

CITY OF CAMBRIDGE, MASSACHUSETTS

CHAPTER 90 CONTRACT 24

ROADWAY IMPROVEMENT PROJECT

AUGUST 2022

PROJECT DESIGN TEAM:

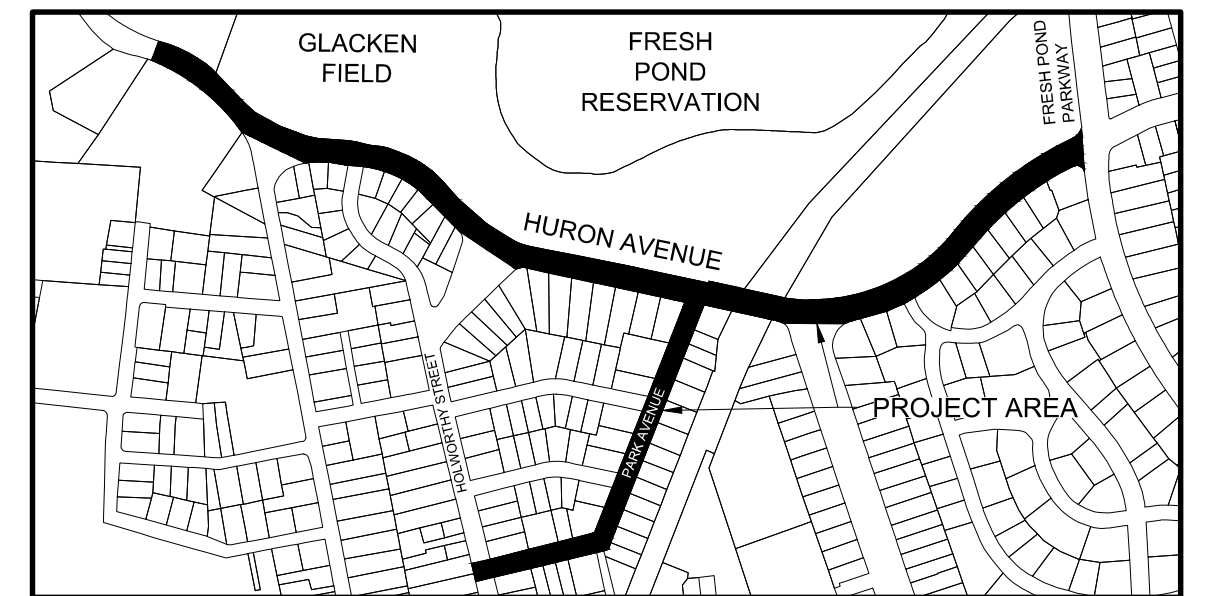


TOOLE
DESIGN



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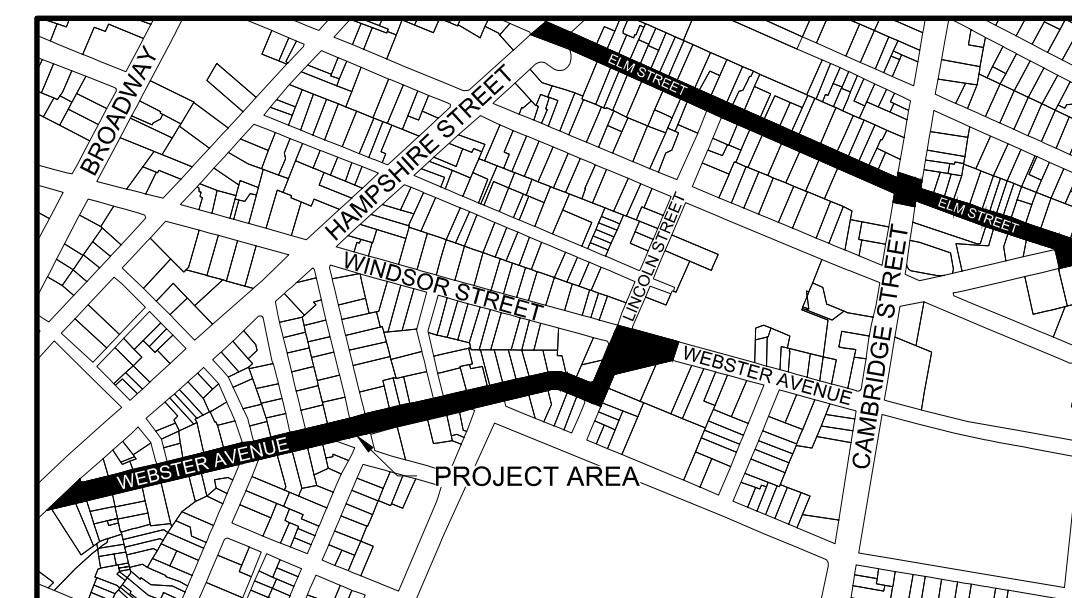
PREPARED FOR:



LOCATION PLAN
SCALE: 1" = 500'



LOCATION PLAN
SCALE: 1" = 500'



LOCATION PLAN
SCALE: 1" = 500'

FILENAME: C:\Users\cmahon\OneDrive\Documents\Projects\City of Cambridge\Chapter 90 Contract 24\Drawings\01-Location Plans\01-Location Plans.dwg
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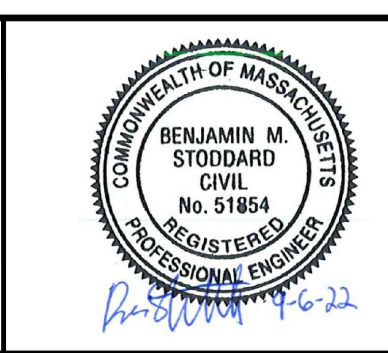
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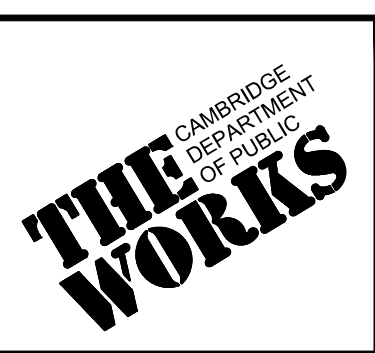
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Scale	AS NOTED
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Designed by	KEA
Drawn by	KEA
Checked by	BMS
Approved by	BMS

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	REVISIONS	

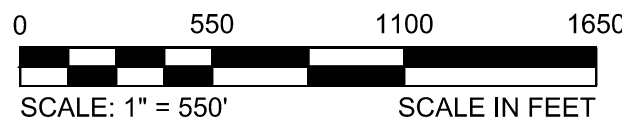


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	SHEET INDEX

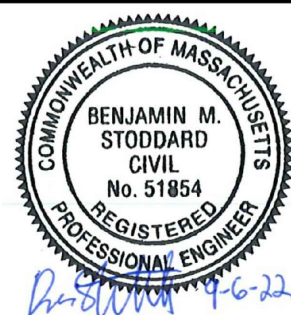
Sheet	G-2
File No.	10565



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T	HURON AVENUE	R-5A, R-10A, R-15A, R-20A, T-5A, T-10A



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Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	KEY PLAN

Sheet	G-3
File No.	10565

EXISTING LEGEND

Table listing existing symbols and their corresponding descriptions, including manholes, catch basins, utility poles, and various elevations.

PROPOSED LEGEND

Table listing proposed symbols and their corresponding descriptions, including drain manholes, water gates, catch basins, and various pavement types.

GENERAL NOTES

- 1. EXACT DEPTHS OF EXISTING PAVEMENT BASES AND SURFACE COURSES ARE NOT KNOWN AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR... 2. DIVERSION, BYPASS, AND CONTROL OF STORM, DRAIN AND DEWATERING FLOWS ARE THE RESPONSIBILITY OF THE CONTRACTOR... 3. THE CONTRACTOR SHALL TEMPORARILY MATCH EXISTING GRADES AND CONDITIONS WITHIN THE CONSTRUCTION AREA UNTIL FINAL RESTORATION IS COMPLETE...

- 29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW PLOWING AND SNOW REMOVAL FROM ALL AREAS WHERE HIS PRESENCE IS MAINTAINED INCLUDING BUT NOT LIMITED TO, UNPAVED SURFACES, PARKED EQUIPMENT AREAS OR ANY CONSTRUCTION ACTIVITY... 30. THE CONTRACTOR SHALL NOT BE PERMITTED TO STARTUP OR OPERATE EQUIPMENT BEFORE OR AFTER ESTABLISHED WORKING HOURS OF 7:00 AM TO 4:00 PM, MONDAY THROUGH FRIDAY WITHOUT WRITTEN APPROVAL OF THE OWNER...

SURVEYING NOTES

- 1. RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES, ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR... 2. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN...

SPECIAL NOTES FOR TREE PROTECTION

- 1. REFER TO "CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS - DIVISION OF URBAN FORESTRY, TREE PROTECTION DURING CONSTRUCTION" IN THE CONTRACT DOCUMENTS... 2. A MASSACHUSETTS OR INTERNATIONAL CERTIFIED ARBORIST SHALL BE SUB-CONTRACTED BY THE CONTRACTOR TO PROVIDE A TREE PROTECTION PLAN AND PERFORM SPECIFIED WORK...

ABBREVIATIONS

Table of abbreviations with columns for symbol, description, and alternate descriptions, including terms like ABND, AG, AVE, BC, BIT, BOT, BW, BRW, CB, CC, CDF, CI, CL, CLF, CO, CONC, CRW, CS, CSU, CTE, CTV, CU, DI, DMH, EG, ELEV, EMH, EXIST, FA, FB, FG, FS, GC, GG, GM, GRAN, GV, GW, HH, HYD, I, ID, IB, LD, LN, LP, NO, NVO, CU, DI, DMH, EG, ELEV, EMH, EXIST, PVC, RIM, RCP, RD, REQ'D, RL, R&R, RWS, RWCN, S, SD, SMH, SRW, SS, SST, ST, STA, TBM, TC, TCB, TELE, THRESH, TL, TOH, TS, TW, TYP, UNK, UP, VC, VGC, W, WITH, WD, WG, WL, WMH, WRW, WW, UTILITY POLE, VITRIFIED CLAY, VERTICAL GRANITE CURB, WATER ELEVATION, WITH, WOOD, WATER GATE, WATER LEVEL, WATER MANHOLE, WOOD RETAINING WALL, WINDOW WELL.

Project information block containing logos for MCMAHON, KLEINFELDER, and HATCH, along with project details: Client: CITY OF CAMBRIDGE, MASSACHUSETTS; Project: CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT; Drawing: GENERAL CIVIL LEGEND, GENERAL NOTES & ABBREVIATIONS; Sheet: G-4; File No. 10565.

GENERAL NOTES

- EXACT DEPTHS OF EXISTING PAVEMENT BASES AND SURFACE COURSES ARE NOT KNOWN AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. APPROXIMATE DEPTHS OF EXISTING PAVEMENT BASES AND SURFACE COURSES ARE INDICATED IN THE BORING LOGS. REFER TO APPENDIX OF THE SPECIFICATIONS.
- DIVERSION, BYPASS, AND CONTROL OF STORM DRAIN AND DEWATERING FLOWS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR'S INTENDED DIVERSION, BYPASS, CONTROL, AND DEWATERING PLANS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR REVIEW AT LEAST 7 DAYS PRIOR TO ANY EXCAVATION. WHEN PERFORMING DEWATERING, THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF SECTION 02210, SECTION 01500, SECTION 02140, AND ALL DEWATERING PERMITS.
- THE CONTRACTOR SHALL MATCH EXISTING GRADES AND CONDITIONS WITHIN THE CONSTRUCTION AREA UNTIL FINAL RESTORATION IS COMPLETE.
- CONTRACTOR SHALL CAP OPENINGS IN EXISTING CATCH BASINS AND MANHOLES WHEN DRAWINGS INDICATE THAT PIPES ARE TO BE REMOVED OR ABANDONED. EXISTING CATCH BASIN LATERALS WHICH ARE NOT RECONNECTED SHALL BE ABANDONED BY CAPPING BOTH ENDS. CAPS SHALL BE WATERTIGHT. ABANDONMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH SPECIFICATION SECTION 02051.
- CONTRACTOR SHALL CUT OPENINGS IN EXISTING CATCH BASINS AND MANHOLES FOR NEW PIPES WHEN EXISTING STRUCTURES ARE TO BE INCLUDED IN THE PROPOSED COLLECTION SYSTEM UNLESS EXISTING STRUCTURE IS BRICK OR AS APPROVED BY THE ENGINEER. NEW CONNECTIONS SHALL BE SEALED WATERTIGHT. ALL NEW PENETRATIONS SHALL BE CIRCULAR CORED OPENINGS. SAW CUT OR HAMMERED NON-CIRCULAR OPENINGS ARE NOT ALLOWED.
- ALL EXTERIOR SURFACES OF CONCRETE STRUCTURES SHALL BE COATED IN ACCORDANCE WITH SPECIFICATION SECTION 07160.
- EXISTING AND PROPOSED ROADWAY CENTERLINE ELEVATIONS ARE SHOWN ON THE ROADWAY GRADING AND PROFILE DRAWINGS. ALL STATIONING IS TO THE CENTER OF THE STRUCTURE. DISTANCES OF "LEFT" (L) AND "RIGHT" (R) ON THE PLAN REFER TO THE ORIENTATION RELATIVE TO THE STATION LINE WHEN FACING THE POSITIVE DIRECTION. THE STATIONS AS SHOWN FOR SEWERS AND DRAINS ARE APPROXIMATE. THE EXACT STATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND RECORDED ON THE RECORD DRAWINGS.
- THE LOCATION OF EXISTING UNDERGROUND PIPES, CABLES, CONDUITS AND STRUCTURES AS SHOWN HAS BEEN COLLECTED FROM THE BEST AVAILABLE SOURCES AND THE OWNER TOGETHER WITH ITS AGENTS DOES NOT IMPLY OR GUARANTEE THE DATA AND INFORMATION IN CONNECTION WITH THE UNDERGROUND PIPES, CABLES, CONDUITS, STRUCTURES AND SUCH OTHER PARTS AS TO THEIR COMPLETENESS NOR THEIR LOCATIONS AS INDICATED. THE CONTRACTOR SHALL CONTACT UTILITY OWNERS AND REQUEST MARKING LOCATION OF ALL THEIR LINES IN THE WORK AREAS. THE CONTRACTOR SHALL ASSUME THAT THERE ARE EXISTING WATER, GAS, AND OTHER UTILITY CONNECTIONS TO EACH AND EVERY BUILDING ENROUTE, WHETHER THEY APPEAR ON THE PLANS OR NOT. ANY EXPENSE AND/OR DELAY OCCASIONED BY THESE UTILITIES AND STRUCTURES OR DAMAGE THERETO, INCLUDING THOSE NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND AT NO ADDITIONAL EXPENSE TO THE OWNER. (SEE SPECIAL CONDITIONS).
- FOUNDATIONS AND LINES FOR SERVICES, POLICE AND FIRE ALARM BOXES, STREET LIGHTS, AND TRAFFIC SIGNALS ARE NOT SHOWN ON THE PLANS. THE APPROPRIATE UTILITY COMPANIES OR AUTHORITIES SHOULD BE CONTACTED AND CONSULTED FOR LOCATIONS OF THE ABOVE.
- THE CONTRACTOR SHALL PREMARK THE EXCAVATION AREA AND NOTIFY THE DIG SAFE CENTER (TEL. NO.1-888-DIG-SAFE) AT LEAST THREE BUSINESS DAYS PRIOR TO ANY EXCAVATION WORK. IN ADDITION, NOTIFICATION SHALL ALSO BE GIVEN TO ALL AFFECTED PRIVATE AND/OR PUBLIC UTILITIES INCLUDING THE CAMBRIDGE DPW, CAMBRIDGE WATER DEPARTMENT, AND CAMBRIDGE ELECTRICAL DEPARTMENT TO PERMIT STREET MARKING OF THEIR LINES. CAMBRIDGE TRAFFIC DEPARTMENT SHALL BE NOTIFIED 72 HOURS AHEAD OF ANY EXCAVATION WITHIN 25' OF SIGNALIZED INTERSECTIONS.
- ALL EXISTING MANHOLE FRAMES, COVERS, CATCH BASINS FRAMES AND GRATES REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND THEN LATER BE SELECTED BY THE OWNER AND DELIVERED BY THE CONTRACTOR TO A LOCATION DESIGNATED BY THE OWNER. ALL REMAINING FRAMES, COVERS, AND GRATES NOT SELECTED BY AND DELIVERED TO THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- TEST PITS SHALL BE EXCAVATED AT THOSE LOCATIONS INDICATED ON THE DRAWINGS AND WHERE ORDERED OR APPROVED BY THE OWNER OR ENGINEER. ALL TEST PIT EXCAVATIONS SHALL BE MADE TO DETERMINE THE LOCATIONS OF EXISTING UTILITIES OR STRUCTURES AND PERFORMED WELL IN ADVANCE OF CONSTRUCTION OPERATIONS SO THAT ANY CHANGES IN ALIGNMENT AND/OR GRADE OF THE PROPOSED WORK OR UTILITY LOCATIONS MAY BE DETERMINED. ALL DECISIONS RELATIVE TO UTILITY CONFLICTS AND RELOCATION REQUIREMENTS SHALL BE MADE BY THE UTILITY OWNER. AT THOSE LOCATIONS WHERE TEST PITS ARE REQUIRED TO DETERMINE THE LOCATION OF EXISTING UTILITIES, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES INVOLVED AT LEAST 72 HOURS PRIOR TO EXCAVATION OF THE TEST PITS.
- WHERE TEMPORARY OR PERMANENT UTILITY RELOCATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY 30 DAYS IN ADVANCE OF CONSTRUCTION AND SHALL COORDINATE THE NEW WORK WITH THE UTILITY RELOCATION.
- THE LIMITS OF BELOW GRADE EXCAVATIONS FOR NEW PIPELINES OR STRUCTURES ARE APPROXIMATE. ACTUAL HORIZONTAL AND VERTICAL LIMITS INCLUDING MEASUREMENT FOR THE NEW WORK SHALL BE APPROVED BY THE ENGINEER DURING CONSTRUCTION.
- GEOTECHNICAL INFORMATION IN THE CONTRACT DOCUMENTS WERE TAKEN FOR THE PURPOSE OF DESIGN AND INDICATE CONDITIONS AT THE LOCATION OF THE BORING ONLY. SUBSURFACE CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM THE GEOTECHNICAL INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS. GROUNDWATER LEVELS INDICATED IN THE BORING LOGS ARE THOSE EXISTING AT THE TIME SUBSURFACE INVESTIGATIONS WERE MADE AND DO NOT REPRESENT PERMANENT GROUNDWATER LEVELS.
- INTERRUPTIONS OF SERVICES SHALL NOT BE PERMITTED. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES AND PROVIDE ALL TEMPORARY UTILITIES AND CONNECTIONS TO AVOID INTERRUPTIONS OF WATER, SANITARY, DRAINAGE, ELECTRIC, PHONE, GAS, FIBEROPTICS, AND CABLE SERVICES.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS INFORMATION AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL CONDITIONS TO THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENT CONTROL DEVICES, AND SHALL NOT COMMENCE CONSTRUCTION UNTIL THESE MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROTECT ALL TRAVELED WAYS FROM DUST AND CONSTRUCTION DEBRIS AT ALL TIMES.
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL AREAS ADJACENT TO THE LIMITS OF CONSTRUCTION WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEMOLISHED MATERIALS, RUBBISH, EXCAVATED MATERIAL AND DEBRIS, UNLESS OTHERWISE NOTED, AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL DISPOSAL PERMITS AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR MAY BE ASKED BY THE OWNER TO SUSPEND CONSTRUCTION OPERATIONS TEMPORARILY TO AVOID CONFLICTS WITH LARGE PUBLIC EVENTS OR LARGE STORM EVENTS. THE CONTRACTOR SHALL NOT BE COMPENSATED FOR COSTS RELATING TO SHUTDOWNS FOR THESE REASONS.
- THE CONTRACTOR SHALL NOT BLOCK ACCESS TO STREET AND PRIVATE PARKING IN THE VICINITY OF THE LIMITS OF CONSTRUCTION AFTER WORK HOURS AND ON WEEKENDS. UNLESS OWNER HAS APPROVED OTHERWISE.
- AREAS WITHIN THE CONTRACT ARE SUBJECT TO THE UTILITY RELATED ABATEMENT MEASURE REGULATIONS OF THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.00 AND SECTIONS 02010, 02080, 02095 OF THE SPECIFICATIONS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO ENVIRONMENTAL DATA (SOIL AND GROUND WATER) FROM BORINGS AND MONITORING WELLS AS REPRESENTATIVE OF SUBSURFACE CONDITIONS IN URBAN AREAS. THE ENVIRONMENTAL DATA ARE APPENDED TO THE SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW PLOWING AND SNOW REMOVAL FROM ALL AREAS WHERE HIS PRESENCE IS MAINTAINED INCLUDING BUT NOT LIMITED TO, UNPAVED SURFACES, PARKED EQUIPMENT AREAS OR ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR STREET SWEEPING, SNOW REMOVAL FROM SIDEWALKS, TRASH REMOVAL, AND RECYCLABLE MATERIALS FROM ALL AREAS WHERE CONSTRUCTION RESTRICTS VEHICULAR OR PEDESTRIAN ACCESS TO STREETS OR SIDEWALKS AND WHERE CONTRACTOR'S PRESENCE INTERFERES WITH MUNICIPAL TRASH REMOVAL, STREET SWEEPING, OR SNOW PLOWING AND REMOVAL.

- THE CONTRACTOR SHALL NOT BE PERMITTED TO STARTUP OR OPERATE EQUIPMENT BEFORE OR AFTER ESTABLISHED WORKING HOURS OF 7:00 AM TO 4:00 PM, MONDAY THROUGH FRIDAY WITHOUT WRITTEN APPROVAL OF THE OWNER, UNLESS NOTED OTHERWISE.
- EXISTING CONDITIONS ARE SHOWN SCREENED.
- ALL EXISTING DRAIN PIPE REPLACED BY PROPOSED DRAIN PIPE SHALL BE REMOVED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS TO BE ABANDONED.
- CONTROLLED DENSITY FILL (CDF) SHALL BE REQUIRED FOR ALL UTILITY CROSSINGS WITH CLEARANCE LESS THAN 12 INCHES. CDF IS NOT TO BE PLACED ADJACENT TO GAS LINES OR WATER MAINS WITHOUT COORDINATION WITH THE CAMBRIDGE WATER DEPARTMENT.
- STRUCTURAL REPAIRS TO EXISTING PIPES SHALL BE COMPLETED PRIOR TO INSTALLATION OF NEW DRAIN AND NEW OR REPLACEMENT LATERAL CONNECTIONS TO THE EXISTING MAIN.
- WHERE NEW SYSTEMS ARE TO BE LAID INTO EXISTING SYSTEM, WHICH ARE REQUIRED TO BE SHUTDOWN TO MAKE THE TIE-IN THE NEW SYSTEM SHALL BE FULLY PREPARED IN ANTICIPATION OF THE TIE-IN TO MINIMIZE DOWNTIME OF THE EXISTING SYSTEM. THE NEW SYSTEM SHALL BE FULLY TESTED TO THE MAXIMUM EXTENT POSSIBLE PRIOR TO THE TIE-IN. MEASUREMENTS SHALL BE TAKEN TO ENSURE THAT THE NEW SYSTEM IS OF THE CORRECT SIZE, LENGTH, AND ALIGNMENT TO COMPLETE THE TIE-IN.
- ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING AND TEMPORARY PAVING OR BY COVERING WITH STEEL PLATES WHEN APPROVED BY THE OWNER.
- EXISTING UTILITY POLES THAT FALL WITHIN 5 FEET OF THE PROPOSED EDGE OF TRENCH SHALL BE SUPPORTED BY THE UTILITY OWNER DURING EXCAVATION OF THE TRENCH. CONTRACTOR SHALL COORDINATE SUPPORT AND BE RESPONSIBLE FOR COSTS AND FEES. WHERE EXISTING GAS, ELECTRIC, AND TELECOM UTILITIES CROSS THE PROPOSED TRENCH LIMITS, CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER TO SUPPORT AND BE RESPONSIBLE FOR COSTS AND FEES. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE EXISTING UTILITY IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS.
- CONTROLLED LOW STRENGTH MATERIAL SHALL NOT BE USED AROUND WATER VALVES OR VALVE BOXES. PROVIDE ACCEPTABLE PROTECTIVE LAYER BETWEEN DUCTILE IRON AND CONTROLLED LOW STRENGTH MATERIAL OR USE A NON-FLY ASH MATERIAL APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL TRENCH DAMS BETWEEN MANHOLES AND AT 300 FOOT INTERVALS ALONG ALL PROPOSED PIPING ON A CASE-BY-CASE BASIS WITH ADVANCED NOTICE TO CAMBRIDGE WATER DEPARTMENT. FLOWFILL IS TO BE EXCAVATABLE, NON-FLY ASH AND ALL DELIVERY SLIPS SHALL BE TURNED OVER TO CAMBRIDGE WATER DEPARTMENT.
- WHERE CONNECTING PROPOSED CATCH BASIN LATERALS TO EXISTING, CONTRACTOR SHALL COMPLETE CONNECTION WITH THE USE OF A TYPE-2 CONNECTION.

SURVEYING NOTES




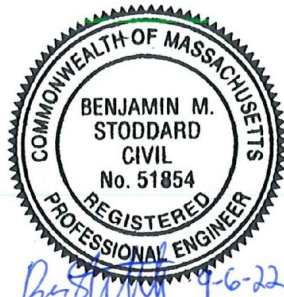

- RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES, ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS) PRIOR TO EXCAVATING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING, OR REPAVING.
- THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
- PROPERTY LINES OF PRIVATE OWNERSHIP HAVE BEEN TAKEN FROM CITY OF CAMBRIDGE ASSESSOR MAPS AND SHOULD BE CONSIDERED APPROXIMATE.
- ALL ELEVATIONS ARE BASED ON THE CAMBRIDGE CITY DATUM.
- THE HORIZONTAL DATUM SHOWN REFERENCES THE MASSACHUSETTS STATE PLACE COORDINATE SYSTEM NAD83.
- THIS PLAN IS BASED ON THE GROUND FIELD SURVEYS PERFORMED BY WSP TITLED "EXISTING CONDITIONS SURVEY GLACKEN FIELD AND HURON AVENUE CAMBRIDGE, MASSACHUSETTS" DATED SEPTEMBER 23, 2020, REVISED DECEMBER 8, 2020 (PROJECT REFERENCE NUMBER 190383E).
- THIS PLAN IS BASED ON THE GROUND FIELD SURVEYS PERFORMED BY WSP TITLED "ELM STREET" DATED AUGUST 15, 2019 (JOB REFERENCE NUMBER 190132H), "CUSHING STREET" DATED MAY 17, 2019 (JOB REFERENCE NUMBER 190132H), "WEBSTER AVENUE" DATED NOVEMBER 15, 2019 (JOB REFERENCE NUMBER 190132H), "CHESTNUT STREET" DATED JULY 26, 2019 (JOB REFERENCE NUMBER 190132H), "PARK AVENUE" DATED JULY 30, 2019 (JOB REFERENCE NUMBER 190132H), "WALDEN STREET" DATED NOVEMBER 8, 2019 (JOB REFERENCE NUMBER 190132H), "DODGE STREET" DATED NOVEMBER 12, 2019 (JOB REFERENCE NUMBER 190132H).
- ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM DIGSAFE DELINEATIONS AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD, BEFORE EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 370, ACTS OF 1963. CONTRACTOR MUST CALL DIGSAFE.

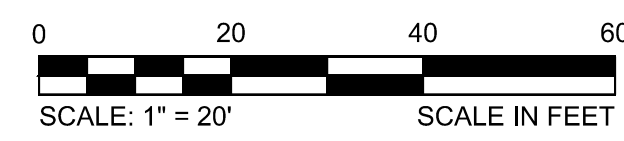
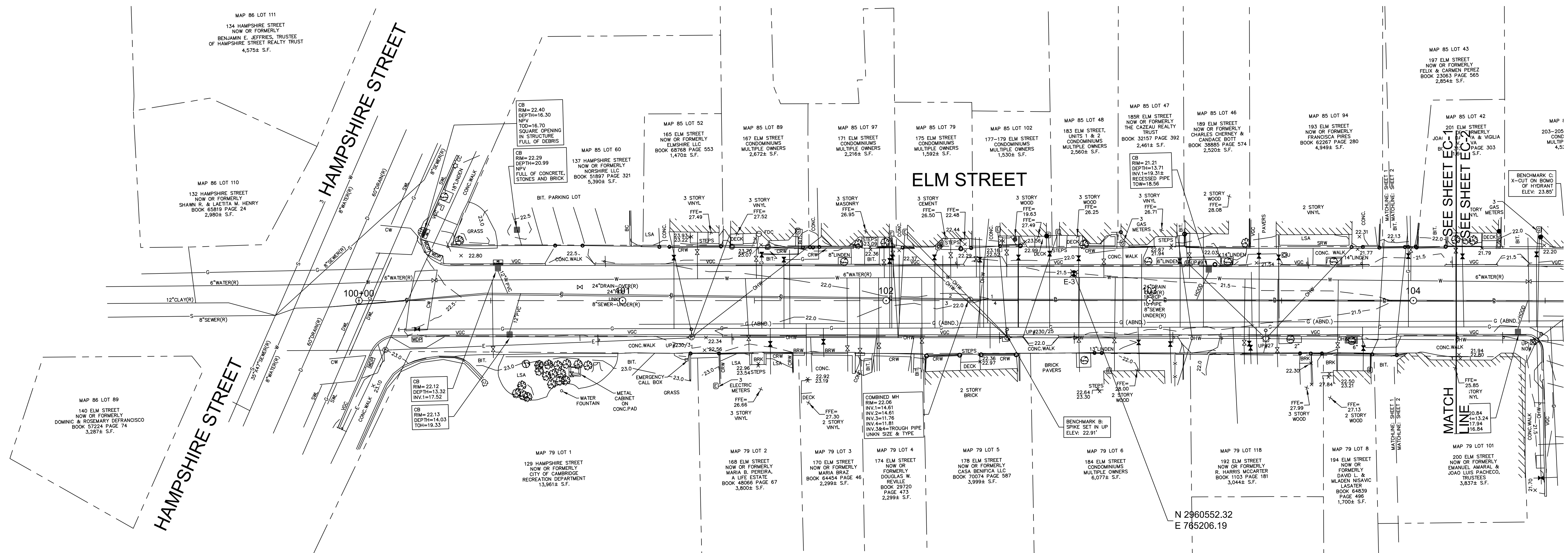
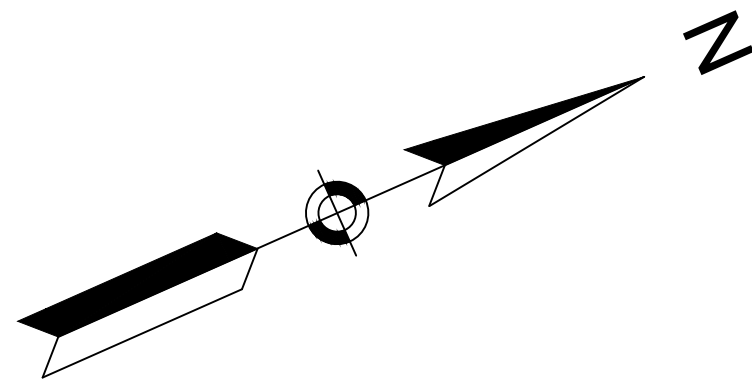
SPECIAL NOTES FOR TREE PROTECTION

- REFER TO "CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS - DIVISION OF URBAN FORESTRY, TREE PROTECTION DURING CONSTRUCTION" IN THE CONTRACT DOCUMENTS. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH MASSACHUSETTS STATE LAW CHAPTER 87, SECTION 12.
- A MASSACHUSETTS OR INTERNATIONAL CERTIFIED ARBORIST SHALL BE SUB-CONTRACTED BY THE CONTRACTOR TO PROVIDE A TREE PROTECTION PLAN AND PERFORM SPECIFIED WORK.
- ALL TREES SHALL BE PRUNED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH SPECIFICATION 02100.
- ALL TREES NOT IDENTIFIED FOR REMOVAL SHALL BE PROTECTED AGAINST CONSTRUCTION AND TRUCKING RELATED DAMAGE TO THEIR TRUNKS, ROOTS, AND LIMBS. TREE TRUNKS SHALL BE WRAPPED AND/OR BARRICADED FOR PROTECTION IF NECESSARY. TREE LIMBS SHALL BE TEMPORARILY SUPPORTED TO AVOID DAMAGE AND/OR PROFESSIONALLY PRUNED IF THEY CAN NOT BE AVOIDED. BREAKAGE OF THE LIMBS SHALL NOT BE PERMITTED. IN ADDITION TO THE "CONSTRUCTION PRUNING" SPECIFICALLY IDENTIFIED, WITHIN THE PROJECT AREA AND ALONG TRUCK ROUTE, SHALL BE PROTECTED FROM DAMAGE OR PROFESSIONALLY PRUNED. "CONSTRUCTION PRUNING" SHALL CONSIST OF SQUARELY CUTTING LIMBS ONLY WHERE THEY CANNOT BE AVOIDED BY TRUCKS OR EQUIPMENT (RAISE PRUNING).
- ALL TREE PROTECTION MEASURES AND OPERATIONS AND ALL ROOT PRUNING, TREE REMOVAL, AND TREE PRUNING SHALL BE SUBJECT TO REVIEW, APPROVAL OR CHANGE BY THE CITY ARBORIST.
- AT THE OWNER'S DISCRETION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY TREE DAMAGED BY CONSTRUCTION OR TRUCKING OPERATIONS. REMOVAL OF THE STUMP, AND REPLACEMENT OF THE TREE IN KIND AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL FINES MAY ALSO BE IMPOSED FOR DAMAGE AS PER CONTRACT SPECIFICATIONS.
- BREAKAGE OF TREE ROOTS SHALL NOT BE PERMITTED AND ROOT PRUNING SHALL BE MINIMIZED. TREE ROOTS THAT CANNOT BE AVOIDED DURING CONSTRUCTION SHALL BE PRUNED IN ACCORDANCE WITH THE SPECIFICATIONS AND UNDER SUPERVISION OF THE CITY ARBORIST, INCLUDING ROOT TREATMENT IF REQUIRED.
- THE CONTRACTOR SHALL COORDINATE WITH DIGSAFE PRIOR TO REMOVING ANY STUMPS. DAMAGE TO EXISTING SIDEWALKS AND UTILITIES SHALL BE REPAIRED AS SPECIFIED AFTER REMOVING STUMPS.
- TREES AND STUMPS REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW TREES AS DIRECTED. STUMP REMOVAL SHALL BE SUFFICIENT TO ALLOW PLANTING OF NEW TREE.

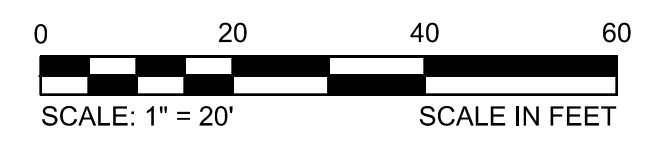
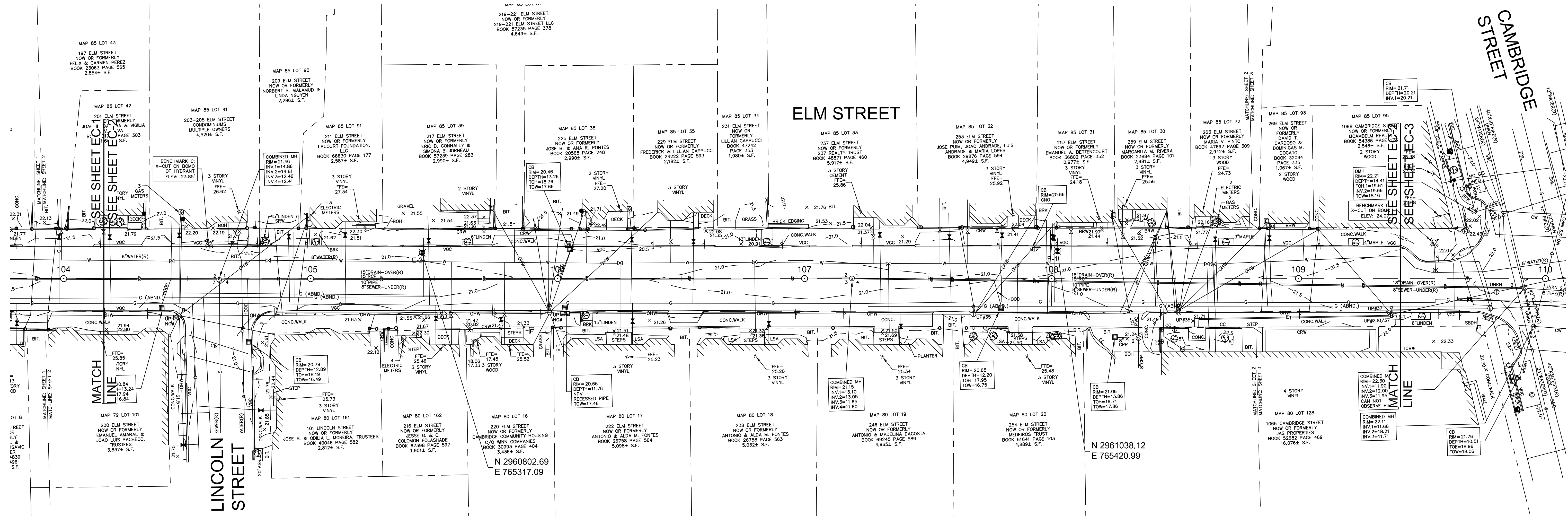
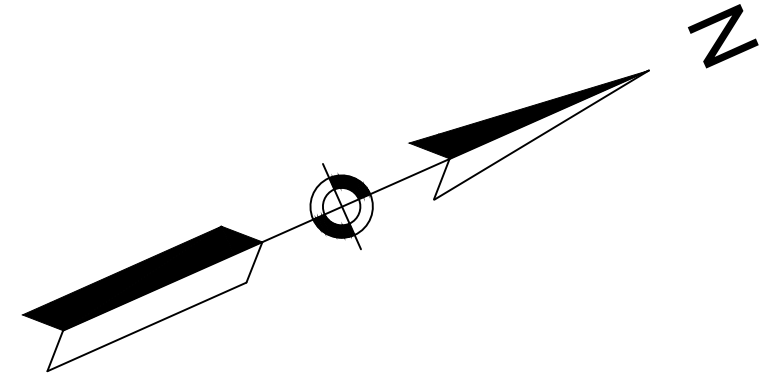
PAVEMENT MARKING AND SIGN NOTES

- ALL PAVEMENT MARKINGS AND SIGNS SHALL MEET LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARD SPECIFICATIONS.
- ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK SUCH THAT THERE WILL BE NO CONFLICTS AT ANY TIME BETWEEN TRAFFIC PATTERNS AND TRAFFIC CONTROL DEVICES (TEMPORARY OR NEW) WITHIN THE LIMITS OF THE PROJECT.
- THE MINIMUM HEIGHT, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK, SHALL BE 7', THE MINIMUM LATERAL OFFSET, MEASURED FROM THE EDGE OF THE SIGN TO THE FACE OF THE CURB, SHALL BE 1'.
- NEW SIGNS SHALL BE FULLY INSTALLED AT THE SAME TIME OR PRIOR TO THE INSTALLATION OF NEW PAVEMENT MARKINGS. SIGNS CONFLICTING WITH THE EXISTING PAVEMENT MARKINGS SHALL BE COVERED UNTIL THE FINAL PAVEMENT MARKINGS ARE INSTALLED. ONCE THE PAVEMENT MARKINGS ARE INSTALLED, THE SIGNS SHALL BE PROMPTLY UNCOVERED.
- ALL PARKING REGULATION SIGNS (EXISTING OR PROPOSED) SHALL BE INSTALLED AT 45 DEGREE ANGLE RELATIVE TO THE CURB LINE UNLESS OTHERWISE NOTED IN THE PLANS. ALL OTHER TRAFFIC-RELATED SIGNS (EXISTING OR PROPOSED) SHALL BE INSTALLED AT A 90 DEGREE ANGLE TO THE CURB, UNLESS OTHERWISE NOTED IN THE PLANS.
- WHERE AN EXISTING UTILITY IS FOUND TO BE IN 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.
- STRIPED PARKING SPACES SHALL MAINTAIN A MINIMUM DISTANCE OF 4' FROM ALL DRIVEWAYS UNLESS OTHERWISE NOTED. CENTER PARKING SPACES BETWEEN DRIVEWAYS WHERE APPLICABLE.

		 <p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	G-5
				Date	AUGUST 2022				Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	
				Job No.	20170208.037A				Drawing	GENERAL CIVIL LEGEND, GENERAL NOTES & ABBREVIATIONS SHEET 2 OF 2		
				Designed by	KEA							
				Drawn by	KEA							
				Checked by	BMS	No.	Description	Date				
				Approved by	BMS		REVISIONS					

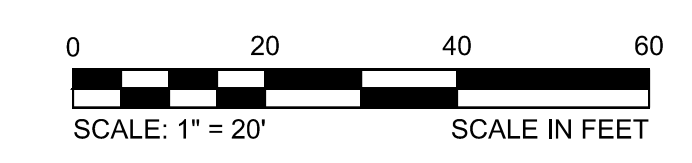
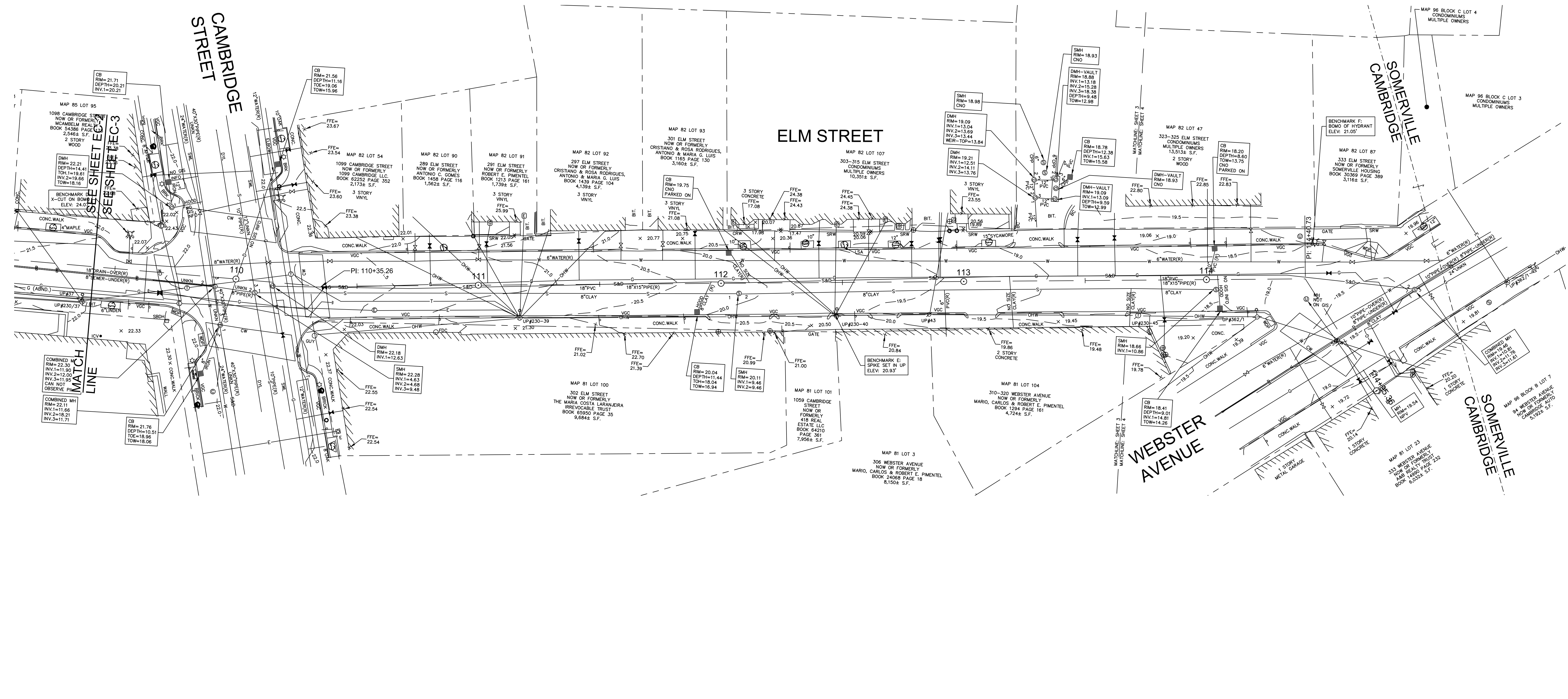
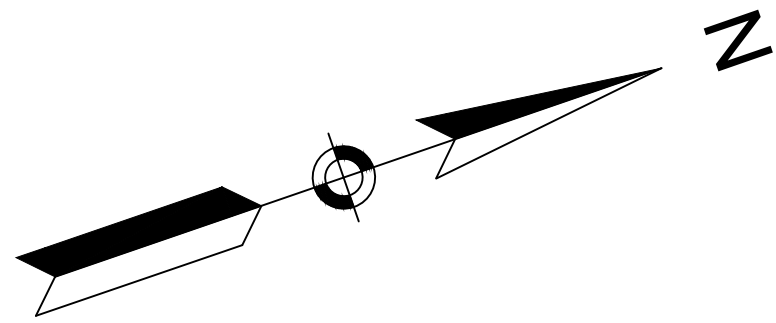


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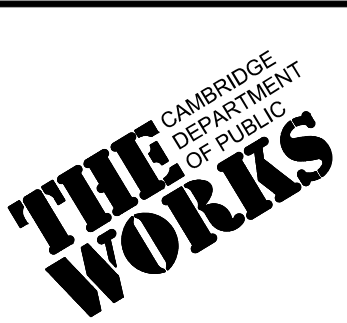


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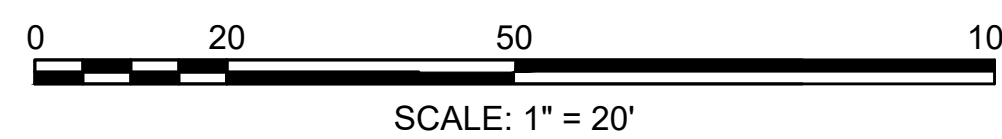
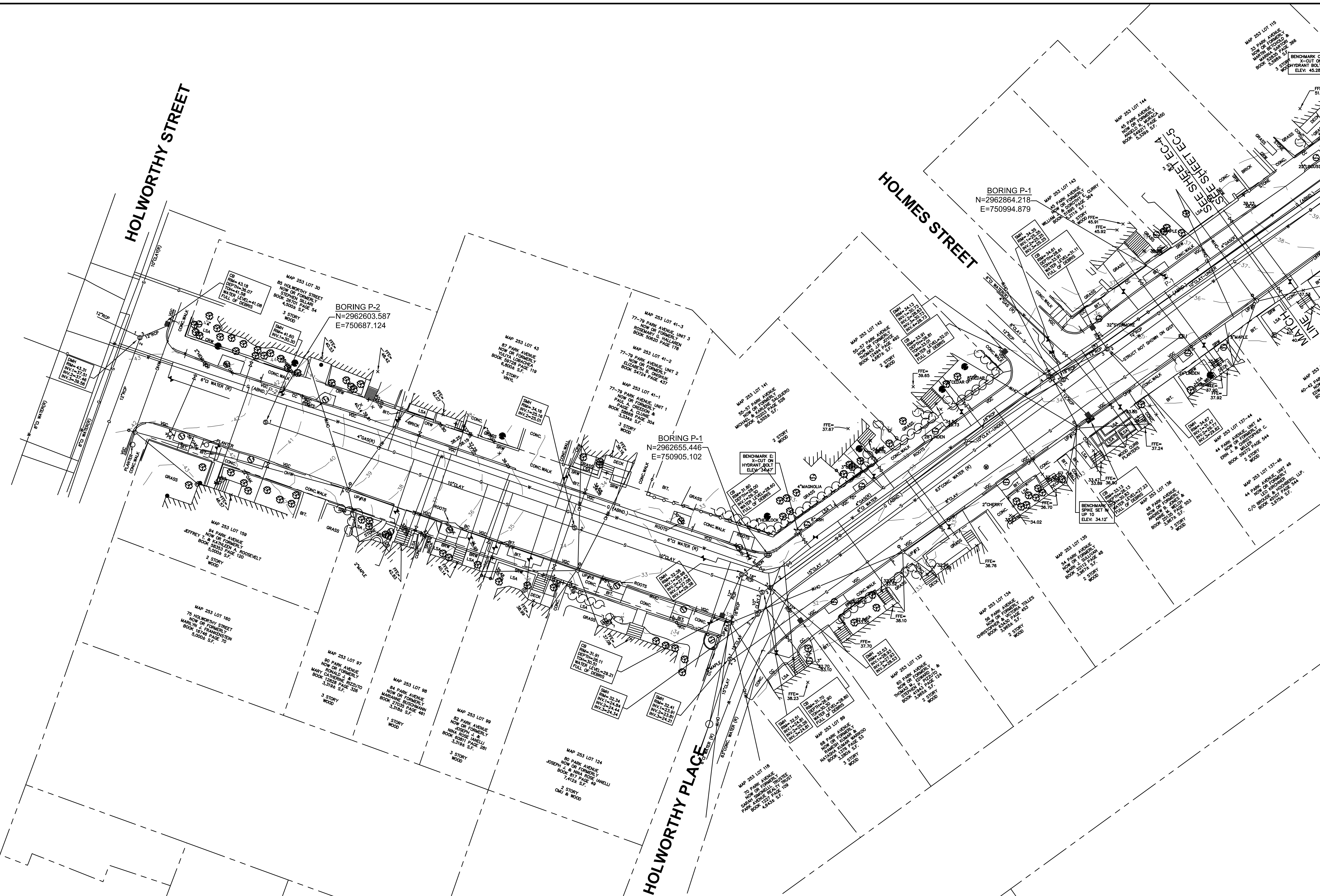
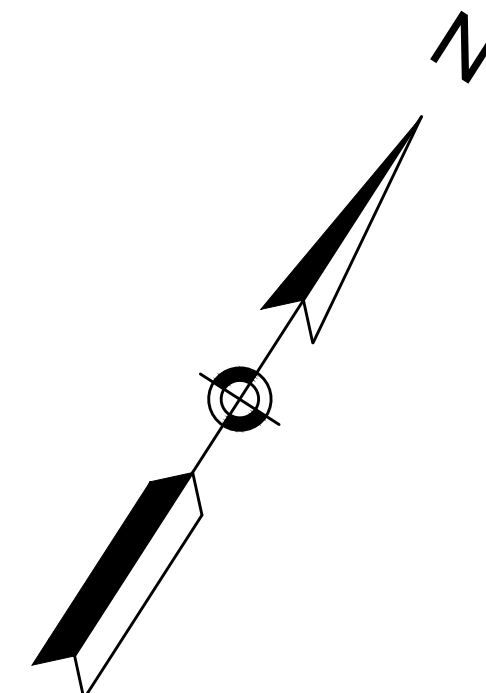


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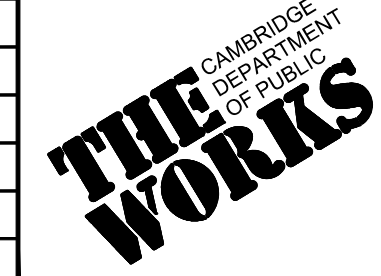


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Drawing	ELM STREET EXISTING CONDITION PLAN SHEET 3 OF 3

Sheet	EC-3
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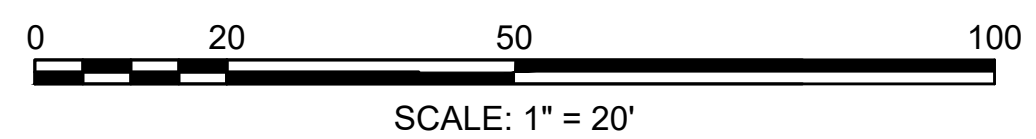
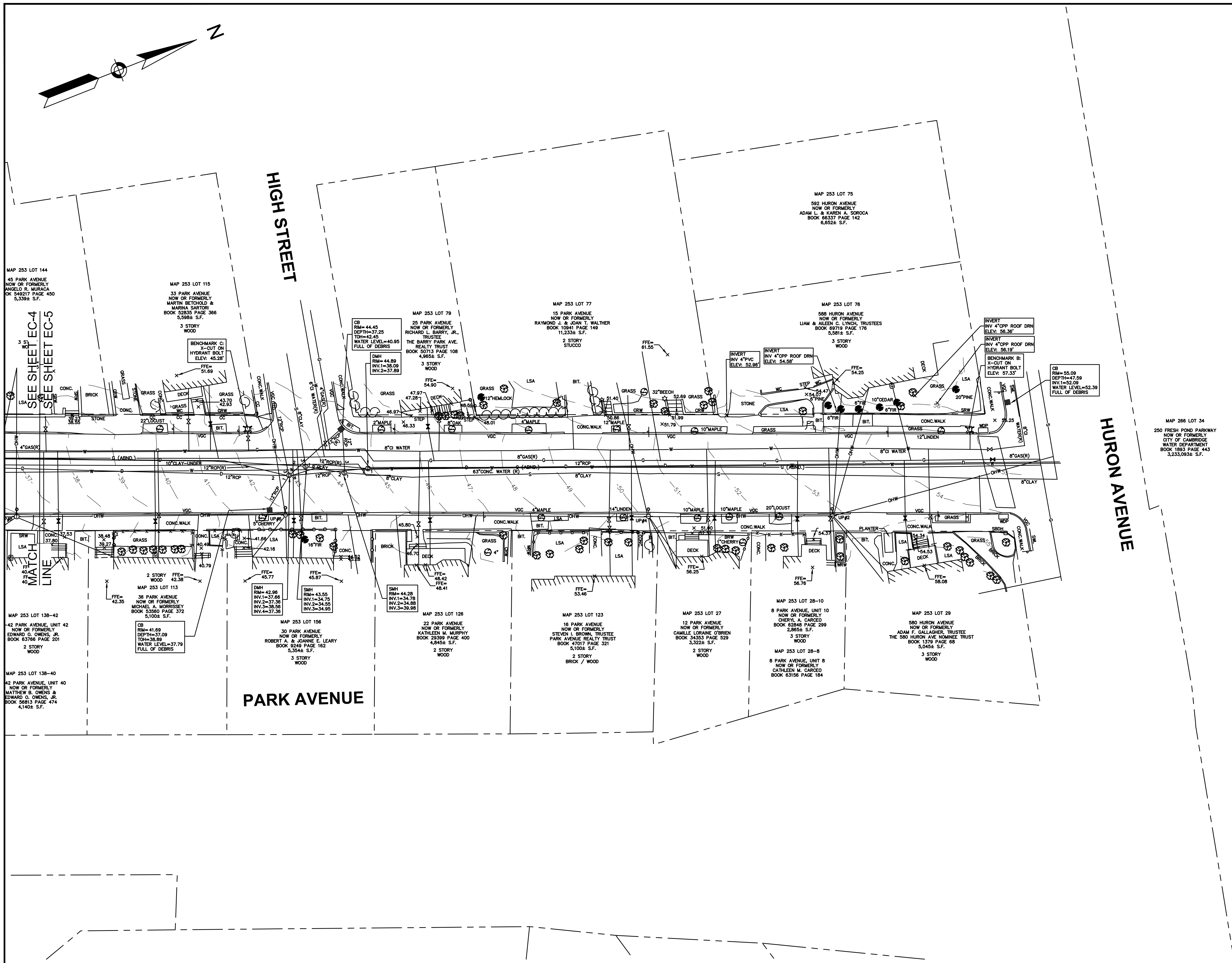
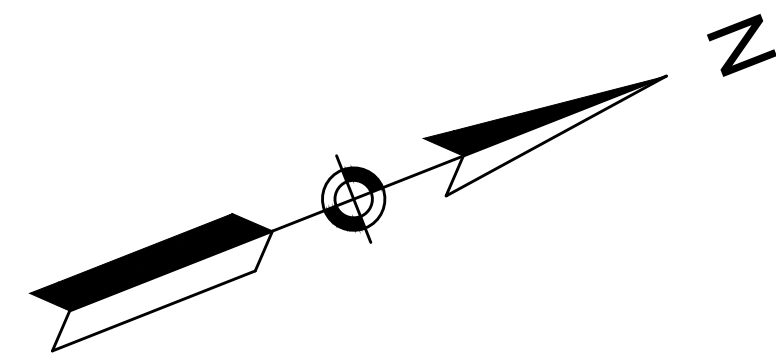
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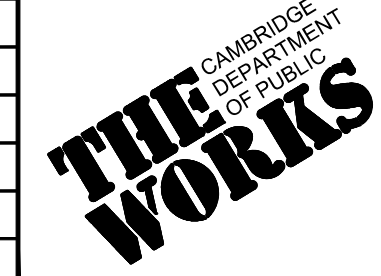
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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVE - EXISTING CONDITIONS PLAN 1 OF 2

Sheet	EC-4
File No.	10565

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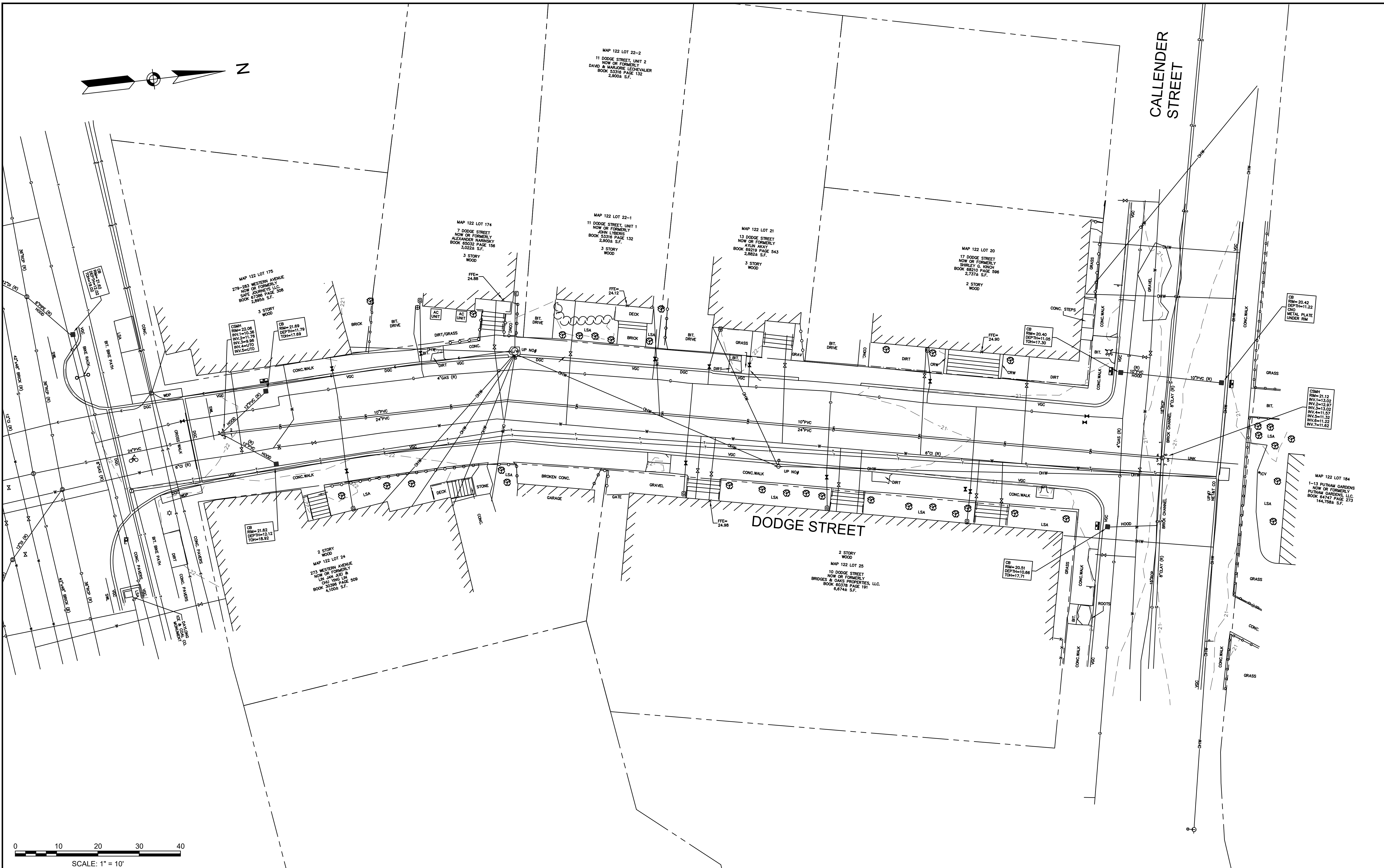


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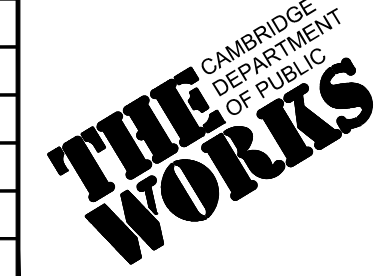


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVE - EXISTING CONDITIONS PLAN 2 OF 2

Sheet	EC-5
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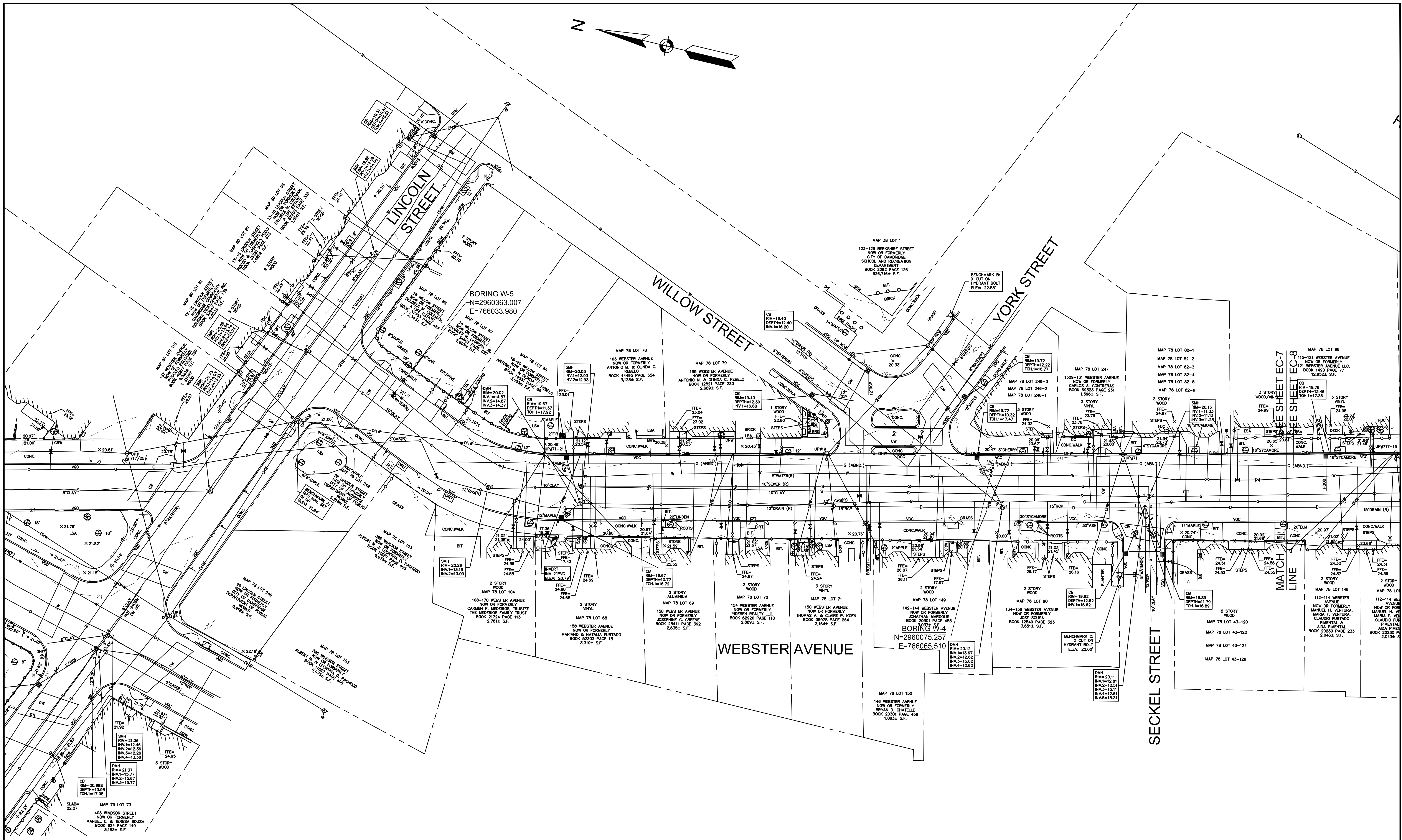


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	DODGE ST - EXISTING CONDITIONS PLAN 1 OF 1

Sheet	EC-6
File No.	10565



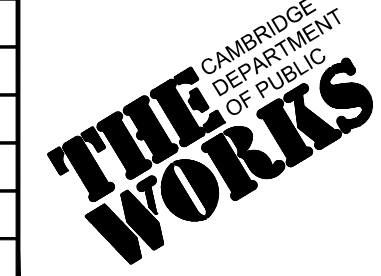
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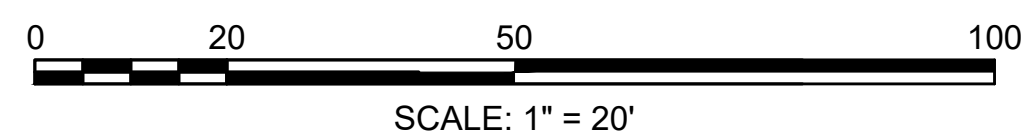
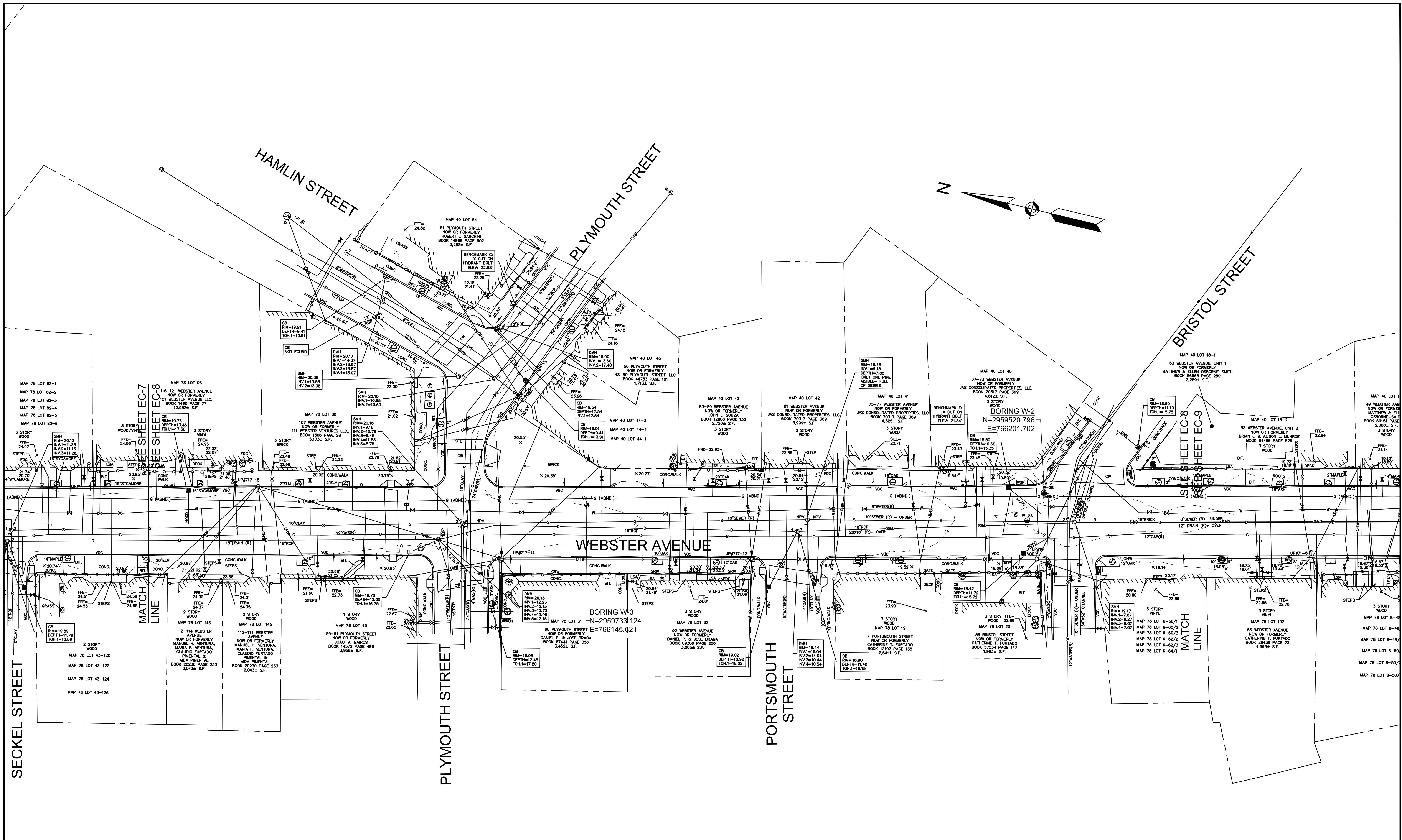
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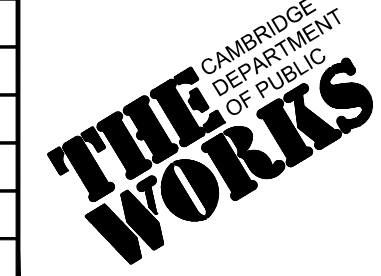
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - EXISTING CONDITIONS PLAN 1 OF 3

Sheet	EC-7
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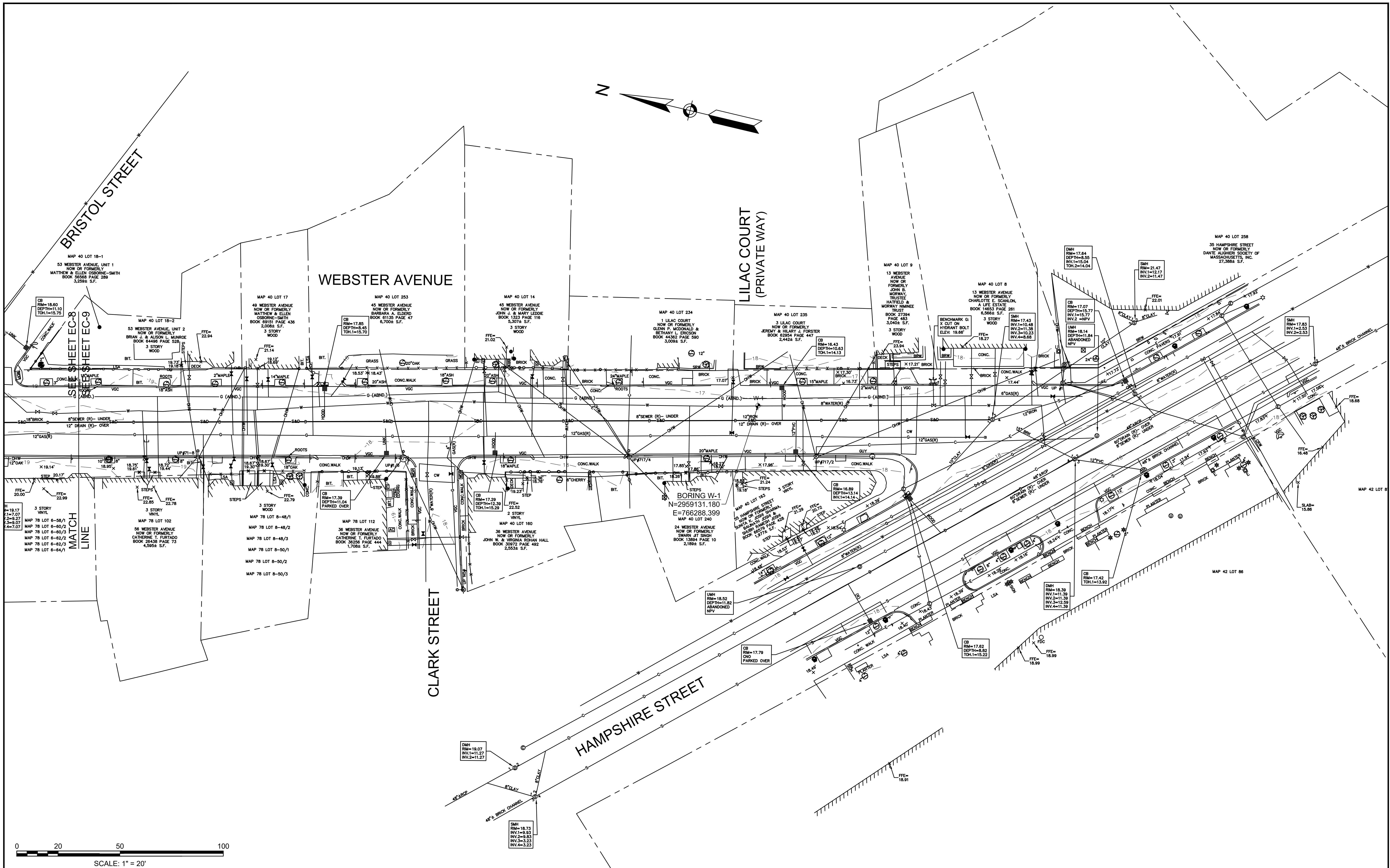
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - EXISTING CONDITIONS PLAN 2 OF 3

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File No.	10565

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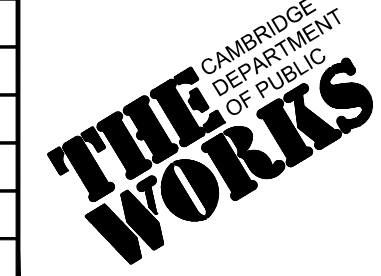
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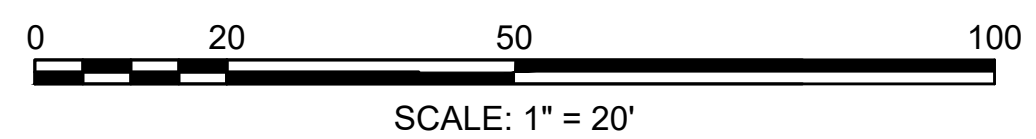
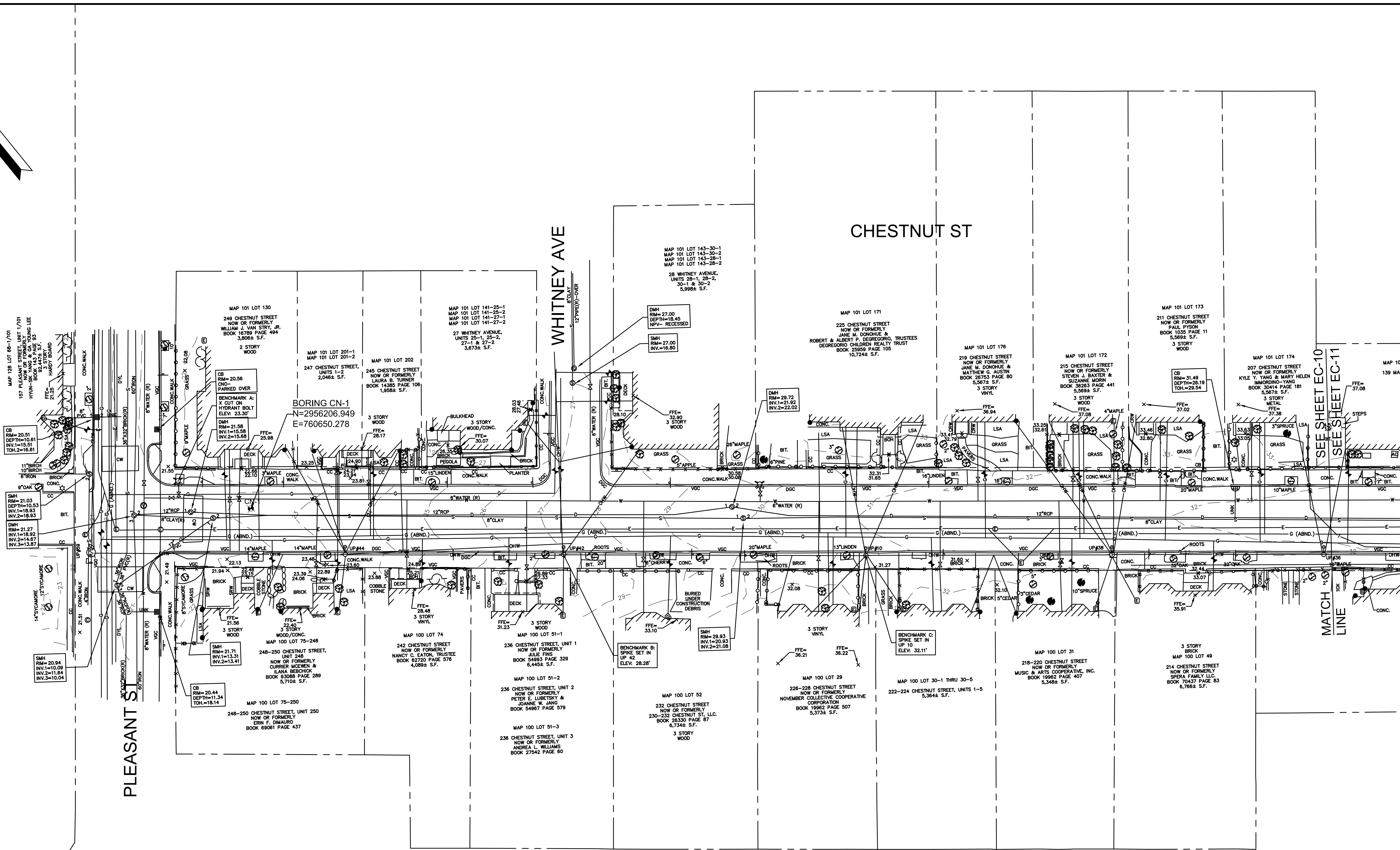
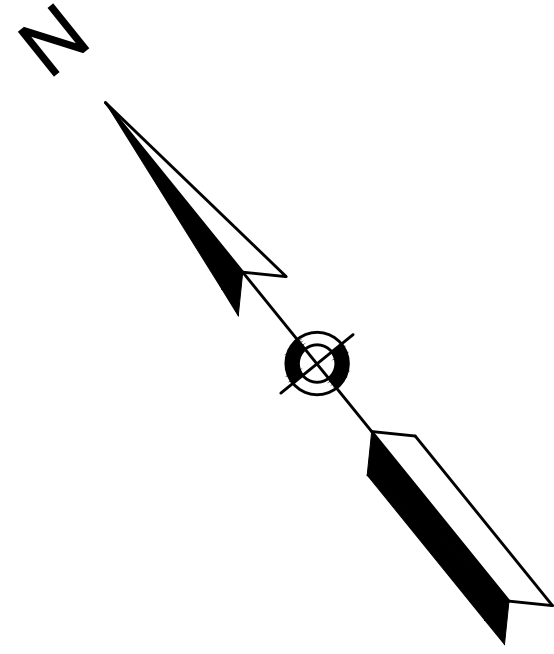
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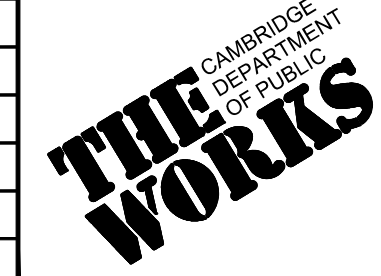
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - EXISTING CONDITIONS PLAN 3 OF 3

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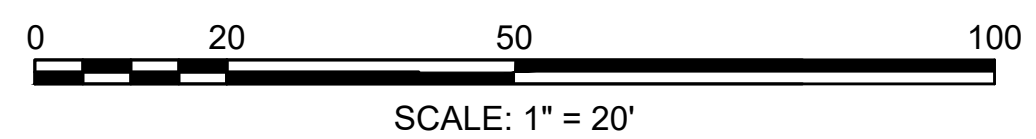
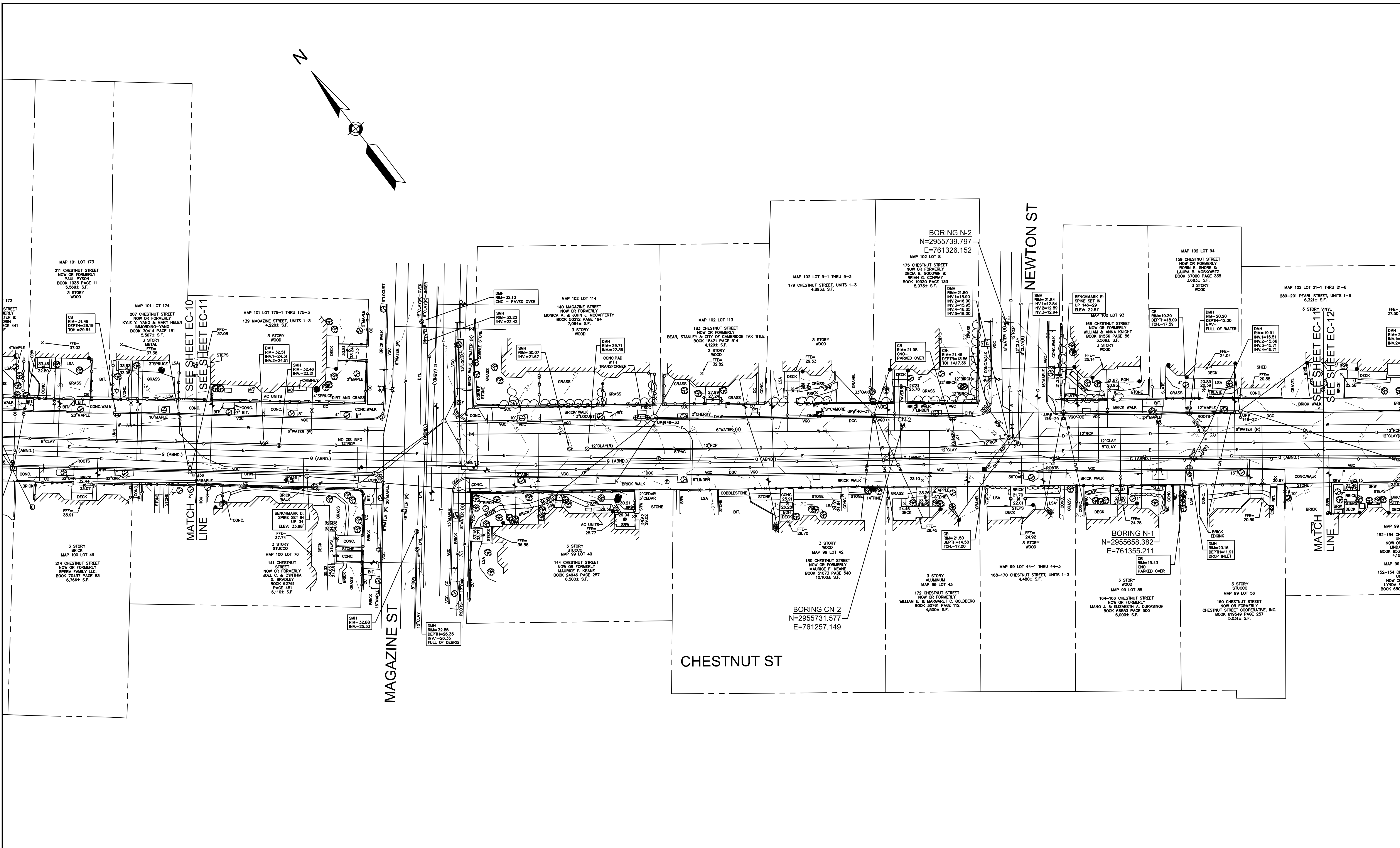
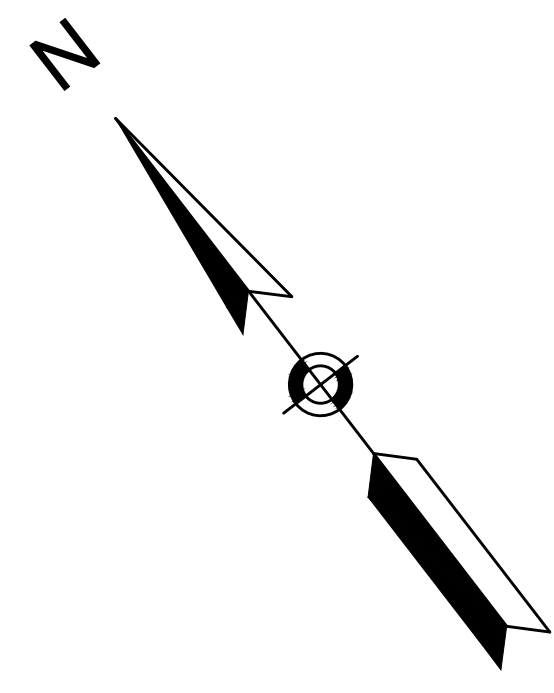


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - EXISTING CONDITIONS PLAN 1 OF 4

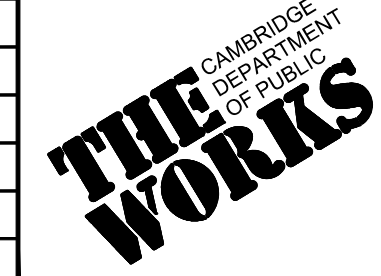
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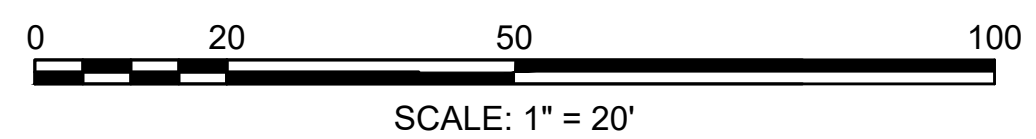
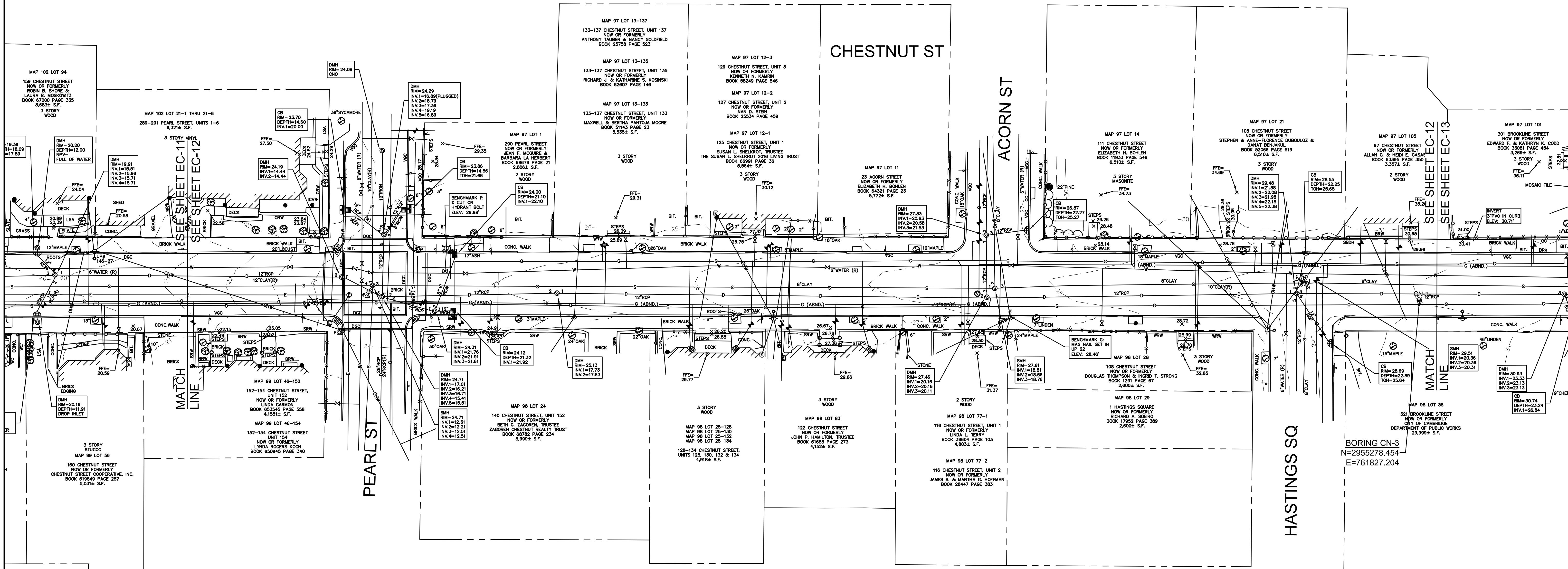
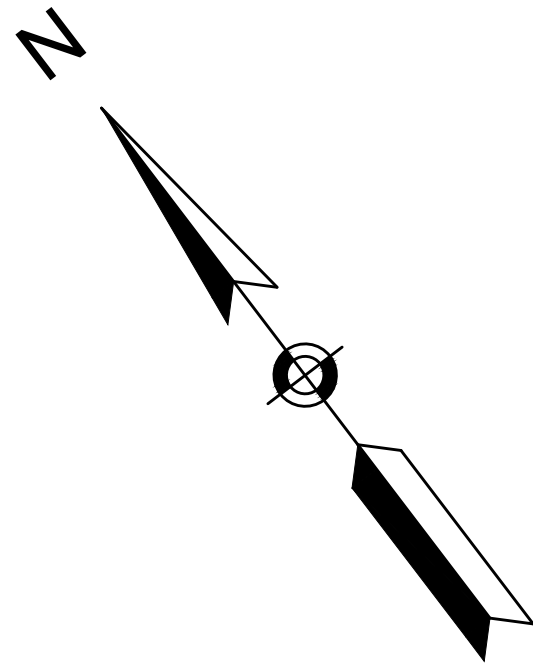
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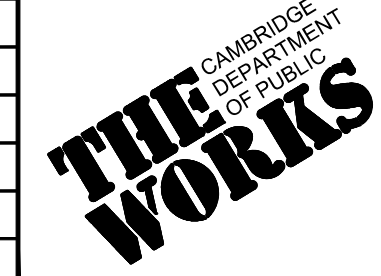
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - EXISTING CONDITIONS PLAN 2 OF 4

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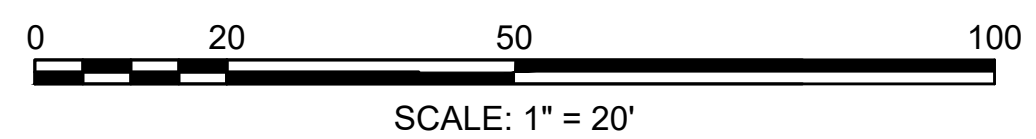
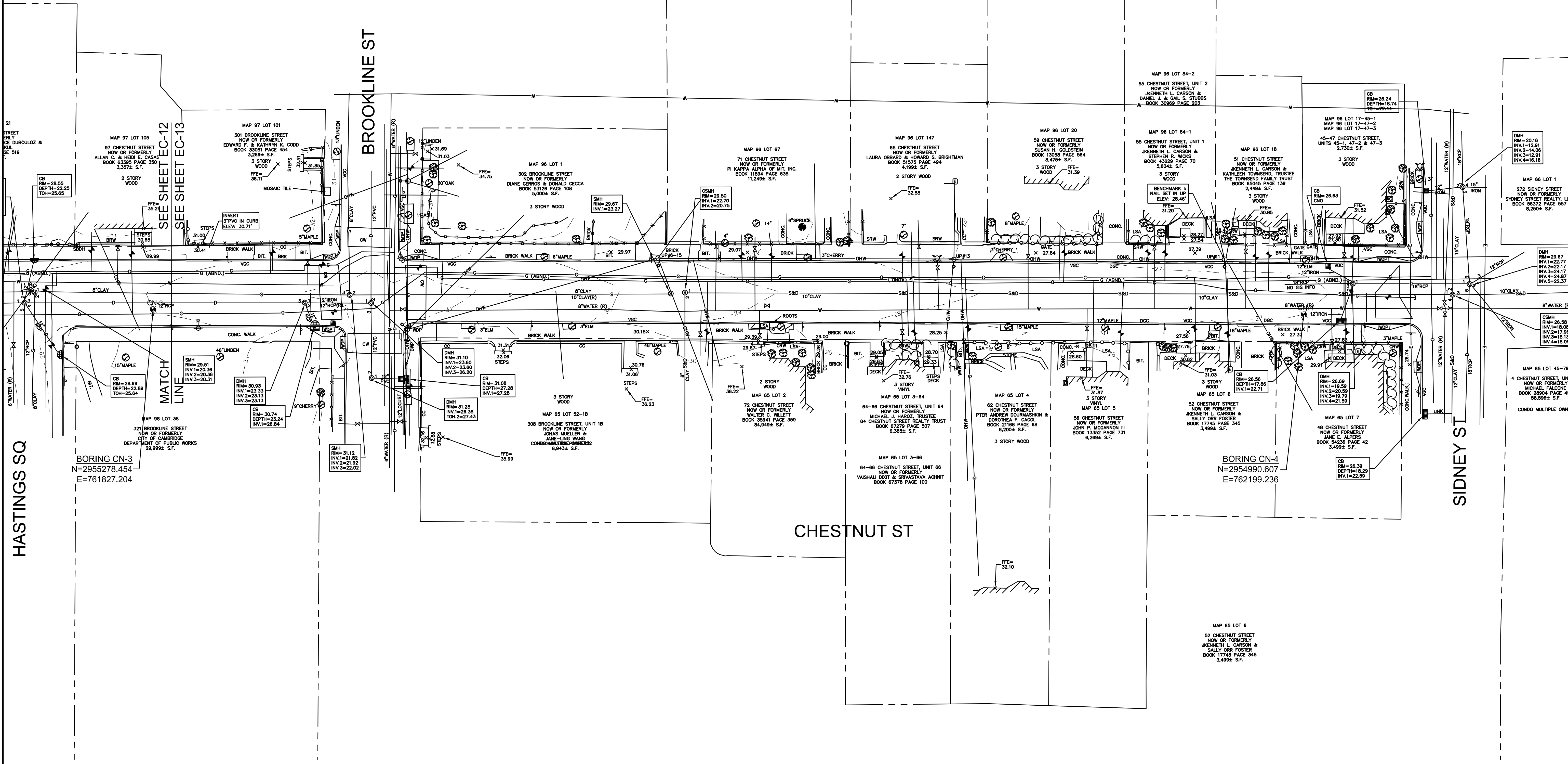
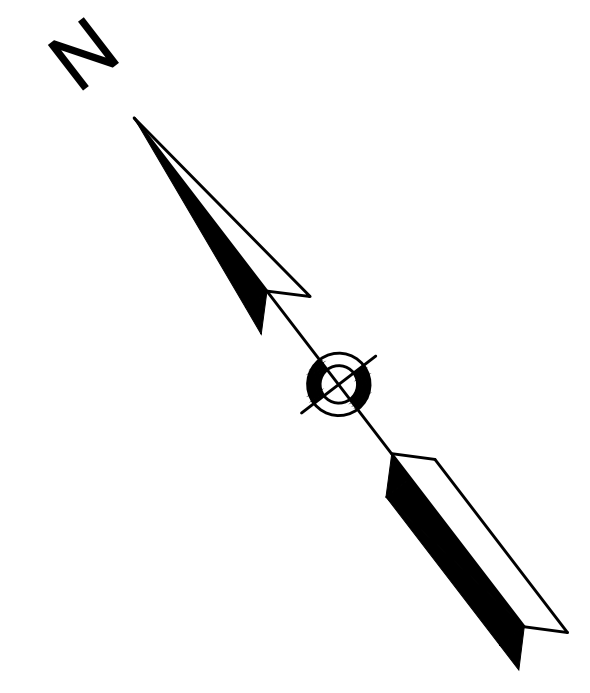


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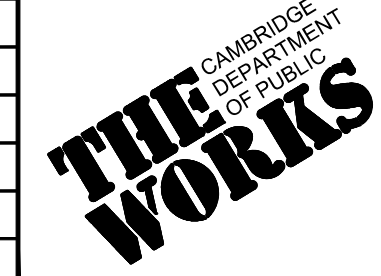


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Drawing	CHESTNUT ST - EXISTING CONDITIONS PLAN 3 OF 4

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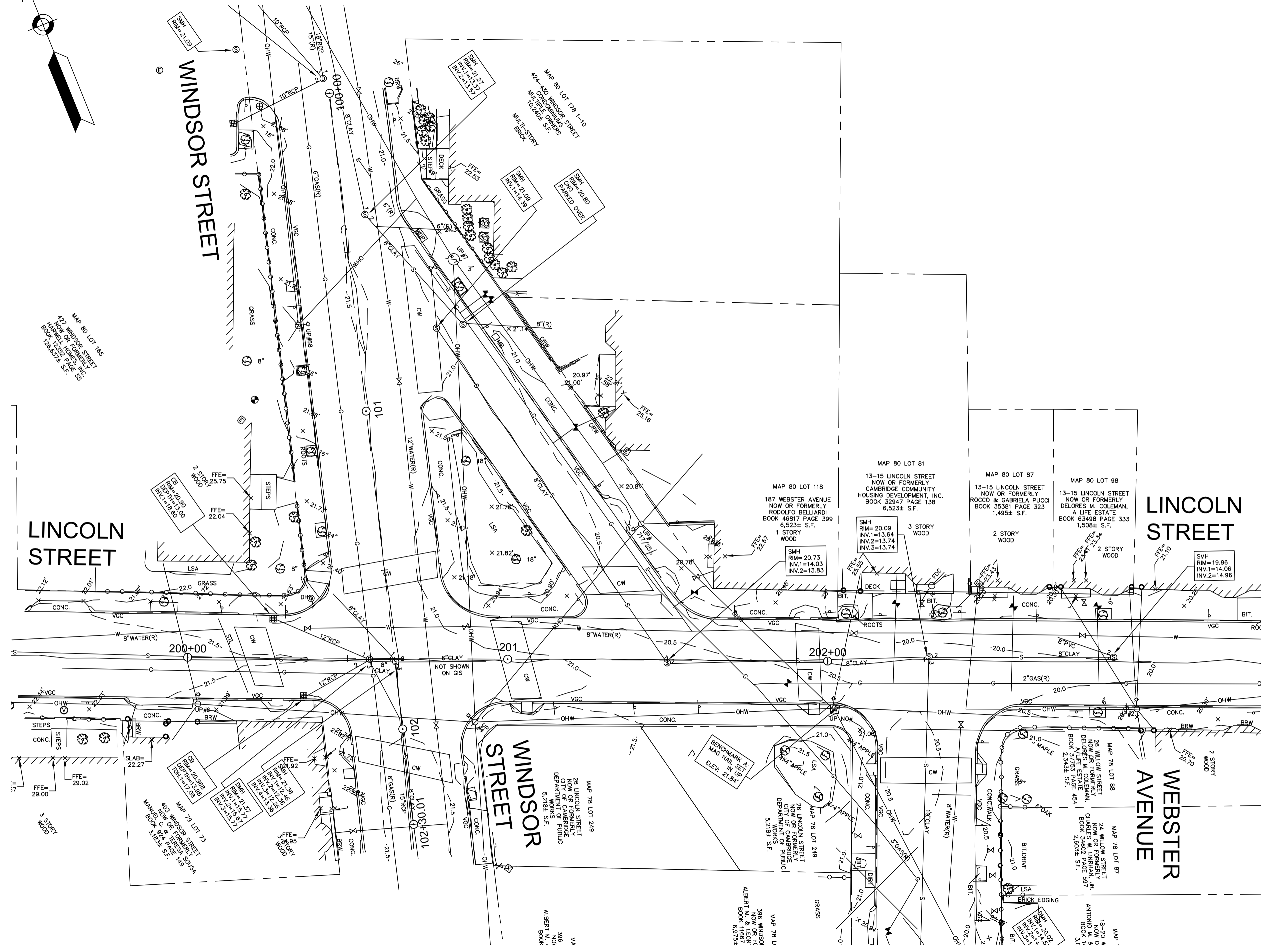
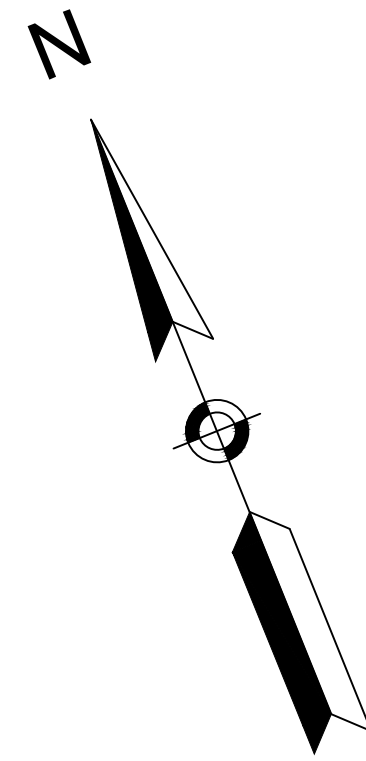
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	CHESTNUT ST - EXISTING CONDITIONS PLAN 4 OF 4

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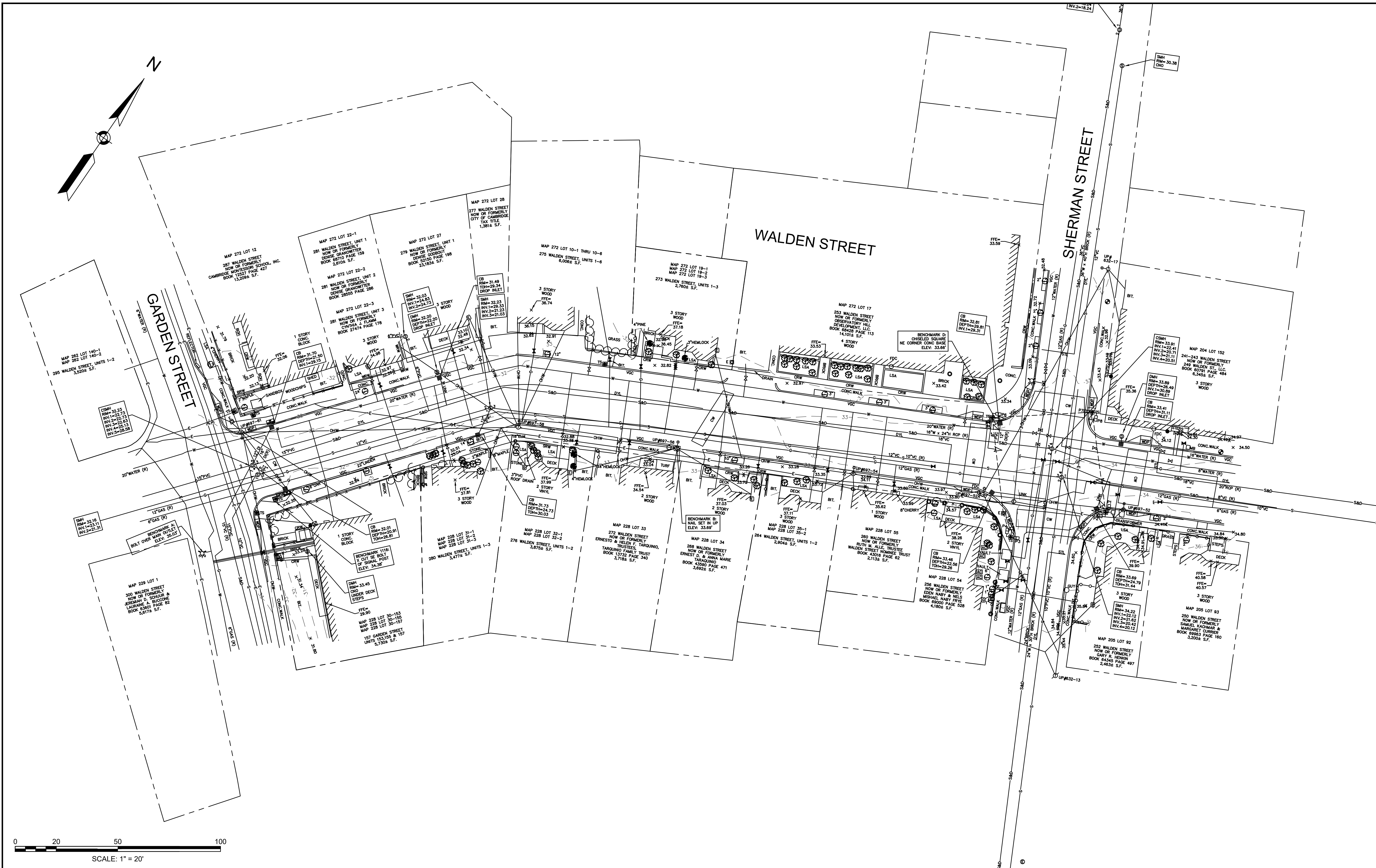
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	LINCOLN STREET EXISTING CONDITIONS PLAN SHEET 1 OF 1

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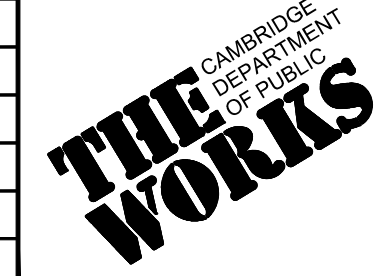
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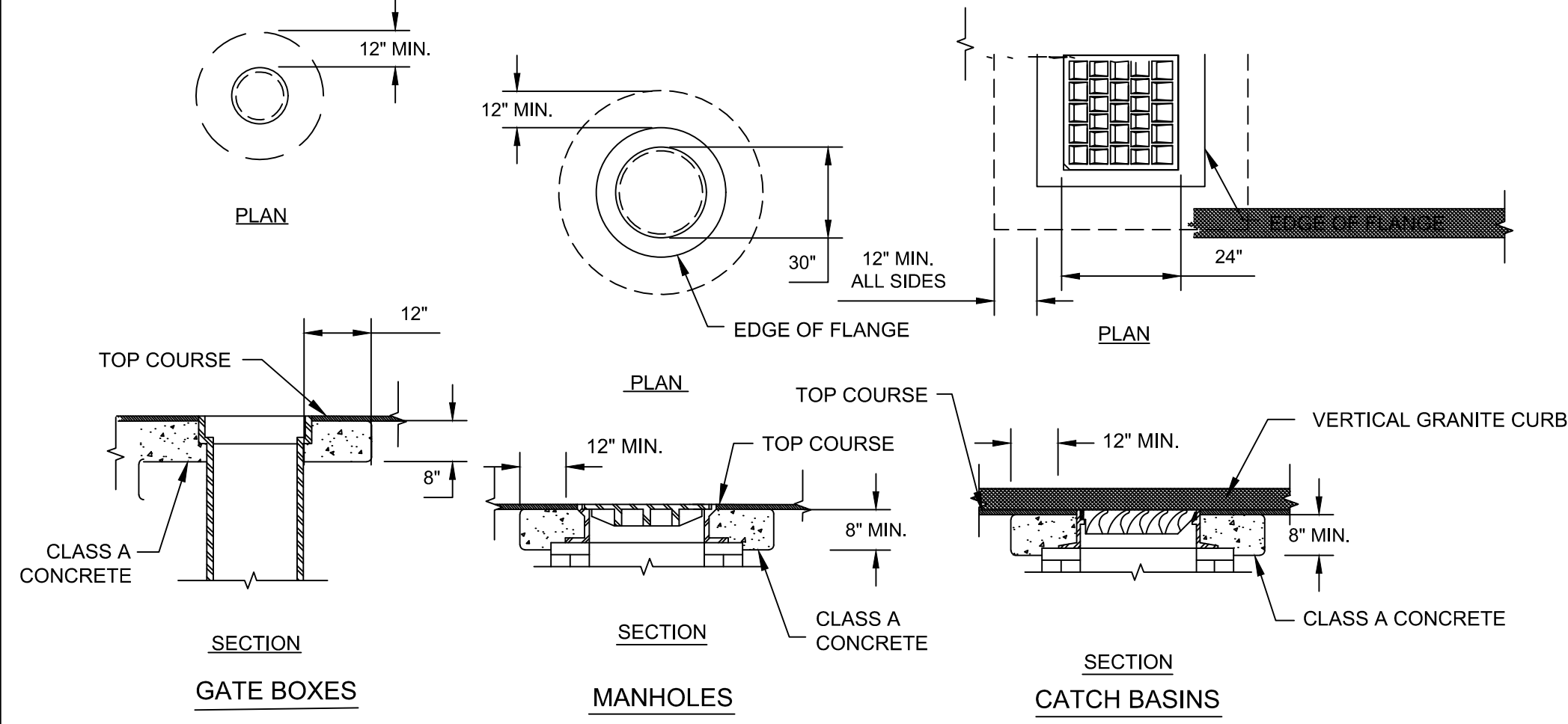


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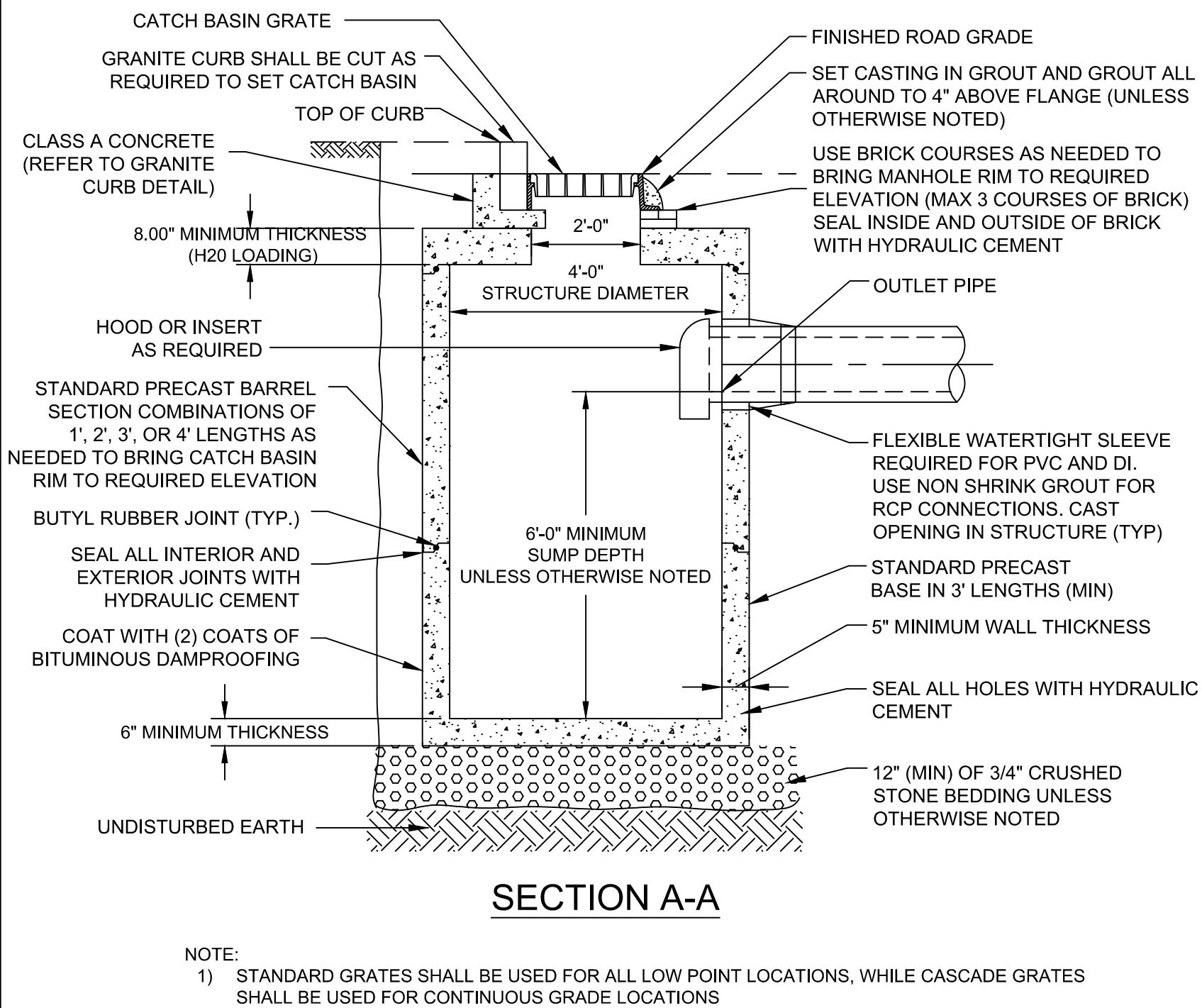
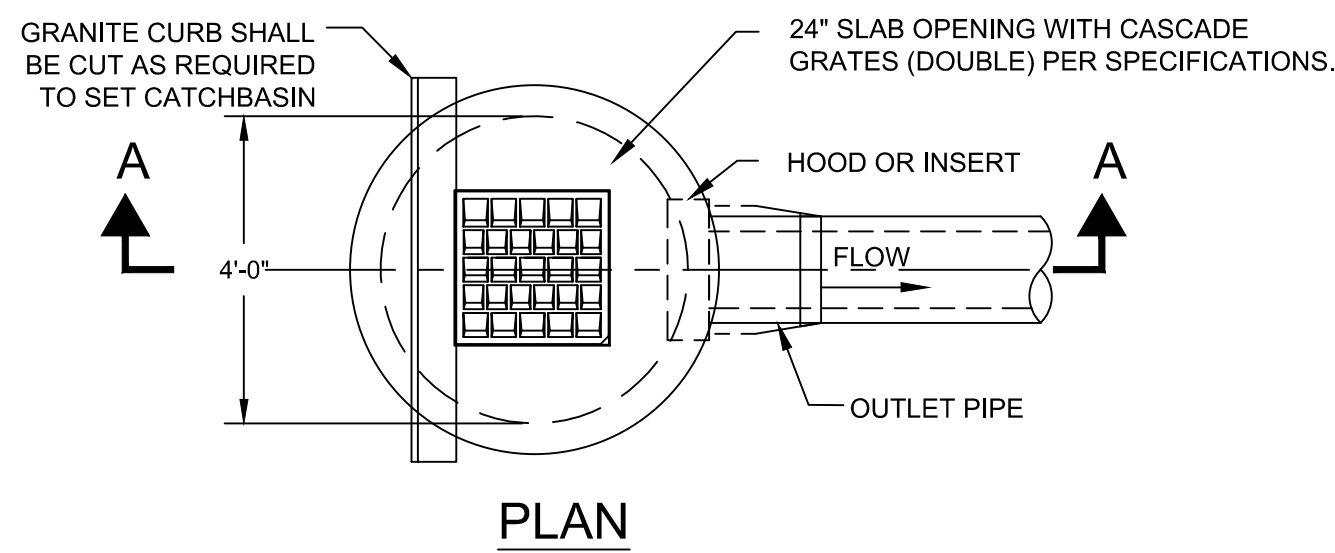


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	WALDEN ST - EXISTING CONDITIONS PLAN 1 OF 1

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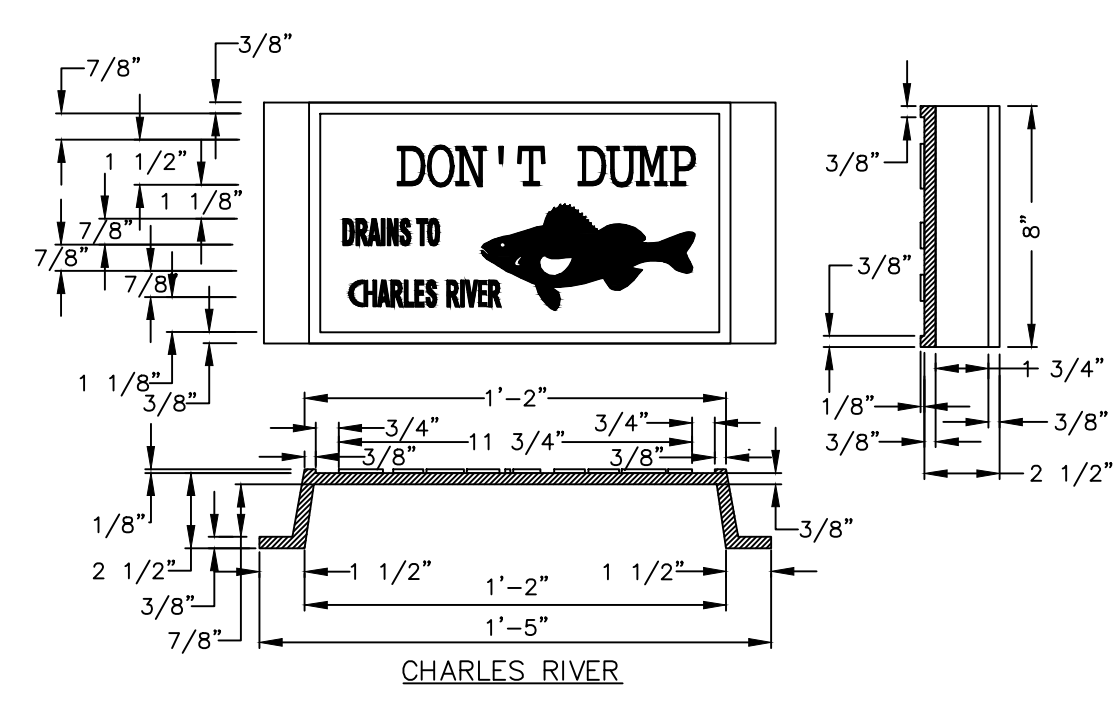


RAISING CASTINGS DETAILS
SCALE: N.T.S.



