

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	1	53
PROJECT FILE NO.		606885	

TITLE SHEET & INDEX

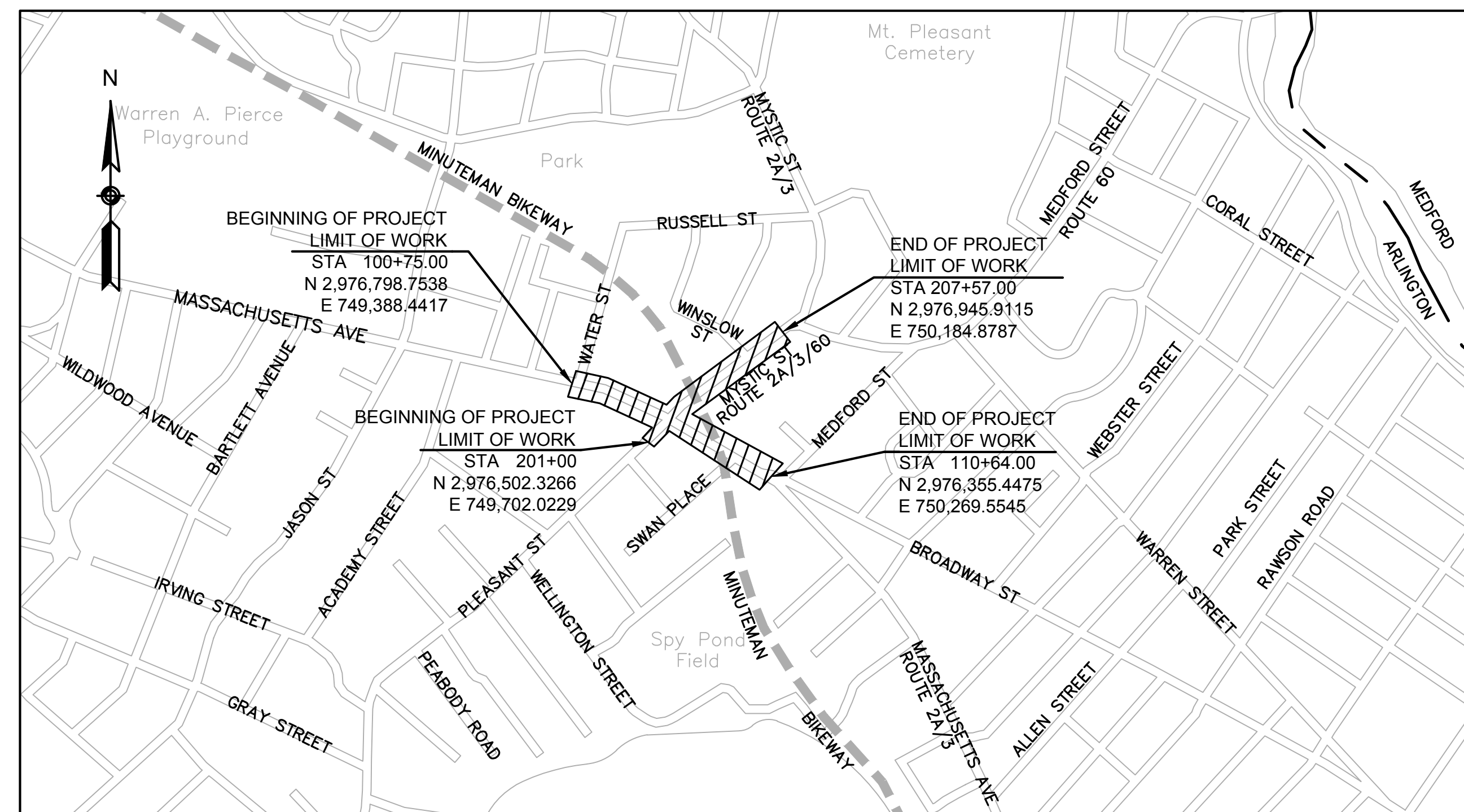
PS&E PLAN AND PROFILE OF BIKEWAY CONNECTION AT INTERSECTION OF ROUTE 3 & ROUTE 60, MASSACHUSETTS AVENUE, PLEASANT STREET & MYSTIC STREET

IN THE TOWN OF
ARLINGTON
MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. CM/HSI-002S(719)X

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 15, 2012, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS, (AS RELATED TO TRAFFIC STANDARD DETAILS ONLY), THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE AASHTO GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES 2012, THE AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES 2012, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

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DESIGN DESIGNATION - MASSACHUSETTS AVENUE

DESIGN SPEED	30 MILES/HR
ADT (CURRENT)	24,705
ADT (DESIGN YEAR)	27,295
K	7.8%
D	53.8% EB
T (PEAK HOUR)	1.1%
DHV	2,130
DDHV	1,145

FUNCTIONAL CLASSIFICATION URBAN PRINCIPAL ARTERIAL

DESIGN DESIGNATION - MYSTIC STREET / PLEASANT STREET

DESIGN SPEED	30 MILES/HR
ADT (CURRENT)	20,285
ADT (DESIGN YEAR)	22,410
K	7.4%
D	51.2% SB
T (PEAK HOUR)	2.2%
DHV	1,670
DDHV	856

FUNCTIONAL CLASSIFICATION URBAN PRINCIPAL ARTERIAL




SCALE 1" = 500'

LENGTH OF PROJECT = 1650.00 FEET = 0.312 MILES

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DATE	DESCRIPTION	REV #
08/2014	PS&E SUBMITTAL	0

 RECOMMENDED FOR APPROVAL			
		CHIEF ENGINEER	DATE
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED:		APPROVED	
DIVISION ADMINISTRATOR	DATE	HIGHWAY ADMINISTRATOR	DATE

GENERAL NOTES

SURVEY

- ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED UTILIZING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION PROVIDED BY MWRA RECORD PLANS AND SUBCONTRACTOR, NITSCH ENGINEERING, INCORPORATED IN MAY 2007 AND SUPPLEMENTED BY A-PLUS CONSTRUCTION SERVICES CORPORATION IN FEBRUARY 2012.
- THE ACCURACY AND COMPLETENESS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS 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 TOWN OWNED UTILITY STRUCTURES WITHIN AREAS AFFECTED BY THE WORK SHALL BE ADJUSTED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER. ANY UTILITY POLES AND/OR GUY POLES WITHIN AREAS AFFECTED BY THE WORK SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES NOT OWNED BY THE CITY SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS.
- THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
- ALL EXISTING PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- ELEVATIONS SHOWN REFER TO NAVD 88 VERTICAL DATUM. THE COORDINATE INFORMATION INCLUDED ON THESE PLANS IS BASED UPON MASSACHUSETTS GRID SYSTEM, NAD 1983, AS DERIVED FROM GPS CONTROL COORDINATES PROVIDED BY THE MASSDOT HIGHWAY DEPARTMENT SURVEY SECTION, FIELDBOOK NUMBER 40756.
- BENCHMARK INFORMATION:
SEE CONSTRUCTION BASELINE TIES SHEET 14 FOR BENCHMARK INFORMATION AND LOCATIONS.

TEMPORARY BENCHMARKS SET:
TBM #1 (PK NAIL) TBM #13 (L.O.C. CONC. SLAB @ STREET LEVEL)
ELEV = 48.36 ELEV = 55.37

TBM #2 (PK NAIL) TBM #14 (R.O.C. CONC. SLAB @ STREET LEVEL)
ELEV = 27.16 ELEV = 48.95

TBM #3 (PK NAIL) TBM #15 (L.O.C. GRANITE STEP)
ELEV = 27.16 ELEV = 45.28

TBM #4 (PK NAIL)
ELEV = 50.48
- MASSDOT HIGHWAY DIVISION SHALL RE-ESTABLISH SURVEY CONTROL PRIOR TO BEGINNING WORK ON THIS CONTRACT.

UTILITIES

- 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.
- 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 PRIVATE UTILITY COVERS IT SHALL BE DEEMED PART OF THE WORK AND THERE WILL BE NO ADDITIONAL COMPENSATION.
- "THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NECESSITY OF MAKING HIS/HER OWN INVESTIGATION IN ORDER TO ASSURE THAT NO DAMAGE TO EXISTING STRUCTURES, DRAINAGE LINES, TRAFFIC SIGNAL CONDUITS, ETCETERA, WILL OCCUR.
- 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. THE TOWN OF ARLINGTON IS NOT A MEMBER OF DIGSAFE. A SEPARATE MARK OUT REQUEST SHALL BE MADE TO THE ARLINGTON SEWER AND WATER DIVISION AT 781-316-3310.
- NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.
- 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.
- CONTRACTOR SHALL COORDINATE ALL WATER WORK WITH THE ARLINGTON SEWER AND WATER DIVISION PRIOR TO CONSTRUCTION. DISRUPTION OF WATER SERVICE REQUIRES A 48 HOUR NOTICE TO AFFECTED RESIDENTS PRIOR TO CONSTRUCTION.

CONSTRUCTION

- AREAS OUTSIDE 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 CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
- JOINTS BETWEEN NEW HOT MIX ASPHALT, ROADWAY PAVEMENT, AND THE LOCATIONS OF SAW CUT FOR EXISTING PAVEMENT SHALL BE SEALED WITH HOT POURED RUBBERIZED ASPHALT AND BACKSANDED.
- 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.
- WHERE THE NEW CONSTRUCTION IS WITHIN THE EXISTING TRAVELED WAY, THE CONTRACTOR SHALL PERFORM WORK SO THAT INTERFERENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM. THE CONTRACTOR WILL NOT BE ALLOWED TO PARK EQUIPMENT, OR STOCKPILE MATERIAL ON 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.
- THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AT HIS OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL SUBMIT TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL BY MASSDOT HIGHWAY DIVISION, THE DESIGNER, 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.
- 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.
- 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 AND THE TOWN OF ARLINGTON POLICE DEPARTMENT.
- 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.
- 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.
- CONTRACTOR SHALL COORDINATE WITH MASSDOT HIGHWAY DIVISION CONCERNING ALL SCHEDULED SPECIAL EVENTS WITHIN THE LIMITS OF WORK.
- THE CONTRACTOR SHALL AT ALL TIMES COORDINATE ROAD AND LANE CLOSURED, AND OTHER DISRUPTIONS IN THE PROJECT AREA, WITH MBTA BUS OPERATIONS.

TRAFFIC

- 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.
- THE CONTRACTOR SHALL TEST THE FUNCTIONALITY OF ANY EXISTING LOOP DETECTORS THAT ARE PROPOSED TO BE RETAINED. ANY LOOPS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO OPERATE ACCORDING TO THE PLANS.
- THE CONTRACTOR SHALL TEST THE EXISTING INTERCONNECT CABLE AND COORDINATION CAPABILITIES. SHOULD ANY CONDUIT OR CABLE BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE THE NECESSARY ITEMS TO PROVIDE PROPER COORDINATION BETWEEN THE CONTROLLERS AS SHOWN ON THE PLANS.
- 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.
- TRAFFIC SIGNAL CONDUIT SHALL BE 3" PVC UNLESS OTHERWISE NOTED.

TEMPORARY TRAFFIC CONTROL

- 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.
- 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.
- THE TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HERE 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.
- 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 SHALL BE FITTED WITH STEADY BURN AND/OR FLASHING WARNING LIGHTS AT THE RESIDENT ENGINEERS DIRECTION.
- PLACE ALL CONSTRUCTION SIGNING, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

CHANNELIZATION:

- CHANNELIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CURRENT M.U.T.C.D. AND MA AMENDMENTS, THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS, AND THE STANDARD SPECIFICATIONS WITH THE LATEST SUPPLEMENTS.
- 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.
- 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' 0.C.
- METAL DRUMS ARE PROHIBITED AS CHANNELIZATION DEVICES.

GRADE DIFFERENCES:

- 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.
- 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.
- 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.
- 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:

- 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.
- 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.
- ALL SIGNS SHALL BE COVERED OR REMOVED WHEN CONDITION IS NOT IN EFFECT.
- 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.

ARLINGTON BIKEWAY CONNECTION AT INTERSECTION OF MASSACHUSETTS AVENUE & MYSTIC STREET

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LEGEND, ABBREVIATIONS, & GENERAL NOTES

PAVEMENT MARKINGS:

- 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.
- 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.
- 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.
- 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.

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MASS.	CM/HSI-002S(719)X	3	53
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LEGEND, ABBREVIATIONS, & GENERAL NOTES

GENERAL (CONT.)

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
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
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
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

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
B	BASELINE
BLDG	BUILDING
BM	BENCH MARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBICI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CI.	CLASS (CONCRETE, EXCAVATION, ETC.)
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
C	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
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	POST 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
PT	POINT OF TANGENCY

LEGEND

CIVIL/UTILITY/SURVEY LEGEND

EXISTING	PROPOSED	
		DRAIN MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		CABLE TV MANHOLE
		ELECTRIC MANHOLE
		OTHER MANHOLE
		DEEP SUMP CATCH BASIN
		CATCH BASIN WITH OFFSET
		DROP INLET
		GAS GATE
		WATER GATE
		UTILITY POLE
		UTILITY POLE WITH LIGHT
		GUY WIRE
		HYDRANT
		SIGN
		MAILBOX
		LIGHT POLE
		ELECTRIC HANDHOLE
		TRAFFIC CONTROL BOX
		FLAGPOLE
		MONUMENT
		GRANITE CURB
		SURVEY TRAVERSE
		TEMPORARY BENCHMARK
		WATER
		DRAIN
		SEWER
		FIBER OPTICS
		LIGHTING
		ELECTRIC
		TELEPHONE
		CABLE TELEVISION
		GAS

CONSTRUCTION PLAN LEGEND

	PROPOSED WHEELCHAIR RAMP
	PROPOSED CATCH BASIN
	PROPOSED DRAINAGE MANHOLE
	PROPOSED DRIVEWAY
	PROPOSED CATCH BASIN
	CURVE NUMBER
	PAVEMENT SAWCUT LINE
	LINE OF EASEMENT

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
			VIDEO DETECTION ZONE
			PRE-EMPTION RECEIVER
			PRE-EMPTION CONFIRMATION STROBE
			PTZ TRAFFIC CAMERA

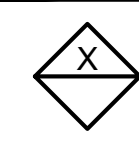
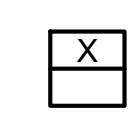
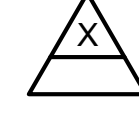
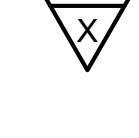
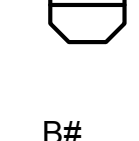

PAVEMENT MARKING LEGEND

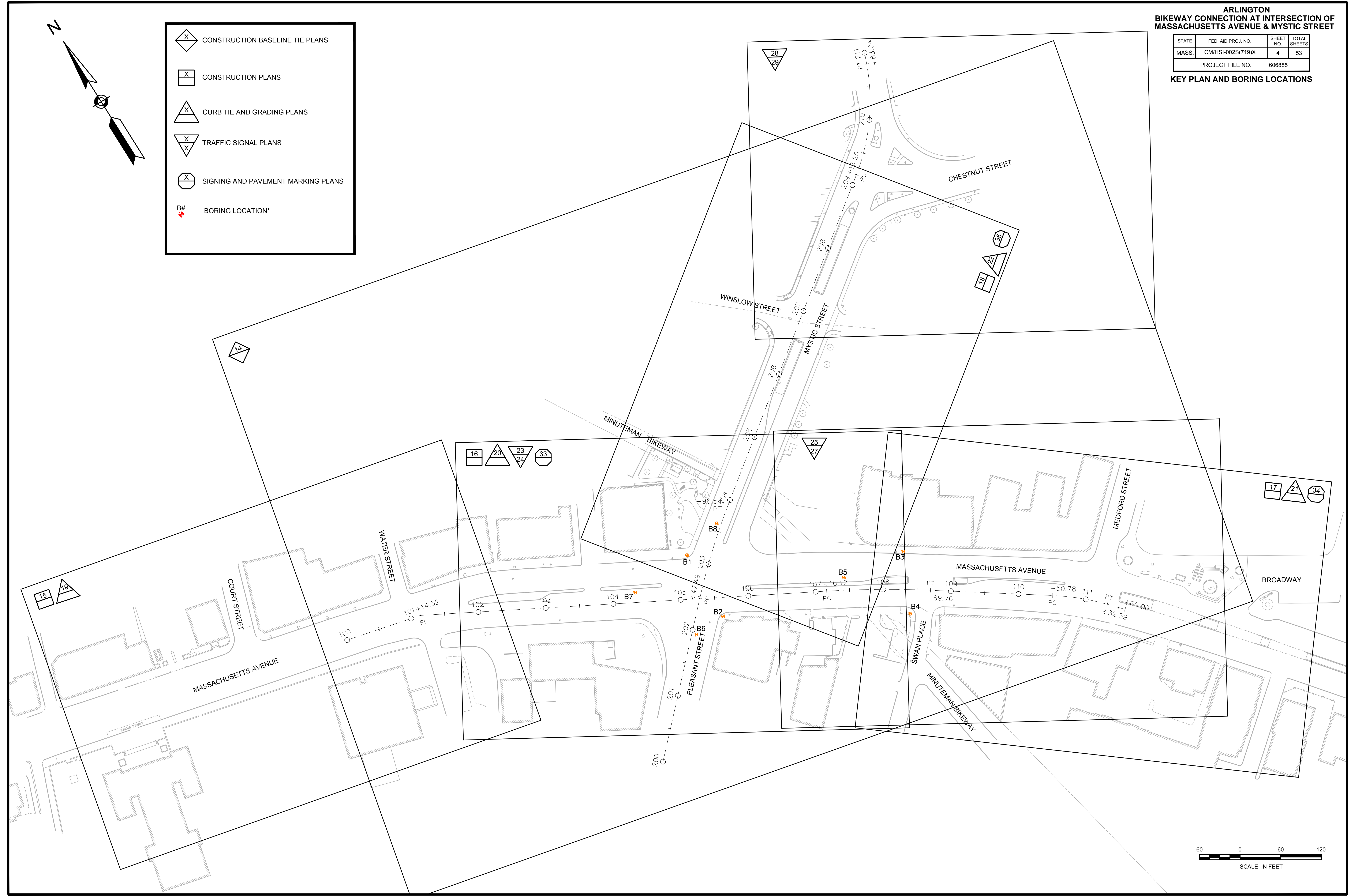
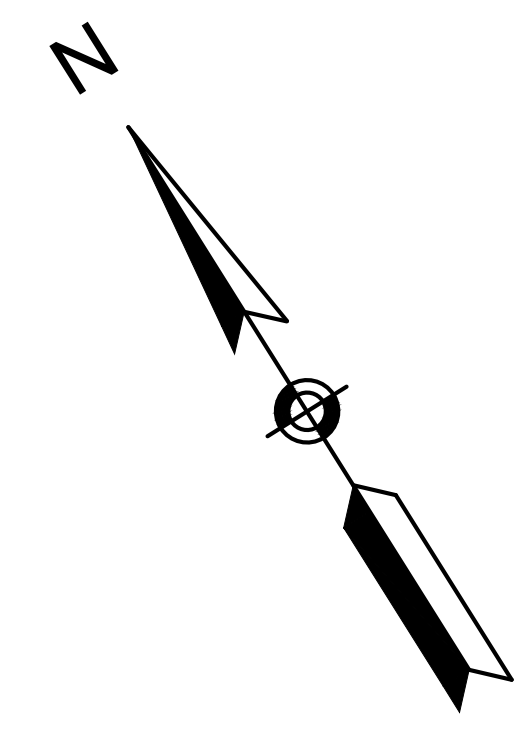
	6" SOLID WHITE EDGE LINE
	6" SOLID YELLOW EDGE LINE
	6" SOLID WHITE LANE LINE
	6" SOLID YELLOW LANE LINE
	6" BROKEN WHITE LANE LINE 10' MARK - 30' SKIP
	6" DOTTED WHITE LINE EXTENSION 2' MARK - 6' SKIP
	6" DOTTED WHITE LANE LINE 3' MARK - 9' SKIP
	12" SOLID WHITE CHANNELIZATION LINE
	12" SOLID YELLOW CHANNELIZATION LINE
	2-6" YELLOW CENTER LINES, 10" O.C.
	WHITE STOP LINE (12" UNLESS OTHERWISE SPECIFIED)
	WHITE - CROSS WALK (24" LONGITUDINAL LINES, 4' O.C.) (UNLESS OTHERWISE SHOWN)
	12" SOLID WHITE GORE LINE (SEE SHEET # FOR DETAIL)
	12" SOLID YELLOW GORE LINE (SEE SHEET # FOR DETAIL)
	6" DOTTED YELLOW LINE EXTENSION 2' MARK - 4' SKIP
	BIKE LANE SYMBOL (SEE SHEET # FOR DETAIL)
	SHARED USE LANE SYMBOL (SEE SHEET # FOR DETAIL)
	BIKE DETECTION SYMBOL
	YIELD LINE (SEE SHEET # FOR DETAIL)

ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	4	53
PROJECT FILE NO.		606885	

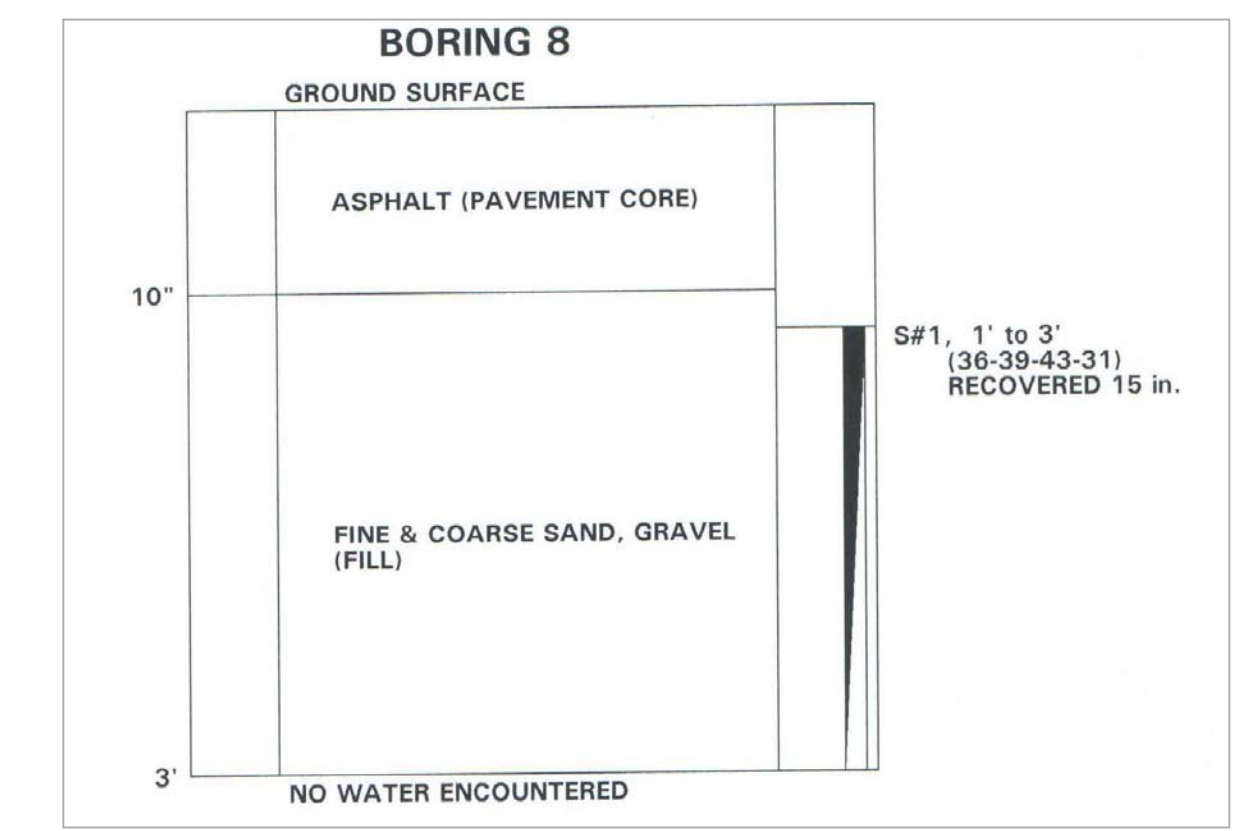
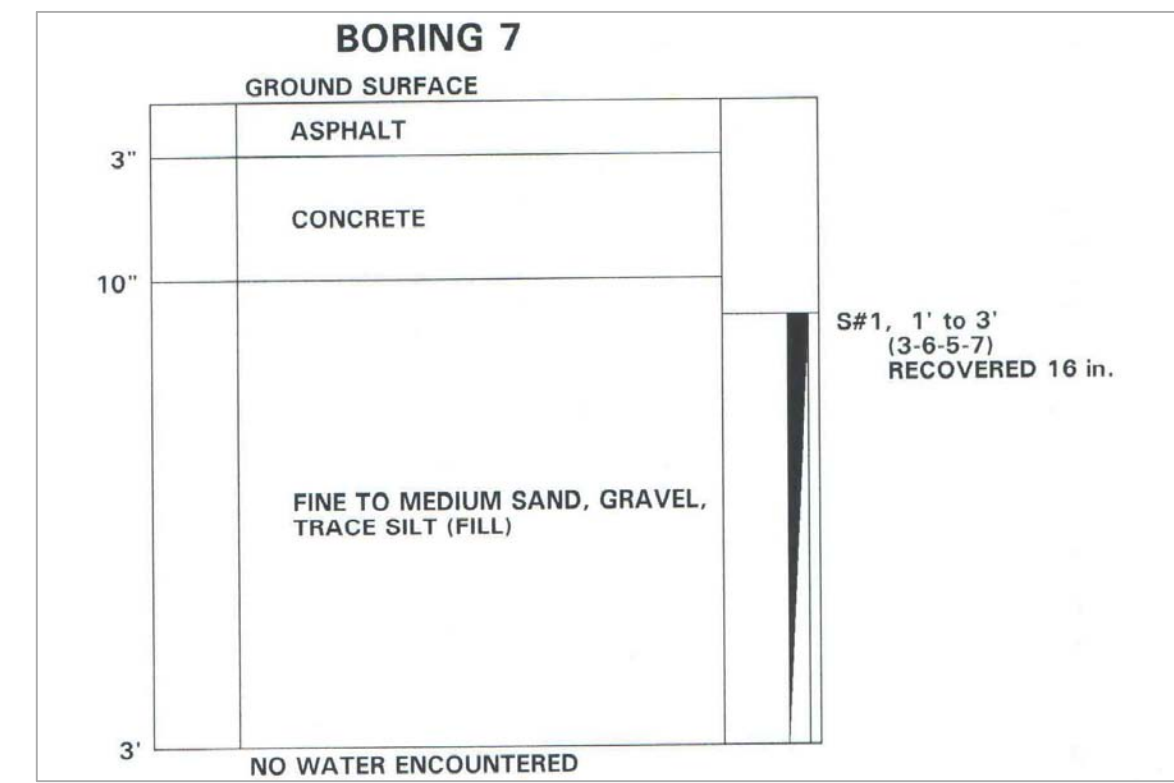
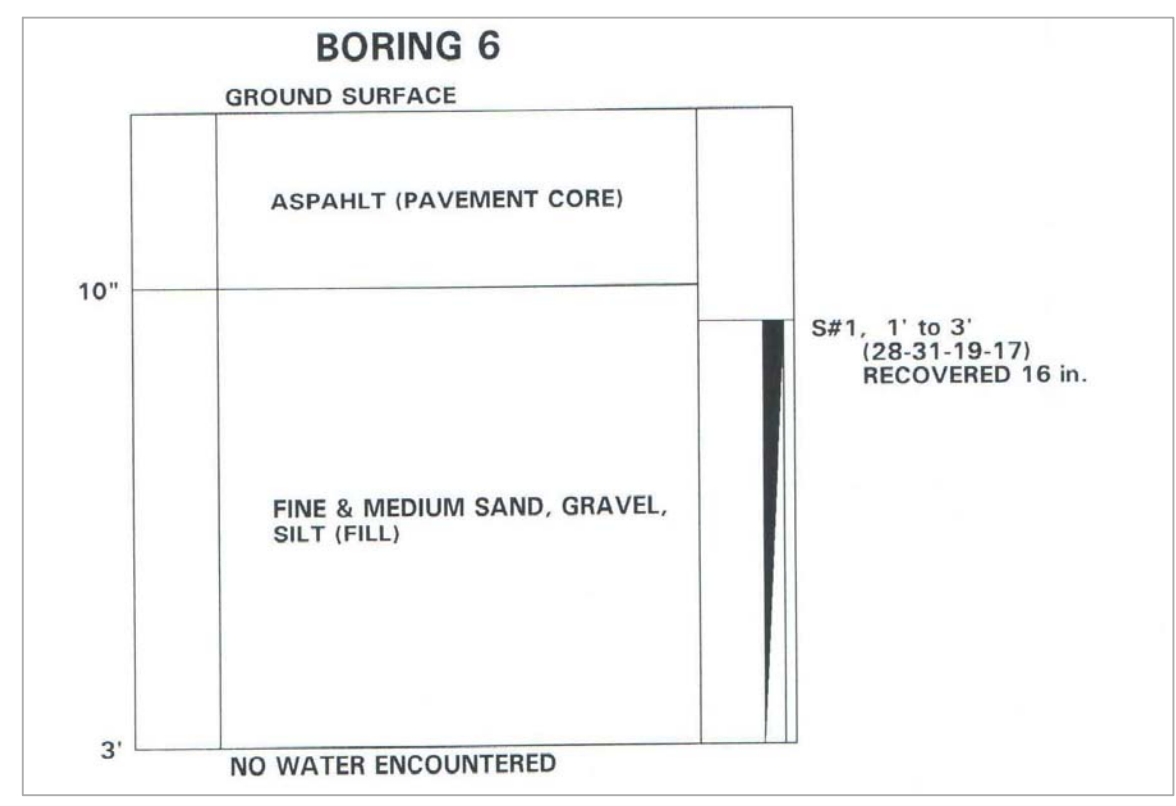
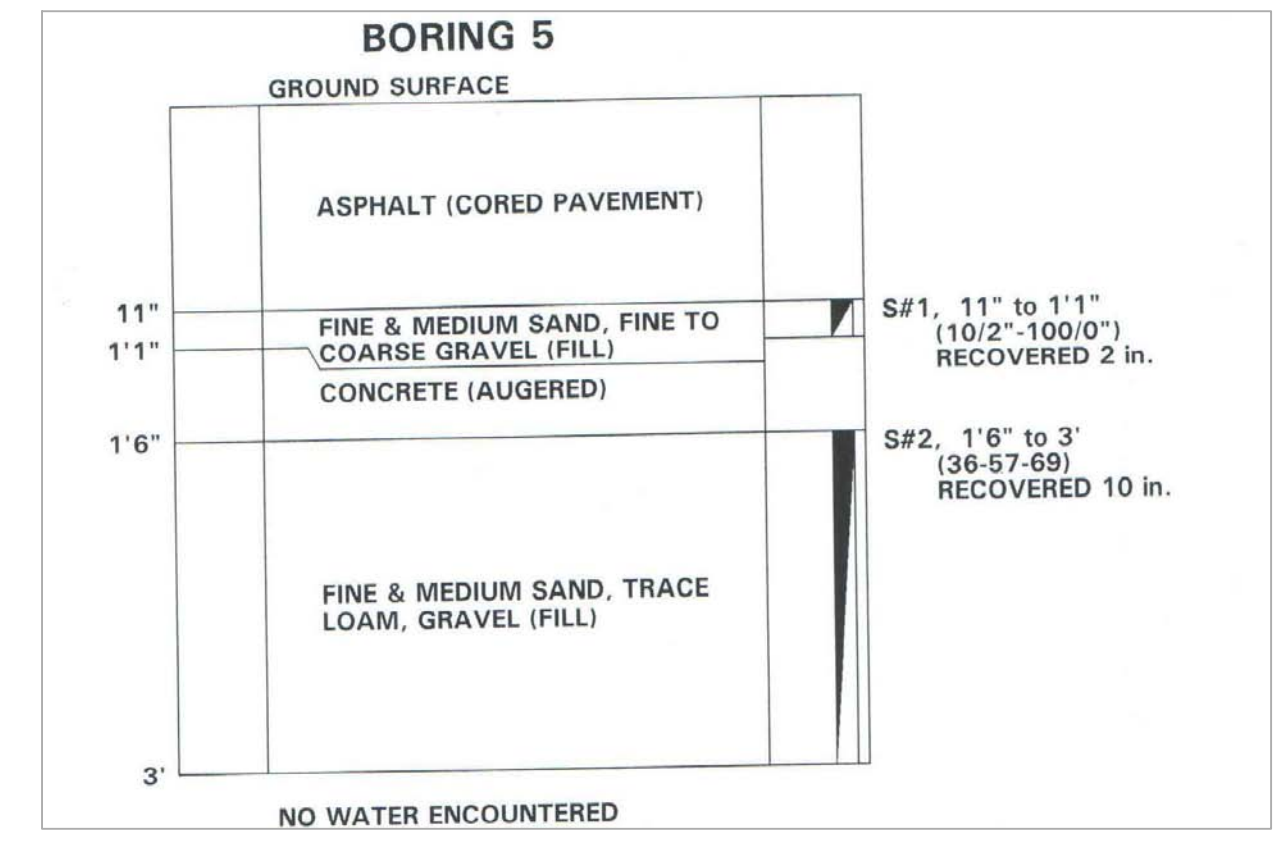
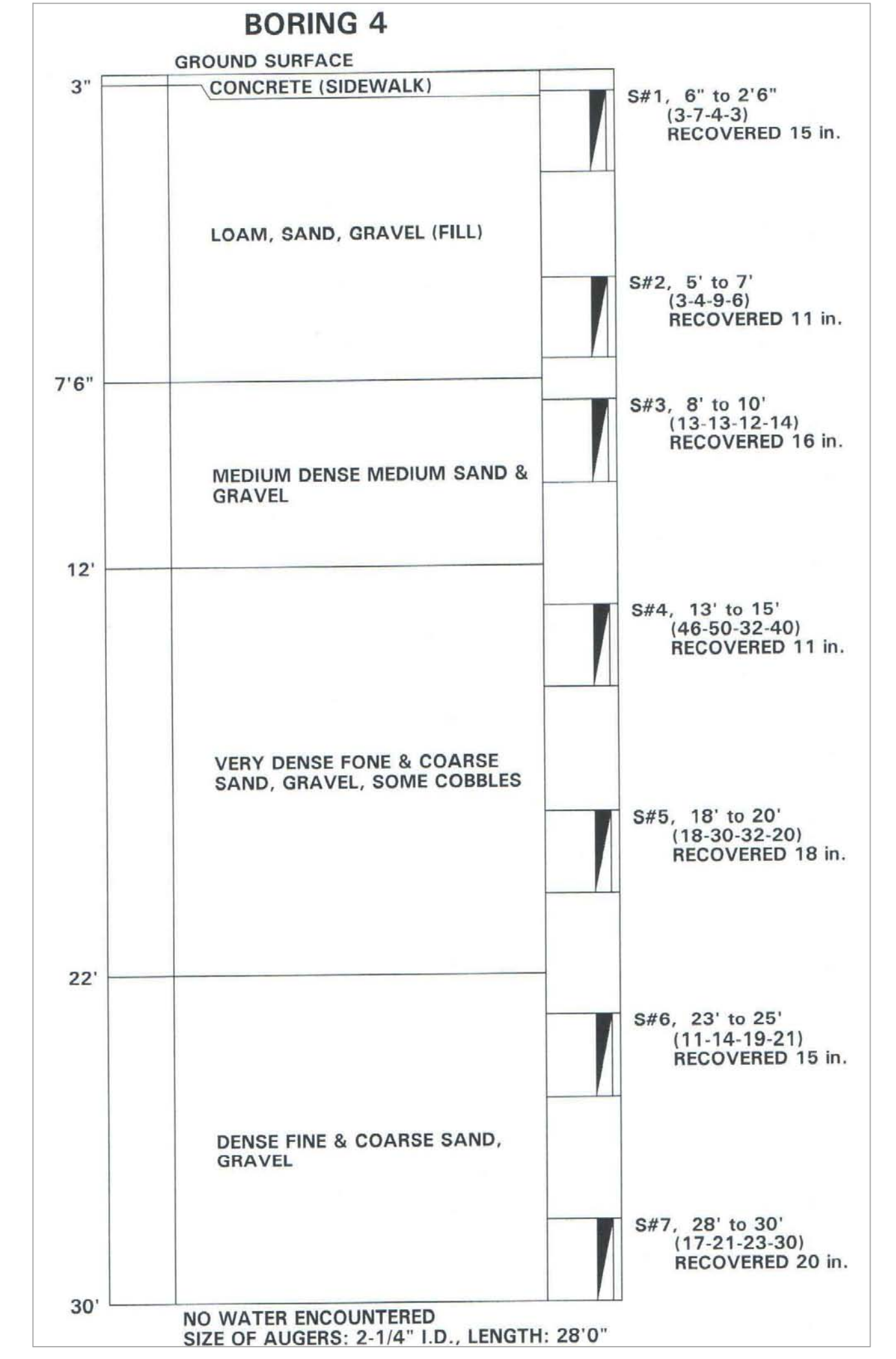
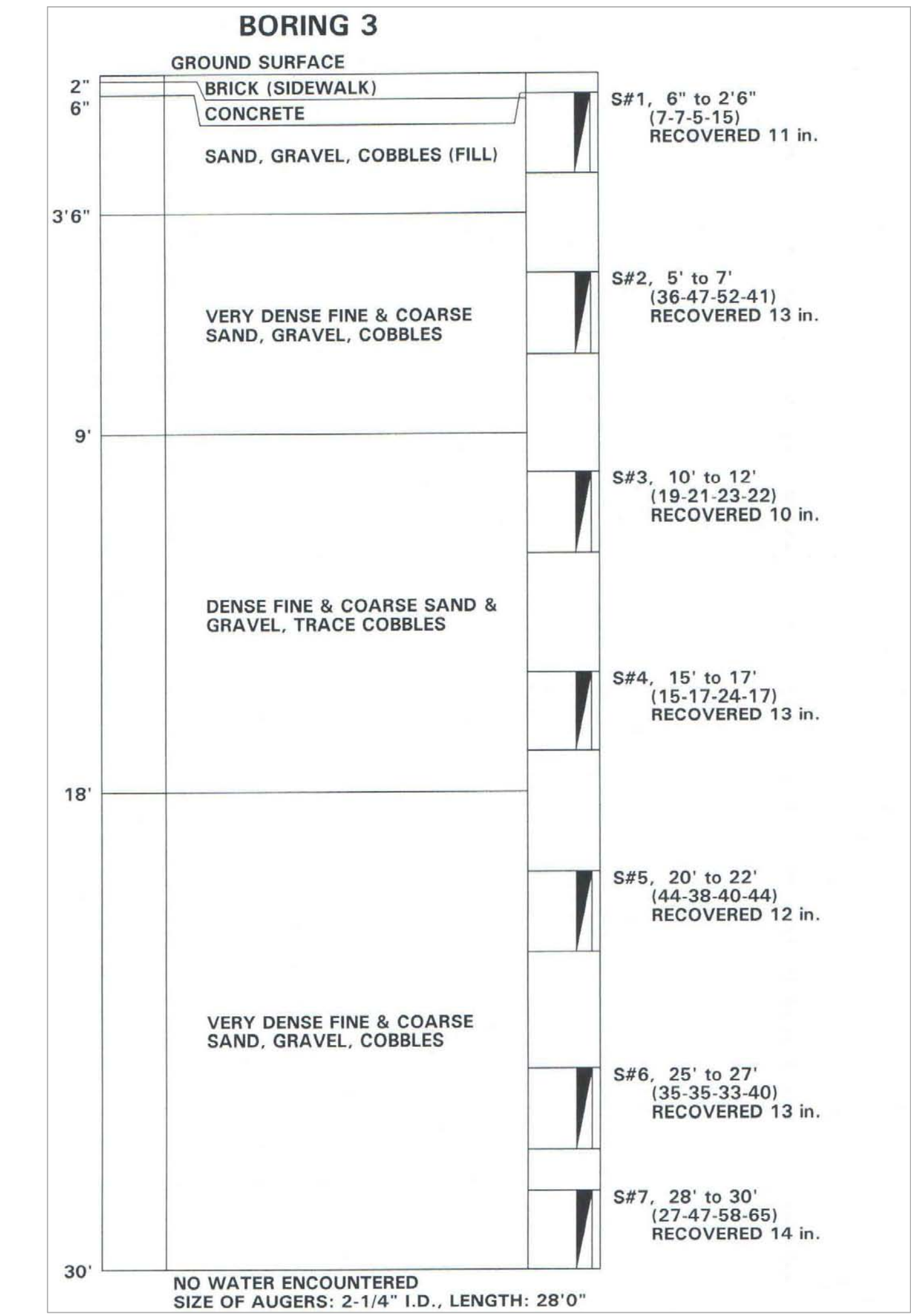
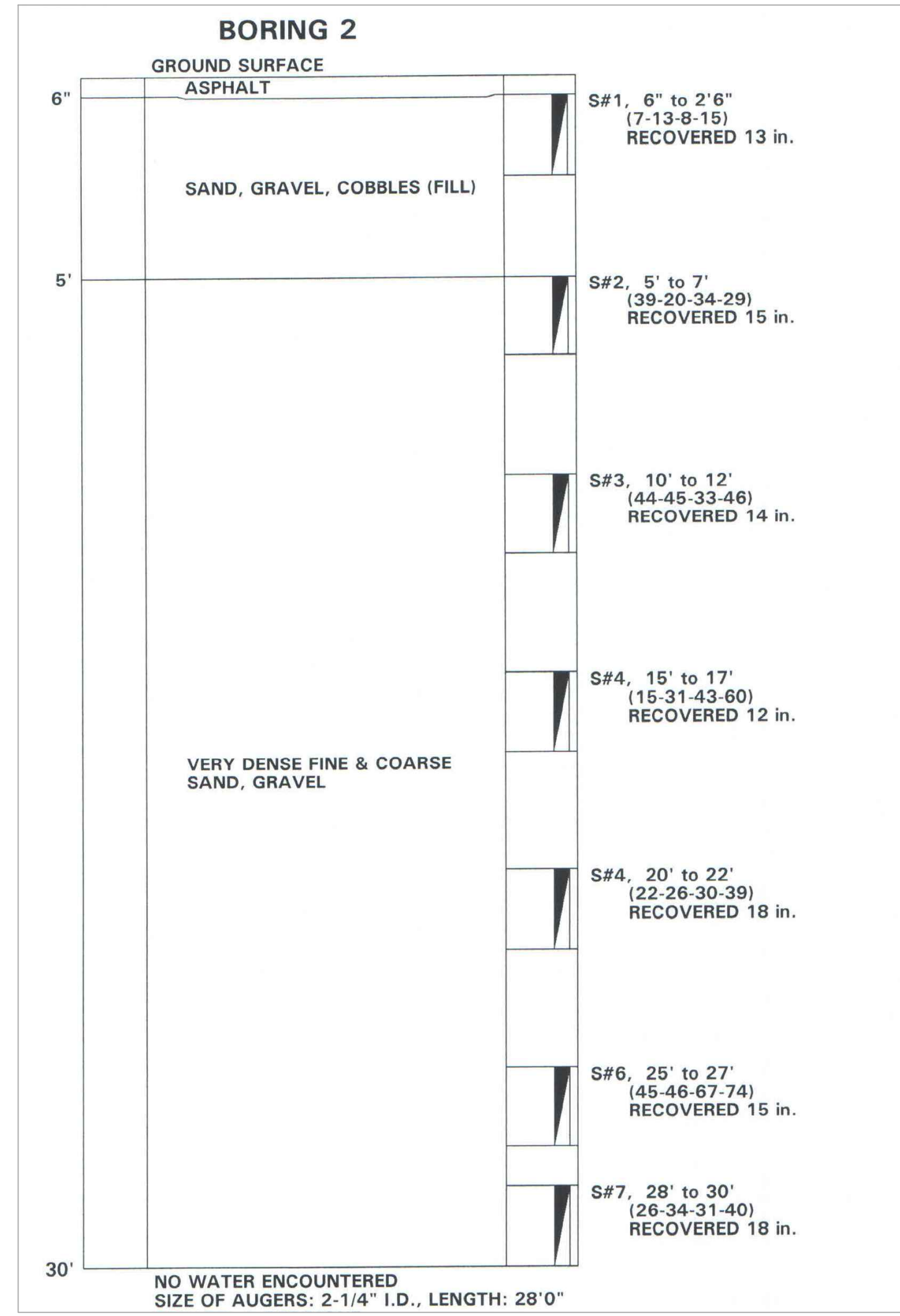
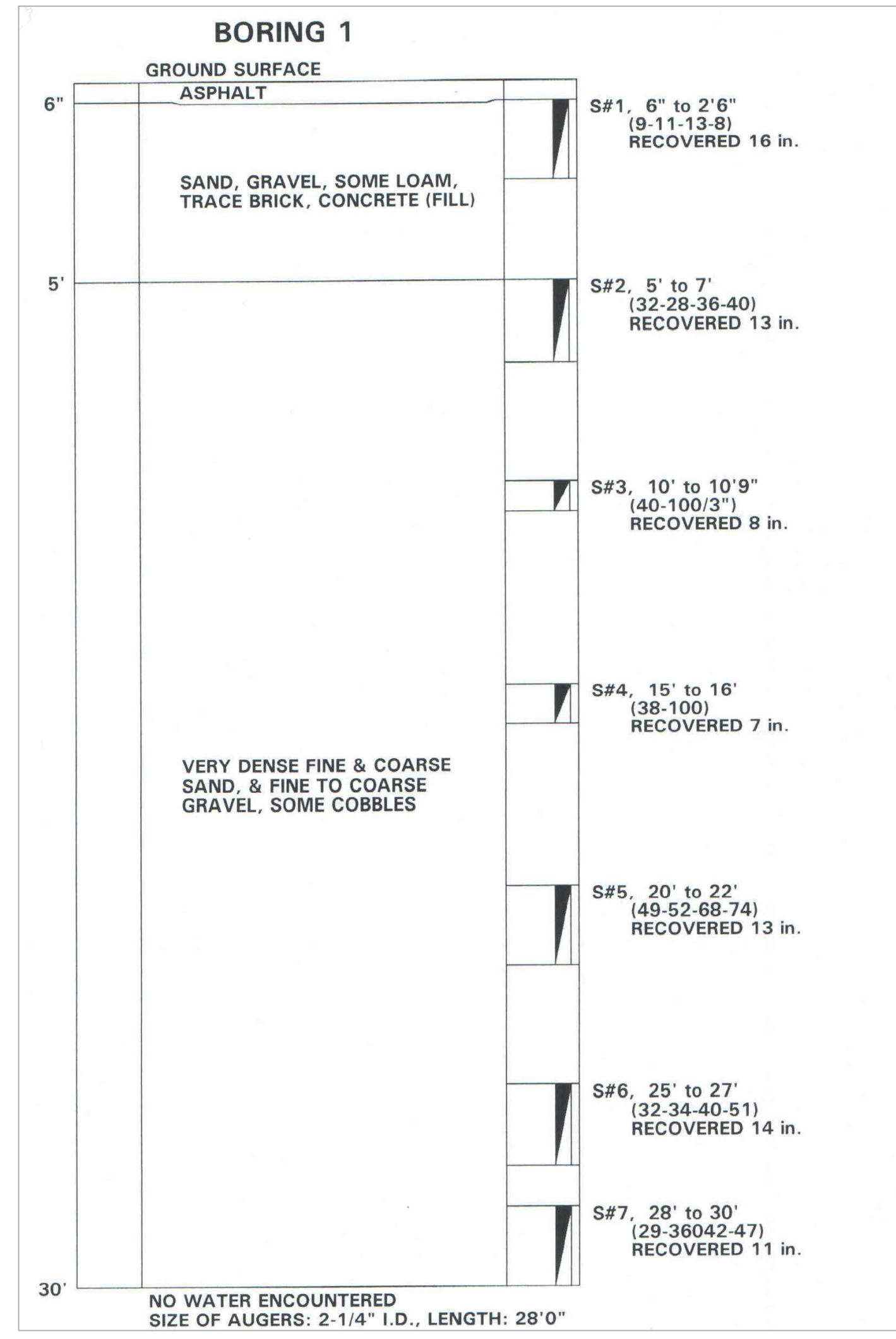
KEY PLAN AND BORING LOCATIONS

-  CONSTRUCTION BASELINE TIE PLANS
-  CONSTRUCTION PLANS
-  CURB TIE AND GRADING PLANS
-  TRAFFIC SIGNAL PLANS
-  SIGNING AND PAVEMENT MARKING PLANS
-  BORING LOCATION*



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	5	53
PROJECT FILE NO. 606885			

BORING LOGS



ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	6	53
PROJECT FILE NO.		606885	

TYPICAL SECTIONS & PAVEMENT NOTES
MASSACHUSETTS AVENUE

PAVEMENT NOTES:
MASSACHUSETTS AVENUE,
MYSTIC STREET,
AND PLEASANT STREET.

PAVEMENT MILL AND OVERLAY:

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) (LATEX MODIFIED) OVER

INTERMEDIATE COURSE: 1.75" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) (LATEX MODIFIED)

PAVEMENT MILLING: 3.50" PAVEMENT MILLING

PAVEMENT TRANSITION:

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) (LATEX MODIFIED) OVER

PAVEMENT MILLING: 1.75" PAVEMENT MILLING

*TO BE USED AT THE LIMITS OF PAVING FOR A 25' WIDE TRANSITION BACK TO EXISTING GRADES

FULL DEPTH RECONSTRUCTION:

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) (LATEX MODIFIED) OVER

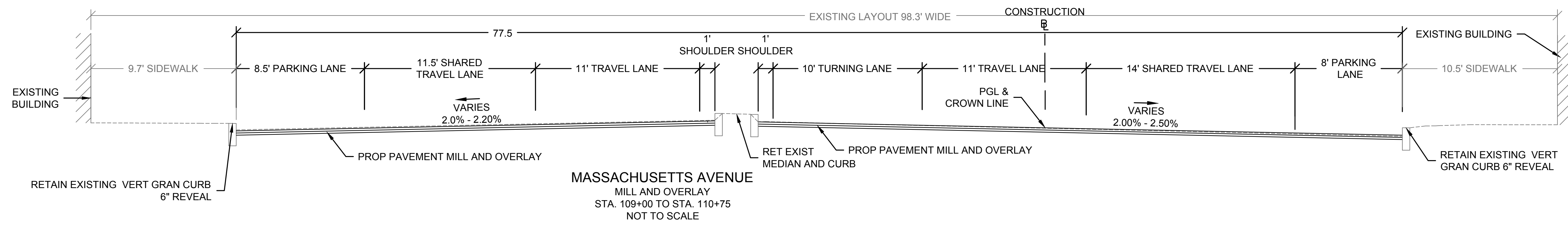
INTERMEDIATE COURSE: 1.75" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) (LATEX MODIFIED) OVER

BASE COURSE: 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER

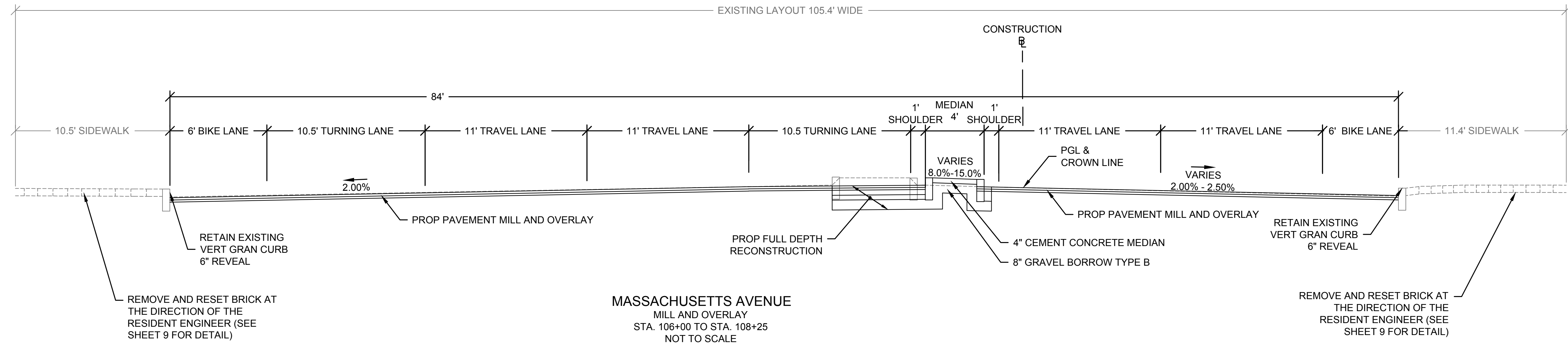
SUB-BASE: 4" DENSE GRADED CRUSHED STONE BASE COURSE OVER

8" SUITABLE EXISTING MATERIAL OR GRAVEL BORROW TYPE B

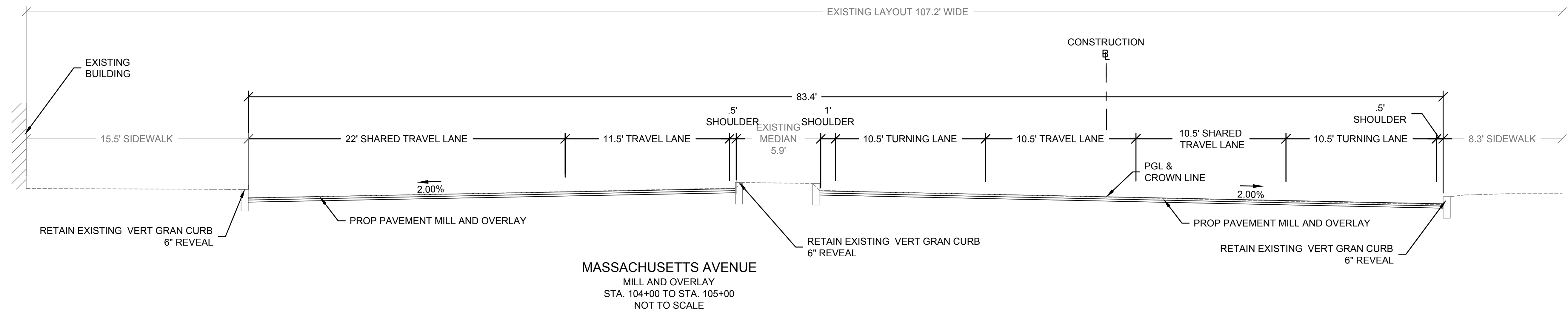
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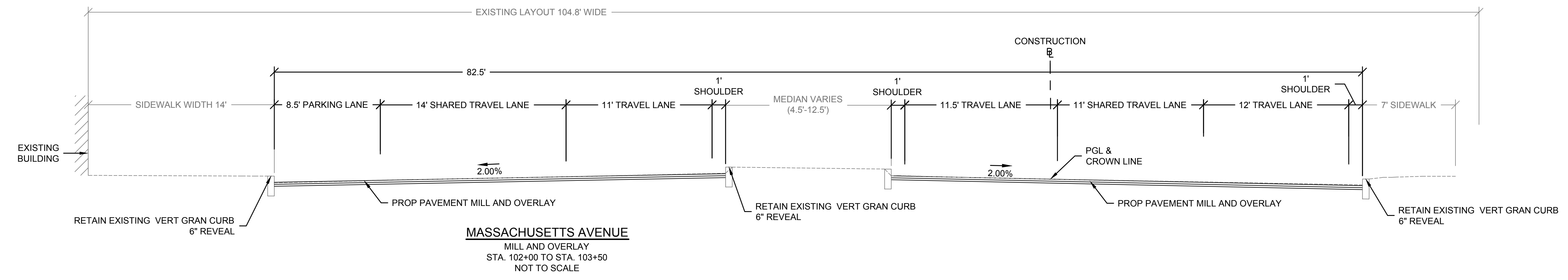
MASSACHUSETTS AVENUE
MILL AND OVERLAY
STA. 109+00 TO STA. 110+75
NOT TO SCALE



MASSACHUSETTS AVENUE
MILL AND OVERLAY
STA. 106+00 TO STA. 108+25
NOT TO SCALE



MASSACHUSETTS AVENUE
MILL AND OVERLAY
STA. 104+00 TO STA. 105+00
NOT TO SCALE



MASSACHUSETTS AVENUE
MILL AND OVERLAY
STA. 102+00 TO STA. 103+50
NOT TO SCALE

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	7	53
PROJECT FILE NO.		606885	

TYPICAL SECTIONS & PAVEMENT NOTES
PLEASANT STREET AND MYSTIC STREET

PAVEMENT NOTES:
MASSACHUSETTS AVENUE, MYSTIC STREET, AND
PLEASANT STREET.

CONTINUED ON PAGE 2

FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) (LATEX MODIFIED) OVER

INTERMEDIATE COURSE: 1.75" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) (LATEX MODIFIED) OVER

BASE COURSE: 6" HES CEMENT CONCRETE BASE OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B

CEMENT CONCRETE DRIVEWAYS AND RAMPS

SURFACE COURSE: 4" CEMENT CONCRETE SURFACE COURSE OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B

CEMENT CONCRETE SIDEWALK

SURFACE COURSE: 4" CEMENT CONCRETE SURFACE COURSE OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B

HOT MIX ASPHALT PATHS AND DRIVES:

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER

INTERMEDIATE COURSE: 2.0" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B

BRICK SIDEWALK:

SURFACE COURSE: 2 1/4" BRICK PAVER

3/8" STONE DUST SETTING BED

INTERMEDIATE COURSE: 4" CEMENT CONCRETE (4000psi, 3/4" 610 AIR ENTRAINED)

SUB-BASE: 8" GRAVEL BORROW TYPE B

HMA UTILITY PATCH REPAIR (TO BE PAID FOR UNDER ITEM 451 HMA FOR PATCHING)

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) (LATEX MODIFIED) OVER

INTERMEDIATE COURSE: 1.75" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) (LATEX MODIFIED) OVER

6" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) (COMPACTED IN 2 - 3" LIFTS)

SUB-BASE: 12" GRAVEL BORROW TYPE B OVER

COMPACTED TRENCH BACKFILL

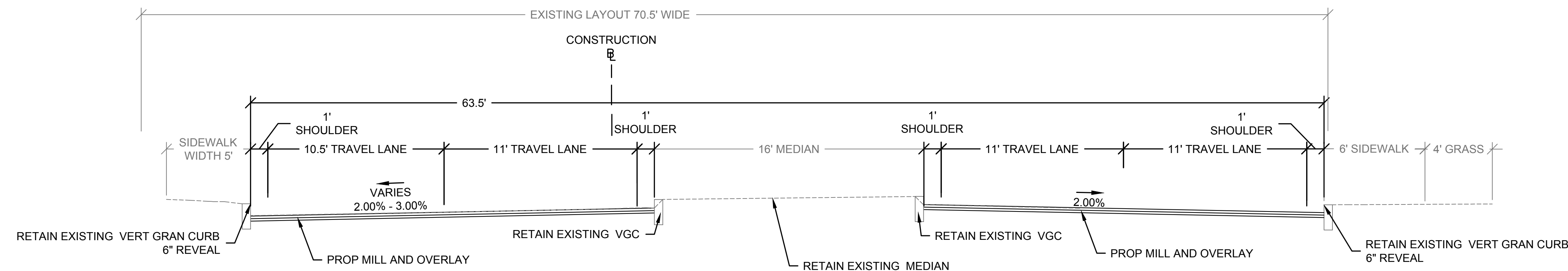
NOTES:

- 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.

* = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND WHEELCHAIR RAMP

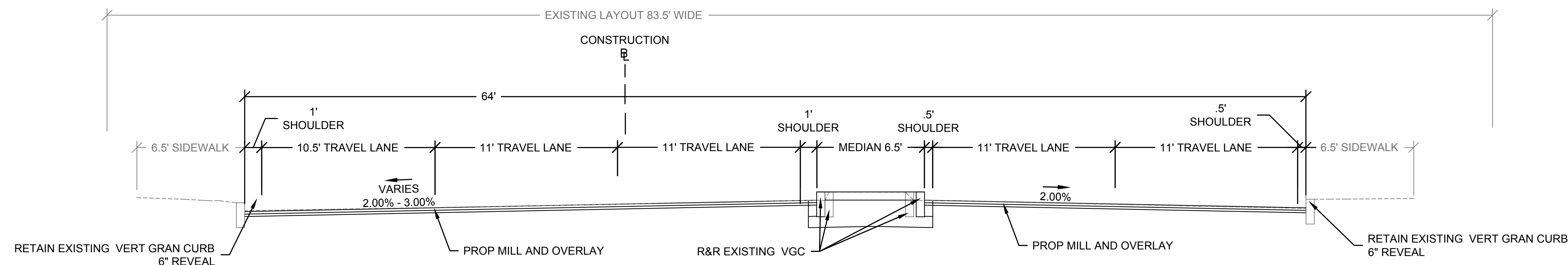
- EXISTING GRAVEL BORROW SUBBASE DETERMINED TO BE SUITABLE MAY REMAIN, AS DIRECTED.

- PROPOSED VERTICAL GRANITE CURB AND RESET GRANITE CURB SHALL BE INSTALLED PER MASSDOT STANDARD DRAWING E106.3.0R



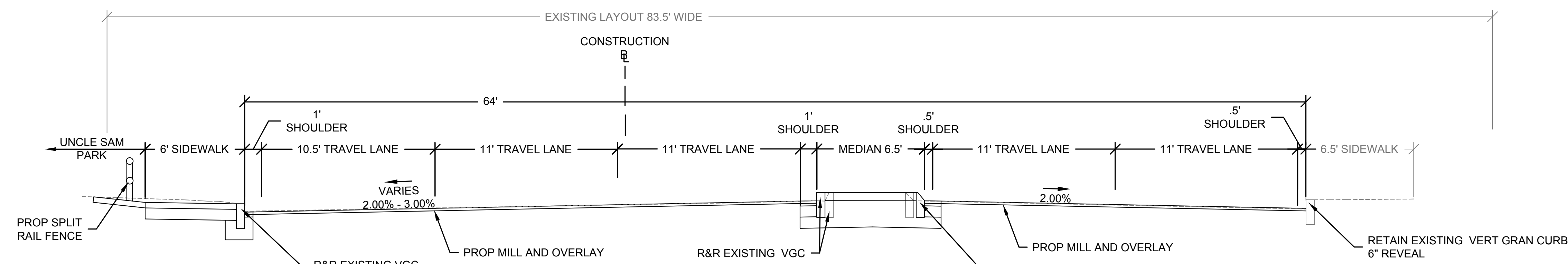
MYSTIC STREET

MILL AND OVERLAY
STA. 207+50 TO STA. 209+75
NOT TO SCALE



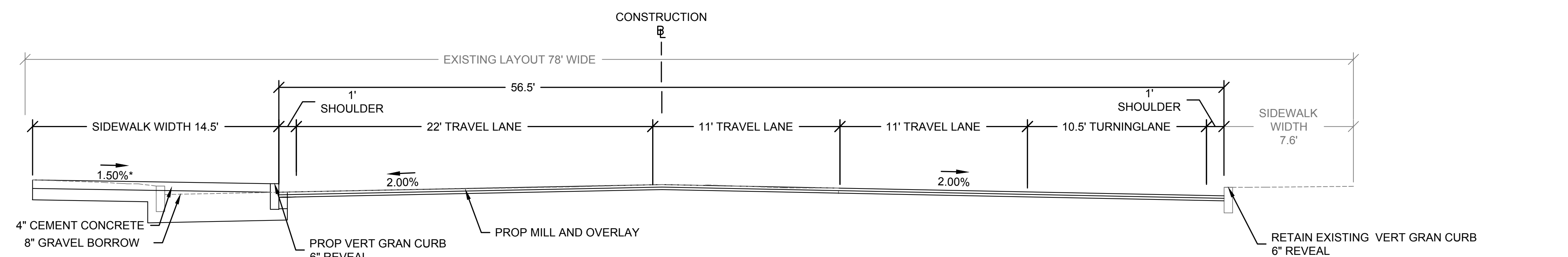
MYSTIC STREET

MILL AND OVERLAY
STA. 204+50 TO STA. 206+50
NOT TO SCALE



MYSTIC STREET

MILL AND OVERLAY
STA. 203+50 TO STA. 204+50
NOT TO SCALE



PLEASANT STREET

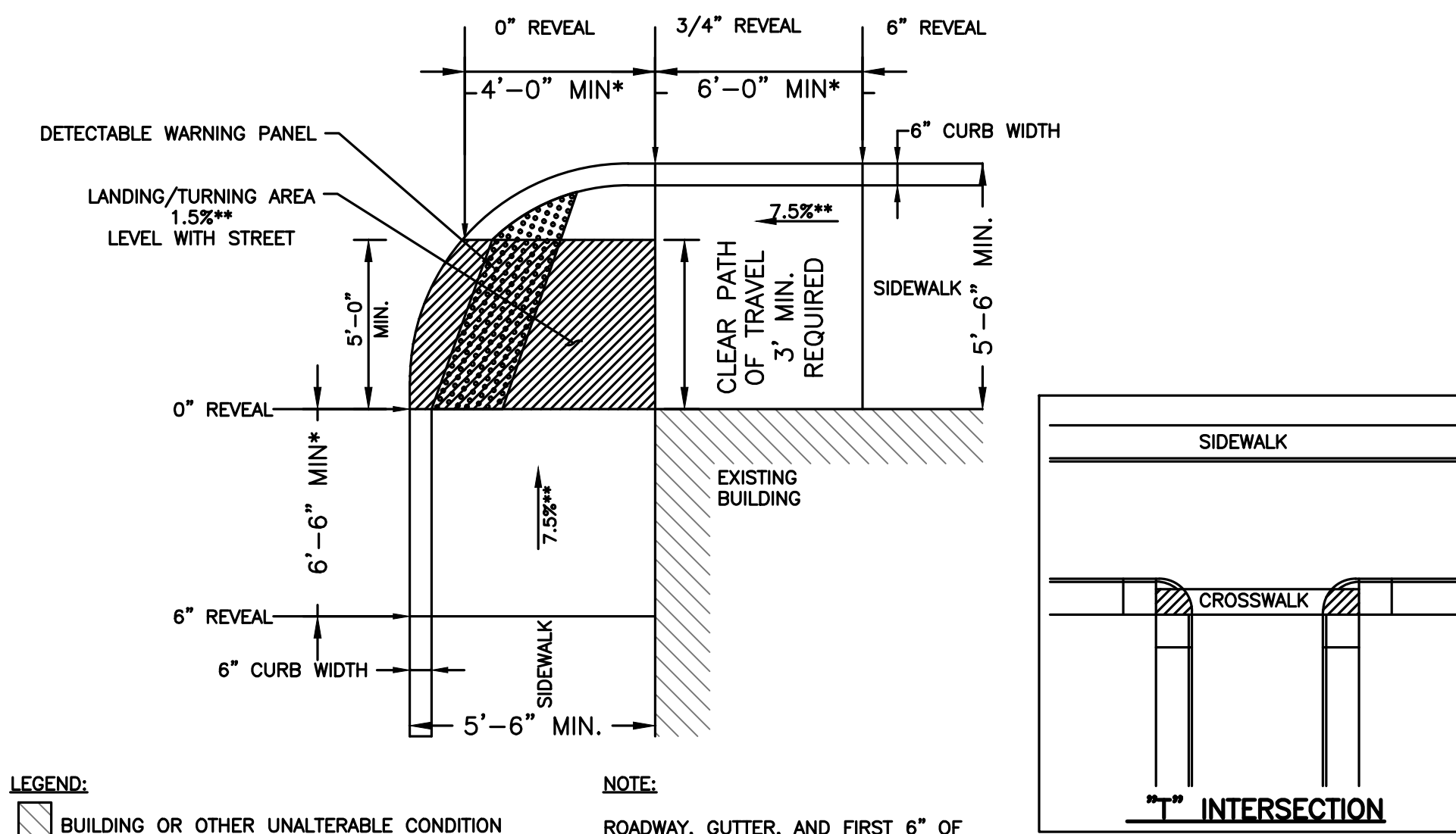
MILL AND OVERLAY
STA. 201+10 TO STA. 202+00
NOT TO SCALE

606885_H01(TYPICAL SECTION).DWG 4-Sep-2014

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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	8	53
PROJECT FILE NO.		606885	

CONSTRUCTION DETAILS

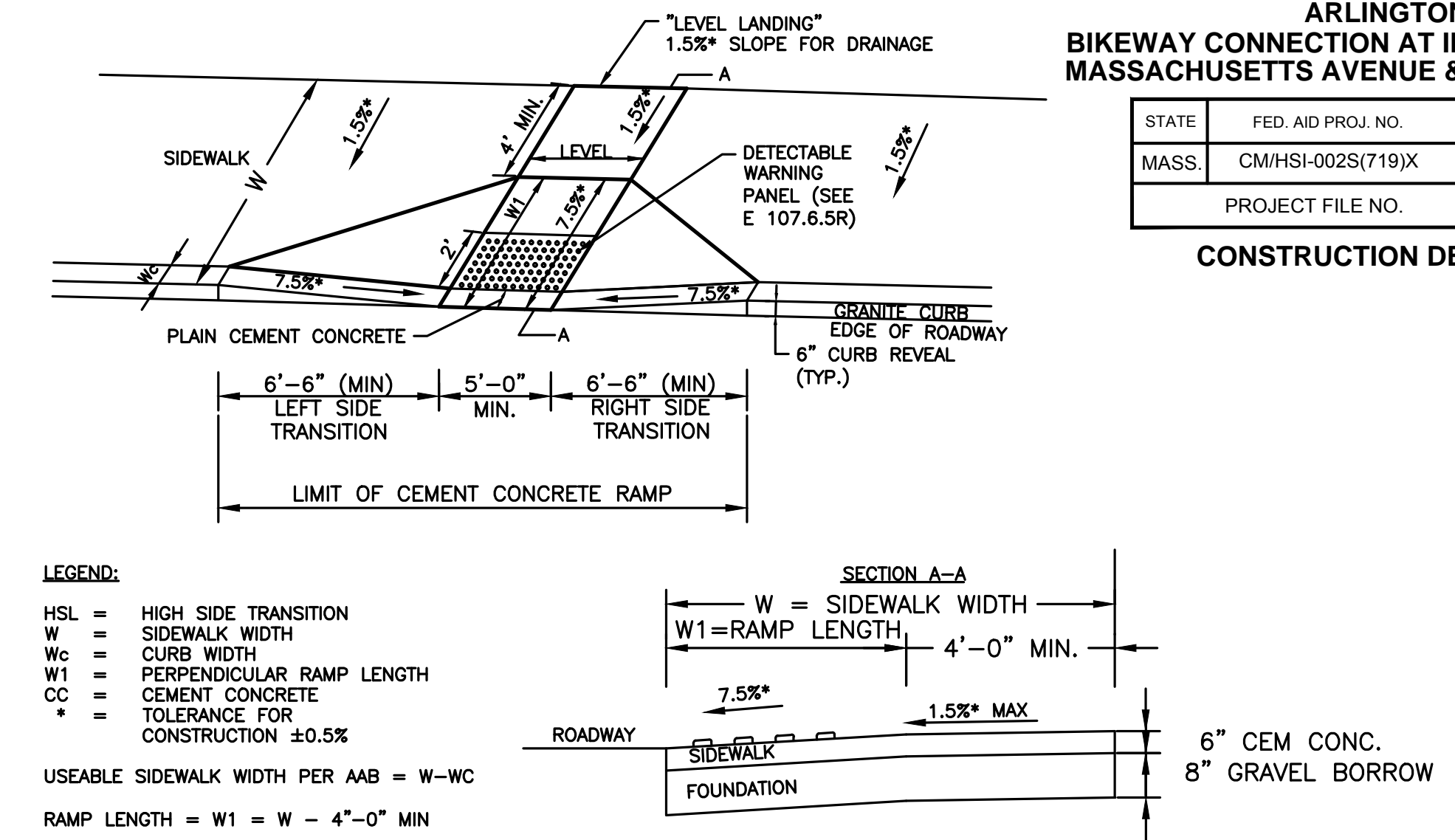


LEGEND:
[Symbol] BUILDING OR OTHER UNALTERABLE CONDITION
** = TRANSITION LENGTH SHOWN IS MINIMUM
* = TOLERANCE FOR CONSTRUCTION ± 0.5%

NOTE:
ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS

"T" INTERSECTION WHEELCHAIR RAMP (E 107.6.4R)
NOT TO SCALE

WCR #	ROADWAY ELEV. AT RAMP ϵ	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	
9	44.65	MASS AVE	108+47	33' RT	R=12.9' L=7.7'	R=10.5' L=7.3'	5.0'	7.0'	7.7'	12.9'	R= 3.19% L= -0.98%
10	44.16	MASS AVE	108+78	28' RT	R=12.2' L=14.2'	R=10.5' L=7.3'	13.9'	10.1'	12.2'	14.2'	1.35%±
13	36.89	MYSTIC STREET	206+88	47' RT	R=6.5' L=14.5'	R=6.0' L=6.0'	6.5'	4.0'	6.5'	14.5'	L=9.0%± R=6.4%±
14	34.55	MYSTIC STREET	207+21	47' RT	R=6.5' L=6.5'	R=6.0' L=6.0'	6.5'	4.9'	6.5'	6.5'	L= 5.8%± R= -7.8%±

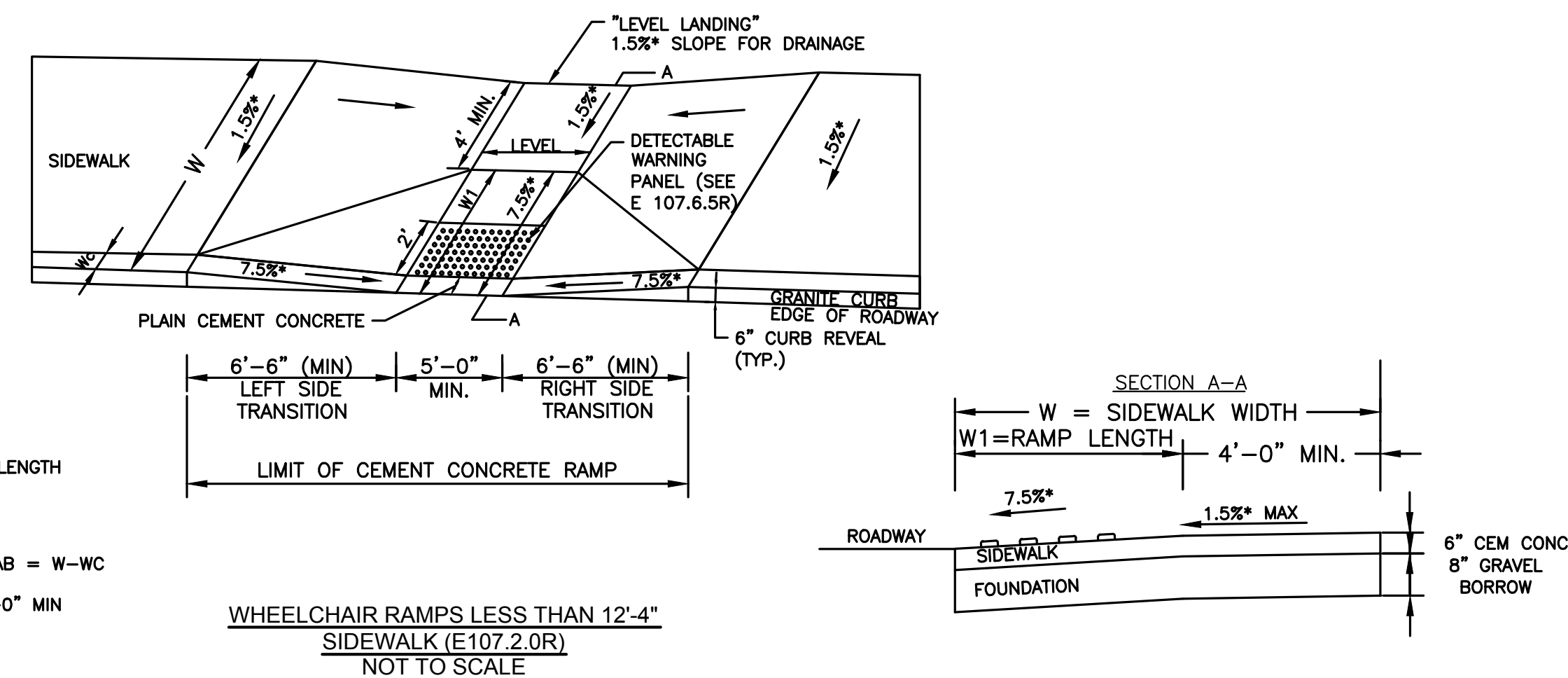


LEGEND:
HSL = HIGH SIDE TRANSITION
W = SIDEWALK WIDTH
Wc = CURB WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USEABLE SIDEWALK WIDTH PER AAB = W-WC
RAMP LENGTH = W1 = W - 4'-0" MIN

WHEELCHAIR RAMPS GREATER THAN 12'-4" SIDEWALK (E107.3.0R)
NOT TO SCALE

WCR #	ROADWAY ELEV. AT RAMP ϵ	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	49.17	MASS AVE	104+97	60' LT	8.3'	16.7'	15.0'	4.0'	6.5'	7.7'	0.60%±
2	48.94	MYSTIC STREET	203+19	26' LT	6.3'	10.3'	15.0'	4.0'	7.7'	6.5'	-0.19%±
3	50.08	MASS AVE	104+75	40' RT	8.3'	21.9'	10.0'	4.0'	7.7'	6.5'	0.59%±
6	48.21	MYSTIC STREET	203+46	46' RT	8.3'	16.3'	5.0'	4.0'	7.7'	6.5'	-0.92%±
7	47.95	MASS AVE	106+24	59' LT	8.3'	16.3'	5.0'	4.0'	7.7'	6.5'	-0.92%±

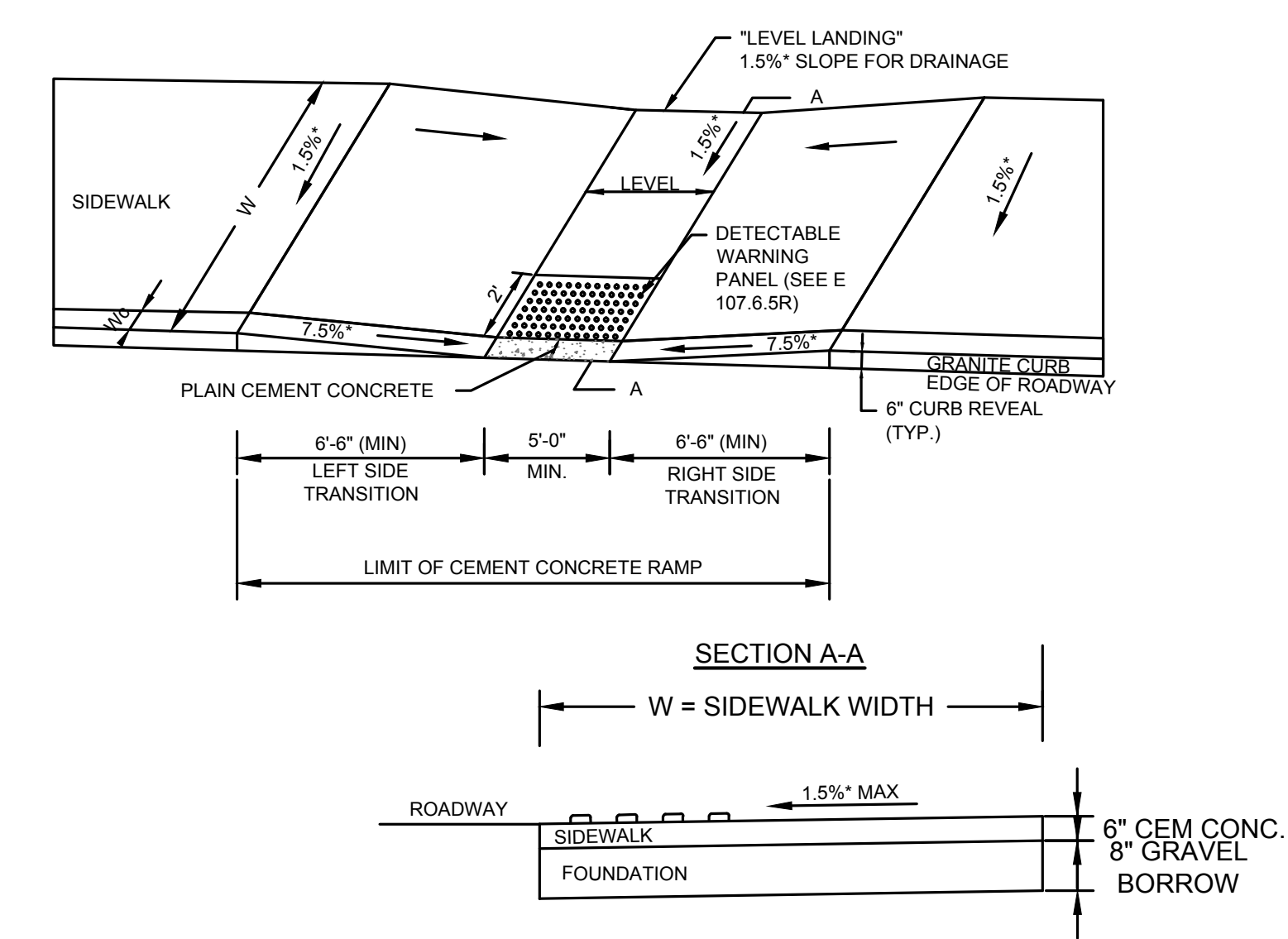
* RAMP 2 ONLY RISES 4.5" TO THE BACK OF SIDEWALK. THE ADDITIONAL ELEVATION IS MADE UP IN THE BIKE PATH AND PARK AREA BEHIND THE RAMP.



LEGEND:
HSL = HIGH SIDE TRANSITION LENGTH
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 RAMPS LESS THAN 12'-4" SIDEWALK (E107.2.0R)
NOT TO SCALE

WCR #	ROADWAY ELEV. AT RAMP ϵ	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	48.57	PLEASANT STREET	202+14	34' RT	3.3'	7.3'	5.0'	4.0'	6.5'	7.7'	0.43%±
5	48.25	MASS AVE	105+75	23 RT	7.4'	11.4'	5.0'	4.0'	6.5'	7.7'	-0.45%±
8	44.34	MASS AVE	108+79	53' LT	6.5'	10.5'	5.0'	4.0'	6.5'	9.0'	1.33%±



LEGEND:
HSL = HIGH SIDE TRANSITION LENGTH
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 RAMPS ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (E107.2.1)
NOT TO SCALE

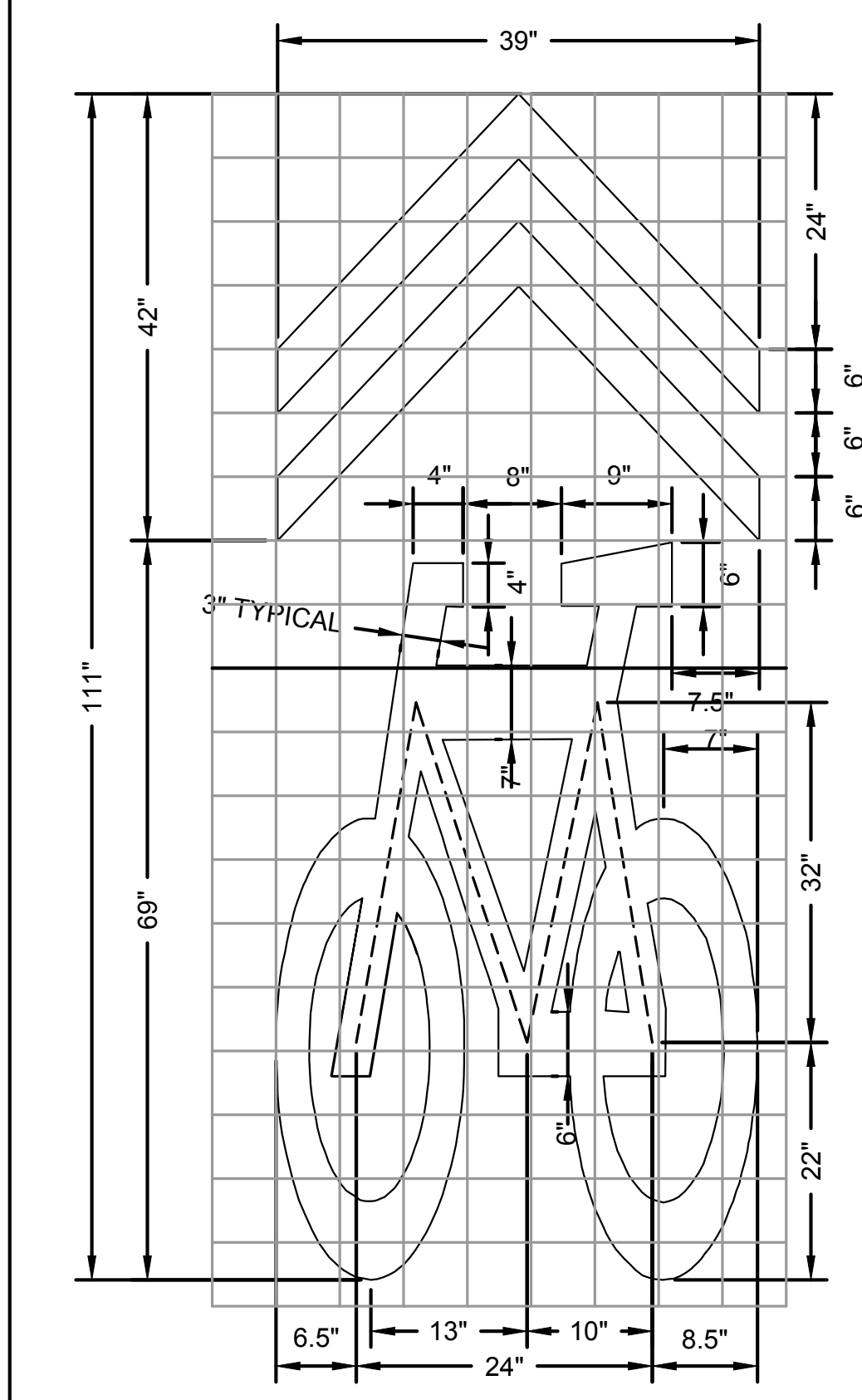
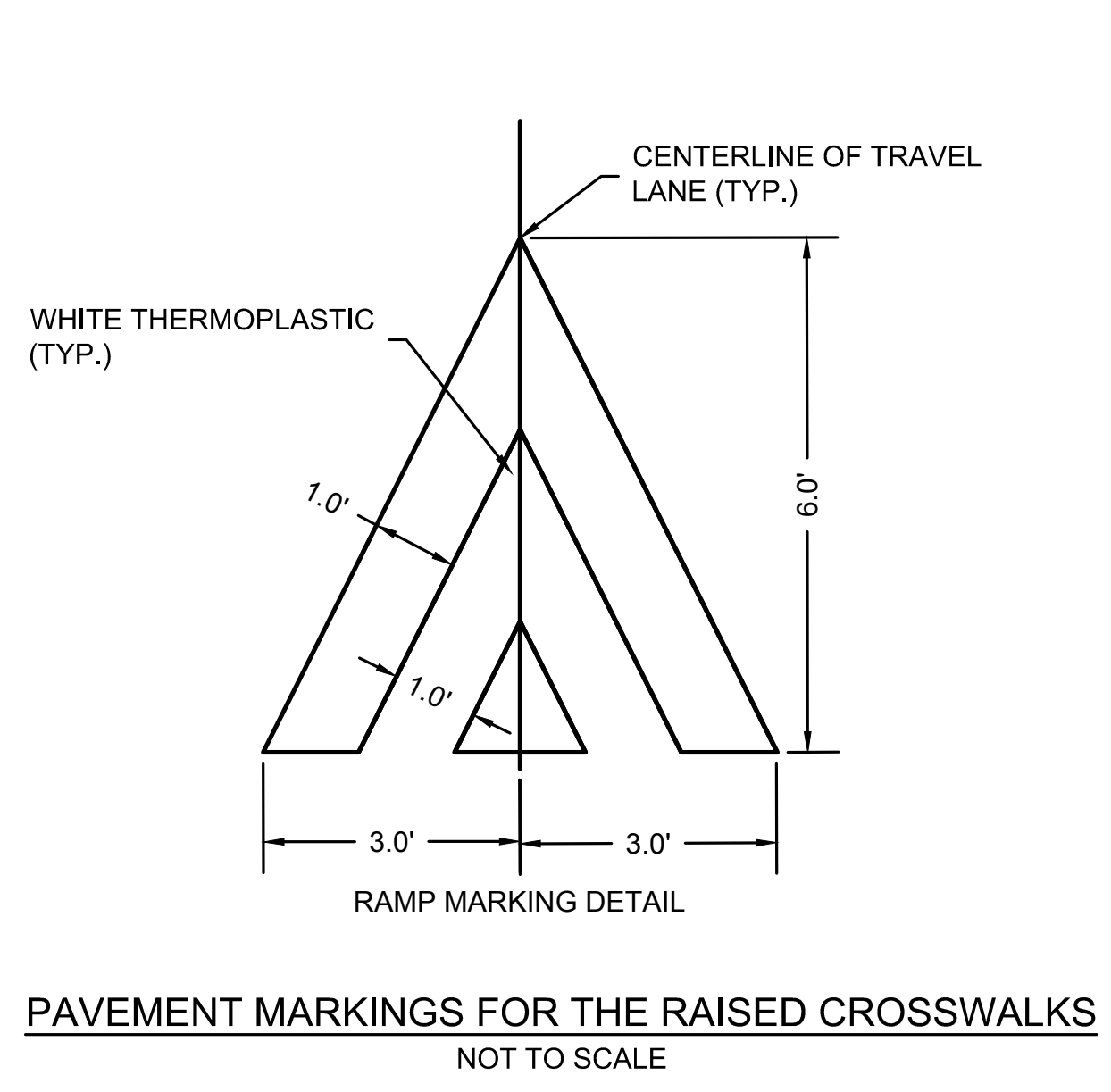
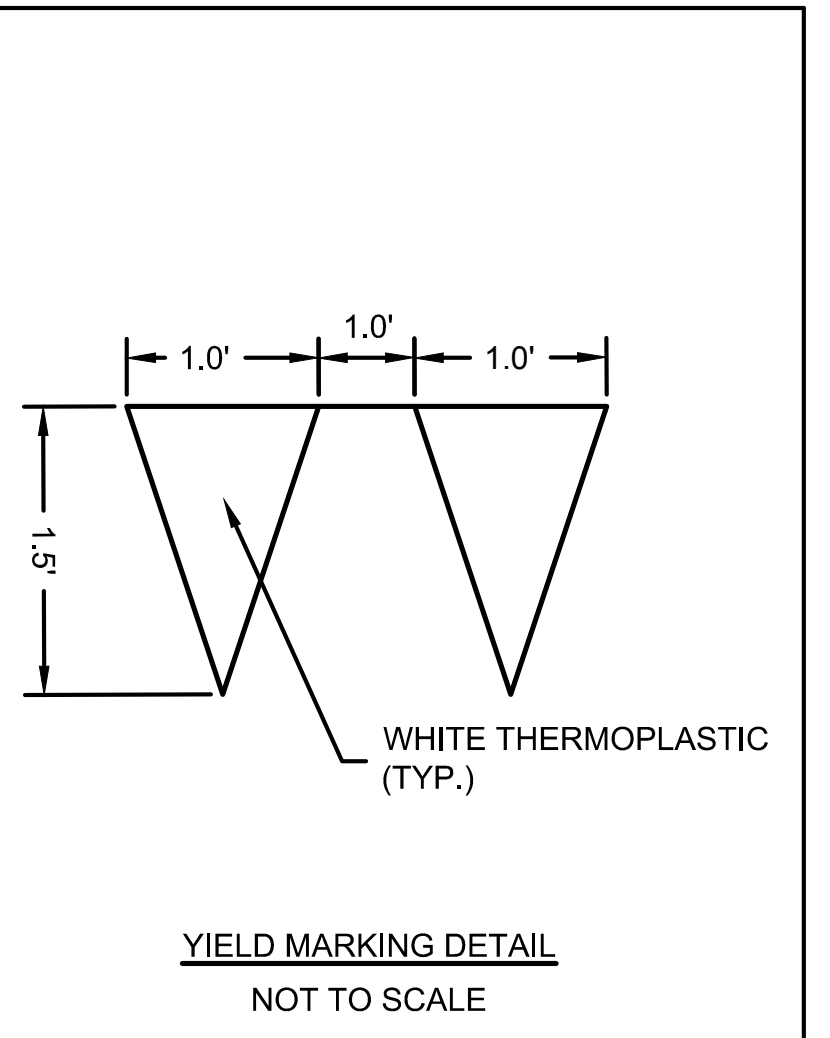
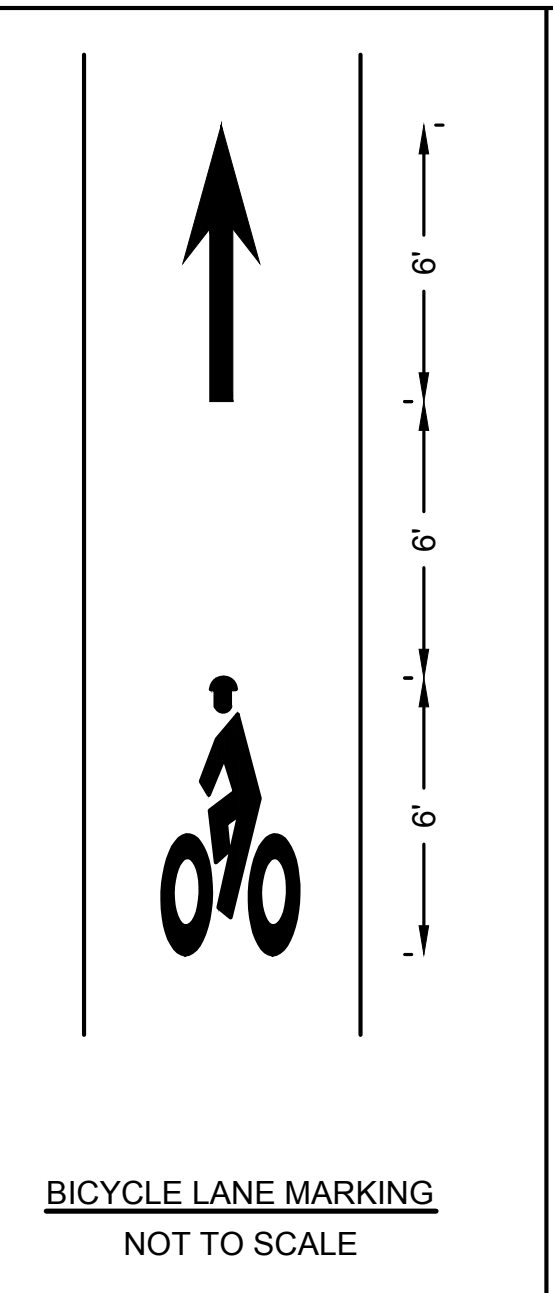
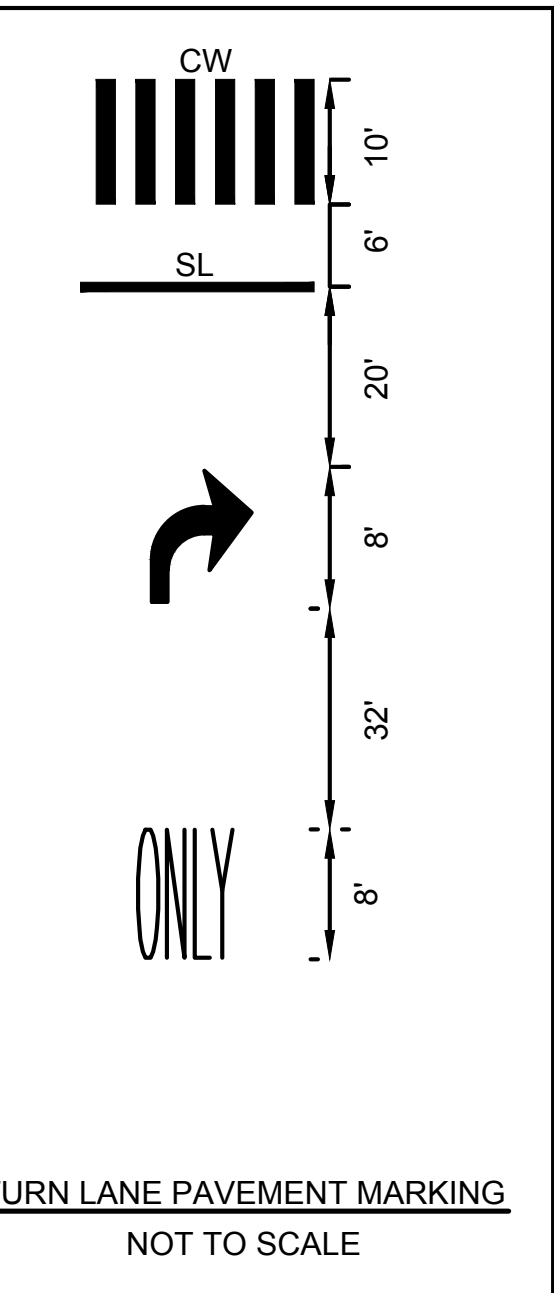
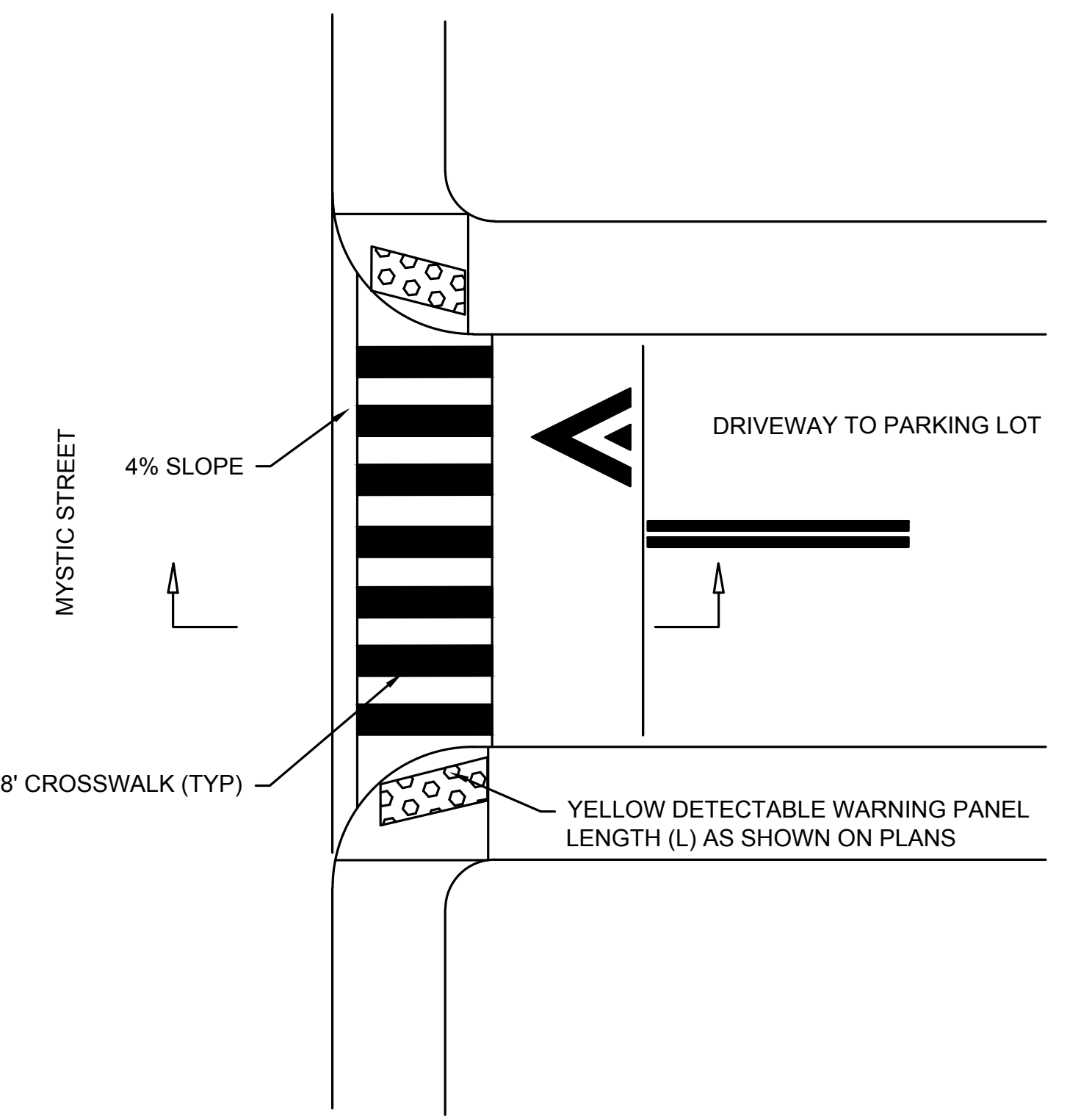
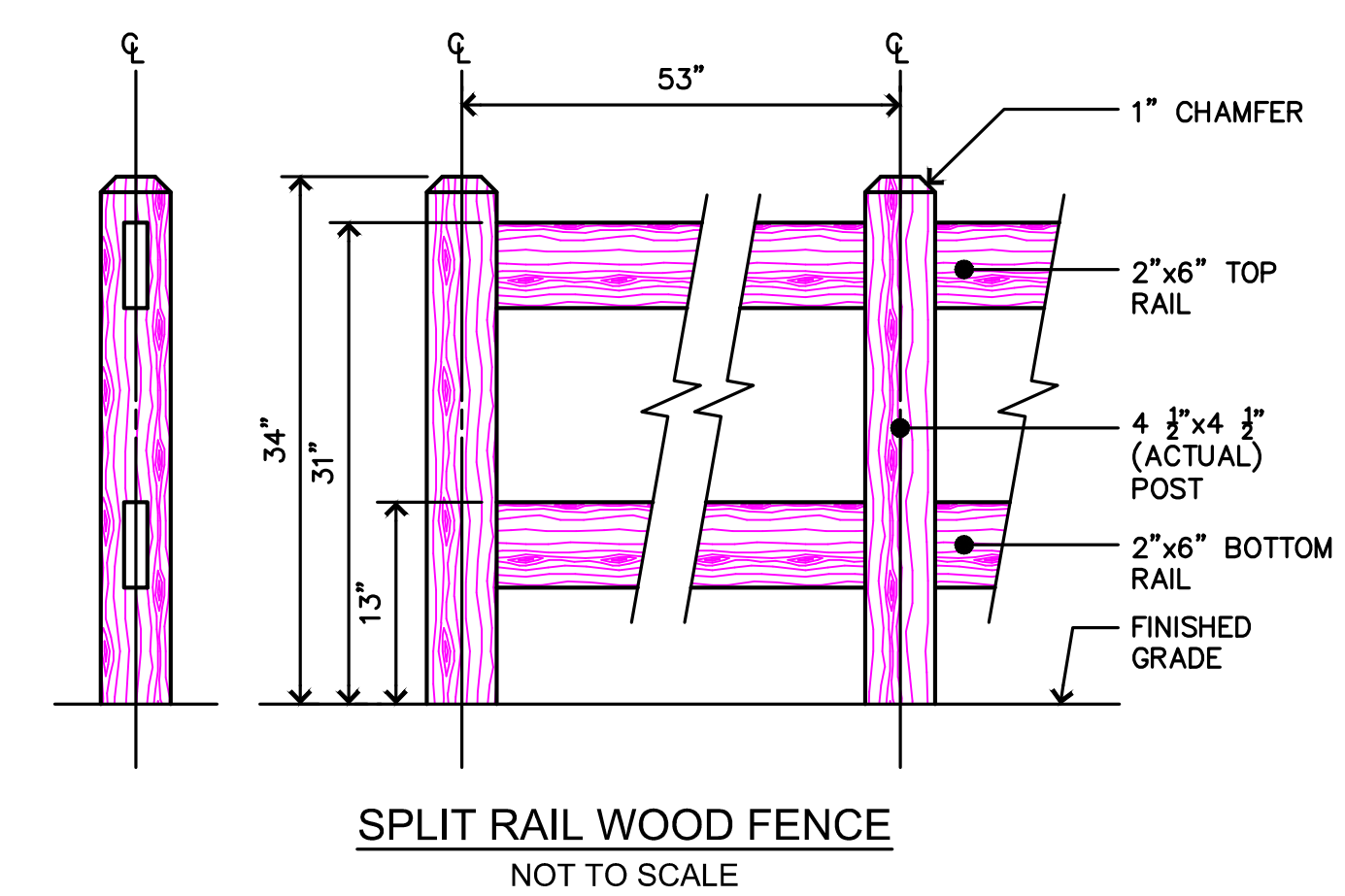
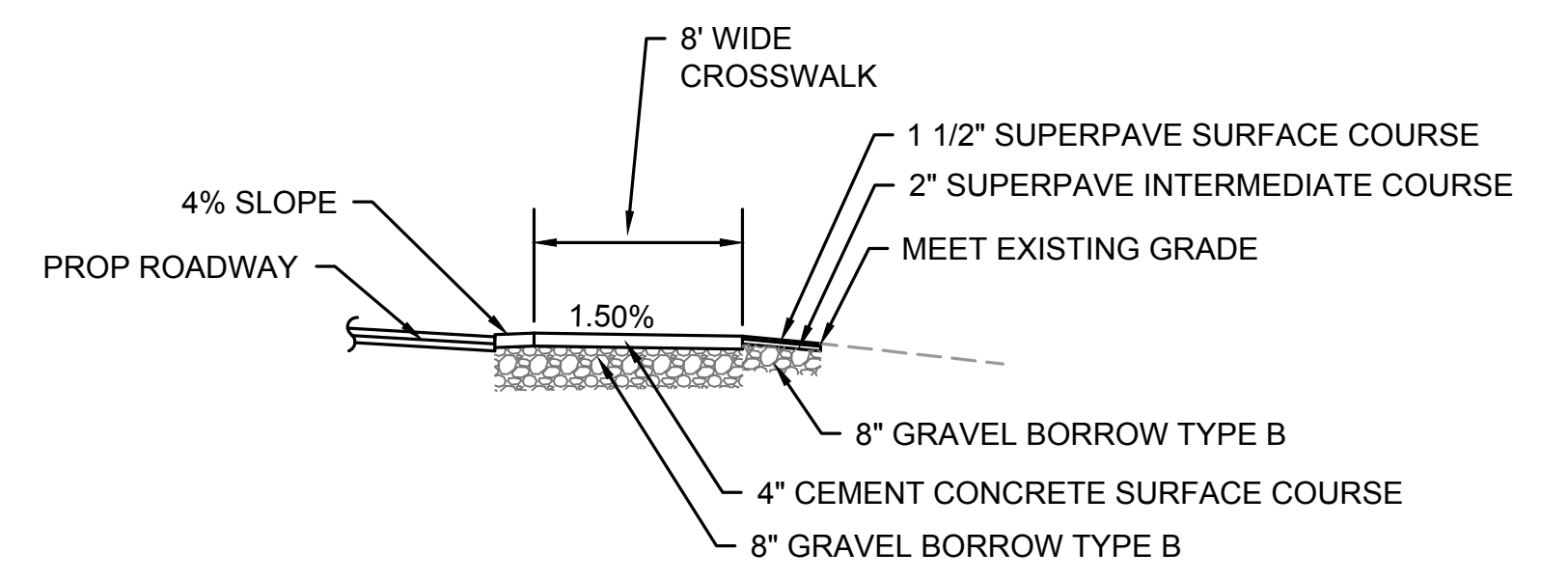
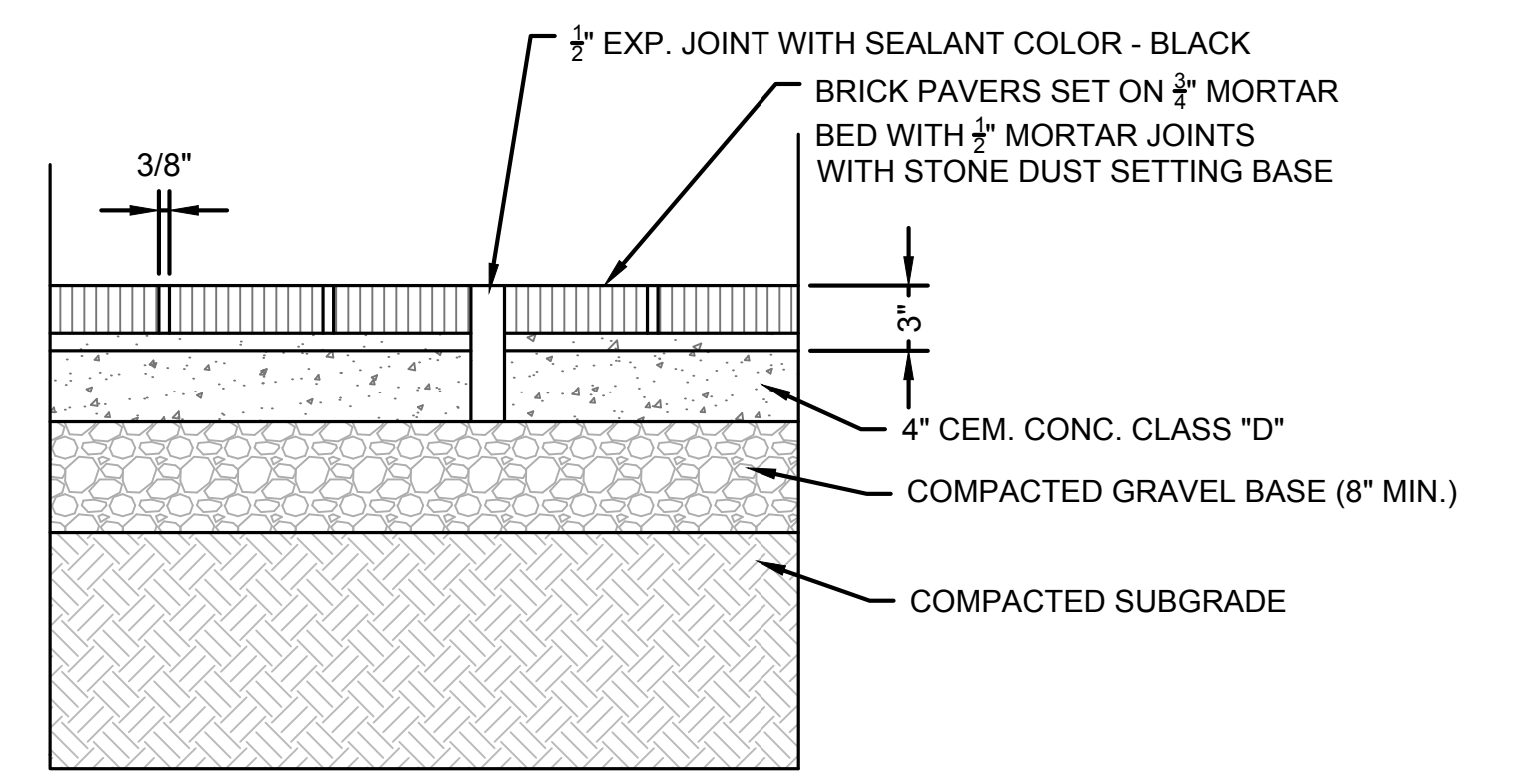
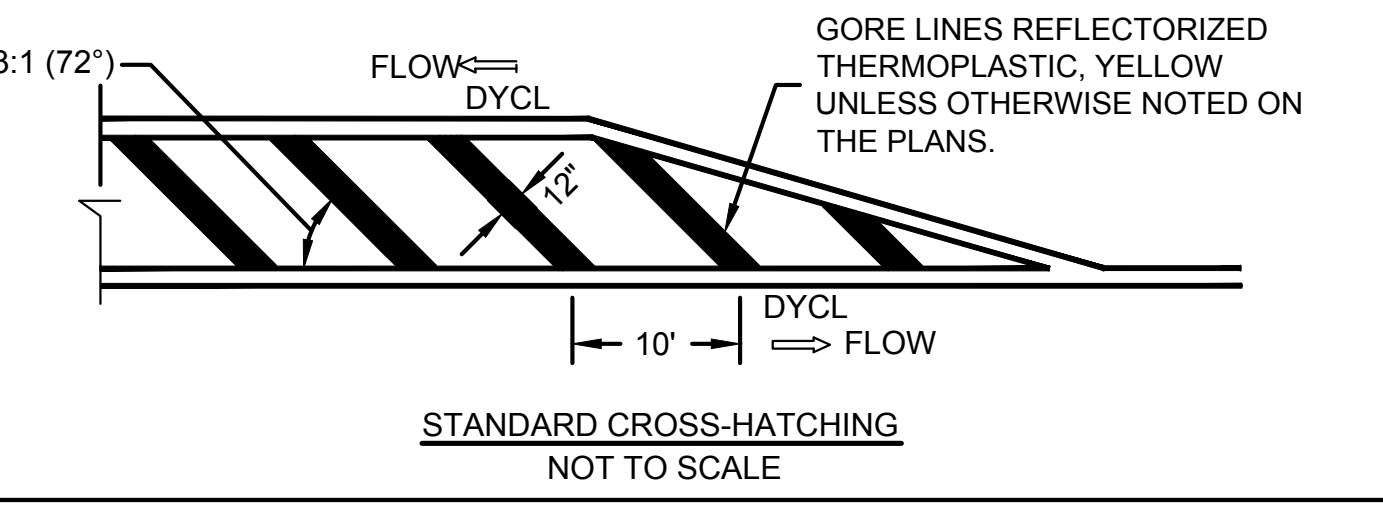
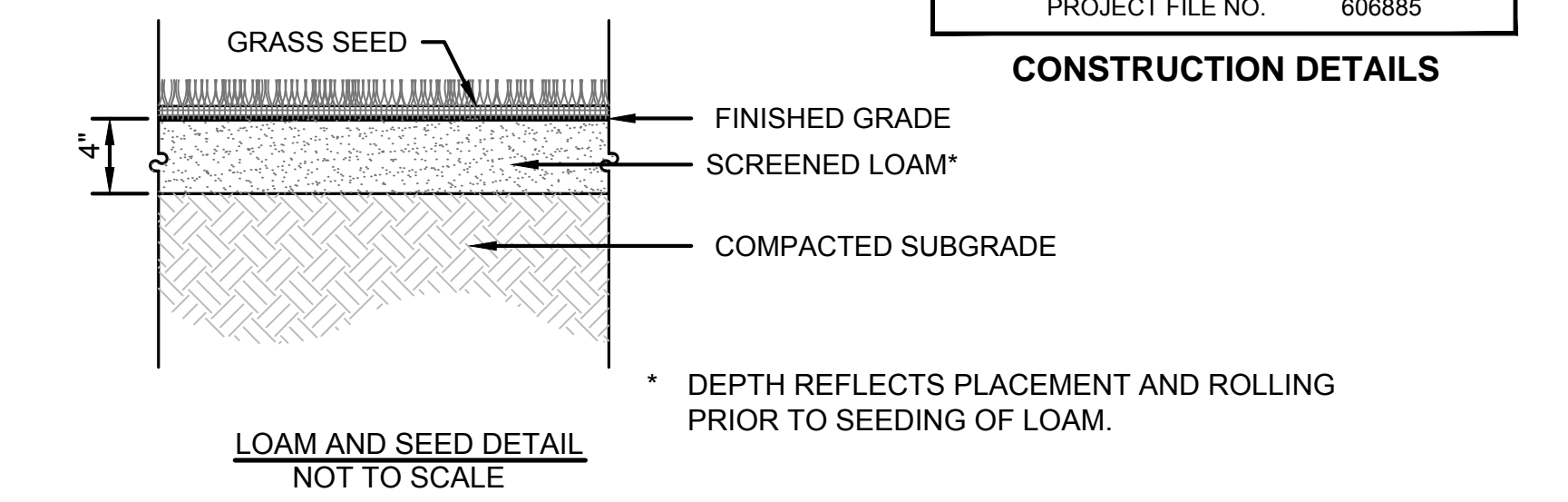
WCR #	ROADWAY ELEV. AT RAMP ϵ	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
11	37.52	MYSTIC STREET	206+54	30' LT	-	6.4'	6.1'	6.4'	15.0'	6.5'	-6.7%±
12	35.45	MYSTIC STREET	207+06	29' LT	-	5.8'	6.3'	5.8'	7.7'	6.5'	L= -1.3%± R= -3.8%±

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).
2. DETECTABLE WARNING PANELS SHALL BE YELLOW

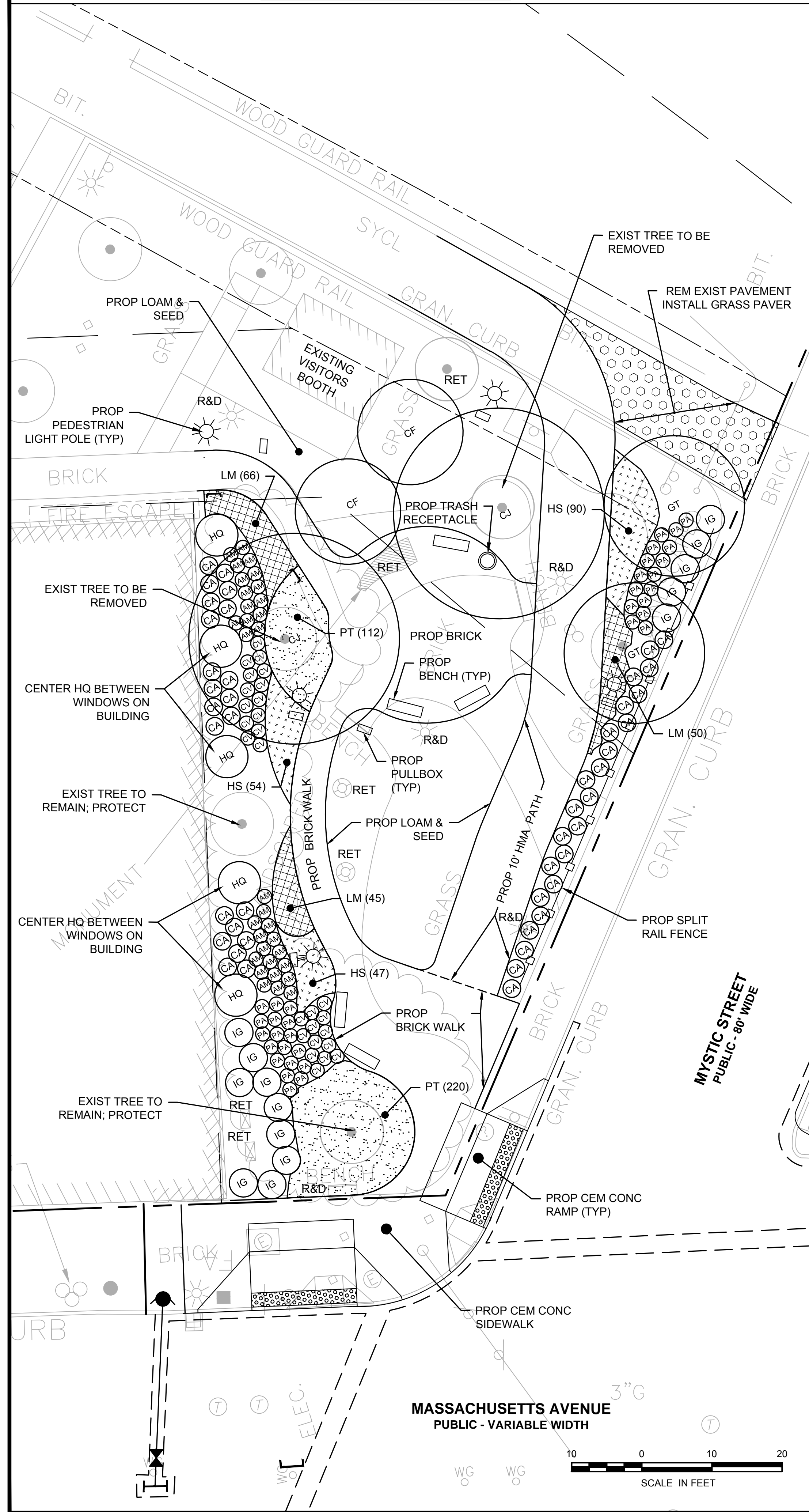
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	9	53
PROJECT FILE NO.		606885	

CONSTRUCTION DETAILS



- SHARED LANE SYMBOL PLACEMENT NOTES:**
1. IN LOCATIONS WITH ON-STREET PARKING, SHARED LANE MARKING SYMBOLS SHALL BE PLACED SO THAT THE CENTER IS A MINIMUM OF 11 FEET FROM THE ADJACENT FACE OF CURB.
 2. IN LOCATIONS WITHOUT ON-STREET PARKING, SHARE LANE MARKING SYMBOLS SHALL BE PLACED SO THAT THE CENTER IS 4 FEET FROM THE ADJACENT FACE OF CURB.
 3. IF LOCATED IN A TURN LANE, SHARED LANE MARKING SYMBOLS SHALL BE CENTERED IN THE LANE.
 4. DO NOT PLACE SYMBOLS ON LANE LINES.
 5. SHARED LANE SYMBOLS SHALL BE PLACED A MAXIMUM OF 500 FEET APART.

