREET

808 MEMORIAL DRIVE
N/F
808 MEMORIAL DRIVE ASSOCIATION
808 MEMORIAL DRIVE

RIGHT OF WAY

D1–2bA
Central Sq 0.7
Kendall Sq./MIT2.3
Dwntn Boston 3.0

R&S R6–1
DO NOT ENTER
R5–1

BICYCLE SIGNAL
SP–1

ONE WAY
R6–1

R3–2

R&S R5–1

R3–2

River St
D3–1

WRONG WAY
R5–1a

ONE WAY
R6–2

R&S R6–2
R&S R5–1a

Memorial Dr
D3–4

R&S R3–7R

RIGHT LANE MUST TURN RIGHT
R3–7R

WRONG WAY
R5–1b

D1–2bO
Central Sq 0.7
Harvard Sq 1.1
Kendall Sq/MIT 2.3

D1–2bD
Kendall Sq./MIT2.3
Dwntn Boston 3.0
Central Sq 0.7

R&S R3–7R

ONE WAY
R6–1

BICYCLE SIGNAL
SP–1

DO NOT ENTER
R5–1

D1–2bQ
Boston 0.3
Harvard Sq 1.1
Central Sq 0.7

R&S R5–2

R&S "NO TRUCKS OR BUSES"

River St
D3–1

R3–1

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

WRONG WAY
R5–1a

R&S R6–2
R&S R5–1a

NO TURN ON RED
R10–11b

ONE WAY
R6–2

ONLY
R3–5R

R&S R10–11b

BICYCLE SIGNAL
SP–1

NO TURN ON RED
R10–11b

R&S R3–2

MATCH TO EXISTING PAVEMENT MARKINGS.

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	41	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N

HARVARD UNIVERSITY
GRADUATE STUDENT APARTMENTS

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE

CHARLES RIVER

WESTERN AVENUE

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SOLDIERS FIELD ROAD RAMP

MATCH TO EXISTING PAVEMENT MARKINGS.

RET R3-2

R3-8iR

R3-8iR

R&S R6-1
R&S R5-1

R&S T-23
R&S R3-17

BICYCLE SIGNAL
SP-1

ONE WAY
R6-1

DO NOT ENTER
R5-1

DO NOT ENTER
R5-1

SWLL

SWEL

SWLL (100')

SYEL

SL

CW

DWLEx

5'

11'

11'

RET R3-2

BICYCLE SIGNAL
SP-1

NO TURN ON RED
R10-11b

Western Ave
D3-5

ONE WAY
R6-1

R3-1

Soldiers Field Rd
D3-3

R&S R3-1

"LOW CLEARANCE" SIGN RET

NO TRUCKS OR BUSES
RET

Cambridge 0.3
Dwntn Boston 3.3
N Allston 0.6
D1-2bJ

R&D D11-1

RET R5-2

NO TRUCKS OR BUSES
RET

BICYCLE SIGNAL
SP-1

R3-1

Newton 3.8
N Allston 0.6
D1-2bG

Cambridge 0.1
Newton 4.0
Dwntn Boston 3.0
D1-2bM

R&D "STOP LINE"

R&S GUIDE SIGN

WRONG WAY
R5-1b

WESTERN AVENUE
SWLL (100')
SWLL (100')
SWEL
BWLL
BWLL
SYEL
ONLY
ONLY
10.5'
10.5'
10.5'
5'
5'

DYCL

SYGL

SYEL

MATCH TO EXISTING PAVEMENT MARKINGS.

R&S R3-17
R&S R3-17bP

R&S T-23

Soldiers Field Rd
D3-3

Cambridge 0.3
Newton 3.8
Dwntn Boston 3.3
D1-2bP

Western Ave
D3-5

R&S R9-5

N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
BK 25140 PG 126

N/F
HARVARD REAL
ESTATE/ALLSTON INC.
BK 25140 PG 126

COMMONWEALTH OF MASSACHUSETTS – DCR
PERMANENT 50' WIDE
SUBSURFACE EASEMENT
(MTY TUNNEL EXTENSION)
BK 8372 PG 692

SWGL
15' O.C.

20'
5'
14'
12'
12'
3'

BWLL
BWLL
BWLL

R3-2

DO NOT ENTER
R5-1

ONE WAY
R6-1

BICYCLE SIGNAL
SP-1

11'
11'
SWLL (100')

RET R5-2

R&S R5-1

DO NOT ENTER
R5-1

ONE WAY
R6-1

BICYCLE SIGNAL
SP-1

N Allston 0.6
Newton 3.8
D1-2bB

R3-8iL

R3-8iL

MATCH TO EXISTING PAVEMENT MARKINGS.

RET R5-1
RET R3-2
R&D R5-1
R&D R3-2

BICYCLE SIGNAL
SP-1

Newton 3.8
Cambridge 0.3
Dwntn Boston 3.3
D1-2bS

ONLY ONLY
R3-8h

CONT. ON SHEET 42

CONT. ON SHEET 43

CHARLES RIVER

20 0 20 40
SCALE 1" = 20'

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	42	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

CHARLES RIVER

CHARLES RIVER

CHARLES RIVER

WESTERN AVENUE

WESTERN AVENUE

MEMORIAL DRIVE

MEMORIAL DRIVE

MATCH TO EXISTING PAVEMENT MARKINGS.

CYCLE TRACK BY OTHERS

WHEELER PARK
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
880 MEMORIAL DRIVE

BLACKSTONE STEAM PLANT
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
24 BLACKSTONE STREET

D1–2bH: Central Sq 0.9 / Kendall Sq/MIT2.5 / Boston 0.1

D1–2bR: Boston 0.1 / Kendall Sq/MIT2.5 / Harvard Sq 0.9

D1–2bL: Harvard Sq 0.9 / Boston 0.1

D1–2bF: Harvard Sq 0.9 / Boston 0.1

R&S GUIDESIGN

R&S R3–2

BICYCLE SIGNAL SP–1

NO TURN ON RED R10–11b

ONE WAY R6–2

BICYCLE SIGNAL SP–1

Western Ave D3–5

R3–2

Memorial Dr D3–4

ONE WAY R6–2

BICYCLE SIGNAL SP–1

CROSS ONLY AT CROSS WALKS R9–2

Western Ave D3–5

R3–2

R3–8h

ONLY R3–5L

R&S R5–2

R3–1

RET

Western Ave D3–5

ONE WAY R6–1

DO NOT ENTER R5–1

R&S R6–1
R&S R5–1

TOW ZONE NO STOPPING ANY TIME T–23 RET

TOW ZONE NO STOPPING FIRE LANE RET T–14L

TOW ZONE PARKING PERMIT ONLY RET

R&S R3–2

ONE WAY R6–1

R3–1

CROSS ONLY AT CROSS WALKS R9–2

TOW ZONE NO STOPPING ANY TIME T–23 RET

DO NOT ENTER R5–1

R&S R6–1
R&S R5–1
R&S R5–2
R&S R3–1
R&S "NO RIGHT TURNS"
R&S "LEFT TURNING MOTORISTS YIELD TO PEDESTRIANS AND CYCLISTS"
R&S R3–7

R3–8

R&S "YIELD TO PEDESTRIANS IN CROSSWALK"

CONT. ON SHEET 41

CONT. ON SHEET 43

SWEL
SWLL (150')
SWLL (100')
SYEL
SYGL
BWLL
DYCL
DWLEx
12" DWLL
CW
SL
ONLY
10.5'
11'
14'
5'

20 0 20 40
SCALE 1" = 20'

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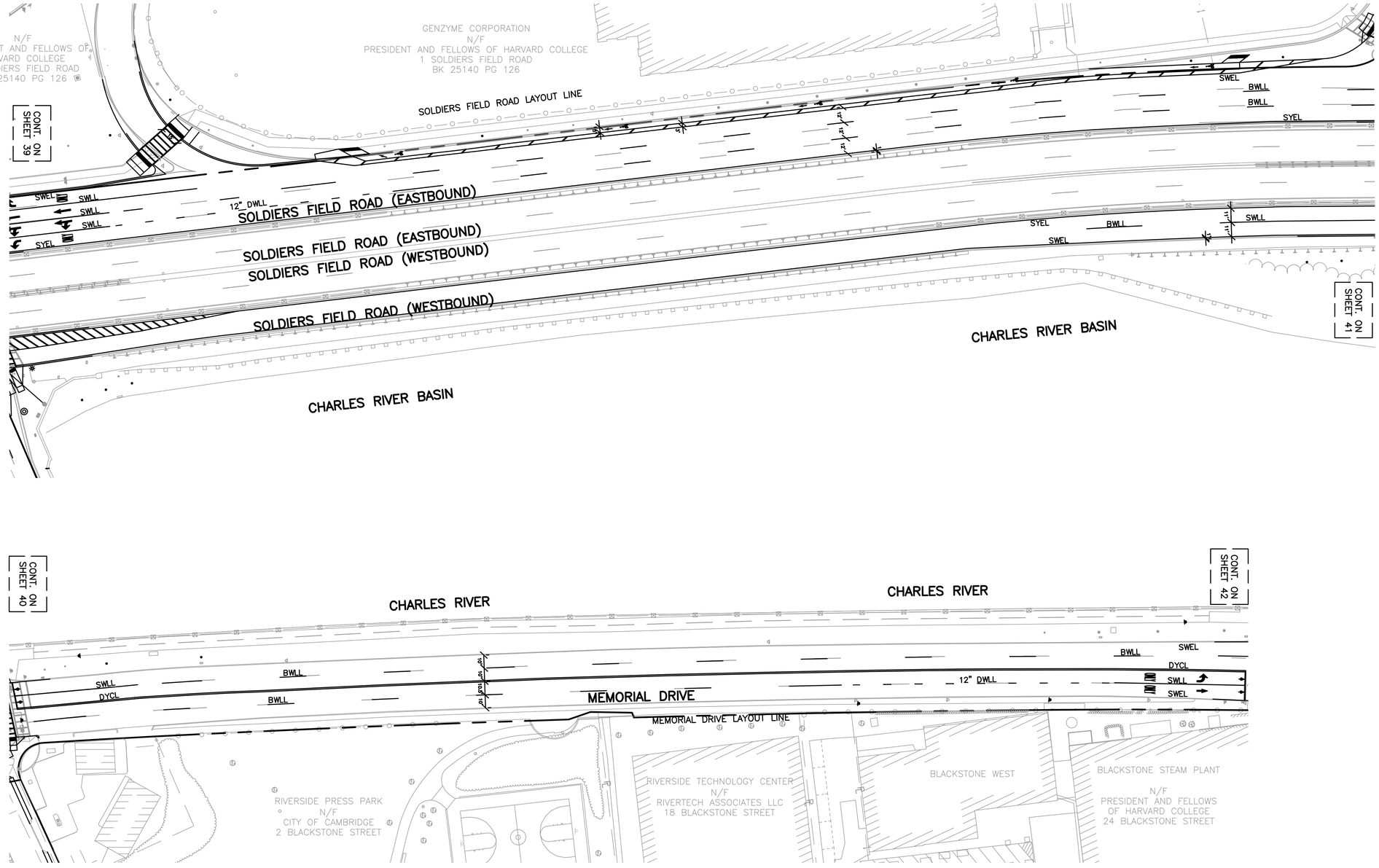
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	43	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N



40 0 40 80

SCALE 1" = 40'

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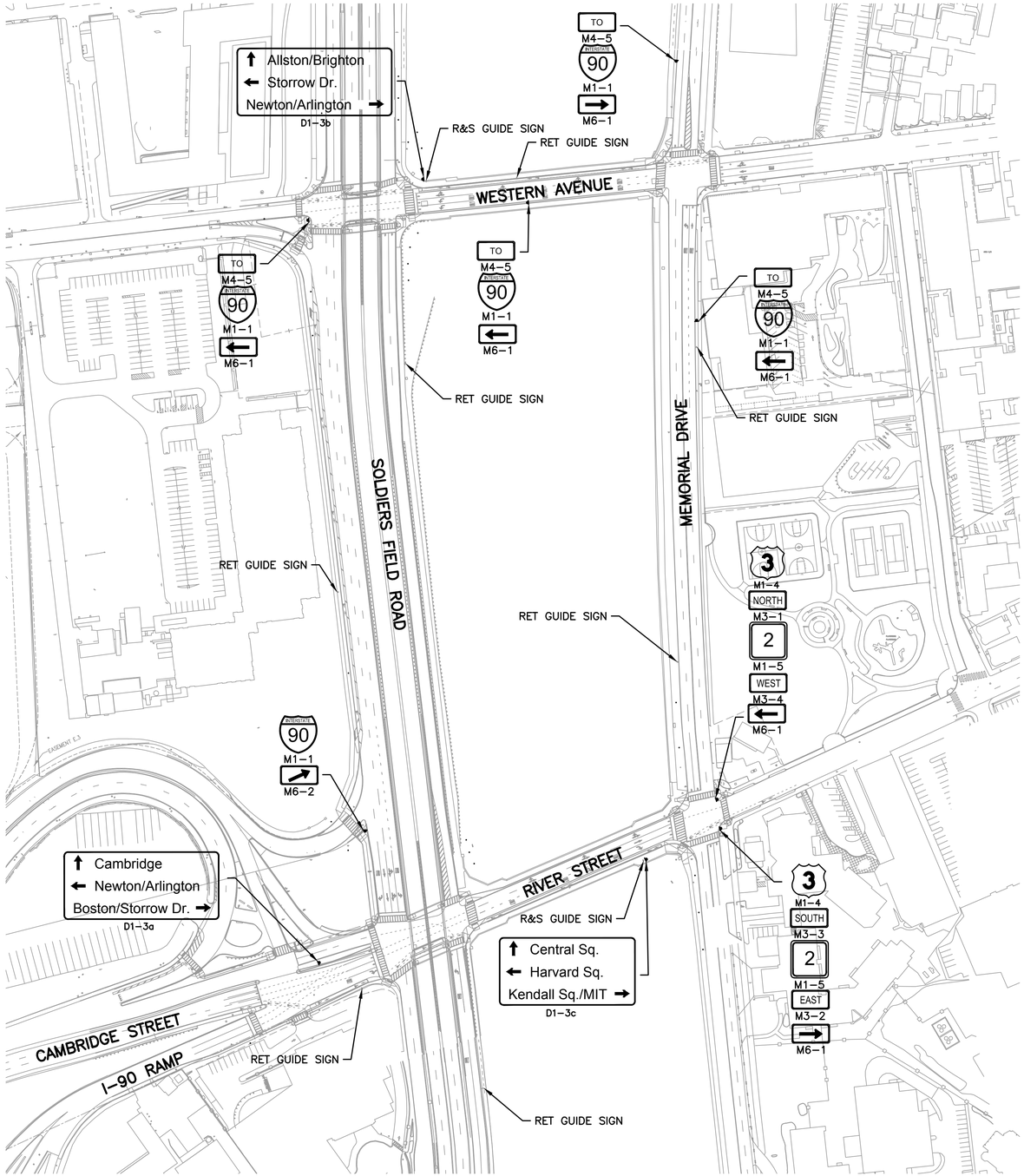
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	44	317
PROJECT FILE NO.	605527		

PAVEMENT & SIGNAGE PLANS

N

WAYFINDING SIGNAGE PLAN



NOT TO SCALE

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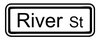
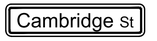
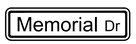
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	45	317
PROJECT FILE NO.	605527		

TRAFFIC SIGN SUMMARY

TRAFFIC SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R3-1	24	24		①	①	①	5	①	①	①	0	4.00	20.00
R3-2	24	24					4				0	4.00	16.00
R3-5L	30	36					1				0	7.50	7.50
R3-5R	30	36					1				0	7.50	7.50
R3-7L	30	30					1				0	6.25	6.25
R3-7R	30	30					4				P5 (4)	6.25	25.00
R3-8	36	30					1				P5 (1)	7.50	7.50
R3-8d	36	30					2				P5 (2)	7.50	15.00
R3-8h	48	30					2				P5 (2)	10.00	20.00
R3-8iL	36	30					2				P5 (2)	7.50	15.00
R3-8iR	36	30					2				P5 (2)	7.50	15.00
R4-7	24	30					3				P5 (3)	5.00	15.00
R5-1	30	30					12				0	6.25	75.00
R5-1a	36	24					2				0	6.00	12.00
R5-1b	12	18					2				0	1.50	3.00
R6-1 (PBS)	36	12					14				P5 (1)	3.00	42.00
R6-2 (PBS)	36	12					2				0	3.00	6.00
R9-2	12	18					2				0	1.50	3.00
R10-11b	36	36		↓	↓	↓	4	↓	↓	↓	0	9.00	36.00
SP-1	24	18		4"	3"	–	17	WHITE	BLACK	BLACK	0	3.00	51.00

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
D3-1 (PBS)	30	12		6"	–	–	5	GREEN	WHITE	WHITE	2" STEEL POST (1)	2.50	12.50
D3-2 (PBS)	48	12		6"	–	–	1	GREEN	WHITE	WHITE	0	4.00	4.00
D3-3 (PBS)	60	12		6"	–	–	3	GREEN	WHITE	WHITE	0	5.00	15.00
D3-4 (PBS)	42	12		6"	–	–	2	GREEN	WHITE	WHITE	0	3.50	7.00
D3-5 (PBS)	42	12		6"	–	–	4	GREEN	WHITE	WHITE	2" STEEL POST (1)	3.50	14.00
M1-1	24	24		①	①	①	5	①	①	①	P5 (1)	4.00	20.00
M1-4	24	24					2				P5 (2)	4.00	8.00
M1-5	24	24					2				0	4.00	8.00
M3-1	24	12					1				0	2.00	2.00
M3-2	24	12					1				0	2.00	2.00
M3-3	24	12					1				0	2.00	2.00
M3-4	24	12					1				0	2.00	2.00
M4-5	24	12					4				P5 (4)	2.00	8.00
M6-1	21	15					6				0	2.19	13.14
M6-2	21	15		↓	↓	↓	1	↓	↓	↓	0	2.19	2.19

① SEE MUTCD 2009 EDITION, 2004/2012 STD. HWY. SIGNS AND SECTION M9.30.0. TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS AND COLOR.

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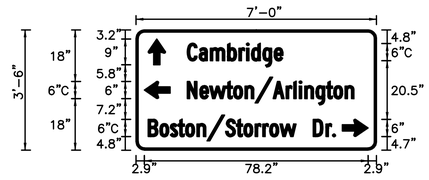
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

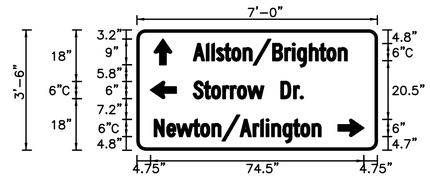
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	46	317
PROJECT FILE NO.	605527		

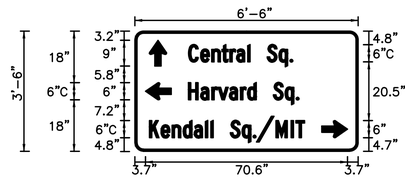
TRAFFIC SIGN SUMMARY

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND	COLOR BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
D1-2bA	29	30	↑ Central Sq 0.7 ↑ Kendall Sq./MIT2.3 ↑ Dwntn Boston 3.0	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.04	6.04
D1-2bB	22	24	↑ Central Sq 0.7 ↑ Kendall Sq./MIT2.3 ↑ Dwntn Boston 3.0	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	3.67	3.67
D1-2bC	29	24	↑ Central Sq 0.7 ↑ Kendall Sq./MIT2.3 ↑ Dwntn Boston 3.0	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	4.83	4.83
D1-2bD	31	30	↑ Kendall Sq./MIT2.3 ↑ Dwntn Boston 3.0 ← Central Sq 0.7	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.46	6.46
D1-2bE	30	24	↑ Newton 4.0 ← Allston Village 0.9	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	5.00	5.00
D1-2bF	24	24	↑ Harvard Sq 0.9 ↑ Boston 0.1	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	4.00	4.00
D1-2bG	24	24	↑ Newton 3.8 ← N Allston 0.6	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	4.00	4.00
D1-2bH	28	30	↑ Central Sq 0.9 ↑ Kendall Sq/MIT2.5 Boston 0.1 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	5.83	5.83
D1-2bI	31	30	↑ Dwntn Boston 3.0 ↑ Cambridge 0.1 Allston Village 0.9 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.46	6.46
D1-2bJ	27	30	↑ Cambridge 0.3 ↑ Dwntn Boston 3.3 N Allston 0.6 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	5.63	5.63
D1-2bK	29	30	↑ Allston Village 0.9 ↑ Newton 4.0 Cambridge 0.1 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.04	6.04
D1-2bL	26	24	↑ Harvard Sq 0.9 ← Boston 0.1	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	4.33	4.33
D1-2bM	29	30	↑ N Allston 0.6 ← Dwntn Boston 3.3 Newton 3.8 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.04	6.04
D1-2bN	30	30	↑ Cambridge 0.1 ← Newton 4.0 Dwntn Boston 3.0 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5 (1)	6.25	6.25
D1-2bO	30	30	↑ Central Sq 0.7 ← Harvard Sq 1.1 Kendall Sq/MIT 2.3 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5(1)	6.25	6.25
D1-2bP	28	30	← Cambridge 0.3 ← Newton 3.8 ← Dwntn Boston 3.3	2"	4"	3"	1	GREEN	WHITE	WHITE	P5(1)	5.83	5.83
D1-2bQ	26	30	↑ Boston 0.3 ↑ Harvard Sq 1.1 Central Sq 0.7 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5(1)	5.42	5.42
D1-2bR	30	30	↑ Boston 0.1 ← Kendall Sq/MIT2.5 Harvard Sq 0.9 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5(1)	6.25	6.25
D1-2bS	30	30	← Newton 3.8 Cambridge 0.3 → Dwntn Boston 3.3 →	2"	4"	3"	1	GREEN	WHITE	WHITE	P5(1)	6.25	6.25
D1-3a	84	42	↑ Cambridge ← Newton/Arlington Boston/Storrow Dr. →	SEE DETAIL			1	GREEN	WHITE	WHITE	5" TUBULAR STEEL POST	24.50	24.50
D1-3b	84	42	↑ Allston/Brighton ← Storrow Dr. Newton/Arlington →	SEE DETAIL			1	GREEN	WHITE	WHITE	5" TUBULAR STEEL POST	24.50	24.50
D1-3c	78	42	↑ Central Sq. ← Harvard Sq. Kendall Sq./MIT →	SEE DETAIL			1	GREEN	WHITE	WHITE	5" TUBULAR STEEL POST	22.75	22.75







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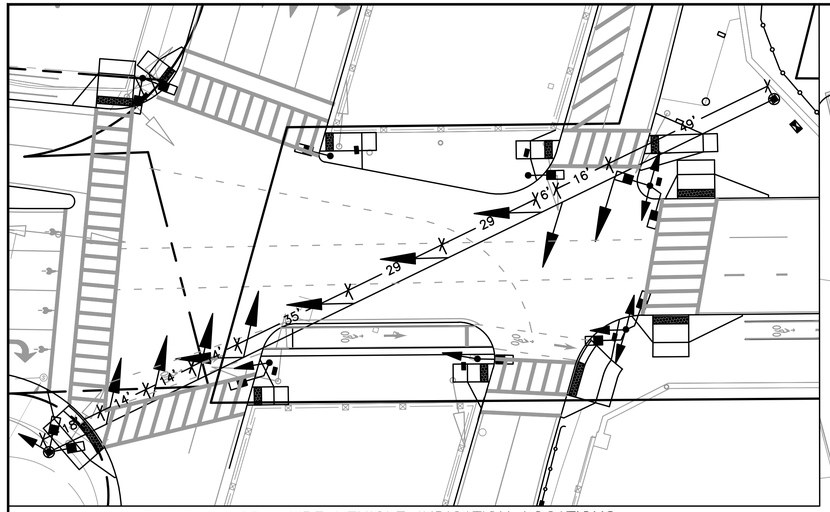
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	47	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PLAN
RIVER STREET AT SOLDIERS FIELD ROAD



DETAIL A: SPANWIRE VEHICLE INDICATION LOCATIONS

N

CAMBRIDGE STREET

I-90 OFF-RAMP

RIVER STREET

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

CHARLES RIVER BASIN

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 20' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS AND PEDESTRIAN INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATIONS.

PROP. 30' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS AND OPTICALLY PROGRAMMED VEHICLE INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH VEHICLE INDICATION, PEDESTRIAN INDICATION, AND BICYCLE INDICATION.

PROP. 30' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATION AND OPTICALLY PEDESTRIAN INDICATION, AND BICYCLE INDICATION.

RETAIN EXISTING CONDUIT AND INTERCONNECT.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

R&S EXISTING TS CONTROLLER AND CABINET.
R&D EXISTING TS FOUNDATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATIONS AND BICYCLE INDICATIONS.

PROP. STRAIN POLE ON NEW FOUNDATION WITH SPAN WIRE ASSEMBLY, VEHICLE INDICATIONS, AND PEDESTRIAN INDICATIONS.

PROP. NEW NEMA TS2-TYPE 1 CONTROLLER, CABINET, FOUNDATION AND ELECTRIC SERVICE CONNECTION

SPLICE EXISTING CONDUIT AND INSTALL NEW PULLBOX. PULL EXISTING INTERCONNECT CABLE TO NEW CONTROLLER.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATIONS AND BICYCLE INDICATIONS.

PROP. 12" X 24" MUNICIPAL STANDARD PULLBOX. (TYP.)

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

20 0 20 40

SCALE 1" = 20'

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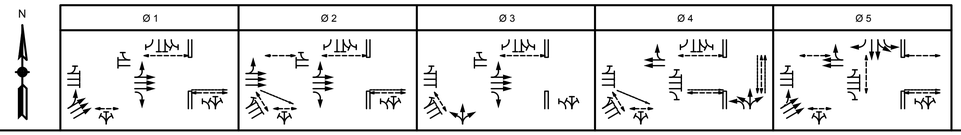
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	48	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SCHEDULE
RIVER STREET AT
SOLDIERS FIELD ROAD



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (COORDINATED)

STREET	*DIRECTION*	*HOUSINGS*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*FLASH OPER.*
CAMBRIDGE STREET	EB	E,F	G	Y	R	G	Y	R	G	Y	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	EB	D	GL-G	Y	R	GL-G	Y	R	GL-G	Y	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	EB	L	GR	YR	RR	GR	YR	RR	GR	YR	RR	RR	RR	RR	RR	RR	RR	FRR
SOLDIERS FIELD ROAD	NB	A	R	R	R	R	R	R	R	R	R	GL-G	Y	R	R	R	R	FR
SOLDIERS FIELD ROAD	NB	C	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	FRL
SOLDIERS FIELD ROAD	SB	G	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	FRL
SOLDIERS FIELD ROAD	SB	H	R	R	R	R	R	R	R	R	R	R	R	R	GL-G	Y	R	FR
SOLDIERS FIELD ROAD	SB	J	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
SOLDIERS FIELD ROAD	SB	K	R	R	R	R	R	R	R	R	R	R	R	R	GR-G	YR-Y	R	FR
CAMBRIDGE STREET	EB	Q,R,X	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	WB	T,U	R	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
DRIVEWAY	NB	V,S	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
I-90 RAMP	NEB	N	GL-G	YL-Y	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
I-90 RAMP	NEB	M	G	Y	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	N-S	P1,P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P3,P4	W	W	W	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	N-S	P5,P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P7,P14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P8,P9	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P10,P11	DW	DW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	E-W	P12,P13	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P15,P16	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	E-W	P17,P18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
BICYCLE	N-S	B1,B2,B3,B10	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	OFF
BICYCLE	E-W	B4, B5	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	OFF
BICYCLE	E-W	B6,B7	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	OFF
BICYCLE	E-W	B8, B9	R	R	R	G	Y	R	R	R	R	G	Y	R	R	R	R	OFF
TIMING IN SECONDS																		
MINIMUM GREEN (INITIAL)			17			17			4			17			27			
PASSAGE TIME (VEHICLE)			3			3			-			3			3			
MAXIMUM 1			20			20			4			20			30			
MAXIMUM 2			-			-			-			-			-			
YELLOW CLEARANCE				4			4			4			4			4		
RED CLEARANCE					2			2			4			4			2	
WALK (W)			8			8			4			9			7			
PEDESTRIAN CLEARANCE			10	4		10	4					10	4		20	4		
BICYCLE GREEN / YELLOW / RED			19 / 3 / 2			15 / 3 / 6						20 / 3 / 4			28 / 3 / 2			
RECALL			MIN			PED			MAX			PED			PED			
MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			

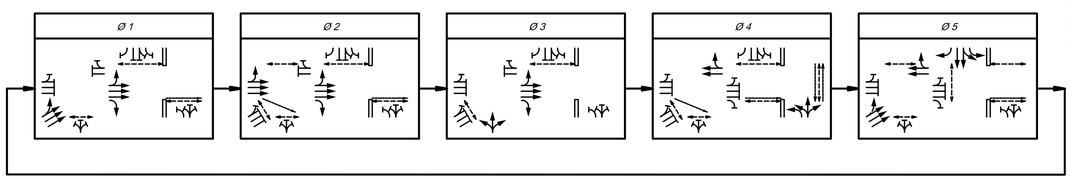
EMERGENCY ONLY

COORDINATION DATA			*COORDINATION PHASE TIMING*				
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.
TP1 M - F (6AM - 9AM)	140	0	32	29	12	34	33
TP2 M - F (3PM - 7PM)	140	0	30	27	12	38	33
TP3 SAT (11AM - 6PM)	120	0	24	24	12	27	33

NOTES:

1. COORDINATION SHALL BE AT THE START OF YELLOW FOR Ø 1.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. IF AN ASSIGNED RIGHT OF WAY IS TO REMAIN IN EFFECT DURING THE NEXT PHASE, THE SIGNAL INDICATOR FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CHANGE AND CLEARANCE INTERVALS.
3. REST-IN-WALK/REST-IN-GREEN FUNCTION SHALL BE ON FOR ALL CONCURRENT PEDESTRIAN AND BICYCLE PHASES.

PREFERENTIAL PHASING SEQUENCE



LEGEND

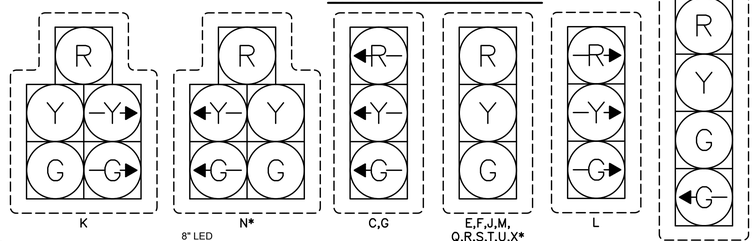
BICYCLE CROSSING
PEDESTRIAN CROSSING

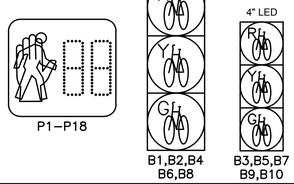
LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION, SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	4	4	B	-	-
2	1	1	2@6'X20'	2-4-2	4	4	B	-	-
3	1	2	2@6'X20'	2-4-2	1	1	B	-	-
4	1	2	2@6'X20'	2-4-2	1	1	B	-	-
5	1	2	2@6'X20'	2-4-2	1	1	B	-	-
6	1	2	2@6'X20'	2-4-2	1	1	B	-	-
7	2	1	2@6'X20'	2-4-2	2	2	B	-	-
8	2	1	2@6'X20'	2-4-2	2	2	B	-	-
9	2	1	2@6'X20'	2-4-2	2	2	B	-	-
10	3	2	2@6'X20'	2-4-2	1	1	B	-	-
11	3	2	2@6'X20'	2-4-2	1	1	B	-	-
12	3	2	2@6'X20'	2-4-2	1	1	B	-	-
13	3	1	2@6'X20'	2-4-2	5	5	B	-	-
14	3	1	2@6'X20'	2-4-2	5	5	B	-	-
15	3	1	2@6'X20'	2-4-2	5	5	B	-	-
16	3	1	2@6'X20'	2-4-2	5	5	B	-	-

SIGNAL IDENTIFICATION





NOTES:

1. ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH CUT AWAY VISORS.
2. ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
3. ALL VEHICLE INDICATIONS SHALL HAVE 5" LOUVERED BACK PLATES.
4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.
5. * INDICATES OPTICALLY PROGRAMMED SIGNAL.

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.01	1	STRAIN POLE, SPANWIRE ASSEMBLY, AND FOUNDATION
	1	20' TYPE 2 STEEL MAST ARM AND FOUNDATION
	2	30' TYPE 2 STEEL MAST ARM AND FOUNDATION
	8	8' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	3	10' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	13	12" 3-SECTION LED VEHICLE SIGNAL INDICATION
	3	12" 3-SECTION LED VEHICLE SIGNAL INDICATION
	2	12" 5-SECTION LED VEHICLE SIGNAL INDICATION
	18	16" LED COUNTDOWN PEDESTRIAN SIGNAL INDICATION
	5	4" 3-SECTION LED BICYCLE SIGNAL INDICATION
	5	8" 3-SECTION LED BICYCLE SIGNAL INDICATION
	3	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
	32	ROADWAY LOOP DETECTOR (6'X20')
	19	12"X24" PULL BOX
	18	LOUVERED BACKPLATES
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.

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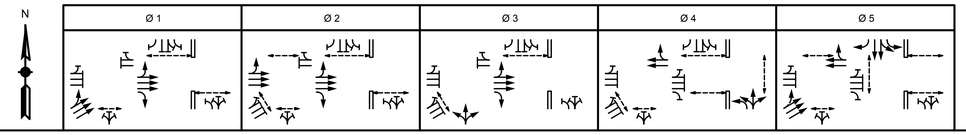
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	49	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SCHEDULE
RIVER STREET AT
SOLDIERS FIELD ROAD
EMERGENCY REPLACEMENT ALTERNATIVE



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (COORDINATED)

STREET	*DIRECTION*	*HOUSINGS*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*FLASH OPER.*
CAMBRIDGE STREET	EB	E,F	G	Y	R	G	Y	R	G	Y	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	EB	D	GL-G	Y	R	GL-G	Y	R	GL-G	Y	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	EB	L	GR	YR	RR	GR	YR	RR	GR	YR	RR	RR	RR	RR	RR	RR	RR	FRR
SOLDIERS FIELD ROAD	NB	A	R	R	R	R	R	R	R	R	R	GL-G	Y	R	R	R	R	FR
SOLDIERS FIELD ROAD	NB	C	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	FRL
SOLDIERS FIELD ROAD	SB	G	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	FRL
SOLDIERS FIELD ROAD	SB	H	R	R	R	R	R	R	R	R	R	R	R	R	GL-G	Y	R	FR
SOLDIERS FIELD ROAD	SB	J	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
SOLDIERS FIELD ROAD	SB	K	R	R	R	R	R	R	R	R	R	R	R	R	GR-G	YR-Y	R	FR
CAMBRIDGE STREET	EB	Q,R,X	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
CAMBRIDGE STREET	WB	T,U	R	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	FR
DRIVEWAY	NB	V,S	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
I-90 RAMP	NEB	N	GL-G	YL-Y	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
I-90 RAMP	NEB	M	G	Y	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
PEDESTRIAN	N-S	P1,P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P3,P4	W	W	W	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	N-S	P5,P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P7,P14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P8,P9	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P10,P11	DW	DW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	E-W	P12,P13	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF
PEDESTRIAN	E-W	P15,P16	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	W/FDW	FDW	DW	DW	DW	DW	OFF
PEDESTRIAN	E-W	P17,P18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OFF

TIMING IN SECONDS

MINIMUM GREEN (INITIAL)			17			17			4			17			27			
PASSAGE TIME (VEHICLE)			3			3			-			3			3			
MAXIMUM 1			20			20			4			20			30			
MAXIMUM 2			-			-			-			-			-			
YELLOW CLEARANCE				4			4			4			4			4		
RED CLEARANCE					2			2			4			4				2
WALK (W)			8			8			4			9			7			
PEDESTRIAN CLEARANCE			10	4		10	4					10	4		20	4		
RECALL			MIN			PED			MAX			PED			PED			
MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			

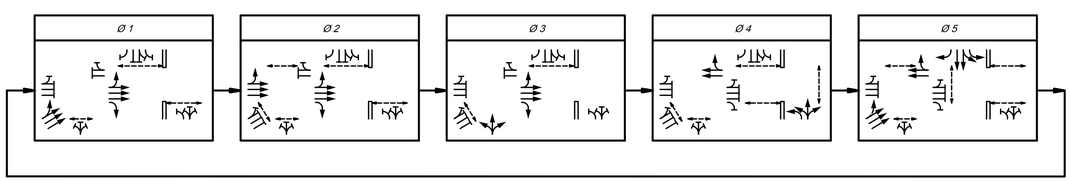
EMERGENCY ONLY

COORDINATION DATA					*COORDINATION PHASE TIMING*		
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.
TP1 M - F (6AM - 9AM)	140	0	32	29	12	34	33
TP2 M - F (3PM - 7PM)	140	0	30	27	12	38	33
TP3 SAT (11AM - 6PM)	120	0	24	24	12	27	33

NOTES:

1. COORDINATION SHALL BE AT THE START OF YELLOW FOR Ø 1.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. IF AN ASSIGNED RIGHT OF WAY IS TO REMAIN IN EFFECT DURING THE NEXT PHASE, THE SIGNAL INDICATOR FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CHANGE AND CLEARANCE INTERVALS.
3. REST-IN-WALK FUNCTION SHALL BE ON FOR ALL CONCURRENT PEDESTRIAN PHASES.

PREFERENTIAL PHASING SEQUENCE

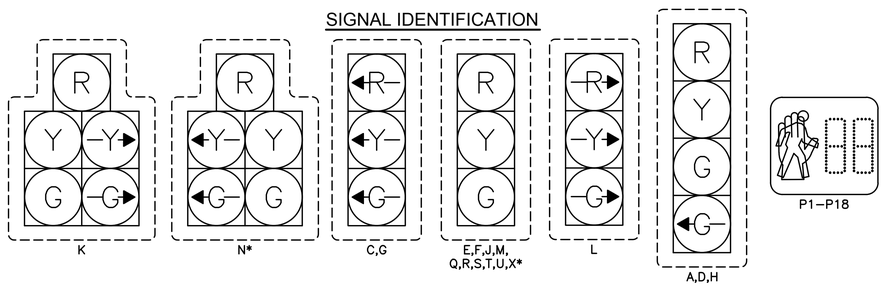


LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION, SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	4	4	B	-	-
2	1	1	2@6'X20'	2-4-2	4	4	B	-	-
3	1	2	2@6'X20'	2-4-2	1	1	B	-	-
4	1	2	2@6'X20'	2-4-2	1	1	B	-	-
5	1	2	2@6'X20'	2-4-2	1	1	B	-	-
6	1	2	2@6'X20'	2-4-2	1	1	B	-	-
7	2	1	2@6'X20'	2-4-2	2	2	B	-	-
8	2	1	2@6'X20'	2-4-2	2	2	B	-	-
9	2	1	2@6'X20'	2-4-2	2	2	B	-	-
10	3	2	2@6'X20'	2-4-2	1	1	B	-	-
11	3	2	2@6'X20'	2-4-2	1	1	B	-	-
12	3	2	2@6'X20'	2-4-2	1	1	B	-	-
13	3	1	2@6'X20'	2-4-2	5	5	B	-	-
14	3	1	2@6'X20'	2-4-2	5	5	B	-	-
15	3	1	2@6'X20'	2-4-2	5	5	B	-	-
16	3	1	2@6'X20'	2-4-2	5	5	B	-	-

SIGNAL IDENTIFICATION



NOTES:

1. ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH CUT AWAY VISORS.
2. ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
3. ALL VEHICLE INDICATIONS SHALL HAVE 5" LOUVERED BACK PLATES.
4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.
5. * INDICATES OPTICALLY PROGRAMMED SIGNAL.

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	50	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PLAN
RIVER STREET AT
MEMORIAL DRIVE

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER BASIN

MEMORIAL DRIVE

RIVER STREET

ONLY

ONLY

ONLY

RETAIN EXISTING CONDUIT AND INTERCONNECT.

RETAIN EXISTING CONDUIT AND INTERCONNECT.

PROP. 12" X 24" MUNICIPAL STANDARD PULLBOX. (TYP.)

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

R&D TS AND FOUNDATION. PROP. PULL BOX.

PROP. 10' TS POST ON NEW FOUNDATION WITH BICYCLE INDICATIONS AND PEDESTRIAN INDICATION.

PROP. 20' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS AND PEDESTRIAN INDICATION.

PROP. 30' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS, PEDESTRIAN INDICATION, PUSHBUTTON, SIGN, AND SADDLE.

PROP. 25' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS, BICYCLE INDICATIONS, PEDESTRIAN INDICATIONS, APS PUSHBUTTON, SIGN, AND SADDLE.

PROP. 8' TS POST ON NEW FOUNDATION WITH BICYCLE INDICATION AND PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH VEHICLE INDICATION, BICYCLE INDICATION, PEDESTRIAN INDICATION, APS PUSHBUTTON, SIGN, AND SADDLE.

R&S EXISTING TS CONTROLLER AND CABINET.
R&D EXISTING TS FOUNDATION.
PROP. NEW NEMA TS2-TYPE 1 CONTROLLER, CABINET, AND FOUNDATION.
RET EXISTING ELECTRIC SERVICE CONNECTION.

20 0 20 40
SCALE 1" = 20'

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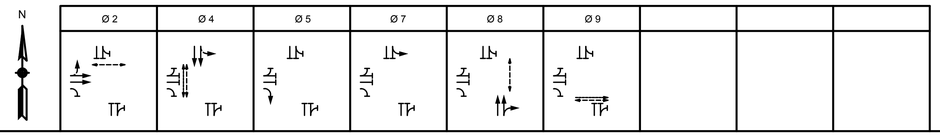
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	51	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SCHEDULE
RIVER STREET AT MEMORIAL DRIVE



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (COORDINATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH OPER.
RIVER STREET	EB	F,G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R										FR
RIVER STREET	EB RT	D,E	RR	RR	RR	RR	RR	RR	GR	YR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR										FRR
MEMORIAL DRIVE	NB	H,J	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R										FY
MEMORIAL DRIVE	SB LT	C,K	R	R	R	G	Y	R	R	R	R	GL/R	YL/R	R	R	R	R	R	R	R										FY
MEMORIAL DRIVE	SB	A	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										FY
PEDESTRIAN	N-S	P3,P4	DW	DW	DW	W/ FDW	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW										OFF
PEDESTRIAN	N-S	P7,P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/ FDW	FDW	DW	DW	DW	DW										OFF
PEDESTRIAN	E-W	P1,P2	W/ FDW	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW										OFF
PEDESTRIAN	E-W	P5,P6	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/ FDW	FDW	DW										OFF
BICYCLE	N-S	B3,B4,B5,B6	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										OFF
BICYCLE	E-W	B1,B2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R										OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			16			16			8			8			13			-											EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			2			3			3			3			3			-											
MAXIMUM 1			60			50			40			10			35			-											
MAXIMUM 2			-			-			-			-			-			-											
YELLOW CLEARANCE				3			4			4			4			4			4										
RED CLEARANCE					2			1			1			1			1			1									
WALK (W)			7			7									7			7											
PEDESTRIAN CLEARANCE			9	3		9	4								6	4			15										
BICYCLE GREEN / YELLOW / RED						14 / 3 / 4												16 / 3 / 4											
RECALL				MIN			PED			MIN			PED			PED			OFF										
MEMORY				NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK										
COORDINATION DATA												COORDINATION PHASE TIMING																	

TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.
TP1 M - F (6AM - 9AM)	140	9	69	71	46	18	53	23			
TP2 M - F (3PM - 7PM)	140	11	73	67	50	15	52	23			
TP3 SAT (11AM - 6PM)	120	11	64	56	41	15	41	23			

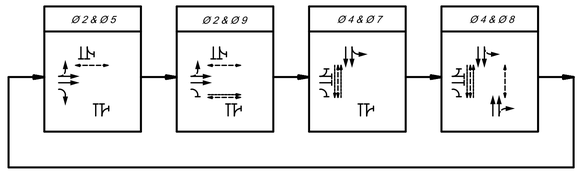
NOTES:

1. COORDINATION SHALL BE AT THE START OF GREEN FOR Ø 2 & Ø 5.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. REST-IN-WALK/REST-IN-GREEN FUNCTION SHALL BE ON FOR ALL CONCURRENT PEDESTRIAN AND BICYCLE PHASES.

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.02	1	20' TYPE 2 STEEL MAST ARM AND FOUNDATION
	1	25' TYPE 2 STEEL MAST ARM AND FOUNDATION
	1	30' TYPE 2 STEEL MAST ARM AND FOUNDATION
	2	8' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	2	10' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	7	12" 3-SECTION LED VEHICLE SIGNAL INDICATION
	2	12" 5-SECTION LED VEHICLE SIGNAL INDICATION
	8	16" LED COUNTDOWN PEDESTRIAN SIGNAL INDICATION
	3	4" 3-SECTION LED BICYCLE SIGNAL INDICATION
	3	8" 3-SECTION LED BICYCLE SIGNAL INDICATION
	2	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
	14	ROADWAY LOOP DETECTOR (6'X20')
	8	12"X24" PULL BOX
	6	LOUVERED BACKPLATES
	2	APS PUSHBUTTON
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.

PREFERENTIAL PHASING SEQUENCE

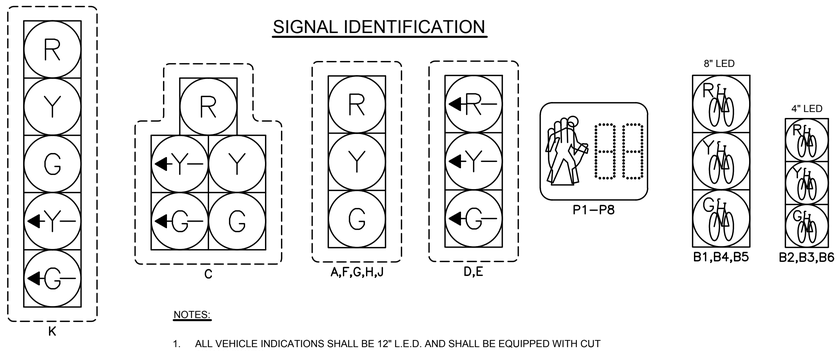


LEGEND

BICYCLE CROSSING

PEDESTRIAN CROSSING

SIGNAL IDENTIFICATION



NOTES:

1. ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH CUT AWAY VISORS.
2. ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
3. ALL VEHICLE INDICATIONS SHALL HAVE 5" LOUVERED BACK PLATES.
4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.

LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION, SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	8	8	B	-	-
2	1	1	2@6'X20'	2-4-2	8	8	B	-	-
3	1	2	2@6'X20'	2-4-2	5	5	B	-	-
4	1	2	2@6'X20'	2-4-2	2	2	B	-	-
5	1	2	2@6'X20'	2-4-2	2	2	B	-	-
6	2	1	2@6'X20'	2-4-2	4	4	B	-	-
7	2	1	2@6'X20'	2-4-2	4	4	B	-	-

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	52	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PLAN
WESTERN AVENUE AT SOLDIERS FIELD ROAD

N

COMMONWEALTH OF MASSACHUSETTS – DCR PERMANENT 50' WIDE SUBSURFACE EASEMENT (CITY TUNNEL EXTENSION) BK 8372 PG 692

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

WESTERN AVENUE

WESTERN AVENUE

ONLY

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATIONS AND BICYCLE INDICATIONS.

INSTALL 4" CONDUIT AND INTERCONNECT CABLE FROM CONTROLLER AT WESTERN AVENUE/SOLDIERS FIELD ROAD TO CONTROLLER AT WESTERN AVENUE/MEMORIAL DRIVE.

RETAIN EXISTING STRAIN POLES AND FOUNDATION. INSTALL NEW SPAN WIRE, VEHICLE INDICATIONS, PEDESTRIAN INDICATIONS, AND BICYCLE INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH VEHICLE INDICATION AND PEDESTRIAN INDICATION.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATION.

R&S EXISTING TS CONTROLLER, MASTER CONTROLLER, AND CABINET.
R&D EXISTING TS FOUNDATION.
PROP. NEW NEMA TS2–TYPE 1 CONTROLLER, MASTER CONTROLLER, CABINET, AND FOUNDATION.
RET EXISTING ELECTRIC SERVICE CONNECTION.

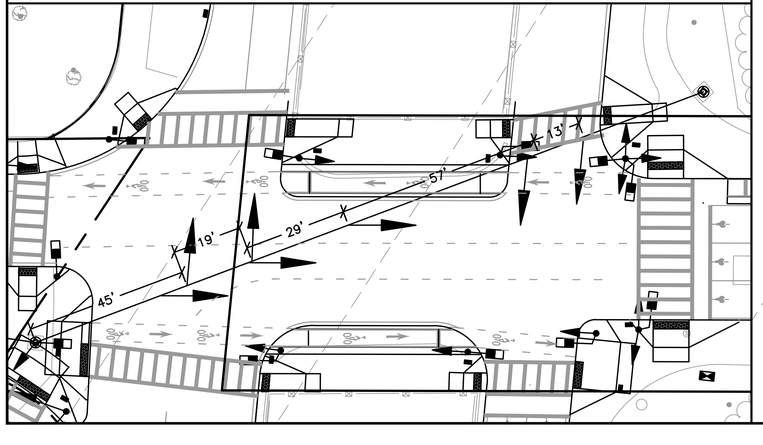
PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATIONS.

PROP. 10' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION AND BICYCLE INDICATION.

PROP. 12" X 24" MUNICIPAL STANDARD PULLBOX. (TYP.)

RETAIN EXISTING CONDUIT AND INTERCONNECT.

DETAIL A: SPANWIRE VEHICLE INDICATION LOCATIONS



20 0 20 40

SCALE 1" = 20'

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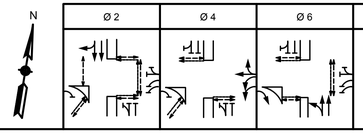
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	53	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SCHEDULE
WESTERN AVENUE AT SOLDIERS FIELD ROAD



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (COORDINATED)

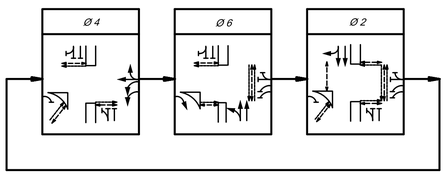
STREET	*DIRECTION*	*HOUSINGS*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*FLASH OPER.*
WESTERN AVENUE	EB	J,K	RR	RR	RR	RR	RR	RR	GR	YR	RR																			FRR
WESTERN AVENUE	WB	D	R	R	R	G	Y	R	R	R	R																			FY
WESTERN AVENUE	WB	E,F	RL	RL	RL	GL	YL	RL	RL	RL	RL																			FYL
SOLDIERS FIELD ROAD	NB	A,C	R	R	R	R	R	R	G	Y	R																			FR
SOLDIERS FIELD ROAD	SB	G,H	G	Y	R	R	R	R	R	R	R																			FR
PEDESTRIAN	N-S	P1,P2	W/ FDW	FDW	DW	DW	DW	DW	W	W	W																			OFF
PEDESTRIAN	N-S	P7,P8	W	W	W	W/ FDW	FDW	DW	DW	DW	DW																			OFF
PEDESTRIAN	N-S	P9,P10	W/ FDW	FDW	DW	DW	DW	DW	DW	DW	DW																			OFF
PEDESTRIAN	E-W	P3,P4	W	W	W	W/ FDW	FDW	DW	DW	DW	DW																			OFF
PEDESTRIAN	E-W	P13,P14	W/ FDW	FDW	DW	DW	DW	DW	DW	DW	DW																			OFF
PEDESTRIAN	E-W	P11,12	DW	DW	DW	W	W	W	W/ FDW	FDW	DW																			OFF
PEDESTRIAN	E-W	P5,P6	DW	DW	DW	DW	DW	DW	W/ FDW	FDW	DW																			OFF
BICYCLE	N-S	B1,B2,B11,B12	G	Y	R	R	R	R	G	G	G																			OFF
BICYCLE	E-W	B3,B4	G	G	G	G	Y	R	R	R	R																			OFF
BICYCLE	E-W	B5	R	R	R	R	R	R	G	Y	R																			OFF
BICYCLE	E-W	B6	G	G	G	G	Y	R	R	R	R																			OFF
BICYCLE	E-W	B7,B8	R	R	R	G	G	G	G	Y	R																			OFF
BICYCLE	E-W	B9,B10	G	Y	R	R	R	R	R	R	R																			OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			14			14			14																					
PASSAGE TIME (VEHICLE)			2			2			2																					
MAXIMUM 1			20			35			25																					
MAXIMUM 2			-			-			-																					
YELLOW CLEARANCE				4			4			4																				
RED CLEARANCE					2			2			4																			
WALK (W)			7			7			7																					
PEDESTRIAN CLEARANCE			7	4		7	4		7	4																				
BICYCLE GREEN / YELLOW / RED			14 / 3 / 3			14 / 3 / 3			14 / 3 / 3																					
RECALL			PED			MIN			PED																					
MEMORY			NON-LOCK			NON-LOCK			NON-LOCK																					
COORDINATION DATA									*COORDINATION PHASE TIMING*																			
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.			SEC.			SEC.			SEC.			SEC.			SEC.			SEC.			SEC.			SEC.			
TP1 M - F (6AM - 9AM)	100	0	28			42			30																					
TP2 M - F (3PM - 7PM)	100	0	21			44			35																					
TP3 SAT (11AM - 6PM)	90	0	25			39			26																					

EMERGENCY ONLY

NOTES:

1. COORDINATION SHALL BE AT THE START OF YELLOW FOR Ø 4.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. REST-IN-WALK/REST-IN-GREEN FUNCTION SHALL BE ON FOR ALL CONCURRENT PEDESTRIAN AND BICYCLE PHASES.

PREFERENTIAL PHASING SEQUENCE

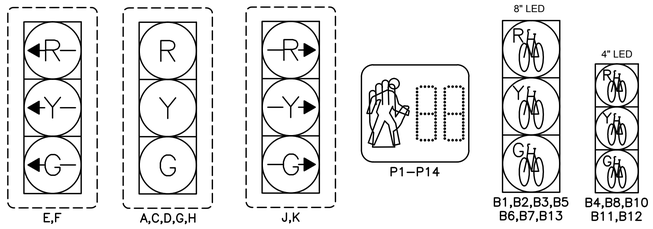


LEGEND

BICYCLE CROSSING

PEDESTRIAN CROSSING

SIGNAL IDENTIFICATION



NOTES:

1. ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH CUT AWAY VISORS.
2. ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
3. ALL VEHICLE INDICATIONS SHALL HAVE 5" LOUVERED BACK PLATES.
4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.03	1	SPANWIRE ASSEMBLY
	3	8' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	9	10' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	9	12" 3-SECTION LED VEHICLE SIGNAL INDICATION
	14	16" LED COUNTDOWN PEDESTRIAN SIGNAL INDICATION
	5	4" 3-SECTION LED BICYCLE SIGNAL INDICATION
	7	8" 3-SECTION LED BICYCLE SIGNAL INDICATION
	4	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
	16	ROADWAY LOOP DETECTOR (6'X20')
	13	12" X 24" PULL BOX
	9	LOUVERED BACKPLATES
	1	MASTER CONTROLLER
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.

LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION. SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	4	4	B	-	-
2	1	2	2@6'X20'	2-4-2	4	4	B	-	-
3	2	1	2@6'X20'	2-4-2	4	4	B	-	-
4	2	2	2@6'X20'	2-4-2	6	6	B	-	-
5	3	1	2@6'X20'	2-4-2	6	6	B	-	-
6	3	2	2@6'X20'	2-4-2	6	6	B	-	-
7	4	1	2@6'X20'	2-4-2	2	2	B	-	-
8	4	2	2@6'X20'	2-4-2	2	2	B	-	-

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	54	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PLAN
WESTERN AVENUE AT
MEMORIAL DRIVE

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER BASIN

MEMORIAL DRIVE

RIGHT OF WAY

INSTALL 4" CONDUIT AND INTERCONNECT CABLE FROM CONTROLLER AT WESTERN AVENUE/SOLDIERS FIELD ROAD TO CONTROLLER AT WESTERN AVENUE/MEMORIAL DRIVE.

PROP. 10' TS POST ON NEW FOUNDATION WITH VEHICLE INDICATION, BICYCLE INDICATIONS, AND PEDESTRIAN INDICATIONS.

R&S EXISTING TS CONTROLLER AND CABINET
R&D EXISTING TS FOUNDATION.
PROP. NEW NEMA TS2–TYPE 1 CONTROLLER, CABINET, AND FOUNDATION.
RET EXISTING ELECTRIC SERVICE CONNECTION.

PROP. 25' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS AND PEDESTRIAN INDICATION.

PROP. 10' TS POST ON NEW FOUNDATION WITH BICYCLE INDICATION AND PEDESTRIAN INDICATION.

WESTERN AVENUE

ONLY

PROP. 35' TYPE 2 STEEL MAST ARM ON NEW FOUNDATION WITH VEHICLE INDICATIONS, BICYCLE INDICATIONS AND PEDESTRIAN INDICATION.

RETAIN EXISTING CONDUIT AND INTERCONNECT.

PROP. 8' TS POST ON NEW FOUNDATION WITH PEDESTRIAN INDICATION.

PROP. 12" X 24" MUNICIPAL STANDARD PULLBOX. (TYP.)

20 0 20 40
SCALE 1" = 20'

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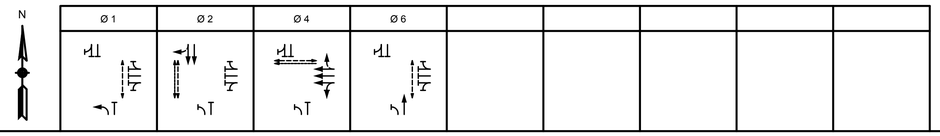
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	55	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SCHEDULE
WESTERN AVENUE AT MEMORIAL DRIVE



SEQUENCE AND TIMING FOR SEMI ACTUATED CONTROL (COORDINATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH OPER.
WESTERN AVENUE	WB	A	R	R	R	R	R	R	GL/G	Y	R	R	R	R																FR
WESTERN AVENUE	WB	C,D	R	R	R	R	R	R	G	Y	R	R	R	R																FR
MEMORIAL DRIVE	NB LT	E,F	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL																FRL
MEMORIAL DRIVE	NB	G,H	R	R	R	R	R	R	R	R	R	G	Y	R																FY
MEMORIAL DRIVE	SB	J,K	R	R	R	G	Y	R	R	R	R	R	R	R																FY
PEDESTRIAN	N-S	P1,P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/ FDW	FDW	DW																OFF
PEDESTRIAN	N-S	P3,P4	DW	DW	DW	W/ FDW	FDW	DW	DW	DW	DW	DW	DW	DW																OFF
PEDESTRIAN	E-W	P5,P6	DW	DW	DW	DW	DW	DW	W/ FDW	FDW	DW	DW	DW	DW																OFF
BICYCLE	N-S	B1,B2,B5,B6	R	R	R	G	Y	R	R	R	R	R	R	R																OFF
BICYCLE	E-W	B3,B4	R	R	R	R	R	R	G	Y	R	R	R	R																OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			10			15			17			16																		EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			2			2			2			2																		
MAXIMUM 1			25			30			25			55																		
MAXIMUM 2			-			-			-			-																		
YELLOW CLEARANCE				4			4			3			4																	
RED CLEARANCE					1			1			2			1																
WALK (W)						7			7			7																		
PEDESTRIAN CLEARANCE						8	4		10	3		9	4																	
BICYCLE GREEN / YELLOW / RED						14 / 3 / 3			16 / 3 / 3																					
RECALL				OFF			PED			MIN			PED																	
MEMORY				NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK																	

COORDINATION DATA			*COORDINATION PHASE TIMING*									
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.
TP1 M - F (6AM - 9AM)	100	94	32	38	30	70						
TP2 M - F (3PM - 7PM)	100	97	39	31	30	70						
TP3 SAT (11AM - 6PM)	90	85	28	34	28	62						

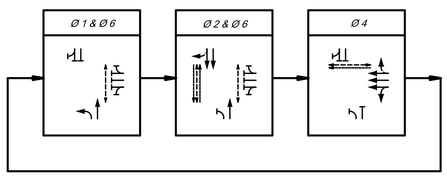
NOTES:

1. COORDINATION SHALL BE AT THE START OF YELLOW FOR Ø 2 & Ø 6.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. REST-IN-WALK/REST-IN-GREEN FUNCTION SHALL BE ON FOR ALL CONCURRENT PEDESTRIAN AND BICYCLE PHASES.