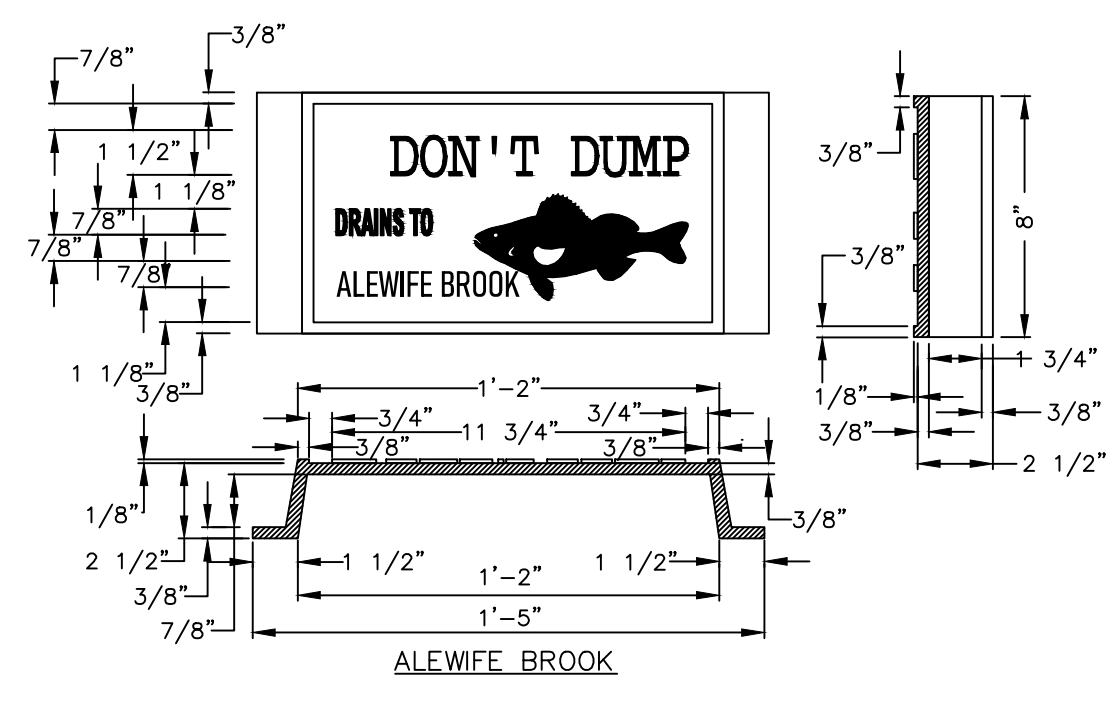
NOTE:
1) STANDARD GRATES SHALL BE USED FOR ALL LOW POINT LOCATIONS, WHILE CASCADE GRATES SHALL BE USED FOR CONTINUOUS GRADE LOCATIONS

TYPE 1 - SINGLE GRATE CATCH BASIN
SCALE: N.T.S.



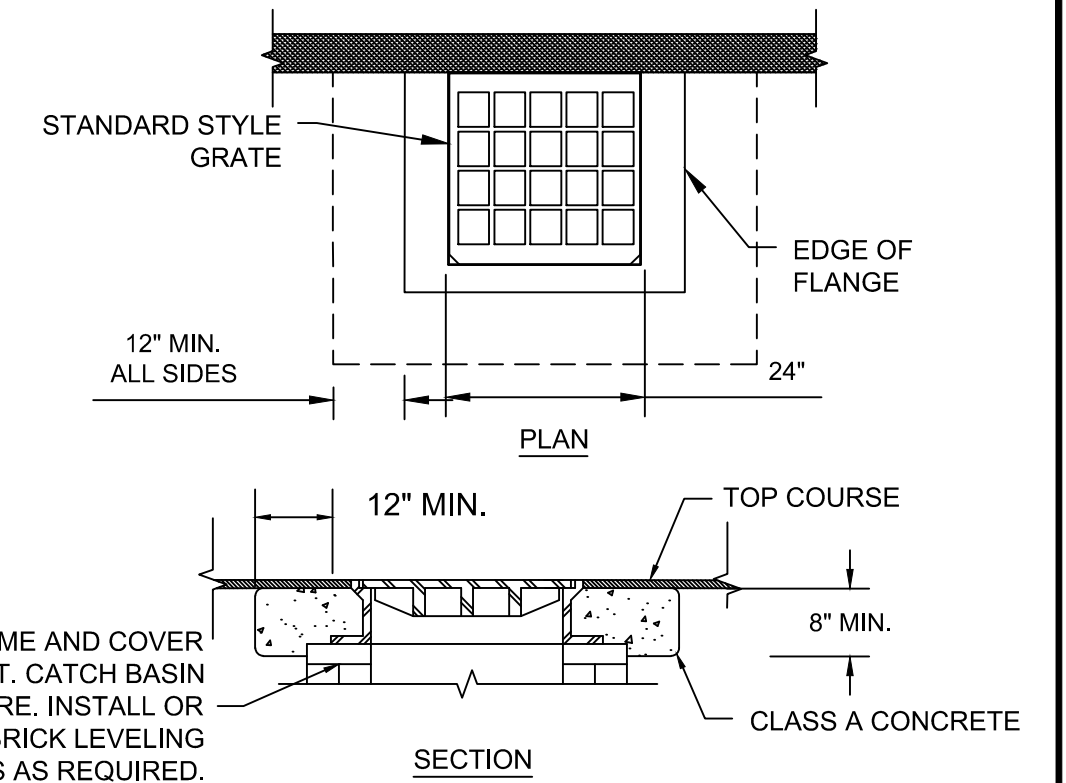
NOTE:
1) CHARLES RIVER CURB MARKER SHALL BE PLACED FOR ALL CATCH BASINS AND DIRECT INLETS ON HURON AVENUE LOCATED AFTER STATION 13+00 AND ON CHESTNUT STREET, DODGE STREET, ELM STREET, PARK AVENUE, WEBSTER AVENUE AND WINDSOR STREET.

CATCH BASIN DON'T DUMP CURB MARKER (CHARLES RIVER)
SCALE: N.T.S.



NOTE:
1) ALEWIFE BROOK CURB MARKER SHALL BE PLACED FOR ALL CATCH BASINS AND DIRECT INLETS ON HURON AVENUE LOCATED BEFORE STATION 13+00 AND ON WALDEN STREET.

CATCH BASIN DON'T DUMP CURB MARKER (ALEWIFE BROOK PARKWAY)
SCALE: N.T.S.

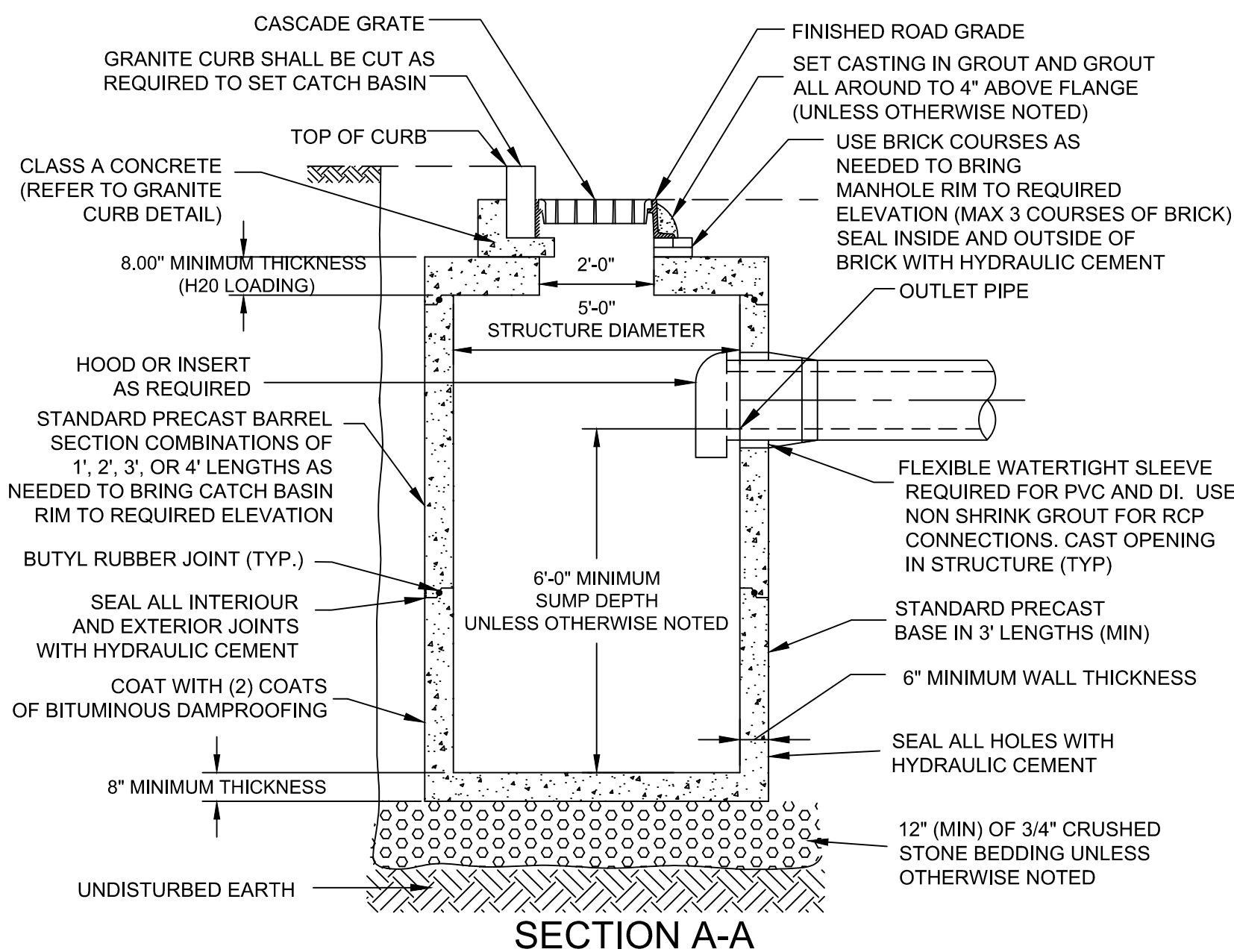
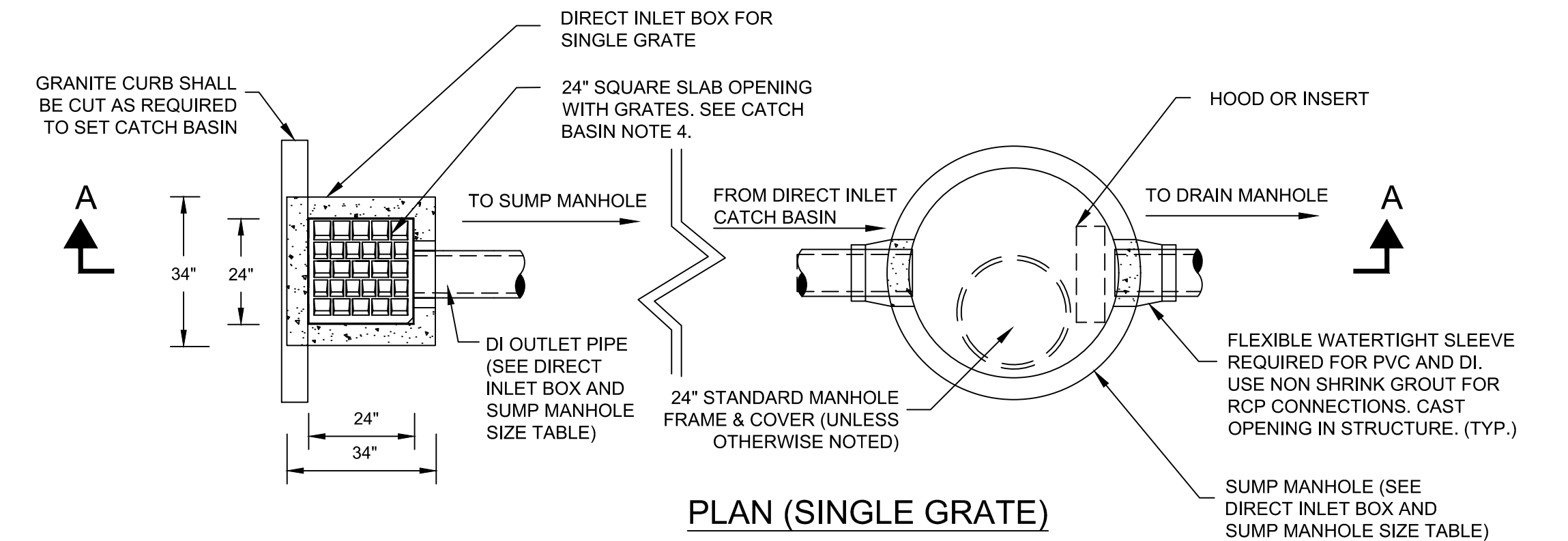
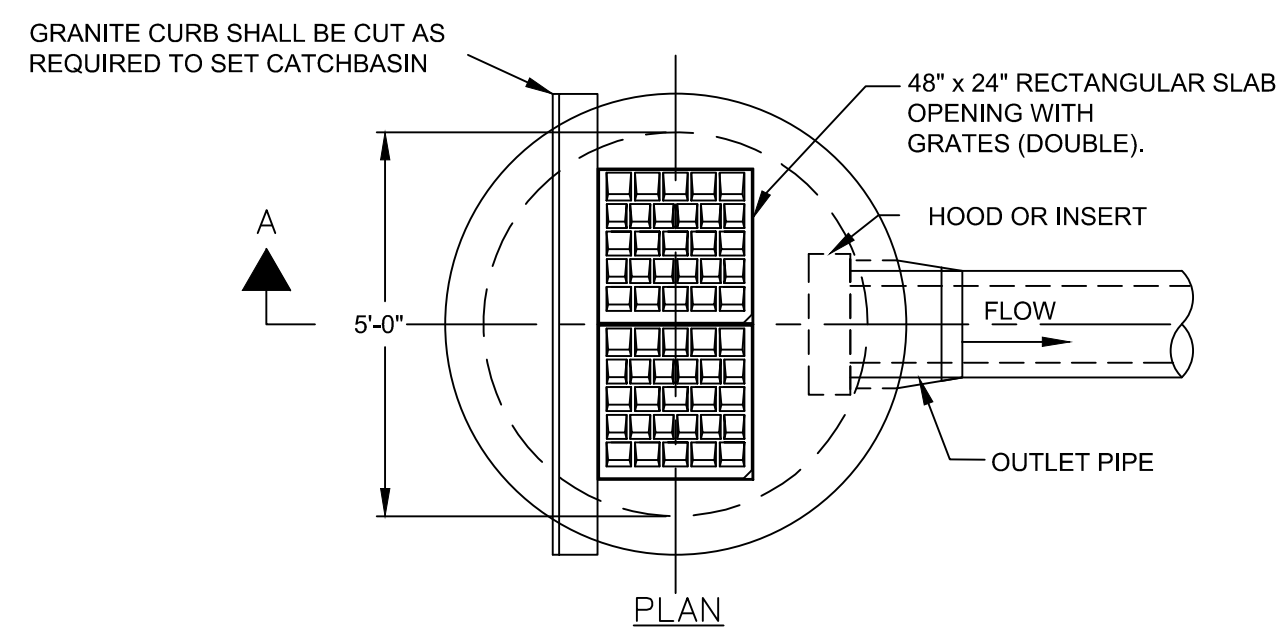
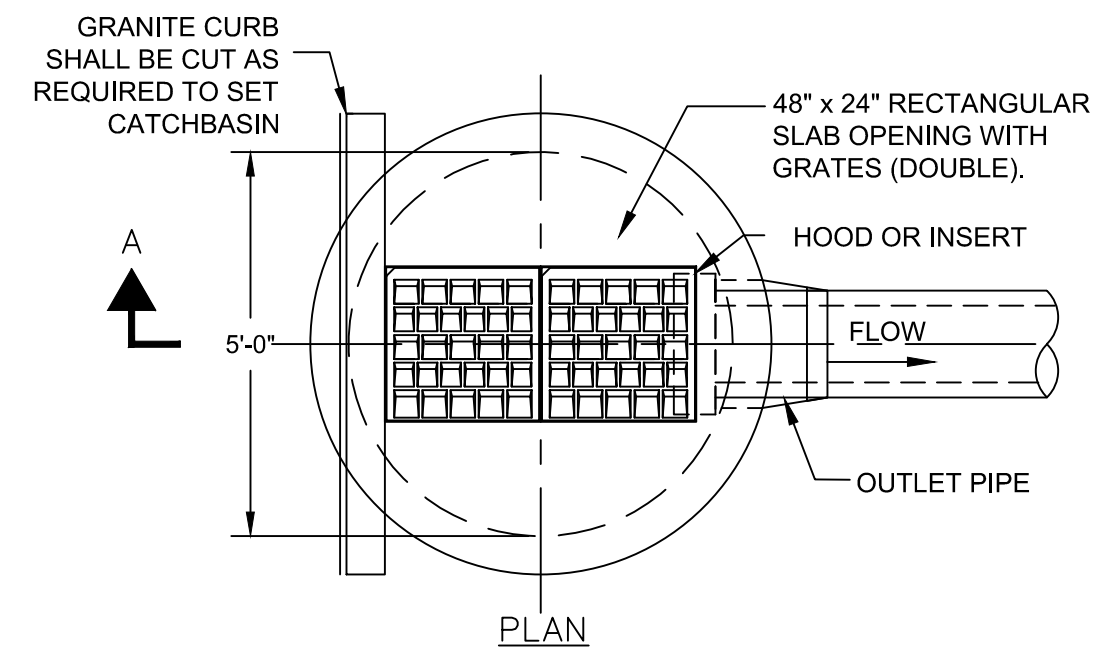


CATCH BASIN - REPLACE FRAME AND GRATE
SCALE: N.T.S.

DIRECT INLET BOX AND SUMP MANHOLE SIZE TABLE

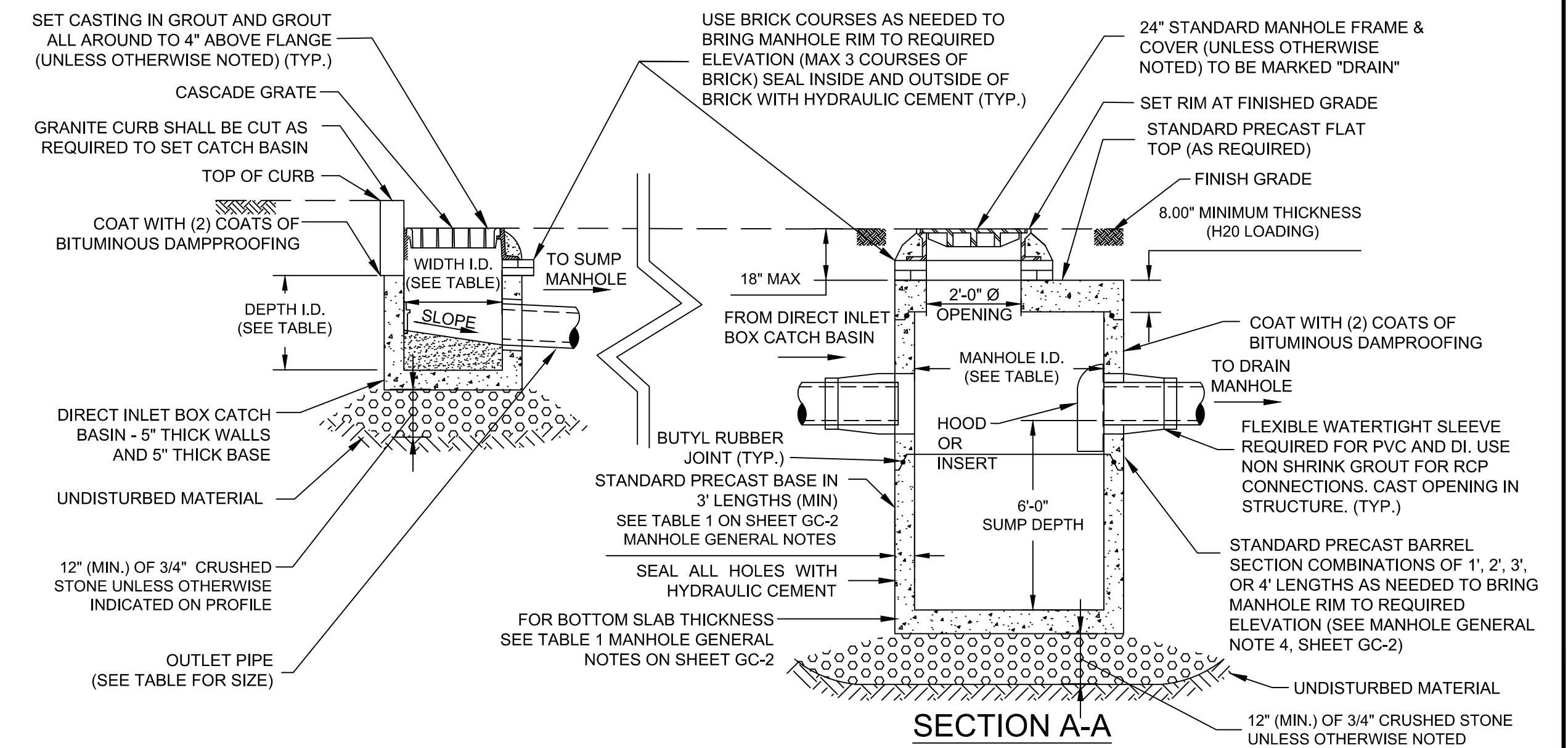
	PRECAST DIRECT INLET BOX		OUTLET PIPE (DI)	SUMP MANHOLE
	WIDTH (I.D.)	LENGTH (I.D.)	MIN DEPTH (I.D.)	Ø (I.D.)
SINGLE GRATE	24"	24"	24"	12"
DOUBLE GRATE	24"	48"	36"	16"

I.D. = INSIDE DIMENSION



NOTE:
1) STANDARD GRATES SHALL BE USED FOR ALL LOW POINT LOCATIONS, WHILE CASCADE GRATES SHALL BE USED FOR CONTINUOUS GRADE LOCATIONS

TYPE 2 - DOUBLE GRATE CATCH BASIN
SCALE: N.T.S.



NOTE:
1) STANDARD GRATES SHALL BE USED FOR ALL LOW POINT LOCATIONS, WHILE CASCADE GRATES SHALL BE USED FOR CONTINUOUS GRADE LOCATIONS

TYPE 5 - DIRECT INLET CATCH BASIN AND DEEP SUMPED MANHOLE- SECTION
SCALE: N.T.S.



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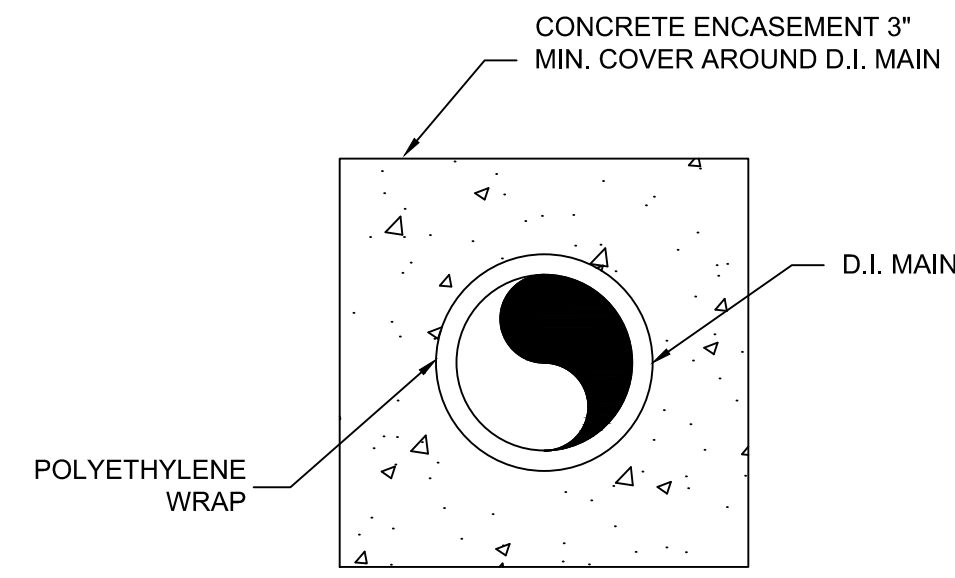


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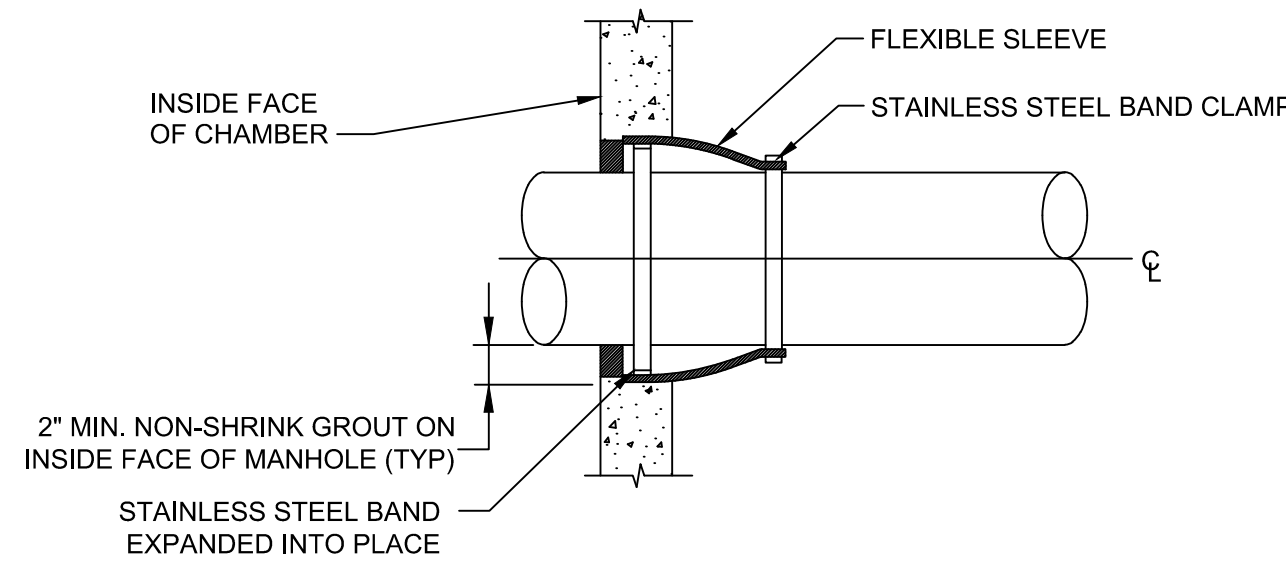


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Drawing	GENERAL CIVIL DETAILS - 1 OF 7

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CONCRETE ENCASUREMENT FOR SEWER MAIN CROSSINGS
SCALE: N.T.S.



FLEXIBLE SLEEVE CONNECTION NOTE:

1. PRECAST OPENING OR CORE DRILLED INTO EXISTING STRUCTURE. SIZE VARIES TO ACCOMMODATE EXTENSION BONNET FLANGE DIAMETER OR PIPE.

FLEXIBLE SLEEVE CONNECTION
SCALE: N.T.S.

TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER RCP	MAX PIPE DIAMETER D/PVC
4'	5"	6"	24"	30"
5'	6"	8"	36"	42"
6'	6"	8"	48"	54"
8'	8"	8"	66"	72"
10'	10"	10"	72"	84"

* MAY VARY DEPENDING ON SIZE AND LOCATION OF ADDITIONAL PENETRATIONS OR RELATIONSHIP OF PENETRATIONS IN MANHOLE

MANHOLE GENERAL NOTES:

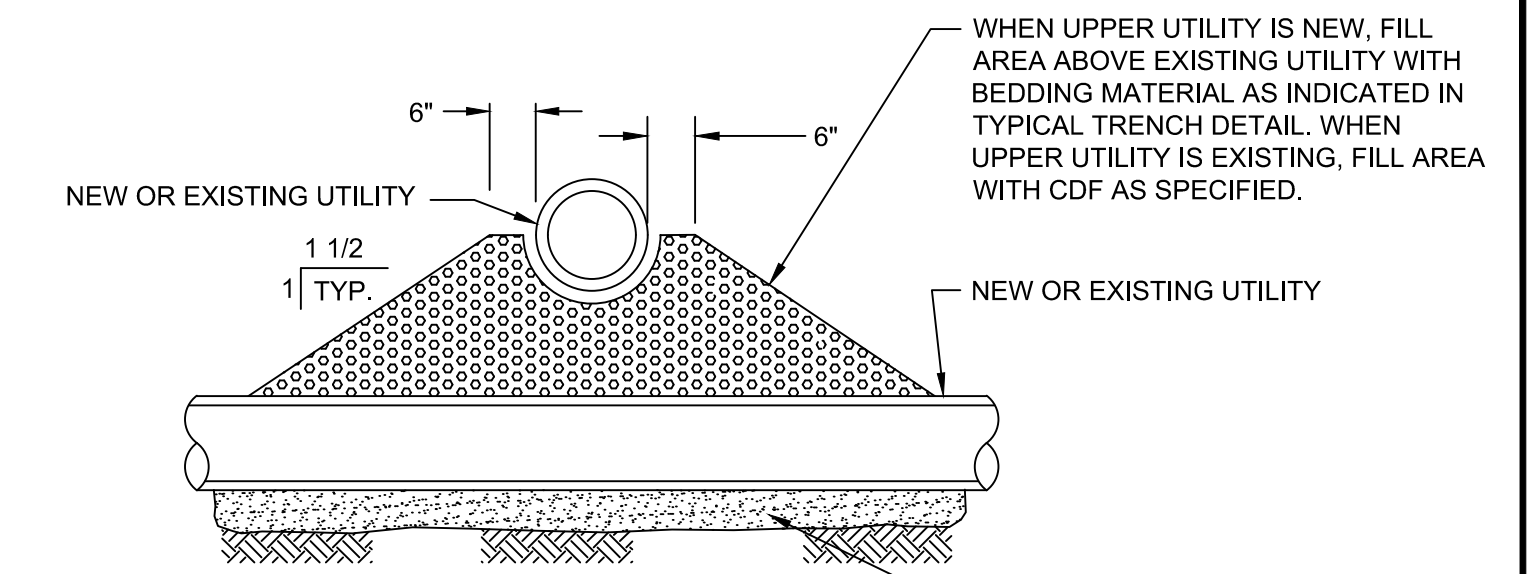
1. HIGHEST POINT OF BRICK TABLE AT MANHOLE WALL, TO BE AT ELEV. OF CROWN OF PIPE. TABLE TO SLOPE AT 8.3%.
2. SEWER OR DRAIN MANHOLE DIAMETER SHALL BE 4', 5', 6', 8', OR 10' AS SHOWN ON PLAN/PROFILE VIEWS.
3. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H20 LOADINGS. UNLESS OTHERWISE NOTED
4. MANHOLES LARGER THAN 4' IN DIAMETER AT THE BASE SHALL BE REDUCED IN DIAMETER TO 4' AT THE NEXT RISER SECTION UNLESS NOTED OTHERWISE ON PLANS.
5. PRECAST MANHOLES SHALL BE PRE-ORDERED WITH PENETRATIONS AT ELEVATIONS INDICATED ON CONTRACT DRAWINGS.

MANHOLE NOTES
SCALE: N.T.S.

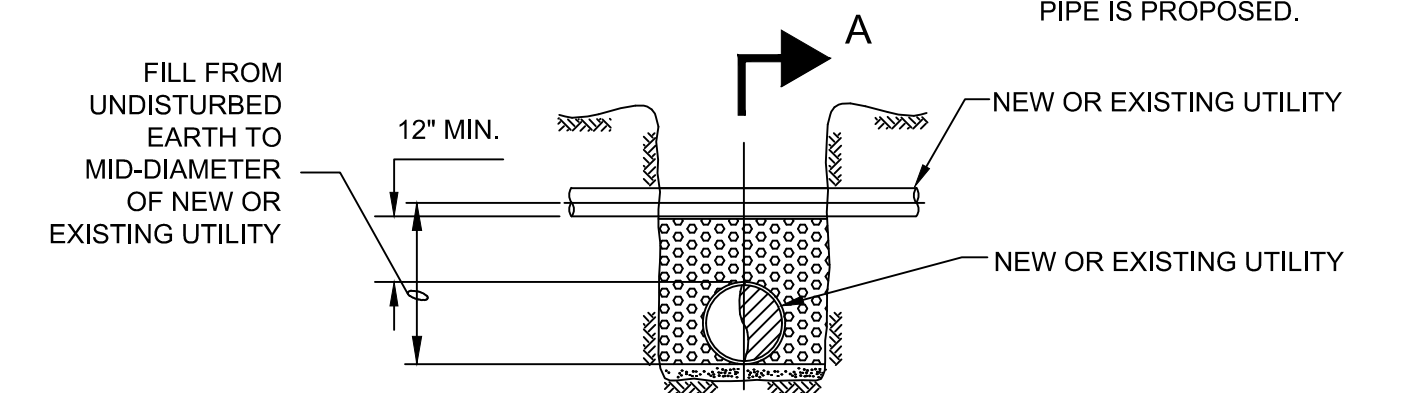
TRENCH PAY LIMIT TABLE FOR MANHOLES

WALL THICKNESS	MAX TRENCH WIDTH
LESS THAN 6"	I.D. + 5'-0"
6" TO 12"	I.D. + 6'-0"
13" TO 18"	I.D. + 7'-0"
19" & GREATER	O.D. + 6'-0"

I.D. = INSIDE DIMENSION
O.D. = OUTSIDE DIMENSION
FOR TRENCHES GREATER THAN 5' DEEP ADD 3' FOR TEMPORARY SUPPORT OF EXCAVATION

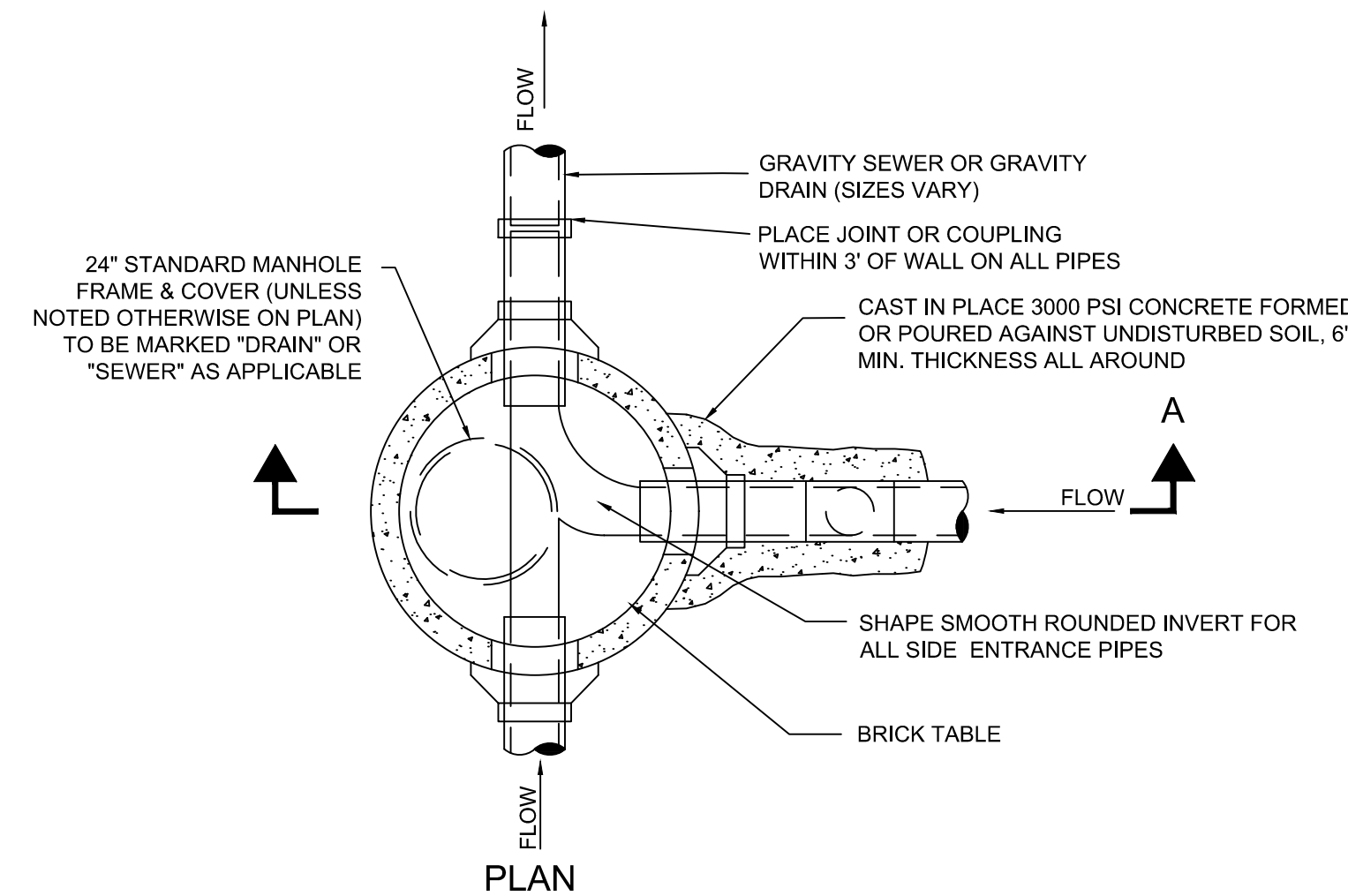


SECTION A-A

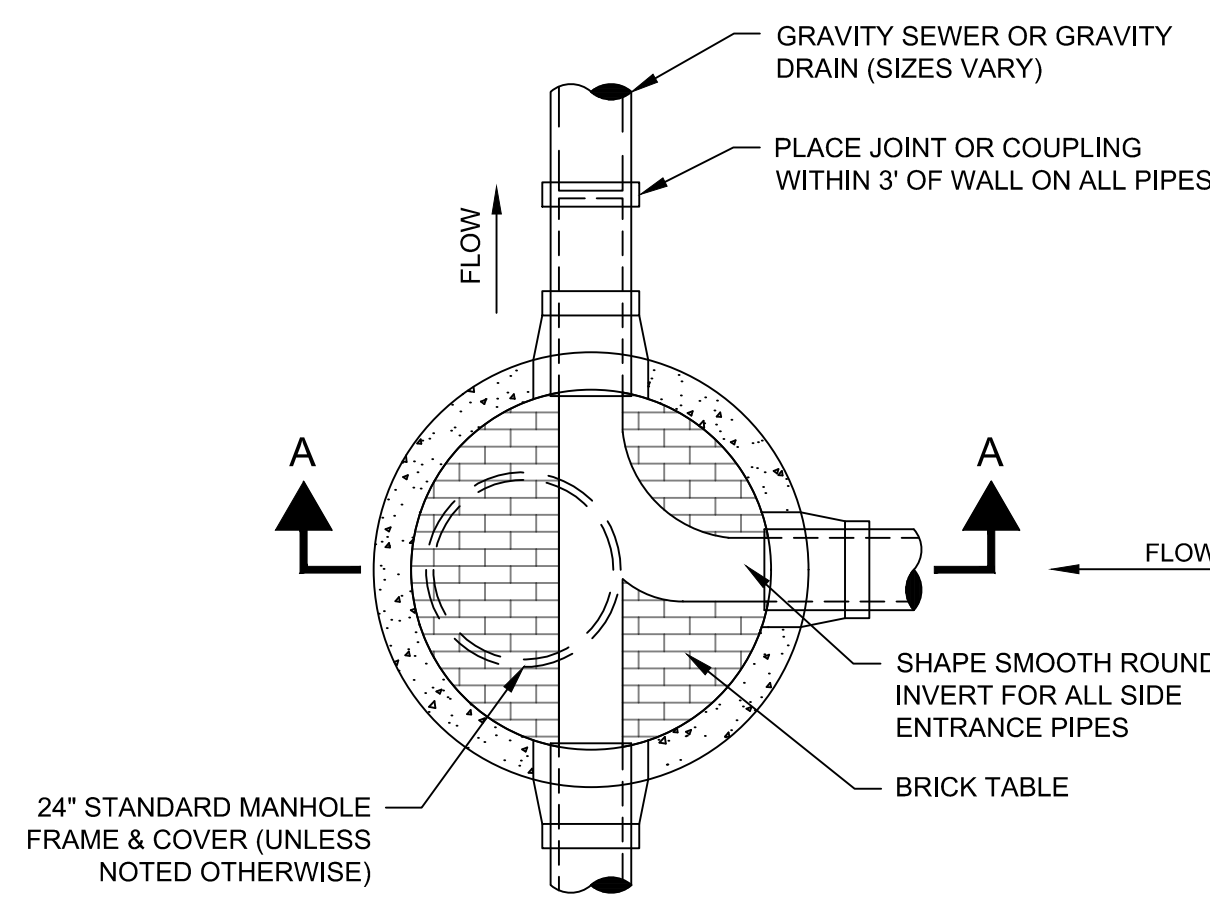


ELEVATION

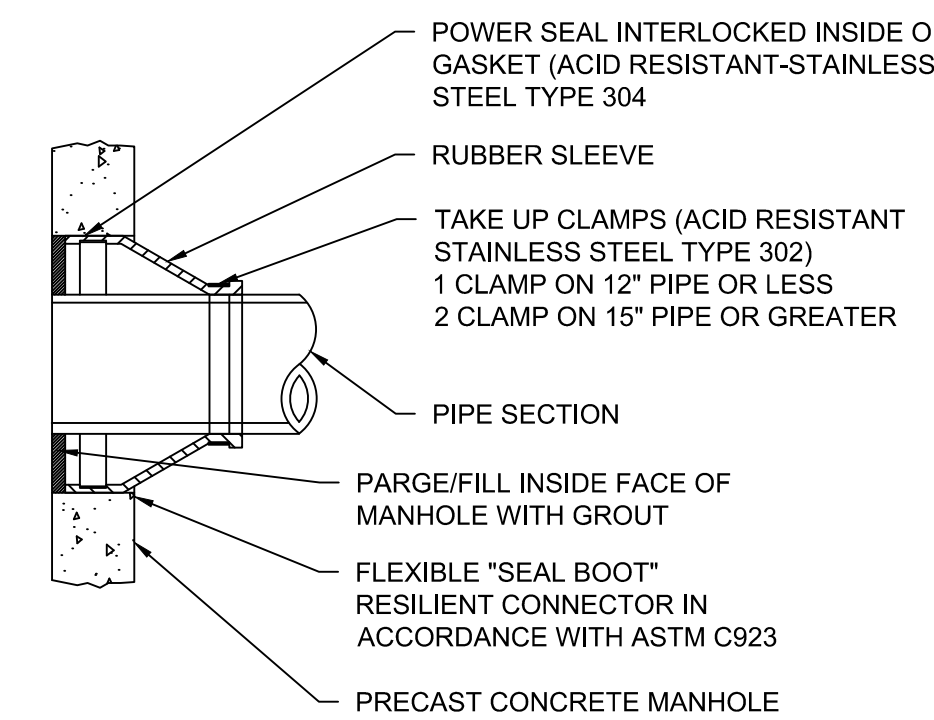
UTILITY CROSSING DETAIL
SCALE: N.T.S.



PLAN

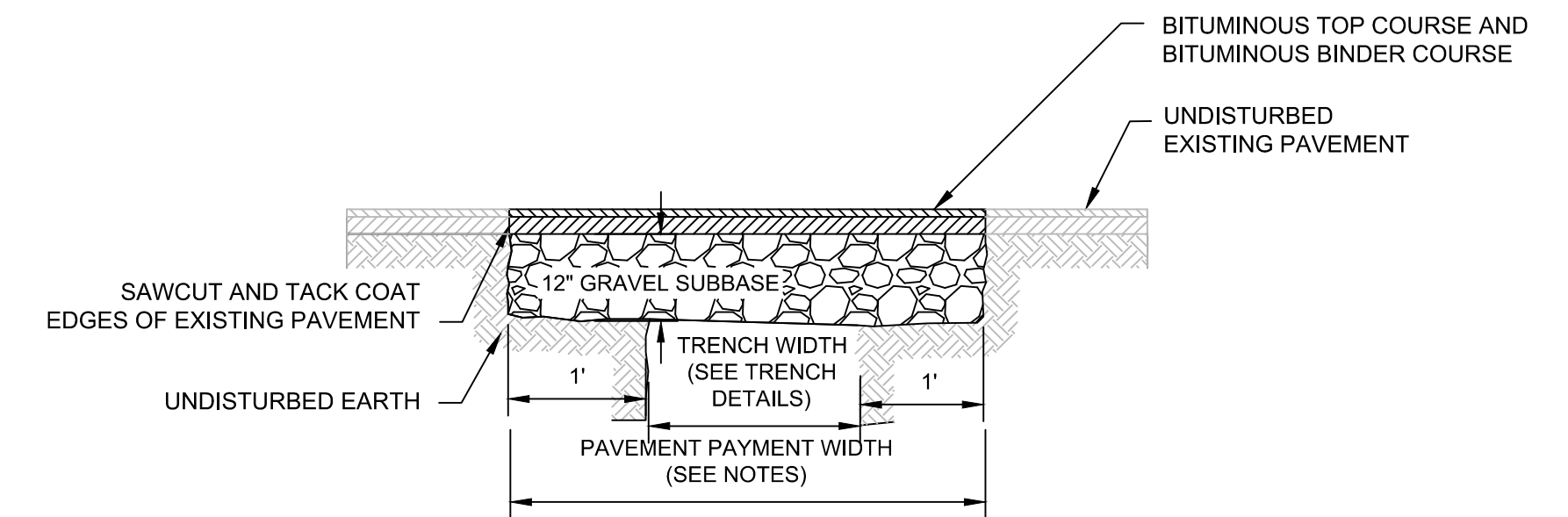


24\"/>



MANHOLE SEAL

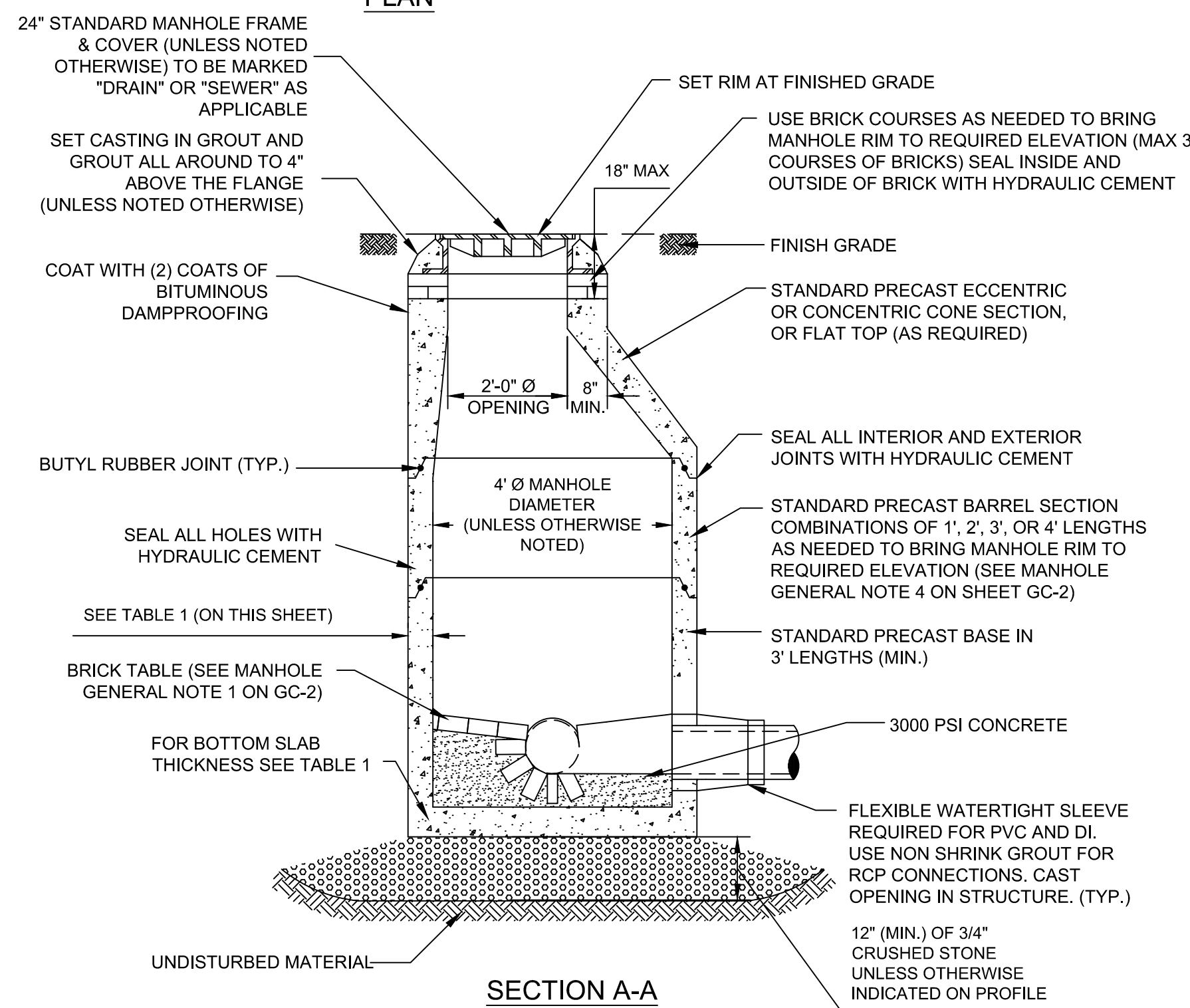
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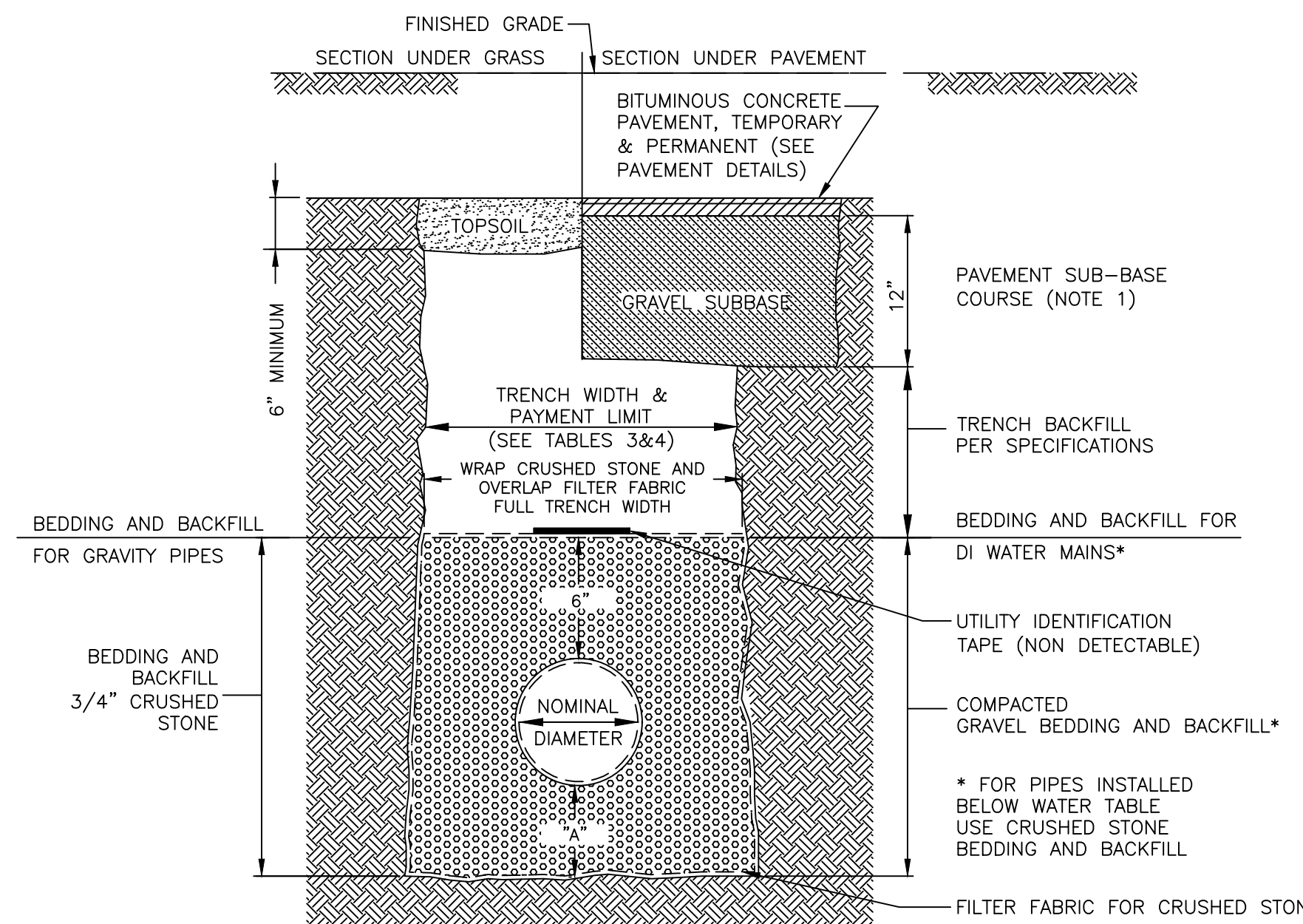
NOTES:

1. PERMANENT TRENCH PAVEMENT PAYMENT WIDTH SHALL BE THE TRENCH PAY LIMIT PLUS TWO FEET.
2. TEMPORARY TRENCH PAVEMENT PAYMENT WIDTH SHALL BE EQUAL TO THE TRENCH PAYMENT LIMIT.
3. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT.
4. SUBBASE AS REQUIRED PRIOR TO PERMANENT TRENCH PAVEMENT.

TRENCH RESTORATION PAVEMENT DETAIL
SCALE: N.T.S.



TYPE 1 - MANHOLE
SCALE: N.T.S.



TRENCH DETAIL FOR DRAIN AND WATER PIPES
SCALE: N.T.S.

TABLE 3: TRENCH PAY LIMIT TABLE FOR PIPES		
PIPE SIZE (DIA.)	MAX TRENCH WIDTH FOR PAYMENT	MAX "A" DEPTH FOR PAYMENT
LESS THAN 2"	2'-0"	6"
2" TO 6"	3'-0"	6"
8" TO 22"	4'-0"	9"
24" & GREATER	I.D. + 2'-0"	12"

I.D. = INSIDE DIMENSION

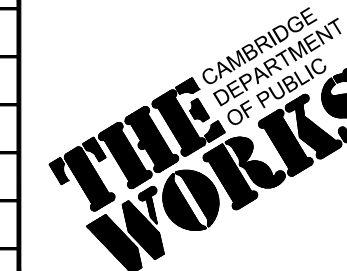
TABLE 4: TRENCH PAY LIMIT TABLE FOR PRECAST STRUCTURES		
WALL THICKNESS	MAX TRENCH WIDTH FOR PAYMENT	MAX "A" DEPTH FOR PAYMENT
LESS THAN 6"	I.D. + 5'-0"	12"
6" TO 12"	I.D. + 6'-0"	12"
13" TO 18"	I.D. + 7'-0"	12"
19" & GREATER	O.D. + 6'-0"	12"

I.D. = INSIDE DIMENSION
O.D. = OUTSIDE DIMENSION

- TRENCH NOTES:**
1. REFER TO SPEC. SECTION 02500 AND PAVEMENT DETAILS FOR PAVEMENT AND SUB-BASE REQUIREMENTS.
 2. REFER TO SPEC. SECTION 02210 FOR EXCAVATION, BACKFILL, GRADING, BEDDING AND COMPACTION REQUIREMENTS.
 3. REFER TO SPEC. SECTION 01025 FOR MEASUREMENT AND PAYMENT.
 4. BEDDING SHALL BE PER DIMENSION "A" UNLESS OTHERWISE INDICATED ON PROFILES.
 5. FOR EXCAVATION, BEDDING AND BACKFILL IN SILT OR CLAY SOIL SEE SPEC. SECTION 02210.

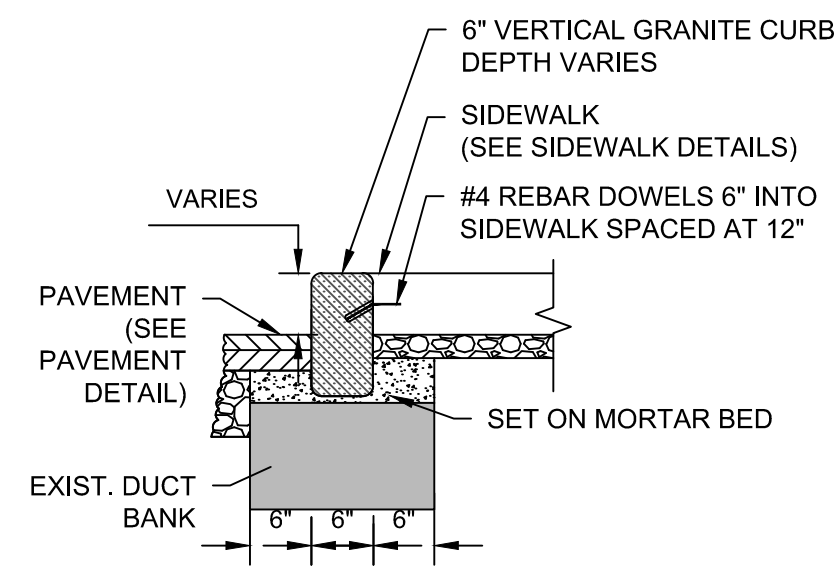


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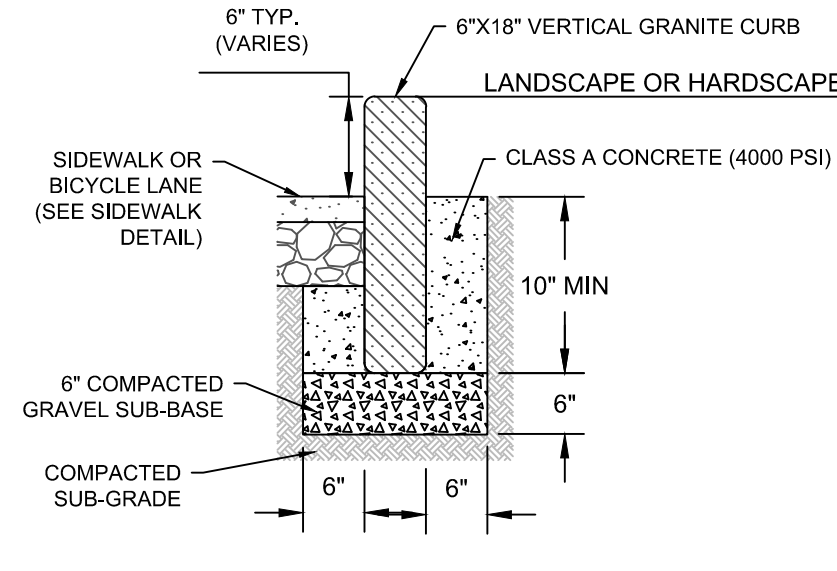


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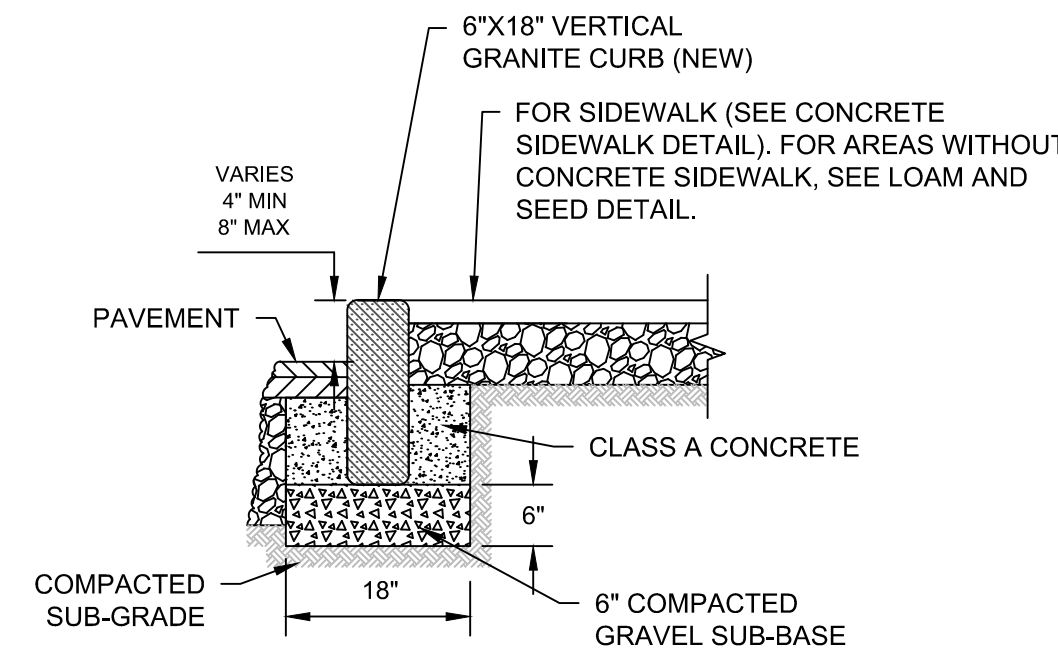
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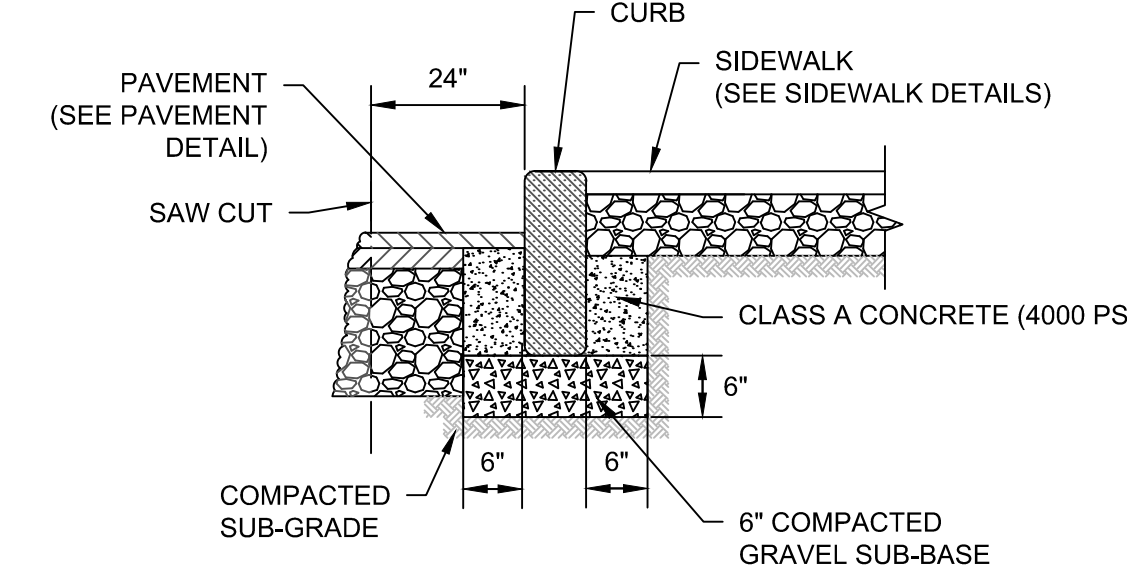
SHALLOW GRANITE CURB
SCALE: N.T.S.



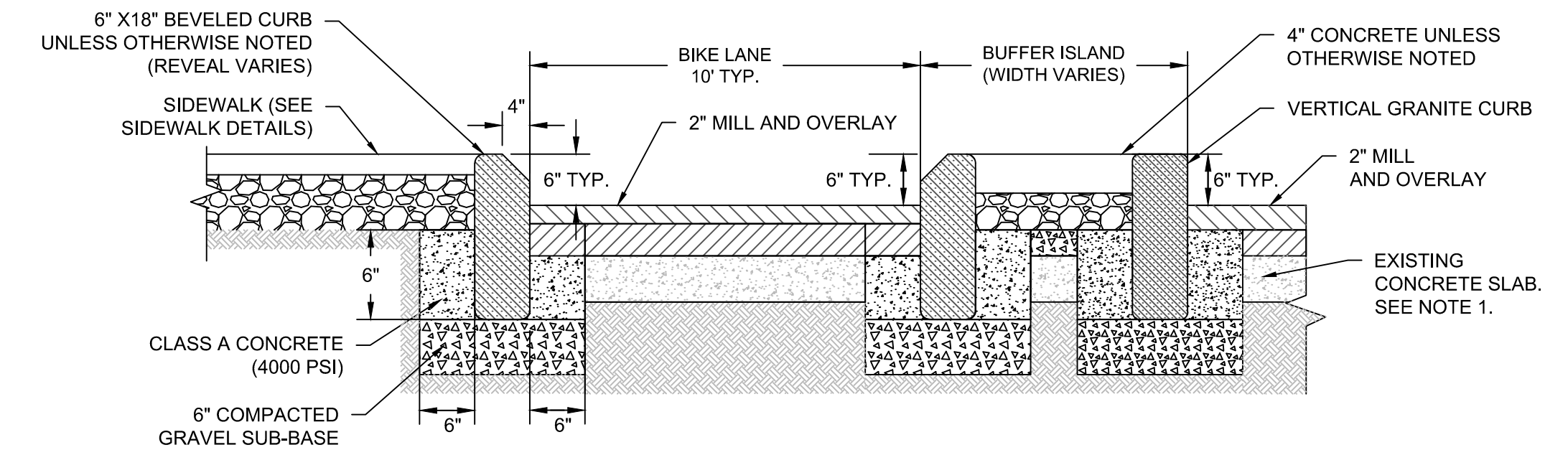
BACK OF SIDEWALK CURB
SCALE: N.T.S.



VERTICAL GRANITE CURB
SCALE: N.T.S.



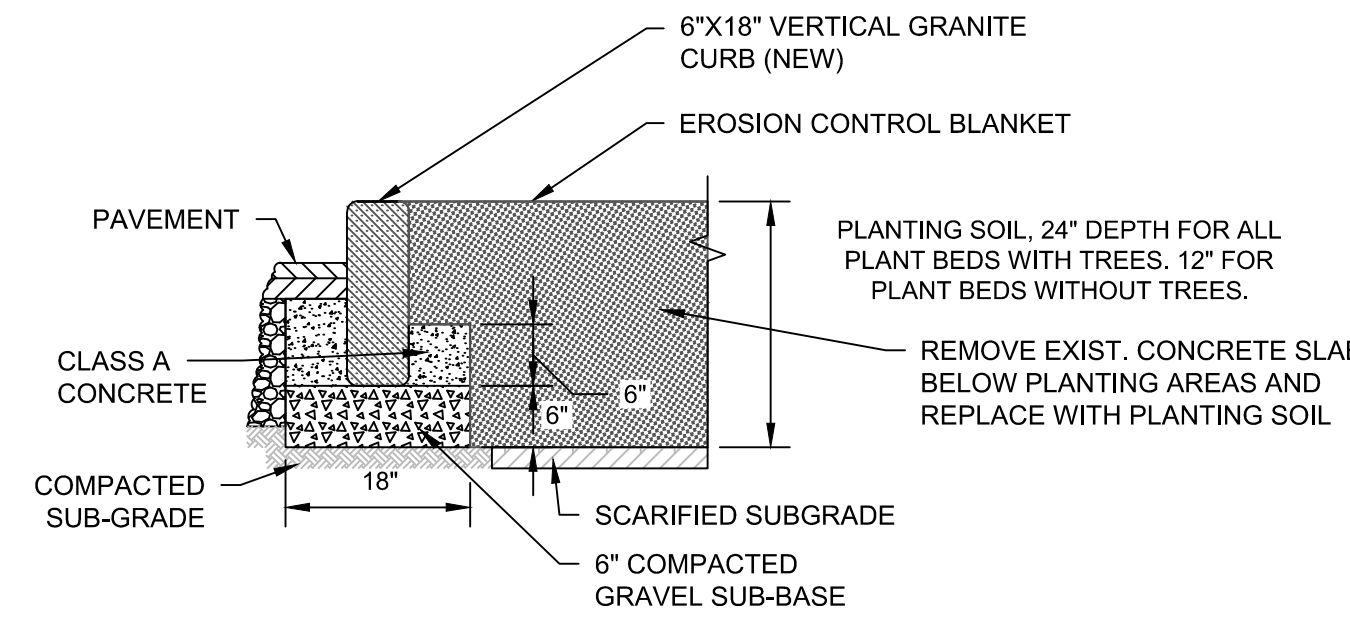
RESET CURB
SCALE: N.T.S.



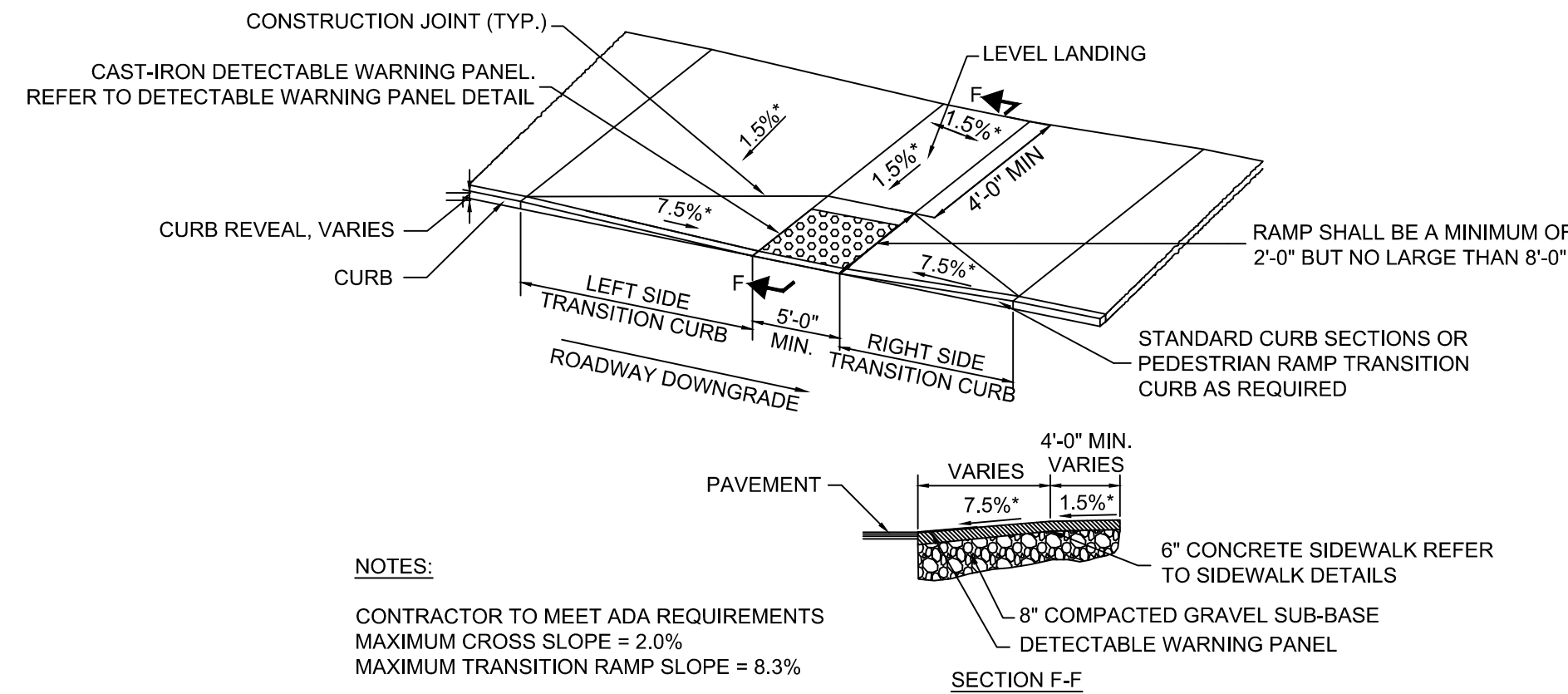
NOTES:

- EXCAVATE, SAW CUT, AND REMOVE EXIST. CONCRETE ROADWAY SLAB WHERE IN CONFLICT WITH PROPOSED CURB AND BUFFER ISLAND.

HURON AVENUE BIKE LANE
SCALE: N.T.S.



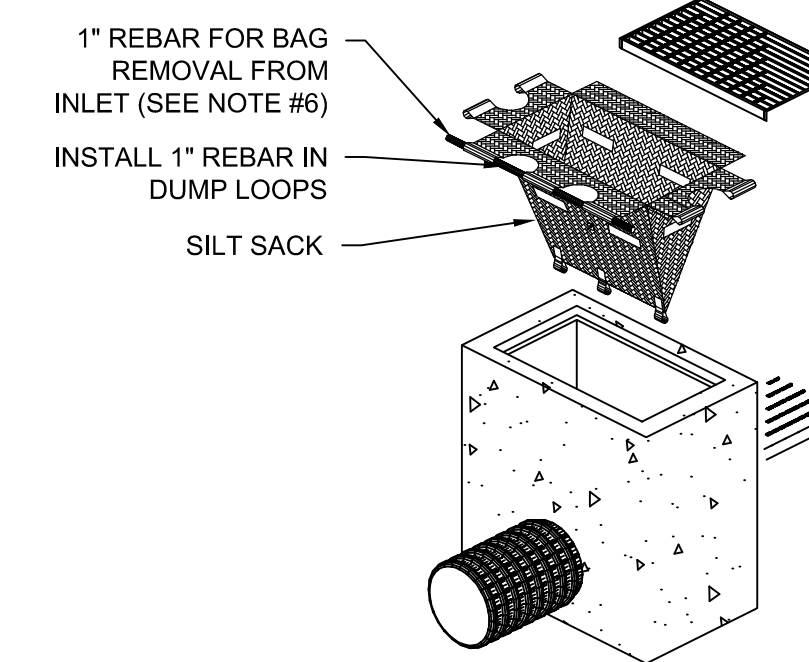
PLANTING AREA AT BUFFER ISLAND (HURON AVENUE)
SCALE: N.T.S.



NOTES:

- CONTRACTOR TO MEET ADA REQUIREMENTS
MAXIMUM CROSS SLOPE = 2.0%
MAXIMUM TRANSITION RAMP SLOPE = 8.3%

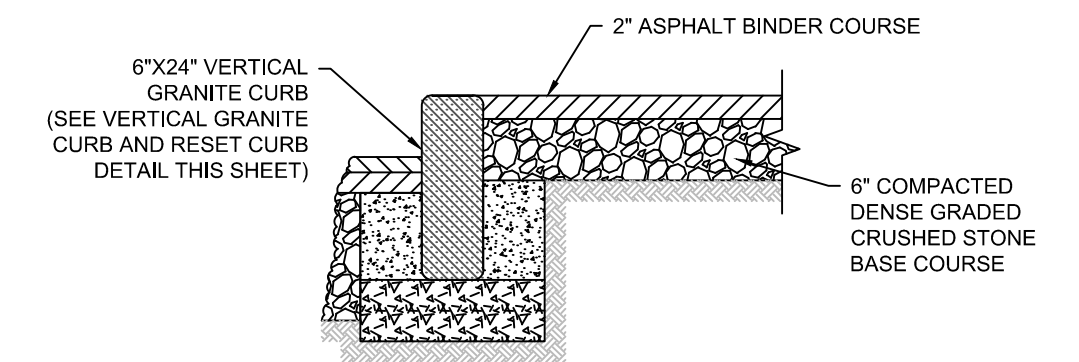
PEDESTRIAN RAMP
SCALE: N.T.S.



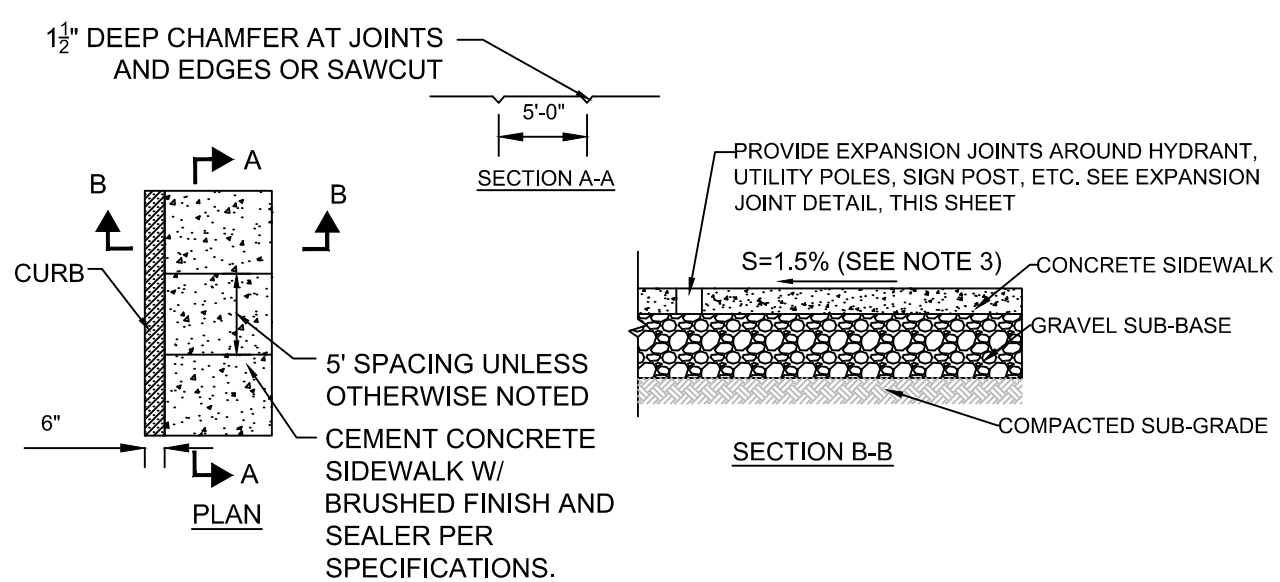
NOTES FOR EROSION CONTROL:

- CONTRACTOR SHALL REMOVE SEDIMENT AS NECESSARY TO MAINTAIN LEVEL BELOW OVERFLOW HOLES IN SILT SACK.
- SILT SACK SHALL BE USED ON ALL CATCH BASINS WITHIN CONSTRUCTION ZONE OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SEDIMENTATION BARRIERS THROUGHOUT THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF SEDIMENT AS REQUIRED.
- CONTRACTOR SHALL REMOVE SILT SACKS AND LEGALLY DISPOSE OF THEM OFF-SITE, UPON COMPLETION OF THE PROJECT AND AS REQUIRED.
- 1" REBAR FOR BAG REMOVAL SHALL BE REMOVED DURING WINTER MONTHS AT LOCATIONS WHERE PLOW ACTIVITY IS. BARS SHALL BE REINSTALLED AFTER SNOW SEASON IS COMPLETE.

SILTSACK
SCALE: N.T.S.



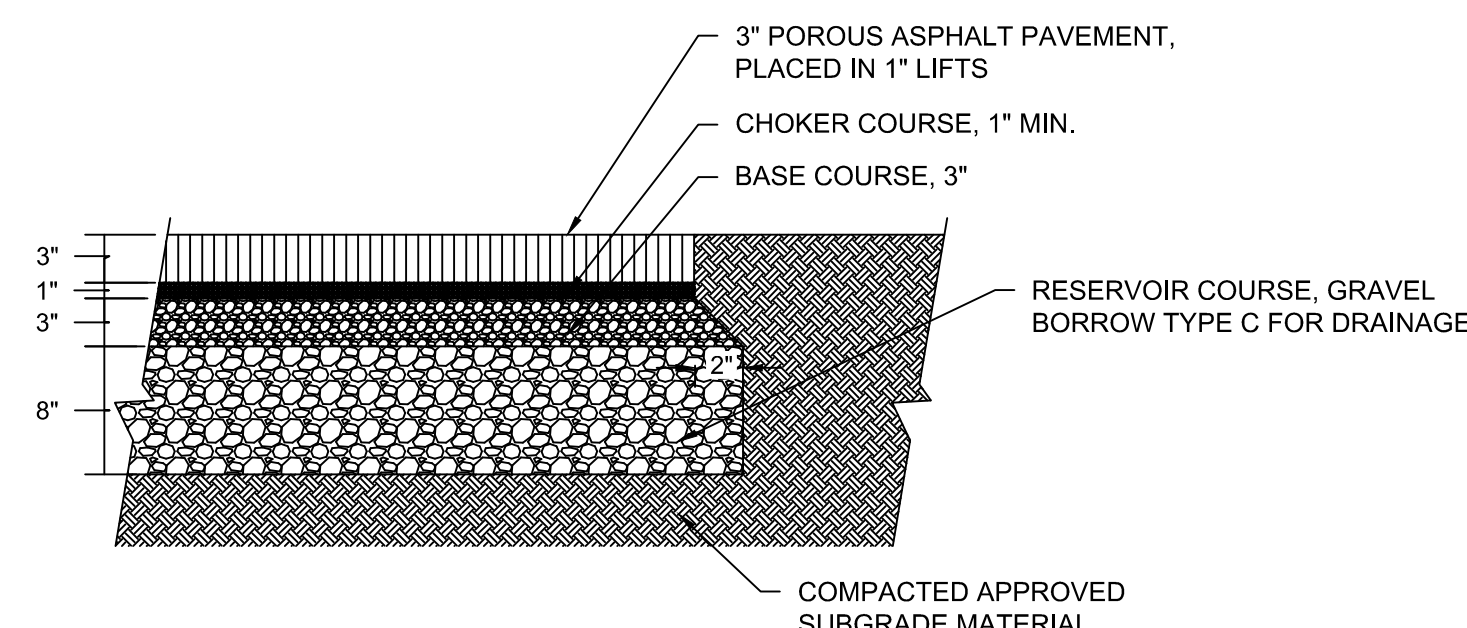
2" TEMPORARY ASPHALT SIDEWALK
SCALE: N.T.S.



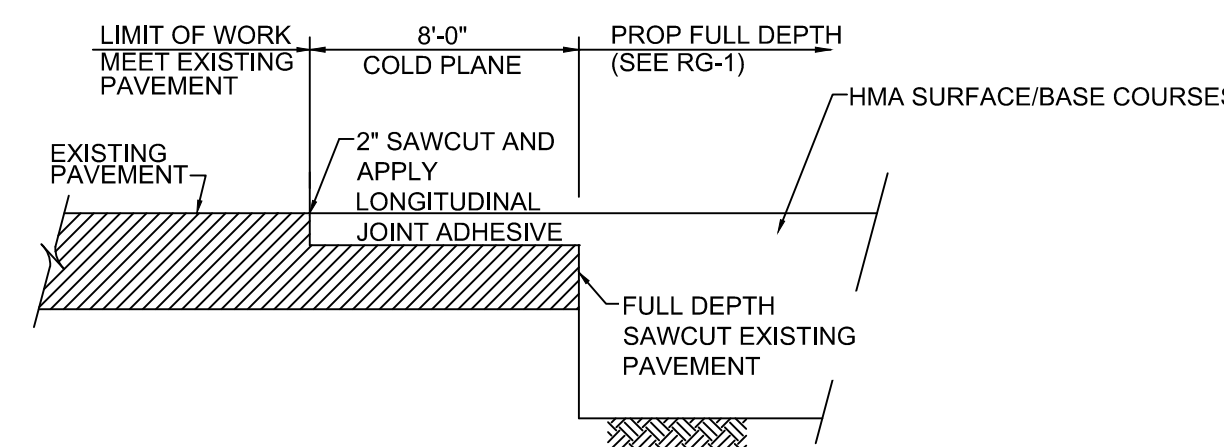
NOTES:

- NEW SIDEWALK SHALL MATCH WIDTH OF EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
- SIDEWALK MATERIAL TO MATCH EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
- SIDEWALKS TO BE BUILT ACCORDING TO PROWAG AND MA AAB REGULATIONS, 1.5% MAX (0.5% TOLERANCE) CROSS SLOPE.
- AROUND HYDRANTS, UTILITY POLES, SIGN POSTS ETC., SEE EXPANSION JOINT DETAIL (SHEET GC-4).
- SEE ROADWAY GRADING AND DETAILED GRADING SHEETS FOR SIDEWALK GRADES.
- MINIMUM CLEARANCE OF 3" SHALL BE PROVIDED AT EXISTING TREE PITS. MINIMUM CLEARANCE OF 4" SHALL BE PROVIDED AT ALL OTHER LOCATIONS.
- CONCRETE SHALL BE 6" THICK WITHIN LIMITS OF BUS STOPS, PEDESTRIAN RAMPS AND DRIVEWAYS. CONCRETE SHALL BE 4" THICK AT ALL OTHER LOCATIONS.

CONCRETE SIDEWALK
SCALE: N.T.S.



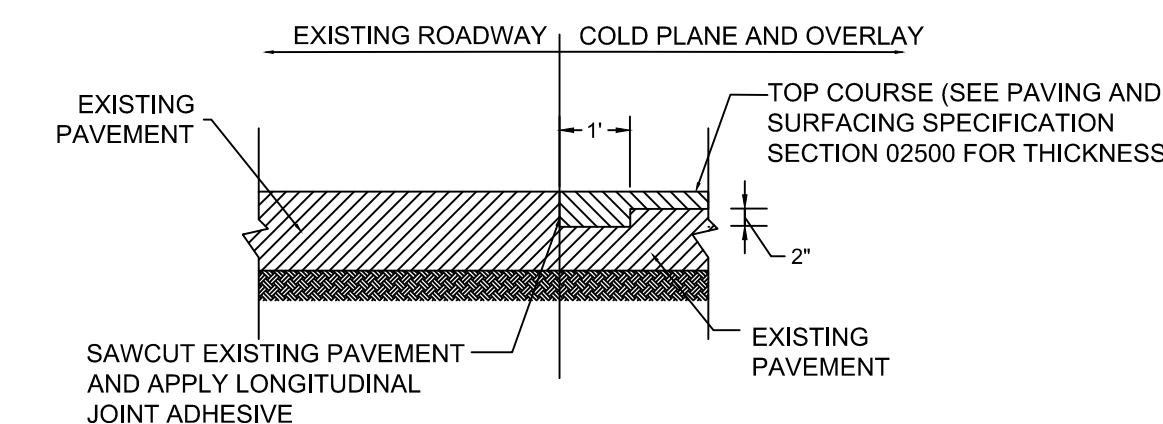
POROUS ASPHALT PAVEMENT
SCALE: N.T.S.



NOTES:

- CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE, TACK COAT AND FINAL PAVEMENT.
- APPLY TACK COAT TO COLD PLANED SURFACES PRIOR TO BEING OVERLAID AT THE RATE OF 0.10 GALLONS PER SQUARE YARD.
- TEMPORARY PAVEMENT SHALL BE PLACED ALONG ANY LIP CREATED BY PAVEMENT REMOVAL. TEMPORARY PAVEMENT SHALL BE PLACED AT A SLOPE OF LESS THAN 1V:3H.

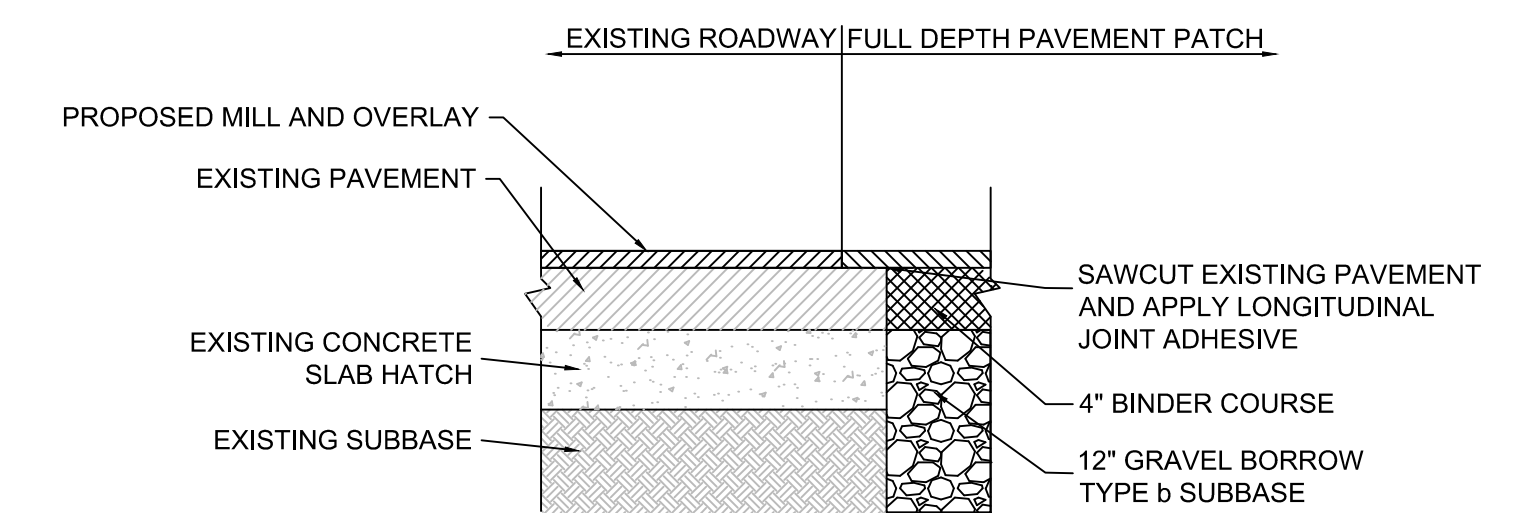
PAVEMENT TRANSITION
SCALE: N.T.S.



NOTES:

- CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT

COLD PLANE AND OVERLAY JOINT
SCALE: N.T.S.



NOTES:

- CLEAN ALL FULL DEPTH PAVEMENT PATCH SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT

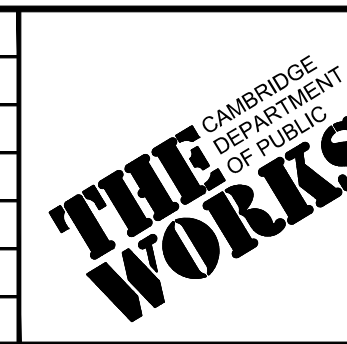
FULL DEPTH PAVEMENT PATCH (HURON AVENUE)
SCALE: N.T.S.