UNCLE SAM PARK PLANTING PLAN



PLANTING SCHEDULE

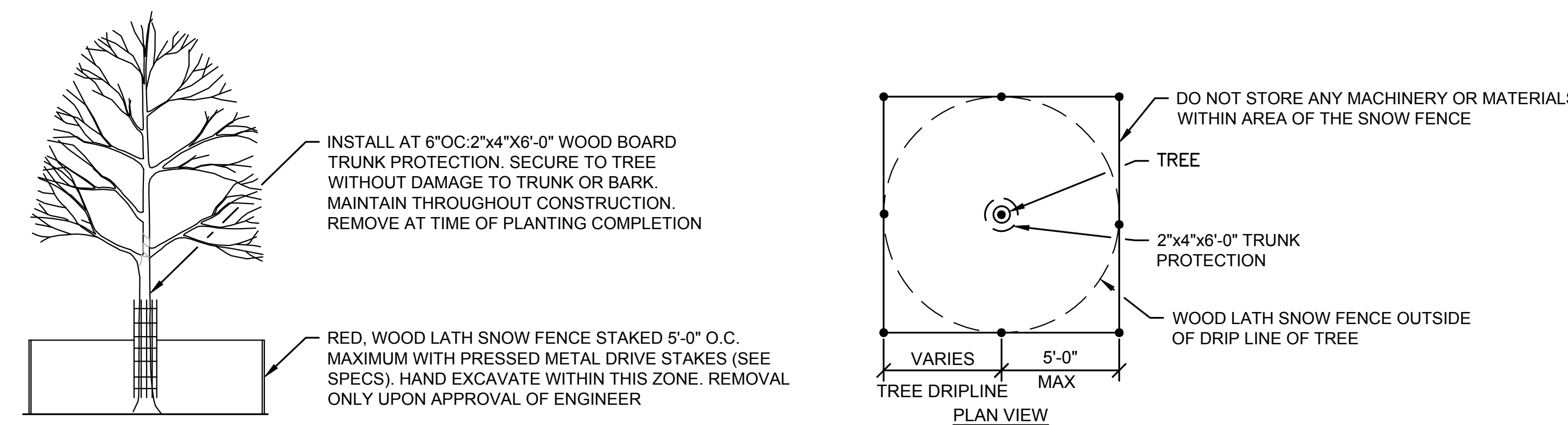
DECIDUOUS TREES					
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
2	CJ	<i>Cercidiphyllum japonicum</i>	KATSURA TREE	2"-2.5" CALIPER	B&B, SINGLE STEM
2	CF	<i>Cornus florida 'Cherokee Chief'</i>	CHEROKEE DOGWOOD	2"-2.5" CALIPER	B&B, SINGLE STEM
2	GT	<i>Gleditsia triacanthos 'Skyline'</i>	HONEY LOCUST	2"-2.5" CALIPER	B&B, SINGLE STEM
SHRUBS					
5	HQ	<i>Hydrangea quercifolia</i>	OAKLEAF HYDRANGEA	3 GAL. CONT.	PLACEMENT AS NOTED
14	IG	<i>Ilex glabra 'Nigra'</i>	NIGRA INKBERRY	3 GAL. CONT.	FULL DENSE, FEMALE ONLY- 4' O.C.
GROUNDCOVER, PERENNIALS, AND GRASSES					
32	AM	<i>Achillea millefolium 'Paprika'</i>	PAPRIKA YARROW	2 GAL. CONT.	INSTALL 2' O.C.
46	CA	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	FEATHER REED GRASS	2 GAL. CONT.	INSTALL 2.5' O.C.
27	CV	<i>Coreopsis verticillata 'Moonbeam'</i>	THREADLEAF COREOPSIS	2 GAL. CONT.	INSTALL 2' O.C.
191	HS	<i>Hemerocallis 'Stella D'oro'</i>	STELLA D'ORO DAY LILY	1 GAL. CONT.	INSTALL 12" O.C.
161	LM	<i>Liriope muscari 'Big Blue'</i>	BIG BLUE LILYTURF	1 GAL. CONT.	FULL, DENSE- INSTALL 12" O.C.
34	PA	<i>Pennisetum alopecuroides 'Hamlen'</i>	FOUNTAIN GRASS	1 GAL. CONT.	INSTALL 2' O.C.
332	PT	<i>Pachysandra terminalis</i>	PACHYSANDRA	FLAT	INSTALL 12" O.C.

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

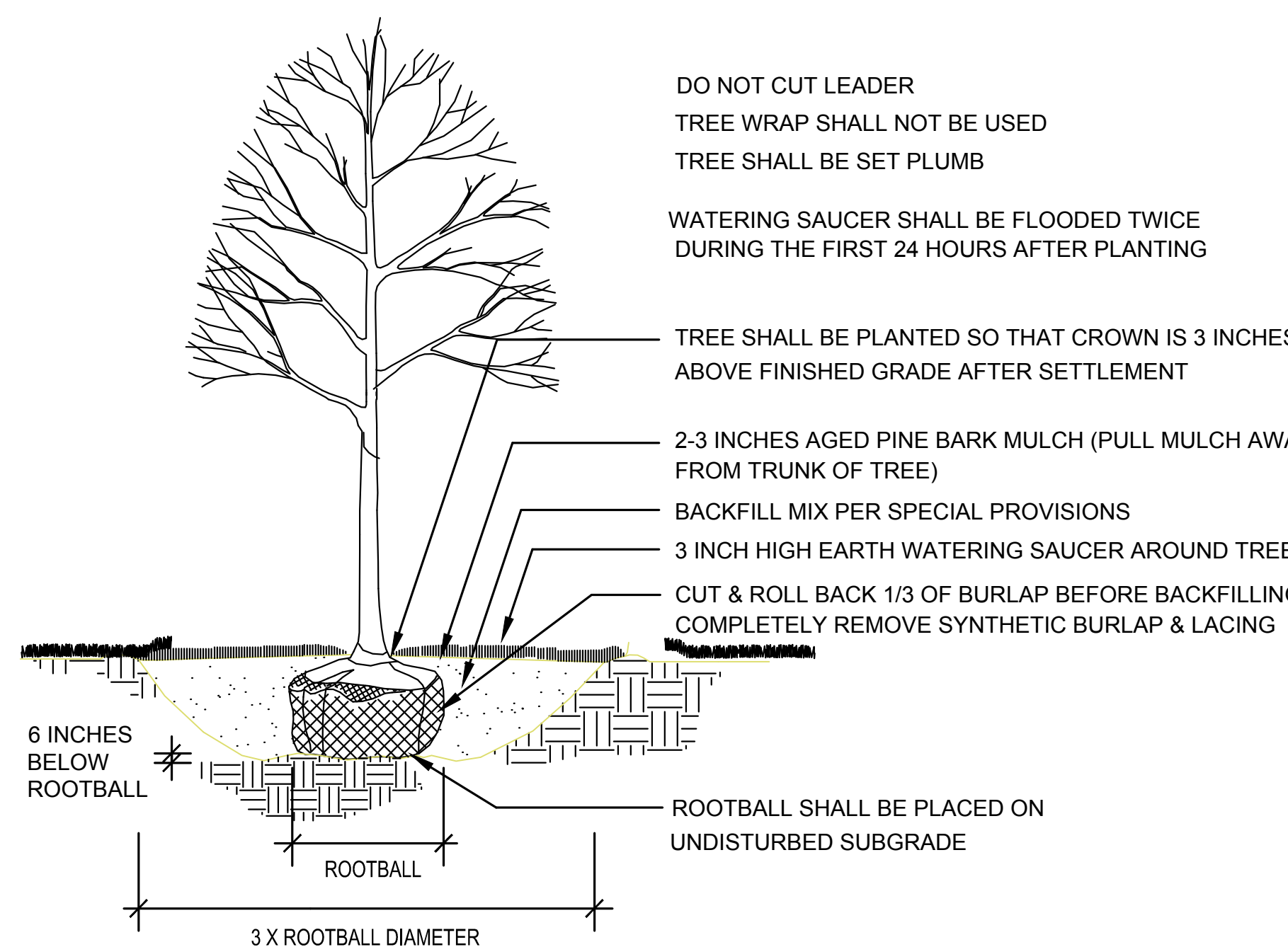
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	10	53
PROJECT FILE NO. 606885			

LANDSCAPING PLAN AND DETAILS

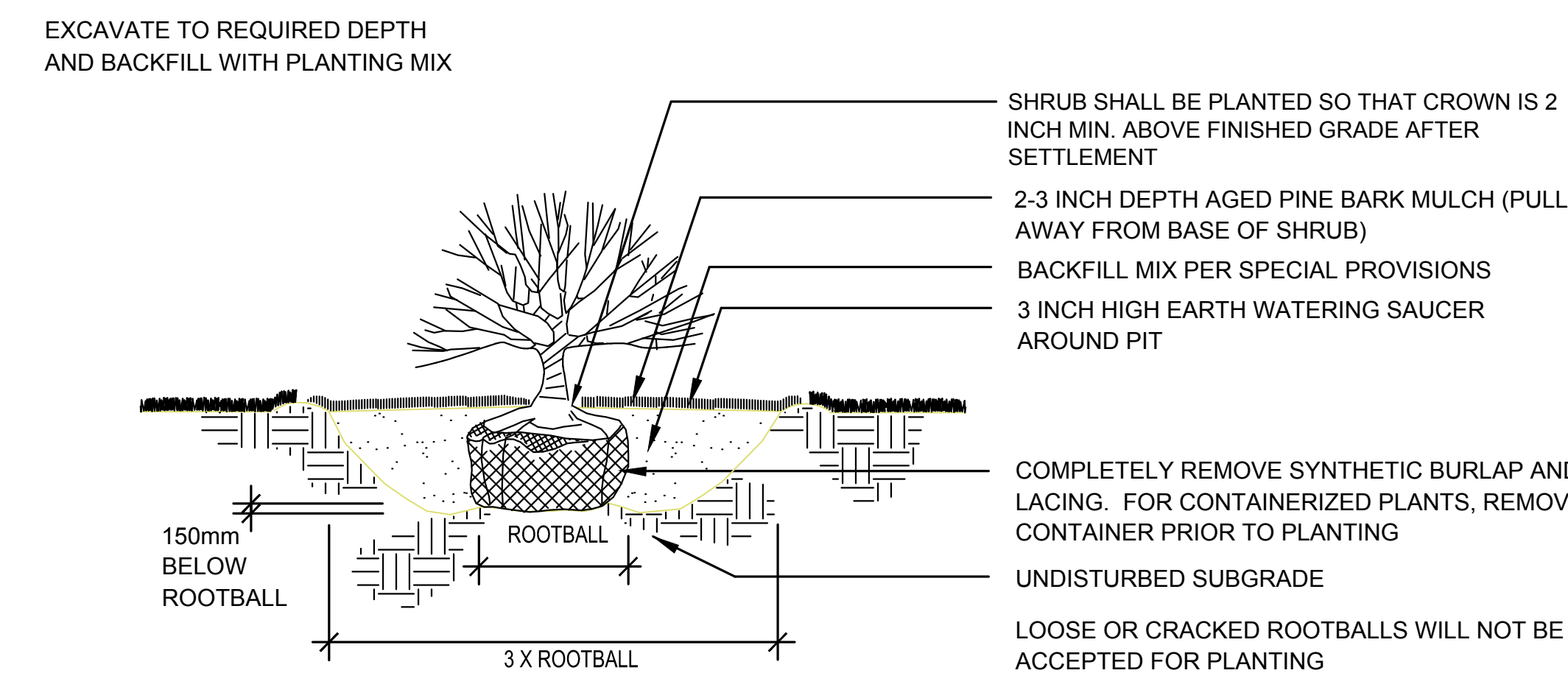
NOTES:
SEE CONSTRUCTION PLAN SHEET 16 FOR ADDITIONAL DESIGN DETAIL IN UNCLE SAM PARK.



TREE PROTECTION
NOT TO SCALE



DECIDUOUS TREE PLANTING
NOT TO SCALE



SHRUB PLANTING
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	11	53
PROJECT FILE NO.		606885	

CONSTRUCTION DETAILS

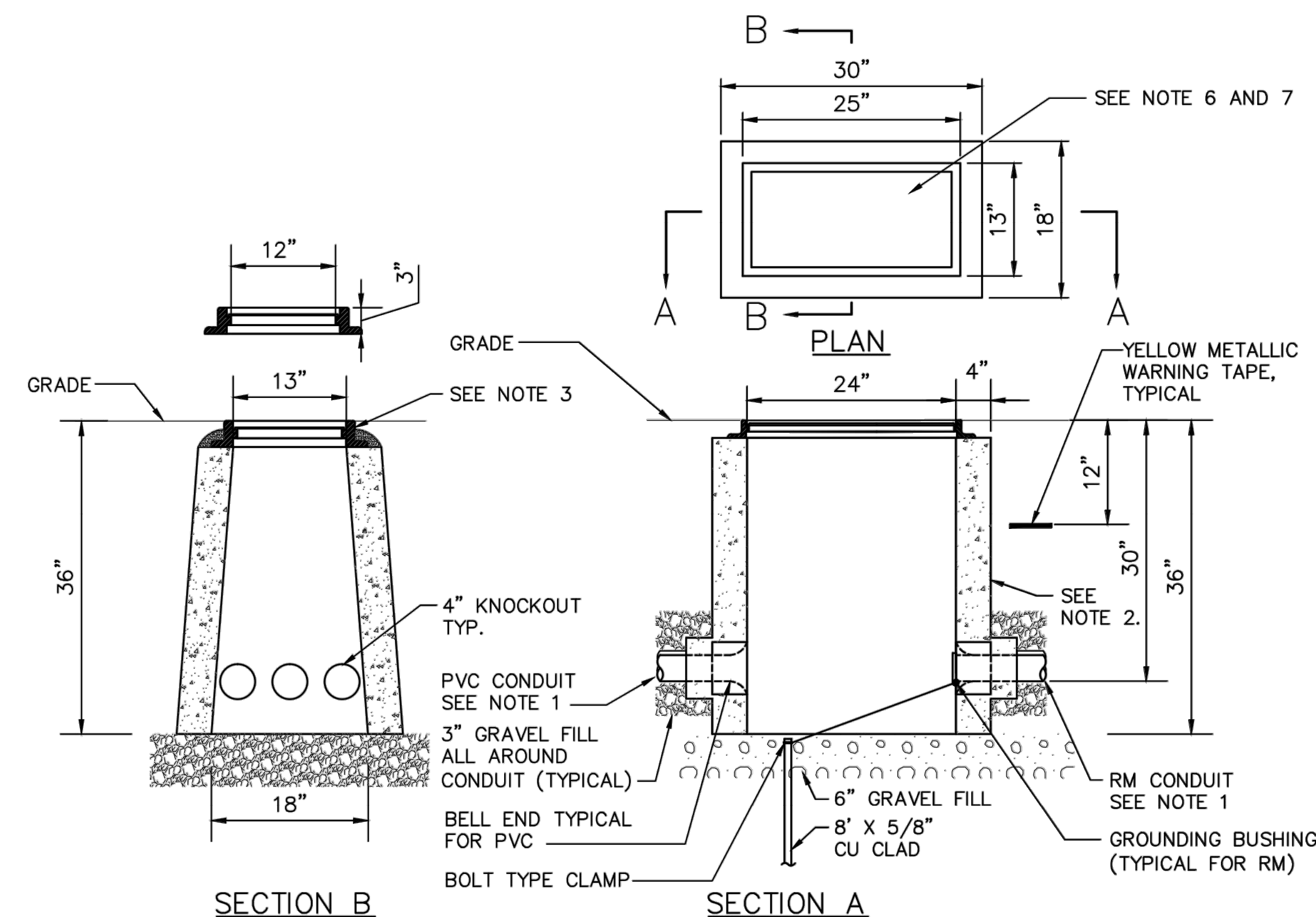
GENERAL NOTES:

- CONDUIT RUNS ARE SHOWN APPROXIMATE. LOCATIONS MAY BE ADJUSTED TO MATCH EXISTING AND PROPOSED CONDITIONS AS REQUIRED BY THE RESIDENT ENGINEER.
- 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.
- STATIONING FOR POLES IS GIVEN FROM THE BASELINE CLOSEST TO THE POLE. OFFSET DISTANCE FROM STREET IS DEFINED ON LIGHT POLE FOUNDATION DETAIL.
- ALL WIRING IN THE PANELBOARDS AND CABINETS SHALL BE PERMANENTLY LABELED AND NEATLY INSTALLED.
- ALL CONDUIT AND EQUIPMENT TO BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, MASSACHUSETTS ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
- ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED FOR ITS INTENDED PURPOSE.
- 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.
- WIRE AND CABLE FURNISHED AND USED SHALL BE NEW. WIRE AND CABLE SHALL BE PROTECTED FROM WEATHER AND DAMAGE DURING STORAGE AND HANDLING.
- NO WIRE SHALL BE DRAWN IN TO ANY CONDUIT UNTIL ALL WORK WHICH MAY CAUSE CABLE DAMAGE IS COMPLETE.
- 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.
- 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.
- THE CONTRACTOR SHALL BE REQUIRED TO ADHERE TO ALL REGULATIONS IMPOSED BY THE TOWN OF ARLINGTON.
- ELECTRICAL SERVICE TO EACH HIGHWAY LIGHTING LOAD CENTER (HLLC) WILL BE PROVIDED BY NSTAR. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE UP POLE WITH ENOUGH SLACK FOR SERVICE CONNECTION. CONTRACTOR SHALL COORDINATE WITH NSTAR FOR SERVICE CONNECTION. CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRIC SERVICE CONNECTIONS AND RELATED FEES FROM NSTAR.
- INSTALL PHOTO ELECTRIC SWITCH IN HLLC.
- CONDUIT SHALL BE SCH. 40 WITH METALLIC DETECTABLE CAUTION TAPE ABOVE. UNLESS OTHERWISE NOTED, CONDUIT SHALL BE AS FOLLOWS:
 3" PVC CONDUIT FROM LIGHTING LOAD CENTER TO NSTAR SERVICE CONNECTION.
 2" PVC CONDUIT BETWEEN HANDHOLES
 2" PVC CONDUIT BETWEEN HANDHOLE AND LIGHT POLE
 2" RGS CONDUIT TRANSITION INTO POLE FOUNDATION
- ALL WIRE SHALL BE CONTINUOUS FROM POLE TO POLE WITHOUT RUNNING SPLICES IN CONDUITS. ALL WIRES SHALL EXTEND 24" OUT OF THE POLE PULL BOX, CONNECTED AT ENDS AND ROLLED BACK INTO THE PULL BOX.
- SPLICES SHALL BE IN ACCORDANCE WITH SECTION 813 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- THE HOT LINE AND NEUTRAL CONNECTION IN THE POLE HANDHOLE SHALL BE WITH AN APPROVED STREET LIGHT FUSE CONNECTOR.
- 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.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING FEATURES PRIOR TO PERFORMING ANY WORK.
- WHERE A NEW PAVEMENT SHALL MEET EXISTING PAVEMENT, THE JOINT SHALL BE SAWCUT TO A NEAT VERTICAL LINE.
- THE CONTRACTOR SHALL MAINTAIN AREAS IN AND AROUND THE WORK ZONE FREE AND CLEAR OF DEBRIS AT ALL TIMES. NO STOCKPILING OF EQUIPMENT OR MATERIAL SHALL BE PERMITTED OUTSIDE OF FIXED WORK ZONES.
- 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 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2003 EDITION AND THE LATEST ADDENDUMS.

ELECTRIC HANDHOLE GENERAL NOTES:

- ALL CONDUIT ENTERING HANDHOLES SHALL EXTEND INTO THE HANDHOLE CAVITY BY AT LEAST 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, 3/4", 610 CEMENT CONCRETE MASONRY.
- POLYMER CONCRETE FRAME SHALL BE BOLTED TO THE SURFACE OF THE PRECAST CONCRETE HANDHOLE.
- ALL CONDUIT INSTALLED IN HANDHOLES SHALL BE INSTALLED IN KNOCKOUTS PROVIDED IN THE BOX AND NO EXCESS KNOCKOUTS SHALL BE MADE. THE KNOCKOUTS ARE DESIGNED TO BE MADE PRIOR TO BACKFILLING AROUND THE PULLBOXES AND HANDHOLES. 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.
- FOR THE EXACT NUMBER, SIZE, AND ORIENTATION OF THE CONDUITS ENTERING THE HANDHOLE, SEE LIGHTING PLAN SHEETS.
- 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.
- FUNCTION DESIGNATION ON THE HANDHOLE SHALL BE LABELED AS FOLLOWS PER NEC ARTICLE 314.30D:

"LIGHTING" FOR LIGHTING CONDUIT.



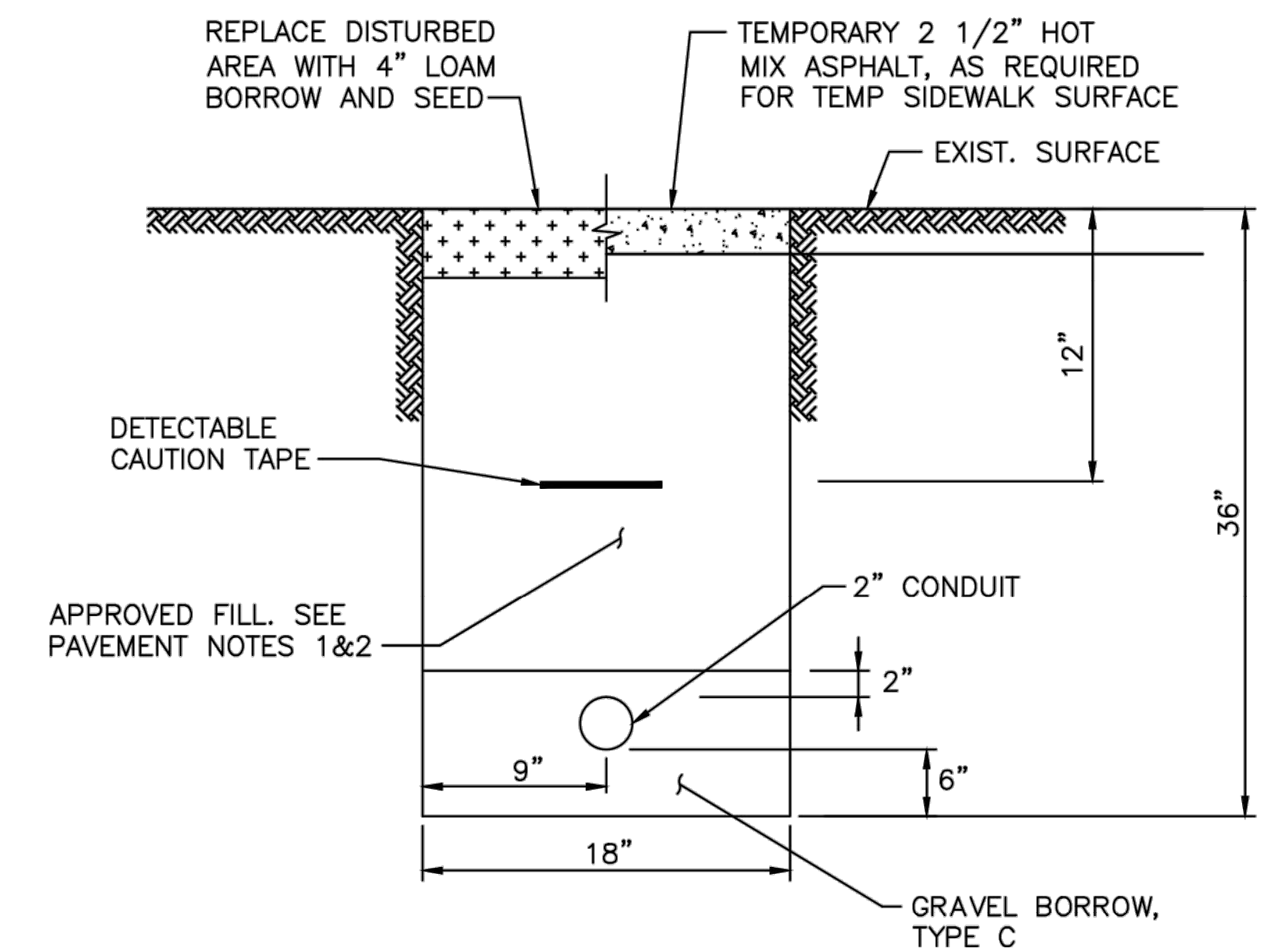
HANDHOLE - 24" x 13" x 36"
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	12	53
PROJECT FILE NO.		606885	

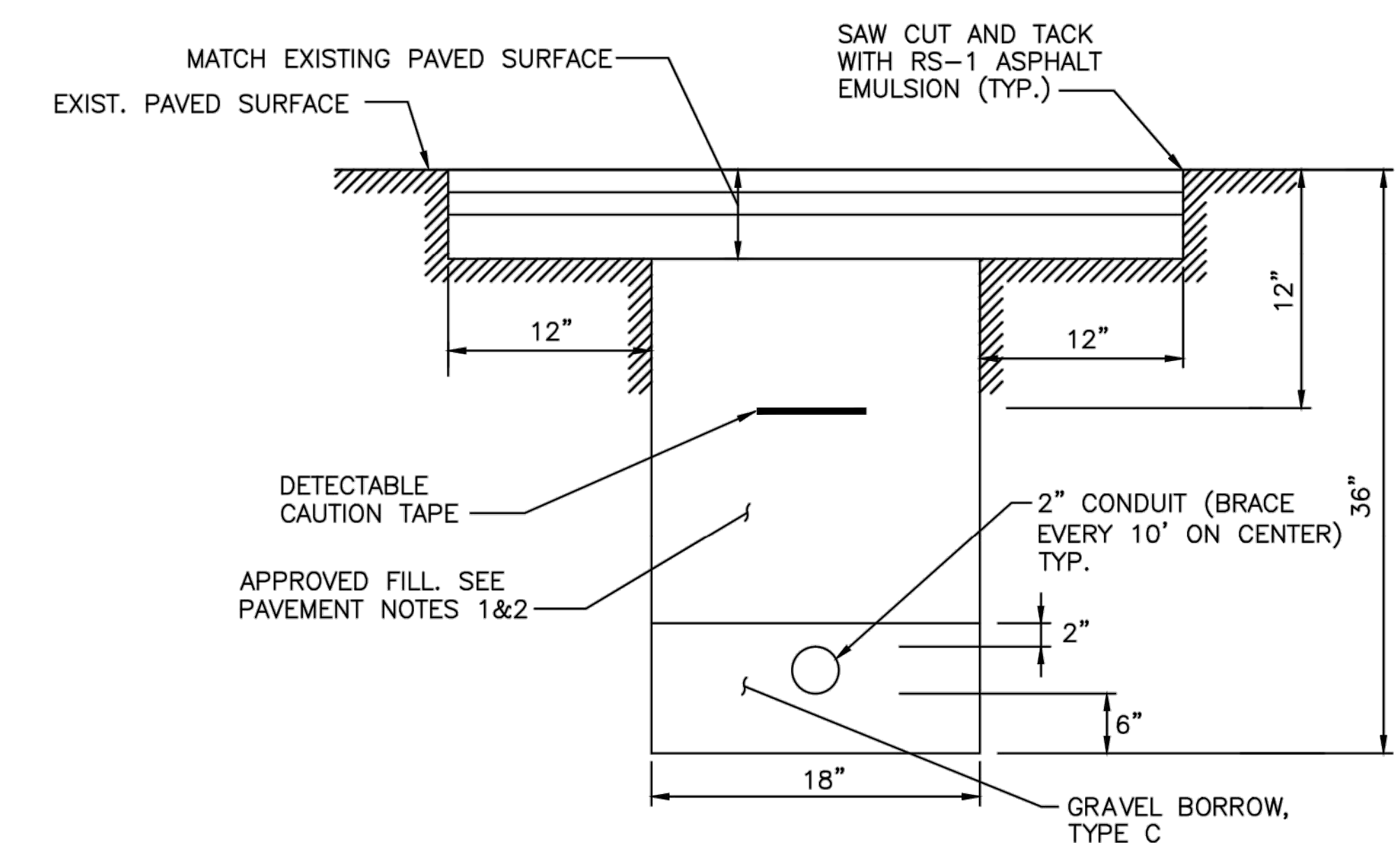
CONSTRUCTION DETAILS

PAVEMENT NOTES FOR
TRENCH PATCHING:

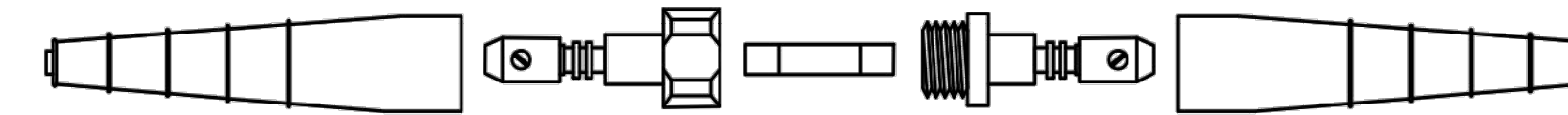
- FOR ALL TRENCH CUTS WITHIN PAVED SURFACES, (MAINLINE AND LOCAL ROADS), CONTROLLED DENSITY FILL (CDF) FOR BACKFILL IS MANDATORY. CONTROLLED DENSITY FILL TYPE 2E, (FLOWABLE-EXCAVATABLE) SHALL MEET THE REQUIREMENTS OF SECTION M4.08.0.
- BACKFILL SHALL CONFORM TO STANDARD PROVISIONS OF SECTION 150.64.



SINGLE 2" CONDUIT
(UNDER GRASS AREA OR SIDEWALK)
NOT TO SCALE



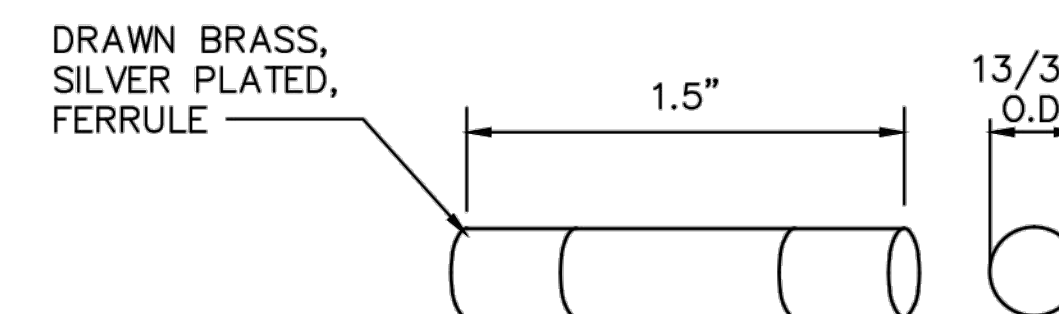
CONDUIT UNDER ROADWAY
NOT TO SCALE



RATING:	600 VOLTS - 20 AMPS.
FUSE SIZE:	1 1/2" x 13/32" O.D. - FERRULE 3/8"
CONNECTOR SIZE:	8 1/2" x 7/8" O.D.
CONNECTOR TYPE:	FUSE - QUICK DISCONNECT SET SCREW TYPE CONNECTION
CONNECTOR MATERIAL:	MOLDED PLASTIC BODY WITH RUBBER INSULATING BOOTS.
CONDUCTOR SIZE:	LINE AND LOAD #2 AWG THROUGH #12 AWG
REQUIRED FEATURES:	WATERTIGHT NO TAPING OR SEALANT REQUIRED
-FUSE HELD IN LOAD SIDE WHEN CONNECTOR IS DISCONNECTED.	
-PROVIDE APPROVED FUSE HOLDER WITH "DUMMY" ROD BLANK FUSE FOR NEUTRALS	

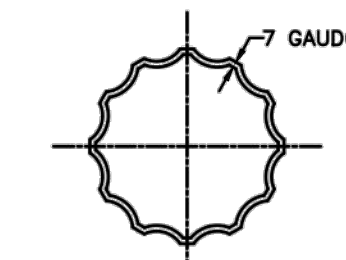
FUSE HELD IN LOAD SIDE WHEN CONNECTOR IS DISCONNECTED.

STRAIGHT THRU CONNECTOR
NOT TO SCALE

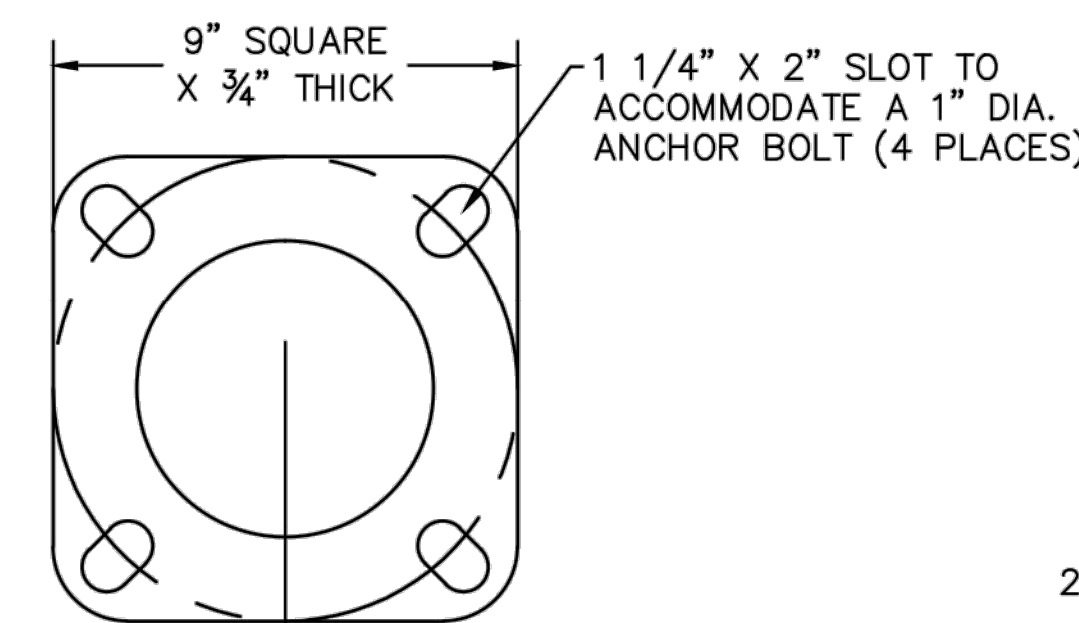


SIZE: MIDGET
TYPE: CURRENT LIMITING FUSE
VOLTAGE RATING: 277/480 VOLTS
USE: PROTECTION OF AREA LIGHTING EQUIPMENT

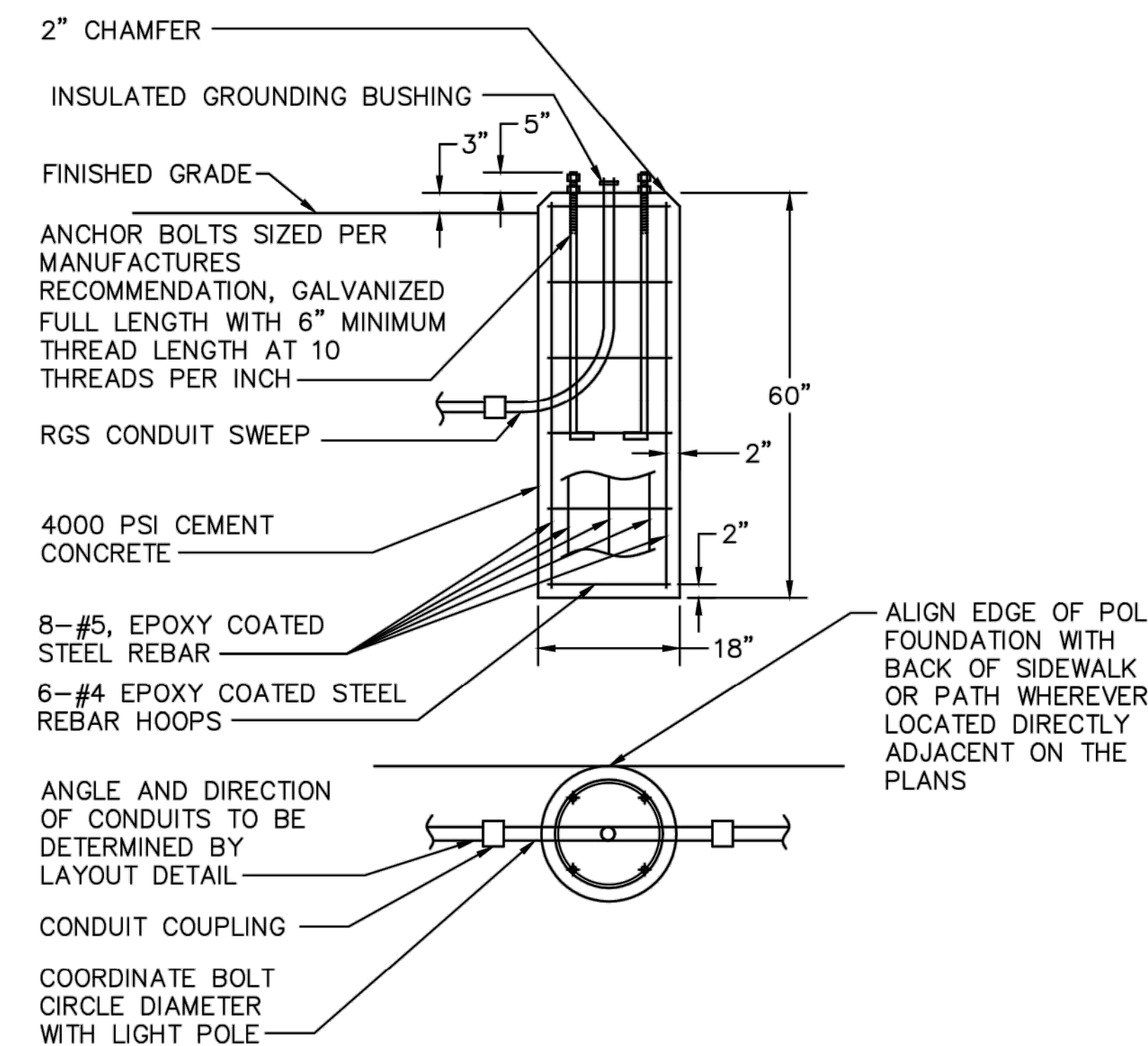
FUSES
NOT TO SCALE



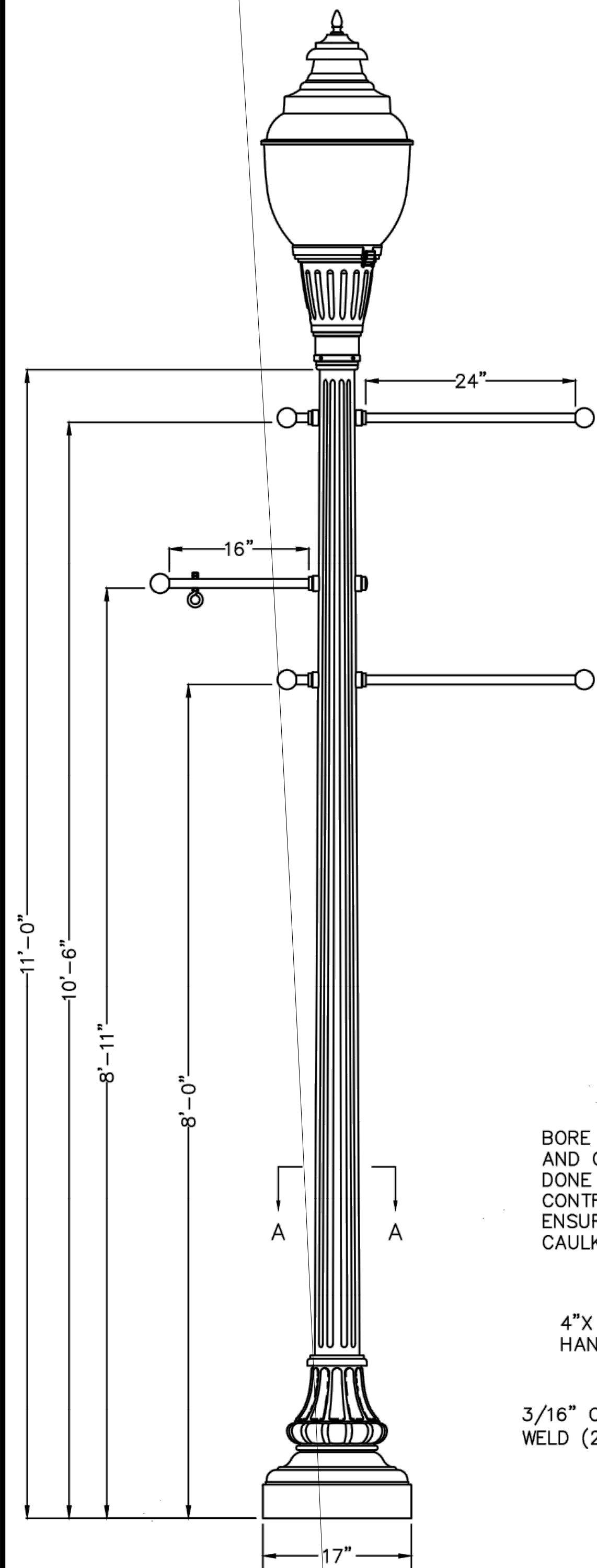
SECTION A-A
12 FLAT FLUTE
7 GAUGE WALL
THICKNESS .14"
TAPER PER
FOOT
N.T.S.



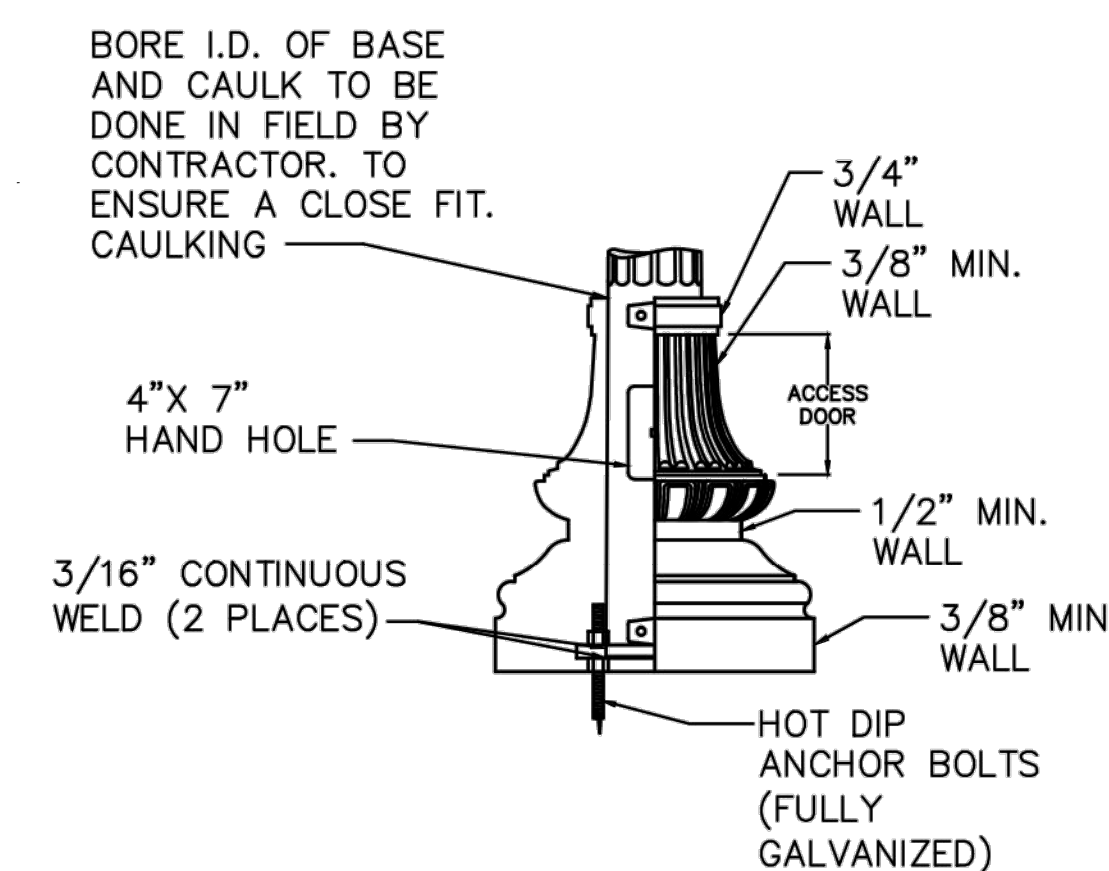
TOP VIEW OF BASE PLATE
N.T.S.



POLE BASE DETAIL
NOT TO SCALE



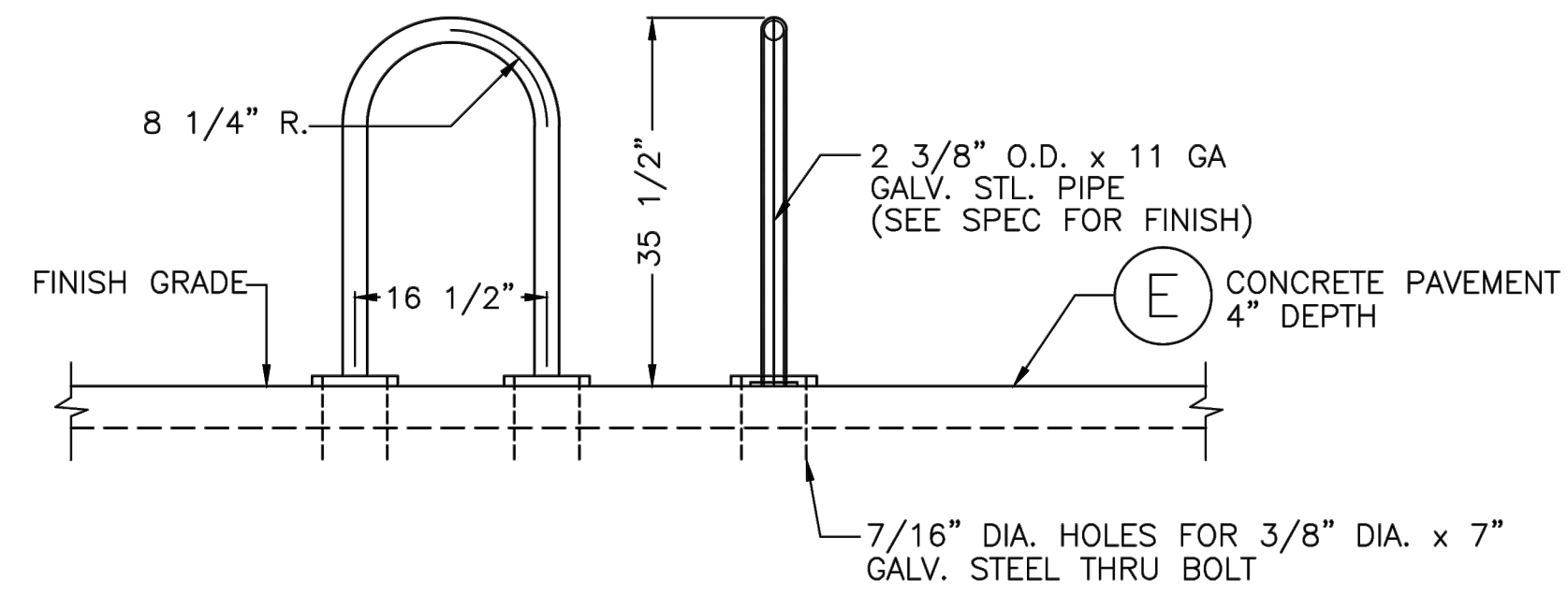
LIGHT POLE AND LUMINAIRE DETAIL
NOT TO SCALE



BORE I.D. OF BASE AND CAULK TO BE DONE IN FIELD BY CONTRACTOR. TO ENSURE A CLOSE FIT. CAULKING

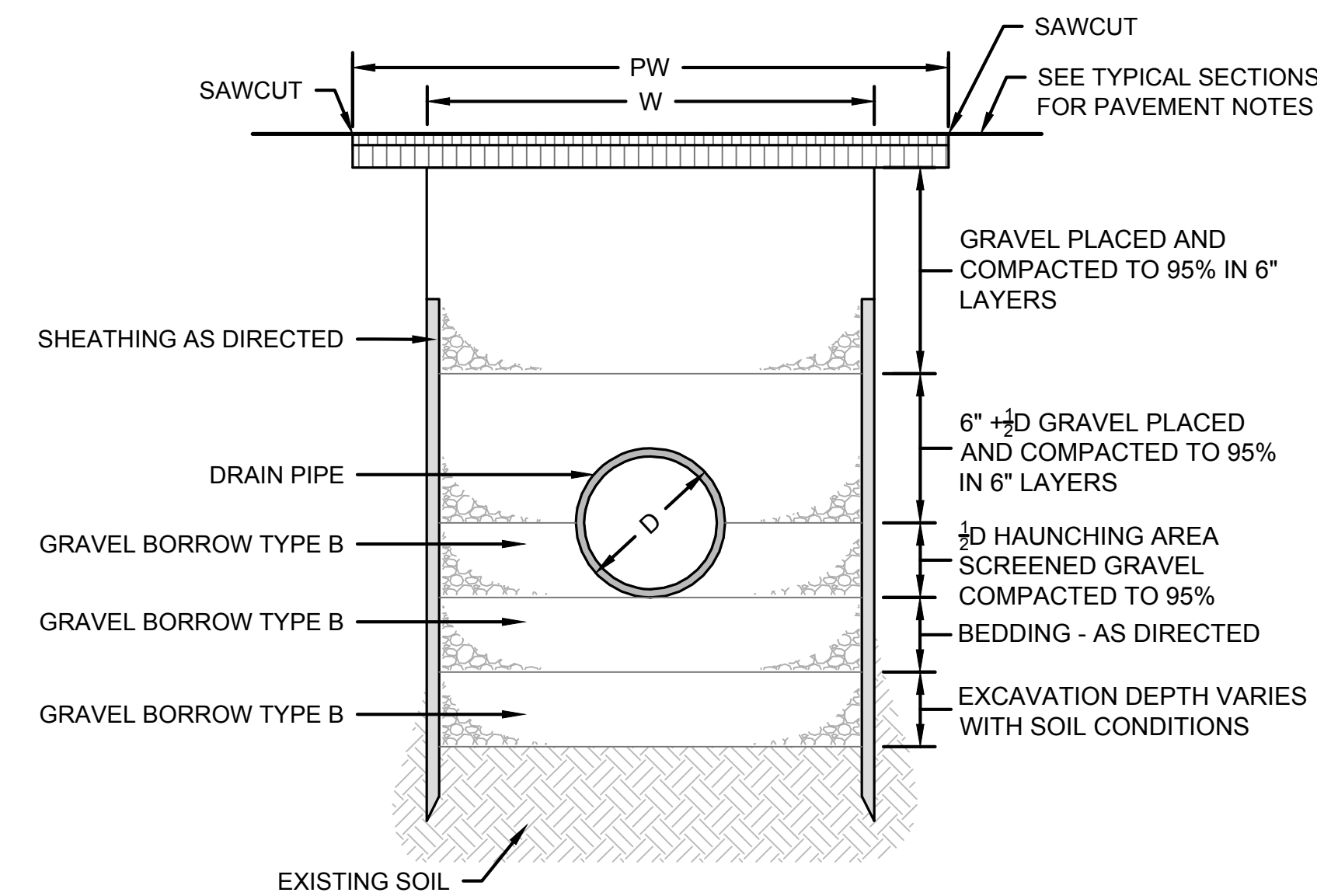
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	13	53
PROJECT FILE NO.		606885	

CONSTRUCTION DETAILS



BIKE HOOP (TYPE 1) - SURFACE MOUNT

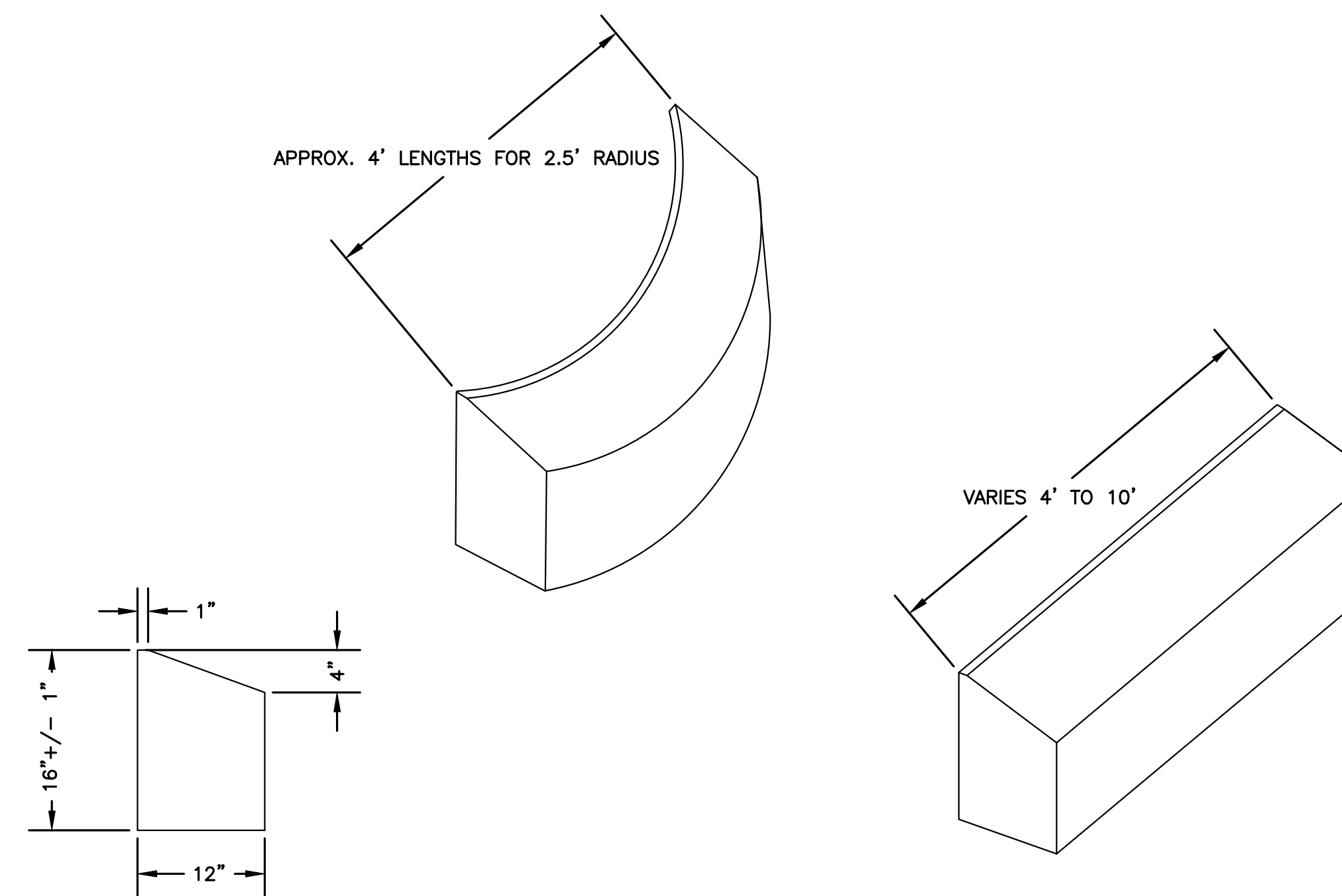
NOT TO SCALE



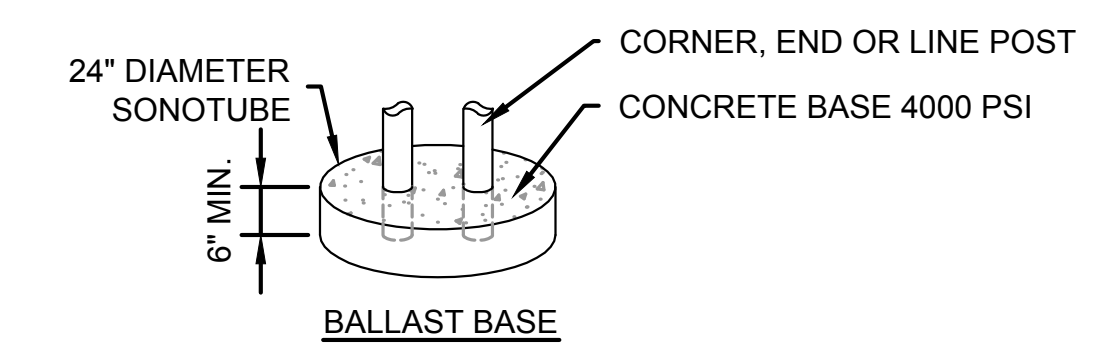
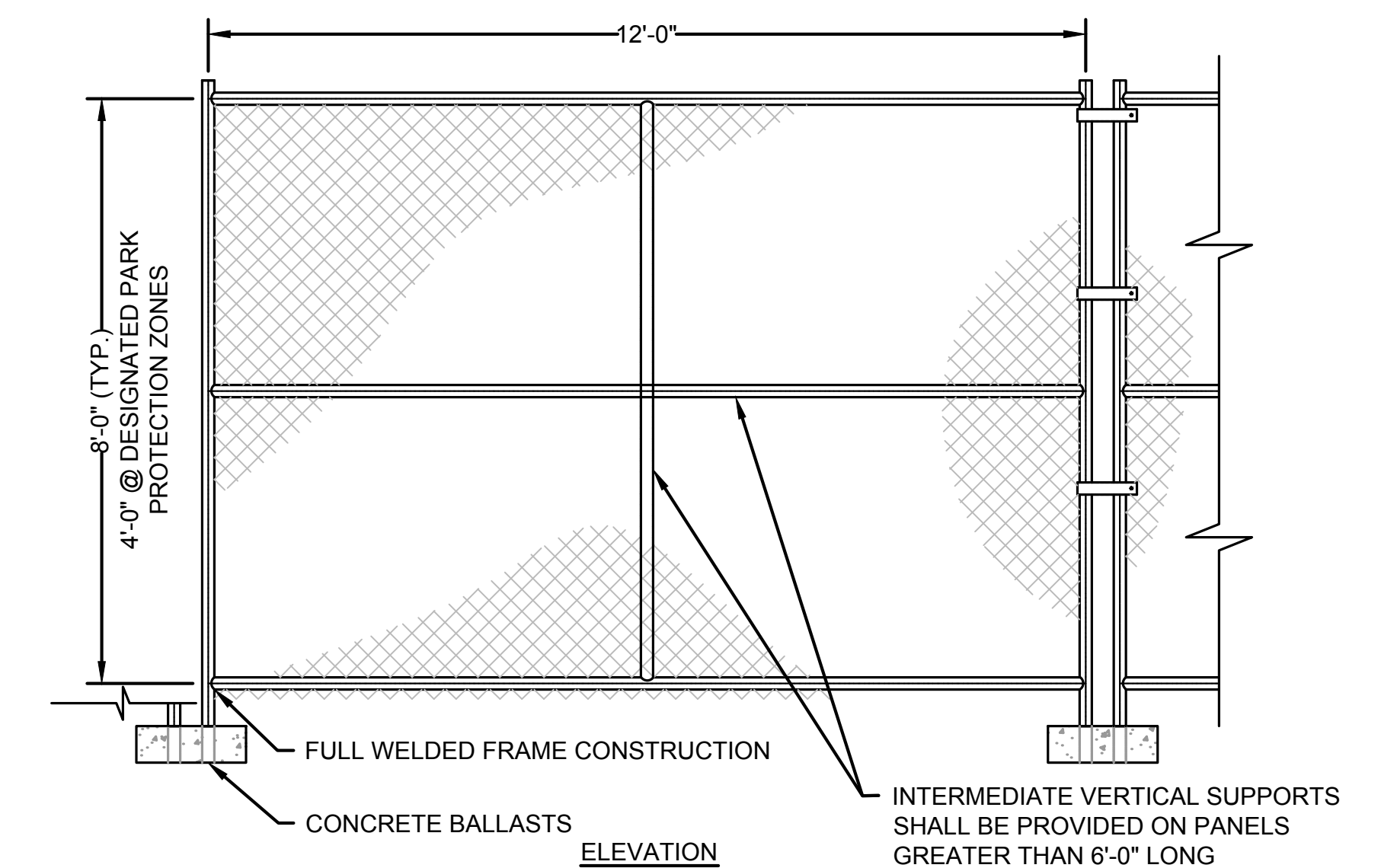
TRENCH DETAIL FOR DUCTILE IRON PIPE
NOT TO SCALE

NOTES:

1. W = MAXIMUM WIDTH
2. PW = MAXIMUM PAVING WIDTH (W+1'-6")
3. D = OUTSIDE PIPE DIAMETER
4. UNSHEATHED TRENCH: W = D+3'-0" (3'-0" MIN.)
5. SHEATHED TRENCH: W = D+3'-0"+SHEATHING WIDTH
- 4'-2" MIN. WITHOUT WALERS
- 5'-0" MIN WITH WALERS
6. TRENCH BOX OR HYDRAULIC SHORING:
- W = D+3'-0"+[WALL SHIELD WIDTH ≤ 8"] +
1'-0" FOR TRENCH BOX
7. PER DIRECTION OF THE MASSDOT PAVEMENT ENGINEER, ITEM 451 HMA PATCHING WILL BE USED FOR THE TEMPORARY PAVEMENT PATCHING.