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.04	1	25' TYPE 2 STEEL MAST ARM AND FOUNDATION
	1	35' TYPE 2 STEEL MAST ARM AND FOUNDATION
	1	8' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	2	10' TRAFFIC SIGNAL POST, BASE, AND FOUNDATION
	8	12" 3-SECTION LED VEHICLE SIGNAL INDICATION
	1	12" 4-SECTION LED VEHICLE SIGNAL INDICATION
	6	16" LED COUNTDOWN PEDESTRIAN SIGNAL INDICATION
	3	4" 3-SECTION LED BICYCLE SIGNAL INDICATION
	3	8" 3-SECTION LED BICYCLE SIGNAL INDICATION
	2	DUAL CHANNEL LOOP DETECTOR AMPLIFIER
	10	ROADWAY LOOP DETECTOR (6'X23')
	7	12"X24" PULL BOX
	9	LOUVERED BACKPLATES
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.

PREFERENTIAL PHASING SEQUENCE

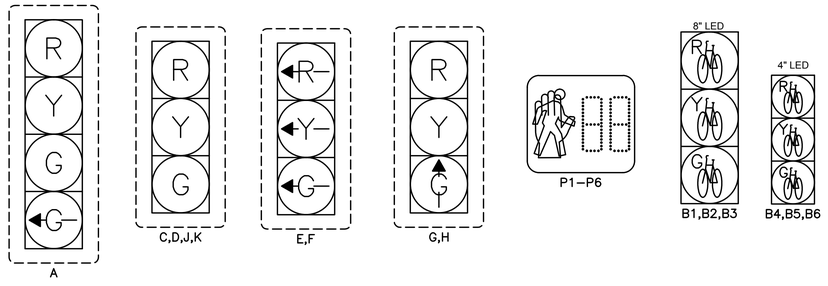


LEGEND

BICYCLE CROSSING

PEDESTRIAN CROSSING

SIGNAL IDENTIFICATION



NOTES:

1. ALL VEHICLE INDICATIONS SHALL BE 12" L.E.D. AND SHALL BE EQUIPPED WITH CUT AWAY VISORS.
2. ALL PEDESTRIAN INDICATIONS SHALL BE 16" L.E.D. AND SHALL COUNTDOWN AND BE EQUIPPED WITH SUN CAP VISORS.
3. ALL VEHICLE INDICATIONS SHALL HAVE 5" LOUVERED BACK PLATES.
4. ALL SIGNALS SHALL BE RIGIDLY MOUNTED.

LOOP DETECTOR DATA

SEE PLAN SHEET-LOOP DETECTOR DETAILS FOR LOOP CONSTRUCTION. SPLICING, DETAILS & NOTES. DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	4	4	B	-	-
2	1	1	2@6'X20'	2-4-2	4	4	B	-	-
3	1	1	2@6'X20'	2-4-2	4	4	B	-	-
4	1	2	2@6'X20'	2-4-2	6	6	B	-	-
5	1	2	2@6'X20'	2-4-2	1	1	B	-	-
6	2	1	2@6'X20'	2-4-2	2	2	B	-	-
7	2	1	2@6'X20'	2-4-2	2	2	B	-	-

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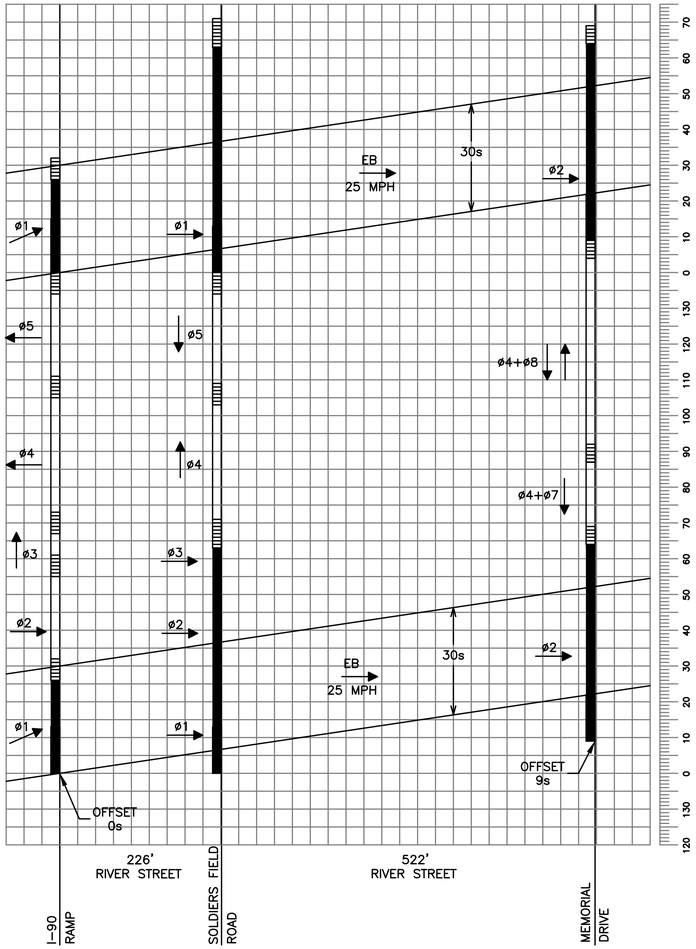
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

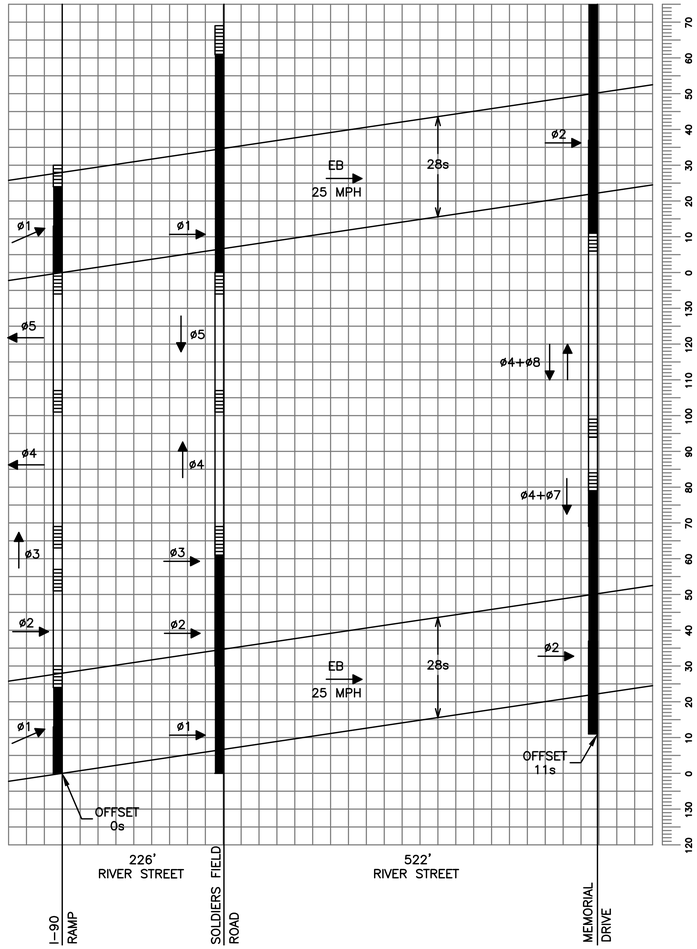
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	56	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SPACE TIME DIAGRAM
RIVER STREET

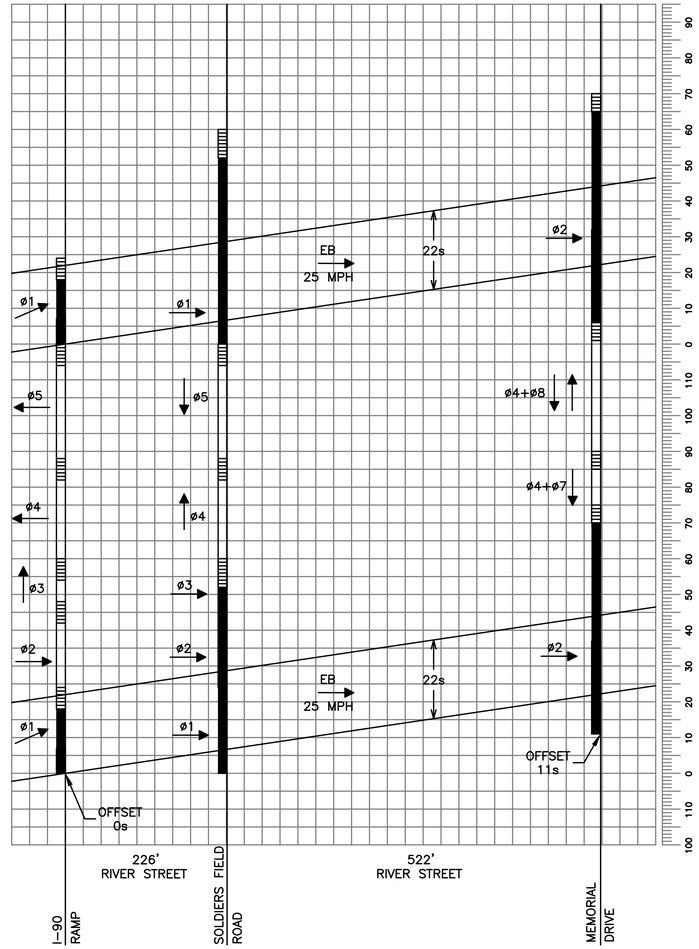
DIAL 1
RIVER STREET
140 SECOND CYCLE



DIAL 2
RIVER STREET
140 SECOND CYCLE



DIAL 3
RIVER STREET
120 SECOND CYCLE



RIVER STREET AT SOLDIER FIELD ROAD

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	140 SEC	140 SEC	120 SEC
OFFSET	0	0	0
SPLIT ø1	32	30	24
SPLIT ø2	29	27	24
SPLIT ø3	12	12	12
SPLIT ø4	34	38	27
SPLIT ø5	33	33	33
COORD. PHASE	ø1	ø1	ø1

NOTES:

1. COORDINATION SHALL BE AT THE START OF GREEN FOR ø1.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.
3. IF AN ASSIGNED RIGHT OF WAY IS TO REMAIN IN EFFECT DURING THE NEXT PHASE, THE SIGNAL INDICATOR FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CHANGE AND CLEARANCE INTERVALS.

RIVER STREET AT MEMORIAL DRIVE

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	140 SEC	140 SEC	120 SEC
OFFSET	9	11	11
SPLIT ø2	69	73	64
SPLIT ø4	71	67	56
SPLIT ø5	46	50	41
SPLIT ø7	18	15	15
SPLIT ø8	53	52	41
SPLIT ø9	23	23	23
COORD. PHASE	ø2 & ø5	ø2 & ø5	ø2 & ø5

NOTES:

1. COORDINATION SHALL BE AT THE START OF GREEN FOR ø2 & ø5.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.

DAILY & WEEKLY COORDINATION PROGRAM

	MONDAY THRU FRIDAY	SATURDAY	SUNDAY
DIAL 1 140s CYCLE	6:00 – 9:00	–	–
DIAL 2 140s CYCLE	15:00 – 19:00	–	–
DIAL 3 120s CYCLE	ALL OTHER TIMES	ALL DAY	ALL DAY
FLASH OPERATION	–	–	–

LEGEND

- COORDINATED PHASE(S) GREEN TIME
- NON-COORDINATED PHASE(S) GREEN TIME
- CLEARANCE TIME (YELLOW + RED)
- PHASE MOVEMENT
- COORDINATION BAND

100 0 100 200

SCALE 1" = 100'

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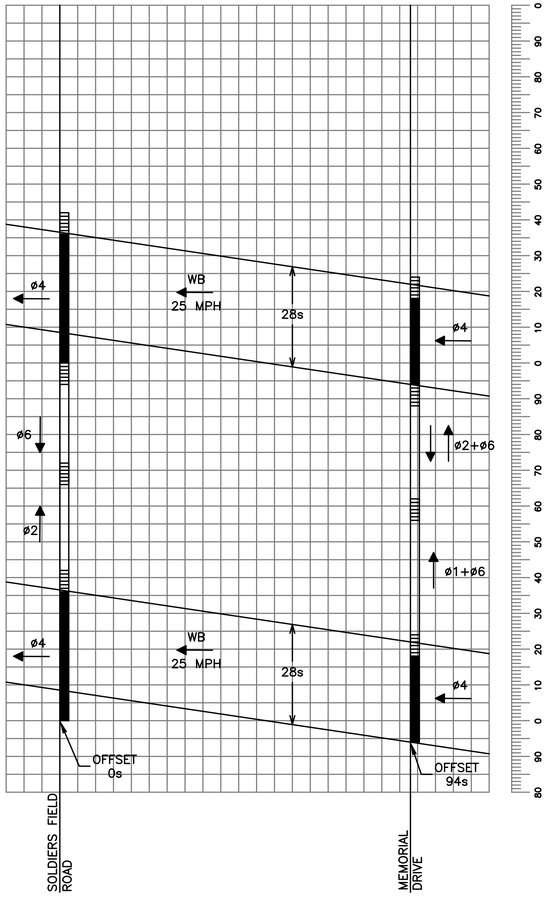
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

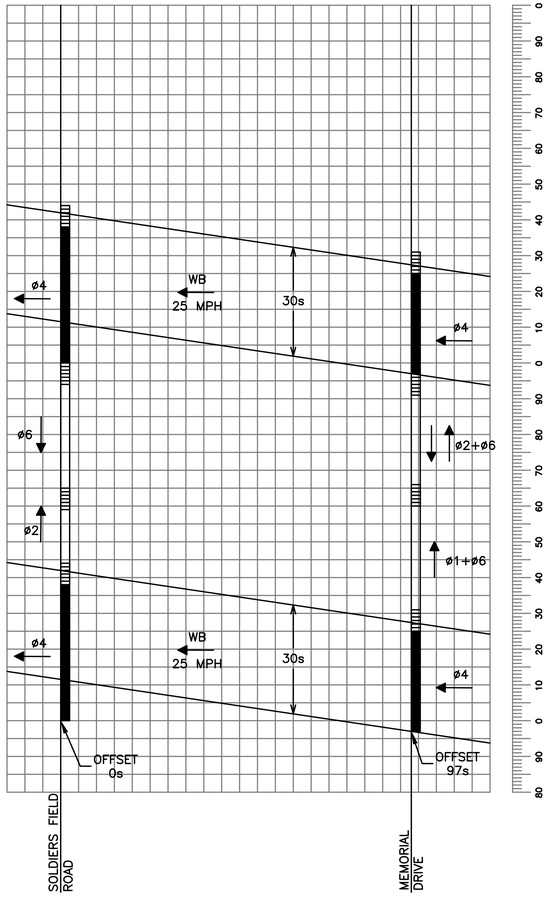
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	57	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL SPACE TIME DIAGRAM
WESTERN AVENUE

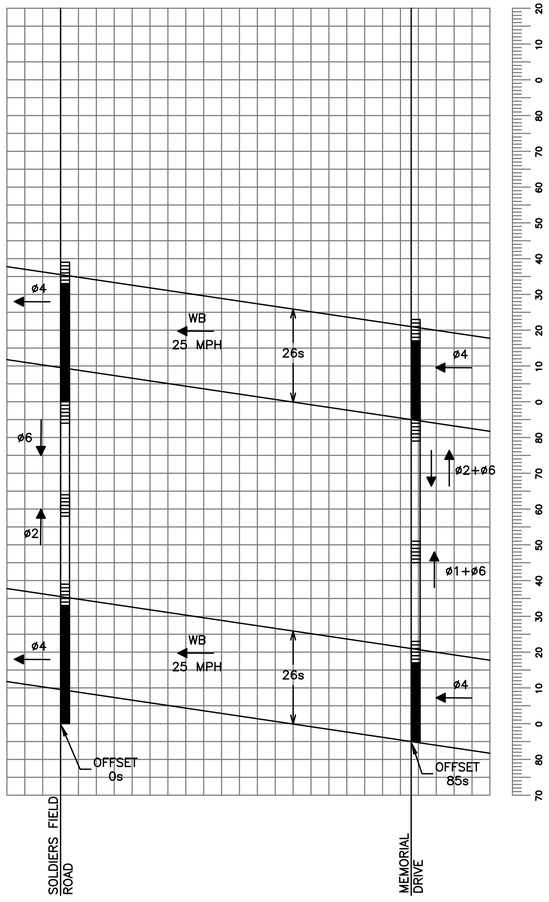
DIAL 1
WESTERN AVENUE
100 SECOND CYCLE



DIAL 2
WESTERN AVENUE
100 SECOND CYCLE



DIAL 3
WESTERN AVENUE
90 SECOND CYCLE



WESTERN AVENUE AT SOLDIER FIELD ROAD
(MASTER CONTROLLER)

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	100 SEC	100 SEC	90 SEC
OFFSET	0	0	0
SPLIT ø2	28	21	25
SPLIT ø4	42	44	39
SPLIT ø6	30	35	26
COORD. PHASE	ø4	ø4	ø4

NOTES:

1. COORDINATION SHALL BE AT THE START OF GREEN FOR ø4
2. MINIMUM 1 SHALL RUN DURING FREE OPERATION.

WESTERN AVENUE AT MEMORIAL DRIVE

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	100 SEC	100 SEC	90 SEC
OFFSET	94	97	85
SPLIT ø1	32	39	28
SPLIT ø2	38	31	34
SPLIT ø4	30	30	28
SPLIT ø6	70	70	62
COORD. PHASE	ø2 & ø6	ø2 & ø6	ø2 & ø6

NOTES:

1. COORDINATION SHALL BE AT THE START OF GREEN FOR ø4.
2. MAXIMUM 1 SHALL RUN DURING FREE OPERATION.

DAILY & WEEKLY COORDINATION PROGRAM

	MONDAY THRU FRIDAY	SATURDAY	SUNDAY
DIAL 1 100s CYCLE	6:00 – 9:00	–	–
DIAL 2 100s CYCLE	15:00 – 19:00	–	–
DIAL 3 90s CYCLE	ALL OTHER TIMES	ALL DAY	ALL DAY
FLASH OPERATION	–	–	–

LEGEND

- COORDINATED PHASE(S) GREEN TIME
- NON–COORDINATED PHASE(S) GREEN TIME
- CLEARANCE TIME (YELLOW + RED)
- PHASE MOVEMENT
- COORDINATION BAND

100 0 100 200

SCALE 1" = 100'

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MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	58	317
PROJECT FILE NO.	605527		

MASSDOT STANDARD DRAWINGS

INDEX

SHEET NO.	DESCRIPTION
1	Title Sheet
2	Light, Medium & Short Span Load Diagrams
3	Heavy Load Diagrams
4	Details
5	Cored Pier Foundations

THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION 1988 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE ENGLISH EDITION OF SUPPLEMENTAL SPECIFICATIONS DATED JUNE 6, 2006, THE AMENDMENTS TO THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS, THE 1977 CONSTRUCTION STANDARDS, THE ENGLISH EDITION OF SUPPLEMENTAL DRAWINGS DATED APRIL 2003, THE 2001 "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" WITH LATEST REVISIONS, THE 2003 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" WITH LATEST REVISIONS, THE 1990 "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS," AND THE 2004 EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

MAST ARM & FOUNDATION

Details Standard Drawings

NOTES

1. For these standard drawings the Design Wind Speed for all Mast Arm Structures shall be **130 MPH**.

2. For these standard drawings the Design Wind Speed for mast arm foundations located in the following counties: Plymouth, Bristol, Barnstable, Dukes, and Nantucket counties in District 5 and Berkshire county in District 1 shall be **130 MPH**. The design wind speed for mast arm foundations for the remainder of the state shall be **110 MPH.**

3. For these standard drawings the mast arm structure design life shall be 25 years.

4. For these standard drawings the Fatigue Category no. 2 was used and truck induced gusts were excluded in the design.

5. These standard drawings do not apply for mast arm structures at intersections with an ADT greater than 40,000 vehicles and a truck percentage of greater than 10%. The responsibility for the design of mast structures and foundations will rest with the design engineer. The structure design life will be 50 years and the fatigue category shall be no. 1. The design wind speed criteria shall be as shown in Notes Nos. 1 & 2. The design will be submitted to MassDOT for review and comment.

6. For strain pole, dual mast arm designs, or mast arms longer than 45 feet, notes 1, 2, 3 and 4 will apply, if ADT (>40,000 vehicles) and truck percentage (10%) criterion is met, note 5 design criteria (50 year design life, fatigue category no. 1, wind design speed notes 1 and 2) will apply. The responsibility for the design of these structures and foundations will rest with the design engineer. The design will be submitted to MassDOT for review and comment.

NO.	REVISION	DATE

Moving Massachusetts Forward. massDOT Highway

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISON

RECOMMENDED FOR APPROVAL

Neil E. Boudreau — 2/11/11
TRAFFIC ENGINEER — DATE

Raymond M. Cody, P.E. — 2/17/11
BRIDGE ENGINEER — DATE

Frank A. Tramontozzi — 2/24/2011
CHIEF ENGINEER — DATE

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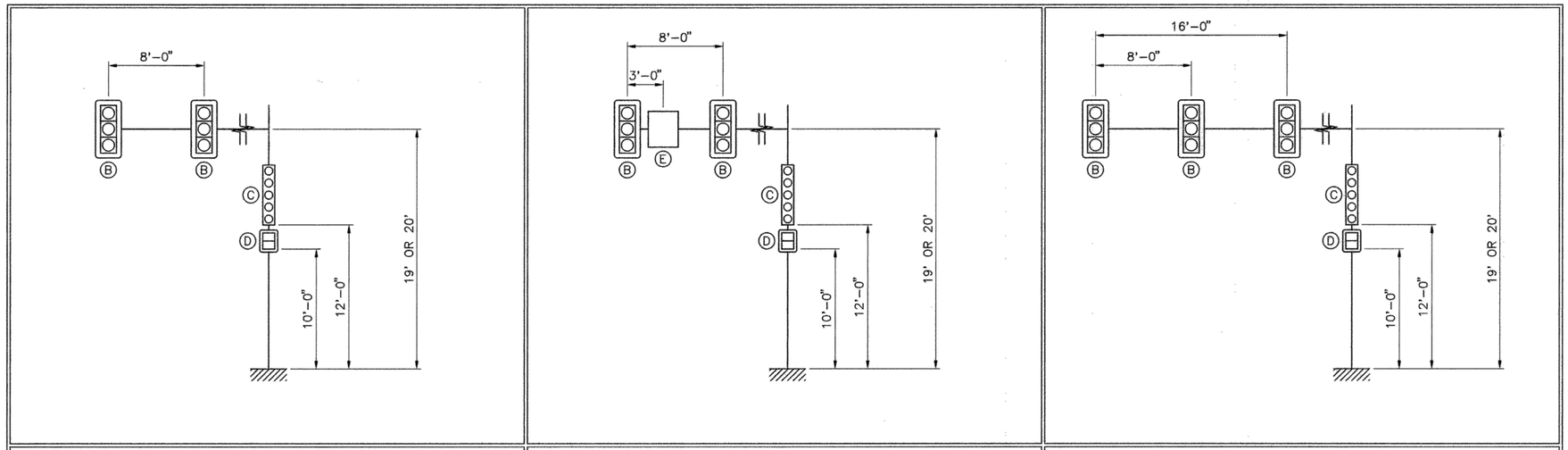
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

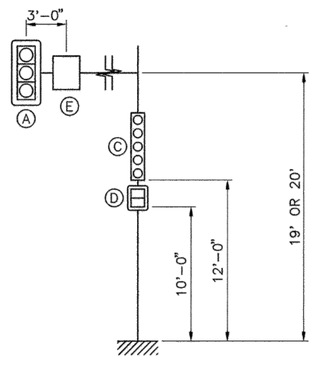
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	59	317
PROJECT FILE NO.	605527		

STANDARD DRAWINGS
TYPE II MAST ARMS



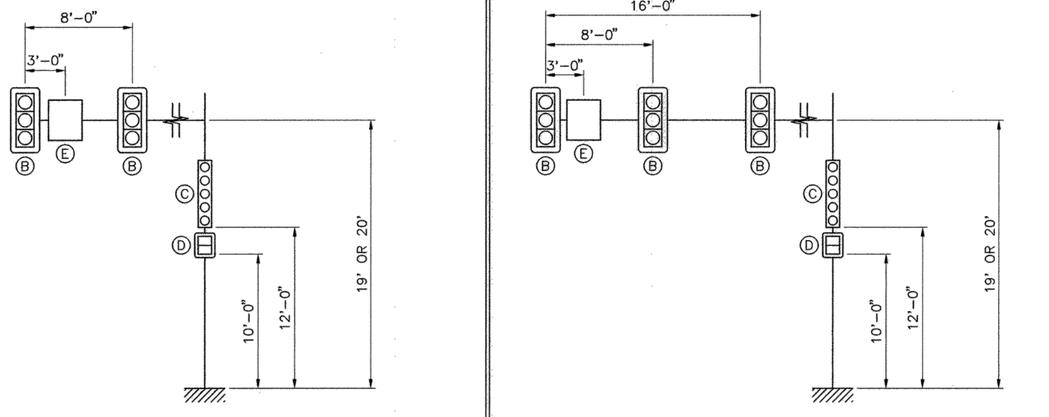
20', 25', 40' & 45' SPANS | 30' SPAN | 35' SPAN

LOAD DEFINITIONS – LIGHT LOADS



15' SPAN

SHORT SPAN LOADING



20' & 25' SPANS | 30', 35', 40' & 45' SPANS

LOAD DEFINITIONS – MEDIUM LOADS

DEVICE	DESCRIPTION	PROJ. AREA (FT~2)	WEIGHT (LBS)
Ⓐ	3 SECTION, 3 WAY SIGNAL	13.50	202
Ⓑ	3 SECTION, 1 WAY SIGNAL	8.67	74
Ⓒ	5 SECTION, 1 WAY SIGNAL	13.33	110
Ⓓ	DUAL PEDESTRIAN SIGNAL	8.00	80
Ⓔ	30" X 36" REGULATORY SIGN	7.50	23

NOTE: ALL SIGNALS HAVE 5.0" BACKPLATES

MONTH_DD,_YYYY	ISSUED FOR CONSTRUCTION

massDOT Highway

STANDARD DRAWINGS

TYPE II MAST ARMS
LIGHT, MEDIUM & SHORT SPAN
LOAD DIAGRAMS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

CHIEF ENGINEER 2/24/2011

BRIDGE ENGINEER | TRAFFIC ENGINEER

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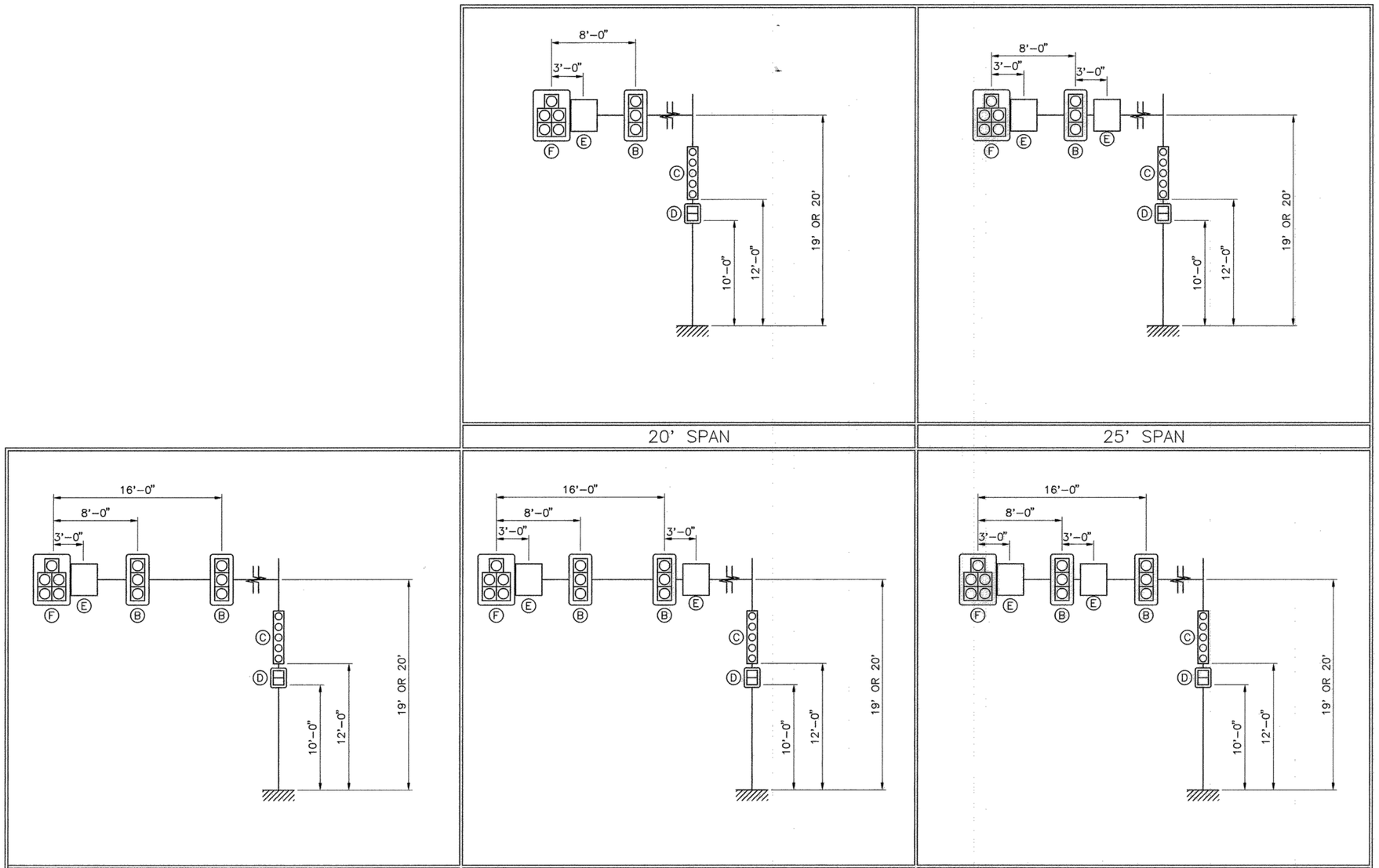
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	60	317
PROJECT FILE NO.	605527		

STANDARD DRAWINGS
TYPE II MAST ARMS



LOAD DEFINITIONS – HEAVY LOADS

DEVICE	DESCRIPTION	PROJ. AREA (FT~2)	WEIGHT (LBS)
(A)	3 SECTION, 3 WAY SIGNAL	18.29	202
(B)	3 SECTION, 1 WAY SIGNAL	8.67	74
(C)	5 SECTION, 1 WAY SIGNAL	13.33	110
(D)	DUAL PEDESTRIAN SIGNAL	8.00	80
(E)	30" X 36" REGULATORY SIGN	7.50	23
(F)	5 SECTION, 2 WAY SIGNAL	21.95	215

NOTE: ALL SIGNALS HAVE 5.0" BACKPLATES

MONTH_DD,_YYYY	ISSUED FOR CONSTRUCTION

Moving Massachusetts Forward
massDOT Highway

STANDARD DRAWINGS

TYPE II MAST ARMS
HEAVY LOAD DIAGRAMS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

2/24/2011
CHIEF ENGINEER

BRIDGE ENGINEER

TRAFFIC ENGINEER

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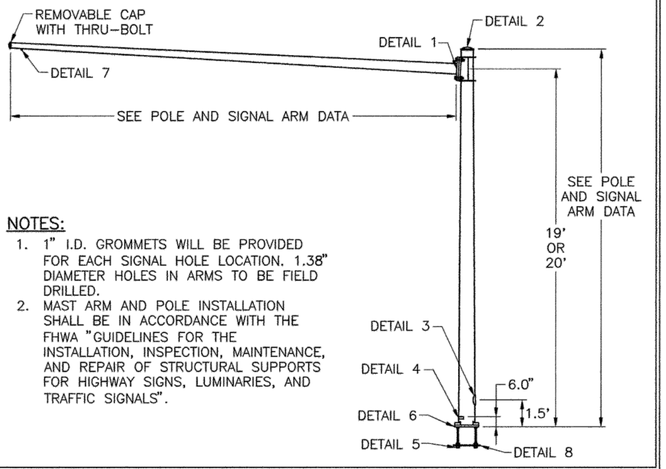
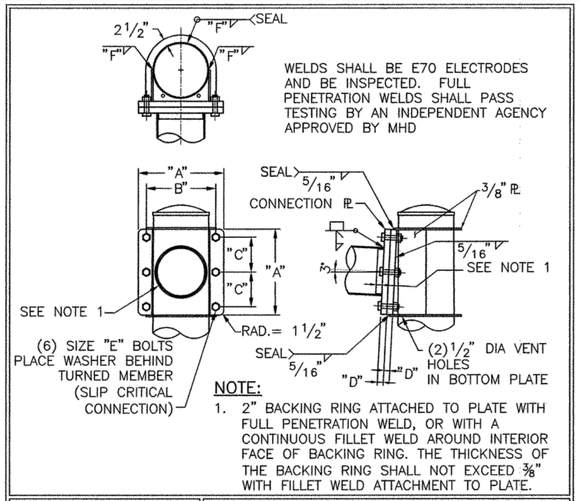


NOTES:

1. 1" I.D. GROMMETS WILL BE PROVIDED FOR EACH SIGNAL HOLE LOCATION. 1.38" DIAMETER HOLES IN ARMS TO BE FIELD DRILLED.
2. MAST ARM AND POLE INSTALLATION SHALL BE IN ACCORDANCE WITH THE FHWA "GUIDELINES FOR THE INSTALLATION, INSPECTION, MAINTENANCE, AND REPAIR OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS".

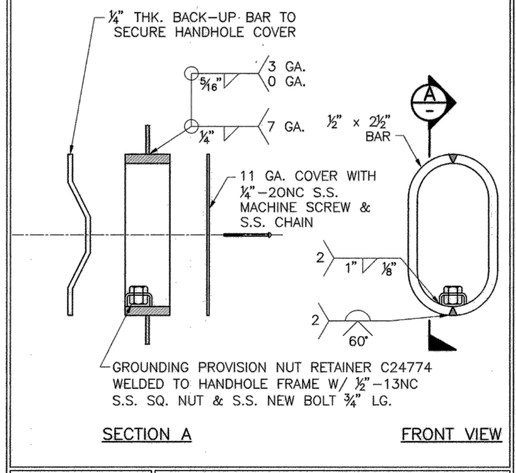
MAST ARM ELEVATION



NOTE:

1. 2" BACKING RING ATTACHED TO PLATE WITH FULL PENETRATION WELD, OR WITH A CONTINUOUS FILLET WELD AROUND INTERIOR FACE OF BACKING RING. THE THICKNESS OF THE BACKING RING SHALL NOT EXCEED 3/8" WITH FILLET WELD ATTACHMENT TO PLATE.

DETAIL 1 | SIGNAL ARM ATTACHMENT

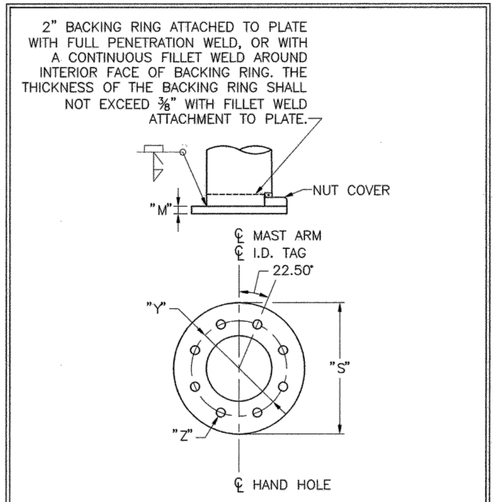


DETAIL 3 | 4"x8" HANDHOLE

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	61	317
PROJECT FILE NO.	605527		

STANDARD DRAWINGS
TYPE II MAST ARMS

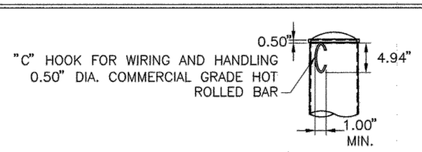


DETAIL 6 | POLE BASE

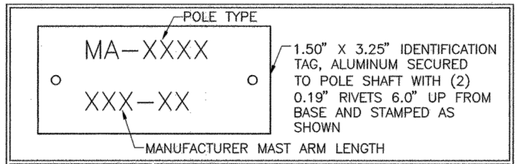
MATERIAL DATA

COMPONENT	DESIGNATION	YIELD (KSI)	COMPONENT	DESIGNATION	YIELD (KSI)
POLE TUBE	ASTM A595 GR. A	55	ARM TUBE	ASTM A595 GR. A	55
POLE BASE PLATE	AASHTO M270	50	ARM CONNECTION PLATE	AASHTO M270	50
ANCHOR BOLTS	AASHTO M314	55	ARM CONNECTING BOLTS	AASHTO M164 **	
GALVANIZING	AASHTO M111 OR M232				

** BOLTS WHICH ACCUMULATE RUST OR DIRT SHALL BE DISCARDED.



DETAIL 2 | POLE TOP



DETAIL 4 | I.D. TAG

POLE AND SIGNAL ARM DATA – LIGHT LOADS

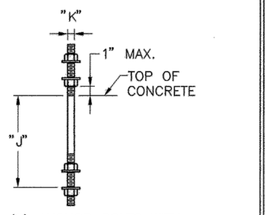
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. LENGTH "J" (IN)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)
	15.00	9.00	6.90	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	20.00	9.00	6.20	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	25.00	10.00	6.50	7 GA.	13.00	10.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	20.00	16.00	8.00	1.00	1.00	0.188
	30.00	12.50	8.30	3 GA.	15.50	12.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	23.50	19.00	9.50	1.25	1.25	0.250
	35.00	13.00	8.10	3 GA.	16.00	13.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	24.50	20.00	10.00	1.25	1.25	0.250
	40.00	13.00	7.40	3 GA.	16.00	13.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	24.50	20.00	10.00	1.25	1.25	0.250
	45.00	13.50	7.20	3 GA.	16.50	13.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.313

POLE AND SIGNAL ARM DATA – MEDIUM LOADS

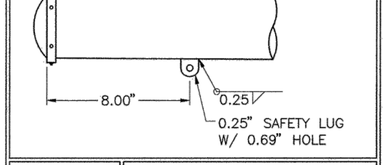
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. LENGTH "J" (IN)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)
	15.00	9.00	6.90	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	20.00	10.00	7.20	3 GA.	13.00	10.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	20.00	16.00	8.00	1.00	1.00	0.250
	25.00	11.00	7.50	3 GA.	14.00	11.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	23.50	19.00	9.50	1.25	1.25	0.250
	30.00	13.00	8.80	3 GA.	16.00	13.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	23.50	19.00	9.50	1.25	1.25	0.250
	35.00	14.00	9.10	3 GA.	17.00	14.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	40.00	15.00	9.40	3 GA.	18.00	15.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	45.00	16.00	9.70	0 GA.	19.00	16.06	21.00	0 GA.	29.50	24.00	1.50	1.813	1.50	36.00	29.50	24.00	12.00	1.75	1.50	0.313

POLE AND SIGNAL ARM DATA – HEAVY LOADS

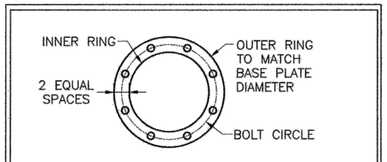
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. LENGTH "J" (IN)	"A" (IN)	"B" (IN)	"C" (IN)	"D" (IN)	"E" (IN)	"F" (IN)
	15.00	9.00	6.90	7 GA.	12.00	9.06	21.00	7 GA.	29.50	24.00	1.50	1.813	1.50	36.00	19.00	15.00	7.50	1.00	1.00	0.188
	20.00	12.50	9.70	3 GA.	15.50	12.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	24.00	19.00	9.50	1.25	1.25	0.250
	25.00	14.00	10.50	3 GA.	17.00	14.06	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	30.00	15.50	11.30	3 GA.	18.50	15.56	21.00	3 GA.	29.50	24.00	1.50	1.813	1.50	36.00	27.50	22.00	11.00	1.50	1.50	0.250
	35.00	16.50	11.60	0 GA.	19.50	16.56	21.00	0 GA.	34.50	28.00	1.75	2.063	1.75	36.00	29.50	24.00	12.00	1.75	1.50	0.313
	40.00	17.50	11.90	0 GA.	20.50	17.56	21.00	0 GA.	34.50	28.00	1.75	2.063	1.75	36.00	29.50	24.00	12.00	1.75	1.50	0.313
	45.00	18.50	12.20	0 GA.	21.50	18.56	21.00	0 GA.	34.50	28.00	1.75	2.063	1.75	36.00	31.50	26.00	13.00	2.00	1.50	0.313



DETAIL 5 | ANCHOR BOLT



DETAIL 7 | SAFETY HANGER LUG



DETAIL 8 | ANCHOR PLATE

MONTH_DD,_YYYY	ISSUED FOR CONSTRUCTION

Moving Massachusetts Forward. massDOT Highway

STANDARD DRAWINGS

TYPE II MAST ARMS
DETAILS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

Frank A. Tramontozzi 2/24/2011
CHIEF ENGINEER

BRIDGE ENGINEER

TRAFFIC ENGINEER

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	62	317
PROJECT FILE NO.	605527		

STANDARD DRAWINGS
TYPE II MAST ARMS

PIER FOUNDATIONS FOR 110 MPH WIND SPEED ZONE

LIGHT LOADING CONDITIONS

SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	6'–0"	18–#8	3'–6"	8'–0"	18–#8	3'–6"	8'–0"	18–#8	3'–6"	9'–0"	18–#8
WET SAND	3'–6"	7'–0"	18–#8	3'–6"	9'–0"	18–#8	3'–6"	9'–0"	18–#8	3'–6"	9'–0"	18–#8
CLAY (MEDIUM STIFF)	3'–6"	11'–0"	18–#8	3'–6"	12'–0"	18–#8	3'–6"	12'–0"	18–#8	3'–6"	12'–0"	18–#8
ALLUVIAL	3'–6"	8'–0"	18–#8	3'–6"	10'–0"	18–#8	3'–6"	10'–0"	18–#8	3'–6"	11'–0"	18–#8

MEDIUM LOADING CONDITIONS

SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	7'–0"	18–#8	3'–6"	9–0"	18–#8	4'–0"	9–0"	18–#9	4'–6"	8'–0"	18–#10
WET SAND	3'–6"	8'–0"	18–#8	3'–6"	9'–0"	18–#8	4'–0"	10'–0"	18–#9	4'–6"	9'–0"	18–#10
CLAY (MEDIUM STIFF)	3'–6"	11'–0"	18–#8	3'–6"	12'–0"	18–#8	4'–0"	13'–0"	18–#9	4'–6"	14'–0"	18–#10
ALLUVIAL	3'–6"	9'–0"	18–#8	3'–6"	10'–0"	18–#8	4'–0"	11'–0"	18–#9	4'–6"	10'–0"	18–#10

HEAVY LOADING CONDITIONS

SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	8'–0"	18–#8	4'–0"	9'–0"	18–#9	4'–6"	10'–0"	18–#10	5'–0"	9'–0"	23–#10
WET SAND	3'–6"	8'–0"	18–#8	4'–0"	10'–0"	18–#9	4'–6"	11'–0"	18–#10	5'–0"	10'–0"	23–#10
CLAY (MEDIUM STIFF)	3'–6"	12'–0"	18–#8	4'–0"	14'–0"	18–#9	4'–6"	15'–0"	18–#10	5'–0"	16'–0"	23–#10
ALLUVIAL	3'–6"	10'–0"	18–#8	4'–0"	11'–0"	18–#9	4'–6"	12'–0"	18–#10	5'–0"	12'–0"	23–#10

PIER FOUNDATIONS FOR 130 MPH WIND SPEED ZONE

LIGHT LOADING CONDITIONS

SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	7'–0"	18–#8	3'–6"	9'–0"	18–#8	3'–6"	10'–0"	18–#8	3'–6"	10'–0"	18–#8
WET SAND	3'–6"	8'–0"	18–#8	3'–6"	10'–0"	18–#8	3'–6"	11'–0"	18–#8	3'–6"	11'–0"	18–#8
CLAY (MEDIUM STIFF)	3'–6"	12'–0"	18–#8	3'–6"	13'–0"	18–#8	3'–6"	13'–0"	18–#8	3'–6"	13'–0"	18–#8
ALLUVIAL	3'–6"	9'–0"	18–#8	3'–6"	12'–0"	18–#8	3'–6"	12'–0"	18–#8	3'–6"	13'–0"	18–#8

MEDIUM LOADING CONDITIONS

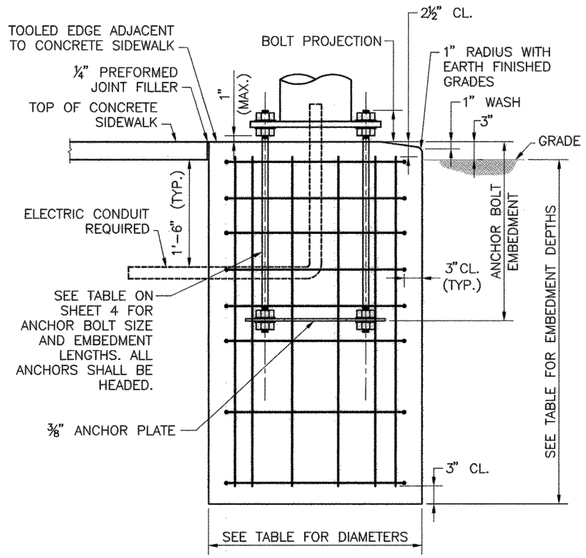
SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	8'–0"	18–#8	3'–6"	10'–0"	18–#8	4'–0"	11'–0"	18–#9	4'–6"	10'–0"	18–#10
WET SAND	3'–6"	8'–0"	18–#8	3'–6"	11'–0"	18–#8	4'–0"	12'–0"	18–#9	4'–6"	11'–0"	18–#10
CLAY (MEDIUM STIFF)	3'–6"	12'–0"	18–#8	3'–6"	14'–0"	18–#8	4'–0"	15'–0"	18–#9	4'–6"	15'–0"	18–#10
ALLUVIAL	3'–6"	10'–0"	18–#8	3'–6"	13'–0"	18–#8	4'–0"	13'–0"	18–#9	4'–6"	12'–0"	18–#10

HEAVY LOADING CONDITIONS

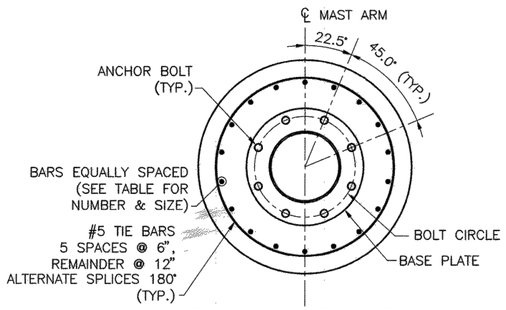
SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
DRY SAND	3'–6"	9'–0"	18–#8	4'–0"	11'–0"	18–#9	4'–6"	12'–0"	18–#10	5'–0"	11'–0"	23–#10
WET SAND	3'–6"	10'–0"	18–#8	4'–0"	12'–0"	18–#9	4'–6"	13'–0"	18–#10	5'–0"	12'–0"	23–#10
CLAY (MEDIUM STIFF)	3'–6"	14'–0"	18–#8	4'–0"	15'–0"	18–#9	4'–6"	16'–0"	18–#10	5'–0"	17'–0"	23–#10
ALLUVIAL	3'–6"	11'–0"	18–#8	4'–0"	13'–0"	18–#9	4'–6"	15'–0"	18–#10	5'–0"	14'–0"	23–#10

NOTES:

1. FOUNDATIONS SHALL BE 4000 PSI, 1½", 565 CEMENT CONCRETE.
2. REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
3. ANCHOR BOLTS SHALL BE SET BY TEMPLATE.
4. PROVIDE FOR ELECTRICAL CONDUIT.
5. EXCAVATION SHALL BE BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATIONS WITHOUT DISTURBING THE SOIL AROUND AND BELOW THE PROPOSED FOUNDATION BOTTOM. ALTERNATE METHODS OF EXCAVATION MAY BE SUBMITTED TO MASSHIGHWAY FOR APPROVAL IF THEY MEET THE REQUIREMENTS LISTED IN NOTES 6, 7, AND 8.
6. THE EARTH WALLS OF THE FOUNDATION SHALL BE ADEQUATELY AND SECURELY PROTECTED AT ALL TIMES AGAINST CAVE–INS, DISPLACEMENT OF THE SURROUNDING EARTH AND FOR THE EXCLUSION OF GROUND WATER. THIS MAY BE DONE BY THE USE OF STEEL CYLINDER LINERS OR CASINGS THAT ARE APPROVED BY MASSHIGHWAY. IF LINERS ARE USED THEY MAY BE RECLAIMED PROVIDED THAT THEY ARE WITHDRAWN AS THE CONCRETE IS BEING PLACED, MAINTAINING A SUFFICIENT HEAD OF CONCRETE WITHIN THE LINER TO PREVENT REDUCTION IN THE FOUNDATION DIAMETER AND TO PREVENT EXTRANEOUS MATERIAL FROM FALLING IN FROM THE SIDES AND MIXING WITH THE CONCRETE.
7. IF THE SOIL IS DISTURBED OR REMOVED BEYOND THE NEAT LINES OF THE OUTSIDE DIMENSION OF THE FOUNDATION, IT SHALL BE REPLACED WITH CONCRETE. ANY ADDITIONAL COST FOR THE CONCRETE SHALL BE PAID FOR BY THE CONTRACTOR.
8. SPECIAL CARE SHOULD BE GIVEN TO AREAS WHERE WET SOIL IS ENCOUNTERED, TO INSURE THAT THE PREAUGERED HOLE DOES NOT COLLAPSE. THIS MAY REQUIRE THE USE OF STEEL CYLINDER LINERS OR CASINGS TO HOLD THE SOIL IN PLACE UNTIL READY FOR CONCRETE PLACEMENT. THE STEEL CYLINDERS OR CASINGS SHALL BE WITHDRAWN AS THE FOUNDATION CONCRETE IS PLACED.
9. DETERMINATION OF EXISTING SOIL CONDITIONS SHALL BE MADE BY THE DESIGN ENGINEER.
10. IF LEDGE OR POOR SOIL IS ENCOUNTERED (i.e. ONE WHICH DOES NOT APPLY TO THE DESIGN TABLES SHOWN ON THIS SHEET), AN ALTERNATIVE DESIGN SHALL BE PROVIDED BY THE DESIGN ENGINEER. DECISIONS MADE IN NOTES 8 AND 9 SHALL BE SUBMITTED TO MASSHIGHWAY FOR APPROVAL. IF UTILITIES OR OTHER UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL BACKFILL THE AREA TO ITS ORIGINAL CONDITION UNTIL AN ALTERNATE DESIGN HAS BEEN PROVIDED BY THE ENGINEER.



PIER FOUNDATION DETAIL
NO SCALE



PIER FOUNDATION PLAN
NO SCALE

MONTH_DD,_YYYY	ISSUED FOR CONSTRUCTION

Moving Massachusetts Forward massDOT Highway

STANDARD DRAWINGS

TYPE II MAST ARMS
CORED PIER FOUNDATIONS

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

Frank A. Tramontozzi 2/24/2011
CHIEF ENGINEER

BRIDGE ENGINEER — TRAFFIC ENGINEER

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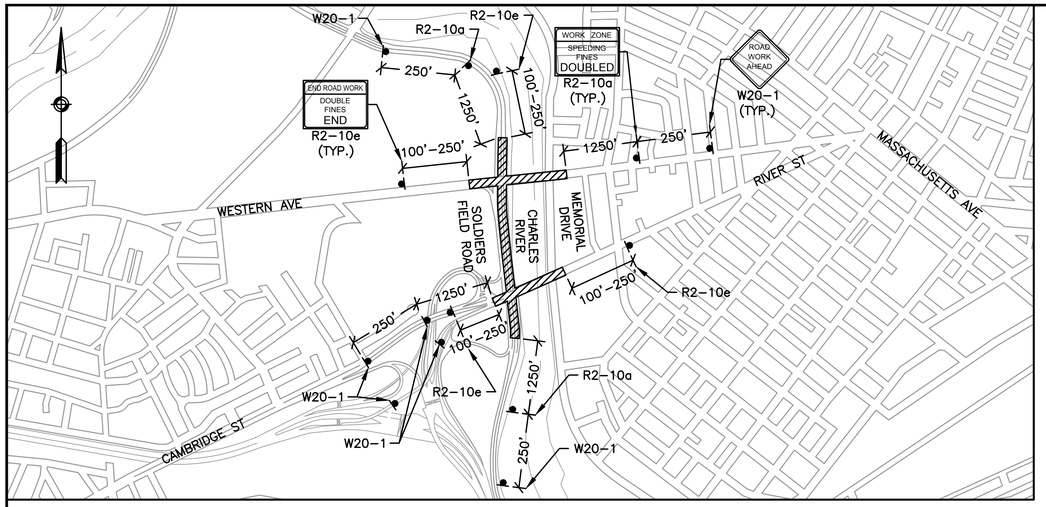
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

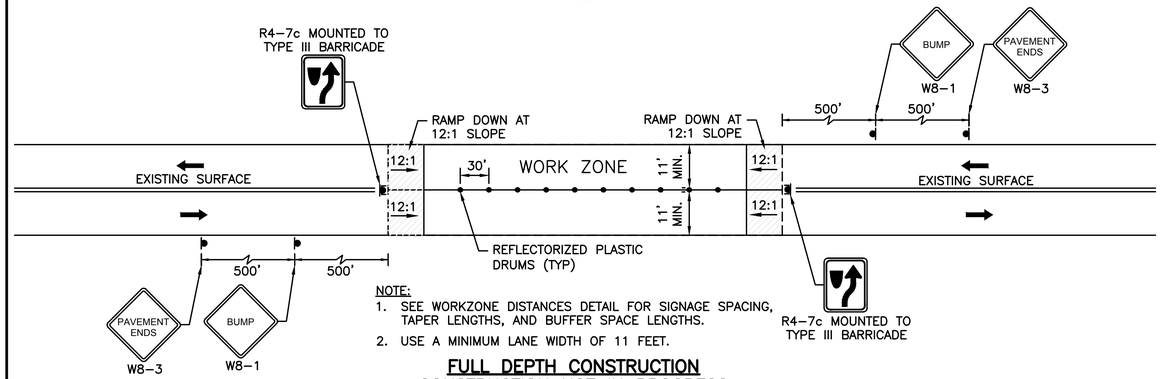
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	63	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS
STANDARD DETAILS

TMP DETAILS.DWG 4-Jan-2013

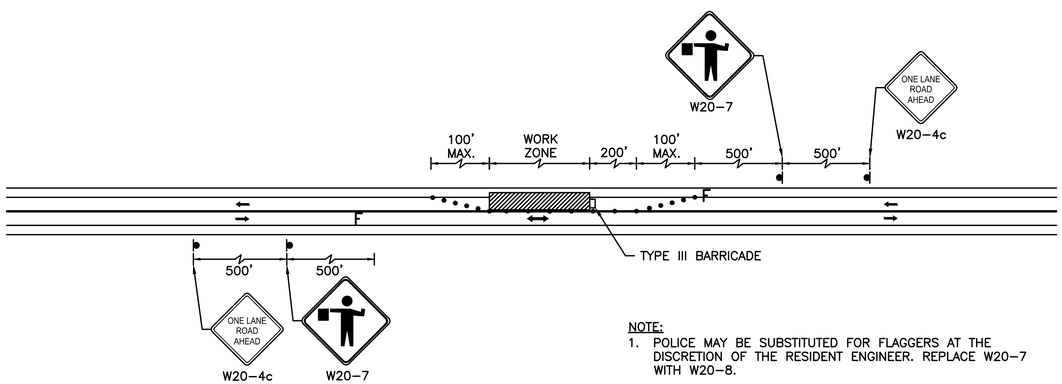


ADVANCE WARNING SIGN LOCATIONS
NOT TO SCALE



NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

FULL DEPTH CONSTRUCTION CONSTRUCTION NOT IN PROGRESS
NOT TO SCALE



NOTE:
1. POLICE MAY BE SUBSTITUTED FOR FLAGGERS AT THE DISCRETION OF THE RESIDENT ENGINEER. REPLACE W20-7 WITH W20-8.
2. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
3. USE A MINIMUM LANE WIDTH OF 11 FEET.