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tel. 978-740-0096 www.hatch.com

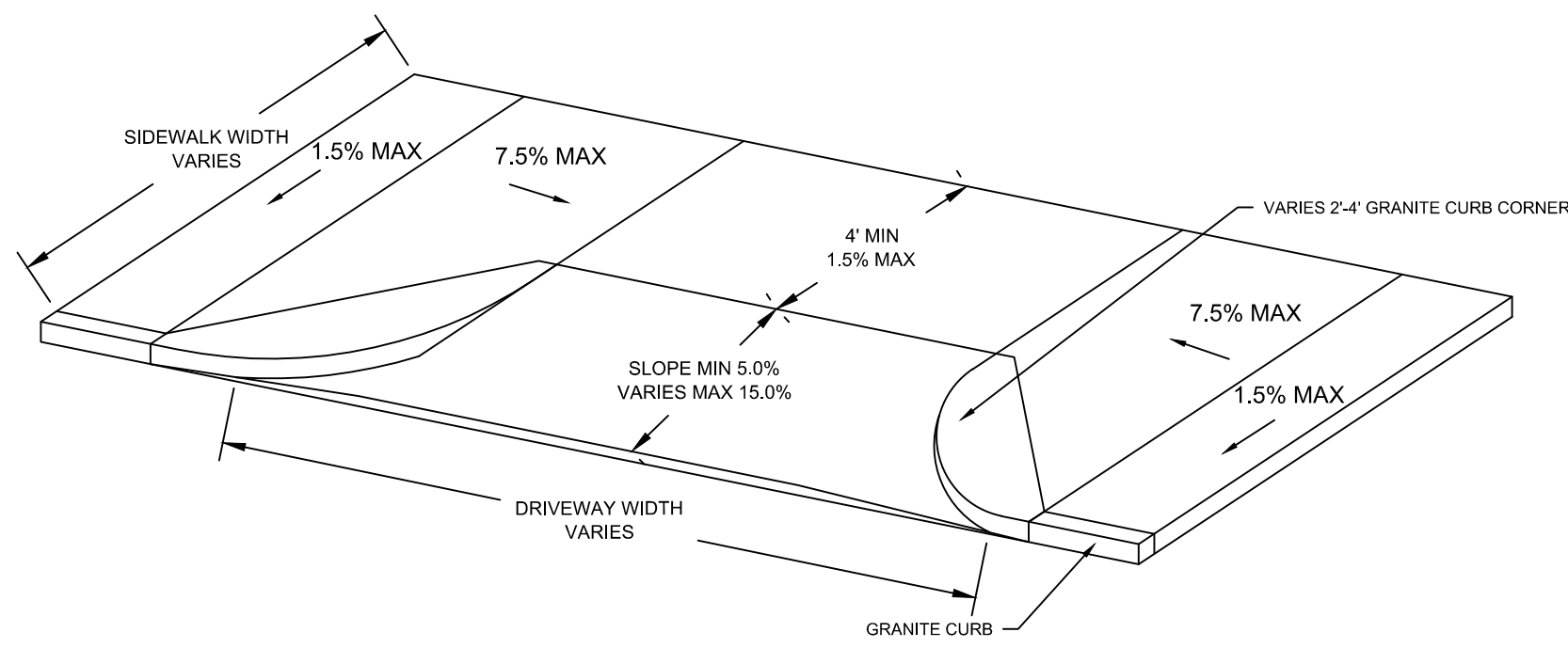


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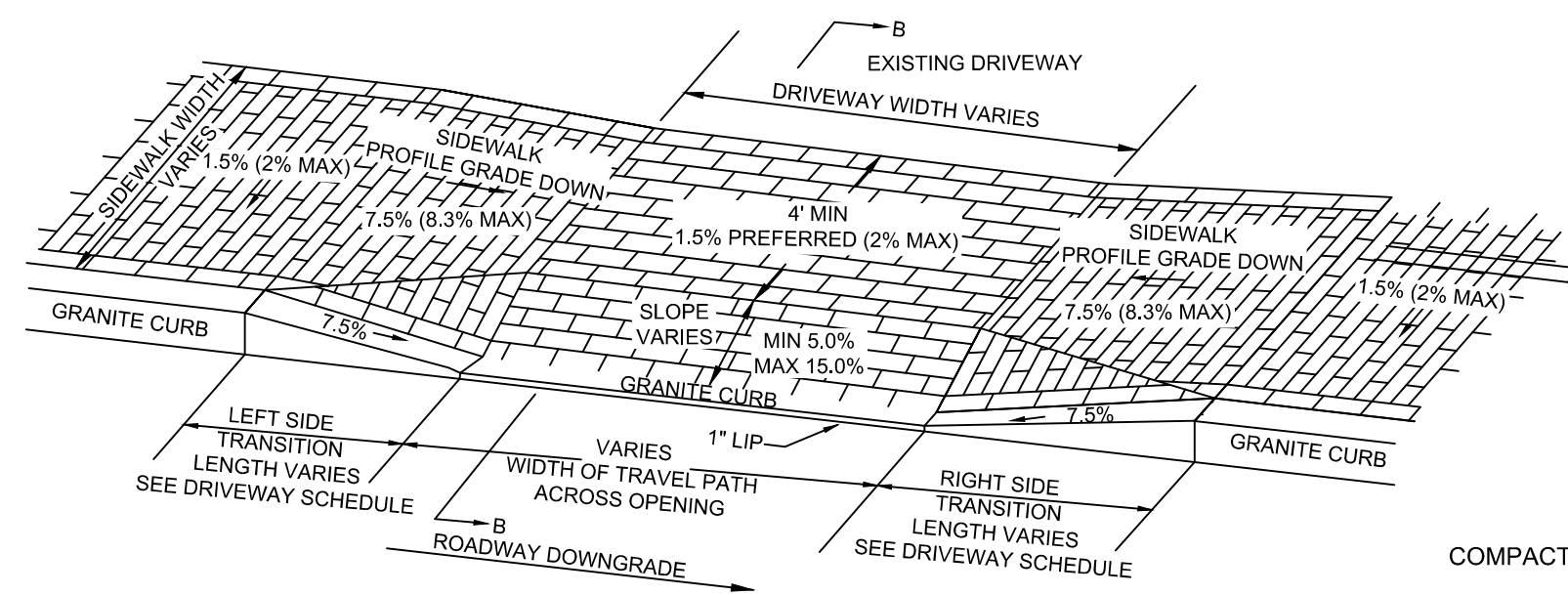
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	GENERAL CIVIL DETAILS - 3 OF 7

Sheet	GC-3
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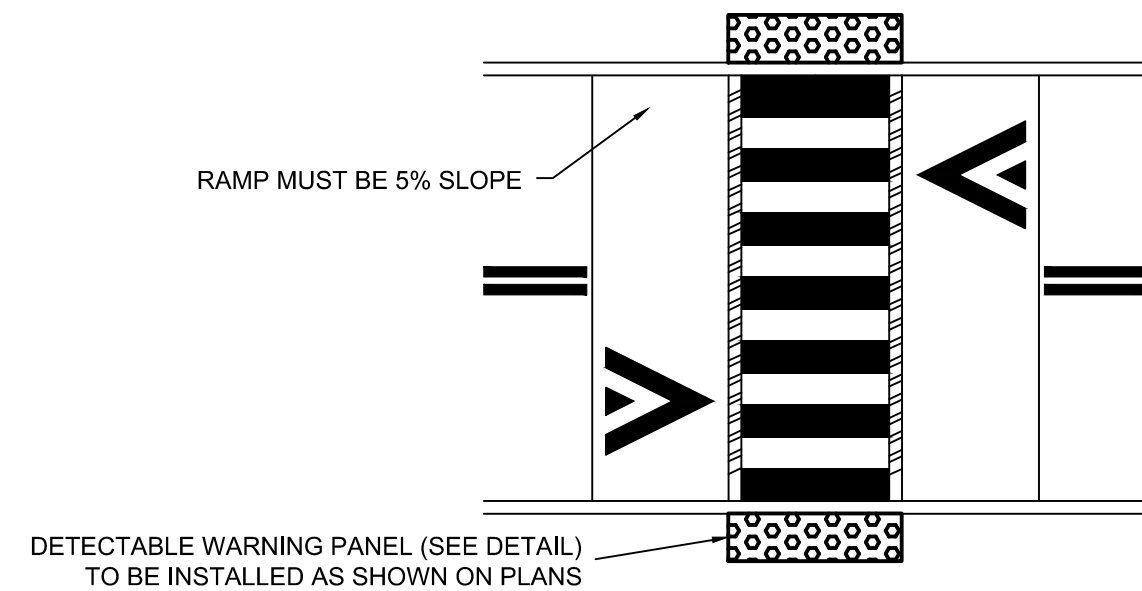
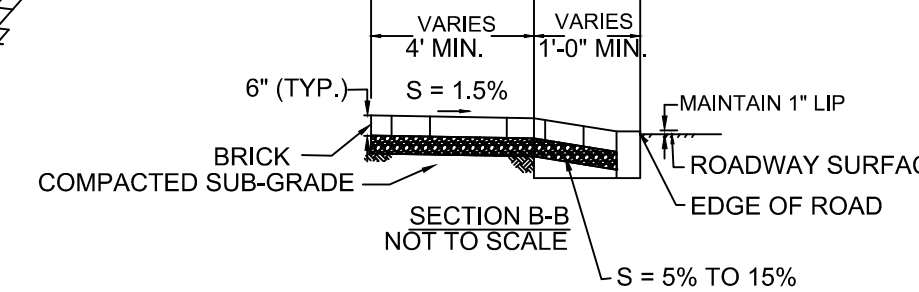
DRIVEWAY DETAIL WITH CURB CORNERS

SCALE: N.T.S.



BRICK DRIVEWAY AT SIDEWALK

SCALE: N.T.S.



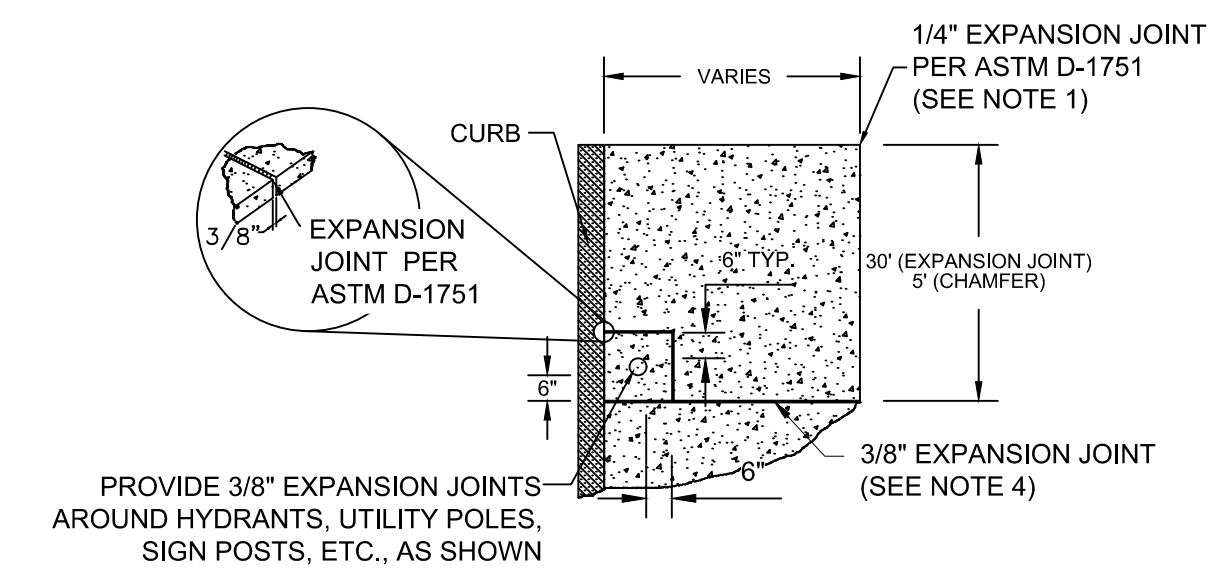
RAISED CROSSWALK PLAN VIEW

SCALE: N.T.S.

TRANSITION CHART

ROADWAY OF PROFILE GRADE	LENGTH OF CURB
0.00	6'-6"
>0.00 TO 0.01	7'-8"
>0.01 TO 0.02	9'-0"
>0.02 TO 0.03	11'-0"
>0.03 TO 0.04	14'-0"
>0.04	15'-0" MAX

* BASED ON A DESIGN SLOPE OF 7.5% AND 6" CURB REVEAL.

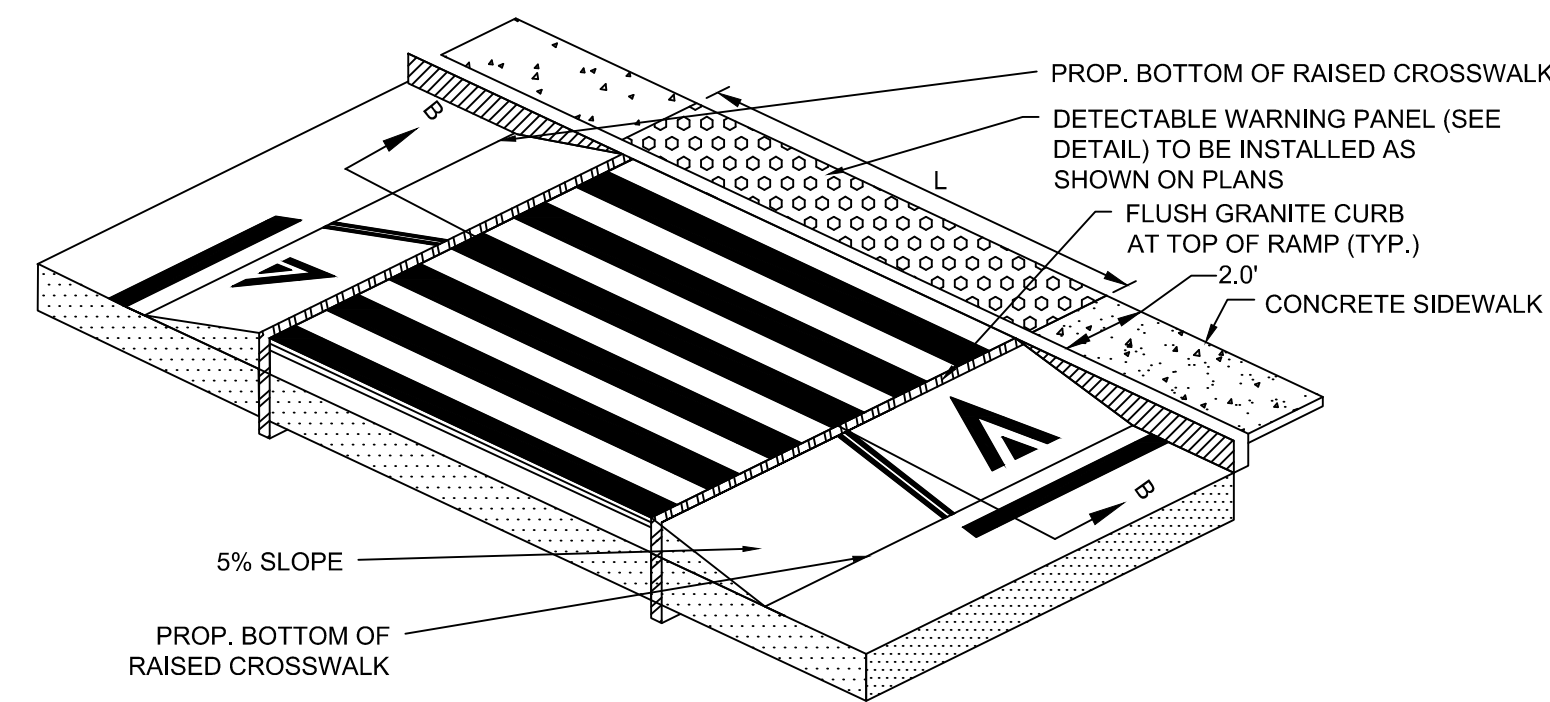


NOTES:

- EXPANSION JOINTS SHALL BE INSTALLED AT BACK OF SIDEWALK STEPS, WALLS, BUILDINGS, AND OTHER STRUCTURES.
- EXPANSION JOINTS AT BUILDINGS SHALL BE CAULKED.
- EXPANSION JOINTS SHALL BE USED AT TRANSITIONS BETWEEN NEW AND EXISTING SIDEWALK JOINTS.
- EXPANSION JOINTS OF 3/8-IN THICK FOAM SHALL BE PLACED EVERY 30 FEET PERPENDICULAR TO CURB ALIGNMENT EXTENDING THROUGH THE SIDEWALK DEPTH.

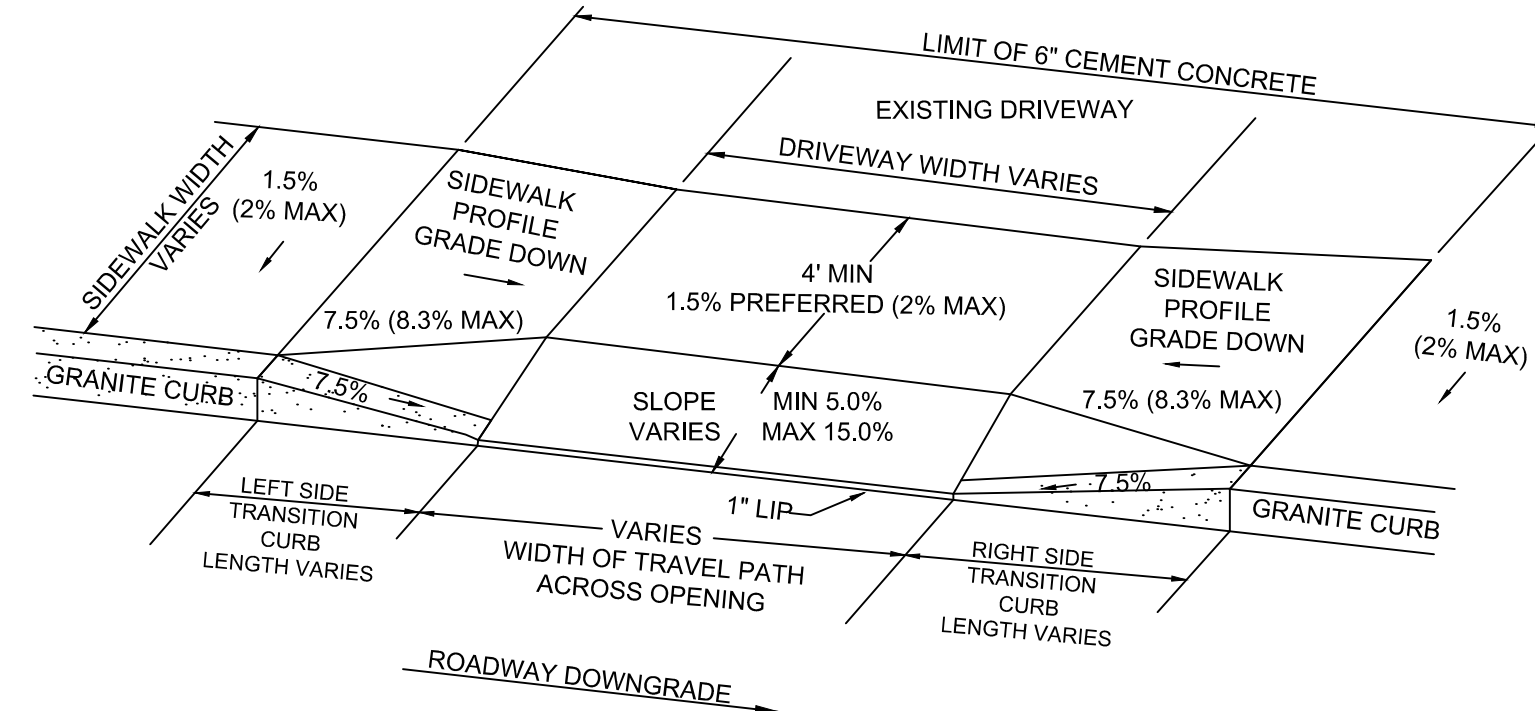
EXPANSION JOINT

SCALE: N.T.S.



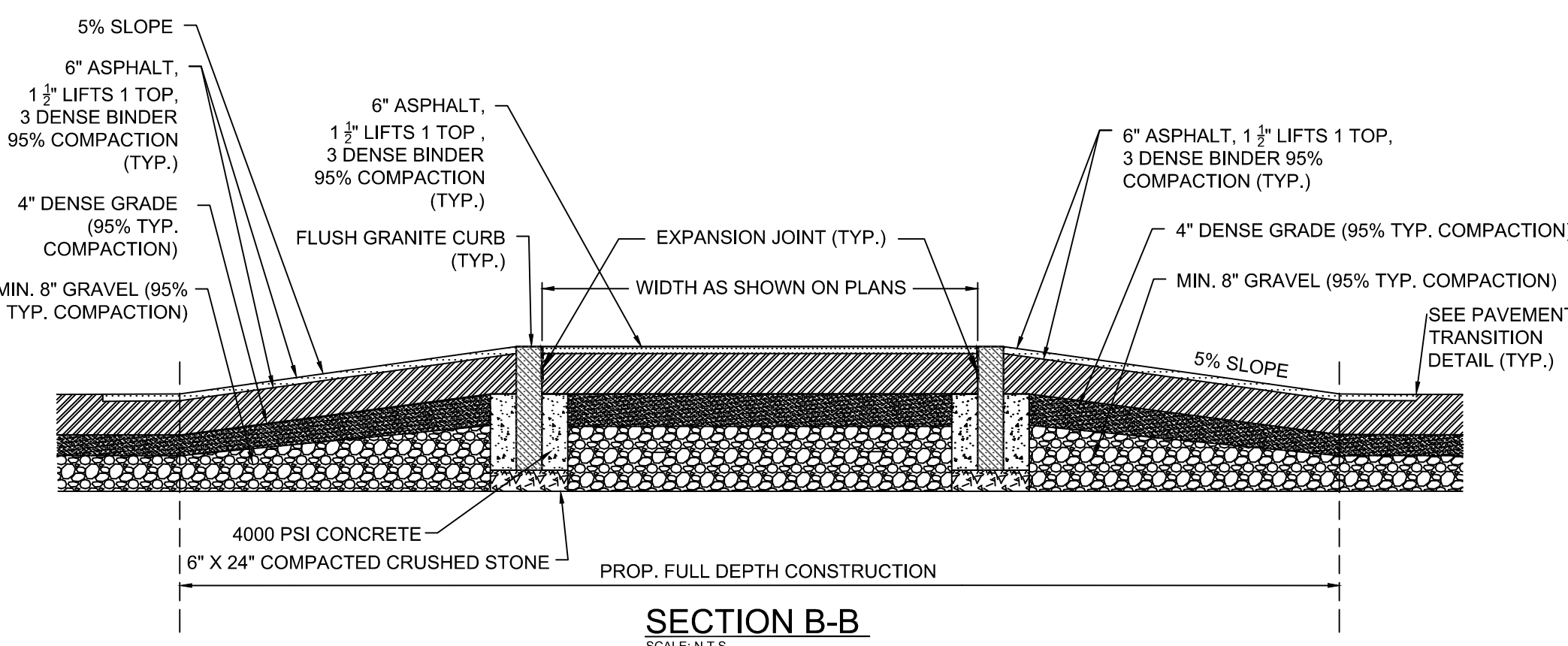
RAISED CROSSWALK ISOMETRIC PLAN

SCALE: N.T.S.



CONCRETE DRIVEWAY AT SIDEWALK

SCALE: N.T.S.



SECTION B-B

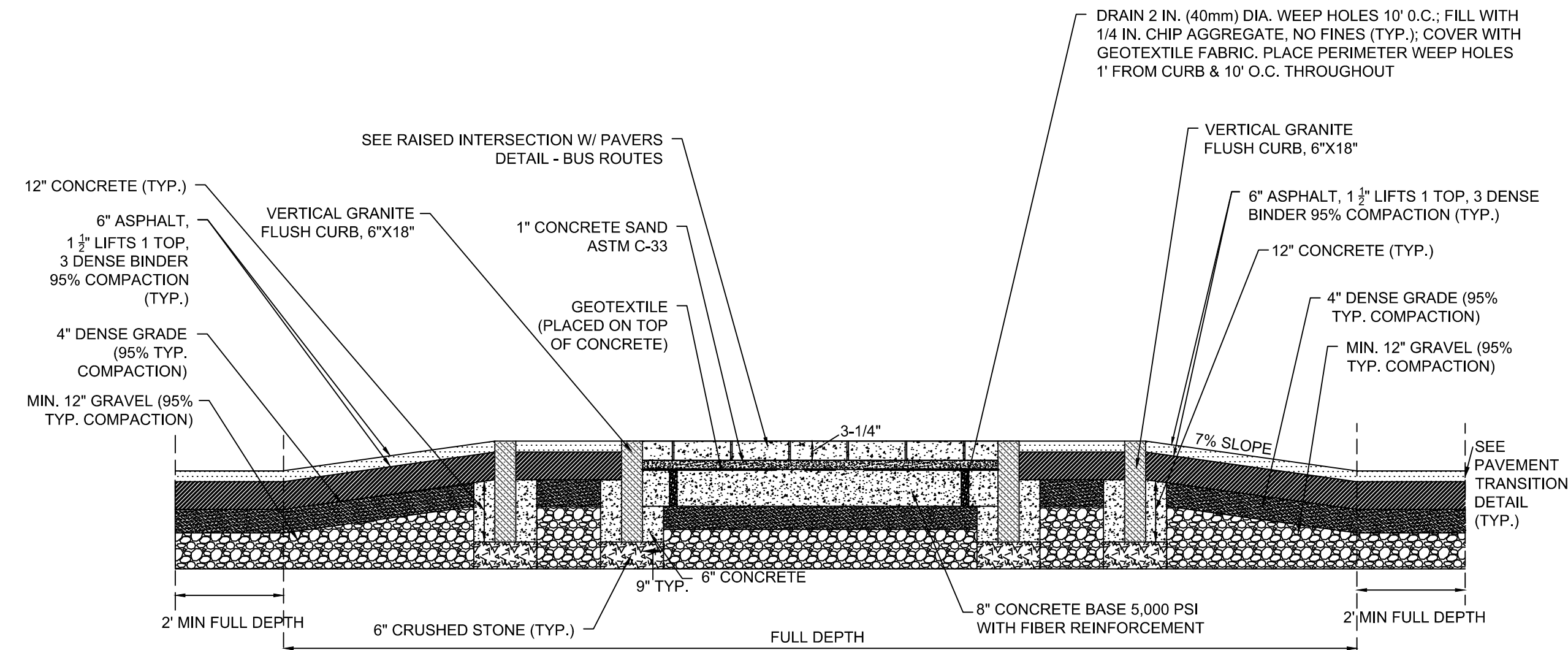
SCALE: N.T.S.

NOTES:

- SEE SPECIFICATIONS FOR ADDITIONAL RAISED INTERSECTION CONSTRUCTION REQUIREMENTS

RAISED CROSSWALK - SIDE STREETS

SCALE: N.T.S. CITY OF CAMBRIDGE STANDARD DETAILS 202

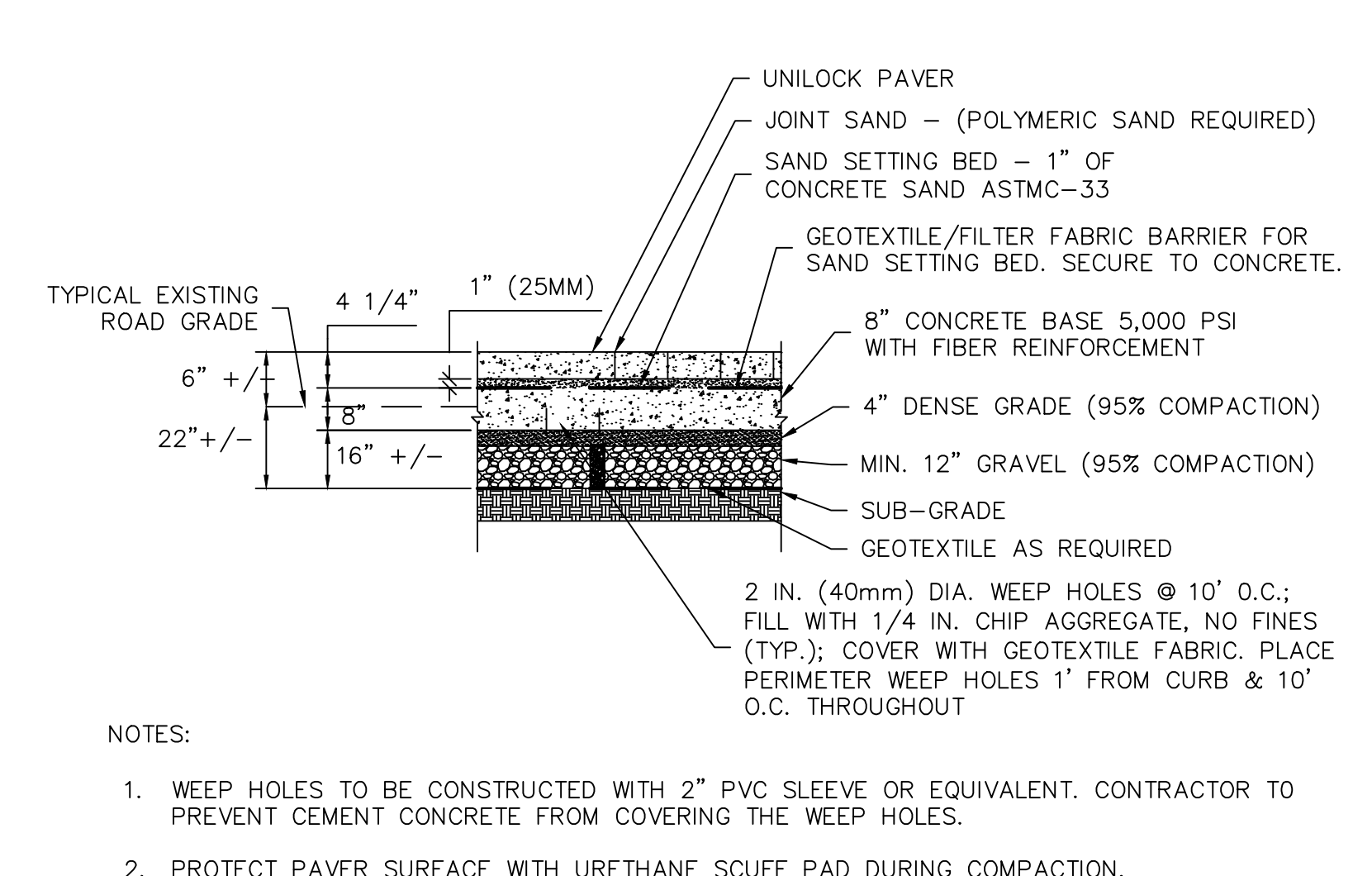


NOTES:

- SEE SPECIFICATIONS FOR ADDITIONAL RAISED INTERSECTION CONSTRUCTION REQUIREMENTS

RAISED INTERSECTION PROFILE PAVERS W/ CONCRETE BASE - BUS ROUTE

SCALE: N.T.S.



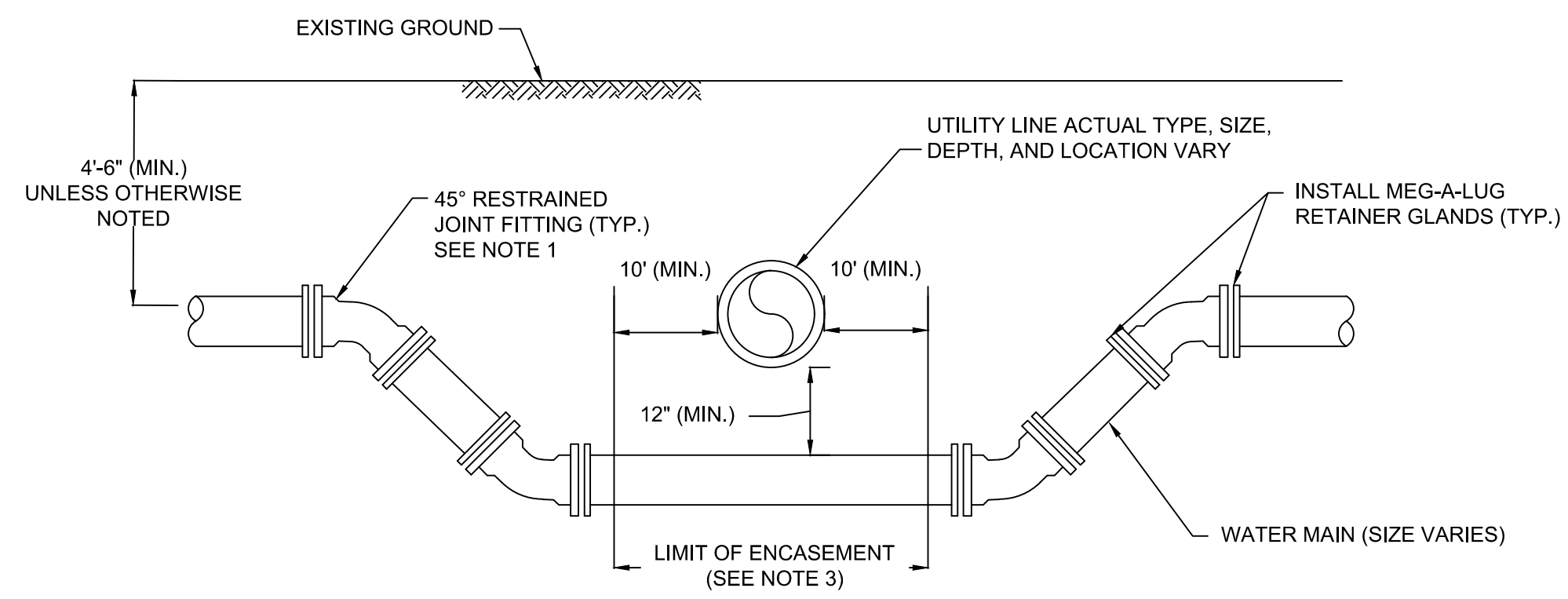
NOTES:

- WEEP HOLES TO BE CONSTRUCTED WITH 2" PVC SLEEVE OR EQUIVALENT. CONTRACTOR TO PREVENT CEMENT CONCRETE FROM COVERING THE WEEP HOLES.
- PROTECT PAVER SURFACE WITH URETHANE SCUFF PAD DURING COMPACTION.

RAISED INTERSECTION W/ PAVERS-BUS ROUTE

SCALE: N.T.S.

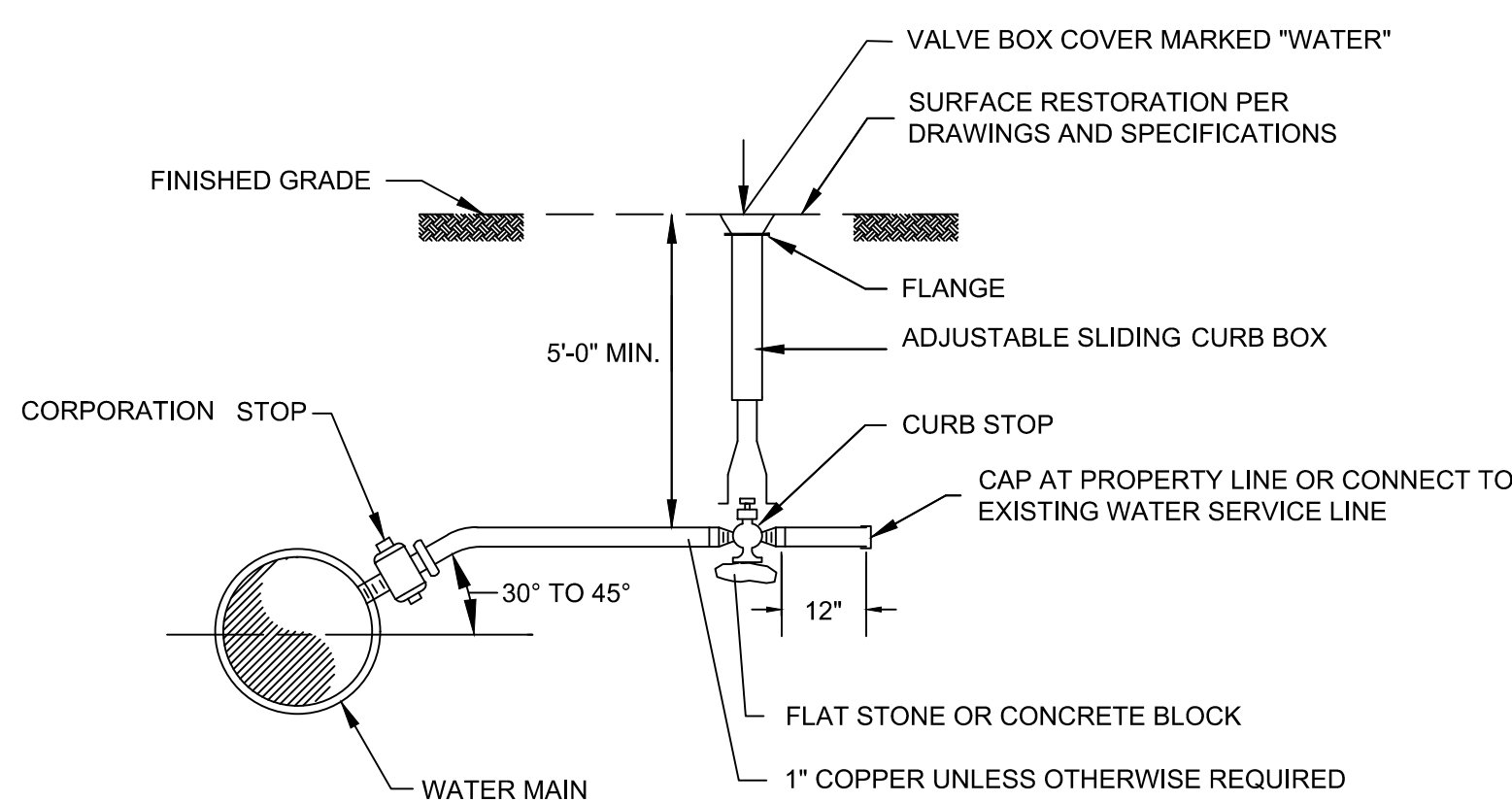
		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS		Sheet	GC-4
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				Job No.	20170208.037A				Drawing	GENERAL CIVIL DETAILS - 4 OF 7			
				Designed by	KEA								
				Drawn by	KEA								
				Checked by	BMS	No.	Description	Date					
				Approved by	BMS		REVISIONS						



NOTES:

1. CONTRACTOR TO UTILIZE FITTINGS ONLY WHEN PIPE DEFLECTION CANNOT BE USED TO CLEAR OBSTRUCTION.
2. ALL CROSSINGS TO BE UNDER UTILITY UNLESS OTHERWISE NOTED.
3. FOR WATER MAIN CROSSING UNDER SEWER MAINS REFER TO SEWER CROSSING AT WATER MAIN DETAIL.
4. INSULATE ALL SMALL DIAMETER WATER MAIN HAVING LESS THAN 4'-0" COVER AND ALL LARGE DIAMETER WATER MAIN (16" OR 20") HAVING LESS THAN 3'-6" COVER.

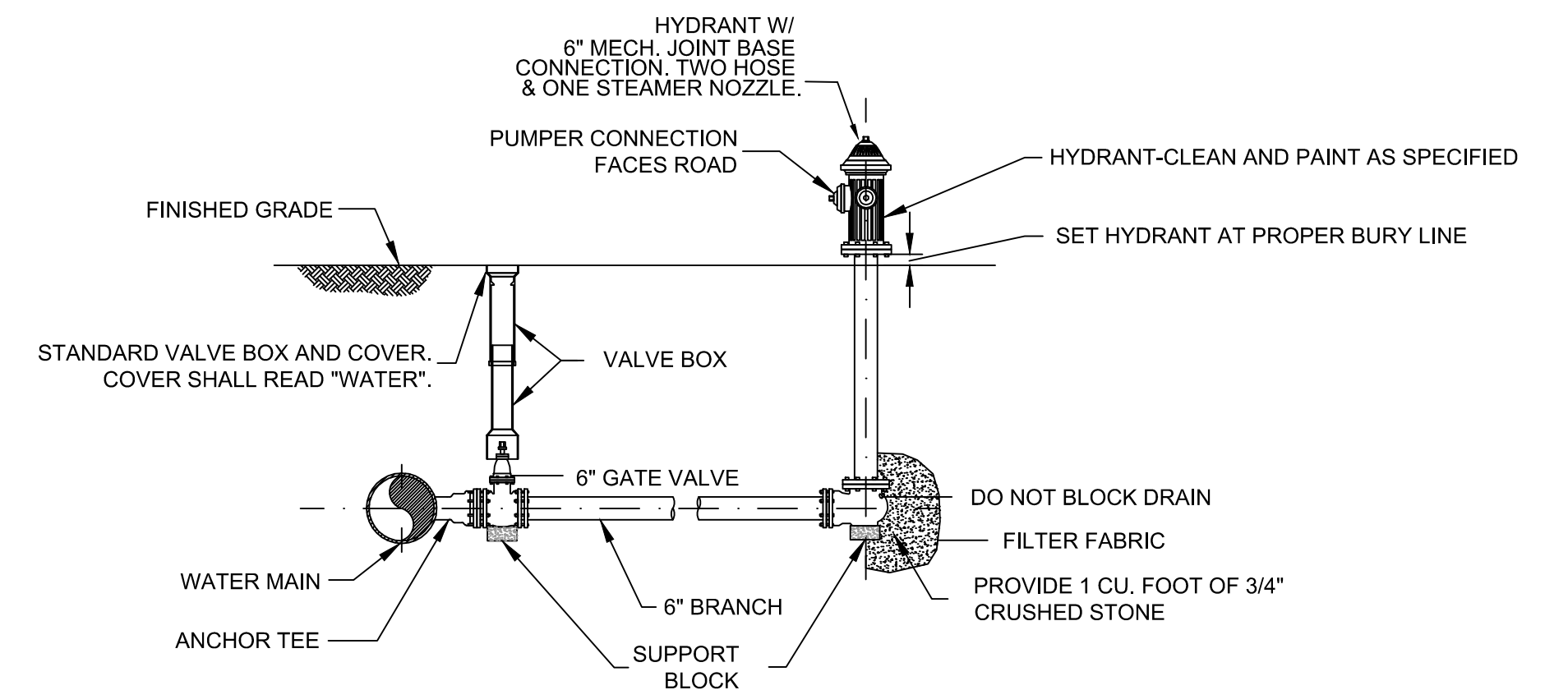
WATER MAIN UTILITY CROSSING
SCALE: N.T.S.



NOTES:

1. ANY WATER MAIN TO BE ENCASED IN CONCRETE FOR STRUCTURAL PURPOSES SHALL BE ENCASED WITHIN FLOWABLE FILL WITH 0% ASH CONTENT.

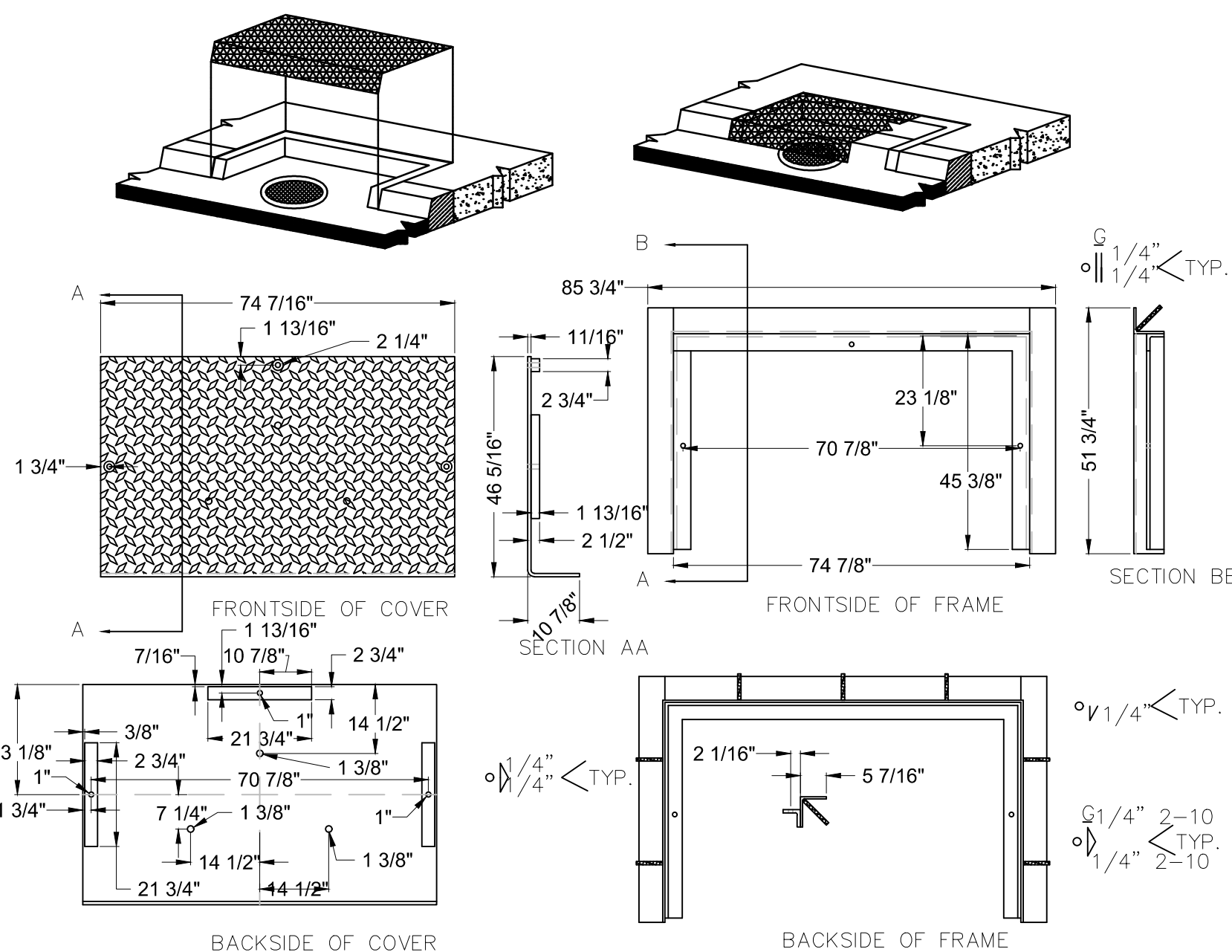
TYPICAL WATER SERVICE CONNECTION
SCALE: N.T.S.



NOTES:

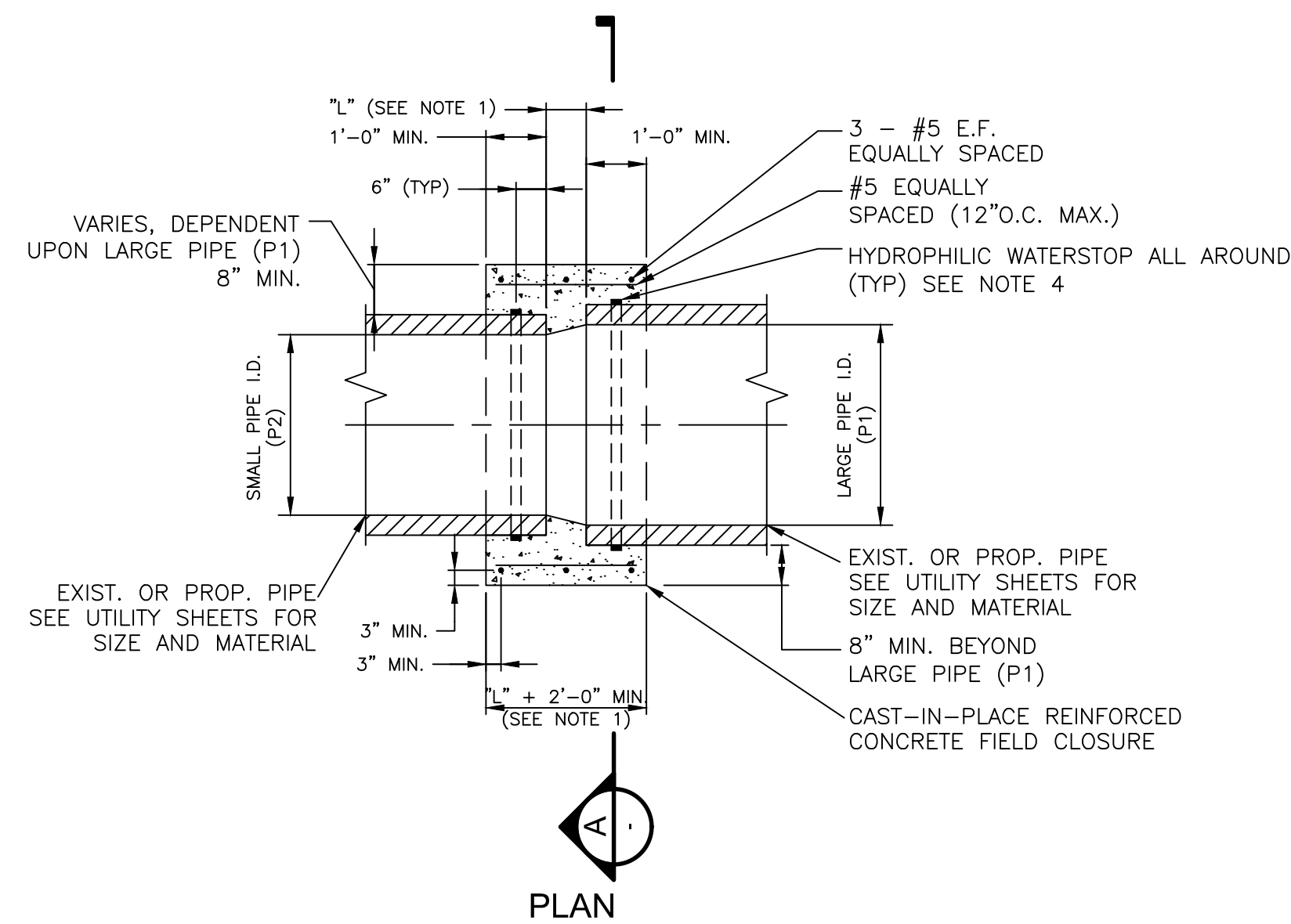
1. PROVIDE HYDRANT AND VALVE JOINTS WITH APPROVED MECHANICAL JOINTS.
2. SUPPORT BLOCKS TO BE PRESSURE TREATED WOOD OR CONCRETE MASONRY BLOCK.
3. ALL VALVES OPEN RIGHT.
4. PROVIDE JOINT RESTRAINT AND THRUST BLOCK PER CITY WATER DEPARTMENT STANDARDS PER SPECIFICATION.

FIRE HYDRANT DETAIL
SCALE: N.T.S.



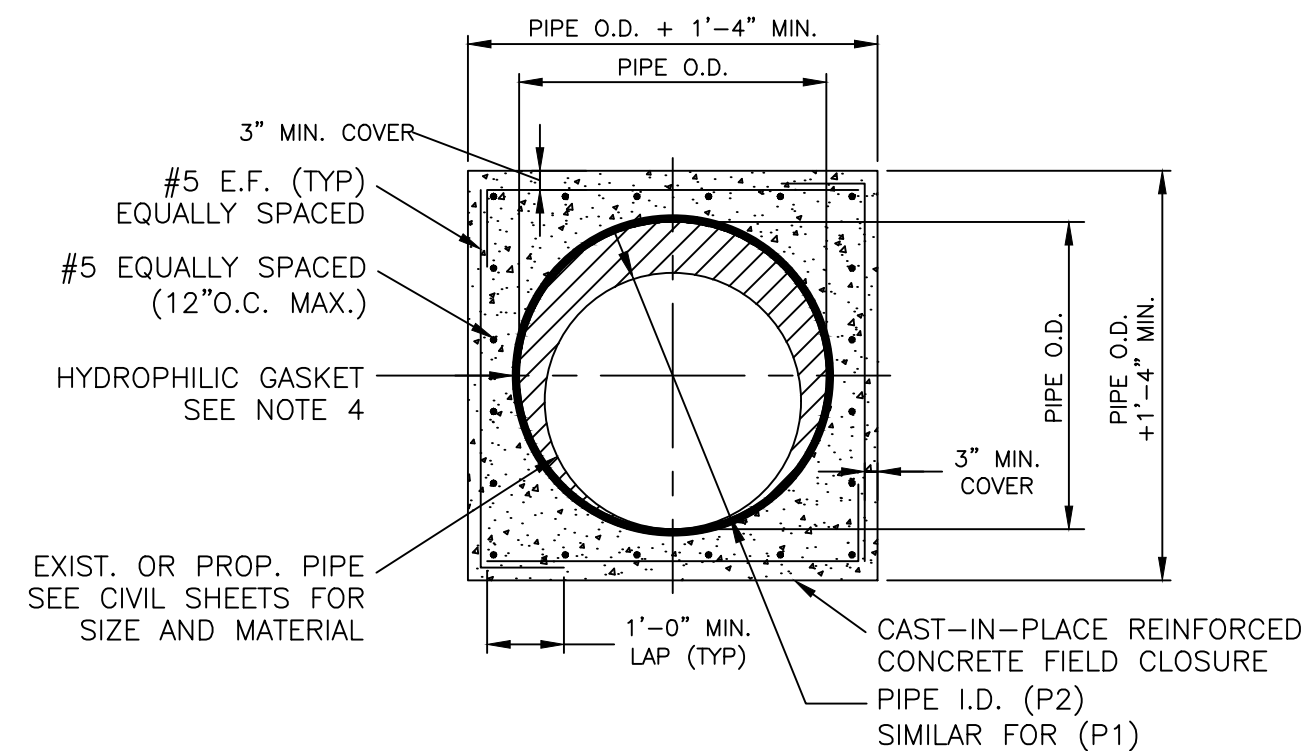
- NOTES:**
1. FRAME AND COVER TO BE GALVANIZED STEEL
 2. MATERIALS TO MEET OR EXCEED ASTM A-36
 3. CONTRACTOR TO PROVIDE ENGINEER FIELD MEASUREMENTS OF CASTING ENCROACHMENTS ON TO CURB LINE, TO DETERMINE APPROPRIATE SIZING.
 4. FALSE CURB CASTINGS ARE BUILT TO FIT BY MANUFACTURER.

FALSE CURB
SCALE: N.T.S.



TYPE 1 PIPE FIELD CLOSURE NOTES:

1. SPACING BETWEEN PIPES (L) DEPENDS ON PIPE SIZES, FOR PIPES OF THE SAME SIZE USE 4". THE DISTANCE "L" EQUALS THE LARGE PIPE I.D. MINUS THE SMALL PIPE I.D. TIMES TWO [L=(P1-P2)x2].
2. PROPOSED PIPE INVERT SHALL MATCH EXISTING PIPE INVERT UNLESS OTHERWISE SHOWN ON CIVIL SHEETS.
3. CLEAN EXISTING PIPE PERIMETER BY PRESSURE WASH OR COMPRESSED AIR AND APPLY BONDING AGENT PRIOR TO CONCRETE ENCASEMENT.
4. INSTALL HYDROPHILIC WATERSTOP ALONG PIPE PERIMETER FOR EACH PIPE AS SPECIFIED IN SECTION 03300.
5. CONCRETE AND REBAR REQUIREMENTS SHALL CONFORM TO STANDARD STRUCTURAL DETAILS (DETAIL 8 THIS SHEET, AND DETAIL 27 ON SHEET GC-9) AND SPECIFICATIONS.
6. LOCATION OF FIELD CLOSURE SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.
7. MAINTAIN 2" COVER BETWEEN PIPE EXTERIOR AND ALL REINFORCING AND 3" MINIMUM FOR CONCRETE SURFACES SHOWN.
8. WHERE PIPE FIELD CLOSURES ARE PROPOSED IN PEAT AND PEAT IS NOT OVER EXCAVATED, PIPE FIELD CLOSURE EXCAVATION BACKFILL TO BE CDF.



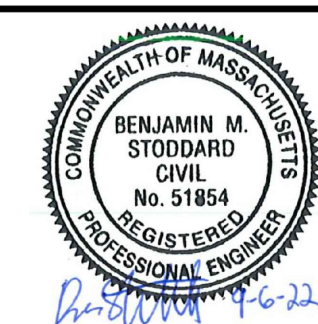
NEW PIPE MATERIAL	EXISTING PIPE MATERIAL				
	BRICK	RCP	DI	VC	PLASTIC
BRICK	1	1	1	1	1
RCP	1	1	1	1	1
DI	1	1	2	2	2
VC	1	1	2	2	2
PLASTIC	1	1	2	2	2

PIPE CONNECTION TABLE

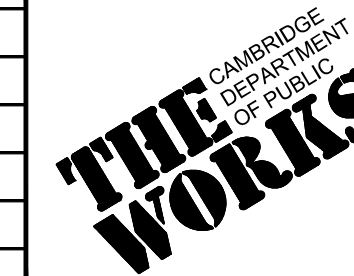
- TYPE 1 = PIPE FIELD CLOSURE (CAST-IN-PLACE)
TYPE 2 = SHIELDED FLEXIBLE COUPLING

- PIPE CONNECTION NOTES:**
1. PIPE COUPLERS SHALL BE INSTALLED PER THE TABLE ABOVE UNLESS OTHERWISE NOTED.

PIPE FIELD CLOSURE TYPE-1
SCALE: N.T.S.

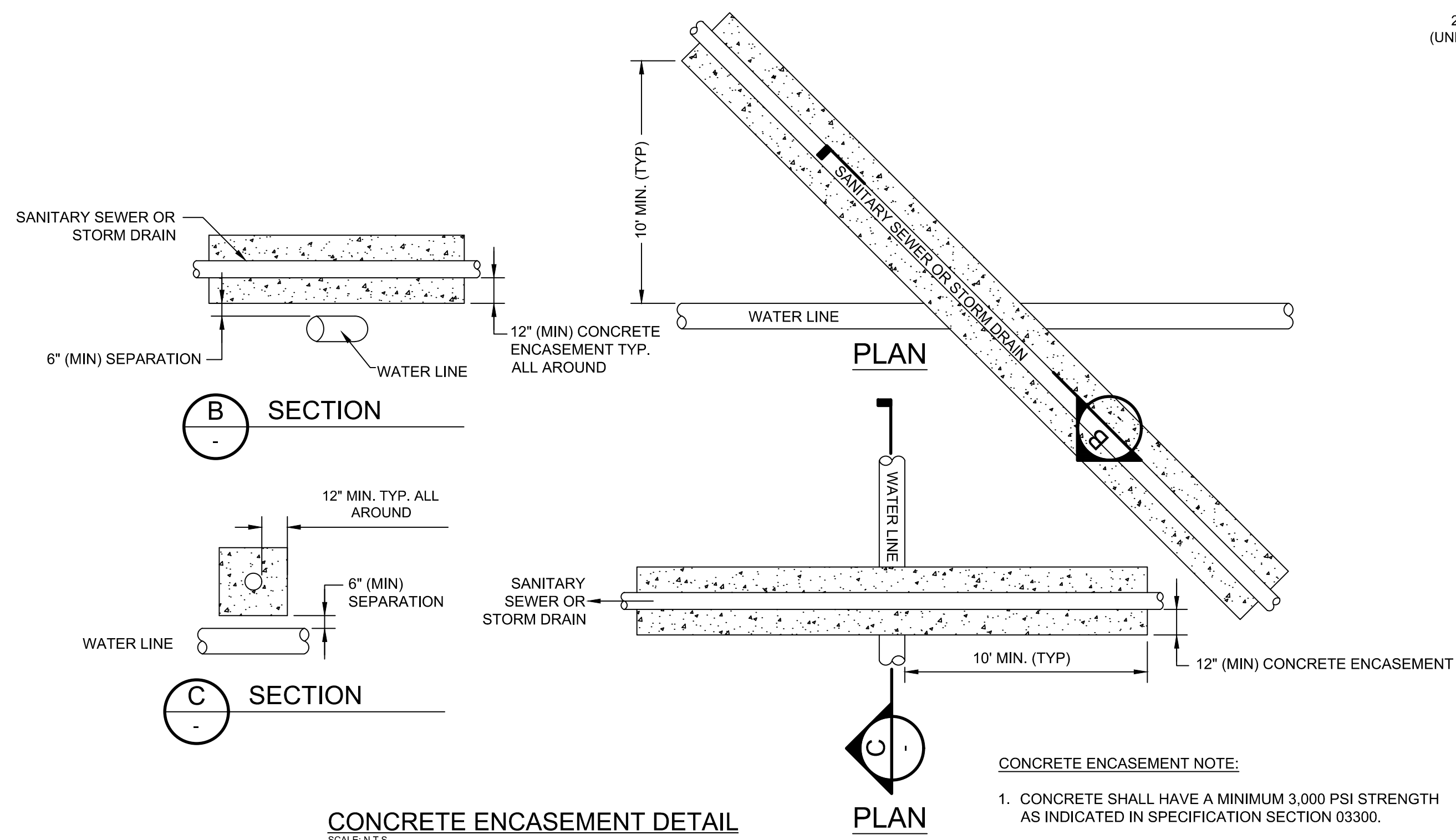


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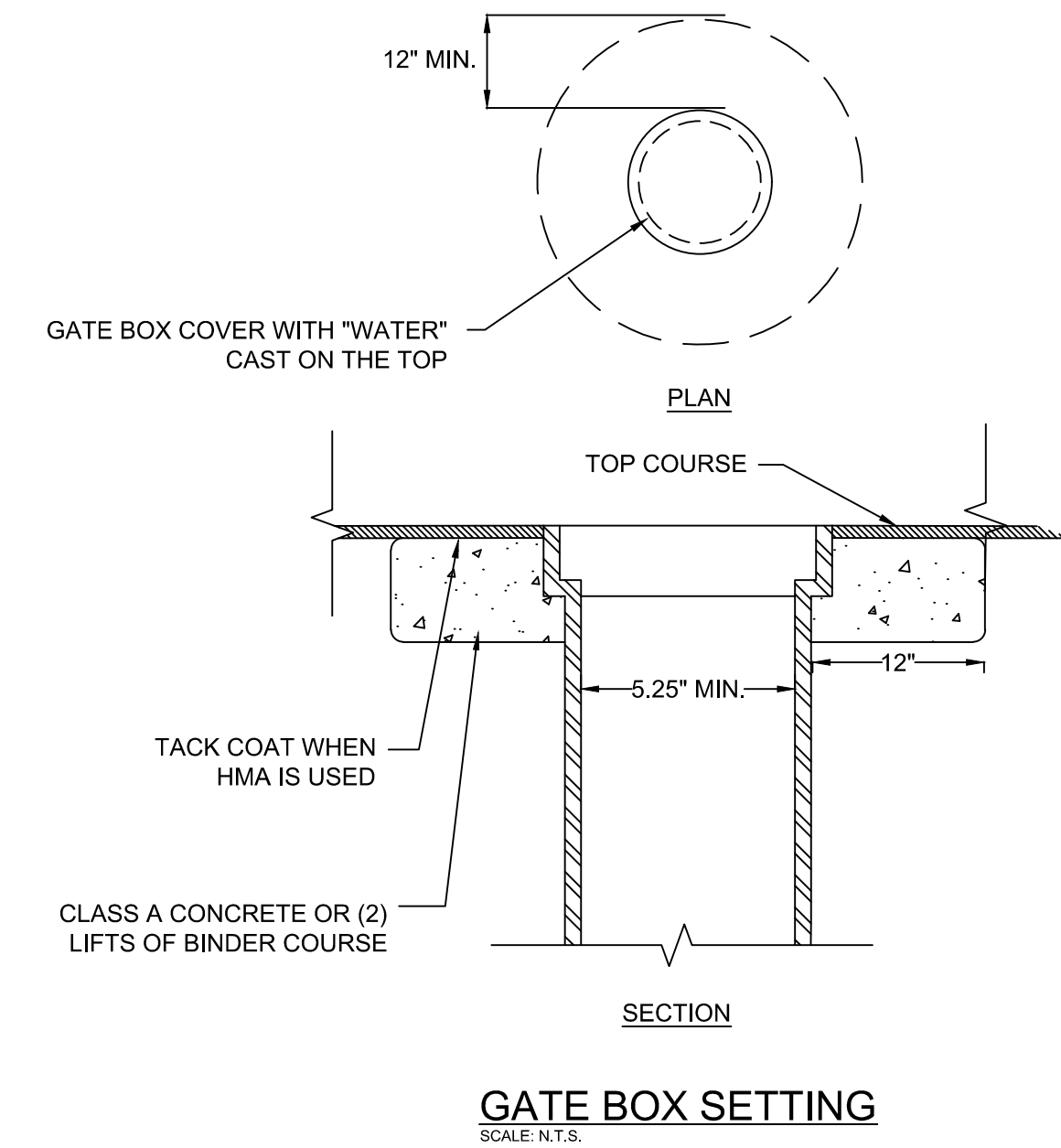
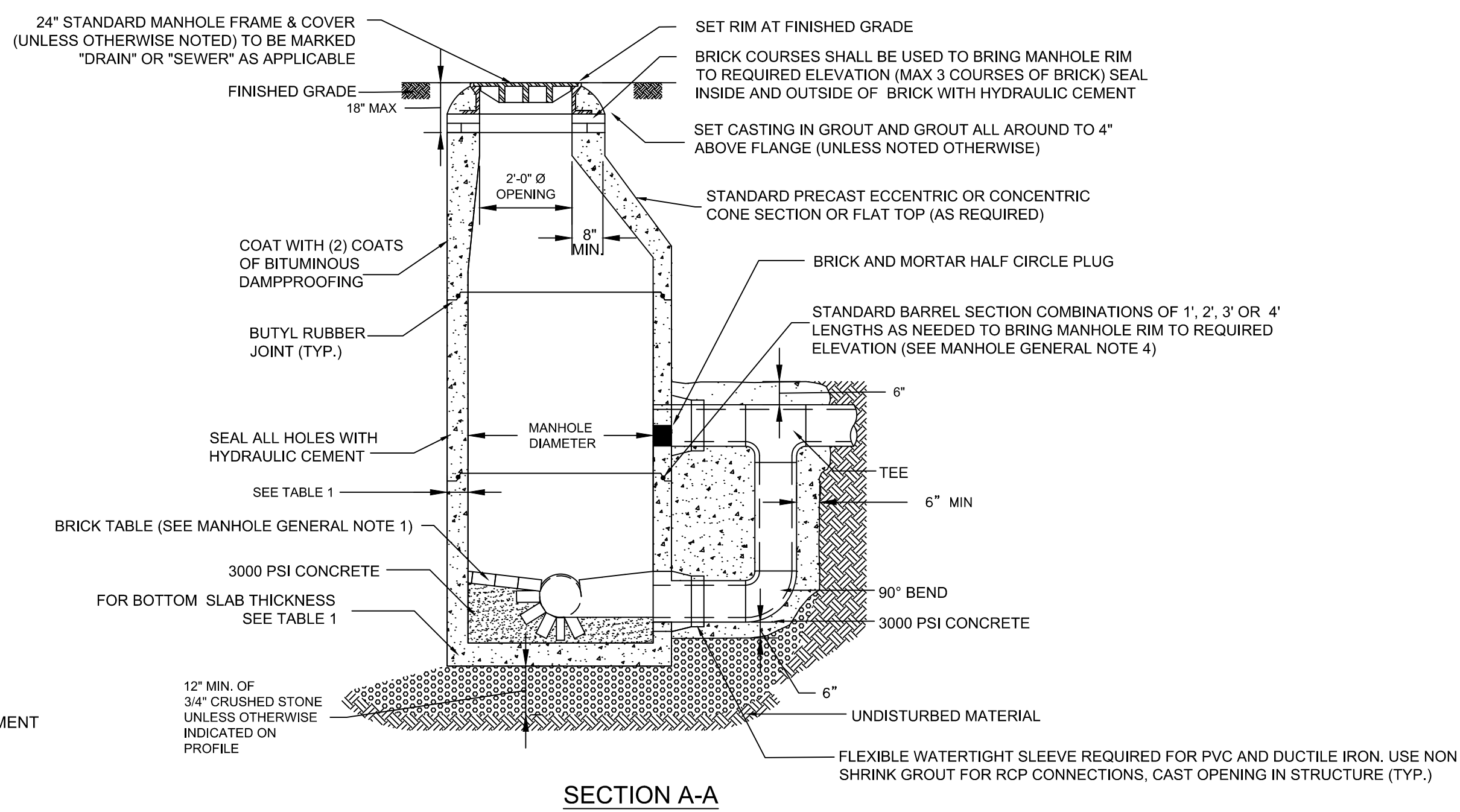


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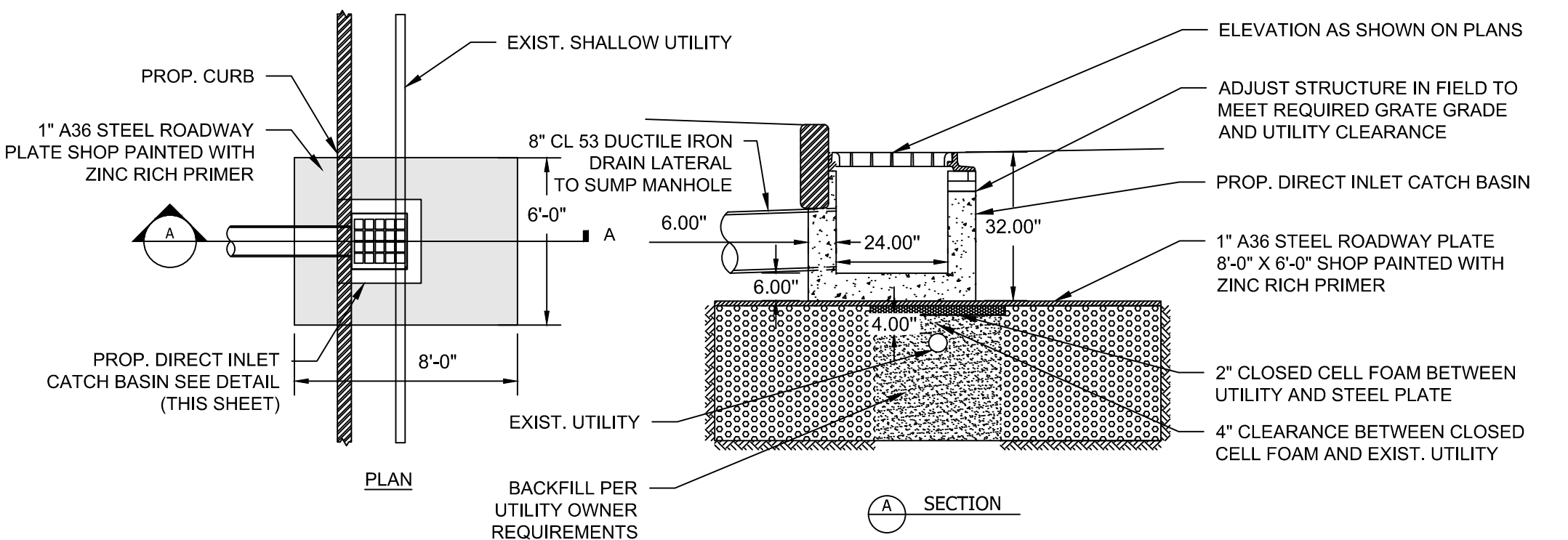
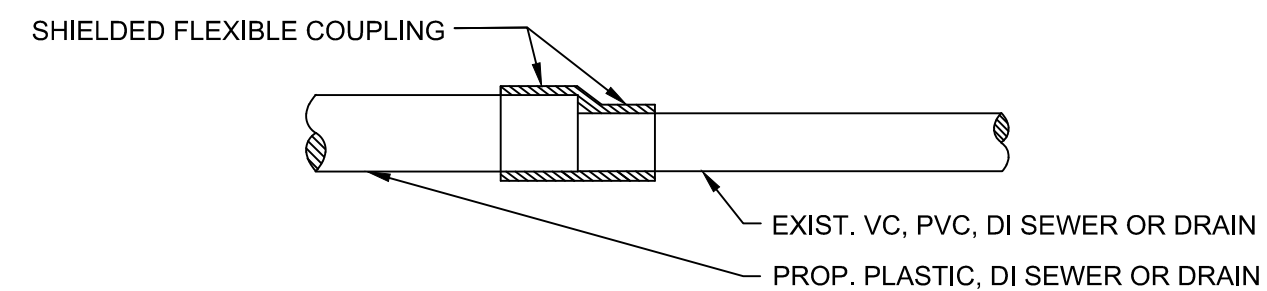


CONCRETE ENCASEMENT DETAIL
SCALE: N.T.S.

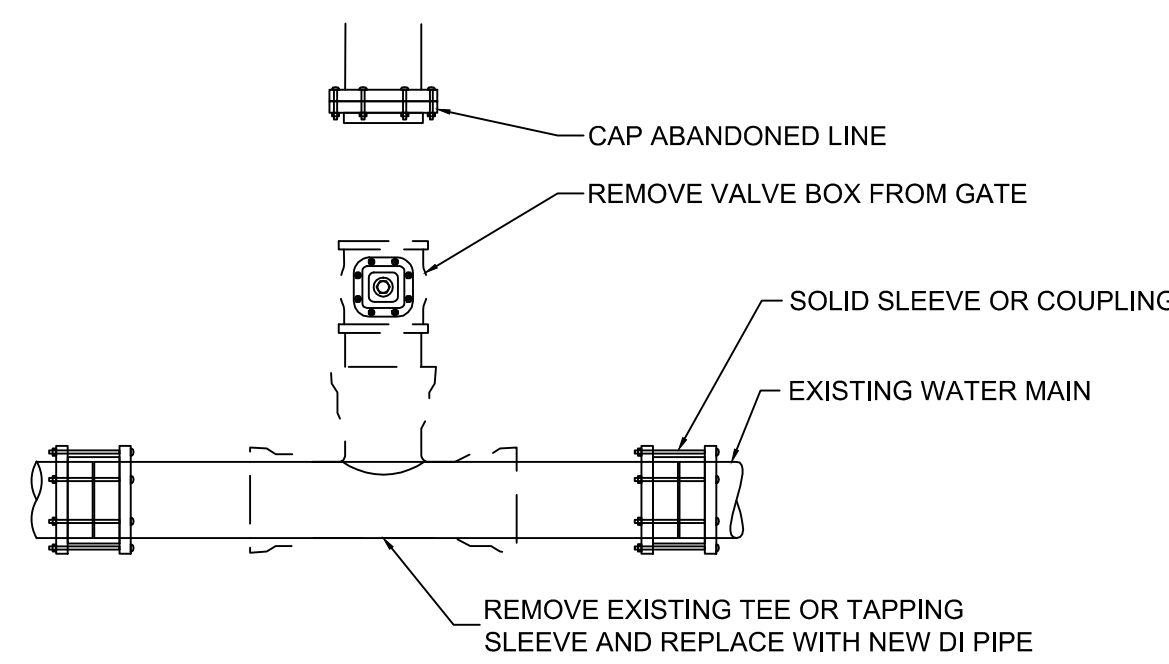


CONCRETE ENCASEMENT NOTE:

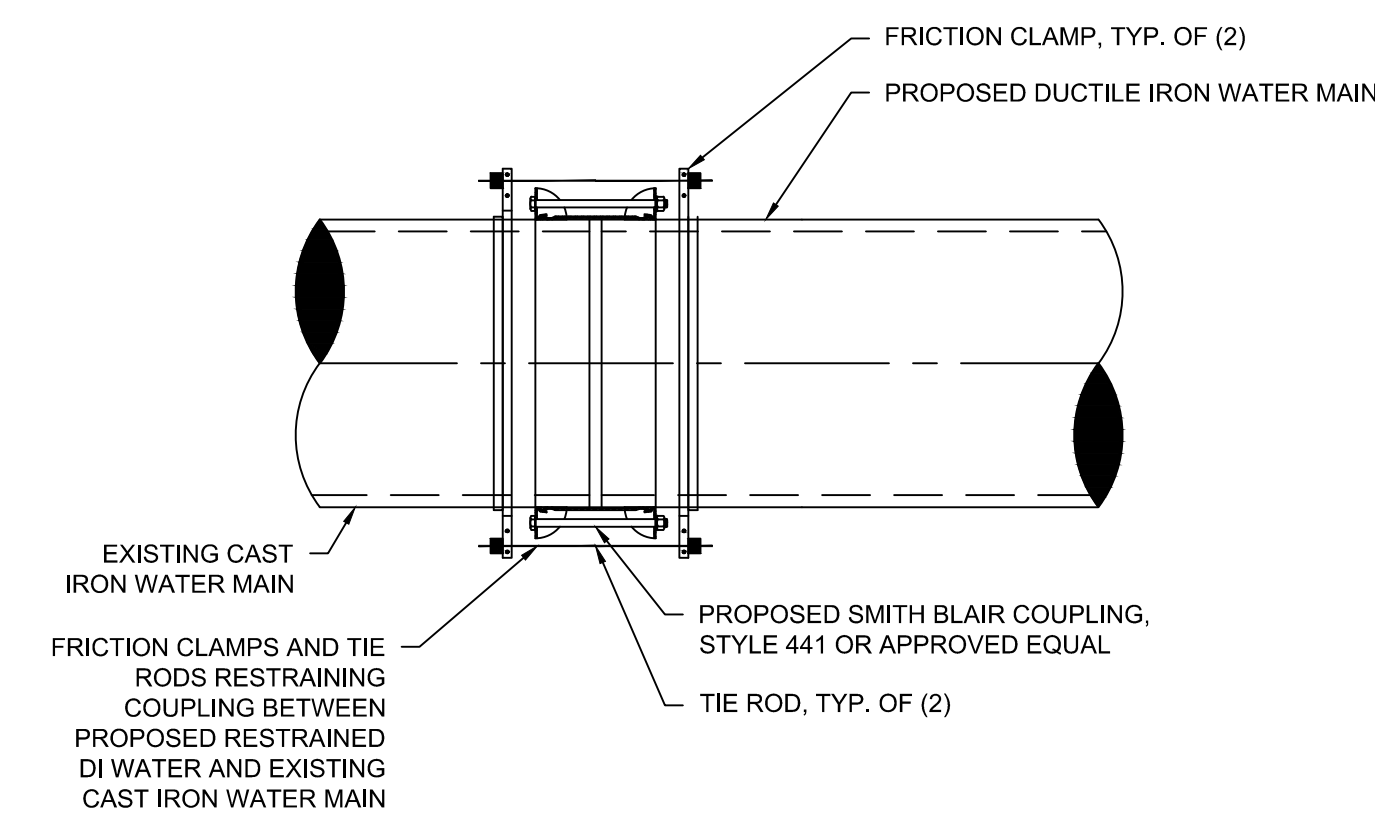
1. CONCRETE SHALL HAVE A MINIMUM 3,000 PSI STRENGTH AS INDICATED IN SPECIFICATION SECTION 03300.



STEEL PLATE SUPPORT OVER EXIST. SHALLOW UTILITY
SCALE: N.T.S.

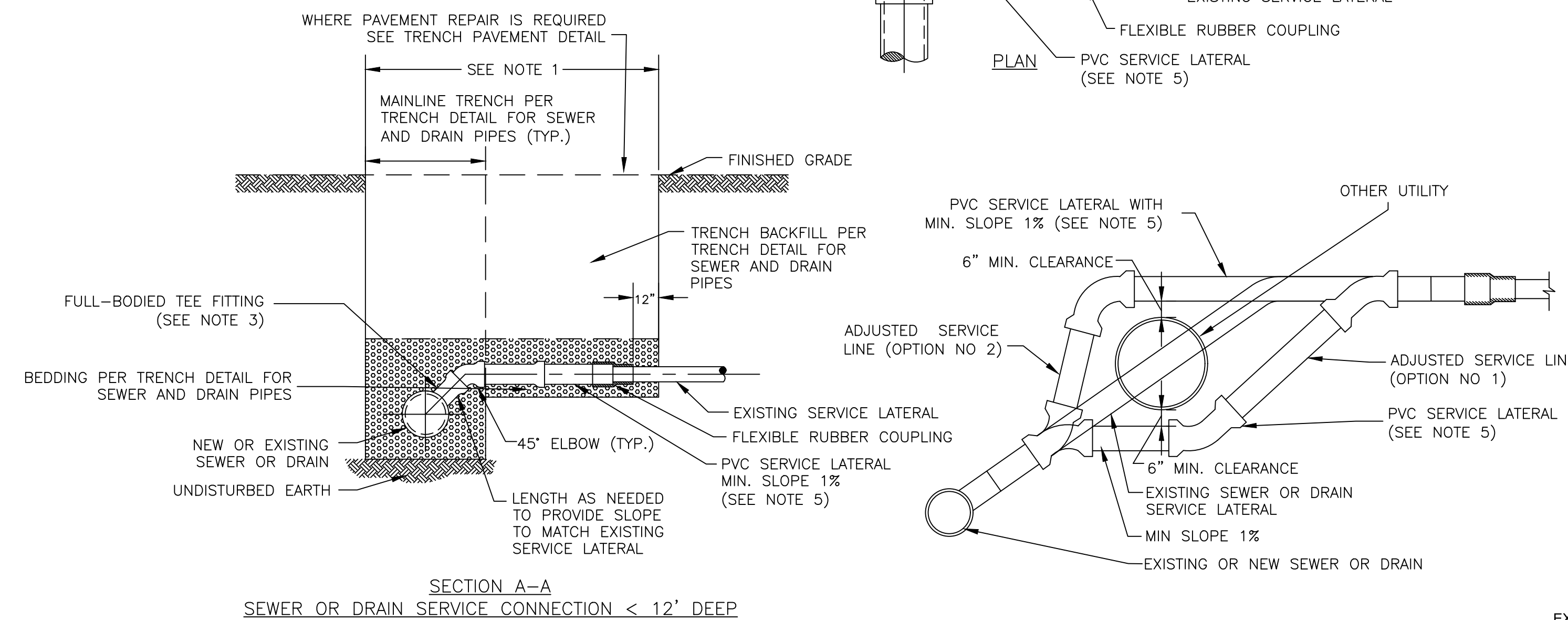


WATER MAIN CUT AND CAP DETAIL
SCALE: N.T.S.



NOTE:

1. EXISTING WATER MAIN TO PROPOSED WATER MAIN CONNECTIONS SHALL BE RESTRAINED WITH THE RODS. RODS, FRICITION CLAMP WASHERS, AND HEAVY HEX NUTS SHALL BE AISI 316 SERIES STAINLESS STEEL MANUFACTURED IN THE UNITED STATES IN ACCORDANCE WITH ASTM A193 GRADE B8M CLASS 1. WHERE 316 STAINLESS STEEL IS NOT AVAILABLE THE CONTRACTOR SHALL PROVIDE FUSION BONDED EPOXY COATED HARDWARE. TIE RODS SHALL BE DOUBLE NUTTED ON EACH END.

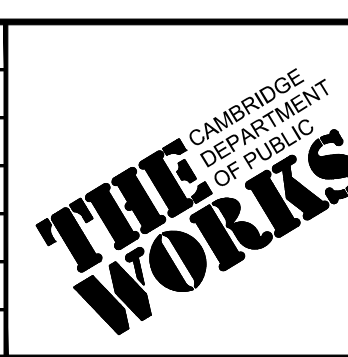


NOTES:

1. REPLACE EXISTING SERVICE LATERAL TO EXTENT REQUIRED.
2. EXCAVATE AND REMOVE EXISTING LATERAL AS REQUIRED TO ALLOW RECONSTRUCTION.
3. FOR SEWER AND DRAIN SERVICE CONNECTIONS TO MAINLINE 18" IN DIAMETER OR GREATER AN INSERTA TEE OR EQUAL MAY BE USED.
4. FOR SERVICE CONNECTIONS > 12' DEEP FROM INVERT OF MAINLINE PIPE TO FINISHED GRADE, SEE CHIMNEY DETAIL.
5. SEWER AND DRAIN LATERALS SHALL BE SIZED TO FIT ANTICIPATED FLOWS BUT SHALL NOT BE LESS THAN 6" FOR SEWER SERVICES AND 8" FOR DRAIN SERVICES

SEWER OR DRAIN SERVICE CONNECTION
SCALE: N.T.S.

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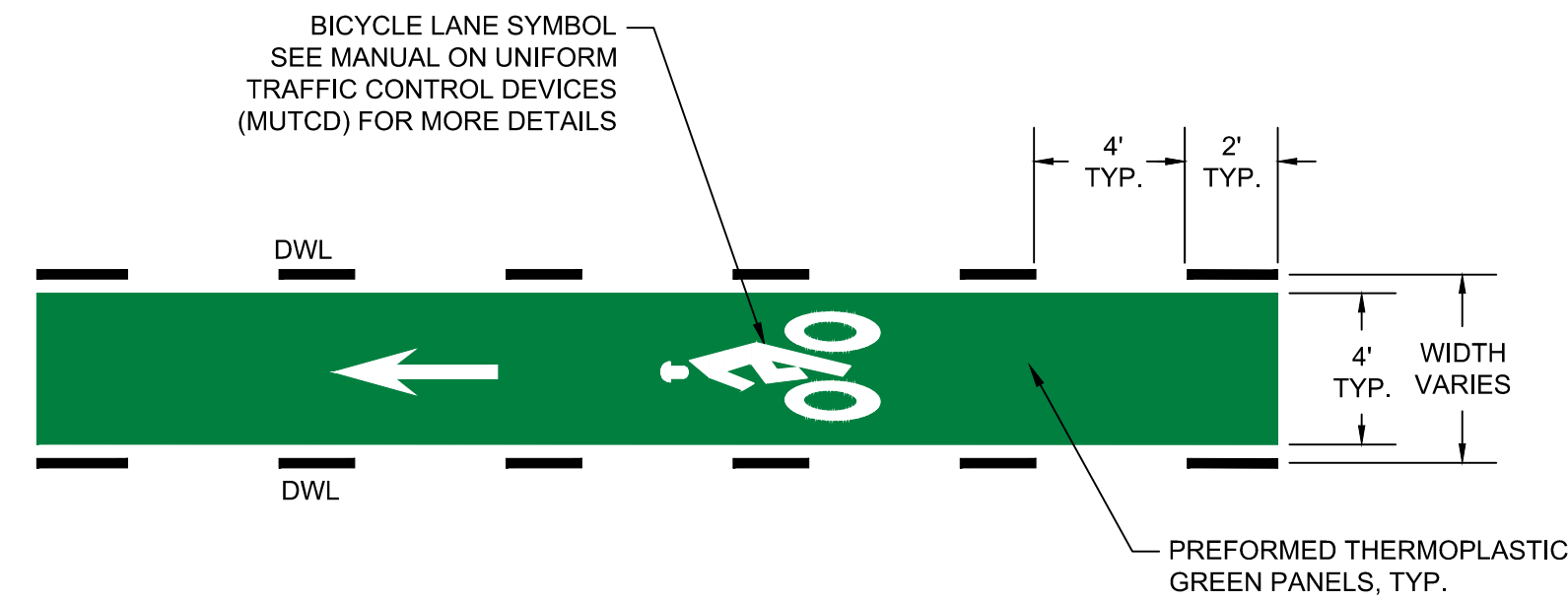
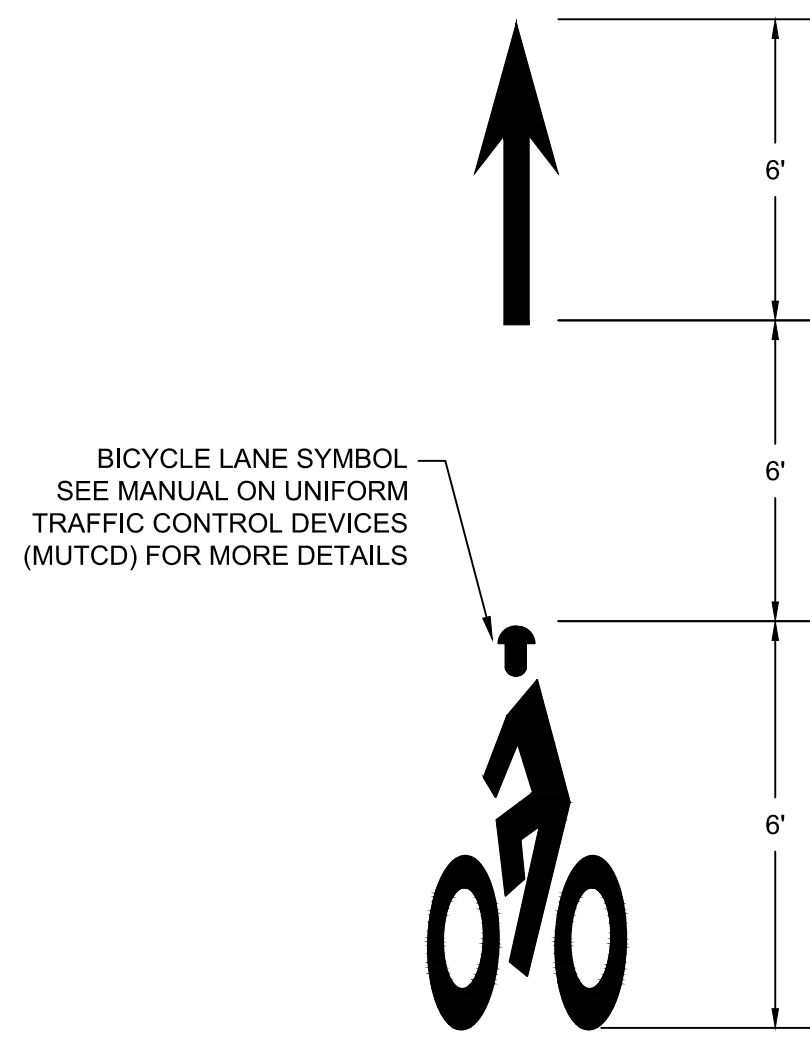
Sheet	GC-6
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McMAHON
TRANSPORTATION ENGINEERS & PLANNERS

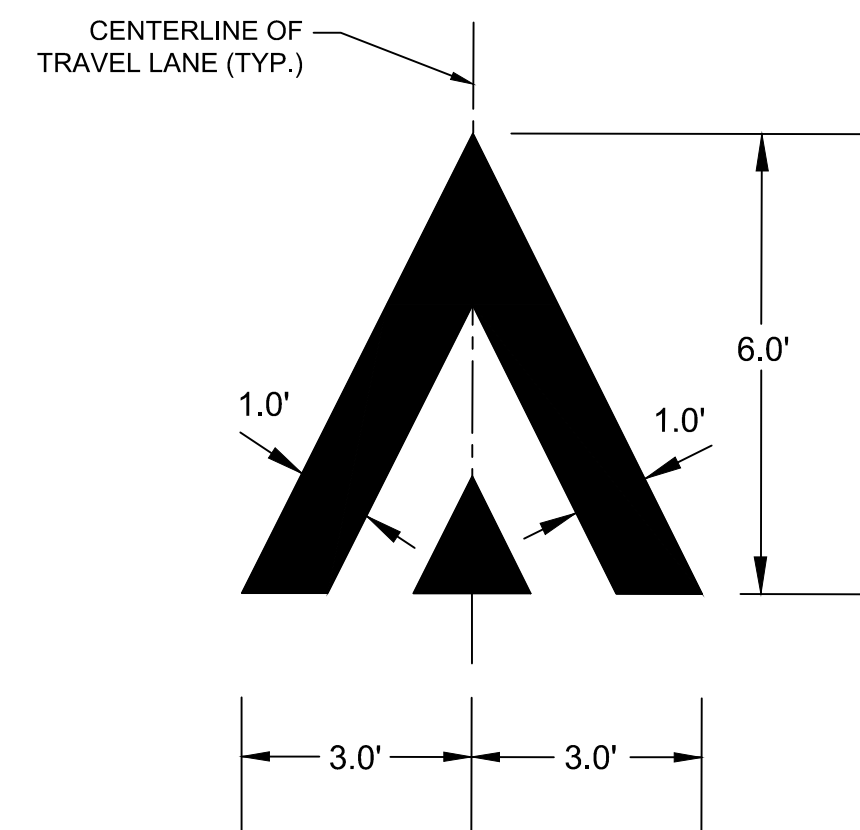
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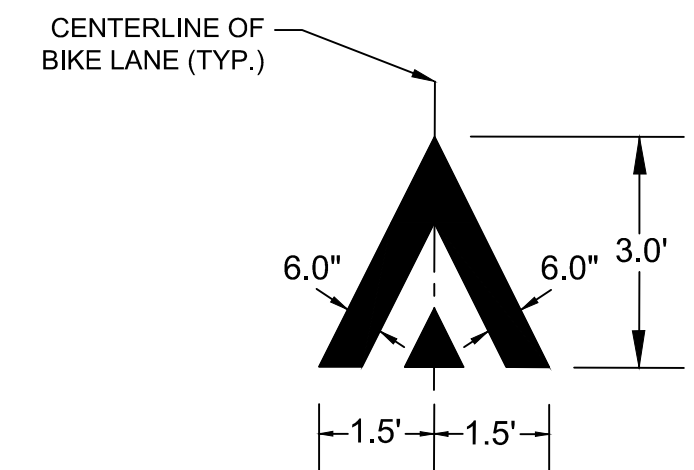
BENJAMIN M. STODDARD
CIVIL
No. 51854
REGISTERED PROFESSIONAL ENGINEER



TYPICAL BIKE CROSS
SCALE: N.T.S.



RAMP MARKING DETAIL
SCALE: N.T.S.

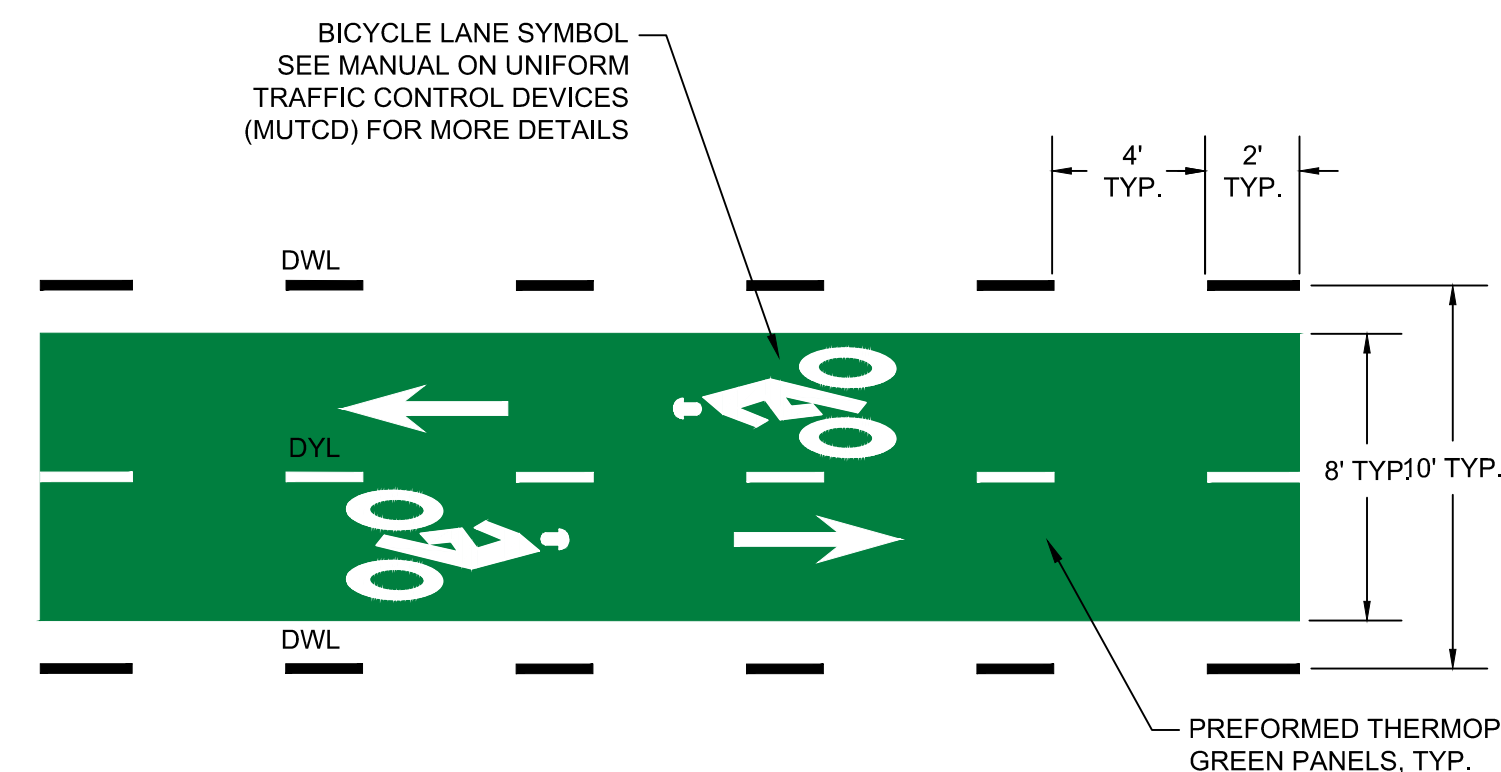


RAMP MARKING FOR BIKE LANE AND LOCAL STREETS DETAIL
SCALE: N.T.S.

BICYCLE LANE STRIPING NOTES:

- DO NOT PLACE SYMBOLS ON LANE LINES.
- PLACE BICYCLE LANE SYMBOLS WITHIN CENTER OF BICYCLE LANE.
- SEE PLAN SHEETS FOR SYMBOL LOCATIONS.
- TRAVEL AND PARKING LANE WIDTHS ARE AS SHOWN ON THE DRAWINGS.
- DO NOT PLACE SYMBOLS WITHIN DASHED LINES.

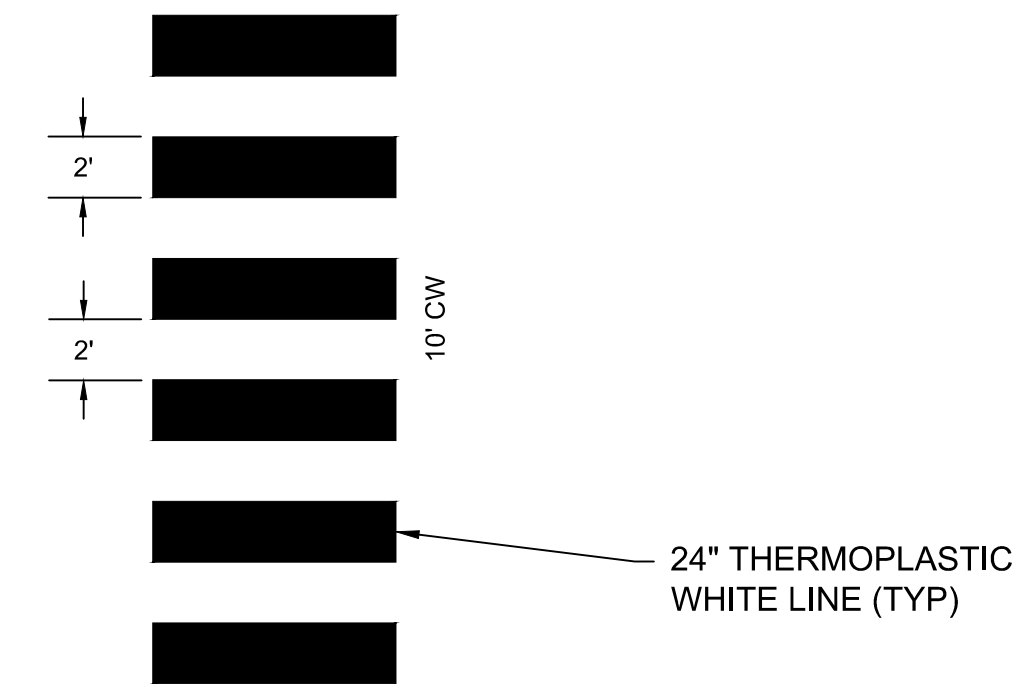
TYPICAL BICYCLE LANE SYMBOL
SCALE: N.T.S.



TYPICAL TWO-WAY BIKE CROSS
SCALE: N.T.S.

BIKE CROSS NOTES:

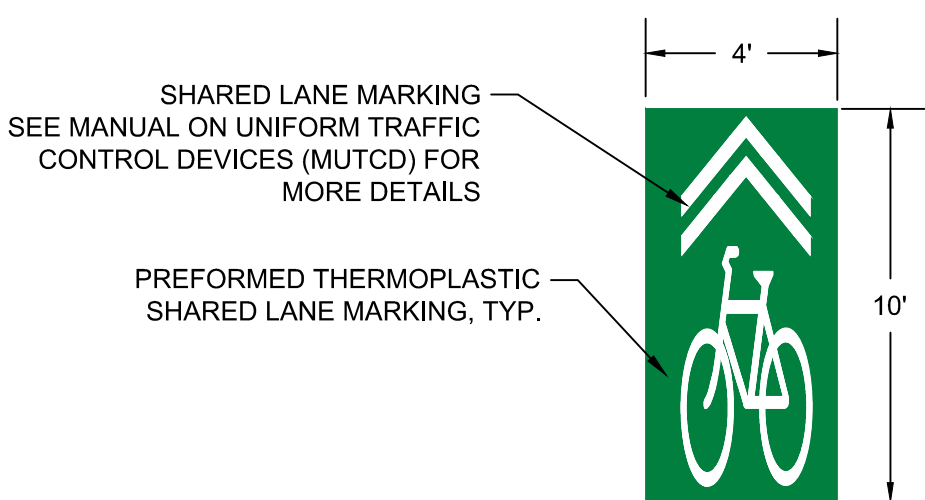
- PREFORMED THERMOPLASTIC GREEN PANELS ARE USED AS SHOWN ON THE PLANS.
- INSTALL PREFORMED THERMOPLASTIC GREEN PANELS BETWEEN 2' DOTTED WHITE LANE LINES AS SHOWN ON PLANS.
- INSTALL PREFORMED THERMOPLASTIC GREEN PANELS SO THAT CROSSWALK MARKINGS ARE NOT DISTURBED.
- INSTALL PREFORMED THERMOPLASTIC GREEN PANELS SO NOT TO COVER ANY UTILITY MANHOLES AND/OR GATES.



CROSSWALK NOTES:

- ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
- LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.
- CROSSWALK BARS SHALL BE PLACED OUTSIDE THE VEHICULAR WHEEL PATH WHEREVER POSSIBLE.

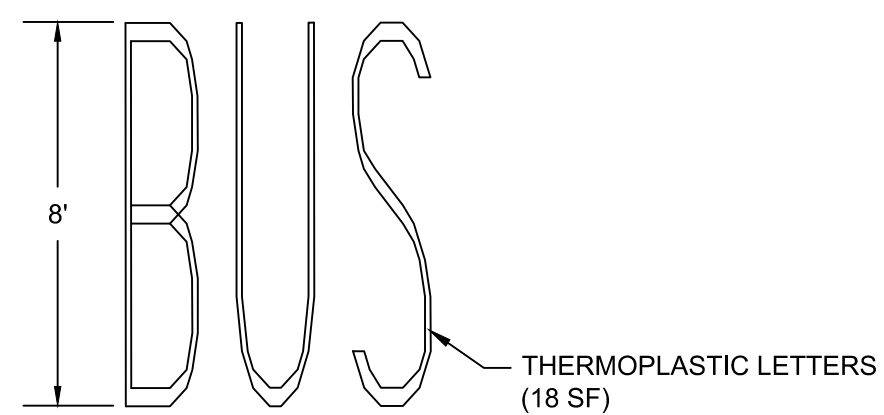
TYPICAL CROSSWALK MARKING
SCALE: N.T.S.



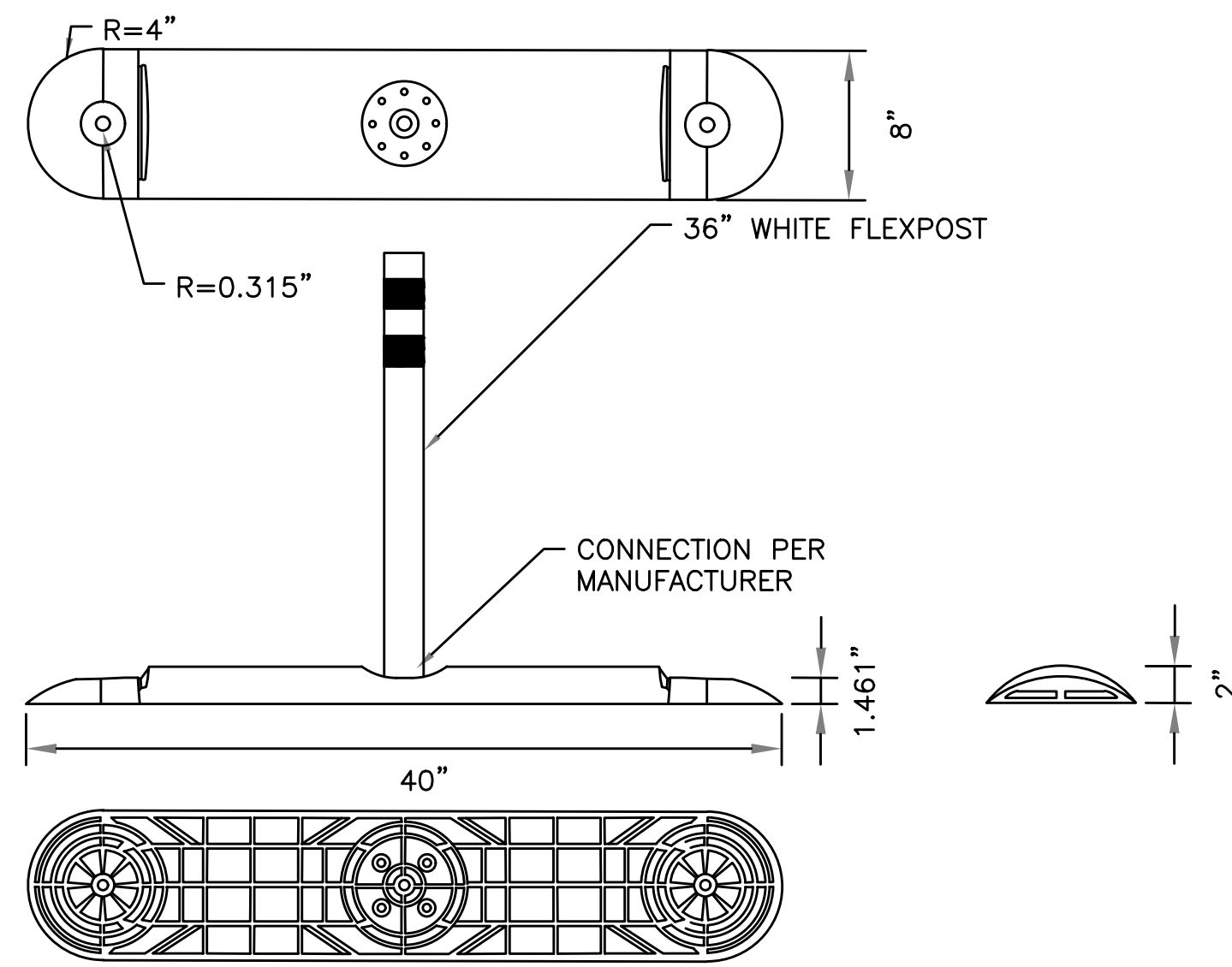
SHARED LANE MARKING SYMBOL NOTES:

- SHARED LANE MARKING SYMBOLS SHALL BE PLACED AS SHOWN ON PLANS.
- SHARED LANE MARKING SYMBOLS SHALL BE PREFORMED THERMOPLASTIC.
- DO NOT PLACE SYMBOLS ON LANE LINES.