TYPE T-100 TRAVERSABLE GRANITE CURBING
STRAIGHT & RADIUS
NOT TO SCALE



NOTES:

1. FABRIC SHALL BE 11 GAUGE MIN. WIRE, WOVEN INTO APPROXIMATELY 2" DIAMOND MESH AND BE ZINC COATED.
2. ALL POSTS, RAILS, AND INTERMEDIATE SUPPORTS TO BE FULL WELDED CONSTRUCTION USING GALVANIZED PIPE WITH A MINIMUM 2 1/2 IN. O.D. GATE POSTS SHALL BE MINIMUM 4 IN. O.D.
3. THE CONTRACTOR IS RESPONSIBLE FOR SURFACE RESTORATION ONCE THE FENCE IS REMOVED.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TEMPORARY CONSTRUCTION FENCE AT THE CONCLUSION OF THE PROJECT.
5. REFER TO SPEC SECTION 01500-2.11 FOR TEMPORARY FENCING, BARRIERS, AND PARTITIONS.

CONSTRUCTION, TREE, & PARK PROTECTION ZONE
FENCE PANEL
NOT TO SCALE

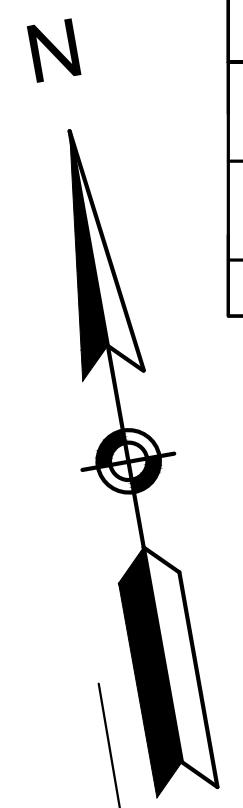
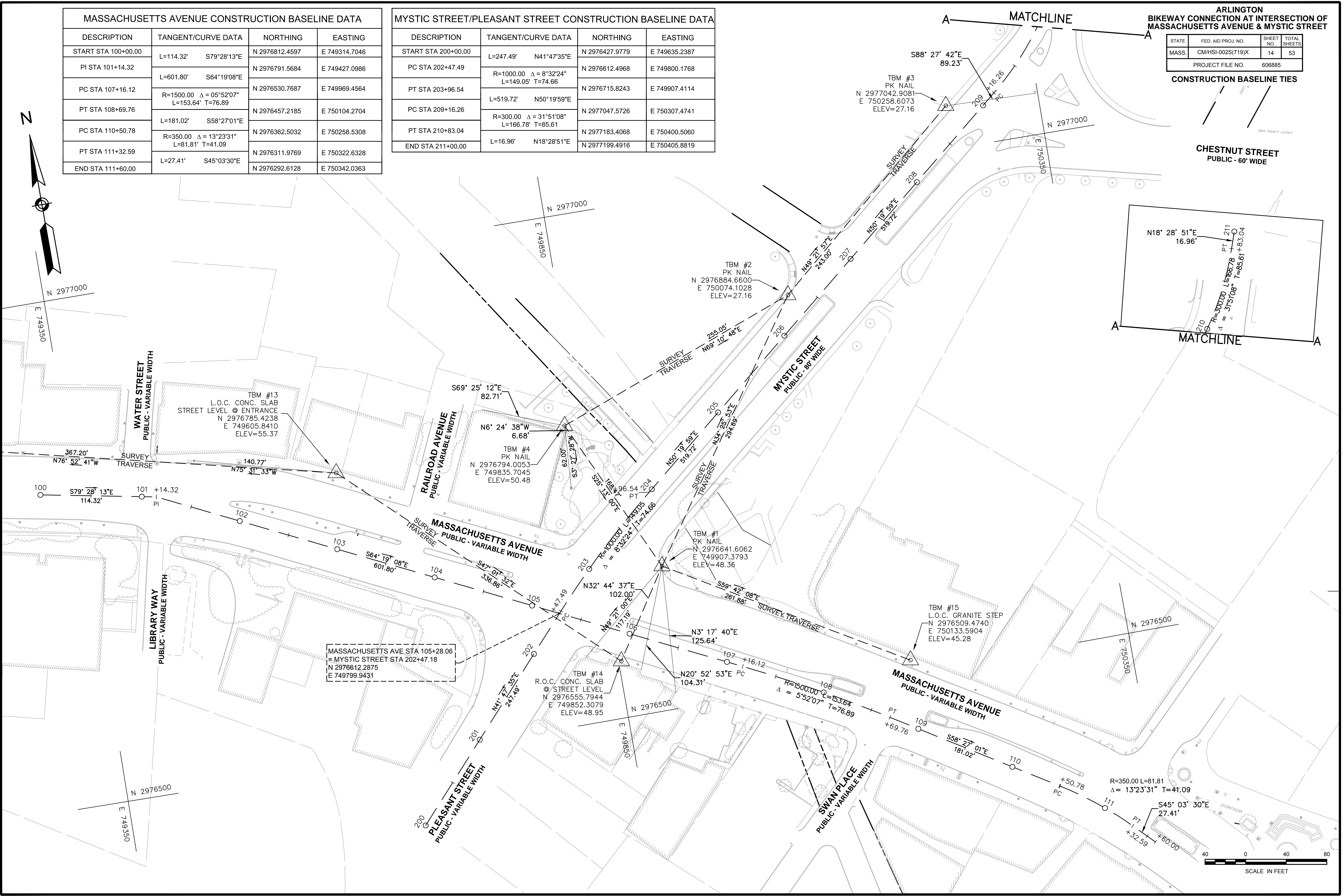
MASSACHUSETTS AVENUE CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 100+00.00	L=114.32' S79°28'13"E	N 2976812.4597	E 749314.7046
PI STA 101+14.32	L=601.80' S64°19'08"E	N 2976791.5684	E 749427.0986
PC STA 107+16.12	R=1500.00 Δ = 05°52'07" L=153.64' T=76.89	N 2976530.7687	E 749969.4564
PT STA 108+69.76	L=181.02' S58°27'01"E	N 2976457.2185	E 750104.2704
PC STA 110+50.78	R=350.00 Δ = 13°23'31" L=81.81' T=41.09	N 2976362.5032	E 750258.5308
PT STA 111+32.59	L=27.41' S45°03'30"E	N 2976311.9769	E 750322.6328
END STA 111+60.00		N 2976292.6128	E 750342.0363

MYSTIC STREET/PLEASANT STREET CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
START STA 200+00.00	L=247.49' N41°47'35"E	N 2976427.9779	E 749635.2387
PC STA 202+47.49	R=1000.00 Δ = 8°32'24" L=149.05' T=74.66	N 2976612.4968	E 749800.1768
PT STA 203+96.54	L=519.72' N50°19'59"E	N 2976715.8243	E 749907.4114
PC STA 209+16.26	R=300.00 Δ = 31°51'08" L=166.78' T=85.61	N 2977047.5726	E 750307.4741
PT STA 210+83.04	L=16.96' N18°28'51"E	N 2977183.4068	E 750400.5060
END STA 211+00.00		N 2977199.4916	E 750405.8819

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	14	53
PROJECT FILE NO. 606885			

CONSTRUCTION BASELINE TIES



**ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	15	53
PROJECT FILE NO.		606885	

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

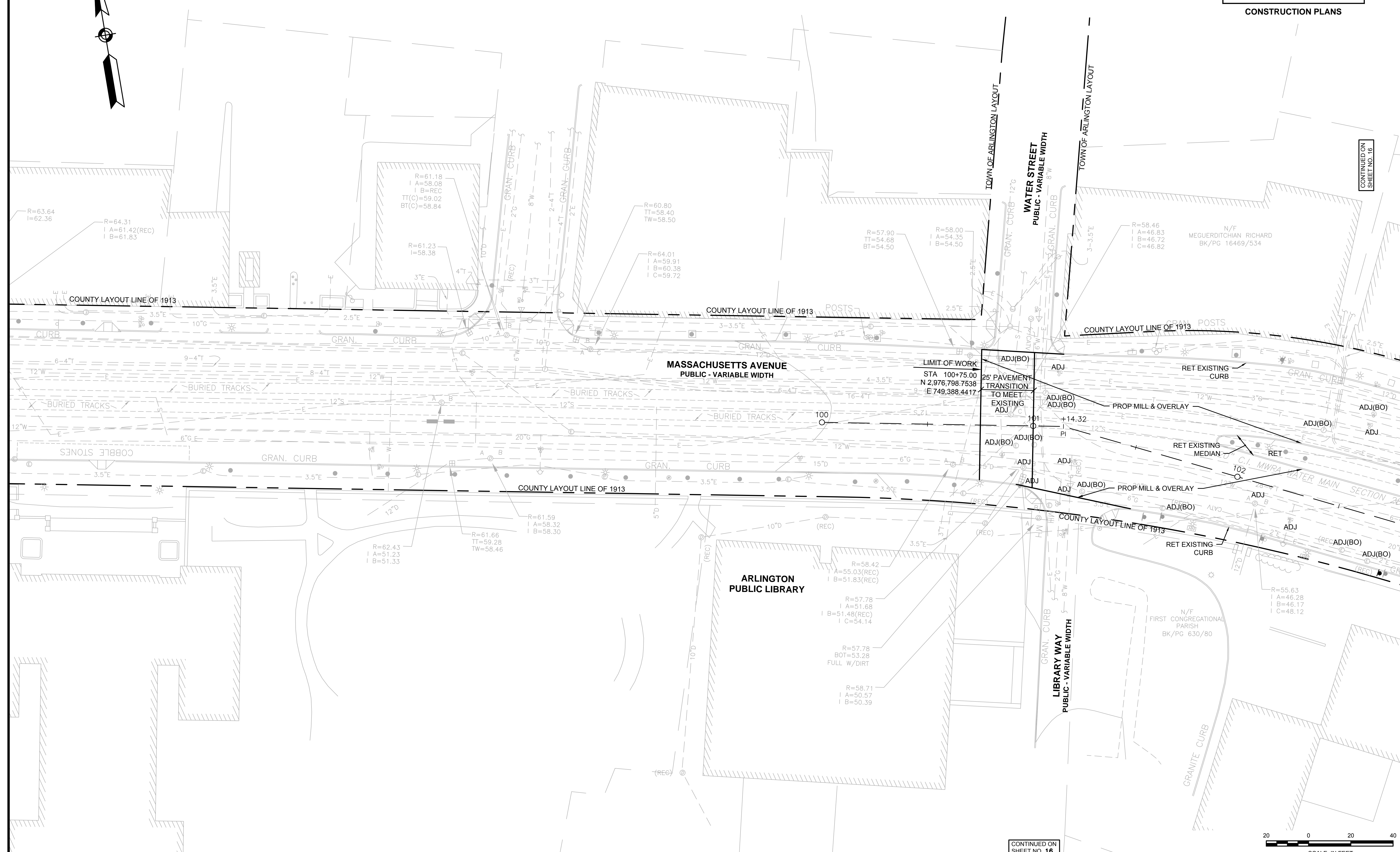
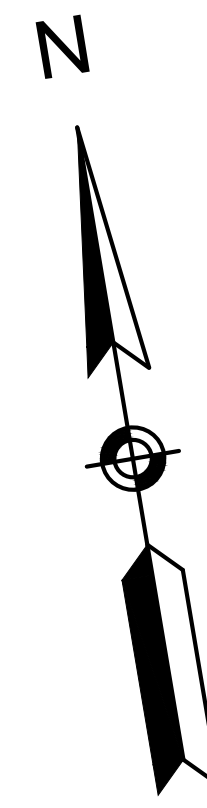
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE



CONTINUED ON
SHEET NO. 16

CONTINUED ON
SHEET NO. 16



CONTINUED ON SHEET NO. 18

ARLINGTON BIKEWAY CONNECTION AT INTERSECTION OF MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	16	53
PROJECT FILE NO.		606885	

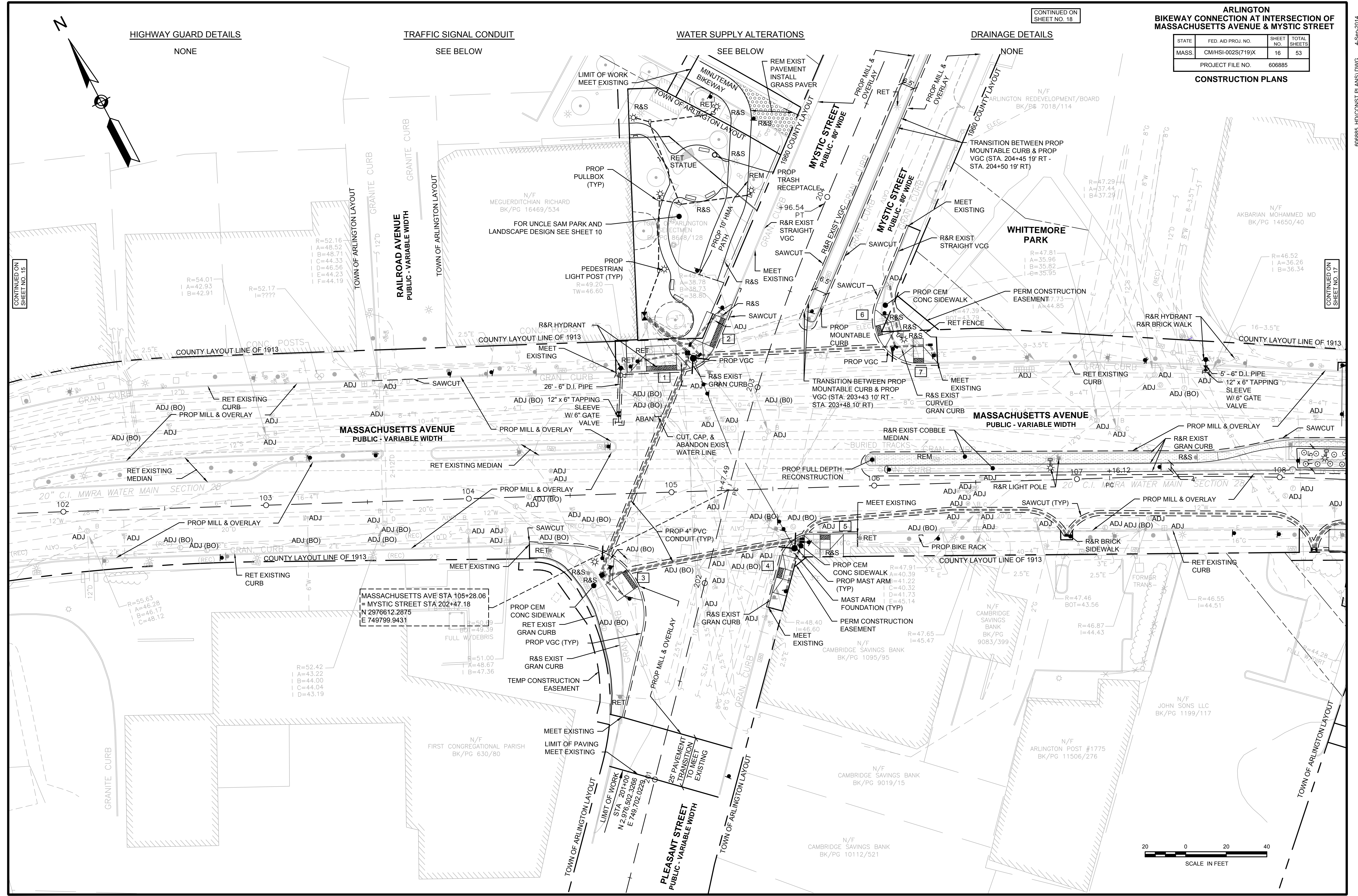
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

WATER SUPPLY ALTERATIONS
SEE BELOW

DRAINAGE DETAILS
NONE



CONTINUED ON SHEET NO. 15

CONTINUED ON SHEET NO. 17

MASSACHUSETTS AVE STA 105+28.06
= MYSTIC STREET STA 202+47.18
N 2976612.2875
E 749799.9431



606885_HDCONST PLANS.DWG 4-Sep-2014

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MicroCAD DWG Vendor

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	17	53
PROJECT FILE NO.		606885	

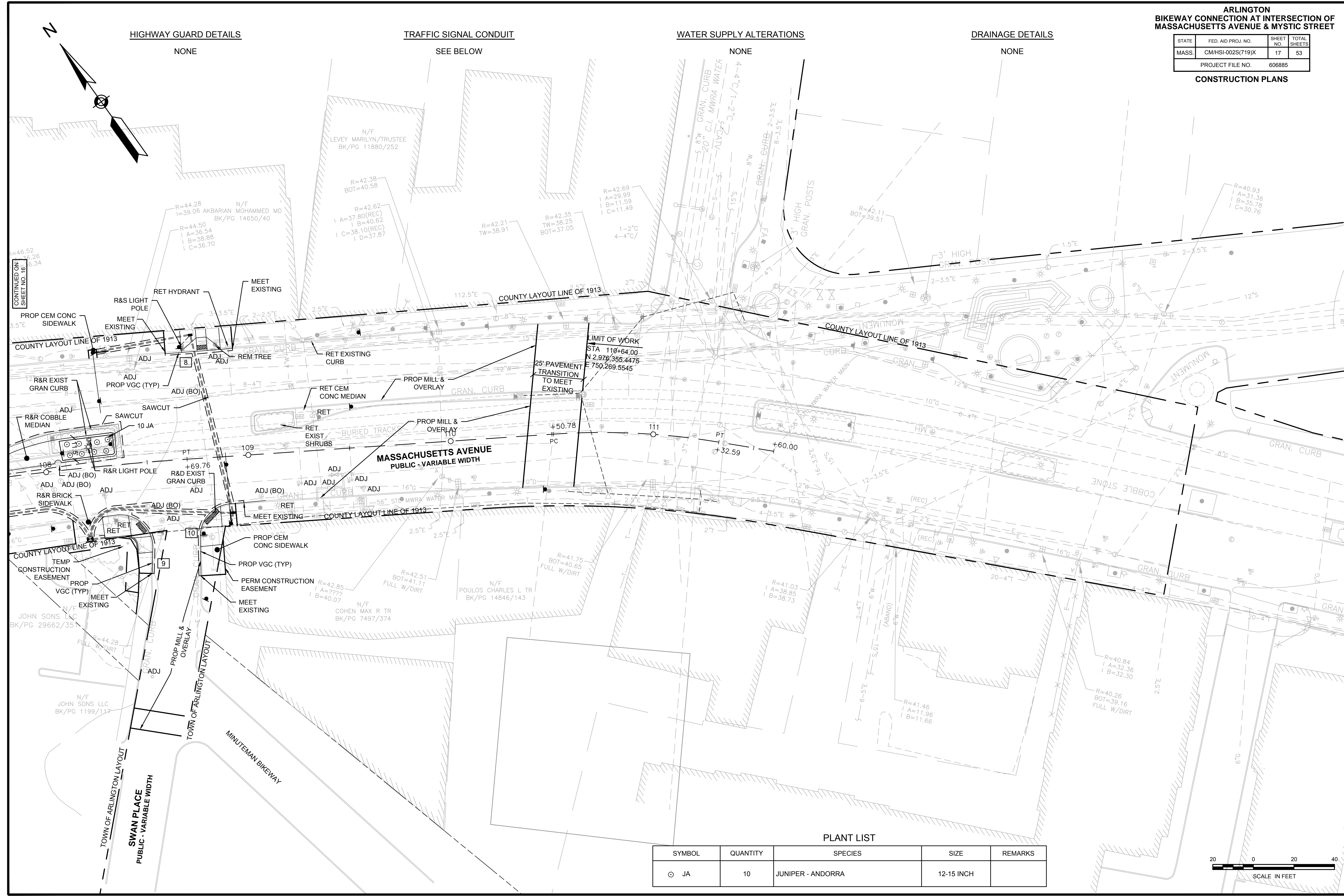
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE BELOW

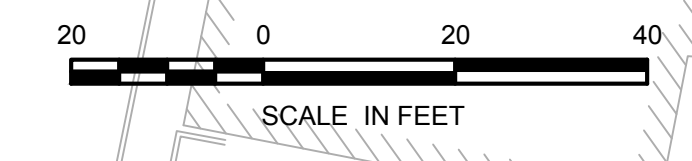
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



PLANT LIST

SYMBOL	QUANTITY	SPECIES	SIZE	REMARKS
⊙ JA	10	JUNIPER - ANDORRA	12-15 INCH	

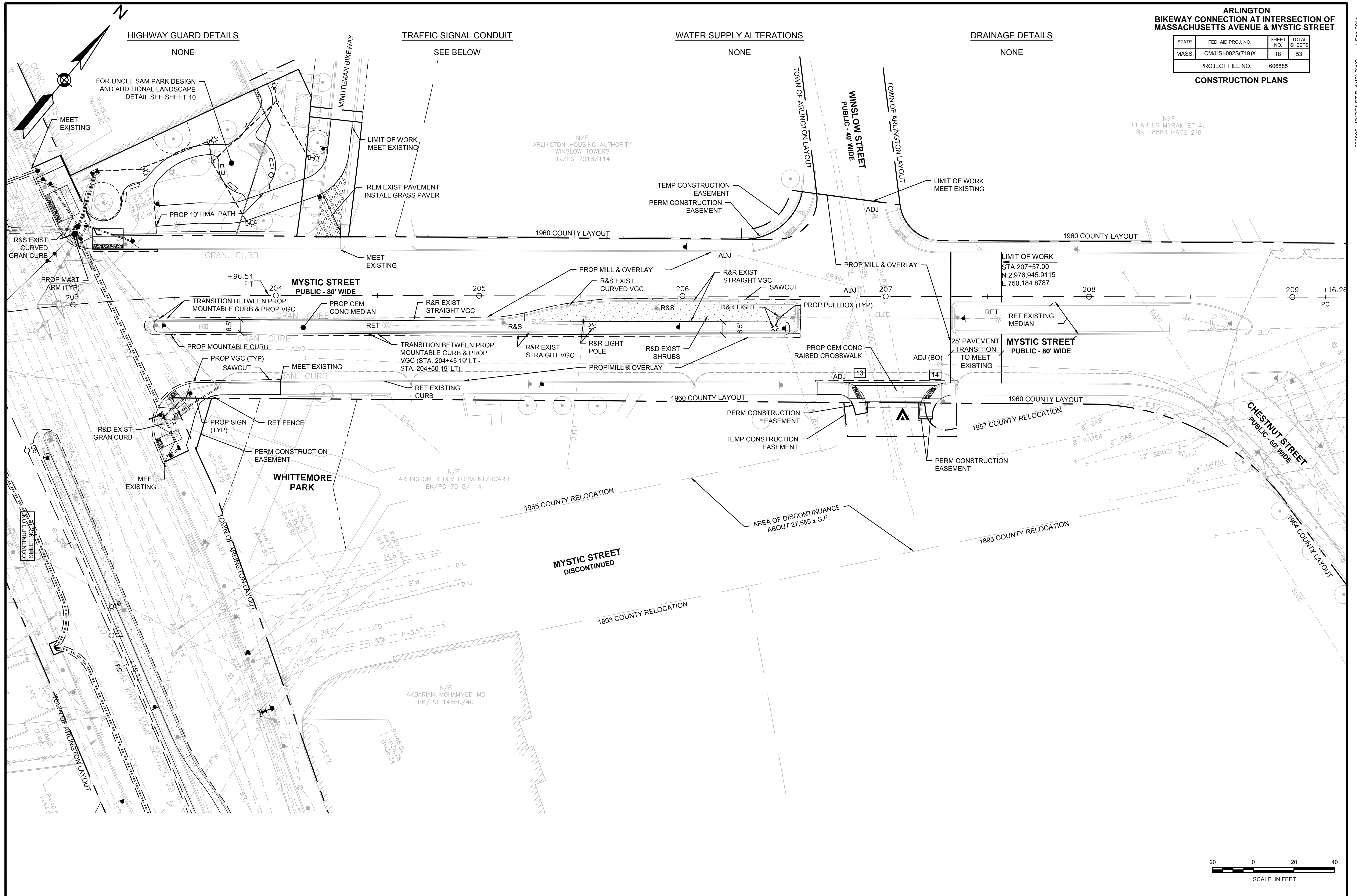


ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	18	53
PROJECT FILE NO.		606885	

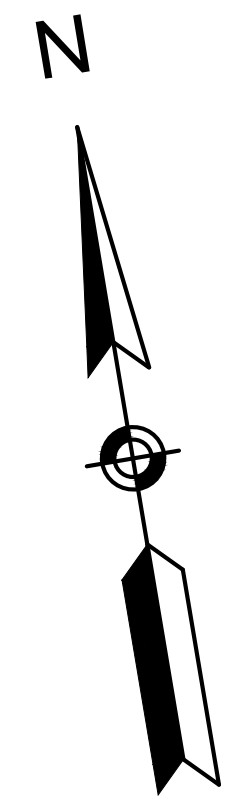
CONSTRUCTION PLANS

N/F
CHARLES MYRAK ET AL
BK 28583 PAGE 216



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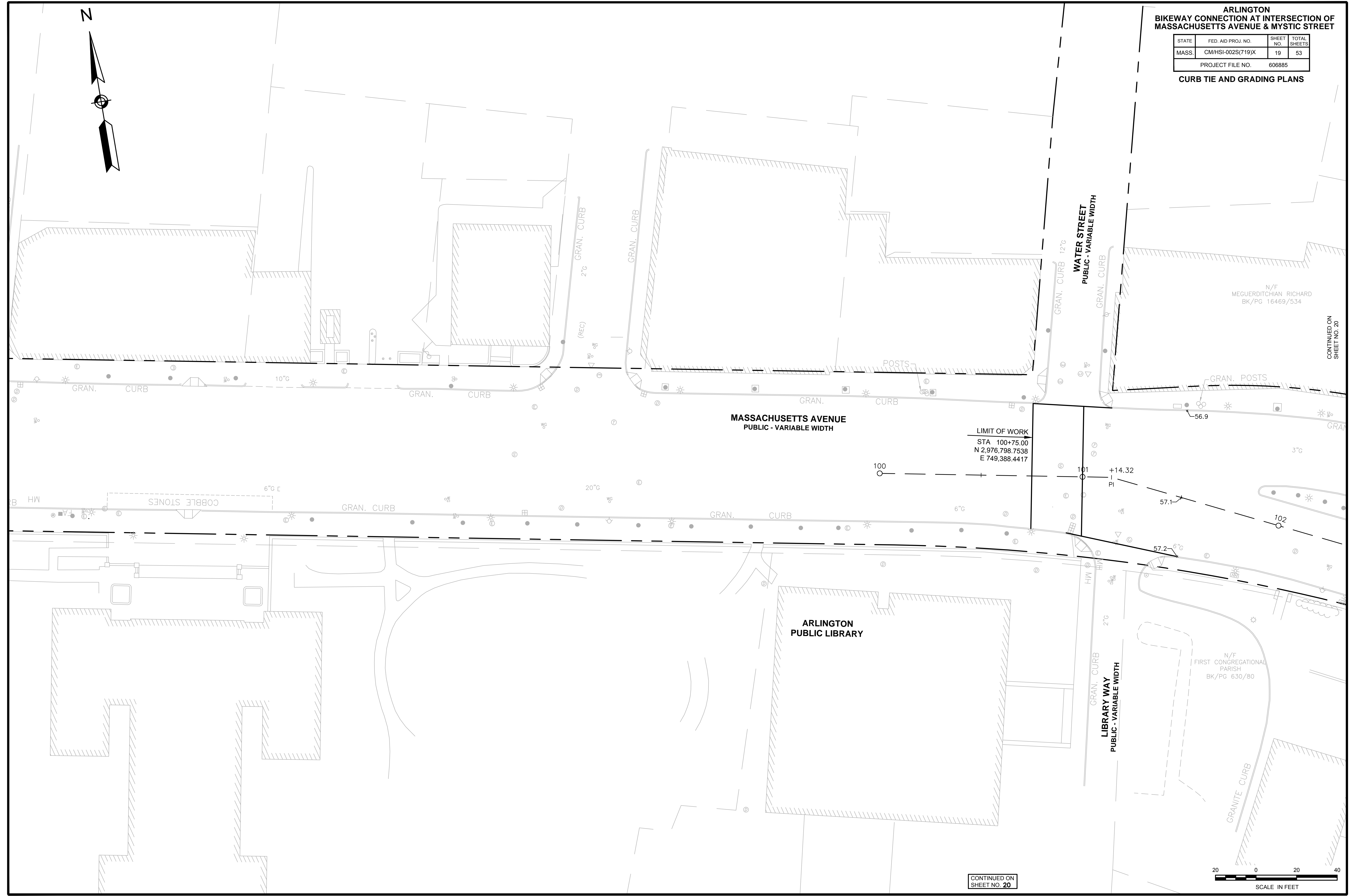


ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	19	53

PROJECT FILE NO. 606885

CURB TIE AND GRADING PLANS



MASSACHUSETTS AVENUE
PUBLIC - VARIABLE WIDTH

LIMIT OF WORK
STA 100+75.00
N 2,976,798.7538
E 749,388.4417

ARLINGTON
PUBLIC LIBRARY

WATER STREET
PUBLIC - VARIABLE WIDTH

LIBRARY WAY
PUBLIC - VARIABLE WIDTH

CONTINUED ON
SHEET NO. 20



SCALE IN FEET

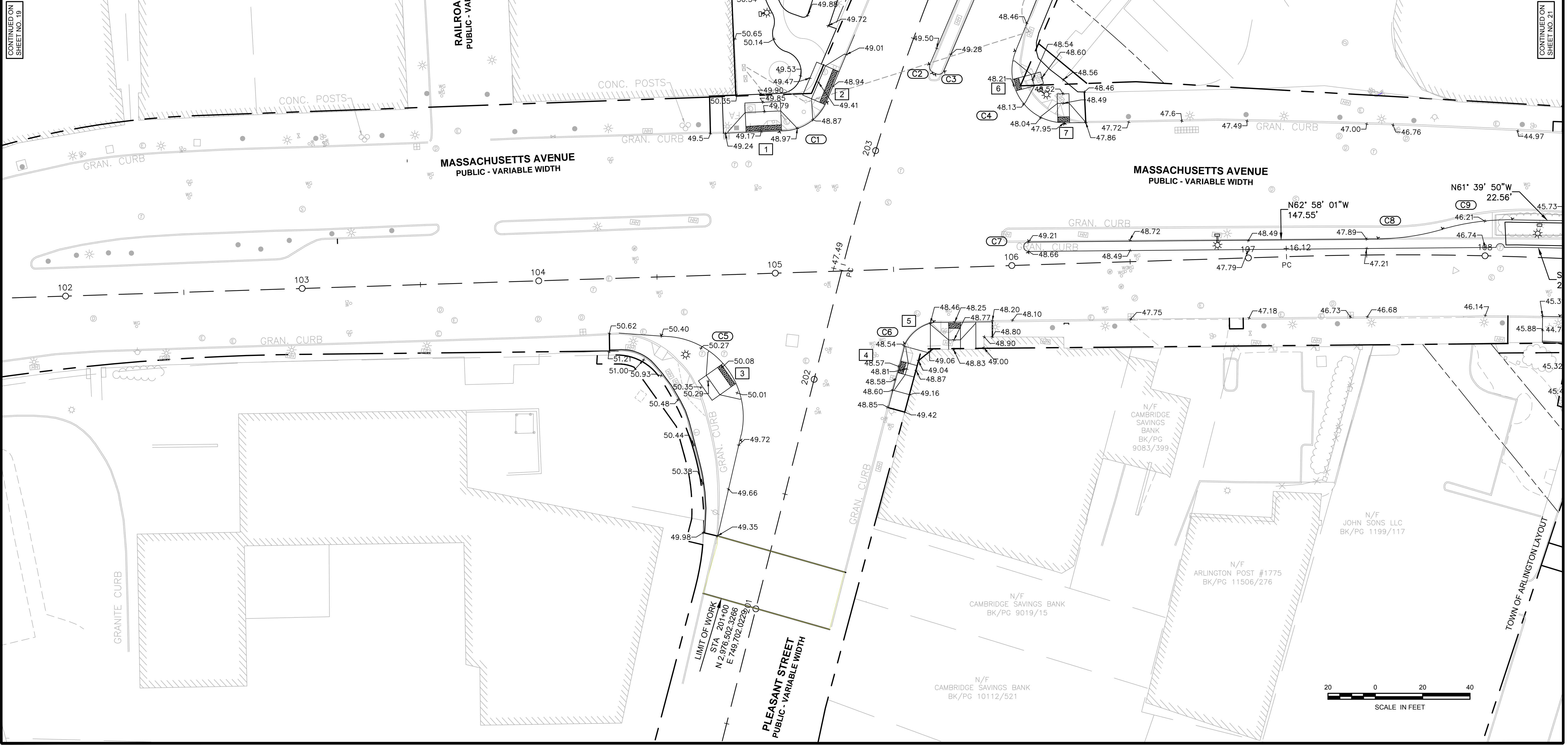
CONTINUED ON
SHEET NO. 20

CURVE TABLE								
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STATION	OFFSET	STATION	OFFSET
C1	20.30	24.55	14.03	69.31	105+04	60' LT	203+13	26' LT
C2	2.50	3.73	2.31	85.53	203+39	12' RT	203+42	10' RT
C3	2.50	4.12	2.70	94.46	203+39	14' RT	203+42	16' RT
C4	22.00	43.20	32.92	112.50	106+24	60' LT	203+60	42' RT
C5	34.00	58.74	39.81	99.00	104+54	25' RT	201+70	24' LT
C6	17.53	15.28	8.16	49.93	105+70	23' RT	202+24	34' RT
C7	2.00	6.28	1791.42	179.87	106+07	6' LT	106+07	10' LT
C8	100.00	27.62	13.90	15.82	107+55	7' LT	107+82	11' LT
C9	100.00	29.89	15.06	17.13	107+82	11' LT	108+11	15' LT
C10	2.00	3.17	2.03	90.83	108+33	16' LT	108+35	14' LT
C11	2.00	3.12	1.98	89.50	108+33	4' LT	108+35	6' LT
C12	16.00	27.35	18.38	97.93	108+33	25' RT	108+49	42' RT
C13	16.00	23.97	14.88	85.83	108+74	39' RT	108+89	23' RT
C14	2.50	4.55	2.84	86.89	206+50	13' RT	206+53	15' RT
C15	2.50	4.70	3.38	106.36	206+50	19' RT	206+53	16' RT

ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	20	53
PROJECT FILE NO.		606885	

CURB TIE AND GRADING PLANS



CONTINUED ON SHEET NO. 19

CONTINUED ON SHEET NO. 21



606885_HDCURB TIE GRADING PLANS.DWG 4-Sep-2014

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MicroDOT DWG Version

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	22	53
PROJECT FILE NO. 606885			

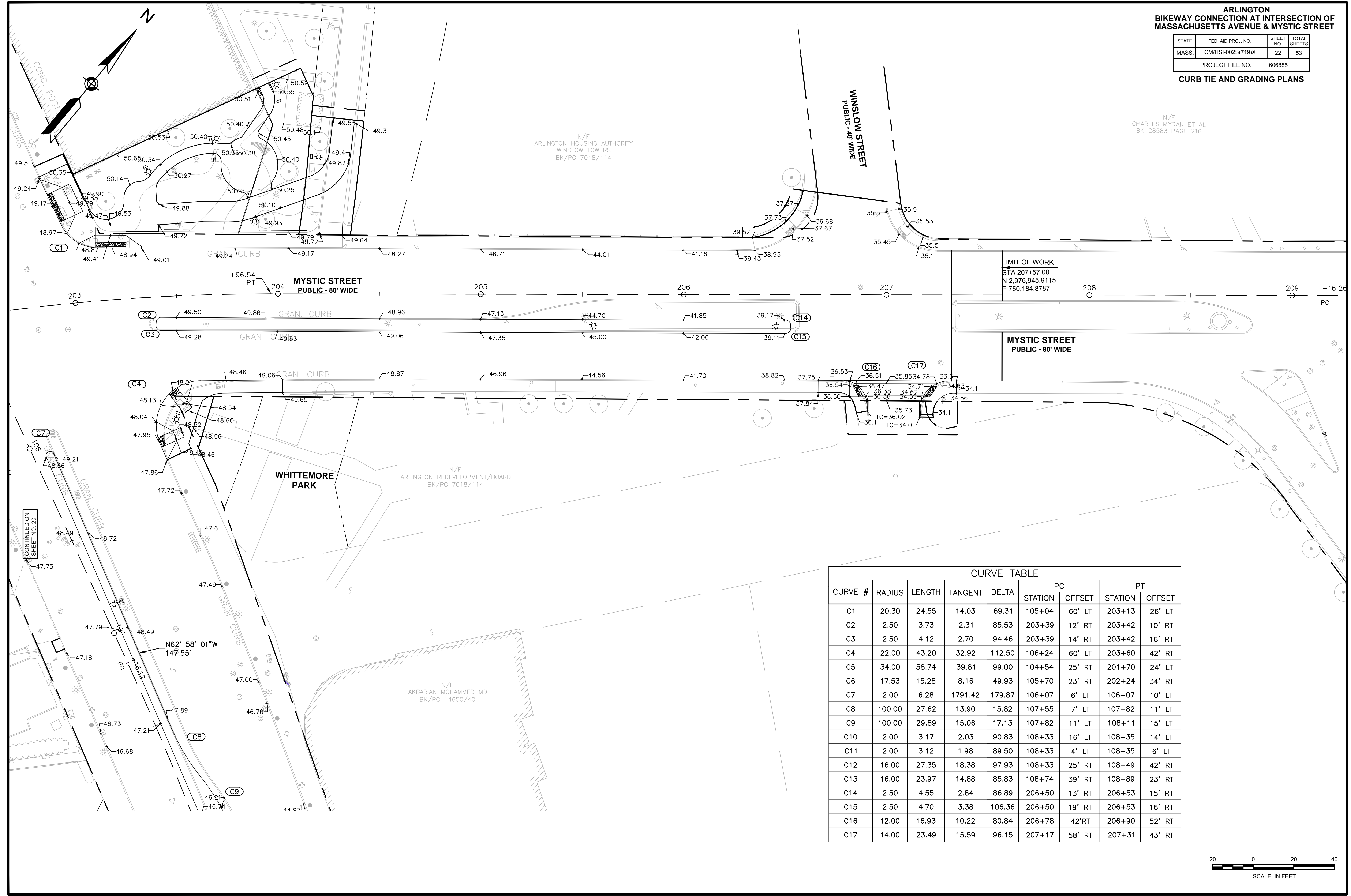
CURB TIE AND GRADING PLANS

N/F
CHARLES MYRAK ET AL
BK 28583 PAGE 216

N/F
ARLINGTON HOUSING AUTHORITY
WINSLOW TOWERS
BK/PG 7018/114

N/F
ARLINGTON REDEVELOPMENT/BOARD
BK/PG 7018/114

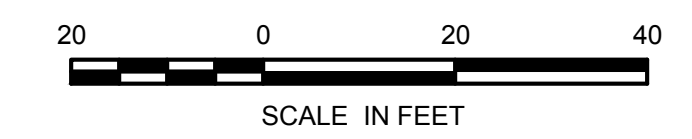
N/F
AKBARIAN MOHAMMED MD
BK/PG 14650/40



LIMIT OF WORK
STA 207+57.00
N 2,976,945.9115
E 750,184.8787

MYSTIC STREET
PUBLIC - 80' WIDE

CURVE #	RADIUS	LENGTH	TANGENT	DELTA	PC		PT	
					STATION	OFFSET	STATION	OFFSET
C1	20.30	24.55	14.03	69.31	105+04	60' LT	203+13	26' LT
C2	2.50	3.73	2.31	85.53	203+39	12' RT	203+42	10' RT
C3	2.50	4.12	2.70	94.46	203+39	14' RT	203+42	16' RT
C4	22.00	43.20	32.92	112.50	106+24	60' LT	203+60	42' RT
C5	34.00	58.74	39.81	99.00	104+54	25' RT	201+70	24' LT
C6	17.53	15.28	8.16	49.93	105+70	23' RT	202+24	34' RT
C7	2.00	6.28	1791.42	179.87	106+07	6' LT	106+07	10' LT
C8	100.00	27.62	13.90	15.82	107+55	7' LT	107+82	11' LT
C9	100.00	29.89	15.06	17.13	107+82	11' LT	108+11	15' LT
C10	2.00	3.17	2.03	90.83	108+33	16' LT	108+35	14' LT
C11	2.00	3.12	1.98	89.50	108+33	4' LT	108+35	6' LT
C12	16.00	27.35	18.38	97.93	108+33	25' RT	108+49	42' RT
C13	16.00	23.97	14.88	85.83	108+74	39' RT	108+89	23' RT
C14	2.50	4.55	2.84	86.89	206+50	13' RT	206+53	15' RT
C15	2.50	4.70	3.38	106.36	206+50	19' RT	206+53	16' RT
C16	12.00	16.93	10.22	80.84	206+78	42' RT	206+90	52' RT
C17	14.00	23.49	15.59	96.15	207+17	58' RT	207+31	43' RT



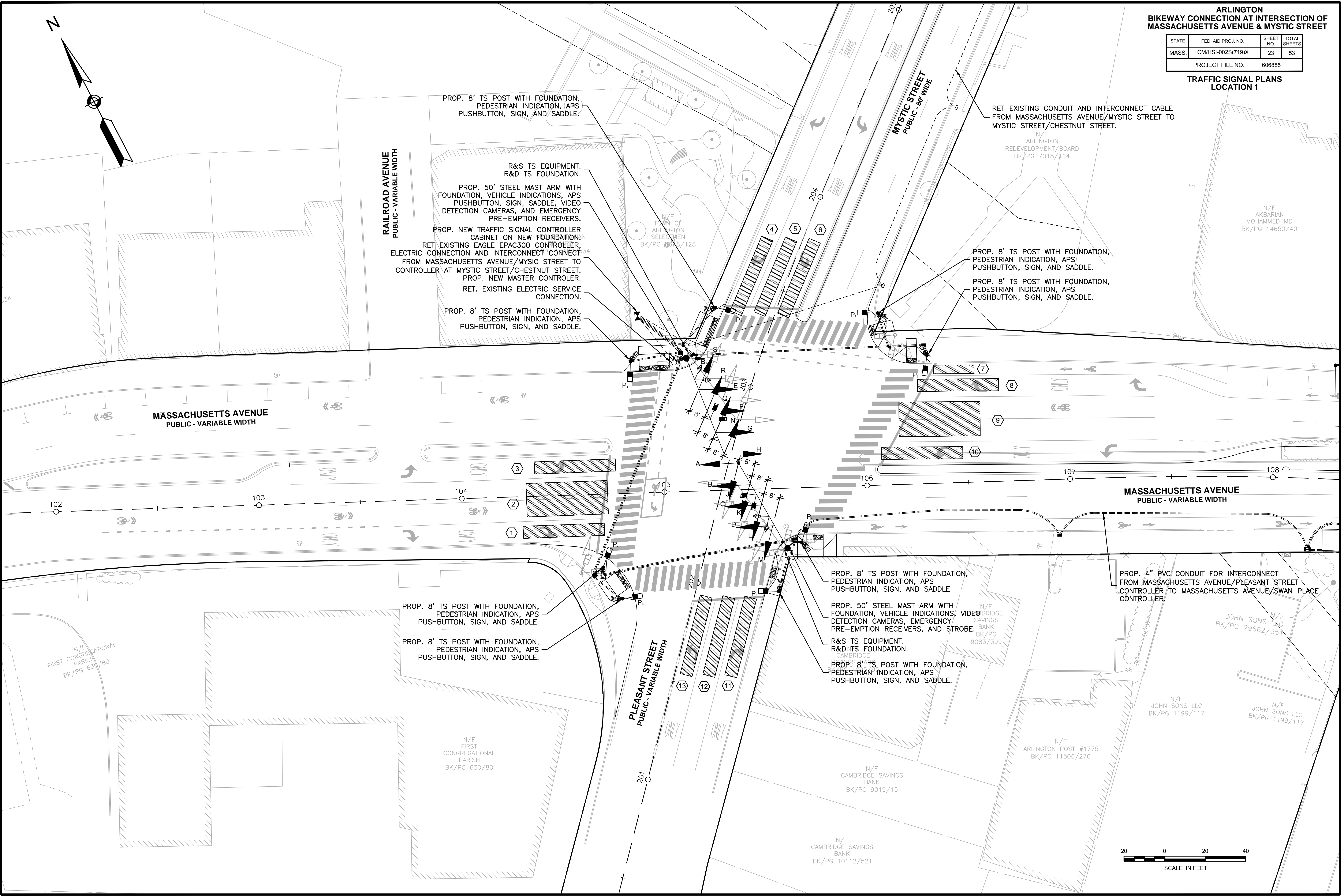
606885_HDCURB TIE GRADING PLANS.DWG 4-Sep-2014

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**ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET**

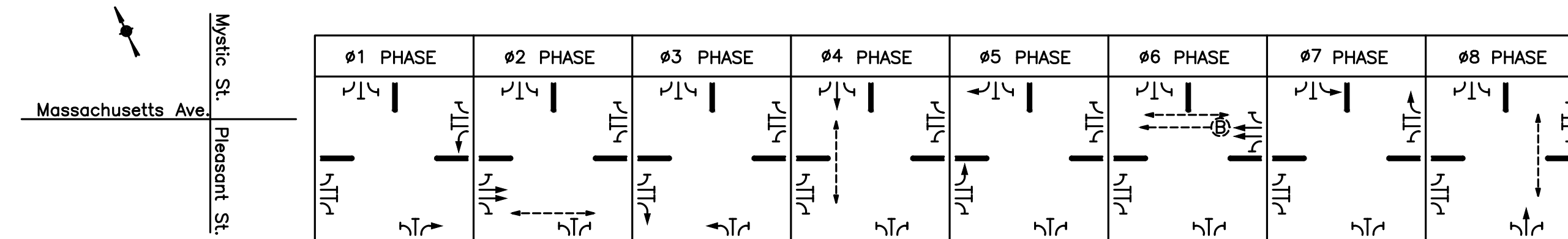
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	23	53
PROJECT FILE NO.		606885	

**TRAFFIC SIGNAL PLANS
LOCATION 1**



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	24	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL DATA
LOCATION 1

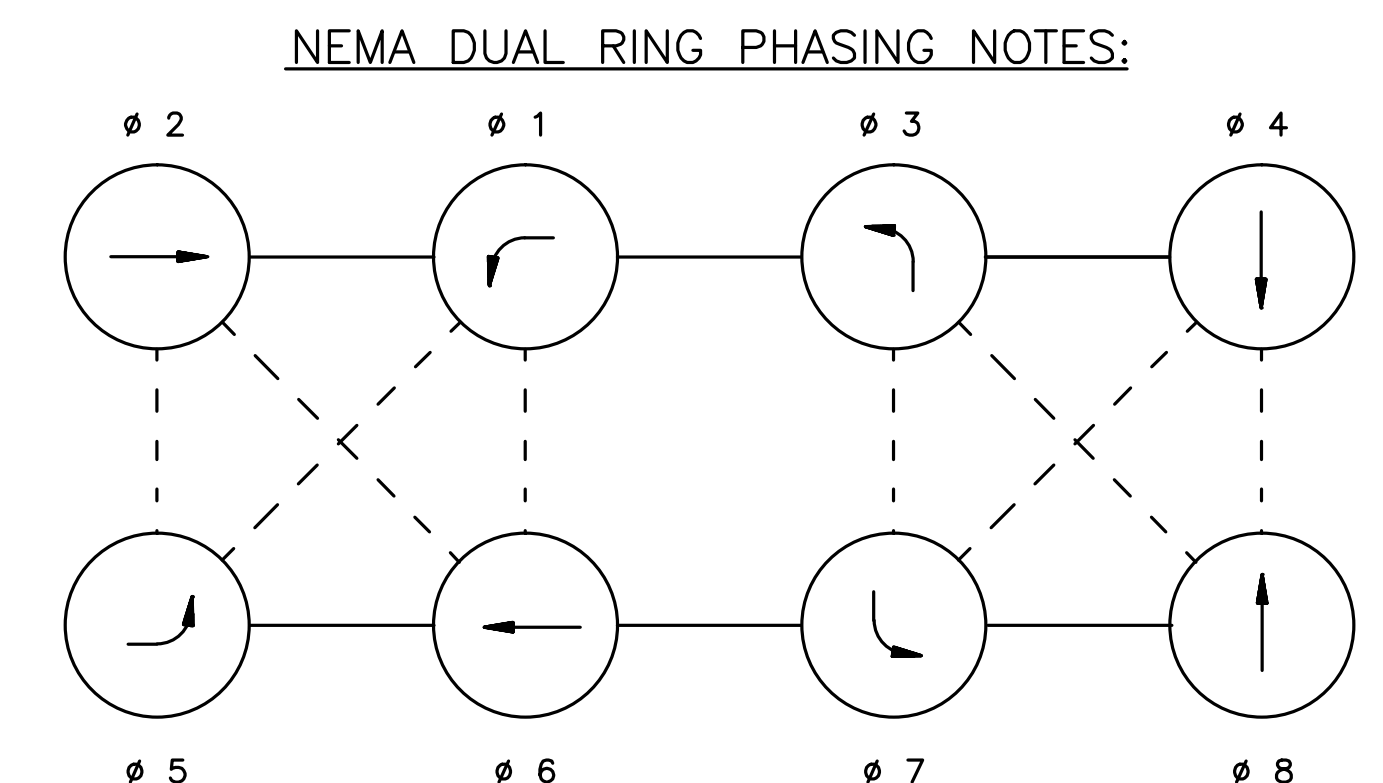
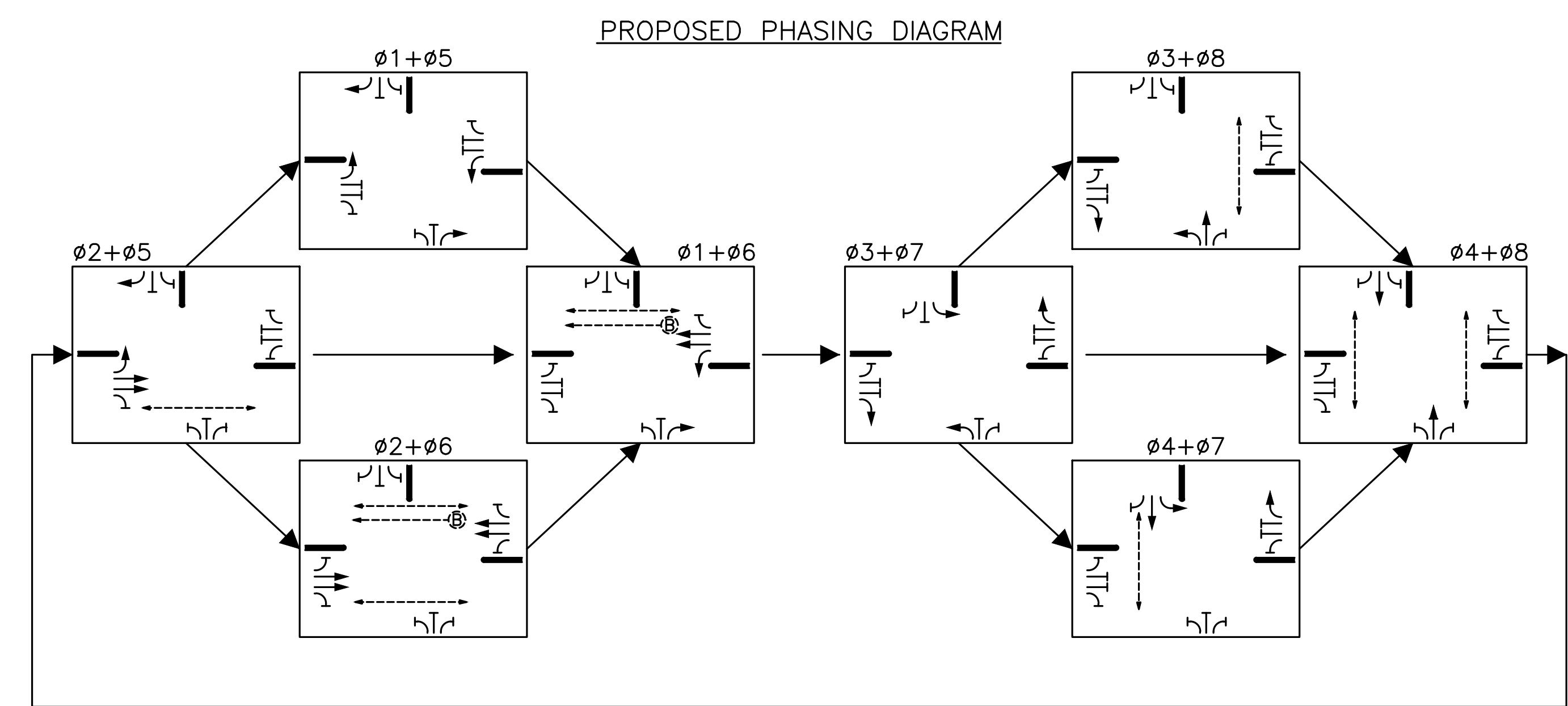


SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)																									
STREET	DIRECTION	HOUSINGS	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	FLASH OPER.	
MASSACHUSETTS AVENUE	EB LT	A	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	FRL
MASSACHUSETTS AVENUE	EB	B,C	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
MASSACHUSETTS AVENUE	EB RT	D	RR	RR	RR	RR	RR	RR	GR	YR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	FRR
MASSACHUSETTS AVENUE	WB LT	H	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	FRL
MASSACHUSETTS AVENUE	WB	F,G	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FY
MASSACHUSETTS AVENUE	WB RT	E	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	FRR
PLEASANT STREET	NB LT	J	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	FRL
PLEASANT STREET	NB	K,L	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
PLEASANT STREET	NB RT	M	GR	YR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	FRR
MYSTIC STREET	SB LT	N	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL	RL	RL	FRL
MYSTIC STREET	SB	Q,R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FR
MYSTIC STREET	SB RT	S	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	FRR
PEDESTRIAN	E-W	P ₁ -P ₂	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P ₃ -P ₄	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	E-W	P ₅ -P ₆	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
PEDESTRIAN	N-S	P ₇ -P ₈	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF
BICYCLE	WB	B ₁	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	OFF

TIMING IN SECONDS																								
MINIMUM GREEN (INITIAL)	6		8		6		8		6		8		6		8		6		8		6		8	
PASSAGE TIME (VEHICLE)	3		3		3		3		3		3		3		3		3		3		3		3	
MAXIMUM 1	14		29		10		36		15		27		13		34									
MAXIMUM 2	16		30		14		40		16		31		16		35									
YELLOW CLEARANCE		3		3		3		3		3		3		3		3		3		3		3		3
RED CLEARANCE			4		4		4		4		4		4		4		4		4		4		4	
WALK (W)			7		7		7		7		7		7		7		7		7		7		7	
PEDESTRIAN CLEARANCE			20		25		18		23															
BICYCLE (G/Y/R)									20/3/6															
RECALL		NONE	MAX/PED	NONE	NONE	NONE	NONE	NONE	MAX/PED	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
MEMORY		NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	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)	120	0	23	37	13	47	22	38	21	39		
TP2 M - F (3PM - 7PM)	120	0	19	36	21	44	23	32	23	42		
TP3 SAT (11AM - 6PM)	110	0	20	34	17	39	22	32	15	41		

1. MASTER CONTROLLER IS AT THIS LOCATION.
2. COORDINATION SHALL BE AT THE START OF GREEN FOR $\phi 2$ & $\phi 6$.
3. COORDINATION SHALL RUN DURING THE TIMES LISTED ABOVE. FREE OPERATION SHALL RUN DURING ALL OTHER TIMES.