TWO LANE ROAD ONE LANE ALTERNATING TRAFFIC WITH FLAGGERS DETAIL (FIGURE TLR-5)
NOT TO SCALE

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM
DOWNSTREAM TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM

NOTE: USE TABLE 6C-4 SHOWN BELOW TO CALCULATE L
SOURCE: TABLE 6C-3 2009 MUTCD

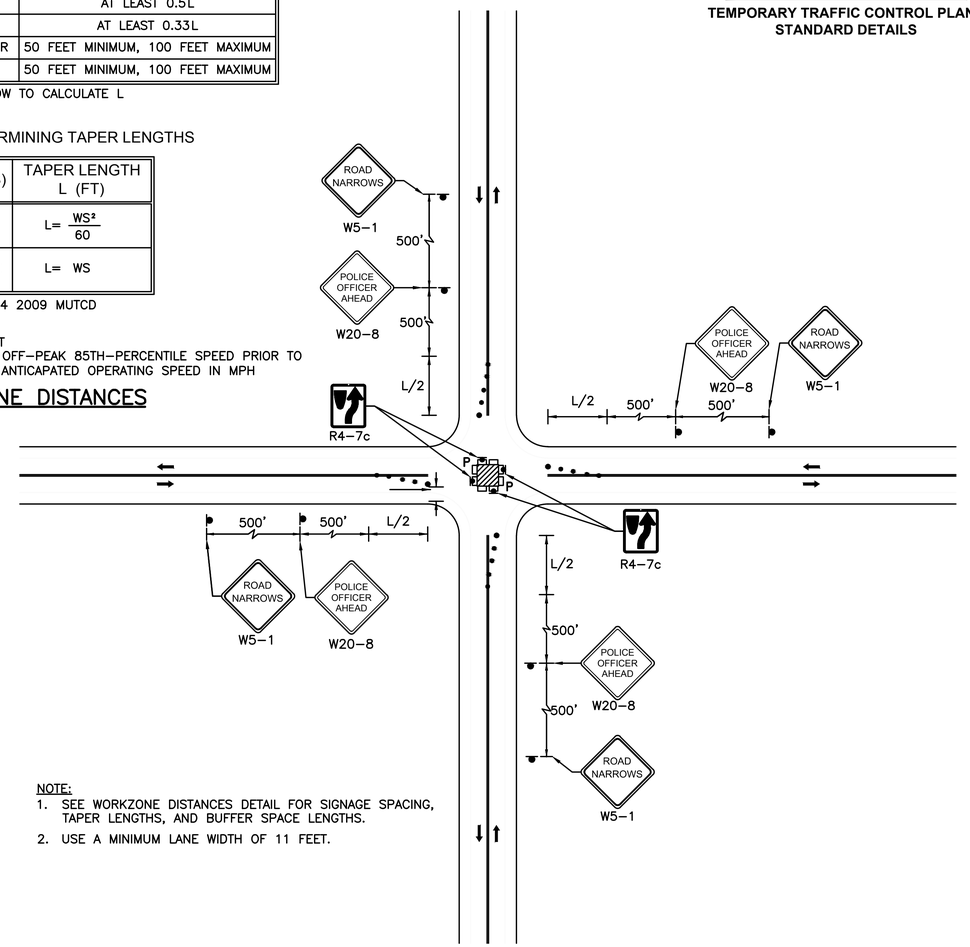
FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH L (FT)
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	L= WS

SOURCE: TABLE 6C-4 2009 MUTCD

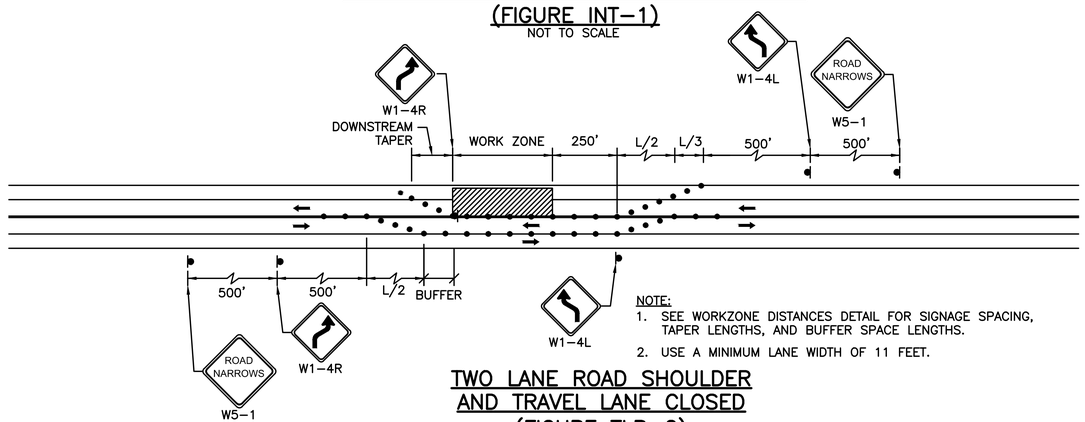
WHERE: L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICAPATED OPERATING SPEED IN MPH

WORKZONE DISTANCES



NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

SINGLE LANE APPROACH CENTER CLOSURE (FIGURE INT-1)
NOT TO SCALE



NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED (FIGURE TLR-2)
NOT TO SCALE

MassDOT SMT Version

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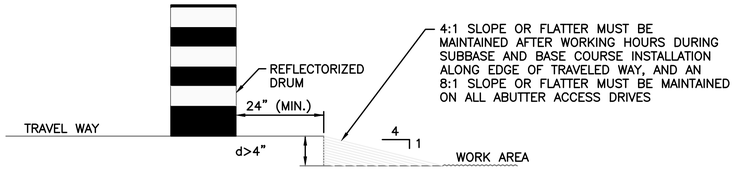
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	64	317
PROJECT FILE NO.	605527		

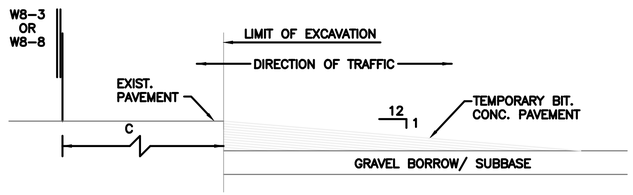
TEMPORARY TRAFFIC CONTROL PLANS
STANDARD DETAILS

TMP DETAILS.DWG 4-Jan-2013



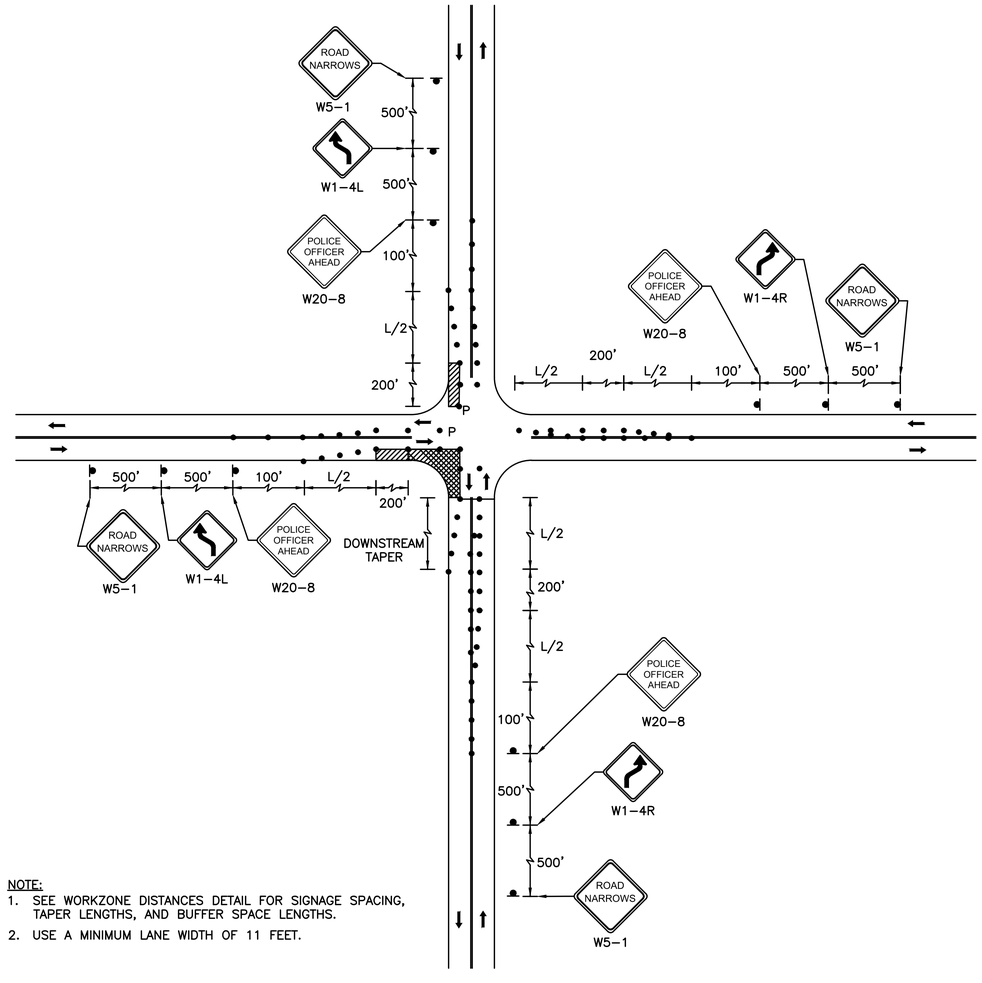
LATERAL DROP–OFF DETAIL (FIGURE GEN–6)

NOT TO SCALE



LONGITUDINAL DROP–OFF DETAIL (FIGURE GEN–6)

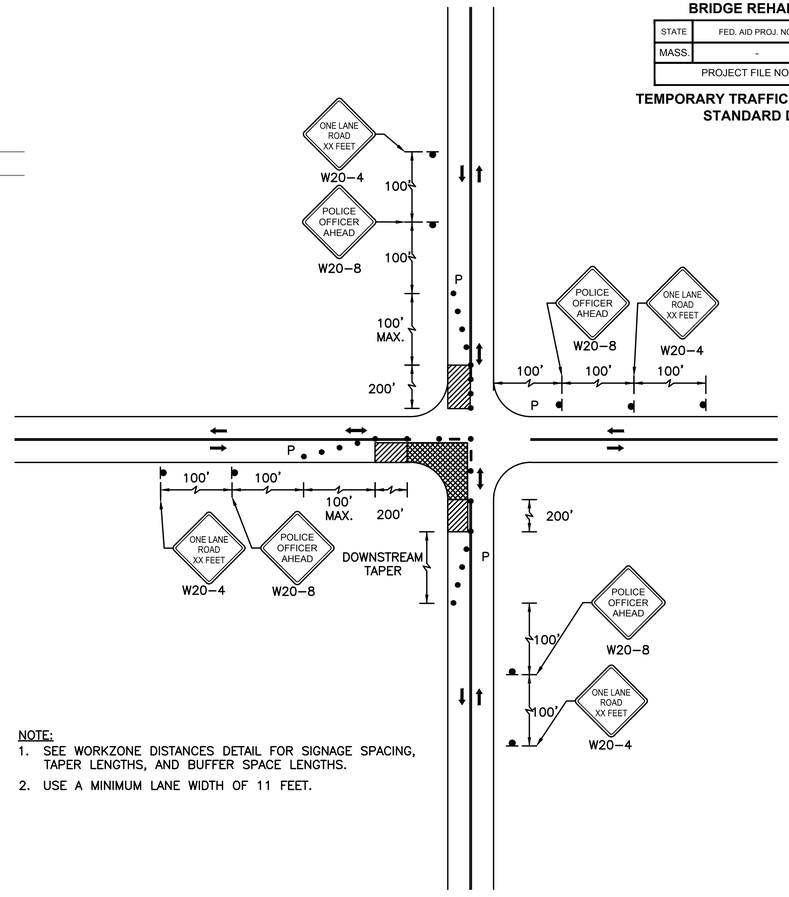
NOT TO SCALE



NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

TWO LANE APPROACH ONE QUADRANT CLOSURE

NOT TO SCALE



NOTE:
1. SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
2. USE A MINIMUM LANE WIDTH OF 11 FEET.

SINGLE LANE APPROACH ONE QUADRANT CLOSURE (FIGURE INT–2)

NOT TO SCALE

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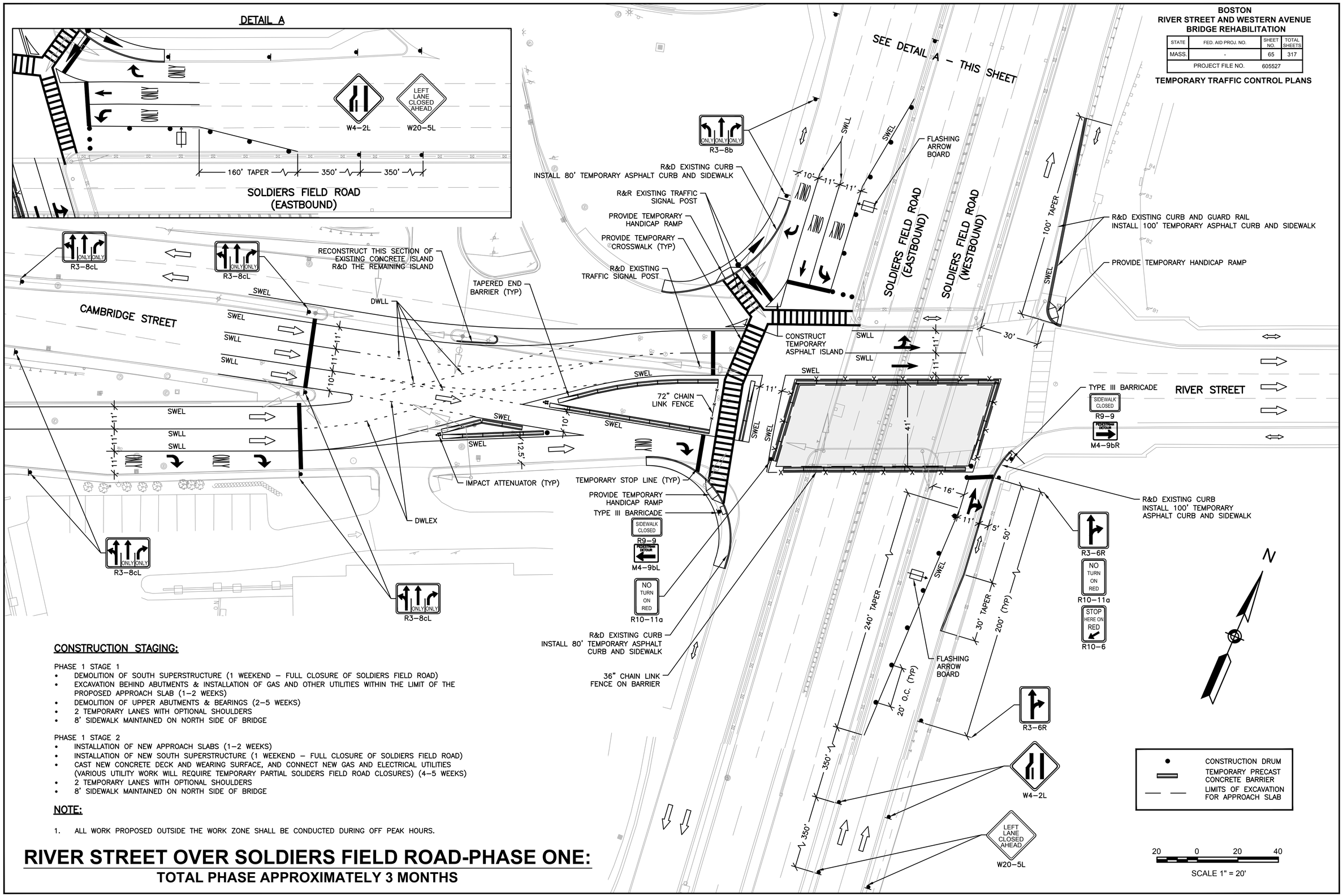
MassDOT SMT Version

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	65	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

DETAIL A



CONSTRUCTION STAGING:

PHASE 1 STAGE 1
- DEMOLITION OF SOUTH SUPERSTRUCTURE (1 WEEKEND – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- EXCAVATION BEHIND ABUTMENTS & INSTALLATION OF GAS AND OTHER UTILITIES WITHIN THE LIMIT OF THE PROPOSED APPROACH SLAB (1–2 WEEKS)
- DEMOLITION OF UPPER ABUTMENTS & BEARINGS (2–5 WEEKS)
- 2 TEMPORARY LANES WITH OPTIONAL SHOULDERS
- 8' SIDEWALK MAINTAINED ON NORTH SIDE OF BRIDGE

PHASE 1 STAGE 2
- INSTALLATION OF NEW APPROACH SLABS (1–2 WEEKS)
- INSTALLATION OF NEW SOUTH SUPERSTRUCTURE (1 WEEKEND – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- CAST NEW CONCRETE DECK AND WEARING SURFACE, AND CONNECT NEW GAS AND ELECTRICAL UTILITIES (VARIOUS UTILITY WORK WILL REQUIRE TEMPORARY PARTIAL SOLIDERS FIELD ROAD CLOSURES) (4–5 WEEKS)
- 2 TEMPORARY LANES WITH OPTIONAL SHOULDERS
- 8' SIDEWALK MAINTAINED ON NORTH SIDE OF BRIDGE

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE ONE:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

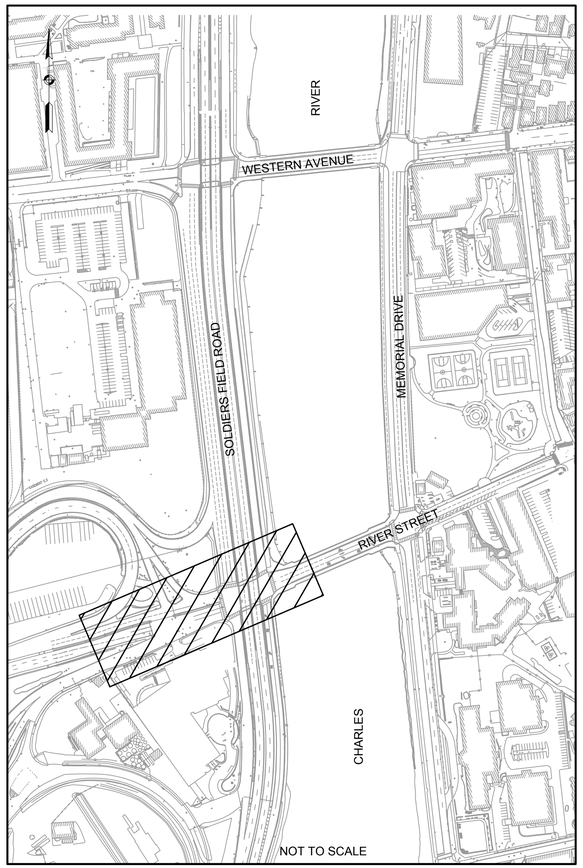
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	66	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

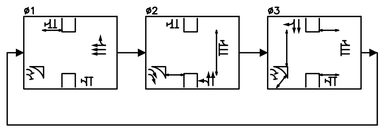
TRAFFIC SIGNAL PHASING SEQUENCE

N

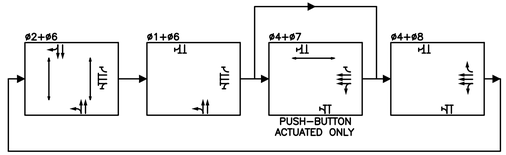
LOCUS



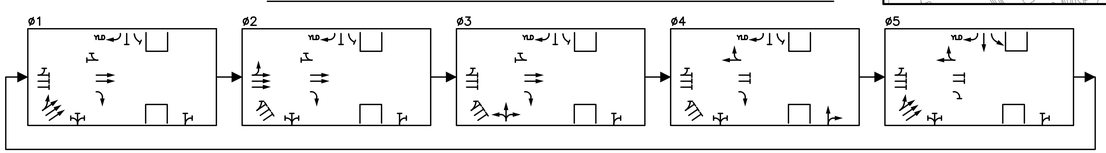
WESTERN AVENUE AT SOLDIERS FIELD ROAD



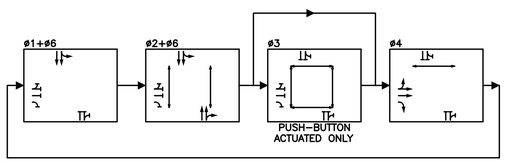
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE ONE:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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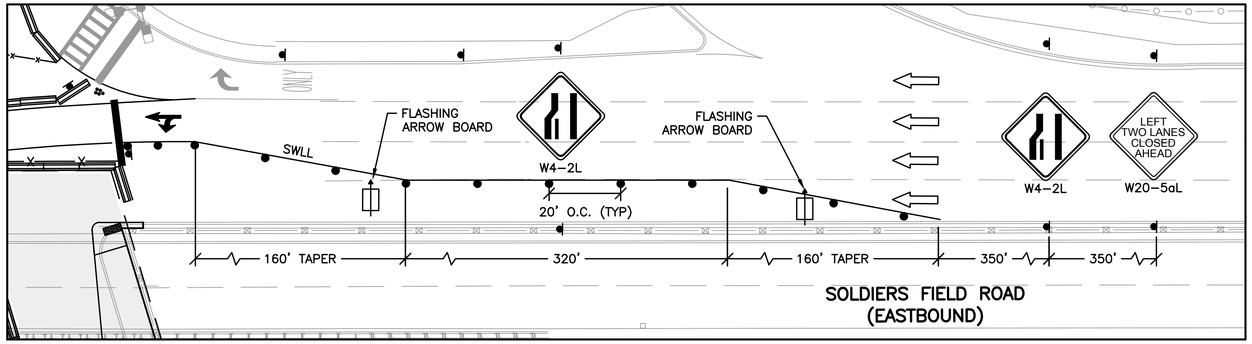
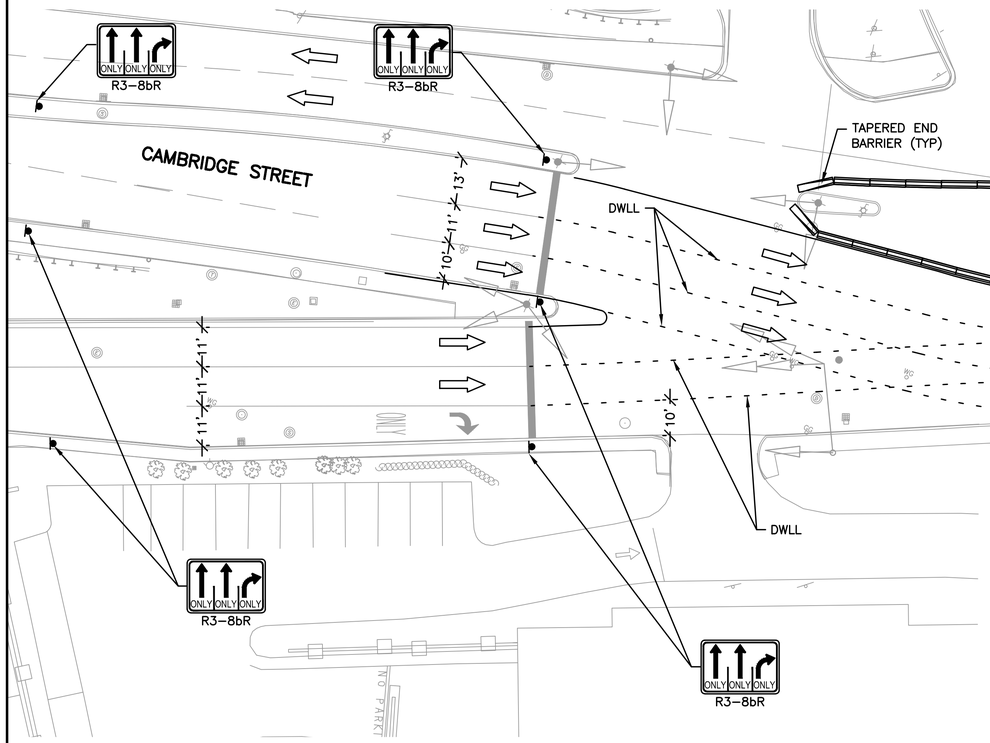
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

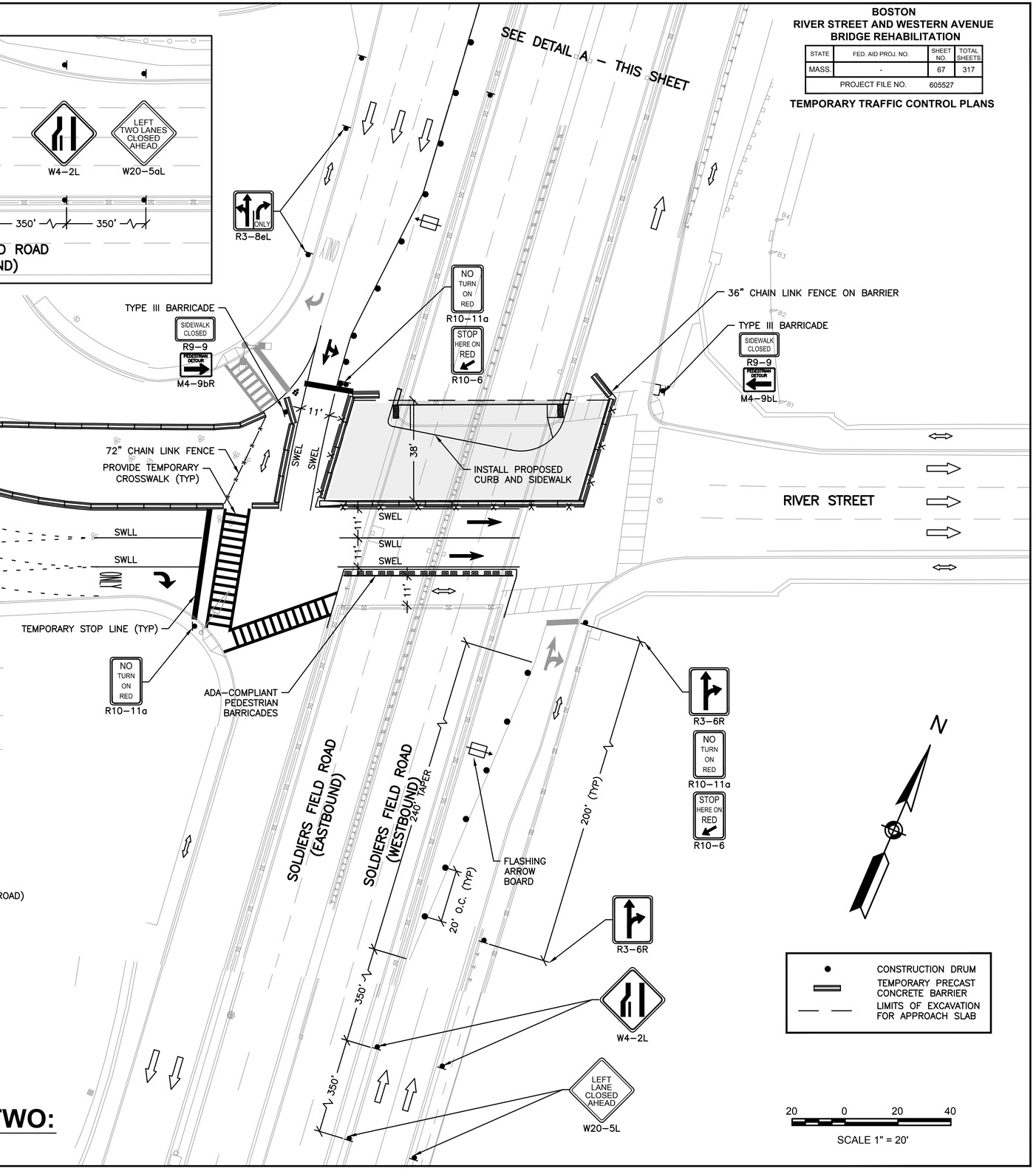
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	67	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

DETAIL A







CONSTRUCTION STAGING:

PHASE 2 STAGE 3
- DEMOLITION OF NORTH SUPERSTRUCTURE AND DISCONNECT EXISTING GAS LINES (1 WEEKEND – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- EXCAVATION BEHIND ABUTMENTS & INSTALLATION OF UTILITIES WITHIN THE LIMIT OF THE PROPOSED APPROACH SLAB (1–2 WEEKS)
- DEMOLITION OF UPPER ABUTMENTS & BEARINGS (2–5 WEEKS)
- 2 TEMPORARY LANES WITH OPTIONAL SHOULDERS
- NEW SIDEWALK WITH BR2 RAIL IN SERVICE ON SOUTH SIDE OF BRIDGE

PHASE 2 STAGE 4
- INSTALLATION OF NEW APPROACH SLABS (1–2 WEEKS)
- INSTALLATION OF NEW NORTH SUPERSTRUCTURE (1 WEEKEND – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- CAST NEW CONCRETE DECK AND WEARING SURFACE, AND CONNECT REMAINING UTILITIES (VARIOUS UTILITY WORK WILL REQUIRE TEMPORARY PARTIAL SOLDIERS FIELD ROAD CLOSURES)

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE TWO:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	68	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

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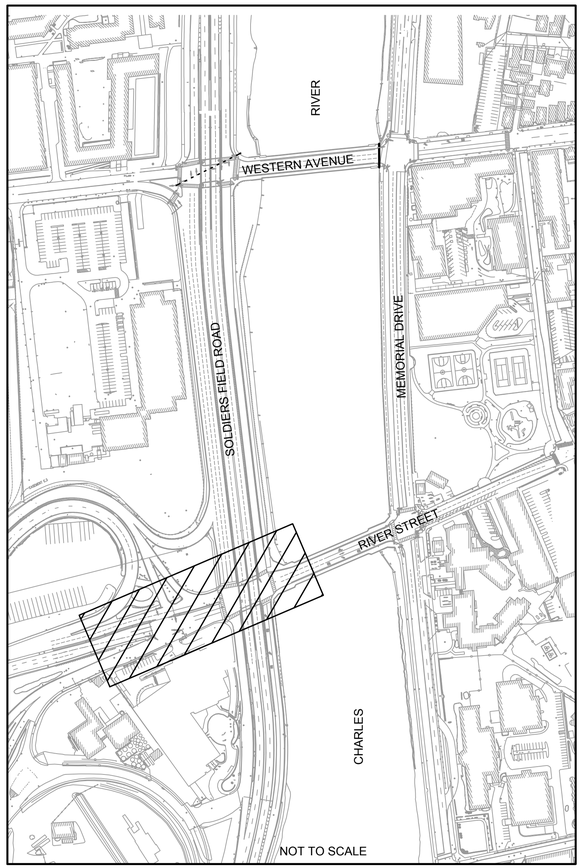
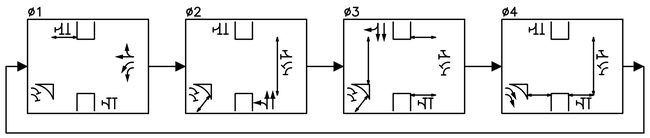
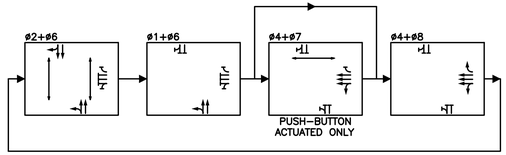
LOCUS



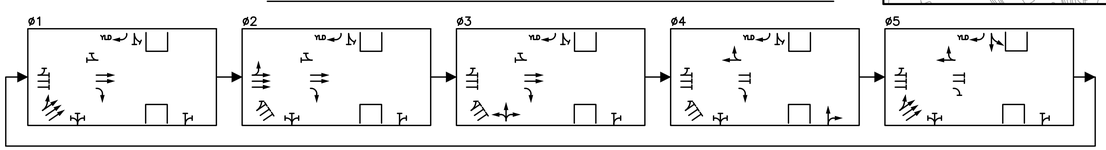
WESTERN AVENUE AT SOLDIERS FIELD ROAD



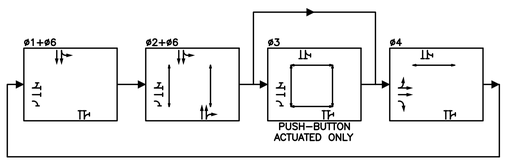
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE TWO:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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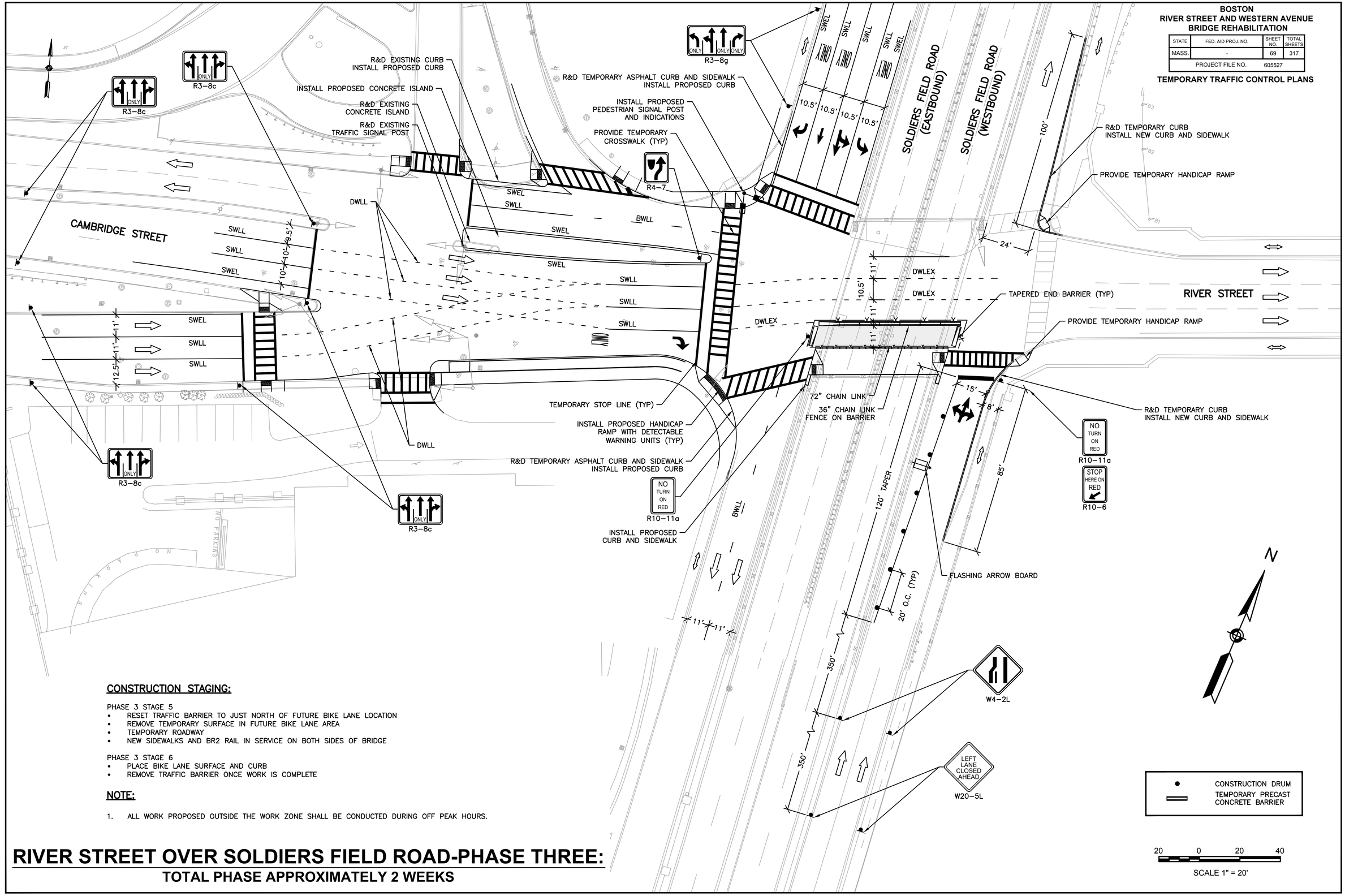
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	69	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION STAGING:

PHASE 3 STAGE 5
- RESET TRAFFIC BARRIER TO JUST NORTH OF FUTURE BIKE LANE LOCATION
- REMOVE TEMPORARY SURFACE IN FUTURE BIKE LANE AREA
- TEMPORARY ROADWAY
- NEW SIDEWALKS AND BR2 RAIL IN SERVICE ON BOTH SIDES OF BRIDGE

PHASE 3 STAGE 6
- PLACE BIKE LANE SURFACE AND CURB
- REMOVE TRAFFIC BARRIER ONCE WORK IS COMPLETE

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE THREE:

TOTAL PHASE APPROXIMATELY 2 WEEKS

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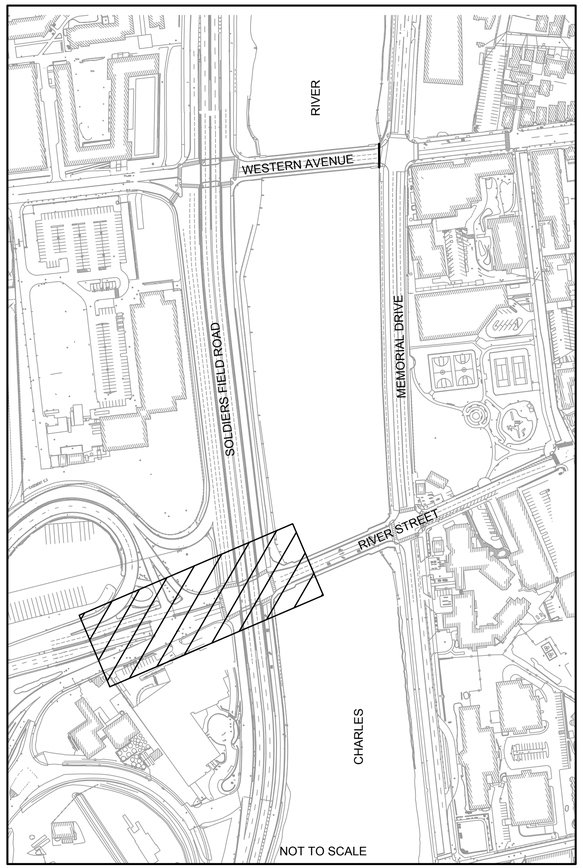
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	70	317
PROJECT FILE NO.	605527		

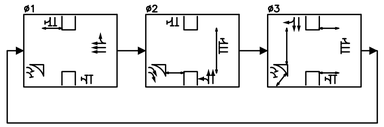
TEMPORARY TRAFFIC CONTROL PLANS

N

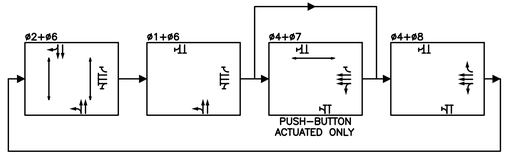
LOCUS



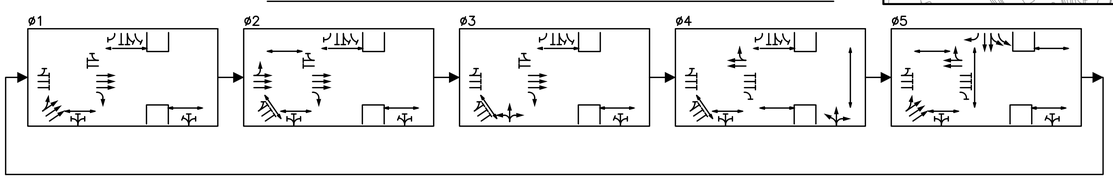
WESTERN AVENUE AT SOLDIERS FIELD ROAD



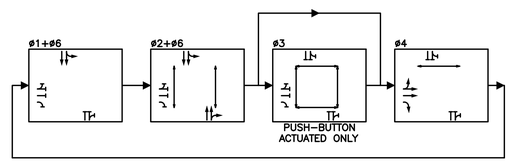
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET OVER SOLDIERS FIELD ROAD-PHASE THREE:

TOTAL PHASE APPROXIMATELY 2 WEEKS

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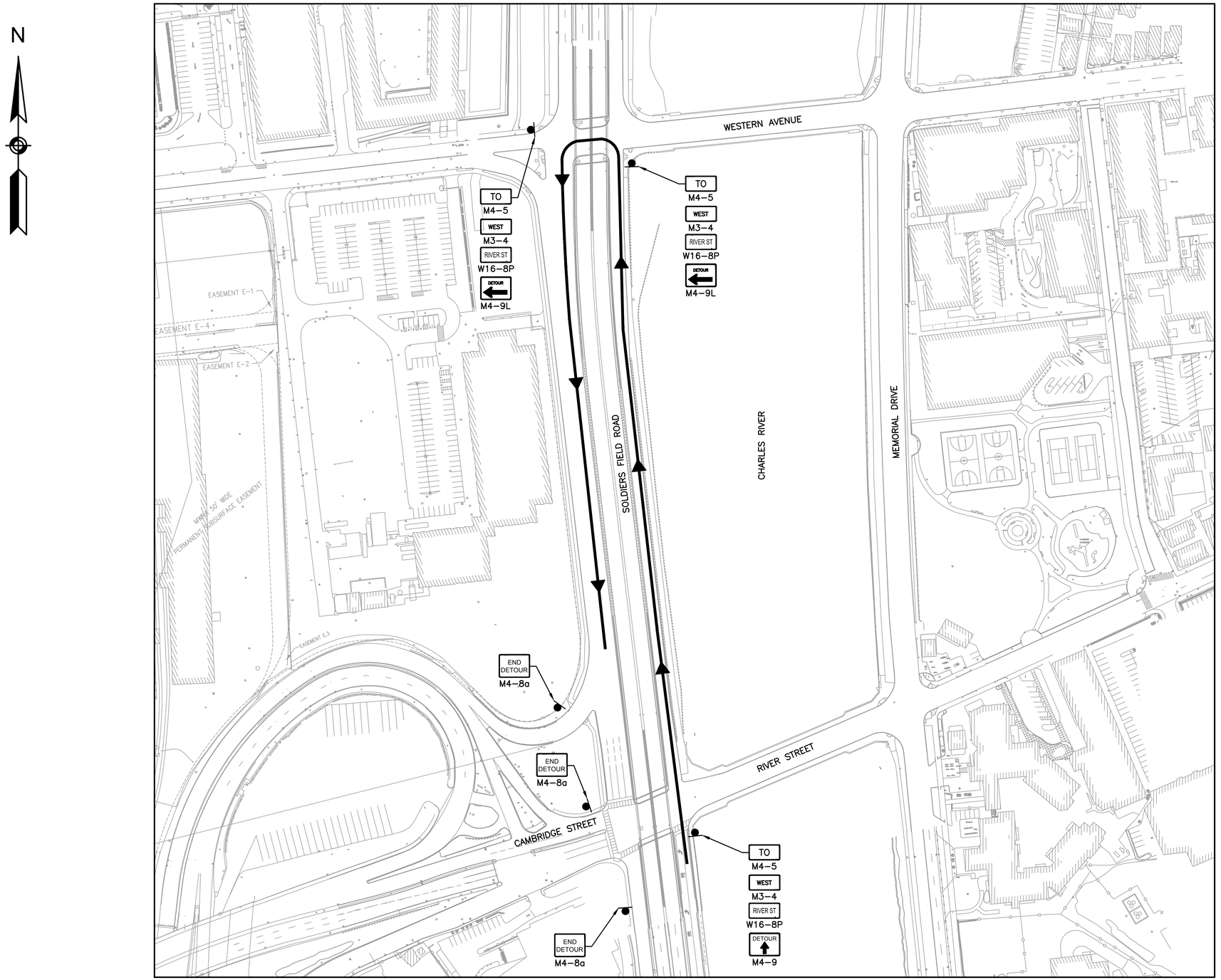
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	71	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



NOT TO SCALE

RIVER STREET/CAMBRIDGE STREET DETOUR:

DURING PHASES 1 AND 2 ONLY

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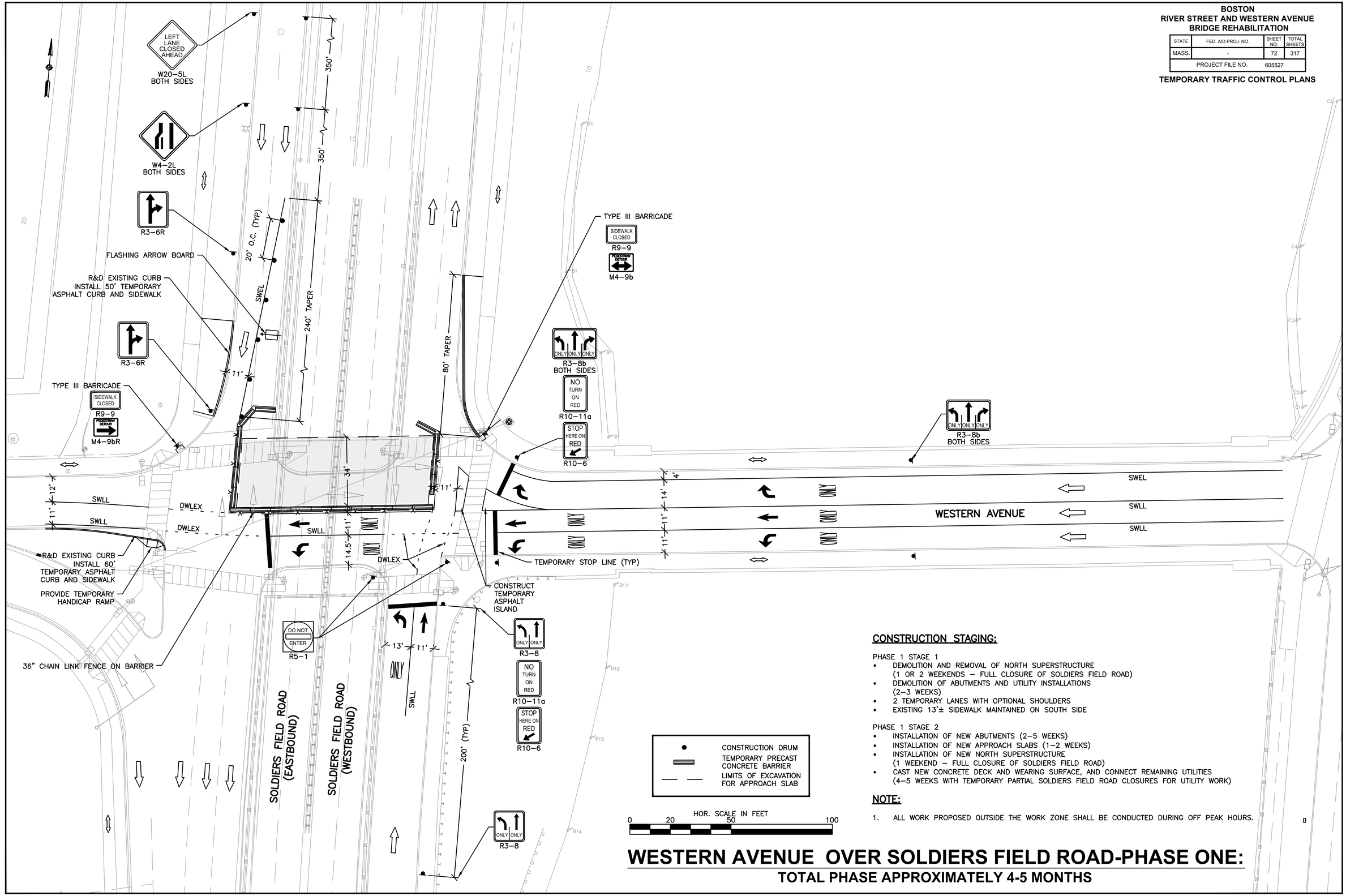
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	72	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION STAGING:

PHASE 1 STAGE 1
- DEMOLITION AND REMOVAL OF NORTH SUPERSTRUCTURE (1 OR 2 WEEKENDS – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- DEMOLITION OF ABUTMENTS AND UTILITY INSTALLATIONS (2–3 WEEKS)
- 2 TEMPORARY LANES WITH OPTIONAL SHOULDERS
- EXISTING 13'± SIDEWALK MAINTAINED ON SOUTH SIDE

PHASE 1 STAGE 2
- INSTALLATION OF NEW ABUTMENTS (2–5 WEEKS)
- INSTALLATION OF NEW APPROACH SLABS (1–2 WEEKS)
- INSTALLATION OF NEW NORTH SUPERSTRUCTURE (1 WEEKEND – FULL CLOSURE OF SOLDIERS FIELD ROAD)
- CAST NEW CONCRETE DECK AND WEARING SURFACE, AND CONNECT REMAINING UTILITIES (4–5 WEEKS WITH TEMPORARY PARTIAL SOLDIERS FIELD ROAD CLOSURES FOR UTILITY WORK)

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE ONE:

TOTAL PHASE APPROXIMATELY 4-5 MONTHS

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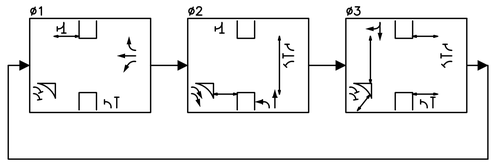
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	73	317
PROJECT FILE NO.	605527		

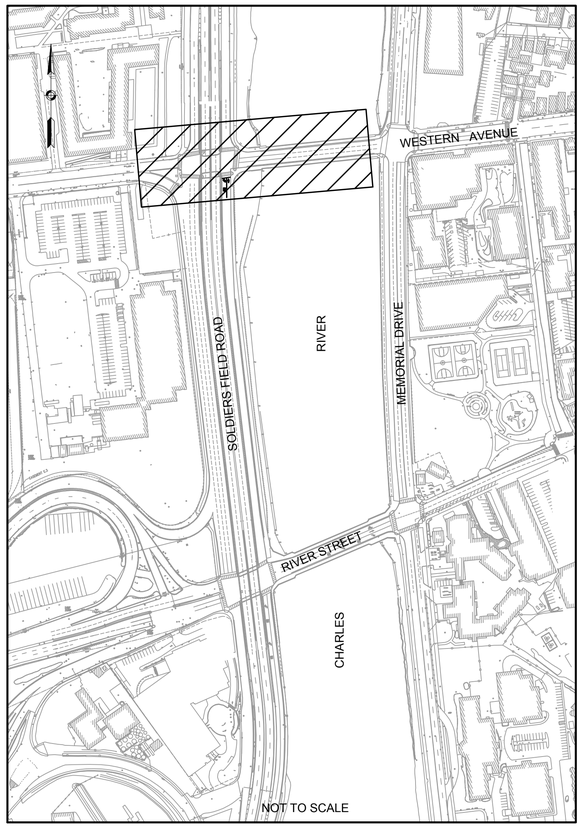
TEMPORARY TRAFFIC CONTROL PLANS

TRAFFIC SIGNAL PHASING SEQUENCE

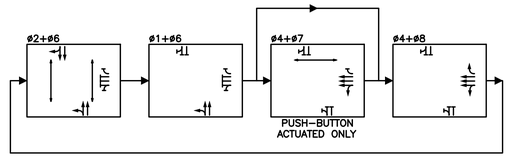
WESTERN AVENUE AT SOLDIERS FIELD ROAD



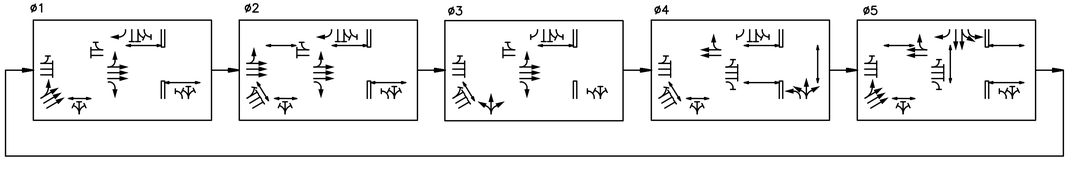
LOCUS



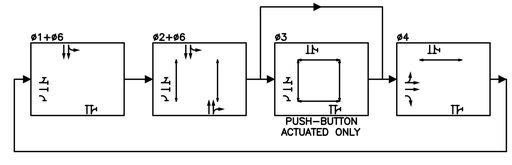
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE ONE:

TOTAL PHASE APPROXIMATELY 4-5 MONTHS

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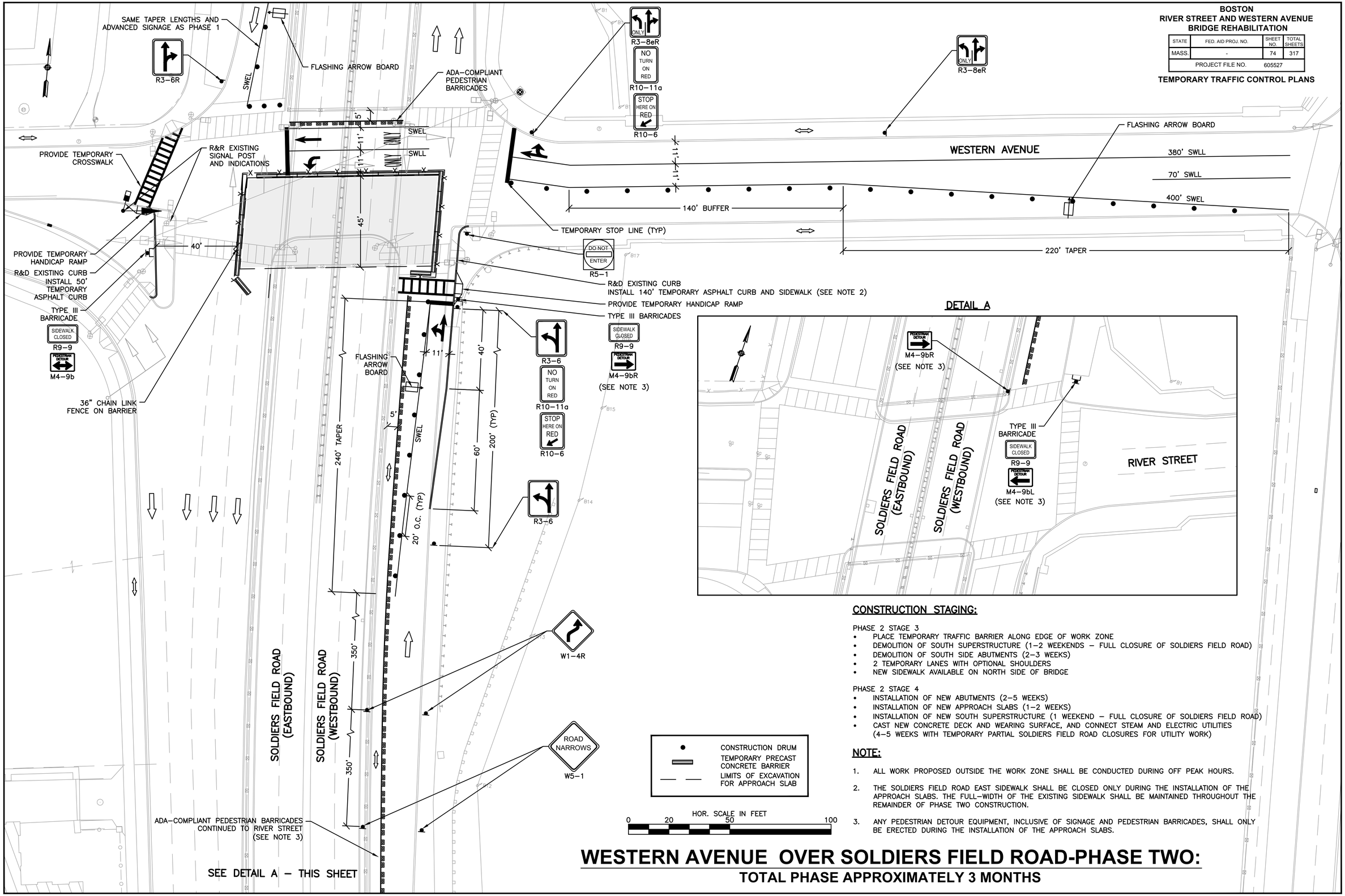
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	74	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



DETAIL A

CONSTRUCTION STAGING:

PHASE 2 STAGE 3
- PLACE TEMPORARY TRAFFIC BARRIER ALONG EDGE OF WORK ZONE
- DEMOLITION OF SOUTH SUPERSTRUCTURE (1-2 WEEKENDS - FULL CLOSURE OF SOLDIERS FIELD ROAD)
- DEMOLITION OF SOUTH SIDE ABUTMENTS (2-3 WEEKS)
- 2 TEMPORARY LANES WITH OPTIONAL SHOULDERS
- NEW SIDEWALK AVAILABLE ON NORTH SIDE OF BRIDGE

PHASE 2 STAGE 4
- INSTALLATION OF NEW ABUTMENTS (2-5 WEEKS)
- INSTALLATION OF NEW APPROACH SLABS (1-2 WEEKS)
- INSTALLATION OF NEW SOUTH SUPERSTRUCTURE (1 WEEKEND - FULL CLOSURE OF SOLDIERS FIELD ROAD)
- CAST NEW CONCRETE DECK AND WEARING SURFACE, AND CONNECT STEAM AND ELECTRIC UTILITIES (4-5 WEEKS WITH TEMPORARY PARTIAL SOLDIERS FIELD ROAD CLOSURES FOR UTILITY WORK)

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.
2. THE SOLDIERS FIELD ROAD EAST SIDEWALK SHALL BE CLOSED ONLY DURING THE INSTALLATION OF THE APPROACH SLABS. THE FULL-WIDTH OF THE EXISTING SIDEWALK SHALL BE MAINTAINED THROUGHOUT THE REMAINDER OF PHASE TWO CONSTRUCTION.
3. ANY PEDESTRIAN DETOUR EQUIPMENT, INCLUSIVE OF SIGNAGE AND PEDESTRIAN BARRICADES, SHALL ONLY BE ERECTED DURING THE INSTALLATION OF THE APPROACH SLABS.

WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE TWO:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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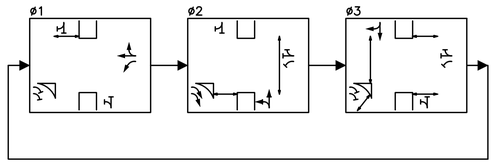
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	75	317
PROJECT FILE NO.	605527		

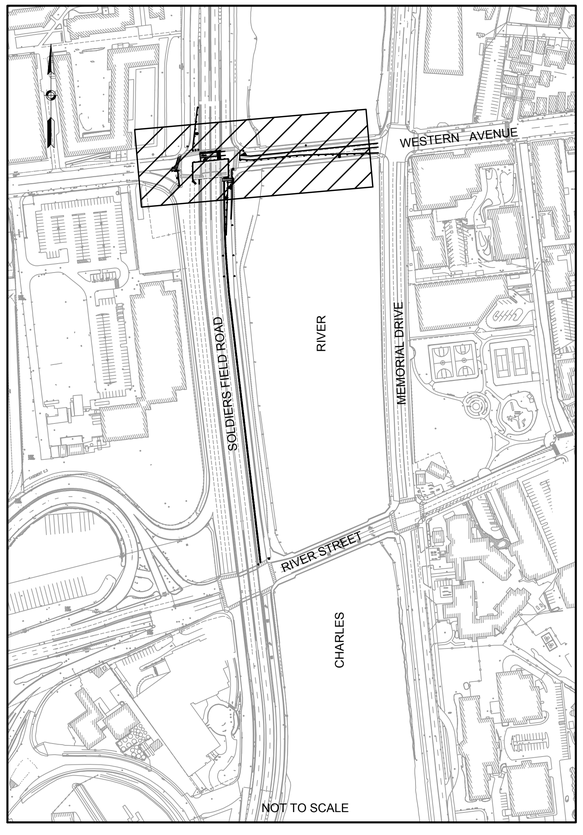
TEMPORARY TRAFFIC CONTROL PLANS

TRAFFIC SIGNAL PHASING SEQUENCE

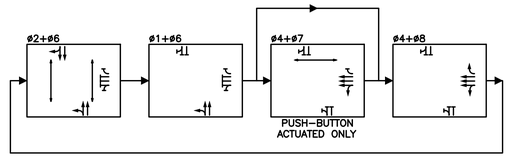
WESTERN AVENUE AT SOLDIERS FIELD ROAD



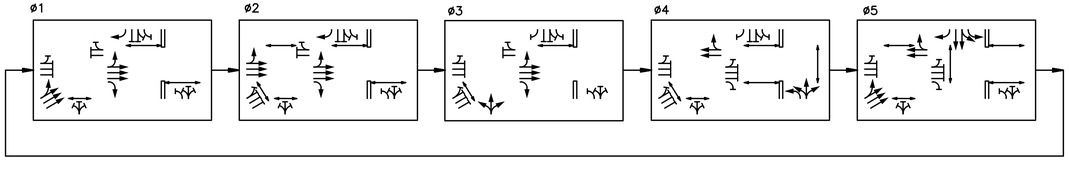
LOCUS



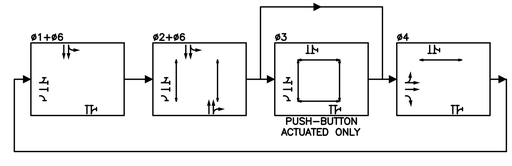
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE TWO:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	76	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

LEFT LANE CLOSED AHEAD
W20-5L BOTH SIDES

W4-2L BOTH SIDES

R3-6R

FLASHING ARROW BOARD

R&D EXISTING CURB
INSTALL PROPOSED CURB

R3-6R

TYPE III BARRICADE
SIDEWALK CLOSED
R9-9
PEDESTRIAN DETOUR
M4-9bR

INSTALL PROPOSED HANDICAP RAMP WITH DETECTABLE WARNING UNITS (TYP)

PROVIDE TEMPORARY CROSSWALK (TYP)

TEMPORARY STOP LINE (TYP)

R&D EXISTING CURB
INSTALL PROPOSED CURB AND HANDICAP RAMPS

R&R EXISTING TRAFFIC SIGNAL/PEDESTRIAN SIGNAL POST AND INDICATIONS (TYP)

36" CHAIN LINK FENCE ON BARRIER

20' O.C. (TYP)
350'
350'
240' TAPER
SWEL
11'

TAPERED END BARRIER

INSTALL PROPOSED CURB

CONSTRUCT TEMPORARY ASPHALT ISLAND

34'
11'
SWLL
SWEL
DWLL
DWLL
SWEL
SWLL
SWEL
DWLEX
12'
11'
16'
11'
5'
5'

DO NOT ENTER
R5-1

13'
11'
8'
ONLY

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

R&D TEMPORARY ASPHALT CURB AND SIDEWALK
INSTALL NEW CURB AND SIDEWALK

200' (TYP)

TYPE III BARRICADE
SIDEWALK CLOSED
R9-9
PEDESTRIAN DETOUR
M4-9b

R3-8b BOTH SIDES

NO TURN ON RED
R10-11a

STOP HERE ON RED
R10-6

R3-8b BOTH SIDES

WESTERN AVENUE

ONLY
ONLY
ONLY
ONLY
ONLY
ONLY
ONLY
ONLY
ONLY

4'
14'
11'
11'

SWEL
SWLL
SWLL
SWEL

R&D EXISTING CURB
INSTALL 90' TEMPORARY ASPHALT CURB AND SIDEWALK

PROVIDE TEMPORARY HANDICAP RAMP

R3-8
ONLY ONLY

NO TURN ON RED
R10-11a

STOP HERE ON RED
R10-6

R3-8
ONLY ONLY

CONSTRUCTION DRUM
TEMPORARY PRECAST CONCRETE BARRIER
LIMITS OF EXCAVATION FOR APPROACH SLAB

HOR. SCALE IN FEET
0 20 50 100

CONSTRUCTION STAGING:

PHASE 3 STAGE 5
- PLACE NEW WEARING SURFACE
- INSTALLATION OF NORTH BIKE LANE SURFACE AND CURB
- INSTALL PERMANENT BR2 BRIDGE RAILING
- NEW SIDEWALK WITH BR2 RAIL IN SERVICE ON SOUTH SIDE OF BRIDGE
- NEW SOUTH SIDE UTILITIES IN SERVICE

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE THREE:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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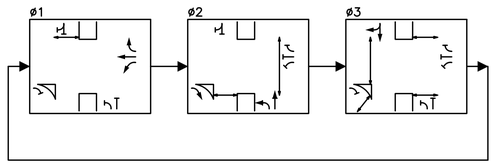
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	77	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PHASING SEQUENCE

WESTERN AVENUE AT SOLDIERS FIELD ROAD



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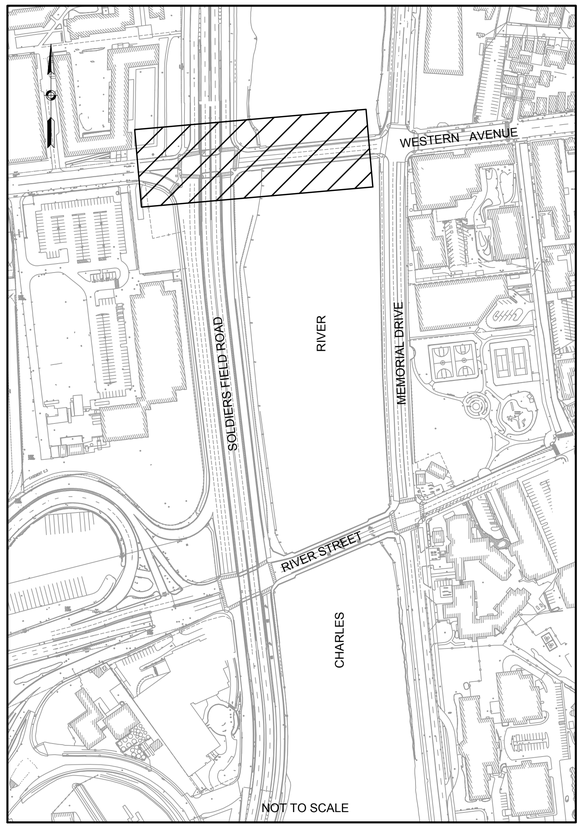
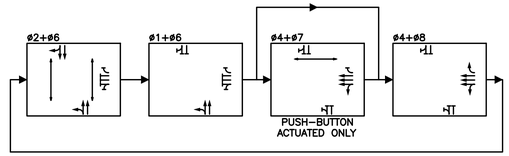
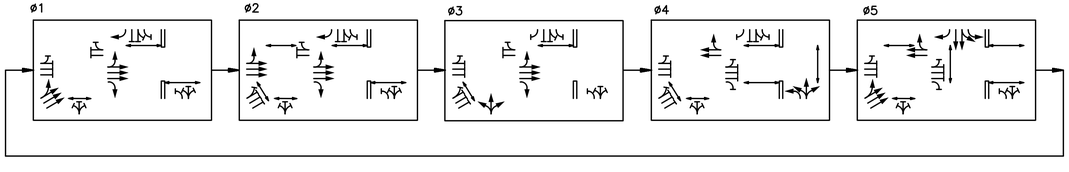


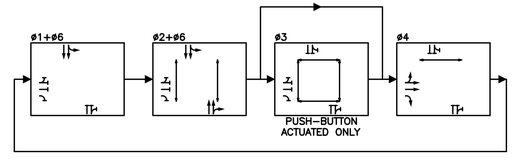
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE THREE:

TOTAL PHASE APPROXIMATELY 3 MONTHS

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	78	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

R3-8aR

R3-8aR

R10-11a NO TURN ON RED

R10-6 STOP HERE ON RED

PROVIDE TEMPORARY CROSSWALK (TYP)

11' 12'

SWTL

SWEL

R&D TEMPORARY ASPHALT CURB AND SIDEWALK
INSTALL NEW CURB AND SIDEWALK

PROVIDE TEMPORARY HANDICAP RAMP

R3-8gL BOTH SIDES

R10-11a NO TURN ON RED

R10-6 STOP HERE ON RED

R3-8gL BOTH SIDES

SWEL

19.5'

DYLL

SWLL

SWLL

DWLEX

DWLEX

DWLEX

10' 10' 10' 10' 10' 10' 10' 10'

ONLY ONLY ONLY ONLY ONLY ONLY ONLY ONLY

WESTERN AVENUE

SWLL

SWLL

SWLL

11'

72" CHAIN LINK FENCE

TAPERED END BARRIER

TEMPORARY STOP LINE (TYP)

R5-1 DO NOT ENTER

R&D TEMPORARY ASPHALT CURB
INSTALL PROPOSED CURB AND HANDICAP RAMPS

36" CHAIN LINK FENCE ON BARRIER

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

SWLL

SWLL

ONLY

SWLL

10' 10' 8'

SWEL

200' (TYP)

R3-8 ONLY ONLY

R10-11a NO TURN ON RED

R10-6 STOP HERE ON RED

R3-8 ONLY ONLY

22.4' 12' 11'

CONSTRUCTION DRUM
TEMPORARY PRECAST CONCRETE BARRIER

HOR. SCALE IN FEET
0 20 50 100

CONSTRUCTION STAGING:

PHASE 4 STAGE 6

- RESET TRAFFIC BARRIER TO JUST NORTH OF FUTURE SOUTH BIKE LANE LOCATION
- REMOVE TEMPORARY SURFACE IN FUTURE SOUTH BIKE LANE AREA
- TEMPORARY ROADWAY
- NEW SIDEWALKS AND BR2 RAIL IN SERVICE ON BOTH SIDES OF BRIDGE
- BIKE LANE IN SERVICE ON NORTH SIDE OF BRIDGE
- PLACE SOUTH BIKE LANE SURFACE AND CURB
- REMOVE TRAFFIC BARRIER ONCE WORK IS COMPLETE

NOTE:

1. ALL WORK PROPOSED OUTSIDE THE WORK ZONE SHALL BE CONDUCTED DURING OFF PEAK HOURS.

WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE FOUR:

TOTAL PHASE APPROXIMATELY 4 WEEKS

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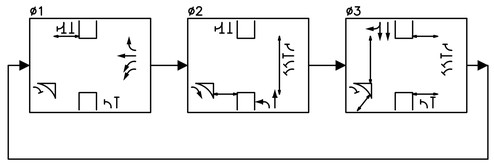
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

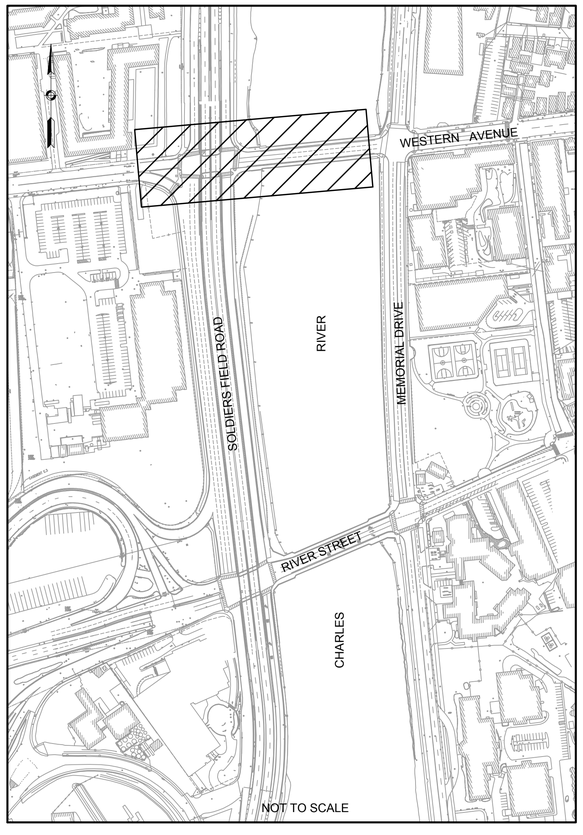
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	79	317
PROJECT FILE NO.	605527		

TRAFFIC SIGNAL PHASING SEQUENCE

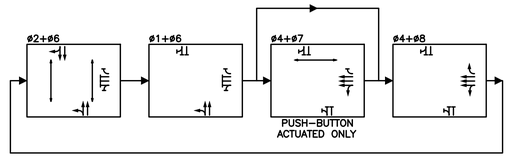
WESTERN AVENUE AT SOLDIERS FIELD ROAD



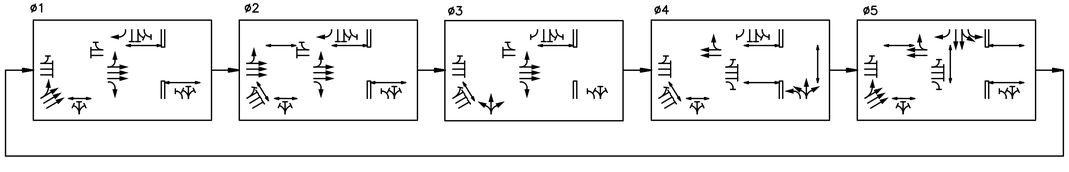
LOCUS



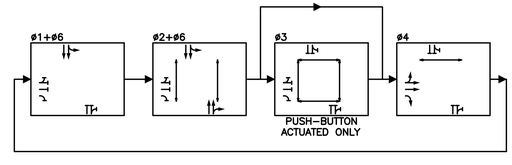
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



RIVER STREET AT MEMORIAL DRIVE



WESTERN AVENUE OVER SOLDIERS FIELD ROAD-PHASE FOUR:

TOTAL PHASE APPROXIMATELY 4 WEEKS

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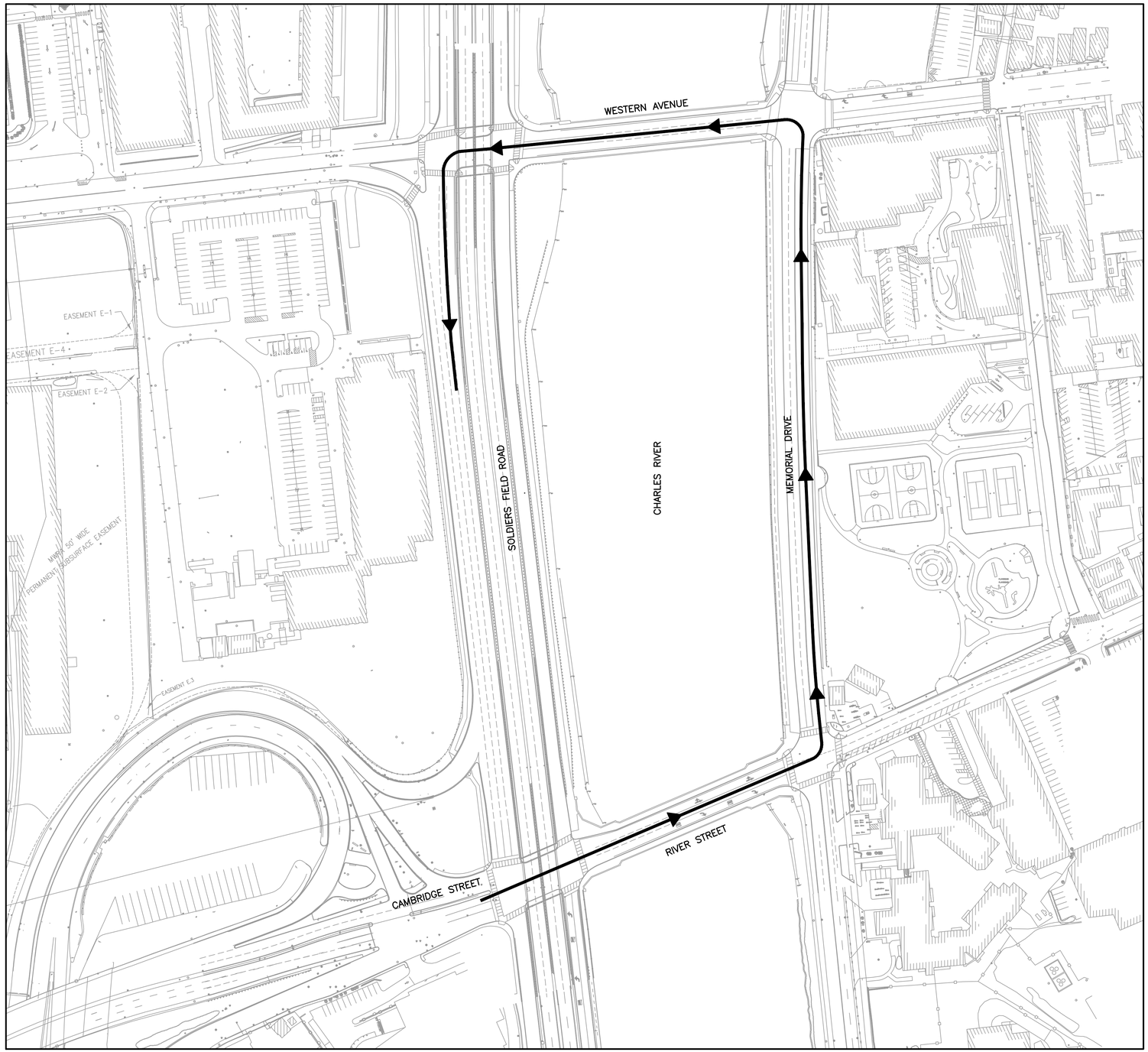
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	80	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

N



NOT TO SCALE

WESTERN AVENUE TRUCK ROUTE

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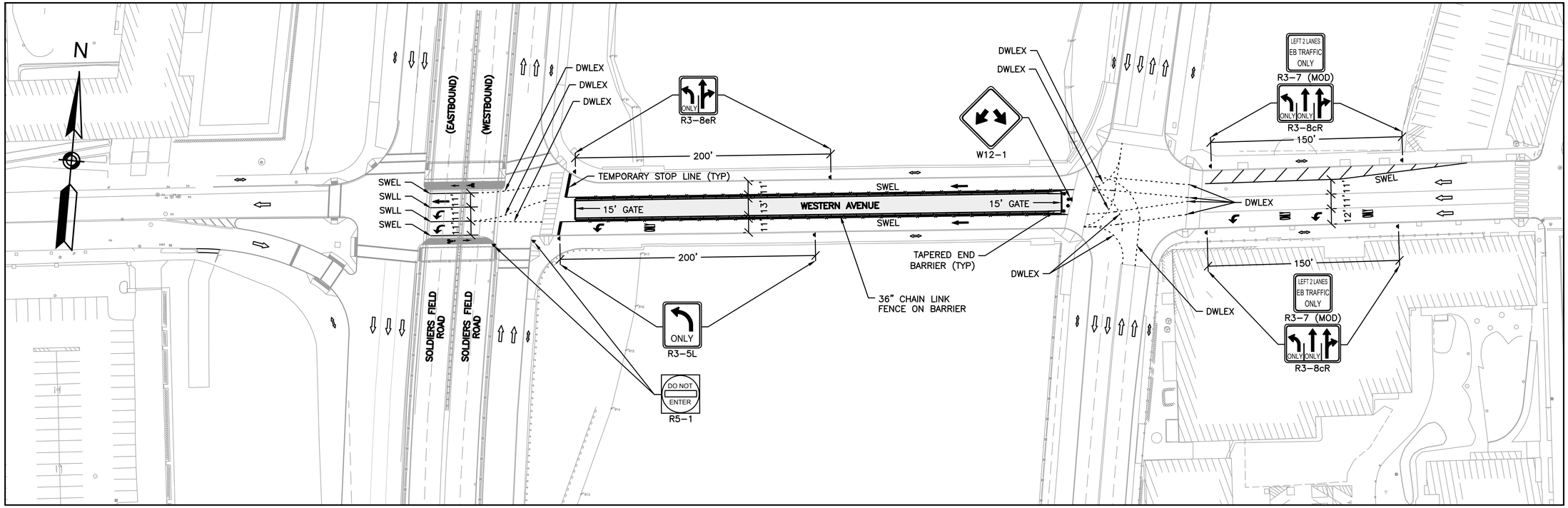
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	81	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

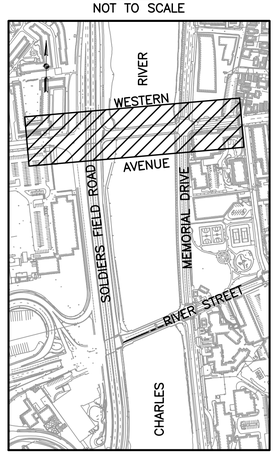
CONSTRUCTION STAGING:

PHASE 1 STAGE 1

- HARVARD UTILITIES (2–10" STEAM & 8" CONDENSATE) TO BE RELOCATED PRIOR TO CONSTRUCTION
- DEMOLITION AND ARCH REPAIR WITHIN THE CENTER OF THE BRIDGE
- REMOVE ABANDONED HARVARD STEAM LINES WITHIN WORK AREA
- 2 TEMPORARY LANES AVAILABLE
- REPAIR ARCH BARREL AND ABUTMENT CONCRETE
- TEMPORARY EARTH SUPPORTS
- CAST FLOWABLE FILL OVER ARCH BARREL BETWEEN TEMPORARY ARCH SUPPORTS TO TOP OF EXISTING ROADWAY
- PLACE TEMPORARY WEARING SURFACE TO MATCH EXISTING ROADWAY

LOCUS

NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (WESTERN AVE)-PHASE ONE:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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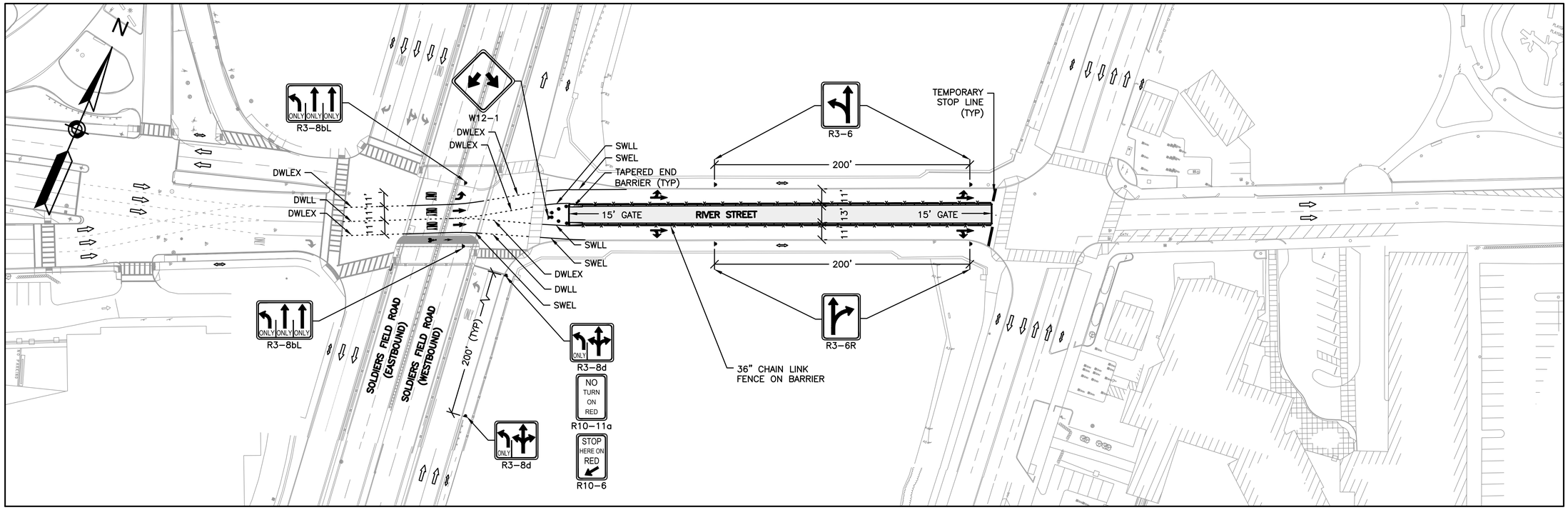
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	82	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



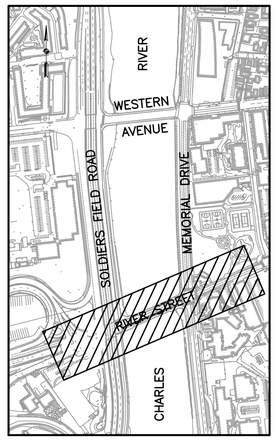
CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

CONSTRUCTION STAGING:

PHASE 1 STAGE 1
- DEMOLITION AND ARCH REPAIR WITHIN THE CENTER OF THE BRIDGE
- 2 TEMPORARY LANES AVAILABLE
- REPAIR ARCH BARREL AND ABUTMENT CONCRETE
- TEMPORARY EARTH SUPPORTS
- CAST FLOWABLE FILL OVER ARCH BARREL BETWEEN TEMPORARY ARCH SUPPORTS TO TOP OF EXISTING ROADWAY
- PLACE TEMPORARY WEARING SURFACE TO MATCH EXISTING ROADWAY

LOCUS
NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (RIVER STREET)-PHASE ONE:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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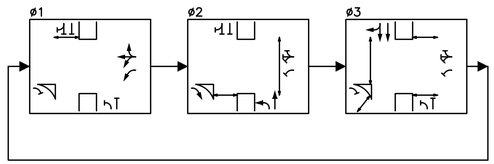
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	83	317
PROJECT FILE NO.	605527		

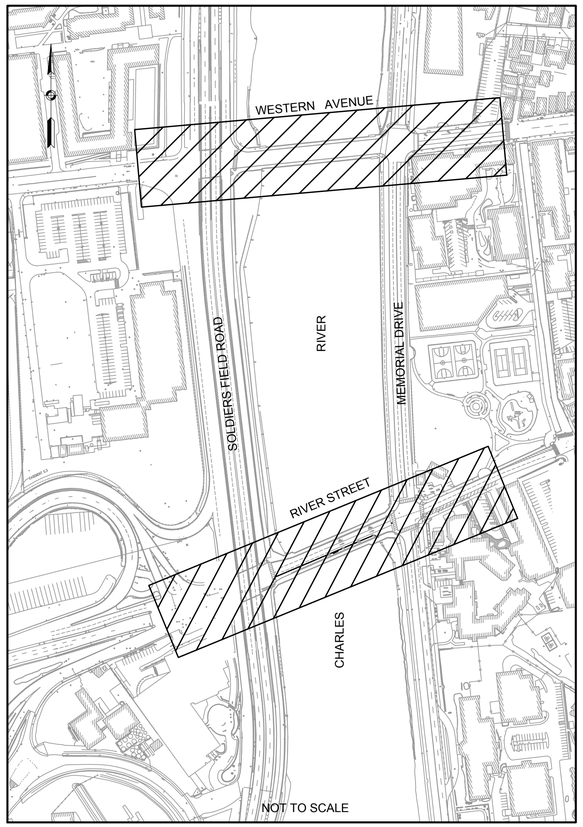
TEMPORARY TRAFFIC CONTROL PLANS

TRAFFIC SIGNAL PHASING SEQUENCE

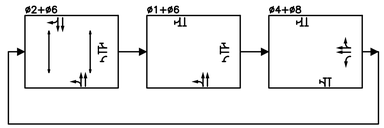
WESTERN AVENUE AT SOLDIERS FIELD ROAD



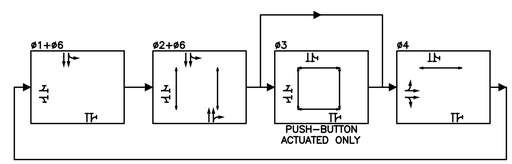
LOCUS



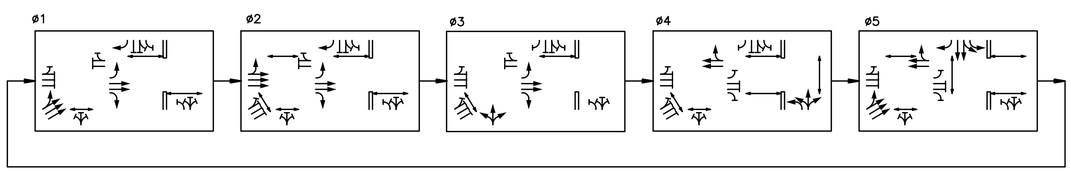
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



ARCH BRIDGES - PHASES ONE, TWO, THREE, AND FIVE:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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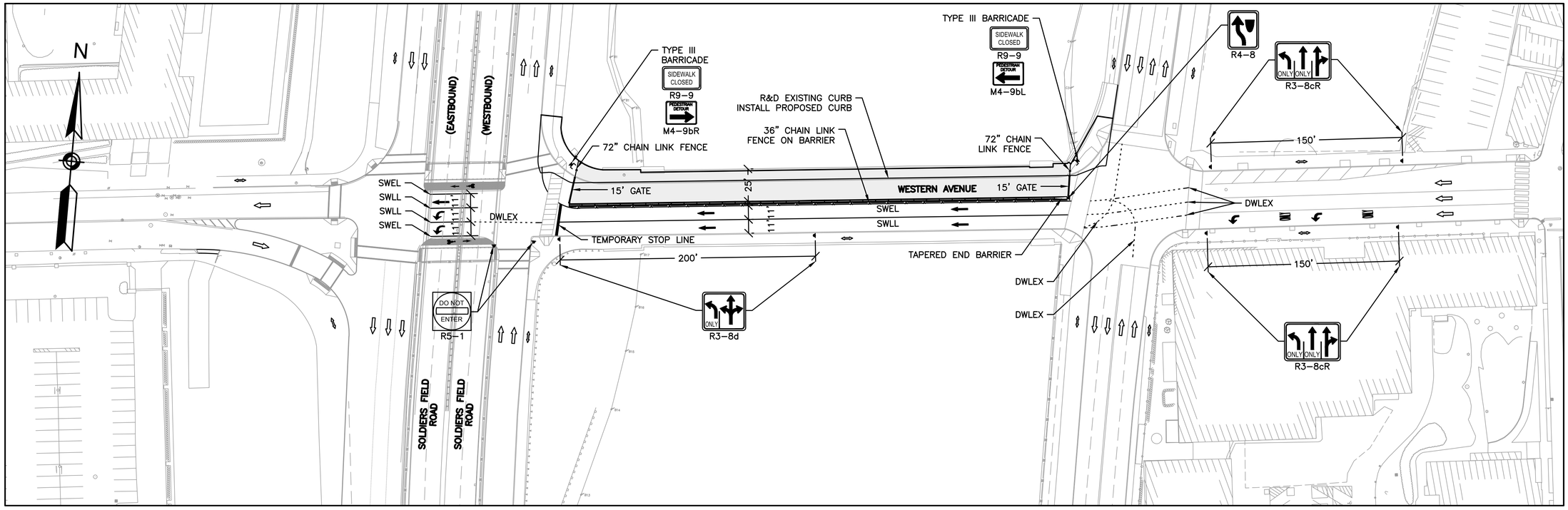
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	84	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION STAGING:

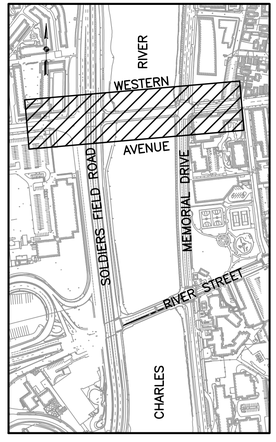
PHASE 2 STAGE 2

- 2 TEMPORARY LANES AVAILABLE
- DEMOLITION OF NORTH SIDE OF BRIDGE
- REPAIR ARCHES, ABUTMENTS, AND PIERS
- EXISTING HARVARD ELECTRIC DUCT TO REMAIN; SUPPORT BY CONTRACTOR
- CLEAN EXISTING DRAIN
- PLACE EARTH FILL AND FLOWABLE FILL
- INSTALLATION OF NEW 30" WATER MAINS
- CONSTRUCT NEW 7.5' SIDEWALK
- PLACE TEMPORARY ROADWAY SLAB AND WEARING COURSE

CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

LOCUS
NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (WESTERN AVENUE)-PHASE TWO:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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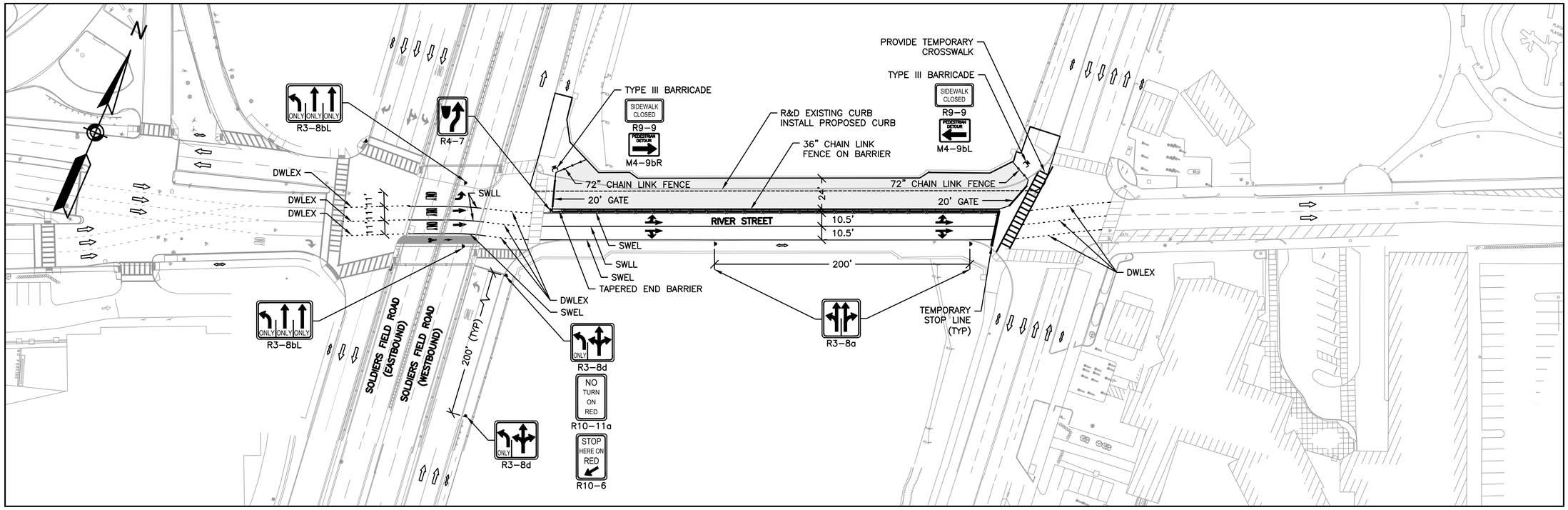
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	85	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

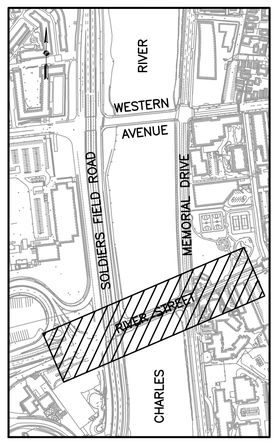
CONSTRUCTION STAGING:

PHASE 2 STAGE 2

- 2 TEMPORARY LANES AVAILABLE
- DEMOLITION OF NORTH SIDE OF BRIDGE
- REPAIR ARCHES, ABUTMENTS, AND PIERS
- REPLACE NORTH–EAST WINGWALL
- EXISTING CONDUIT TO REMAIN AND BE SUPPORTED BY CONTRACTOR
- REMOVE EXISTING AND INSTALL NEW 30" WATER MAINS
- CLEAN EXISTING DRAIN
- PLACE EARTH FILL AND FLOWABLE FILL
- CONSTRUCT NEW 10' SIDEWALK
- PLACE TEMPORARY ROADWAY SURFACE OVER TEMPORARY LEVELING COURSE AND NON–BONDING LAYER

LOCUS

NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (RIVER STREET)-PHASE TWO:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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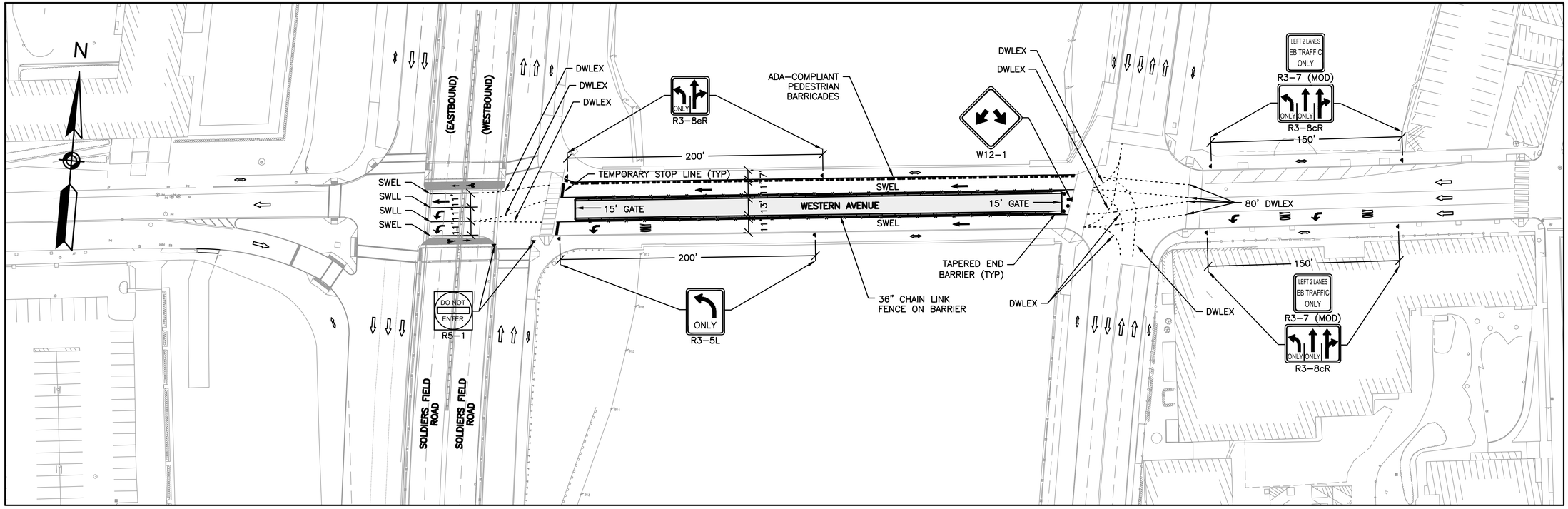
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	86	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION DRUM

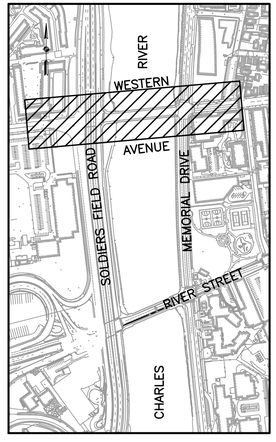
TEMPORARY PRECAST CONCRETE BARRIER

CONSTRUCTION STAGING:

PHASE 3 STAGE 3
- 2 TEMPORARY LANES AVAILABLE
- REMOVE TEMPORARY ROADWAY TO FLOWABLE FILL
- REMOVE EXISTING HARVARD UTILITIES (2–10" STEAM & 8" CONDENSATE) TO THE LIMITS OF THE TEMPORARY BARRIER
- INSTALLATION OF PROPOSED ROADWAY CONCRETE SLAB AND WEARING COURSE

LOCUS

NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (WESTERN AVENUE)-PHASE THREE:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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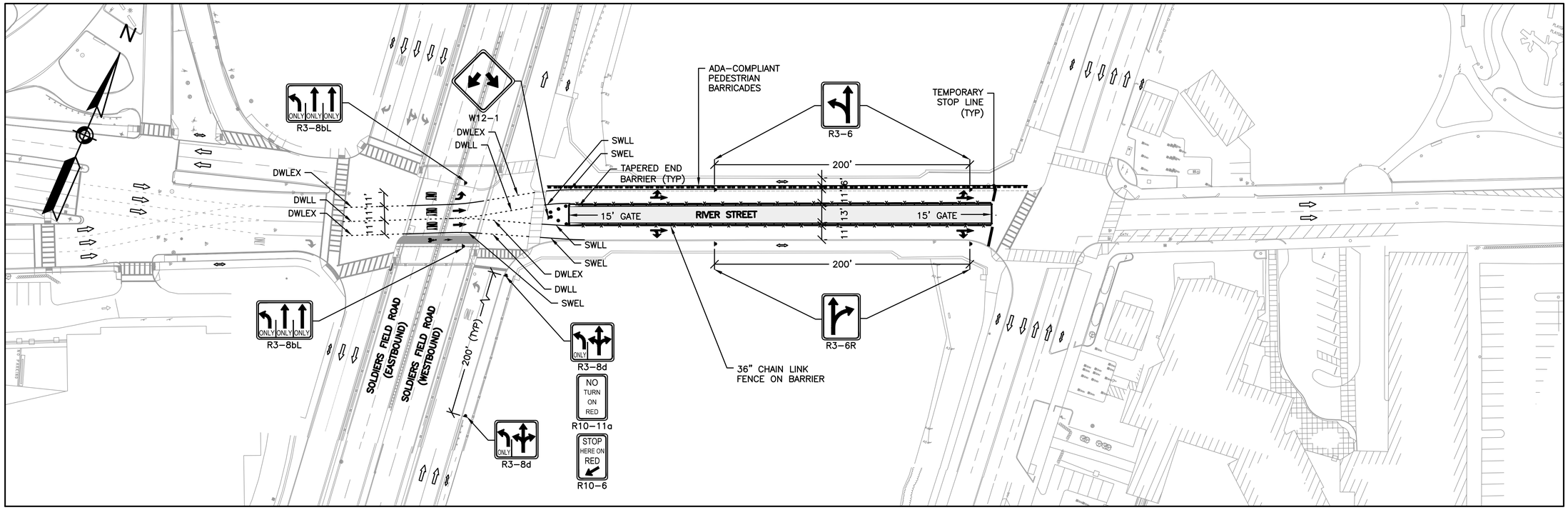
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	87	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



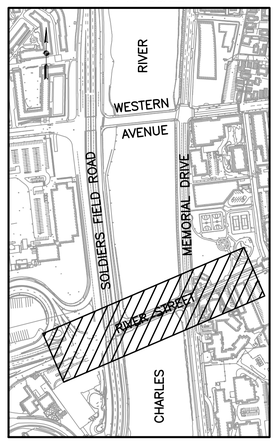
CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

CONSTRUCTION STAGING:

PHASE 3 STAGE 3
- 2 TEMPORARY LANES AVAILABLE
- INSTALL PROPOSED CONCRETE ROADWAY SLAB AND WEARING COURSE OVER TEMPORARY ROADWAY WITHIN THE CENTER PORTION OF THE BRIDGE

LOCUS
NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (RIVER STREET)-PHASE THREE:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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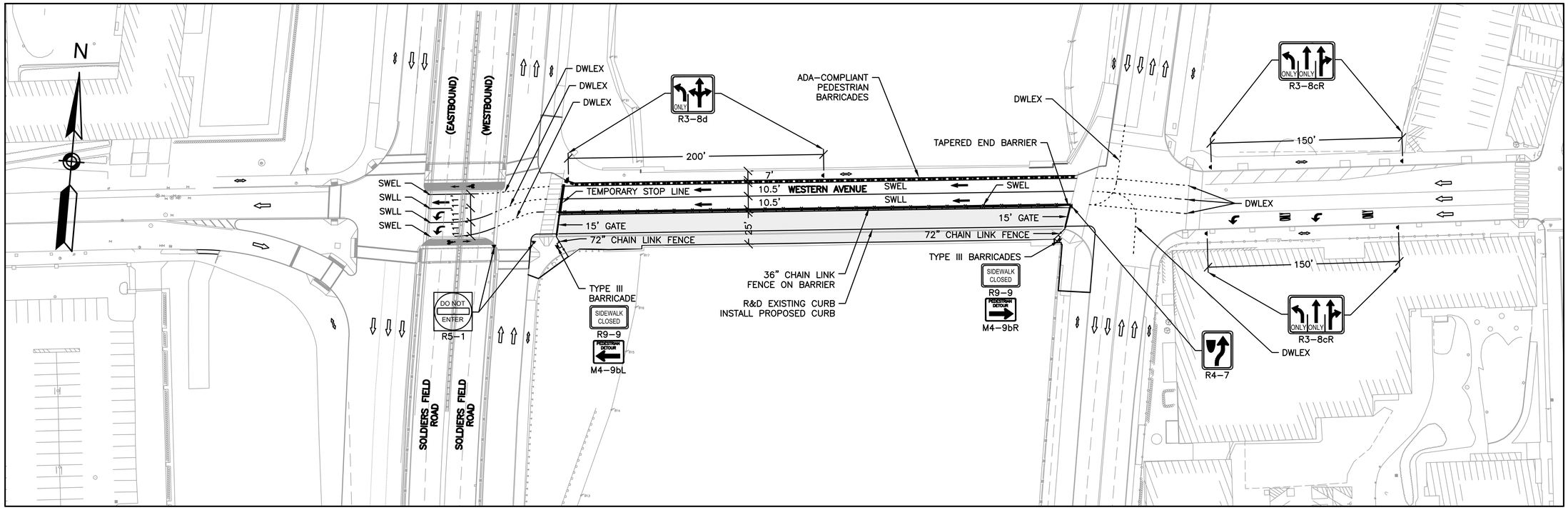
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	88	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

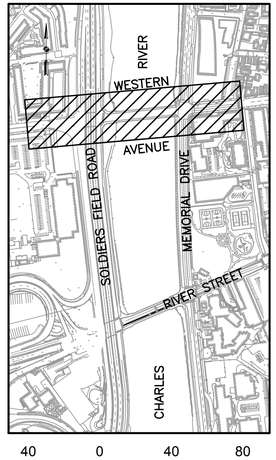
CONSTRUCTION STAGING:

PHASE 4 STAGE 4

- 2 TEMPORARY LANES AVAILABLE
- DEMOLITION OF SOUTH SIDE OF BRIDGE
- REPAIR ARCHES, ABUTMENTS, AND PIERS
- REMOVE EXISTING 30" WATER MAINS
- INSTALL UTILITIES
- RELOCATED HARVARD UTILITIES SUPPORTED BY CONTRACTOR
- CLEAN EXISTING DRAIN
- PLACE EARTH FILL AND FLOWABLE FILL
- CONSTRUCT NEW SIDEWALK
- INSTALLATION OF PROPOSED ROADWAY SLAB AND WEARING COURSE

LOCUS

NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (WESTERN AVENUE)-PHASE FOUR:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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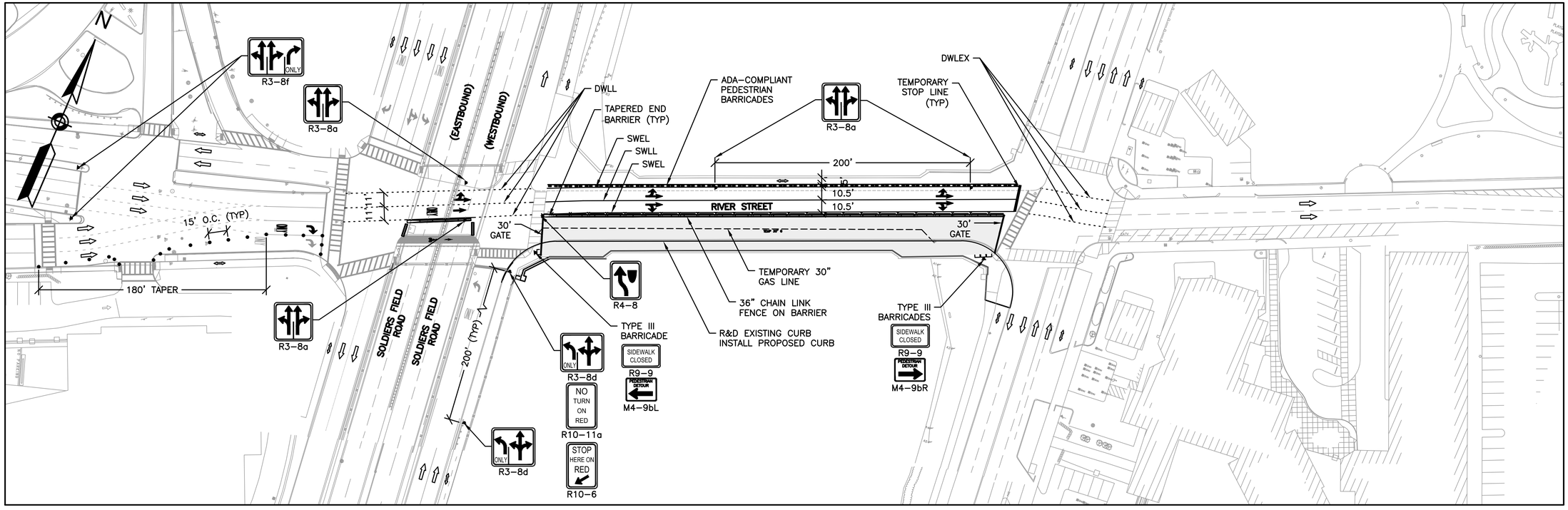
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	89	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



CONSTRUCTION STAGING:

PHASE 4 STAGE 4

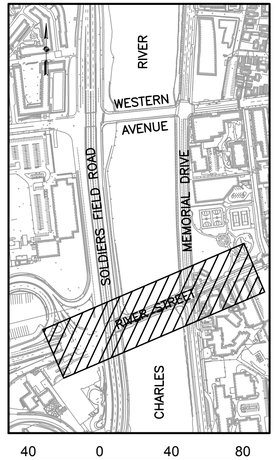
- 2 TEMPORARY LANES AVAILABLE
- TEMPORARY 30" CAS MAIN TO BE INSTALLED PRIOR TO DEMO OF EXISTING GAS MAINS, SUPPORTED BY CONTRACTOR
- DEMOLITION OF SOUTH SIDE OF BRIDGE
- REPAIR ARCHES, ABUTMENTS, AND PIERS
- REMOVE EXISTING AND INSTALL NEW 30" GAS MAINS
- CLEAN EXISTING DRAIN
- PLACE EARTH FILL AND FLOWABLE FILL
- CONSTRUCT NEW SIDEWALK
- INSTALL PROPOSED CONCRETE ROADWAY SLAB AND WEARING COURSE
- PLACE TEMPORARY ROADWAY SLAD AND WEARING SURFACE IN THE AREA OF THE PROPOSED CYCLE TRACK

CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

LOCUS

NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (RIVER STREET)-PHASE FOUR:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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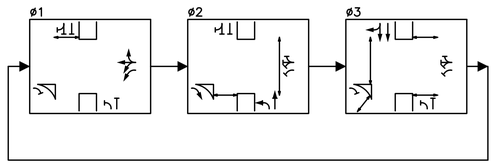
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	90	317
PROJECT FILE NO.	605527		

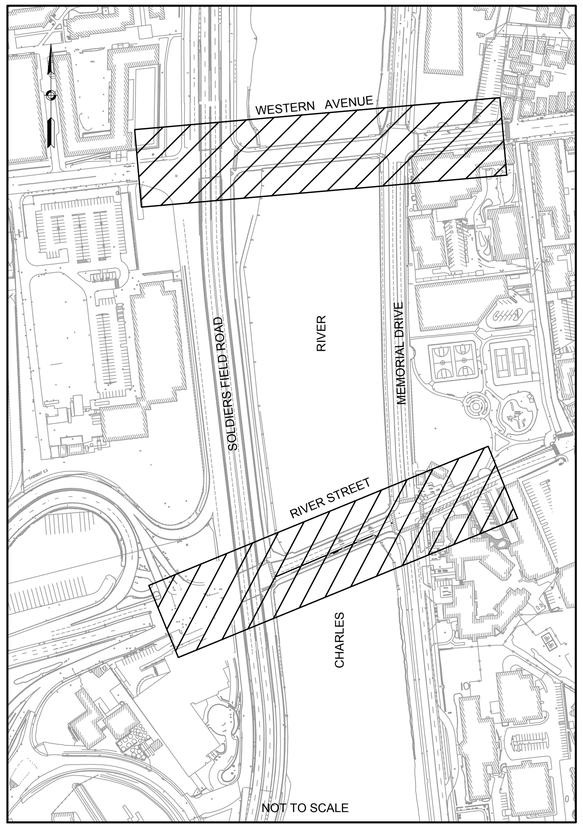
TEMPORARY TRAFFIC CONTROL PLANS

TRAFFIC SIGNAL PHASING SEQUENCE

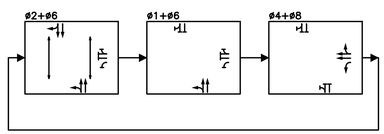
WESTERN AVENUE AT SOLDIERS FIELD ROAD



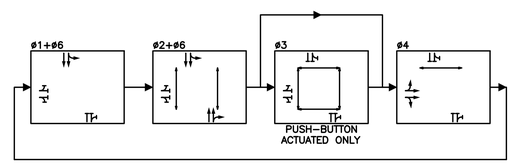
LOCUS



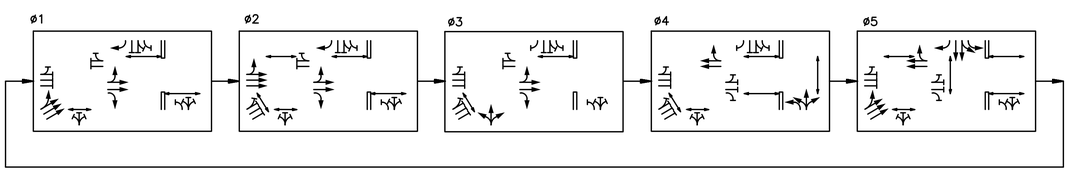
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



ARCH BRIDGES - PHASE FOUR:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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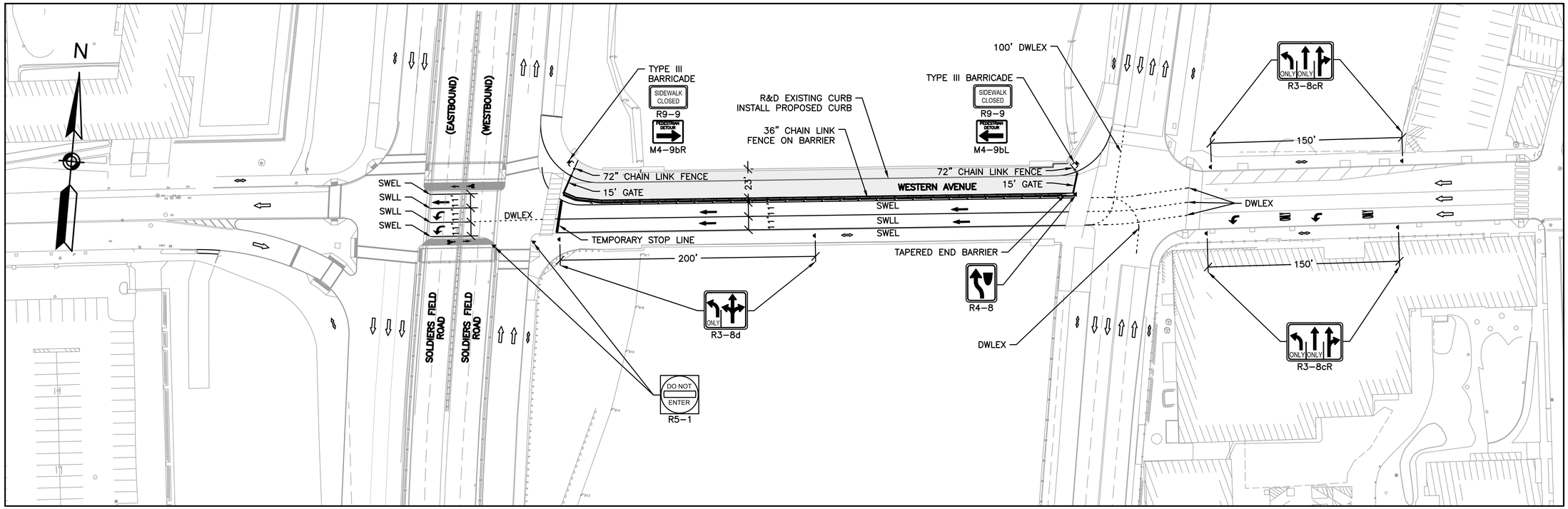
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	91	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



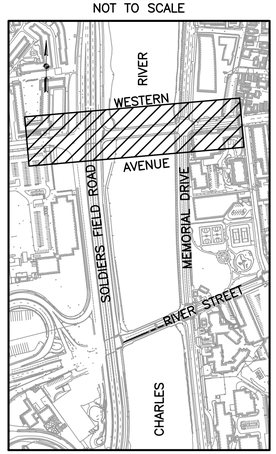
CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

CONSTRUCTION STAGING:

PHASE 5 STAGE 5
- 2 TEMPORARY LANES AVAILABLE
- REMOVE TEMPORARY ROADWAY SLAB ON NORTH SIDE
- CONSTRUCT REMAINING PORTION OF NORTH SIDEWALK/CYCLE TRACK

LOCUS
NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (WESTERN AVENUE)-PHASE FIVE:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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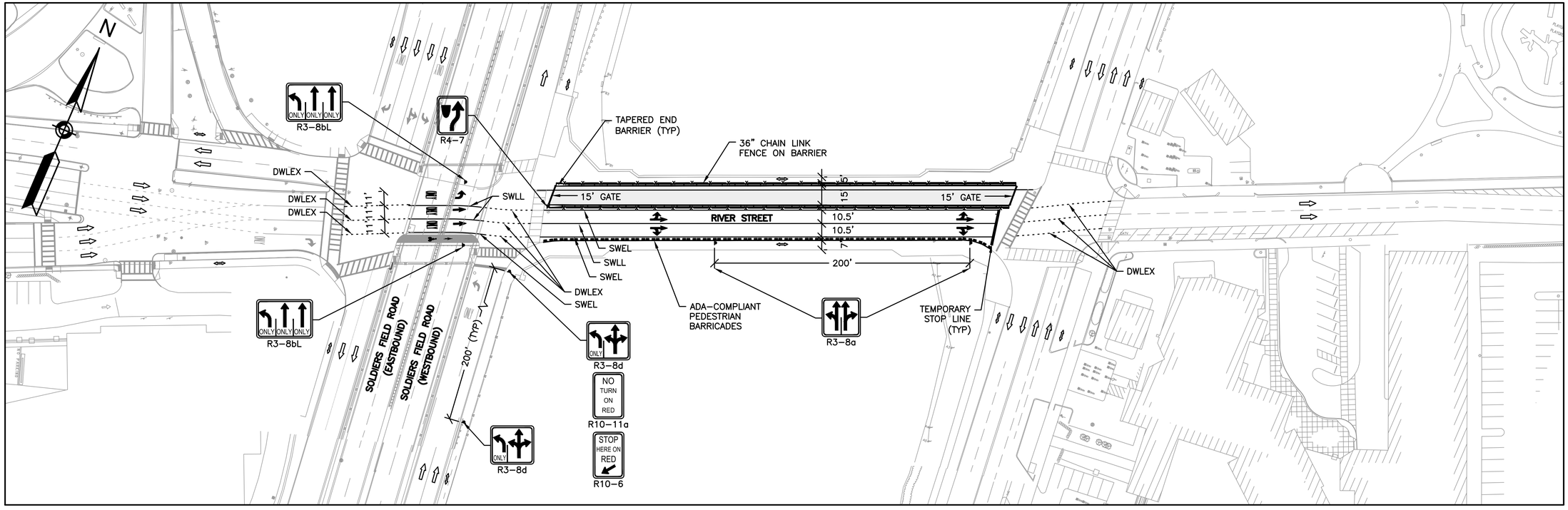
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	92	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



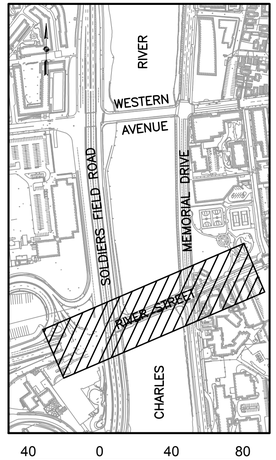
CONSTRUCTION DRUM

TEMPORARY PRECAST CONCRETE BARRIER

CONSTRUCTION STAGING:

PHASE 5 STAGE 5
- 2 TEMPORARY LANES AVAILABLE
- REMOVE TEMPORARY ROADWAY ON NORTH SIDE TO REVEAL PROPOSED ROADWAY

LOCUS
NOT TO SCALE



40 0 40 80

SCALE 1" = 40'

ARCH BRIDGE (RIVER STREET)-PHASE FIVE:

TOTAL PHASE APPROXIMATELY 1 MONTH

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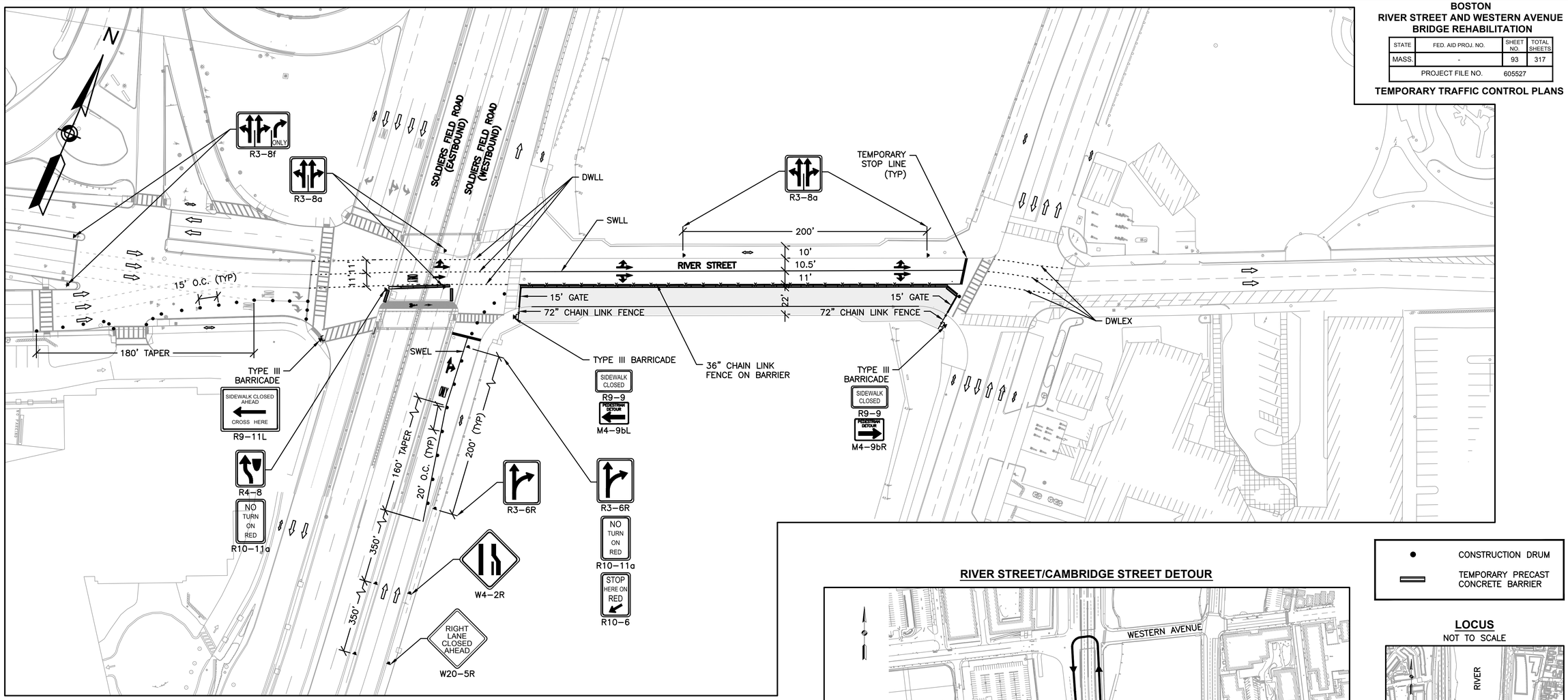
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

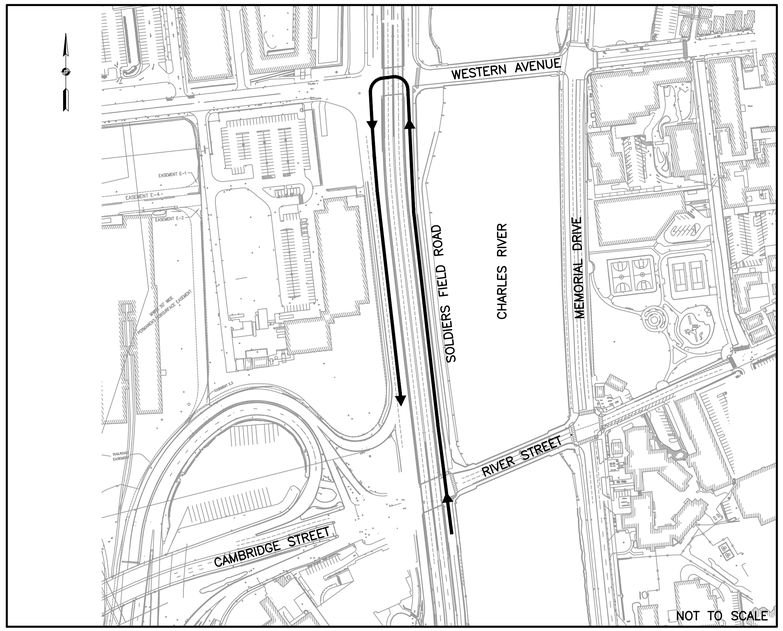
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	93	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS

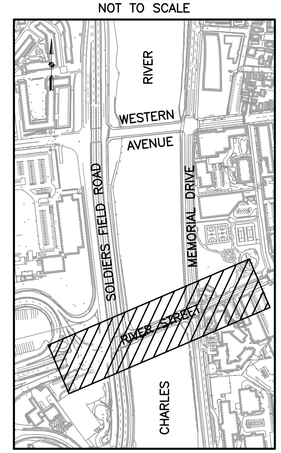


- ● CONSTRUCTION DRUM
- TEMPORARY PRECAST CONCRETE BARRIER

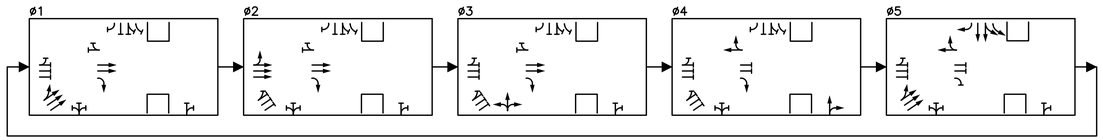
RIVER STREET/CAMBRIDGE STREET DETOUR



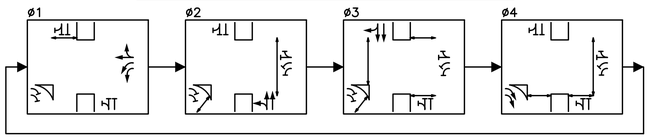
LOCUS
NOT TO SCALE



PROPOSED TRAFFIC SIGNAL PHASE SEQUENCE
RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



WESTERN AVENUE AT SOLDIERS FIELD ROAD



CONSTRUCTION STAGING:

PHASE 6 STAGE 6
- TWO TRAVEL LANES AVAILABLE
- REMOVE TEMPORARY ROADWAY SLAB ON SOUTH SIDE OF BRIDGE
- CONSTRUCT REMAINING PORTION OF SOUTH SIDEWALK/CYCLE TRACK

ARCH BRIDGE (RIVER STREET)-PHASE SIX:

TOTAL PHASE APPROXIMATELY 2 MONTHS

40 0 40 80
SCALE 1" = 40'

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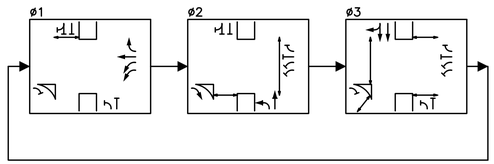
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	94	317
PROJECT FILE NO.	605527		

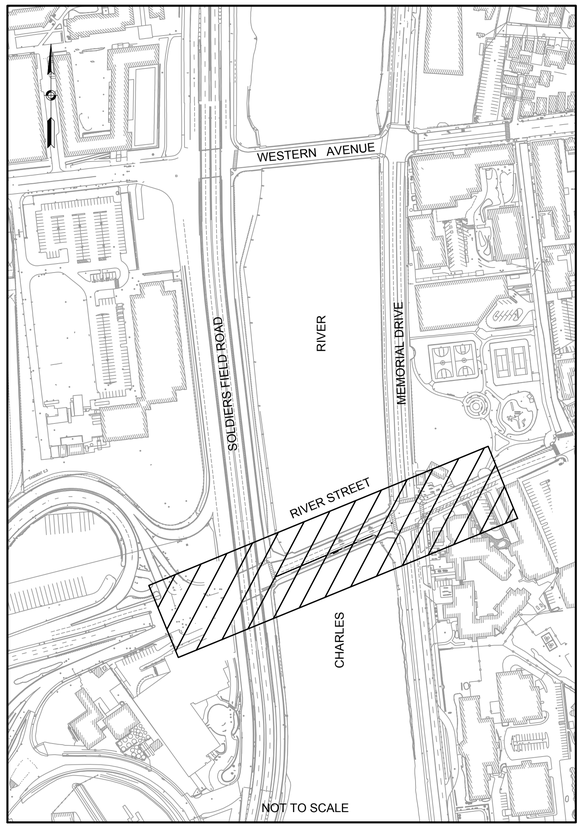
TEMPORARY TRAFFIC CONTROL PLANS

TRAFFIC SIGNAL PHASING SEQUENCE

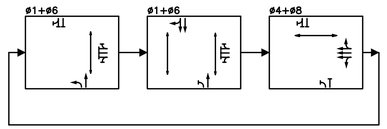
WESTERN AVENUE AT SOLDIERS FIELD ROAD



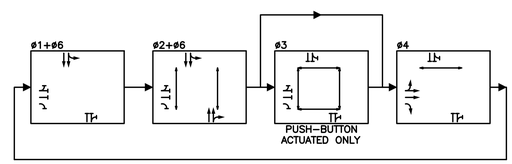
LOCUS



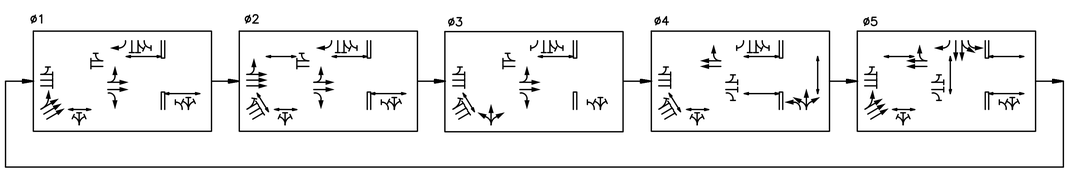
WESTERN AVENUE AT MEMORIAL DRIVE



RIVER STREET AT MEMORIAL DRIVE



RIVER STREET/CAMBRIDGE STREET AT SOLDIERS FIELD ROAD & I-90



ARCH BRIDGE (RIVER STREET) - PHASE SIX:

TOTAL PHASE APPROXIMATELY 2 MONTHS

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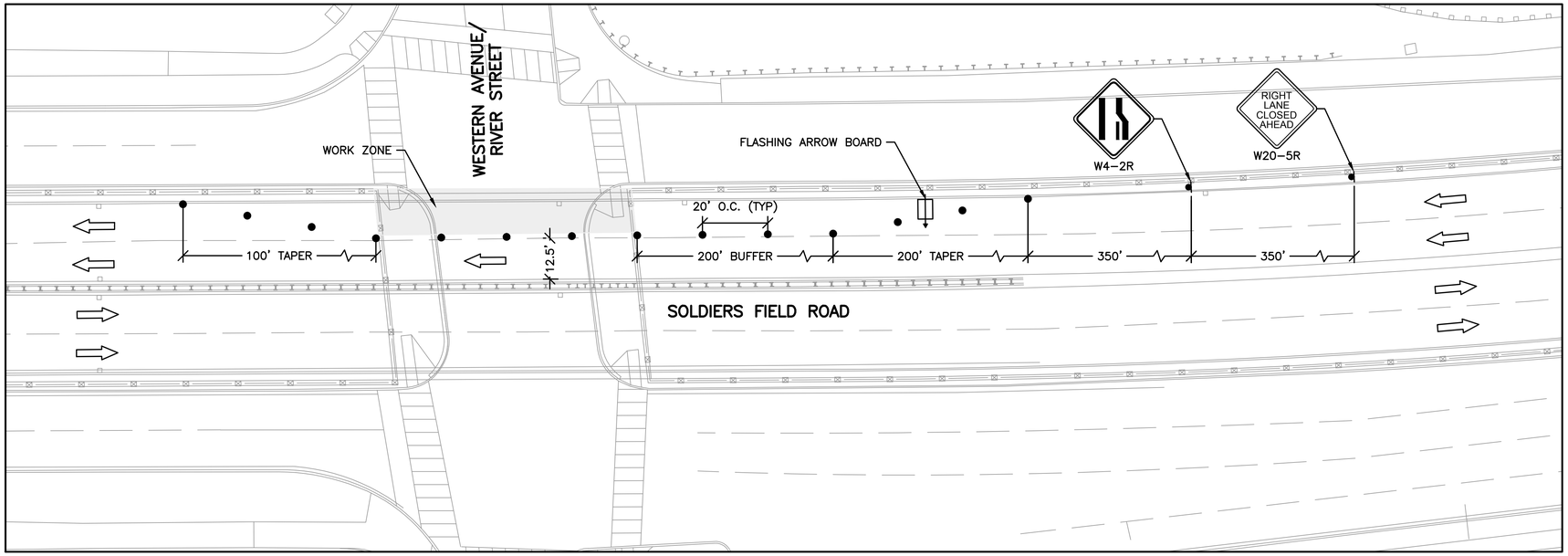
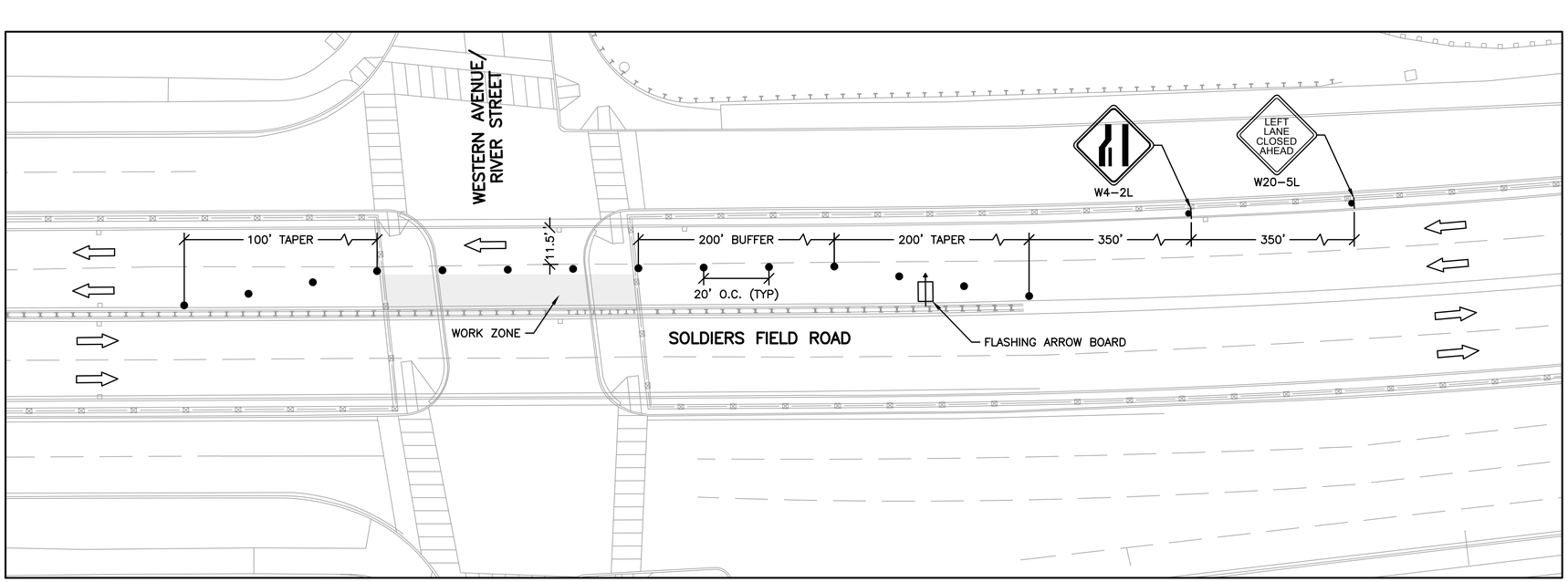
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	95	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS



RIGHT-LANE CLOSURE



LEFT-LANE CLOSURE

NOTES:

1. THIS PLAN REPRESENTS TYPICAL LANE CLOSURES ALONG SOLDIERS FIELD ROAD TO SUPPORT SHORT DURATION CONSTRUCTION ACTIVITIES FOR BRIDGE CONSTRUCTION. THE WORK ZONE LENGTHS AND SIGN LOCATIONS MAY VARY DEPENDING ON THE LOCATION AND NATURE OF THE WORK.
2. THE RIGHT–LANE AND LEFT–LANE CLOSURES MAY APPLY TO BOTH THE EASTBOUND AND WESTBOUND DIRECTIONS ALONG SOLDIERS FIELD ROAD.

HOR. SCALE IN FEET
0 20 50 100

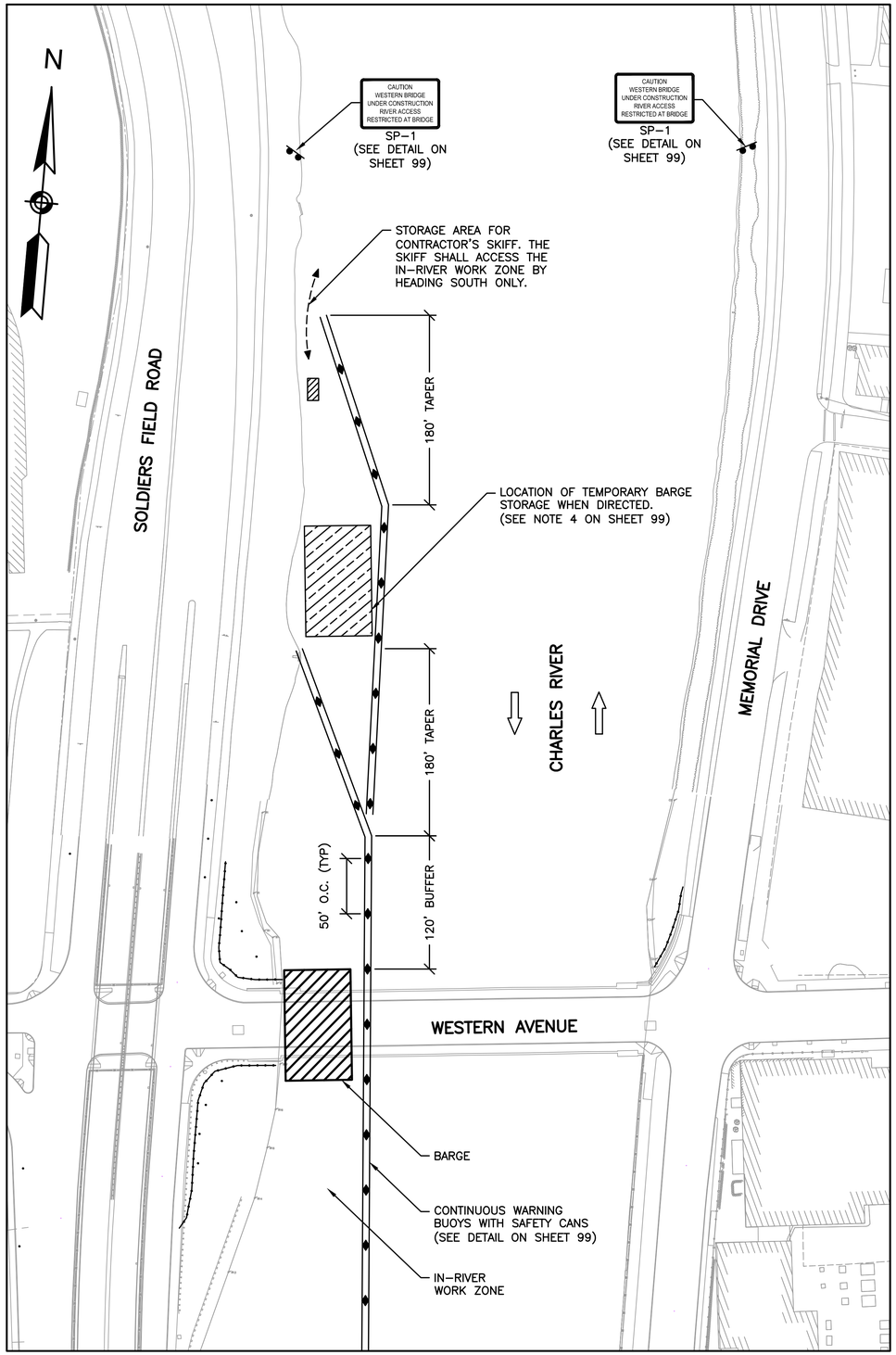
TYPICAL LANE CLOSURES FOR SOLIDERS FIELD ROAD

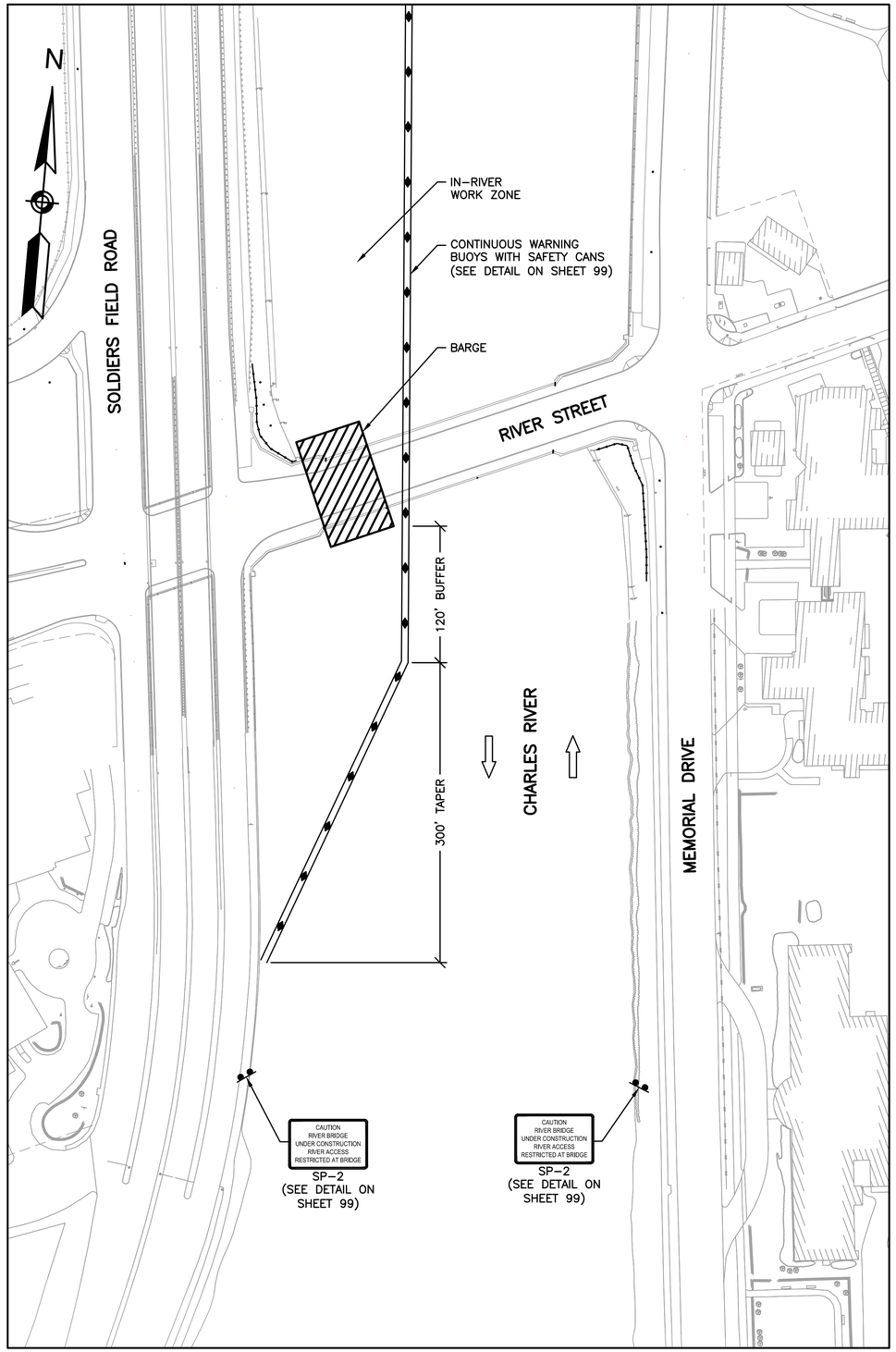
L:\09149\CURRENT\CUTSHEETS\TMP SOLDIERS FIELD RD.dwg, 1/4/2013 1:16:30 PM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

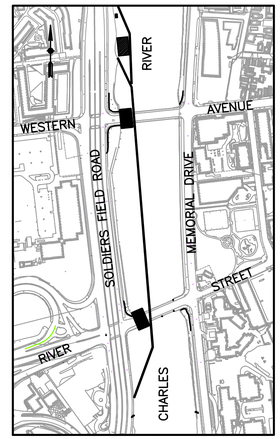
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	96	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS





LOCUS



NOT TO SCALE

CHARLES RIVER (WEST ARCHES):

TOTAL PHASE APPROXIMATELY 2 MONTHS

60 0 60 120

SCALE 1" = 60'

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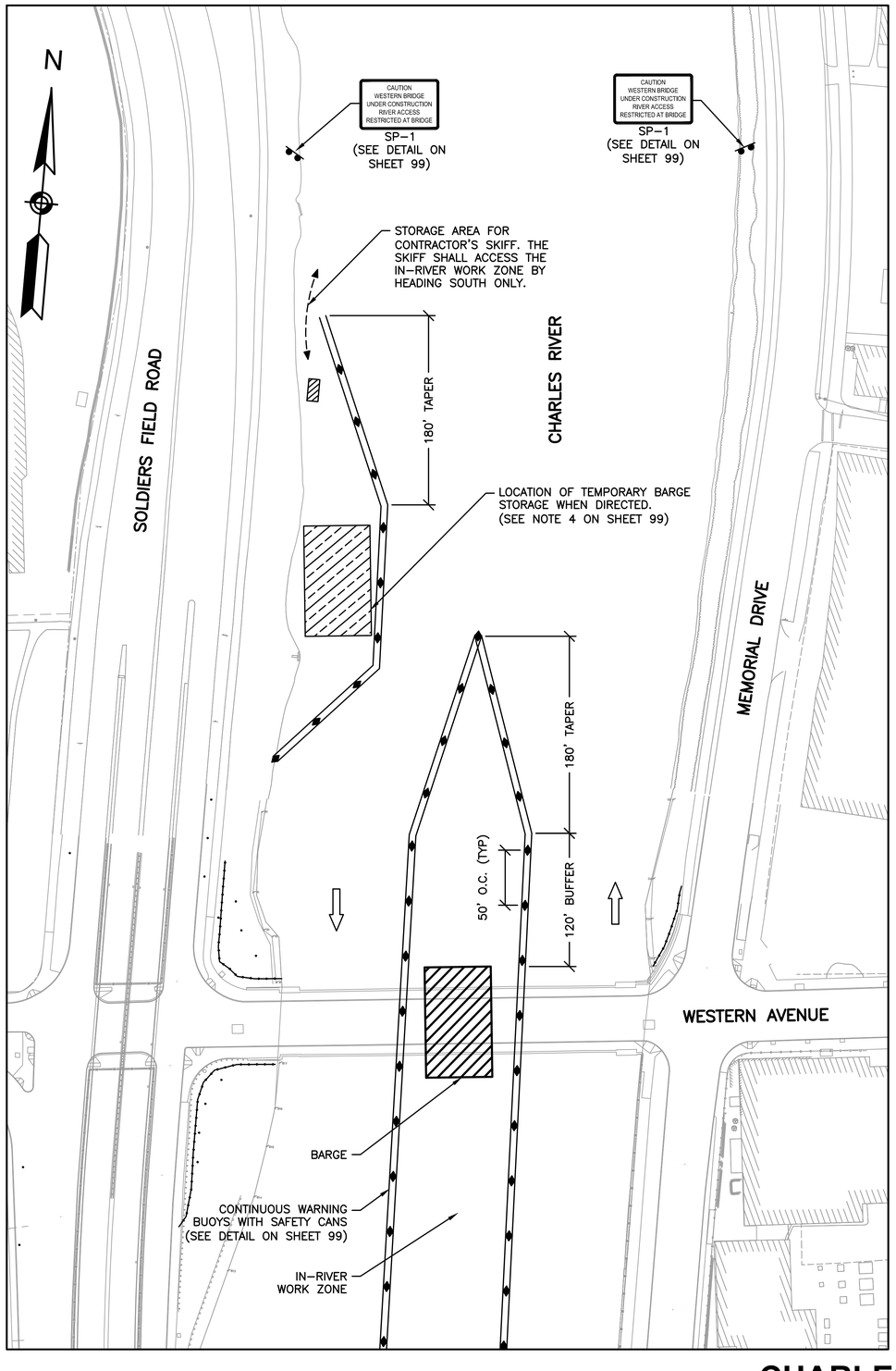
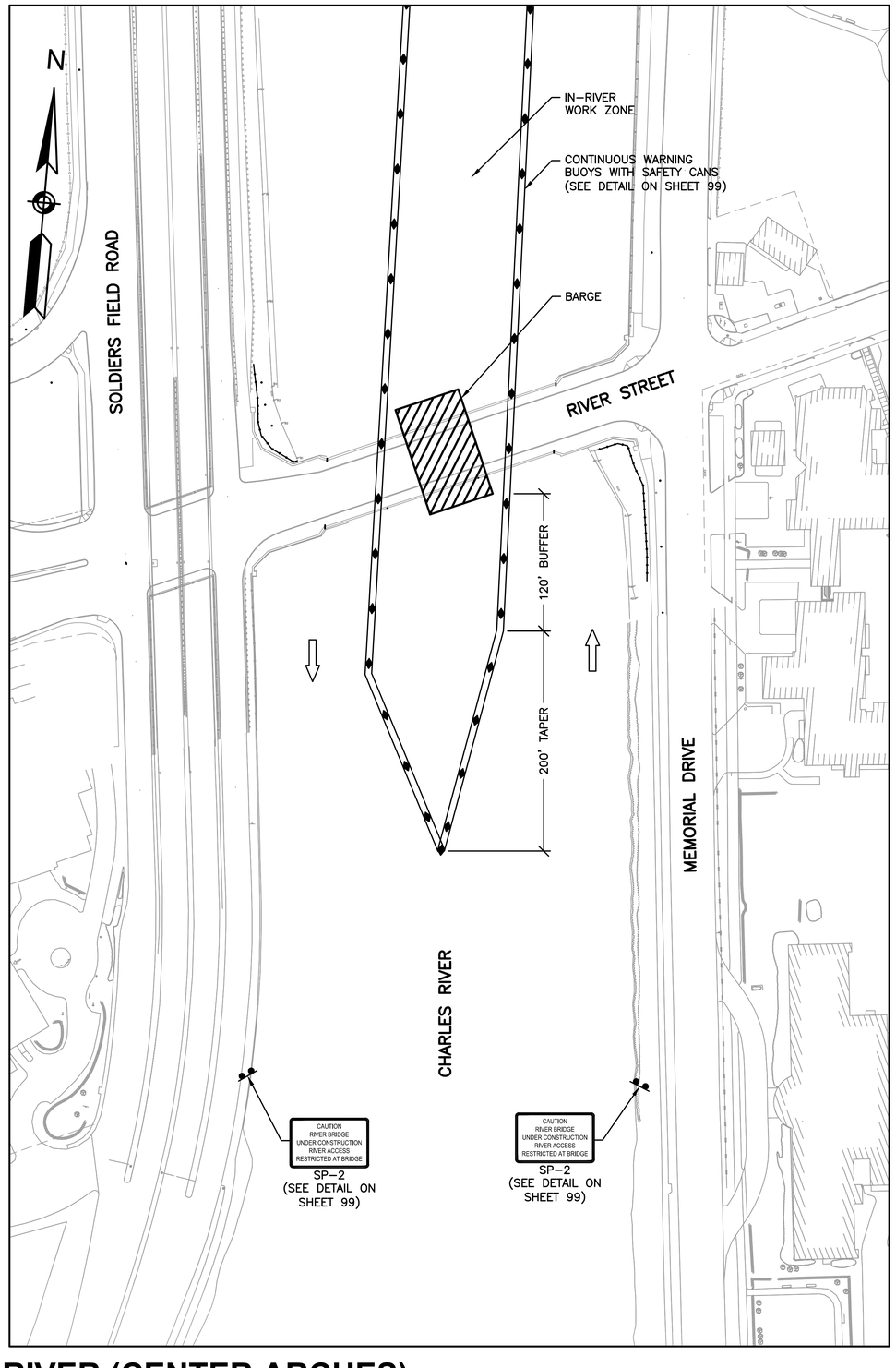
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

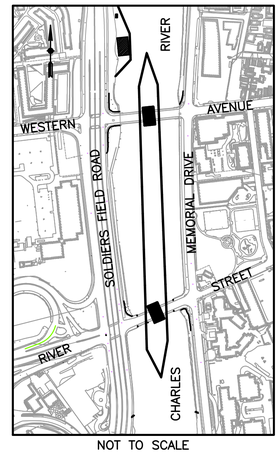
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	97	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS





LOCUS



NOT TO SCALE

CHARLES RIVER (CENTER ARCHES):

TOTAL PHASE APPROXIMATELY 2 MONTHS

60 0 60 120

SCALE 1" = 60'

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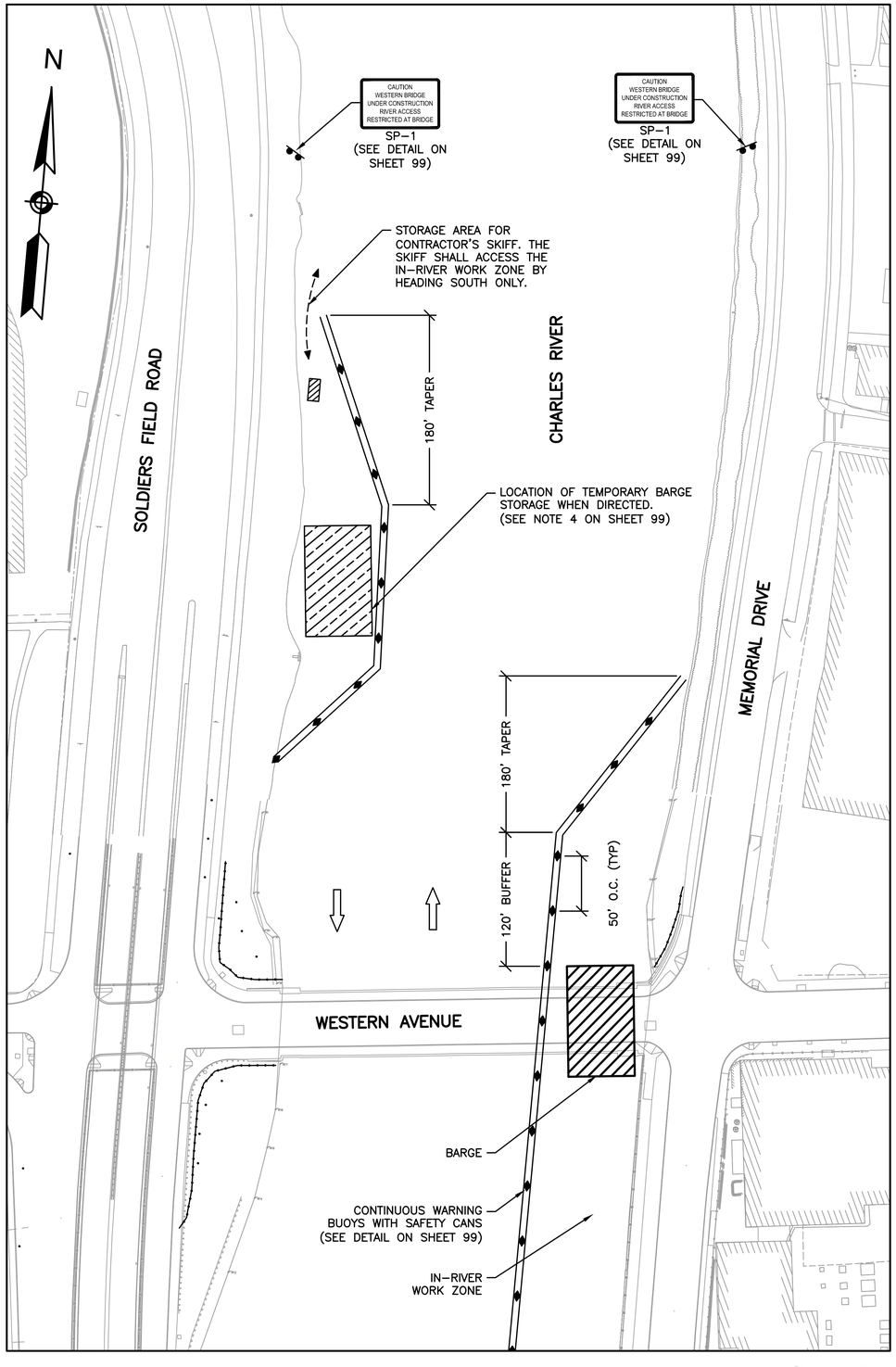
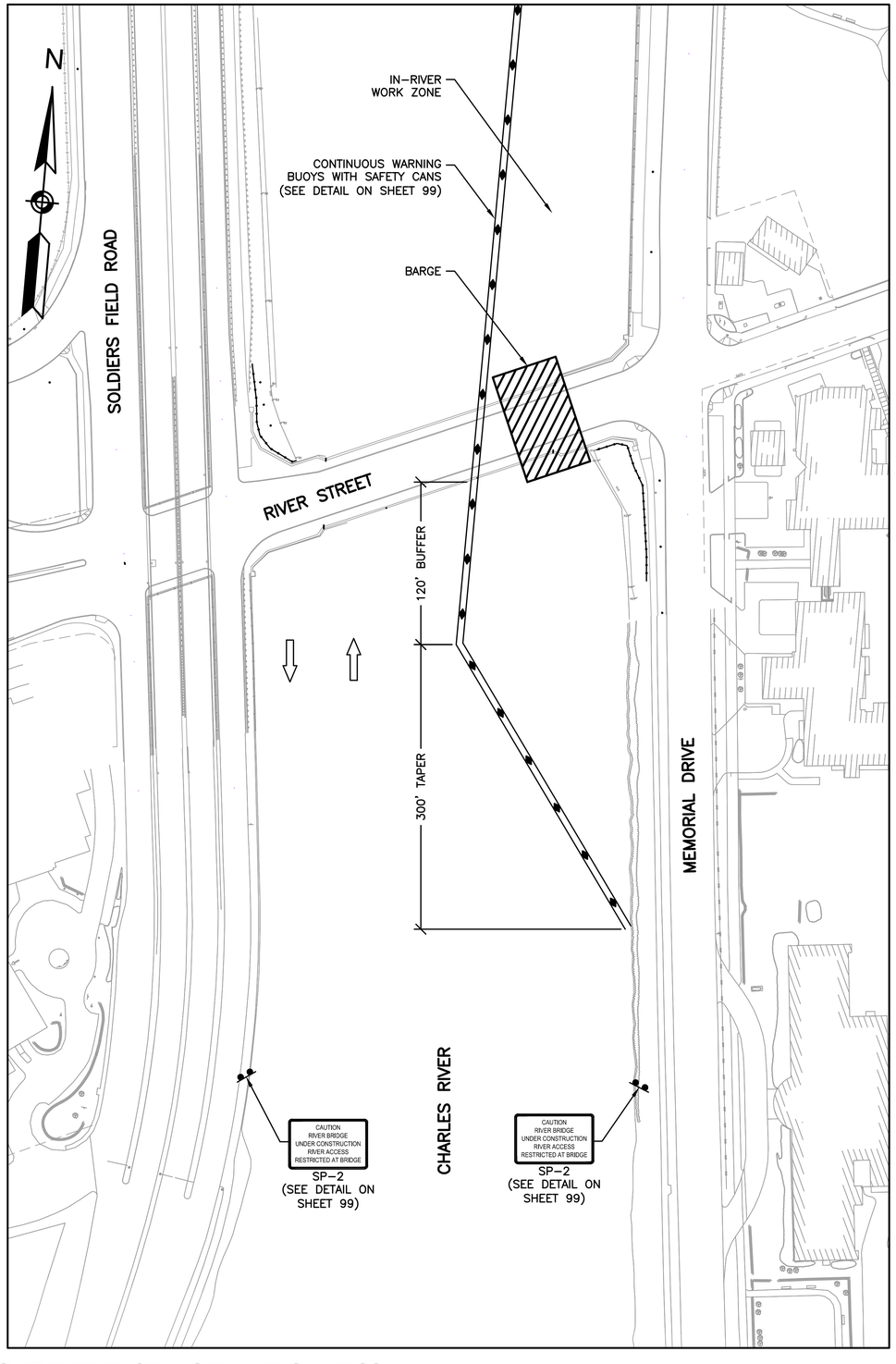
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

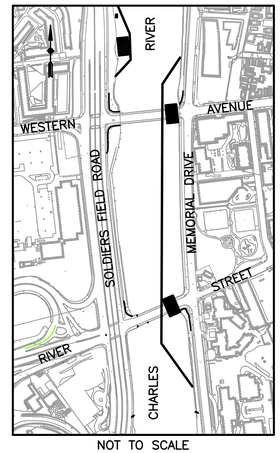
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	98	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL PLANS





LOCUS



NOT TO SCALE

CHARLES RIVER (EAST ARCHES):

TOTAL PHASE APPROXIMATELY 2 MONTHS

60 0 60 120

SCALE 1" = 60'

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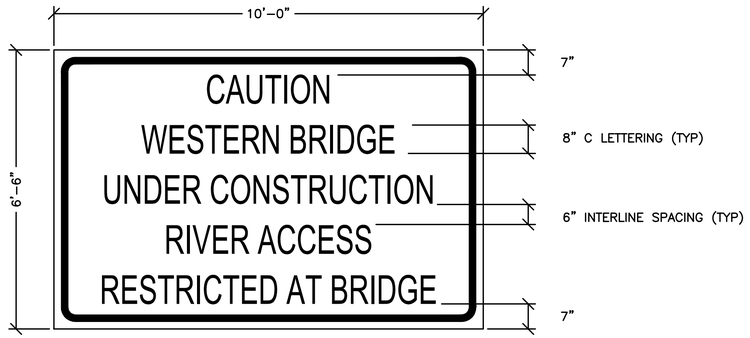
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	99	317
PROJECT FILE NO.	605527		

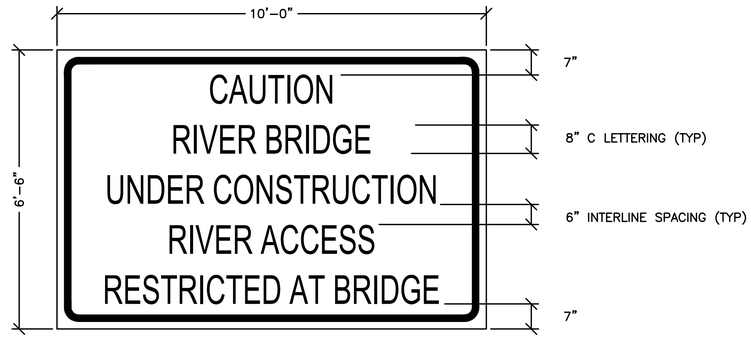
TEMPORARY TRAFFIC CONTROL PLANS

NOTES:

1. TWO ARCHES SHALL BE OPEN TO NAVIGATION/PUBLIC USE AT ALL TIMES DURING CONSTRUCTION.
2. ALL BARGES SHALL BE LIGHTED WITH CONSTANT BURNING WHITE LIGHTS ON ALL FOUR CORNERS.
3. BARGE ANCHOR LINES SHALL BE MARKED BY LIGHTED BUOY.
4. IN-RIVER CONSTRUCTION WORK ZONES SHALL BE BROKEN DOWN AND BARGES MOVED DURING MAJOR EVENTS AS REQUIRED BY THE ENGINEER. THE BARGES SHALL BE TEMPORARILY STORED IN THE LOCATION SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS.
5. SEE SHEETS 96 THROUGH 98 FOR TEMPORARY TRAFFIC CONTROL PLANS.

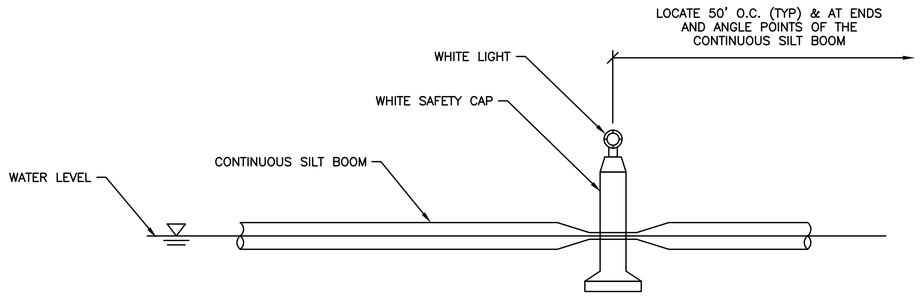


SP-1



SP-2

CUSTOM SIGN DETAILS



CONTINUOUS WARNING BUOY SCHEMATIC DETAIL

CHARLES RIVER:

TOTAL PHASE APPROXIMATELY 6 MONTHS

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BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	100	317
PROJECT FILE NO.	605527		

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

SIGN ID NO.	QUANTITY	LOCATION NO.	LOCATION	TEXT	SIZE OF SIGN WIDTH (in)	SIZE OF SIGN HEIGHT (in)	POST SIZE AND No. REQUIRED	AREA (SQ ft)	TOTAL AREA (SQ ft)
M4–9b	1	SEE SHEETS 63–93		PEDESTRIAN DETOUR	48	36	X	12.00	12.00
M4–9bL	2			PEDESTRIAN DETOUR	48	36	X	12.00	24.00
M4–9bR	2			PEDESTRIAN DETOUR	48	36	X	12.00	24.00
R2–10a	3			WORK ZONE SPEEDING FINES DOUBLED	36	24	X	6.00	18.00
R2–10e	4			END ROAD WORK DOUBLE FINES END	36	24	X	6.00	24.00
R3–5L	2			ONLY	30	36	X	7.50	15.00
R3–6	2				30	36	X	7.50	15.00
R3–6R	2				30	36	X	7.50	15.00
R3–7 (MOD)	4			LEFT 2 LANES EB TRAFFIC ONLY	30	30	X	6.25	25.00
R3–8	2			ONLY ONLY	30	36	X	7.50	15.00
R3–8a	4				30	36	X	7.50	30.00
R3–8aR	2			ONLY	30	36	X	7.50	15.00
R3–8b	4			ONLY ONLY ONLY	30	48	X	10.00	40.00
R3–8bL	2			ONLY ONLY ONLY	30	48	X	10.00	20.00
R3–8bR	6			ONLY ONLY ONLY	30	48	X	10.00	60.00
R3–8c	7			ONLY	30	48	X	10.00	70.00
R3–8cL	6			ONLY ONLY	30	48	X	10.00	60.00
R3–8cR	4			ONLY ONLY	30	48	X	10.00	40.00
R3–8d	4			ONLY	30	36	X	7.50	30.00
R3–8eL	2			ONLY	30	36	X	7.50	15.00
R3–8eR	2	SEE SHEETS 63–93		ONLY	30	36	X	7.50	15.00
R3–8f	2			ONLY	30	48	X	10.00	20.00
R3–8g	2			ONLY ONLY ONLY	30	60	X	12.50	25.00
R3–8gL	4			ONLY ONLY ONLY ONLY	30	60	X	12.50	50.00
R4–7	1				24	30	X	5.00	5.00
R4–8	1				24	30	X	5.00	5.00
R5–1	2			DO NOT ENTER	30	30	X	6.25	12.5
R9–9	4			SIDEWALK CLOSED	30	18	X	3.75	15.00
R9–11L	1			SIDEWALK CLOSED AHEAD CROSS HERE	48	36	X	12.00	12.00
R10–6	3			STOP HERE ON RED	12	18	X	1.50	4.50
R10–11a	3			NO TURN ON RED	12	18	X	1.50	4.50
W1–4R	2				36	36	X	9.00	18.00
W4–2L	6				36	36	X	9.00	54.00
W4–2R	2				36	36	X	9.00	18.00
W5–1	2			ROAD NARROWS	36	36	X	9.00	18.00
W12–1	2				36	36	X	9.00	18.00
W20–1	7			ROAD WORK AHEAD	36	36	X	9.00	63.00
W20–5L	4			LEFT LANE CLOSED AHEAD	36	36	X	9.00	36.00
W20–5R	2			RIGHT LANE CLOSED AHEAD	36	36	X	9.00	18.00
W20–5aL	2			LEFT 2 LANES CLOSED AHEAD	36	36	X	9.00	18.00

(1) SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AMENDMENTS FOR LATEST SPECIFICATION ON TEXT, DIMENSIONS AND COLOR. ALSO REFER TO 1995 MASSDOT STANDARD SPECIFICATIONS SECTION M 9.30.0

L:\09149\CURRENT\CUTSHEETS\TMP SIGN SUMMARY.dwg, 1/4/2013 1:19:30 PM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	101	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
SITE PREPARATION AND REMOVALS
SHEET 1 OF 14
LA1

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED – CLEAR & GRUB ROOTS
- INVASIVE VEGETATION

N

I-90 ON-RAMP

I-90 OFF-RAMP

I-90 ON-RAMP

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

APPROXIMATE LANDSCAPE LIMIT OF WORK

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126
ASSESSORS PARCEL ID 2200301000

REMOVE EXISTING TREES CLEAR AND GRUB ROOTS, TYP

LIMIT OF WORK
STA 100+00
N 2,956,662.8046
E 759,147.0185

CITY OF BOSTON LAYOUT

APPROXIMATE LANDSCAPE LIMIT OF WORK

CAMBRIDGE STREET

CITY OF BOSTON LAYOUT

EXISTING SHRUBS TO BE RETAINED AND PROTECTED

LAYOUT LINE

APPROXIMATE LANDSCAPE LIMIT OF WORK

APPROXIMATE LANDSCAPE LIMIT OF WORK

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

N/F
HARVARD UNIVERSITY
BEACON YARDS, LLC
BK 31596 PG 155
BK 31580 PG 81
ASSESSORS PARCEL ID
2200107010

N.O. PARKING

N O P A R K I N G

DOUBLETREE HOTEL
N/F
ALAN M. LEVENTHAL
TRUSTEE OF 400 SOLDIERS FIELD ROAD NOMINEE TRUST
BK 36236 PG 154
BK 10751 PG 49
ASSESSORS PARCEL ID 2200102000

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

APPROXIMATE 100' WETLAND BUFFER

LIMIT OF WORK
STA 301+10
N 2,956,672.8298
E 759,485.2878

LIMIT OF WORK
STA 401+00
N 2,956,673.0337
E 759,572.7806

CONT. ON SHEET 105

MATCHLINE A

MATCHLINE B

CONT. ON SHEET 102

+53.64 PT

+69.11 PC

+34.47 PT

+65.50 PC

25' RIVERFRONT AREA (RFA)

CHARLES RIVER

RIVER STREET

RETAIN EXISTING GUARDRAIL

RETAIN EXISTING HEADWALL

APPROXIMATE LANDSCAPE LIMIT OF WORK

REMOVE APPROXIMATE 1,380 SF AREA OF INDIGO BUSH (AMORPHA FRUTICOSA) AND TREE OF HEAVEN (AILANTHUS ALTISSIMA) BY CONTROLLED APPLICATION METHODS, AS SPECIFIED

REMOVE ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE VEGETATION UNLESS OTHERWISE SHOWN TO BE PROTECTED, AS SPECIFIED

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR ADDITIONAL NOTES.
2. PLANT INVENTORY AREAS ARE REFERENCED IN LANDSCAPE SHEET 114.
3. TREE NUMBERS ARE REFERENCED IN THE TREE INVENTORY ON LANDSCAPE SHEET 114.
4. REFER TO LANDSCAPE SHEETS 112 AND 113 FOR LANDSCAPE DETAILS.
5. REFER TO CONSTRUCTION PLAN SHEETS 17–21 FOR COMPOST FILTER TUBES, EROSION CONTROL HAYBALES, AND TURBIDITY CURTAINS.
6. REMOVAL OF ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE PLANT MATERIAL SHALL BE DONE IMMEDIATELY BY CONTRACTOR PRIOR TO INITIATING ANY OTHER PRE–CONSTRUCTION OPERATIONS, REMOVALS OR CONSTRUCTION.

20 0 20 40

SCALE 1" = 20'

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	102	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
SITE PREPARATION AND REMOVALS
SHEET 2 OF 14
LA2

N

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED – CLEAR & GRUB ROOTS
- INVASIVE VEGETATION

RETAIN EXISTING BENCH

APPROXIMATE LANDSCAPE LIMIT OF WORK

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

REMOVE EXISTING TREES CLEAR AND GRUB ROOTS, TYP

REMOVE ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE VEGETATION UNLESS OTHERWISE SHOWN TO BE PROTECTED, AS SPECIFIED

REMOVE APPROXIMATE 120 SF AREA OF INDIGO BUSH (AMORPHA FRUTICOSA) BY CONTROLLED APPLICATION METHODS AS SPECIFIED

RETAIN EXISTING HEADWALL

APPROXIMATE LANDSCAPE LIMIT OF WORK

EXISTING SHRUBS TO BE RETAINED AND PROTECTED

APPROXIMATE LANDSCAPE LIMIT OF WORK

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (MARCH 10, 1921)

LIMIT OF WORK
STA 110+30
N 2,957,041.3039
E 760,102.3348

LIMIT OF WORK
STA 502+00
N 2,956,814.7241
E 759,976.8347

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

RIVER STREET

MEMORIAL DRIVE

25' RIVERFRONT AREA (RFA)

APPROXIMATE 100' WETLAND BUFFER

N/F
SHELL OIL COMPANY
820 MEMORIAL DRIVE
MAP 129 LOT 55

RIVERSIDE PRESS PARK
N/F
CITY OF CAMBRIDGE
2 BLACKSTONE STREET
L.C. PLAN NO. 8817C
MAP 129 LOT 59

808 MEMORIAL DRIVE
N/F
808 MEMORIAL DRIVE ASSOCIATION
808 MEMORIAL DRIVE
MAP 128 LOT 30

MOBIL

RIGHT OF WAY CITY OF CAMBRIDGE LAYOUT

CITY OF CAMBRIDGE LAYOUT

MATCHLINE B

CONT. ON SHEET 101

+54.81 PT

+38.62 PC

+12.57 PT

+42.01 PC

505 504 503 502

36 37 38 39 40 41 42

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR ADDITIONAL NOTES.
2. PLANT INVENTORY AREAS ARE REFERENCED IN LANDSCAPE SHEET 114.
3. TREE NUMBERS ARE REFERENCED IN THE TREE INVENTORY ON LANDSCAPE SHEET 114.
4. REFER TO LANDSCAPE SHEETS 112 AND 113 FOR LANDSCAPE DETAILS.
5. REFER TO CONSTRUCTION PLAN SHEETS 17–21 FOR COMPOST FILTER TUBES, EROSION CONTROL HAYBALES, AND TURBIDITY CURTAINS.
6. REMOVAL OF ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE PLANT MATERIAL SHALL BE DONE IMMEDIATELY BY CONTRACTOR PRIOR TO INITIATING ANY OTHER PRE–CONSTRUCTION OPERATIONS, REMOVALS OR CONSTRUCTION.

20 0 20 40

SCALE 1" = 20'

N

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED – CLEAR & GRUB ROOTS
- INVASIVE VEGETATION

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR ADDITIONAL NOTES.
2. PLANT INVENTORY AREAS ARE REFERENCED IN LANDSCAPE SHEET 114.
3. TREE NUMBERS ARE REFERENCED IN THE TREE INVENTORY ON LANDSCAPE SHEET 114.
4. REFER TO LANDSCAPE SHEETS 112 AND 113 FOR LANDSCAPE DETAILS.
5. REFER TO CONSTRUCTION PLAN SHEETS 17–21 FOR COMPOST FILTER TUBES, EROSION CONTROL HAYBALES, AND TURBIDITY CURTAINS.
6. REMOVAL OF ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE PLANT MATERIAL SHALL BE DONE IMMEDIATELY BY CONTRACTOR PRIOR TO INITIATING ANY OTHER PRE–CONSTRUCTION OPERATIONS, REMOVALS OR CONSTRUCTION.

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	103	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
SITE PREPARATION AND REMOVALS
SHEET 3 OF 14
LA3

HARVARD UNIVERSITY
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE
ASSESSOR PARCEL ID 2200481000

LIMIT OF WORK
STA 315+00
N 2,958,055.1671
E 759,363.0645

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

GRASS

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

APPROXIMATE 100' WETLAND BUFFER

LIMIT OF WORK
STA 414+85
N 2,958,053.2124
E 759,449.9851

APPROXIMATE LANDSCAPE LIMIT OF WORK

REMOVE ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE VEGETATION UNLESS OTHERWISE SHOWN TO BE PROTECTED, AS SPECIFIED

RETAIN EXISTING CULVERT

CHARLES RIVER

RETAIN EXISTING SIGNS

+38.70 PT

REMOVE APPROXIMATE 790 SF AREA OF JAPANESE KNOTWEED (FALLOPIA JAPONICA) BY CONTROLLED APPLICATION METHODS, AS SPECIFIED

LIMIT OF WORK
STA 201+00
N 2,957,935.3637
E 759,186.0117

APPROXIMATE LANDSCAPE LIMIT OF WORK

CITY OF BOSTON LAYOUT

RIGHT OF WAY

WESTERN AVENUE

200 201 +65.01 PI 202 314 203 414 204 205

MATCHLINE

RETAIN EXISTING CONTROL BOX

±62.22 PC

CONT. ON SHEET 104

APPROXIMATE LANDSCAPE LIMIT OF WORK

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

GENZYME CORPORATION
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126
ASSESSOR PARCEL ID 2200301000

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

PROTECT EXISTING GUARDRAIL

REMOVE EXISTING TREES CLEAR AND GRUB ROOTS, TYP

REMOVE ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE VEGETATION UNLESS OTHERWISE SHOWN TO BE PROTECTED, AS SPECIFIED

APPROXIMATE LANDSCAPE LIMIT OF WORK

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

APPROXIMATE 100' WETLAND BUFFER

+62.52 PT

SOLDIERS FIELD ROAD RAMP

CONT. ON SHEET 105

MATCHLINE

20 0 20 40

SCALE 1" = 20'

N

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED – CLEAR & GRUB ROOTS
- INVASIVE VEGETATION

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	104	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
SITE PREPARATION AND REMOVALS
SHEET 4 OF 14
LA4

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

RETAIN EXISTING SIGN

APPROXIMATE LANDSCAPE LIMIT OF WORK

REMOVE ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE VEGETATION UNLESS OTHERWISE SHOWN TO BE PROTECTED, AS SPECIFIED

REMOVE APPROXIMATE 1,090 SF AREA OF INDIGO BUSH (AMORPHA FRUTICOSA) BY CONTROLLED APPLICATION METHODS, AS SPECIFIED

LIMIT OF WORK
STA 515+10
N 2,958,122.4832
E 759,931.4396

APPROXIMATE 25' RIVER FRONT AREA (RFA)

MEMORIAL DRIVE

APPROXIMATE 100' WETLAND BUFFER

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT

WHEELER PARK
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
880 MEMORIAL DRIVE
MAP 130 LOT 1

LIMIT OF WORK
STA 210+00
N 2,958,031.3574
E 760,080.8514

RIGHT OF WAY

CITY OF CAMBRIDGE LAYOUT

CHARLES RIVER

MATCHLINE D

WESTERN AVENUE

205 206 207 208 209 210 211

514 515 516

+46.42 PT

70 71 72

CONT. ON SHEET 103

CHARLES RIVER

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

APPROXIMATE LANDSCAPE LIMIT OF WORK

RETAIN EXISTING SIGN

69

513 512

+67.23 PC

BLACKSTONE STEAM PLANT
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
24 BLACKSTONE STREET
MAP 129 LOT 47

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR ADDITIONAL NOTES.
2. PLANT INVENTORY AREAS ARE REFERENCED IN LANDSCAPE SHEET 114.
3. TREE NUMBERS ARE REFERENCED IN THE TREE INVENTORY ON LANDSCAPE SHEET 114.
4. REFER TO LANDSCAPE SHEETS 112 AND 113 FOR LANDSCAPE DETAILS.
5. REFER TO CONSTRUCTION PLAN SHEETS 17–21 FOR COMPOST FILTER TUBES, EROSION CONTROL HAYBALES, AND TURBIDITY CURTAINS.
6. REMOVAL OF ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE PLANT MATERIAL SHALL BE DONE IMMEDIATELY BY CONTRACTOR PRIOR TO INITIATING ANY OTHER PRE–CONSTRUCTION OPERATIONS, REMOVALS OR CONSTRUCTION.