TYPICAL SHARED LANE MARKING
SCALE: N.T.S.



TYPICAL "BUS" MARKING
SCALE: N.T.S.



MANUFACTURING INFORMATION

- INJECTION MOLDED
- UV STABILIZED HDPE
- COLOR: WHITE

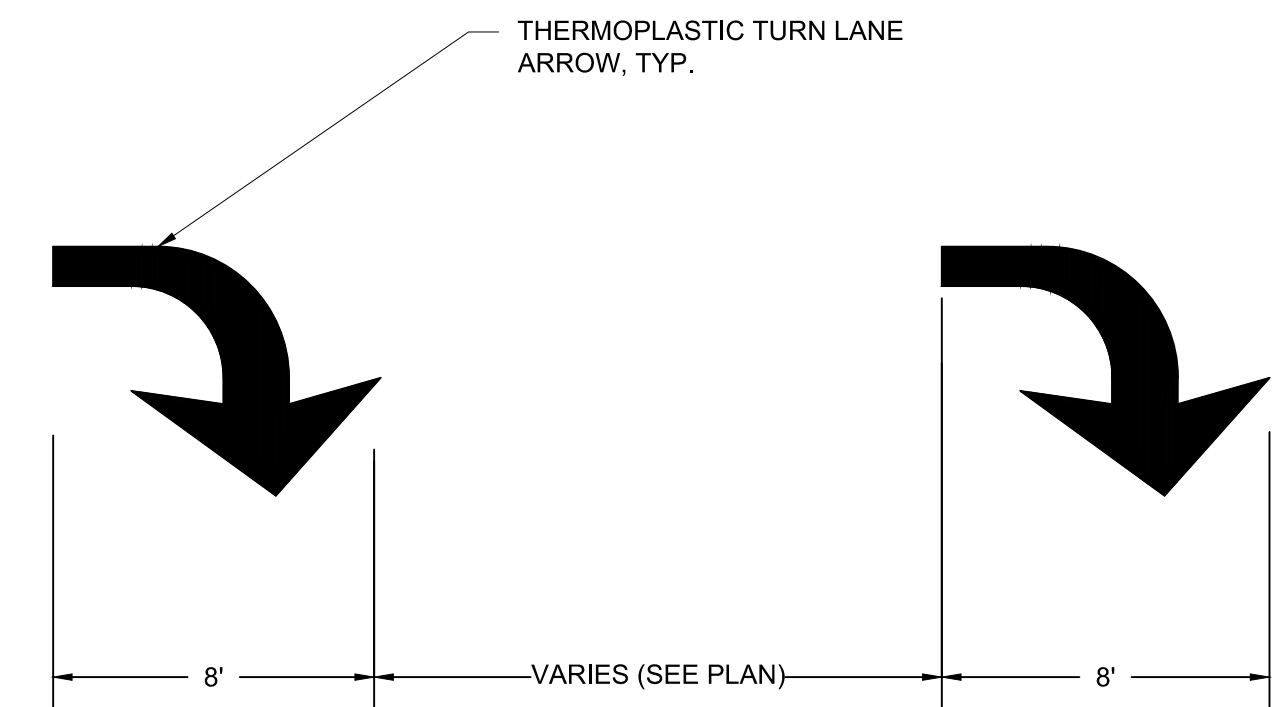
INTENDED USE

- CRASHWORTHINESS TESTED TO 2009 M.A.S.H. STANDARD

NOTES:

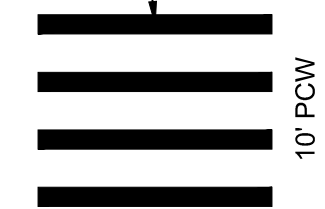
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
- PER CITY OF CAMBRIDGE SPECS FOR IN-GROUND CORED-BASE FLEXPOST.
- DESIGN PLANS SHOULD BE CONSULTED FOR VARIATIONS.
- IF LOCATED ON BRIDGE BASE MUST BE GLUED TO BRIDGE DECK INSTEAD OF CORED.

TRAFFIC SEPARATOR CURB (MODULAR BASE)
SCALE: N.T.S.



TYPICAL PAVEMENT MARKING SYMBOLS PLACEMENT
SCALE: N.T.S.

12" LONGITUDINAL LINES AT 3' O.C. (UNLESS OTHERWISE SHOWN)

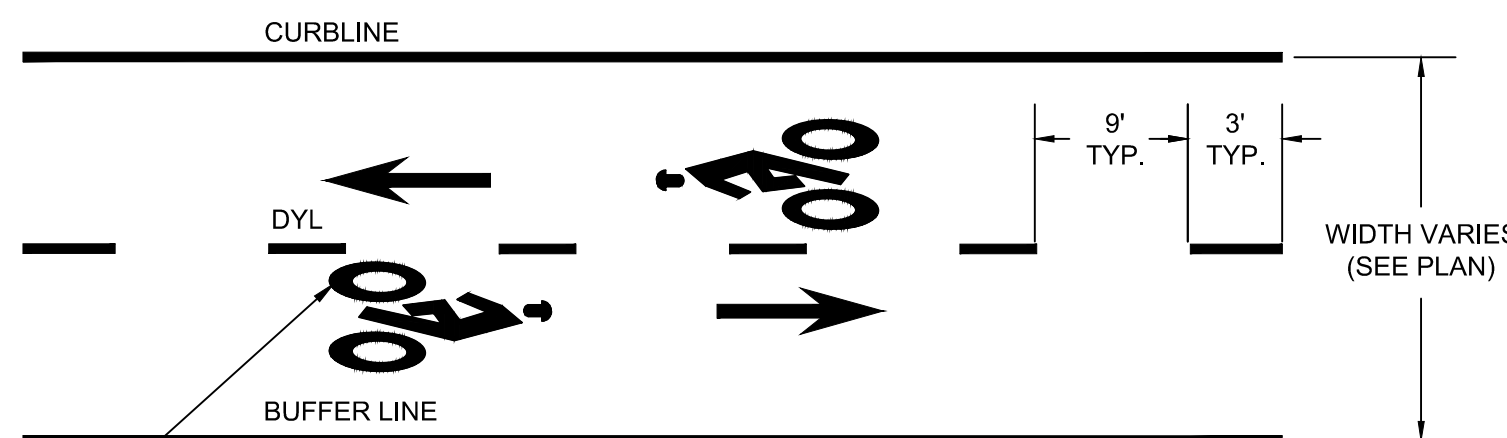


PEDESTRIAN CROSSWALK IN BIKE LANE
SCALE: N.T.S.



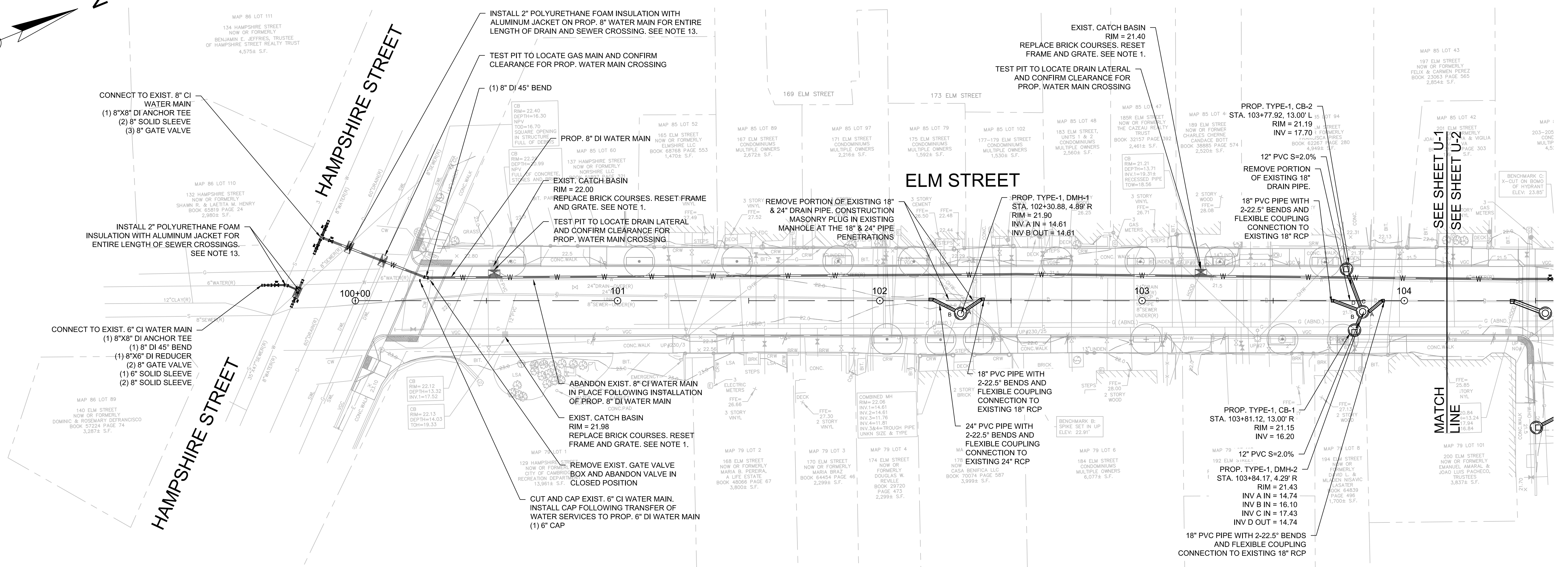
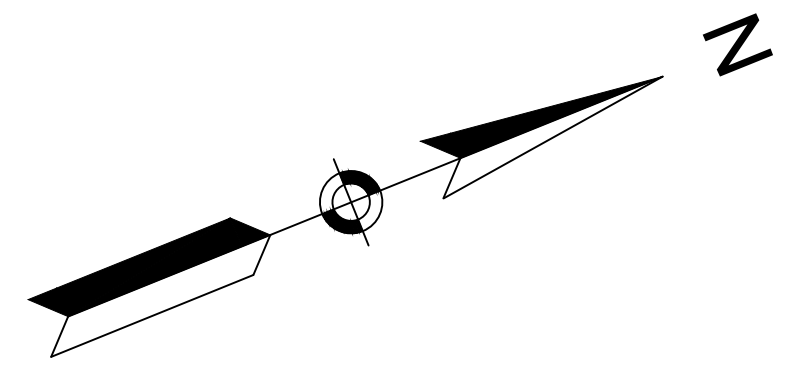
DIRECTION OF TRAVEL

BIKE LANE YIELD MARKING
SCALE: N.T.S.



TYPICAL TWO-WAY SEPARATED BIKE LANE
SCALE: N.T.S.

BICYCLE LANE SYMBOL SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR MORE DETAILS

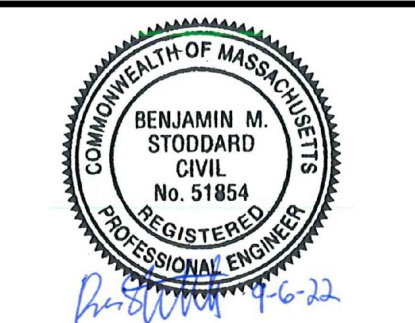
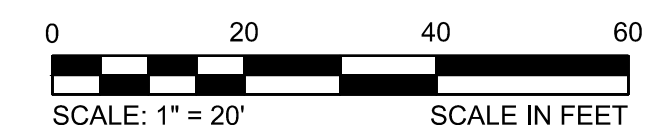


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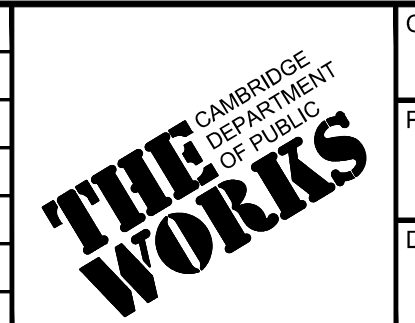
- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
- ALL WORK SHALL BE IN CONFORMANCE WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
- THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS, REQUIRED CWD "SIGN OFF'S" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED), TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
- UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
- CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
- WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
- ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
- ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
- IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
- TABLE 1 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 1 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE SIX (6) KNOWN LEAD SERVICES AND ONE (1) KNOWN 3/4" SERVICES IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
- FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE FOUR (4) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
- CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.
- INSTALL 8" DI WATER MAIN ABOVE EXISTING SEWER AND DRAIN. MAINTAIN A MINIMUM OF 6" RADIAL CLEARANCE BETWEEN PROPOSED WATER MAIN AND EXISTING SEWER AND DRAIN. MAINTAIN A MINIMUM OF 2'-0" COVER FROM TOP OF WATER MAIN TO SURFACE. INSTALL 2" POLYURETHANE FOAM INSULATION WITH ALUMINUM JACKET FOR ENTIRE LENGTH OF HORIZONTAL CROSSING.

TABLE 1 - EXISTING WATER SERVICE INFORMATION

ELM STREET STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
129 HAMPSHIRE ST.	-	-	-	-
165	1	COPPER	3/4	LEAD
167	1	COPPER	1	LEAD
168	1	COPPER	3/4	LEAD
169R	1	COPPER	3/4	LEAD
170	3/4	LEAD	3/4	LEAD
171	1	COPPER	1	LEAD
174	3/4	COPPER	3/4	LEAD
175	1 1/4	LEAD	1 1/4	LEAD
177	1	COPPER	3/4	LEAD
178	1 1/2	COPPER	3/4	LEAD
179	1	COPPER	3/4	LEAD
182	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
183	1	COPPER	3/4	LEAD
184	1	COPPER	3/4	GALV
185R	1 1/4	LEAD	1 1/4	LEAD
189	1	COPPER	3/4	LEAD
190	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
192	1	COPPER	3/4	LEAD
193	3/4	LEAD	3/4	LEAD
194	1	COPPER	3/4	LEAD
197	1	COPPER	3/4	LEAD
200	1 1/2	LEAD	1 1/2	LEAD
201	3/4	LEAD	3/4	LEAD

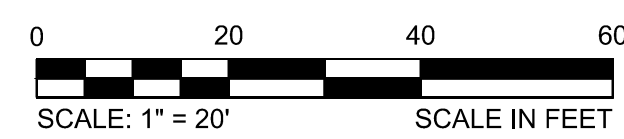
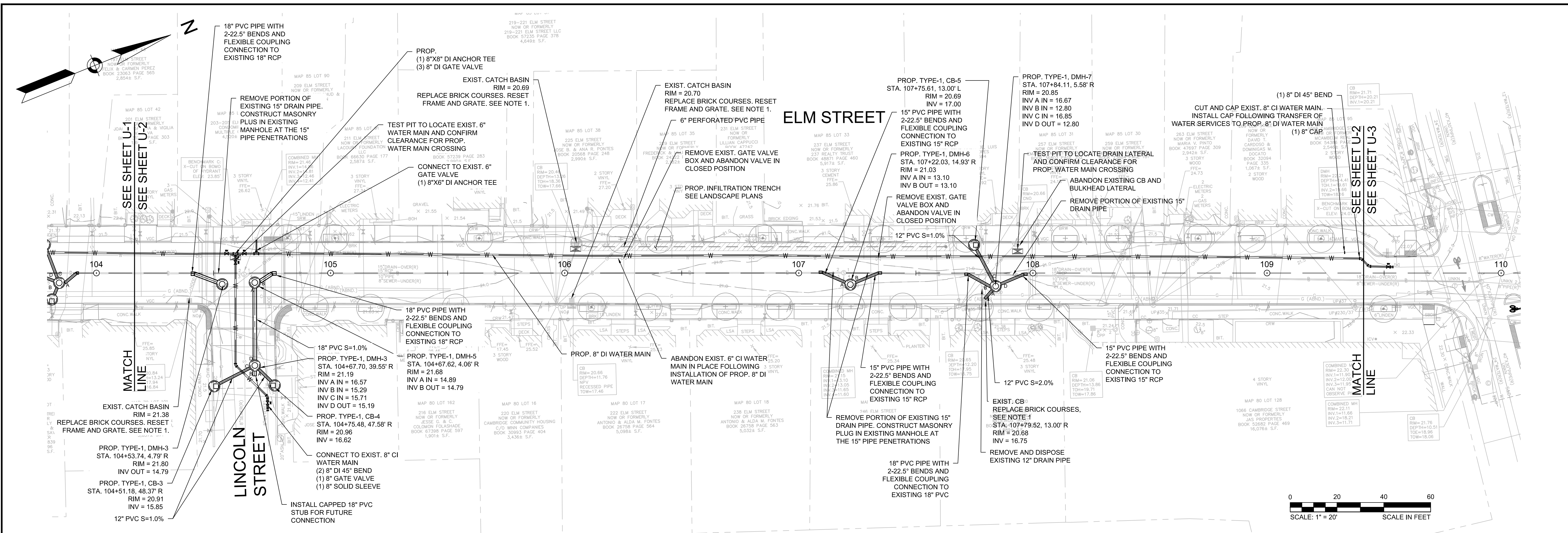


Scale	AS NOTED
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Job No.	20170208.037A
Designed by	KEA
Drawn by	KEA
Checked by	BJM
Approved by	BMS



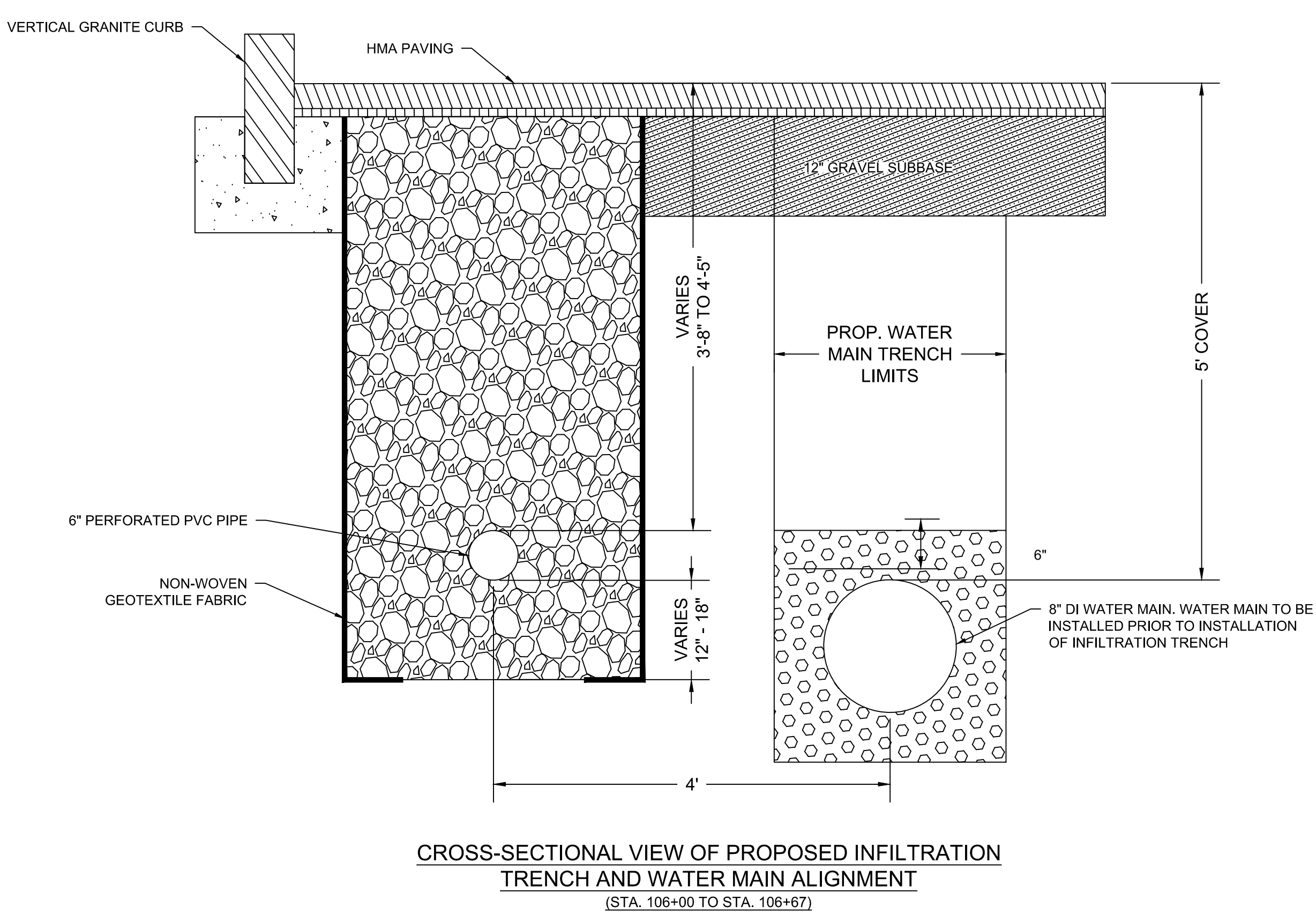
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET UTILITY PLAN SHEET 1 OF 7

Sheet	U-1
File No.	10565



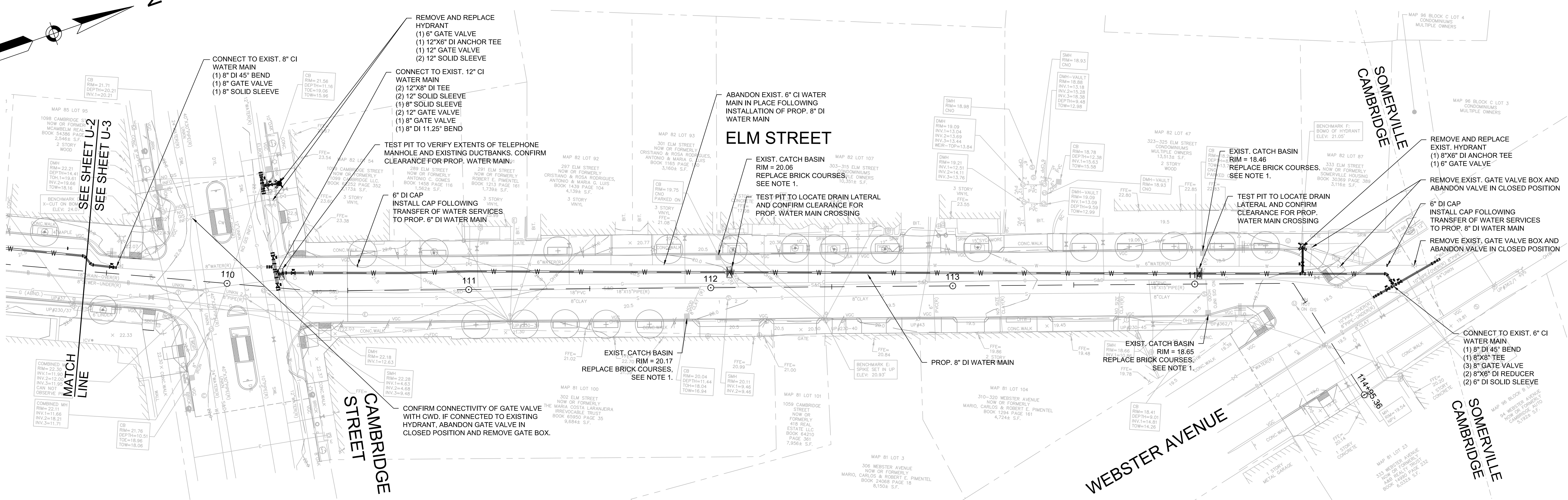
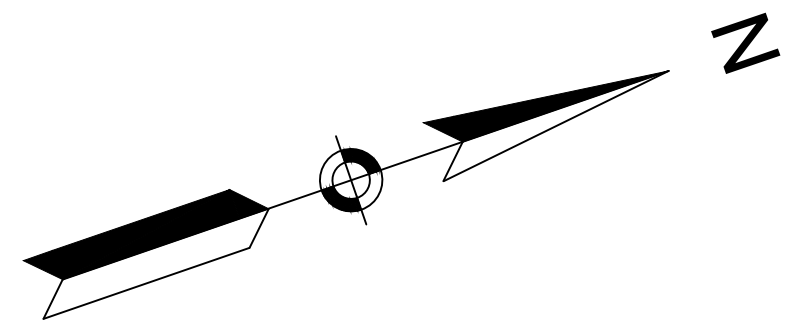
- NOTES:
- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
 - ALL WORK SHALL BE IN CONFORMANCE WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
 - THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS. REQUIRED CWD "SIGN OFF'S" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED). TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
 - UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
 - CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
 - WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
 - ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
 - ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
 - IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
 - TABLE 2 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 2 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE IS FIVE (5) KNOWN LEAD SERVICES IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
 - FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE SEVEN (7) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
 - CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.

ELM STREET STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
203-205	1	COPPER	3/4	LEAD
211	1	COPPER	1	COPPER
101 LINCOLN ST.	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
216	1	GALV	1	GALV
217	1	COPPER	3/4	LEAD
220	1	COPPER	1	COPPER
222-228	1 1/2	COPPER	1 1/2	COPPER
225	3/4	LEAD	3/4	LEAD
229	1	COPPER	1	COPPER
232-238	1 1/2	COPPER	1 1/2	COPPER
237	1	COPPER	3/4	LEAD
240-246	1 1/2	COPPER	1 1/2	COPPER
248-254	1 1/2	COPPER	1 1/2	COPPER
251	1	COPPER	3/4	LEAD
253	1	LEAD	1	LEAD
255	1 1/4	LEAD	1 1/4	LEAD
257	1 1/4	LEAD	1 1/4	LEAD
259	1	COPPER	UNKNOWN	UNKNOWN
263	1	COPPER	1	COPPER
269	1 1/4	LEAD	1 1/4	LEAD
1066 (CAMBRIDGE ST.)	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
1066 (CAMBRIDGE ST.)	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN



CROSS-SECTIONAL VIEW OF PROPOSED INFILTRATION TRENCH AND WATER MAIN ALIGNMENT (STA. 106+00 TO STA. 106+67)

 27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com		Scale AS NOTED			Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet U-2
		Date AUGUST 2022			Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No. 10565
		Job No. 20170208.037A		Drawing ELM STREET UTILITY PLAN SHEET 2 OF 7		
		Designed by KEA				
		Drawn by KEA				
		Checked by BJM	No.	Description	Date	
		Approved by BMS		REVISIONS		



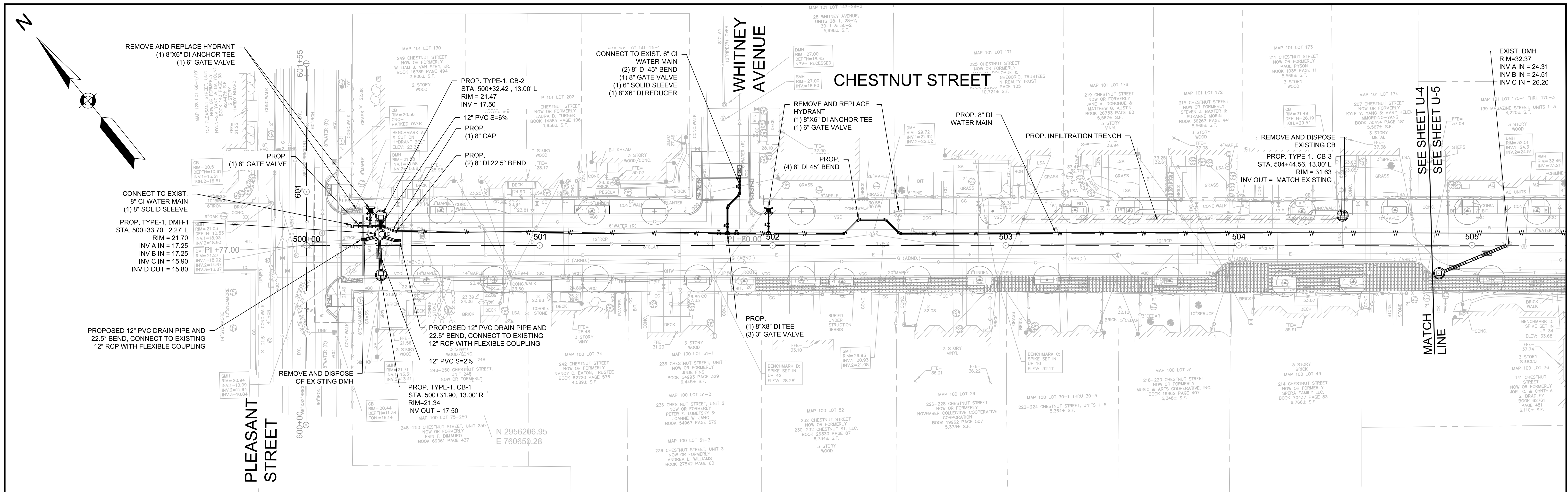
- NOTES:
- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
 - ALL WORK SHALL BE IN CONFORMANCE WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
 - THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS, REQUIRED CWD "SIGN OFFS" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED), TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
 - UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
 - CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
 - WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
 - ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
 - ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
 - IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
 - TABLE 3 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 3 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE ONE (1) KNOWN LEAD SERVICE IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
 - FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES.
 - CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. CAMBRIDGE WATER DEPARTMENT HAS INDICATED WATER MAIN ON MAGAZINE STREET MAY BE PRESSURE TESTED AND DISINFECTED AGAINST TEMPORARY CAPS. FOLLOWING APPROVAL BY THE ENGINEER, CONTRACTOR MAY REMOVE TEMPORARY CAP AND INSTALL COUPLING AND DISINFECT USING CHLORINATION SWAB. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.

TABLE 3 - EXISTING WATER SERVICE INFORMATION

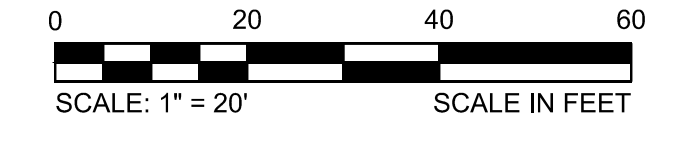
ELM STREET STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
289	1	COPPER	1	COPPER
291	1	COPPER	1	COPPER
297	1	LEAD	1	LEAD
301	1	COPPER	1	COPPER
303-305	1	COPPER	UNKNOWN	UNKNOWN
307-309	1	COPPER	1	COPPER
315	1	COPPER	1	COPPER
323-325	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
329	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN



		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		<p>Scale AS NOTED</p> <p>Date AUGUST 2022</p> <p>Job No. 20170208.037A</p> <p>Designed by KEA</p> <p>Drawn by KEA</p> <p>Checked by BJM</p> <p>Approved by BMS</p>		<p>Client CITY OF CAMBRIDGE, MASSACHUSETTS</p> <p>Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</p> <p>Drawing ELM STREET UTILITY PLAN SHEET 3 OF 7</p>	<p>Sheet U-3</p> <p>File No. 10565</p>
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SEE SHEET U-4
SEE SHEET U-5
MATCH LINE

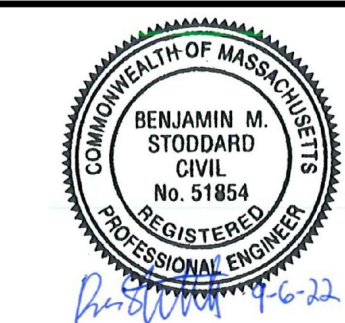


NOTES:

- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
- THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS, REQUIRED CWD "SIGN OFF'S" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED), TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
- UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
- CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
- WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
- ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
- ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
- IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
- TABLE 1 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 1 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE ONE (1) KNOWN LEAD SERVICE IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
- FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE THREE (3) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
- CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.

TABLE 1 - EXISTING WATER SERVICE INFORMATION

CHESTNUT STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
249-251	1 1/4	GALV.	1 1/4	GALV.
250	1	COPPER	1	COPPER
247-245	1	COPPER	1	UNKNOWN
248	1	COPPER	1	COPPER
25-27 WHITNEY	1	COPPER	3/4	LEAD
242-244	1	GALV.	1	GALV.
28-30 WHITNEY ST.	1 1/2	COPPER	1 1/2	COPPER
236	1	COPPER	1	COPPER
225	1 1/4	LEAD	1 1/4	LEAD
230-232	1	COPPER	3/4	LEAD
219-221	1	COPPER	1	UNKNOWN
226-228	1	GALV.	1	GALV.
215-217	1	COPPER	1	UNKNOWN
222-224	1	GALV.	1	GALV.
211-213	1	COPPER	1	UNKNOWN
218-220	1	COPPER	1	UNKNOWN

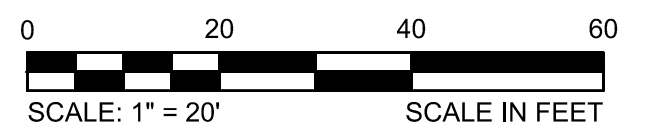
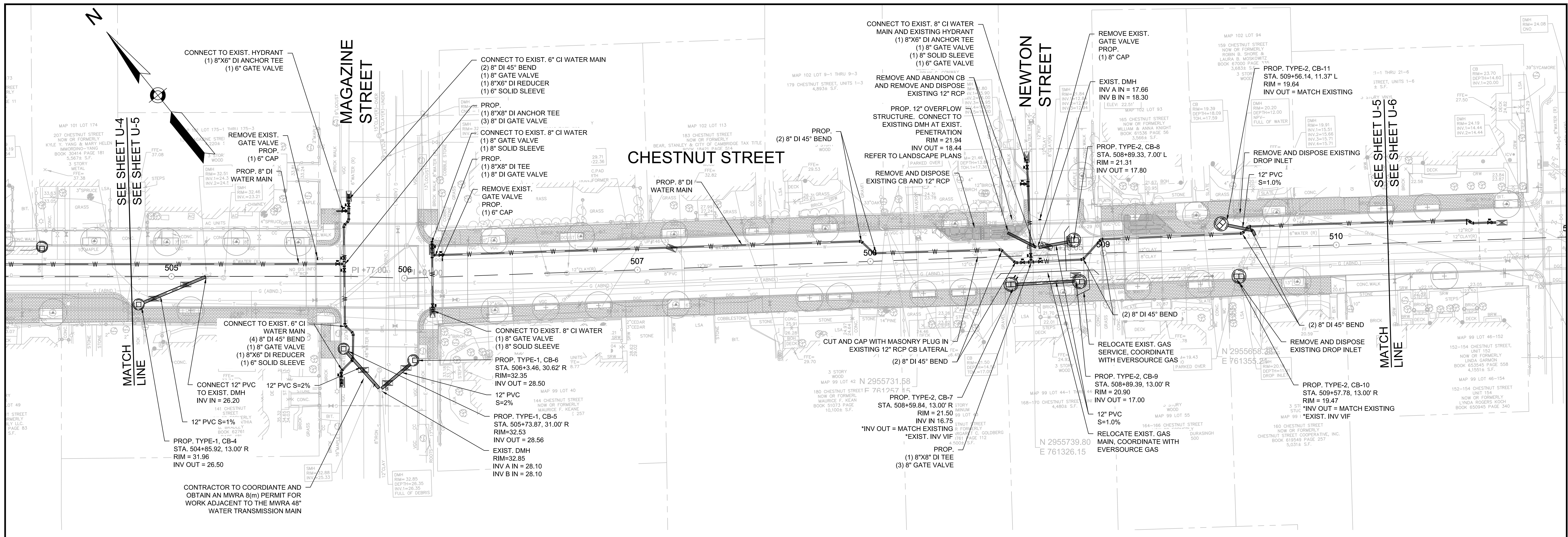


Scale	AS NOTED
Date	AUGUST 2022
Job No.	20170208.037A
Designed by	KEA
Drawn by	KEA
Checked by	BJM
Approved by	BMS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET UTILITY PLAN SHEET 4 OF 7

Sheet	U-4
File No.	10565

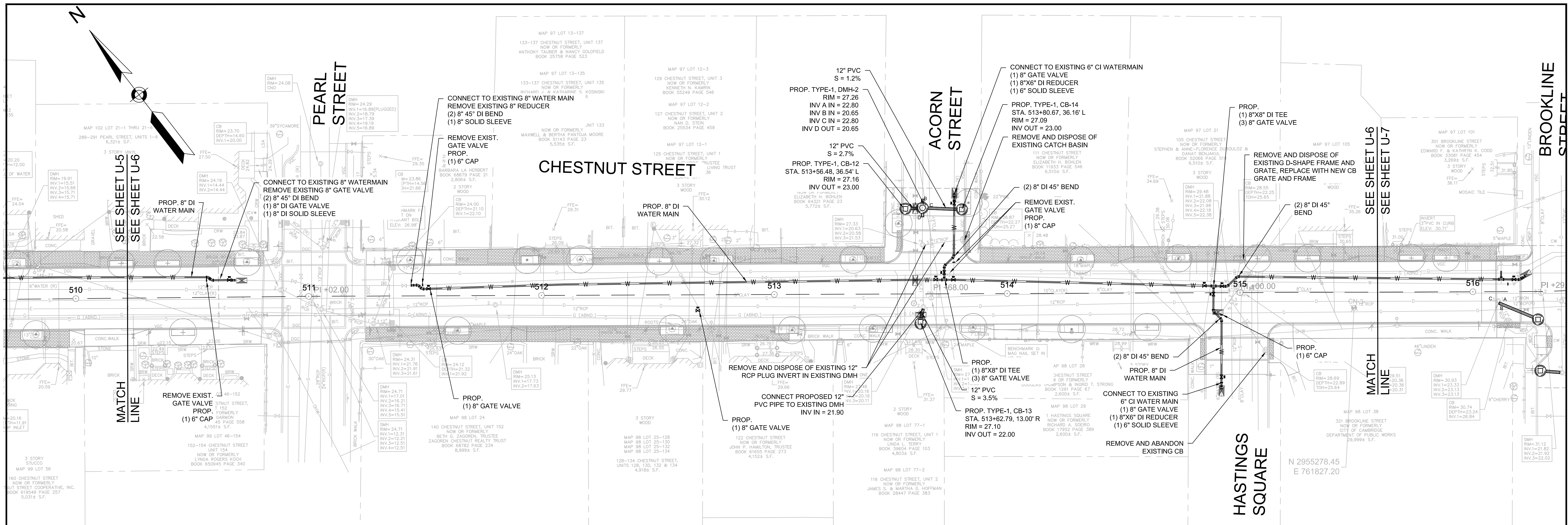


NOTES:

- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
- THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS, REQUIRED CWD "SIGN OFFS" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED), TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
- UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
- CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
- WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
- ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
- ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
- IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
- TABLE 2 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 2 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE THREE (3) KNOWN LEAD SERVICES IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
- FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE ONE (1) SERVICE GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
- CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.

CHESTNUT STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
207-209	1	LEAD	1	LEAD
214	1 1/2	COPPER	1 1/2	COPPER
139 MAGAZINE ST.	1	BRASS	1	BRASS
141 MAGAZINE ST.	1	COPPER	1	UNKNOWN
143 MAGAZINE ST.	1	COPPER	1	UNKNOWN
140 MAGAZINE ST. (DOM)	1	LEAD	1	LEAD
140 MAGAZINE ST. (FR)	1	LEAD	1	LEAD
144 MAGAZINE ST.	1	COPPER	1	UNKNOWN
183-185	1	COPPER	1	UNKNOWN
180	1	COPPER	1	COPPER
179	1	COPPER	1	UNKNOWN
172-174	1	COPPER	1	UNKNOWN
175	-	UNKNOWN	-	UNKNOWN

				Scale AS NOTED		Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet U-5
				Date AUGUST 2022		Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No. 10565
27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com				Job No. 20170208.037A Designed by KEA Drawn by KEA Checked by BJM Approved by BMS	No. Description Date REVISIONS	Drawing CHESTNUT STREET UTILITY PLAN SHEET 5 OF 7	



NOTES:

- ALL WORK SHALL BE IN CONFORMANCE WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
- THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEES AND ELBOWS. REQUIRED CWD "SIGN OFFS" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED). TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
- UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
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- ALL ELBOWS, TEES, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
- IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
- TABLE 3 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 3 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE FOUR (4) KNOWN LEAD SERVICES AND TWO (2) KNOWN 3/4" SERVICES IN THE STREET. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
- FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE IS ONE (1) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
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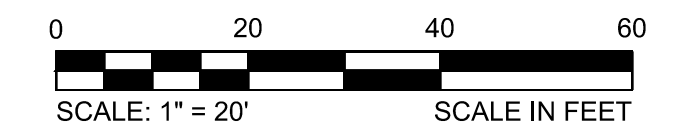


TABLE 3 - EXISTING WATER SERVICE INFORMATION

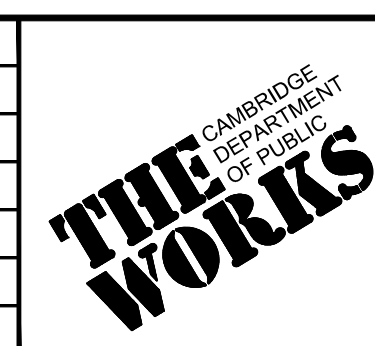
CHESTNUT STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
163-165	1	LEAD	1	LEAD
168-170	3/4	LEAD	3/4	LEAD
159-161-R	1	COPPER	1	LEAD
166	1	PLASTIC	1	UNKNOWN
289-291 PEARL ST.(DOM)	2	COPPER	2	COPPER
289-291 PEARL ST.(FR)	2	COPPER	2	COPPER
160	1	LEAD	1	GALV.
290 PEARL ST.	1	COPPER	3/4	LEAD
295 PEARL ST.	1	COPPER	1	UNKNOWN
133-137	1 1/4	LEAD	1 1/4	LEAD
140-142 (DOM)	3/4	COPPER	3/4	COPPER
140-142 (FR)	3/4	COPPER	3/4	COPPER
128-134	1	COPPER	1	COPPER



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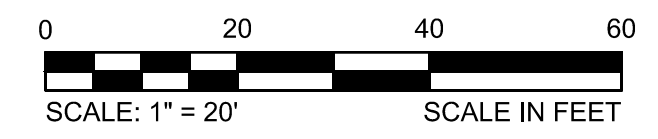
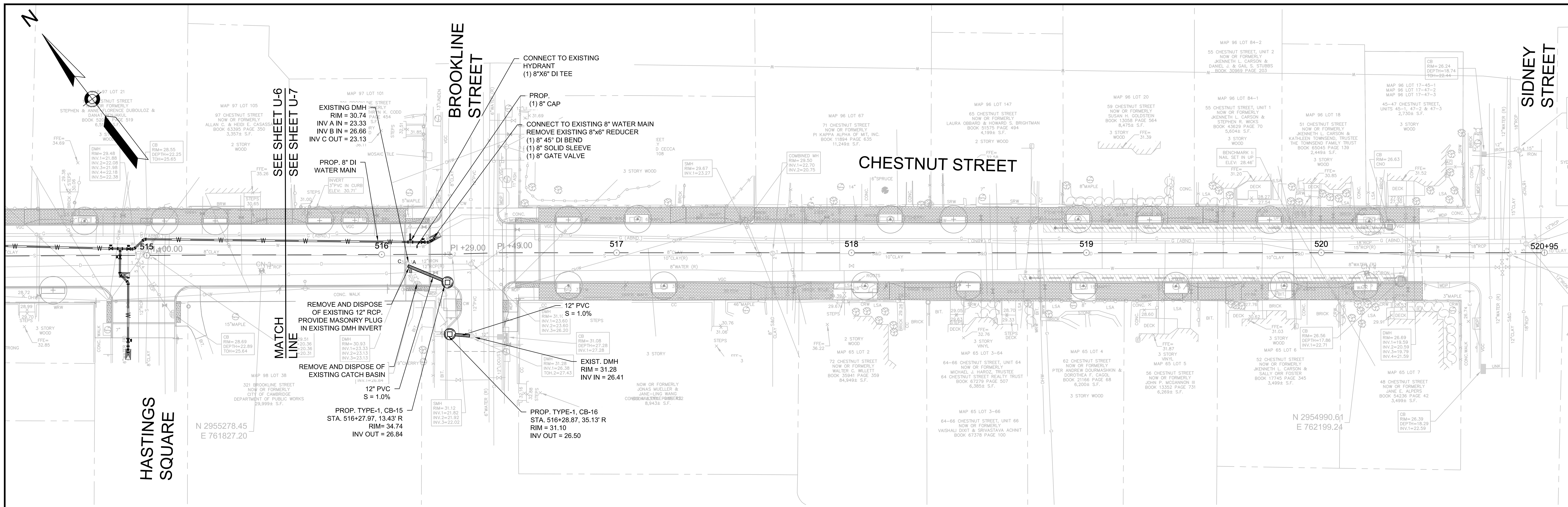


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BJM	No.	Description
Approved by	BMS		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET UTILITY PLAN SHEET 6 OF 7

Sheet	U-6
File No.	10565



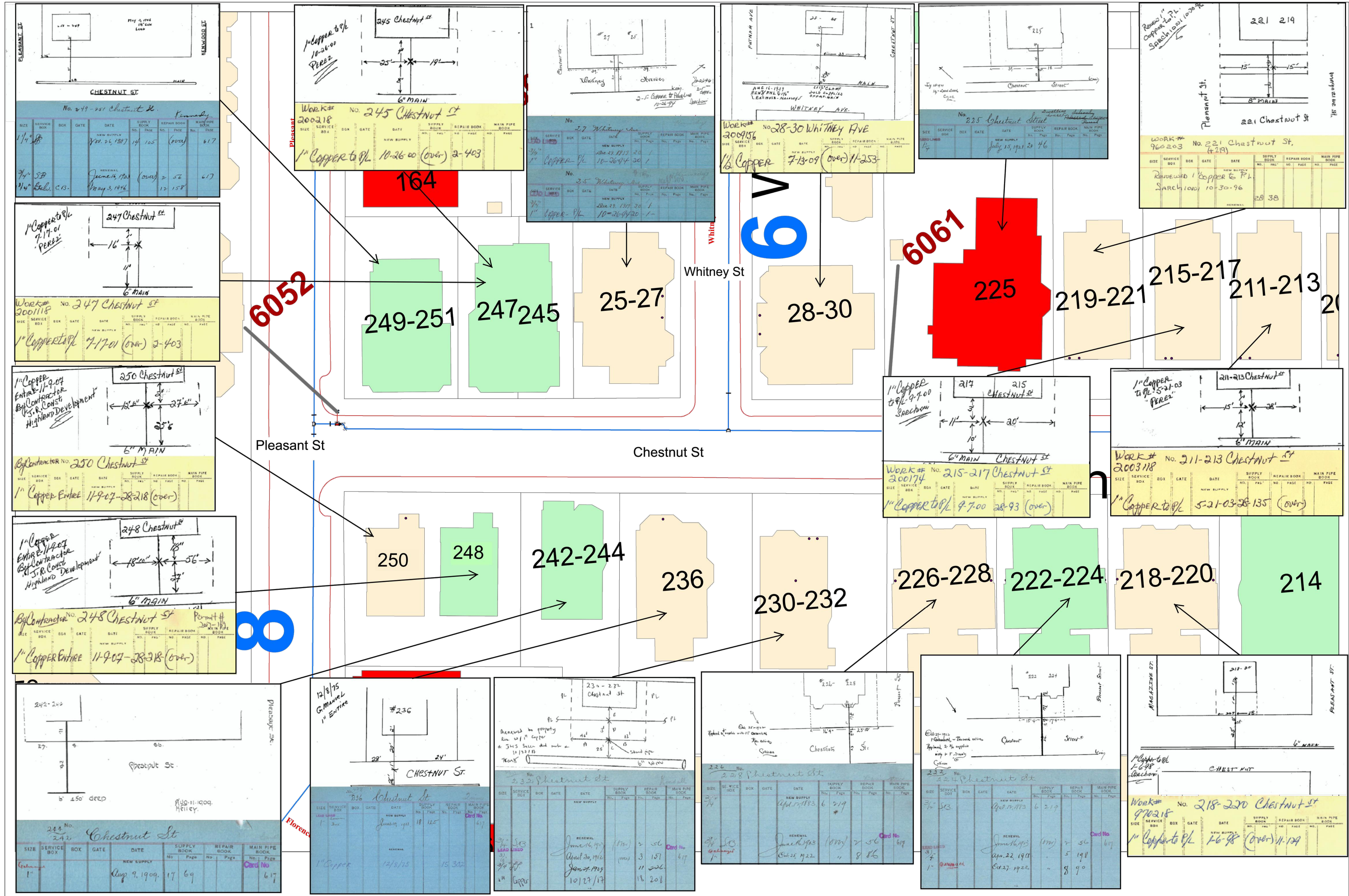
NOTES:

1. ALL WORK SHALL BE IN CONFORMANCE WITH CAMBRIDGE WATER DEPARTMENT STANDARDS.
2. THE CAMBRIDGE WATER DEPARTMENT (CWD) WILL NOT ISSUE NEW WATER CONSTRUCTION PERMITS UNTIL ALL REQUIREMENTS FOR PREVIOUS (I.E., INITIAL CWD PERMIT) CWD PERMITS ARE MET. THESE REQUIREMENTS INCLUDE ACCURATE AND LEGIBLE SWING TIE DIMENSIONS TO ALL NEW WATER MAIN GATE VALVES, TEE'S AND ELBOW'S, REQUIRED CWD "SIGN OFF'S" ON THE CONTRACTOR'S COPY OF THE CWD EXECUTED PERMIT (WHEN PERMITTED WORK IS COMPLETED), TEST DOCUMENTATION THAT INCLUDES MASSACHUSETTS STATE CERTIFIED INITIAL CHLORINATION AND BACTERIA TESTING OF NEW WATER MAIN WORK, AND PRESSURE TEST RESULTS OF NEW WATER MAIN WORK. THE CONTRACTOR IS HEREBY ADVISED THAT THE CWD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SLIP IN PROJECT SCHEDULE IF THESE REQUIREMENTS FOR PERMITS ARE NOT FOLLOWED.
3. UNLESS OTHERWISE NOTED, WATER MAINS SHALL BE INSTALLED WITH MINIMUM 5.0' COVER.
4. CONTRACTOR TO PROVIDE 1" CHLORINATION TAP AT ALL LOCATIONS WHERE PROPOSED WATER MAIN CONNECTS TO EXISTING WATER MAIN.
5. WATER GATES, BOXES, AND HYDRANTS SHALL BE INSTALLED TO EXISTING GRADE AND ADJUSTED TO FINAL GRADE ELEVATIONS DURING SURFACE RESTORATION WORK.
6. ALL NEW AND RELOCATED HYDRANTS TO BE FLOW TESTED IN COORDINATION WITH THE CWD AND PAINTED PER THE CWD SPECIFICATIONS. CONTRACTOR TO COORDINATE WITH CWD FOR PAINT SPECIFICATIONS/COLOR.
7. ALL ELBOWS, TEE'S, AND CONNECTIONS TO BE PROPERLY RESTRAINED PER THE CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS.
8. IF LOCATION OF EXISTING CURB STOP IS INACCESSIBLE FOR REPLACEMENT, CONTRACTOR TO COORDINATE WITH CWD TO DETERMINE LOCATION OF NEW CURB STOP PRIOR TO INSTALLATION.
9. TABLE 4 - EXISTING WATER SERVICE INFORMATION IS FOR REFERENCE ONLY. ALL WATER SERVICES TO BE VERIFIED BY CONTRACTOR AND CONNECTED TO NEW WATER MAIN. EXISTING LEAD SERVICES IN THE STREET SHALL BE REMOVED AND REPLACED TO THE METER. CONTRACTOR SHALL CONDUCT TWO TEST PITS PER LEAD SERVICE. ONE AT THE CONNECTION AT THE MAIN AND THE OTHER WITHIN EXISTING SIDEWALK. ALL OTHER NON-COPPER SERVICES AND SERVICES UNDER 1" IN DIAMETER SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1" SERVICES. AS SHOWN IN TABLE 4 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE FOUR (4) KNOWN LEAD SERVICES. ADDITIONAL LOCATIONS TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
10. FOR WATER SERVICES GREATER THAN 1" IN SIZE, CONTRACTOR TO INSTALL VALVE AT THE MAIN PER DETAILS. WATER SERVICES 1-1/4" IN SIZE SHALL BE REPLACED TO THE BACK OF SIDEWALK WITH 1-1/2" SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE THREE (3) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
11. CONTRACTOR TO PRESSURE TEST AND DISINFECT PER CITY OF CAMBRIDGE WATER DEPARTMENT STANDARDS. CAMBRIDGE WATER DEPARTMENT HAS INDICATED WATER MAIN ON MAGAZINE STREET MAY BE PRESSURE TESTED AND DISINFECTED AGAINST TEMPORARY CAPS. FOLLOWING APPROVAL BY THE ENGINEER, CONTRACTOR MAY REMOVE TEMPORARY CAP AND INSTALL COUPLING AND DISINFECT USING CHLORINATION SWAB. REFERENCE SPECIFICATION SECTION 02675 FOR DISINFECTION PROCEDURES.

TABLE 4 - EXISTING WATER SERVICE INFORMATION

CHESTNUT STREET NUMBER	EXISTING STREET		EXISTING PRIVATE	
	SIZE (IN.)	MATERIAL	SIZE (IN.)	MATERIAL
125-129	1 1/4	LEAD	1	BRASS
122-124	1 1/2	COPPER	1 1/2	COPPER
23-27 ACORN ST	1	LEAD	1	LEAD
116	1	PLASTIC	1	UNKNOWN
111	3/4	LEAD	3/4	LEAD
1 HASTING SQUARE	1	COPPER	1	UNKNOWN
105	1	COPPER	1	UNKNOWN
97-99	1	LEAD	1	LEAD
301 BROOKLINE ST.	1	COPPER	1	UNKNOWN
308 BROOKLINE ST.	1 1/2	COPPER	1 1/2	UNKNOWN
302 BROOKLINE ST.	1	COPPER	1	UNKNOWN

				<p>Scale AS NOTED</p> <p>Date AUGUST 2022</p> <p>Job No. 20170208.037A</p> <p>Designed by KEA</p> <p>Drawn by KEA</p> <p>Checked by BJM</p> <p>Approved by BMS</p>		<p>Client CITY OF CAMBRIDGE, MASSACHUSETTS</p> <p>Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</p> <p>Drawing CHESTNUT STREET UTILITY PLAN SHEET 7 OF 7</p>	<p>Sheet U-7</p> <p>File No. 10565</p>
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244 Chestnut St

1 1/4" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1 1/4"			10/26/00				

247 Chestnut St

1" COPPER TO PL PEREZ

7-17-01

Work# 200118 No. 247 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			7-17-01				

250 Chestnut St

1" COPPER ENTIRE BY CONTRACTOR

11-9-07

By Contractor No. 250 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			11-9-07				

248 Chestnut St

1" COPPER ENTIRE BY CONTRACTOR

11-9-07

By Contractor No. 248 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			11-9-07				

225 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				

218-220 Chestnut St

1" COPPER TO PL PEREZ

1-6-98

Work# 970218 No. 218-220 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			1-6-98				

249-251 Chestnut St

1" COPPER TO PL PEREZ

7-17-01

By Contractor No. 249-251 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			7-17-01				

247-245 Chestnut St

1" COPPER TO PL PEREZ

7-17-01

By Contractor No. 247-245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			7-17-01				

25-27 Whitney St

1" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			10-26-00				

28-30 Whitney Ave

1/2" COPPER

7-13-09

Work# 2009156 No. 28-30 WHITNEY AVE

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1/2"			7-13-09				

225 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				

215-217 Chestnut St

1" COPPER TO PL PEREZ

9-7-00

Work# 300174 No. 215-217 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			9-7-00				

211-213 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				

250 Chestnut St

1" COPPER ENTIRE BY CONTRACTOR

11-9-07

By Contractor No. 250 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			11-9-07				

248 Chestnut St

1" COPPER ENTIRE BY CONTRACTOR

11-9-07

By Contractor No. 248 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			11-9-07				

242-244 Chestnut St

1" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			10-26-00				

236 Chestnut St

1" COPPER TO PL PEREZ

12/16/15

Work# 2016175 No. 236 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			12/16/15				

230-232 Chestnut St

1" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			10-26-00				

226-228 Chestnut St

1" COPPER TO PL PEREZ

9-7-00

Work# 300174 No. 215-217 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			9-7-00				

222-224 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				

242-244 Chestnut St

1" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			10-26-00				

236 Chestnut St

1" COPPER TO PL PEREZ

12/16/15

Work# 2016175 No. 236 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			12/16/15				

230-232 Chestnut St

1" COPPER TO PL PEREZ

10-26-00

Work# 200218 No. 245 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			10-26-00				

226-228 Chestnut St

1" COPPER TO PL PEREZ

9-7-00

Work# 300174 No. 215-217 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			9-7-00				

222-224 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				

218-220 Chestnut St

1" COPPER TO PL PEREZ

1-6-98

Work# 970218 No. 218-220 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			1-6-98				

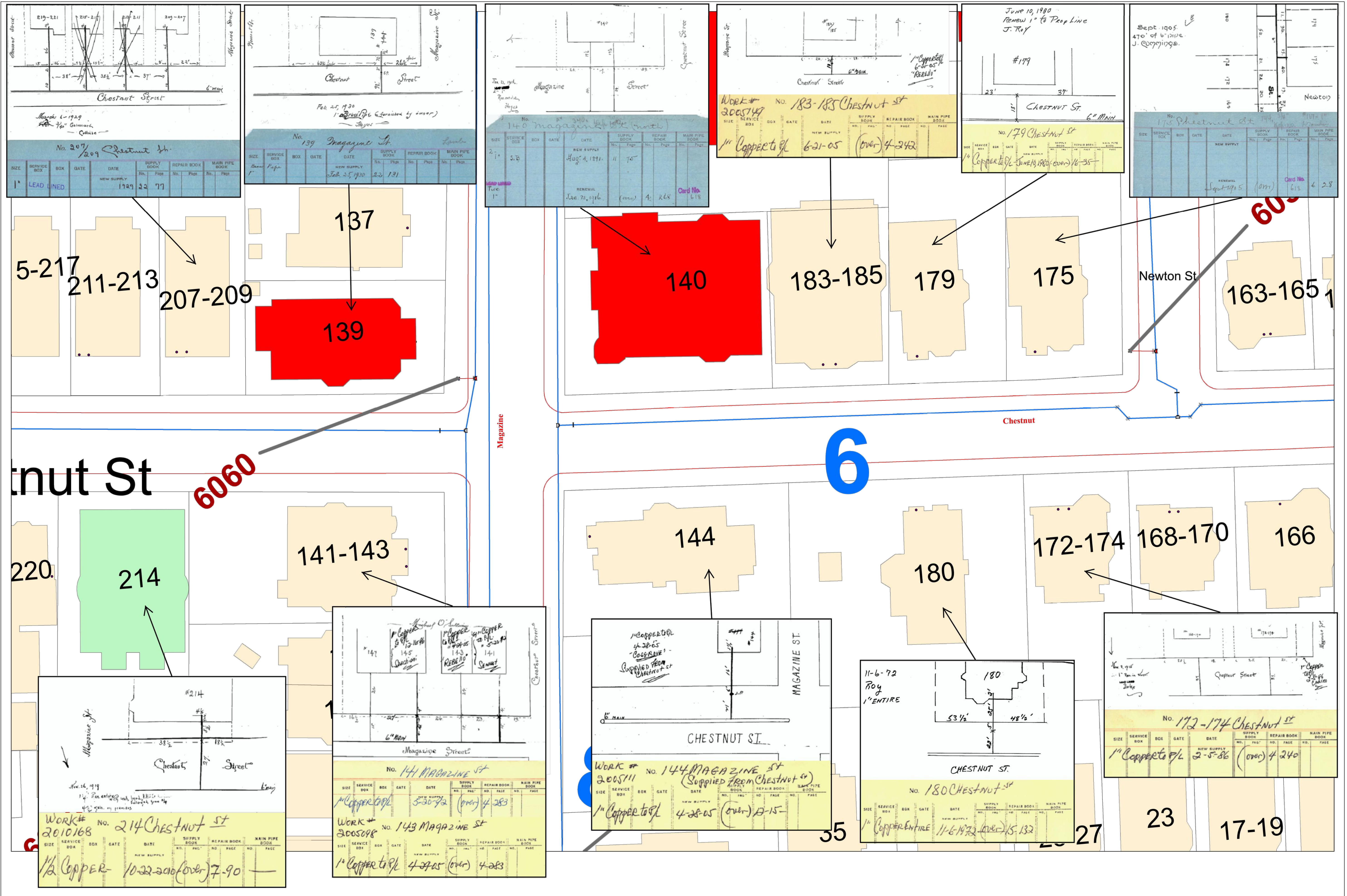
214 Chestnut St

1" COPPER TO PL PEREZ

5-21-03

Work# 2003118 No. 211-213 Chestnut St

SIZE	SERVICE BOX	BOX	DATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"			5-21-03				



March 6, 1929
3/4" Copper
Culvert

No. 207 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	LEAD LINED			1929	22	77	

Feb 25, 1930
1" Copper (Furnished by owner)
Taper

No. 139 Magazine St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Lead Pipe			Feb 25, 1930	22	131	

Jan 11, 1916
Renewal

No. 140 Magazine St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
2"				Aug 4, 1891	11	70	
				Renewal	Jan 21, 1916	(over) 4	268

Card No. 618

June 10, 1980
Renewal 1" to Deep Line
J. Roy

Work # 2005149
1" Copper to 6-31-05 (over) 4-242

No. 183-185 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 6-31-05			(over) 4-242			

June 10, 1980
Renewal 1" to Deep Line
J. Roy

#179

No. 179 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 6-31-05			(over) 6-35			

Sept. 1905
470' of 6" pipe
J. Compying

No. 175 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 6-31-05			(over) 6-35			

Card No. 615

5-217
211-213
207-209

137
139

140

183-185
179
175

163-165

6060

Chestnut St

6060

220
214

141-143

144

180

172-174

168-170
166

Nov 26, 1919
1" Pipe entire with lead joints
Furnished from City
to 214, by premises

Work # 2010168
1/2 Copper- 10-22-200 (over) 7-90

No. 214 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1/2"	Copper			10-22-200	(over) 7-90		

1" Copper to 4-28-05 (over) 4-283

No. 144 Magazine St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 4-28-05			(over) 4-283			

Work # 2005098
1" Copper to 4-28-05 (over) 4-283

No. 143 Magazine St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 4-28-05			(over) 4-283			

1" Copper to 4-28-05 (over) 4-15

Work # 2005111
1" Copper to 4-28-05 (over) 4-15

No. 144 Magazine St.
(Supplied from Chestnut St)

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 4-28-05			(over) 4-15			

11-6-72
Roy
1" ENTIRE

180

No. 180 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper ENTIRE			11-6-72	(over) 15-132		

1" Copper to 2-5-86 (over) 4-240

No. 172-174 Chestnut St.

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK	REPAIR BOOK	MAIN PIPE BOOK
1"	Copper to 2-5-86			(over) 4-240			



Scale	AS NOTED
Date	AUGUST 2022
Job No.	20170208.037A
Designed by	
Drawn by	MKR
Checked by	BMS
Approved by	BMS

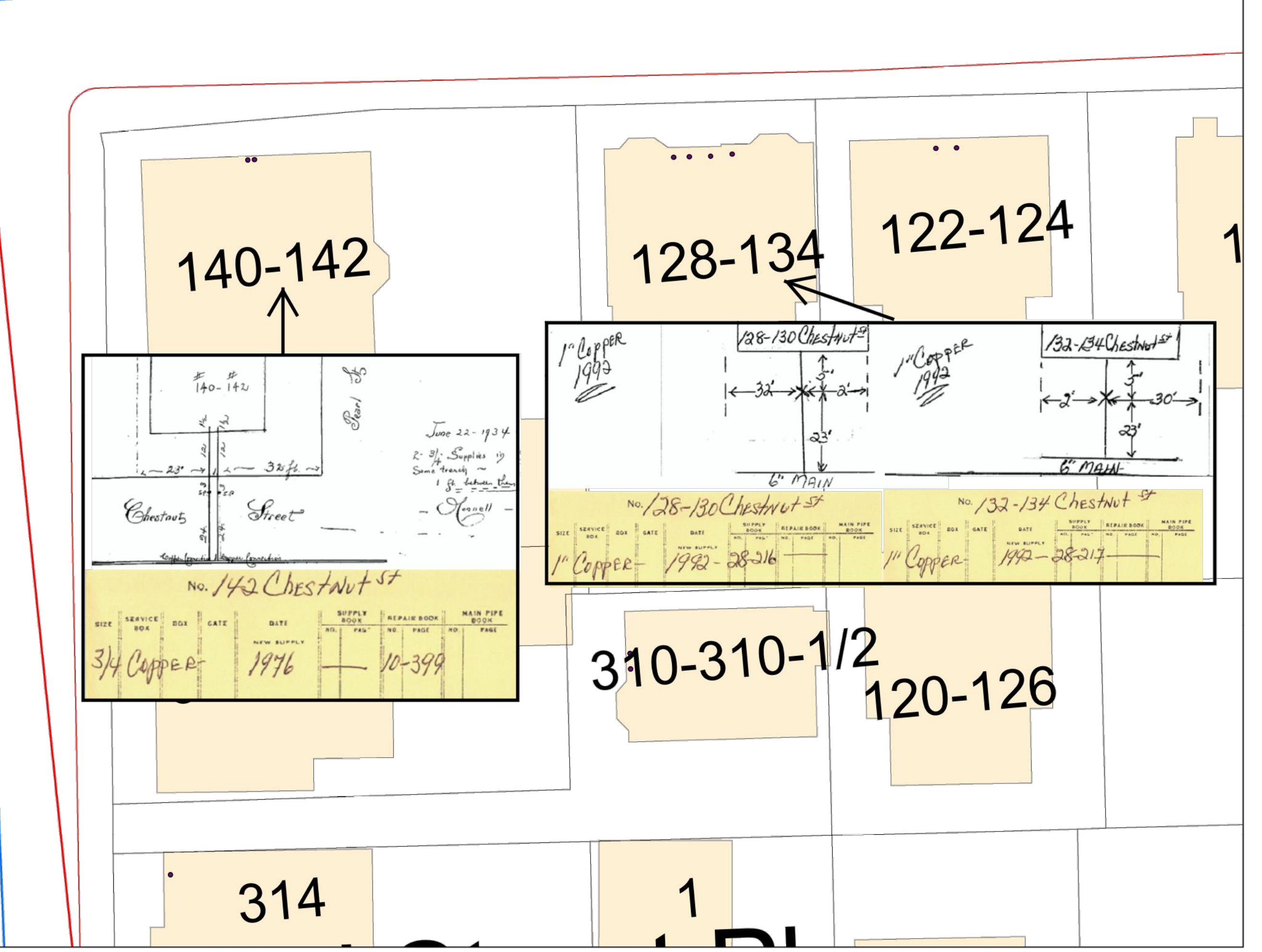
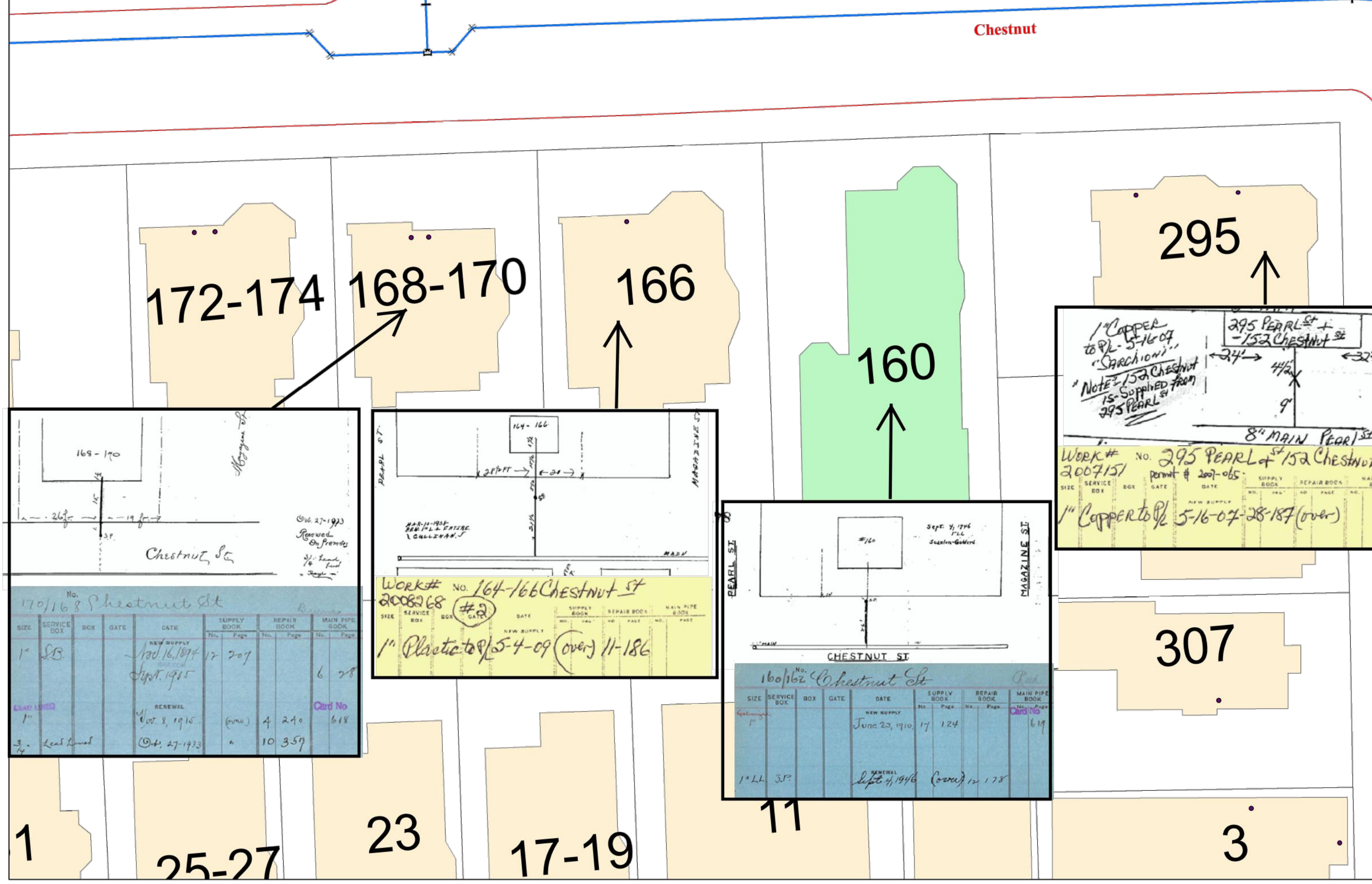
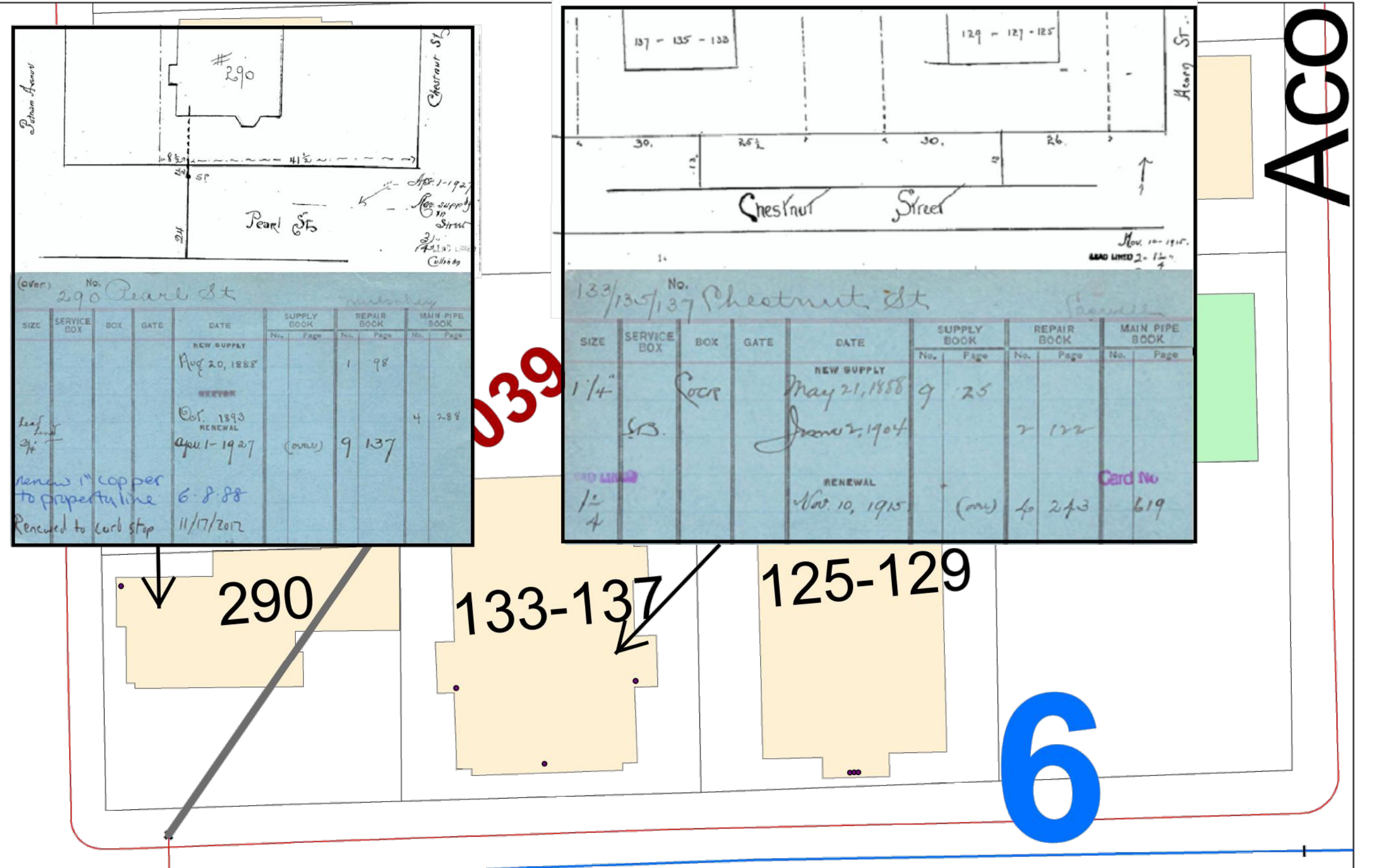
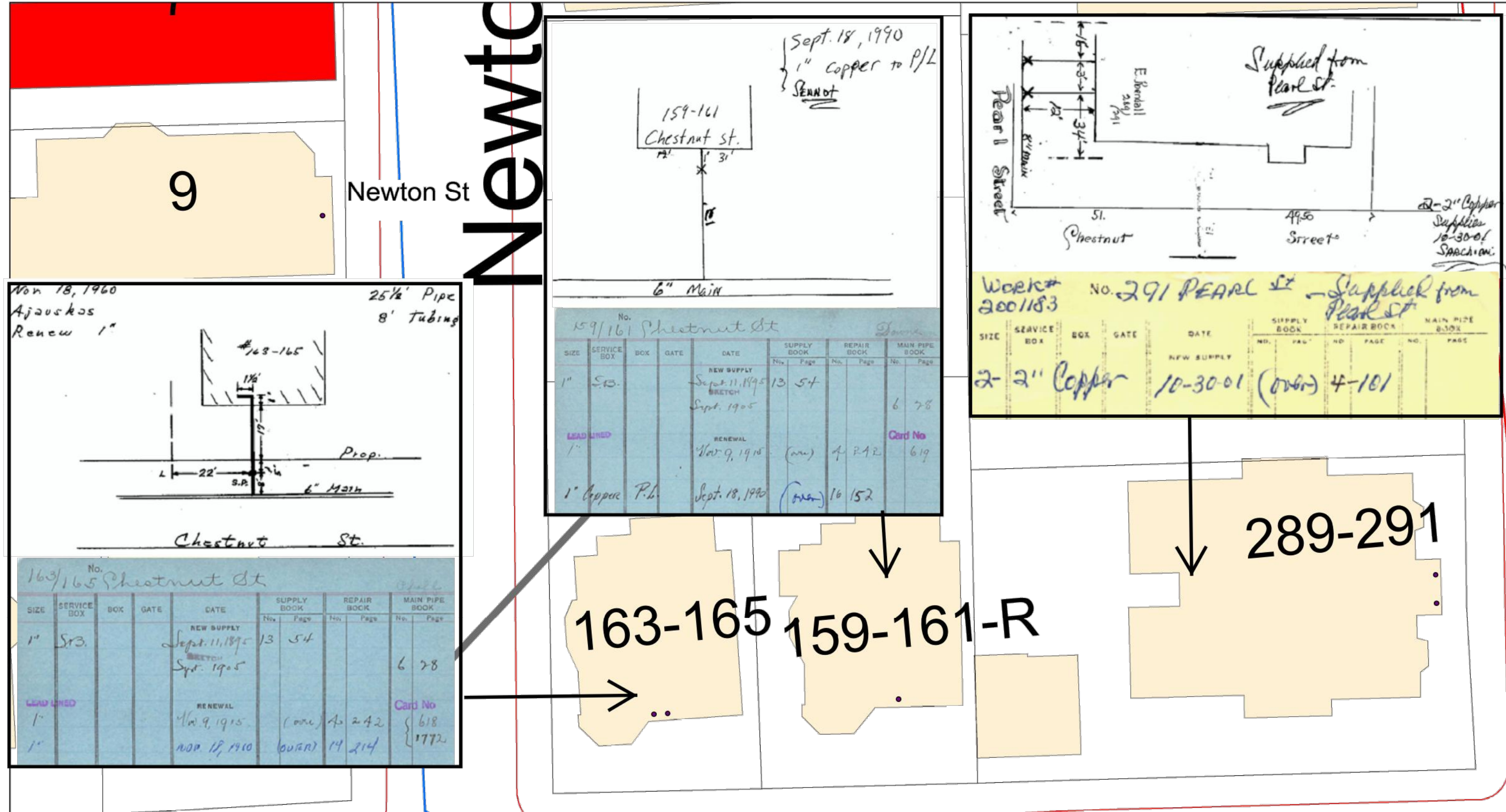


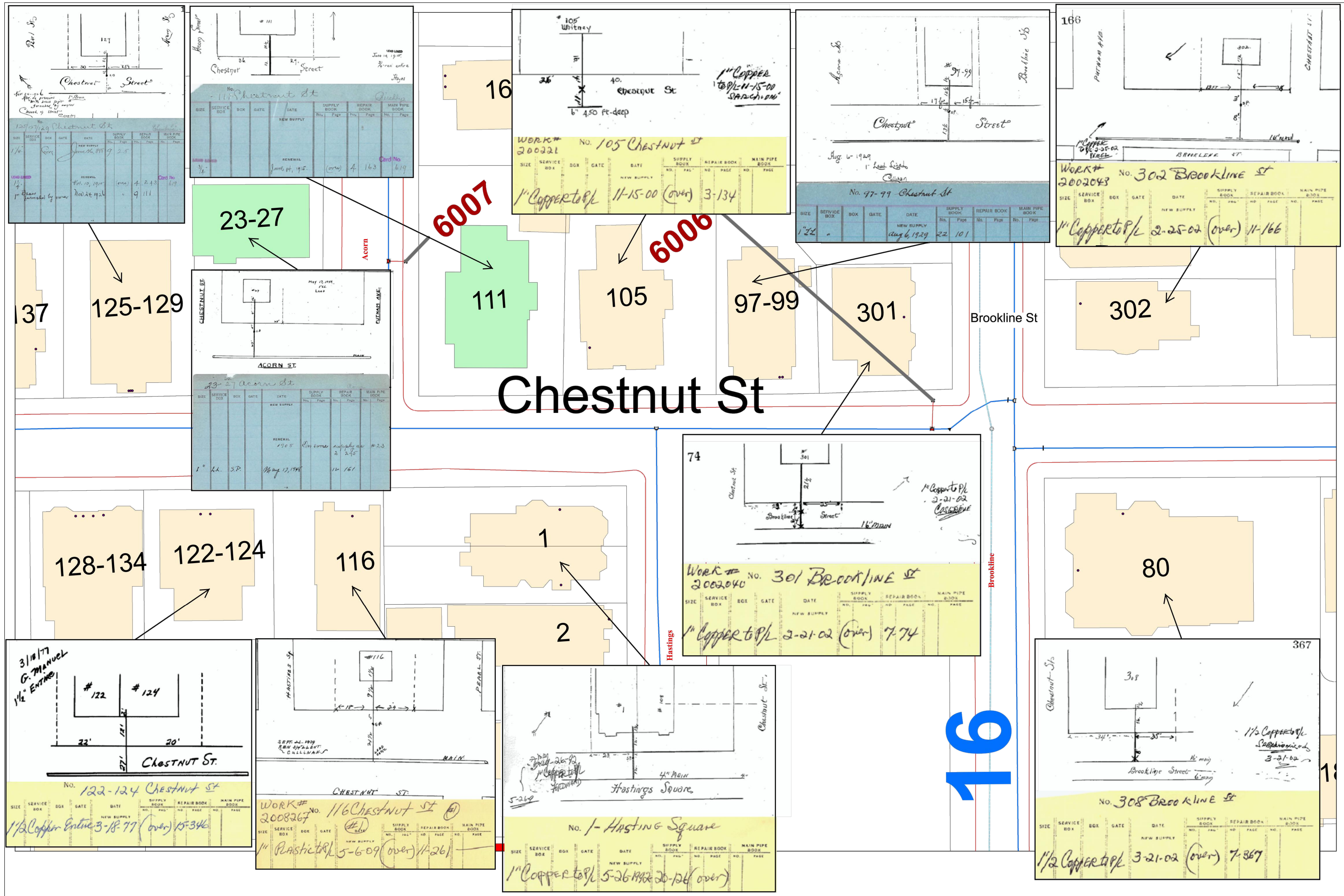
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - WATER SERVICE TIE CARDS SHEET 2 OF 4

Sheet	U-9
File No.	10565

ACO

Newton





23-27

6007

WORK# 200221 No. 105 Chestnut St
1" Copper top/l 11-15-00 (over) 3-134

6006

WORK# 2002043 No. 302 Brookline St
1" Copper top/l 2-25-02 (over) 11-166

WORK# 2002040 No. 301 Brookline St
1" Copper top/l 2-21-02 (over) 7-74

3/10/77 G. MANUEL
1/2" ENTIRE
No. 122-124 Chestnut St
1/2" Copper Entire 3-18-77 (over) 15-346

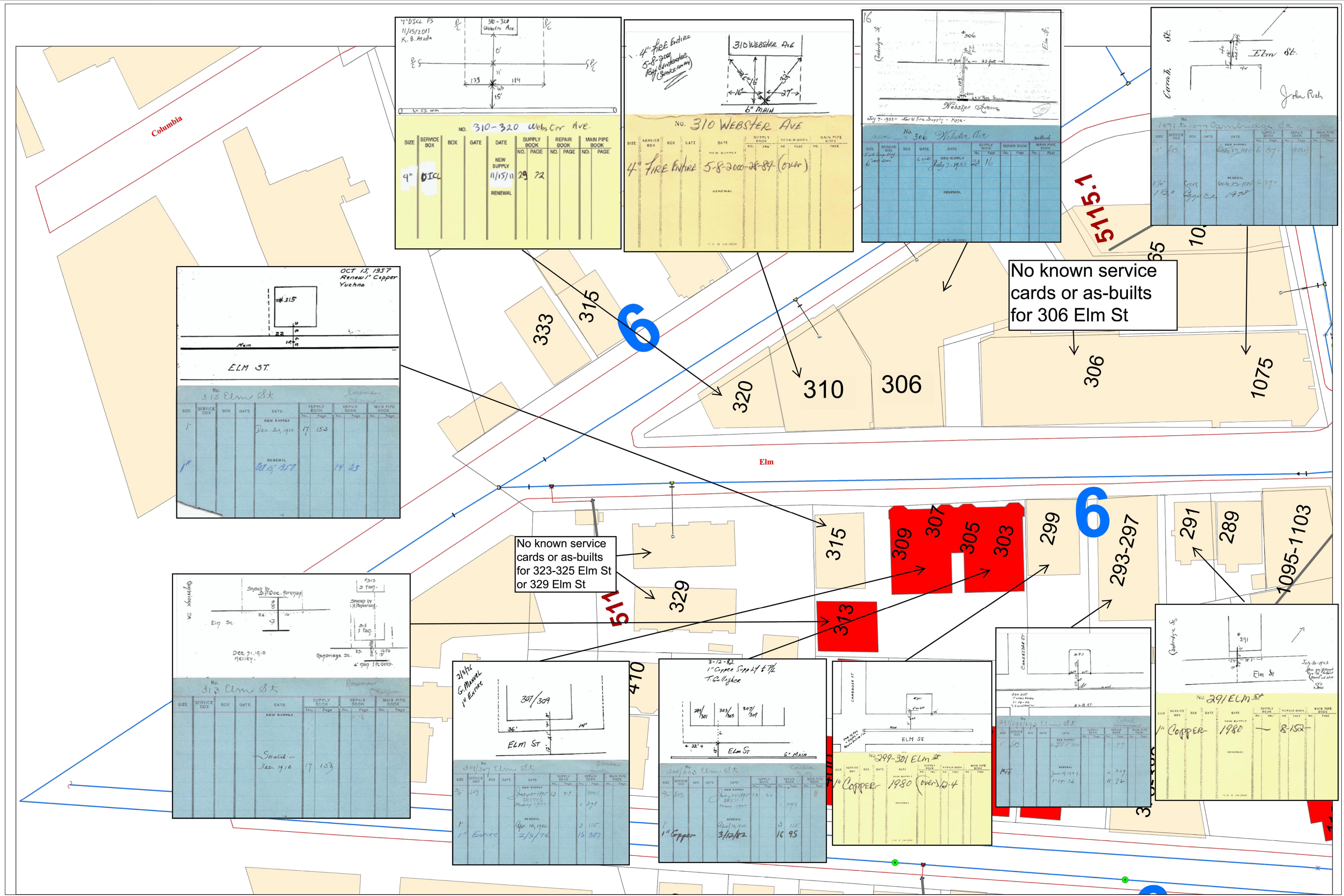
WORK# 2008267 No. 116 Chestnut St
1" Plastic top/l 5-6-09 (over) 11-261

No. 1- Hastings Square
1" Copper top/l 5-26-99 20-126 (over)

No. 308 Brookline St
1/2" Copper top/l 3-21-02 (over) 7-367

Chestnut St

16



4" DI CL PB
11/15/2011
K. B. Aruda

310-320
Webster Ave

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
4"	DI CL			11/15/11	29	72				
NEW SUPPLY										
RENEWAL										

4" FIRE ENTIRE
5-8-2000
Riff (Sink & Army)

310 WEBSTER AVE

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
4"	FIRE ENTIRE			5-8-2000	28	87				
NEW SUPPLY										
RENEWAL										

16
Cambridge St
306
Webster Ave
Elm St

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			July 7, 1933	23	16				
NEW SUPPLY										
RENEWAL										

1071 to 1075 Cambridge St
Elm St

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			6/23/11	6	37				
NEW SUPPLY										
RENEWAL										

OCT 15, 1957
Renew 1" Copper
Yuchno

#315

ELM ST

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			Dec 21, 1910	17	153				
NEW SUPPLY										
RENEWAL										

313 Elm St

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			Dec 19, 10	17	103				
NEW SUPPLY										
RENEWAL										

2 1/2" G. Manned
1" Entrance

309/307
ELM ST

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
3"	Copper			Jan 13, 1910	21	101				
NEW SUPPLY										
RENEWAL										

3-12-82
1" Copper Supp 4" & 7/2"
T. C. D. Joyce

305/303
ELM ST

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			3/12/82	16	95				
NEW SUPPLY										
RENEWAL										

309-307
ELM ST

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			1980						
NEW SUPPLY										
RENEWAL										

299-297
ELM ST

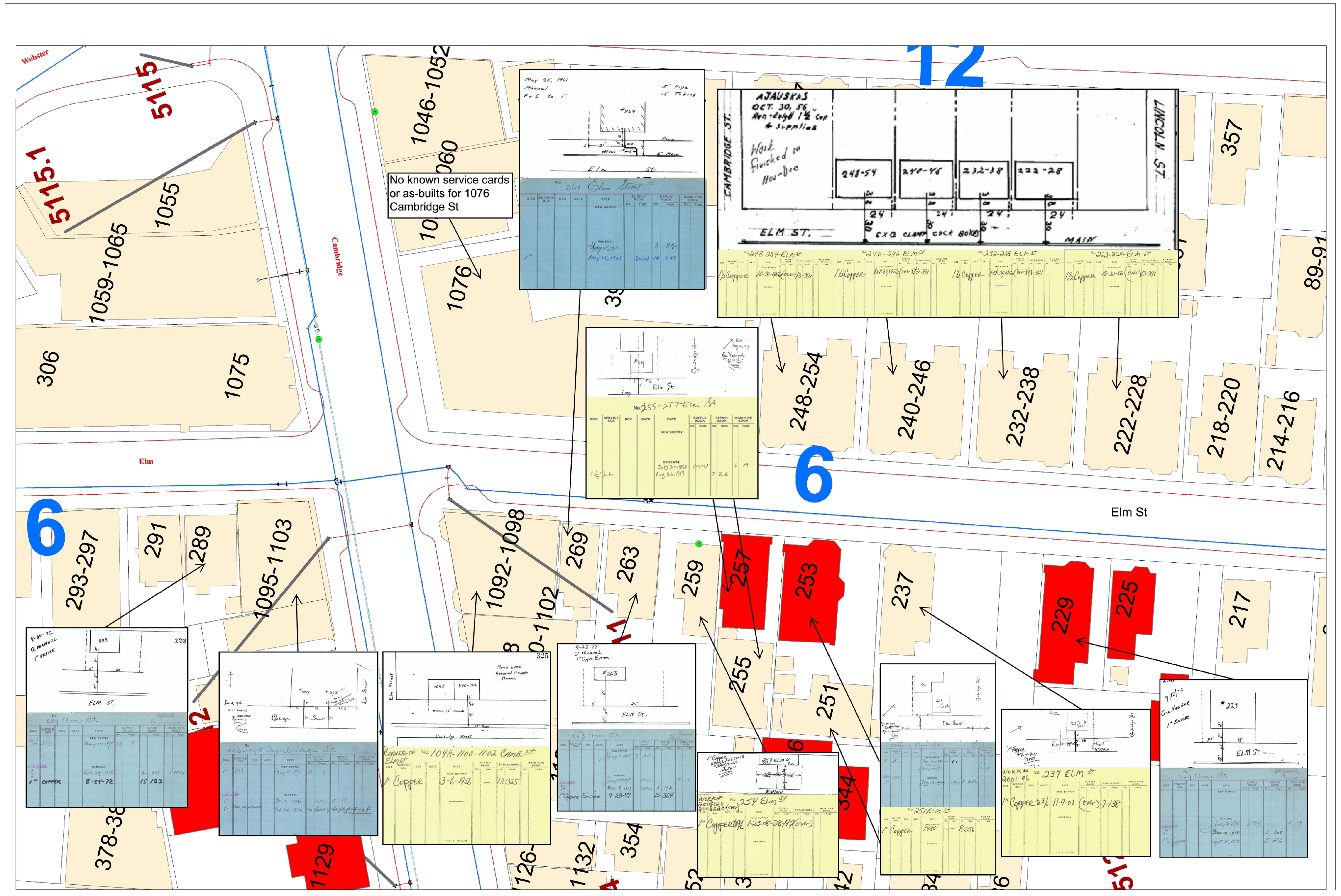
SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			1980						
NEW SUPPLY										
RENEWAL										

291
ELM ST

SIZE	SERVICE BOX	BOX	GATE	DATE	SUPPLY BOOK NO.	SUPPLY BOOK PAGE	REPAIR BOOK NO.	REPAIR BOOK PAGE	MAIN PIPE BOOK NO.	MAIN PIPE BOOK PAGE
1"	Copper			1980						
NEW SUPPLY										
RENEWAL										

No known service cards or as-builts for 306 Elm St

No known service cards or as-builts for 323-325 Elm St or 329 Elm St



No known service cards or as-builts for 1076 Cambridge St

May 25, 1961
Manual
R+E to 1"

5' Pipe
15' TUBING

219 Elm Street

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1 1/2"						
			RENEWAL			
			May 15, 1911			3 84
			May 25, 1961			6000 19 297

AJAUSKAS
OCT. 30, 56
Ren-Edge 1 1/2" COP
& Supplies

Work finished on
Nov-Dec

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						

No. 255-257 Elm St

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1 1/2"						
			RENEWAL			
			30-12-21-1958			7 26
			Aug 26, 1919			

9-24-92
G. MANUAL
1" COPPER

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			May 24, 1913			
			8-24-72			15 103

No. 1095-1103 Cambridge St

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			May 31, 1915			7
			Jul 4, 1961			5 15
			Jul 24, 1970			10-10-102

CORNER OF No. 1098-1100-1102 CAMB. ST
ELM ST.