1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. IF THE MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

VIDEO DETECTOR DATA

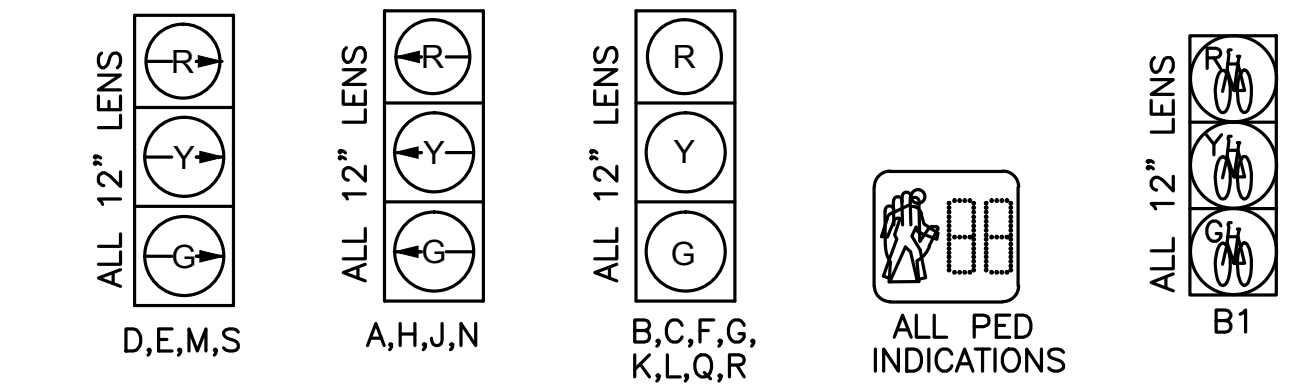
DETECTOR NUMBER	DETECTION SIZE	ø CALLED	ø EXT.	MODE A=PULSE B=PRES.
1	6'X40'	3	3	B
2	16'X40'	2	2	B
3	6'X40'	5	5	B
4	6'X40'	5	5	B
5	6'X40'	4	4	B
6	6'X40'	7	7	B
7	4'X20'	6	6	B
8	6'X40'	7	7	B
9	16'X40'	6	6	B
10	6'X40'	1	1	B
11	6'X40'	1	1	B
12	6'X40'	8	8	B
13	6'X40'	3	3	B

CLEARANCES

FROM	TO							
	G	GL	GR	R	RL	RR	W	DW
G	G	-	-	Y	-	-	-	-
GL	-	GL	-	-	YL	-	-	-
GR	-	-	GR	-	-	YR	-	-
R	-	-	-	R	-	-	-	-
RL	-	-	-	-	RL	-	-	-
RR	-	-	-	-	-	RR	-	-
W	-	-	-	-	-	-	W	FDW
DW	-	-	-	-	-	-	-	DW

MAJOR ITEMS REQUIRED			
PAY ITEM	QUANTITY	ITEM	
816.01	1	TRAFFIC SIGNAL CONTROLLER CABINET & FOUNDATION	
	9	8' SIGNAL POLE, BASE, & FOUNDATION	
	2	50 FT TYPE II, GALV. STEEL MAST ARM ASSEMBLY, BASE & FDN.	
	17	3-SECTION, SIGNAL HOUSING (12" L.E.D.)	
	8	PEDESTRIAN HOUSING (16" L.E.D. W/ COUNTDOWN)	
	8	APS PUSH BUTTON, SIGN & SADDLES	
	2	EMERGENCY PREEMPTION RECEIVER - TWO-WAY	
	2	EMERGENCY PREEMPTION PHASE SELECTOR MODULE-DUAL CHANNEL	
	1	EMERGENCY PREEMPTION CARD RACK	
	1	EMERGENCY PREEMPTION CONFIRMATION STROBE (WHITE)	
	4	VIDEO DETECTION CAMERA	
	1	VIDEO DETECTION CARD RACK	
	1	VIDEO DETECTION PROCESSOR	
	16	NON-LOUVERED BACKPLATES WITH 3-INCH REFLECTIVE STRIPS	
	813.79	1	MASTER CONTROLLER
	811.30	10	8" X 23" PULL BOX
		Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.	

SIGNAL IDENTIFICATION



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

FIRE PREEMPTION SCHEDULE

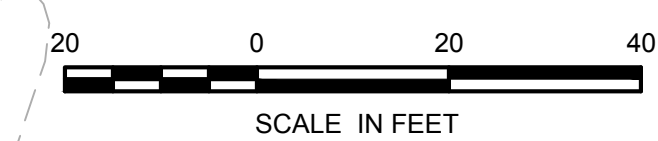
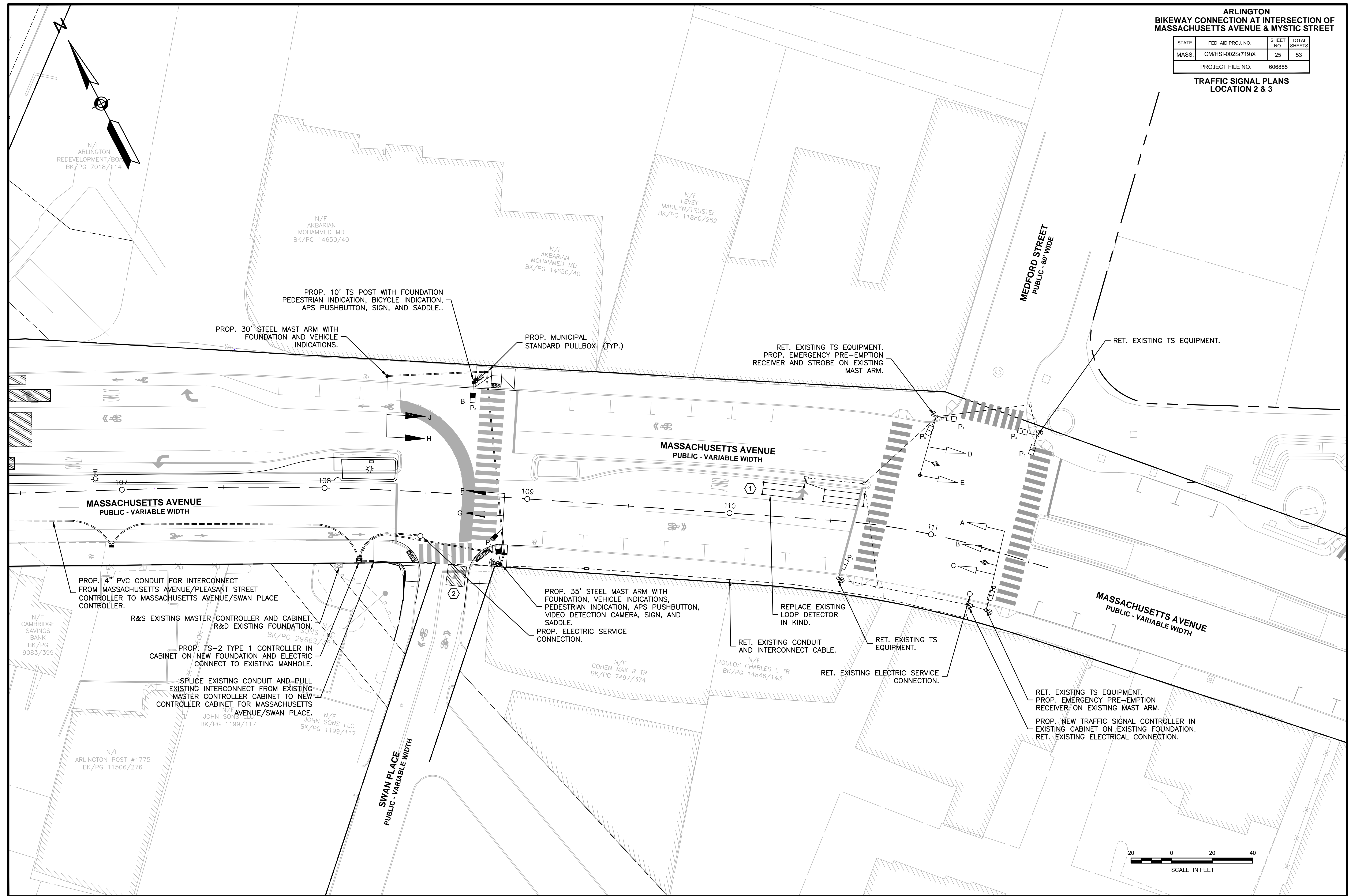
APPROACH	PREEMPTION PHASE	NEXT PHASE CALLED
EASTBOUND	2+5	2+6
WESTBOUND	1+6	3+7
NORTHBOUND	3+8	4+8
SOUTHBOUND	4+7	4+8

- EMERGENCY VEHICLE PREEMPTION OPERATION:
1. EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
 2. PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
 3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
 4. PREEMPTION MINIMUM GREENS SHALL BE SIX SECONDS.
 5. PEDESTRIAN INDICATIONS SHALL DISPLAY A 'DON'T WALK' SYMBOL DURING PREEMPTION.
 6. NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
 7. ACTUAL TIMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY THE TOWN PRIOR TO OPERATION.

ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	25	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL PLANS
LOCATION 2 & 3



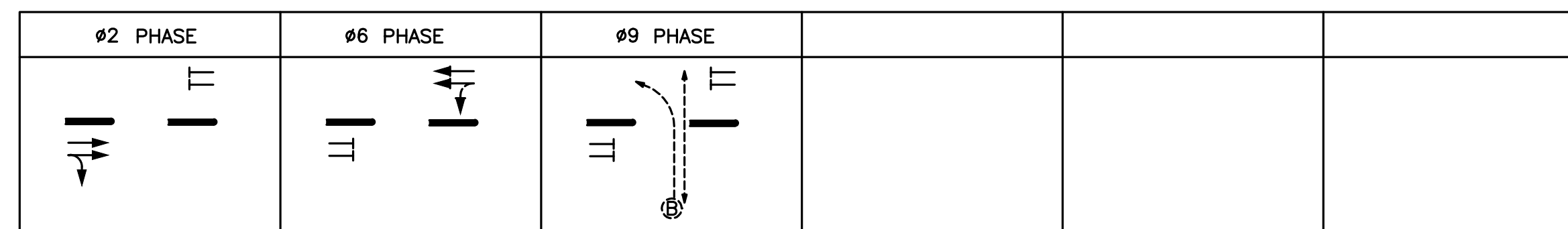
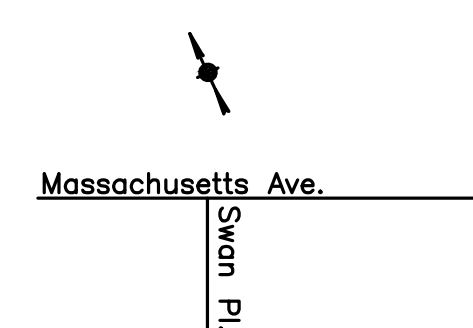
606885_TR(TRAFFIC SIGNAL).DWG 4-Sep-2014

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ManCAD DWG Viewer

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	26	53
PROJECT FILE NO.		606885	

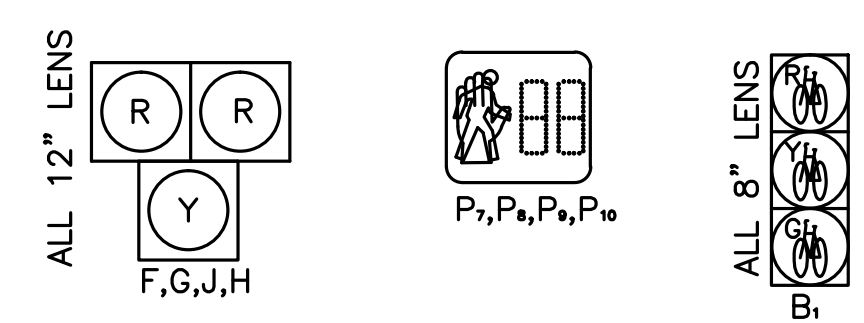
TRAFFIC SIGNAL DATA
LOCATION 2



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)															FLASH OPER.							
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11									
MASSACHUSETTS AVENUE	EB	F,G	OFF	FY	SY	SR	OFF	OFF	OFF	OFF	SR	FR	FR							OFF		
MASSACHUSETTS AVENUE	WB	J,H	OFF	OFF	OFF	OFF	OFF	FY	SY	SR	SR	FR	FR							OFF		
PEDESTRIAN	N-S	P ₁ -P ₄	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW							OFF		
BICYCLE	NB	B ₁	R	R	R	R	R	R	R	R	G	Y	R							OFF		
			TIMING IN SECONDS																			
MINIMUM GREEN (INITIAL)			70					70														
PASSAGE TIME (VEHICLE)			-					-														
MAXIMUM 1			-					-														
MAXIMUM 2			-					-														
YELLOW CLEARANCE				3	3				3	3												
RED CLEARANCE							1							1								
WALK (W)													10									
PEDESTRIAN CLEARANCE													19									
BICYCLE (G/Y/R)													24/3/6									
RECALL			MAX				MAX				NONE											
MEMORY			NON-LOCK				NON-LOCK				LOCK											
COORDINATION DATA			COORDINATION PHASE TIMING																			
TIMING PLAN			CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	
TP1 M - F (6AM - 9AM)			120	104	87 (120)	87 (120)	87 (120)	33 (0)														
TP2 M - F (3PM - 7PM)			120	97	87 (120)	87 (120)	87 (120)	33 (0)														
TP3 SAT (11AM - 6PM)			110	89	77 (110)	77 (110)	77 (110)	33 (0)														

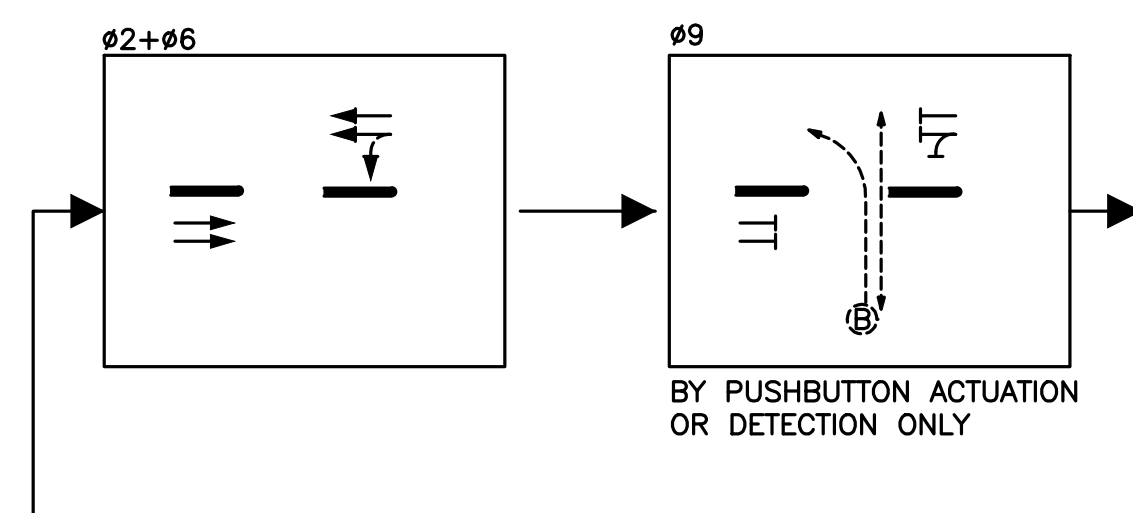
1. MASTER CONTROLLER IS AT MASSACHUSETTS AVENUE/MYSTIC STREET.
2. COORDINATION SHALL BE AT THE START OF #2.
3. COORDINATION SHALL RUN DURING THE TIMES LISTED ABOVE. FREE OPERATION SHALL RUN DURING ALL OTHER TIMES.
4. #9 SHALL BE ACTUATED BY PUSHBUTTON OR DETECTION ONLY.
5. COORDINATION TIMING WHEN #9 IS NOT CALLED IS DENOTED WITH THE PARENTHESES (XX).

SIGNAL IDENTIFICATION



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

PROPOSED PHASING DIAGRAM



VIDEO DETECTOR DATA

DETECTOR NUMBER	DETECTION SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.
2	9'X10'	9	9	B

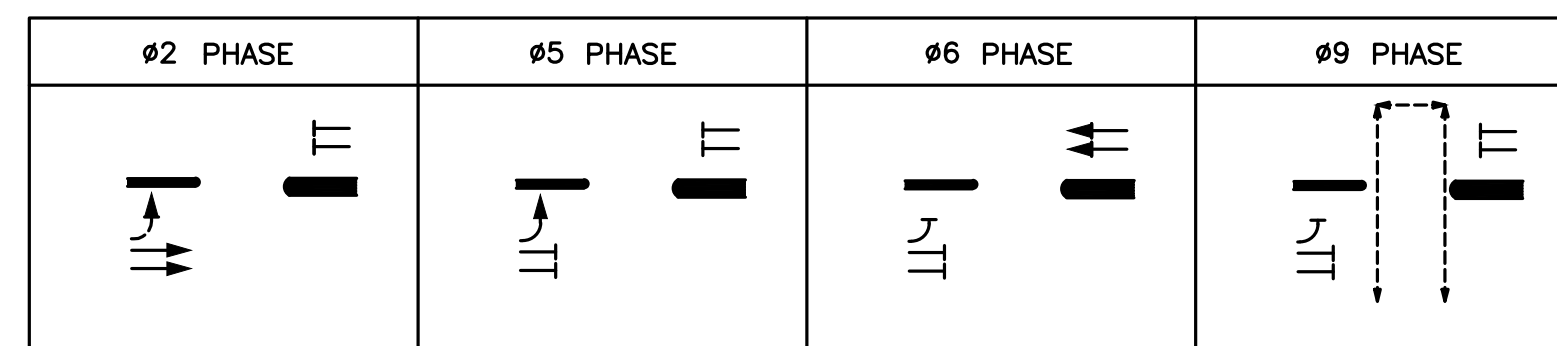
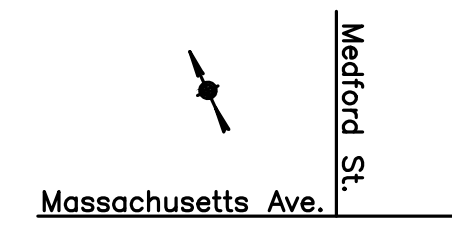
MAJOR ITEMS REQUIRED		
PAY ITEM	QUANTITY	ITEM
815.1	1	TRAFFIC SIGNAL CONTROLLER CABINET & FOUNDATION
	1	10' SIGNAL POLE, BASE, & FOUNDATION
	1	30 FT TYPE II, GALV. STEEL MAST ARM ASSEMBLY, BASE & FDN.
	1	35 FT TYPE II, GALV. STEEL MAST ARM ASSEMBLY, BASE & FDN.
	4	3-SECTION, SIGNAL HOUSING (12" L.E.D.)
	1	3-SECTION, BICYCLE SIGNAL HOUSING (8" L.E.D.)
	2	PEDESTRIAN HOUSING (16" L.E.D. W/ COUNTDOWN)
	2	APS PUSH BUTTON, SIGN & SADDLES
	1	VIDEO DETECTION CAMERA
	1	VIDEO DETECTION CARD RACK
	1	VIDEO DETECTION PROCESSOR
	4	NON-LOUVERED BACKPLATES WITH 3-INCH REFLECTIVE STRIPS
	1	ELECTRIC SERVICE CONNECTION - UNDERGROUND
811.30	2	8" X 23" PULL BOX
Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.		

PEDESTRIAN HYBRID BEACON & PEDESTRIAN INDICATION SEQUENCE

	1. DARK UNTIL ACTIVATED.		1. DON'T WALK.
	2. FLASHING YELLOW UPON ACTIVATION.		2. DON'T WALK
	3. STEADY YELLOW FOR VEHICLE CLEARANCE.		3. DON'T WALK.
	4. STEADY RED DURING BUFFER INTERVAL.		4. DON'T WALK.
	5. STEADY RED DURING PEDESTRIAN WALK INTERVAL.		5. WALK.
	6. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL.		6. FLASHING DON'T WALK WITH COUNTDOWN.
	7. ALTERNATING FLASHING RED DURING PEDESTRIAN BUFFER INTERVAL.		7. DON'T WALK.
	8. DARK UNTIL ACTIVATED AGAIN.		8. DON'T WALK.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	27	53
PROJECT FILE NO.		606885	

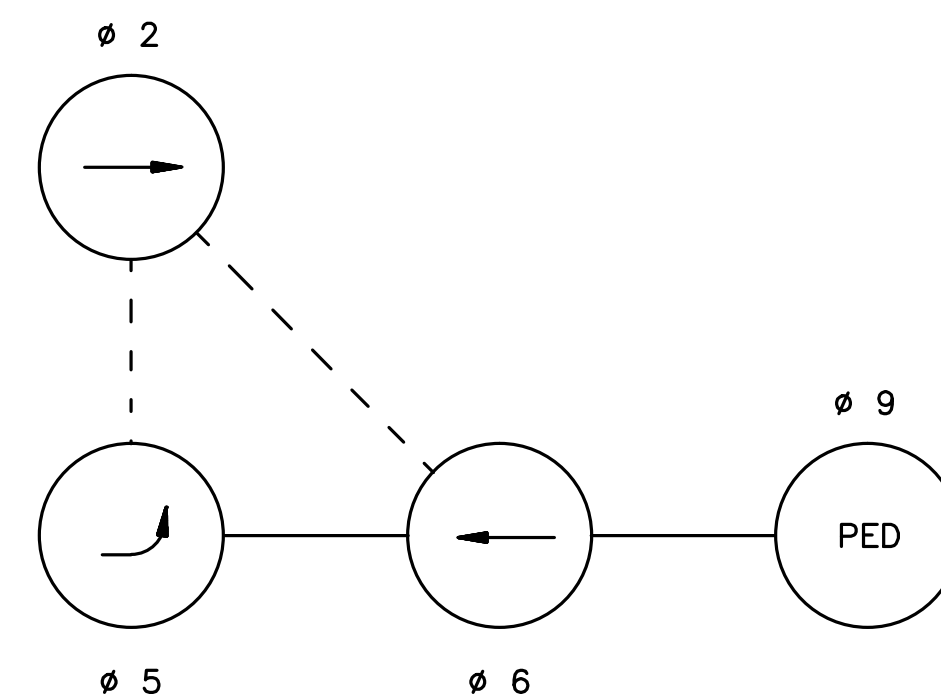
TRAFFIC SIGNAL DATA
LOCATION 3



SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)																
STREET	DIRECTION	HOUSINGS	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	FLASH OPER.	
MASSACHUSETTS AVENUE	EB LT	A	FYL	Y	R	GL	Y	R	R	R	R	R	R	R	FY	
MASSACHUSETTS AVENUE	EB	B,C	G	Y	R	R	R	R	R	R	R	R	R	R	FY	
MASSACHUSETTS AVENUE	WB	D,E	R	R	R	R	R	R	G	Y	R	R	R	R	FY	
PEDESTRIAN	E-W	P ₁ -P ₂	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF	
PEDESTRIAN	N-S	P ₃ -P ₄	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF	
PEDESTRIAN	N-S	P ₅ -P ₆	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF	
TIMING IN SECONDS																
MINIMUM GREEN (INITIAL)			8			6			8			-				
PASSAGE TIME (VEHICLE)			3			3			3			-				
MAXIMUM 1			80			21			55			-				
MAXIMUM 2			83			23			57			-				
YELLOW CLEARANCE				3			3			3						
RED CLEARANCE					1			1			1			4		
WALK (W)												10				
PEDESTRIAN CLEARANCE														19		
RECALL			MAX			NONE			MAX			PED				
MEMORY			NON-LOCK			NON-LOCK			NON-LOCK			LOCK				
COORDINATION DATA																
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	COORDINATION PHASE TIMING													
TP1 M - F (6AM - 9AM)	120	104	SEC.	SEC.	SEC.	SEC.										
TP2 M - F (3PM - 7PM)	120	97	87 (120)	26 (31)	61 (89)	33 (0)										
TP3 SAT (11AM - 6PM)	110	89	87 (120)	27 (32)	60 (88)	33 (0)										
			77 (110)	22 (27)	55 (83)	33 (0)										

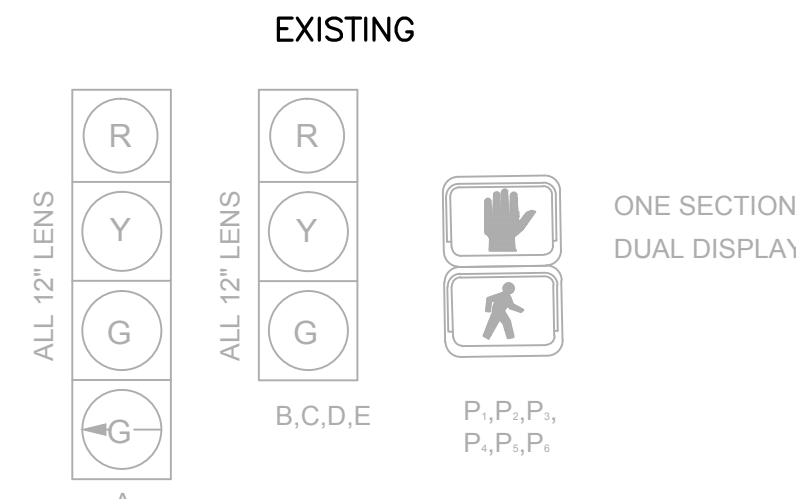
- MASTER CONTROLLER IS AT MASSACHUSETTS AVENUE/MYSTIC STREET.
- COORDINATION SHALL BE AT THE START OF 02&06.
- COORDINATION SHALL RUN DURING THE TIMES LISTED ABOVE. FREE OPERATION SHALL RUN DURING ALL OTHER TIMES.
- 09 SHALL BE ACTUATED BY PUSHBUTTON ONLY.
- COORDINATION TIMING WHEN 09 IS NOT CALLED IS DENOTED WITH THE PARENTHESES (XX).

NEMA DUAL RING PHASING NOTES:

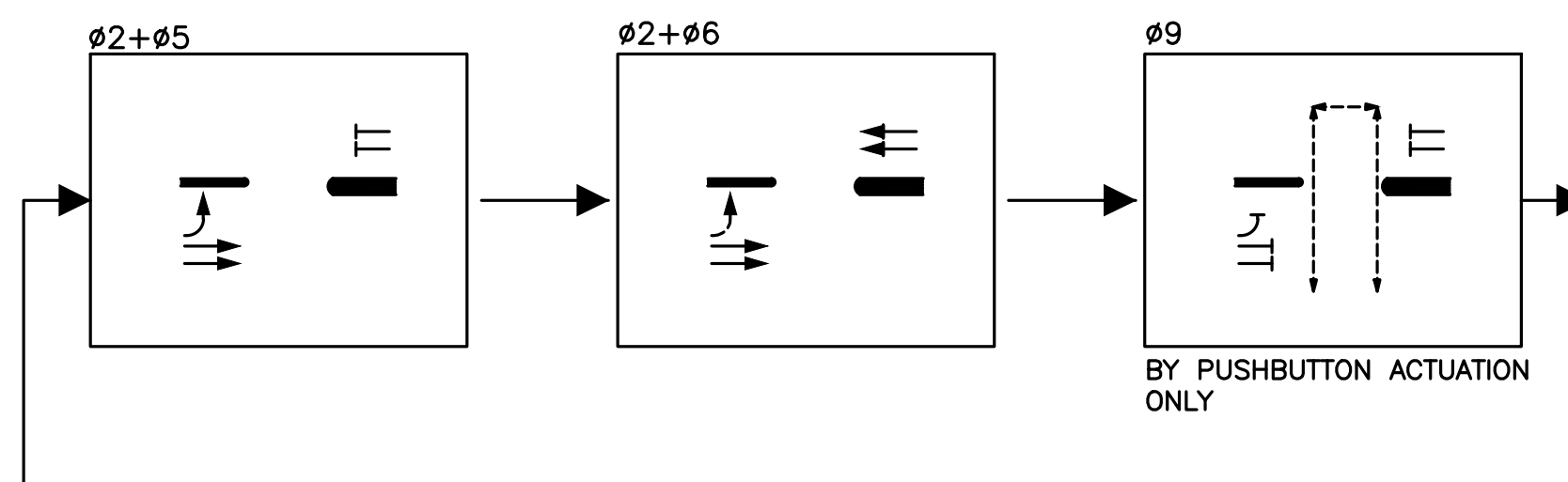


- PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
- PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
- IF THE MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

SIGNAL IDENTIFICATION



PROPOSED PHASING DIAGRAM



FROM	TO						
	G	GL	-	R	-	W	DW
G	G	-	-	-	-	-	-
GL	Y	GL	-	Y	-	-	-
-	-	-	-	Y	-	-	-
R	-	-	-	R	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
W	-	-	-	-	-	W	FDW
DW	-	-	-	-	-	-	DW

PAY ITEM	MAJOR ITEMS REQUIRED	
	QUANTITY	ITEM
616.03	2	EMERGENCY PREEMPTION RECEIVER - ONE-WAY
	1	EMERGENCY PREEMPTION PHASE SELECTOR MODULE-DUAL CHANNEL
	1	EMERGENCY PREEMPTION CARD RACK
	1	EMERGENCY PREEMPTION CONFIRMATION STROBE (WHITE)
		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 0 RED. TIME IN SEC.

DETECTOR NUMBER	AMPLIFIER NUMBER	CHANNEL NUMBER	LOOP SIZE	NUM. OF TURNS	0 CALLED	0 EXT.	MODE A=PULSE B=PRE.	DELAY TIME	EXT. TIME
1	1	1	2@6'X20'	2-4-2	5	5	B	-	-

EMERGENCY VEHICLE PREEMPTION OPERATION:

- EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
- PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
- IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
- PREEMPTION MINIMUM GREENS SHALL BE SIX SECONDS.
- PEDESTRIAN INDICATIONS SHALL DISPLAY A 'DON'T WALK' SYMBOL DURING PREEMPTION.
- NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
- ACTUAL TIMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY THE TOWN PRIOR TO OPERATION.

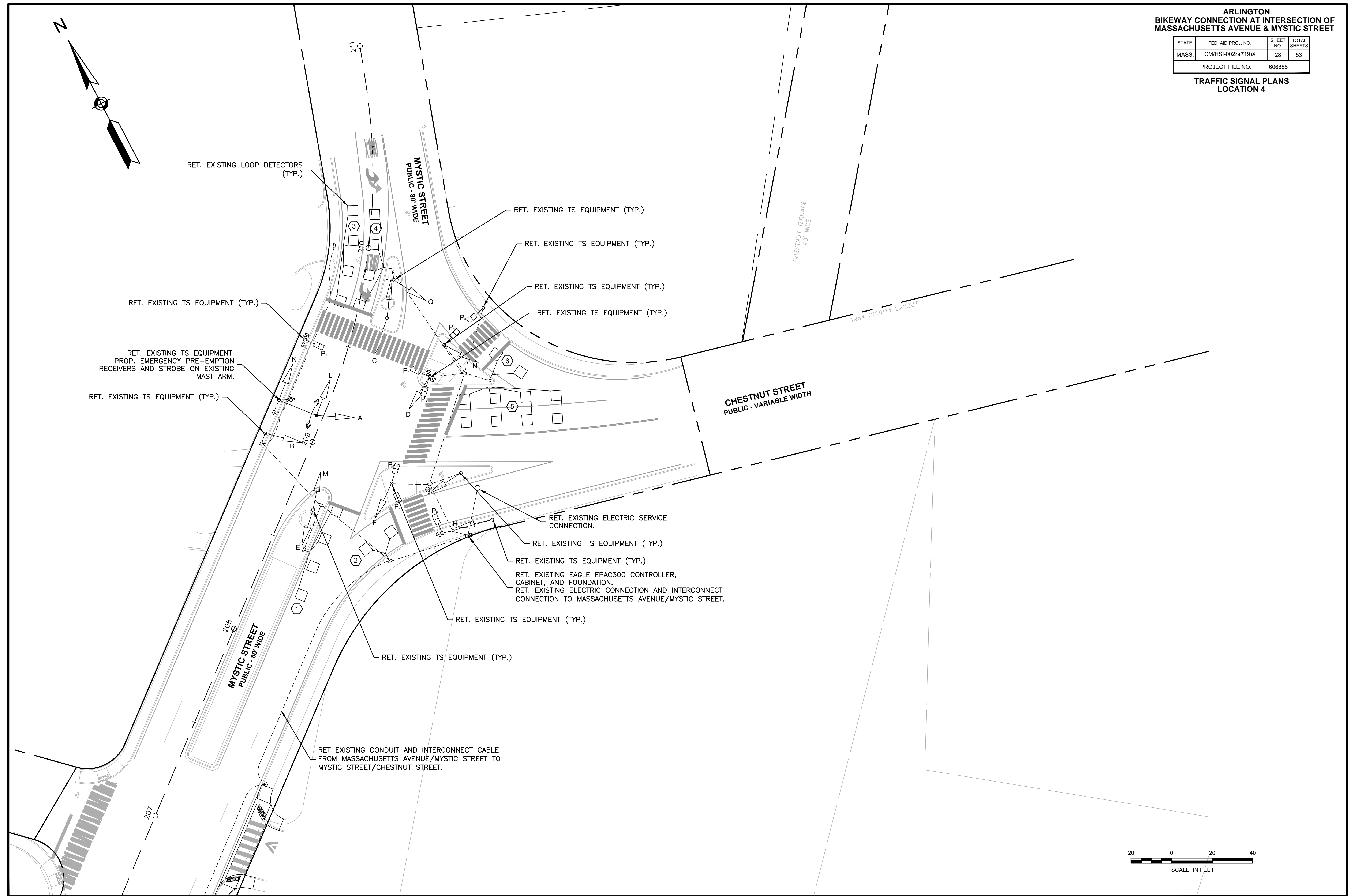
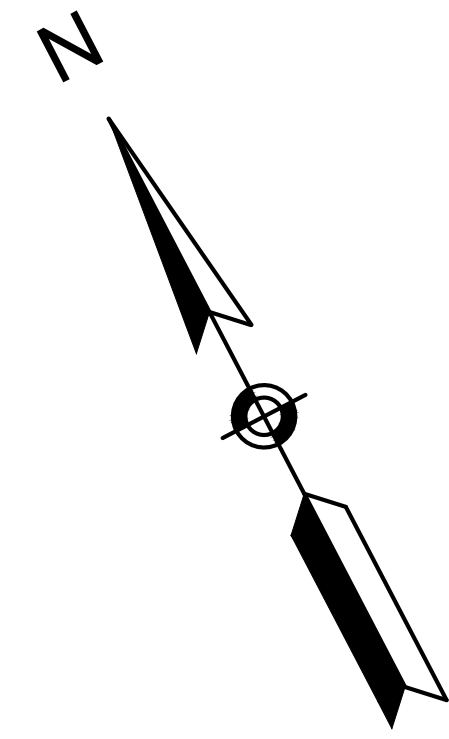
FIRE PREEMPTION SCHEDULE

APPROACH	PREEMPTION PHASE	NEXT PHASE CALLED
EASTBOUND	2	2+6
WESTBOUND	6	2+6

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	28	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL PLANS
LOCATION 4



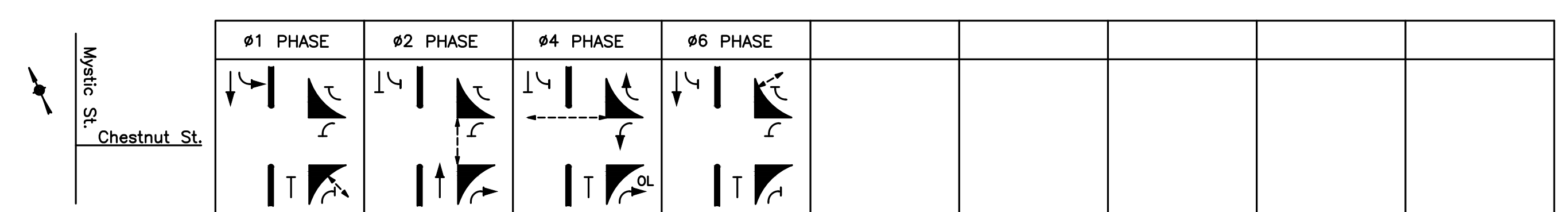
606885_TR(TRAFFIC SIGNAL).DWG 4-Sep-2014

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MicroDOT DWG Viewer

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	29	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL DATA
LOCATION 4

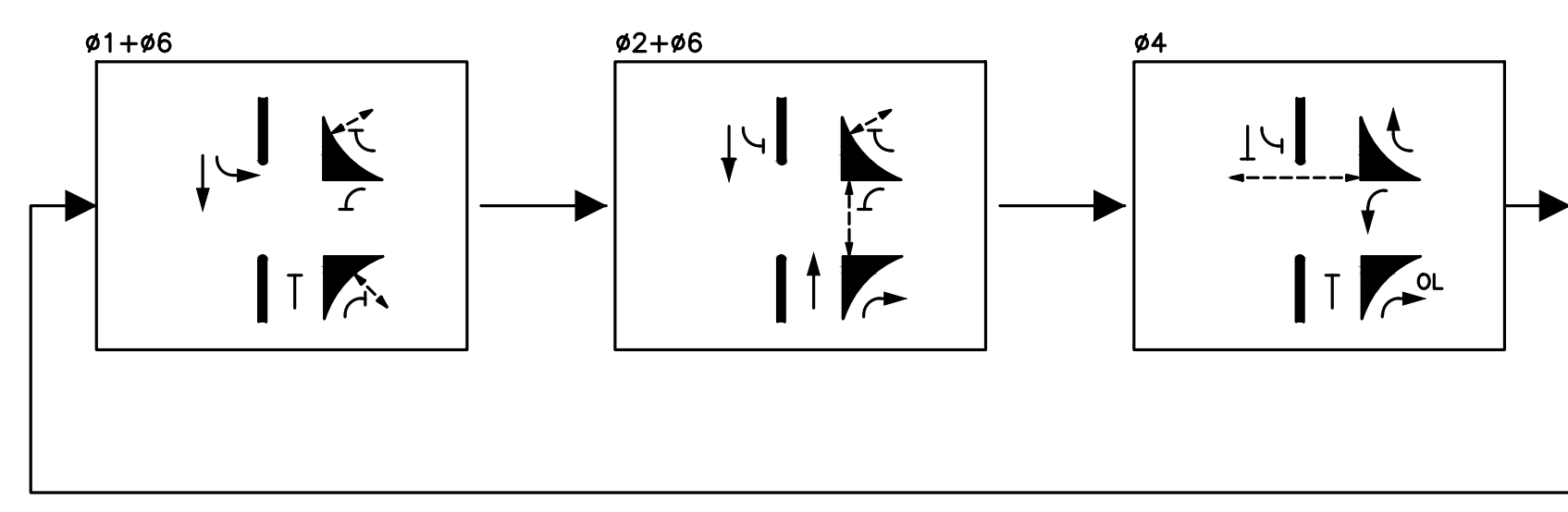


SEQUENCE AND TIMING FOR FULL ACTUATED CONTROL (COORDINATED)

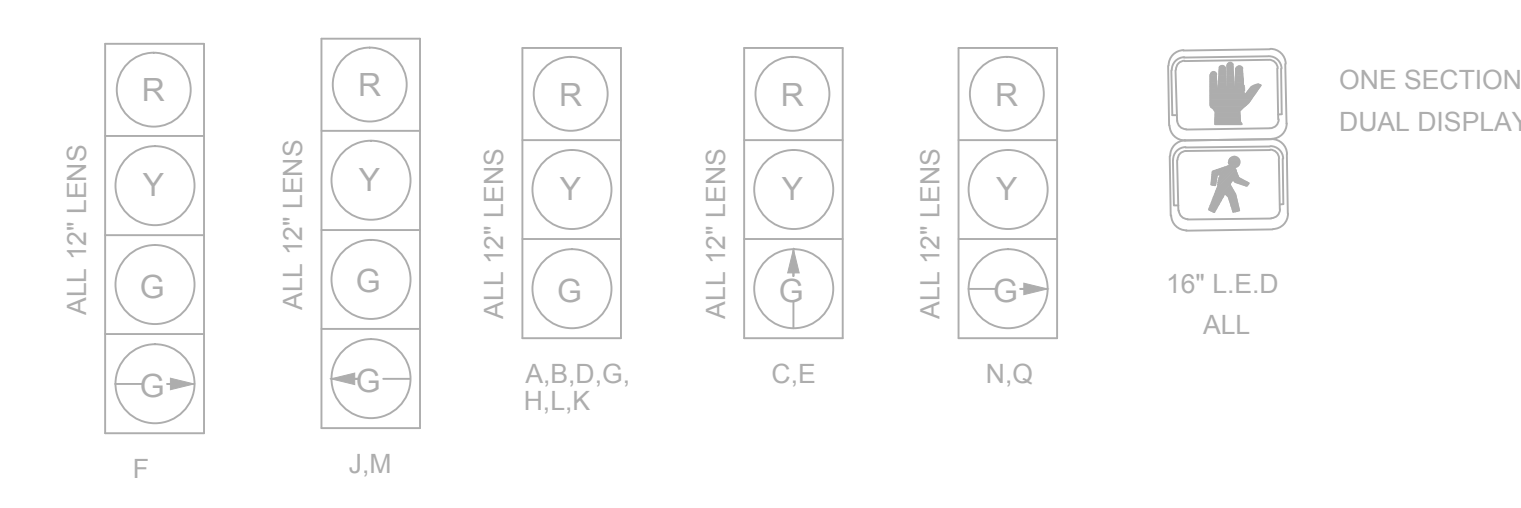
STREET	DIRECTION	HOUSINGS	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	GRN	CL	CL	FLASH OPER.	
CHESTNUT STREET	WB	A,B	R	R	R	R	R	R	G	Y	R	R	R	R	FR	
CHESTNUT STREET	WB	N,Q	R	R	R	R	R	R	GR	Y	R	R	R	R	FR	
MYSTIC STREET	NB	C,E	R	R	R	GV	Y	R	R	R	R	R	R	R	FY	
MYSTIC STREET	NB	D	R	R	R	G	Y	R	R	R	R	R	R	R	FY	
MYSTIC STREET	NB	F	R	R	R	G/GR	Y	R	R	R	R	R	R	R	FY	
MYSTIC STREET	NB	G,H	R	R	R	G	Y	R	G	Y	R	R	R	R	FY	
MYSTIC STREET	SB	J,M	G/CL	Y	R	R	R	R	R	R	R	R	R	R	FY	
MYSTIC STREET	SB	K,L	R	R	R	R	R	R	R	R	R	G	Y	R	FY	
PEDESTRIAN	N-S	P ₁ -P ₂	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	
PEDESTRIAN	N-S	P ₂ -P ₁	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW	OFF	
PEDESTRIAN	E-W	P ₃ -P ₄	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	OFF	
PEDESTRIAN	N-S	P ₁ -P ₂	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	OFF	
TIMING IN SECONDS																
MINIMUM GREEN (INITIAL)				6				8				6				8
PASSAGE TIME (VEHICLE)				2				2				2				2
MAXIMUM 1				29				43				32				76
MAXIMUM 2				34				47				33				80
YELLOW CLEARANCE					3					3					3	
RED CLEARANCE						1					1					1
WALK (W)				7				7				7				
PEDESTRIAN CLEARANCE				5				9				13				
RECALL				NONE			NONE			MAX/PED			NONE			
MEMORY				NON-LOCK			NON-LOCK			NON-LOCK			NON-LOCK			
COORDINATION DATA				COORDINATION PHASE TIMING												
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.										
TP1 M - F (6AM - 9AM)	120	0	38	45	37	83										
TP2 M - F (3PM - 7PM)	120	118	33	51	36	84										
TP3 SAT (11AM - 6PM)	110	105	29	45	36	74										

- MASTER CONTROLLER IS AT MASSACHUSETTS AVENUE/MYSTIC STREET.
- COORDINATION SHALL BE AT THE START OF #4.
- COORDINATION SHALL RUN DURING THE TIMES LISTED ABOVE. FREE OPERATION SHALL RUN DURING ALL OTHER TIMES.

PROPOSED PHASING DIAGRAM



SIGNAL IDENTIFICATION EXISTING



CLEARANCES

FROM	TO							
	G	GL	GV	GR	R	-	W	DW
G	G	-	-	-	Y	-	-	-
GL	-	GL	-	-	Y	-	-	-
GV	-	-	GV	-	Y	-	-	-
GR	-	-	-	GR	Y	-	-	-
G/GL	G	-	-	-	Y	-	-	-
G/GR	G	-	-	-	Y	-	-	-
R	-	-	-	-	R	-	-	-
W	-	-	-	-	-	-	W	FDW
DW	-	-	-	-	-	-	-	DW

FIRE PREEMPTION SCHEDULE

APPROACH	PREEMPTION PHASE	NEXT PHASE CALLED
WESTBOUND	4	1+6
NORTHBOUND	2+6	4
SOUTHBOUND	1+6	2+6

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		EXISTING			2	2	B	-	-
2		EXISTING			2	2	B	-	-
3		EXISTING			6	6	B	-	-
4		EXISTING			1	1	B	-	-
5		EXISTING			4	4	B	-	-
6		EXISTING			4	4	B	-	-

EMERGENCY VEHICLE PREEMPTION OPERATION:

- EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
- PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
- IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
- PREEMPTION MINIMUM GREENS SHALL BE SIX SECONDS.
- PEDESTRIAN INDICATIONS SHALL DISPLAY A 'DON'T WALK' SYMBOL DURING PREEMPTION.
- NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
- ACTUAL TIMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY THE TOWN PRIOR TO OPERATION.

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	30	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL DATA
MASSACHUSETTS AVENUE
TIME-SPACE DIAGRAM

**LOCATION 1
MASSACHUSETTS AVENUE AND MYSTIC STREET
(MASTER CONTROLLER)**

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	120 SEC	120 SEC	110 SEC
OFFSET	0	0	0
SPLIT Ø1	23	19	20
SPLIT Ø2	37	36	34
SPLIT Ø3	13	21	17
SPLIT Ø4	47	44	39
SPLIT Ø5	22	23	22
SPLIT Ø6	38	32	32
SPLIT Ø7	21	23	15
SPLIT Ø8	39	42	41
COORD. PHASE	Ø2 & Ø6	Ø2 & Ø6	Ø2 & Ø6

NOTES:

- COORDINATION SHALL BE AT THE START OF GREEN FOR Ø2 & Ø6.

**LOCATION 2
MASSACHUSETTS AVENUE AND SWAN PLACE**

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	120 SEC	120 SEC	110 SEC
OFFSET	104	97	89
SPLIT Ø2	87	87	77
SPLIT Ø6	87	87	77
SPLIT Ø9	33	33	33
COORD. PHASE	Ø2 & Ø6	Ø2 & Ø6	Ø2 & Ø6

NOTES:

- COORDINATION SHALL BE AT THE START OF Ø2 & Ø6.

**LOCATION 3
MASSACHUSETTS AVENUE AND MEDFORD STREET**

COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	120 SEC	120 SEC	110 SEC
OFFSET	104	97	89
SPLIT Ø2	87	87	77
SPLIT Ø5	26	27	22
SPLIT Ø6	61	60	55
SPLIT Ø9	33	33	33
COORD. PHASE	Ø2 & Ø6	Ø2 & Ø6	Ø2 & Ø6

NOTES:

- COORDINATION SHALL BE AT THE START OF GREEN FOR Ø2 & Ø6.

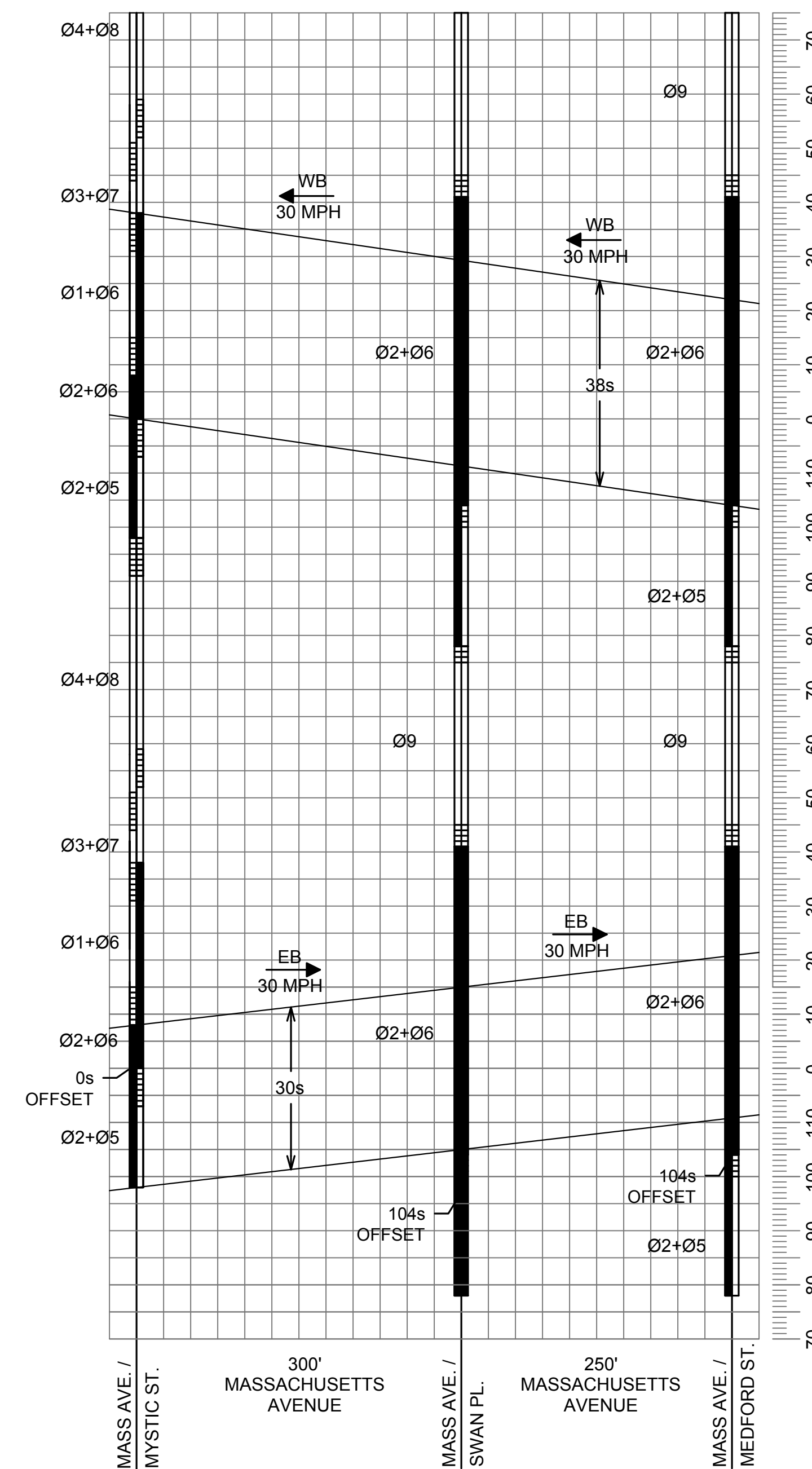
LEGEND

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

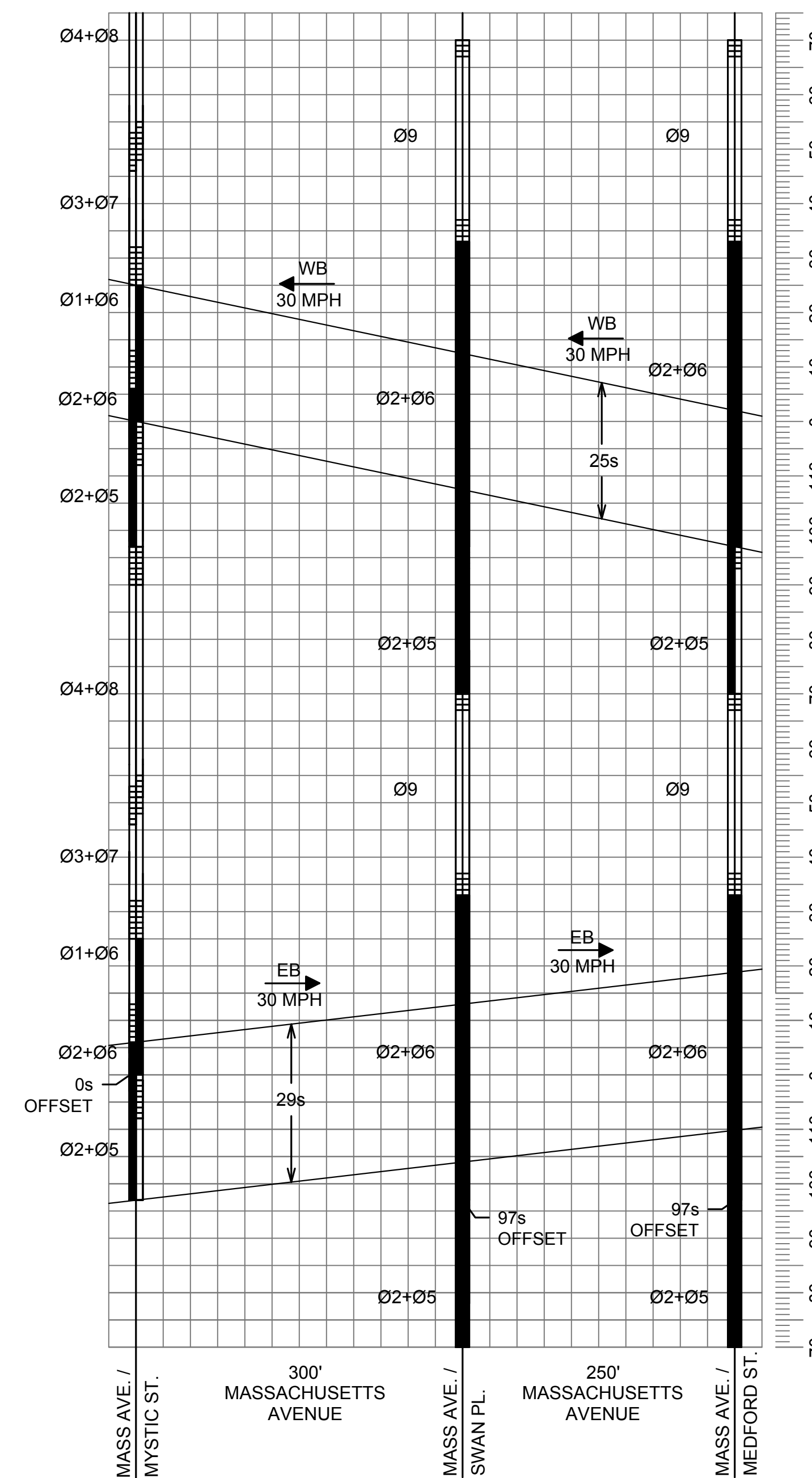
DAILY & WEEKLY COORDINATION PROGRAM

	MONDAY THRU FRIDAY	SATURDAY	SUNDAY
DIAL 1 120s CYCLE	6:00 - 9:00	-	-
DIAL 2 120s CYCLE	15:00 - 19:00	-	-
DIAL 3 110s CYCLE	-	15:00 - 19:00	-
FLASH OPERATION	-	-	-
FREE OPERATION	ALL OTHER TIMES	ALL OTHER TIMES	ALL OTHER TIMES

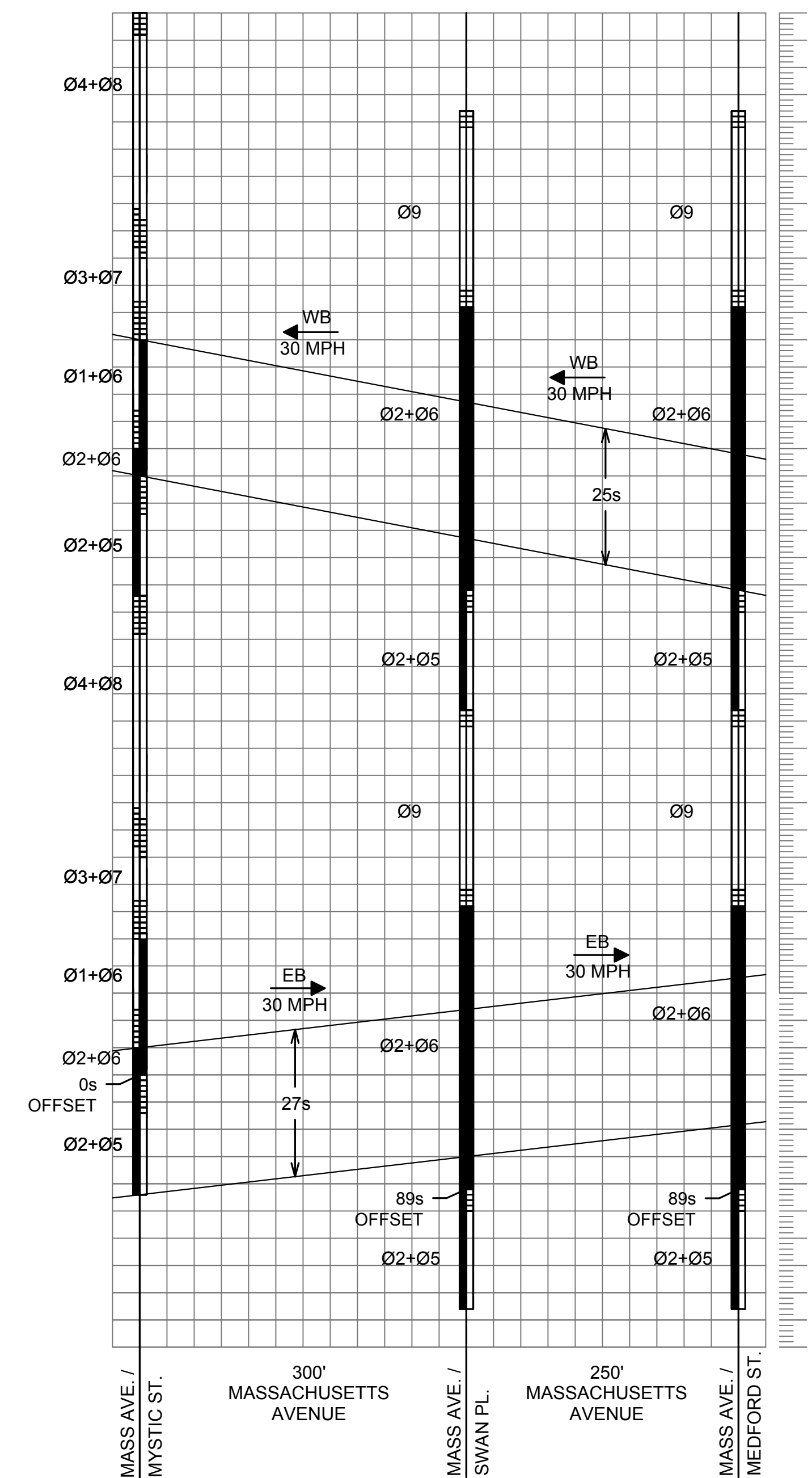
DIAL 1
MASSACHUSETTS AVENUE
120 SECOND CYCLE



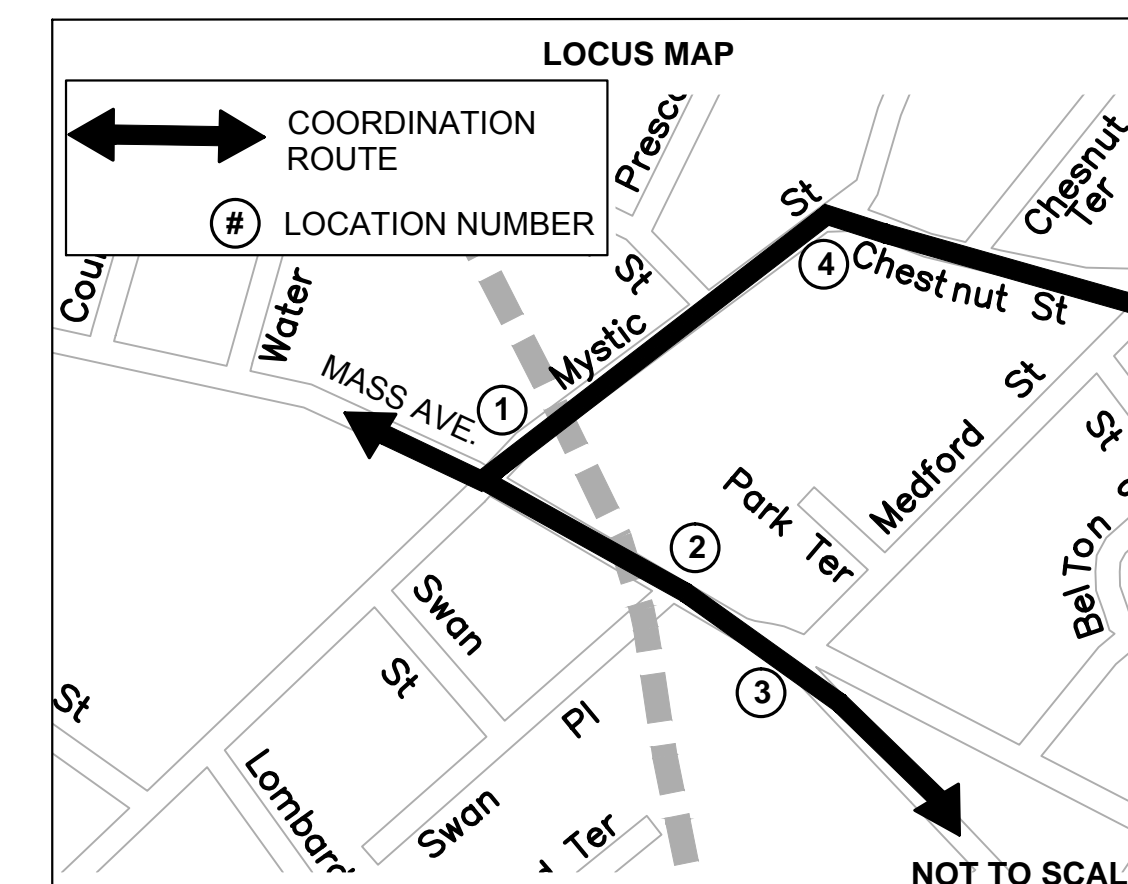
DIAL 2
MASSACHUSETTS AVENUE
120 SECOND CYCLE



DIAL 3
MASSACHUSETTS AVENUE
110 SECOND CYCLE



100 0 100 200
SCALE 1" = 100'



ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	31	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNAL DATA
MYSTIC STREET
TIME-SPACE DIAGRAM

LOCATION 1
MASSACHUSETTS AVENUE AND MYSTIC STREET
(MASTER CONTROLLER)
COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	120 SEC	120 SEC	110 SEC
OFFSET	0	0	0
SPLIT Ø1	23	19	20
SPLIT Ø2	37	36	34
SPLIT Ø3	13	21	17
SPLIT Ø4	47	44	39
SPLIT Ø5	22	23	22
SPLIT Ø6	38	32	32
SPLIT Ø7	21	23	15
SPLIT Ø8	39	42	41
COORD. PHASE	Ø2 & Ø6	Ø2 & Ø6	Ø2 & Ø6

NOTES:

- COORDINATION SHALL BE AT THE START OF GREEN FOR Ø2 & Ø6.