20 0 20 40

SCALE 1" = 20'

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	105	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
SITE PREPARATION AND REMOVALS
SHEET 5 OF 14
LA5

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED – CLEAR & GRUB ROOTS
- INVASIVE VEGETATION

N

APPROXIMATE LANDSCAPE LIMIT OF WORK

GENZYME CORPORATION
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 SOLDIERS FIELD ROAD
BK 25140 PG 126
ASSESSORS PARCEL ID 2200301100

N/F
PRESIDENT AND FELLOWS OF
HARVARD COLLEGE
1 SOLDIERS FIELD ROAD
BK 25140 PG 126
ASSESSORS PARCEL ID 2200301100

I-90 ON RAMP

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

REMOVE EXISTING TREES CLEAR AND GRUB ROOTS, TYP

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

RIGHT OF WAY

PARCEL B33-E1
BK 7696 PG 449

EASEMENT LINE

CONT. ON SHEET 101

CONT. BELOW

MATCHLINE E

MATCHLINE A

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

APPROXIMATE 100' WETLAND BUFFER

CONT. ON SHEET 103

MATCHLINE C

CONT. ABOVE

EXISTING TREES TO BE RETAINED AND PROTECTED, TYP SEE DETAIL

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR ADDITIONAL NOTES.
2. PLANT INVENTORY AREAS ARE REFERENCED IN LANDSCAPE SHEET 114.
3. TREE NUMBERS ARE REFERENCED IN THE TREE INVENTORY ON LANDSCAPE SHEET 114.
4. REFER TO LANDSCAPE SHEETS 112 AND 113 FOR LANDSCAPE DETAILS.
5. REFER TO CONSTRUCTION PLAN SHEETS 17–21 FOR COMPOST FILTER TUBES, EROSION CONTROL HAYBALES, AND TURBIDITY CURTAINS.
6. REMOVAL OF ALL HAZARDOUS, DETRIMENTAL, NUISANCE AND INVASIVE PLANT MATERIAL SHALL BE DONE IMMEDIATELY BY CONTRACTOR PRIOR TO INITIATING ANY OTHER PRE–CONSTRUCTION OPERATIONS, REMOVALS OR CONSTRUCTION.

20 0 20 40

SCALE 1" = 20'

PLANT LIST– RIVER STREET– BOSTON

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	LOCATION	PLANT TYPE	SIZE	REMARKS
3	AR	ACER RUBRUM 'RED SUNSET'	RED MAPLE	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM
2	TA	TILIA AMERICANA 'AMERICAN SENTRY'	AMERICAN SENTRY LINDEN	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM

BOSTON
RIVER STREET AND WESTERN AVENUE BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	106	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
PLANTING
SHEET 6 OF 14
LA6

N

I–90 ON–RAMP

I–90 OFF–RAMP

I–90 ON–RAMP

LIMIT OF WORK
STA 100+00
N 2,956,662.8046
E 759,147.0185

APPROXIMATE LIMIT OF GRADING

SCARIFIED AND SEEDED LAWN WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

CITY OF BOSTON LAYOUT

RETAIN EXISTING TREE

APPROXIMATE LANDSCAPE LIMIT OF WORK

N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
BK 25140 PG 126
ASSESSORS PARCEL ID 2200301000

1 TA

35'

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

A

304

MATCHLINE

A

CONT. ON SHEET 110

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

EASEMENT LINE
PARCEL B&E
BK 2696 PG 543

RIGHT OF WAY

303

APPROXIMATE 100' WETLAND BUFFER

405

+53.64
PT

404

+69.11
PC

SOLDIERS FIELD ROAD RAMP

25' RIVERFRONT AREA (RFA)

CHARLES RIVER

12'

APPROXIMATE LANDSCAPE LIMIT OF WORK

3 AR

RETAIN EXISTING TREE

20'

20'

TREE PLANTING, TYP SEE DETAIL

+34.47
PT

403

+65.50
PC

SEEDED SLOPE– RESTORATION MIX AND GEOTEXTILE FABRIC FOR STABILIZATION SEE DETAIL

SLOPE STABILIZATION SEE DETAIL

8'

B

MATCHLINE

106

105

104

103

102

101

100

CAMBRIDGE STREET

RIVER STREET

CHARLES RIVER

CONT. ON SHEET 107

APPROXIMATE LIMIT OF GRADING

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAIL (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

RETAIN EXISTING TREES

CITY OF BOSTON LAYOUT

20'

1 TA

LAYOUT LINE

RETAIN EXISTING TREES AND SHURBS

APPROXIMATE LANDSCAPE LIMIT OF WORK

RETAIN EXISTING TREES

APPROXIMATE LANDSCAPE LIMIT OF WORK

N/F
HARVARD UNIVERSITY
BEACON YARDS, LLC
BK 31596 PG 155
BK 31580 PG 81
ASSESSORS PARCEL ID
2200107010

RETAIN EXISTING TREES

DOUBLETREE HOTEL
N/F
ALAN M. LEVENTHAL
TRUSTEE OF 400 SOLDIERS FIELD ROAD NOMINEE TRUST
BK 36236 PG 154
BK 10751 PG 49
ASSESSORS PARCEL ID 2200102000

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

302

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

301

LIMIT OF WORK
STA 301+10
N 2,956,672.8298
E 759,485.2878

402

25' RIVERFRONT AREA (RFA)

SOLDIERS FIELD ROAD RAMP

401

LIMIT OF WORK
STA 401+00
N 2,956,673.0337
E 759,572.7806

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED CLEAR & GRUB ROOTS
- SCARIFIED AND SEEDED LAWN MIX
- SEEDED SLOPE RESTORATION MIX
- SLOPE STABILIZATION

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR PLANTING NOTES.
2. REFER TO DETAIL LANDSCAPE SHEET 113 FOR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE SHEET 114 FOR TREE INVENTORY PLANT LIST.
4. CONFIRM ALL PROPOSED TREE LOCATIONS ARE NOT WITHIN FOUR (4) FEET OF ANY EXISTING UTILITY. PLANT RELOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND MASSDOT LANDSCAPE ARCHITECT.
5. LAWN RESTORATION SHALL INCLUDE ALL EXISTING COMPACTED OR DISTURBED LAWN AREAS WITHIN THE PROJECT LIMITS. REFER TO DETAILS AND SPECIFICATIONS.
6. FINISHED SITE GRADES SHALL BE RESTORED TO EXISTING GRADIENTS UNLESS OTHERWISE DIRECTED OR NOTED.

20 0 20 40

SCALE 1" = 20'

PLANT LIST– RIVER STREET– CAMBRIDGE

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	LOCATION	PLANT TYPE	SIZE	REMARKS
5	PA	PLATANUS X ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE	CAMBRIDGE	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	107	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
PLANTING
SHEET 7 OF 14
LA7

N

BOSTON (SUFFOLK COUNTY)
CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

RIVER STREET

MATCHLINE B

CONT. ON SHEET 106

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

APPROXIMATE LANDSCAPE LIMIT OF WORK

RETAIN EXISTING TREE

SLOPE STABILIZATION SEE DETAIL

SEEDED SLOPE– RESTORATION MIX AND GEOTEXTILE FABRIC FOR STABILIZATION SEE DETAIL

TREE PLANTING, TYP SEED DETAIL

2 PA

3 PA

+54.81 PT

+38.62 PC

+42.01 PC

+12.57 PT

25' RIVERFRONT AREA (RFA)

50'

70'

60'

60'

MEMORIAL DRIVE

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (MARCH 10, 1921)

APPROXIMATE 100' WETLAND BUFFER

RIVERSIDE PRESS PARK
N/F
CITY OF CAMBRIDGE
2 BLACKSTONE STREET
L.C. PLAN NO. 8817C
MAP 129 LOT 59

LIMIT OF WORK
STA. 110+30
N 2,957,041.3039
E 760,102.3348

CITY OF CAMBRIDGE LAYOUT

N/F
SHELL OIL COMPANY
820 MEMORIAL DRIVE
MAP 129 LOT 55

RIVER STREET

CITY OF CAMBRIDGE LAYOUT

RETAIN EXISTING SHRUBS AND PLANTINGS

RETAIN EXISTING TREE

APPROXIMATE LIMIT OF GRADING

APPROXIMATE LANDSCAPE LIMIT OF WORK

RETAIN EXISTING SHRUBS AND PLANTINGS

808 MEMORIAL DRIVE
N/F
808 MEMORIAL DRIVE ASSOCIATION
808 MEMORIAL DRIVE
MAP 128 LOT 30

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (MARCH 10, 1921)

LIMIT OF WORK
STA 502+00
N 2,956,814.7241
E 759,976.8347

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED CLEAR & GRUB ROOTS
- SCARIFIED AND SEEDED LAWN MIX
- SEEDED SLOPE RESTORATION MIX
- SLOPE STABILIZATION

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR PLANTING NOTES.
2. REFER TO DETAIL LANDSCAPE SHEET 113 FOR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE SHEET 114 FOR TREE INVENTORY PLANT LIST.
4. CONFIRM ALL PROPOSED TREE LOCATIONS ARE NOT WITHIN FOUR (4) FEET OF ANY EXISTING UTILITY. PLANT RELOCATIONS SHALL BE COORDINATED WITH THE ENGINEER AND MASSDOT LANDSCAPE ARCHITECT.
5. LAWN RESTORATION SHALL INCLUDE ALL EXISTING COMPACTED OR DISTURBED LAWN AREAS WITHIN THE PROJECT LIMITS. REFER TO DETAILS AND SPECIFICATIONS.
6. FINISHED SITE GRADES SHALL BE RESTORED TO EXISTING GRADIENTS UNLESS OTHERWISE DIRECTED OR NOTED.

20 0 20 40

SCALE 1" = 20'

PLANT LIST– BOSTON AND CAMBRIDGE

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	LOCATION	PLANT TYPE	SIZE	REMARKS
4	PA	PLATANUS X ACERIFIOLIA 'BLOODGOOD'	LONDON PLANE TREE	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM
6	TA	TILIA AMERICANA 'AMERICAN SENTRY'	AMERICAN SENTRY LINDEN	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM
3	QP	QUERCUS PALUSTRIS 'CROWNRIGHT'	PIN OAK	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED CLEAR & GRUB ROOTS
- SCARIFIED AND SEEDED LAWN MIX
- SEEDED SLOPE RESTORATION MIX
- SLOPE STABILIZATION

BOSTON
RIVER STREET AND WESTERN AVENUE BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	108	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
PLANTING
SHEET 8 OF 14
LA8

N

WESTERN AVENUE

CITY OF BOSTON LAYOUT

HARVARD UNIVERSITY
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
1 WESTERN AVENUE
ASSESSOR PARCEL ID 2200481000

GENZYME CORPORATION
N/F
PRESIDENT AND FELLOWS
OF HARVARD COLLEGE
BK 25140 PG 126
ASSESSOR PARCEL ID 2200301000

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT (OCTOBER 3, 1963)

SOLDIERS FIELD ROAD RAMP

SOLDIERS FIELD ROAD (EASTBOUND)

SOLDIERS FIELD ROAD (WESTBOUND)

APPROXIMATE 100' WETLAND BUFFER

CHARLES RIVER

MATCHLINE

LIMIT OF WORK
STA 201+00
N 2,957,935.3637
E 759,186.0117

LIMIT OF WORK
STA 315+00
N 2,958,055.1671
E 759,363.0645

LIMIT OF WORK
STA 414+85
N 2,958,051.2124
E 759,449.9851

+65.01

+38.70 PT

±62.22 PC

+62.52 PT

1 TA

3 TA

3 QP

1 PA

3 PA

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

SCARIFIED AND SEEDED LAWN MIX SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

APPROXIMATE LANDSCAPE LIMIT OF WORK

APPROXIMATE LIMIT OF GRADING

RETAIN EXISTING TREES

RETAIN EXISTING TREE

SEEDED SLOPE– RESTORATION MIX AND GEOTEXTILE FABRIC FOR STABILIZATION SEE DETAIL

SLOPE STABILIZATION SEE DETAIL

TREE PLANTING, TYP SEE DETAIL

CONT. ON SHEET 110

CONT. ON SHEET 109

NOTES:

1. REFER TO LANDSCAPE SHEET 111 FOR PLANTING NOTES.
2. REFER TO DETAIL LANDSCAPE SHEET 113 FOR SLOPE STABILIZATION.
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20 0 20 40
SCALE 1" = 20'

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	109	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
PLANTING
SHEET 9 OF 14
LA9

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED CLEAR & GRUB ROOTS
- SCARIFIED AND SEEDED LAWN MIX
- SEEDED SLOPE RESTORATION MIX
- SLOPE STABILIZATION

N

BOSTON (SUFFOLK COUNTY) / CAMBRIDGE (MIDDLESEX COUNTY)

CHARLES RIVER

MATCHLINE D

CONT. ON SHEET 108

WESTERN AVENUE

205 206 207 208 209 210 211

514 513 512 516 515

MEMORIAL DRIVE

LIMIT OF WORK
STA 515+10
N 2,958,122.4832
E 759,931.4396

LIMIT OF WORK
STA 210+00
N 2,958,031.3574
E 760,080.8514

+46.42 PT

+67.23 PC

APPROXIMATE 25' RIVER FRONT AREA (RFA)

APPROXIMATE 100' WETLAND BUFFER

DEPARTMENT OF CONSERVATION AND RECREATION LAYOUT

RIGHT OF WAY

CITY OF CAMBRIDGE LAYOUT

WHEELER PARK
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
880 MEMORIAL DRIVE
MAP 130 LOT 1

BLACKSTONE STEAM PLANT
N/F
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
24 BLACKSTONE STREET
MAP 129 LOT 47

SEEDED SLOPE– RESTORATION MIX AND GEOTEXTILE FABRIC FOR STABILIZATION SEE DETAIL

APPROXIMATE LANDSCAPE LIMIT OF WORK

SLOPE STABILIZATION SEE DETAIL

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

RETAIN EXISTING TREE

APPROXIMATE LANDSCAPE LIMIT OF WORK

RETAIN EXISTING TREE

RETAIN EXISTING TREE

SCARIFIED AND SEEDED LAWN MIX WITH COMPOST TOPSOIL, SEE DETAILS (AT COMPACTED OR DISTURBED AREAS, MANUALLY SCARIFY AT TREE ROOTS)

APPROXIMATE LANDSCAPE LIMIT OF WORK

NOTES:

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2. REFER TO DETAIL LANDSCAPE SHEET 113 FOR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE SHEET 114 FOR TREE INVENTORY PLANT LIST.
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20 0 20 40

SCALE 1" = 20'

N

LEGEND:

- TEMPORARY TREE PROTECTION FENCE
- APPROXIMATE LANDSCAPE LIMIT OF WORK
- TREE TRUNK PROTECTION
- TREE TO BE REMOVED CLEAR & GRUB ROOTS
- SCARIFIED AND SEEDED LAWN MIX
- SEEDED SLOPE RESTORATION MIX
- SLOPE STABILIZATION

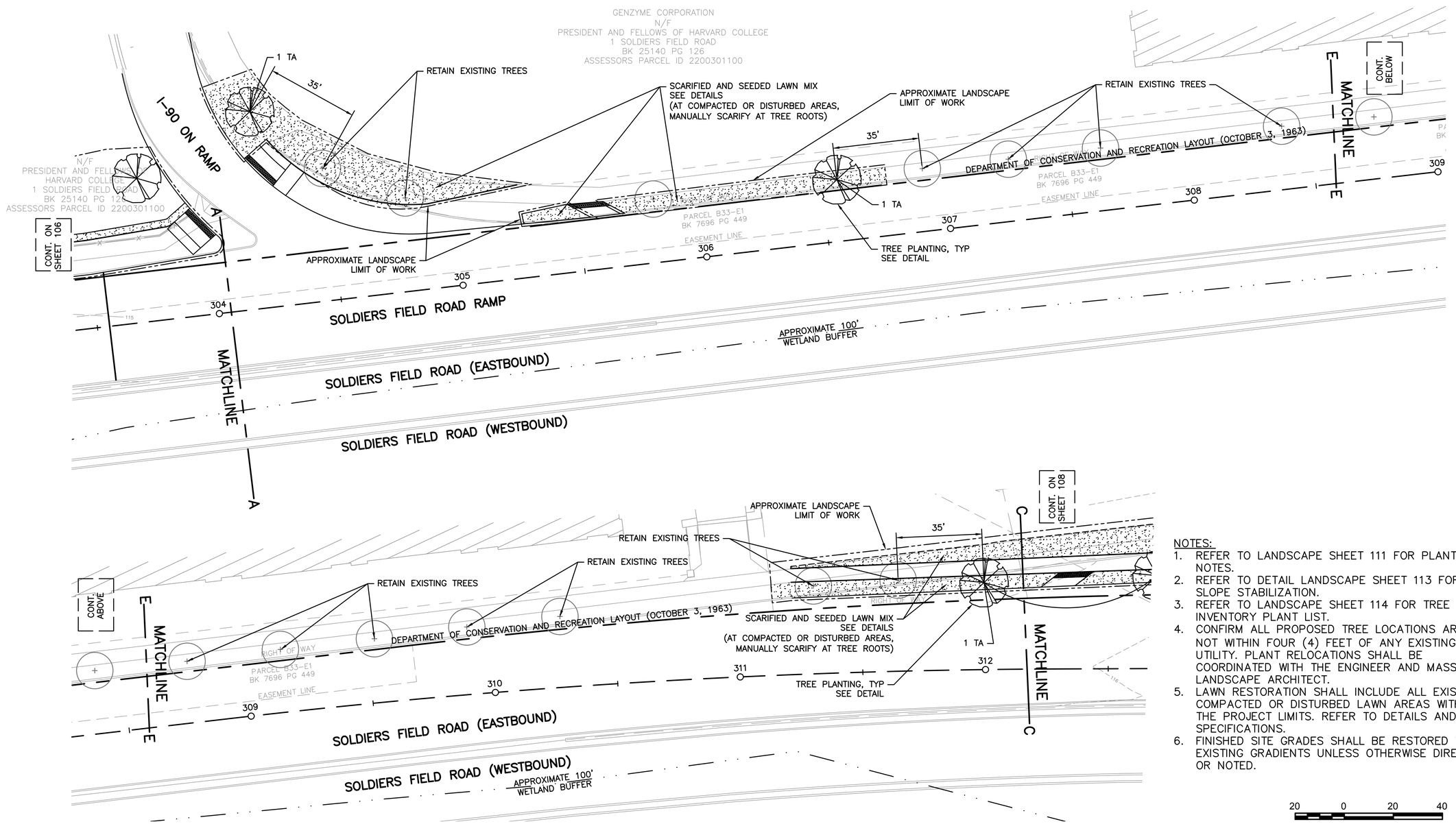
SUMMARY PLANT LIST– BOSTON AND CAMBRIDGE

QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	LOCATION	PLANT TYPE	SIZE	REMARKS
3	TA	TILIA AMERICANA 'AMERICAN SENTRY'	AMERICAN SENTRY LINDEN	BOSTON	DECIDUOUS TREE	3"–3.5" CALIPER	B&B, SINGLE STEM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	110	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
PLANTING
SHEET 10 OF 14
LA10



NOTES:

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2. REFER TO DETAIL LANDSCAPE SHEET 113 FOR SLOPE STABILIZATION.
3. REFER TO LANDSCAPE SHEET 114 FOR TREE INVENTORY PLANT LIST.
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20 0 20 40

SCALE 1" = 20'

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	111	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
DETAILS
SHEET 11 OF 14
LD1

LANDSCAPE LEGEND

APPROXIMATE LANDSCAPE LIMIT OF WORK

TREE PLANTING

SCARIFIED AND SEEDED LAWN

SEEDED SLOPE RESTORATION MIX

SLOPE STABILIZATION

TEMPORARY TREE PROTECTION FENCE

TEMPORARY TREE TRUNK PROTECTION

TREE TO BE REMOVED
CLEAR AND GRUB ROOTS

LANDSCAPE NOTES

(REFER TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)

GENERAL NOTES

1. THE LANDSCAPE DESIGN FOR THE REHABILITATION OF RIVER STREET AND WESTERN AVENUE BRIDGES INCORPORATES APPROPRIATE CONFORMANCE WITH THE MASTER PLAN FOR THE CHARLES RIVER BY GOODY CLANCY ASSOCIATES FOR THE METROPOLITAN DISTRICT COMMISSION, APRIL 2002, NOW THE DEPARTMENT OF CONSERVATION AND RECREATION (DCR).

2. THE INTENT OF THE DESIGN IS ALSO TO INCORPORATE AS MUCH AS POSSIBLE APPEARANCE OF KNOWN HISTORICAL FEATURES AND MASSDOT PROJECT DEVELOPMENT AND DESIGN GUIDE, CHAPTER 13 –LANDSCAPE AND AESTHETICS. CONTEMPORARY MATERIALS ARE SHOWN WHERE APPROPRIATE.

3. ACCESSIBILITY GUIDELINES, PUBLIC SAFETY AND DCR MAINTENANCE PRACTICES HAVE BEEN TAKEN INTO CONSIDERATION. THESE CONSIDERATIONS MAY ALSO HAVE RESULTED IN DEVIATION FROM HISTORIC DESIGNS.

LAYOUT NOTES

1. ALL DIMENSION LINES ARE EITHER PARALLEL OR PERPENDICULAR TO LINES FROM WHICH THEY ARE DRAWN UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

2. BEFORE LANDSCAPE ITEMS ARE CONSTRUCTED, SUBMITTALS MUST BE APPROVED, ALL LOCATIONS SHALL BE STAKED IN THE FIELD, MOCKUPS CONSTRUCTED IF INDICATED IN SPECIAL PROVISIONS, VERIFIED BY THE CONTRACTOR AND REVIEWED BY THE ENGINEER. ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT.

3. REFER TO STANDARD SPECIFICATIONS FOR MATERIALS AND INSTALLATION, IF NOT COVERED IN PROJECT PLANS AND SPECIFICATIONS.

4. TREE PROTECTION FENCING AS INDICATED ON SITE PREPARATION AND REMOVALS PLANS SHALL BE INSTALLED BEFORE CONSTRUCTION VEHICLES ACCESS OR CONSTRUCTION OCCURS WITHIN 20 FEET OF ANY EXISTING TREE TO REMAIN. FENCING SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND WITH REVIEW OF ENGINEER. REMOVAL SHALL BE AT COMPLETION OF CONSTRUCTION IN THE VICINITY. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL PROTECTION AND PRUNING REQUIREMENTS.

5. TREE ROOTS SHOULD BE PROTECTED UP TO THE DRIP LINE WHENEVER POSSIBLE.

PLANTING NOTES

1. VERIFY THAT PROPOSED PLANTINGS DO NOT CONFLICT WITH UTILITIES IN THE FIELD BEFORE LAYING OUT PLANTINGS. ROOTBALLS OF PROPOSED TREES SHALL NOT BE LOCATED WITHIN 4 HORIZONTAL FEET OF AN EXISTING GAS MAIN OR OTHER UTILITY LINE OR FIXTURE.

2. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY AMERICAN ASSOCIATION OF NURSERYMEN, LATEST EDITION, OR AS INDICATED IN THE PLANT LIST WHICH SHALL GOVERN.

3. ALL PLANT MATERIAL SHALL BE FIELD APPROVED IN NURSERIES BY THE ENGINEER AFTER PRELIMINARY TAGGING BY CONTRACTOR. ALL STOCK SHALL BE NURSERY GROWN.

4. ENGINEER SHALL REVIEW PLACEMENT OF PLANTS IN FIELD BEFORE INSTALLATION AFTER STAKING IN FIELD BY CONTRACTOR ACCORDING TO PLANTING PLANS AND SITE DETAILS. THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY CONFLICTS BETWEEN PROPOSED PLANT LOCATIONS AND BELOW GRADE UTILITIES, STRUCTURES, DRAINAGE PROBLEMS OR ANY OTHER PLANTING CONFLICT ENCOUNTERED OR ANTICIPATED AND REVIEWED WITH THE ENGINEER BEFORE CONSTRUCTION COMMENCES.

5. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN SIZES AND QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS. THE NUMBERS OF PLANTS GIVEN IN MASSINGS AND ON THE PLANT LIST IS APPROXIMATE AND CONTRACTOR SHALL PLANT TREES AT THE SPACING INDICATED ON THE PLANS AND AS DETAILED. THE ENGINEER HAS THE RIGHT TO REJECT INJURED, DISEASED, DESICCATED OR INCORRECT SPECIES AT ANY TIME.

6. ALL PLANTS THAT ARE DELIVERED TO THE SITE AND NOT PLANTED IMMEDIATELY SHALL BE STORED AND WATERED PROPERLY, ACCORDING TO THE SPECIFICATIONS, IN SECURE LOCATIONS REVIEWED BY THE ENGINEER. ALL PLANTS SHALL HAVE A GUARANTEE, AS GIVEN IN THE STANDARD SPECIAL PROVISIONS, SECTION 771 – PLANTING TREES, SHRUBS AND GROUNDCOVER.

7. ALL NEW PLANT MATERIAL WITHIN THE LANDSCAPE LIMIT OF WORK SHALL BE PRUNED AFTER PLANTING TO REMOVE ALL DEAD OR DAMAGED BRANCHES. TREE WOUND DRESSING SHALL NOT BE USED ON ANY PLANTINGS. ALL NEW PLANTINGS SHALL BE WATERED AS NECESSARY FROM DELIVERY UNTIL THE END OF THE PLANT ESTABLISHMENT PERIOD.

8. ALL PLANTS SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS TO ORIGINAL GRADE BEFORE DIGGING, UNLESS OTHERWISE DETAILED, AND SHALL HAVE A MULCHED SAUCER ACCORDING TO DETAILS. PLANT PITS SHALL DRAIN, OR PLANTS LOCATED IN AREAS THAT DO NOT DRAIN SHALL BE MOVED TO NEW LOCATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

9. ALL PAPER, FIBER–POT OR PLASTIC CONTAINERS AND PLASTIC OR IRON FASTENERS AND ROPE SHALL BE REMOVED FROM PLANTS BEFORE SETTING IN PLANT PIT. WIRE BASKETS AND TWINE SHALL BE CAREFULLY TRIMMED OFF AT LEAST THE TOP TWO THIRDS OF THE ROOTBALLS. ROOTBALLS SHALL BE HANDLED CAREFULLY SO AS TO NOT CRACK OR BREAK. PLANTS SHALL NOT BE LIFTED BY THEIR TRUNKS OR STEMS. UNTIE AND TURN DOWN BURLAP TWO–THIRDS, PER DETAIL.

10. TREE TRUNKS SHALL BE INSTALLED 10 FT. CLEAR FROM ALL HYDRANTS AND STANDPIPES TO ENSURE THEIR VISIBILITY AT ALL TIMES.

11. PLANT SPACING SHALL BE AS INDICATED ON THE DRAWINGS OR IN THE PLANT LIST. MULCH TREE SAUCERS WITH 3–INCH DEPTH AGED PINE BARK TO LIMITS OF SAUCERS AS SHOWN ON LANDSCAPE PLANS.

PLANTING SOIL AND GRADING NOTES

1. EXISTING STACKED TOPSOILS SHALL BE UTILIZED IN THE FORMULATION OF PLANTING SOIL MIXTURE WITH ADDED COMPOST AS PER SPECIAL PROVISIONS. FOR PLANTING SOIL MIXTURES AROUND ROOTBALLS, A MINIMUM OF SPECIFIED AMOUNT OF STACKED AND STOCKPILED TOPSOIL SHALL BE INCORPORATED INTO THE PLANTING SOIL MIX. ALL GRASS, SOD, ROOTS AND STONES OVER 1–INCH DIAMETER SHALL BE REMOVED FROM ALL SOILS FOR PLANTING AND SEEDING AND LEGALLY DISPOSED OF.

2. ANY DISCREPANCIES OR CONFLICTS ARISING BETWEEN EXISTING CONDITIONS AND THE GRADING PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING.

3. GRADE STAKES SHOWING DEPTH OF SOIL AMENDED WITH COMPOST SHALL BE REVIEWED BY ENGINEER IN FIELD BEFORE FINAL GRADING CAN COMMENCE.

4. ALL NEW PLANTINGS SHALL HAVE A MINIMUM DEPTH OF PLANTING SOIL MIX, AS INDICATED ON THE DRAWINGS. ALL SEEDED AREAS SHALL HAVE COMPOST TILLED INTO TOP 4–INCH DEPTH OF SOIL. PLANTING SOIL SHALL BE REQUIRED TO BE TESTED FOR CONFORMANCE WITH SPECIFICATIONS BEFORE PLANTING OR SEEDING. SOIL MAY NOT BE WORKED IN A WET OR FROZEN STATE OR IT MAY BE REJECTED BY THE ENGINEER.

5. IN AREAS WHERE PLANTING OR SEEDING OCCURS ON EXISTING GRADES, AREAS SHALL BE CLEARED, DISCED AND/OR FILLED AND SOIL AMENDED TO MEET THE RANGES AND MINIMUM REQUIREMENTS FOR PLANTING SOIL. IF EXISTING TOPSOIL CANNOT BE AMENDED TO MEET SPECIFICATIONS, IT SHALL BE EXCAVATED AND REPLACED WITH APPROVED SOIL.

6. WITHIN LANDSCAPED AREAS, ALL EXISTING OR PROPOSED INLET COVERS, GRATES, ETC. SHALL BE SET AND ADJUSTED BY THE CONTRACTOR TO BE FLUSH WITH THE FINISHED GRADE.

7. THE CONTRACTOR'S WORK SHALL BE SCHEDULED TO ALLOW THE FINISHED SUBGRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PUDDLING. PROVIDE TEMPORARY POSITIVE DRAINAGE AS REQUIRED.

8. THE PROPOSED SITE PAVEMENTS, SURFACINGS AND PLANTED AREAS SHALL BE PITCHED IN THE DIRECTIONS SHOWN ON THE DRAWINGS. IF NOT OTHERWISE SHOWN, PROPOSED PAVEMENT AREAS SHALL BE PITCHED A MINIMUM OF ONE PERCENT IN THE DIRECTION SHOWN ON THE DRAWINGS, AND PROPOSED SEEDED AND PLANTED AREAS SHALL BE PITCHED IN A MINIMUM OF ONE PERCENT TOWARD A DRAIN INLET OR BASIN.

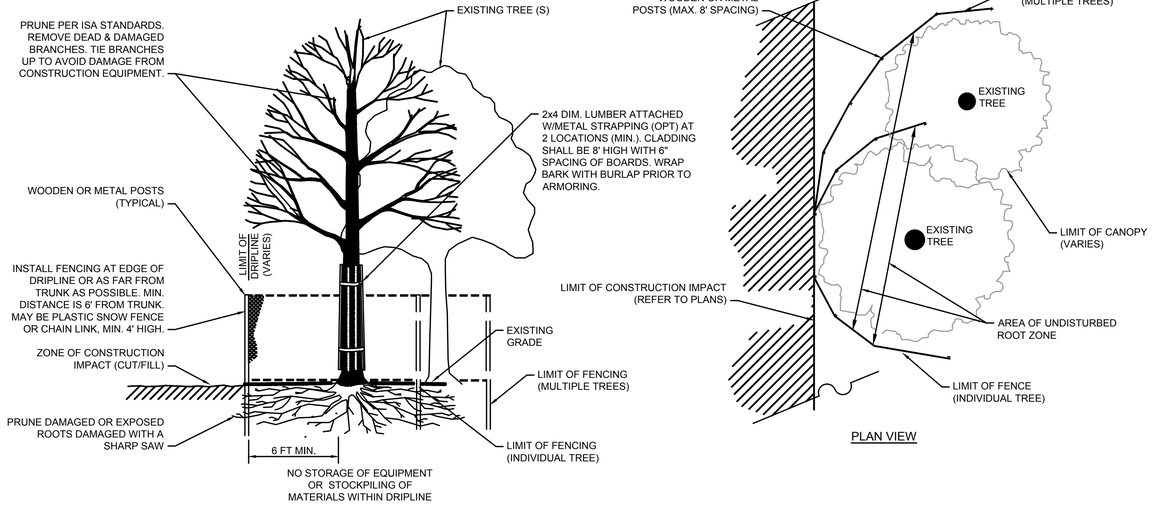
9. CONTRACTOR SHALL MEET EXISTING GRADES IN A SMOOTH MANNER, WITHOUT DISTURBING DRAINAGE CONDITIONS, AND SHALL PROTECT EXISTING VEGETATION AND PROTECTIVE FENCING. THE CONTRACTOR SHALL REQUEST THAT THE ENGINEER REVIEW THE FINISHED GRADES BEFORE PLANTING AND SEEDING OPERATIONS BEGIN.

10. ALL AREAS WITHIN THE LIMIT OF WORK WHICH ARE DISTURBED, SHALL BE SEEDED, IF NO OTHER PLANTINGS ARE INDICATED AND THE AREA IS NOT PAVED. SEEDING TYPE(S) SHALL BE RELATED TO SURROUNDING SEEDING TYPES AND USES, AS DETERMINED BY THE ENGINEER.

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	112	317
PROJECT FILE NO. 605524 & 605527			

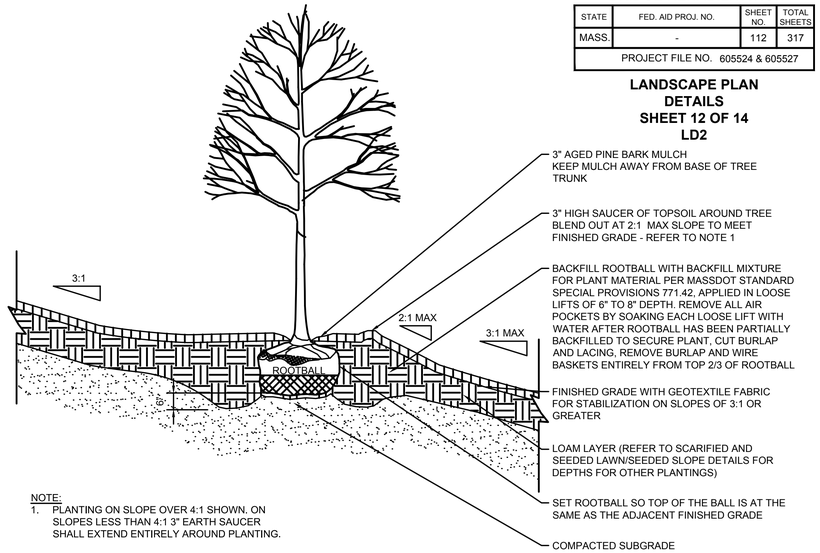
LANDSCAPE PLAN
DETAILS
SHEET 12 OF 14
LD2



PLAN VIEW

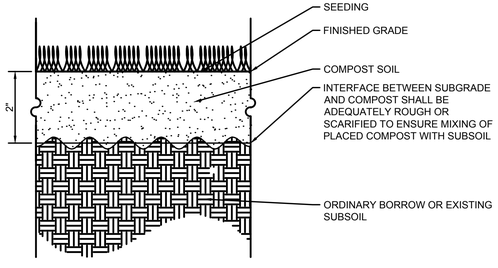
NOTES:
1. INSTALLATION SHALL BE COMPLETED BEFORE ANY CONSTRUCTION VEHICLES ACCESS THE SITE OR ANY OTHER SITE PREPARATION, DEMOLITION, SALVAGE OR CONSTRUCTION COMMENCES.
2. REFER TO PLANS FOR FENCE LOCATIONS.

TREE PROTECTION - EXISTING TREE(S)
N.T.S.



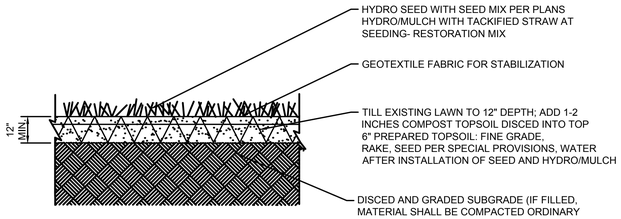
NOTE:
1. PLANTING ON SLOPE OVER 4:1 SHOWN. ON SLOPES LESS THAN 4:1 3" EARTH SAUCER SHALL EXTEND ENTIRELY AROUND PLANTING.

TREE PLANTING
N.T.S.



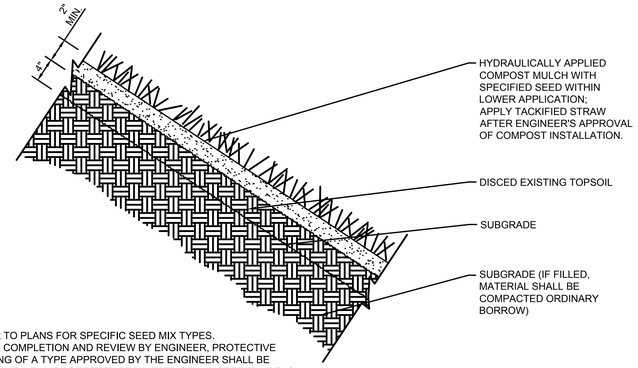
NOTES:
1. DEPTH REFLECTS PLACEMENT AND ROLLING PRIOR TO SEEDING.

COMPOST TOPSOIL AND SEED
N.T.S.



NOTES:
1. REFER TO PLANS FOR SPECIFIC SEED MIX TYPES.
2. DO NOT DISC SOIL WITHIN 10 FT OF EXISTING TREE TRUNKS, MANUALLY CULTIVATE ONLY.
3. AFTER COMPLETION AND REVIEW BY ENGINEER, PROTECTIVE FENCING OF A TYPE APPROVED BY THE ENGINEER SHALL BE INSTALLED AT THE UNPROTECTED PERIMETER OF ALL SEEDED AREAS UNTIL ACCEPTANCE.

SCARIFIED AND SEEDED LAWN- RESTORATION MIX
N.T.S.



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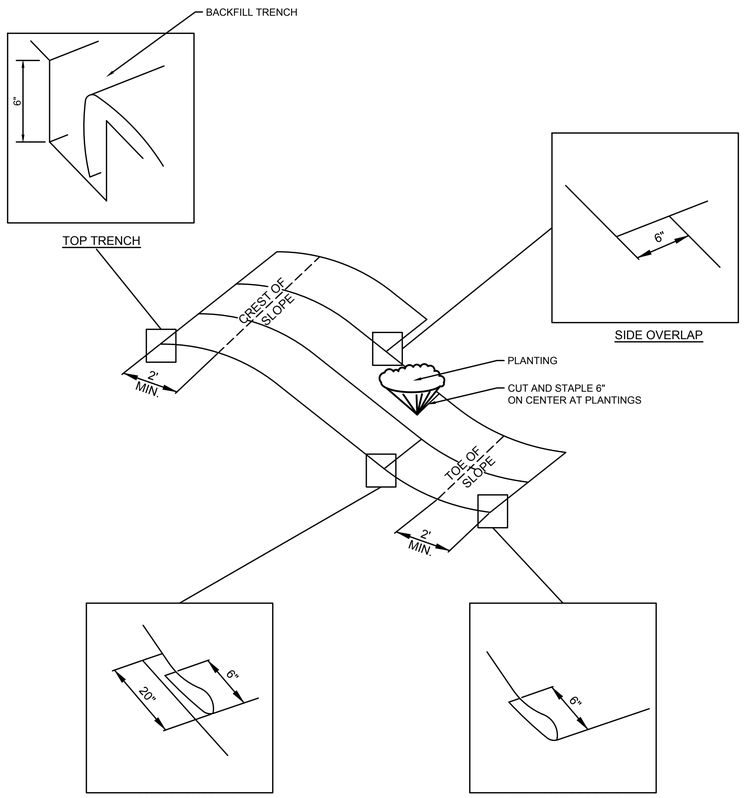
SEEDED SLOPE
N.T.S.

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

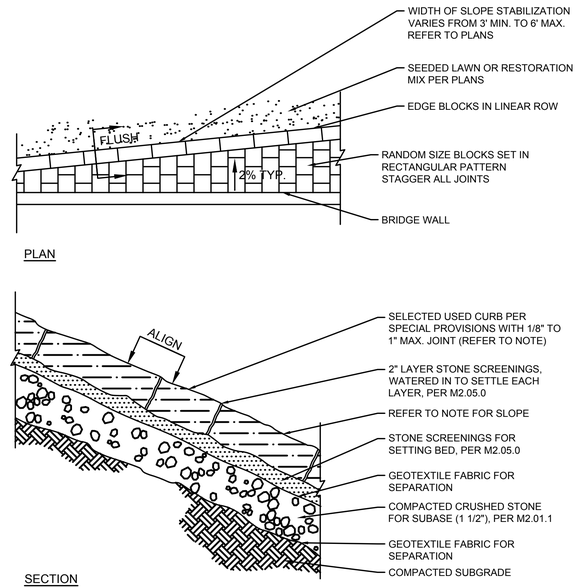
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	113	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
DETAILS
SHEET 13 OF 14
LD3



NOTES:
1. REFER TO SPECIAL PROVISIONS FOR SPACING OF WIRE STAPLES.

GEOTEXTILE FABRIC FOR STABILIZATION
N.T.S.



NOTES:
1. LONGITUDINAL SLOPE SHALL CONFORM TO ADJACENT BRIDGE FINISHED GRADES PER DRAWINGS.
2. NO BLOCKS SHALL BE SMALLER IN DIMENSION THAN 12" X 12" X 8" IN DEPTH.

SLOPE STABILIZATION
N.T.S.

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	114	317
PROJECT FILE NO. 605524 & 605527			

LANDSCAPE PLAN
DETAILS
SHEET 14 OF 14
LD4

TREE INVENTORY

ID NOS	GENUS	SPECIES	LOCATION	PLAN SHEET NOS	DIAMETER BREAST HEIGHT (INCHES)	CONDITION	DISPOSITION
1	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	12		RETAIN AND PROTECT
2	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	12		RETAIN AND PROTECT
3	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	12		REMOVE
4	TILIA	LINDEN	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
5	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	12		RETAIN AND PROTECT
6	TILIA	SPECIES	RIVER ST BOSTON	101	16		RETAIN AND PROTECT
7	TILIA	SPECIES	RIVER ST BOSTON	101	12		RETAIN AND PROTECT
8	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
9	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
10	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
11	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
12	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
13	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	UNIDENTIFIED		RETAIN AND PROTECT
14	UNIDENTIFIED	UNIDENTIFIED	RIVER ST BOSTON	101	UNIDENTIFIED		RETAIN AND PROTECT
15	TILIA	SPECIES	RIVER ST BOSTON	101	16		REMOVE
16	TILIA	SPECIES	RIVER ST BOSTON	101	18		REMOVE
17	TILIA	SPECIES	RIVER ST BOSTON	101	18		REMOVE
18	TILIA	SPECIES	RIVER ST BOSTON	101	10		RETAIN AND PROTECT
19	TILIA	SPECIES	RIVER ST BOSTON	101	16		RETAIN AND PROTECT
20	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
21	TILIA	SPECIES	RIVER ST BOSTON	101	16		RETAIN AND PROTECT
22	TILIA	SPECIES	RIVER ST BOSTON	101	14		RETAIN AND PROTECT
23	PLATANUS	SPECIES	RIVER ST BOSTON	101	2		RETAIN AND PROTECT
24	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	5		REMOVE
25	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	6		REMOVE
26	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	8		REMOVE
27	ACER	SACCHARINUM	RIVER ST BOSTON	101	12		REMOVE
28	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	4		REMOVE
29	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	17		REMOVE
30	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	4		REMOVE
31	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	5		REMOVE
32	AILANTHUS	ALTISSIMA	RIVER ST BOSTON	101	9		REMOVE
33	UNIDENTIFIED	UNIDENTIFIED	RIVER ST CAMBRIDGE	102	5		REMOVE
34	PRUNUS	SPECIES	RIVER ST CAMBRIDGE	102	8		REMOVE
35	ACER	PLATANOIDES	RIVER ST CAMBRIDGE	102	8		REMOVE
36	UNIDENTIFIED	UNIDENTIFIED	RIVER ST CAMBRIDGE	102	6		REMOVE
37	UNIDENTIFIED	UNIDENTIFIED	RIVER ST CAMBRIDGE	102	18		REMOVE
38	PLATANUS	SPECIES	RIVER ST CAMBRIDGE	102	18		RETAIN AND PROTECT
39	PLATANUS	SPECIES	RIVER ST CAMBRIDGE	102	16		RETAIN AND PROTECT
40	TILIA	SPECIES	RIVER ST CAMBRIDGE	102	12		RETAIN AND PROTECT
41	TILIA	SPECIES	RIVER ST CAMBRIDGE	102	12		RETAIN AND PROTECT
42	TILIA	SPECIES	RIVER ST CAMBRIDGE	102	12		RETAIN AND PROTECT

TREE INVENTORY

ID NOS	GENUS	SPECIES	LOCATION	PLAN SHEET NOS	DIAMETER BREAST HEIGHT (INCHES)	CONDITION	DISPOSITION
43	TILIA	SPECIES	WESTERN AVE BOSTON	103	16		RETAIN AND PROTECT
44	TILIA	SPECIES	WESTERN AVE BOSTON	103	14		RETAIN AND PROTECT
45	TILIA	SPECIES	WESTERN AVE BOSTON	103	18		RETAIN AND PROTECT
46	TILIA	SPECIES	WESTERN AVE BOSTON	103	8		RETAIN AND PROTECT
47	TILIA	SPECIES	WESTERN AVE BOSTON	103	14		RETAIN AND PROTECT
48	ACER	PLATANOIDES	WESTERN AVE BOSTON	103	6		RETAIN AND PROTECT
49	UNIDENTIFIED	UNIDENTIFIED	WESTERN AVE BOSTON	103	12		RETAIN AND PROTECT
50	UNIDENTIFIED	UNIDENTIFIED	WESTERN AVE BOSTON	103	12		RETAIN AND PROTECT
51	TILIA	SPECIES	WESTERN AVE BOSTON	103	18		REMOVE
52	UNIDENTIFIED	UNIDENTIFIED	WESTERN AVE BOSTON	103	6		RETAIN AND PROTECT
53	PLATANUS	SPECIES	WESTERN AVE BOSTON	103	14		RETAIN AND PROTECT
54	PLATANUS	SPECIES	WESTERN AVE BOSTON	103	17		RETAIN AND PROTECT
55	ACER	PLATANOIDES	WESTERN AVE BOSTON	103	12		RETAIN AND PROTECT
56	TILIA	SPECIES	WESTERN AVE BOSTON	103	10		REMOVE
57	PRUNUS	SPECIES	WESTERN AVE BOSTON	103	4		REMOVE
58	ALNUS	GLUTINOSA	WESTERN AVE BOSTON	103	15		REMOVE
59	AILANTHUS	ALTISSIMA	WESTERN AVE BOSTON	103	12		RETAIN AND PROTECT
60	AILANTHUS	ALTISSIMA	WESTERN AVE BOSTON	103	8		REMOVE
61	PRUNUS	SPECIES	WESTERN AVE BOSTON	103	5		REMOVE
62	PRUNUS	SPECIES	WESTERN AVE BOSTON	103	6		REMOVE
63	AILANTHUS	ALTISSIMA	WESTERN AVE BOSTON	103	36		RETAIN AND PROTECT
64	PLATANUS	SPECIES	WESTERN AVE BOSTON	103	4		RETAIN AND PROTECT
65	PRUNUS	SPECIES	WESTERN AVE BOSTON	103	4		RETAIN AND PROTECT
66	AILANTHUS	ALTISSIMA	WESTERN AVE BOSTON	103	12		RETAIN AND PROTECT
67	PLATANUS	SPECIES	WESTERN AVE BOSTON	103	8		RETAIN AND PROTECT
68	CRATAEGUS	SPECIES	WESTERN AVE BOSTON	103	5		RETAIN AND PROTECT
69	PLATANUS	SPECIES	WESTERN AVE CAMBRIDGE	104	28		RETAIN AND PROTECT
70	QUERCUS	PALUSTRIS	WESTERN AVE CAMBRIDGE	104	4		RETAIN AND PROTECT
71	TILIA	SPECIES	WESTERN AVE CAMBRIDGE	104	20		RETAIN AND PROTECT
72	TILIA	SPECIES	WESTERN AVE CAMBRIDGE	104	14		RETAIN AND PROTECT
73	UNIDENTIFIED	UNIDENTIFIED	SOLDIERS FIELD ROAD BOSTON	105	UNIDENTIFIED		RETAIN AND PROTECT
74	UNIDENTIFIED	UNIDENTIFIED	SOLDIERS FIELD ROAD BOSTON	105	UNIDENTIFIED		RETAIN AND PROTECT
75	UNIDENTIFIED	UNIDENTIFIED	SOLDIERS FIELD ROAD BOSTON	105	UNIDENTIFIED		REMOVE
76	UNIDENTIFIED	UNIDENTIFIED	SOLDIERS FIELD ROAD BOSTON	105	UNIDENTIFIED		RETAIN AND PROTECT
77	UNIDENTIFIED	UNIDENTIFIED	SOLDIERS FIELD ROAD BOSTON	105	UNIDENTIFIED		RETAIN AND PROTECT
78	TILIA	SPECIES	SOLDIERS FIELD ROAD BOSTON	105	8		RETAIN AND PROTECT

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	115	317
PROJECT FILE NO.	605527		

GENERAL ELECTRICAL NOTES, ABBREVIATIONS, AND LEGEND

LIGHTING LEGEND

- PROPOSED CANTILEVERED LIGHT POLE
- PROPOSED STRAIGHT LIGHT POLE
- UTILITY MANHOLE
- LIGHTING LOAD CENTER
- RED NAVIGATION LIGHTING
- GREEN NAVIGATION LIGHTING
- DECORATIVE PIER LED LUMINAIRE
- DECORATIVE ARCHWAY LED LUMINAIRE

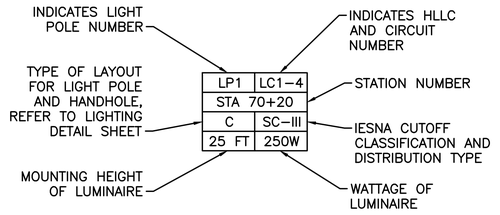
ABBREVIATIONS

A	AMPERE
AWG	AMERICAN WIRE GAUGE
C	CANTILEVERED (POLE TYPE)
GFI	GROUND FAULT INTERRUPTER RECEPTACLE
FT	FOOT
LC	LIGHTING CIRCUIT
LP	LIGHTING PANEL
GND	GROUND
HLLC	HIGHWAY LIGHTING LOAD CENTER
MASSDOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
NTS	NOT TO SCALE
S	STRAIGHT (POLE TYPE)
SC	SEMI-CUTOFF
STA	STATION NUMBER
TYP	TYPICAL
V	VOLT
W	WATTS

GENERAL LIGHTING NOTES

1. CONDUIT RUNS ARE SHOWN APPROXIMATE. LOCATIONS MAY BE ADJUSTED TO MATCH EXISTING AND PROPOSED CONDITIONS AS REQUIRED BY THE RESIDENT ENGINEER.
2. ALL CONDUIT RUNS SHALL BE EMBEDDED IN THE FILL AND SHALL PENETRATE THROUGH THE STRUCTURAL CONCRETE TO THE FIXTURES WHERE EVER POSSIBLE. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE CONDUIT RUNS TO THE ENGINEER FOR APPROVAL.
3. THE CONTRACTOR SHALL VISIT THE JOB SITE WITH THE CONTRACT DOCUMENTS AND INVESTIGATE ALL CONDITIONS AFFECTING THIS WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE LOCATION AND SITE OF THE WORK, AND SHALL VERIFY DIMENSIONS, QUANTITIES, ACTUAL INSTALLATION CONDITIONS, CONFLICTS, AND STORAGE FACILITIES.
4. STATIONING FOR POLES IS GIVEN FROM THE BASELINE CLOSEST TO THE POLE. OFFSET DISTANCE FROM STREET IS DEFINED ON LIGHT POLE FOUNDATION DETAIL.
5. ALL WIRING IN THE HANDHOLES, PANELBOARDS, AND CABINETS SHALL BE PERMANENTLY LABELED AND NEATLY INSTALLED.
6. ALL CONDUIT AND EQUIPMENT IS TO BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, MASSACHUSETTS ELECTRICAL CODE, AND APPLICABLE LOCAL CODES.
7. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED FOR ITS INTENDED PURPOSE.
8. WIRE SIZES SHALL BE BASED ON AMERICAN WIRE GAGE (AWG), AS APPLIED TO COPPER CONDUCTORS. THE CONDUCTOR INSULATION SHALL BE TYPE USE-2, OR RHH-RHW-2.
9. WIRE AND CABLE FURNISHED AND USED SHALL BE NEW. WIRE AND CABLE SHALL BE PROTECTED FROM WEATHER AND DAMAGE DURING STORAGE AND HANDLING.
10. NO WIRE SHALL BE DRAWN IN TO ANY CONDUIT UNTIL ALL WORK WHICH MAY CAUSE DAMAGE IS COMPLETE.
11. THE CONTRACTOR SHALL CAREFULLY MARK THE PROPOSED LOCATION OF THE CONCRETE FOUNDATION AND THEN SHALL DETERMINE IF ANY UTILITIES, OR UNDERGROUND OR OVERHEAD OBSTRUCTION WILL PREVENT THE INSTALLATION AT THIS LOCATION. SIMILAR MARKING SHALL BE DONE FOR THE CONDUIT RUNS TO THE FOUNDATION. IF SUCH AN OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL REQUEST PERMISSION FROM THE ENGINEER TO MOVE OR ADJUST THE LOCATION OF THE FOUNDATION.
12. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH OR INCONVENIENCE TO BUSINESS CONCERNS OR ABUTTERS ON ACCOUNT OF THE CONSTRUCTION WORK IS KEPT TO A MINIMUM. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND EGRESS FROM ABUTTING PROPERTIES AT ALL TIMES.
13. THE CONTRACTOR SHALL BE REQUIRED TO ADHERE TO ALL REGULATIONS IMPOSED BY THE DCR, MASSDOT, CITY OF CAMBRIDGE, CITY OF BOSTON, AND THE COMMONWEALTH OF MASSACHUSETTS.
14. ELECTRICAL SERVICE TO EACH HIGHWAY LIGHTING LOAD CENTER (HLLC) WILL BE PROVIDED BY NSTAR. CONTRACTOR SHALL COORDINATE WITH MASSDOT, DCR, AND NSTAR FOR SERVICE CONNECTION. CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRIC SERVICE CONNECTIONS AND RELATED FEES FROM NSTAR.
15. INSTALL A PHOTO ELECTRIC SWITCH IN EACH HLLC. ONLY ONE PHOTOCELL SHALL BE USED FOR EACH HLLC.
16. CONDUIT SHALL BE SCHEDULE 40 PVC. CONDUIT SHALL BE AS FOLLOWS: 3" PVC CONDUIT FROM LIGHTING LOAD CENTER TO NSTAR SERVICE CONNECTION WITH A SPARE 3" CONDUIT. BEYOND HLLC, CONDUIT SIZE AS SHOWN ON PLANS. A SPARE 2" CONDUIT SHALL BE INCLUDED IN CONDUIT RUNS BETWEEN JUNCTION BOXES AND THE HLLC.
17. ALL WIRE SHALL BE CONTINUOUS FROM HANDHOLE TO HANDHOLE WITHOUT RUNNING SPLICES IN CONDUITS. ALL WIRES SHALL EXTEND 24" ABOVE THE PULL BOX, CONNECTED AT ENDS AND ROLLED BACK INTO THE PULL BOX.
18. SPLICES SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE MASS HIGHWAY STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
19. THE HOT LINE AND NEUTRAL CONNECTION IN THE POLE HANDHOLE SHALL BE WITH AN APPROVED STREET LIGHT FUSE CONNECTOR.
20. THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE LOCATIONS ARE APPROXIMATE ONLY AND IN SOME CASES MAY BE INCOMPLETE. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES REQUIRED AND VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
21. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FEATURES PRIOR TO PERFORMING ANY WORK.
22. THE CONTRACTOR SHALL MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIALS SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
23. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE LATEST ADDENDUM OF THE LATEST ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
24. EXISTING ELECTRICAL CONDUIT MAY CONTAIN ASBESTOS. CONTRACTOR SHALL AVOID DISTURBING EXISTING CONDUIT WHEREVER POSSIBLE. WHERE CONDUIT REQUIRES REMOVAL, REMOVAL OF ASBESTOS ITEM 182.2 SHALL BE USED.
25. NAVIGATION LIGHTING MUST BE OPERATIONAL AT ALL TIMES. PROVIDE TEMPORARY POWER FEED TO EXISTING NAVIGATION LIGHTING WHEN NECESSARY DURING BRIDGE CONSTRUCTION. REMOVE EXISTING NAVIGATION LIGHTING AND ASSOCIATED CONDUIT AFTER NEW NAVIGATION LIGHTING IS OPERATIONAL.