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			3-6-1922			13-325

9-23-77
G. MANUAL
1" COPPER

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			July 27, 1977			5 172
			4-23-77			15 364

WORK # NO. 259 ELM ST
1" COPPER

SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			1-22-08			28-472

No. 251 ELM ST

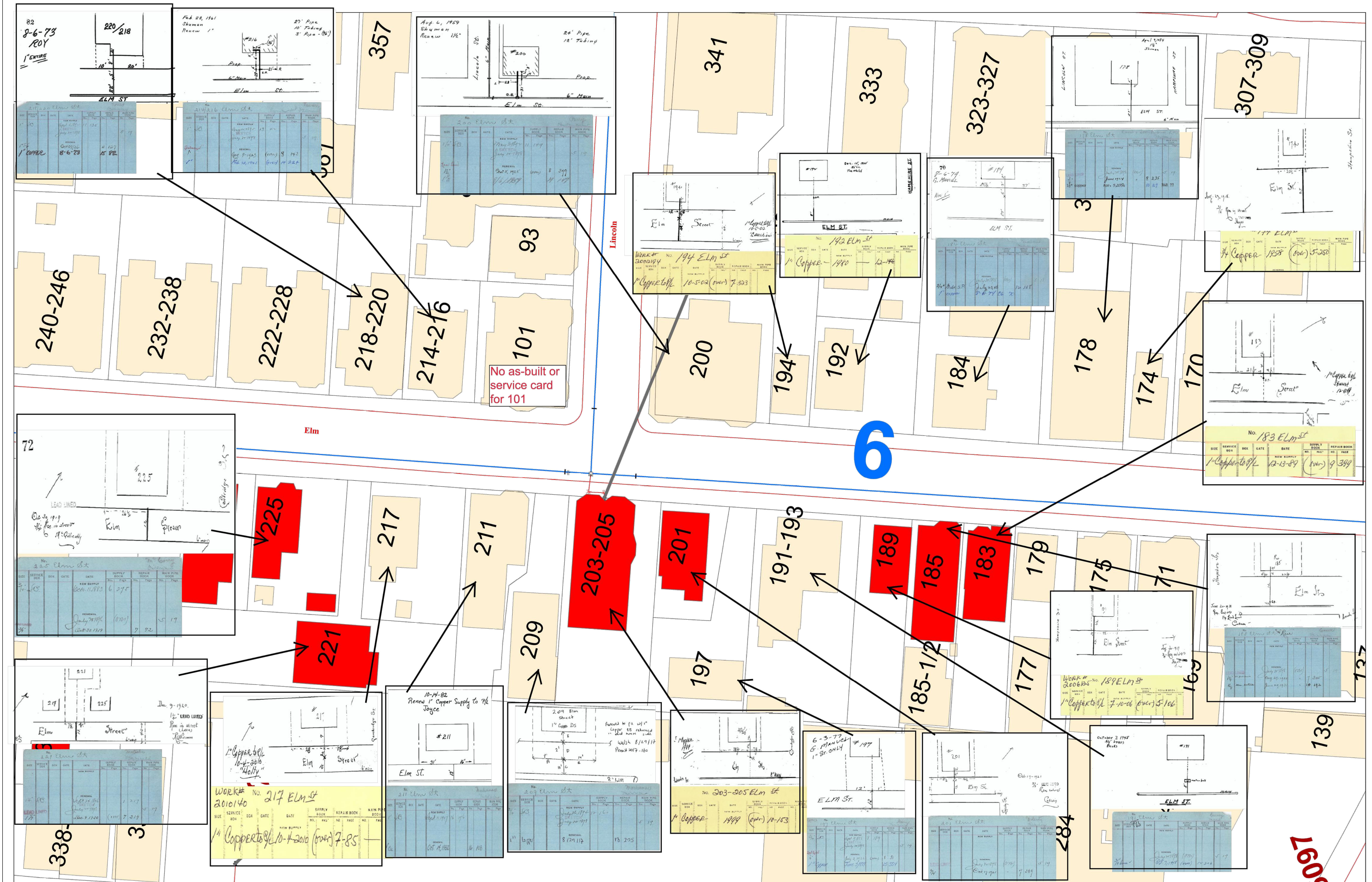
SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			1980			8-258

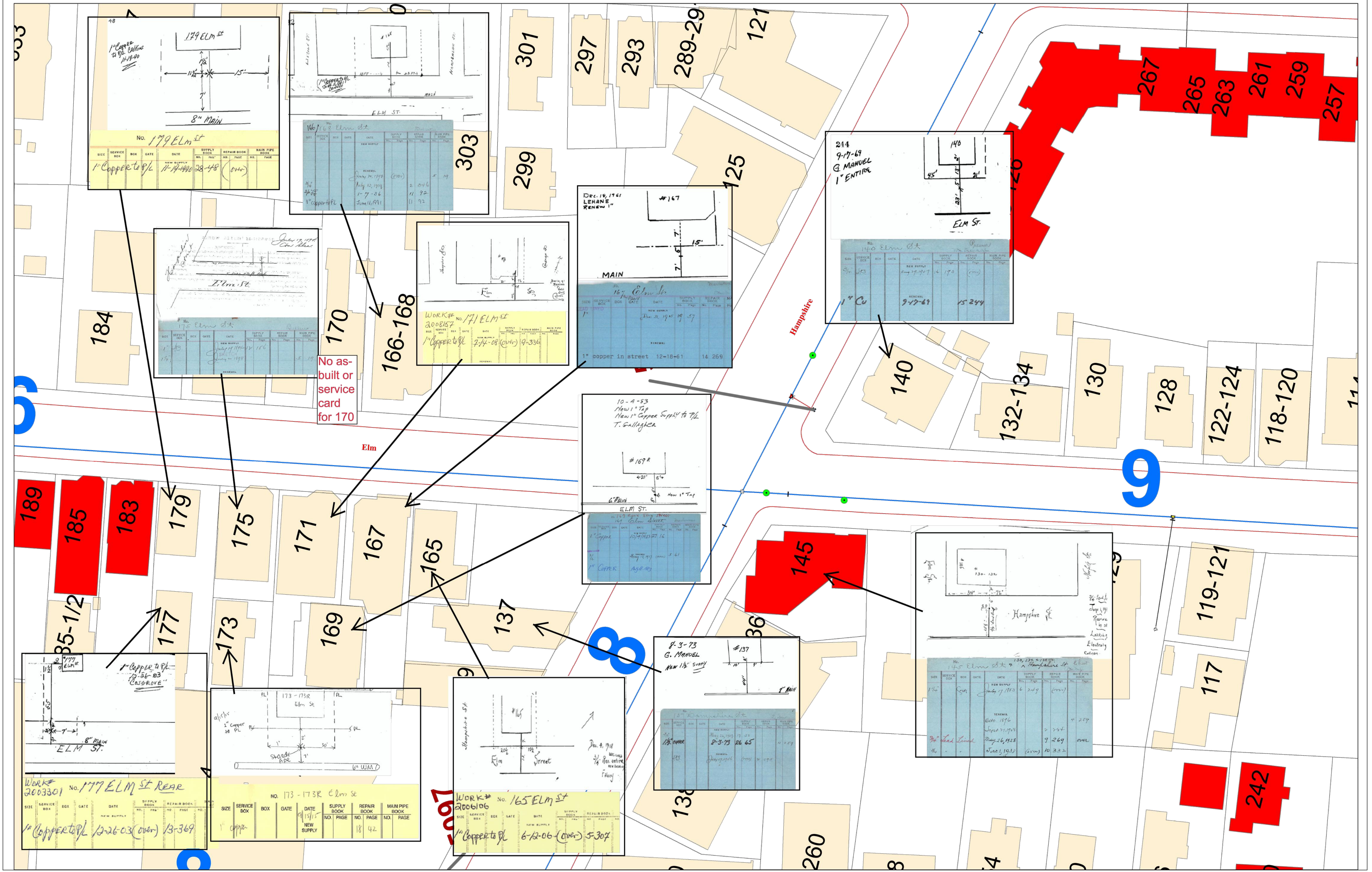
WORK # NO. 237 ELM ST
1" COPPER

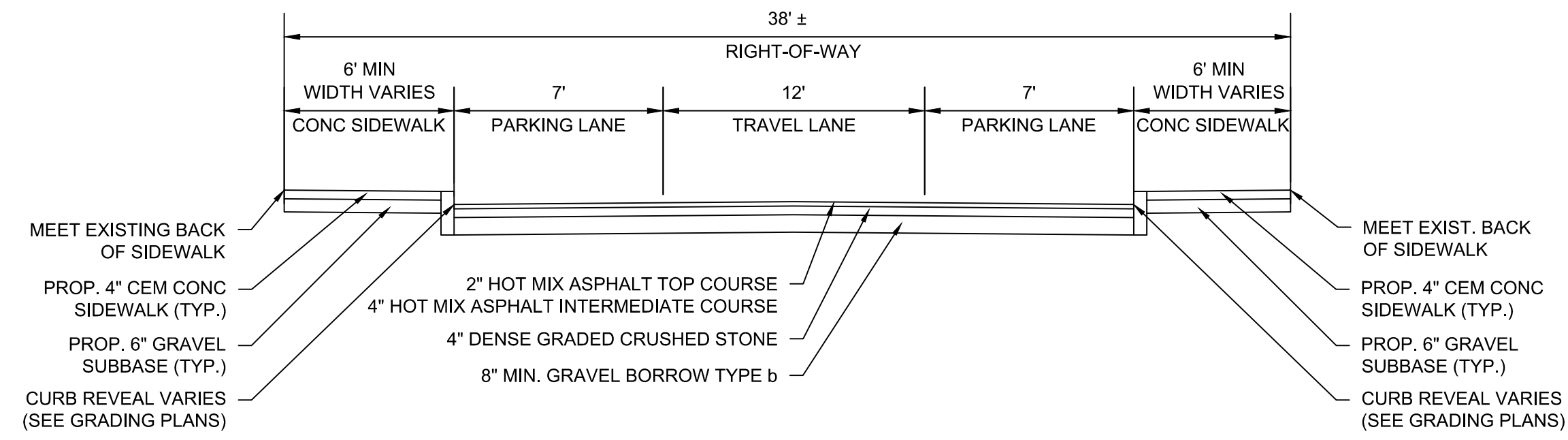
SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			11-9-01			11-138

9/21/75
G. VANDER
1" COPPER

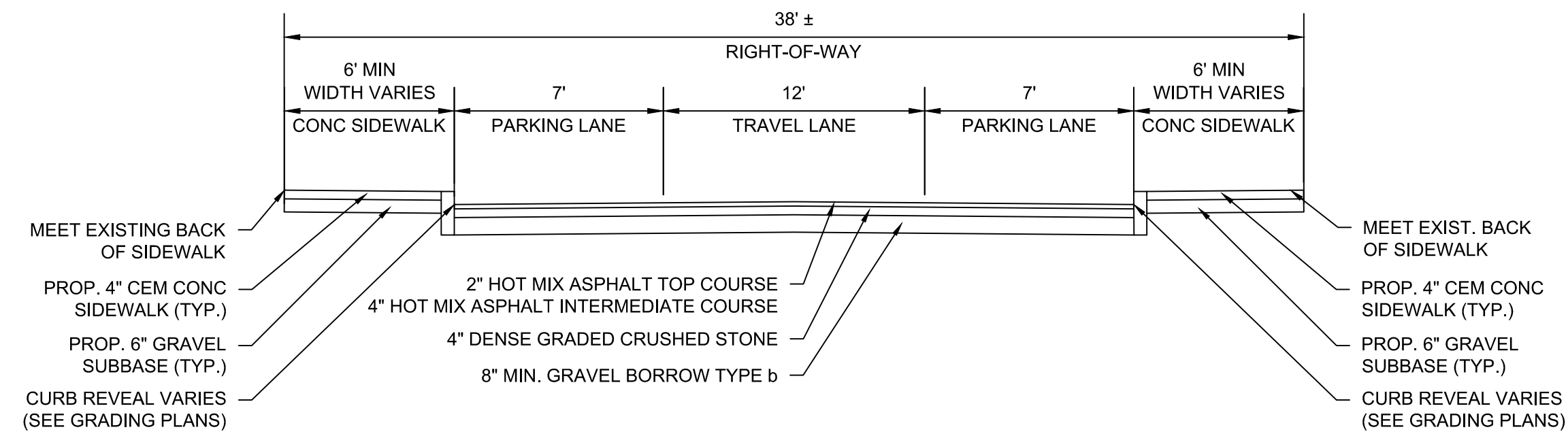
SIZE	SERVICE BOX	BOX DATE	DATE	SUPPLY BOOK NO.	REPAIR BOOK NO.	MAIN PIPE BOOK NO.
1"						
			RENEWAL			
			May 19, 1975			5 308
			Sept 12, 1975			15 296



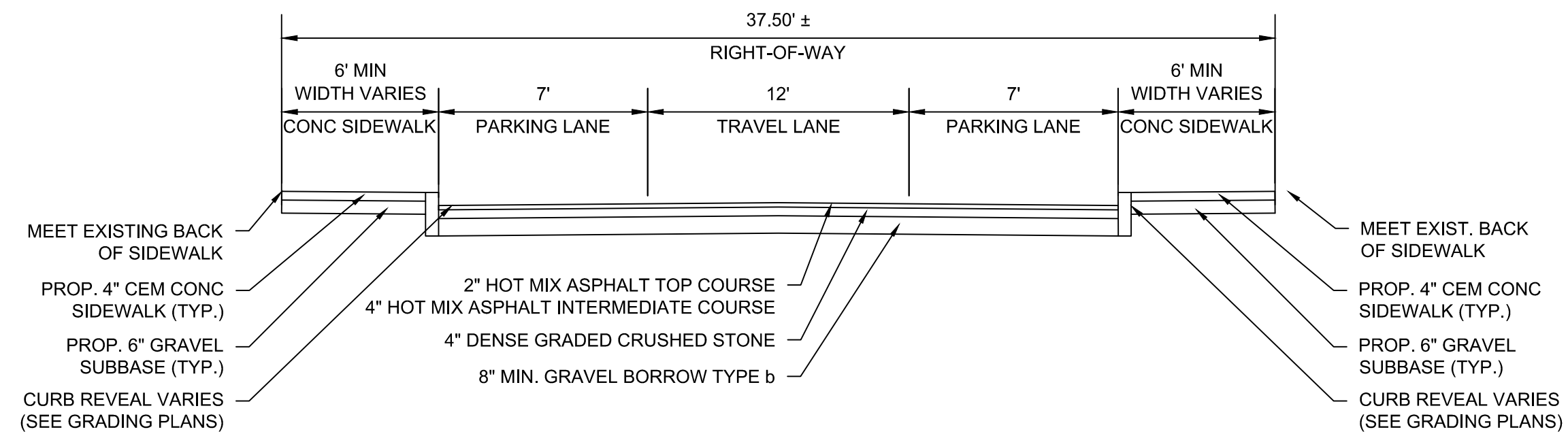




ELM STREET
STA. 100+00 TO STA. 104+16.25
NOT TO SCALE



ELM STREET
STA. 104+16.25 TO STA. 109+41.26
NOT TO SCALE



ELM STREET
STA. 110+31.21 TO STA. 114+95.36
NOT TO SCALE

FULL DEPTH PAVEMENT:

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5) OVER
4" HOT MIX ASPHALT DENSE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE: 4" DENSE GRADED CRUSHED STONE

SUBBASE: 8" MIN. GRAVEL BORROW TYPE b

ASPHALT EMULSION FOR TACK COAT:

ASPHALT EMULSION FOR TACK COAT SHALL BE PLACED ON ALL MILLED SURFACES (APPLICATION RATE = 0.07 GAL/SY) AND BETWEEN ALL NEW PAVEMENT LAYERS (APPLICATION RATE = 0.05 GAL/SY)

CEMENT CONCRETE SIDEWALK:

SURFACE: 4" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

SUBBASE: 6" GRAVEL BORROW TYPE b

CEMENT CONCRETE WHEELCHAIR RAMPS, INTERSECTIONS, AND DRIVEWAYS:

SURFACE: 6" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

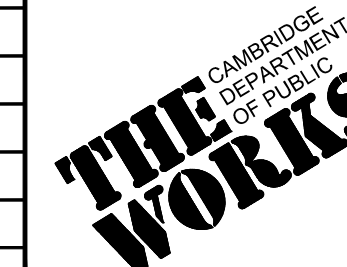
SUBBASE: 6" GRAVEL BORROW TYPE b



27 Congress Street, Salem, MA 01970
tel. 978-740-0096 www.hatch.com

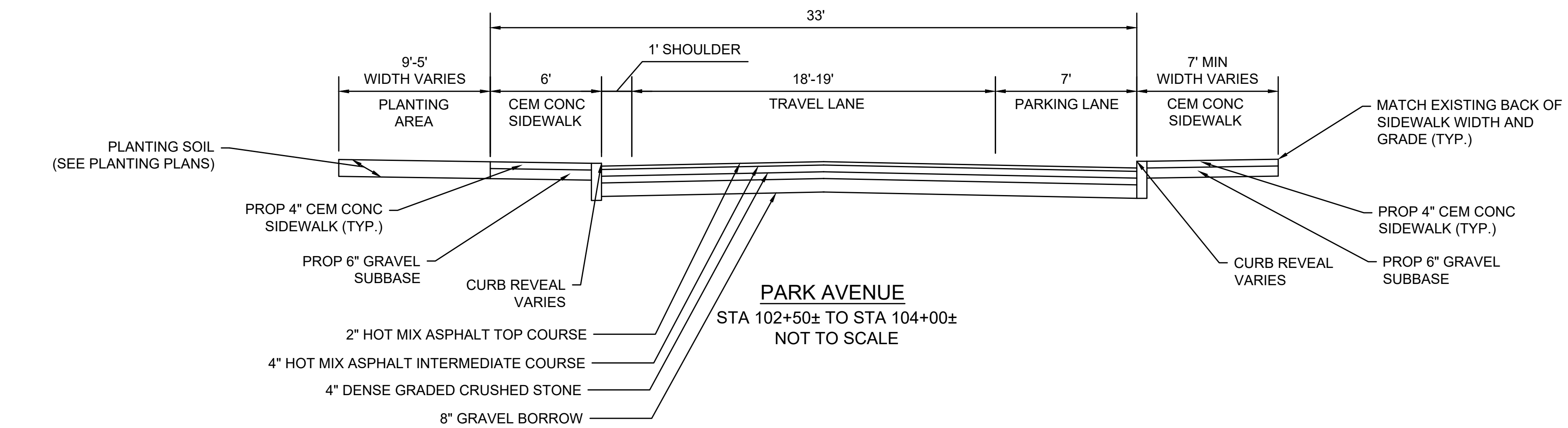
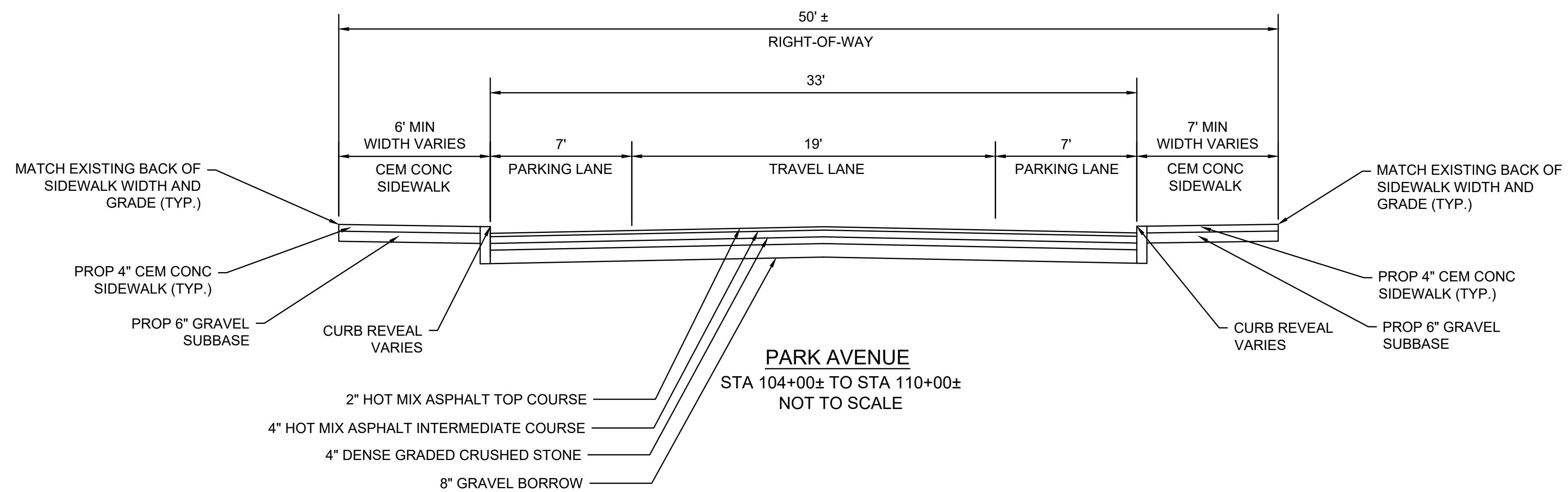
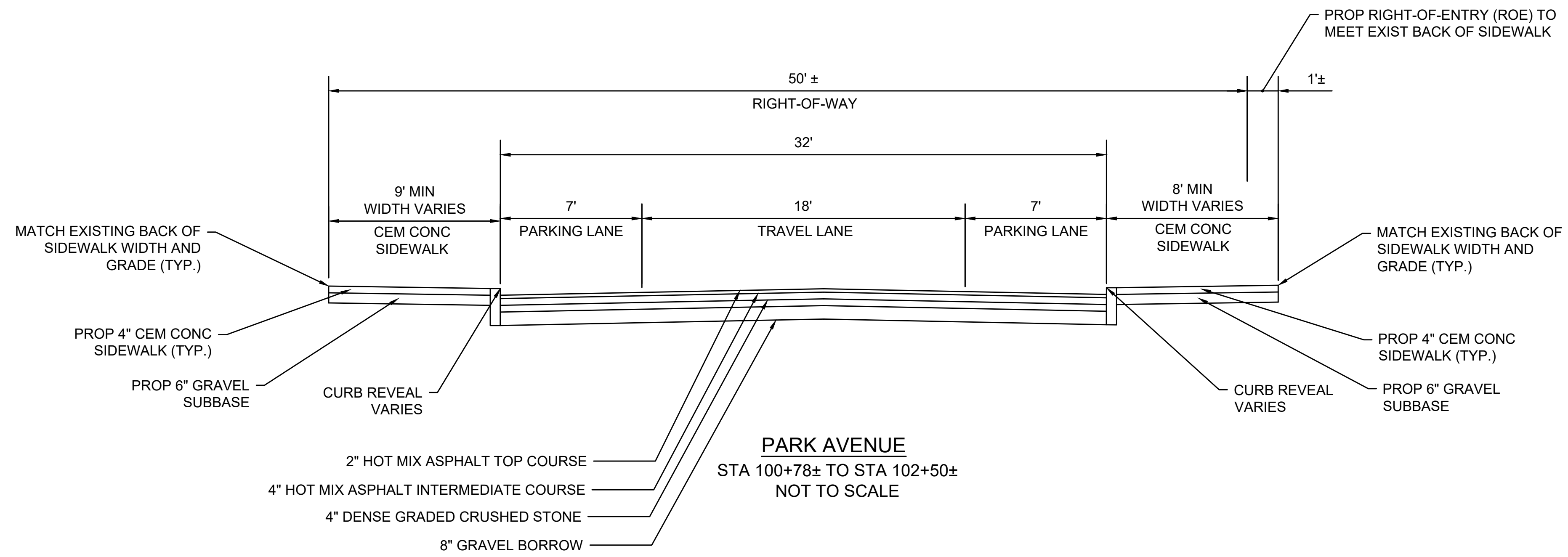


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BJM	No.	Description
Approved by	BMS		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET TYPICAL SECTIONS SHEET 1 OF 1

Sheet	RG-1
File No.	10565



FULL DEPTH PAVEMENT:

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5) OVER
4" HOT MIX ASPHALT DENSE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
BASE: 4" DENSE GRADED CRUSHED STONE
SUBBASE: 8" MIN GRAVEL BORROW TYPE b

PAVEMENT MILL AND HMA OVERLAY:

MILLING: 2" FINE MILLING

SURFACE: 2" HMA

ASPHALT EMULSION FOR TACK COAT:

ASPHALT EMULSION FOR TACK COAT SHALL BE PLACED ON ALL MILLED SURFACES (APPLICATION RATE=0.07 GAL/SY) AND BETWEEN ALL NEW PAVEMENT LAYERS (APPLICATION RATE=0.05 GAL/SY).

CEMENT CONCRETE SIDEWALK:

SURFACE: 4" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER
SUBBASE: 6" GRAVEL BORROW TYPE b

CEMENT CONCRETE WHEELCHAIR RAMPS, CEMENT CONCRETE SIDEWALK AT CURB EXTENSIONS, AND DRIVEWAYS:

SURFACE: 6" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER
SUBBASE: 6" GRAVEL BORROW TYPE b

BRICK SIDEWALK:

SURFACE: 2-1/4" BRICK OVER

SBUBASE: TACK COAT

3/4" SAND-ASPHALT SETTING BED

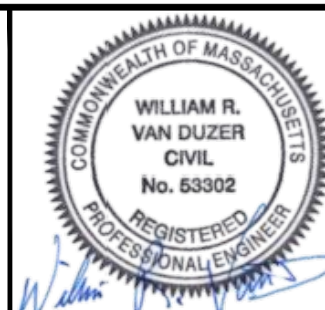
ASPHALT TACK COAT

4" ASPHALT BINDER COURSE

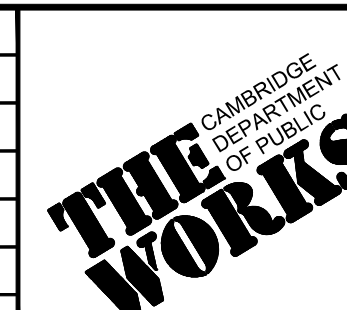
8" GRAVEL BORROW TYPE b



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tel. 978-740-0096 www.hatch.com

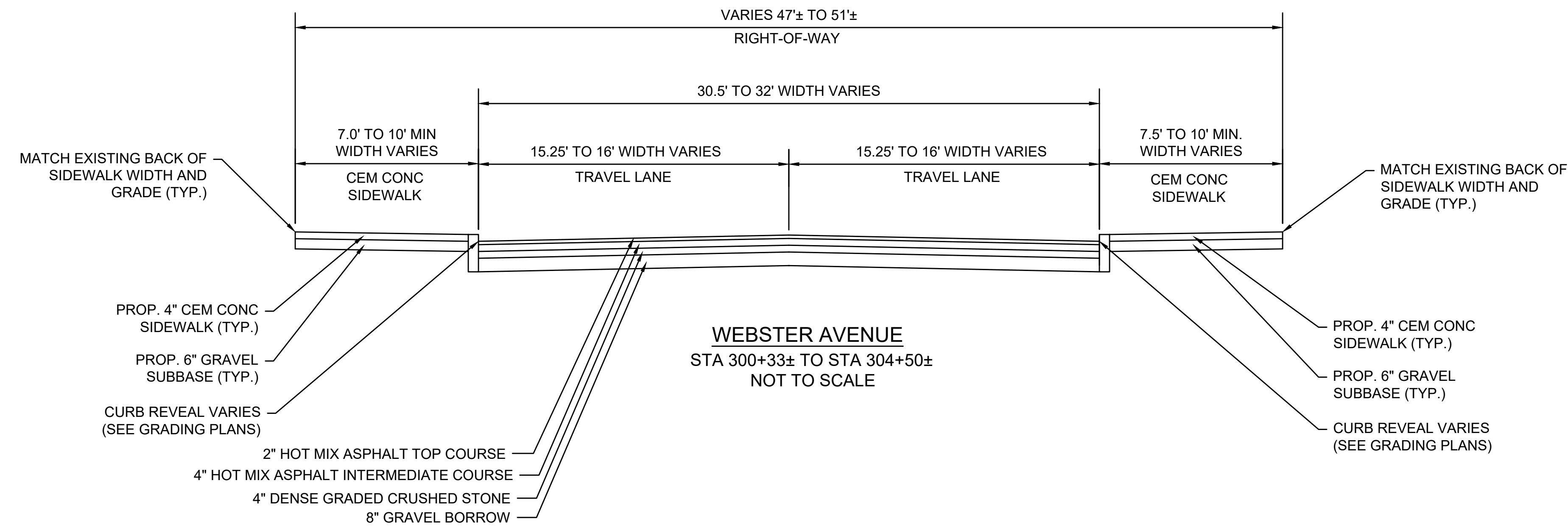


Scale	AS NOTED			
Date	SEPTEMBER 2022			
Job No.	20170208.037A			
Designed by	SBM			
Drawn by	AJM			
Checked by	WRV	No.	Description	Date
Approved by	PMF		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVE - TYPICAL SECTIONS PLAN 1 OF 1

Sheet	RG-2
File No.	10565



FULL DEPTH PAVEMENT:

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5) OVER
4" HOT MIX ASPHALT DENSE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE: 4" DENSE GRADED CRUSHED STONE

SUBBASE: 8" MIN GRAVEL BORROW TYPE b

PAVEMENT MILL AND HMA OVERLAY:

MILLING: 2" MICROMILL

SURFACE: 2" HMA

ASPHALT EMULSION FOR TACK COAT:

ASPHALT EMULSION FOR TACK COAT SHALL BE PLACED ON ALL MILLED SURFACES (APPLICATION RATE=0.07 GAL/SY) AND BETWEEN ALL NEW PAVEMENT LAYERS (APPLICATION RATE=0.05 GAL/SY).

CEMENT CONCRETE SIDEWALK:

SURFACE: 4" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

SUBBASE: 6" GRAVEL BORROW TYPE b

CEMENT CONCRETE WHEELCHAIR RAMPS, CEMENT CONCRETE SIDEWALK AT CURB EXTENSIONS, AND DRIVEWAYS:

SURFACE: 6" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

SUBBASE: 6" GRAVEL BORROW TYPE b

BRICK SIDEWALK:

SURFACE: 2-1/4" BRICK OVER

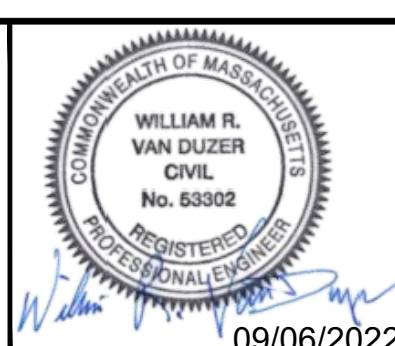
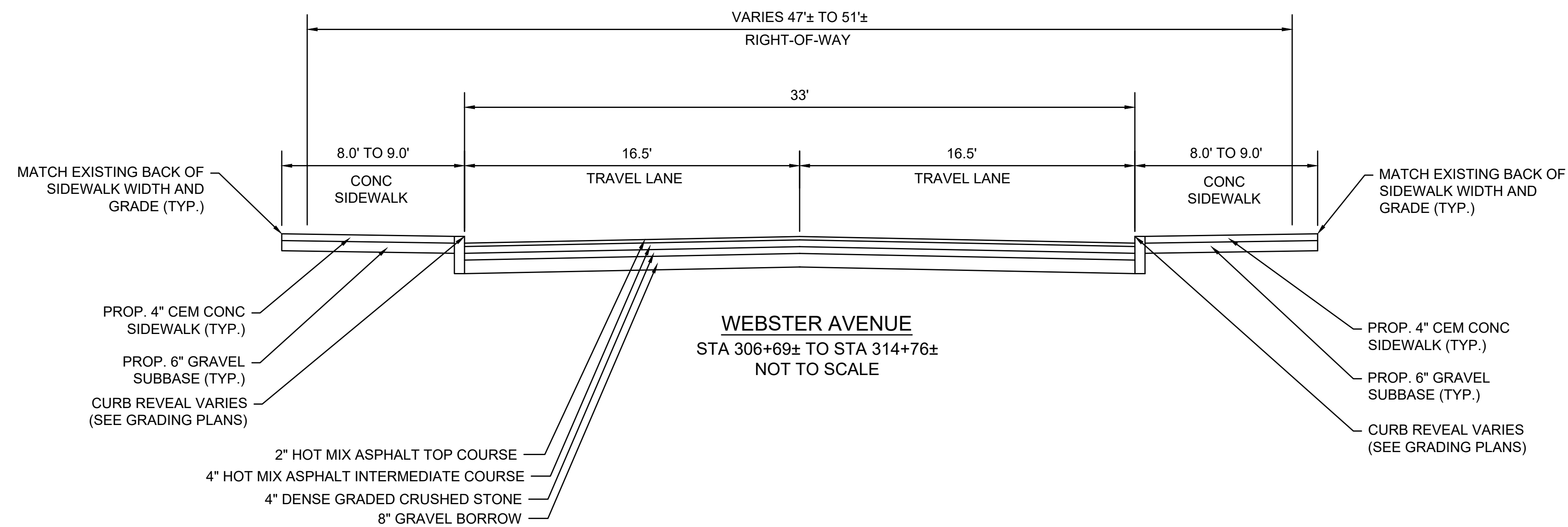
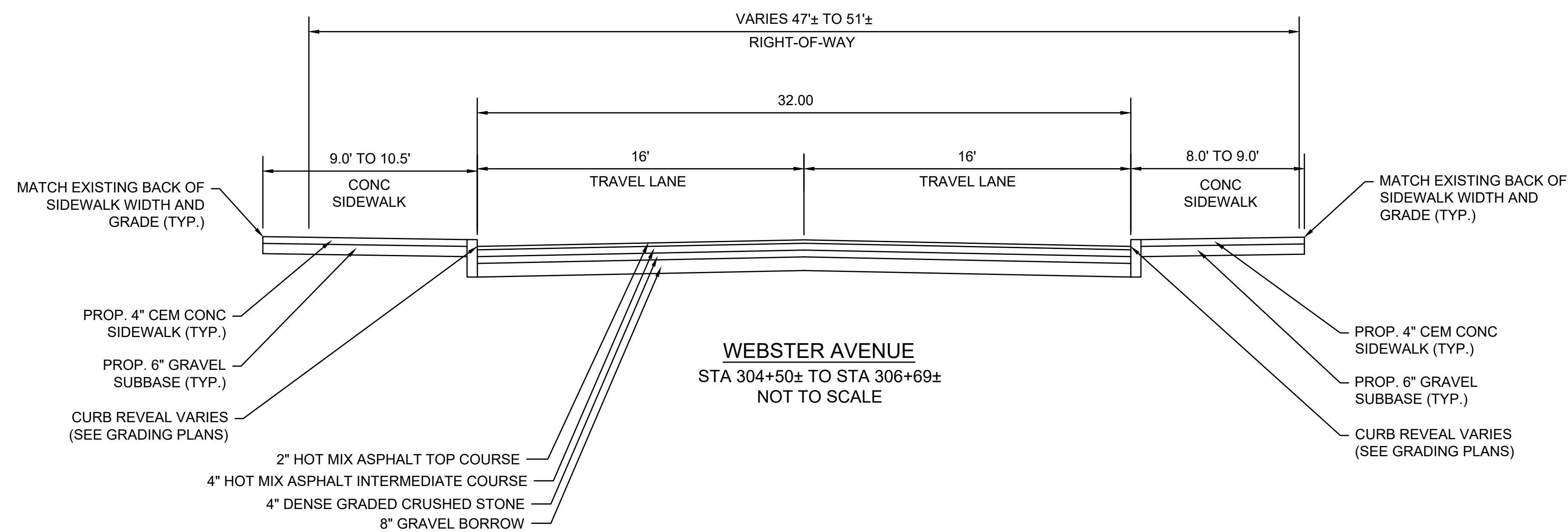
SUBBASE: TACK COAT

3/4" SAND-ASPHALT SETTING BED

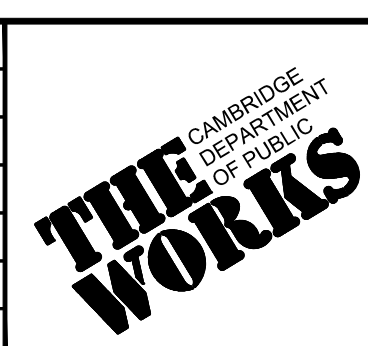
ASPHALT TACK COAT

4" ASPHALT BINDER COURSE

8" GRAVEL BORROW TYPE b

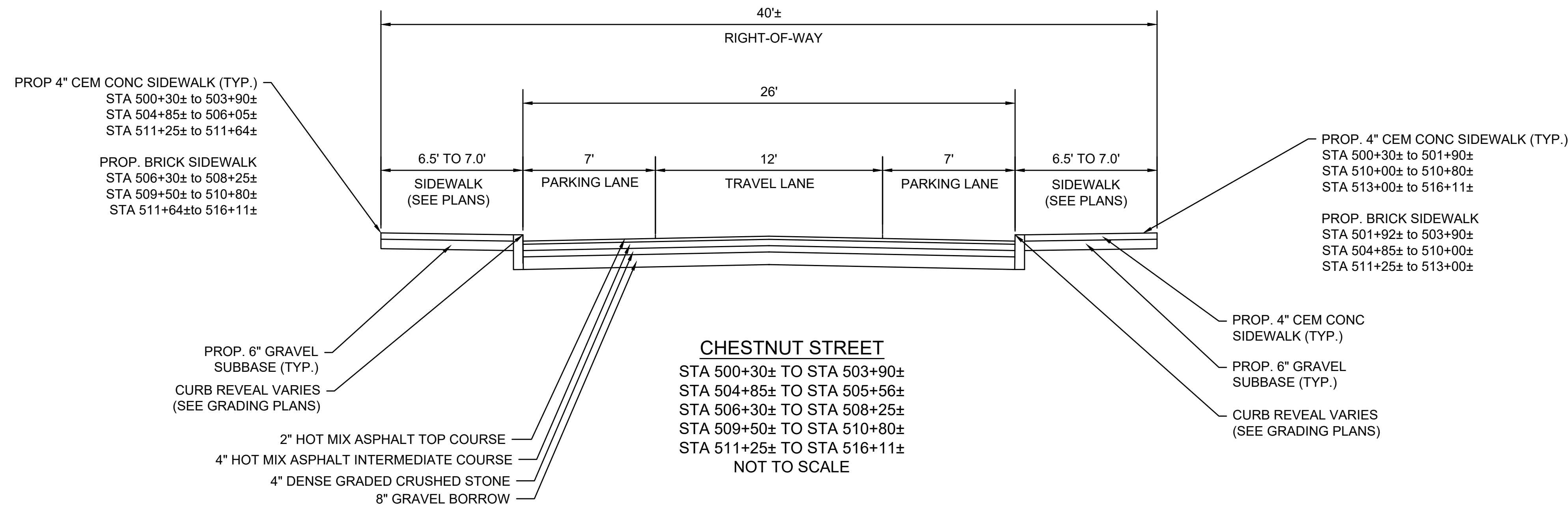


Scale	AS NOTED		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE - TYPICAL SECTIONS PLAN 1 OF 1

Sheet	RG-3
File No.	10565



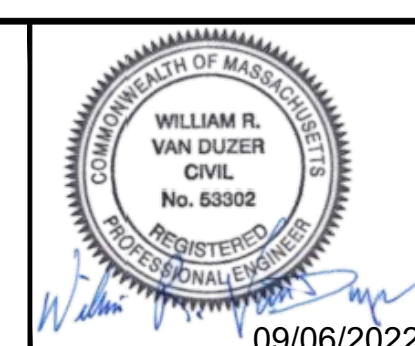
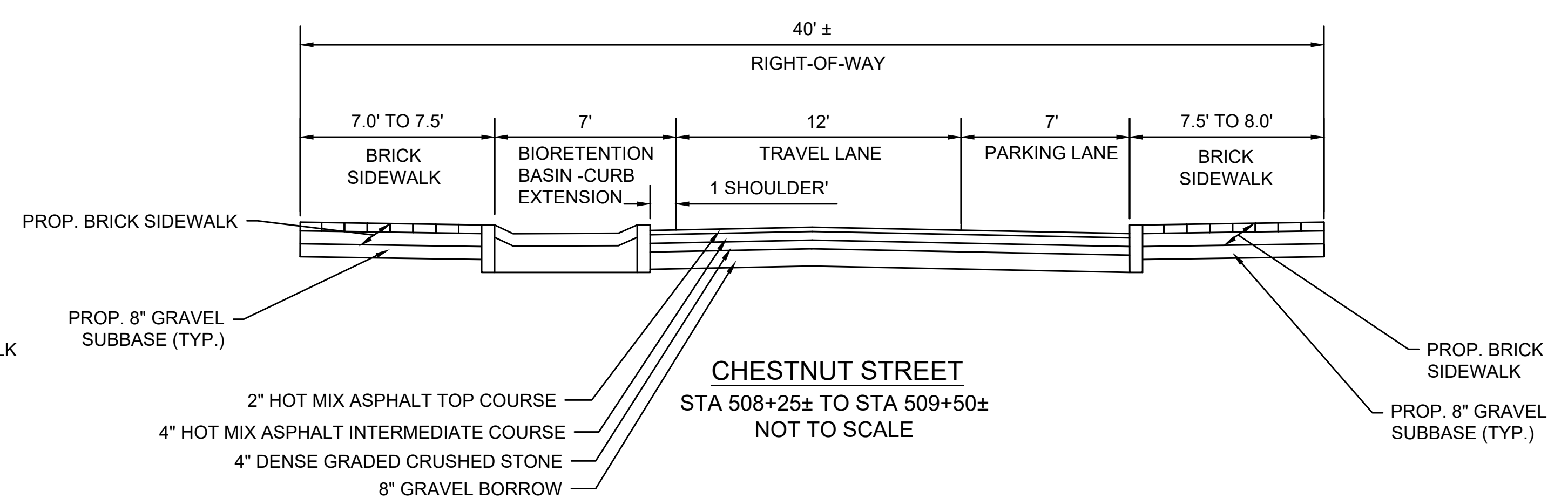
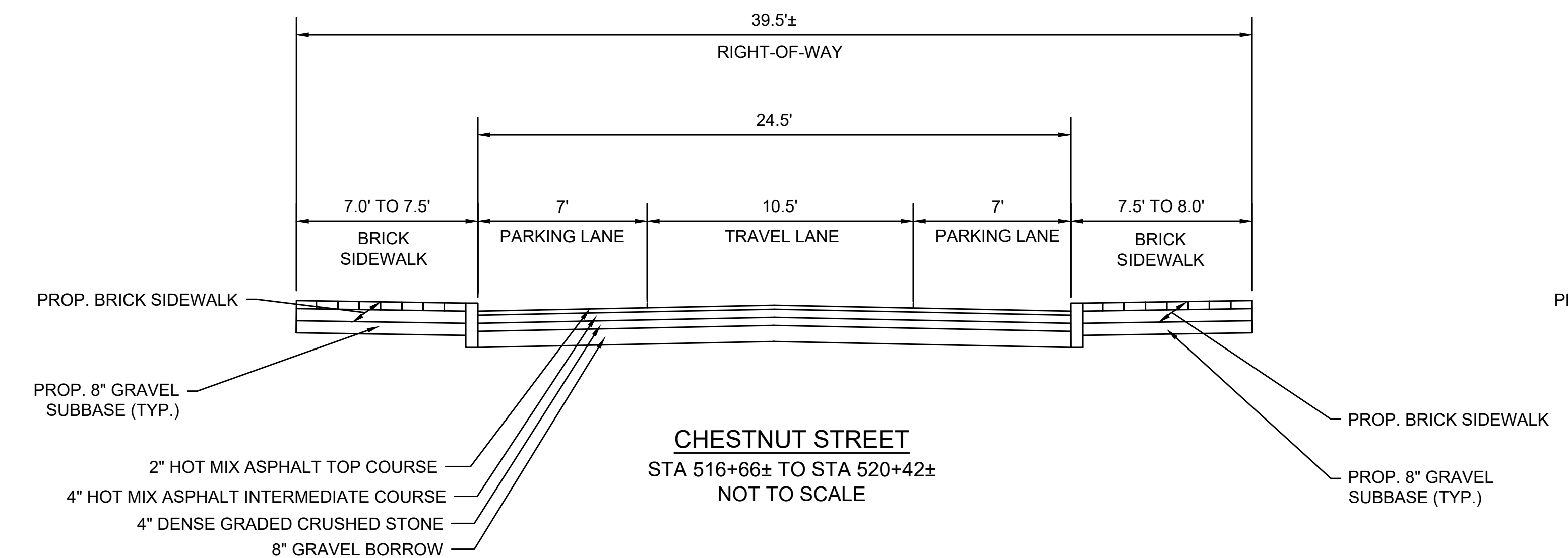
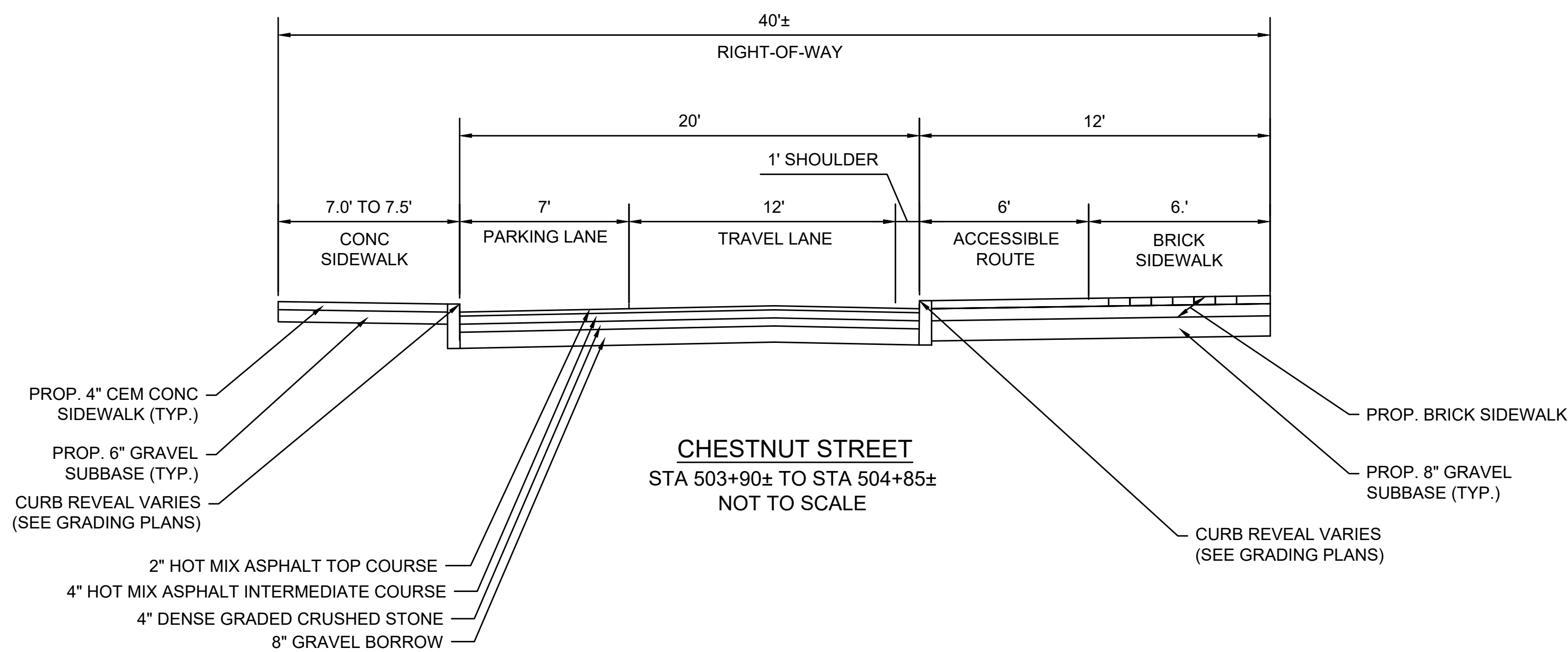
FULL DEPTH PAVEMENT:
 SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5) OVER
 4" HOT MIX ASPHALT DENSE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
 BASE: 4" DENSE GRADED CRUSHED STONE
 SUBBASE: 8" MIN GRAVEL BORROW TYPE b

PAVEMENT MILL AND HMA OVERLAY:
 MILLING: 2" MICROMILL
 SURFACE: 2" HMA
 ASPHALT EMULSION FOR TACK COAT:
 ASPHALT EMULSION FOR TACK COAT SHALL BE PLACED ON ALL MILLED SURFACES (APPLICATION RATE=0.07 GAL/SY) AND BETWEEN ALL NEW PAVEMENT LAYERS (APPLICATION RATE=0.05 GAL/SY).

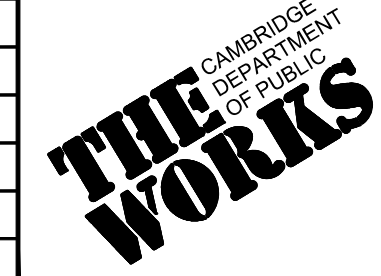
CEMENT CONCRETE SIDEWALK:
 SURFACE: 4" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER
 SUBBASE: 6" GRAVEL BORROW TYPE b

CEMENT CONCRETE WHEELCHAIR RAMPS, CEMENT CONCRETE SIDEWALK AT CURB EXTENSIONS, AND DRIVEWAYS:
 SURFACE: 6" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER
 SUBBASE: 6" GRAVEL BORROW TYPE b

BRICK SIDEWALK:
 SURFACE: 2-1/4" BRICK OVER
 SUBBASE: TACK COAT
 3/4" SAND-ASPHALT SETTING BED
 ASPHALT TACK COAT
 4" ASPHALT BINDER COURSE
 8" GRAVEL BORROW TYPE b

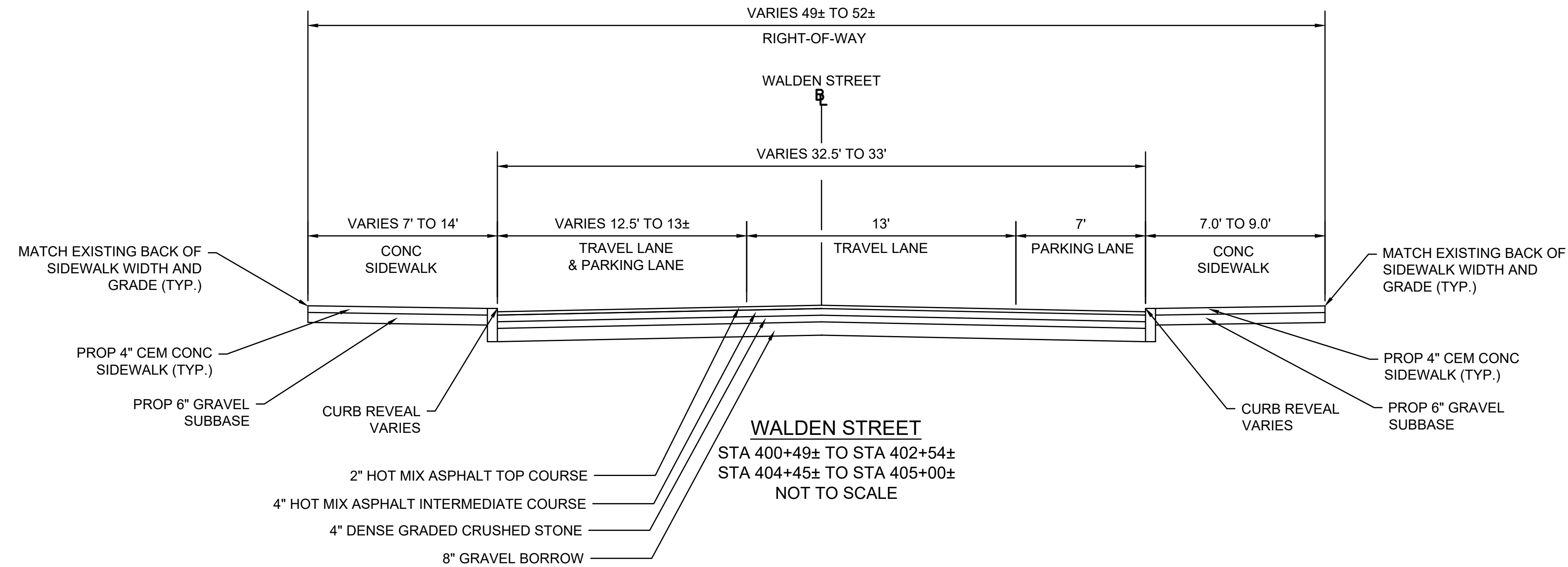


Scale	AS NOTED		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - TYPICAL SECTIONS PLAN 1 OF 1

Sheet	RG-4
File No.	10565



FULL DEPTH PAVEMENT:

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5) OVER
4" HOT MIX ASPHALT DENSE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE: 4" DENSE GRADED CRUSHED STONE

SUBBASE: 8" MIN GRAVEL BORROW TYPE b

PAVEMENT MILL AND HMA OVERLAY:

MILLING: 2" MICROMILL

SURFACE: 2" HMA

ASPHALT EMULSION FOR TACK COAT:

ASPHALT EMULSION FOR TACK COAT SHALL BE PLACED ON ALL MILLED SURFACES (APPLICATION RATE=0.07 GAL/SY) AND BETWEEN ALL NEW PAVEMENT LAYERS (APPLICATION RATE=0.05 GAL/SY).

CEMENT CONCRETE SIDEWALK:

SURFACE: 4" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

SUBBASE: 6" GRAVEL BORROW TYPE b

CEMENT CONCRETE WHEELCHAIR RAMPS, CEMENT CONCRETE SIDEWALK AT CURB EXTENSIONS, AND DRIVEWAYS:

SURFACE: 6" CEMENT CONCRETE (4000 PSI, 3/4", 610 M4.02) SIDEWALK OVER

SUBBASE: 6" GRAVEL BORROW TYPE b

BRICK SIDEWALK:

SURFACE: 2-1/4" BRICK OVER

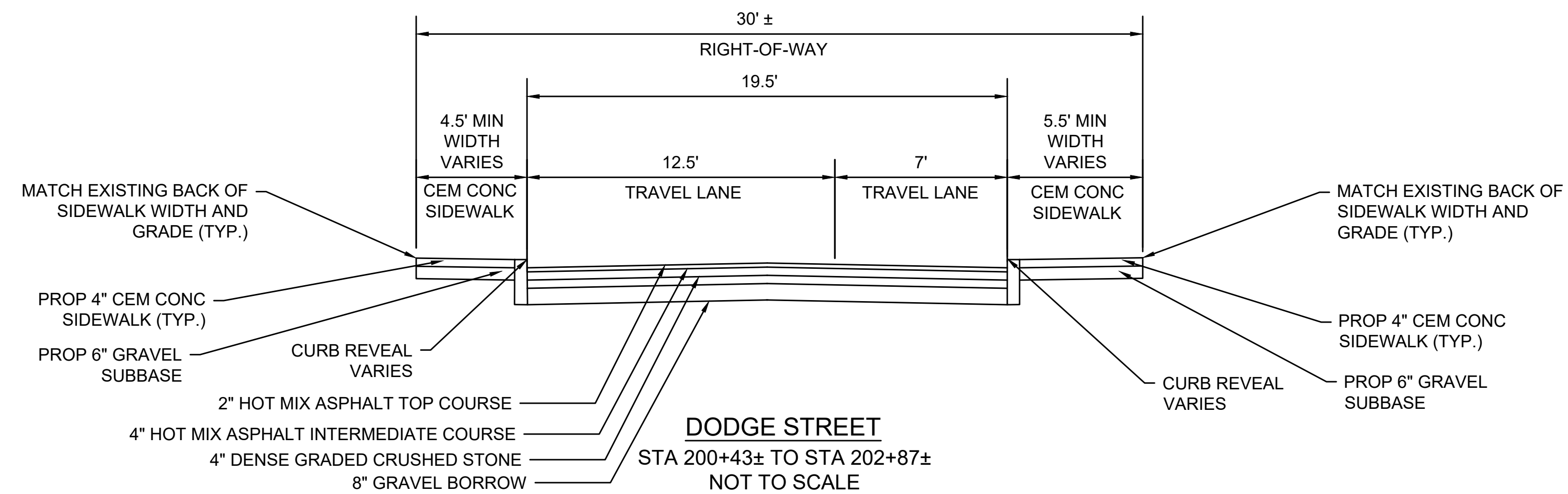
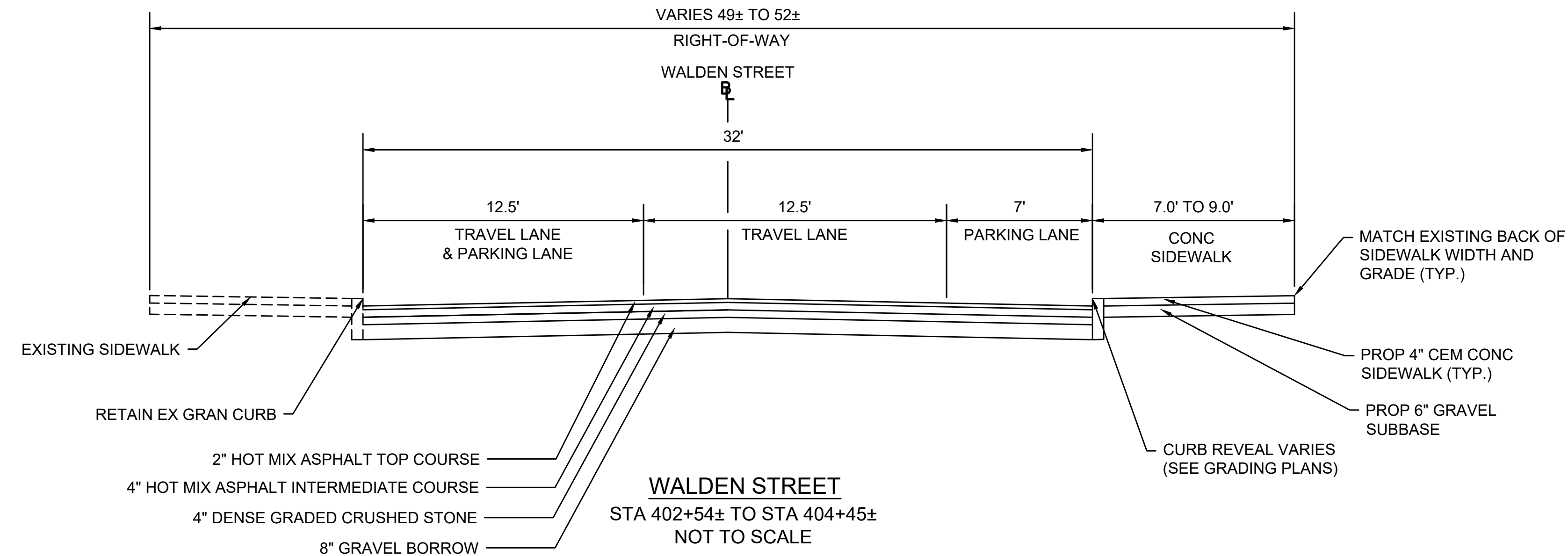
SUBBASE: TACK COAT

3/4" SAND-ASPHALT SETTING BED

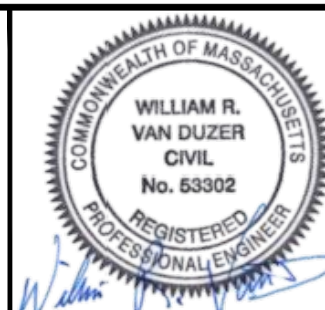
ASPHALT TACK COAT

4" ASPHALT BINDER COURSE

8" GRAVEL BORROW TYPE b

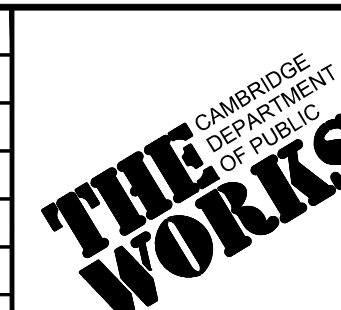


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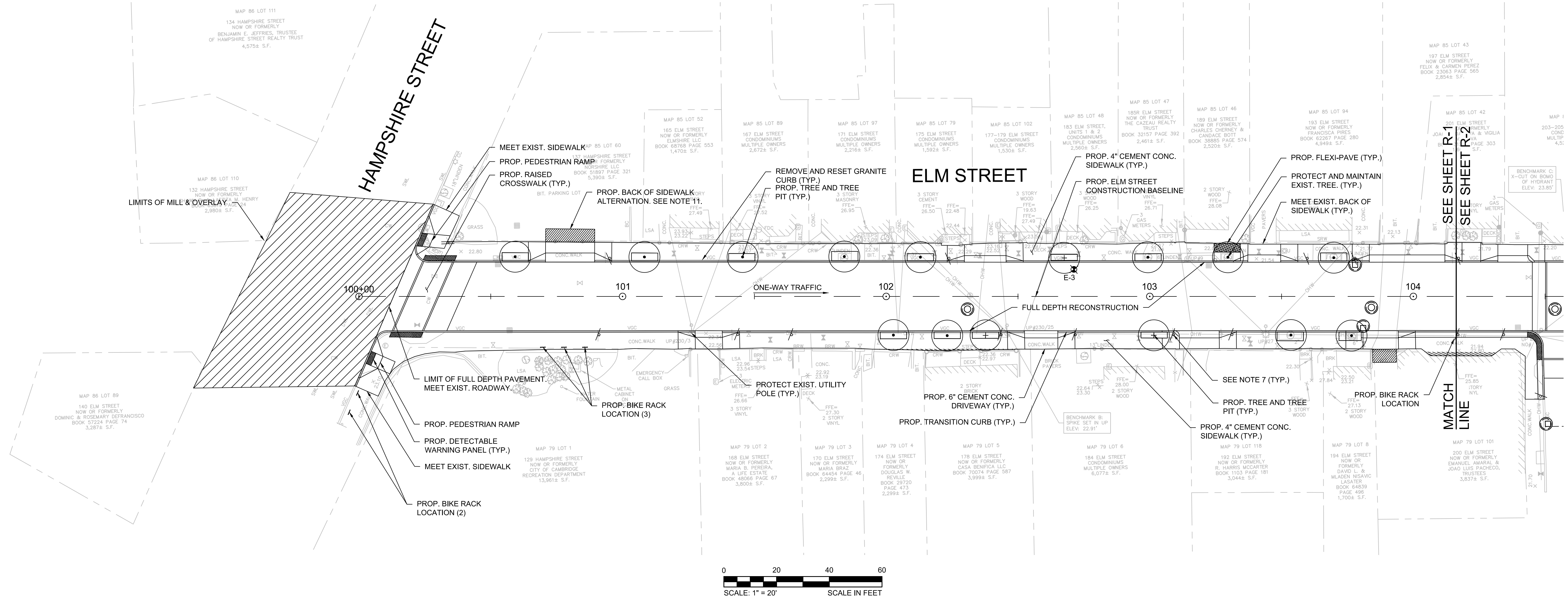
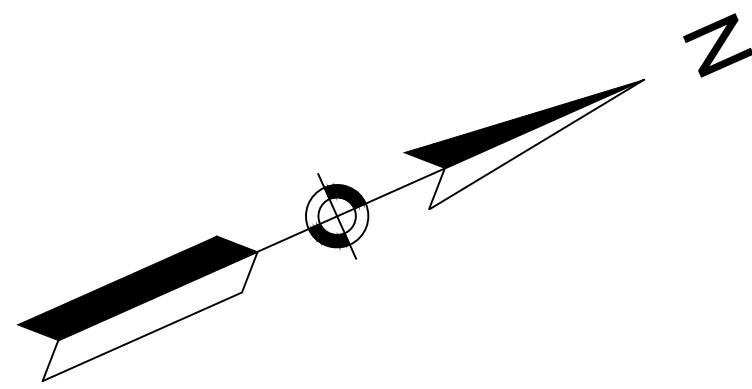
09/06/2022

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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN ST AND DODGE ST - TYPICAL SECTIONS PLAN 1 OF 1

Sheet	RG-5
File No.	10565

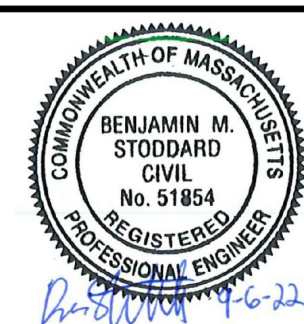


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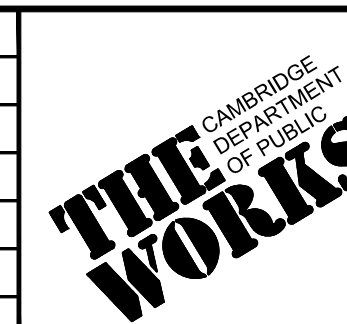
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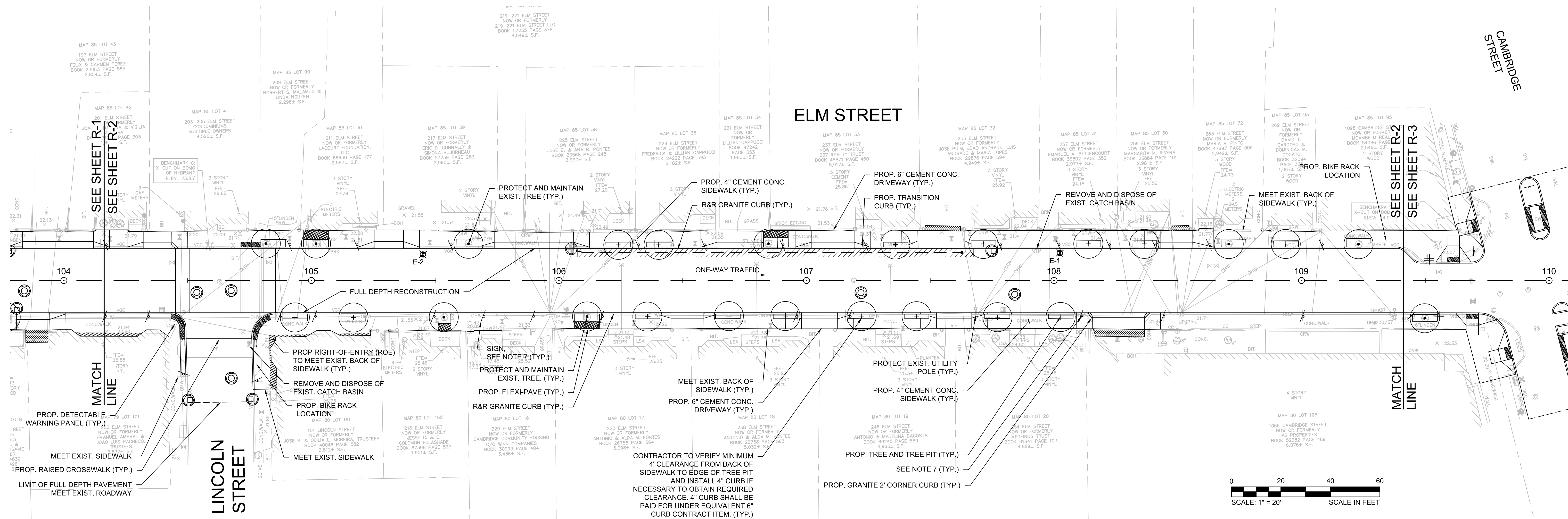
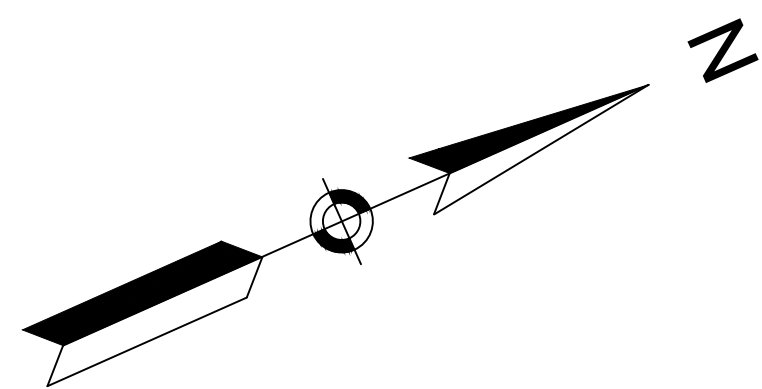


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			REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET CONSTRUCTION PLAN SHEET 1 OF 3

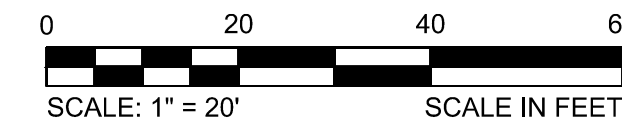
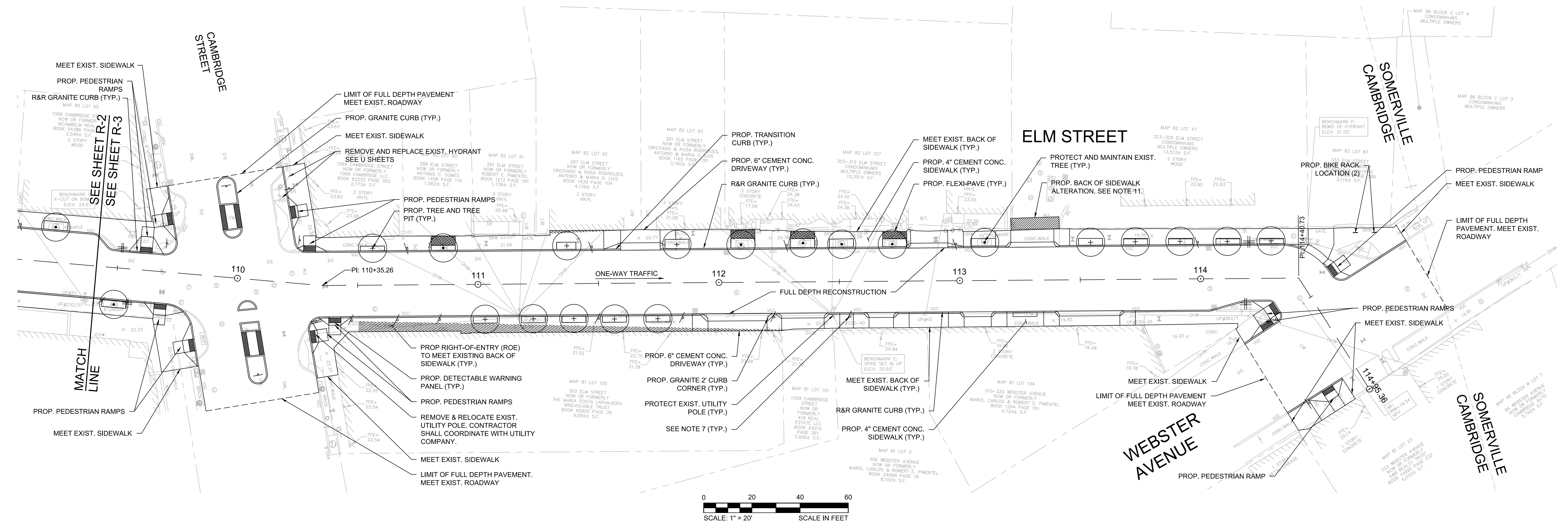
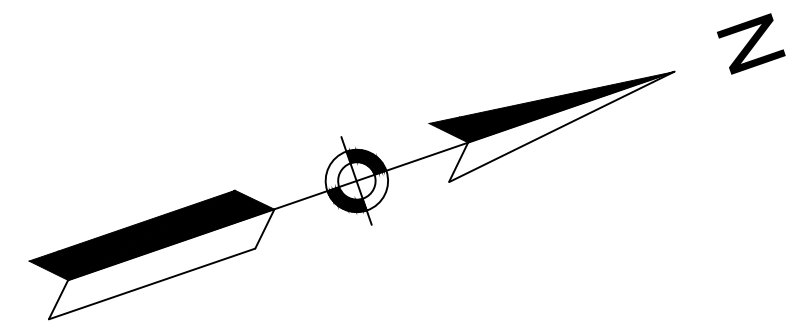
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File No.	10565



NOTES:

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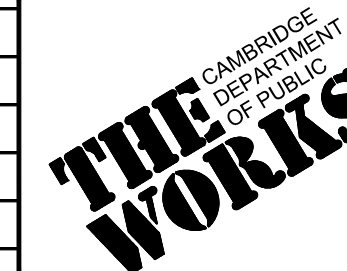
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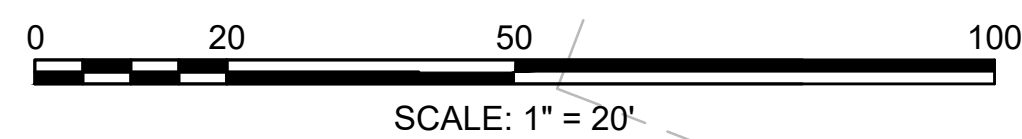
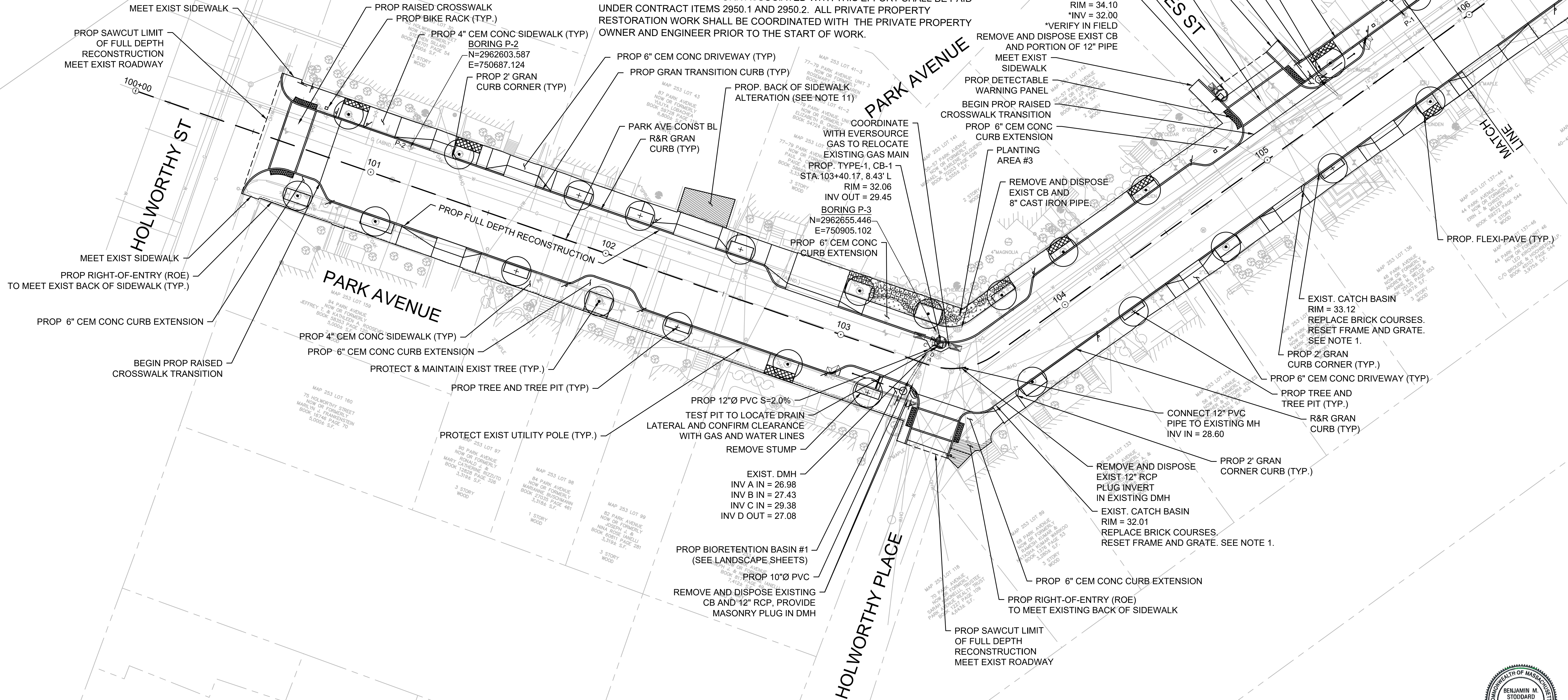
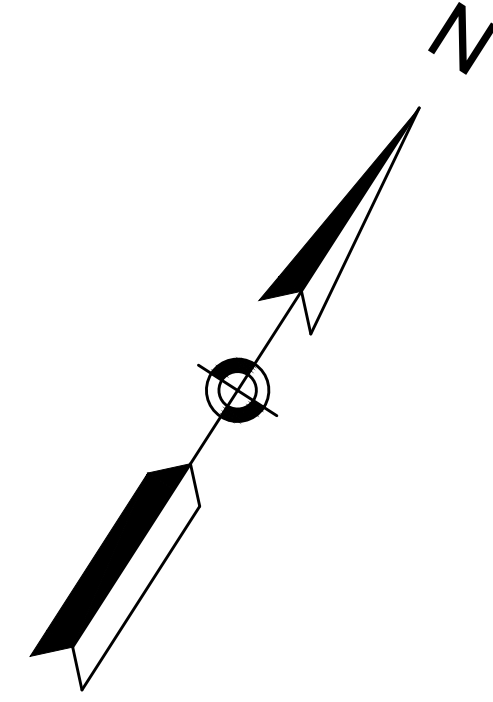


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET CONSTRUCTION PLAN SHEET 3 OF 3

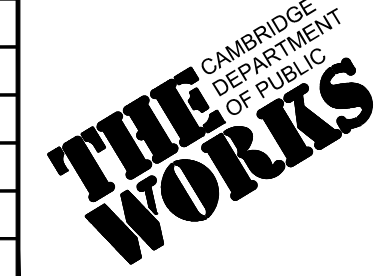
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File No.	10565

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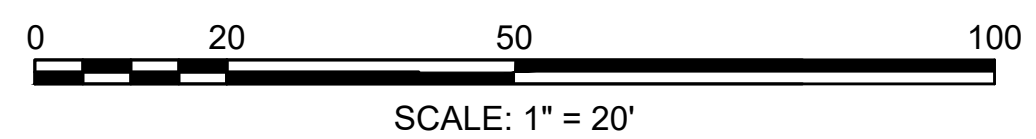
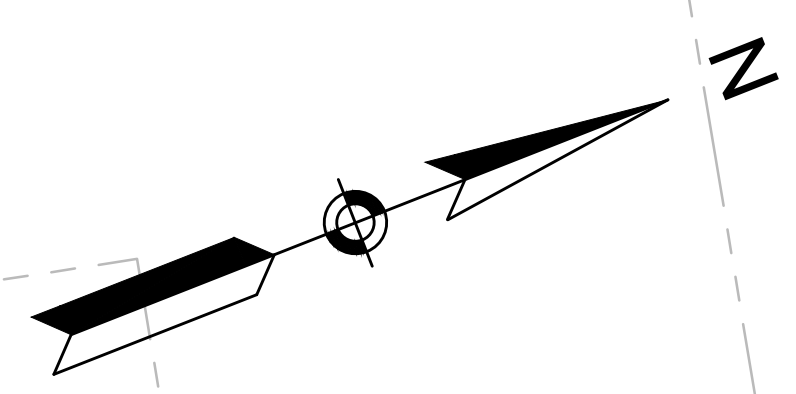
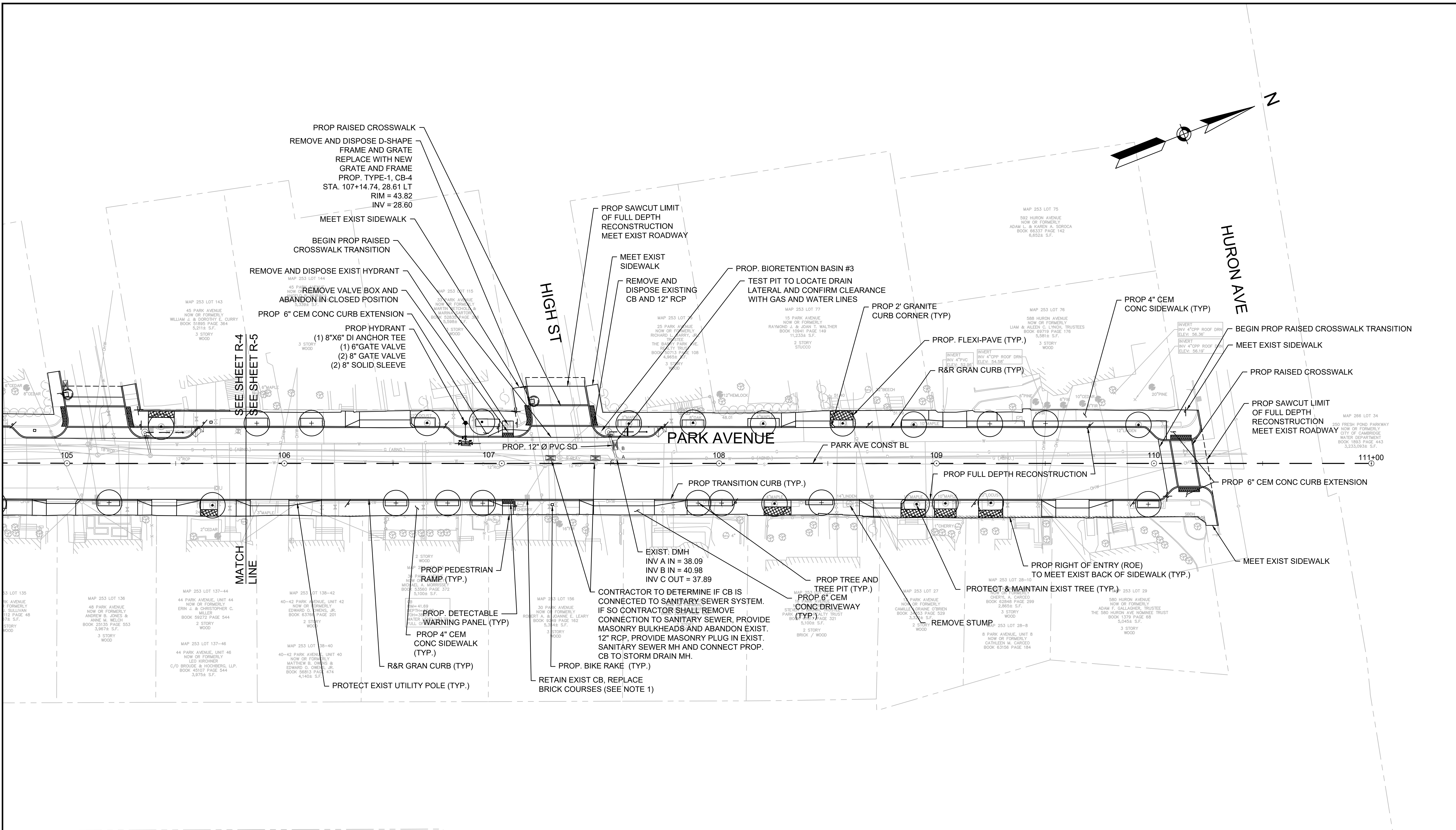


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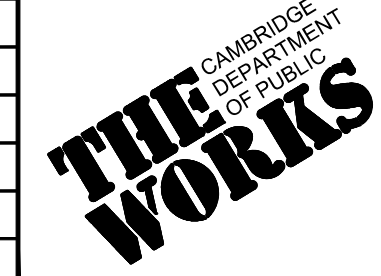


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVE - CONSTRUCTION PLAN PLAN 1 OF 2

Sheet	R-4
File No.	10565



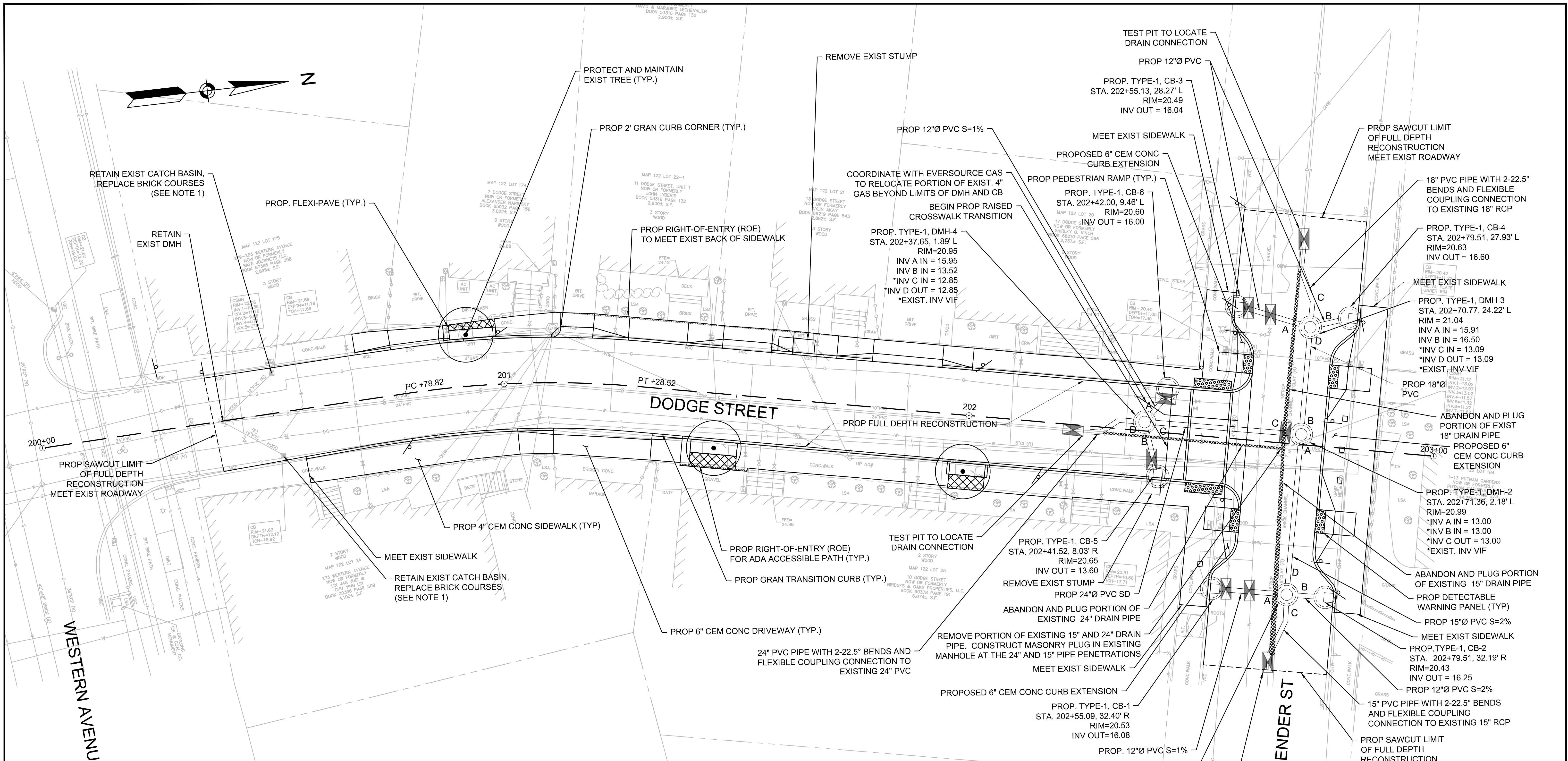
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Drawing	PARK AVE - CONSTRUCTION PLAN PLAN 2 OF 2

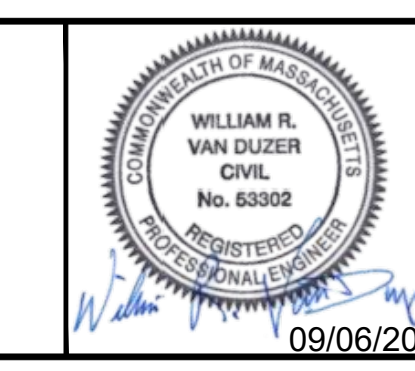
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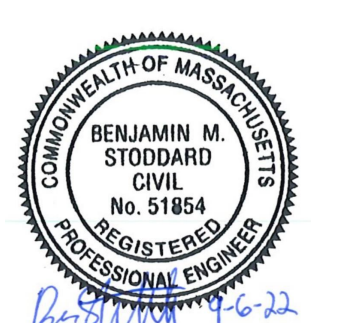


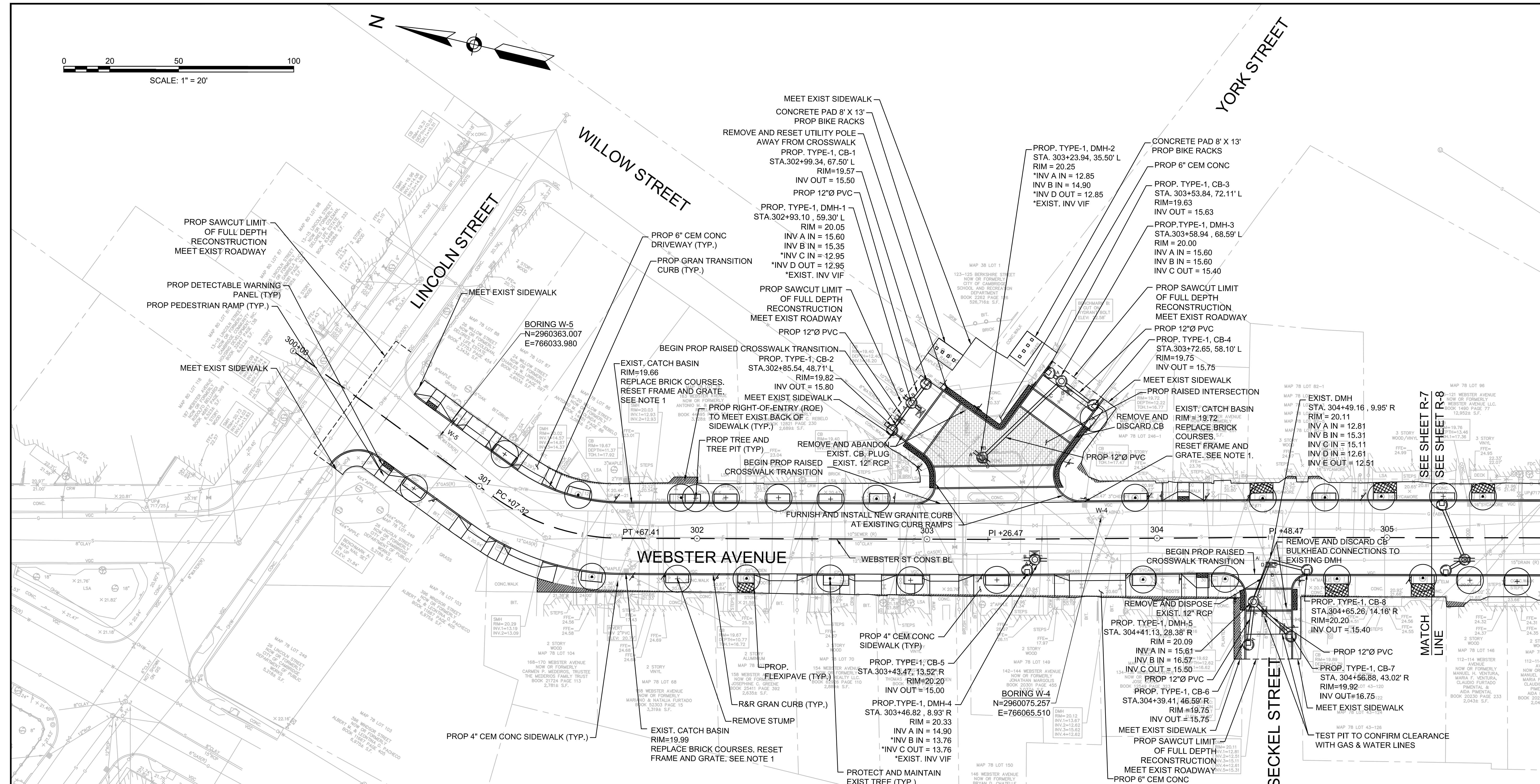
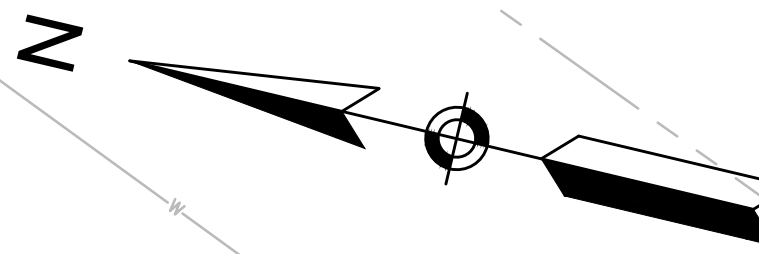
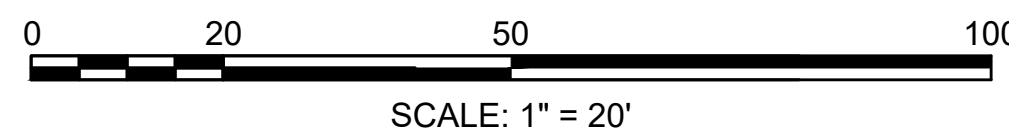
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Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	DODGE ST - CONSTRUCTION PLAN PLAN 1 OF 1

Sheet	R-6
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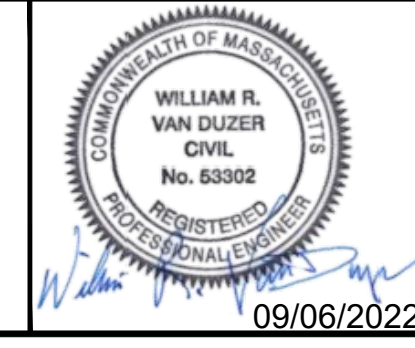




NOTES:

- CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
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- ALL EXISTING FEATURES AT THE BACK OF SIDEWALK SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED. DAMAGES OR DISLODGING OF FEATURES AT BACK OF SIDEWALK SHALL BE REPAIRED/REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL MATCH THE EXISTING GRADE AT THE LIMITS OF CONSTRUCTION. FOR PAVEMENT LIMITS, THE JOINT BETWEEN EXISTING AND PROPOSED PAVEMENT SHALL BE TREATED WITH INFRARED PAVEMENT SEALANT AND HOT POURED RUBBERIZED ASPHALT SEALER.

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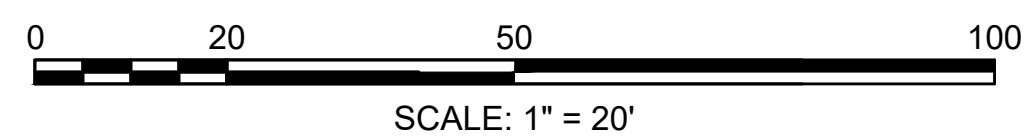
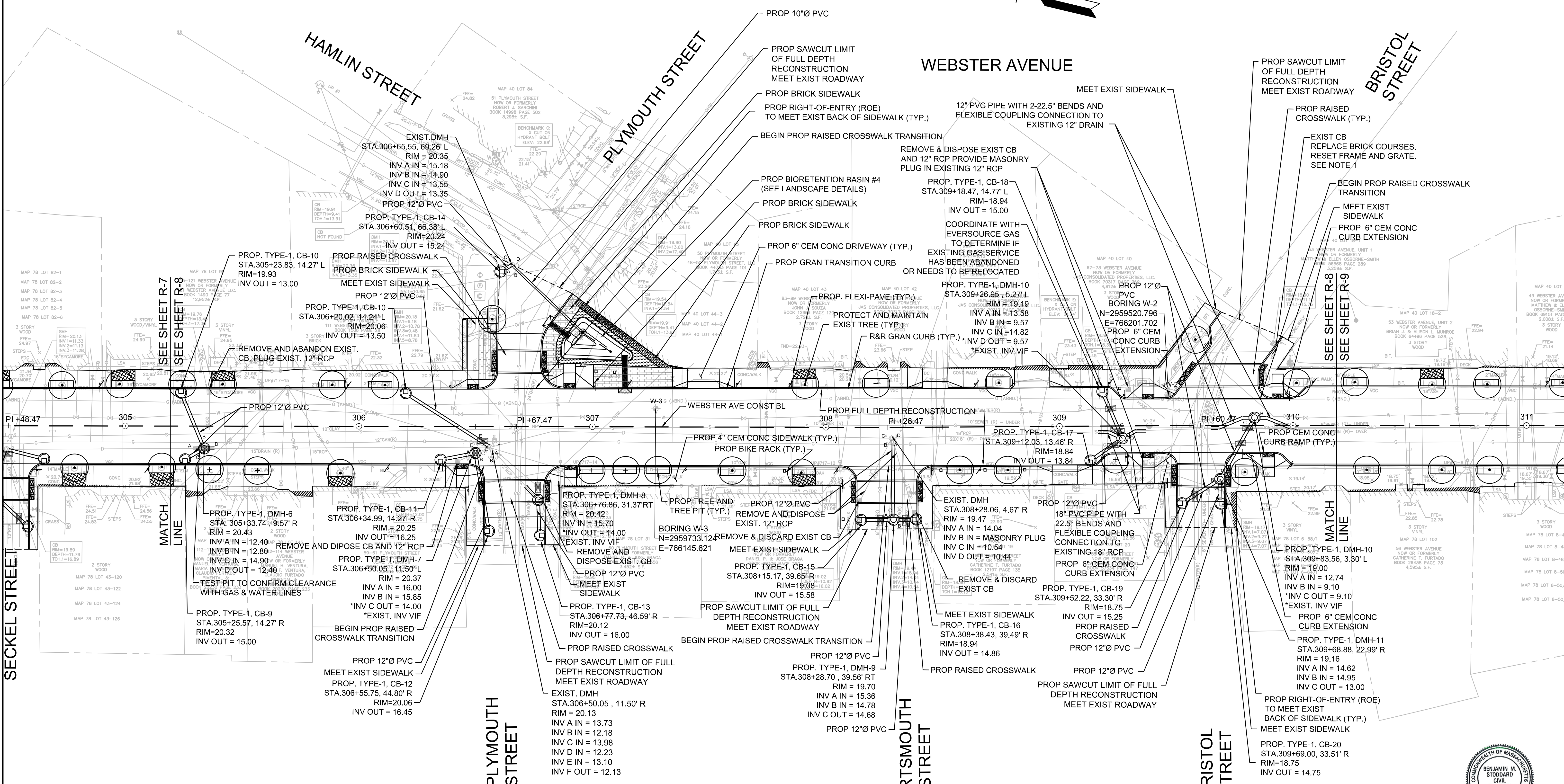
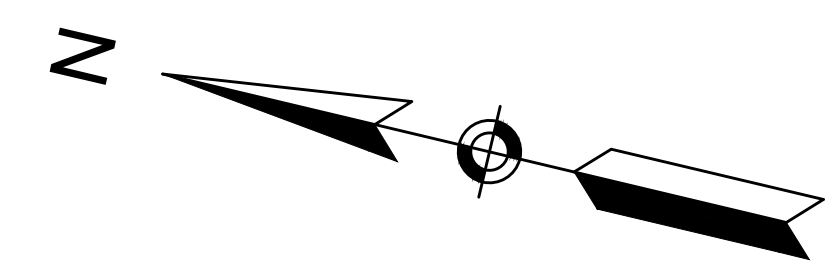


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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - CONSTRUCTION PLAN PLAN 1 OF 3

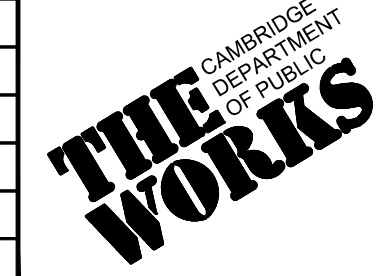
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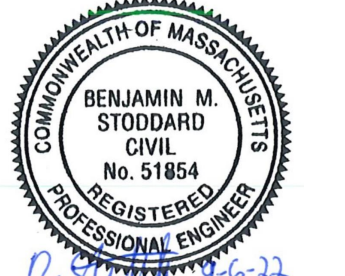


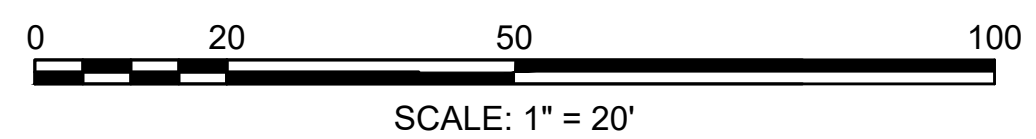
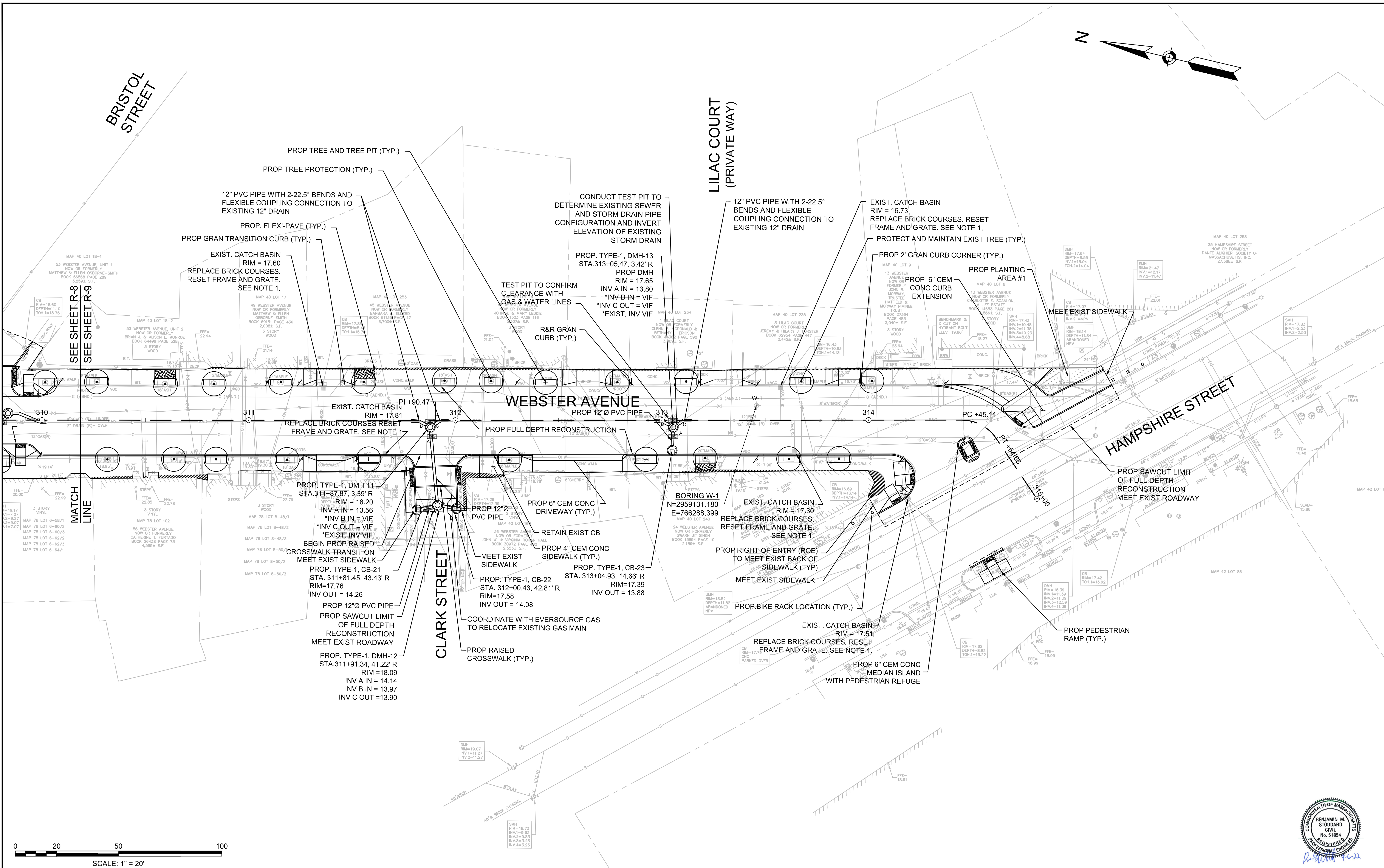
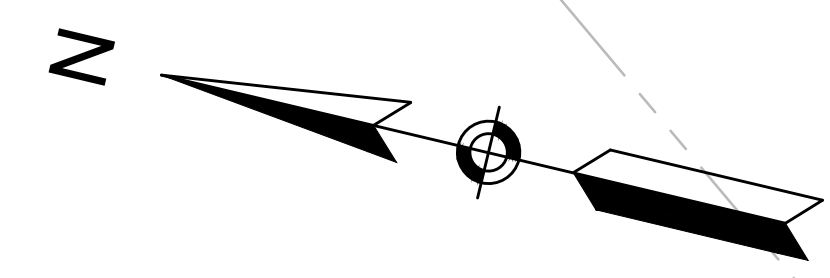
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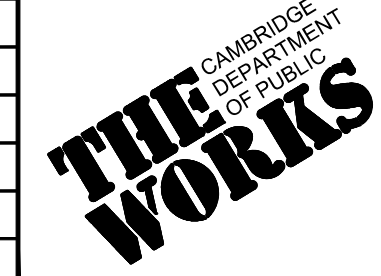
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Drawing	WEBSTER AVE - CONSTRUCTION PLAN PLAN 2 OF 3

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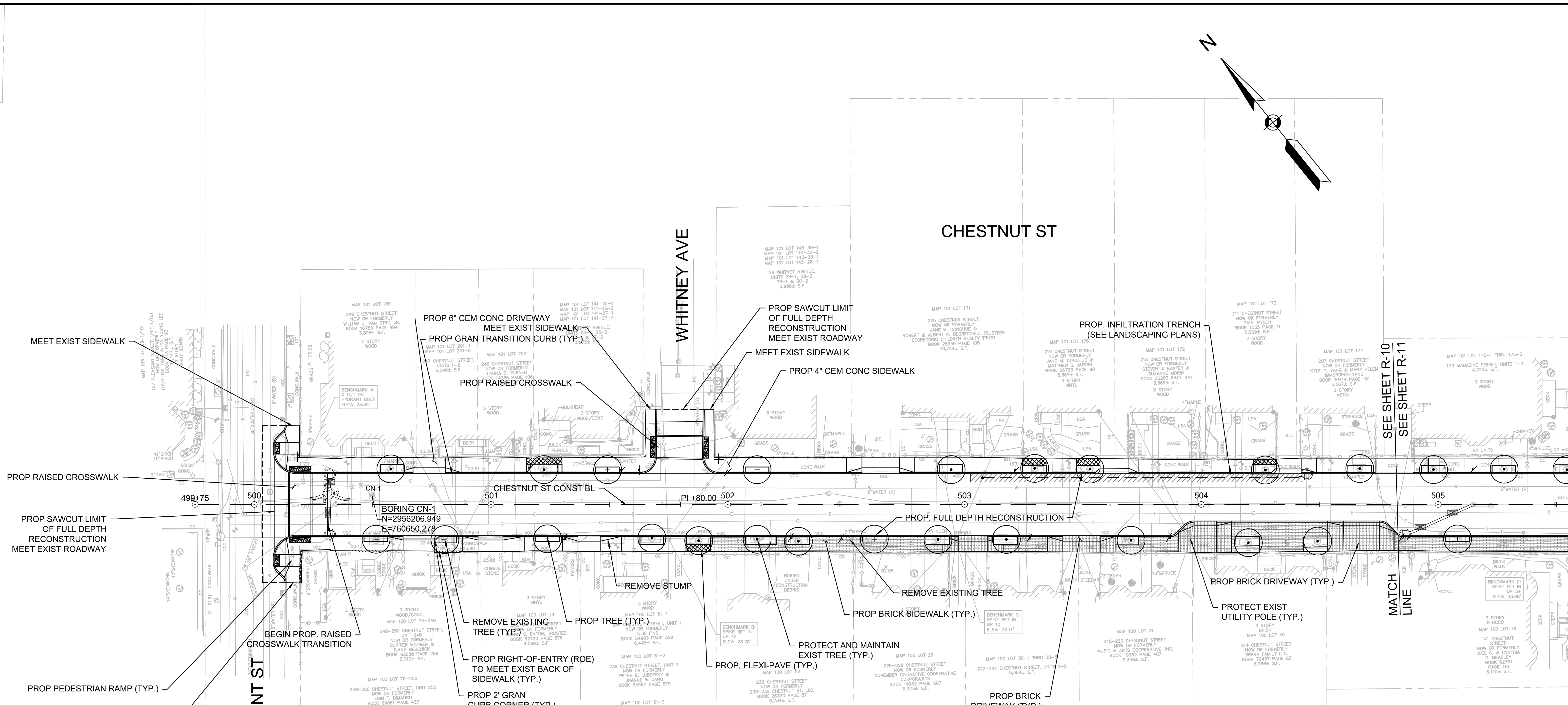
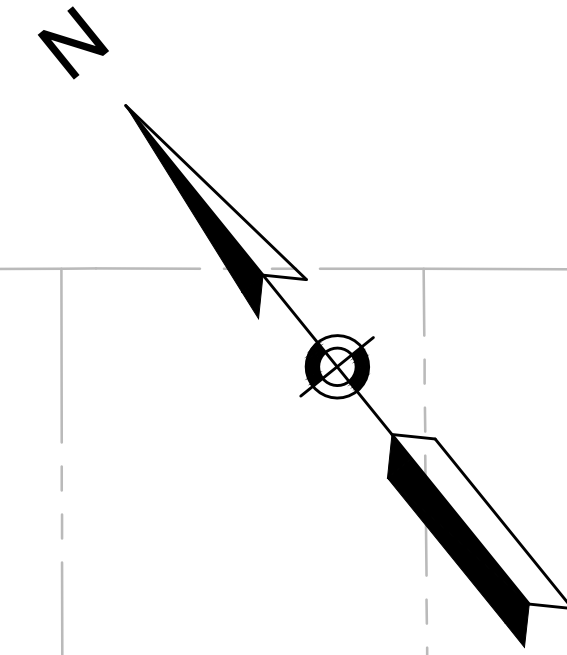
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - CONSTRUCTION PLAN PLAN 3 OF 3

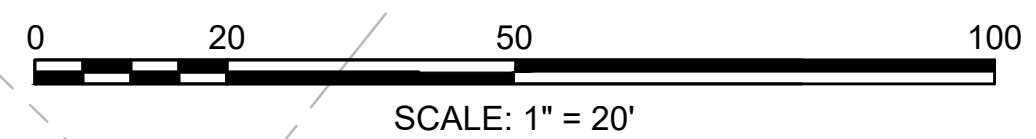
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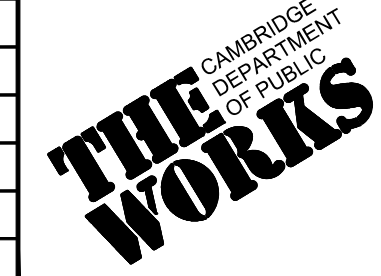


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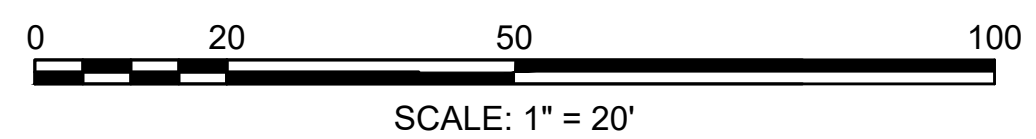
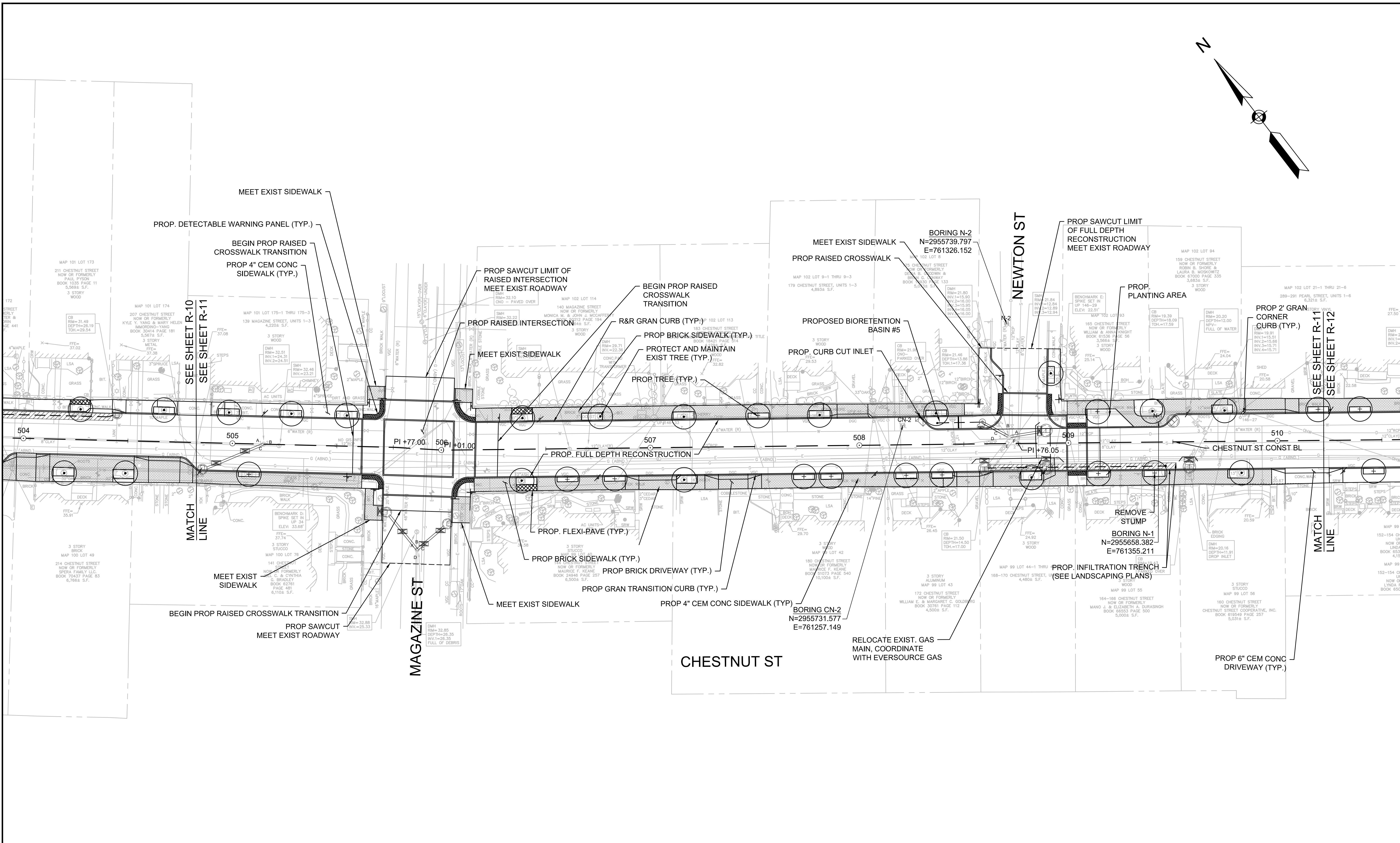
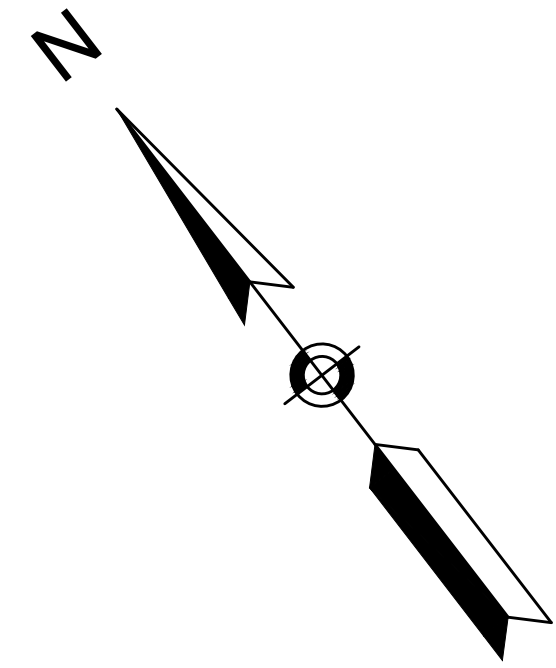