LOCATION 4
MYSTIC STREET AND CHESTNUT STREET
COORDINATION DATA
ALL ENTRIES IN SECONDS

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	120 SEC	120 SEC	110 SEC
OFFSET	0	118	105
SPLIT Ø1	38	33	29
SPLIT Ø2	45	51	45
SPLIT Ø4	37	36	36
SPLIT Ø6	83	84	74
COORD. PHASE	Ø3	Ø3	Ø3

NOTES:

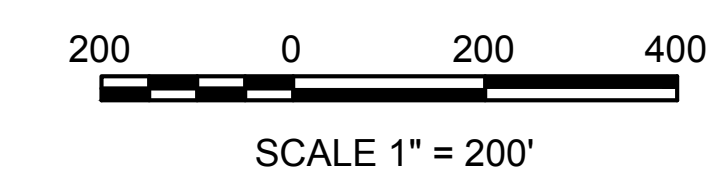
- COORDINATION SHALL BE AT THE START OF GREEN FOR Ø4.

LEGEND

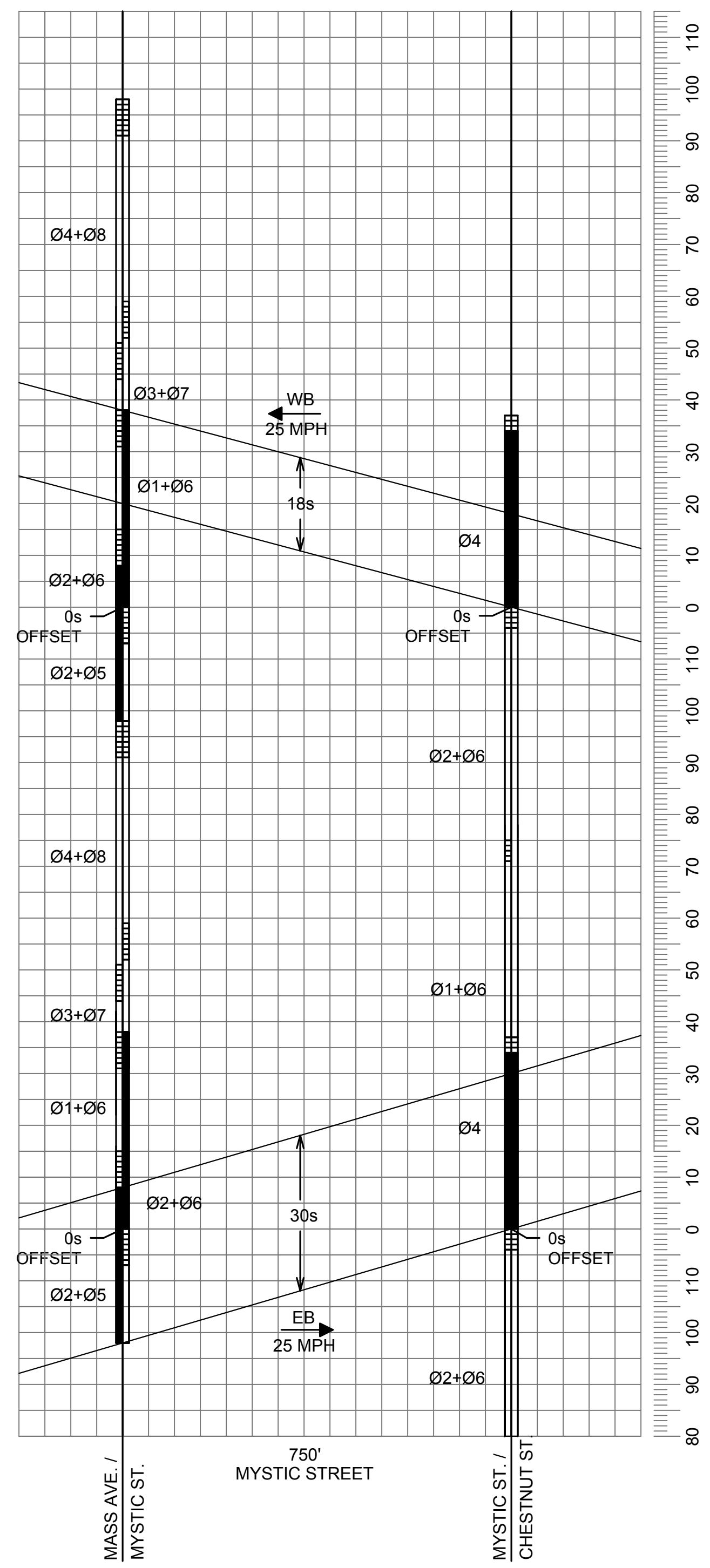
- COORDINATED PHASE(S) GREEN TIME
- NON-COORDINATED PHASE(S) GREEN TIME
- CLEARANCE TIME (YELLOW + RED)
- PHASE MOVEMENT
- COORDINATION BAND

DAILY & WEEKLY COORDINATION PROGRAM

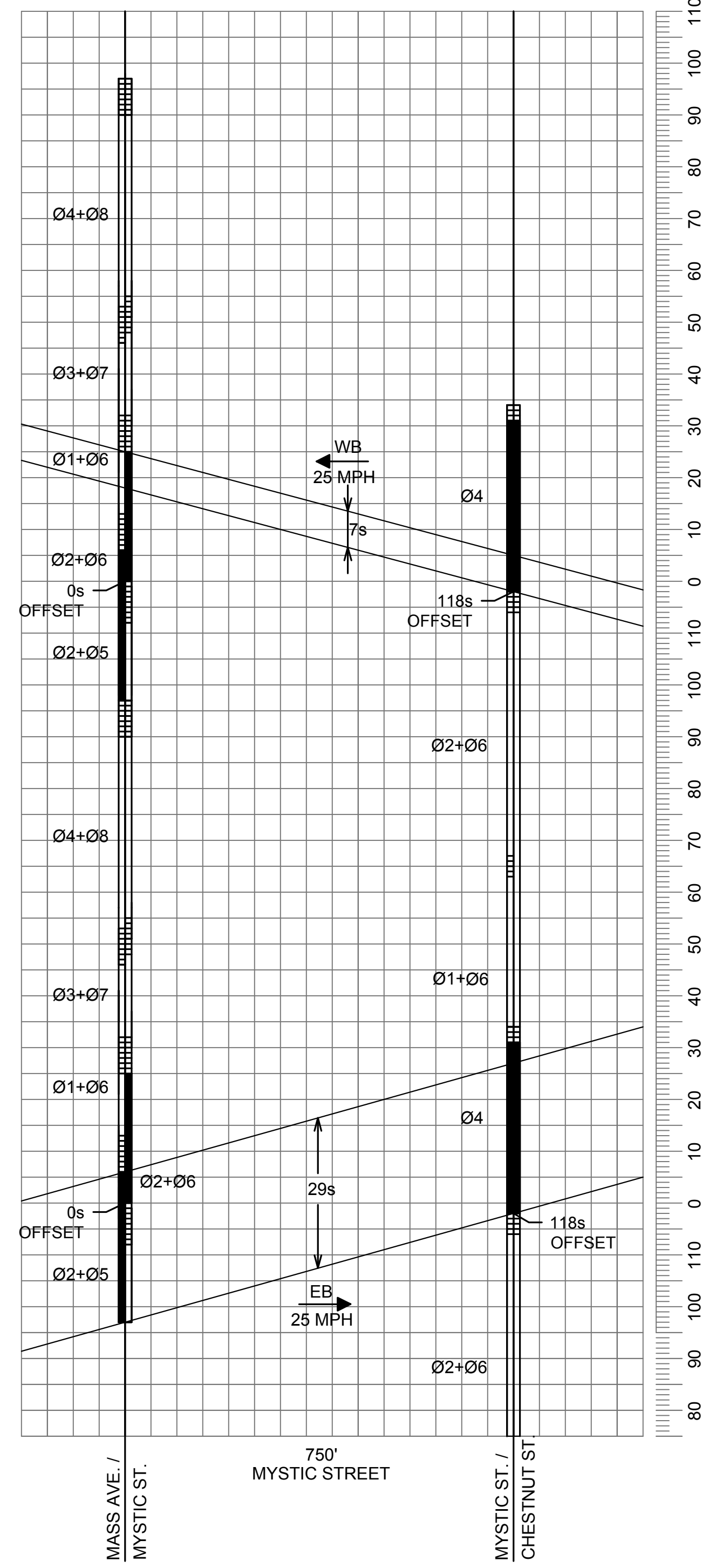
	MONDAY THRU FRIDAY	SATURDAY	SUNDAY
DIAL 1 120s CYCLE	6:00 - 9:00	-	-
DIAL 2 120s CYCLE	15:00 - 19:00	-	-
DIAL 3 110s CYCLE	-	15:00 - 19:00	-
FLASH OPERATION	-	-	-
FREE OPERATION	ALL OTHER TIMES	ALL OTHER TIMES	ALL OTHER TIMES



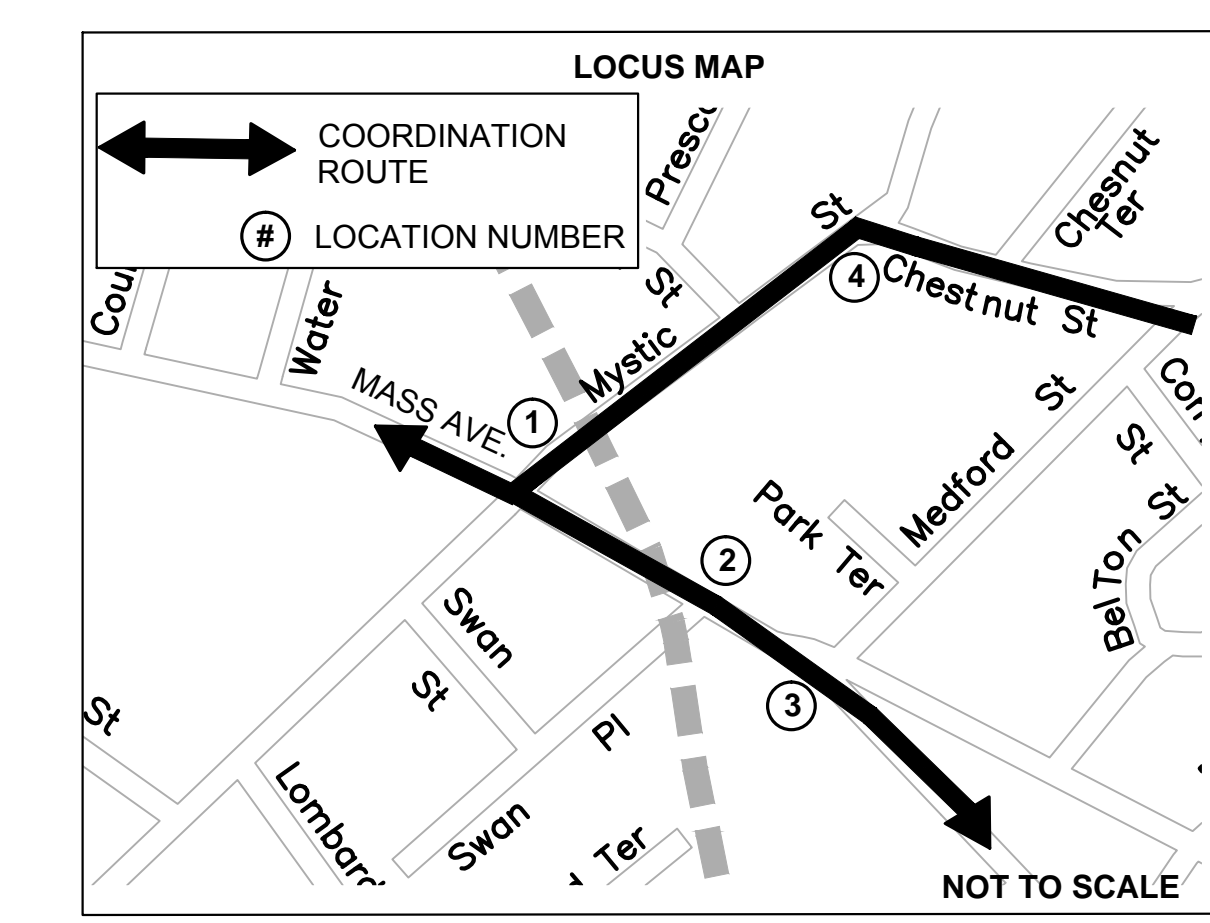
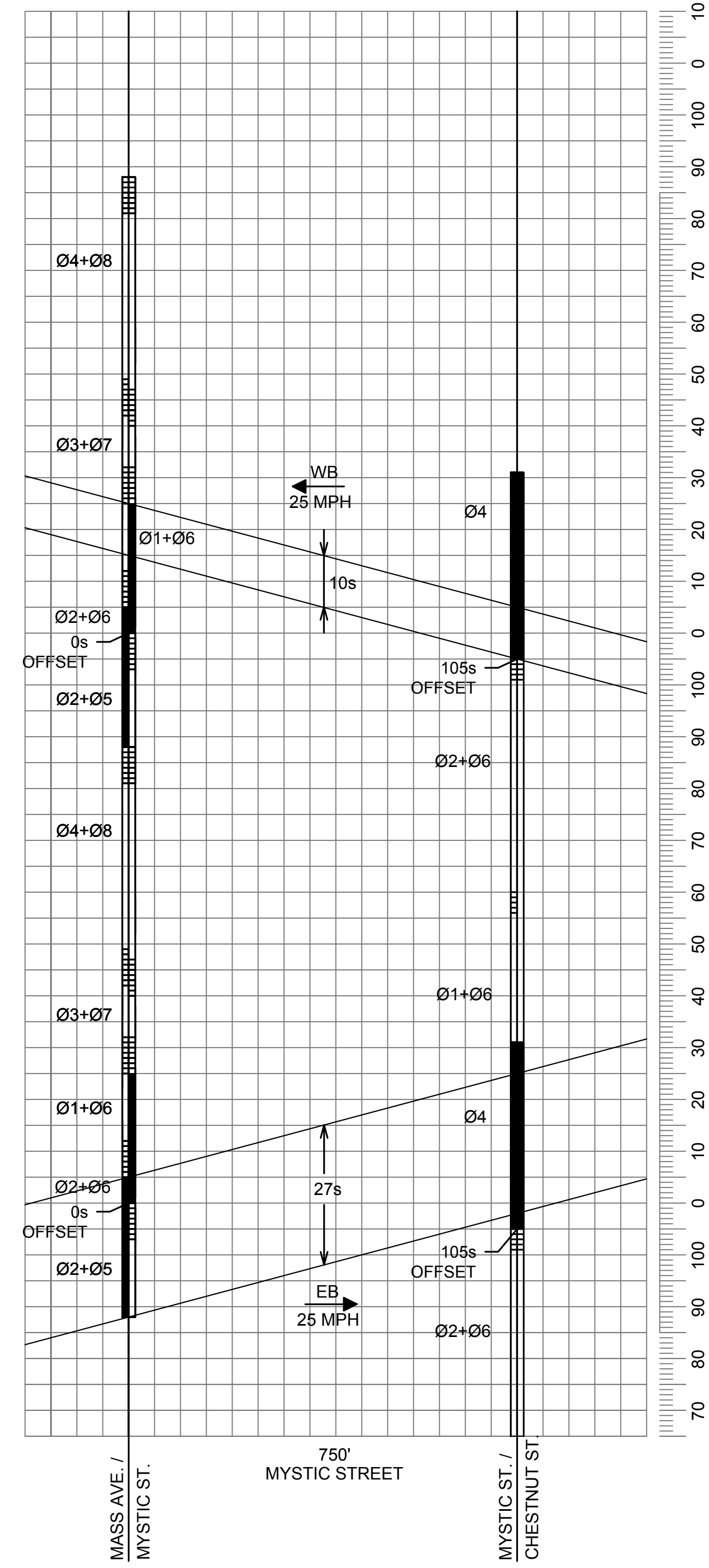
DIAL 1
MYSTIC STREET
120 SECOND CYCLE

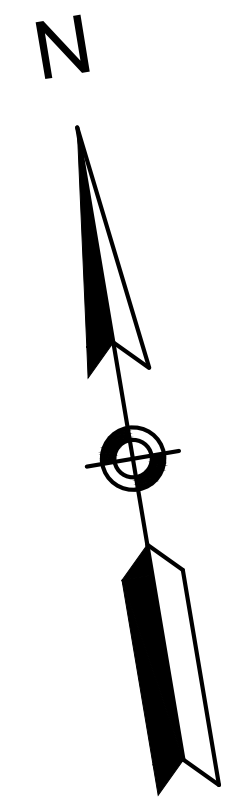


DIAL 2
MYSTIC STREET
120 SECOND CYCLE



DIAL 3
MYSTIC STREET
110 SECOND CYCLE

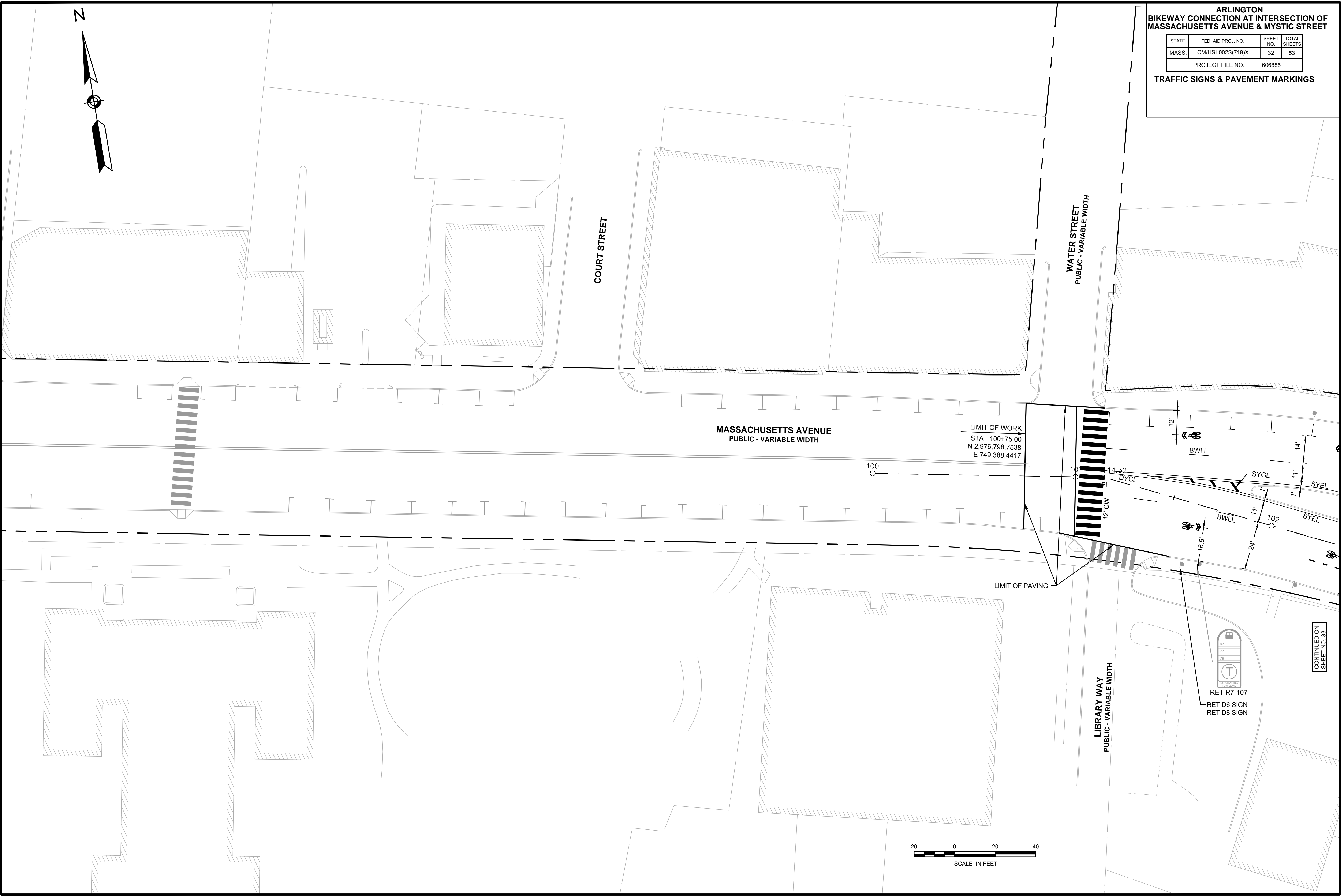




ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	32	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNS & PAVEMENT MARKINGS



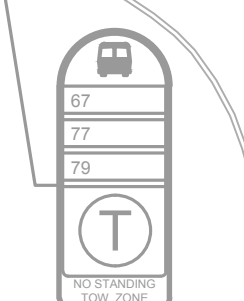
LIMIT OF WORK
STA 100+75.00
N 2,976,798.7538
E 749,388.4417

100

12' CW
10' BWLL

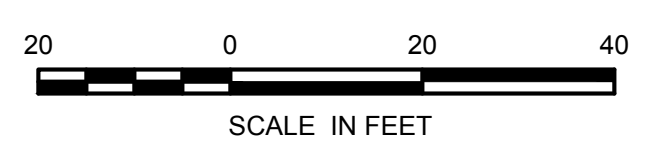
12' BWLL
14' 32' DYCL
11' SYGL
1' SYEL
11' SYEL
102
1' SYEL
16.5' BWLL
24' SYEL

LIMIT OF PAVING.



RET R7-107
RET D6 SIGN
RET D8 SIGN

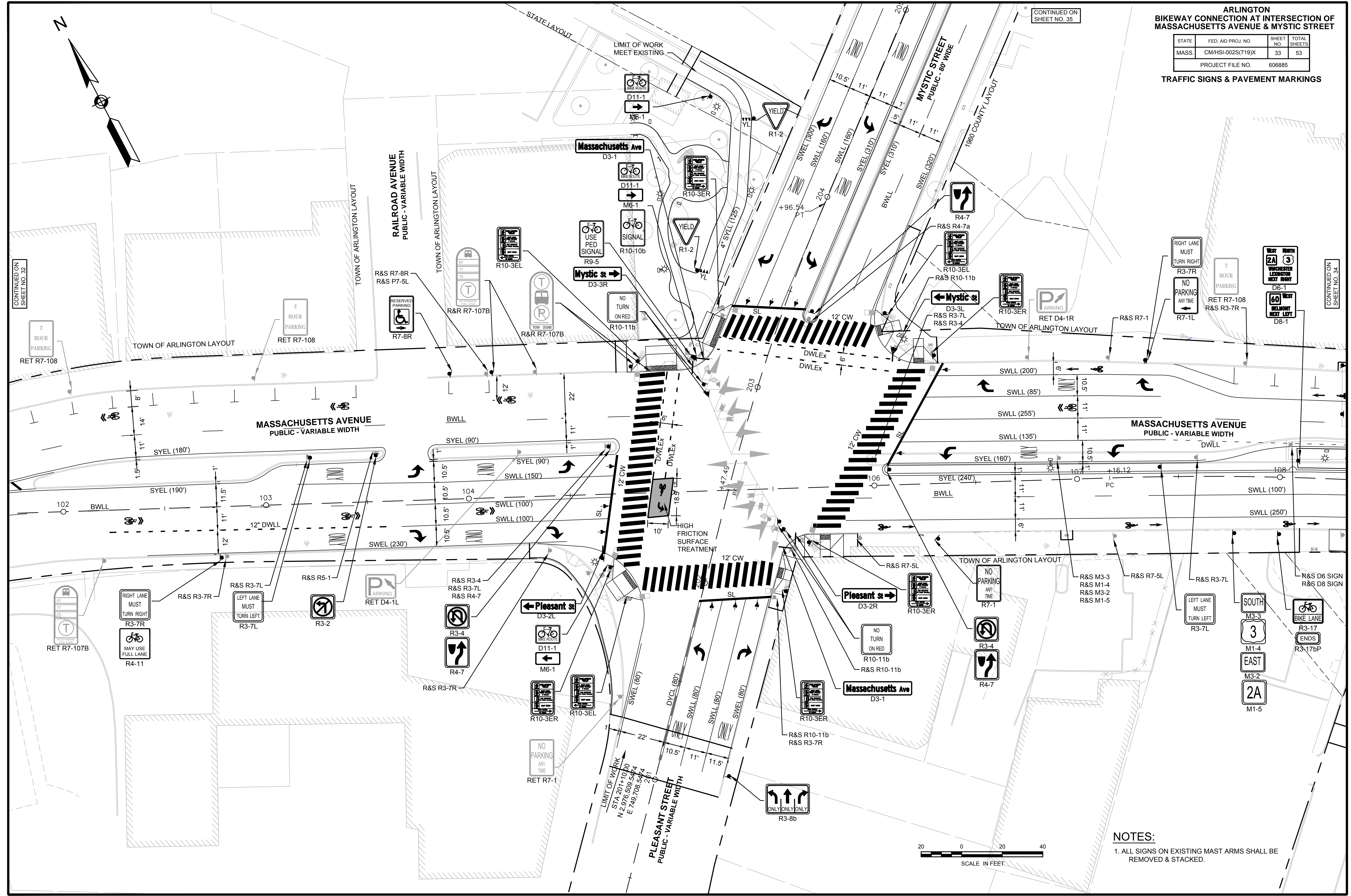
CONTINUED ON
SHEET NO. 33



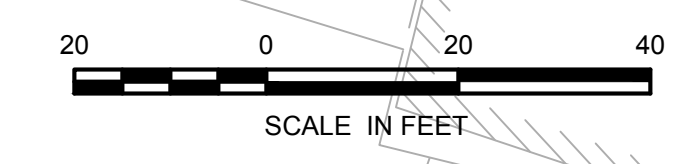
ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	33	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNS & PAVEMENT MARKINGS



NOTES:
1. ALL SIGNS ON EXISTING MAST ARMS SHALL BE REMOVED & STACKED.



CONTINUED ON SHEET NO. 32

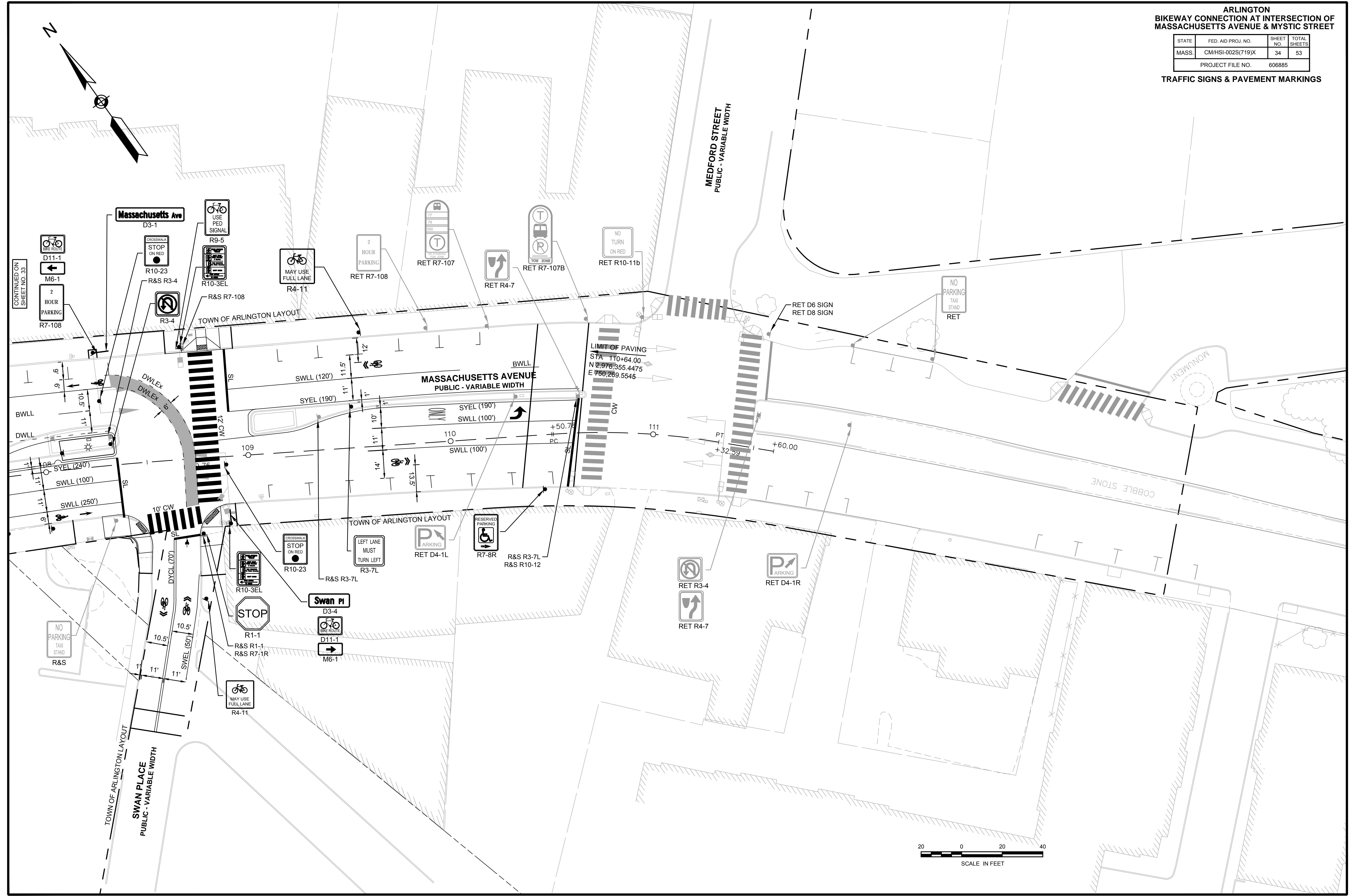
CONTINUED ON SHEET NO. 35

CONTINUED ON SHEET NO. 34

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	34	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNS & PAVEMENT MARKINGS



CONTINUED ON
SHEET NO. 33

L:\10181\CURRENT\OUTSHEETS\606885_TR\TRAFFIC&PAVE MARKS.DWG, 9/4/2014, 12:25:02 PM

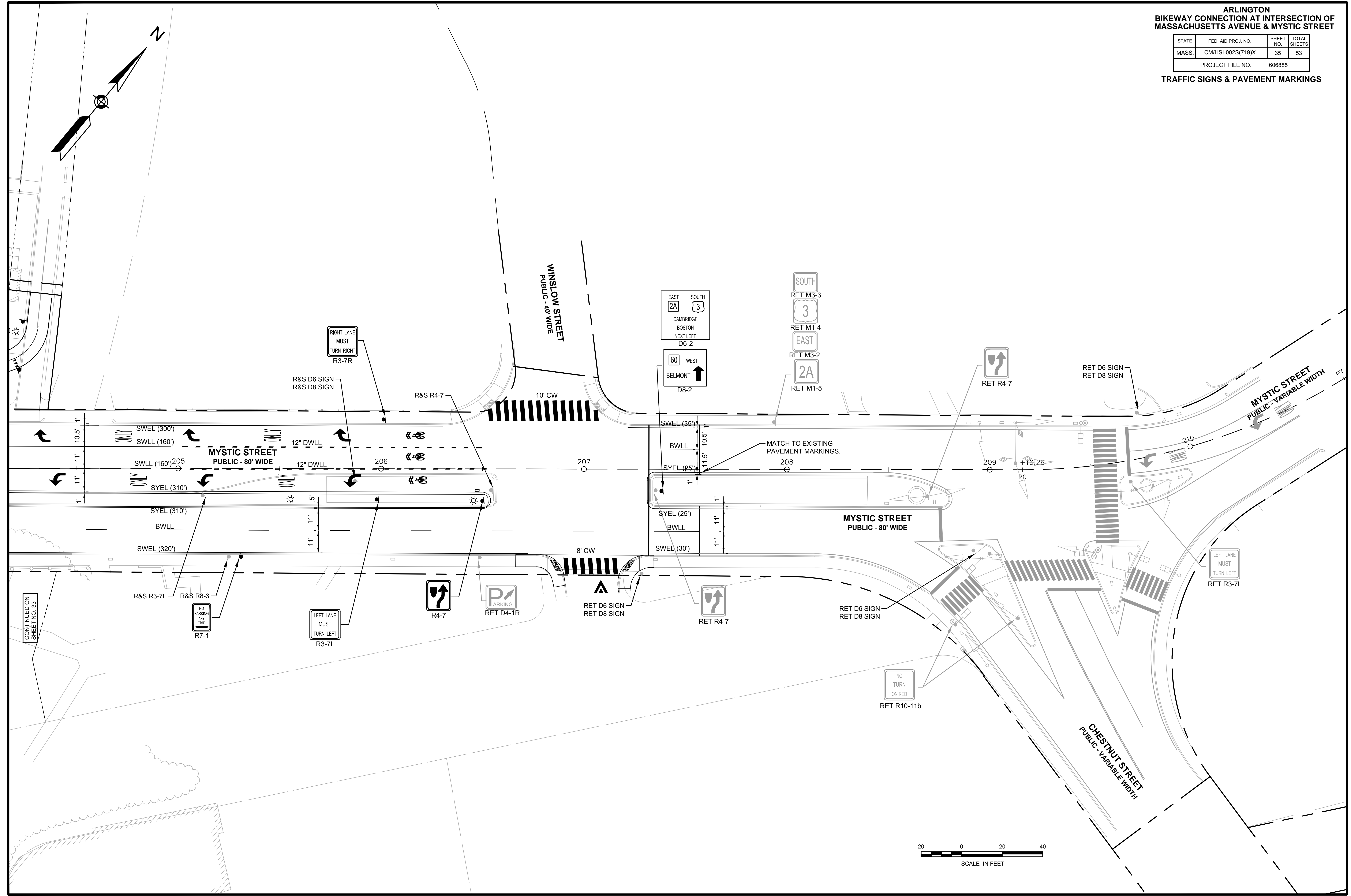
606885_TR\TRAFFIC&PAVE MARKS.DWG 4-Sep-2014

ManCAD DWG Vendor

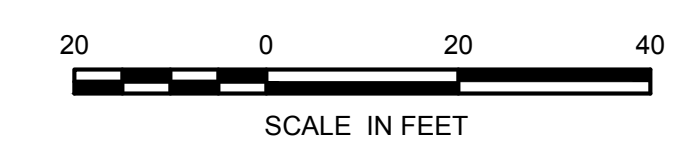
ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	35	53
PROJECT FILE NO.		606885	

TRAFFIC SIGNS & PAVEMENT MARKINGS



CONTINUED ON
SHEET NO. 33



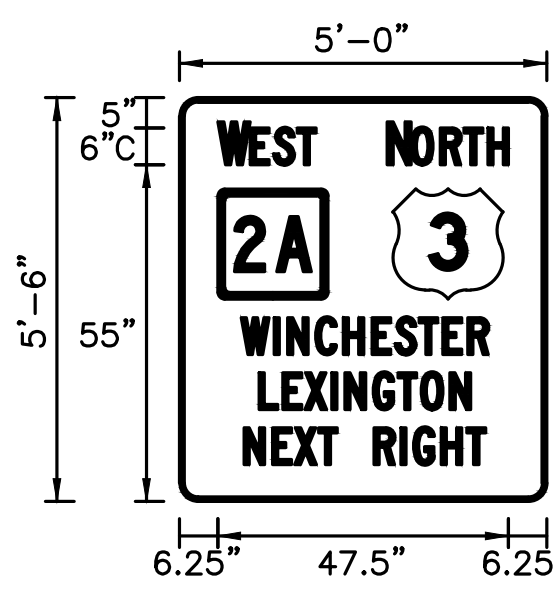
TRAFFIC SIGN SUMMARY

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

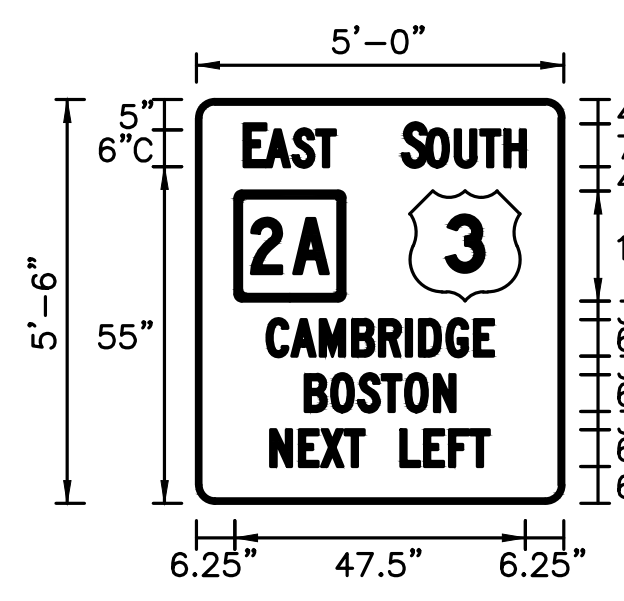
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30		1	1	1	1	RED	WHITE	WHITE	(1) P5	6.25	6.25
R1-2	18	18					1	RED/WHITE	RED	WHITE	(1) P5	2.25	2.25
R3-2	36	36					1	WHITE	RED/BLACK	BLACK	(1) P5	9.00	9.00
R3-4	36	36					3	WHITE	RED/BLACK	BLACK	(3) P5	9.00	27.00
R3-7L	36	36					4	WHITE	BLACK	BLACK	(4) P5	9.00	36.00
R3-7R	36	36					3	WHITE	BLACK	BLACK	(3) P5	9.00	27.00
R3-8B	48	30					1	WHITE	BLACK	BLACK	(1) P5	10.00	10.00
R3-17	24	18					1	BLACK/WHITE	WHITE/BLACK	BLACK	(1) P5	3.00	3.00
R3-17BP	24	8					1	WHITE	BLACK	BLACK	(1) MOUNT WITH R3-17	1.33	1.33
R4-7	24	30					4	WHITE	BLACK	BLACK	(2) P5 (2) MOUNT WITH R3-4	5.00	20.00
R4-11	30	30					3	WHITE	BLACK	BLACK	(2) P5 (1) MOUNT WITH R3-7R	6.25	18.75
R7-1	12	18					2	WHITE	RED	RED	(2) P5	1.50	3.00
R7-1L	12	18					1	WHITE	RED	RED	(1) MOUNT WITH R3-7R	1.50	1.50
R7-8R	12	18					1	WHITE	BLUE/GREEN	GREEN	(1) P5	1.50	1.50
R7-8L	12	18					1	WHITE	BLUE/GREEN	GREEN	(1) P5	1.50	1.50
R7-10B	12	18					1	WHITE	GREEN	GREEN	(1) MOUNT WITH D11-1	1.50	1.50
R9-5	12	18					2	WHITE	BLACK	BLACK	(1) P5 (1) MOUNT ON SIGNAL POST	1.50	3.00
R10-3EL	9	15					6	WHITE	BLACK	BLACK	(6) MOUNT ON SIGNAL POST	0.94	4.69
R10-3ER	9	15					5	WHITE	BLACK	BLACK	(5) MOUNT ON SIGNAL POST	0.94	5.63
R10-10B	30	36					1	WHITE	BLACK	BLACK	(1) MOUNT ON MAST ARM POST	7.50	7.50

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R10-11B	36	36		1	1	1	4	WHITE	BLACK	BLACK	(4) MOUNT ON MAST ARM	9.00	36.00
R10-23	24	30					2	WHITE	RED/BLACK	BLACK	(2) MOUNT ON MAST ARM	5.00	10.00
D11-1	24	18					5	GREEN	WHITE	WHITE	(4) MOUNT ON MAST ARM POST	3.00	12.00
M1-4	24	24					1	WHITE	BLACK	BLACK	(1) MOUNT WITH M3-3	4.00	4.00
M1-5	21	15					1	WHITE	BLACK	BLACK	(1) MOUNT WITH M3-3	2.19	2.19
M3-2	24	12					1	WHITE	BLACK	BLACK	(1) MOUNT WITH M3-3	2.00	2.00
M3-3	24	24					1	WHITE	BLACK	BLACK	(1) P5	4.00	4.00
M6-1	12	9					5	GREEN	WHITE	WHITE	(3) MOUNT WITH D11-1 (1) MOUNT WITH D3-4	0.75	3.00
D3-1	60	12		SEE SIGN DETAIL FOR D3-1	SEE SIGN DETAIL FOR D3-1	SEE SIGN DETAIL FOR D3-1	2	GREEN	WHITE	WHITE	(2) MOUNT ON MAST ARM POST	5.00	10.00
D3-2L	48	12		SEE SIGN DETAIL FOR D3-2	SEE SIGN DETAIL FOR D3-2	SEE SIGN DETAIL FOR D3-2	1	GREEN	WHITE	WHITE	(1) MOUNT ON 2" STEEL POST	4.00	4.00
D3-2R	48	12		SEE SIGN DETAIL FOR D3-2	SEE SIGN DETAIL FOR D3-2	SEE SIGN DETAIL FOR D3-2	1	GREEN	WHITE	WHITE	(1) MOUNT ON MAST ARM POST	4.00	4.00
D3-3L	42	12		SEE SIGN DETAIL FOR D3-3	SEE SIGN DETAIL FOR D3-3	SEE SIGN DETAIL FOR D3-3	1	GREEN	WHITE	WHITE	(1) MOUNT ON 2" STEEL POST	3.50	3.50
D3-3R	42	12		SEE SIGN DETAIL FOR D3-3	SEE SIGN DETAIL FOR D3-3	SEE SIGN DETAIL FOR D3-3	1	GREEN	WHITE	WHITE	(1) MOUNT ON MAST ARM POST	3.50	3.50
D3-4	36	12		SEE SIGN DETAIL FOR D3-4	SEE SIGN DETAIL FOR D3-4	SEE SIGN DETAIL FOR D3-4	1	GREEN	WHITE	WHITE	(1) MOUNT ON MAST ARM POST	3.00	3.00
D6-1	60	66		SEE SIGN DETAIL FOR D6-1	SEE SIGN DETAIL FOR D6-1	SEE SIGN DETAIL FOR D6-1	1	GREEN	WHITE	WHITE	(1) 5" STEEL POST	27.50	27.50
D6-2	60	66		SEE SIGN DETAIL FOR D6-2	SEE SIGN DETAIL FOR D6-2	SEE SIGN DETAIL FOR D6-2	1	GREEN	WHITE	WHITE	(1) 5" STEEL POST	27.50	27.50
D8-1	48	42		SEE SIGN DETAIL FOR D8-1	SEE SIGN DETAIL FOR D8-1	SEE SIGN DETAIL FOR D8-1	1	GREEN	WHITE	WHITE	(1) MOUNT WITH D6-1	14.00	14.00
D8-2	48	36		SEE SIGN DETAIL FOR D8-2	SEE SIGN DETAIL FOR D8-2	SEE SIGN DETAIL FOR D8-2	1	GREEN	WHITE	WHITE	(1) MOUNT WITH D6-2	12.00	12.00

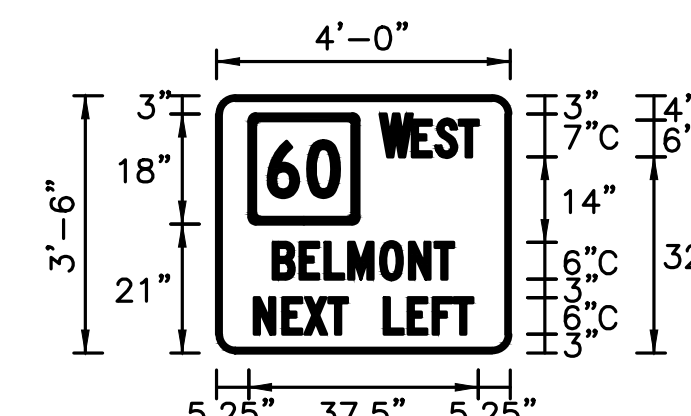
① SEE MUTCD 2009 EDITION, 1979 STD. HWY. SIGNS AND SECTION M9.30.0. TYPE III OF THE MHD STANDARD SPECIFICATION FOR TEXT DIMENSIONS AND COLOR.



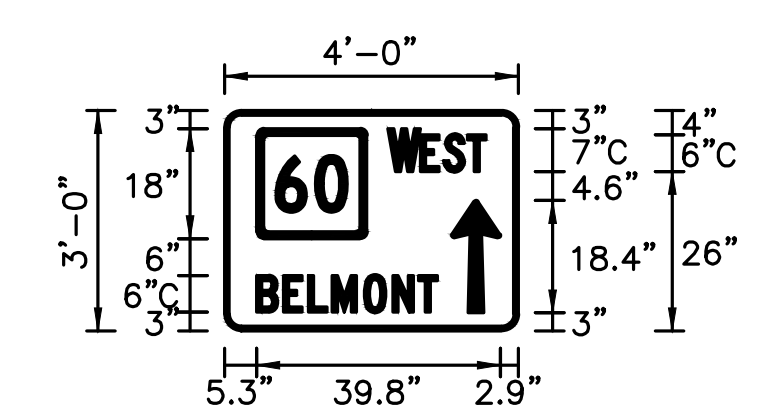
D6-1 SIGN DETAIL



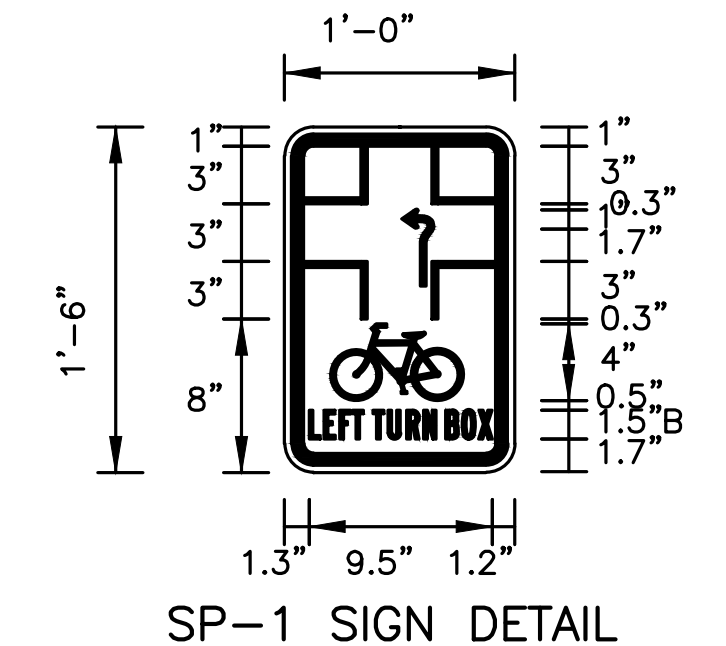
D6-2 SIGN DETAIL



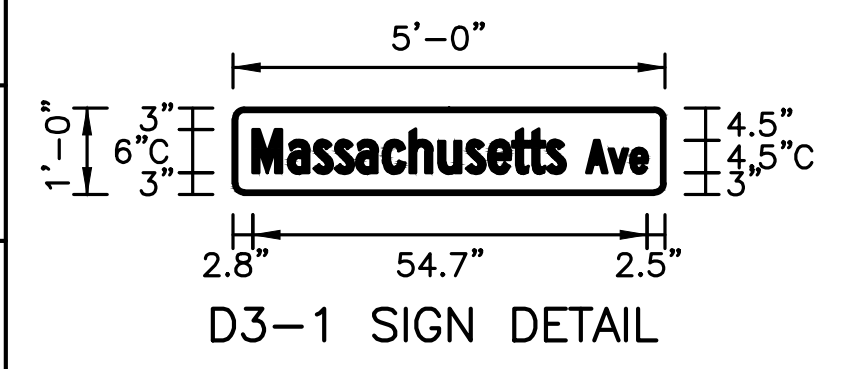
D8-1 SIGN DETAIL



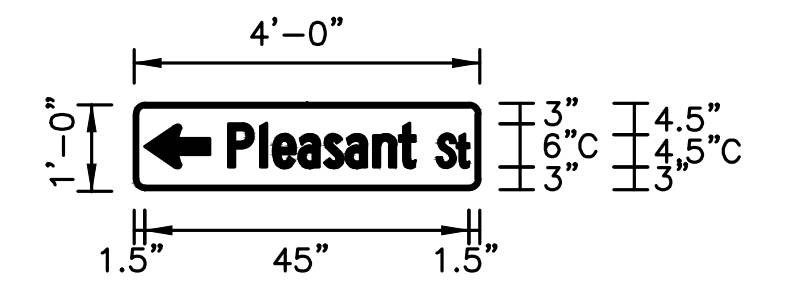
D8-2 SIGN DETAIL



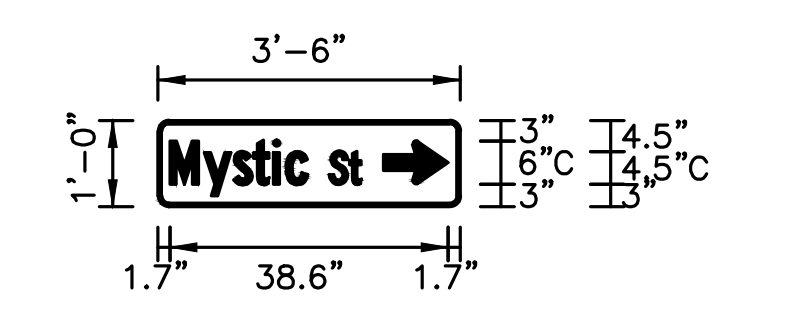
SP-1 SIGN DETAIL



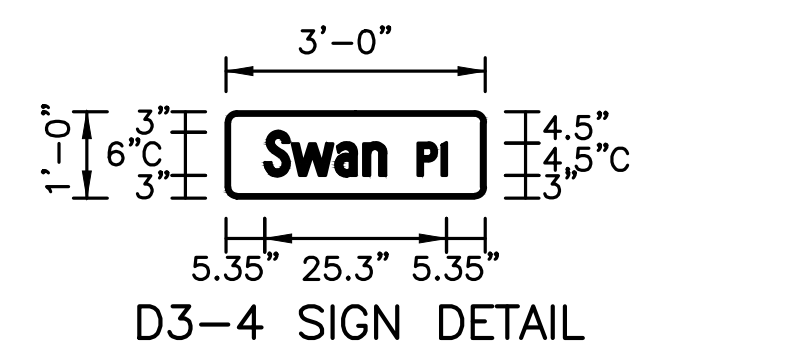
D3-1 SIGN DETAIL



D3-2 SIGN DETAIL



D3-3 SIGN DETAIL



D3-4 SIGN DETAIL

TRAFFIC SIGN SUMMARY SHEET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	36	53
PROJECT FILE NO.		606885	

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	37	53
PROJECT FILE NO.		606885	

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

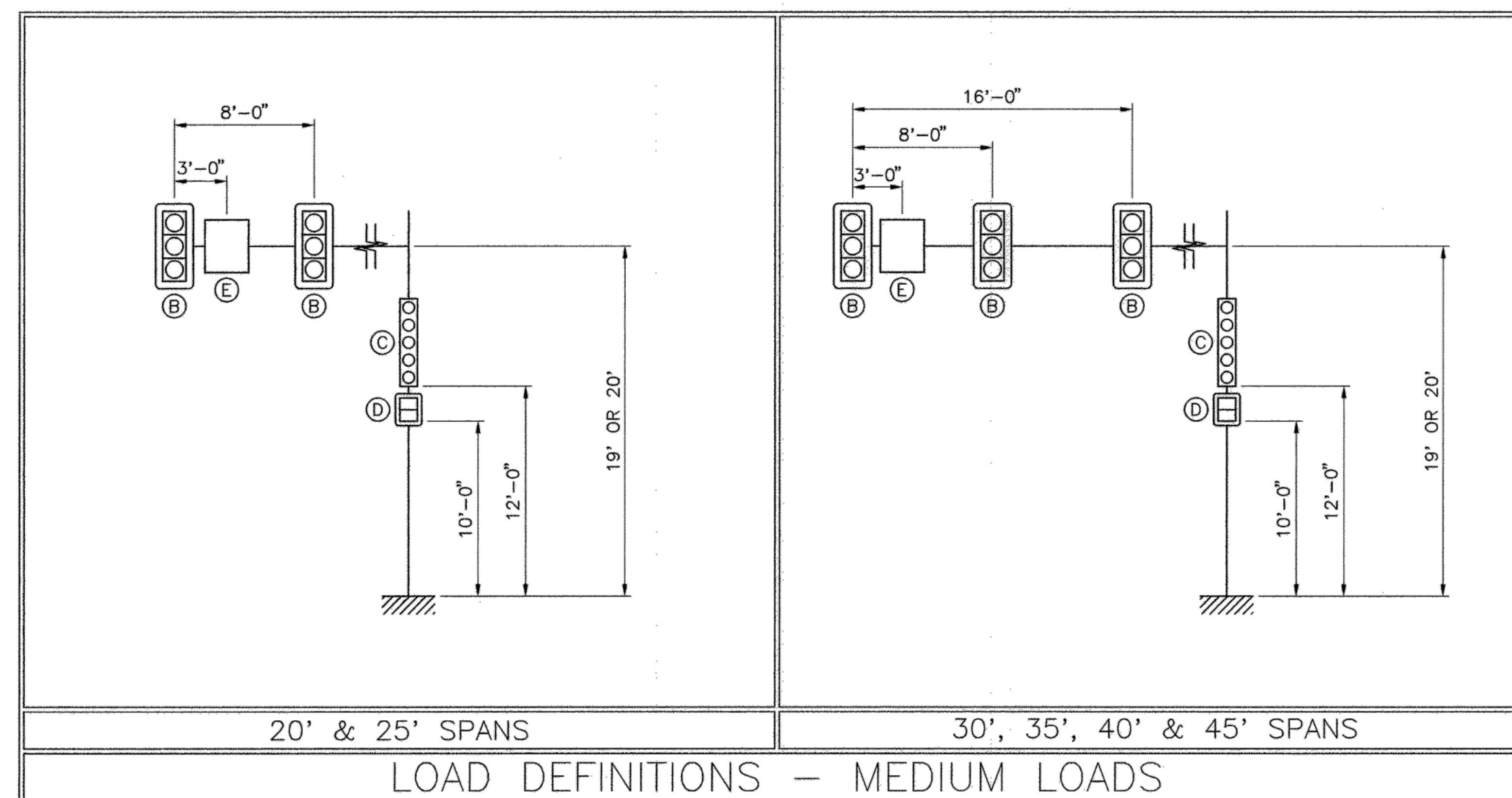
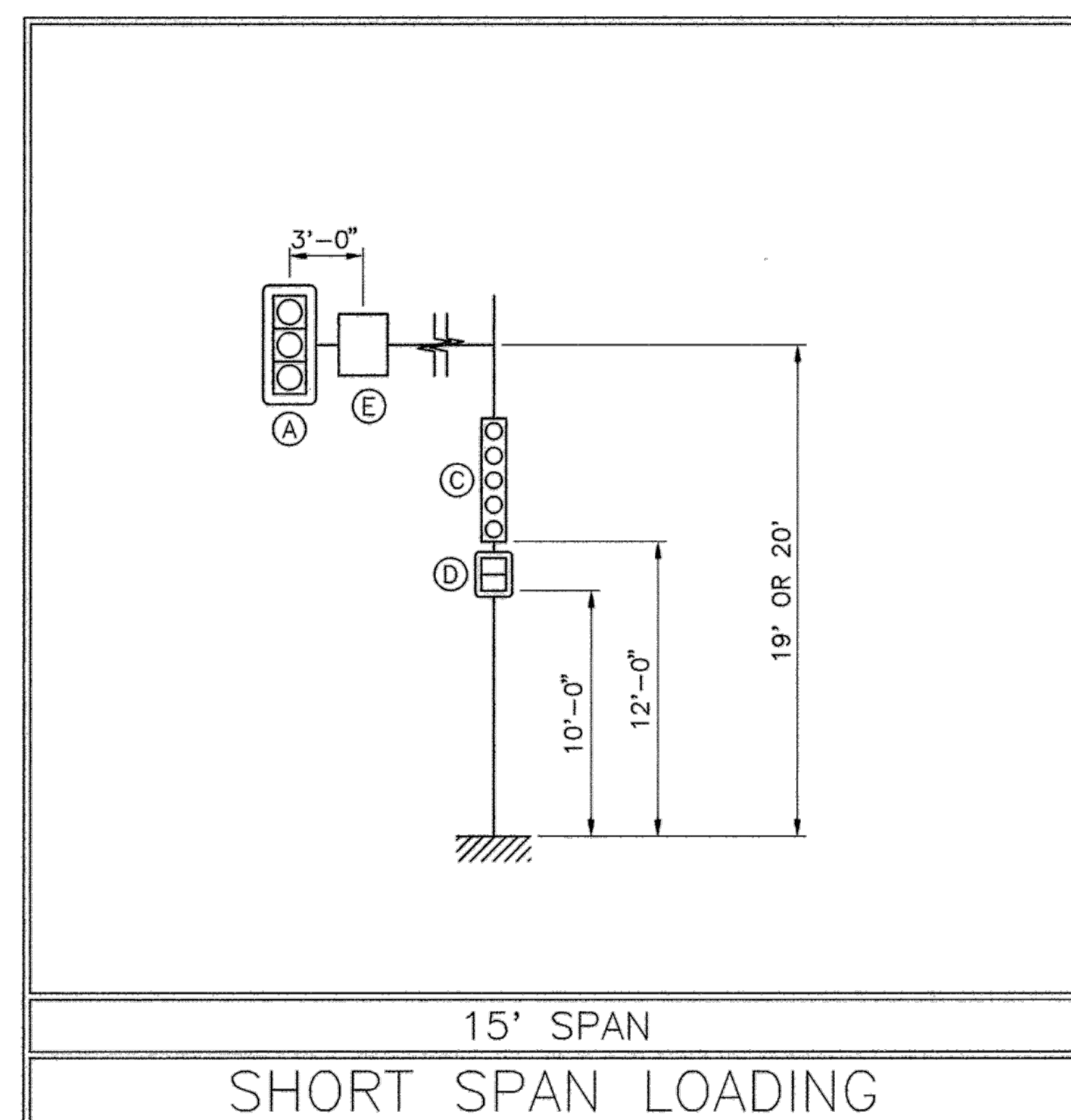
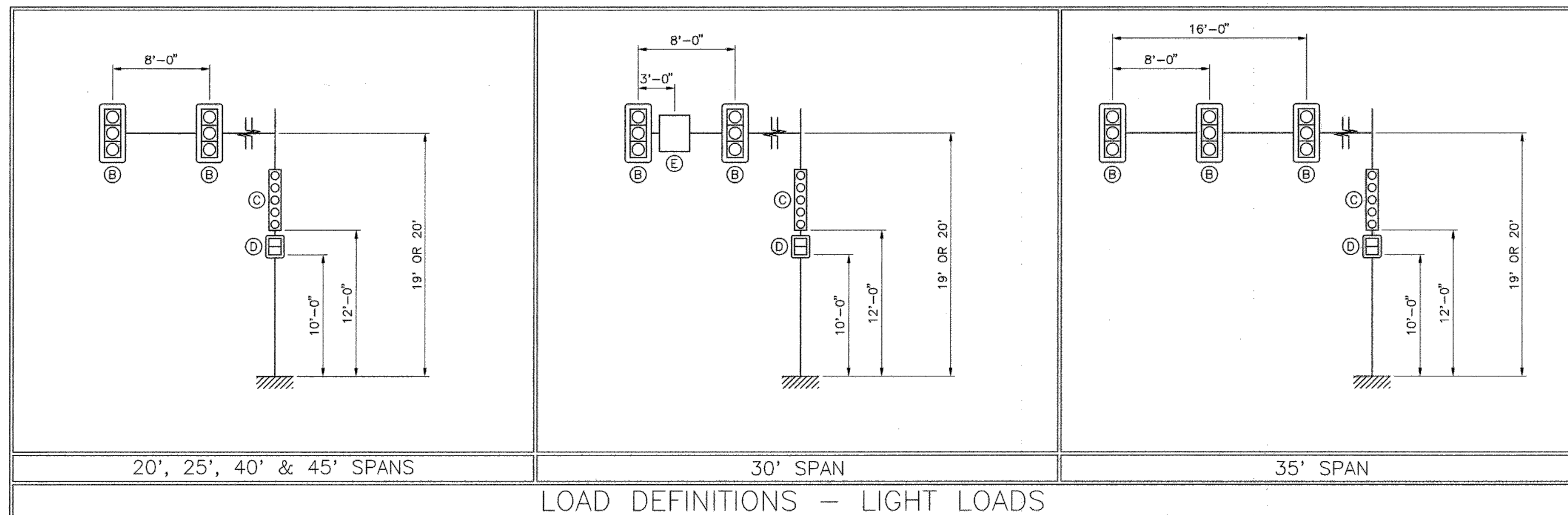
- For these standard drawings the Design Wind Speed for all Mast Arm Structures shall be **130 MPH**.
- For these standard drawings the Design Wind Speed for mast arm foundations located in the following counties: Plymouth, Bristol, Barnstable, Dukes, and Nantucket counties in District 5 and Berkshire 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**.
- For these standard drawings the mast arm structure design life shall be 25 years.
- For these standard drawings the Fatigue Category no. 2 was used and truck induced gusts were excluded in the design.
- 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.
- 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.