LUMINAIRE INFORMATION BOX



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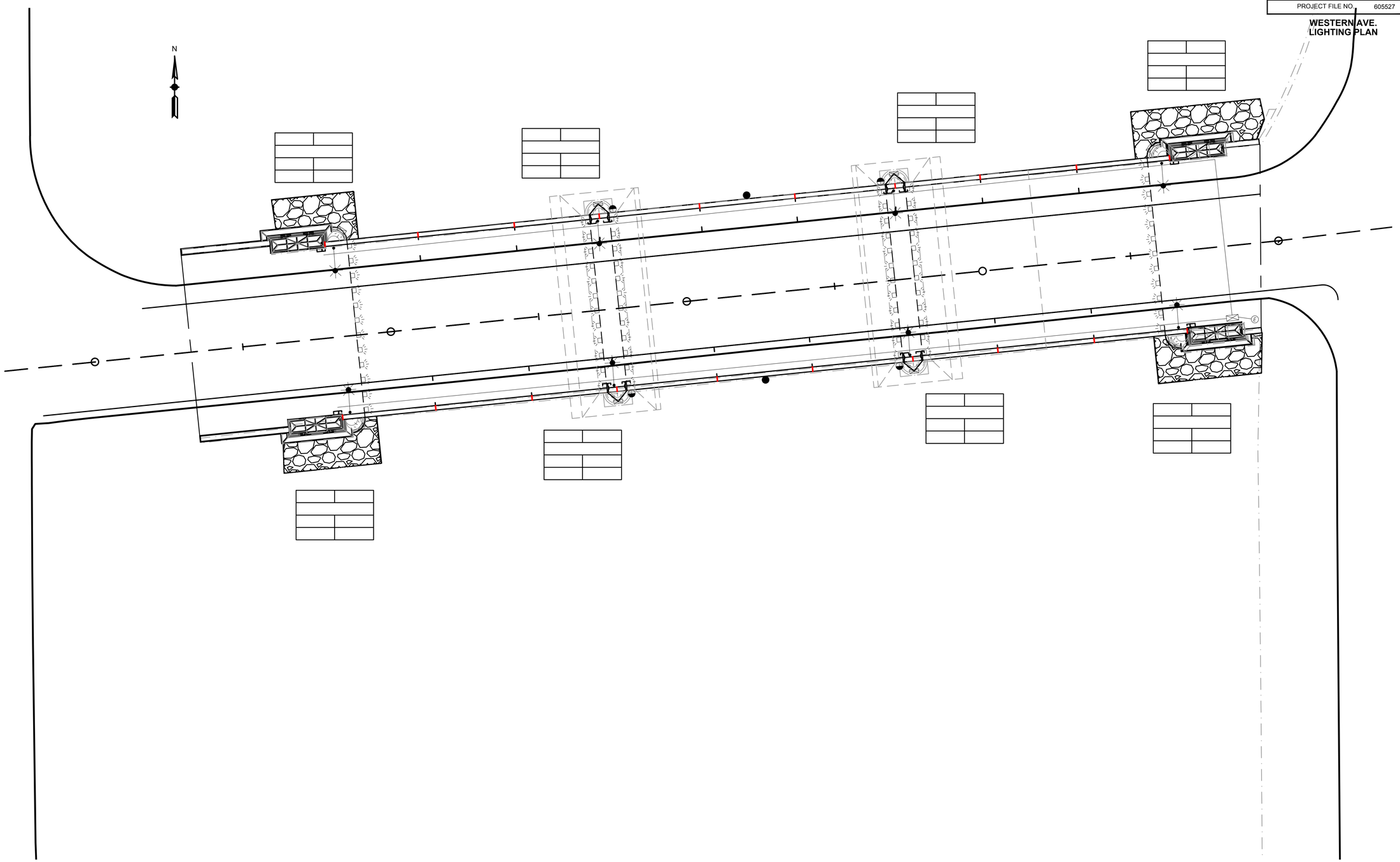
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	116	317
PROJECT FILE NO.		605527	

WESTERN AVE.
LIGHTING PLAN



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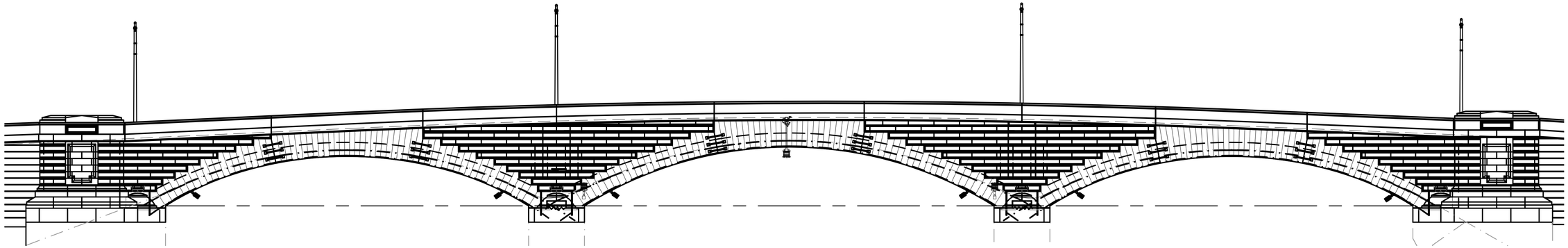
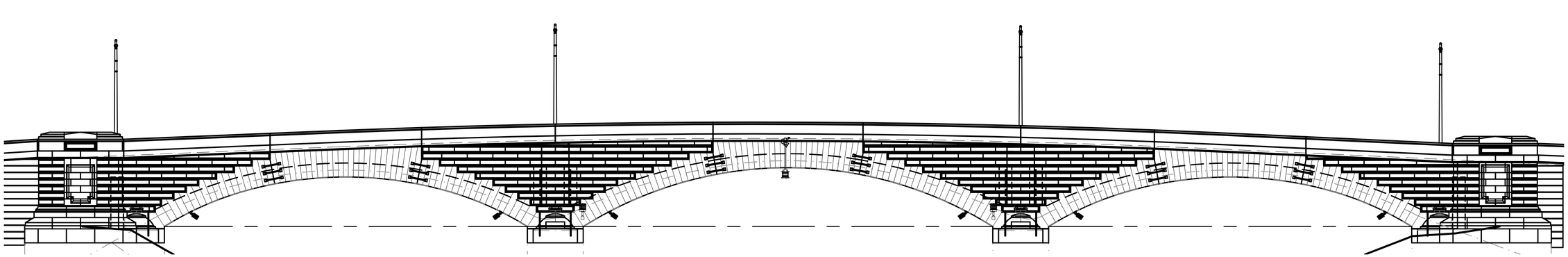
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	117	317
PROJECT FILE NO.	605527		

WESTERN AVE.
LUMINAIRE MOUNTING
ELEVATION





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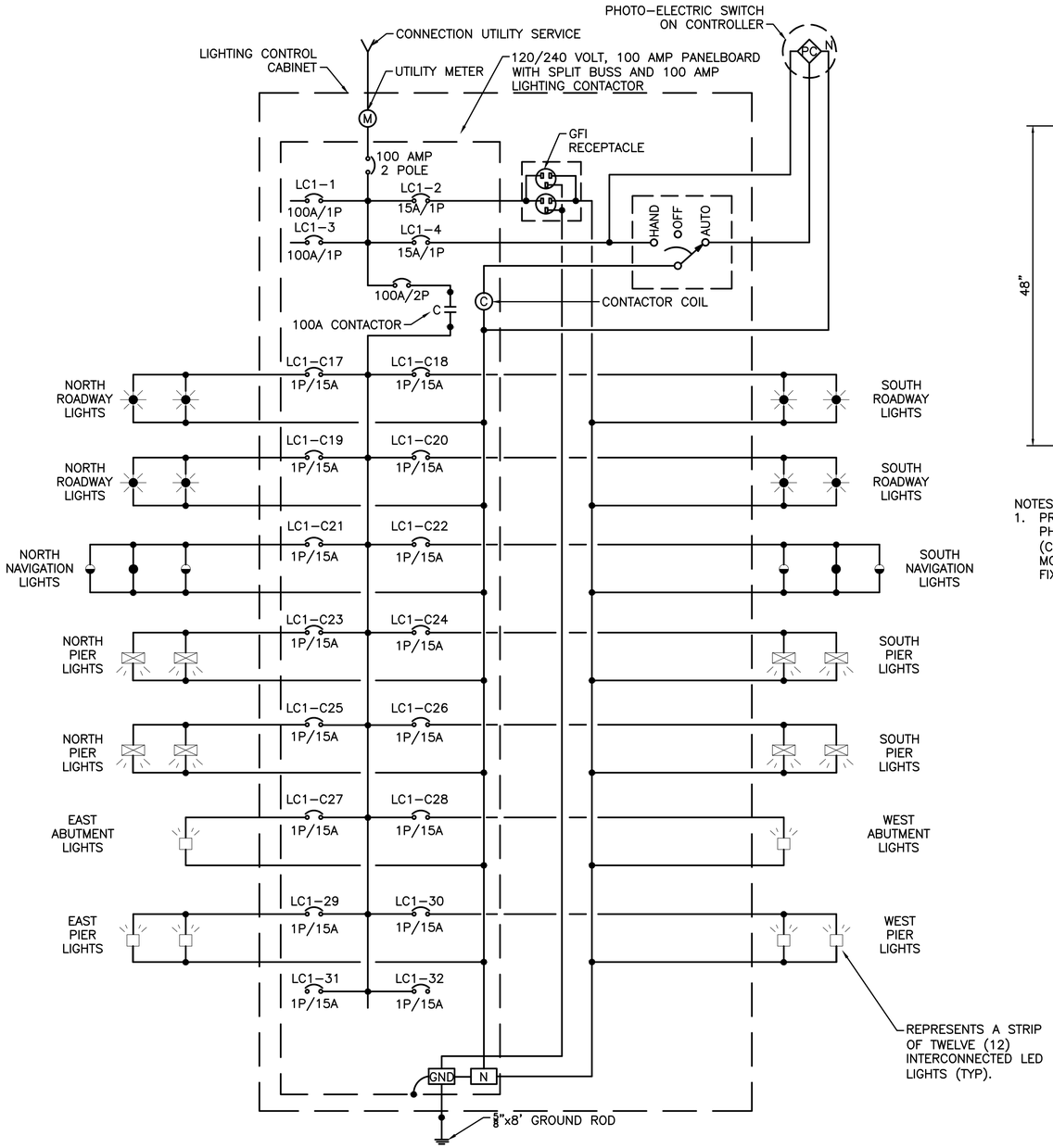
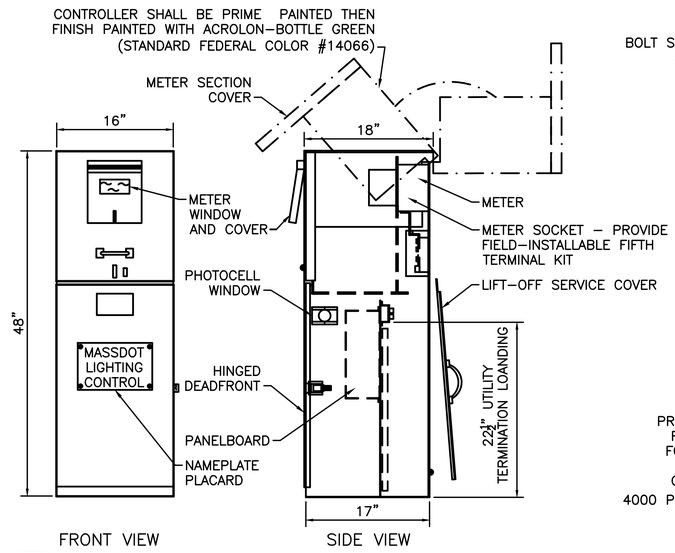


ONE LINE DIAGRAM
N.T.S.



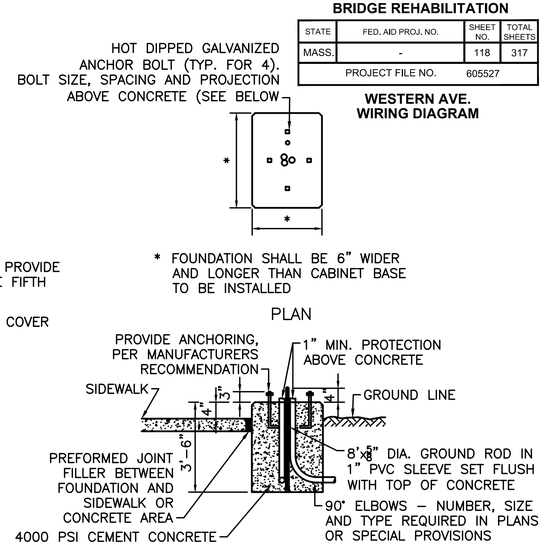
NOTES:
1. PROVIDE MILBANK CP3B51110A22SL1 MODIFIED WITH 100 AMP CONTACTOR, PHOTOCELL, FIFTH TERMINAL KIT FOR USE WITH RINGLESS METER SOCKETS (COORDINATE WITH ELECTRIC UTILITY FOR METER SOCKET REQUIREMENTS), MOUNTING BASE, ANCHOR BOLT KIT, GFCI RECEPTACLE, AND INTERNAL LIGHT FIXTURE OR EQUAVALENT BY MYERS POWER PRODUCTS, OR VIT STRONG BOX.

LIGHTING CONTROL CABINET DETAIL
N.T.S.

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	118	317
PROJECT FILE NO.	605527		

WESTERN AVE.
WIRING DIAGRAM



NOTE: ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".

CONCRETE FOUNDATION FOR LIGHTING CONTROL CABINET
N.T.S.

BUS: 120/240V, 1PH, 3W, 60HZ
MAIN LUGS ONLY: 100A
FEEDER SIZE: 3#2, 1#2 – GND

PANELBOARD LC1–UNSWITCHED
UNSWITCHED LOADS ONLY
GROUND BAR

SHORT CIRCUIT BRACING: 10–KAIC
CABINET: SURFACE
PANEL LOCATION: N HARVARD BOSTON

LOAD SERVED	HP	VA A	VA B	CKT. NO.	NEUTRAL	CKT. NO.	VA A	VA B	HP	LOAD SERVED
MAIN		–		1	100A	2	180			GFI RECEPTACLE
MAIN			–	3	100A	4		50		CONTROL CKT
SPARE		–		5	100A	6	–			SWITCH LOAD CENTER (BELOW)
SPARE			–	7	100A	8		–		SWITCH LOAD CENTER (BELOW)
SPARE		–		9		10	–			SPARE
SPACE			–	11		12		–		SPACE
SPACE		–		13		14	–			SPACE
SPACE			–	15		16		–		SPACE

PANELBOARD LC1–SWITCHED
SWITCHED LOADS ONLY
GROUND BAR

LOAD SERVED	HP	VA A	VA B	CKT. NO.	NEUTRAL	CKT. NO.	VA A	VA B	HP	
NORTH ROADWAY LIGHTING		351		17		18	351			SOUTH ROADWAY LIGHTING
NORTH ROADWAY LIGHTING			351	19		20		351		SOUTH ROADWAY LIGHTING
NAVIGATION LIGHTING		300		21		22	300			NAVIGATION LIGHTING
NORTH PIER LIGHTS			53	23		24		53		SOUTH PIER LIGHTS
NORTH PIER LIGHTS		53		25		26	53			SOUTH PIER LIGHTS
UNDER ARCH LGTS–EAST ABUTMENT			101	27		28		101		UNDER ARCH LGTS–WEST ABUTMENT
UNDER ARCH LGTS–EAST PIER		202		29		30	202			UNDER ARCH LGTS–WEST PIER
SPARE			–	31		32		–		SPARE

VA A: 1792 VA B: 1260
TOTAL CONNECTED LOAD: 3052 VA

ALL BRANCH CB: 15 AMP TRIP
UNLESS OTHERWISE NOTED

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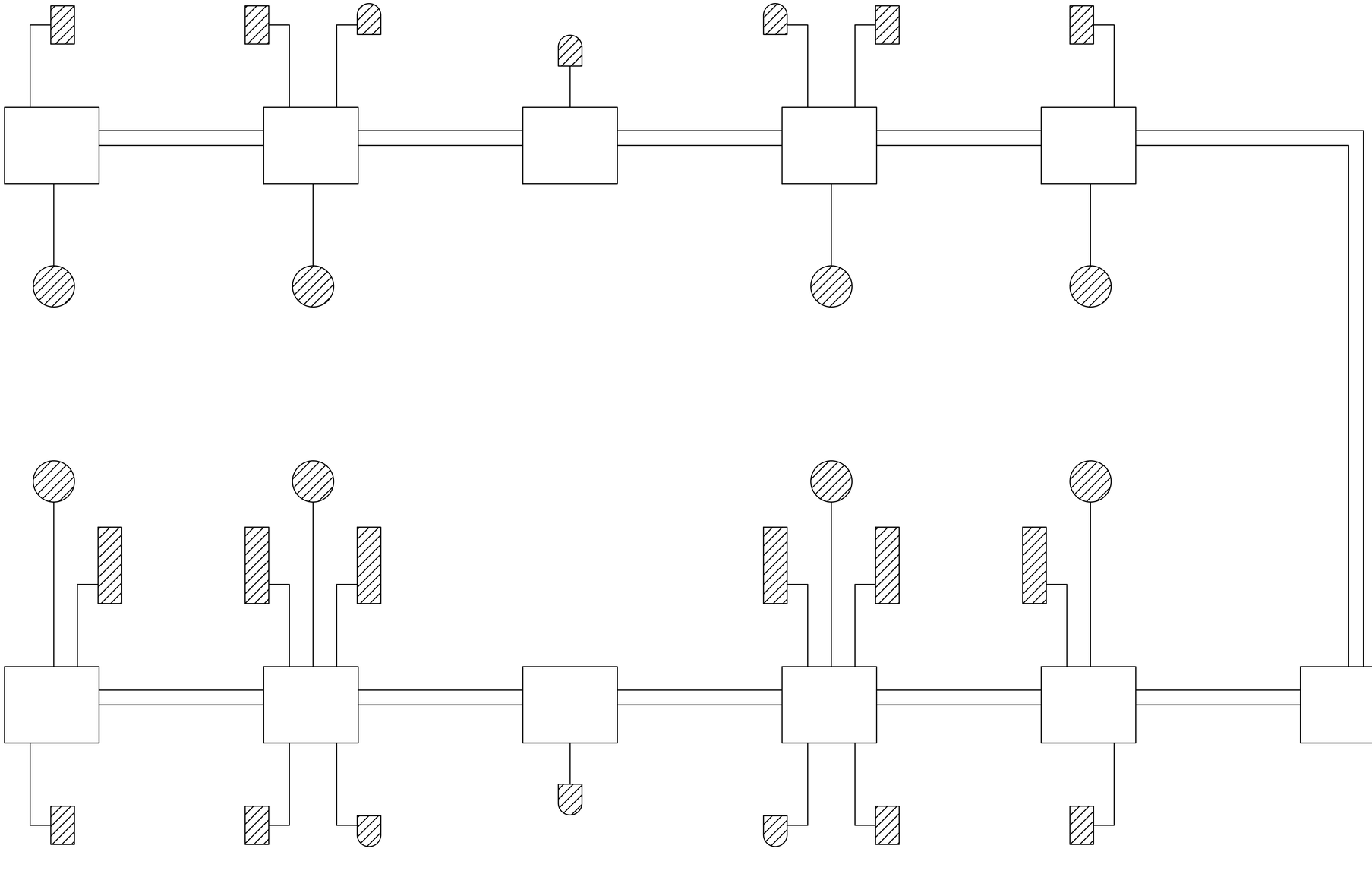
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	119	317
PROJECT FILE NO.	605527		

WESTERN AVE.
CONDUIT BLOCK
DIAGRAM



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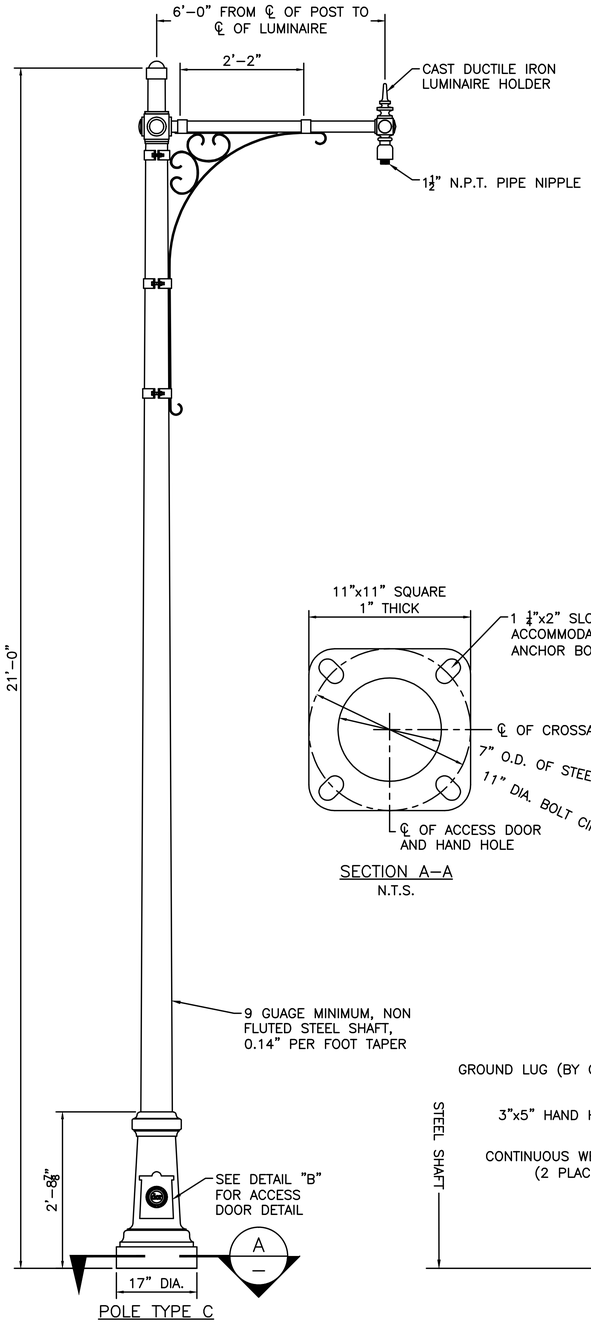
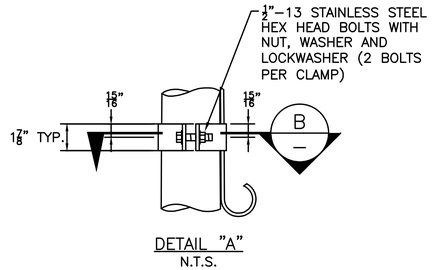
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	120	317
PROJECT FILE NO.	605527		

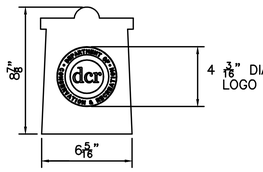
WESTERN AVE.
STREET LIGHT



POLE TYPE C



DETAIL "A"
N.T.S.



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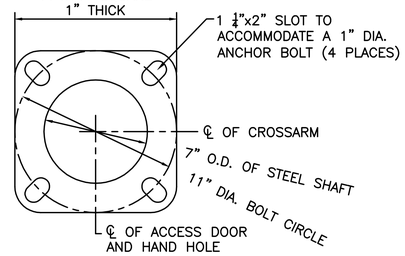

SECTION A–A
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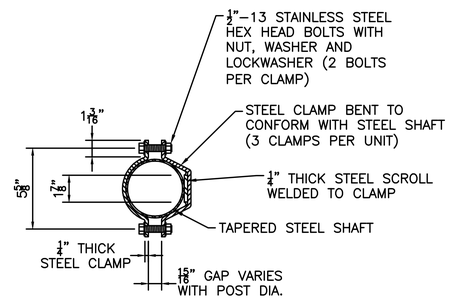

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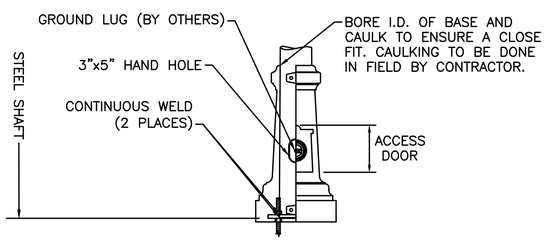

CROSS ARM SPECIFICATIONS

STYLE:	CAMBRIDGE SINGLE
WIDTH:	6'–0" FROM ℄ OF POST TO ℄ OF LUMINAIRE
MATERIAL:	CAST DUCTILE IRON AND STEEL SCROLL WORK
FINISH:	PRIME PAINTED THEN FINISH PAINTED, SHERWIN WILLIAMS ACROLON – CLASSIC BLACK

LAMP POST SPECIFICATIONS

STYLE:	CAMBRIDGE STEEL
HEIGHT:	21'–0"
BASE:	17" DIAMETER
MATERIAL:	
SHAFT:	9 GUAGE MINIMUM, SMOOTH STEEL MONOTUBE CONSTRUCTION
BASE:	2 PIECE, (WRAP AROUND) HEAVY WALL CAST IRON PER A.S.T.M. A 48–83 CLASS 30
FINISH:	
SHAFT:	HOT DIP GALVANIZED THEN PRIME PAINTED AND FINISHED PAINTED, SHERWIN WILLIAMS ACROLON – CLASSIC BLACK
BASE:	PRIME PAINTED THEN FINISH PAINTED, SHERWIN WILLIAMS ACROLON – CLASSIC BLACK
ACCESS DOOR:	LOCATED IN BASE TO COINCIDE WITH HAND HOLE IN STEEL SHAFT SECURED WITH TAMPER PROOF HEX SOCKET SECURITY MACHINE SCREWS
GROUND STUD PROVISIONS:	¼" 20 SQUARE NUT WELDED TO INSIDE WALL OF SHAFT OPPOSITE HAND HOLE FOR GROUND STUD (STUD BY OTHERS)
ANCHOR BOLTS:	(4) 1" DIA. (SUPPLIED BY OTHERS)
BOLT PROJECTION:	5" REQUIRED

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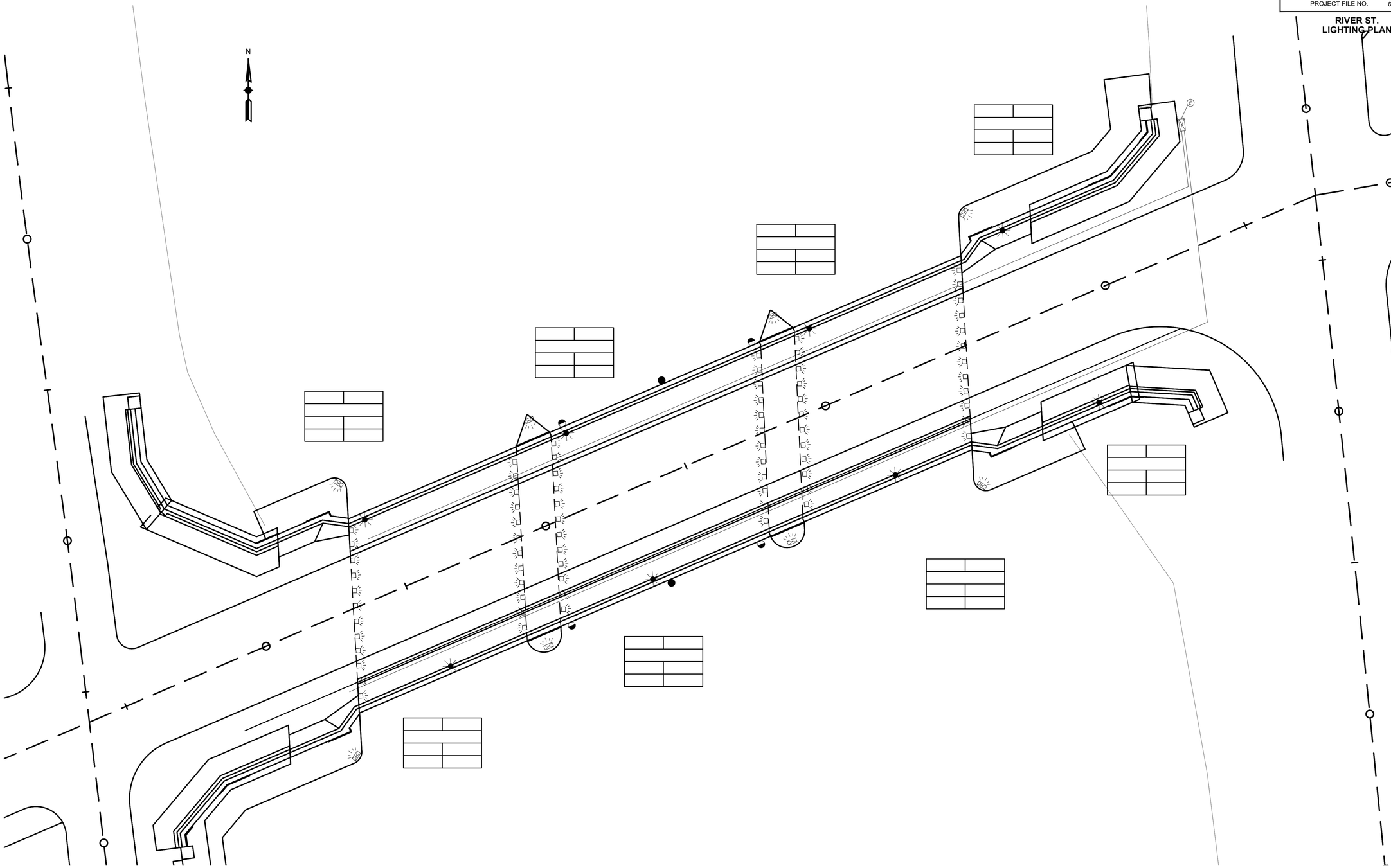
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	121	317
PROJECT FILE NO.	605527		

RIVER ST.
LIGHTING PLAN



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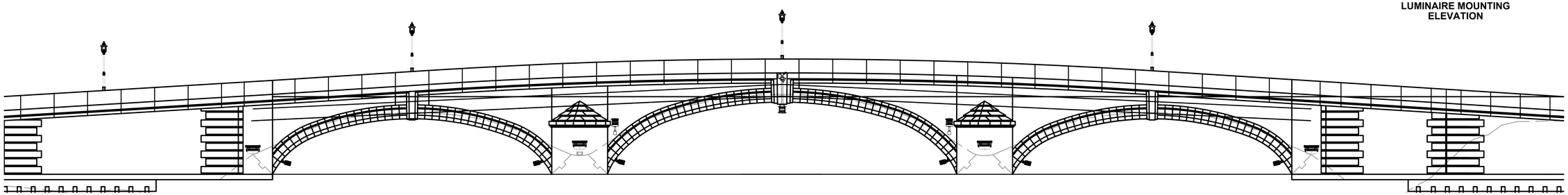
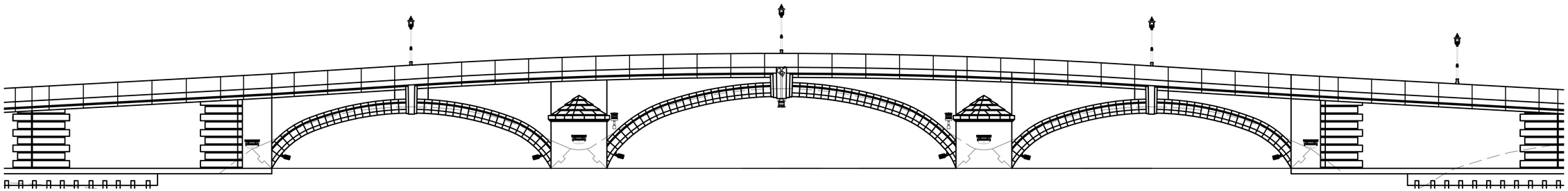
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	122	317
PROJECT FILE NO.	605527		

RIVER ST.
LUMINAIRE MOUNTING
ELEVATION





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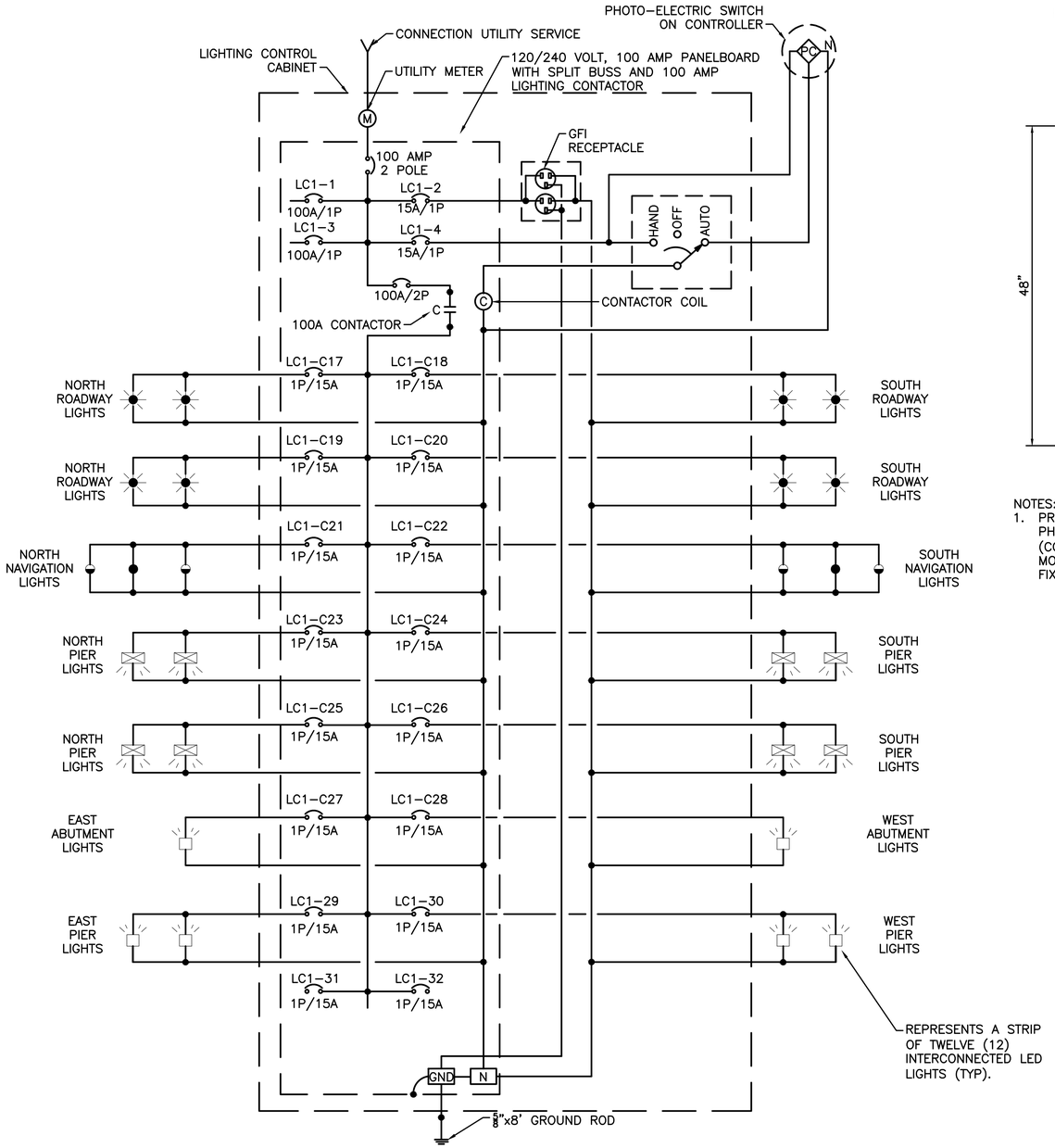
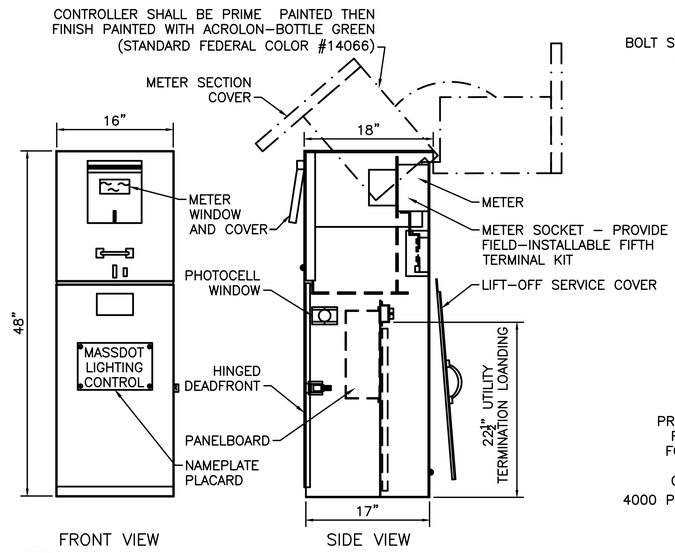
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	123	317
PROJECT FILE NO.	605527		

RIVER ST.
WIRING DIAGRAM

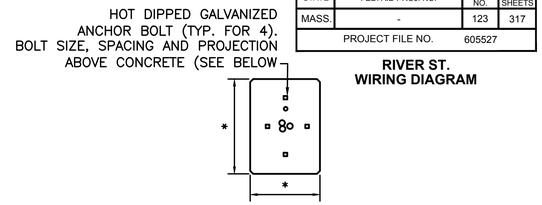


ONE LINE DIAGRAM
N.T.S.



NOTES:
1. PROVIDE MILBANK CP3B51110A22SL1 MODIFIED WITH 100 AMP CONTACTOR, PHOTOCELL, FIFTH TERMINAL KIT FOR USE WITH RINGLESS METER SOCKETS (COORDINATE WITH ELECTRIC UTILITY FOR METER SOCKET REQUIREMENTS), MOUNTING BASE, ANCHOR BOLT KIT, GFCI RECEPTACLE, AND INTERNAL LIGHT FIXTURE OR EQUAVALENT BY MYERS POWER PRODUCTS, OR VIT STRONG BOX.

LIGHTING CONTROL CABINET DETAIL
N.T.S.



NOTE: ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".

CONCRETE FOUNDATION FOR LIGHTING CONTROL CABINET
N.T.S.

BUS: 120/240V, 1PH, 3W, 60HZ
MAIN LUGS ONLY: 100A
FEEDER SIZE: 3#2, 1#2 – GND

PANELBOARD LC1–UNSWITCHED
UNSWITCHED LOADS ONLY
GROUND BAR

SHORT CIRCUIT BRACING: 10–KAIC
CABINET: SURFACE
PANEL LOCATION: N HARVARD BOSTON

LOAD SERVED	HP	VA A	VA B	CKT. NO.	NEUTRAL	CKT. NO.	VA A	VA B	HP	LOAD SERVED
MAIN		–		1	100A	2	180			GFI RECEPTACLE
MAIN			–	3	100A	4		50		CONTROL CKT
SPARE		–		5	100A	6	–			SWITCH LOAD CENTER (BELOW)
SPARE			–	7	100A	8		–		SWITCH LOAD CENTER (BELOW)
SPARE		–		9		10	–			SPARE
SPACE			–	11		12		–		SPACE
SPACE		–		13		14	–			SPACE
SPACE			–	15		16		–		SPACE

PANELBOARD LC1–SWITCHED
SWITCHED LOADS ONLY
GROUND BAR

LOAD SERVED	HP	VA A	VA B	CKT. NO.	NEUTRAL	CKT. NO.	VA A	VA B	HP	
NORTH ROADWAY LIGHTING		351		17		18	351			SOUTH ROADWAY LIGHTING
NORTH ROADWAY LIGHTING			351	19		20		351		SOUTH ROADWAY LIGHTING
NAVIGATION LIGHTING		300		21		22	300			NAVIGATION LIGHTING
NORTH PIER LIGHTS			53	23		24		53		SOUTH PIER LIGHTS
NORTH PIER LIGHTS		53		25		26	53			SOUTH PIER LIGHTS
UNDER ARCH LGTS–EAST ABUTMENT			101	27		28		101		UNDER ARCH LGTS–WEST ABUTMENT
UNDER ARCH LGTS–EAST PIER		202		29		30	202			UNDER ARCH LGTS–WEST PIER
SPARE			–	31		32		–		SPARE

VA A: 1792 VA B: 1260
TOTAL CONNECTED LOAD: 3052 VA

ALL BRANCH CB: 15 AMP TRIP
UNLESS OTHERWISE NOTED

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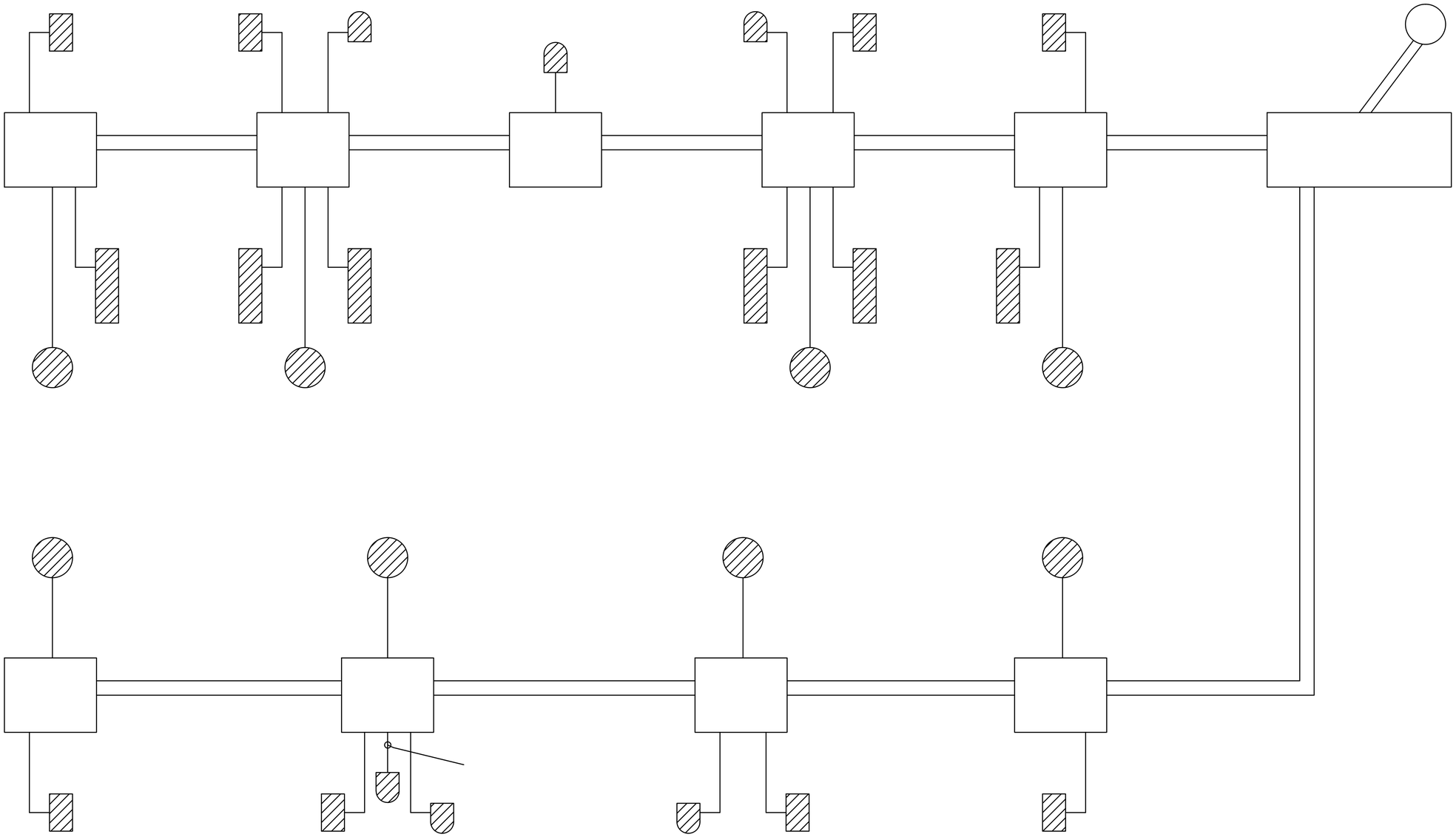
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	124	317
PROJECT FILE NO.	605527		

RIVER ST. CONDUIT BLOCK DIAGRAM



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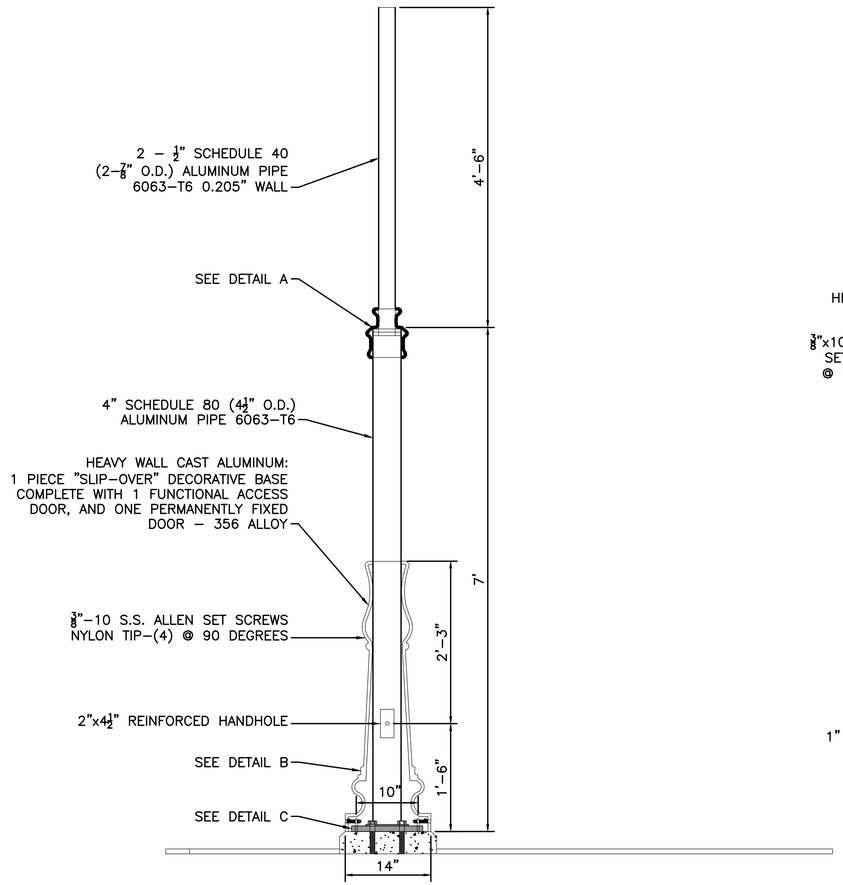
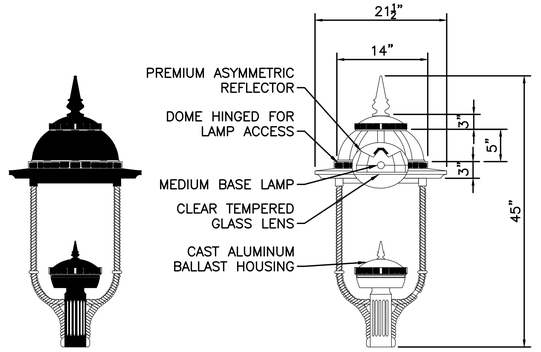
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	125	317
PROJECT FILE NO.	605527		

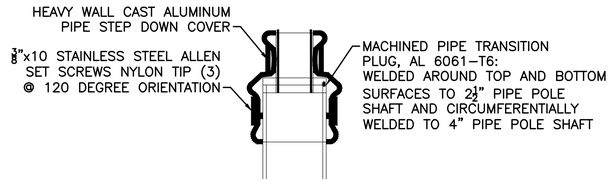
RIVER ST.
STREET LIGHT



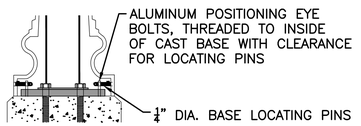
POLE DETAIL
N.T.S.
POLE TYPE S



POST TOP LUMINAIRE
N.T.S.

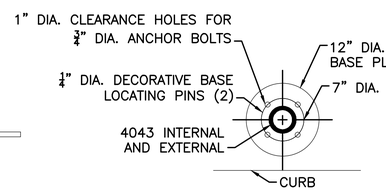


DETAIL A



DETAIL B

ANCHOR BOLTS: (4) ¾"x24"L, 3" HOOK FULLY GALVANIZED–55KSI



BASE DETAIL C

GFCI ORIENTATION LOCATED 90 DEGREES. FUNCTIONAL ACCESS DOORS LOCATED @ 270 DEGREES. FIXED ACCESS DOOR LOCATED @ 90 DEGREES.

POLE ASSEMBLY DETAILS
N.T.S.

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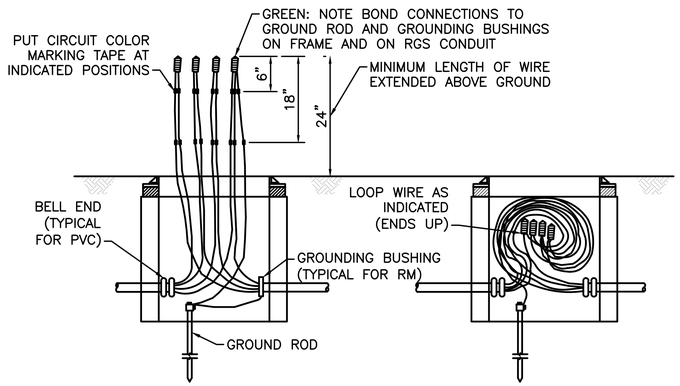
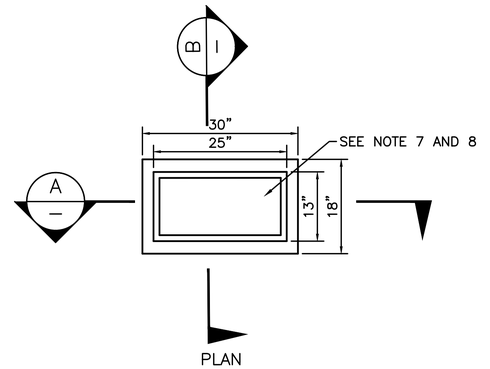
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

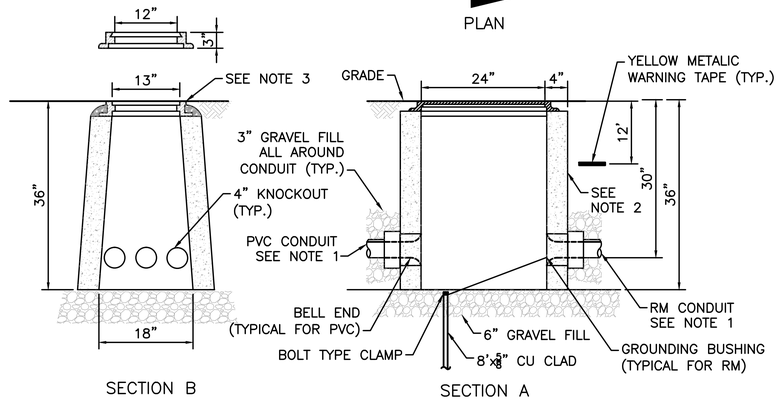
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	126	317
PROJECT FILE NO.	605527		

ELECTRIC HANDHOLE DETAILS



HANDHOLE WIRING DETAIL
N.T.S.





HANDHOLE – 24" x 13" x 36"
N.T.S.

ELECTRIC HANDHOLE GENERAL NOTES:

1. ALL CONDUIT ENTERING HANDHOLES SHALL EXTEND INTO THE HANDHOLE CAVITY BY AT LEAST 2".
2. ALL HANDHOLES SHALL BE PRECAST CONCRETE, AND SHALL BE FREE OF CRACKS OR OTHER DEFECTS. CONCRETE FOR PRECAST CONCRETE PULLBOXES/HANDHOLES SHALL BE 4000 PSI, ¾", 610 CEMENT CONCRETE MASONRY.
3. POLIMER CONCRETE INSTALLED SHALL BE BOLTED TO THE SURFACE OF THE PRECAST CONCRETE HANDHOLE.
4. ALL CONDUIT INSTALLED IN HANDHOLES SHALL BE INSTALLED IN KNOCKOUTS PROVIDED IN THE BOX AND NO EXCESS KNOCKOUTS SHALL MADE. THE KNOCKOUTS ARE DESIGNED TO BE MADE PRIOR TO BACKFILLING AROUND THE PULLBOXES AND HANDHOLE. AFTER THE CONDUIT HAS BEEN INSTALLED IN THE PULLBOX/HANDHOLE, THE OPEN SPACE BETWEEN THE BOX AND THE CONDUIT WILL BE SEALED WITH 4000 PSI CEMENT CONCRETE MASONRY. ANY CONDUIT INSTALLED IN SUCH A MANNER AS TO BLOCK COMPLETE ACCESS TO ANY OTHER CONDUIT SHALL BE REMOVED AND RESET.
5. FOR THE EXACT NUMBER, SIZE, AND ORIENTATION OF THE CONDUITS ENTERING THE HANDHOLE, SEE LIGHTING PLAN SHEETS.
6. HANDHOLE FRAME AND COVER TO BE NON–CONDUCTIVE FIBERGLASS REINFORCED POLYMER CONCRETE TYPE. FRAME AND COVER TO BE RATED FOR A STATIC DESIGN LOAD OF 15,000 LB OVER A 10"x10" AREA AND MUST PASS A MINIMUM STATIC TEST LOAD OF 22,568 LB MINIMUM. FRAME AND COVER SHALL BE RATED ANSI TIER 15 MINIMUM.
7. FUNCTION DESIGNATION ON THE HANDHOLE SHALL BE LABELED AS FOLLOWS PER NEC ARTICLE 314.30D: 'MASSDOT LIGHTING" FOR LIGHTING CONDUIT.
8. HANDHOLE FRAME AND COVER SHALL BE DARK GREEN (STANDARD FEDERAL COLOR #14066).

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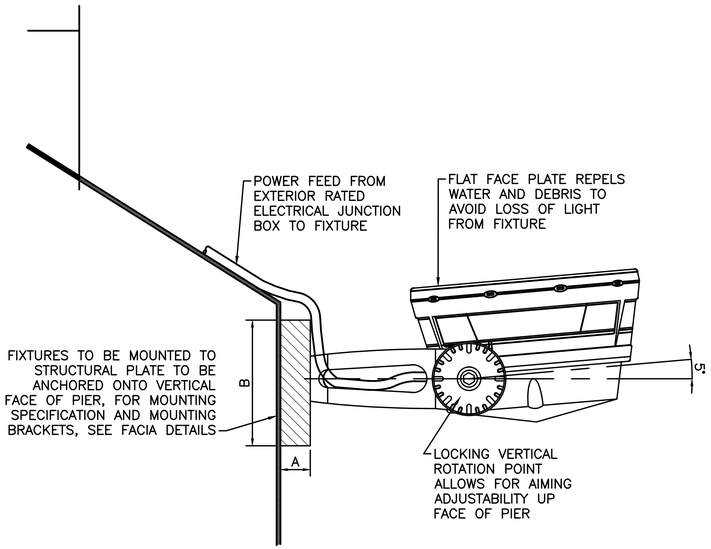
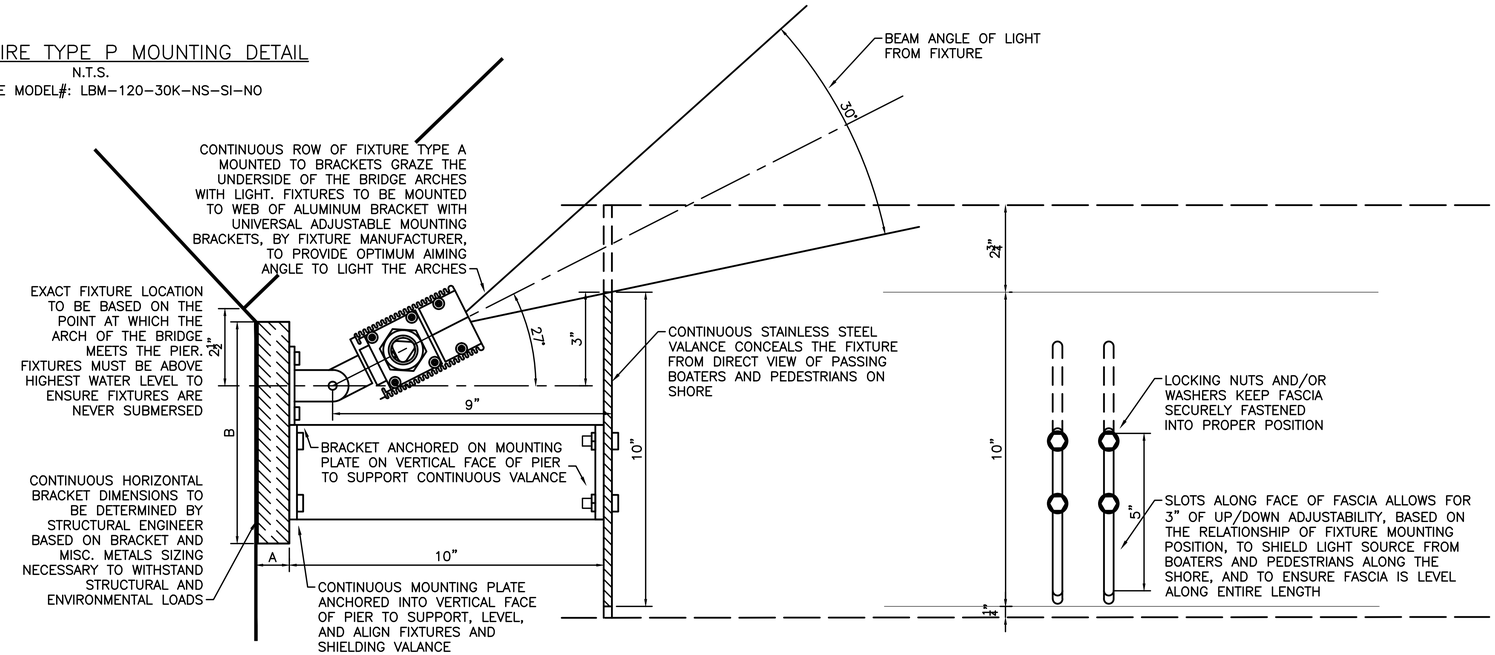
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	127	317
PROJECT FILE NO.	605527		

DECORATIVE LIGHTING DETAILS



PIER LUMINAIRE TYPE P MOUNTING DETAIL
N.T.S.
LUMENPULSE MODEL#: LBM-120-30K-NS-SI-NO



ARCH LUMINAIRE TYPE A MOUNTING DETAIL
N.T.S.
LUMENPULSE MODEL#: LOG-RO-120-48-30K-30x60-SI-NO

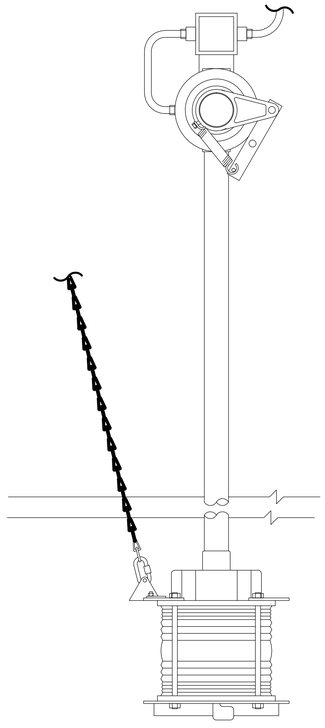
VALANCE ELEVATION
N.T.S.