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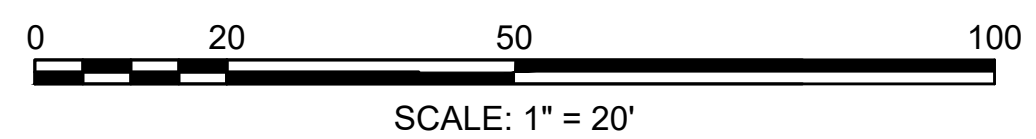
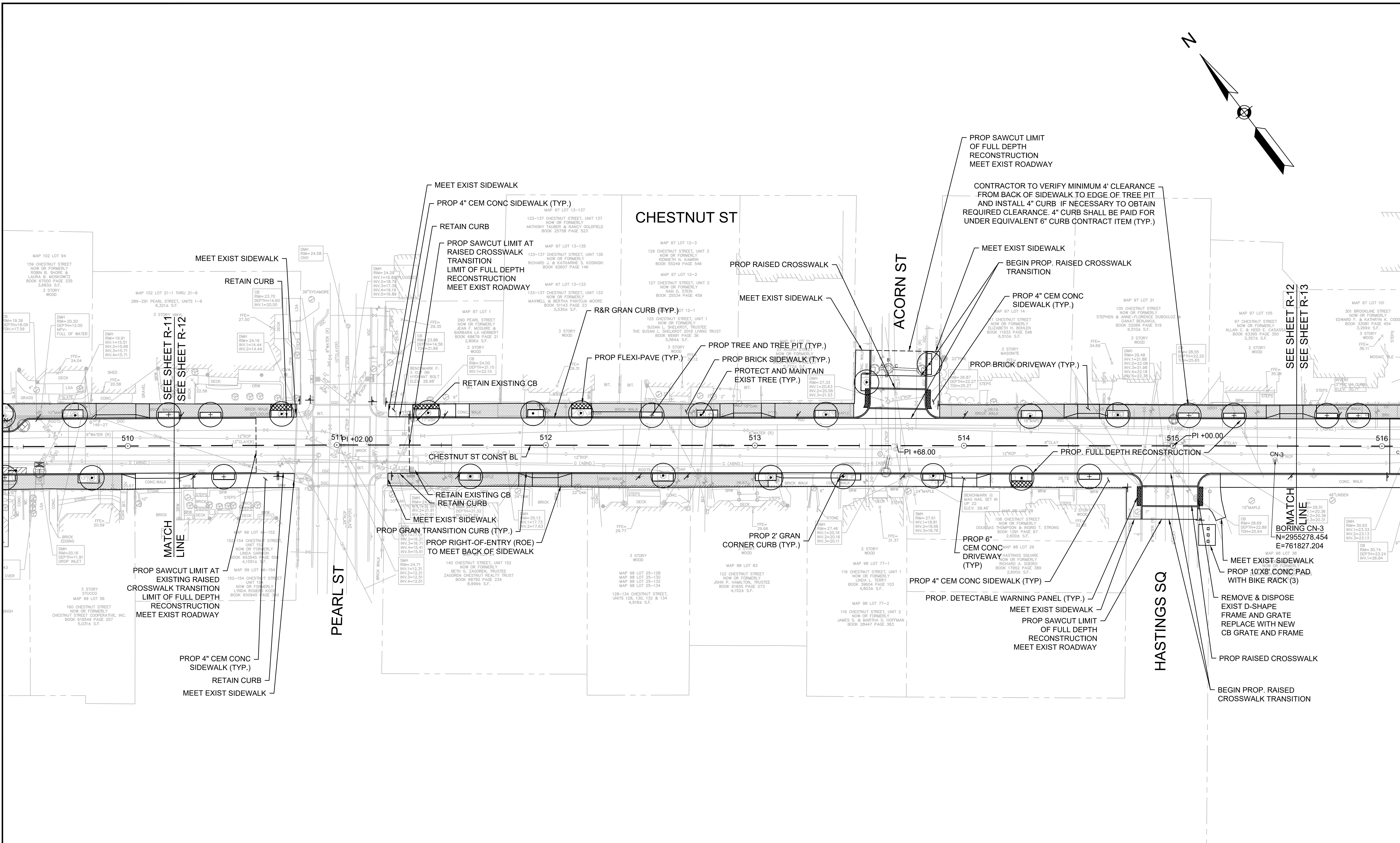
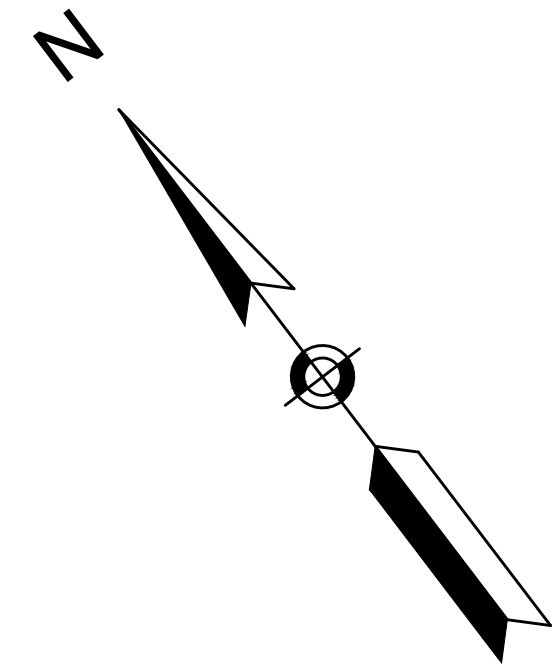


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - CONSTRUCTION PLAN PLAN 1 OF 4

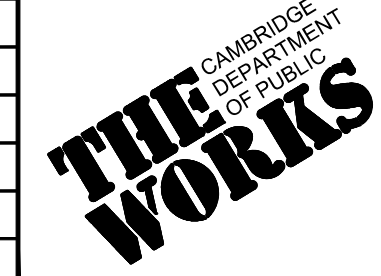
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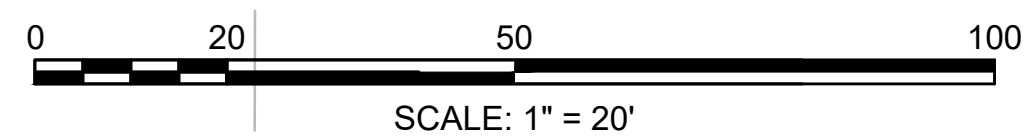
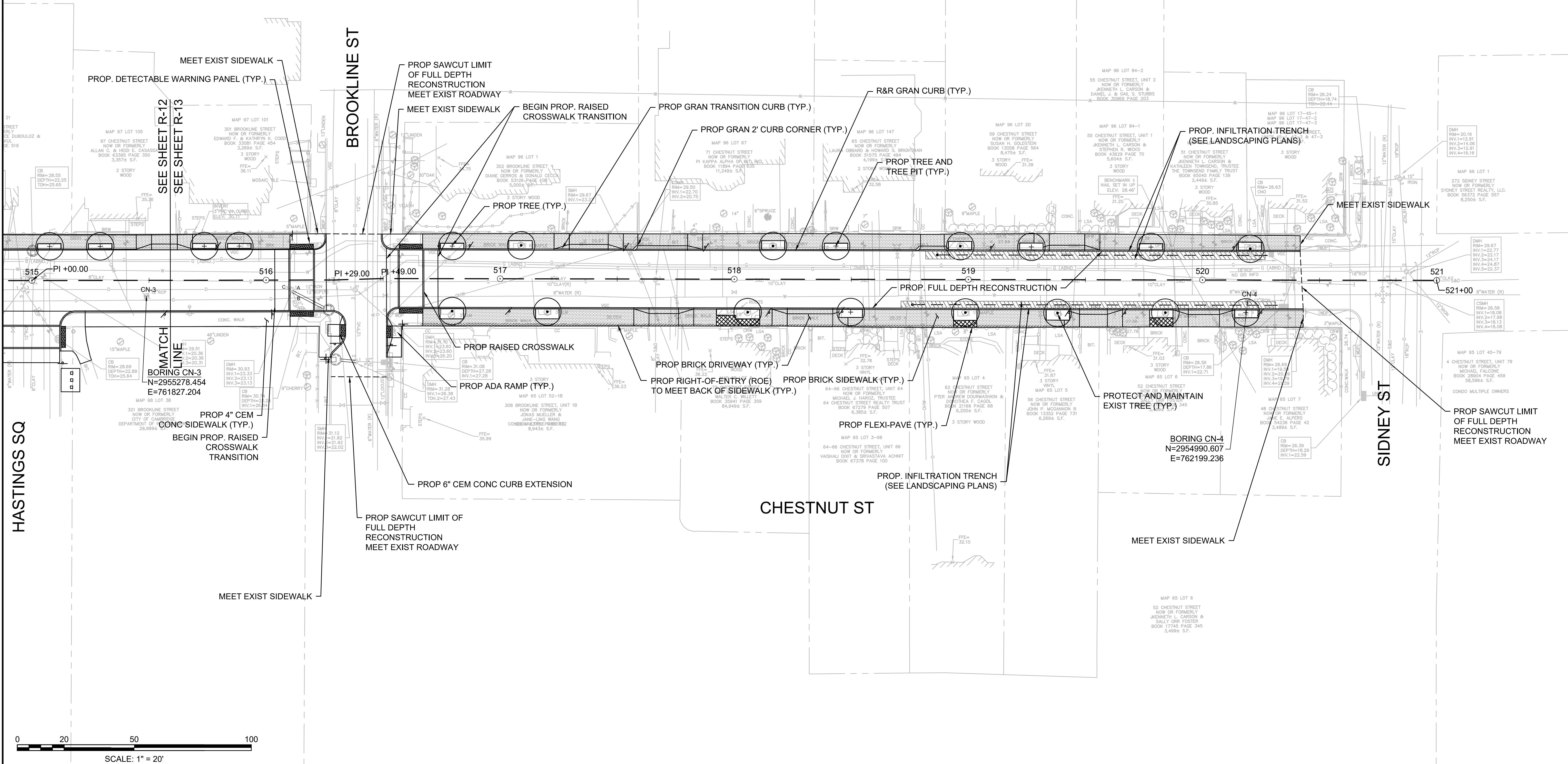
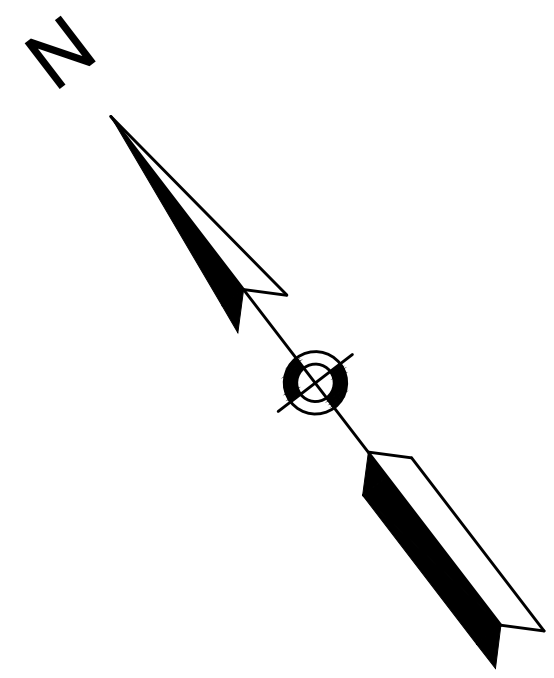


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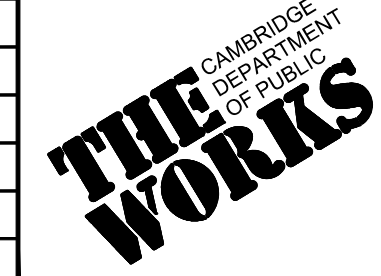


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	CHESTNUT ST - CONSTRUCTION PLAN PLAN 3 OF 4

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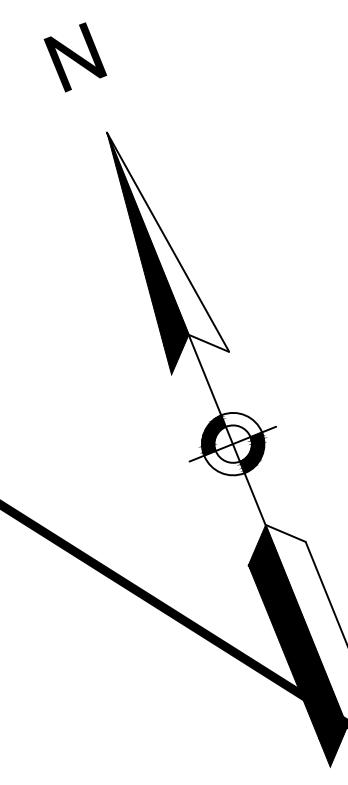
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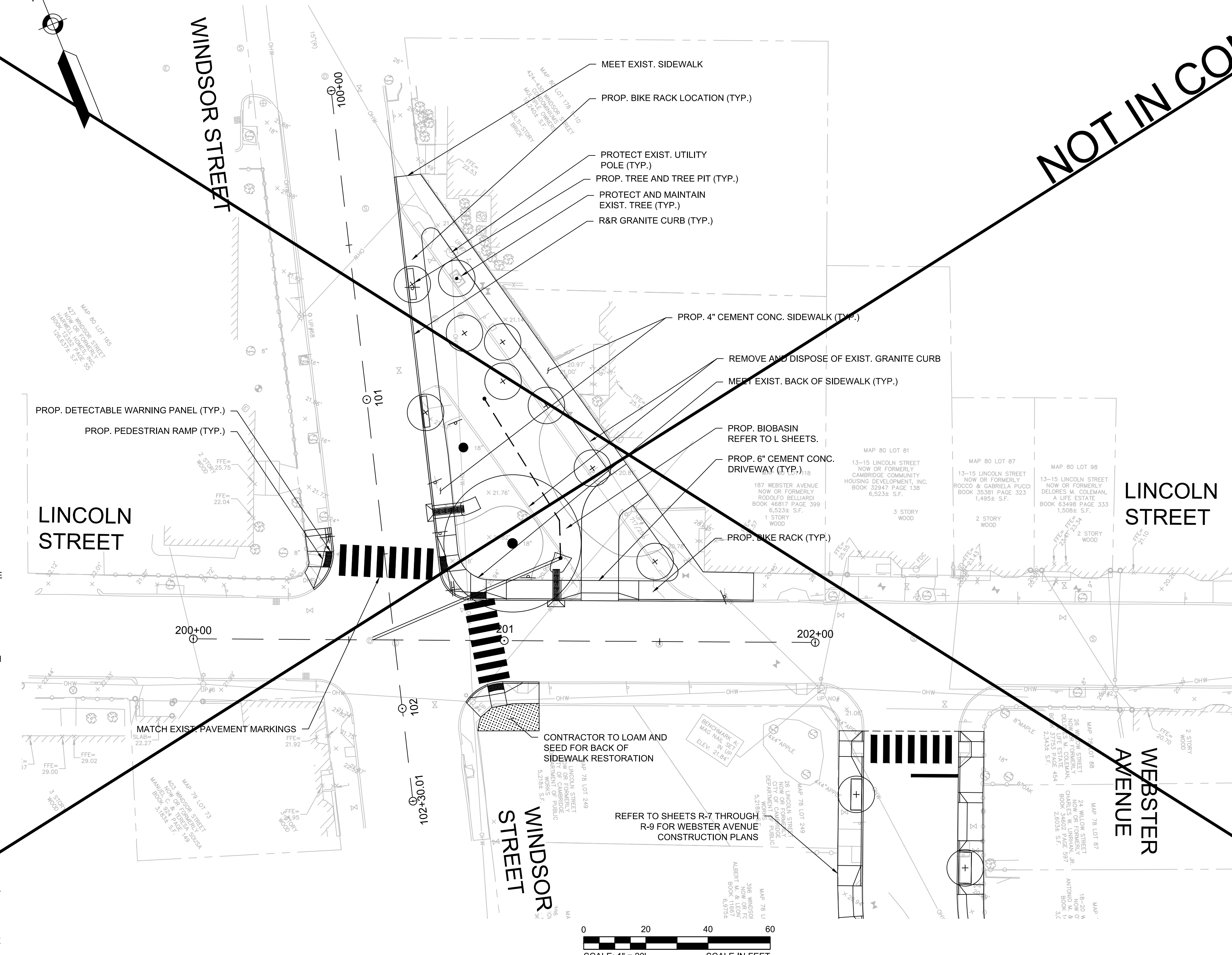
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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - CONSTRUCTION PLAN PLAN 4 OF 4

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File No.	10565

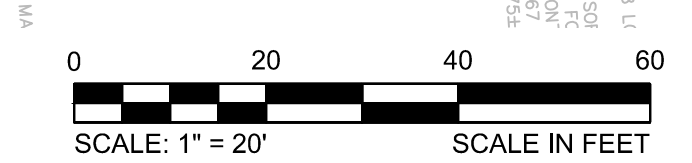
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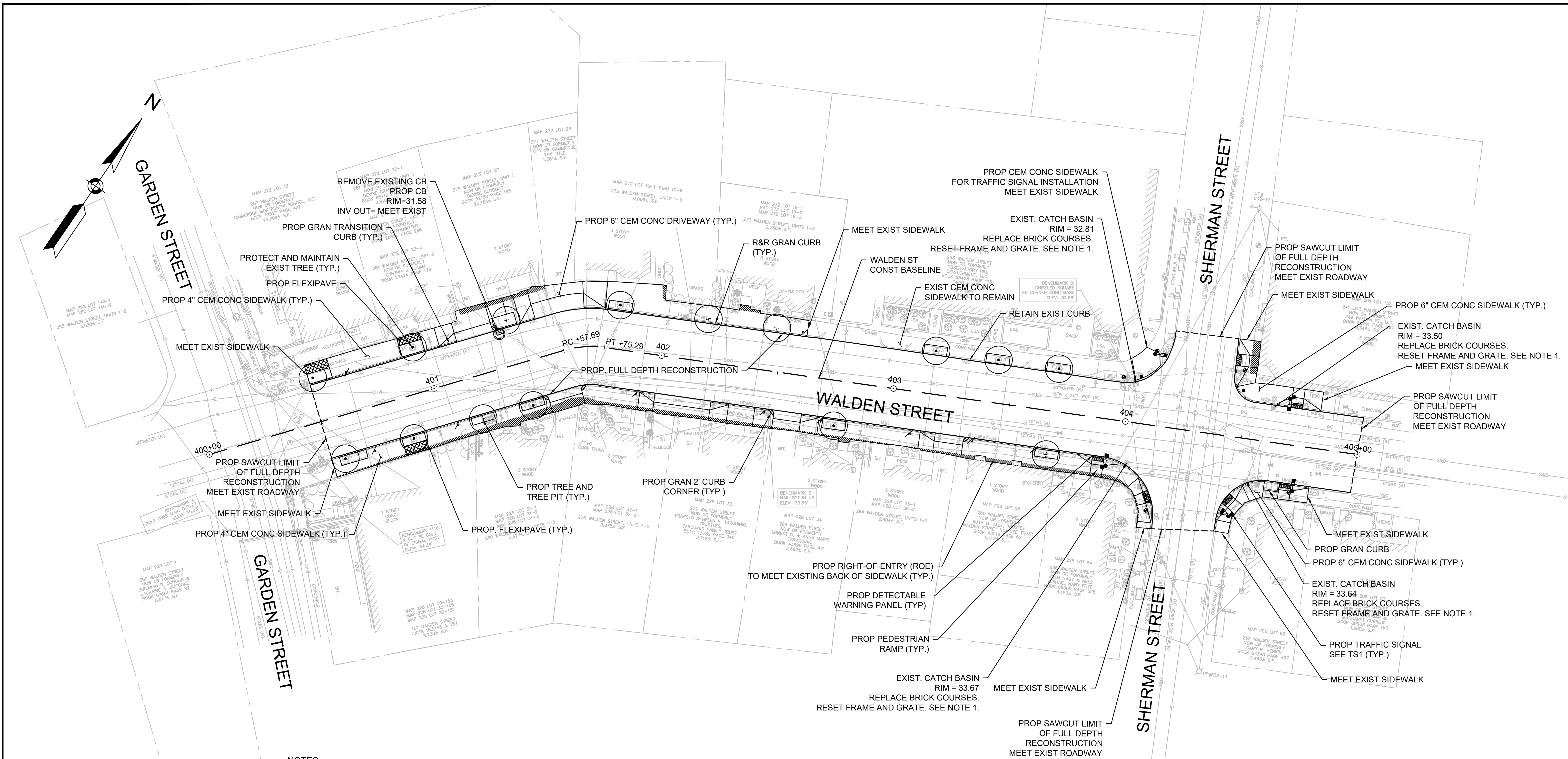
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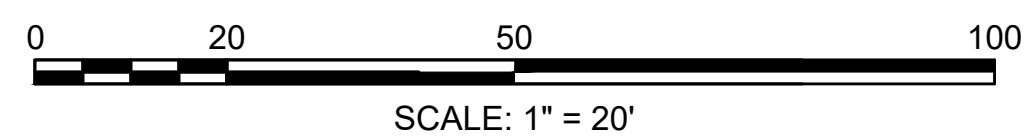


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- ALL EXISTING SIGNS SHALL BE REMOVED AND REPLACED UNLESS OTHERWISE NOTED. ALL REINSTALLED SIGNS OR PROPOSED SIGNS SHALL BE LOCATED A LATERAL CLEARANCE OF 1' FROM THE CURB. REFER TO STRIPING AND SIGNAGE PLANS.
- WHERE SIDEWALKS ARE LESS THAN 5' WIDE, PASSING ZONES HAVE BEEN IDENTIFIED EVERY 200' WITHIN ACCESSIBLE ROUTES. PASSING ZONES SHALL BE A MINIMUM SIZE OF 5'X5' AND HAVE A MAXIMUM SLOPE OF 1.5% IN ALL DIRECTIONS. ADA ACCESSIBLE ROUTES ARE NOTED ON THE DRAWINGS.
- LOCATIONS WHERE CONCRETE OR BRICK SIDEWALKS ARE UNABLE TO BE INSTALLED DUE TO THE PRESENCE OF ROOTS AT EXISTING TREES, APPROXIMATE LIMITS OF FLEXI-PAVE ARE INDICATED ON THE DRAWINGS. LIMITS OF FLEXI-PAVE SHALL BE FINALIZED IN THE FIELD UPON THE REMOVAL OF THE EXISTING SIDEWALK AND REVIEW OF ROOT LOCATIONS. FOR FLEXIBLE POROUS PAVING, REFER TO SPECIFICATION SECTION 02520.
- CONTRACTOR SHALL NOT PERFORM ANY WORK ON PRIVATE PROPERTY UNTIL A SIGNED RIGHT-OF-ENTRY (ROE) IS RECEIVED BY DPW FROM THE PROPERTY OWNER. ROEs SHALL BE PERFORMED BY THE DPW PROJECT MANAGER.
- CONTRACTOR SHALL MATCH EXISTING GRADE AT BACK OF SIDEWALK LIMITS. REVIEW OF ALL SIDEWALK FORMS SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE FOR LOCATIONS WHERE PRIVATE PROPERTY RESTORATION IS REQUIRED TO MEET DRAINAGE REQUIREMENTS AND BACK OF SIDEWALK GRADE. ALL WORK ASSOCIATED WITH THIS EFFORT SHALL BE PAID UNDER CONTRACT ITEMS 2950.1 AND 2950.2. ALL PRIVATE PROPERTY RESTORATION WORK SHALL BE COORDINATED WITH THE THE PRIVATE PROPERTY OWNER AND ENGINEER PRIOR TO THE START OF WORK.



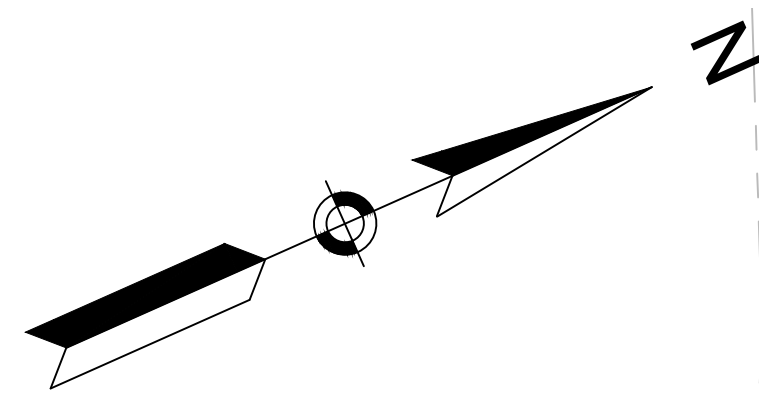
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Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN ST - CONSTRUCTION PLAN PLAN 1 OF 1

Sheet	R-15
File No.	10565



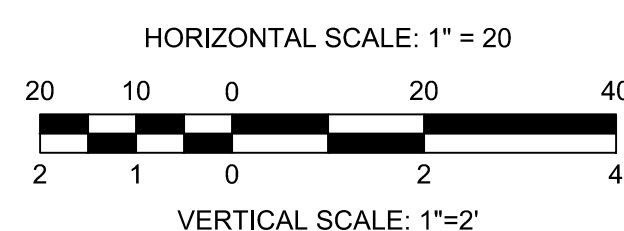
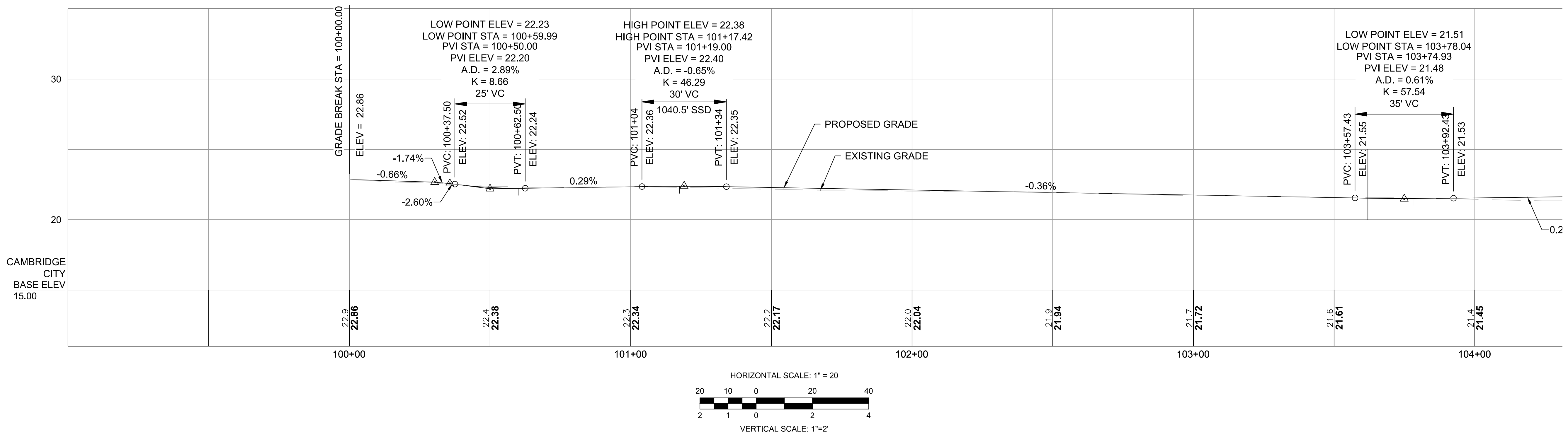
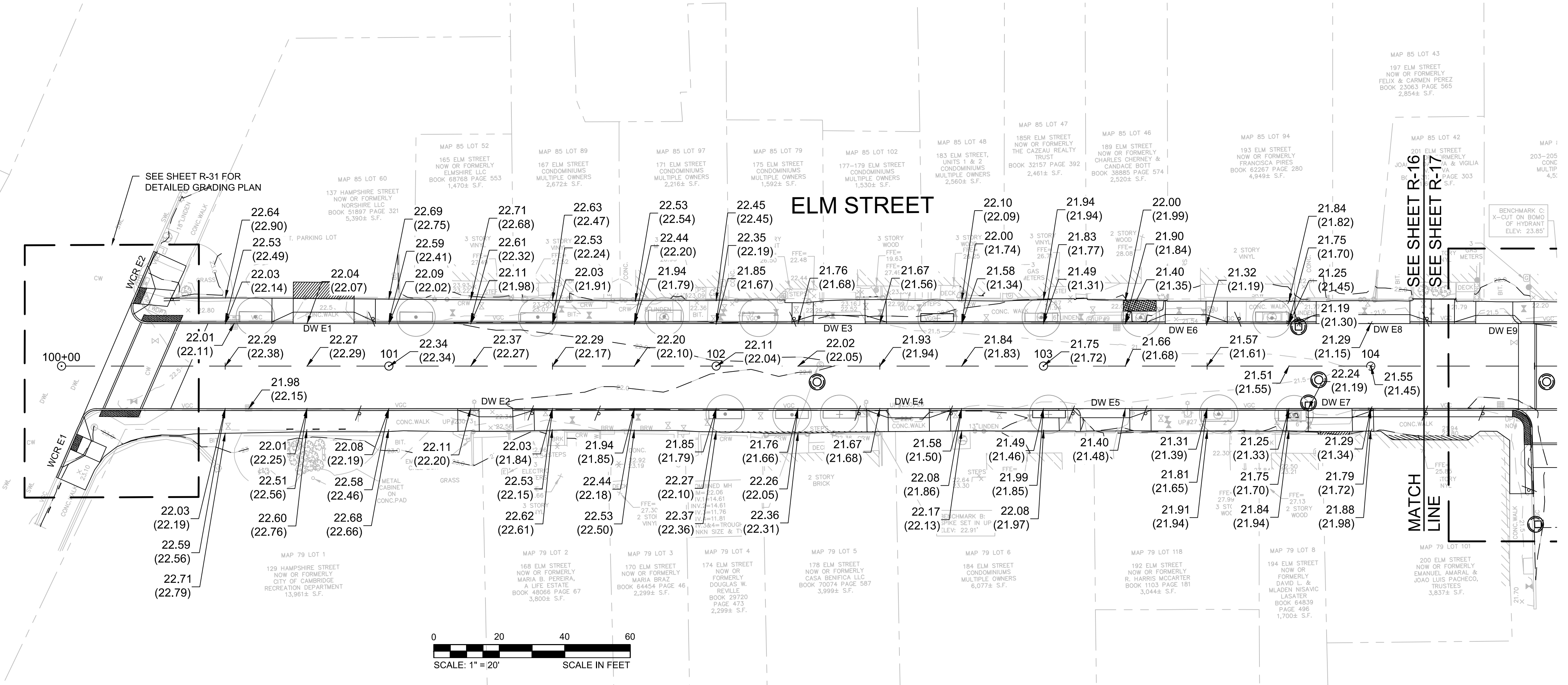


MAP 85 LOT 111
134 HAMPSHIRE STREET
NOW OR FORMERLY
BENJAMIN E. JEFFRIES, TRUSTEE
OF HAMPSHIRE STREET REALTY TRUST
4,575± S.F.

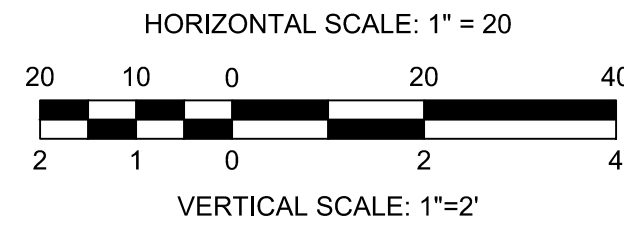
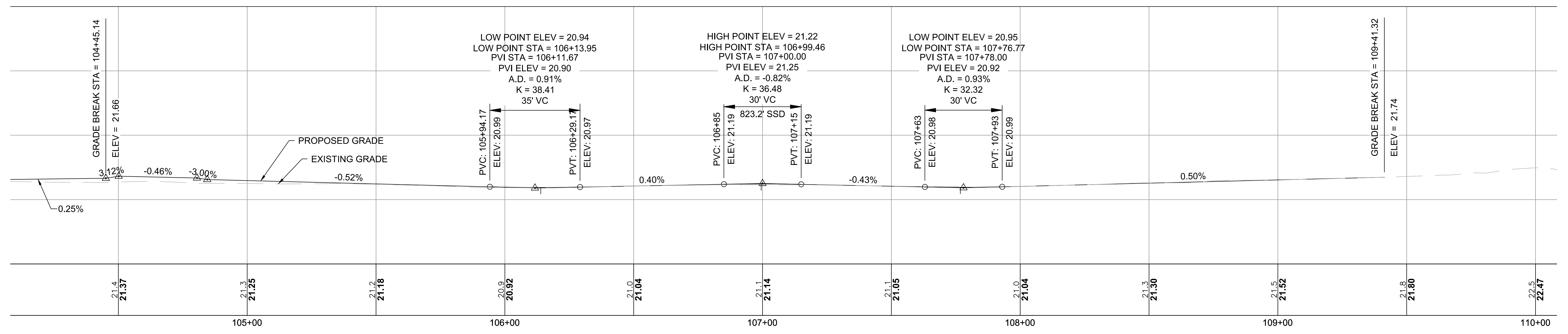
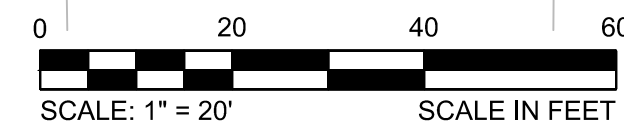
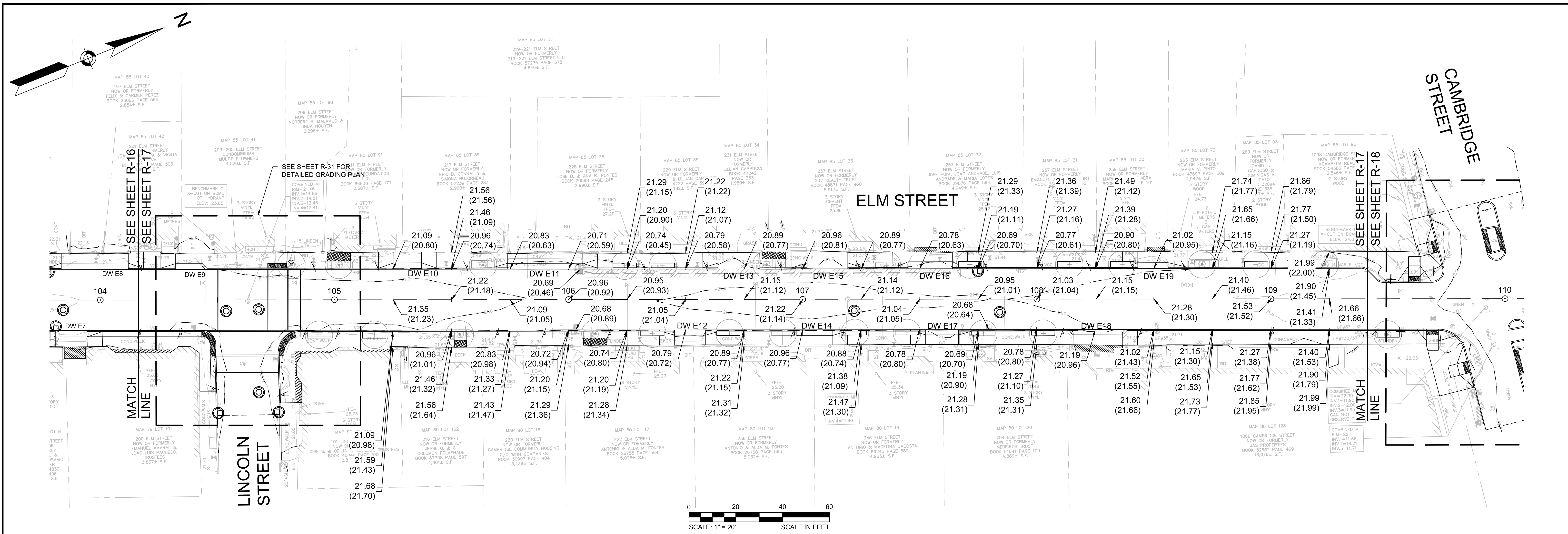
MAP 85 LOT 110
132 HAMPSHIRE STREET
NOW OR FORMERLY
SHAWN R. & LACETTA M. HENRY
BOOK 60819 PAGE 24
2,860± S.F.

MAP 85 LOT 89
140 ELM STREET
NOW OR FORMERLY
DOMING & ROSEMARY DEFRANCISCO
BOOK 57224 PAGE 74
3,287± S.F.

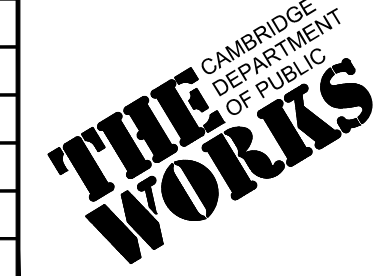
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				Scale AS NOTED Date AUGUST 2022 Job No. 20170208.037A Designed by KEA Drawn by KEA Checked by BJM Approved by BMS		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing ELM STREET - GRADING PLAN AND PROFILE SHEET 1 OF 3	Sheet R-16 File No. 10565
				27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com		No. Description Date REVISIONS	

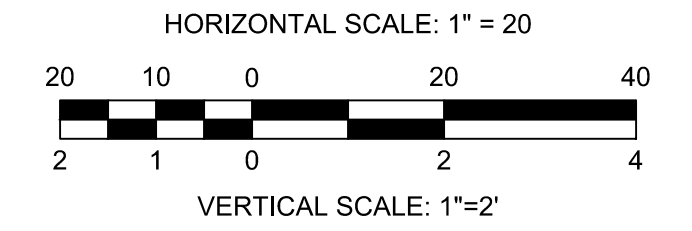
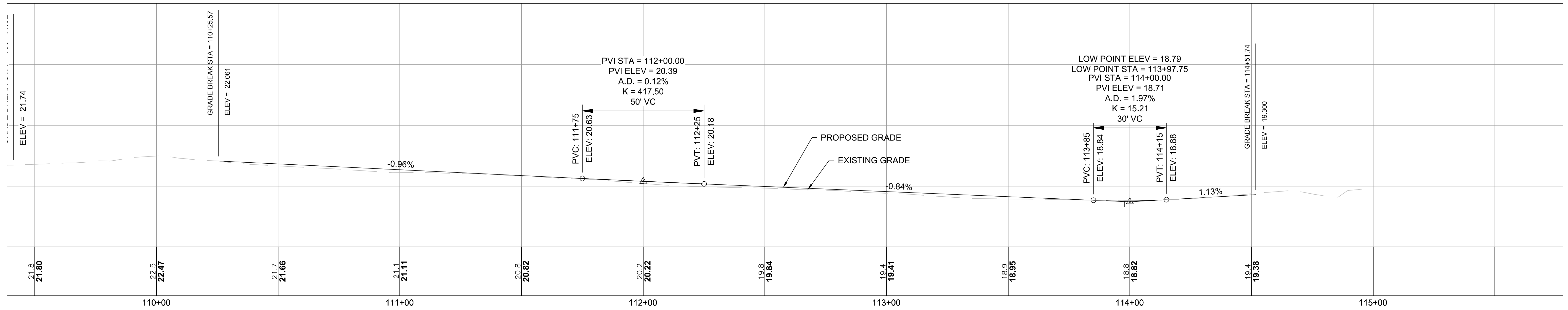
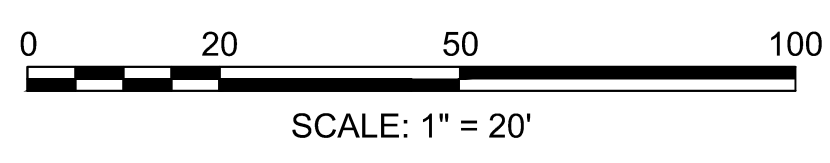
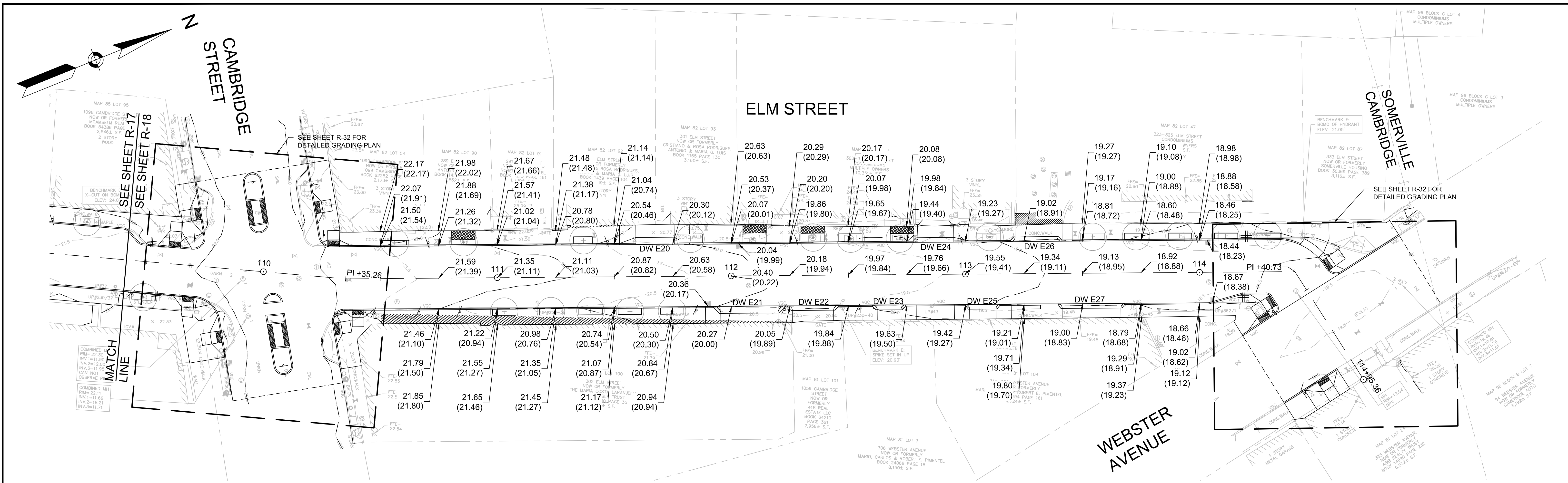


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Designed by	KEA		
Drawn by	KEA		
Checked by	BJM	No.	Description
Approved by	BMS		Date

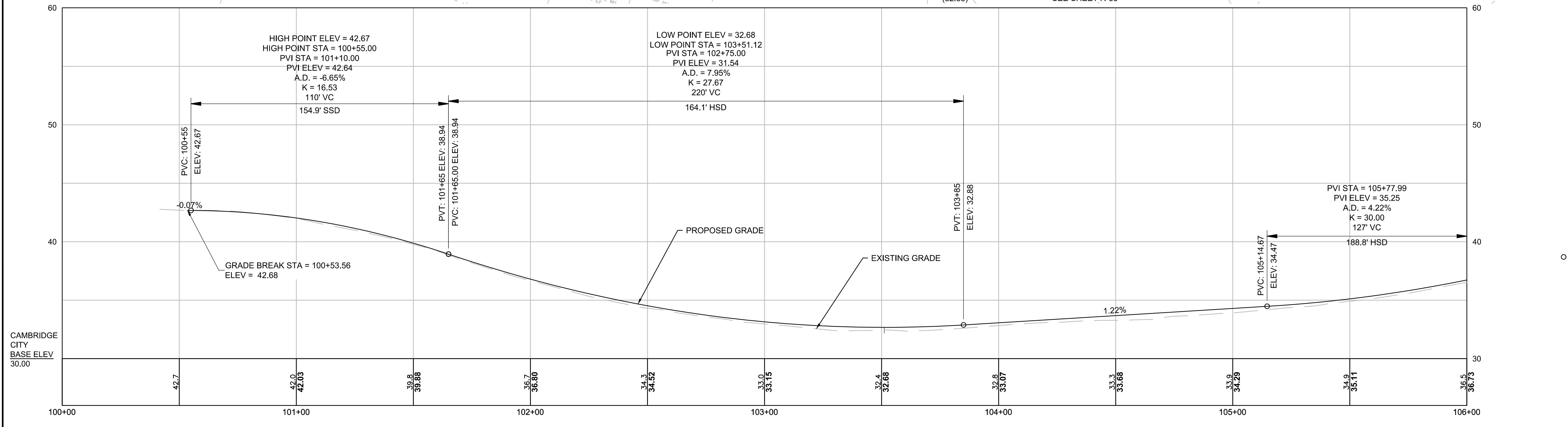
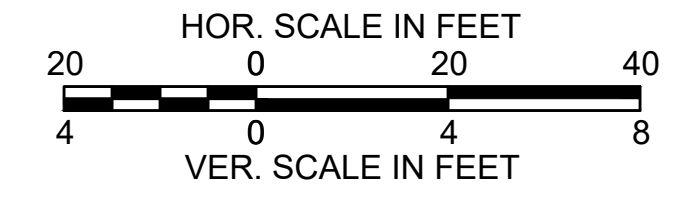
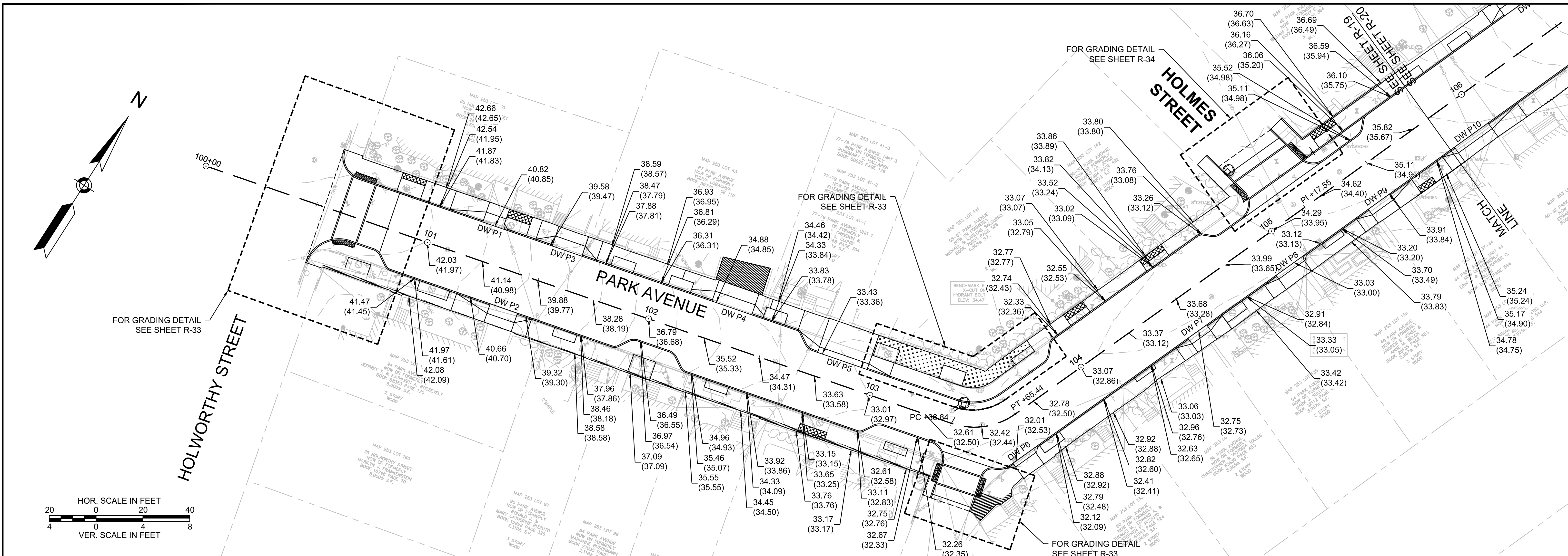


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET - GRADING PLAN AND PROFILE SHEET 2 OF 3

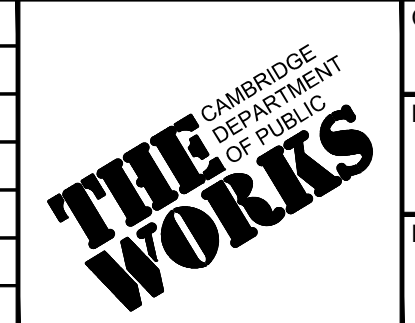
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File No.	10565



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				27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com			

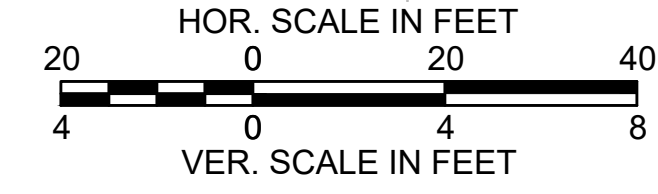
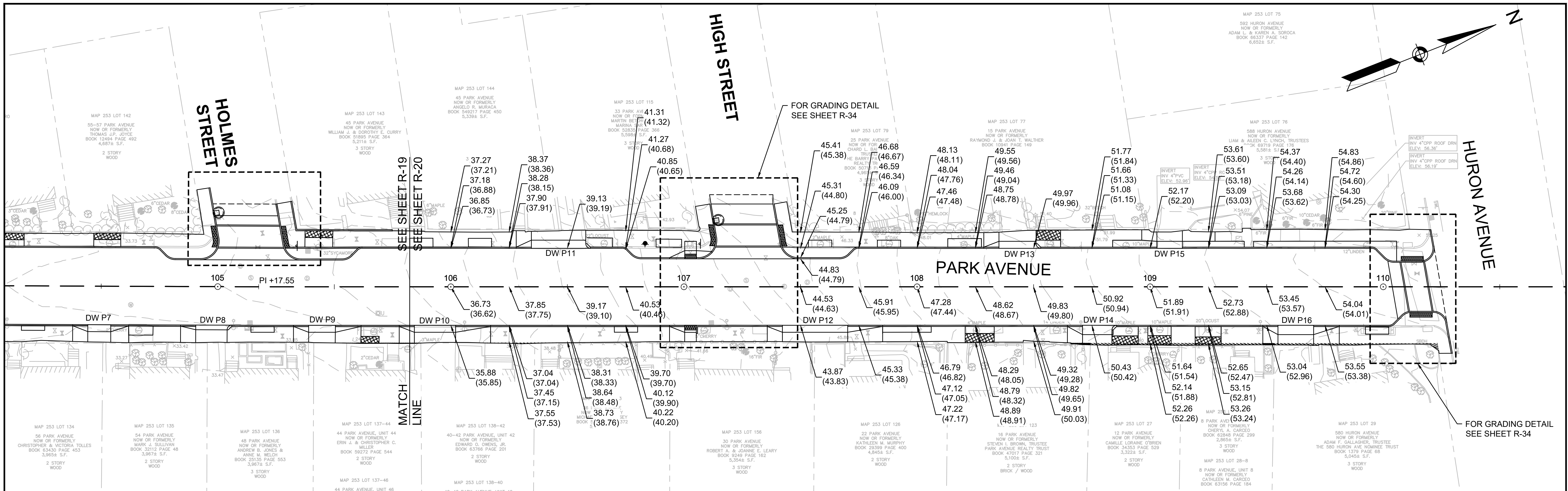


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Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF

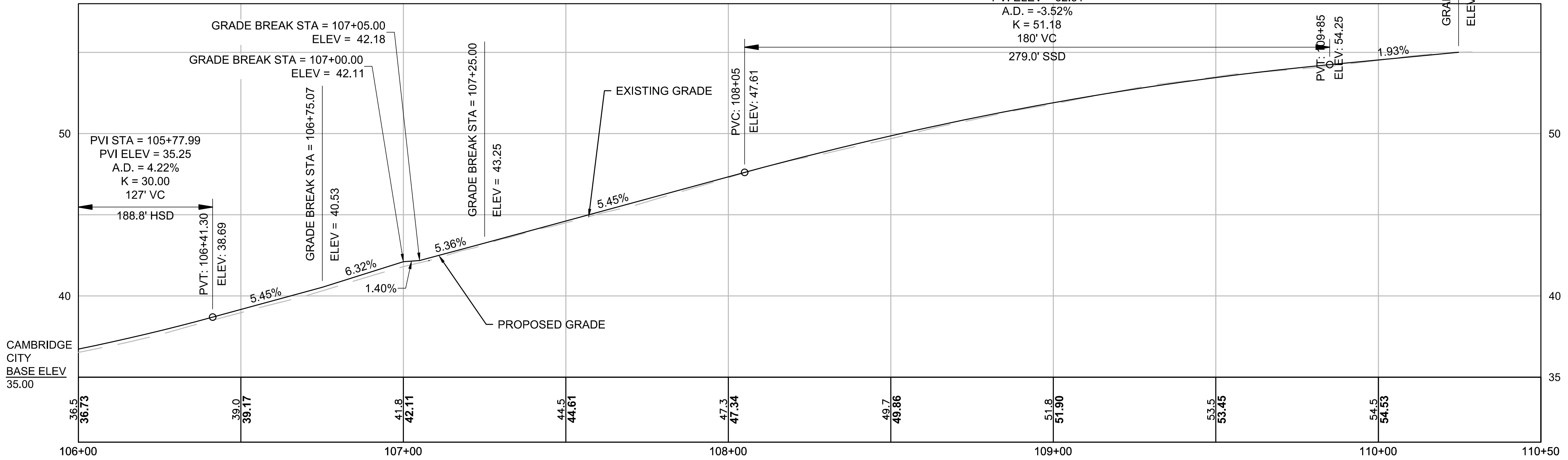


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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - GRADING PLAN AND PROFILE PLAN 1 OF 2

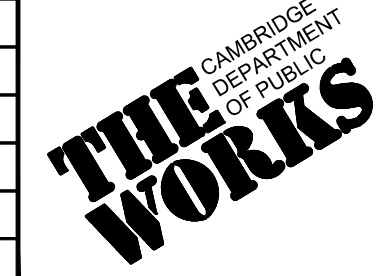
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File No.	10565



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 HIGH POINT STA = 109+85.00
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 A.D. = -3.52%
 K = 51.18
 180' VC
 279.0' SSD

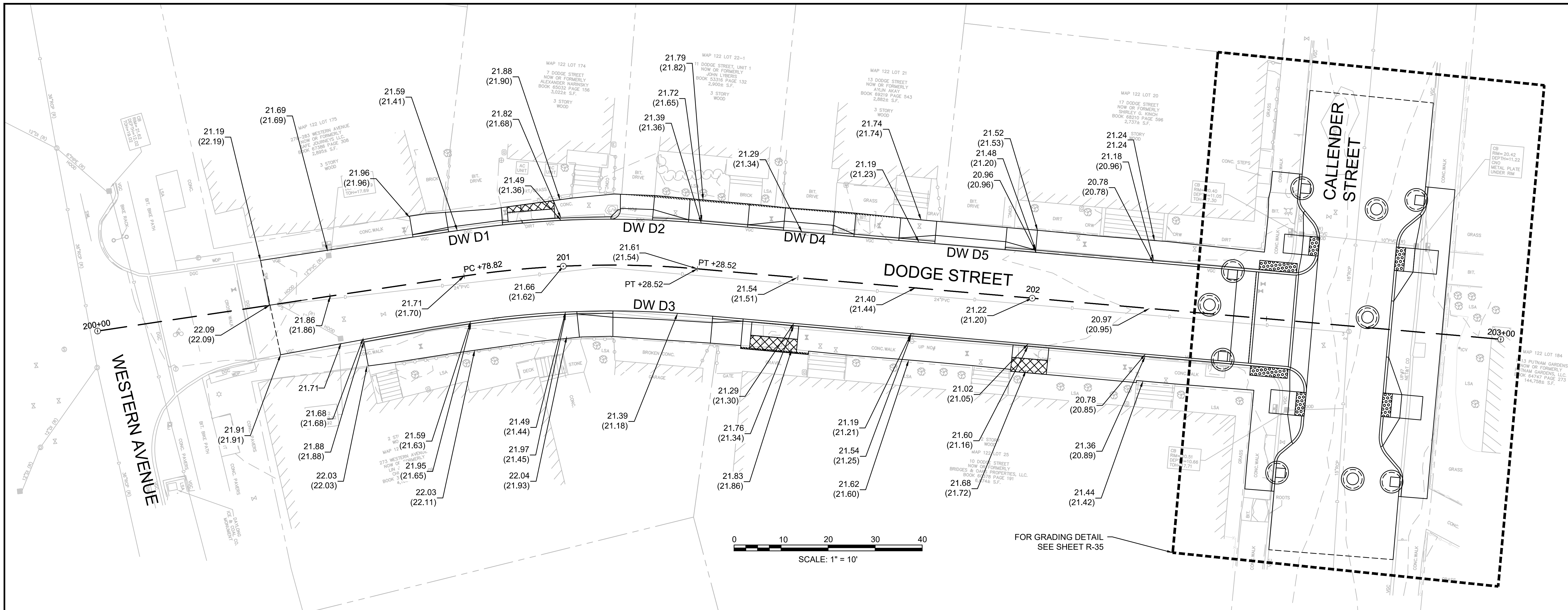


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REVISIONS			

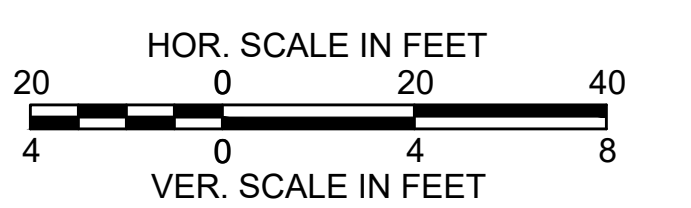
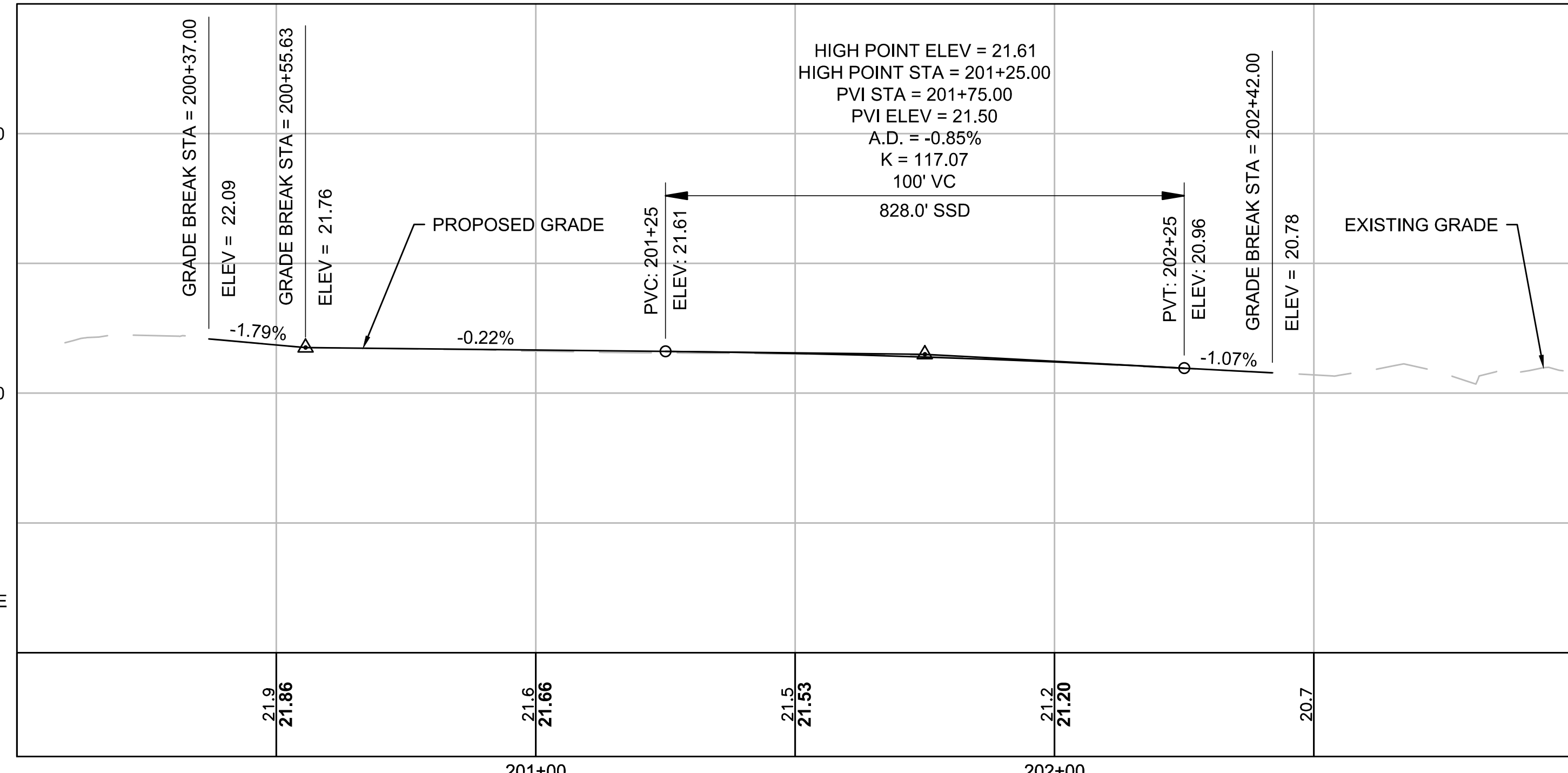


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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - GRADING PLAN AND PROFILE PLAN 2 OF 2

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File No.	10565



FOR GRADING DETAIL
SEE SHEET R-35



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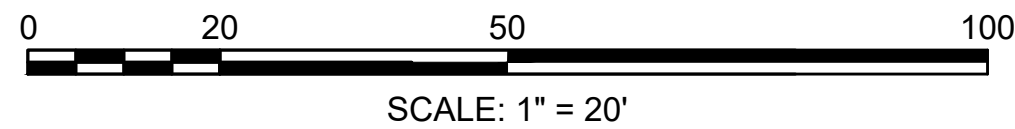
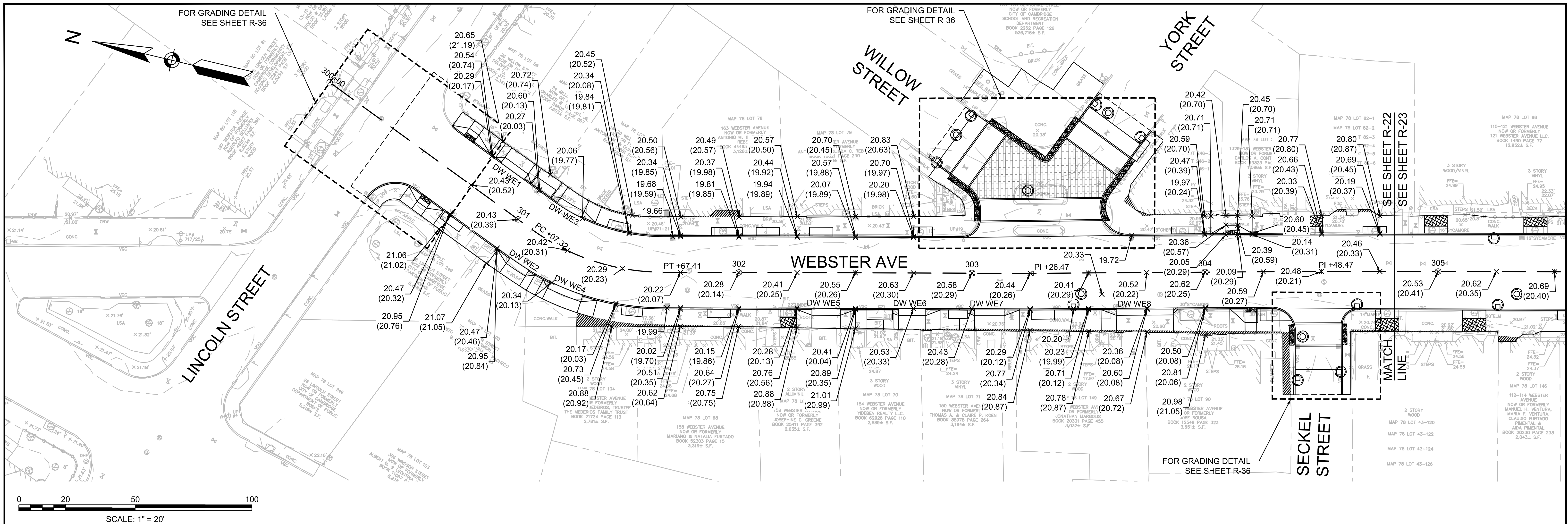


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Approved by	PMF

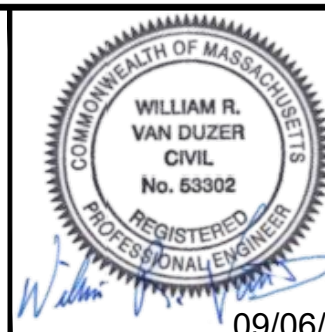


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	DODGE STREET - GRADING PLAN AND PROFILE PLAN 1 OF 1

Sheet	R-21
File No.	10565



CAMBRIDGE CITY BASE ELEV 10.00



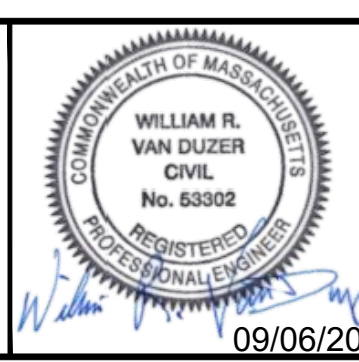
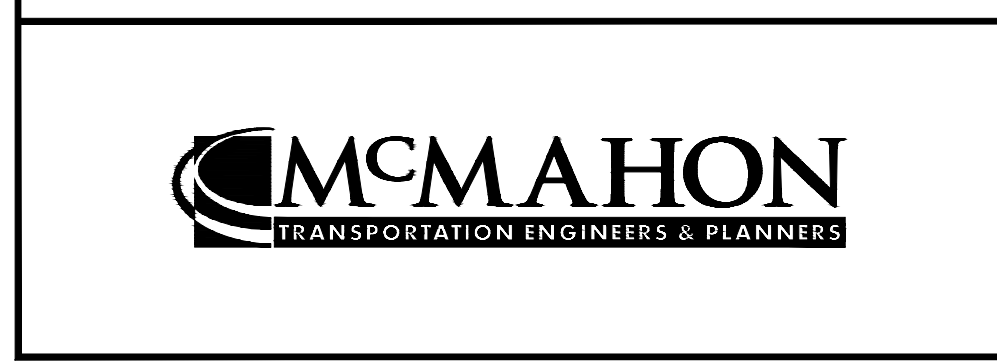
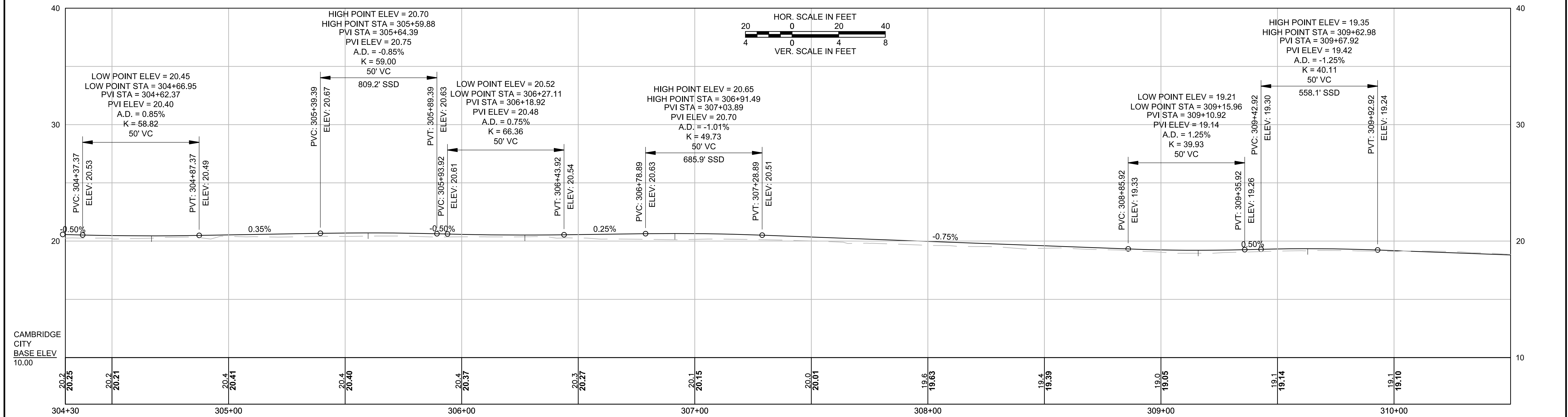
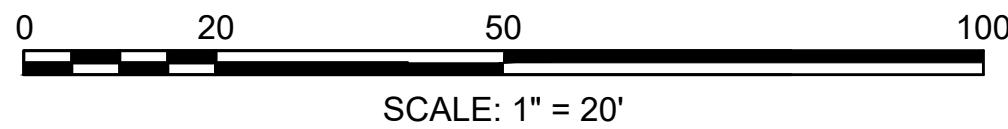
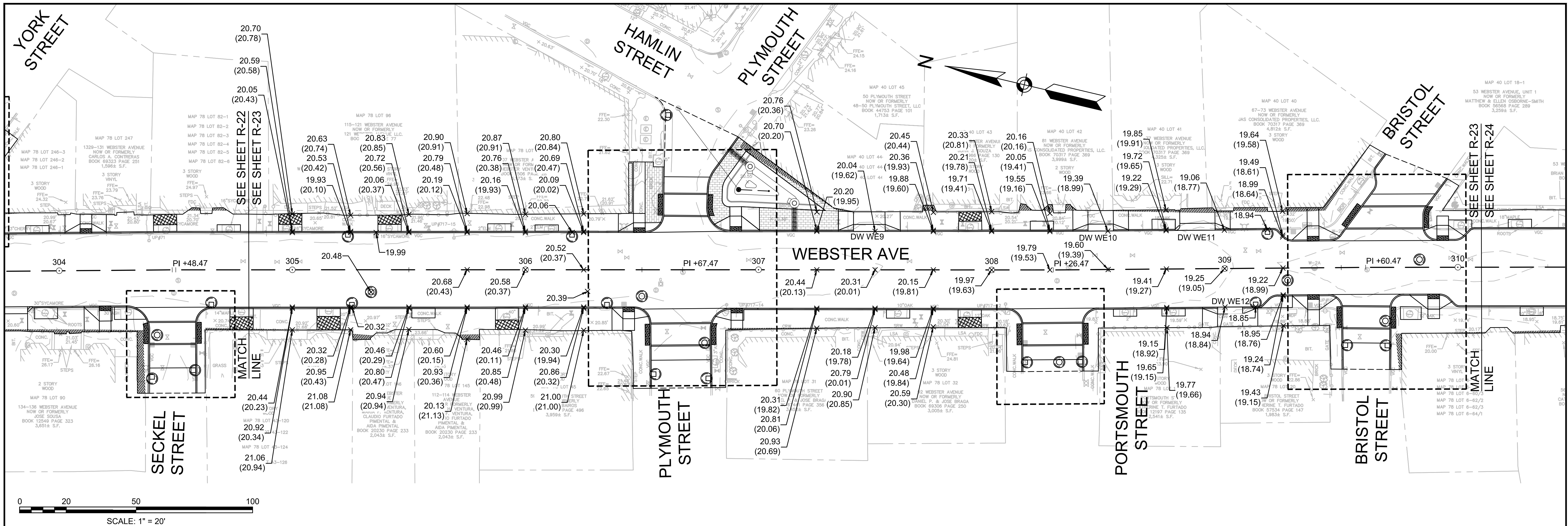
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Designed by	SBM
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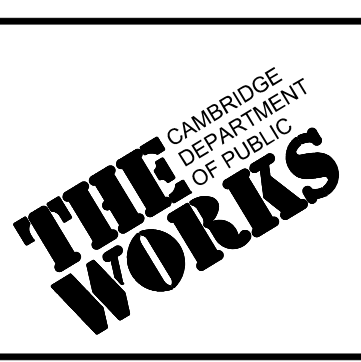
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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - GRADING PLAN AND PROFILE PLAN 1 OF 3

Sheet	R-22
File No.	10565

09/06/2022

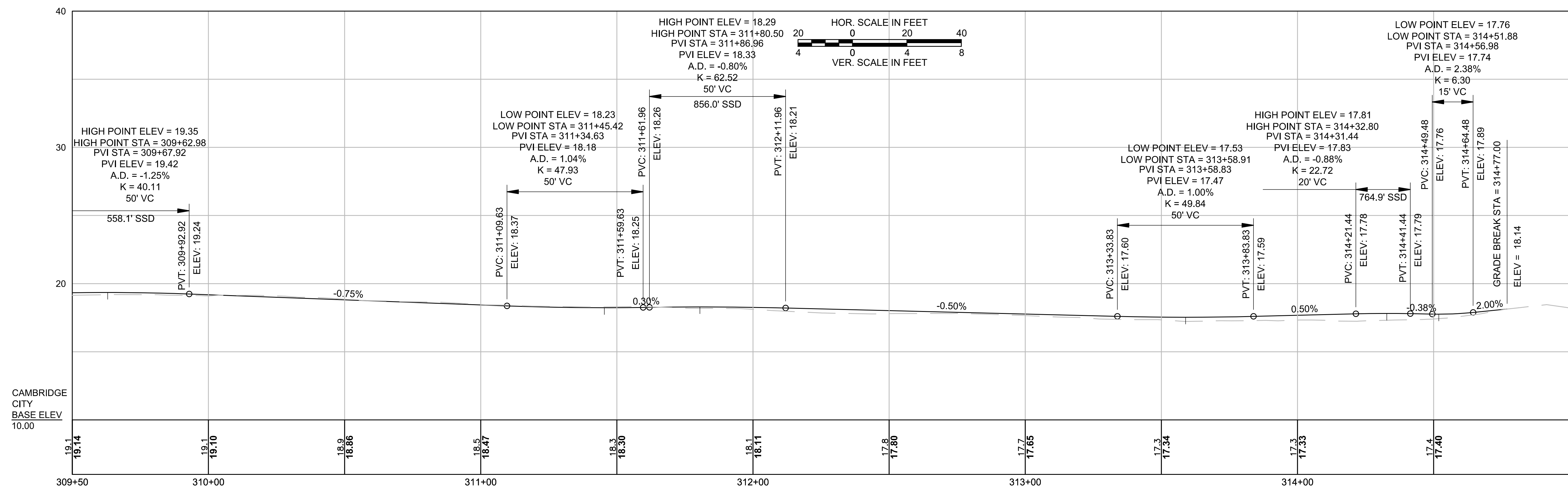
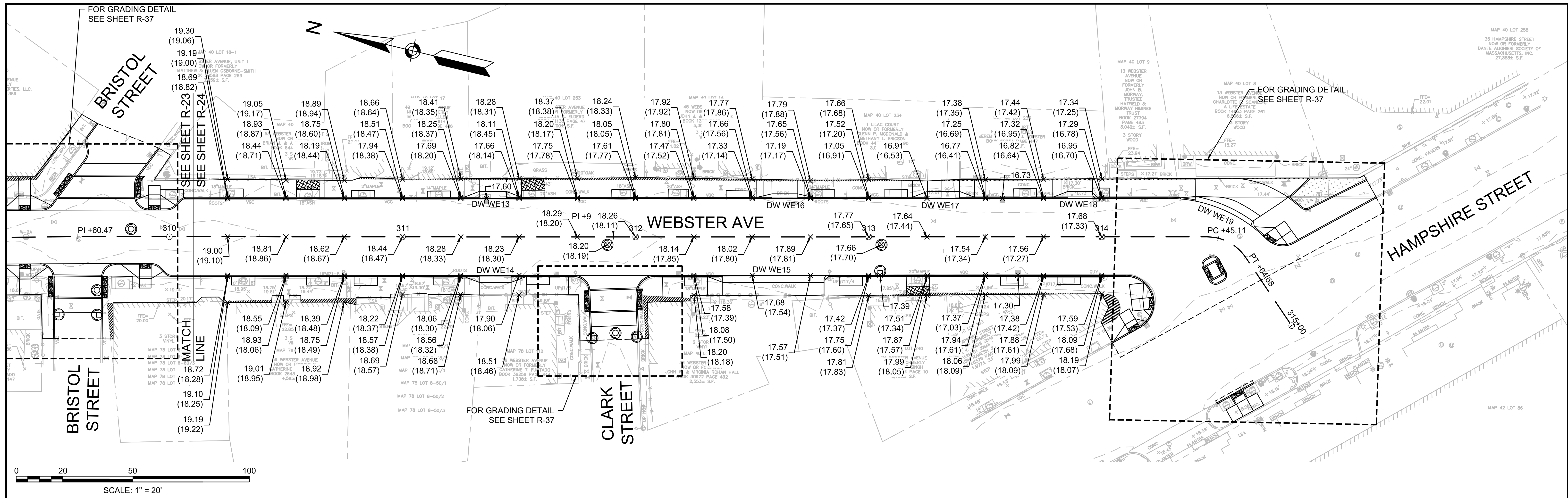


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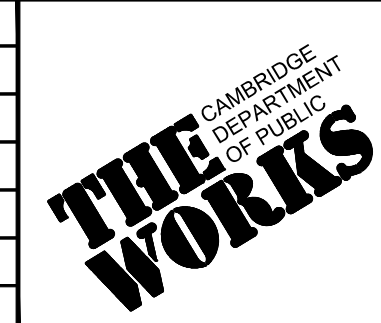


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - GRADING PLAN AND PROFILE PLAN 2 OF 3

Sheet	R-23
File No.	10565

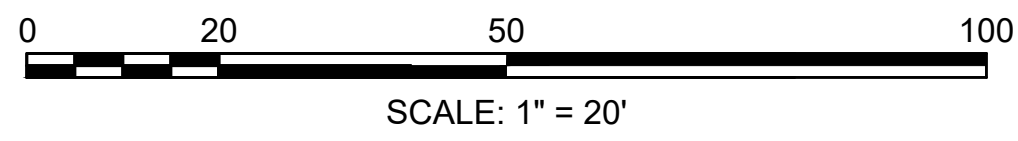
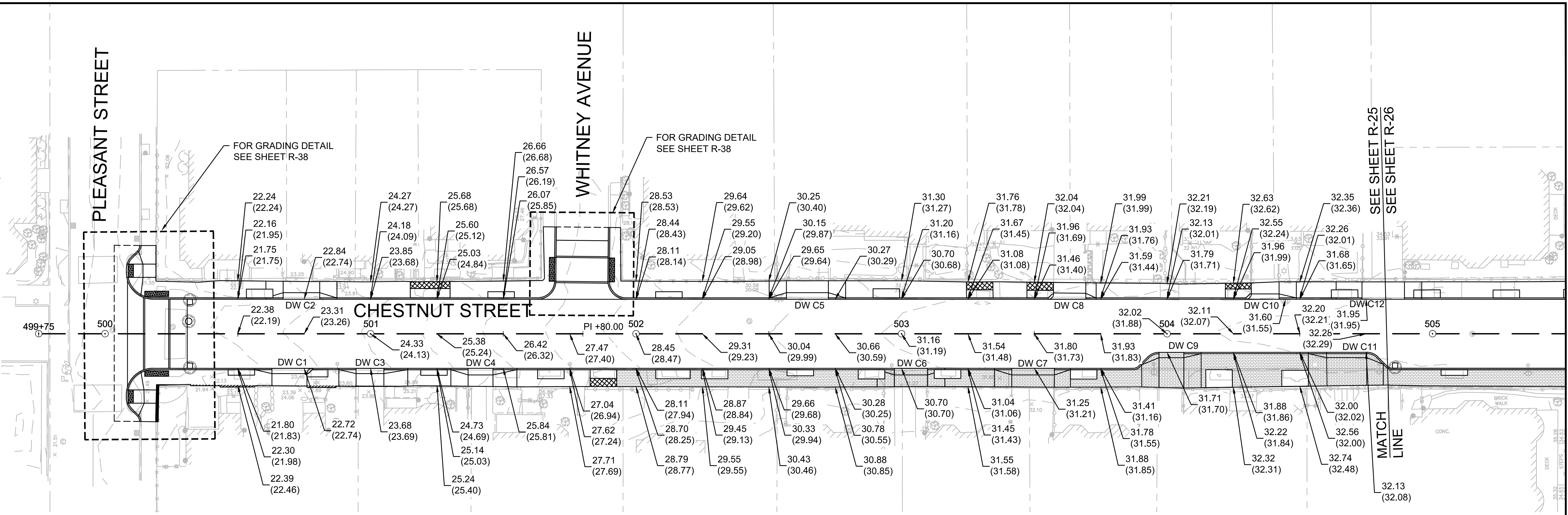
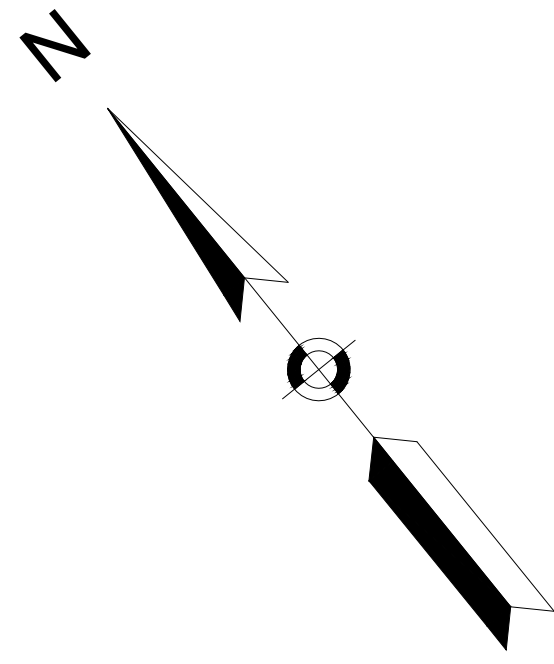


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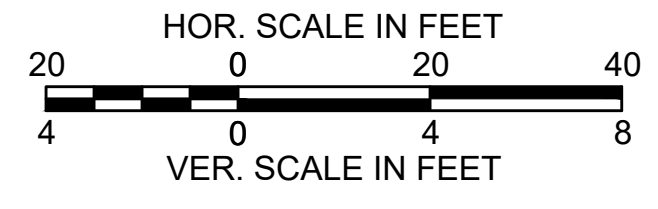
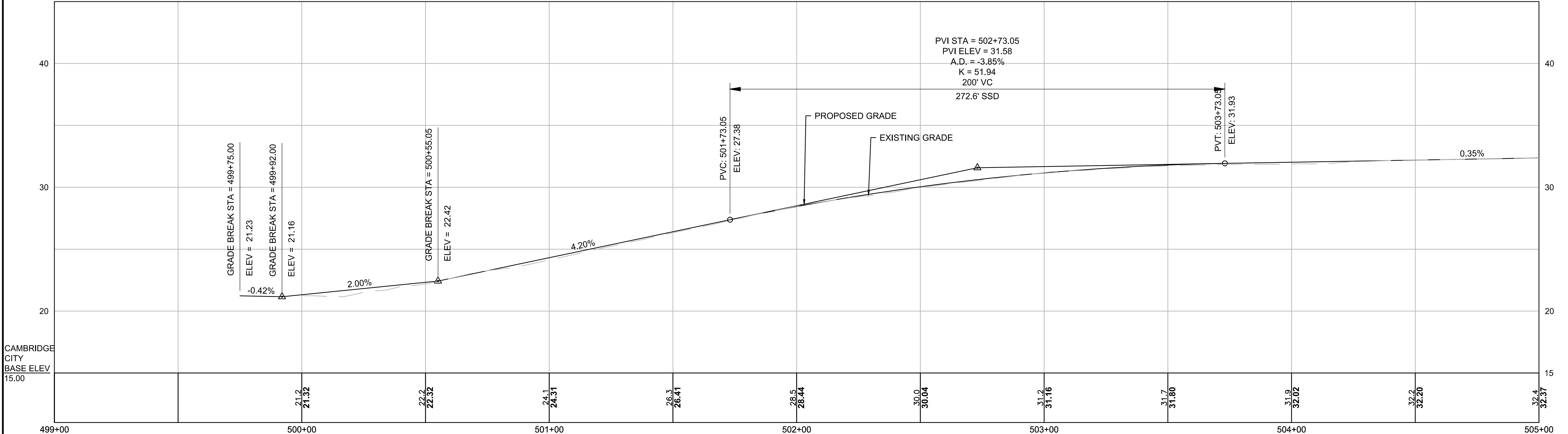


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - GRADING PLAN AND PROFILE PLAN 3 OF 3

Sheet	R-24
File No.	10565



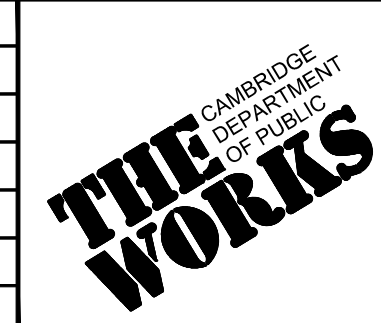
CHESTNUT ST



CAMBRIDGE CITY BASE ELEV 15.00



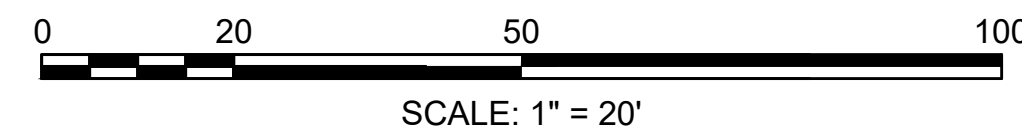
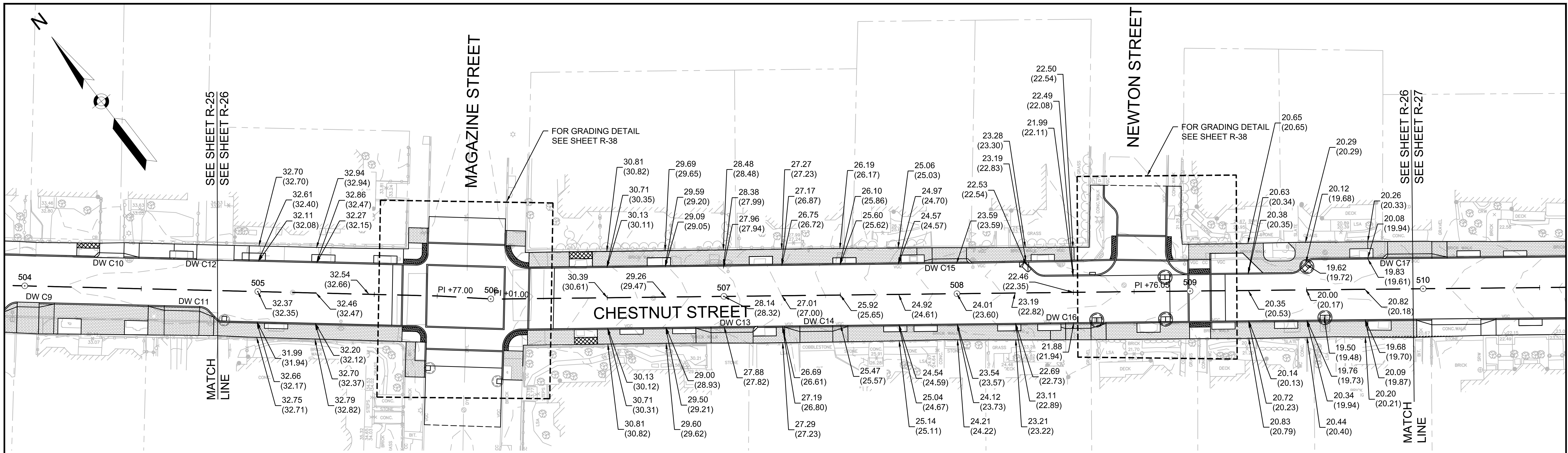
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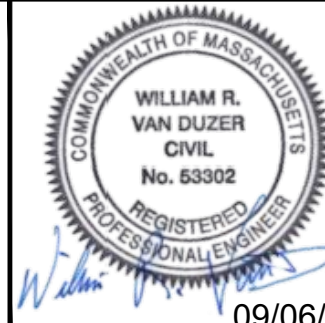
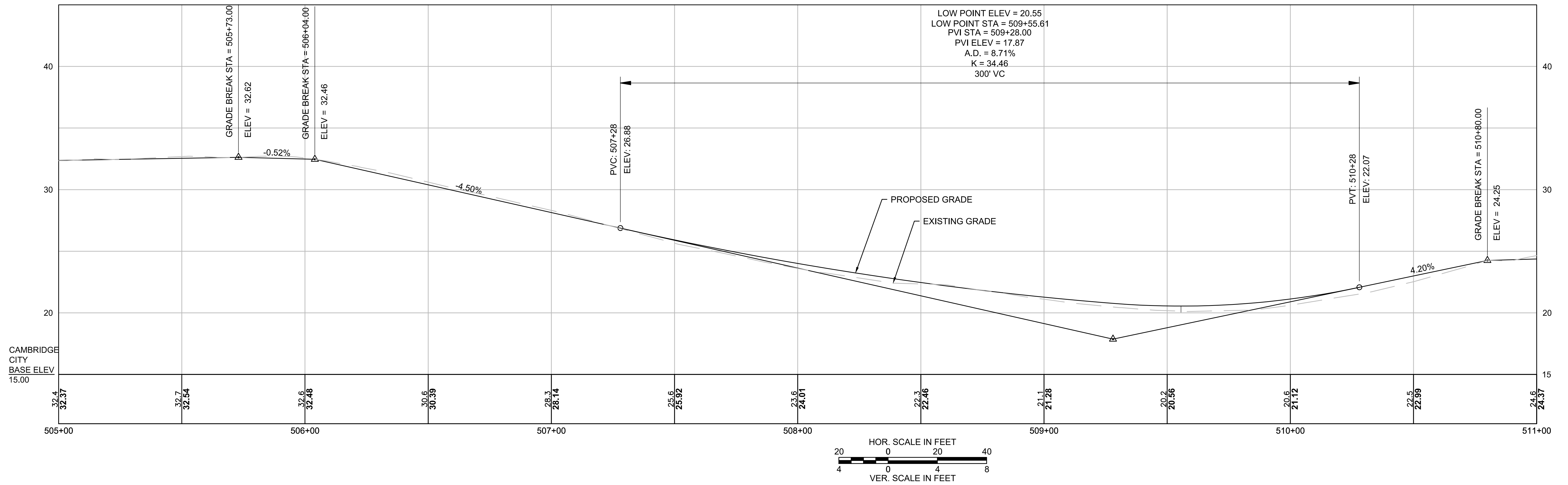
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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - GRADING PLAN & PROFILE PLAN 1 OF 4

Sheet	R-25
File No.	10565

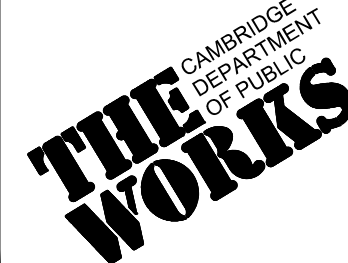
09/06/2022



CHESTNUT ST

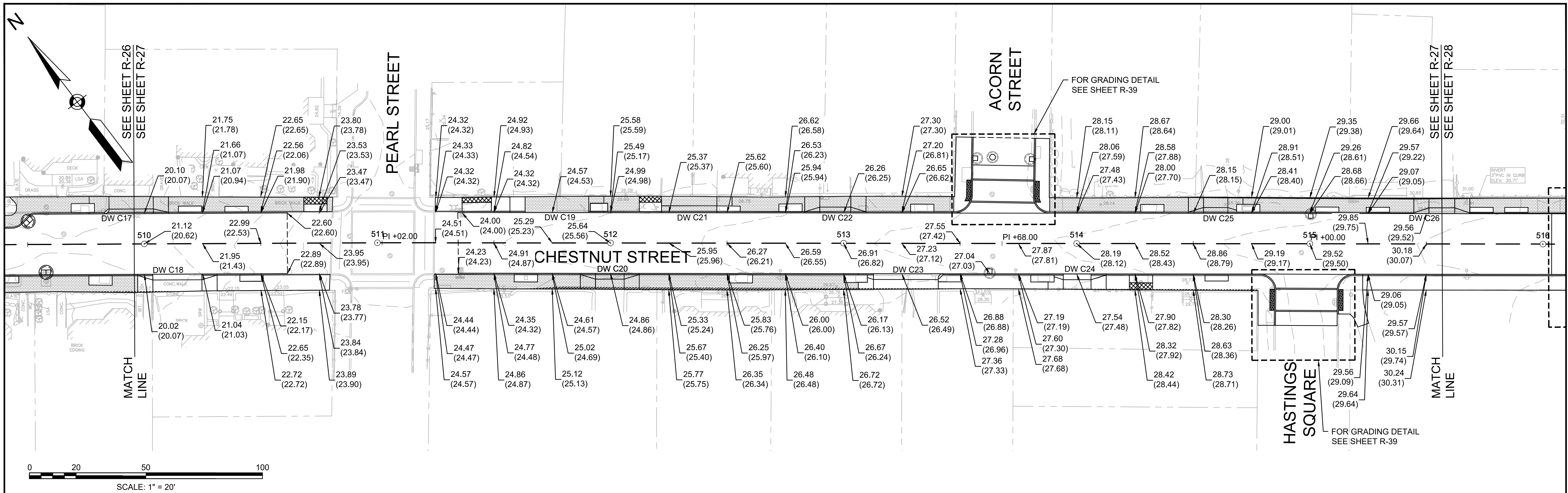


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Approved by	PMF
09/06/2022	

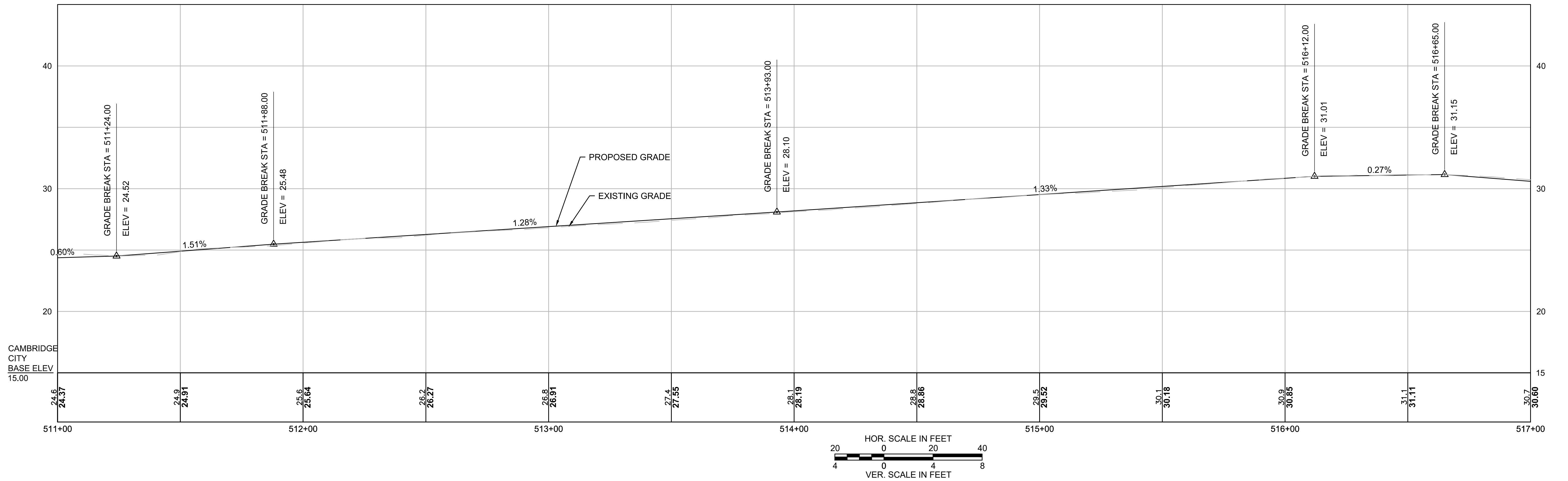


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT ST - GRADING PLAN & PROFILE PLAN 2 OF 4

Sheet	R-26
File No.	10565

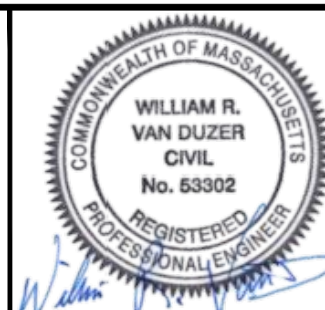


CHESTNUT ST

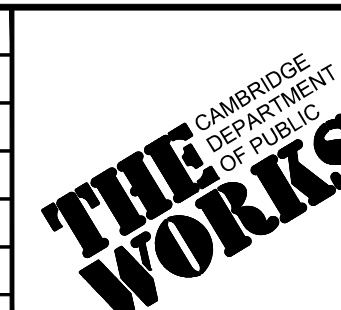


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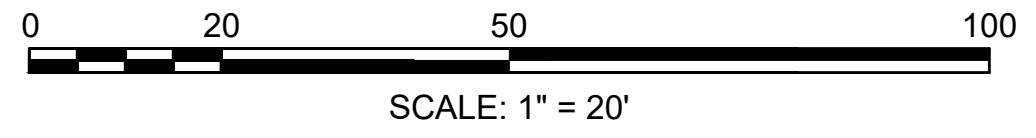
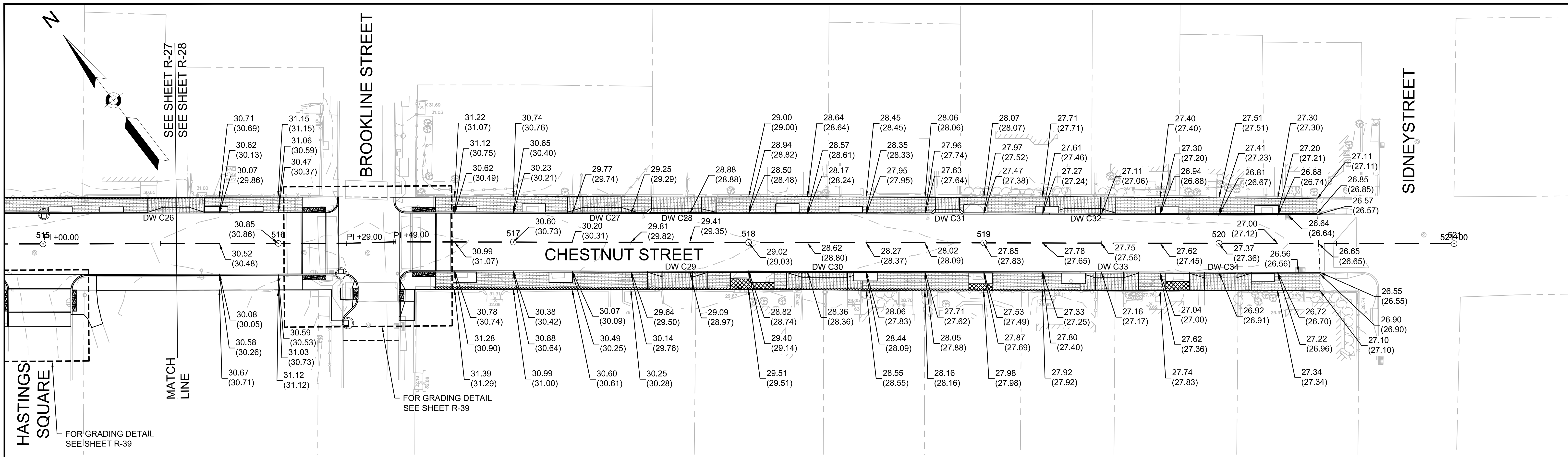


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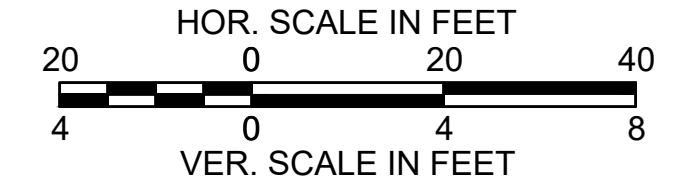
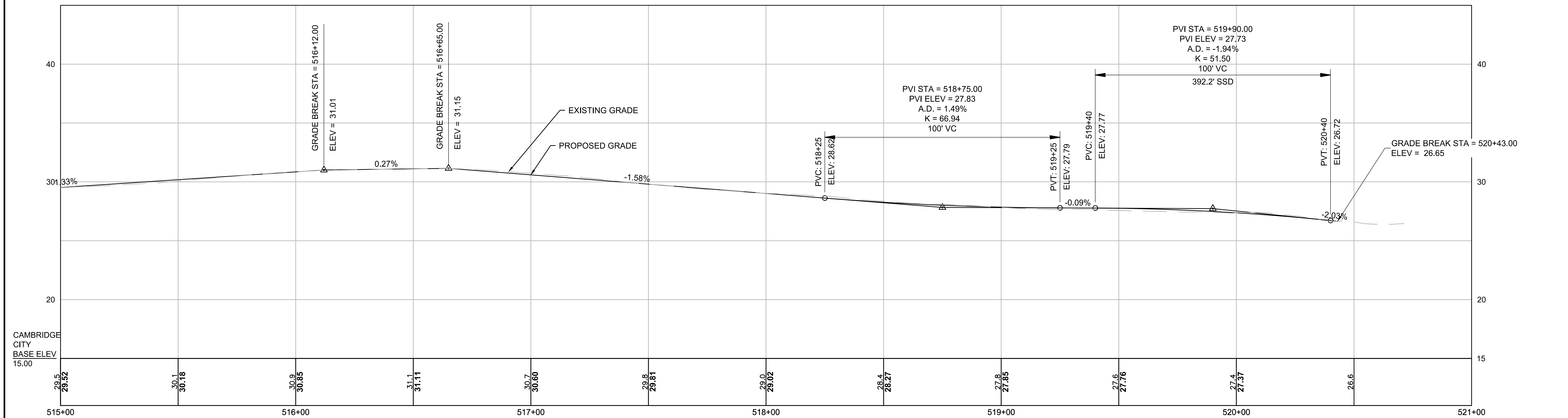


Client CITY OF CAMBRIDGE, MASSACHUSETTS
Project CHAPTER 90 CONTRACT 24
ROADWAY IMPROVEMENT PROJECT
Drawing CHESTNUT ST - GRADING PLAN & PROFILE
PLAN 3 OF 4