Moving Massachusetts Forward.
massDOT
Highway

NO.	REVISION	DATE	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION
			RECOMMENDED FOR APPROVAL
			<i>Neil E. Bourdieu</i> 2/10/11 TRAFFIC ENGINEER DATE
			<i>Donald W. Pemberton</i> 2/17/11 BRIDGE ENGINEER DATE
			<i>Frank G. Traverso</i> 2/24/2011 CHIEF ENGINEER DATE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	38	53
PROJECT FILE NO.		606885	

STANDARD DRAWINGS
TYPE II MAST ARMS



DEVICE	DESCRIPTION	PROJ. AREA (FT ²)	WEIGHT (LBS)
(A)	3 SECTION, 3 WAY SIGNAL	13.50	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

NOTE: ALL SIGNALS HAVE 5.0" BACKPLATES

MONTH_DD, YYYY ISSUED FOR CONSTRUCTION



STANDARD DRAWINGS

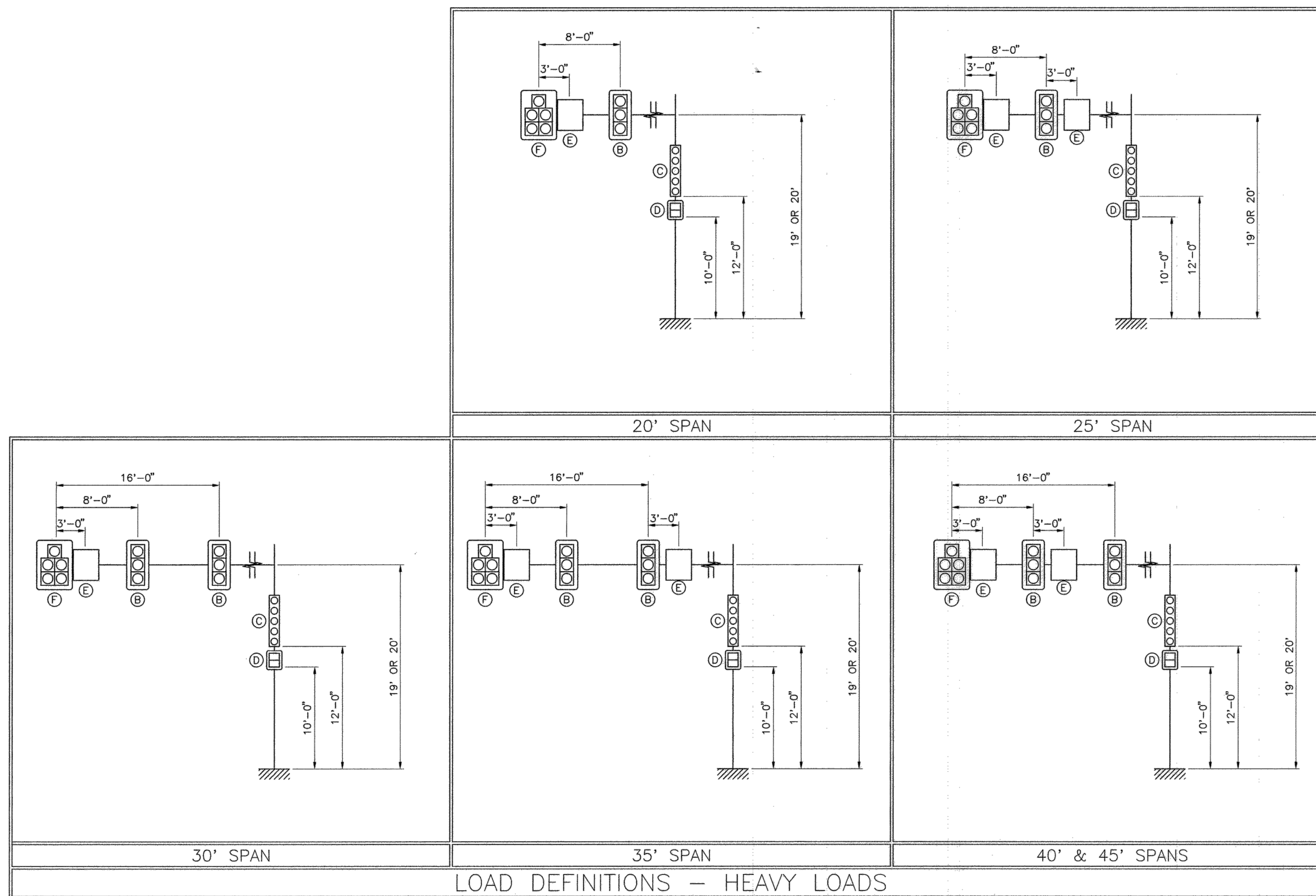
TYPE II MAST ARMS
LIGHT, MEDIUM & SHORT SPAN
LOAD DIAGRAMS

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

Frank A. Tronchetti 2/24/2011
CHIEF ENGINEER
David M. ...
BRIDGE ENGINEER
Neil E. ...
TRAFFIC ENGINEER

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	39	53
PROJECT FILE NO.		606885	

STANDARD DRAWINGS
TYPE II MAST ARMS



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



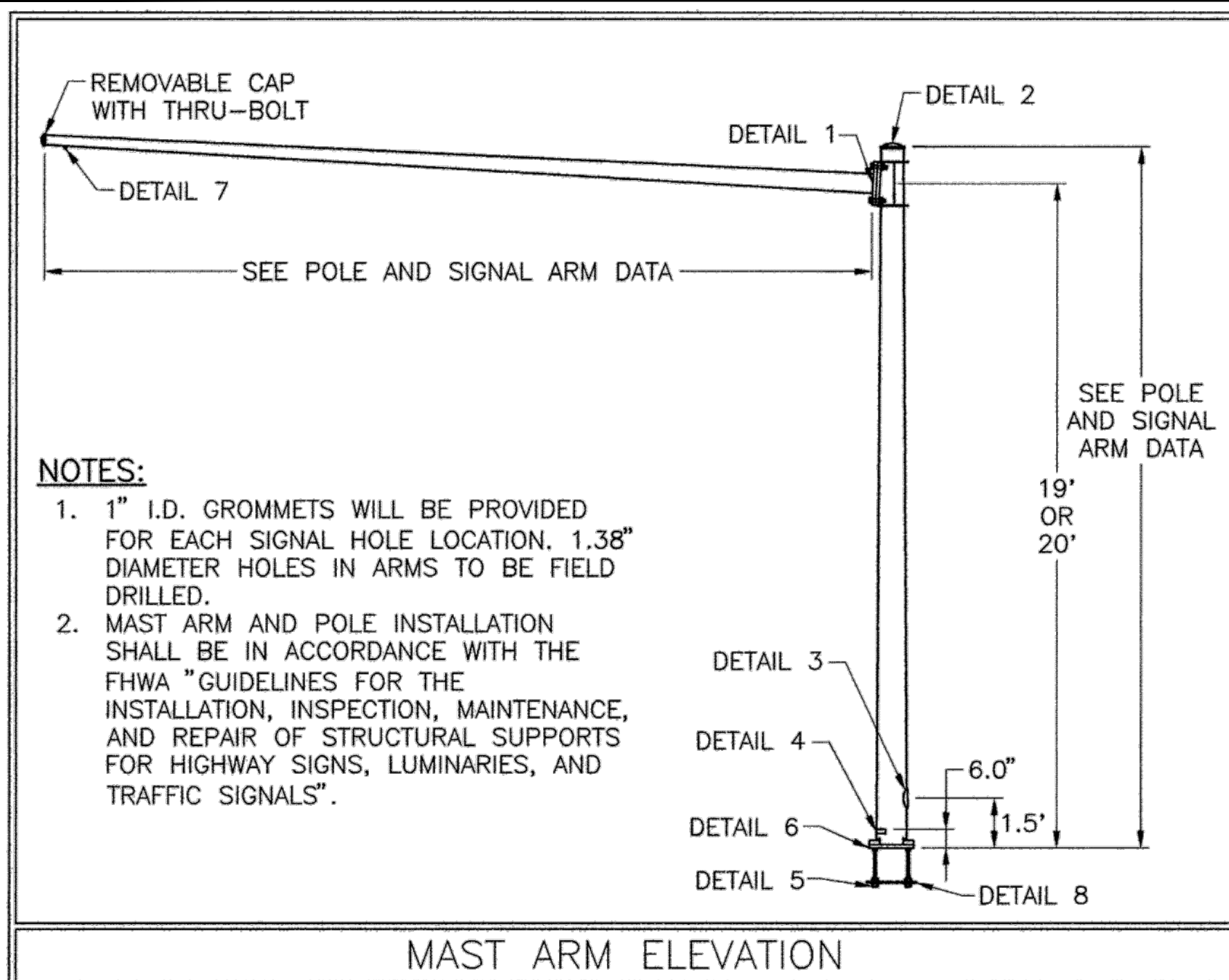
STANDARD DRAWINGS
TYPE II MAST ARMS
HEAVY LOAD DIAGRAMS

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

Frank A. Tomasi 2/24/2011
CHIEF ENGINEER
Neil E. Brennan
BRIDGE ENGINEER TRAFFIC ENGINEER

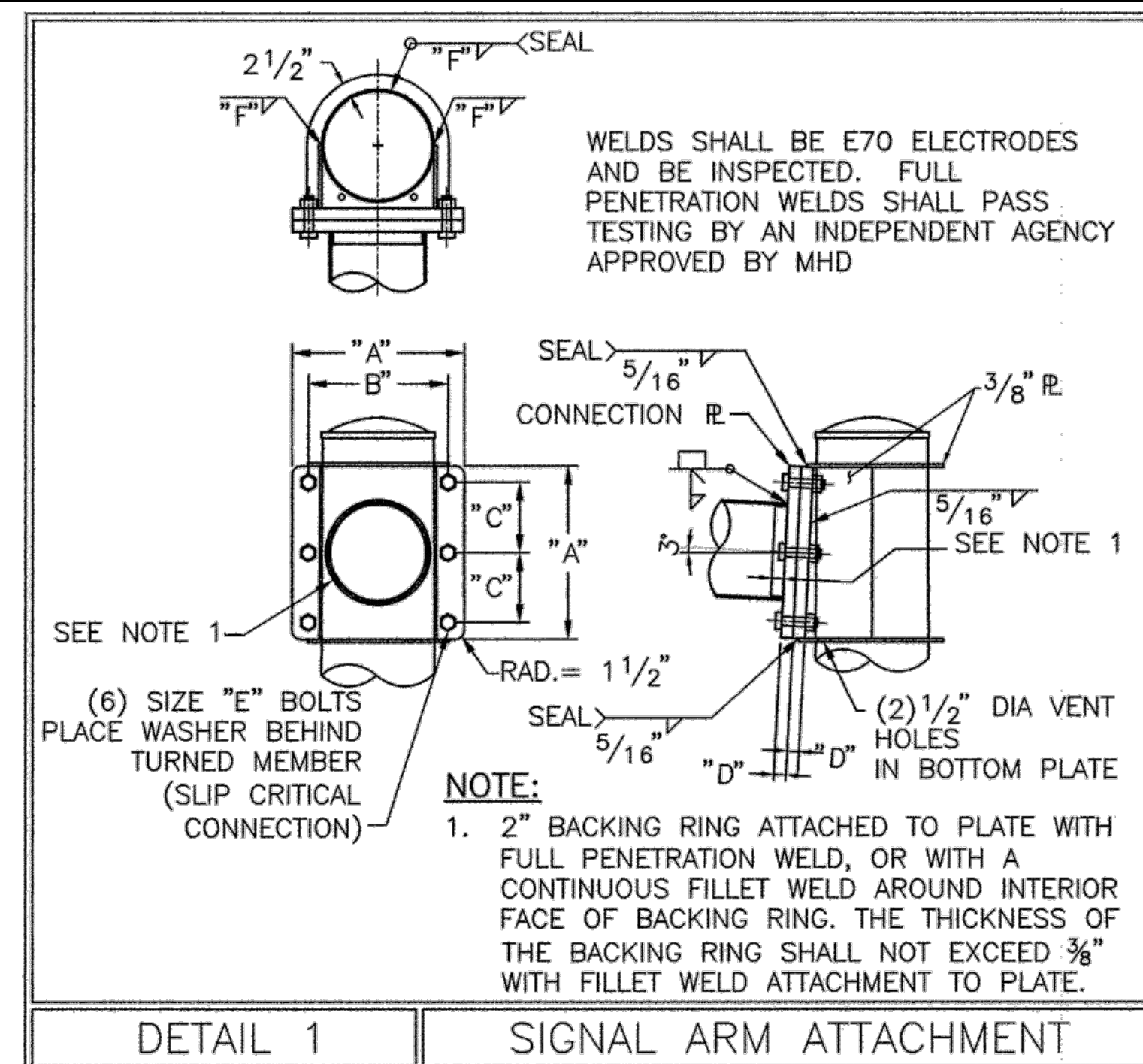
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	40	53
PROJECT FILE NO.		606885	

STANDARD DRAWINGS
TYPE II MAST ARMS

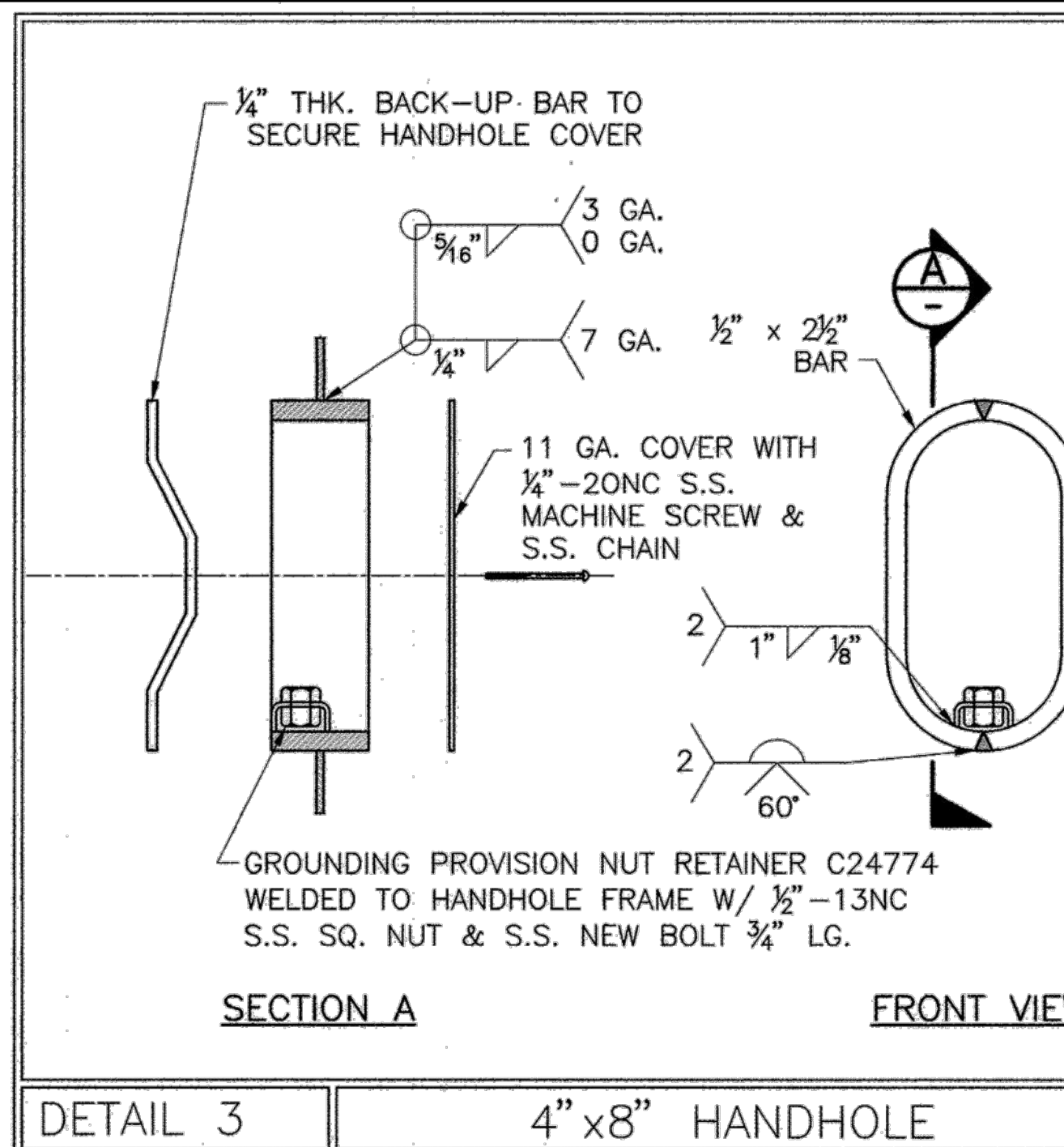


- NOTES:
- 1" I.D. GROMMETS WILL BE PROVIDED FOR EACH SIGNAL HOLE LOCATION. 1.38" DIAMETER HOLES IN ARMS TO BE FIELD DRILLED.
 - MAST ARM AND POLE INSTALLATION SHALL BE IN ACCORDANCE WITH THE FHWA "GUIDELINES FOR THE INSTALLATION, INSPECTION, MAINTENANCE, AND REPAIR OF STRUCTURAL SUPPORTS FOR HIGHWAY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

MAST ARM ELEVATION



DETAIL 1 SIGNAL ARM ATTACHMENT

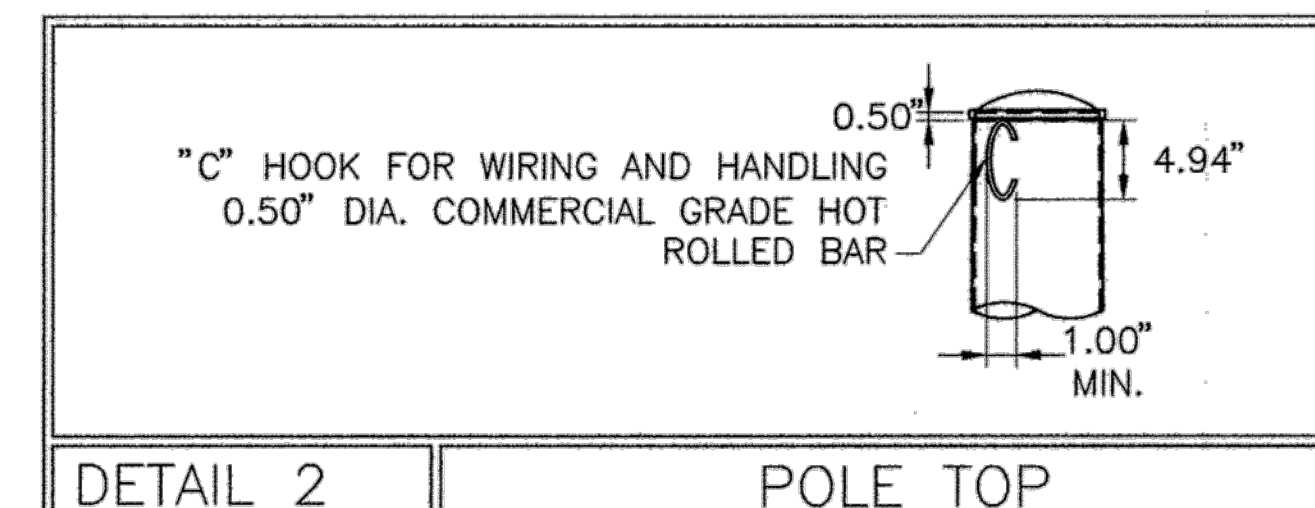


DETAIL 3 4"x8" HANDHOLE

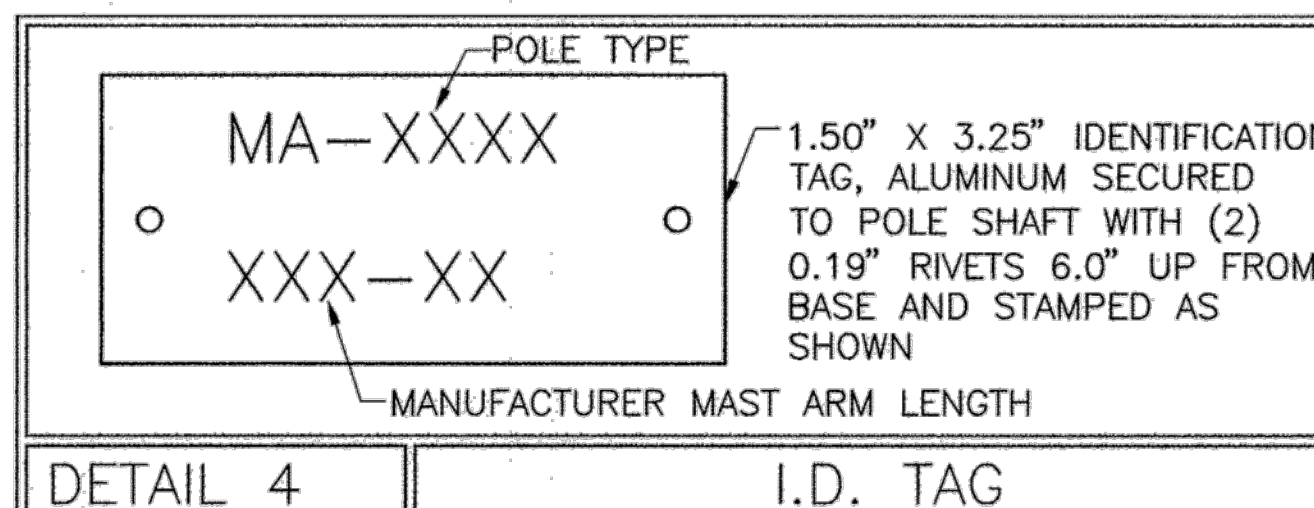
MATERIAL DATA

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				

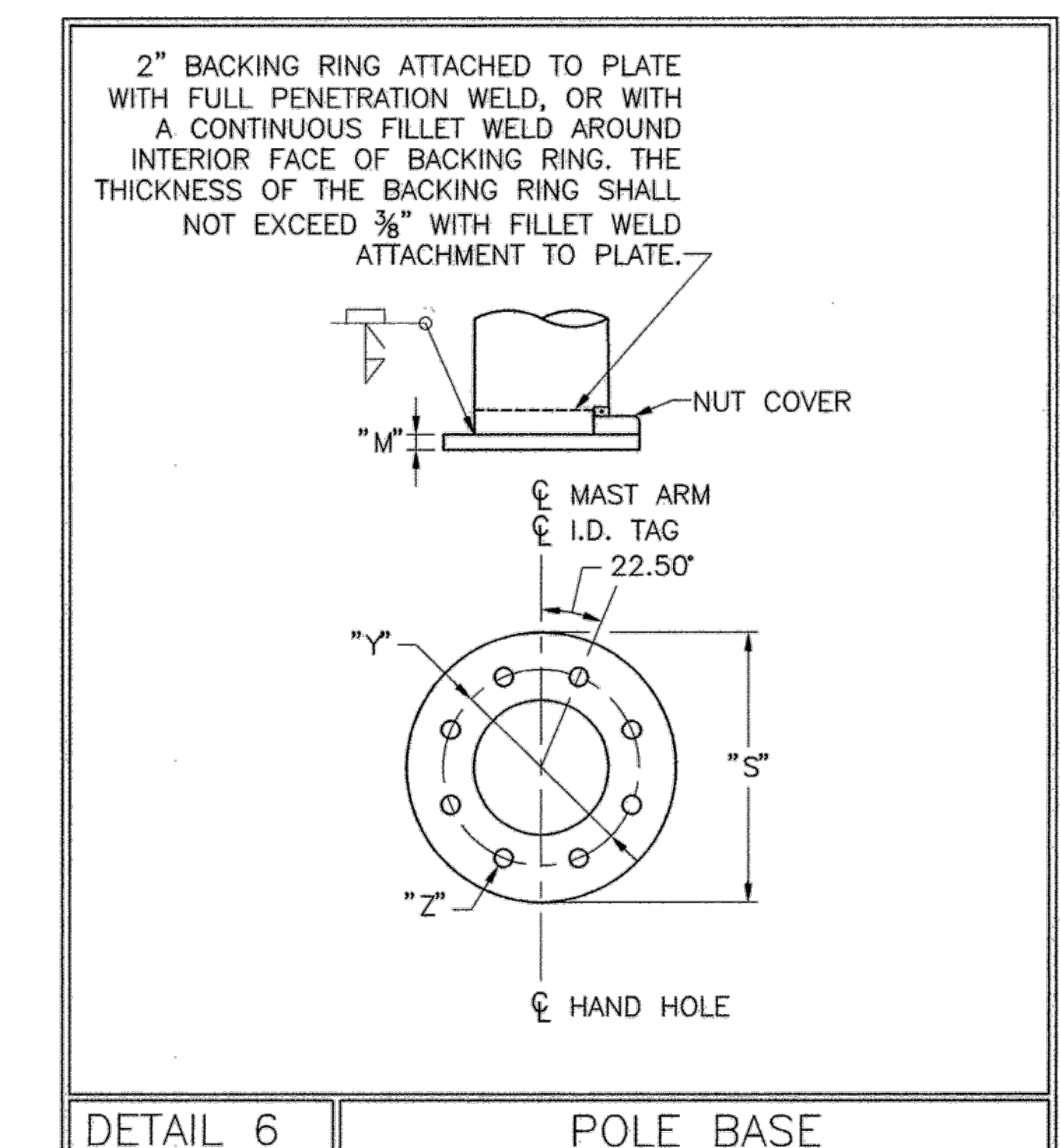
** BOLTS WHICH ACCUMULATE RUST OR DIRT SHALL BE DISCARDED.



DETAIL 2 POLE TOP



DETAIL 4 I.D. TAG



DETAIL 6 POLE BASE

POLE AND SIGNAL ARM DATA - LIGHT LOADS

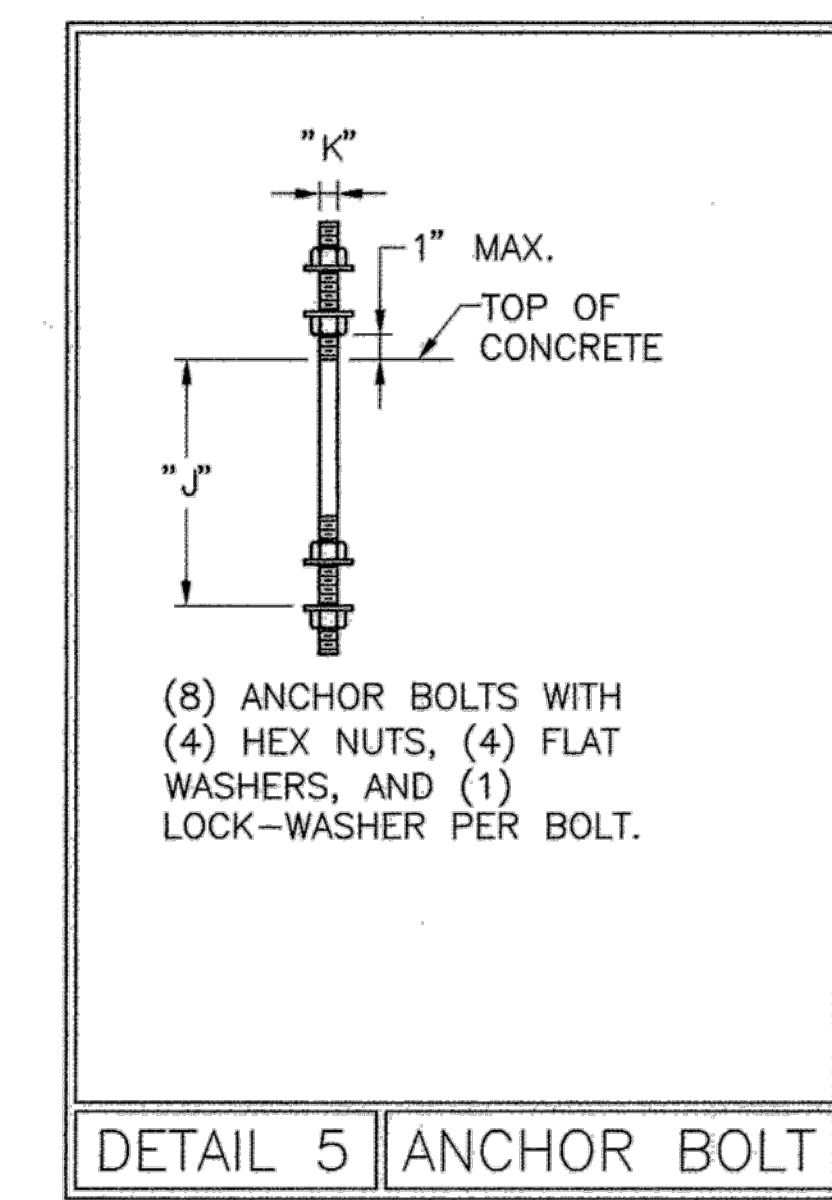
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. 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

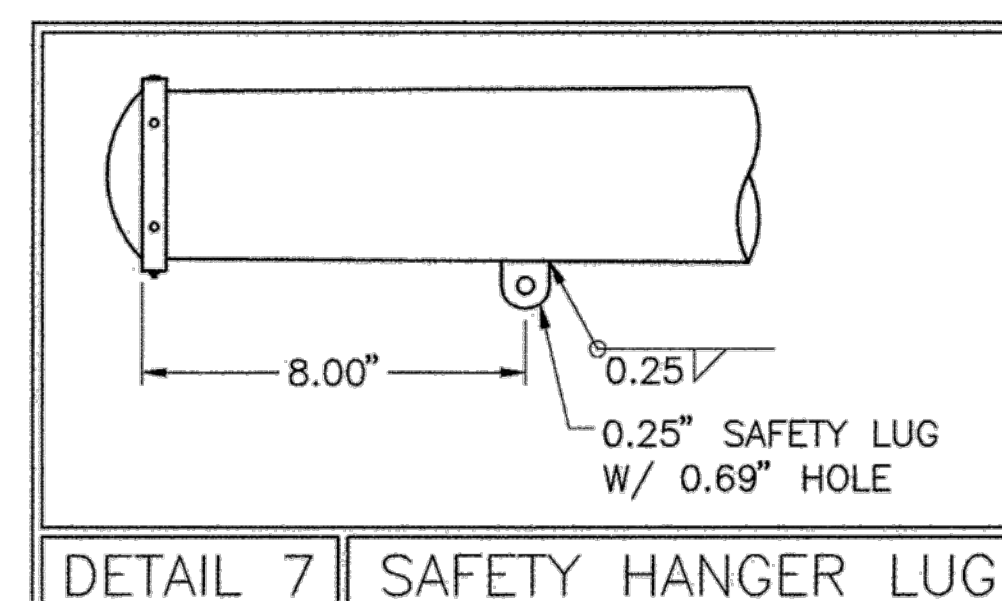
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. 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

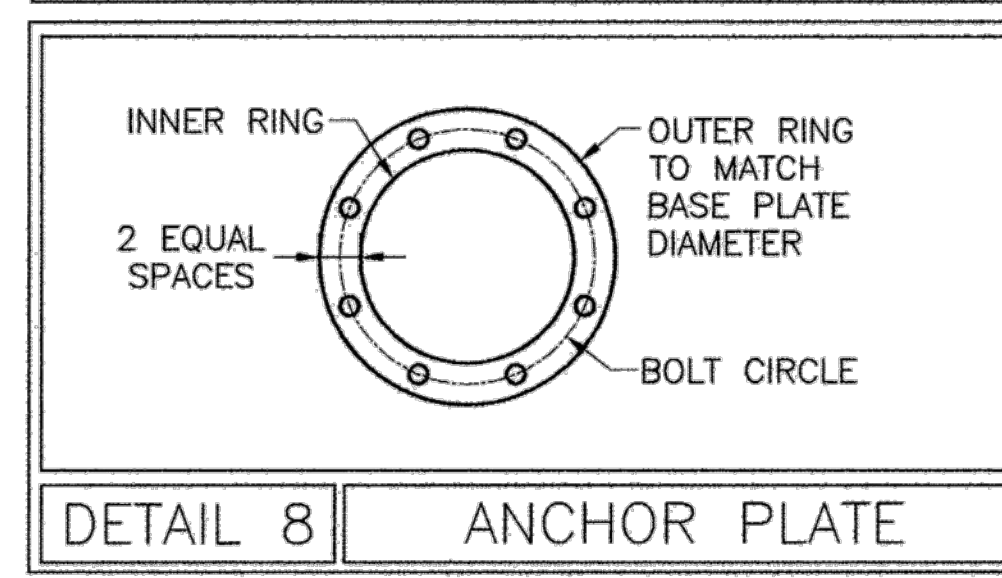
LOCATIONS	SIGNAL ARM TUBE				POLE TUBE				POLE BASE				ANCHOR BOLT		SIGNAL ARM ATTACHMENT DATA					
	SPAN (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	WALL THK.	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	WALL THK.	PLATE CIRCLE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	EMBED. 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

massDOT
Highway
STANDARD DRAWINGS
TYPE II MAST ARMS
DETAILS

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

Frank A. Tomlinson 2/21/2011
CHIEF ENGINEER

Charles H. ...
BRIDGE ENGINEER

Neil E. ...
TRAFFIC ENGINEER

SHEET 4 OF 5 SHEETS

L:\10161\CURRENT\CUSTOMERS\606885_TR(SIGNAL DETAILS)\dwg_9442014_12:25:34 PM

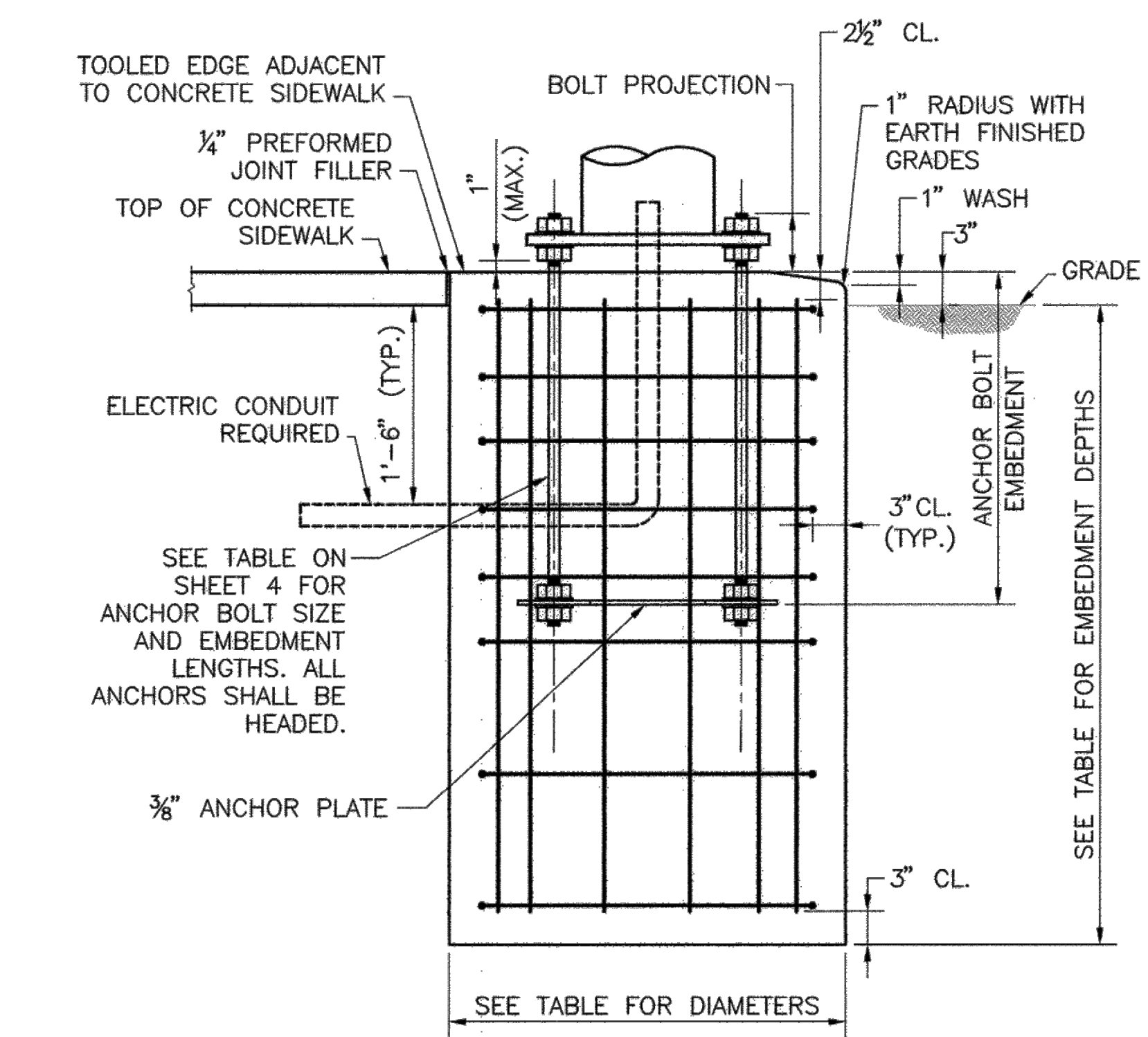
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	41	53
PROJECT FILE NO.		606885	

STANDARD DRAWINGS
TYPE II MAST ARMS

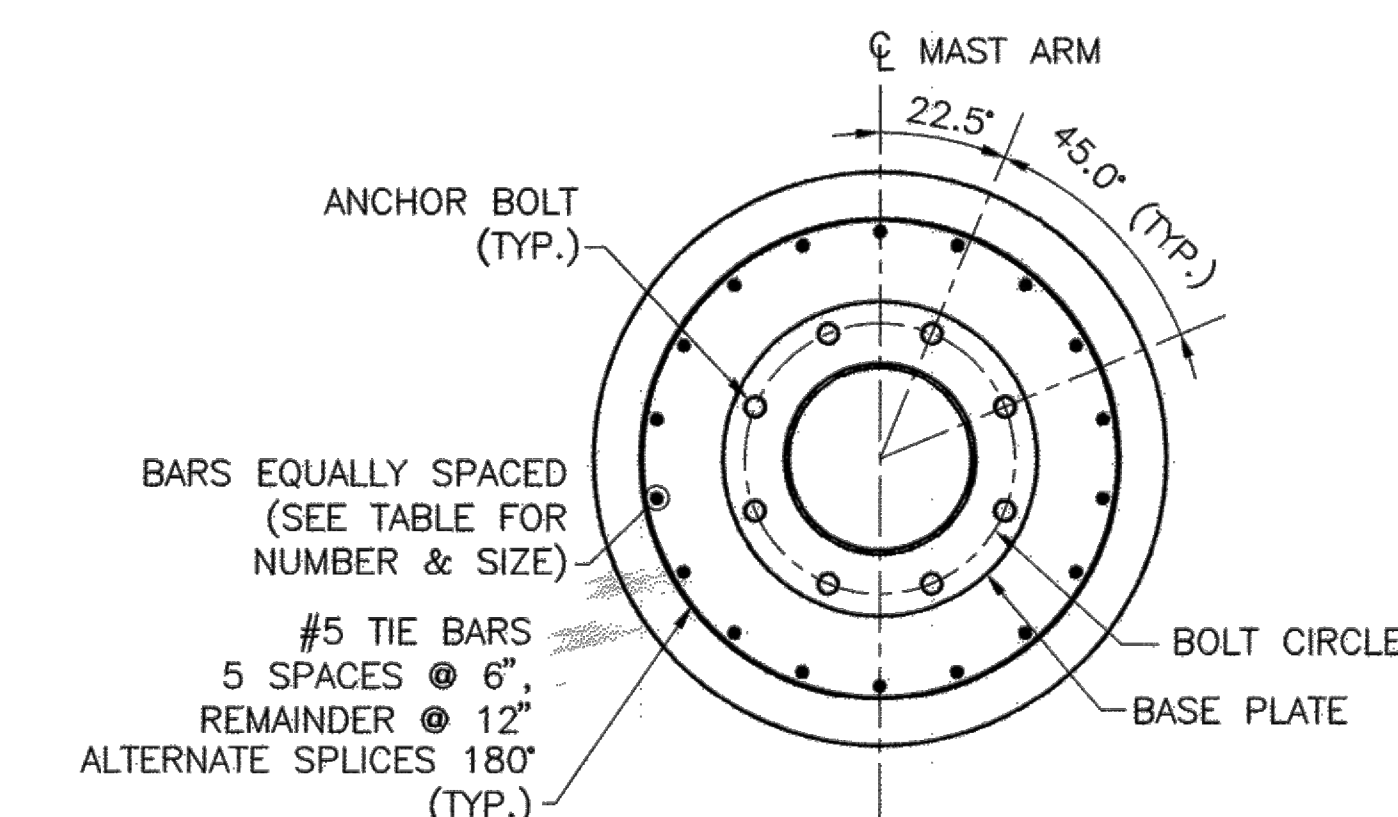
PIER FOUNDATIONS FOR 110 MPH WIND SPEED ZONE												
LIGHT LOADING CONDITIONS												
SOIL TYPE	15' & 20' MAST ARMS			25' & 30' MAST ARMS			35' & 40' MAST ARMS			45' MAST ARMS		
	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS	DIAMETER	DEPTH	VERTICAL BARS
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 FOUNDATION DETAIL
NO SCALE



PIER FOUNDATION PLAN
NO SCALE

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:
- FOUNDATIONS SHALL BE 4000 PSI, 1 1/2", 565 CEMENT CONCRETE.
 - REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
 - ANCHOR BOLTS SHALL BE SET BY TEMPLATE.
 - PROVIDE FOR ELECTRICAL CONDUIT.
 - 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.
 - 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.
 - 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.
 - 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.
 - DETERMINATION OF EXISTING SOIL CONDITIONS SHALL BE MADE BY THE DESIGN ENGINEER.
 - 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.

MONTH_DD_YYYY ISSUED FOR CONSTRUCTION

massDOT
Standard Drawings
TYPE II MAST ARMS
CORED PIER FOUNDATIONS

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

Frank A. Tranter 3/24/2011
CHIEF ENGINEER

Neil E. Bourdeau
TRAFFIC ENGINEER

SHEET 5 OF 5 SHEETS

**ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	42	53
PROJECT FILE NO.		606885	

**TEMPORARY TRAFFIC CONTROL PLAN
GENERAL NOTES, LEGEND,
AND ADVANCE WARNING SIGNAGE**

PORTABLE CHANGEABLE MESSAGE SIGN SCHEDULE

SIGN	DURING CONSTRUCTION	2 WEEKS PRIOR TO WORK
1	MASS AVE UNDER CONST	"DATE" MASS AVE WORK
2	MYSTIC UNDER CONST	"DATE" MYSTIC WORK

GENERAL NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED DRUMS WITH MOUNTED LIGHTING DEVICES, MUST PASS THE CRITERIA SET FORTH IN THE NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESS/RESIDENTS AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL LIMIT FULL DEPTH SIDEWALK CONSTRUCTION, OR ANY WORK THAT INVOLVES EXCAVATION WITHIN OR ADJACENT TO SIDEWALKS, TO ONE STREET BLOCK ON EACH SIDE OF THE STREET.
- CONTRACTOR SHALL ONLY OCCUPY THE CURBSIDE PARKING LANE ON ONE SIDE OF THE STREET IN THE BLOCK WHERE WORK IS OCCURRING.
- NO SIDEWALK OR UTILITY WORK SHALL BE PERFORMED ON BOTH SIDES OF THE STREET SIMULTANEOUSLY WITHIN THE BLOCK WHERE WORK IS OCCURRING.

CONSTRUCTION STAGING:

- CONTRACTOR WILL PERFORM WORK AFFECTING THE TRAVELING PUBLIC ONLY BETWEEN 9:00 AM AND 3:00 PM. ALL PAVEMENT EDGES SHALL BE SLOPED, WITH NO SHARP DROP OFFS.
- NO WORK AFFECTING THE TRAVELING PUBLIC SHALL BE DONE BETWEEN THE DATES OF NOVEMBER 15 AND JANUARY 15 WITHOUT THE APPROVAL OF THE ENGINEER AND TOWN. ALL LANES AND SIDEWALKS MUST BE OPEN TO TRAFFIC AND PEDESTRIANS DURING THIS TIME.
- ACCESS TO ALL INTERSECTING STREETS AND BUSINESSES, DRIVEWAYS, AND WALKWAYS SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION, EXCEPT DURING SUCH LIMITED TIMES AS INDICATED IN NOTE 4 BELOW.
- CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING ROADWAY, DRIVEWAY OR SIDEWALK EXCAVATION, TEMPORARY OR PERMANENT DRIVEWAY PAVEMENT PLACEMENT, WALKWAY RECONSTRUCTION, AND SIMILAR OPERATIONS.
- THE CONTRACTOR SHALL PROVIDE SAFE AND READY MEANS OF INGRESS AND EGRESS TO ALL STORES AND SHOPS, PUBLIC AND PRIVATE AND PROFESSIONAL OFFICES AND ANY OTHER BUSINESSES OR RESIDENTS IN THE PROJECT AREA, BOTH DAY AND NIGHT, FOR

THE DURATION OF THE PROJECT.

PHASE I - SIDEWALK RECONSTRUCTION, CURBING, AND DRAINAGE:

- CONSTRUCT SIDEWALK, RESET/INSTALL CURBING, AND INSTALL DRAINAGE STRUCTURES WITHIN WORK ZONE.
- WHERE THE WORK IS OCCURRING, CURBSIDE PARKING MUST BE MAINTAINED ON AT LEAST ONE SIDE OF THE ROADWAY AT ALL TIMES. NO CURB OR DRAINAGE WORK MAY BE PERFORMED SIMULTANEOUSLY ON DIRECTLY OPPOSITE SIDES OF THE ROADWAY.
- SEE TEMPORARY TRAFFIC CONTROL DETAILS, SHEETS 43 TO 45.

PHASE II - MEDIAN CONSTRUCTION:

- CONSTRUCT MEDIANS (INSTALL CURBING OR EDGING AS REQUIRED) WITHIN WORK ZONE.
- SEE TEMPORARY TRAFFIC CONTROL PLANS, SHEETS 46 TO 49.

PHASE III - MILLING AND PAVING:

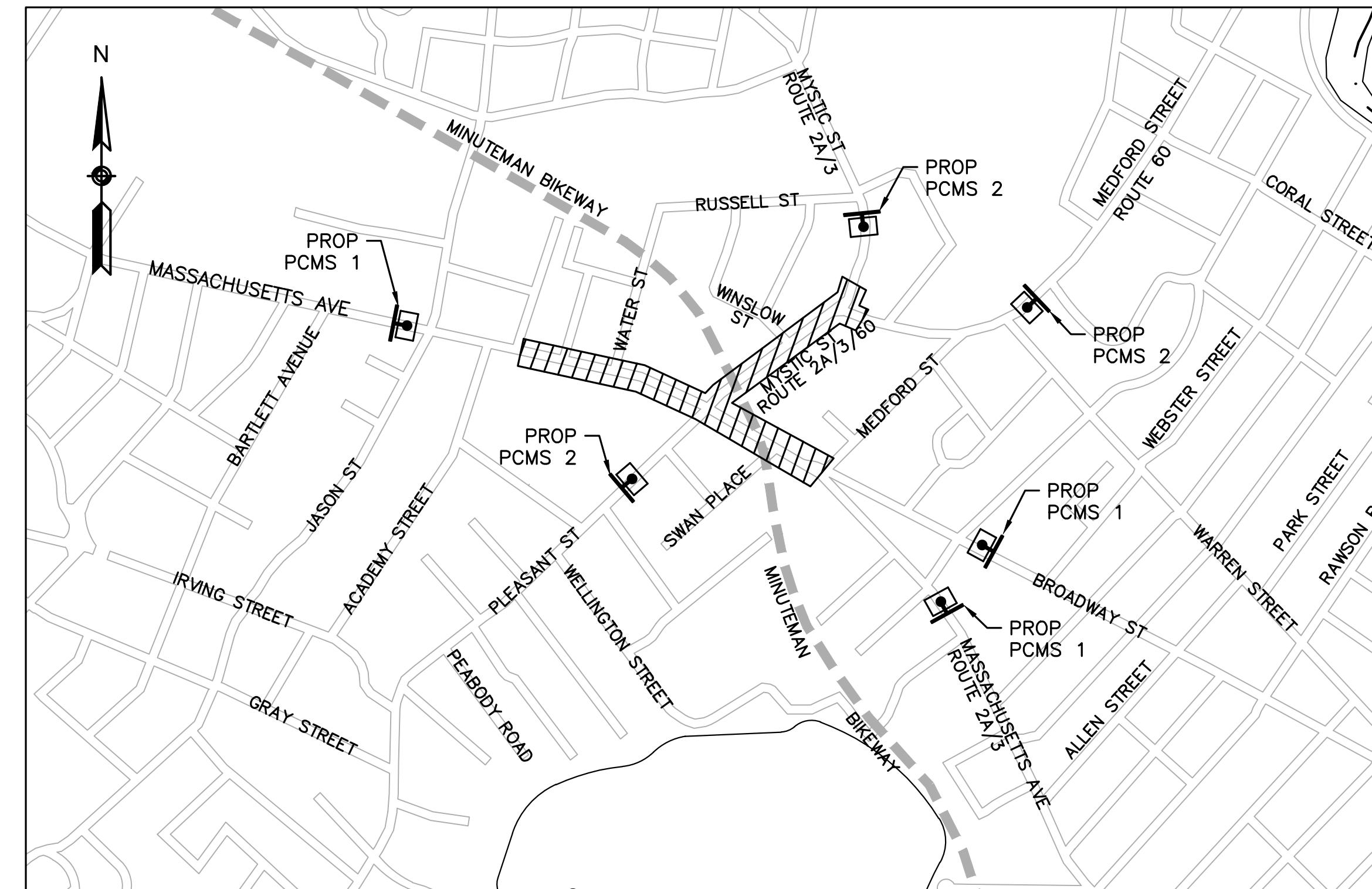
- MILLING AND PAVING SHALL NOT BE DONE UNTIL SIDEWALK AND MEDIAN WORK IS COMPLETE.
- MILL AND OVERLAY PAVEMENT WITHIN THE LIMITS OF CONSTRUCTION AND AS REQUIRED BY THE ENGINEER.
- MILLING AND PAVING OPERATIONS FOR MASSACHUSETTS AVENUE SHALL FOLLOW THE SEQUENCE BELOW:
 - REPAVE THE EASTBOUND PARKING LANE. MAINTAIN 15' MINIMUM TRAVEL WAY.
 - REPAVE THE REMAINING EASTBOUND TRAVEL LANES. SHIFT TRAFFIC INTO PARKING LANE AND MAINTAIN 15' MINIMUM TRAVEL WAY.
 - REPAVE THE WESTBOUND PARKING LANE. MAINTAIN 15' MINIMUM TRAVEL WAY.
 - REPAVE THE REMAINING WESTBOUND TRAVEL LANES. SHIFT TRAFFIC INTO PARKING LANE AND MAINTAIN 15' MINIMUM TRAVEL WAY.
- MILLING AND PAVING OPERATIONS FOR PLEASANT STREET/MYSTIC STREET SHALL FOLLOW THE SEQUENCE BELOW:
 - REPAVE THE EASTERN HALF OF NORTHBOUND TRAVEL LANE. MAINTAIN 12' MINIMUM TRAVEL WAY.
 - REPAVE THE WESTERN HALF OF NORTHBOUND TRAVEL LANE. MAINTAIN 12' MINIMUM TRAVEL WAY.
 - REPAVE THE WESTERN HALF OF SOUTHBOUND TRAVEL LANES. MAINTAIN 12' MINIMUM TRAVEL WAY.
 - REPAVE THE EASTERN HALF OF SOUTHBOUND TRAVEL LANES. MAINTAIN 12' MINIMUM TRAVEL WAY.
- MILLING AND PAVING SHALL TAKE PLACE OUTSIDE MORNING OR EVENING PEAK TRAVEL HOURS (9:00 AM - 3:00 PM) AS APPROVED BY THE ENGINEER.
- NO SUBPHASE OR SECTION OF ROADWAY MILLING AND PAVING SHALL TERMINATE WITHIN AN INTERSECTION.

PHASE IV - PAVEMENT MARKINGS:

- APPLY PERMANENT PAVEMENT MARKINGS THROUGHOUT THE PROJECT.

PHASE V - FINAL LANDSCAPING AND CLEAN-UP:

- INSTALL FINAL LANDSCAPING, REPAIR AND REPLACE LANDSCAPING THAT HAS BEEN DAMAGED OR HAS NOT ESTABLISHED PROPERLY.
- RE-SEED ANY LAWN AREAS AS DIRECTED BY THE ENGINEER.
- CLEANUP OF PROJECT SITE.