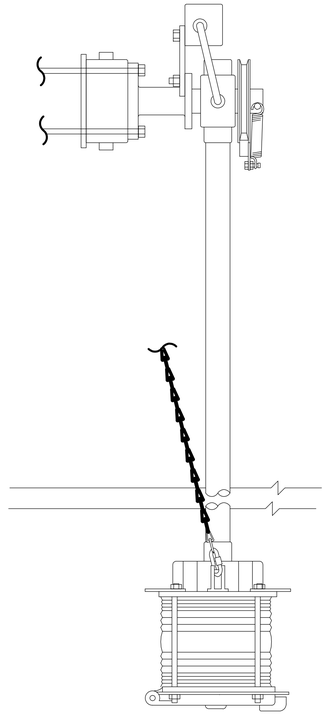
L:\09149\CURRENT\CUTSHEETS\R-W_Elec\E13 - Decorative Lighting Details.dwg, 1/4/2013 1:22:31 PM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	128	317
PROJECT FILE NO.	605527		

NAVIGATION LIGHTING DETAILS





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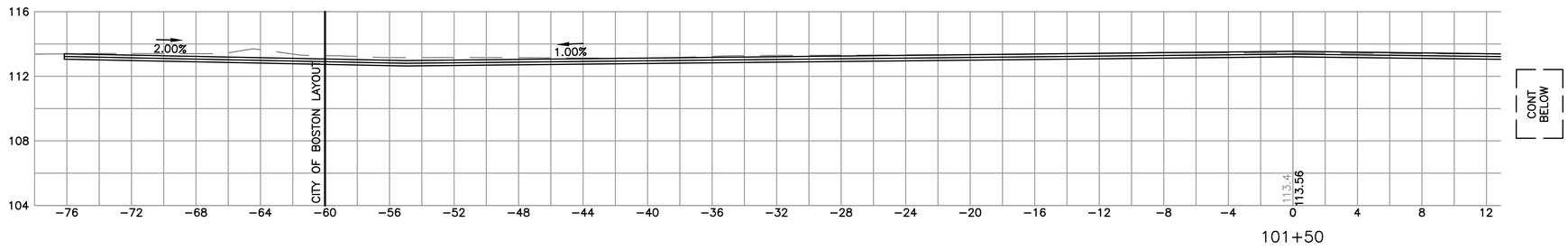
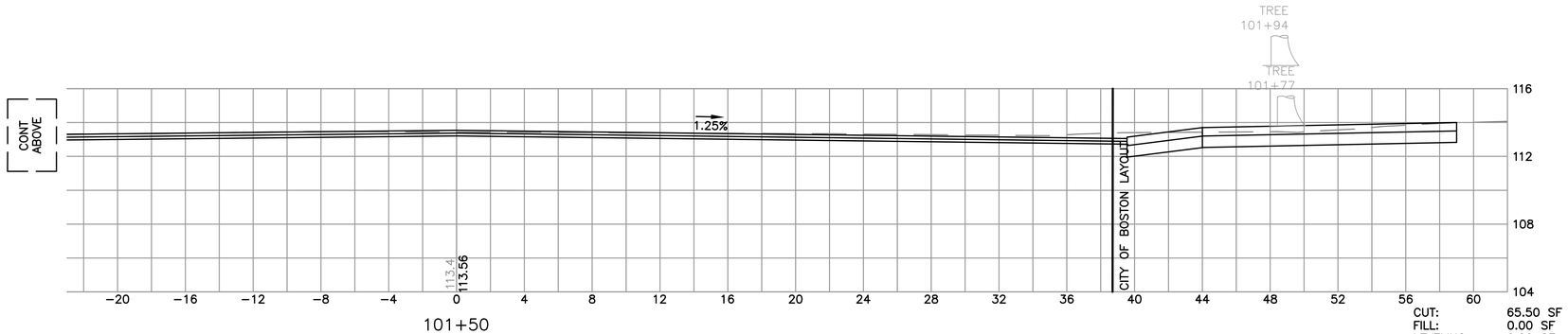
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	301	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
RIVER STREET

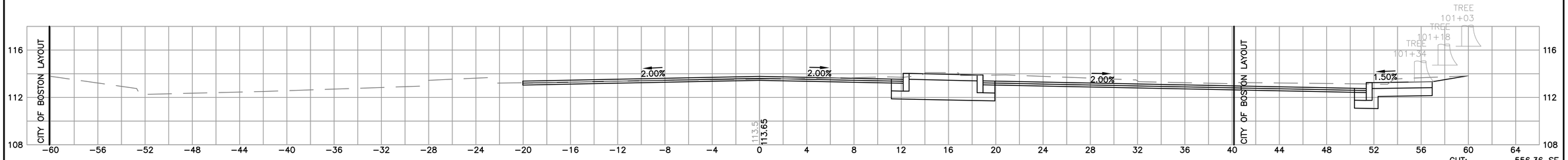


101+50



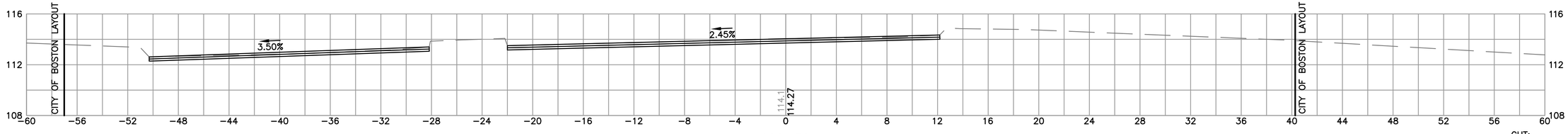
101+50

CUT: 65.50 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



101+00

CUT: 556.36 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



100+50

CUT: 16.44 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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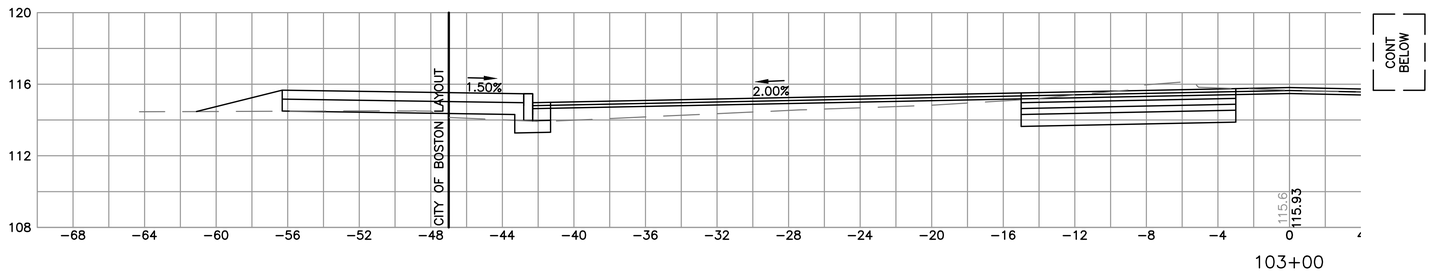
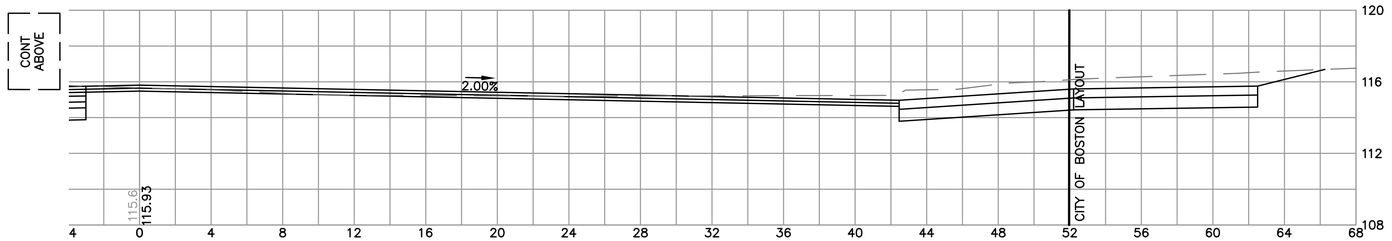
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	302	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
RIVER STREET

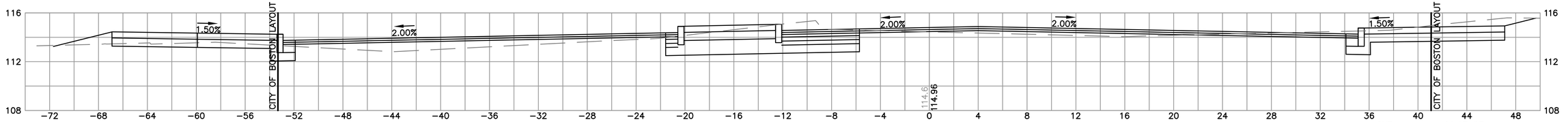


103+00



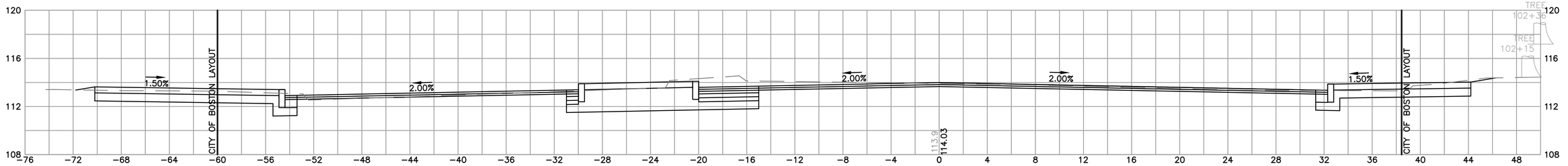
103+00

CUT: 71.86 SF
FILL: 14.46 SF
LEVELING: 0.00 SF



102+50

CUT: 61.97 SF
FILL: 20.56 SF
LEVELING: 0.00 SF



102+00

CUT: 182.75 SF
FILL: 0.22 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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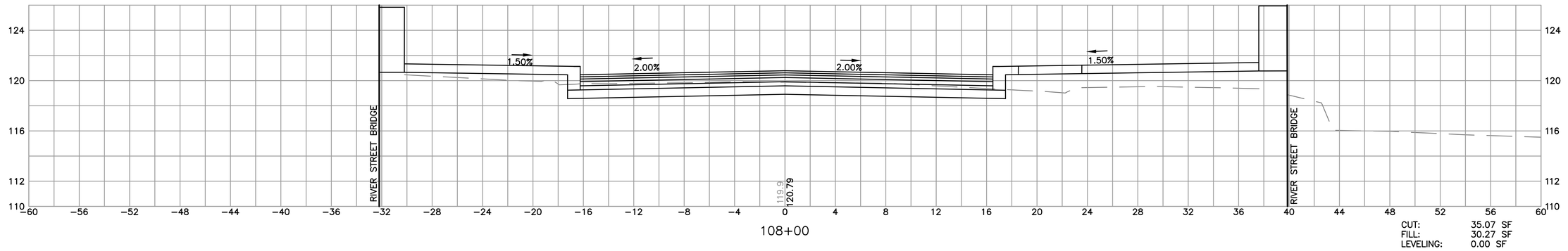
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

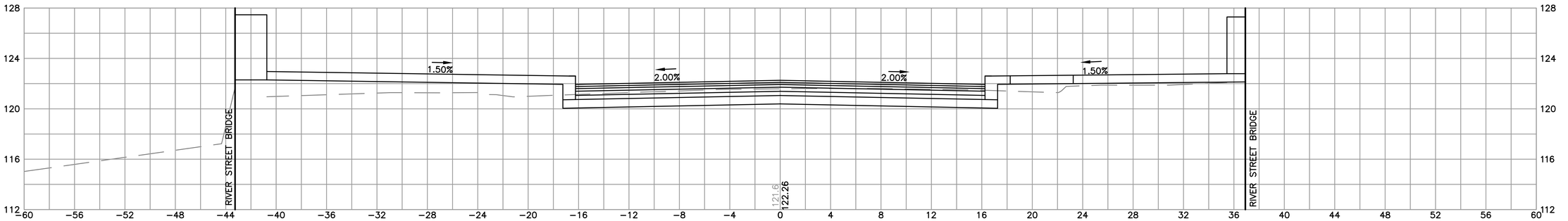
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	303	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
RIVER STREET



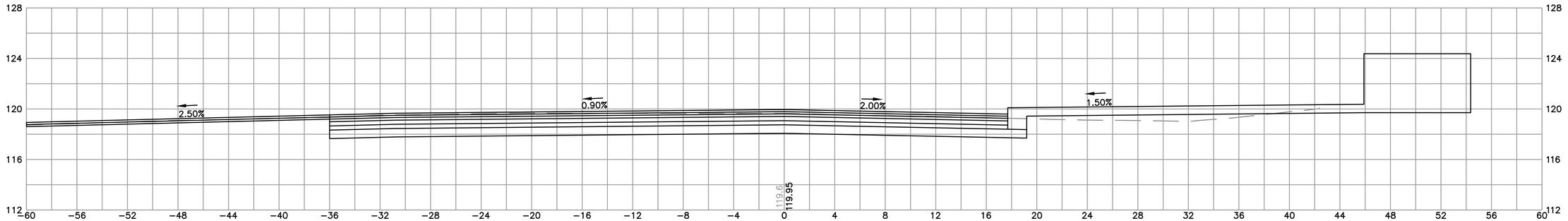
108+00

CUT: 35.07 SF
FILL: 30.27 SF
LEVELING: 0.00 SF



105+00

CUT: 43.21 SF
FILL: 27.98 SF
LEVELING: 0.00 SF



104+50

CUT: 108.21 SF
FILL: 4.61 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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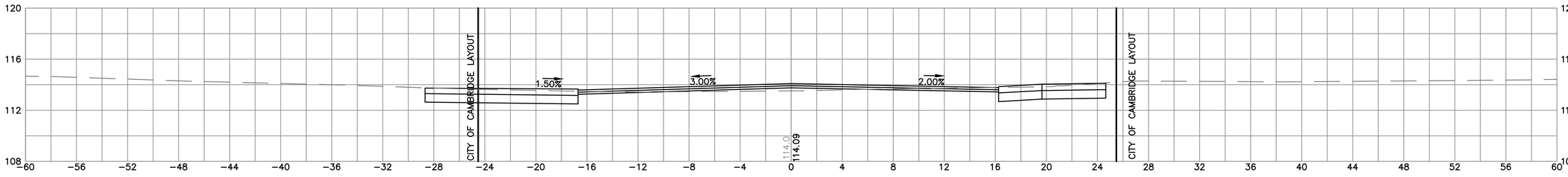
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

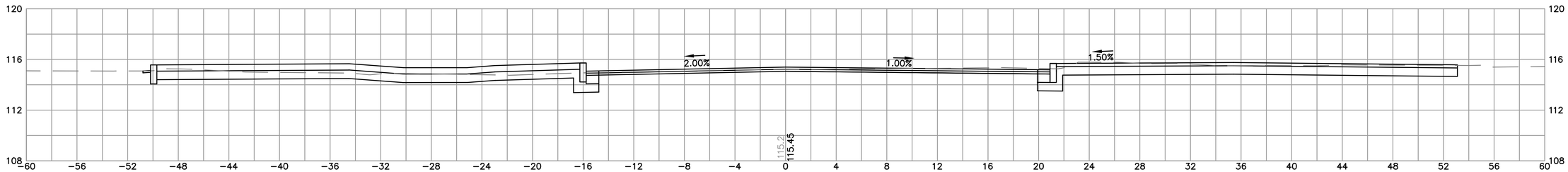
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	304	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
RIVER STREET



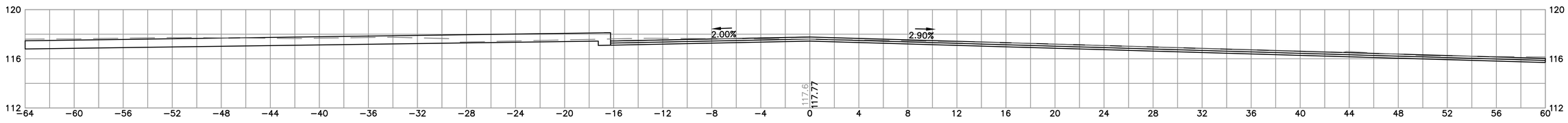
109+50

CUT: 23.95 SF
FILL: 1.96 SF
LEVELING: 0.00 SF



109+00

CUT: 60.35 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



108+50

CUT: 49.46 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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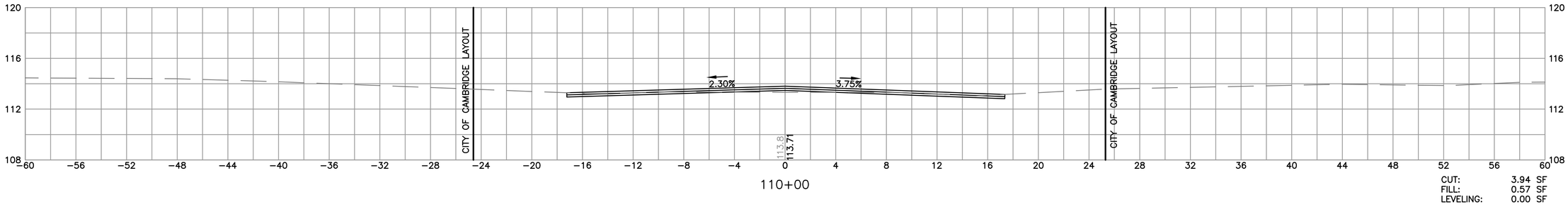
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	305	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
RIVER STREET



CUT: 3.94 SF
FILL: 0.57 SF
LEVELING: 0.00 SF

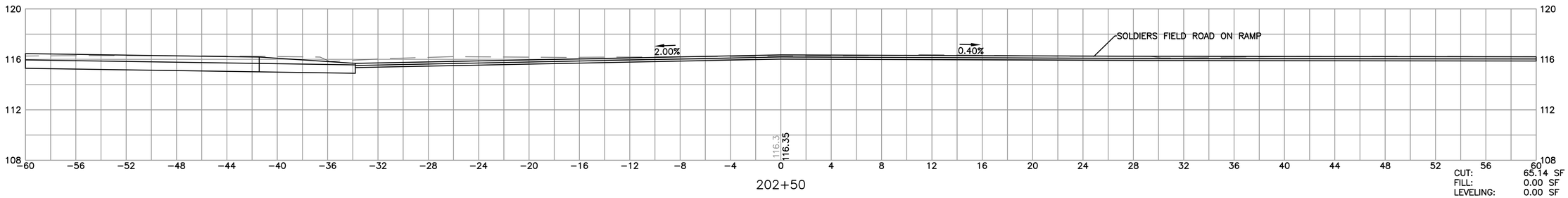
4 0 4 8
SCALE 1" = 4'

L:\09149\CURRENT\CUTSHEETS\X-SECTIONS.dwg, 1/4/2013 12:36:33 PM

BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

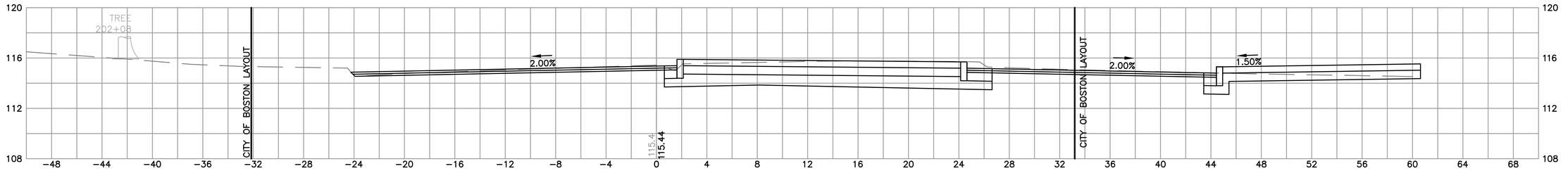
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	306	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
WESTERN AVENUE



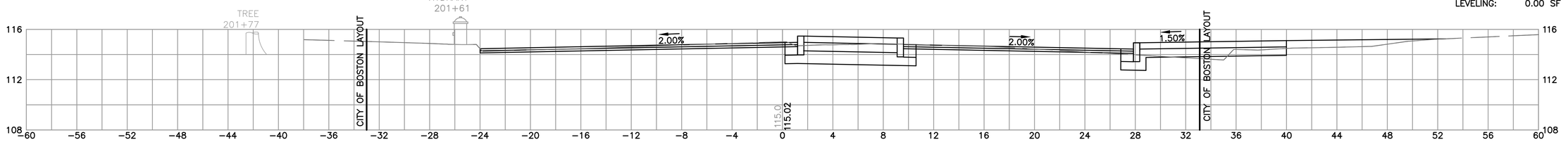
202+50

CUT: 65.14 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



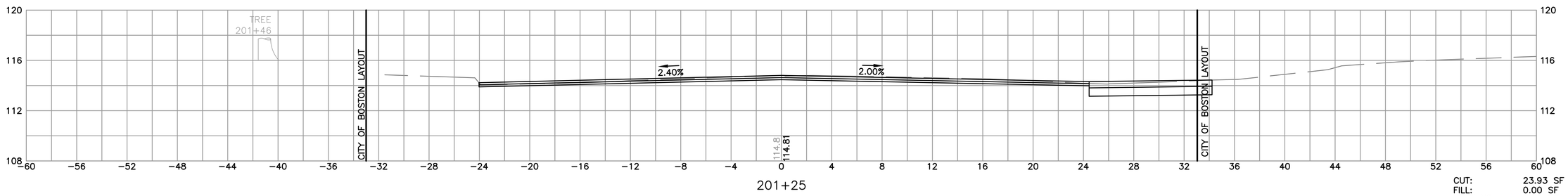
202+00

CUT: 73.08 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



201+50

CUT: 30.73 SF
FILL: 5.85 SF
LEVELING: 0.00 SF



201+25

CUT: 23.93 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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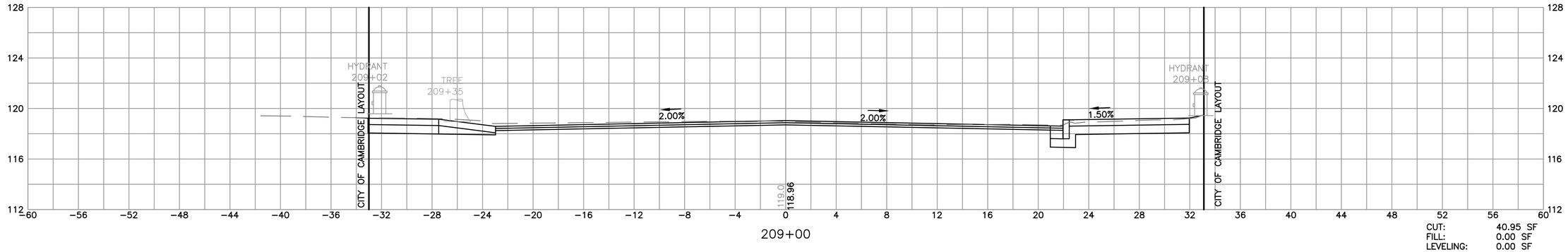
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

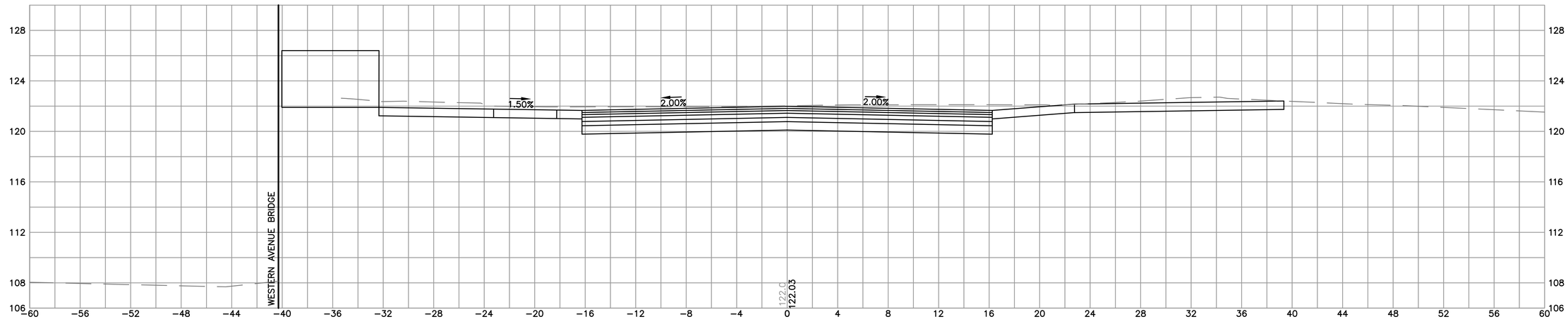
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	307	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
WESTERN AVENUE



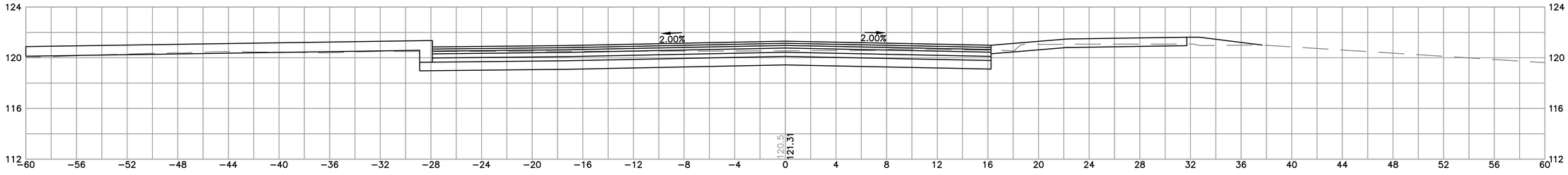
209+00

CUT: 40.95 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



208+00

CUT: 104.99 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



204+00

CUT: 64.51 SF
FILL: 1.02 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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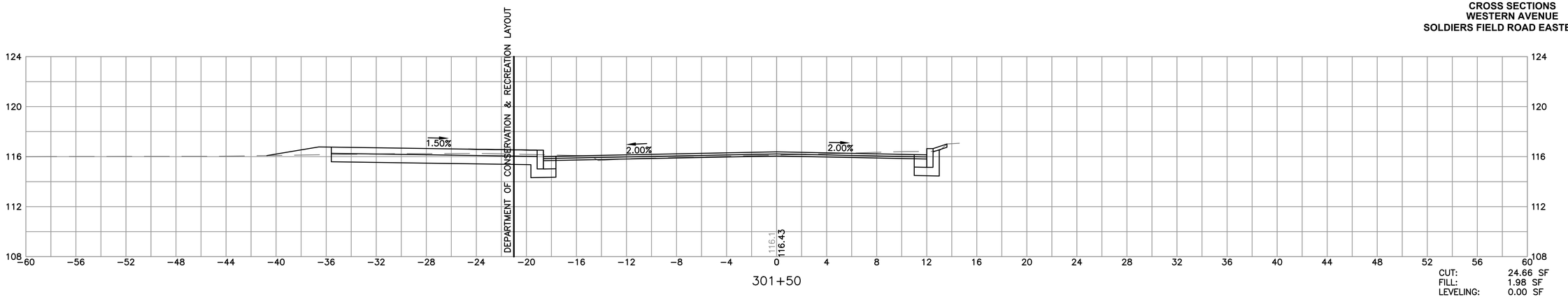
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

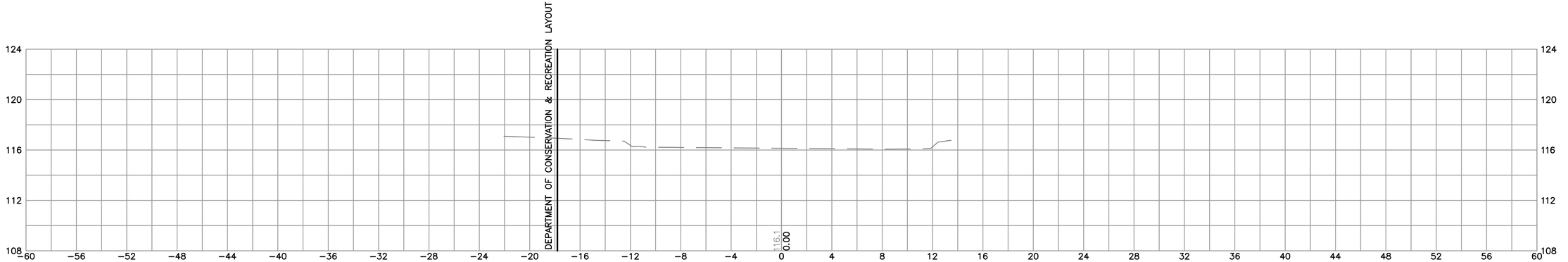
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	308	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
WESTERN AVENUE
SOLDIERS FIELD ROAD EASTBOUND



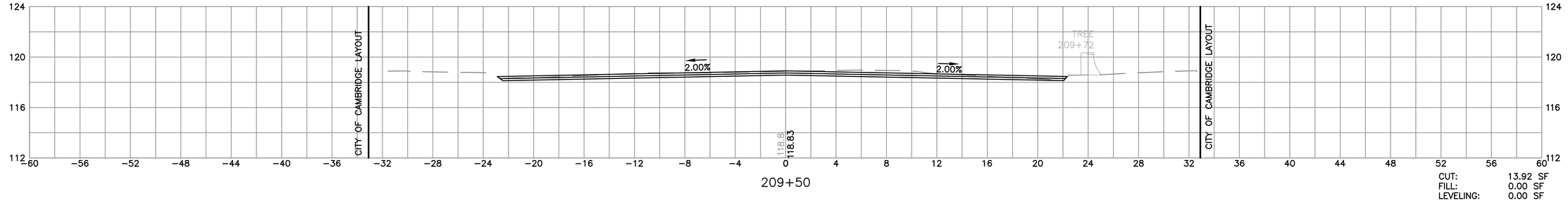
301+50

CUT: 24.66 SF
FILL: 1.98 SF
LEVELING: 0.00 SF



301+00

CUT: 0.00 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



209+50

CUT: 13.92 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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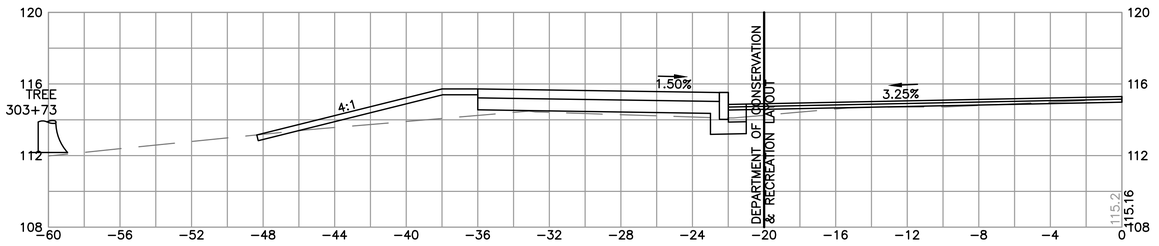
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

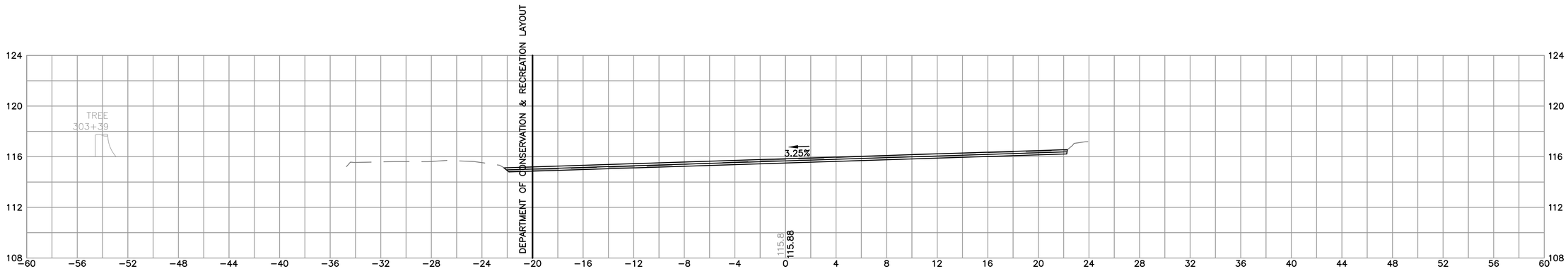
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	309	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD EASTBOUND



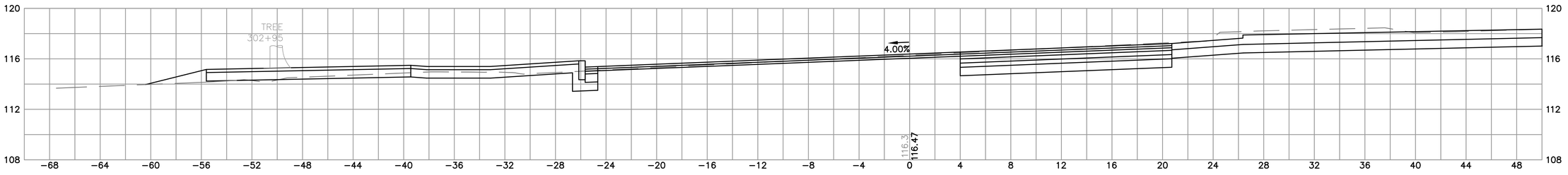
303+50

CUT: 2.90 SF
FILL: 11.05 SF
LEVELING: 0.00 SF



303+00

CUT: 9.40 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



302+50

CUT: 89.82 SF
FILL: 2.78 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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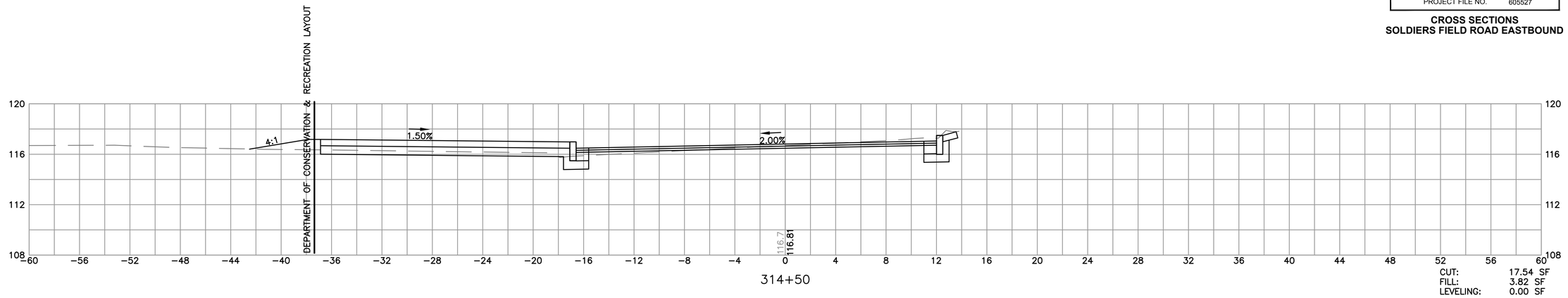
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

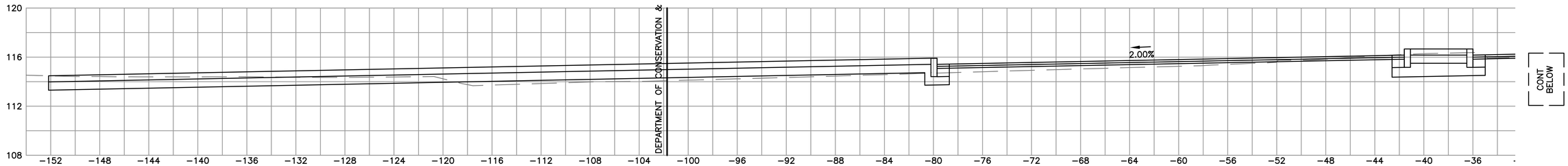
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	313	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD EASTBOUND

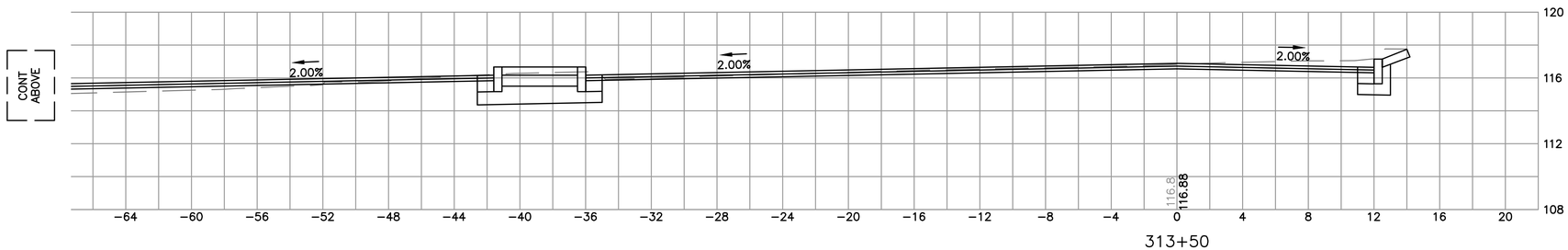


314+50

CUT: 17.54 SF
FILL: 3.82 SF
LEVELING: 0.00 SF



CUT: 60.85 SF
FILL: 13.46 SF
LEVELING: 0.00 SF



313+50

SCALE 1" = 4'

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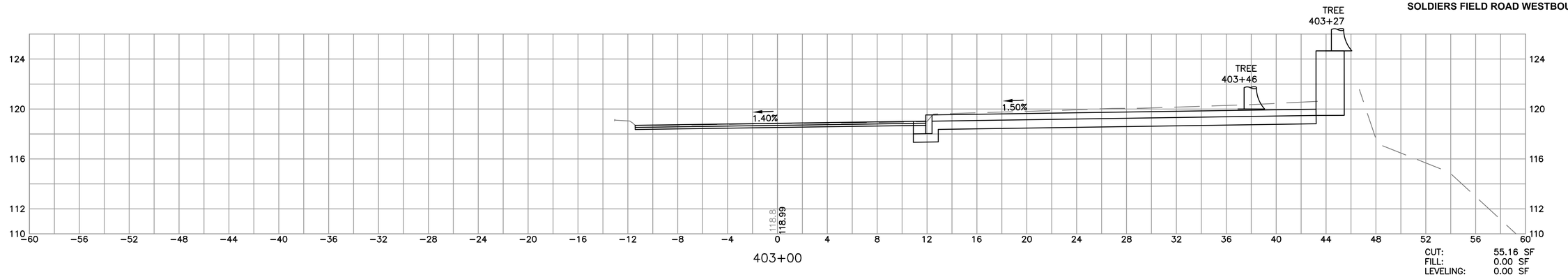
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

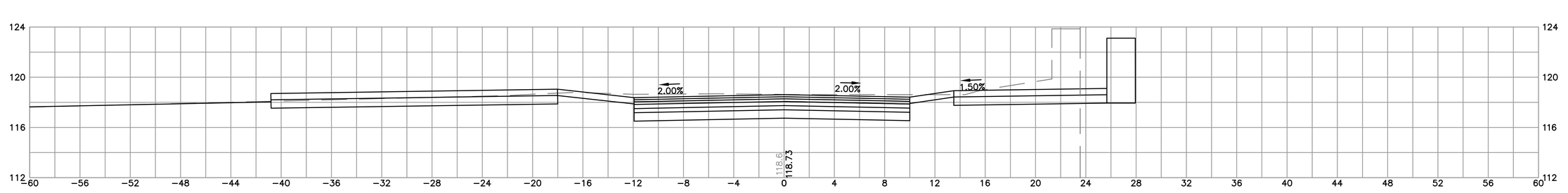
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	314	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD WESTBOUND



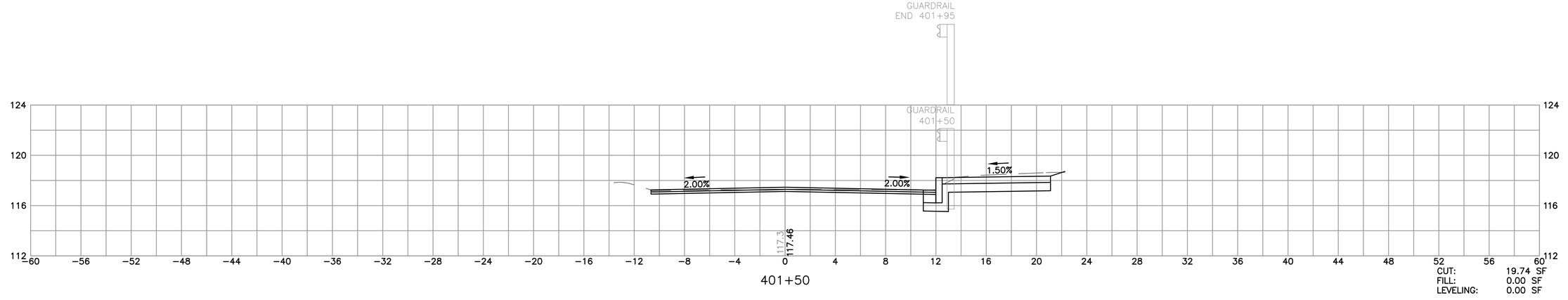
403+00

CUT: 55.16 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



402+00

CUT: 91.01 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



401+50

CUT: 19.74 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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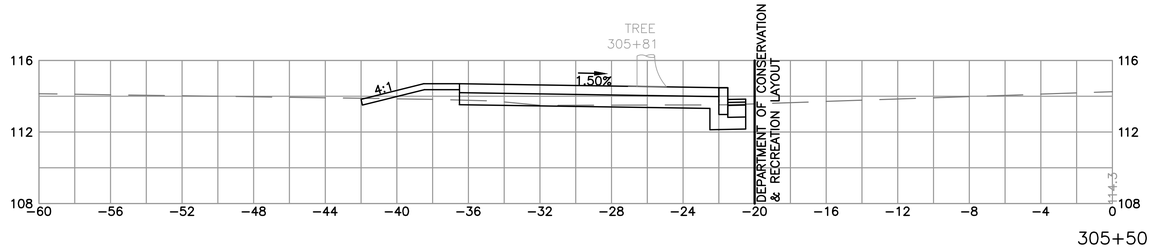
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

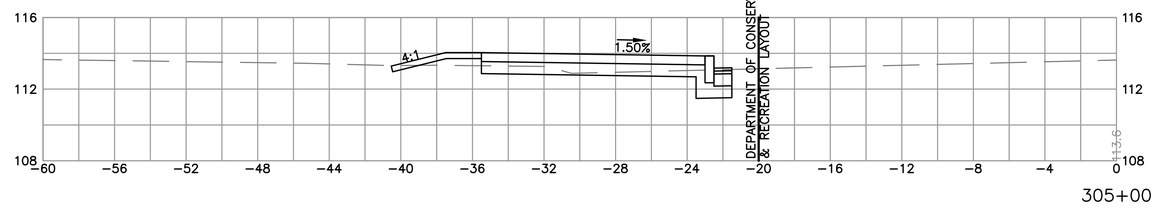
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	310	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD EASTBOUND



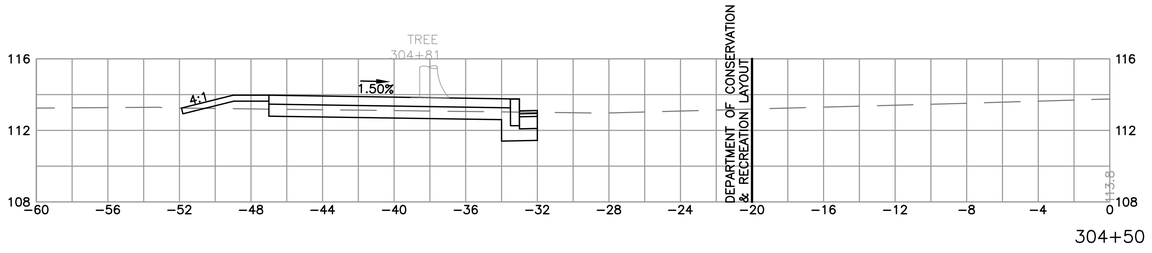
305+50

CUT: 6.46 SF
FILL: 1.60 SF
LEVELING: 0.00 SF



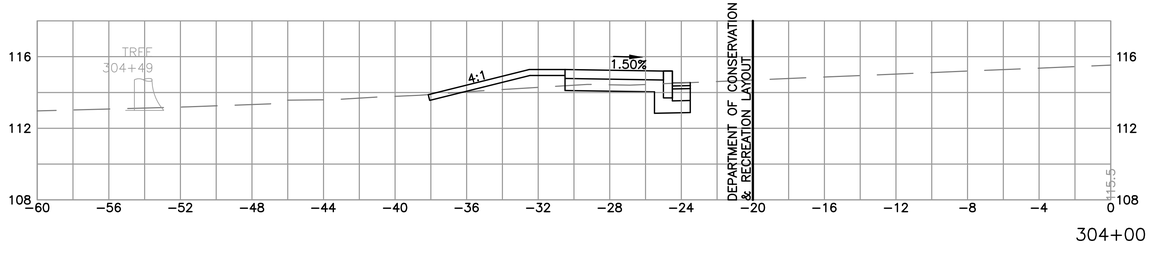
305+00

CUT: 8.34 SF
FILL: 1.07 SF
LEVELING: 0.00 SF



304+50

CUT: 8.81 SF
FILL: 1.19 SF
LEVELING: 0.00 SF



304+00

CUT: 5.44 SF
FILL: 2.55 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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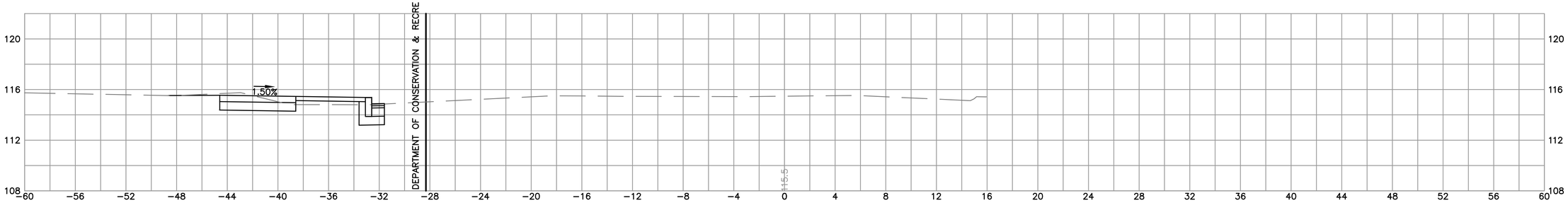
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

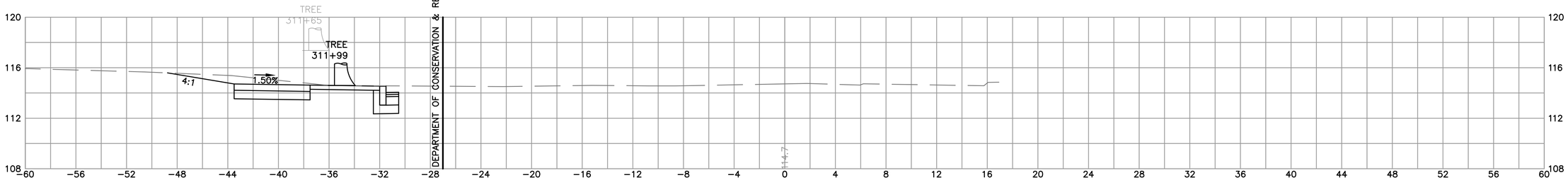
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	311	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD EASTBOUND



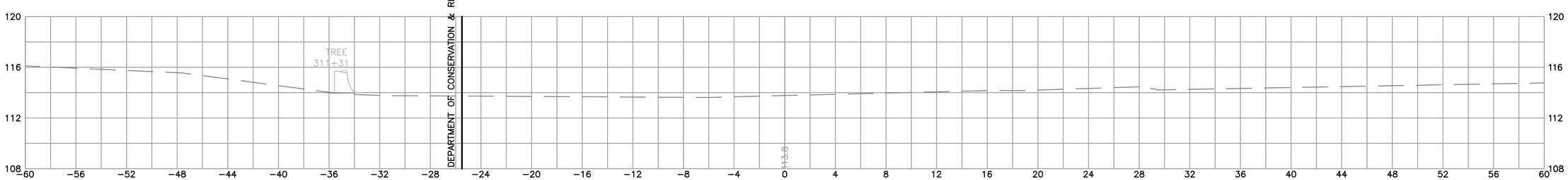
312+00

CUT: 9.73 SF
FILL: 1.35 SF
LEVELING: 0.00 SF



311+50

CUT: 16.78 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



311+00

CUT: 0.00 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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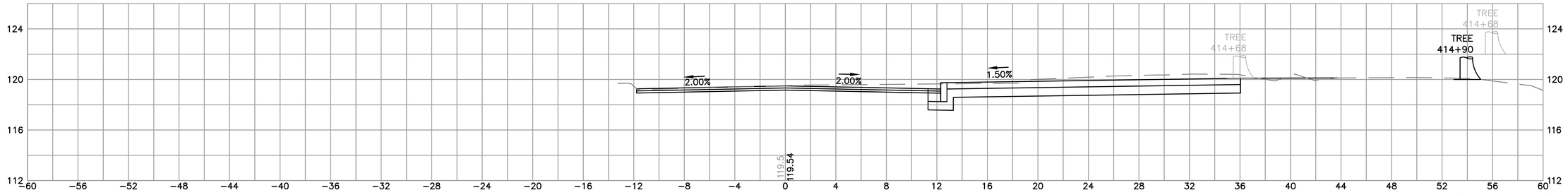
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

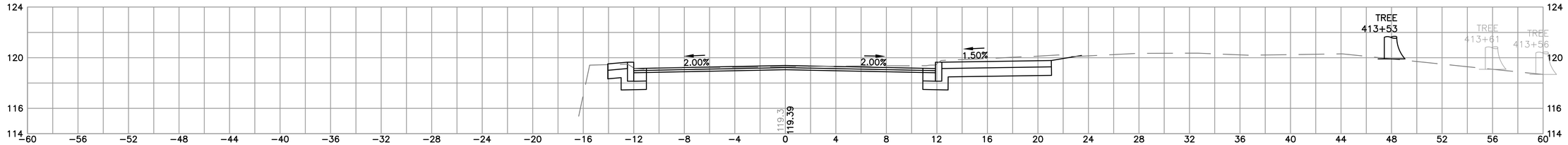
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	315	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD WESTBOUND



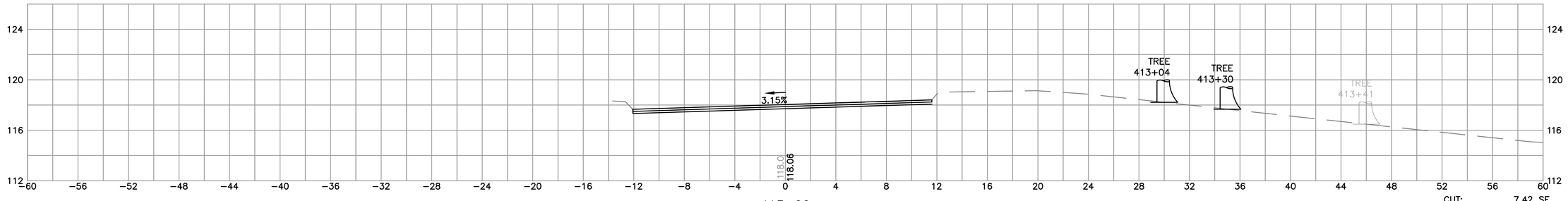
414+50

CUT: 45.11 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



413+50

CUT: 28.41 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



413+00

CUT: 7.42 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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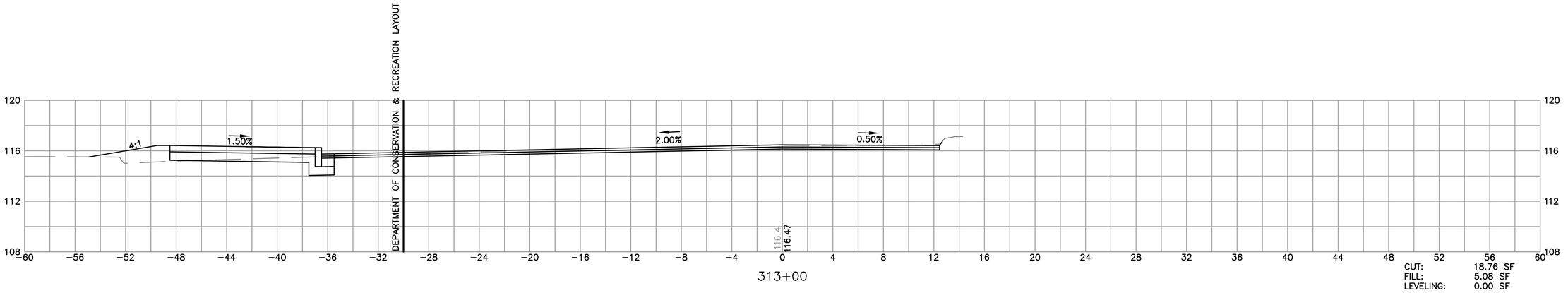
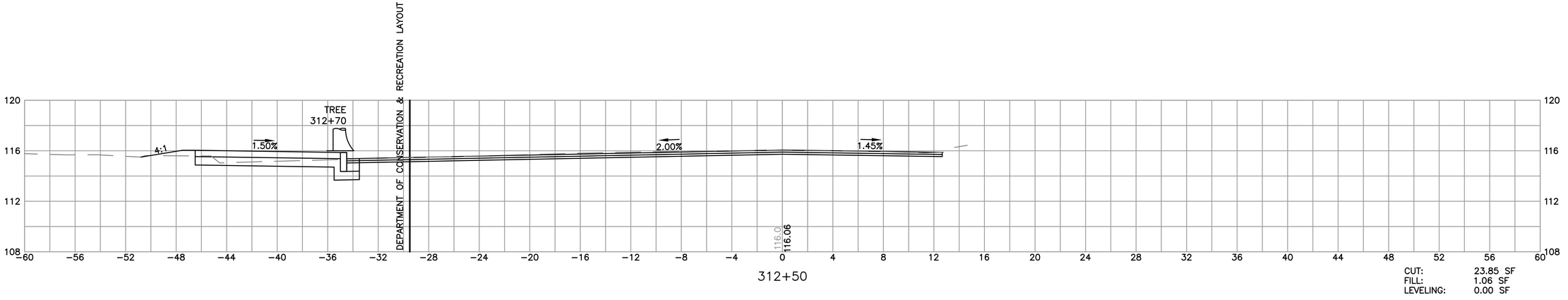
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	312	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD EASTBOUND





4 0 4 8

SCALE 1" = 4'

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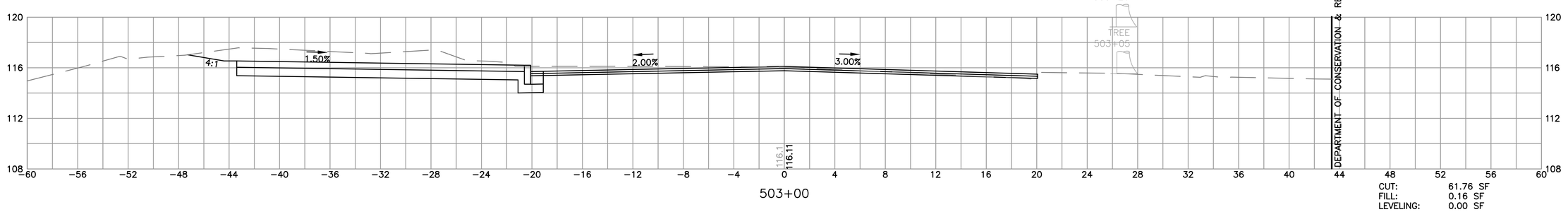
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

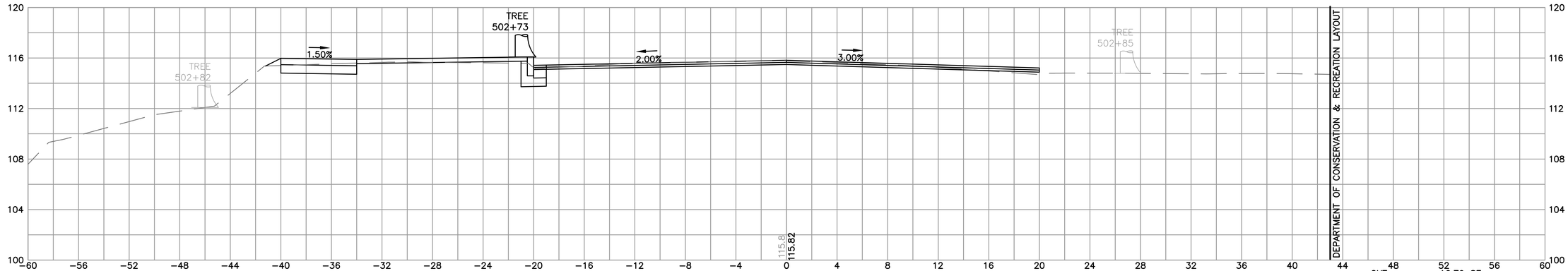
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	316	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
SOLDIERS FIELD ROAD WESTBOUND
MEMORIAL DRIVE



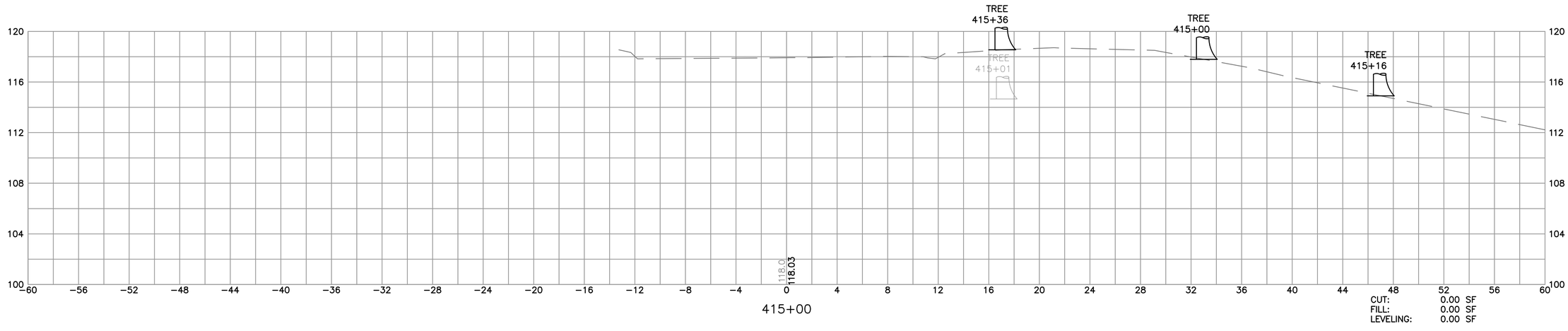
503+00

CUT: 61.76 SF
FILL: 0.16 SF
LEVELING: 0.00 SF



502+50

CUT: 16.79 SF
FILL: 1.29 SF
LEVELING: 0.00 SF



415+00

CUT: 0.00 SF
FILL: 0.00 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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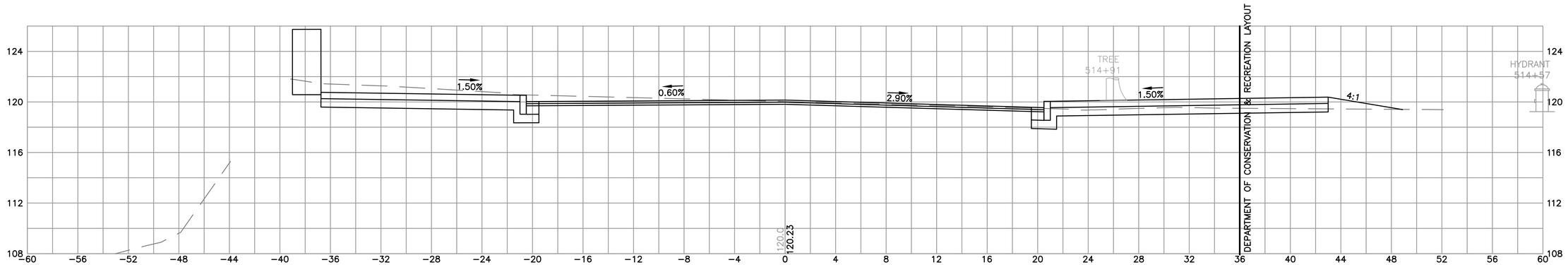
BOSTON
RIVER STREET AND WESTERN AVENUE
BRIDGE REHABILITATION

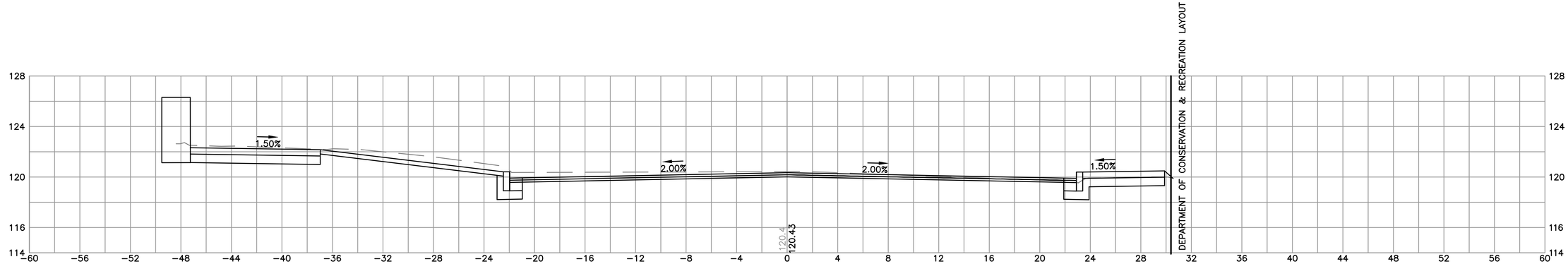
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	-	317	317
PROJECT FILE NO.	605527		

CROSS SECTIONS
MEMORIAL DRIVE



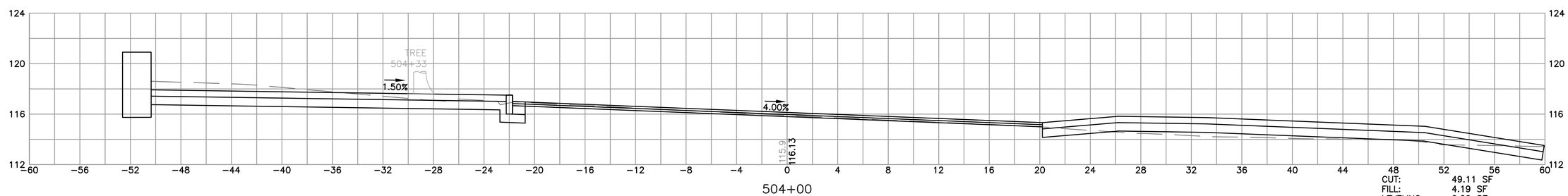
514+50

CUT: 56.13 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



513+50

CUT: 54.25 SF
FILL: 0.00 SF
LEVELING: 0.00 SF



504+00

CUT: 49.11 SF
FILL: 4.19 SF
LEVELING: 0.00 SF

4 0 4 8

SCALE 1" = 4'

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