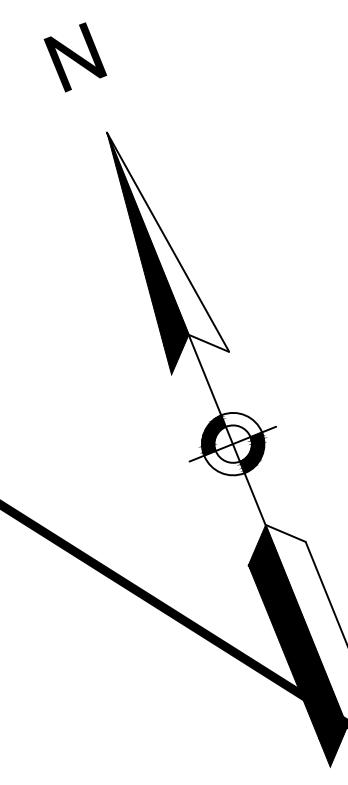
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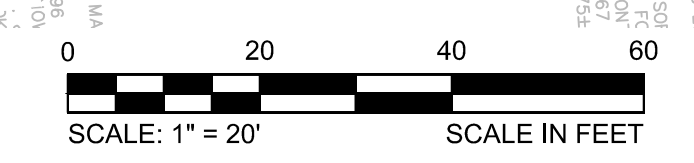
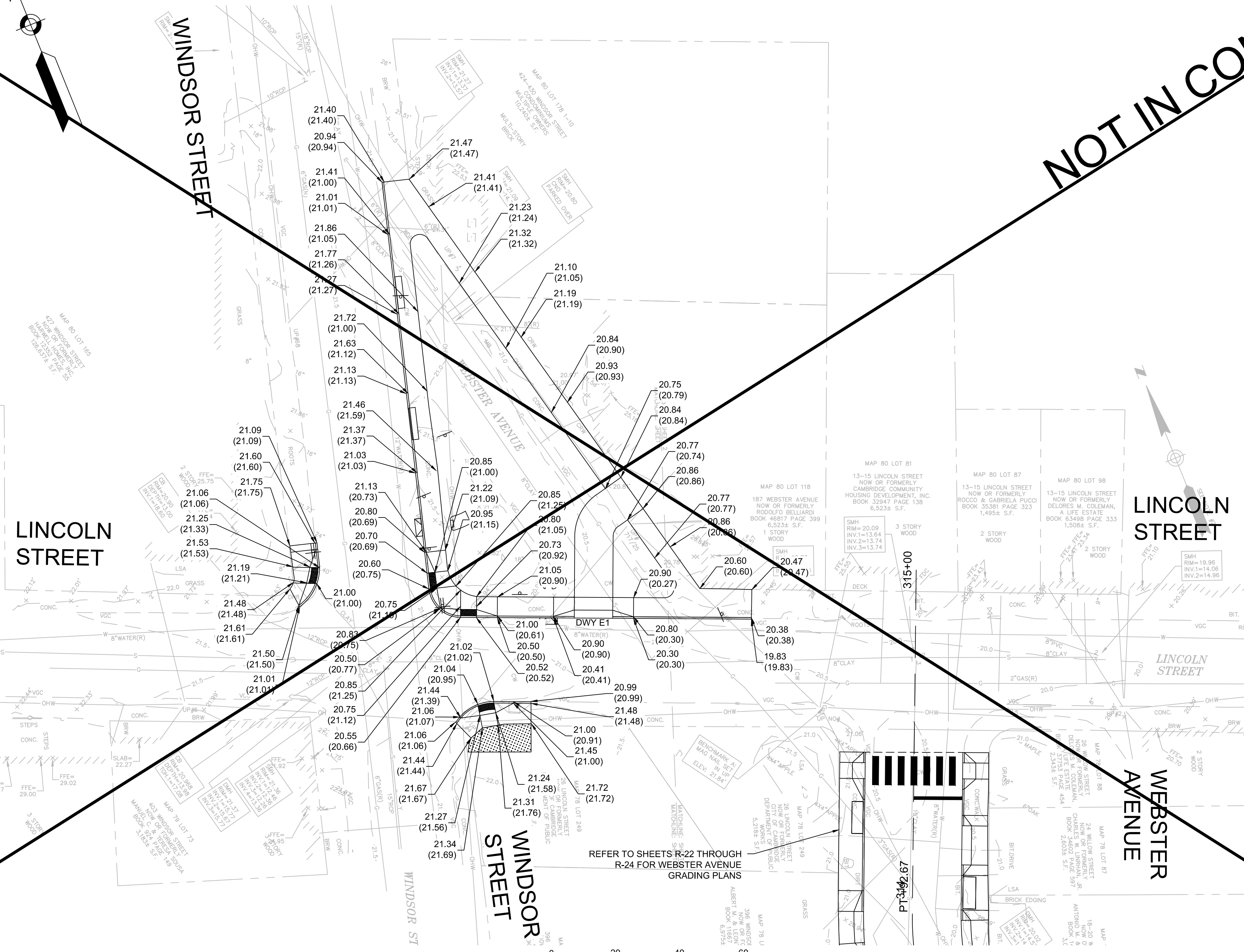
CHESTNUT ST



		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		Scale AS NOTED Date SEPTEMBER 2022 Job No. 20170208.037A Designed by SBM Drawn by AJM Checked by WRV Approved by PMF		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing CHESTNUT ST - GRADING PLAN & PROFILE PLAN 4 OF 4	Sheet R-28 File No. 10565
				Approved by PMF		No. Description Date REVISIONS	



NOT IN CONTRACT

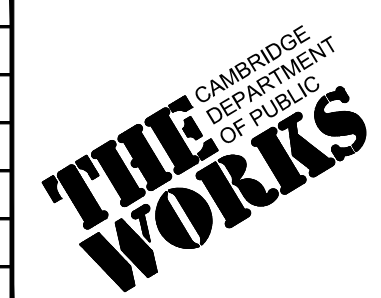


REFER TO SHEETS R-22 THROUGH R-24 FOR WEBSTER AVENUE GRADING PLANS



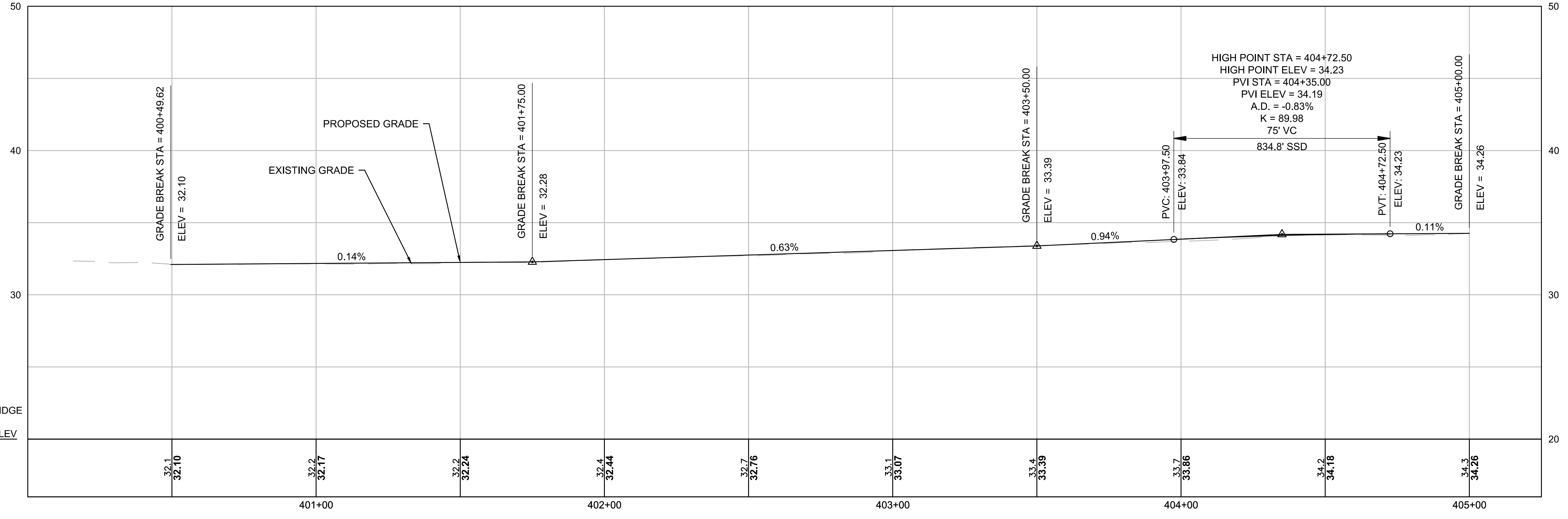
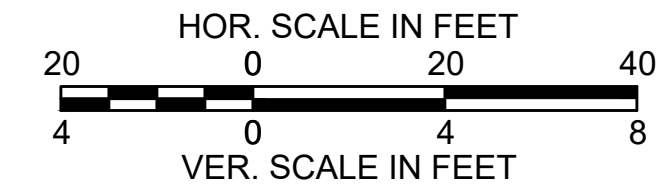
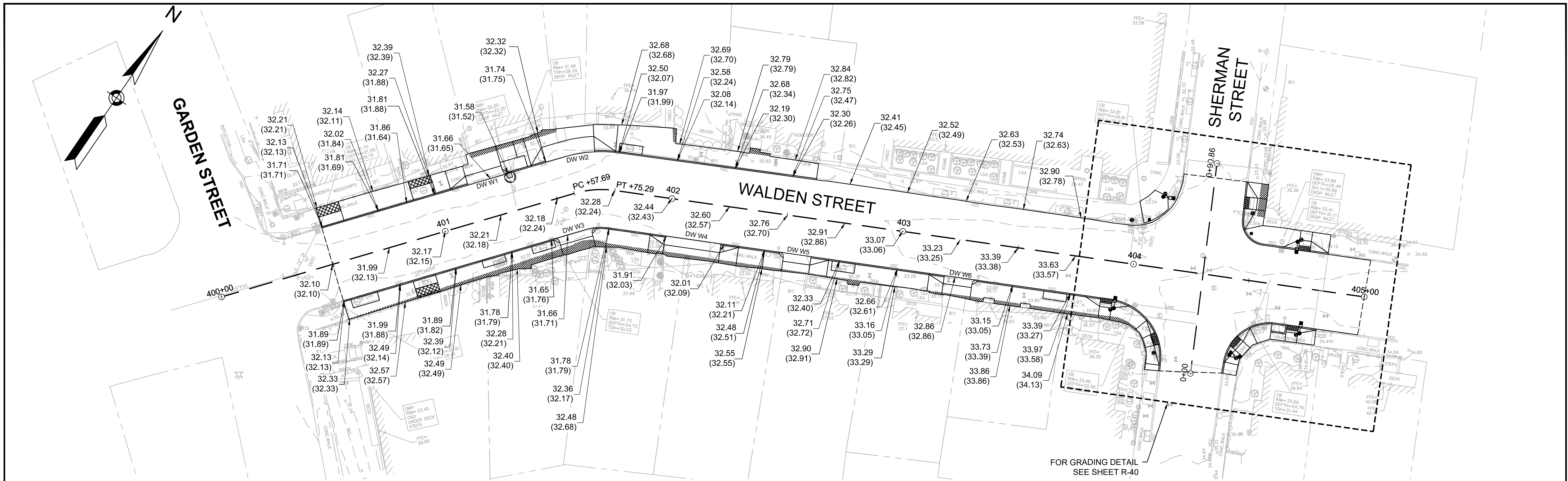
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Date	AUGUST 2022
Job No.	20170208.037A
Designed by	KEA
Drawn by	KEA
Checked by	BJM
Approved by	BMS

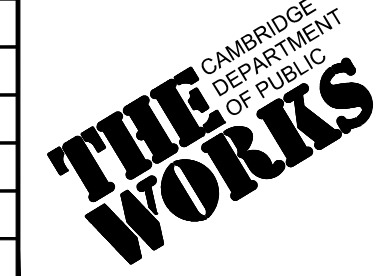


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	LINCOLN STREET GRADING PLAN SHEET 1 OF 1

Sheet	R-29
File No.	10565

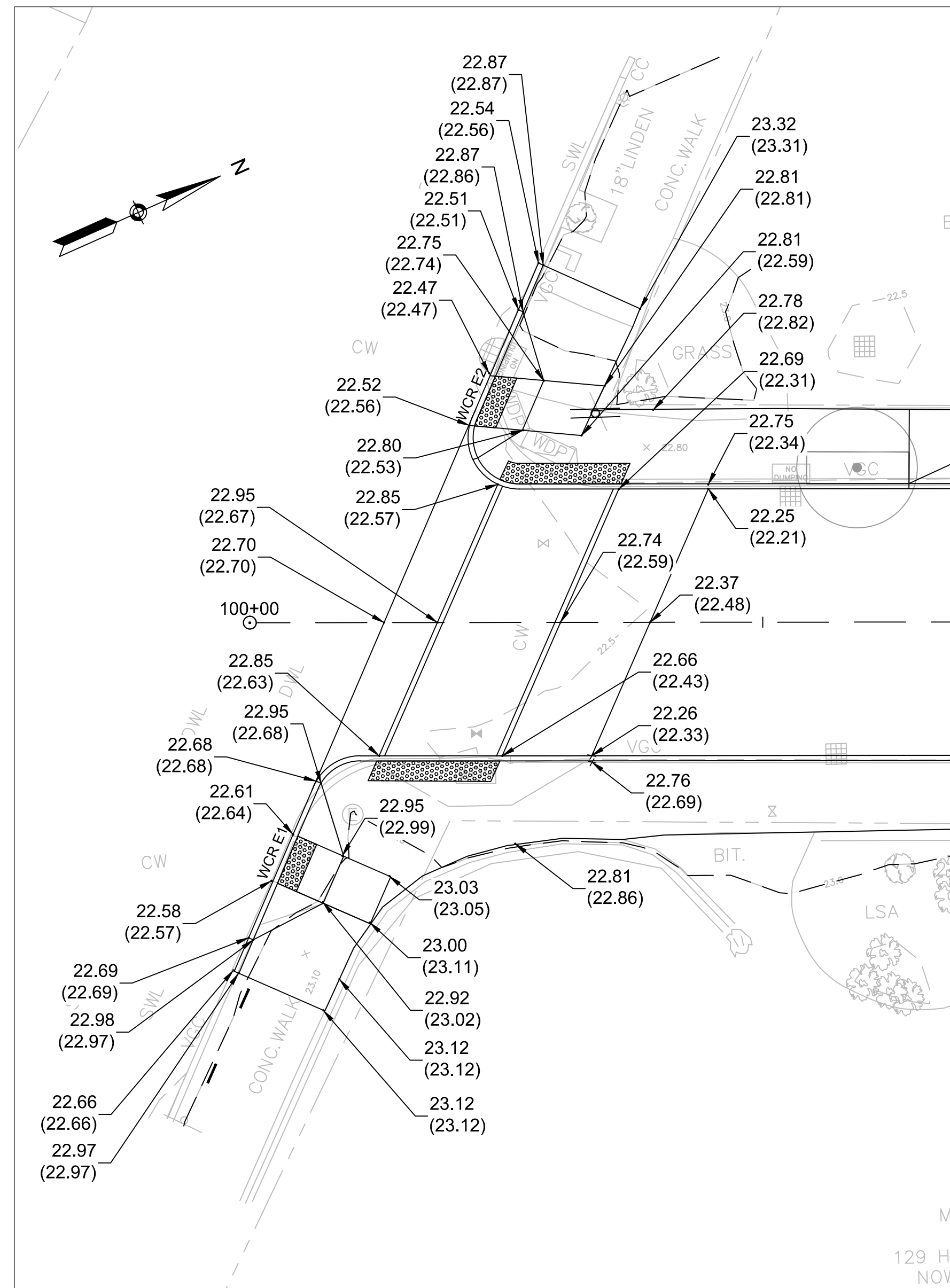


Scale	AS NOTED		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

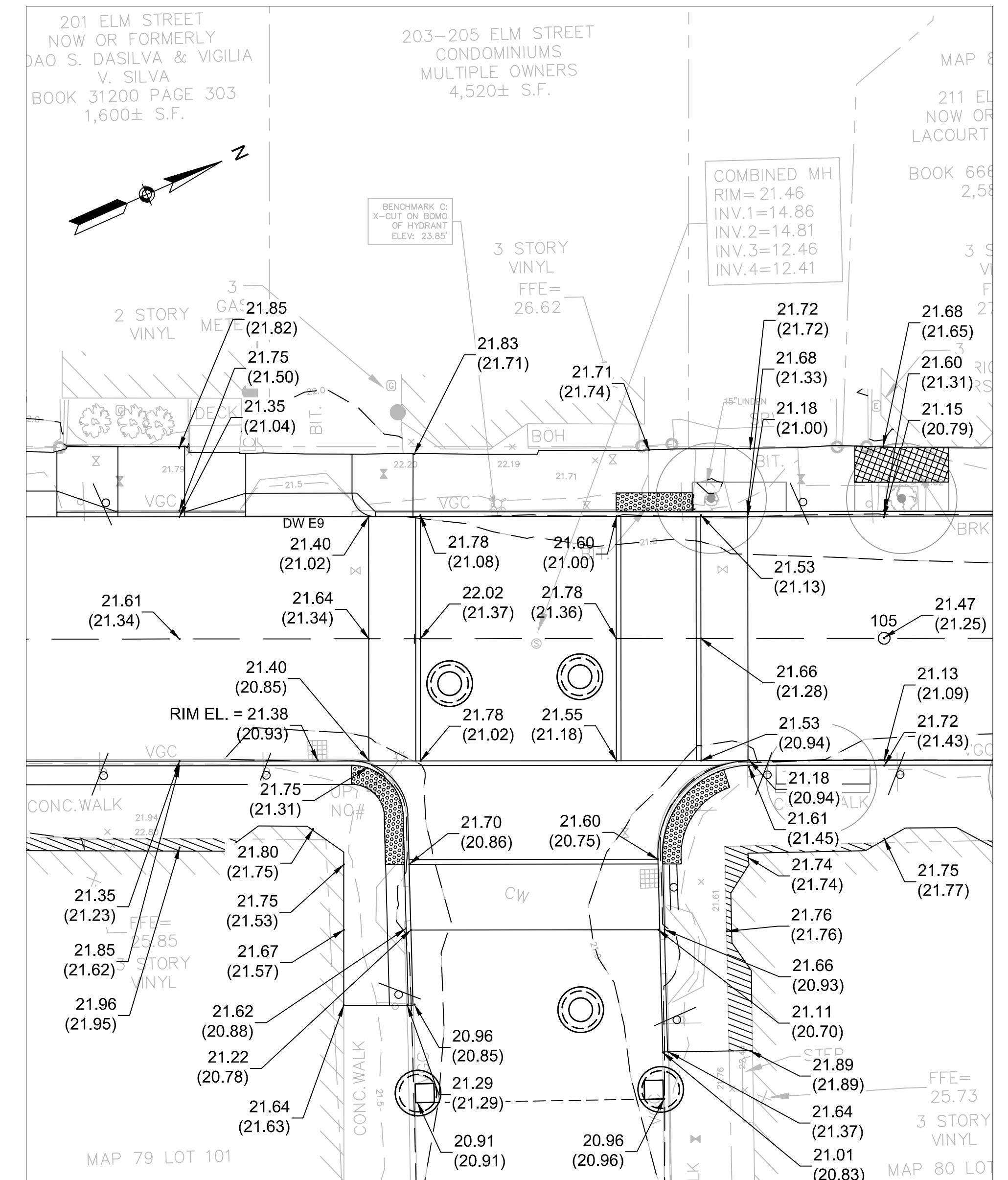


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN STREET - GRADING PLAN AND PROFILE PLAN 1 OF 1

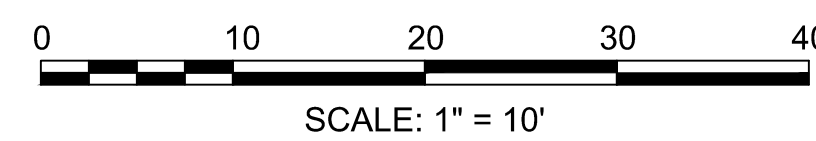
Sheet	R-30
File No.	10565



RAISED CROSSWALK GRADING PLAN
ELM STREET AT HAMPSHIRE STREET



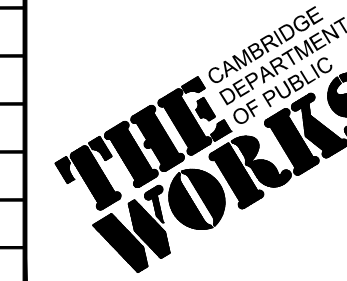
RAISED CROSSWALK GRADING PLAN
ELM STREET AT LINCOLN STREET



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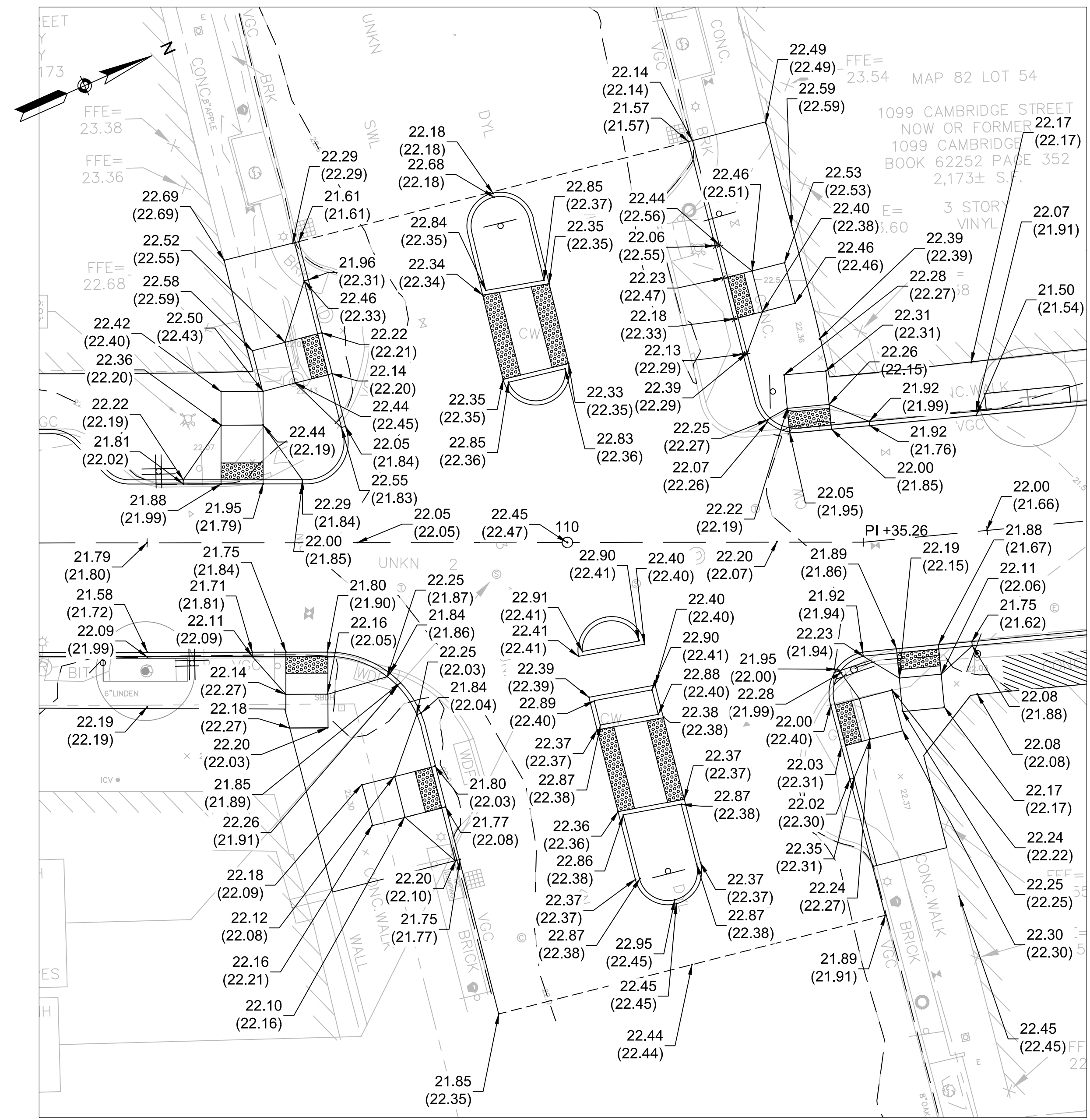


Scale	1" = 10'		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BJM	No.	Description
Approved by	BMS		REVISIONS

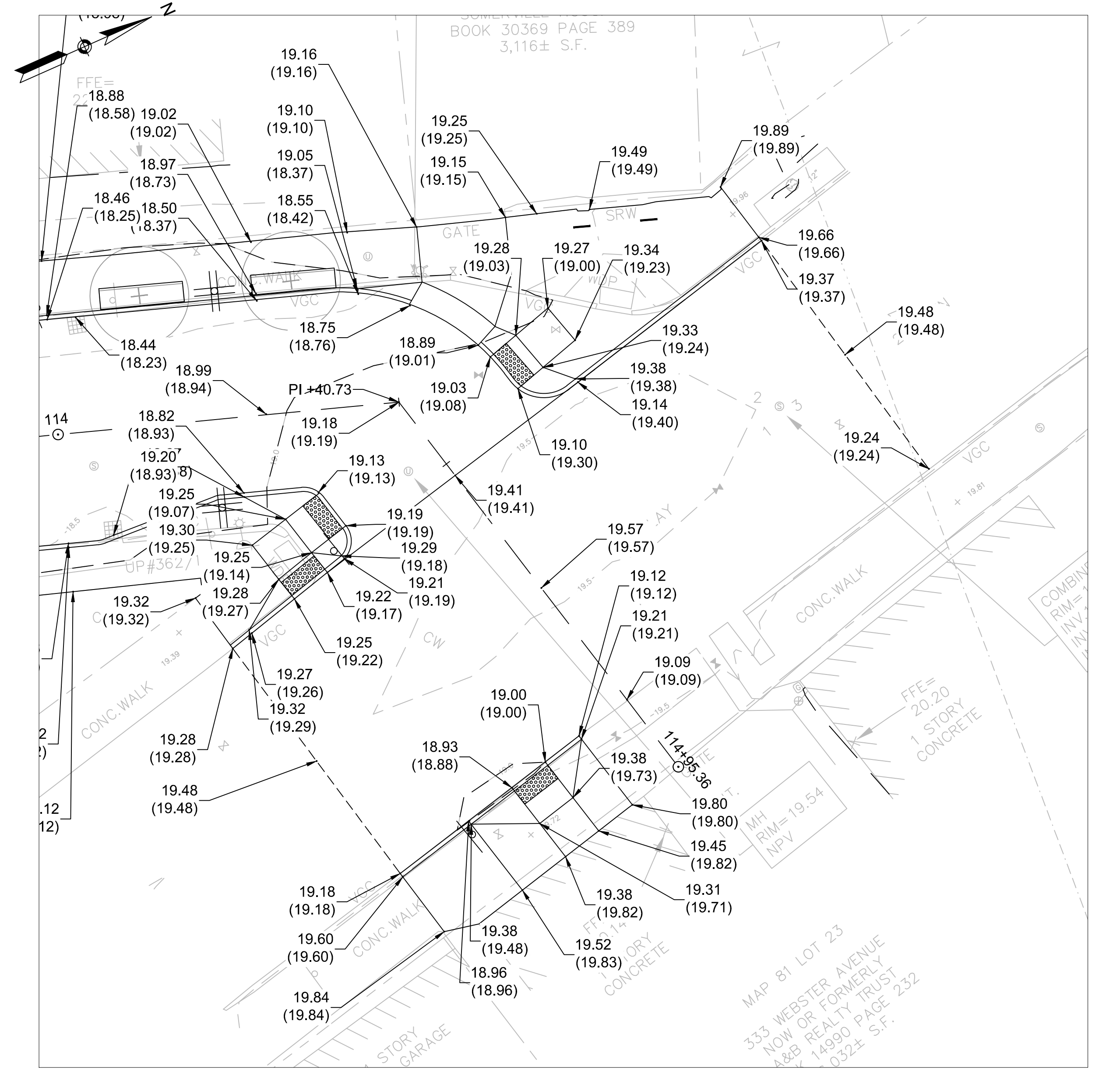


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET - DETAIL GRADING SHEET 1 OF 2

Sheet	R-31
File No.	10565



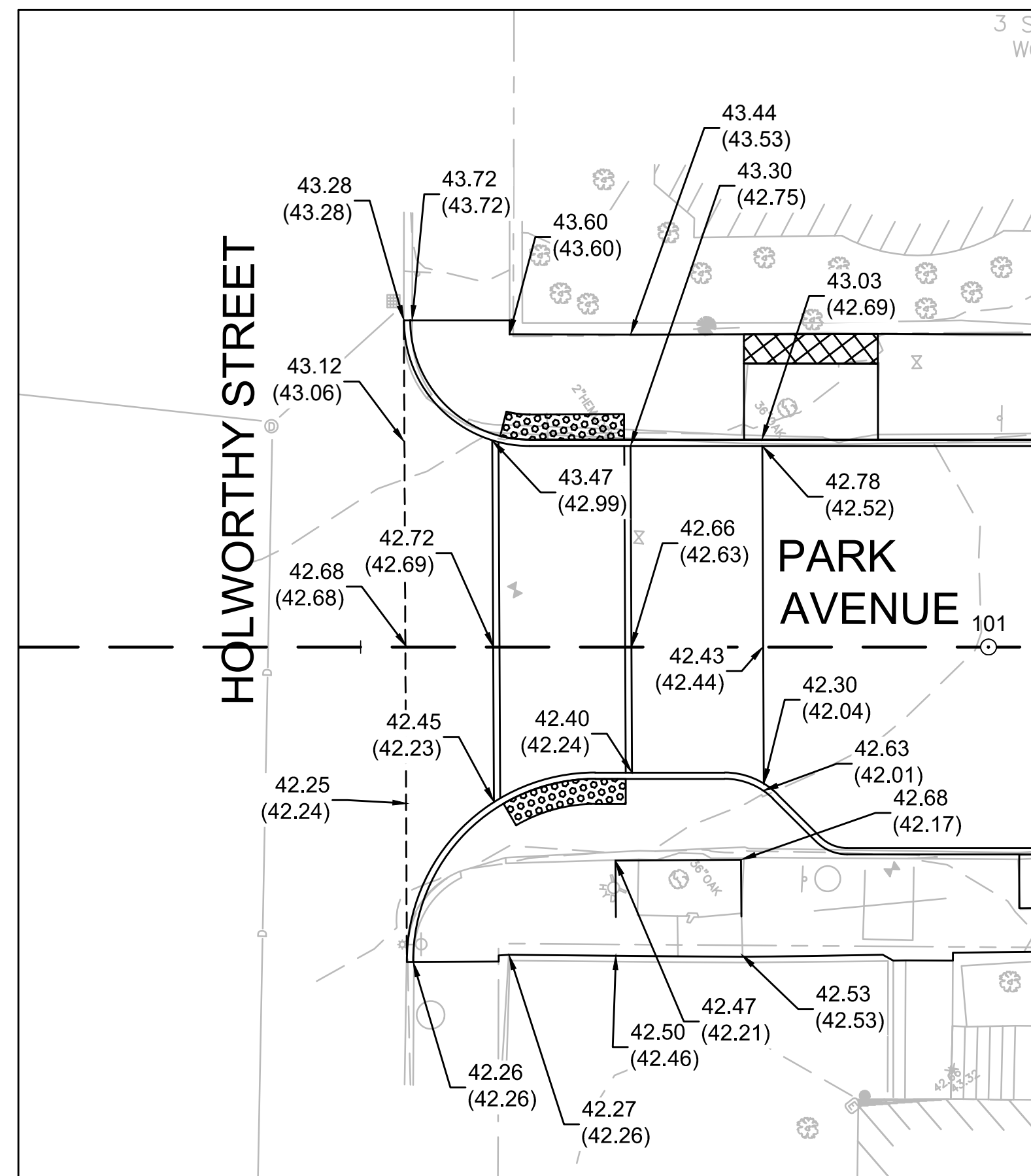
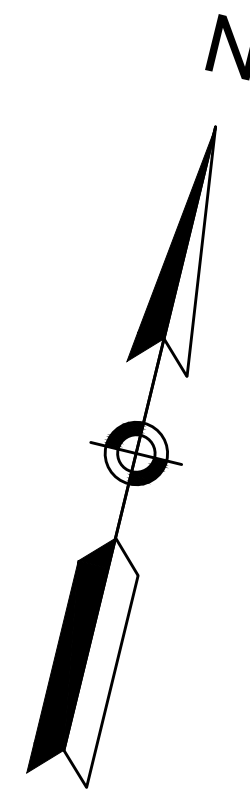
INTERSECTION GRADING PLAN
ELM STREET AT CAMBRIDGE STREET



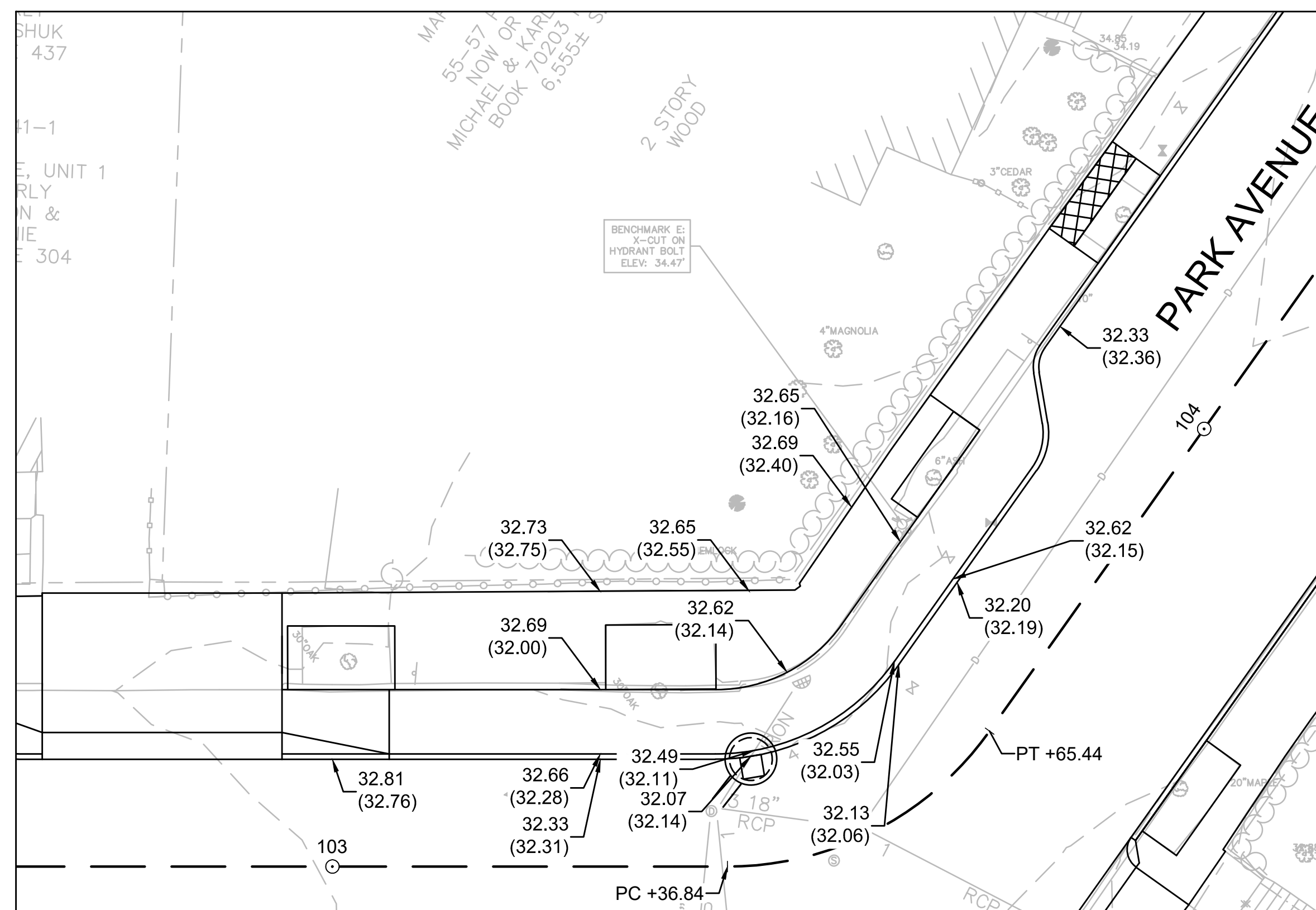
INTERSECTION GRADING PLAN
ELM STREET AT WEBSTER AVENUE



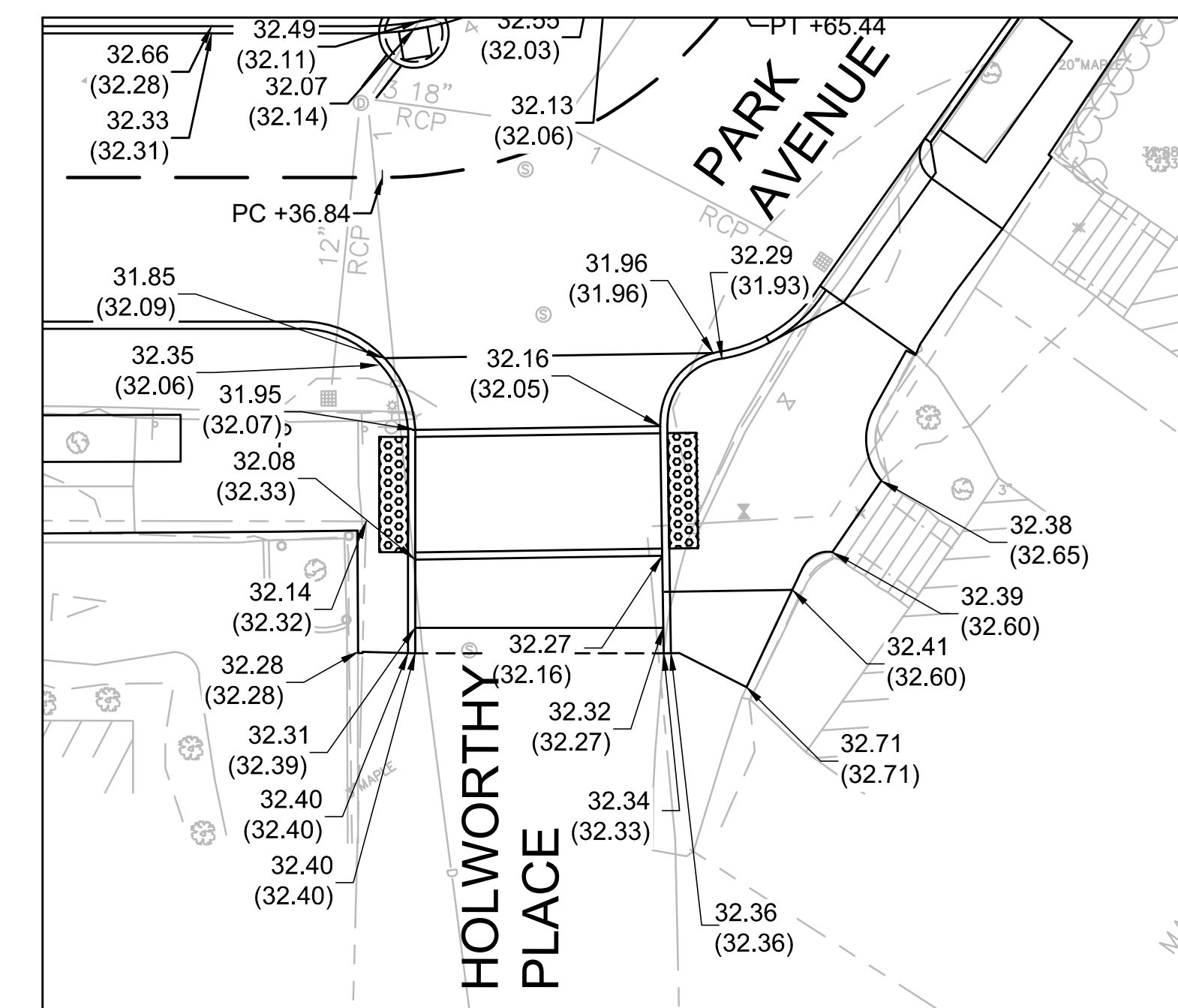
				Scale: 1" = 10' Date: AUGUST 2022 Job No.: 20170208.037A Designed by: KEA Drawn by: KEA Checked by: BJM Approved by: BMS		Client: CITY OF CAMBRIDGE, MASSACHUSETTS Project: CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing: ELM STREET - DETAIL GRADING SHEET 2 OF 2	Sheet: R-32 File No.: 10565
				27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com		333 WEBSTER AVENUE NOW OR FORMERLY A&S REALTY TRUST 14990 PAGE 232 032± S.F.	



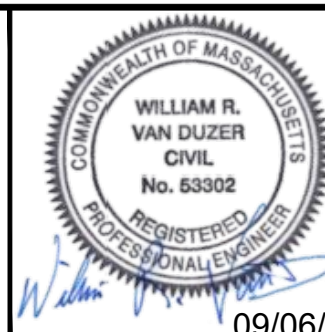
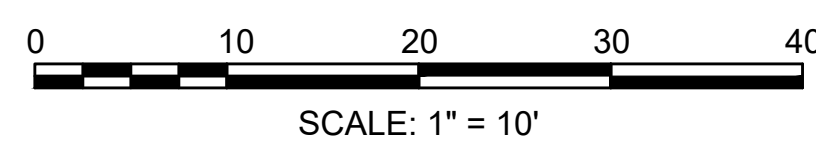
RAISED CROSSWALK GRADING PLAN
PARK AVENUE AT HOLWORTHY STREET
SCALE: 1" = 10'



CURB EXTENSION ON PARK AVENUE
SCALE: 1" = 10'



RAISED CROSSWALK GRADING PLAN
PARK AVENUE AT HOLWORTHY PLACE
SCALE: 1" = 10'

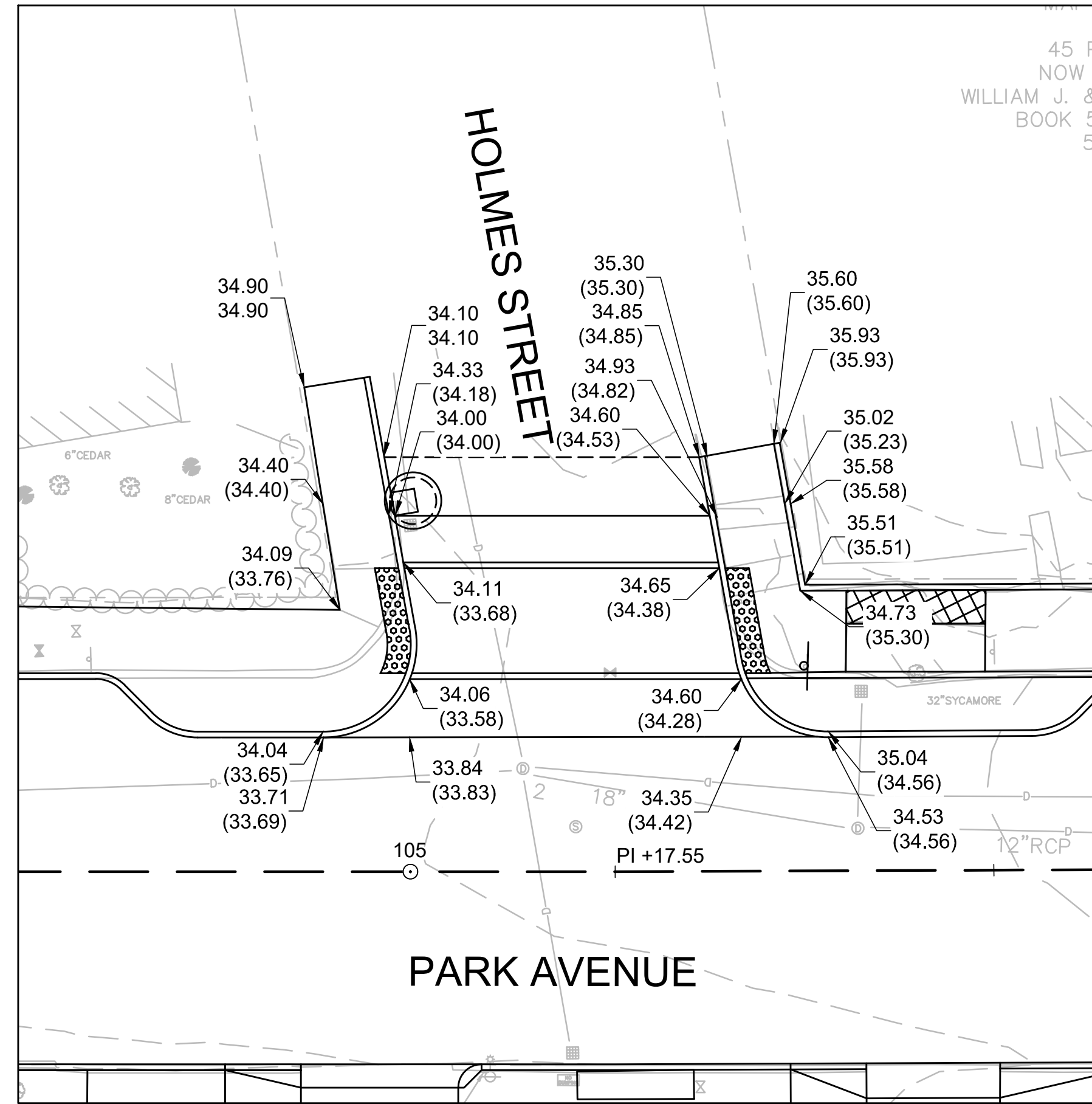
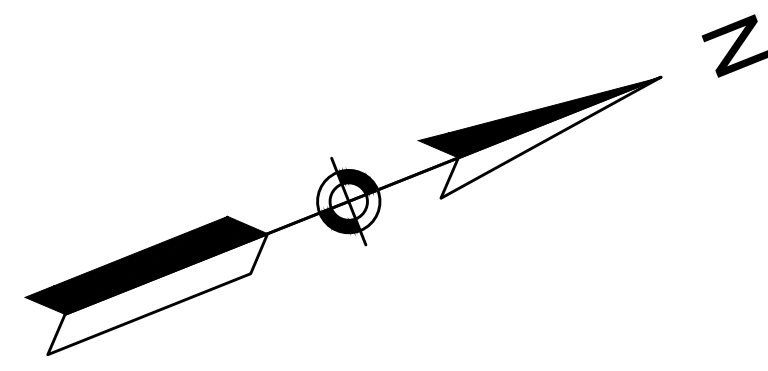


Scale	1"=10'			
Date	SEPTEMBER 2022			
Job No.	20170208.037A			
Designed by	SBM			
Drawn by	AJM			
Checked by	WRV	No.	Description	Date
Approved by	PMF		REVISIONS	

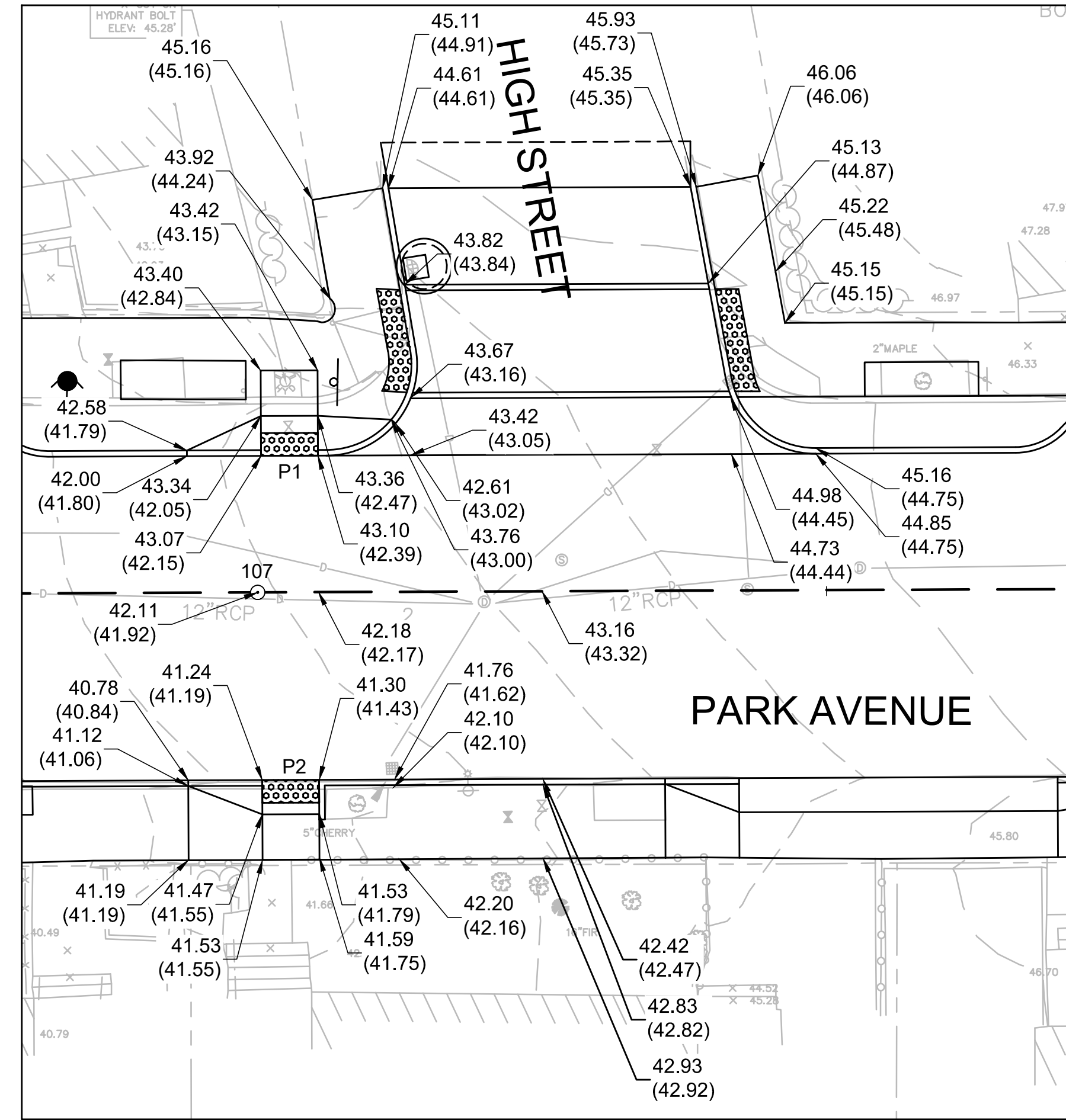


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - DETAIL GRADING PLAN 1 OF 2

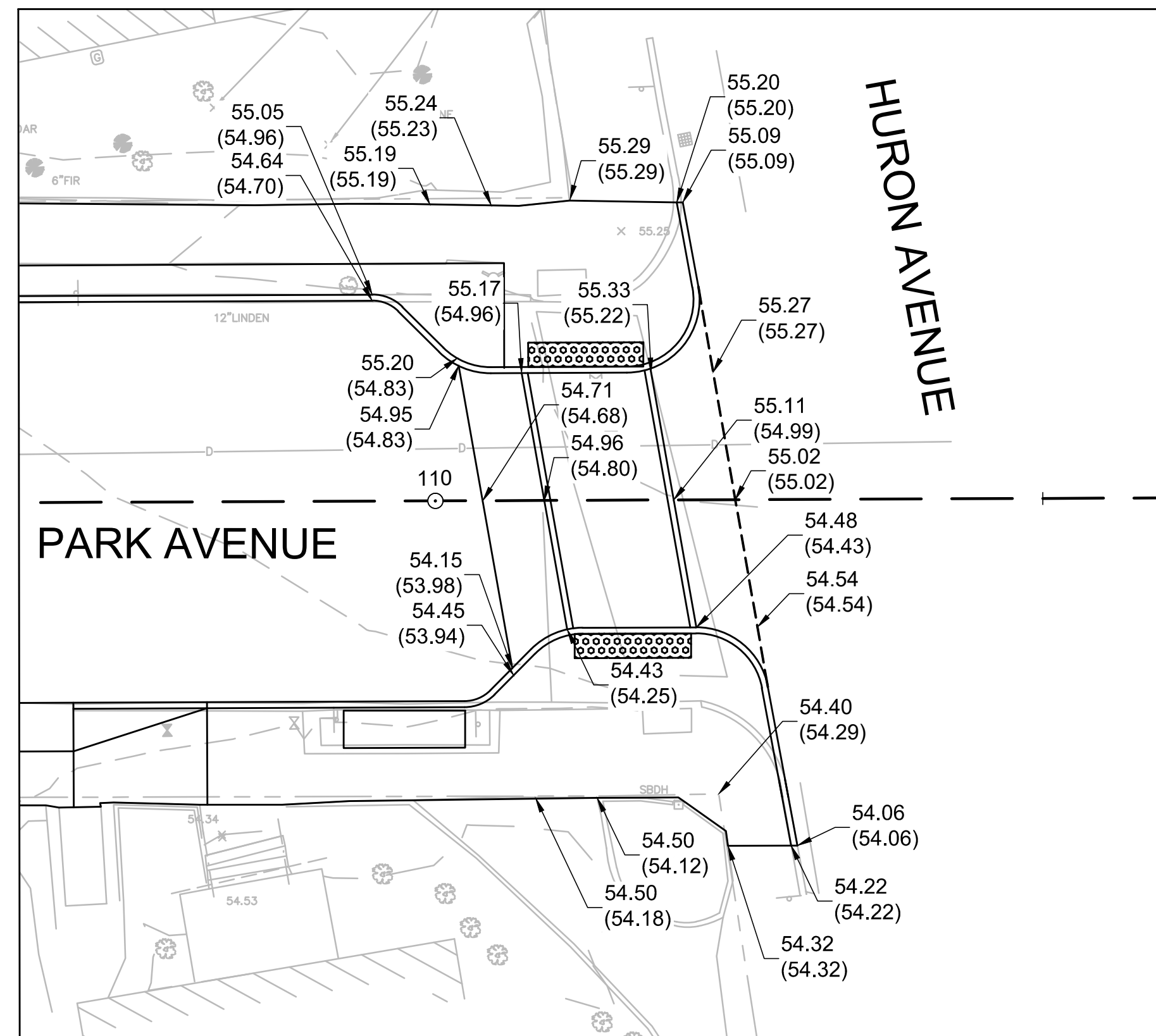
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File No.	10565



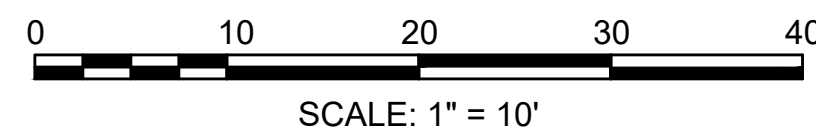
RAISED CROSSWALK GRADING PLAN
PARK AVENUE AT HOLMES STREET
SCALE: 1" = 10'



RAISED CROSSWALK GRADING PLAN
PARK AVENUE AT HIGH STREET
SCALE: 1" = 10'



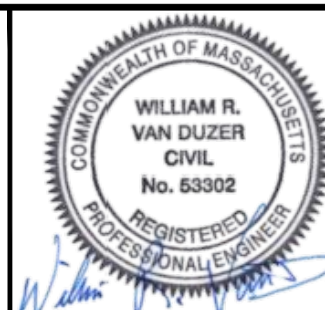
RAISED CROSSWALK GRADING PLAN
PARK AVENUE AT HURON STREET
SCALE: 1" = 10'



SCALE: 1" = 10'

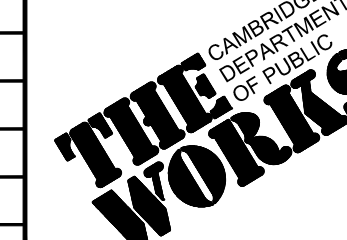


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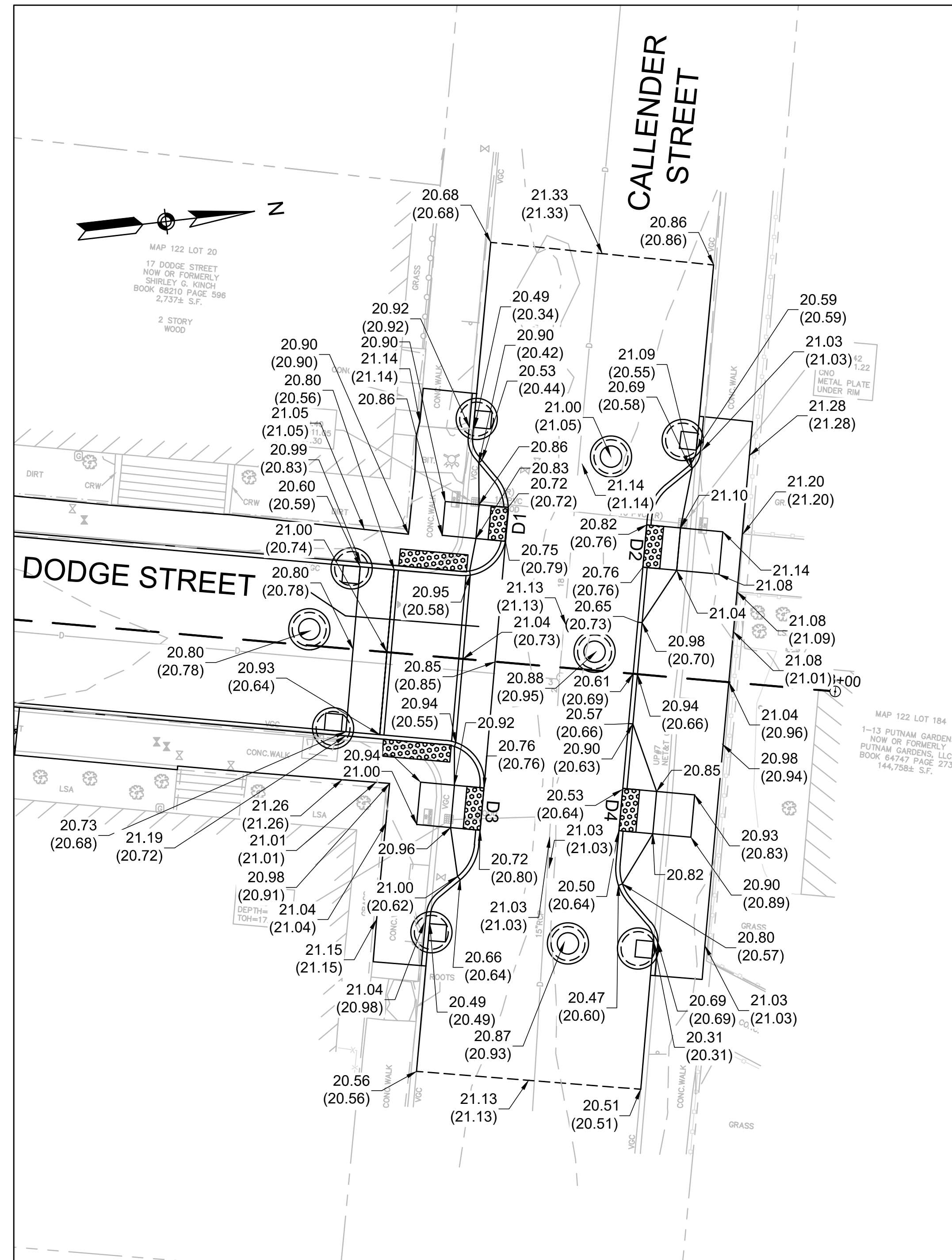
09/06/2022

Scale	1"=10'			
Date	SEPTEMBER 2022			
Job No.	20170208.037A			
Designed by	SBM			
Drawn by	AJM			
Checked by	WRV	No.	Description	Date
Approved by	PMF		REVISIONS	

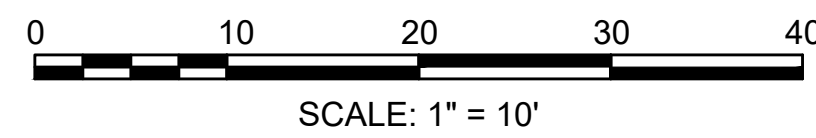


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - DETAIL GRADING PLAN 2 OF 2

Sheet	R-34
File No.	10565

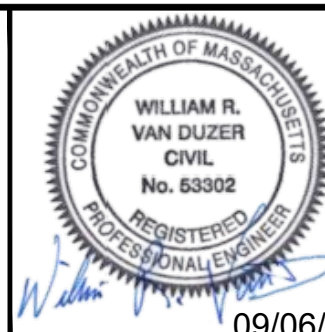


INTERSECTION GRADING PLAN
 DODGE STREET AT CALLENDER STREET
 SCALE: 1" = 10'



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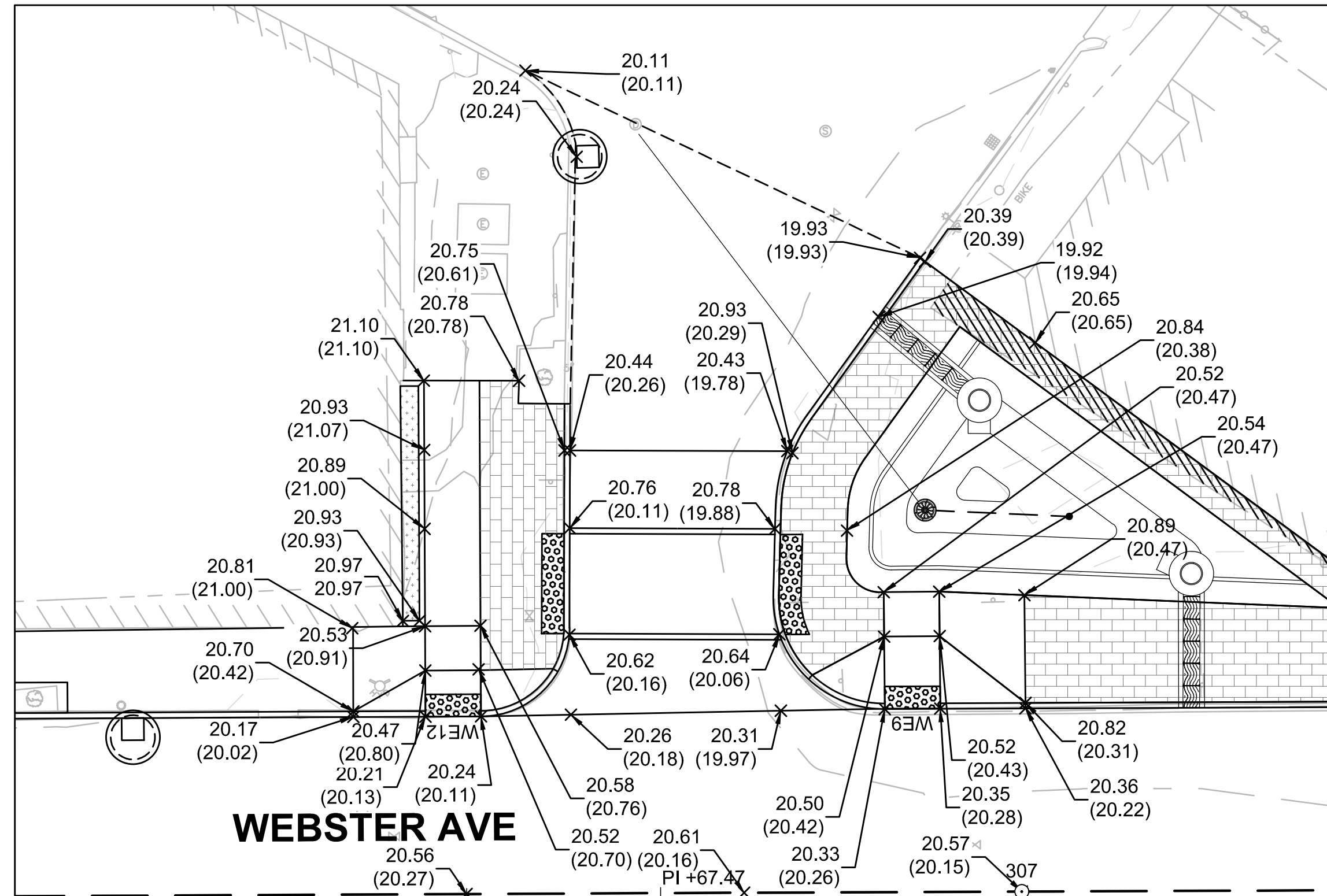
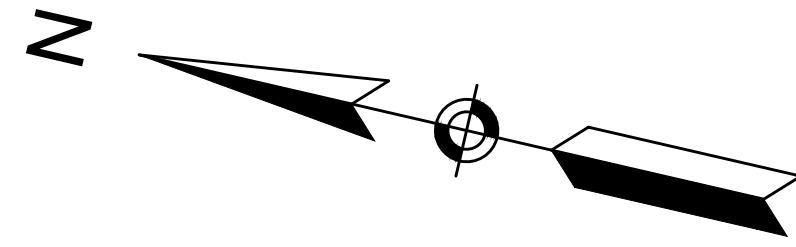


Scale	AS NOTED		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

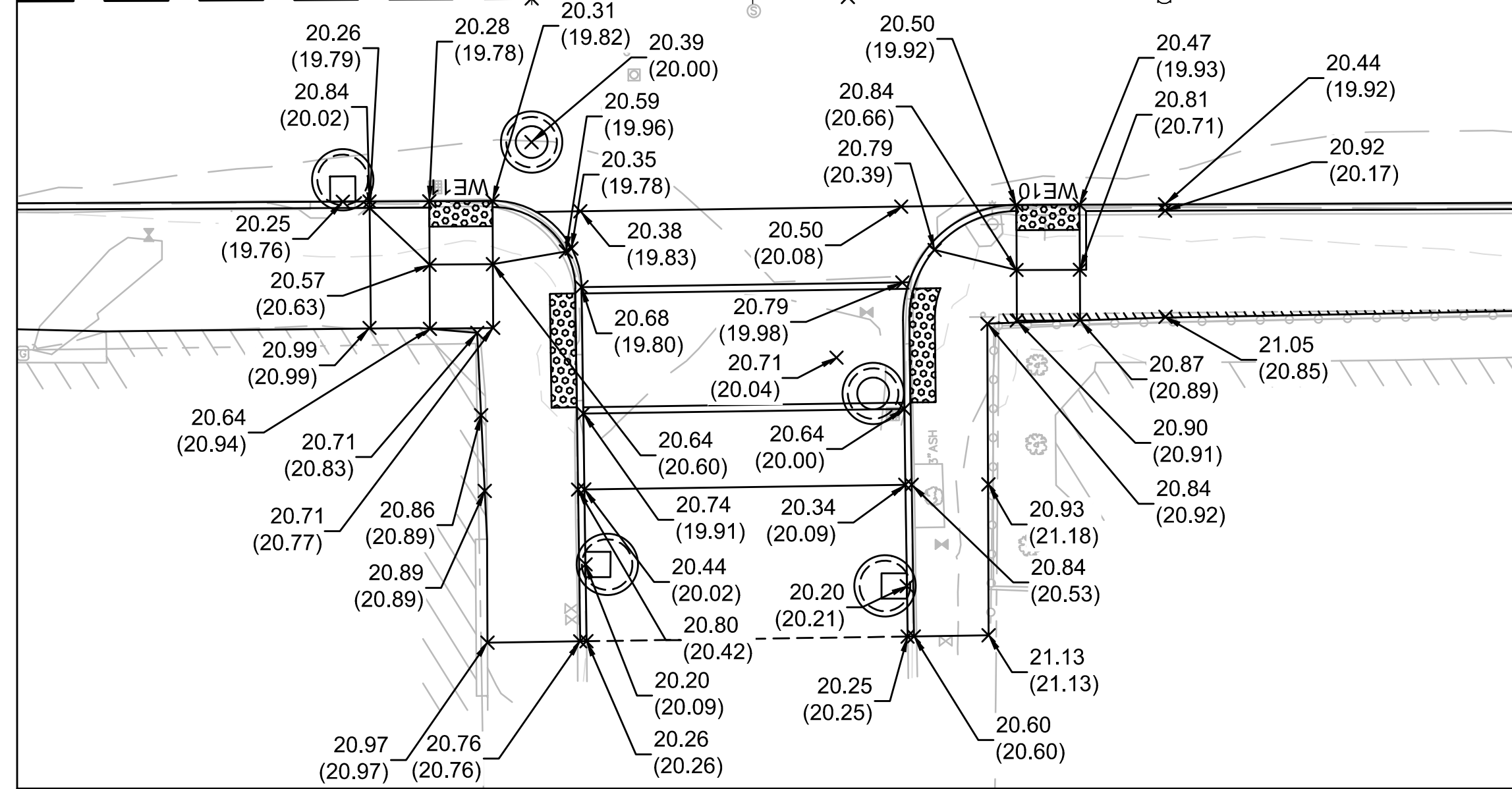


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	DODGE STREET - DETAIL GRADING PLAN PLAN 1 OF 1

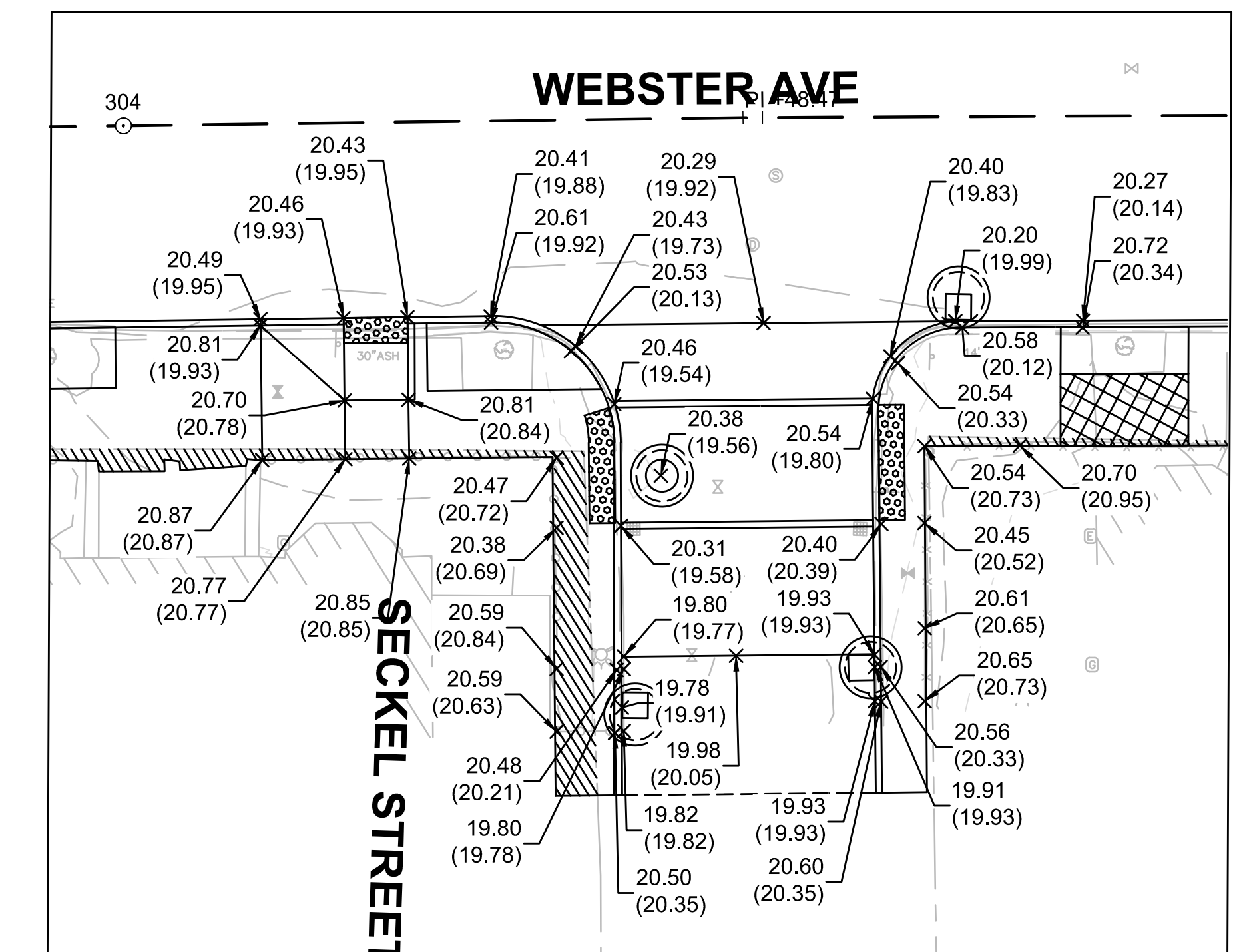
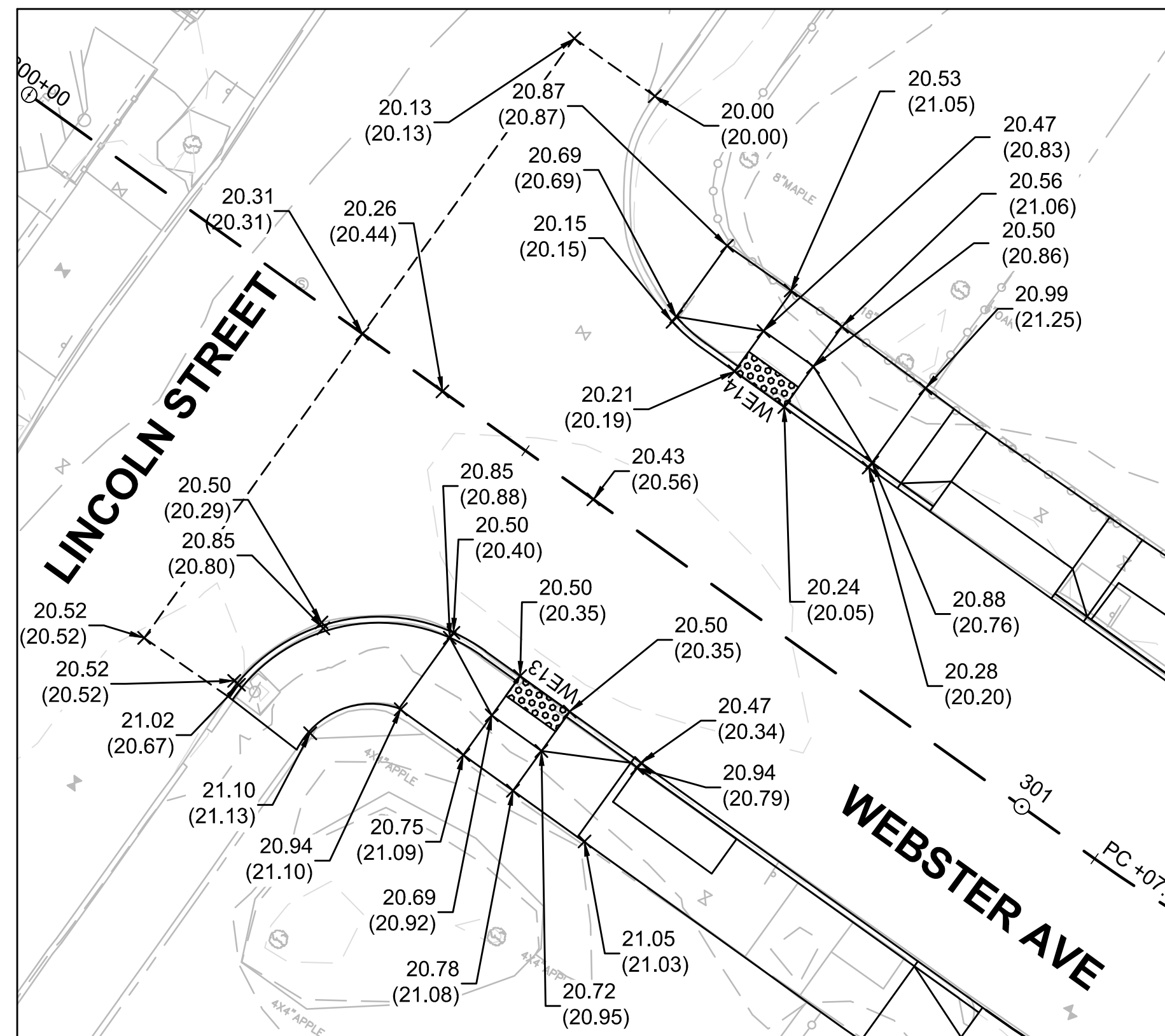
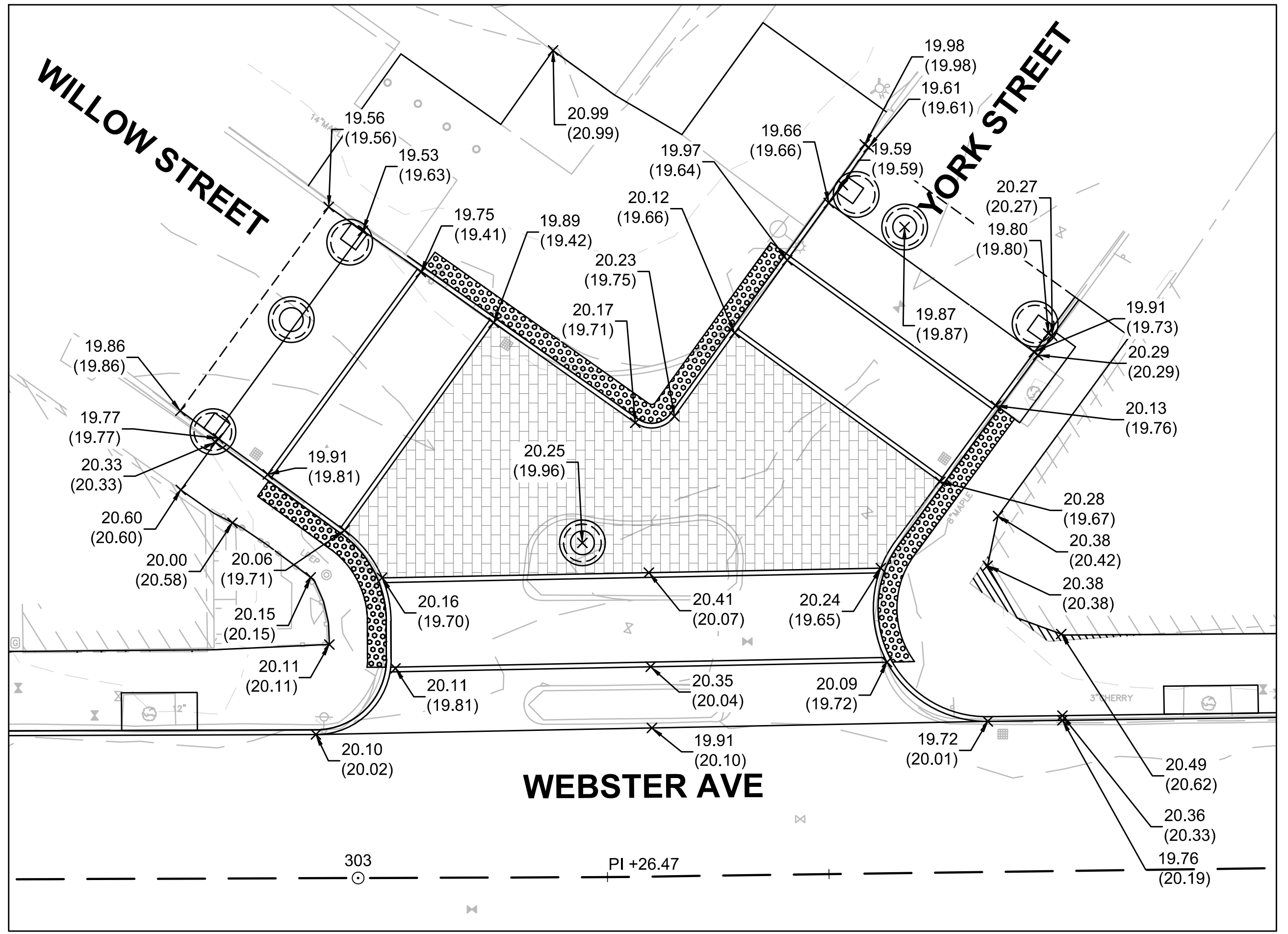
Sheet	R-35
File No.	10565



INTERSECTION GRADING PLAN
WEBSTER STREET AT PLYMOUTH STREET
SCALE: 1" = 10'

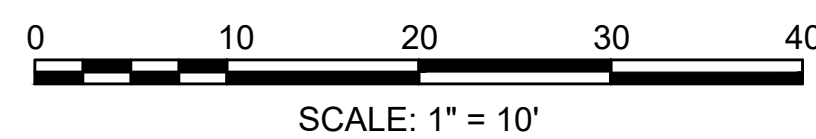


INTERSECTION GRADING PLAN
WEBSTER STREET AT WILLOW STREET & YORK STREET
SCALE: 1" = 10'



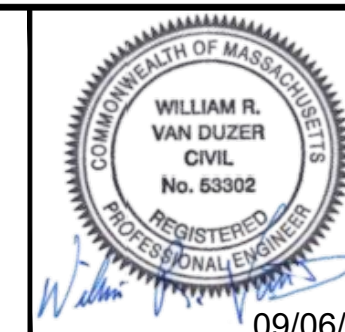
CURB RAMP GRADING PLAN
WEBSTER STREET AT LINCOLN STREET
SCALE: 1" = 10'

RAISED CROSSWALK GRADING PLAN
WEBSTER STREET AT SECKEL STREET
SCALE: 1" = 10'



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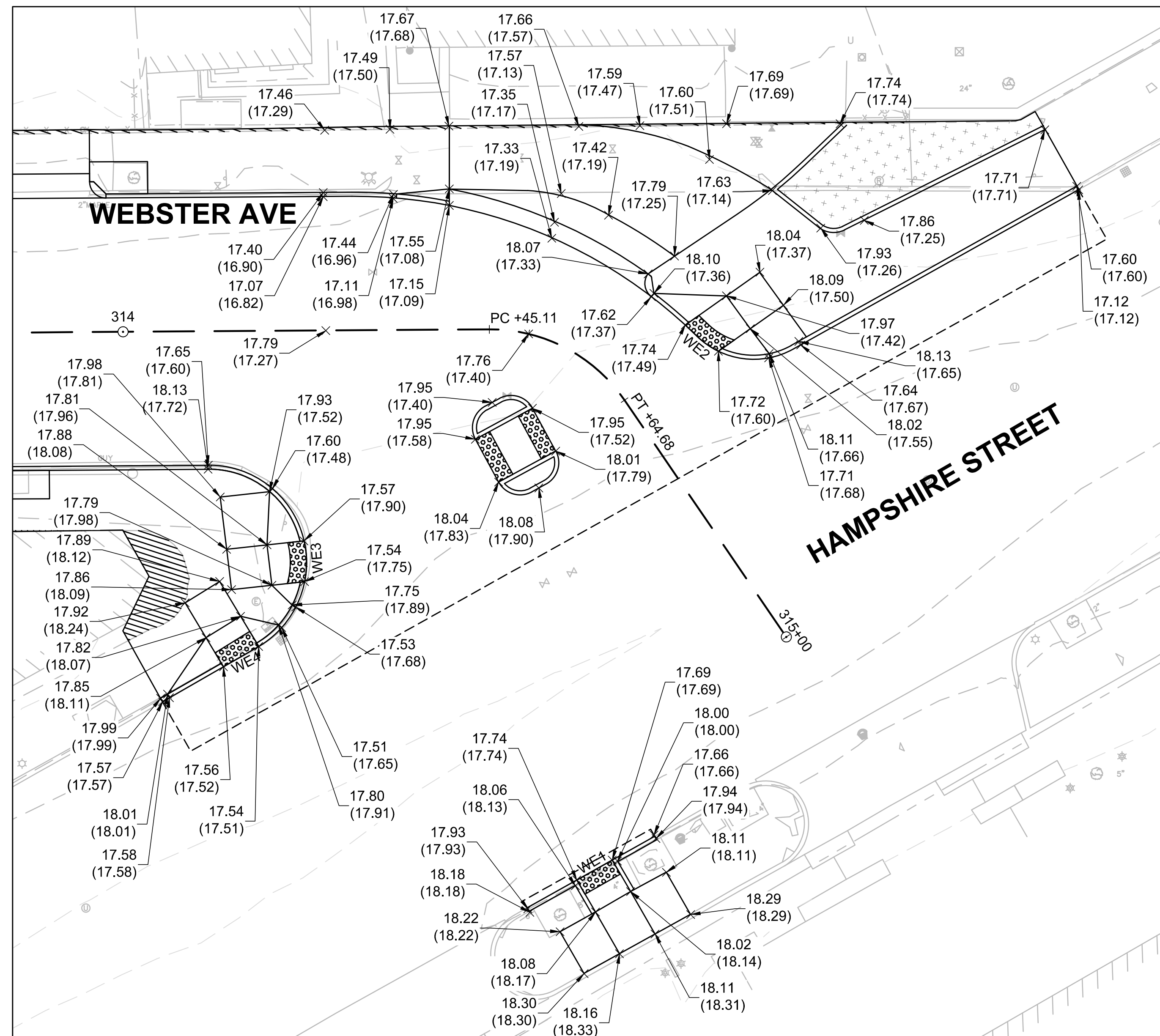


Scale	1"=10'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

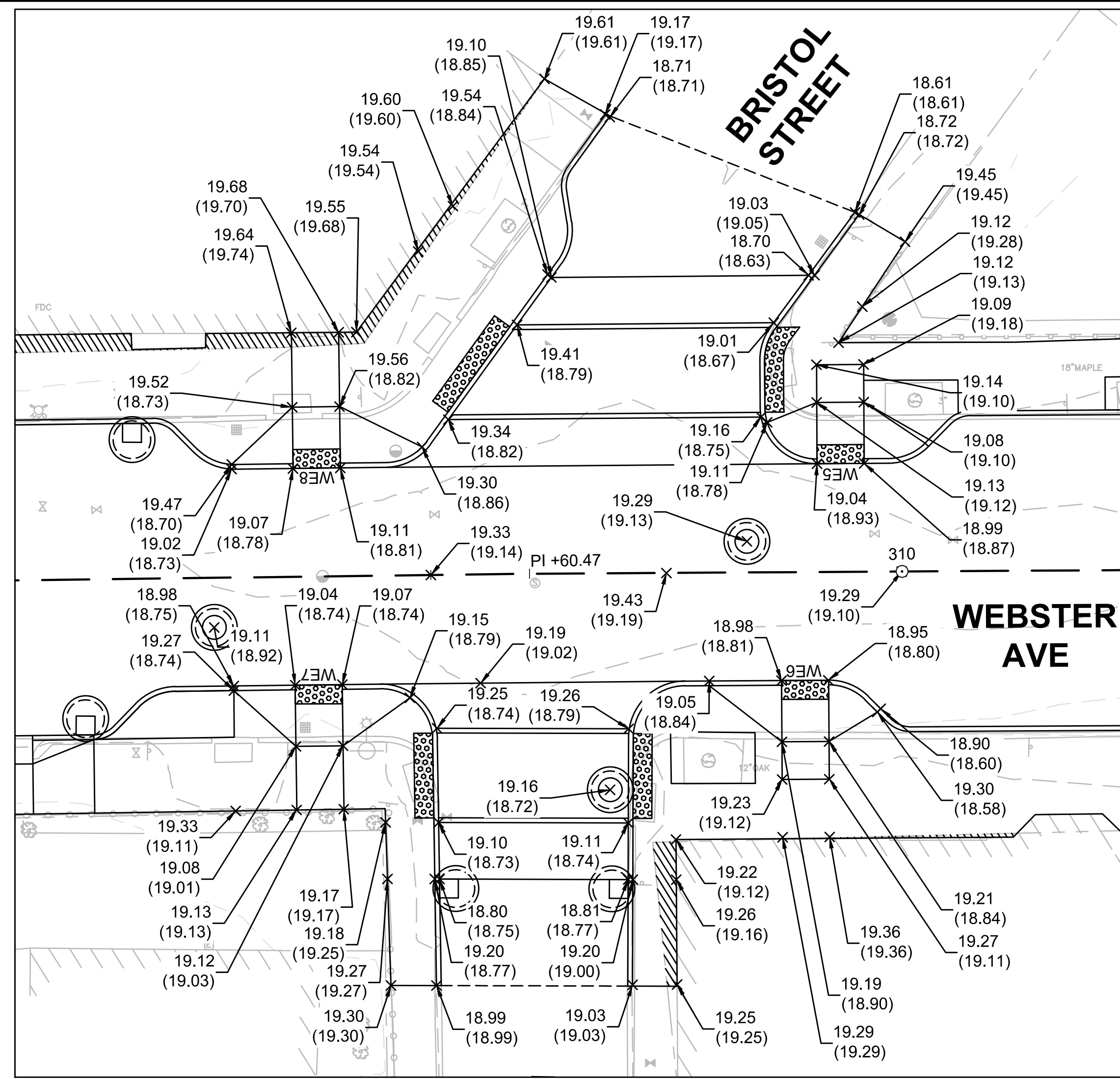


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - DETAIL GRADING PLAN 1 OF 2

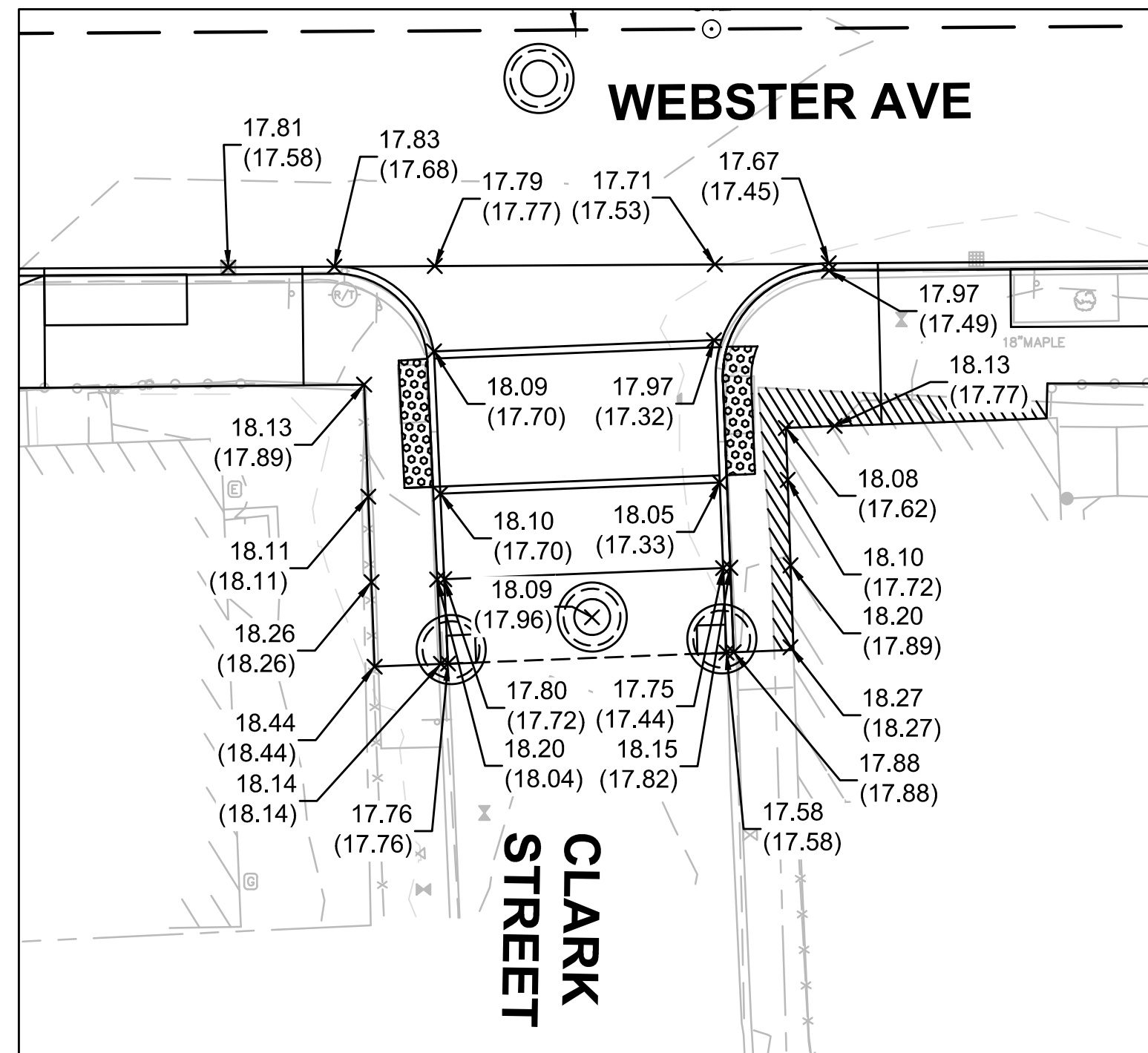
Sheet	R-36
File No.	10565



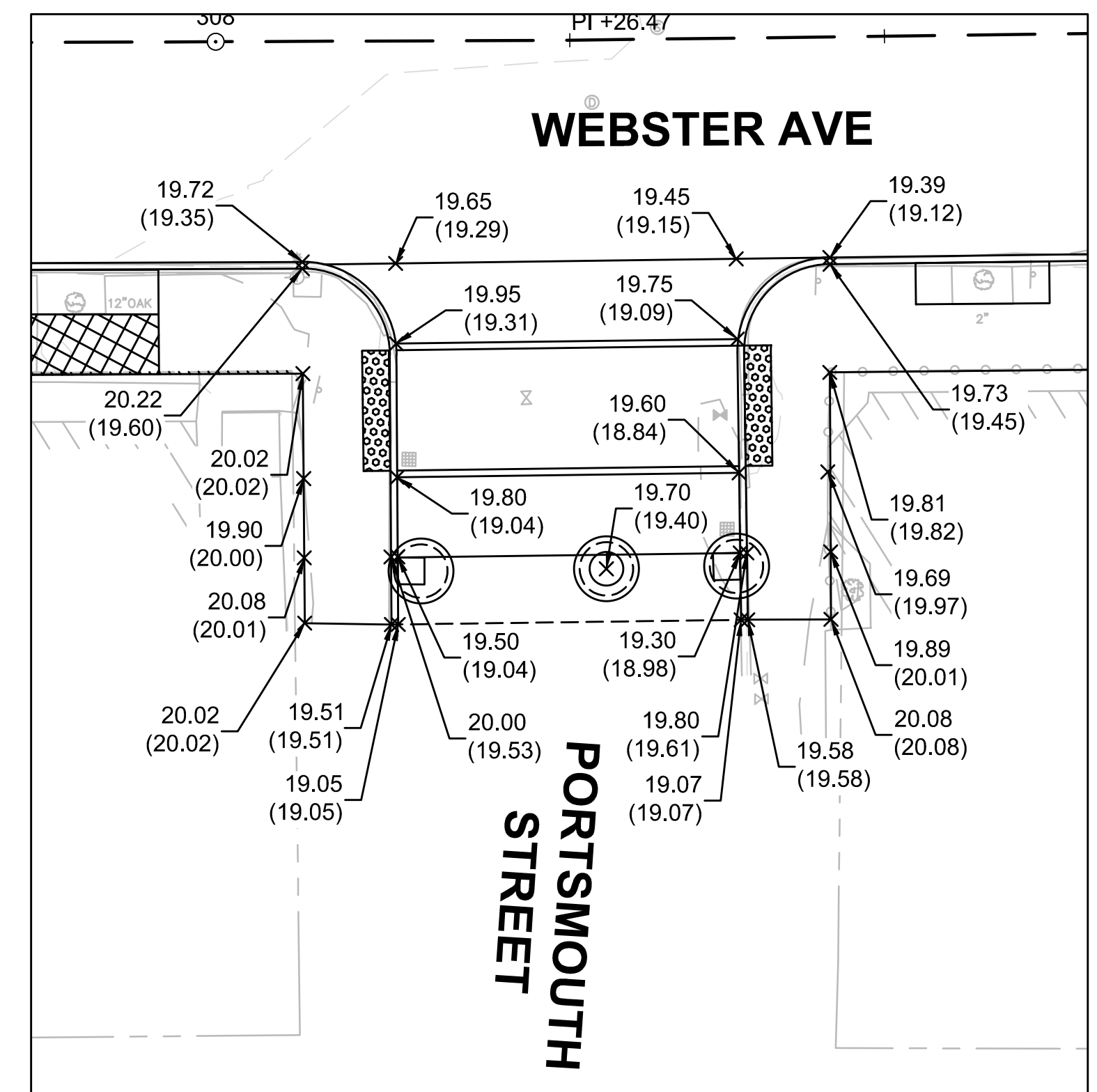
RAISED CROSSWALK GRADING PLAN
WEBSTER STREET AT HAMPSHIRE STREET
SCALE: 1" = 10'



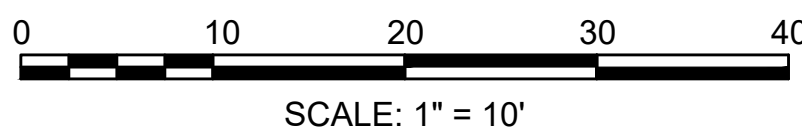
INTERSECTION GRADING PLAN
WEBSTER STREET AT BRISTOL STREET
SCALE: 1" = 10'



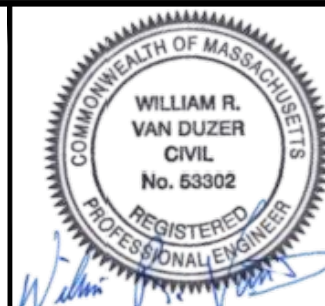
RAISED CROSSWALK GRADING PLAN
WEBSTER STREET AT CLARK STREET
SCALE: 1" = 10'



RAISED CROSSWALK GRADING PLAN
WEBSTER STREET AT PORTSMOUTH STREET
SCALE: 1" = 10'



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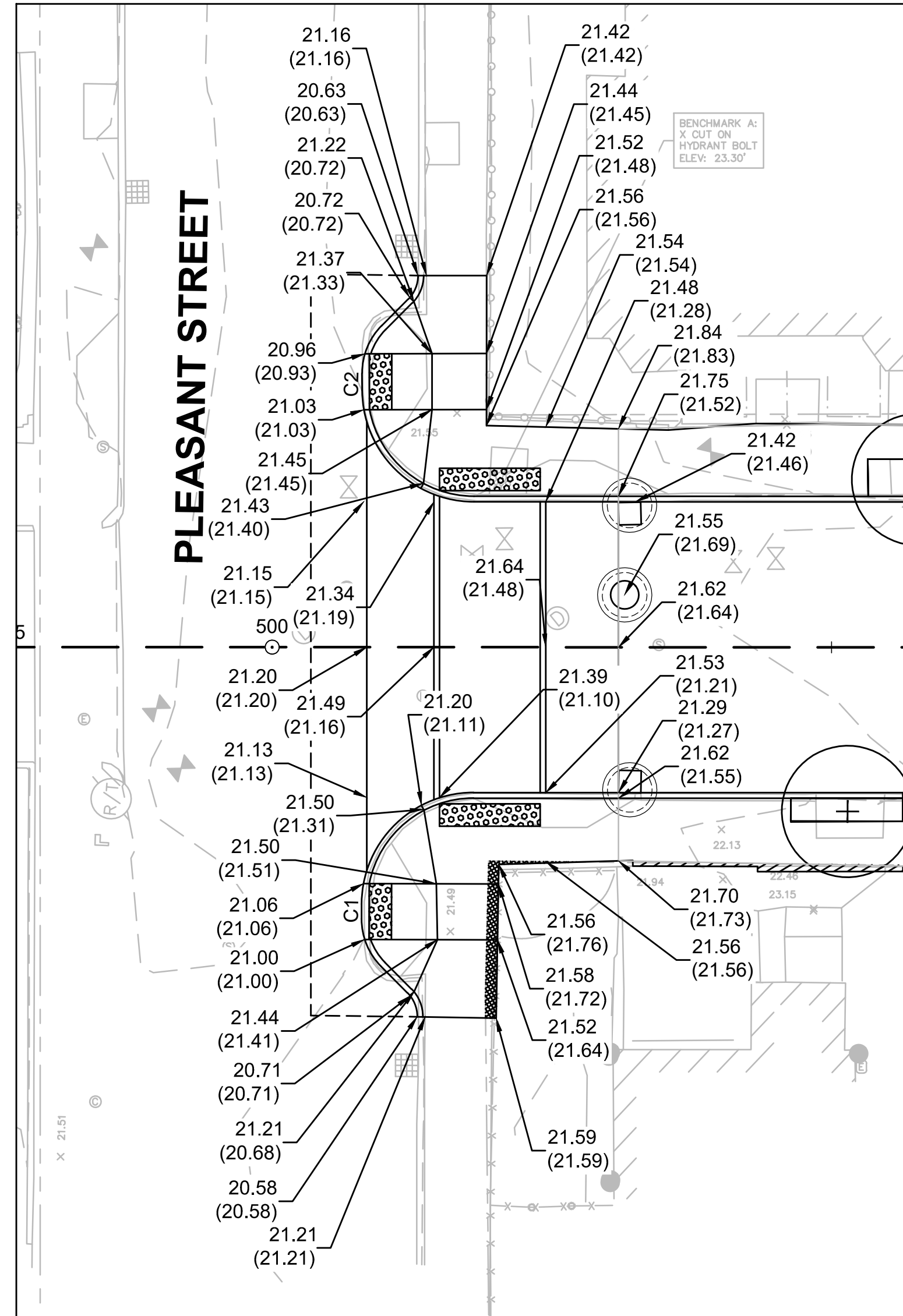
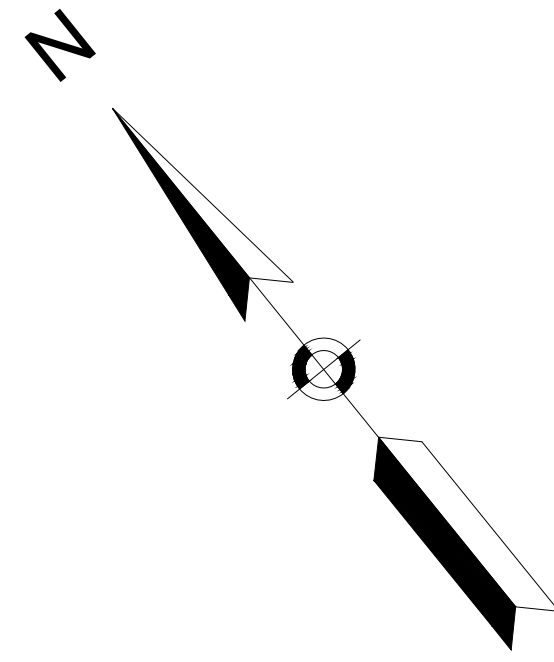
09/06/2022

Scale	1"=10'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
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Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

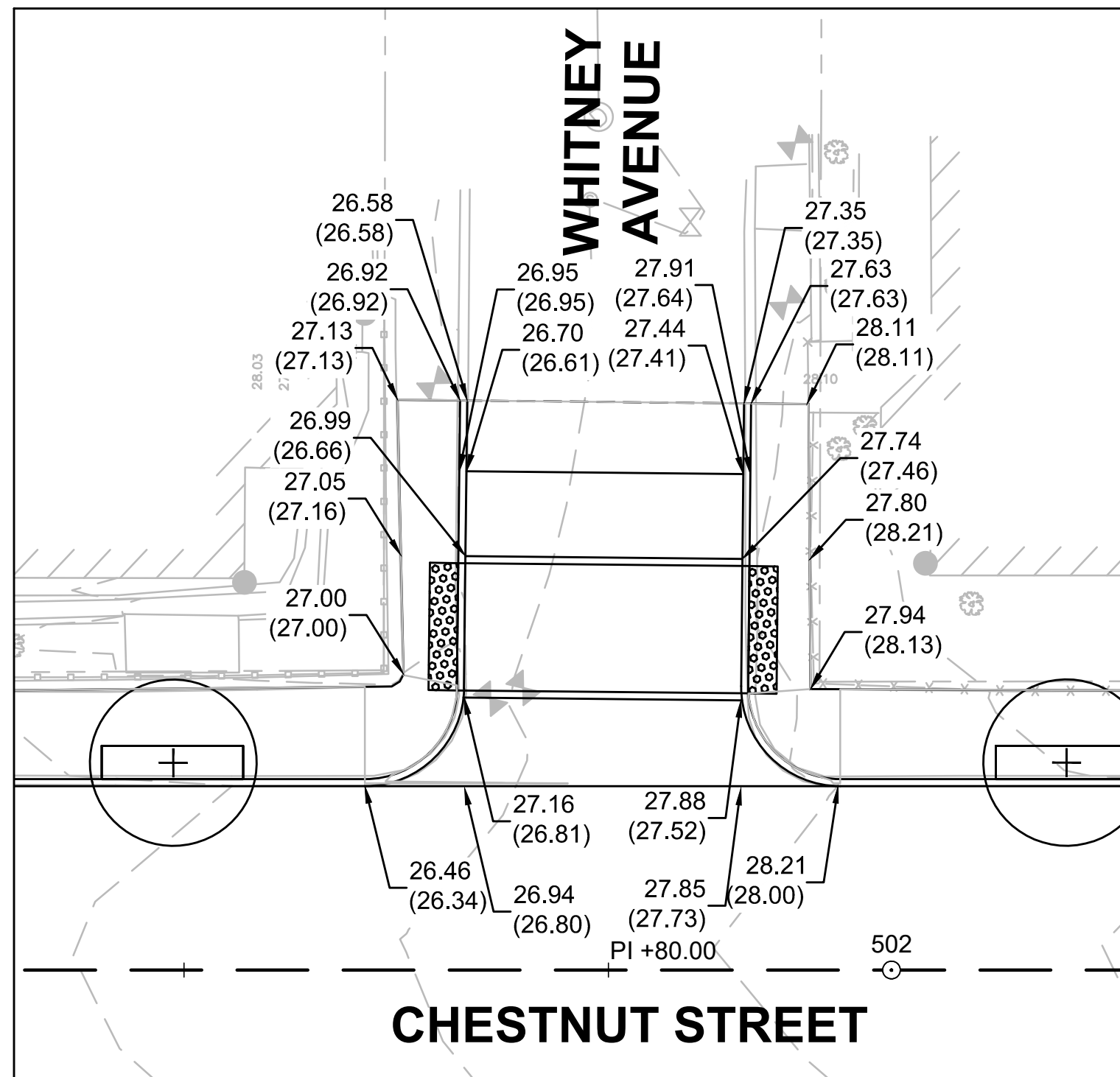


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVE - DETAIL GRADING PLAN 2 OF 2