ADVANCE WARNING SIGNAGE
(NOT TO SCALE)

NOTE:

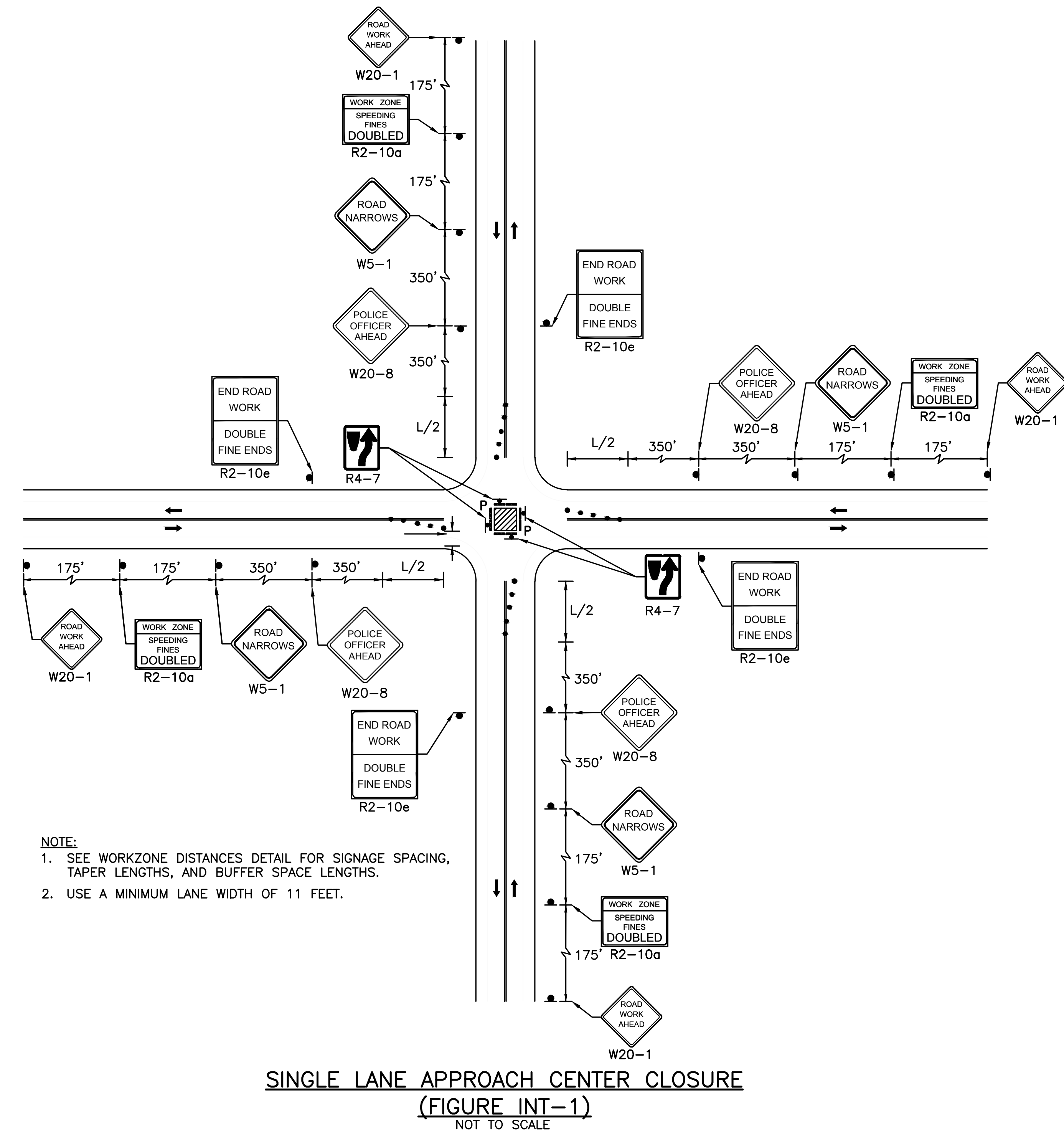
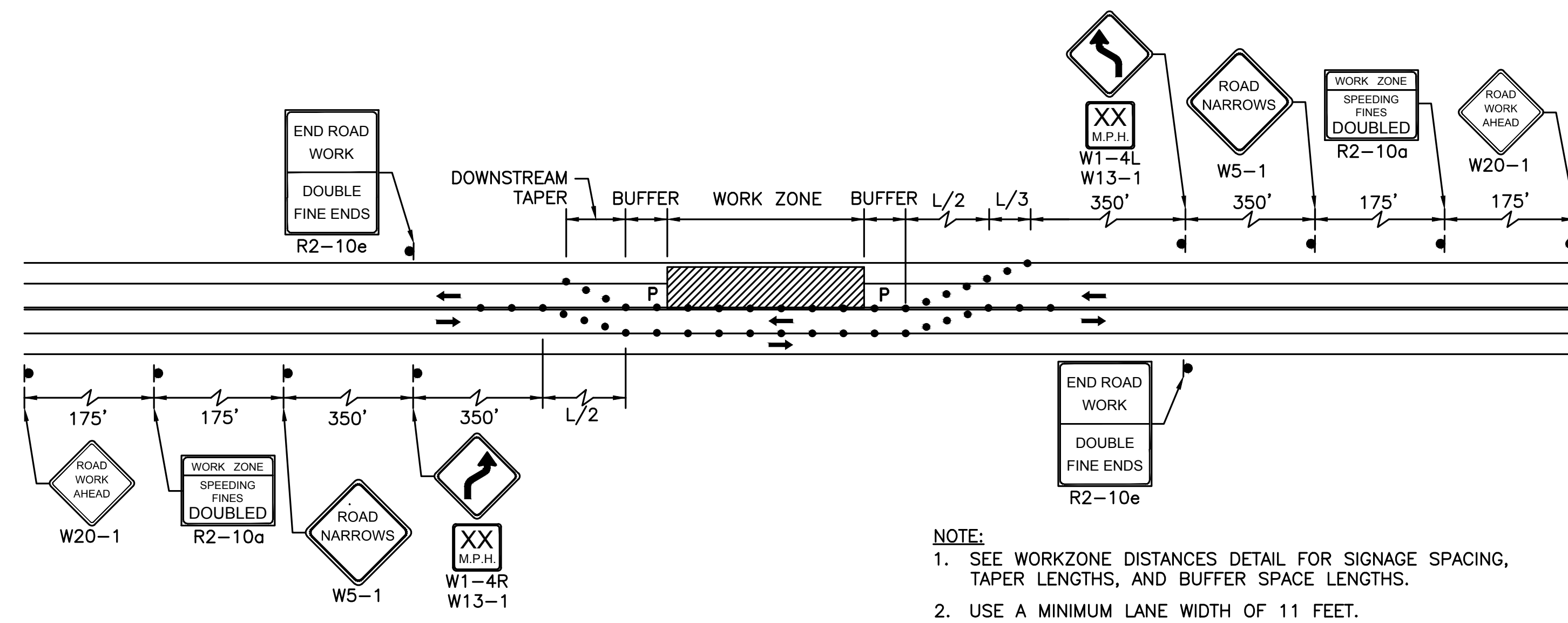
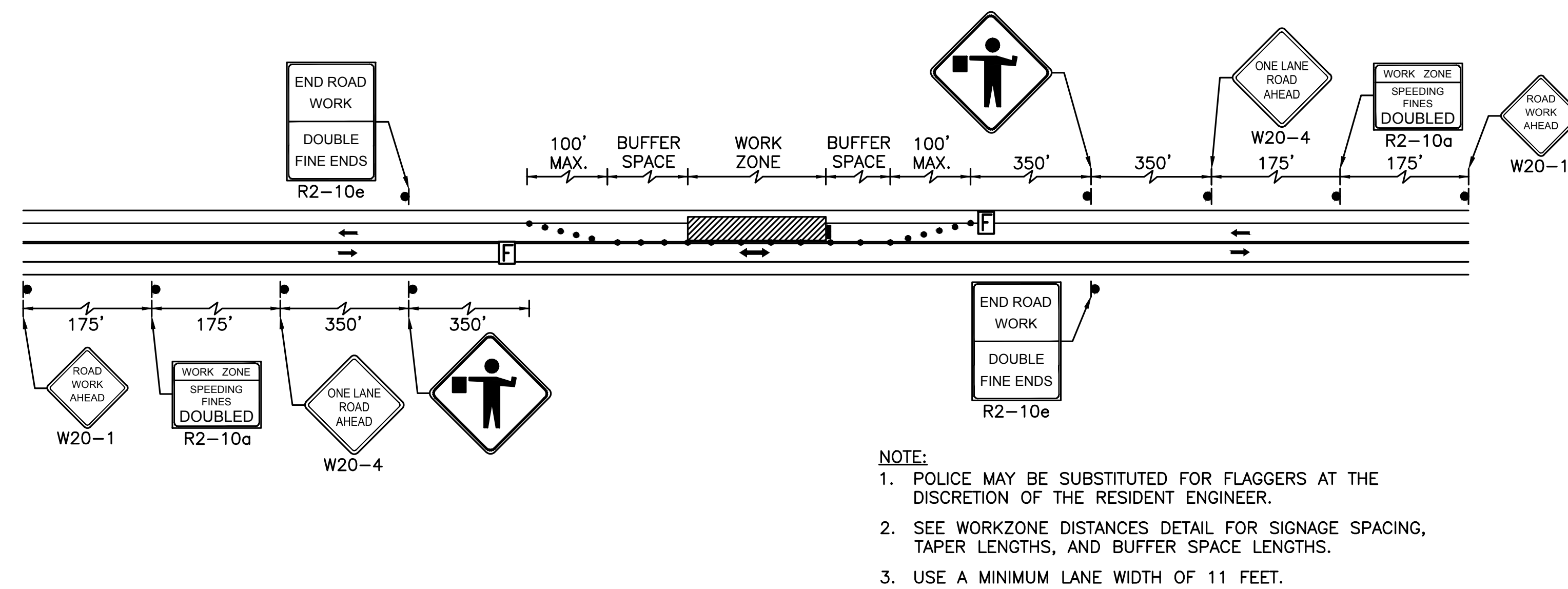
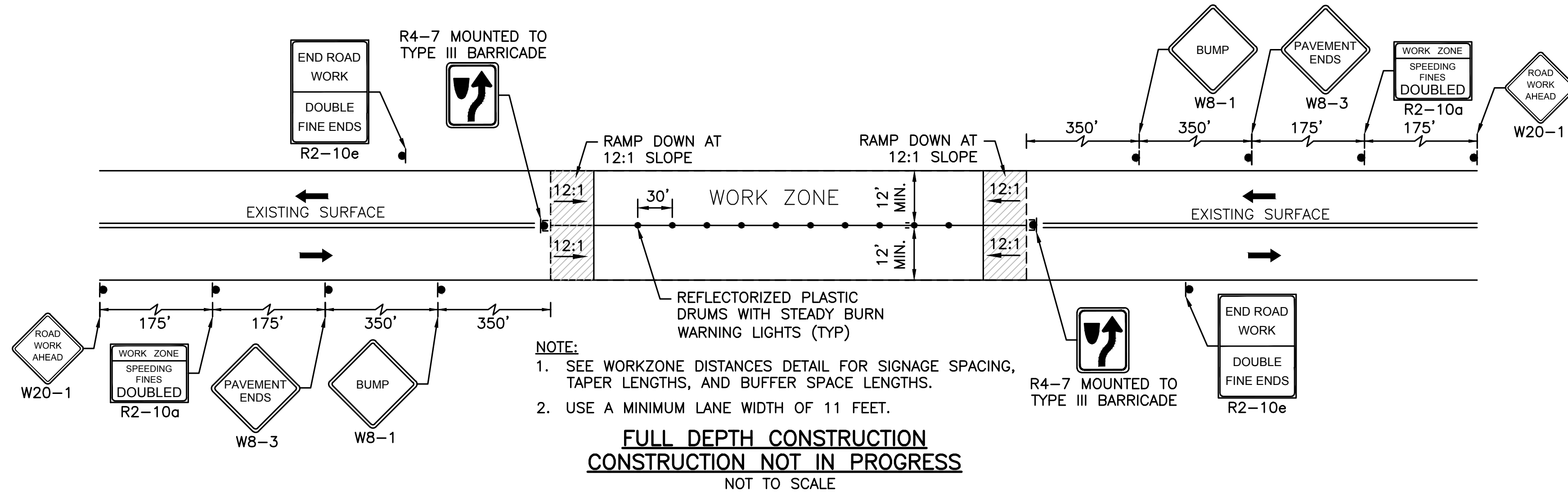
THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL PROPOSED PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) IN THE FIELD SUCH THAT VEHICULAR AND PEDESTRIAN TRAFFIC IS NOT IMPEDED. LOCATION OF PCMS UNITS ON PRIVATE PROPERTY SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE OWNER.

TEMPORARY TRAFFIC CONTROL PLAN LEGEND

	DIRECTION OF TRAVEL / NUMBER OF TRAVEL LANES
	STACKABLE REFLECTORIZED TRAFFIC DRUM
	36" TRAFFIC CONE
	WORK AREA
	SINGLE SIGN POST
	FLAGGER
	POLICE DETAIL
	PEDESTRIAN FLOW
	TYPE III BARRICADE
	TAPERED PRECAST CONCRETE TRAFFIC BARRIER
	HIGH MOUNTED INTERNALLY ILLUMINATED FLASHING ARROW
	PORTABLE CHANGEABLE MESSAGE SIGN
	72" CHAIN LINK FENCE
	TEMPORARY CONCRETE BARRIER
	TEMPORARY CONCRETE BARRIER WITH 72" CLF
	TEMPORARY IMPACT ATTENUATOR
	VEHICLE MOUNTED MOVABLE IMPACT ATTENUATOR
	PROPOSED GRANITE CURB TO BE INSTALLED
	PROPOSED NEW CURB
	PROPOSED WORKZONE

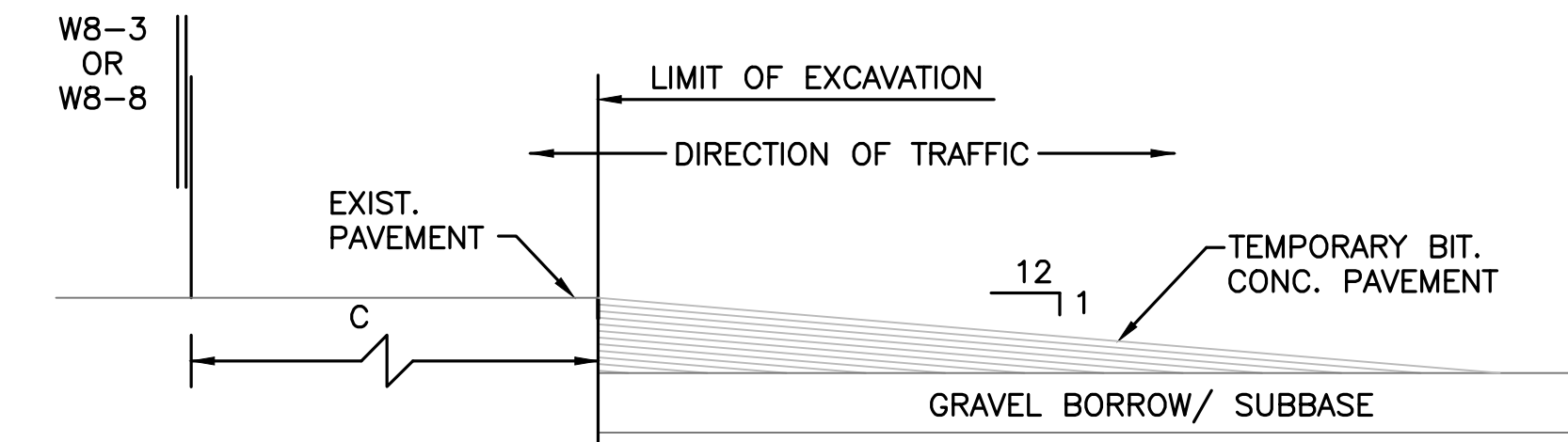
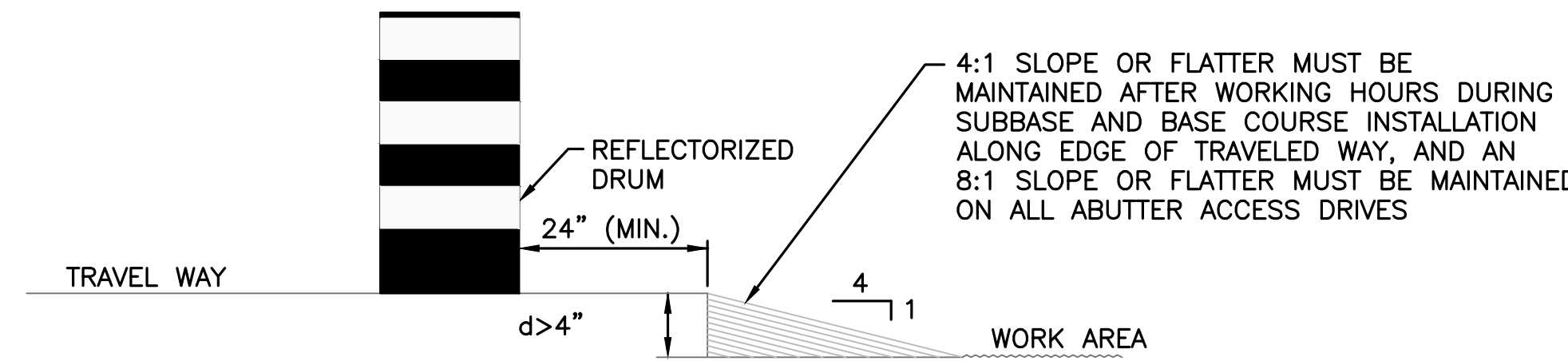
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	43	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLAN
DETAILS



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	44	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLAN
DETAILS



LATERAL DROP-OFF DETAIL
(FIGURE GEN-5)
NOT TO SCALE

LONGITUDINAL DROP-OFF DETAIL
(FIGURE GEN-5)
NOT TO SCALE

RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN (LOW SPEED)*	100 FEET	100 FEET	100 FEET
URBAN (HIGH SPEED)*	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET
EXPRESSWAY/FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET

SOURCE: TABLE 6C-1 2009 MUTCD

BUFFER SPACE TABLE

POSTED SPEED (MPH)	LENGTH (FT)
20	115
25	155
30	200
35	250
40	305
45	250
50	250
55	495
60	570
65	645
70	730
75	820

SOURCE: TABLE 6C-2 2009 MUTCD

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

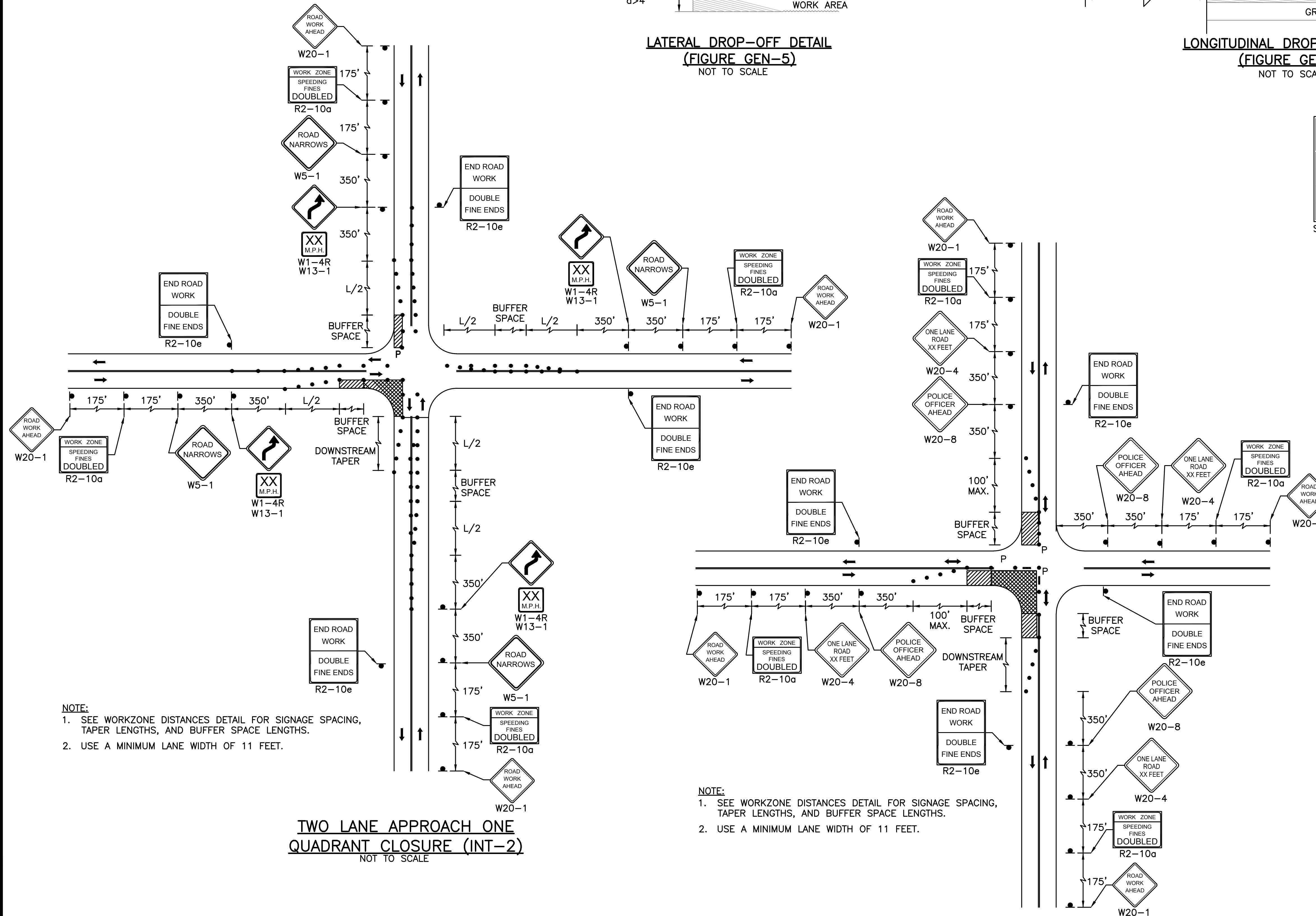
SPEED LIMIT (S)	TAPER LENGTH L (FT)
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

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 ANTICIPATED OPERATING SPEED IN MPH



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

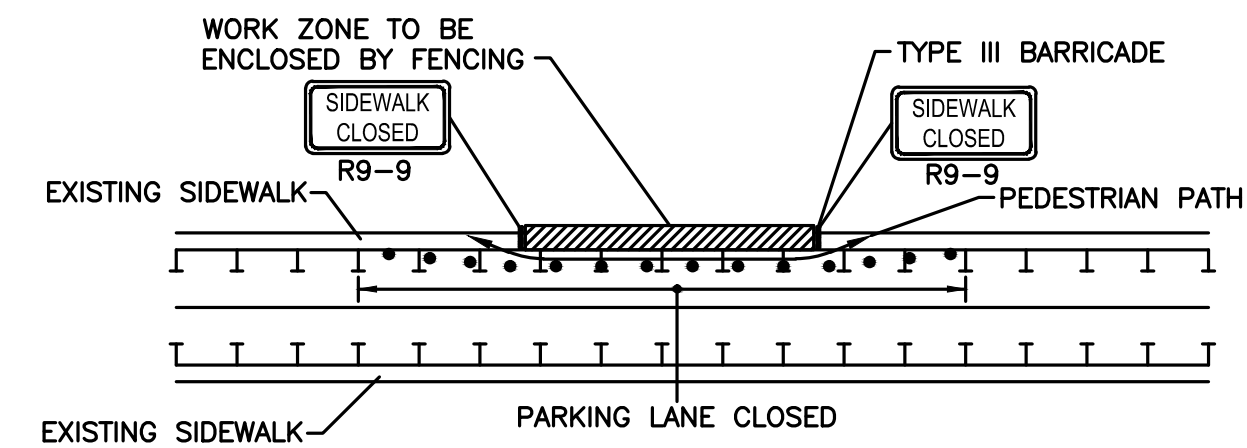
- NOTE:
- SEE WORKZONE DISTANCES DETAIL FOR SIGNAGE SPACING, TAPER LENGTHS, AND BUFFER SPACE LENGTHS.
 - USE A MINIMUM LANE WIDTH OF 11 FEET.

SINGLE LANE APPROACH ONE QUADRANT CLOSURE
(FIGURE INT-2)
NOT TO SCALE

WORK ZONE DISTANCES (GEN-2)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	45	53
PROJECT FILE NO.		606885	

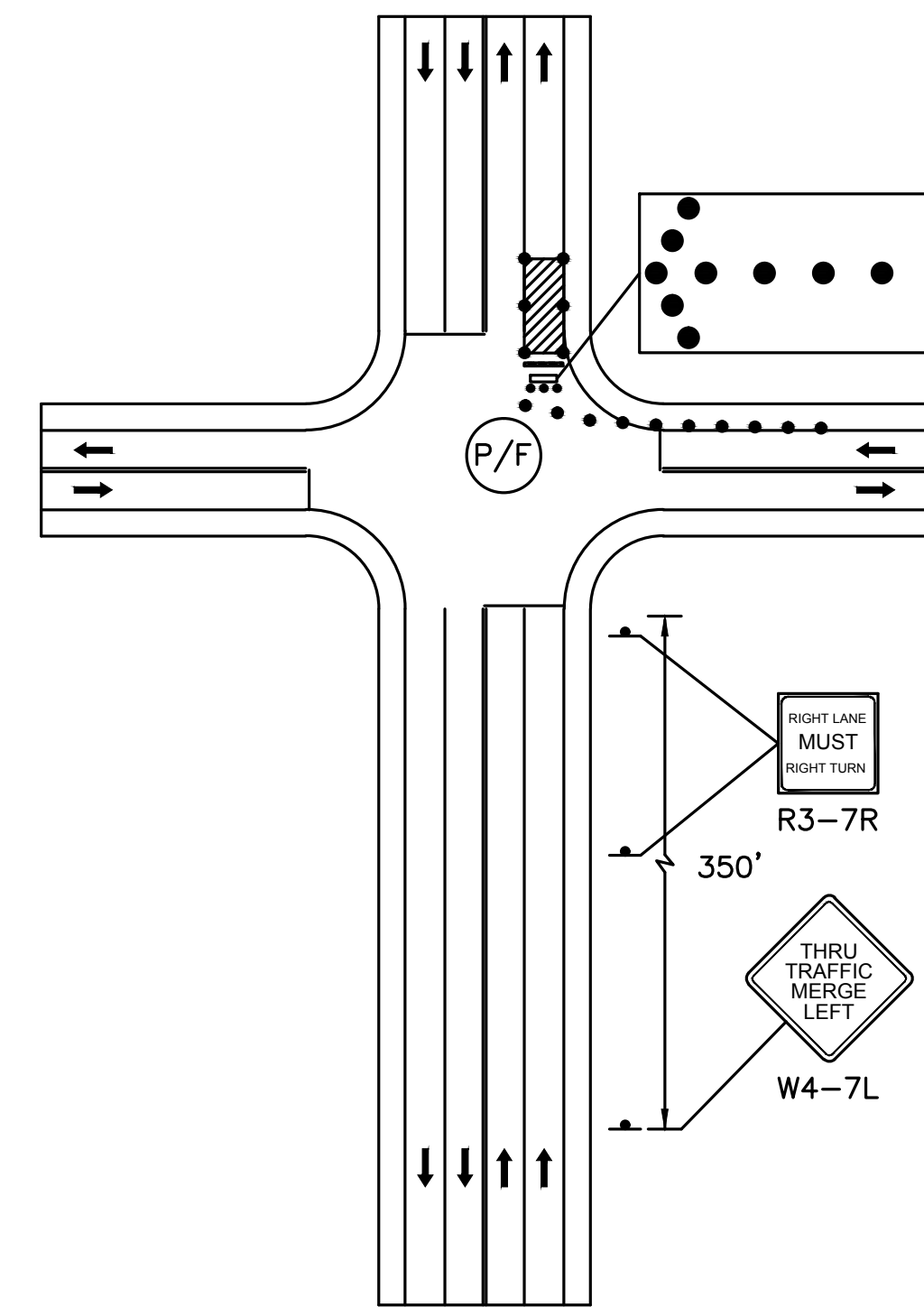
TEMPORARY TRAFFIC CONTROL PLAN
DETAILS



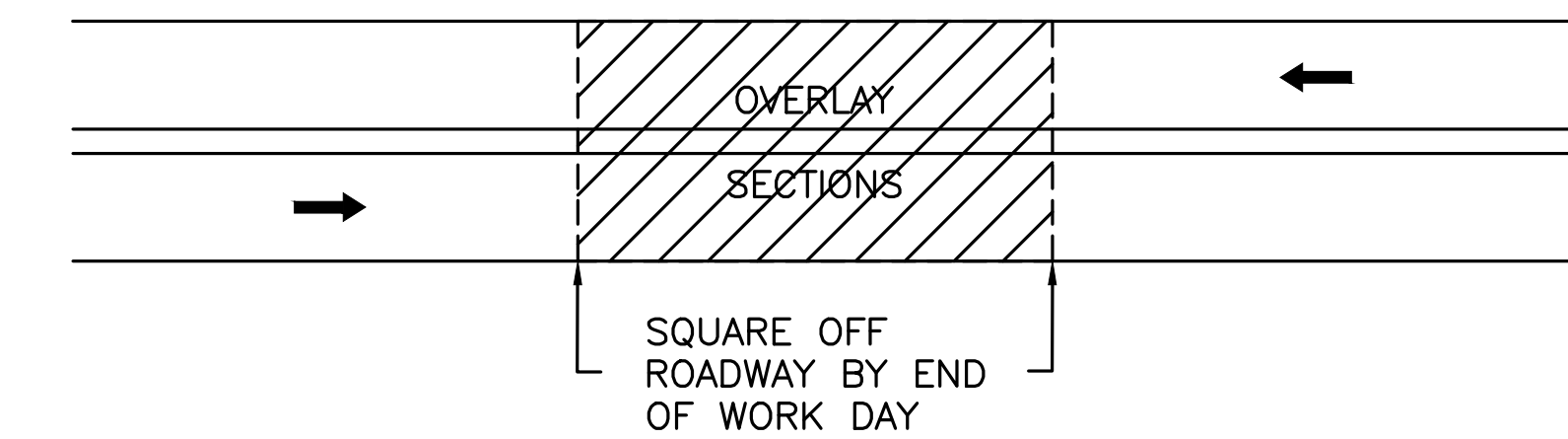
NOTES

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
5. THE TEMPORARY PEDESTRIAN PATHS SHALL BE ADA COMPLIANT.

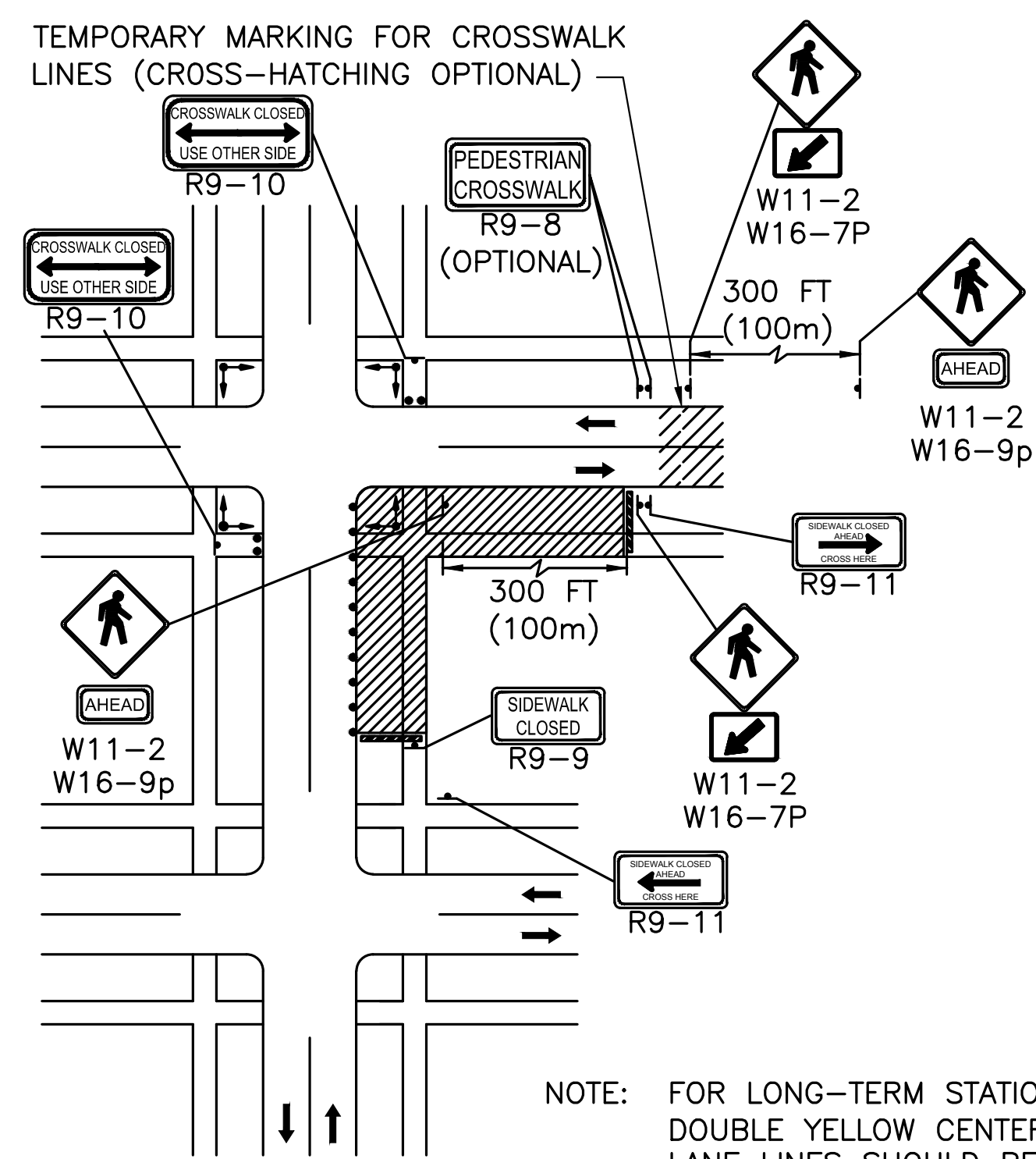
PEDESTRIAN BYPASS (PED-3)
NOT TO SCALE



DOUBLE LANE APPROACH FAR
SIDE CLOSURE RIGHT LANE (INT-4)
NOT TO SCALE

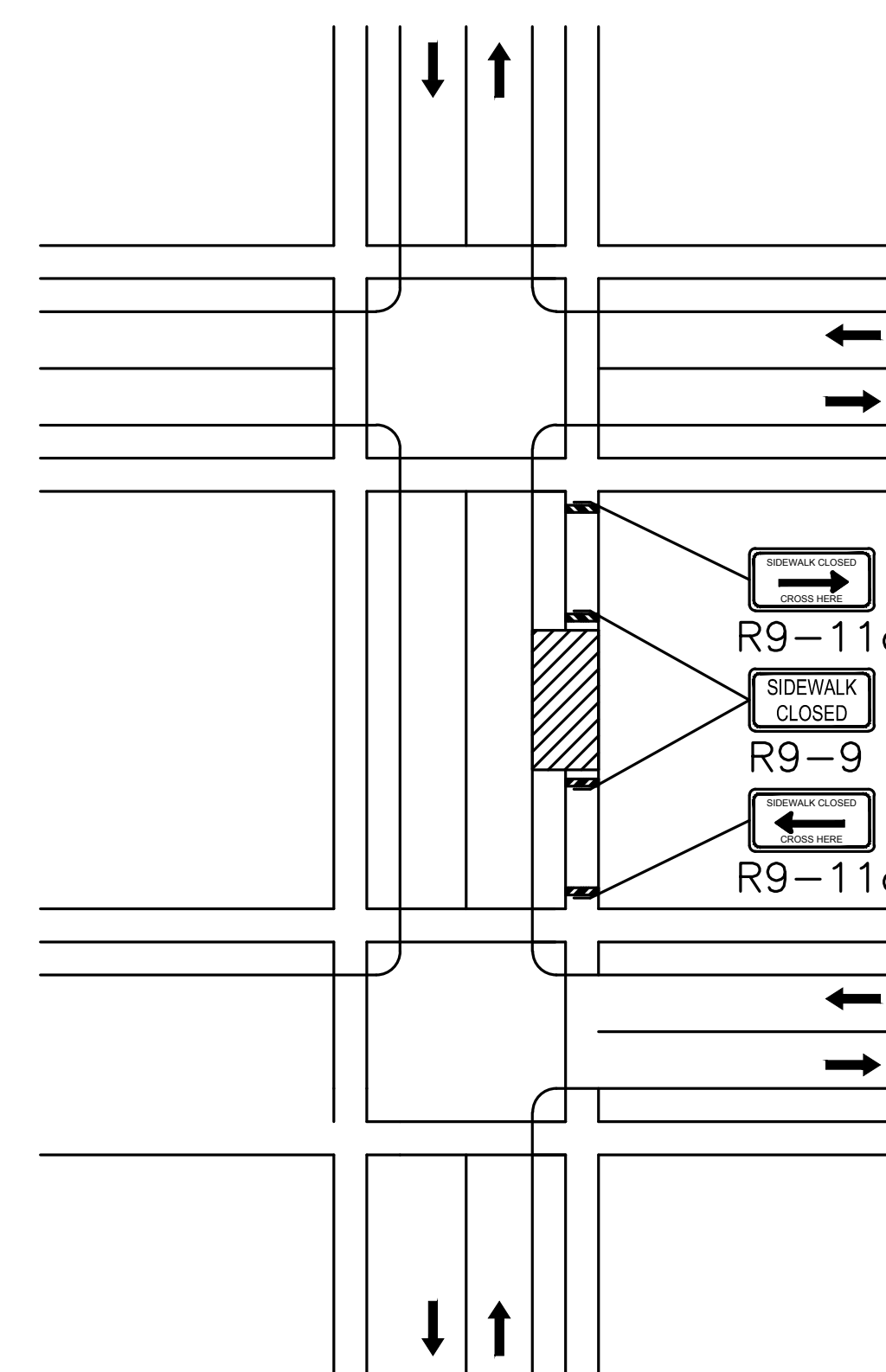


AFTER HOURS TREATMENT FOR AREAS
RECEIVING OVERLAY
NOT TO SCALE

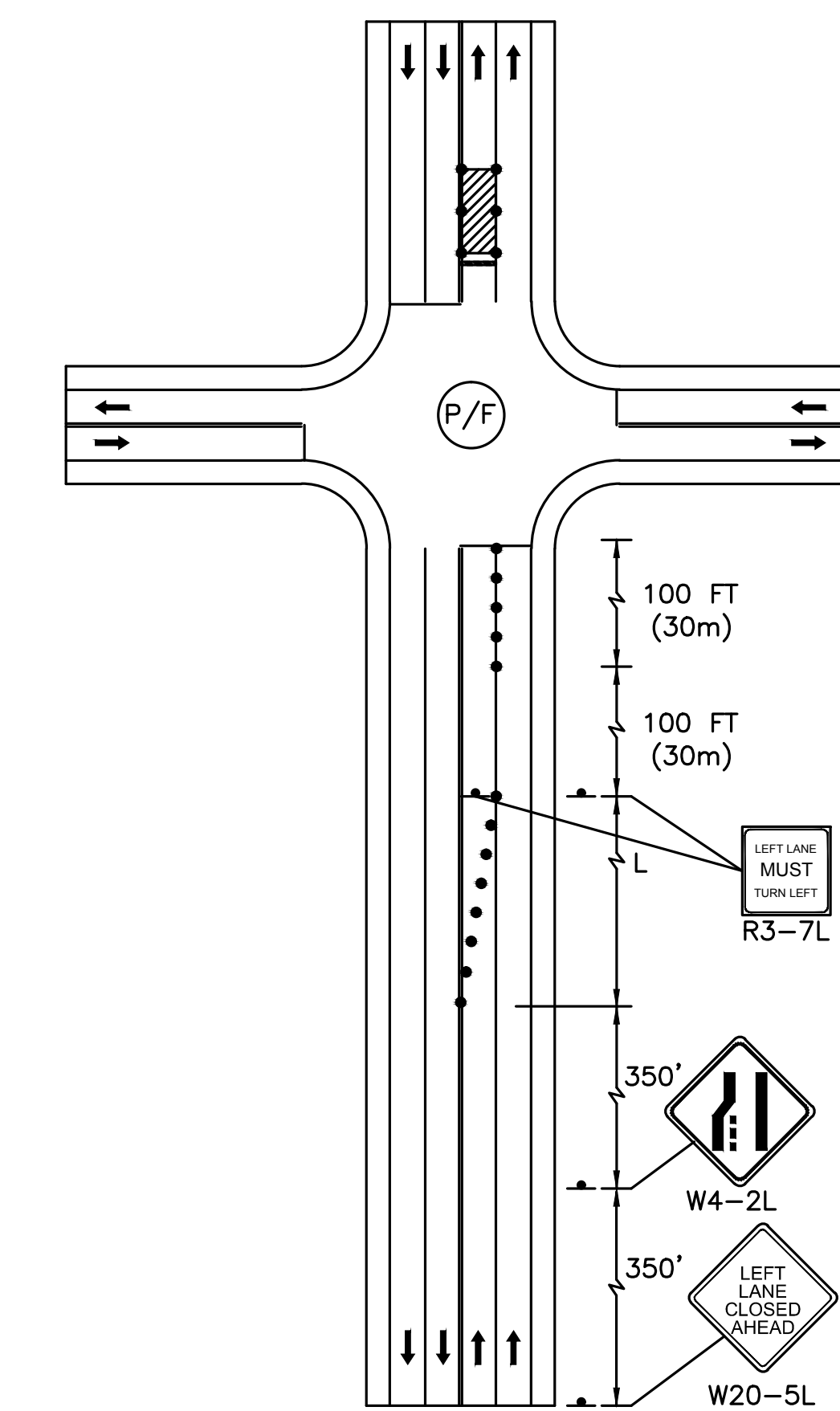


NOTE: FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.

PEDESTRIAN DETOUR (PED-2)
NOT TO SCALE



SIDEWALK CLOSED WITH DETOUR (PED-1)
NOT TO SCALE



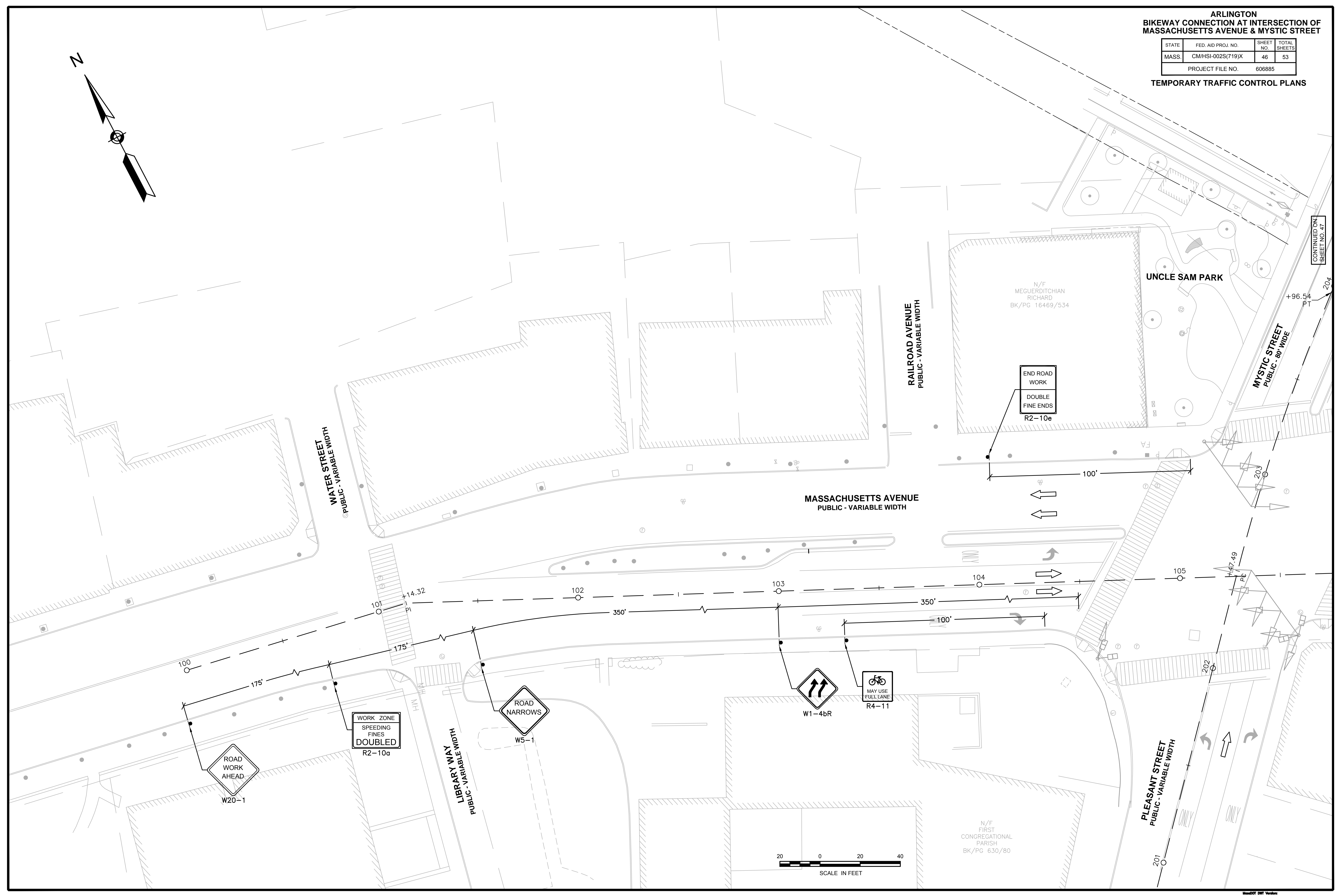
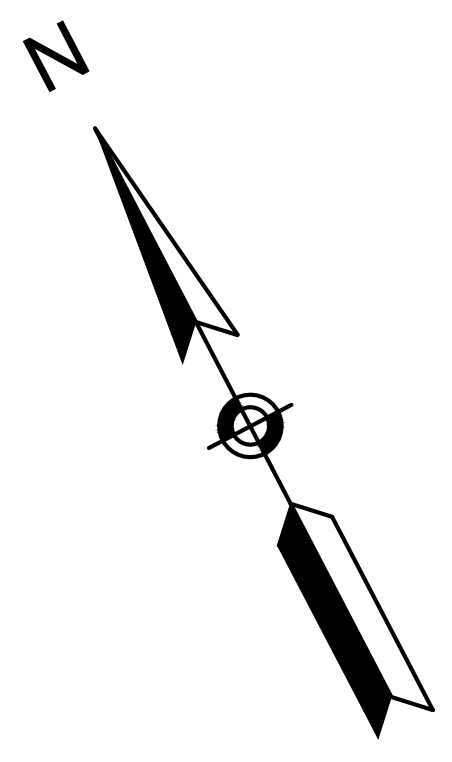
DOUBLE LANE APPROACH FAR
SIDE CLOSURE INSIDE LANE (INT-3)
NOT TO SCALE

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	46	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLANS

606885_TR(TTCP PLANS).DWG 4-Sep-2014



CONTINUED ON
SHEET NO. 47

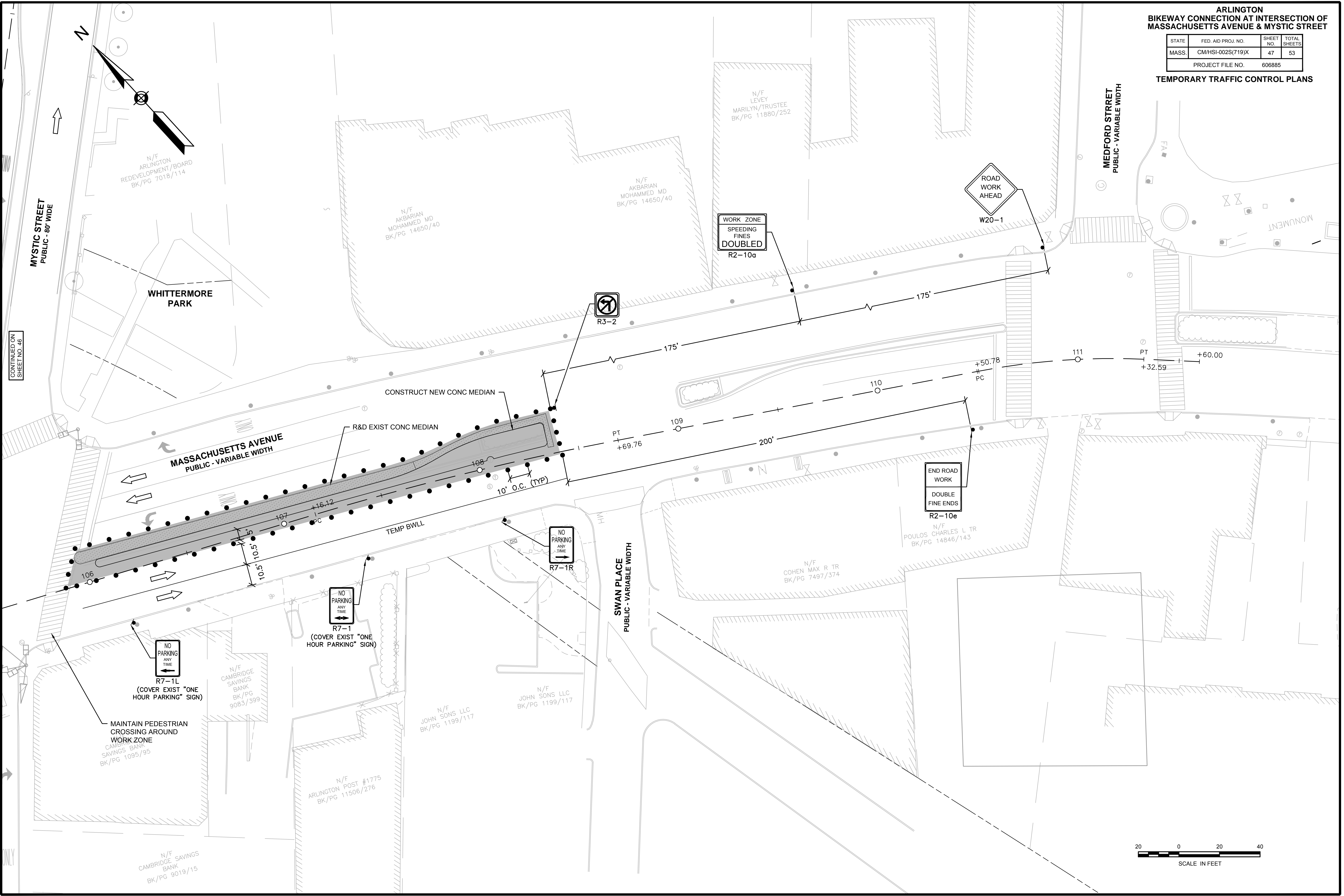
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MicroDOT DWG Version

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	47	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLANS



CONTINUED ON
SHEET NO. 48

606885_TR(TTCP PLANS).DWG 4-Sep-2014

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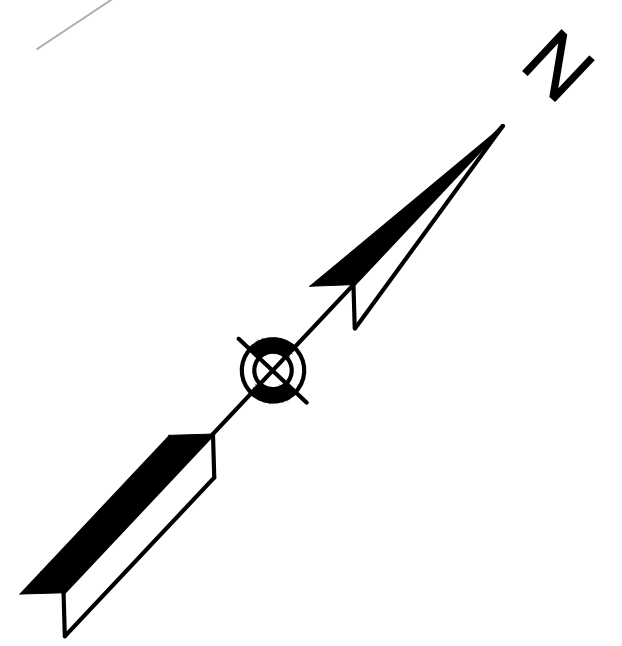
ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	48	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLANS

606885_TR(TTCP PLANS).DWG 4-Sep-2014

CONTINUED ON
SHEET NO. 49



END ROAD
WORK
DOUBLE
FINE ENDS
R2-10e

PLEASANT STREET
PUBLIC - VARIABLE WIDTH

MYSTIC STREET
PUBLIC - 80' WIDE

ROAD
WORK
AHEAD
W20-1

WORK ZONE
SPEEDING
FINES
DOUBLED
R2-10a

ROAD
NARROWS
W5-1

W1-4R

MAY USE
FULL LANE
R4-11

MAINTAIN PEDESTRIAN
CROSSING AROUND WORK ZONE



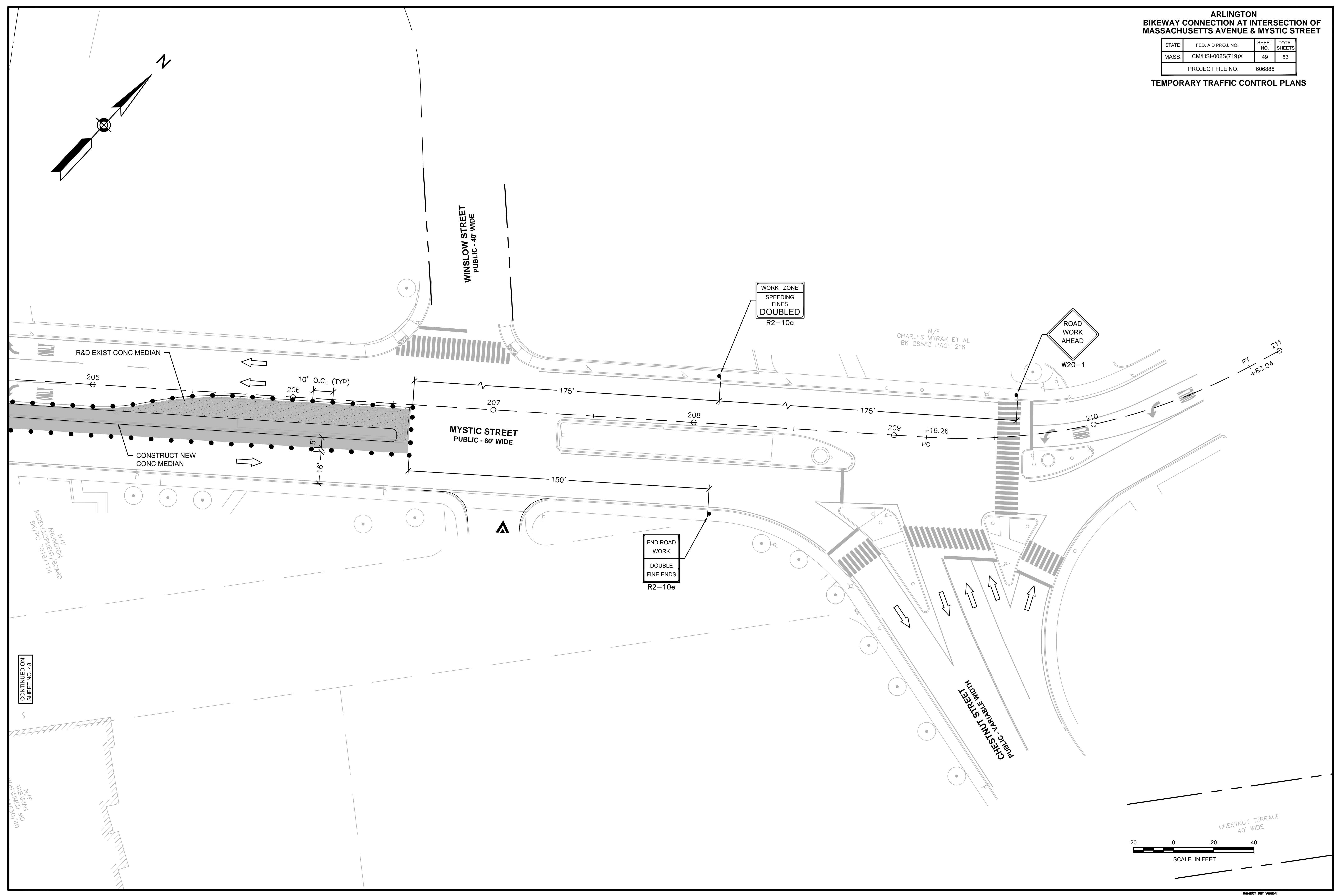
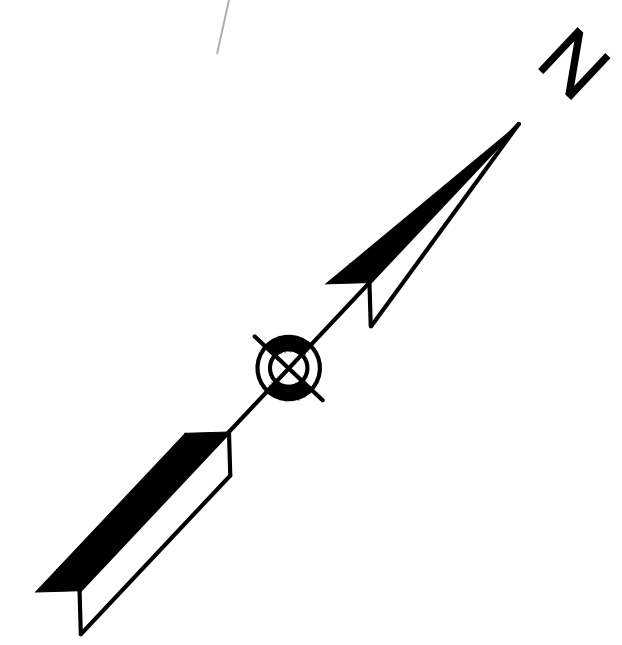
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MicroDOT DWG Version

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	49	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLANS



R&D EXIST CONC MEDIUM

CONSTRUCT NEW CONC MEDIUM

WINSLOW STREET
PUBLIC - 40' WIDE

MYSTIC STREET
PUBLIC - 80' WIDE

N/F
CHARLES MYRAK ET AL
BK 28583 PAGE 216

ROAD WORK
AHEAD
W20-1

PT
+83.04

+16.26
PC

END ROAD
WORK
DOUBLE
FINE ENDS
R2-10e

CHESTNUT STREET
PUBLIC - VARIABLE WIDTH

CHESTNUT TERRACE
40' WIDE

SCALE IN FEET

CONTINUED ON
SHEET NO. 48

N/E
ARLINGTON/ROBERTO
REDEVELOPMENT/10/14
BK 1 PG 70/8/11/14

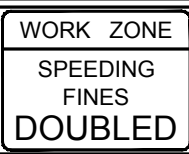
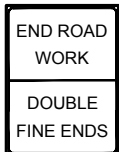









N/E
ARLINGTON MD
REDEVELOPMENT/10/14

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	50	53
PROJECT FILE NO.		606885	

TEMPORARY TRAFFIC CONTROL PLANS
SIGN SUMMARY

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

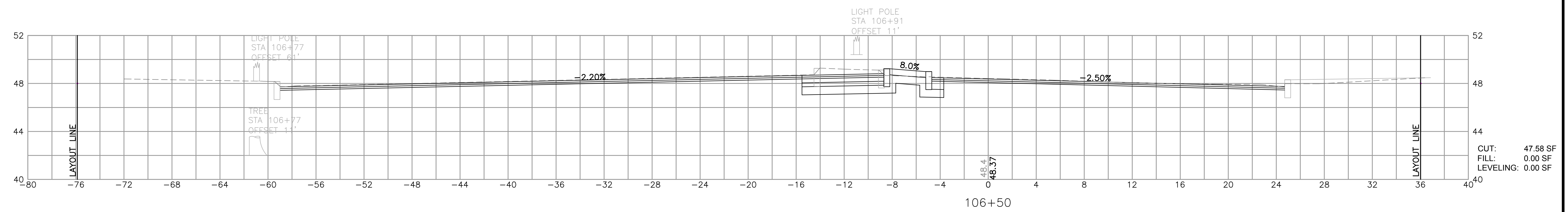
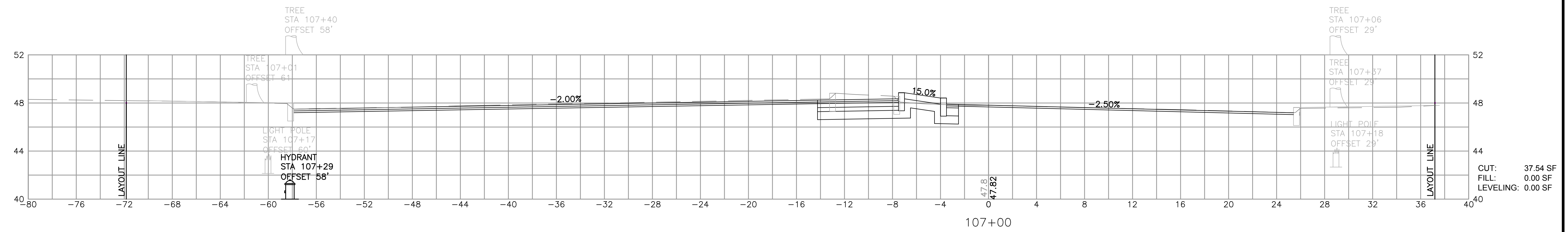
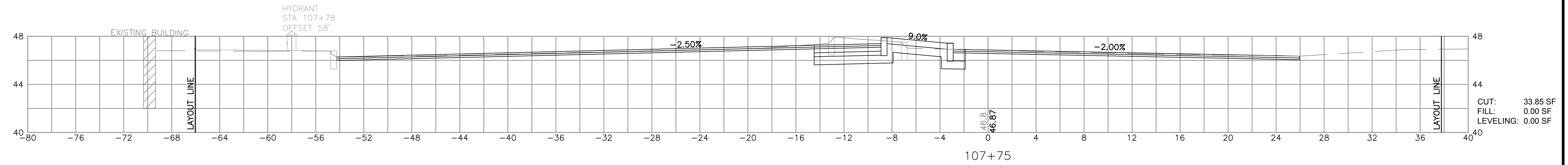
SEE CURRENT EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AMENDMENTS FOR SPECIFICATION ON TEXT, DIMENSIONS AND COLOR. ALSO REFER TO 1995 MHD STANDARD SPECIFICATIONS SECTION M 9.30.0

SIGN ID NO.	QUANTITY	LOCATION NO.	LOCATION	TEXT	SIZE OF SIGN		TEXT DIMENSION (in)				COLOR				POST SIZE AND No. REQUIRED	AREA (SQ ft)	TOTAL AREA (SQ ft)	
					WIDTH (in)	HEIGHT (in)	LETTER HEIGHT	VERTICAL SPACING	EDGE SPACING	SHIELD	ARROW RTE MKR	BACK-GROUND	LEGEND	BORDER				
R2-10a	2	SEE TEMPORARY TRAFFIC CONTROL PLANS			30	24	4D 4D 4D	2 IN 2 IN 2 IN	-	-		ORANGE WHITE	BLACK	BLACK	MUTCD SPEC. MOUNT ON POST	5.00	10.00	
R2-10e	2				48	60	7C 7C 7C	8.5 IN 4.5 IN 11 IN 4.5 IN 6.2 IN	-	-		ORANGE WHITE	BLACK	BLACK		20.00	40.00	
R3-2	1				24	30	SEE MUTCD STANDARD DETAIL										5.00	5.00
R4-11	1				30	30										6.25	6.25	
R7-1	1				12	18										1.50	1.50	
R7-1L	1				12	18										1.50	1.50	
R7-1R	1				12	18										1.50	1.50	
W1-4R	1				36	36										9.00	9.00	
W1-4bR	1				36	36										9.00	9.00	
W5-1	1				36	36										9.00	9.00	
W20-1	2	▼	▼		36	36	▼	▼	▼	▼	▼	▼	▼	▼	▼	9.00	18.00	

ARLINGTON
BIKEWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	52	53
PROJECT FILE NO. 606885			

CROSS SECTIONS



ARLINGTON
BIKWAY CONNECTION AT INTERSECTION OF
MASSACHUSETTS AVENUE & MYSTIC STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	CM/HSI-002S(719)X	53	53
PROJECT FILE NO.		606885	

CROSS SECTIONS