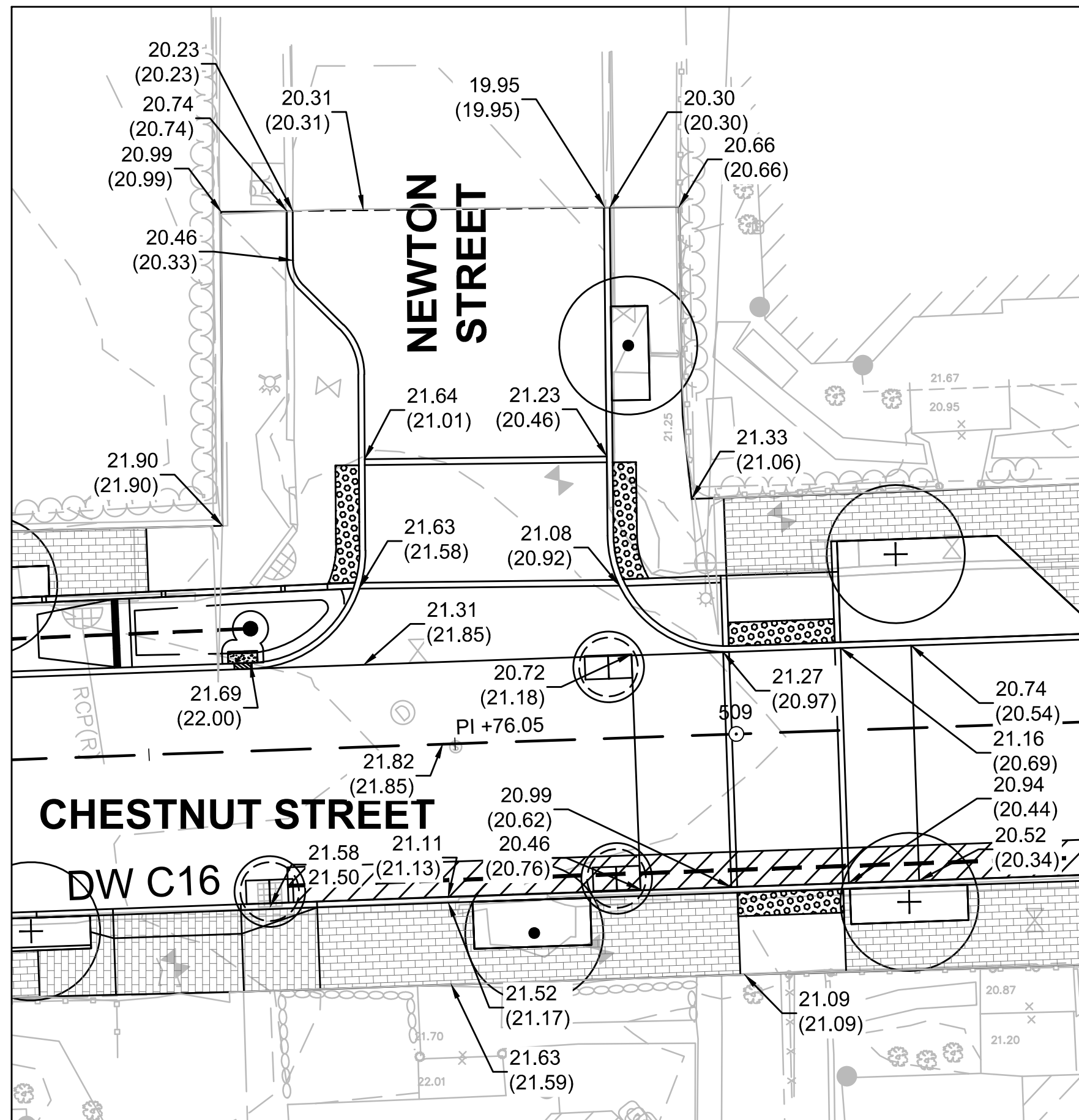
Sheet	R-37
File No.	10565



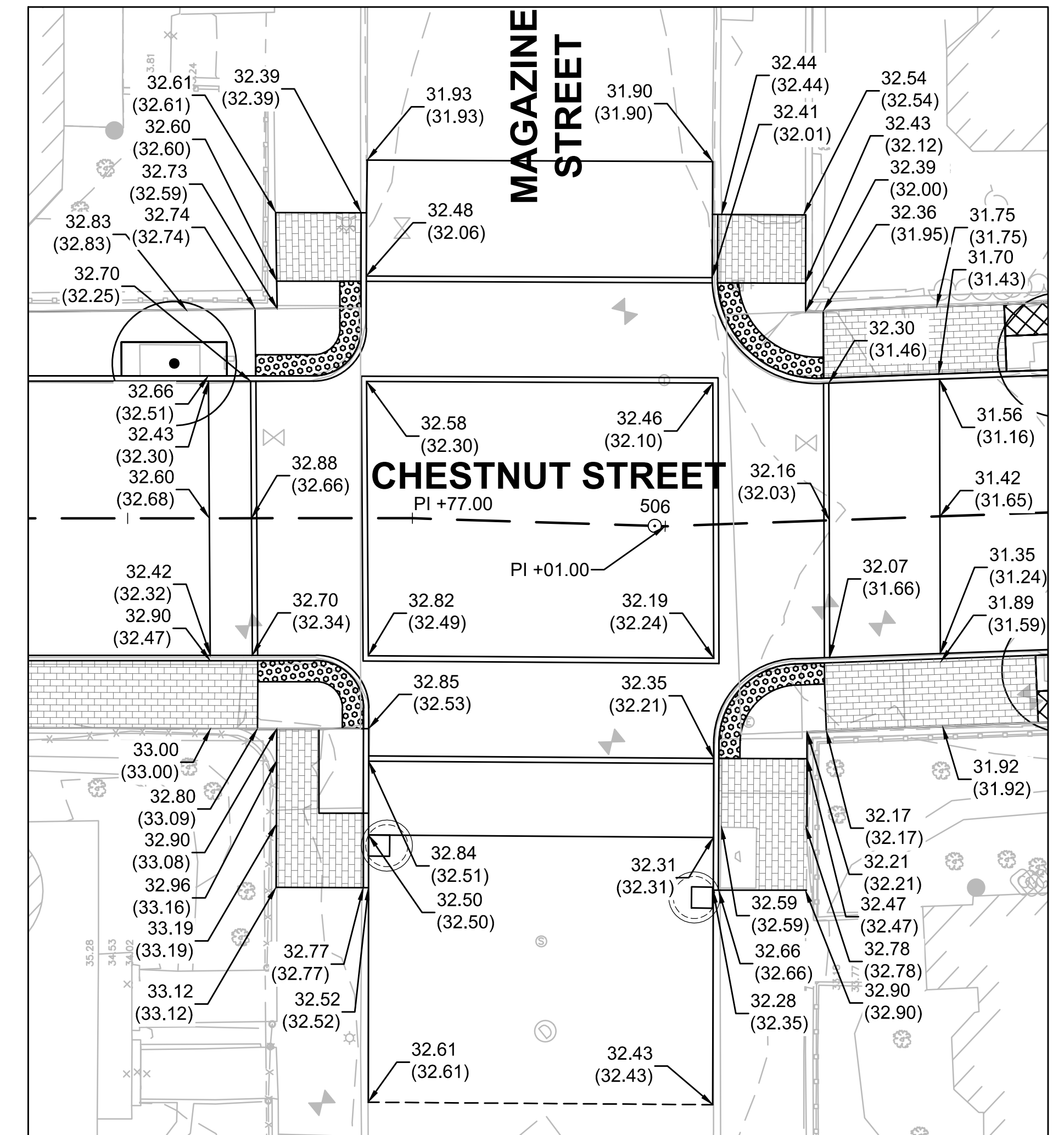
RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT PLEASANT STREET
SCALE: 1" = 10'



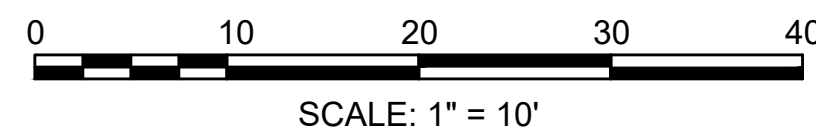
RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT WHITNEY AVENUE
SCALE: 1" = 10'



RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT NEWTON STREET
SCALE: 1" = 10'

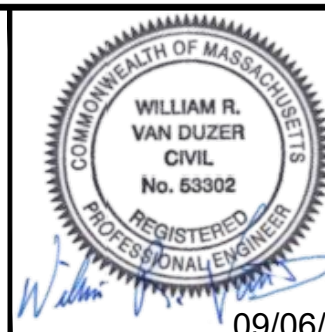


RAISED INTERSECTION GRADING PLAN
CHESTNUT STREET AT MAGAZINE STREET
SCALE: 1" = 10'

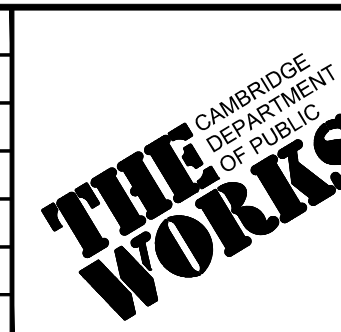


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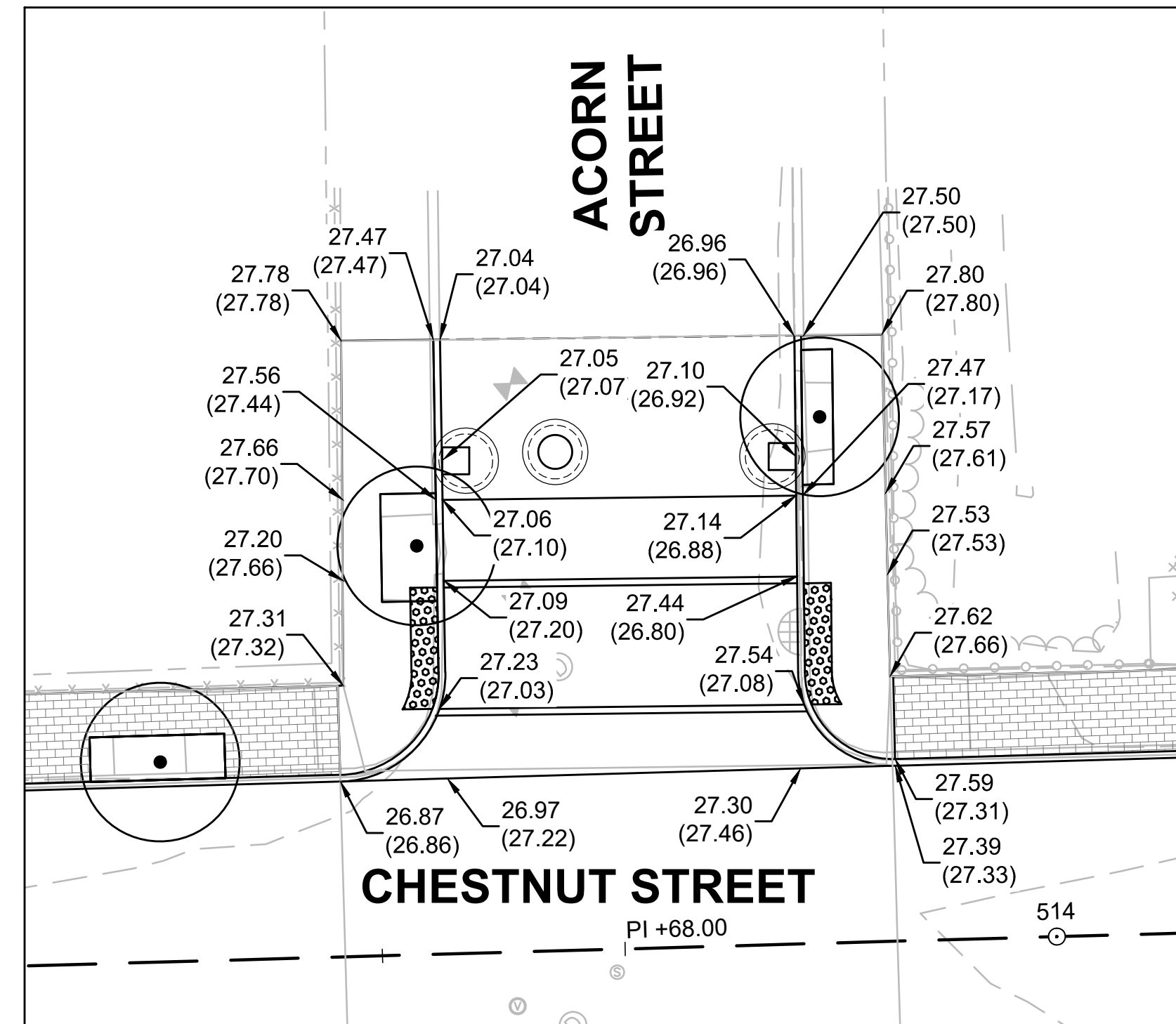
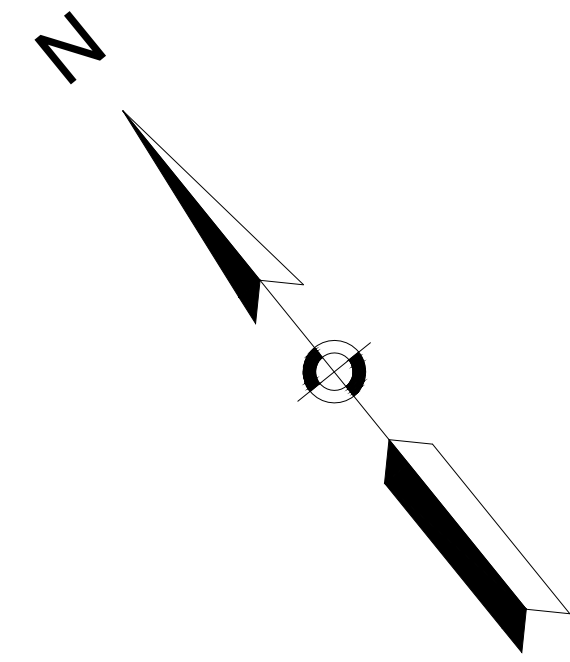


Scale	1" = 10'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

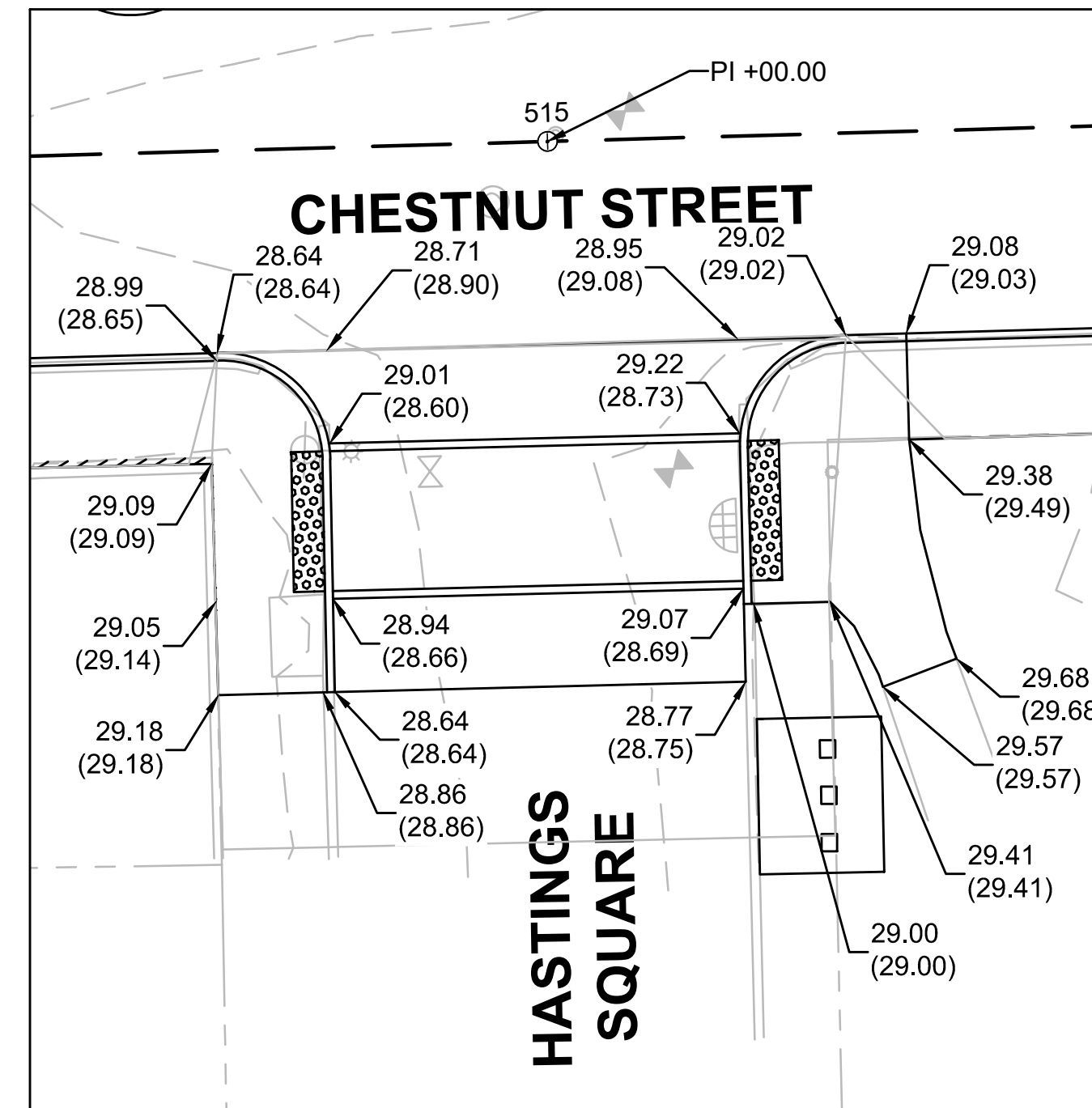


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - DETAIL GRADING PLAN PLAN 1 OF 2

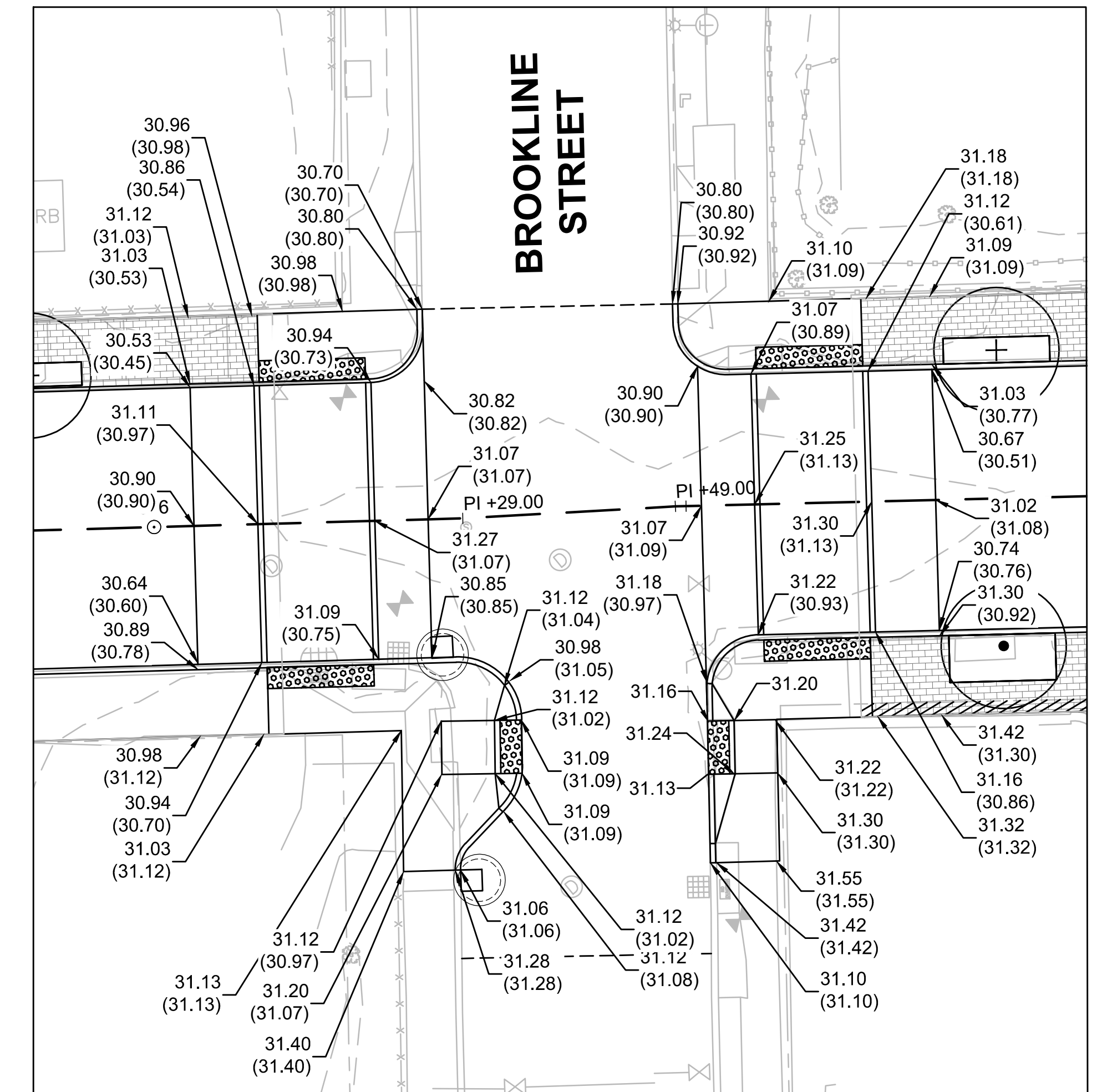
Sheet	R-38
File No.	10565



RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT ACORN STREET
SCALE: 1" = 10'



RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT HASTINGS STREET
SCALE: 1" = 10'

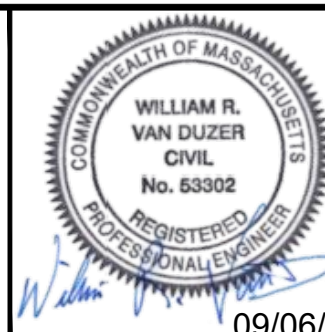


RAISED CROSSWALK GRADING PLAN
CHESTNUT STREET AT BROOKLINE STREET
SCALE: 1" = 10'

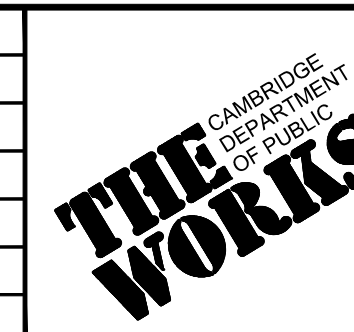


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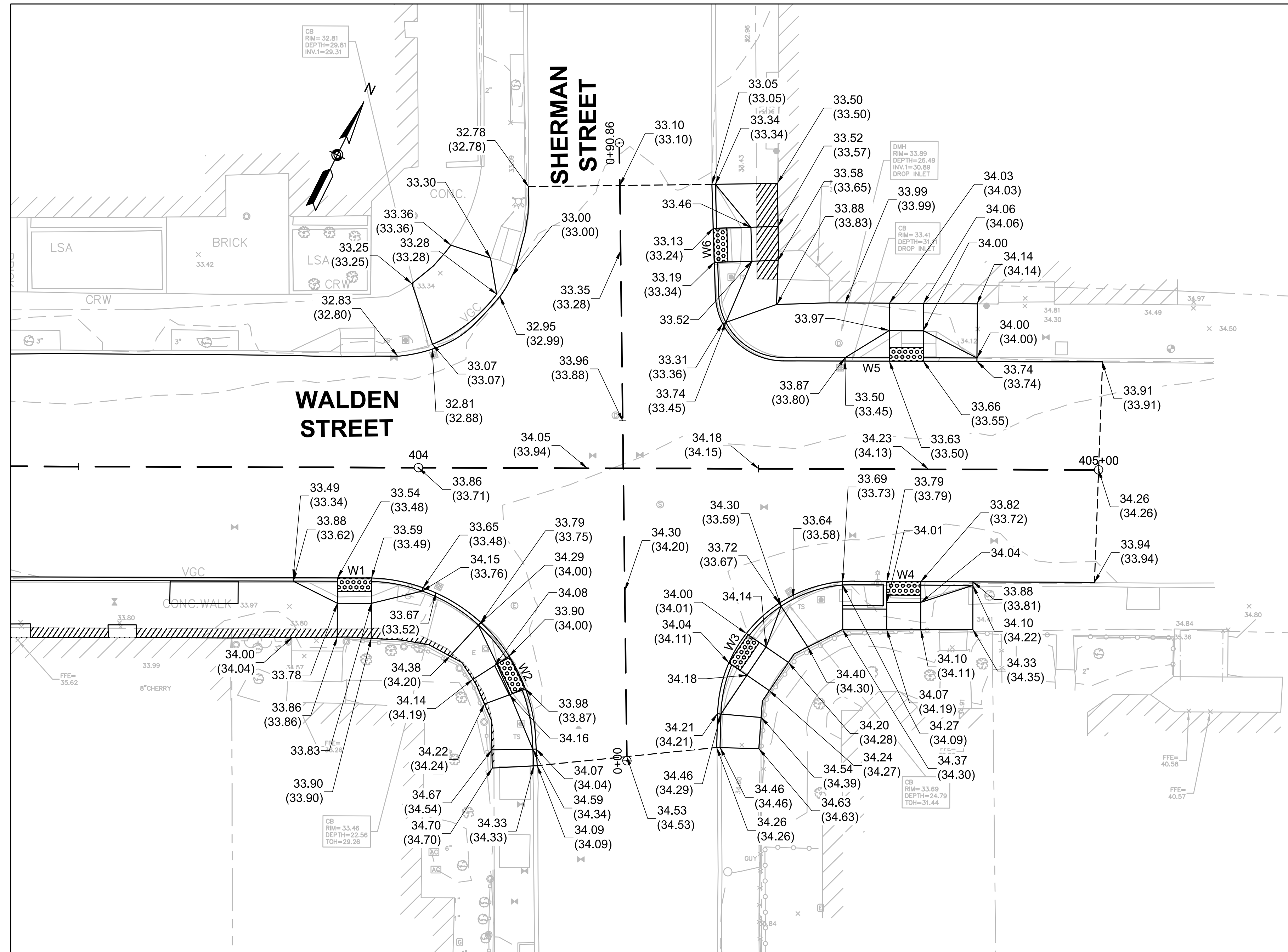


Scale	AS NOTED		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		Date
			REVISIONS

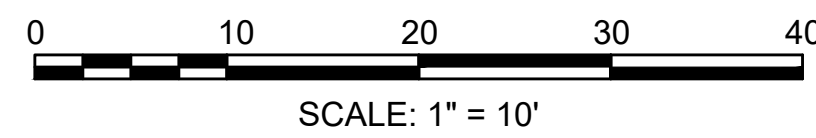


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - DETAIL GRADING PLAN PLAN 2 OF 2

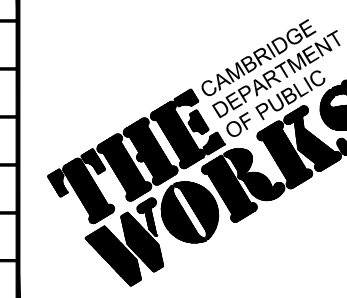
Sheet	R-39
File No.	10565



INTERSECTION GRADING PLAN
 WALDEN STREET AT SHERMAN STREET
 SCALE: 1" = 10'

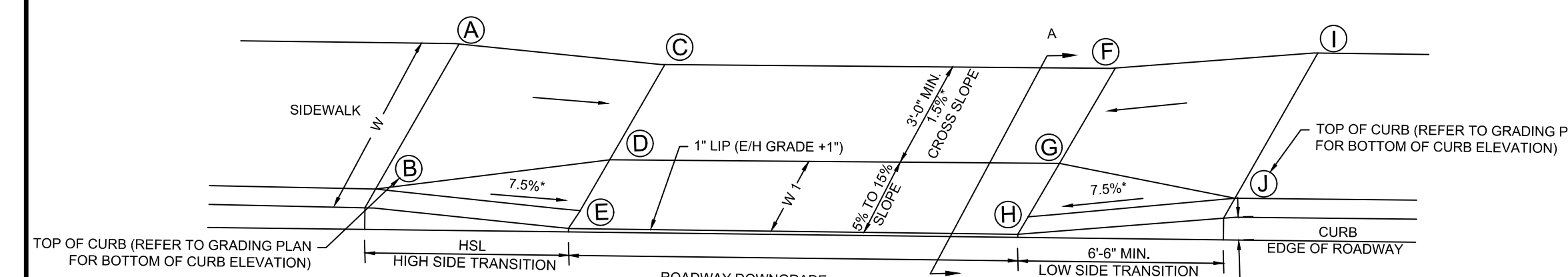
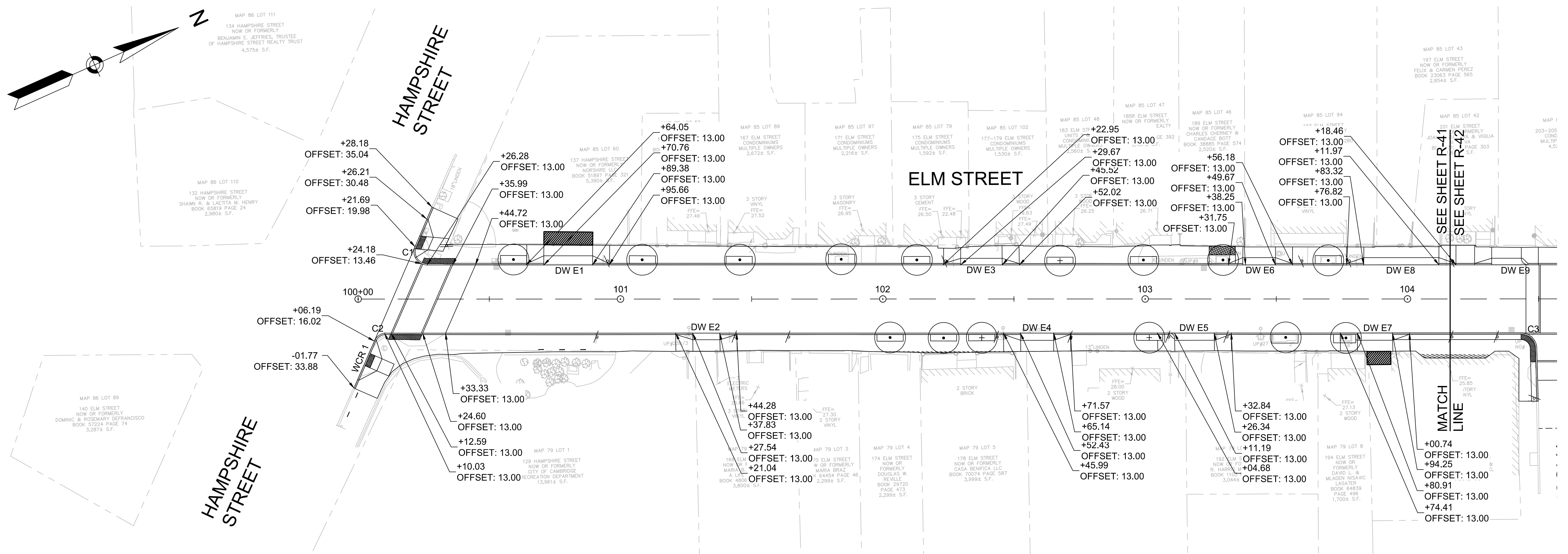


Scale	1"=10'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		DATE
			REVISIONS

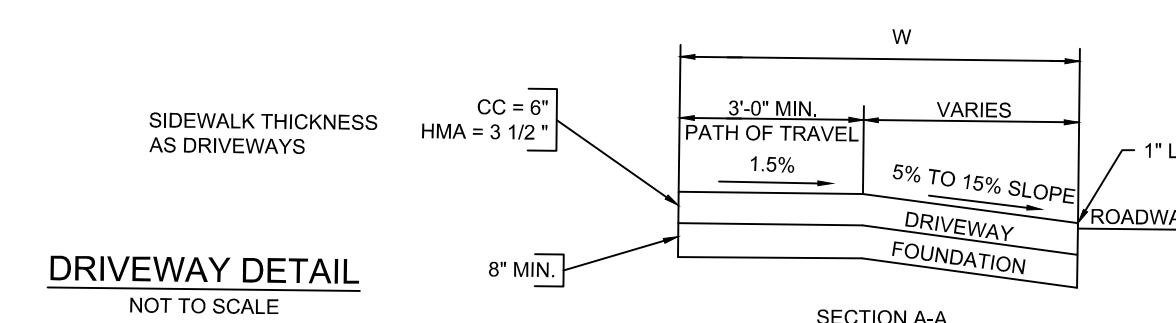


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN STREET - DETAIL GRADING PLAN PLAN 1 OF 1

Sheet	R-40
File No.	10565



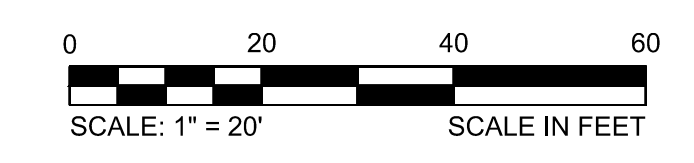
LEGEND
 HSL = HIGH SIDE TRANSITION LENGTH, SEE E 107.9.0
 WT = RAMP WIDTH
 W = SIDEWALK WIDTH
 * = TOLERANCE FOR CONSTRUCTION ±.5%
 CC = CEMENT CONCRETE
 HMA = HOT MIX ASPHALT



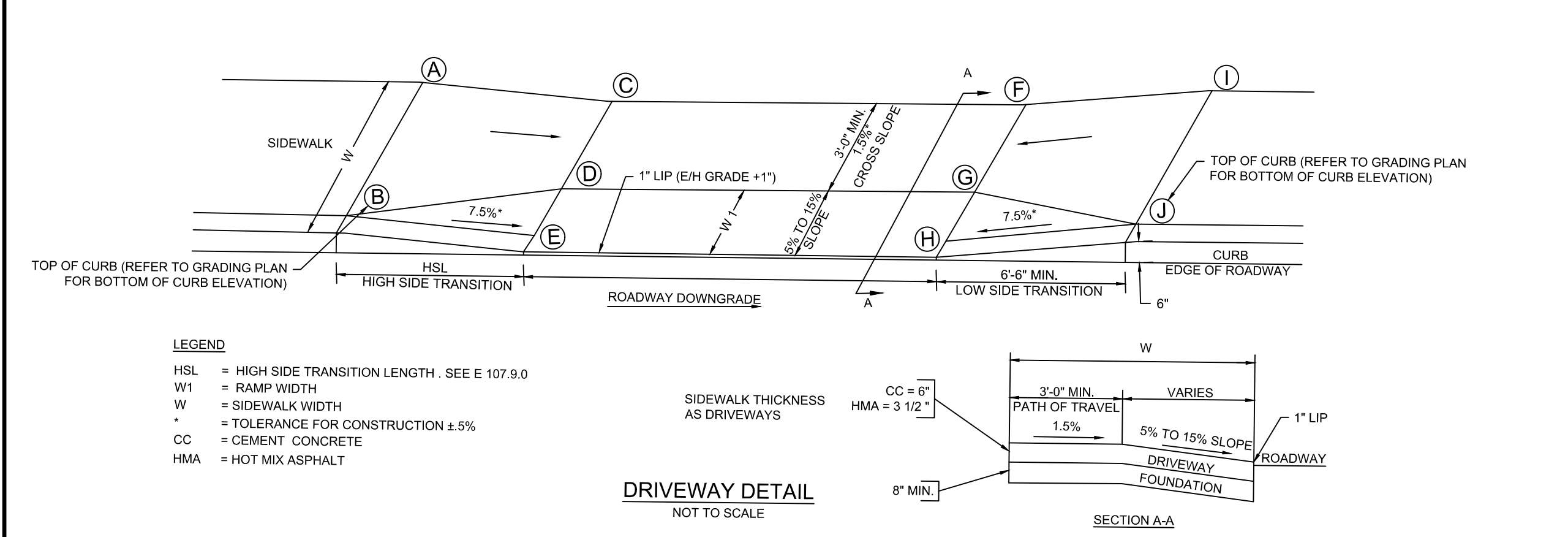
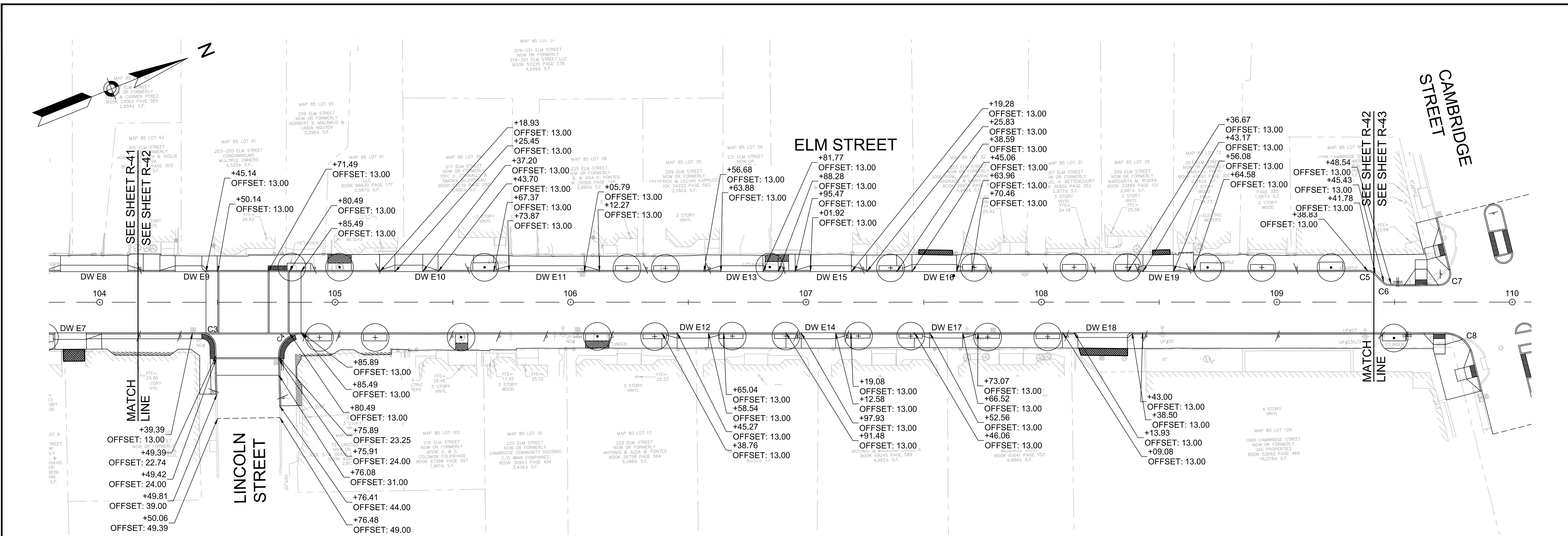
DW#	RAMP REFERENCE POINT						DEPTH OF RAMP	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET	LEFT SIDE	RIGHT SIDE	A					B	C	D	E	F	G	H	I	J			
						ELM ST.					100+80.07	13.00' LT	3.50	4.10	18.61	-0.27%	6.50	6.50	22.67	22.53	22.63	22.56
E2	ELM ST.	101+31.20	13.00' RT	2.50	4.40	10.32	0.39%	6.50	6.50	22.67	22.55	22.52	22.45	22.07	22.55	22.48	22.10	22.63	22.51			
E3	ELM ST.	102+37.49	13.00' LT	2.50	4.38	15.80	0.38%	6.50	6.50	22.39	22.27	22.19	22.12	21.74	22.15	22.07	21.69	22.29	22.16			
E4	ELM ST.	102+59.36	13.00' RT	2.75	4.21	12.60	0.39%	6.50	6.50	22.21	22.09	22.11	22.03	21.62	22.15	22.07	21.66	22.32	22.19			
E5	ELM ST.	103+16.20	13.00' RT	2.75	4.09	15.13	0.33%	6.50	-	21.99	21.87	21.88	21.81	21.40	21.94	21.86	21.45	22.09	21.97			
E6	ELM ST.	103+43.15	13.00' LT	2.75	4.14	12.48	0.43%	6.50	6.50	22.00	21.88	21.85	21.77	21.36	21.80	21.72	21.31	21.88	21.76			
E7	ELM ST.	103+88.89	13.00' RT	2.75	4.17	13.41	0.09%	6.50	-	21.92	21.79	21.74	21.66	21.25	21.74	21.66	21.25	21.87	21.75			
E8	ELM ST.	103+99.40	13.00' LT	2.75	4.14	28.63	0.24%	6.50	6.50	21.83	21.74	21.74	21.66	21.25	21.70	21.62	21.32	21.96	21.83			

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00	2960300.2651	765105.5097		N23°56'31.58"E 1035.26'	110+35.26	2961246.4482	765525.6325
L2	110+35.26	2961246.4482	765525.6325		N18°33'46.40"E 405.47'	114+40.73	2961630.8191	765654.7105
L3	114+40.73	2961630.8191	765654.7105		N76°32'11.64"E 54.64'	114+95.36	2961643.5399	765707.8457

CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	113°18'01.32"	5,000	9.89	7.60
C2	66°41'58.68"	5,000	5.82	3.29



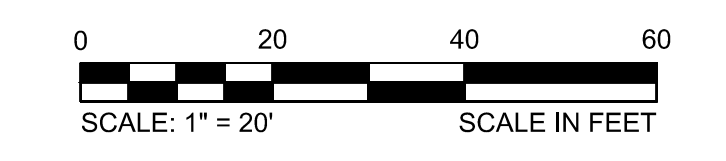
				Scale 1" = 20' Date AUGUST 2022 Job No. 20170208.037A Designed by KEA Drawn by KEA Checked by BJM Approved by BMS		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing ELM STREET - CURB TIE PLAN SHEET 1 OF 3	Sheet R-41 File No. 10565
				27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com			



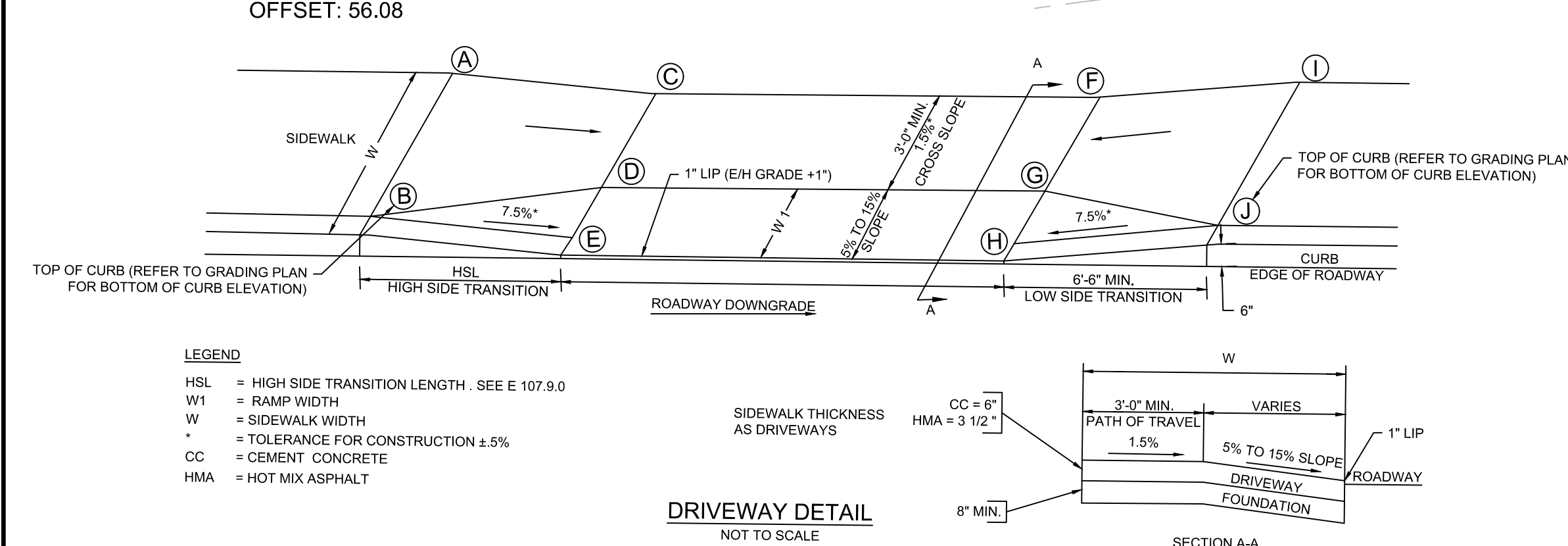
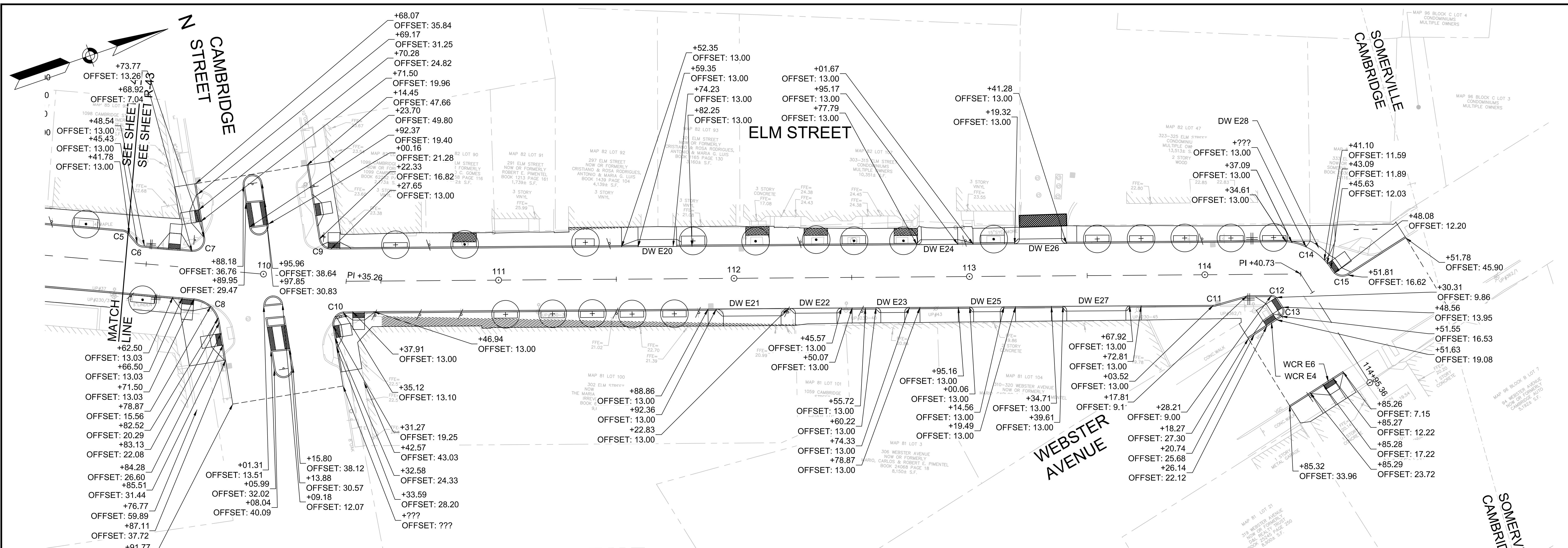
DW#	DRIVEWAYS							ELEVATIONS											
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
E9	ELM ST.	104+41.09	13.14' LT	2.50	4.24	11.3	0.27%	6.5	6.5	21.89	21.77	21.72	21.65	21.37	21.64	21.57	21.39	22.04	21.92
E10	ELM ST.	105+39.45	13.11' LT	2.75	4.65	11.8	-0.52%	6.5	6.5	21.67	21.54	21.50	21.44	21.08	21.50	21.43	21.02	21.62	21.49
E11	ELM ST.	105+90.15	13.10' LT	2.50	4.16	31.9	-0.52%	6.5	6.5	21.41	21.29	21.25	21.21	20.83	21.04	21.02	20.69	21.09	20.97
E12	ELM ST.	106+52.01	13.00' RT	2.25	4.19	13.3	0.40%	6.5	6.3	21.40	21.28	21.24	21.17	20.83	21.16	21.09	20.75	21.36	21.24
E13	ELM ST.	106+72.41	13.07' LT	2.50	4.45	17.9	-0.43%	6.5	6.5	21.35	21.22	21.31	21.23	20.85	21.37	21.30	20.92	21.56	21.44
E14	ELM ST.	107+06.03	13.00' RT	2.50	4.00	14.6	0.21%	6.5	6.5	21.34	20.84	21.24	21.17	20.87	21.16	21.09	20.96	21.40	21.28
E15	ELM ST.	107+10.68	13.06' LT	2.50	4.62	17.4	-0.46%	6.5	6.5	21.57	21.44	21.39	21.31	20.93	21.30	21.22	20.84	21.41.00	21.28
E16	ELM ST.	107+55.06	13.05' LT	3.00	4.15	18.9	0.43%	6.5	6.5	21.39	21.26	21.26	21.18	20.73	21.20	21.13	20.68	21.33	21.20
E17	ELM ST.	107+60.10	13.00' RT	2.25	4.10	14.0	0.43%	6.5	6.5	21.31	21.20	21.12	21.05	20.71	21.18	21.11	20.77	21.35	21.24
E18	ELM ST.	108+25.98	13.00' RT	2.00	4.64	20.9	0.50%	6.5	6.5	21.93	21.81	21.48	21.46	21.45	21.23	21.15	20.85	21.39	21.27
E19	ELM ST.	108+51.01	13.02' LT	3.00	4.23	12.9	0.50%	6.5	6.5	21.58	21.51	21.51	21.43	20.98	21.58	21.50	21.05	21.87	21.74

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00	2960300.2651	765105.5097		N23°56'31.58"E 1035.26'	110+35.26	2961246.4482	765525.6325
L2	110+35.26	2961246.4482	765525.6325		N18°33'46.40"E 405.47'	114+40.73	2961630.8191	765654.7105
L3	114+40.73	2961630.8191	765654.7105		N76°32'11.64"E 54.84'	114+95.36	2961643.5399	765707.8457

CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C3	88°31'50.58"	10.00	15.45	9.75
C4	91°25'03.09"	10.00	15.96	10.25
C5	45°00'56.64"	4.00	3.14	1.66



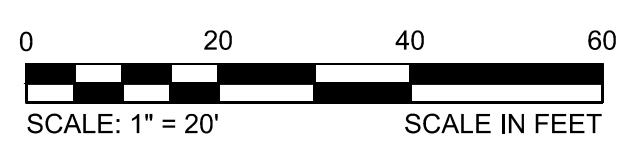
				Scale	1" = 20'		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-42
				Date	AUGUST 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
				Job No.	20170208.037A	Drawing		ELM STREET - CURB TIE PLAN SHEET 2 OF 3		
				Designed by	KEA					
				Drawn by	KEA					
				Checked by	BJM	No.		Description		
				Approved by	BMS			REVISIONS		



DW#	RAMP REFERENCE POINT							TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET	WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
E20	ELM ST.	111+67.46	13.77' LT	3.00	5.35	16.4	-0.94%	7.0	6.5	21.17	21.0200	20.99	20.90	20.45	20.85	20.75	20.30	20.87	20.72
E21	ELM ST.	112+07.59	13.00' RT	3.00	4.18	24.5	-0.92%	6.1	6.5	20.61	20.48	20.61	20.53	20.08	20.84	20.76	20.31	20.96	20.83
E22	ELM ST.	112+33.70	13.00' RT	2.00	4.37	17.6	-0.86%	6.5	6.1	20.46	20.34	20.27	20.19	19.89	20.36	20.28	19.98	20.69	20.58
E23	ELM ST.	112+67.29	13.00' RT	2.00	4.31	10.2	-0.84%	6.5	6.5	20.11	20.00	20.03	19.95	19.65	20.12	20.04	19.74	20.40	20.29
E24	ELM ST.	112+86.88	13.80' LT	2.00	5.23	15.4	-0.84%	0.0	6.5	20.58	20.44	20.03	20.00	19.90	20.00	19.91	19.77	19.51	19.38
E25	ELM ST.	113+07.24	13.00' RT	2.00	4.24	11.2	-0.84%	6.5	6.5	19.73	19.62	19.69	19.61	19.31	19.60	19.52	19.22	20.06	19.95
E26	ELM ST.	113+31.47	13.81' LT	2.00	5.24	17.7	-0.84%	6.5	6.5	20.19	19.64	19.49	19.44	19.40	19.34	19.31	19.27	19.84	19.71
E27	ELM ST.	113+53.76	13.00' RT	2.00	4.08	25.1	1.00%	6.5	6.5	19.32	19.21	19.09	19.02	18.72	19.29	19.02	18.92	19.68	19.57
E28	ELM ST.	114+40.73	11.09' LT	3.00	12.20	10.1	1.50%	6.3	2.0	19.14	18.86	18.94	19.54	18.86	18.94	19.27	18.86	18.94	18.93

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00	2960300.2651	765105.5097		N23°56'31.58"E 1035.28'	110+35.26	2961246.4482	765525.6325
L2	110+35.26	2961246.4482	765525.6325		N18°33'46.40"E 405.47'	114+40.73	2961630.8191	765654.7105
L3	114+40.73	2961630.8191	765654.7105		N76°32'11.64"E 54.64'	114+95.36	2961643.5399	765707.8457

CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C6	45°00'00.00"	4.00	3.14	1.66
C7	104°11'09.04"	5.00	9.09	6.42
C8	75°43'52.32"	12.00	15.86	9.33
C9	81°03'53.43"	5.00	7.07	4.28
C10	99°08'25.84"	5.00	8.65	5.87
C11	13°56'29.00"	3.00	0.73	0.37
C12	57°35'56.28"	3.00	3.02	1.65
C13	89°01'04.43"	3.00	4.66	2.95
C14	52°34'41.69"	25.00	22.94	12.35
C15	89°50'50.63"	5.00	7.84	4.99



Scale 1" = 20'

Date AUGUST 2022

Job No. 20170208.037A

Designed by KEA

Drawn by KEA

Checked by BJM

Approved by BMS

Scale 1" = 20'

Date AUGUST 2022

Job No. 20170208.037A

Designed by KEA

Drawn by KEA

Checked by BJM

Approved by BMS

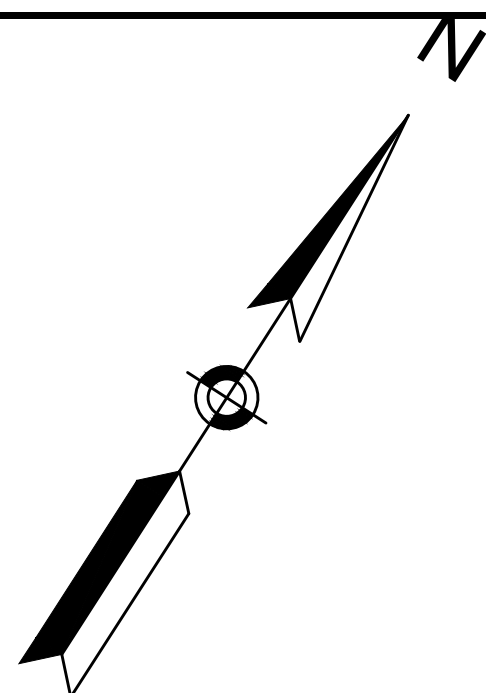
Client CITY OF CAMBRIDGE, MASSACHUSETTS

Project CHAPTER 90 CONTRACT 24
ROADWAY IMPROVEMENT PROJECT

Drawing ELM STREET - CURB TIE PLAN
SHEET 3 OF 3

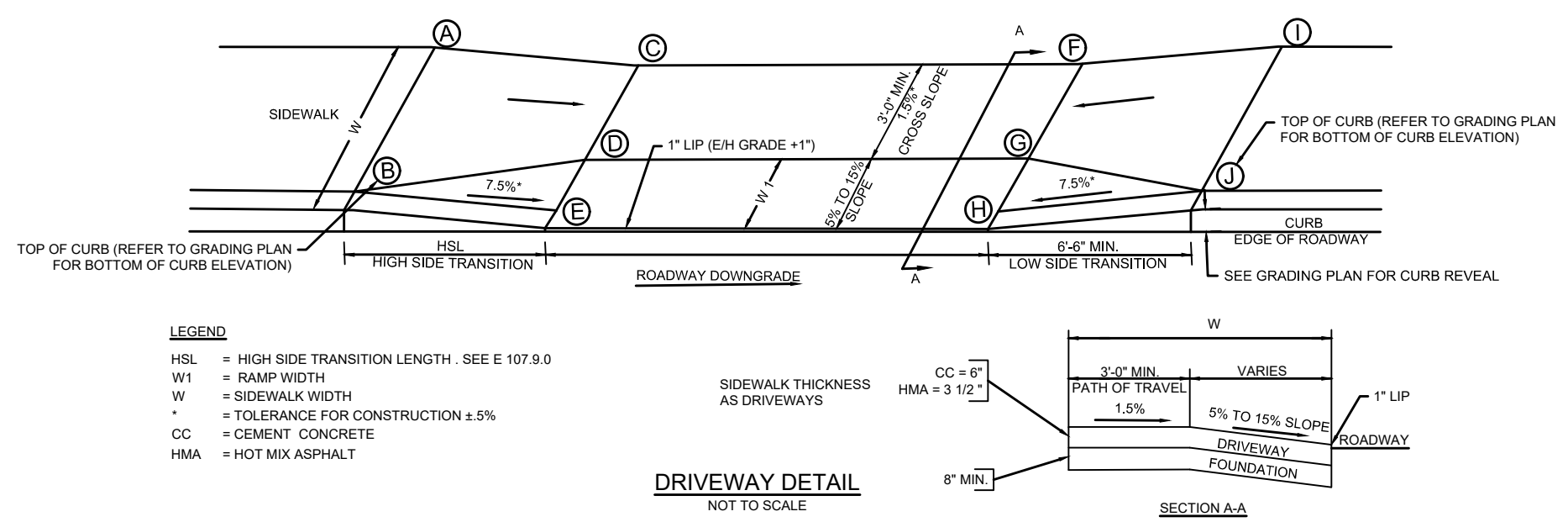
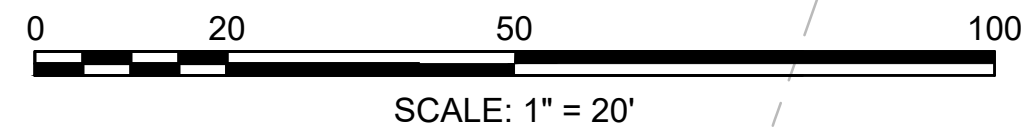
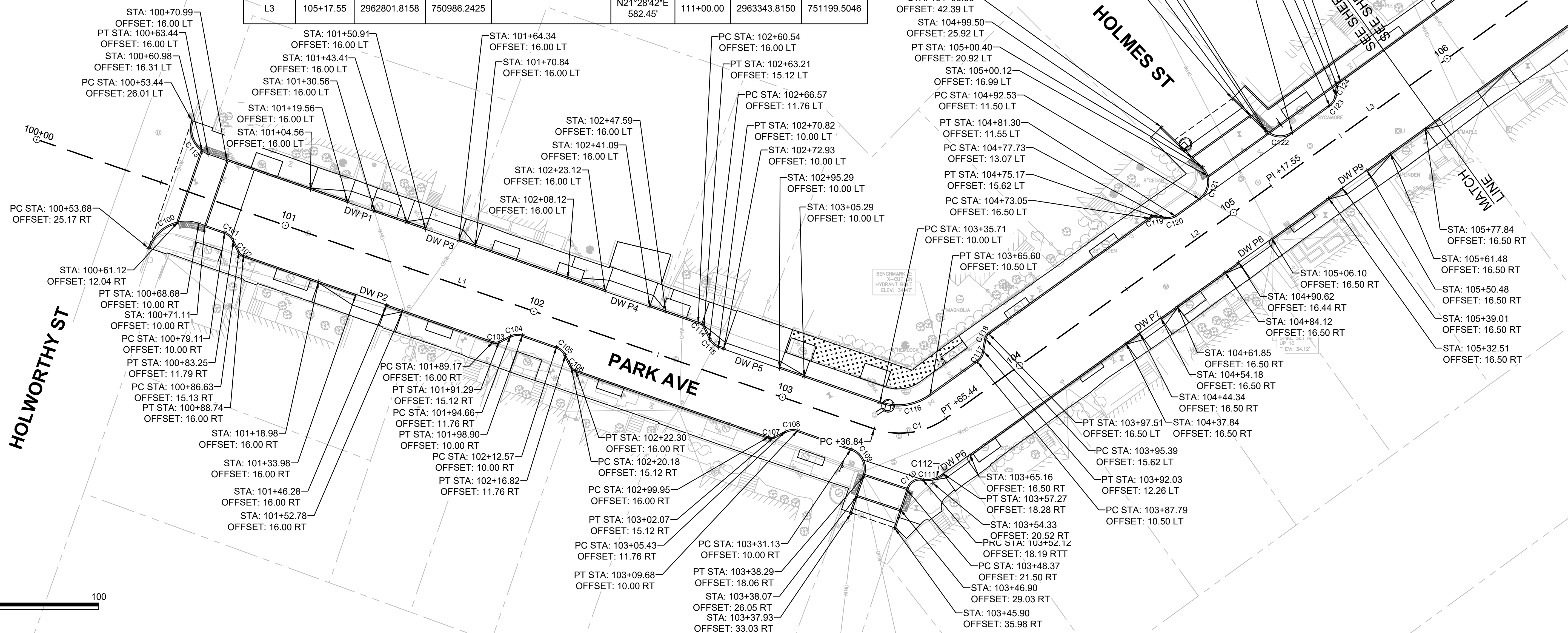
Sheet R-43

File No. 10565



PARK AVE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	2962562.7663	750581.9090		N76°19'06"E 336.84'	103+36.84	2962642.4399	750909.1949
C1	103+36.84	2962642.4399	750909.1949	R = 30.00' Δ = 54°36'26" L = 28.59' T = 15.49'		103+65.44	2962660.4909	750929.9709
L2	103+65.44	2962660.4909	750929.9709		N21°42'40"E 152.12'	105+17.55	2962801.8158	750986.2425
L23	105+17.55	2962801.8158	750986.2425		N21°28'42"E 582.45'	111+00.00	2963343.8150	751199.5046
L3	105+17.55	2962801.8158	750986.2425		N21°28'42"E 582.45'	111+00.00	2963343.8150	751199.5046

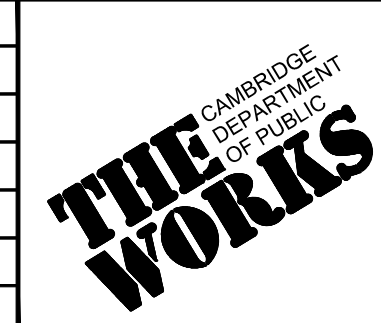
CURVE TABLE			
Curve #	Delta	Radius	Length
C100	90°15'58"	15.00	23.63
C101	44°44'02"	6.00	4.68
C102	44°44'02"	3.00	2.34
C103	45°00'00"	3.00	2.36
C104	45°00'00"	6.00	4.71
C105	45°00'00"	6.00	4.71
C106	45°00'00"	3.00	2.36
C107	45°00'00"	3.00	2.36
C108	45°00'00"	6.00	4.71
C109	90°00'00"	8.00	12.57
C110	81°41'15"	5.00	7.13
C111	19°06'52"	10.00	3.34
C112	26°18'33"	10.00	4.59
C113	90°03'28"	10.00	15.72
C114	44°59'59"	3.00	2.36
C115	45°00'00"	6.00	4.71
C116	54°36'26"	21.00	20.01
C117	45°00'02"	6.00	4.71
C118	45°00'02"	3.00	2.36
C119	45°00'00"	3.00	2.36
C120	45°00'00"	6.00	4.71
C121	100°13'19"	8.00	13.99
C122	80°08'32"	8.00	11.19
C123	45°00'00"	6.00	4.71
C124	45°07'53"	3.00	2.36



DW#	RAMP REFERENCE POINT		WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS										
							LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
	BASELINE	STATION	OFFSET																
P1	PARK	101+24	16.00 LT	4.5	8.30	9.0	-5.67%	15.0	-	42.30	42.18	41.36	41.31	41.05	41.26	41.21	40.54	41.47	41.36
P2	PARK	101+40	16.00 RT	4.3	8.30	12.3	5.37%	6.5	15.0	39.78	39.67	40.17	40.12	39.52	40.55	40.50	40.18	41.47	41.36
P3	PARK	101+58	16.00 LT	4.5	9.00	13.4	-7.16%	7.5	6.5	40.46	40.16	39.97	39.90	39.52	39.25	39.18	38.56	38.73	38.60
P4	PARK	102+32	16.00 LT	4.0	9.00	18.0	-4.39%	10.0	6.5	36.31	36.18	35.45	35.38	34.99	34.22	34.15	34.20	34.47	34.43
P5	PARK	102+84	10.00 LT	2.5	15.50	22.3	-2.38%	11.0	10.0	34.04	33.97	33.72	33.60	33.46	33.20	33.08	32.93	33.28	33.20
P6	PARK	103+60	17.00 RT	2.0	8.10	12.5	-3.76%	-	6.5	-	-	32.86	32.76	32.38	32.39	31.91	32.44	31.77	-
P7	PARK	104+49	16.50 RT	3.0	7.40	9.8	-0.61%	7.7	6.5	33.36	33.33	33.20	33.13	32.78	33.13	33.06	32.72	33.12	33.11
P8	PARK	105+00	16.50 RT	2.0	7.00	15.5	-0.58%	-	6.5	-	-	33.39	33.32	33.07	33.32	33.25	32.98	33.37	33.28
P9	PARK	105+45	16.50 RT	3.0	7.28	11.5	-2.87%	11.0	6.5	34.92	34.81	34.43	34.37	33.93	34.08	34.00	33.60	33.95	33.91

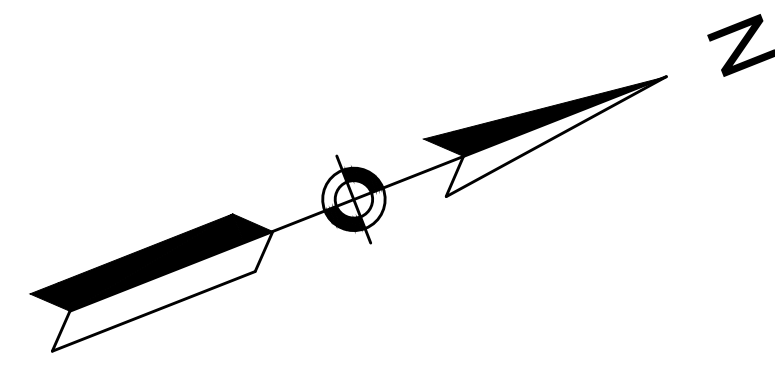


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF



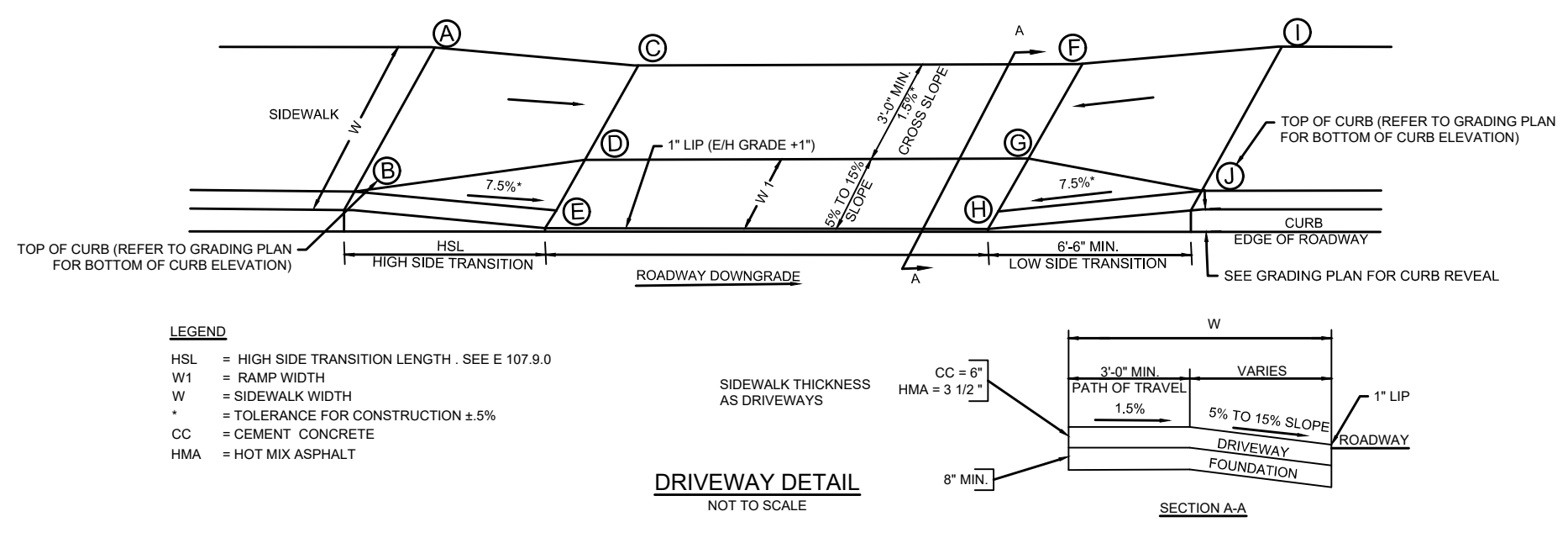
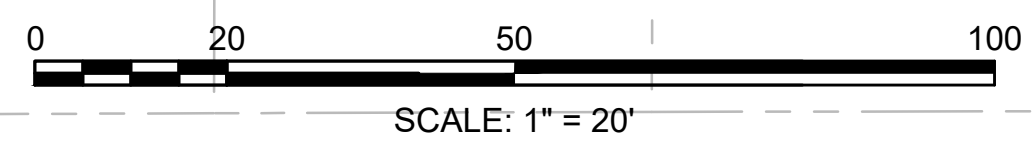
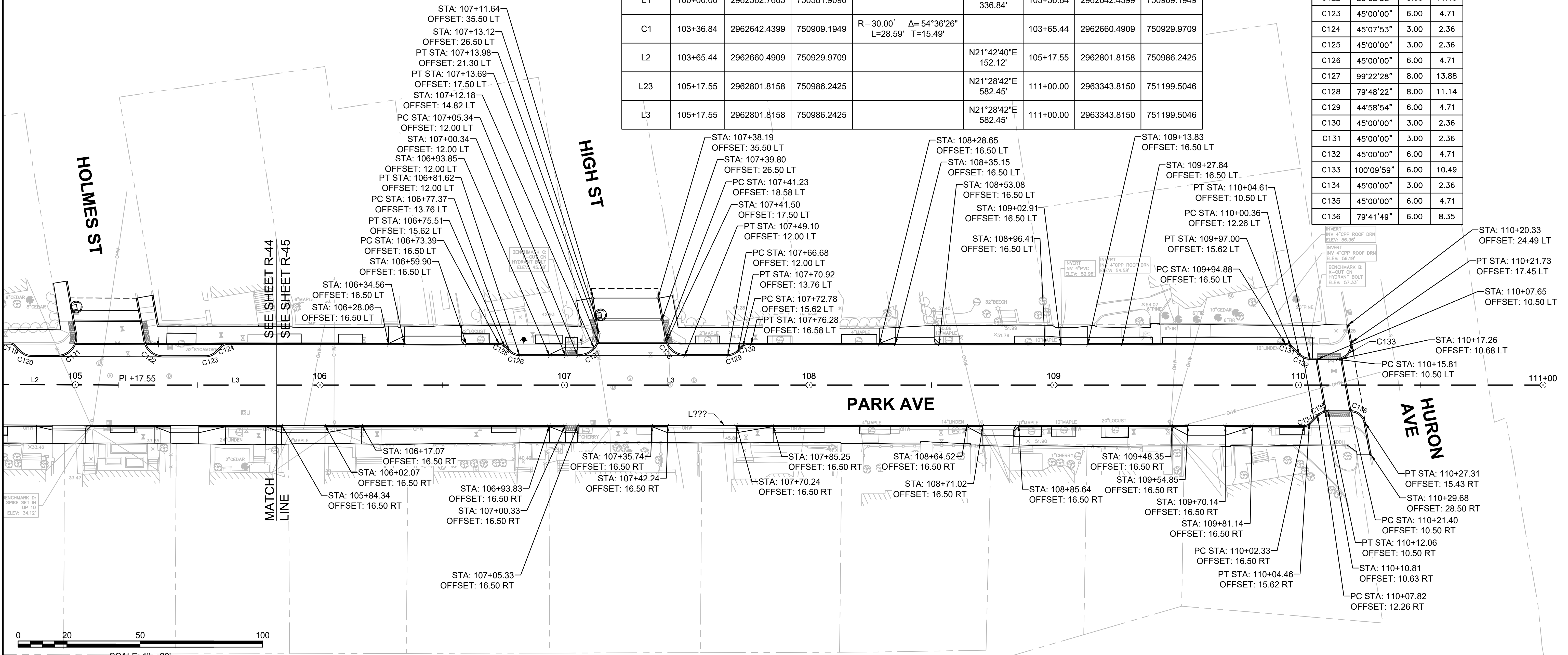
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - ALIGNMENT & CURB TIE PLAN PLAN 1 OF 2

Sheet	R-44
File No.	10565



PARK AVE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	2962562.7663	750581.9090		N76°19'06"E 336.84'	103+36.84	2962642.4399	750909.1949
C1	103+36.84	2962642.4399	750909.1949	R=30.00' Δ=54°36'26" L=28.59' T=15.49'		103+65.44	2962660.4909	750929.9709
L2	103+65.44	2962660.4909	750929.9709		N21°42'40"E 152.12'	105+17.55	2962801.8158	750986.2425
L23	105+17.55	2962801.8158	750986.2425		N21°28'42"E 582.45'	111+00.00	2963343.8150	751199.5046
L3	105+17.55	2962801.8158	750986.2425		N21°28'42"E 582.45'	111+00.00	2963343.8150	751199.5046

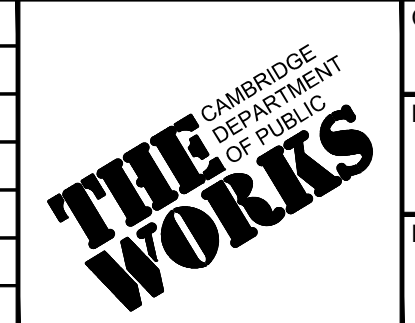
CURVE TABLE			
Curve #	Delta	Radius	Length
C119	45°00'00"	3.00	2.36
C120	45°00'00"	6.00	4.71
C121	100°13'19"	8.00	13.99
C122	80°08'32"	8.00	11.19
C123	45°00'00"	6.00	4.71
C124	45°07'53"	3.00	2.36
C125	45°00'00"	3.00	2.36
C126	45°00'00"	6.00	4.71
C127	99°22'28"	8.00	13.88
C128	79°48'22"	8.00	11.14
C129	44°58'54"	6.00	4.71
C130	45°00'00"	3.00	2.36
C131	45°00'00"	3.00	2.36
C132	45°00'00"	6.00	4.71
C133	100°09'59"	6.00	10.49
C134	45°00'00"	3.00	2.36
C135	45°00'00"	6.00	4.71
C136	79°41'49"	6.00	8.35



DW#	RAMP REFERENCE POINT										ELEVATIONS									
	BASELINE	STATION	OFFSET	WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS										
								LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
P10	PARK	105+95	16.50 RT	3.0	7.4	17.8	-3.94%	15.0	6.5	37.22	37.17	36.30	36.24	35.89	35.63	35.57	35.19	35.44	35.41	
P11	PARK	106+48	16.50 LT	3.0	7.3	23.0	6.26%	6.5	-	38.41	38.31	38.86	38.80	38.37	40.12	40.06	39.81	-	-	
P12	PARK	107+36	16.50 RT	3.0	7.0	28.0	-5.82%	15.0	6.5	46.27	46.26	45.41	45.35	45.05	43.88	43.82	43.42	43.57	43.54	
P13	PARK	108+44	16.50 LT	3.0	7.0	16.0	4.56%	6.5	-	49.67	49.43	49.86	49.78	49.25	50.59	50.51	49.98	-	-	
P14	PARK	108+78	16.50 RT	4.0	8.2	12.5	-5.36%	-	6.5	-	-	51.65	51.59	50.91	50.98	50.92	50.24	50.54	50.44	
P15	PARK	109+08	16.50 LT	3.0	7.0	11.0	3.64%	6.5	14.0	52.88	52.78	52.87	52.81	52.28	53.27	53.21	52.68	53.73	53.63	
P16	PARK	109+62	16.50 RT	4.0	8.4	15.0	-2.07%	11.0	6.5	54.21	54.09	54.15	54.08	53.45	53.84	53.77	53.14	53.56	53.50	

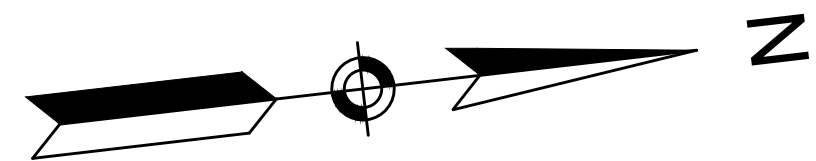


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE - ALIGNMENT & CURB TIE PLAN PLAN 2 OF 2

Sheet	R-45
File No.	10565

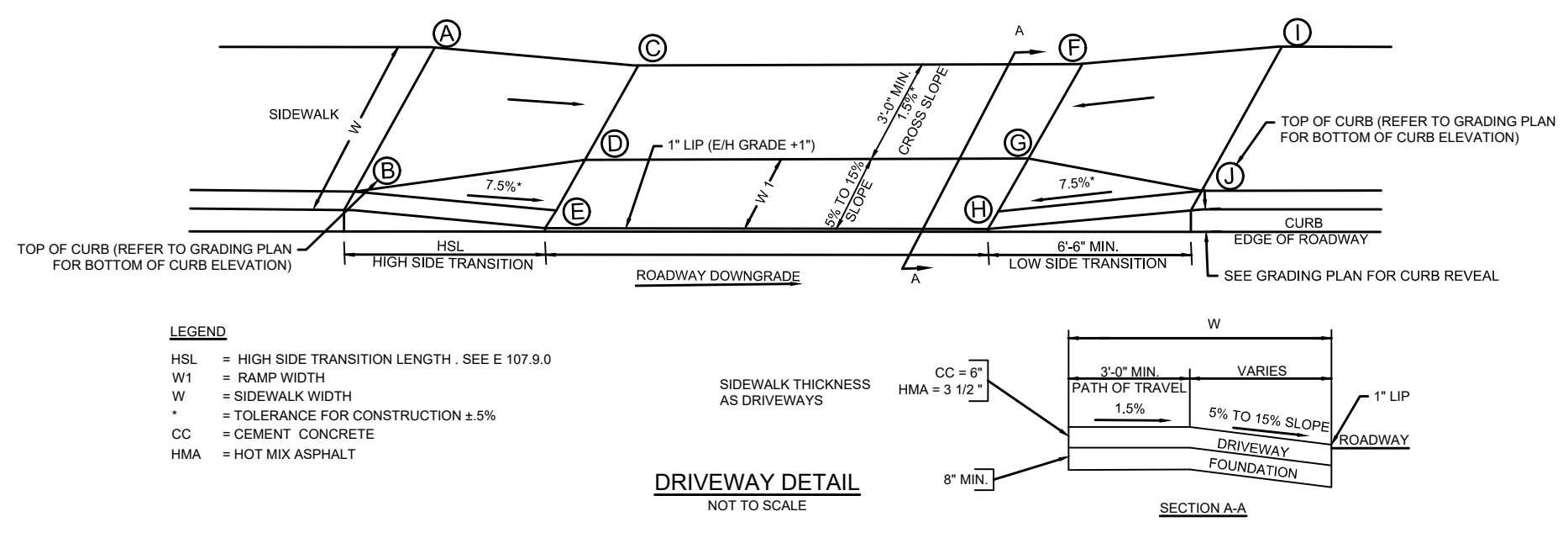
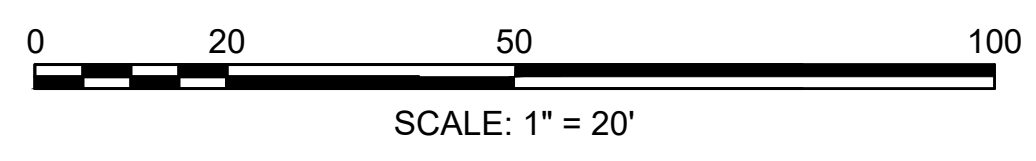
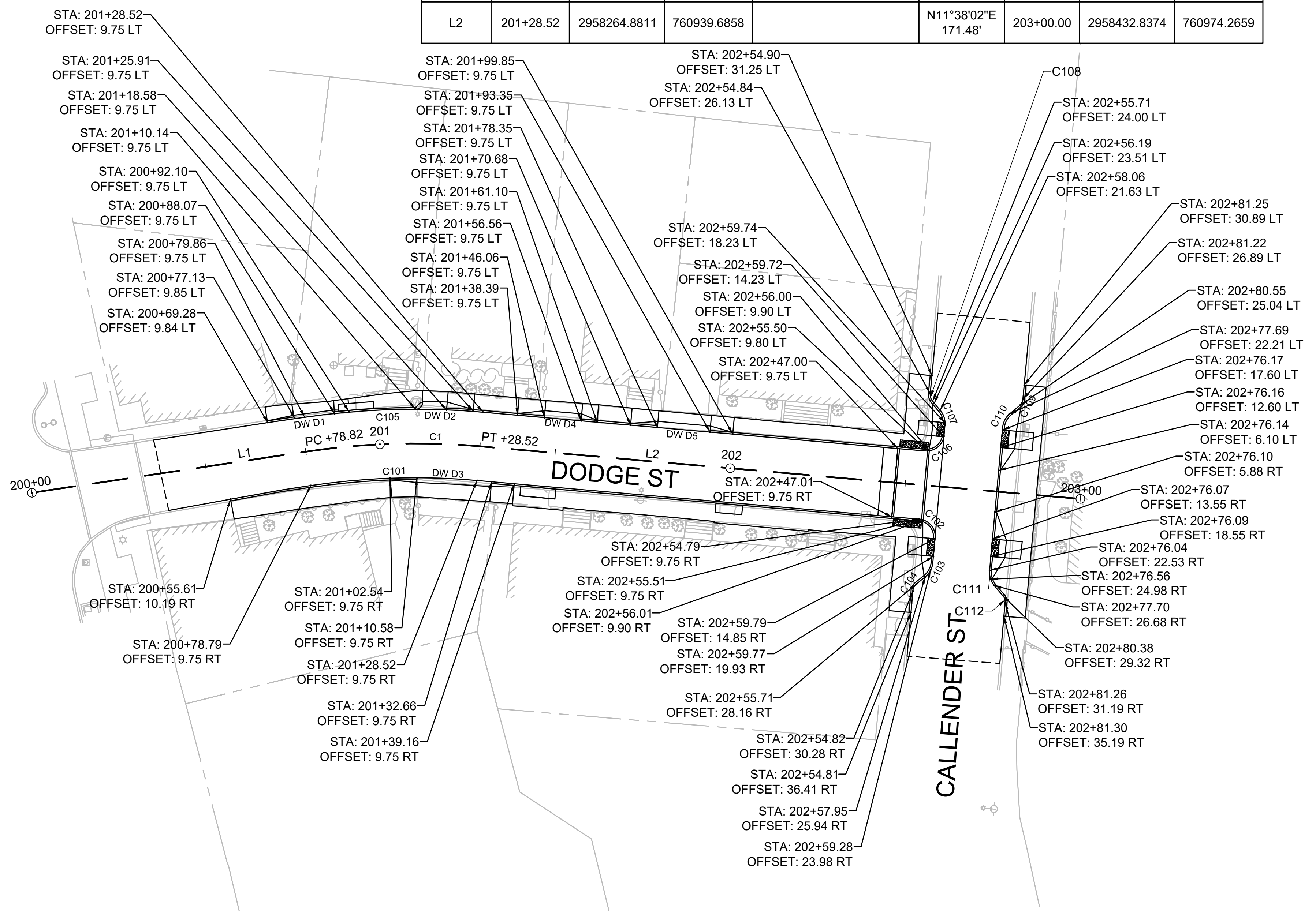


DODGE STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	200+00.00	2958136.6981	760938.1114		N1°54'39"W 78.82'	200+78.82	2958215.4722	760935.4834
C1	200+78.82	2958215.4722	760935.4834	R=210.25' L=49.70' Δ=13°32'41" T=24.97'		201+28.52	2958264.8811	760939.6858
L2	201+28.52	2958264.8811	760939.6858		N11°38'02"E 171.48'	203+00.00	2958432.8374	760974.2659

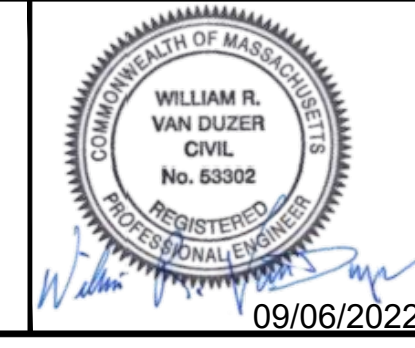
CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C101	13°32'41"	200.50	47.40	23.8100
C102	90°15'35"	5.00	7.88	5.0227
C103	45°00'10"	6.00	4.71	2.4854
C104	45°00'00"	3.00	2.36	1.2426
C105	13°13'56"	220.00	50.81	25.5175
C106	69°57'42"	5.00	6.11	3.4985
C107	36°45'16"	6.00	3.85	1.9933
C108	45°00'00"	3.00	2.36	1.2426
C109	38°27'08"	3.00	2.01	1.0462
C110	45°35'59"	6.00	4.78	2.5221
C111	43°38'48"	6.02	4.59	2.4118
C112	40°25'34"	3.00	2.12	1.1046

WESTERN AVE

CALLENDER ST



DW#	DRIVEWAYS										ELEVATIONS									
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH												
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
D1	DODGE	200+82	9.75 LT	1.0	4.2	24	-0.45%	7.67	6.5	21.95	21.89	21.80	21.75	21.60	21.74	21.70	21.55	21.79	21.77	
D2	DODGE	201+15	9.75 LT	2.2	5.2	7	-0.34%	--	7.67	--	--	21.76	21.72	21.45	21.72	21.68	21.42	21.77	21.75	
D3	DODGE	201+22	9.75 RT	1.4	5.4	21	0.42%	6.5	7.67	21.90	21.80	21.62	21.57	21.36	21.70	21.64	21.45	21.91	21.96	
D4	DODGE	201+51	9.75 LT	2.0	4.8	10.5	-0.41%	7.67	6.5	21.79	21.72	21.65	21.60	21.31	21.61	21.56	21.27	21.67	21.25	
D5	DODGE	201+85	9.75 LT	1.8	4.8	15	-0.92%	7.67	6.5	21.83	21.71	21.47	21.42	21.16	21.33	21.28	21.02	21.52	21.48	

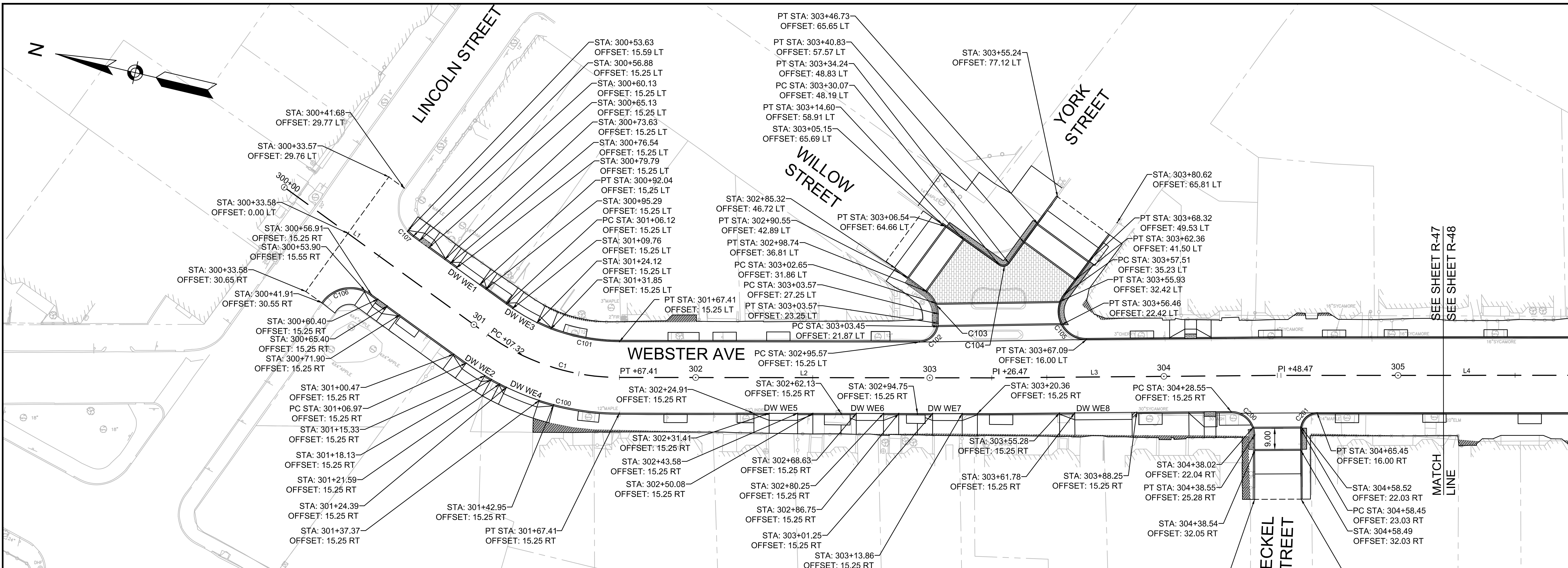


Scale	AS NOTED
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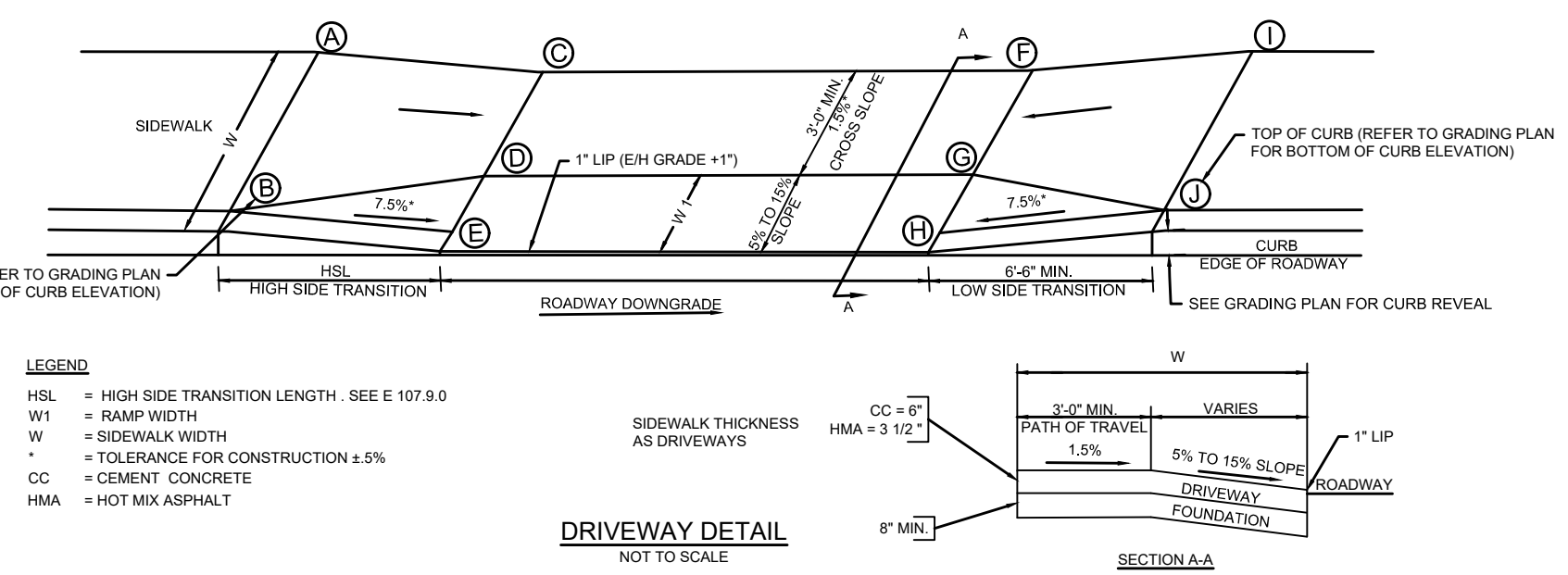
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	DODGE STREET - ALIGNMENT & CURB TIE PLAN PLAN 1 OF 1

Sheet	R-46
File No.	10565

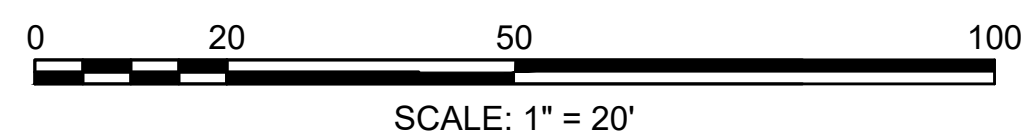


CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C100	35°51'49"	111.25	69.64	36.0009
C101	35°51'49"	80.75	50.54	26.1310
C102	90°00'00"	8.00	12.57	8.0000
C103	53°43'10"	12.00	11.25	6.0774
C104	89°27'09"	3.00	4.68	2.9715
C105	127°05'19"	12.00	26.62	24.1150
C106	91°08'07"	15.00	23.86	15.3002
C107	12°14'34"	15.00	3.21	1.6087

WEBSTER AVE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	300+00.00	2960433.7926	766054.8841		S22°39'19"W 107.32'	301+07.32	2960334.7492	766013.5443
C1	301+07.32	2960334.7492	766013.5443	R=96.00' Δ=35°51'44" L=60.09' T=31.06'		301+67.41	2960275.8383	766008.6760
L2	301+67.41	2960275.8383	766008.6760		S13°12'25"E 159.06'	303+26.47	2960120.9898	766045.0154
L3	303+26.47	2960120.9898	766045.0154		S13°46'04"E 122.00'	304+48.47	2960002.4912	766074.0506



DW#	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
WE1	WEBSTER	300+85	15.25 LT	3.0	8.0	12.0	0.33%	3.25	3.25	20.65	20.54	20.92	20.84	20.31	20.80	20.72	20.35	20.76	20.65
WE2	WEBSTER	301+11	15.25 RT	3.0	8.0	9.75	0.51%	3.25	6.50	20.74	20.63	20.98	20.91	20.39	21.03	20.96	20.44	21.06	20.95
WE3	WEBSTER	301+17	15.25 LT	3.0	8.0	12.0	-1.00%	3.25	6.50	20.58	20.46	20.63	20.54	20.18	20.58	20.51	20.06	20.59	20.47
WE4	WEBSTER	301+31	15.25 RT	3.0	8.0	15.0	0.60%	6.50	3.25	20.91	20.79	20.88	20.79	20.26	20.93	20.86	20.35	20.75	20.64
WE5	WEBSTER	302+37	15.25 RT	3.0	8.5	12.0	-0.50%	6.50	6.50	21.01	20.89	20.98	20.90	20.37	20.92	20.83	20.31	20.88	20.76
WE6	WEBSTER	302+74	15.25 RT	3.0	6.0	11.5	-0.43%	6.50	6.50	21.05	20.99	21.09	21.04	20.55	21.09	21.03	20.51	21.08	20.95
WE7	WEBSTER	303+08	15.25 RT	3.0	5.75	12.6	0.56%	6.50	6.50	20.87	20.80	20.80	20.75	20.36	21.01	20.96	20.43	21.07	20.93
WE8	WEBSTER	303+74	15.25 RT	3.0	6.5	24.5	-0.53%	-	6.50	-	-	20.89	20.83	20.42	20.69	20.63	20.29	20.65	20.57

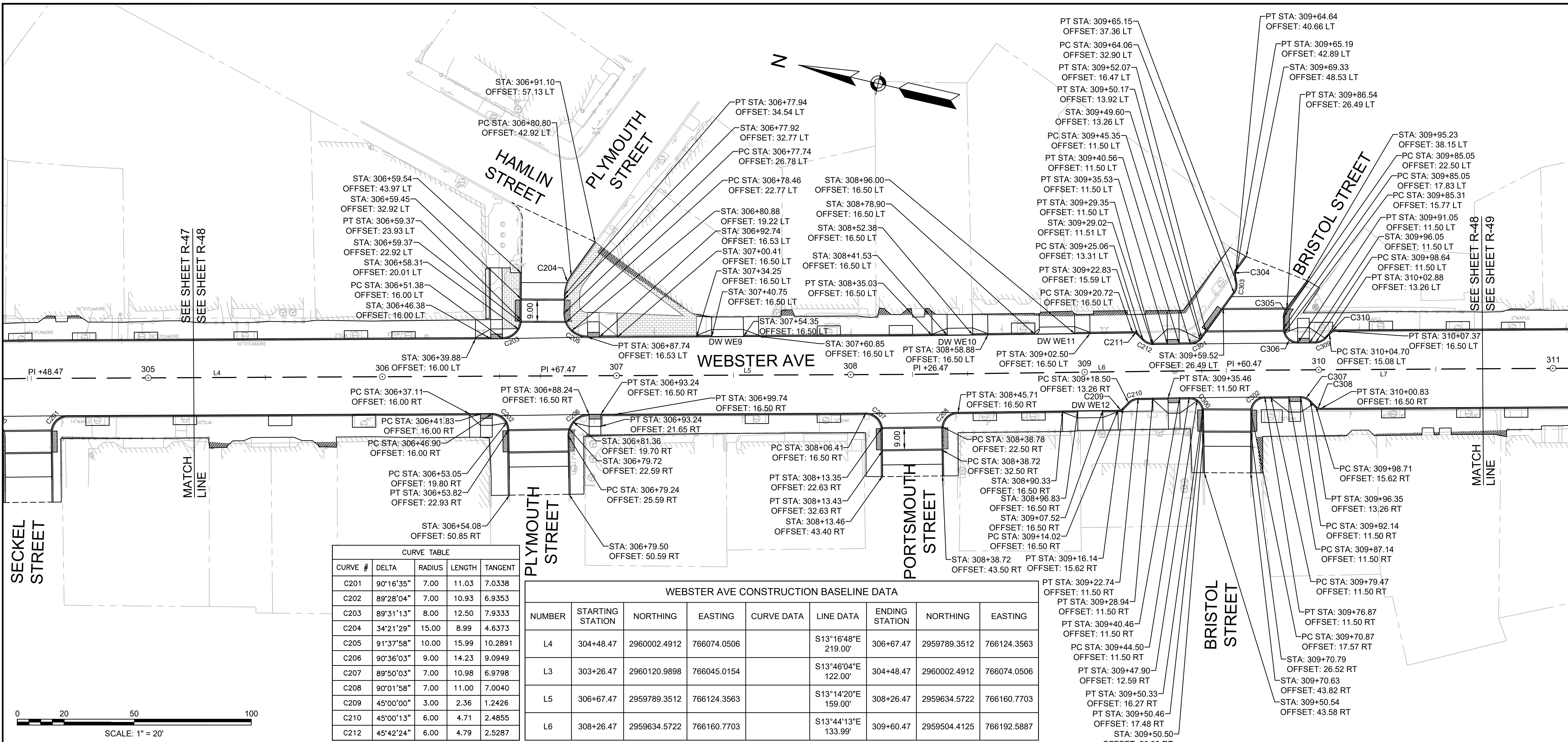


Scale	AS NOTED
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Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE - ALIGNMENT & CURB TIE PLAN PLAN 1 OF 3

Sheet	R-47
File No.	10565



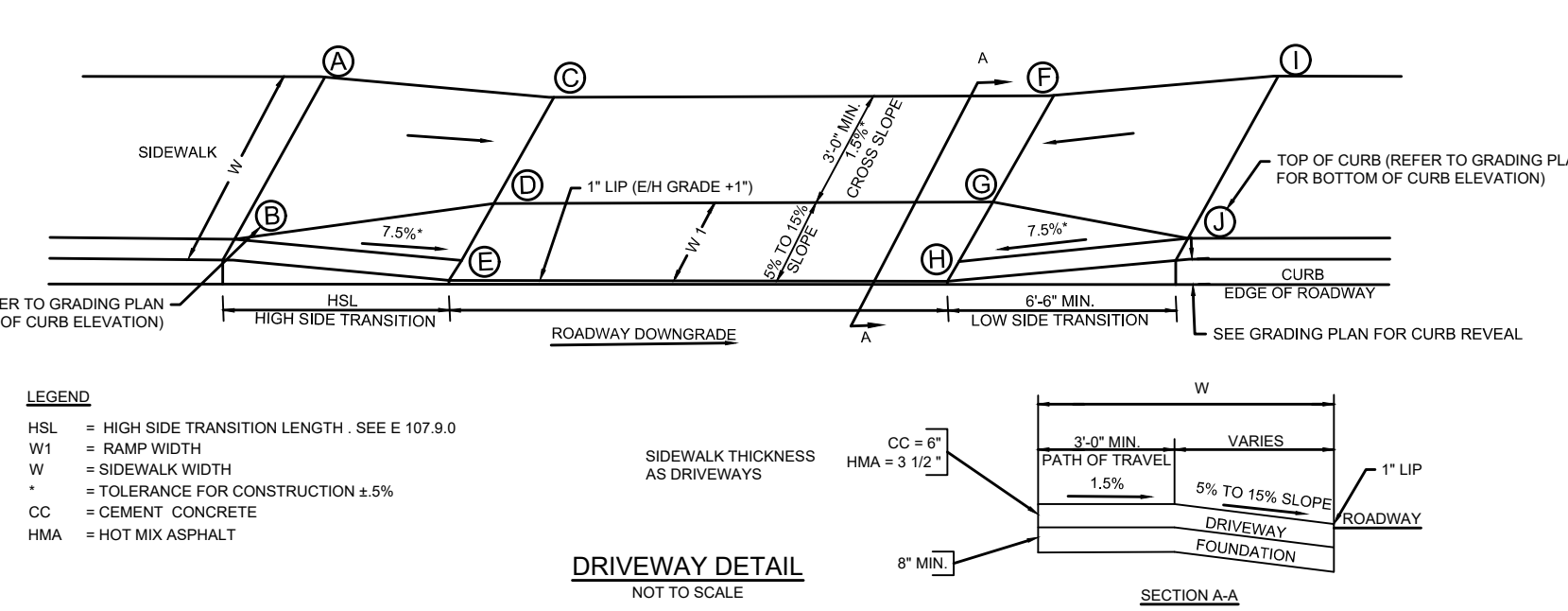
SEE SHEET R-47
SEE SHEET R-48

SCALE: 1" = 20'

CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C201	90°16'35"	7.00	11.03	7.0338
C202	89°28'04"	7.00	10.93	6.9353
C203	89°31'13"	8.00	12.50	7.9333
C204	34°21'29"	15.00	8.99	4.6373
C205	91°37'58"	10.00	15.99	10.2891
C206	90°36'03"	9.00	14.23	9.0949
C207	89°50'03"	7.00	10.98	6.9798
C208	90°01'58"	7.00	11.00	7.0040
C209	45°00'00"	3.00	2.36	1.2426
C210	45°00'13"	6.00	4.71	2.4855
C212	45°42'24"	6.00	4.79	2.5287

SEE SHEET R-49 FOR CURVE #300-310

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	304+48.47	2960002.4912	766074.0506		S13°16'48"E 219.00'	306+67.47	2959789.3512	766124.3563
L3	303+26.47	2960120.9898	766045.0154		S13°46'04"E 122.00'	304+48.47	2960002.4912	766074.0506
L5	306+67.47	2959789.3512	766124.3563		S13°14'20"E 159.00'	308+26.47	2959634.5722	766160.7703
L6	308+26.47	2959634.5722	766160.7703		S13°44'13"E 133.99'	309+60.47	2959504.4125	766192.5887



DW#	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
WE9	WEBSTER	307+48	16.50 LT	3.0	8.5	13.5	-0.67%	6.50	6.50	20.71	20.64	20.66	20.61	20.10	20.40	20.36	20.01	20.36	20.30
WE10	WEBSTER	308+47	16.50 LT	3.0	9.0	10.75	-0.65%	6.50	6.50	20.11	19.99	20.07	19.97	19.44	20.00	19.90	19.37	19.95	19.83
WE11	WEBSTER	308+88	16.50 LT	3.0	8.75	15.25	-0.72%	6.50	6.50	19.81	19.72	19.72	19.20	19.71	19.62	19.62	19.09	19.69	19.57
WE12	WEBSTER	309+02	16.50 RT	3.0	5.25	11.0	0.73%	6.50	6.50	19.36	19.24	19.45	19.41	18.88	19.53	19.49	18.96	19.64	19.52



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Approved by	PMF REVISIONS

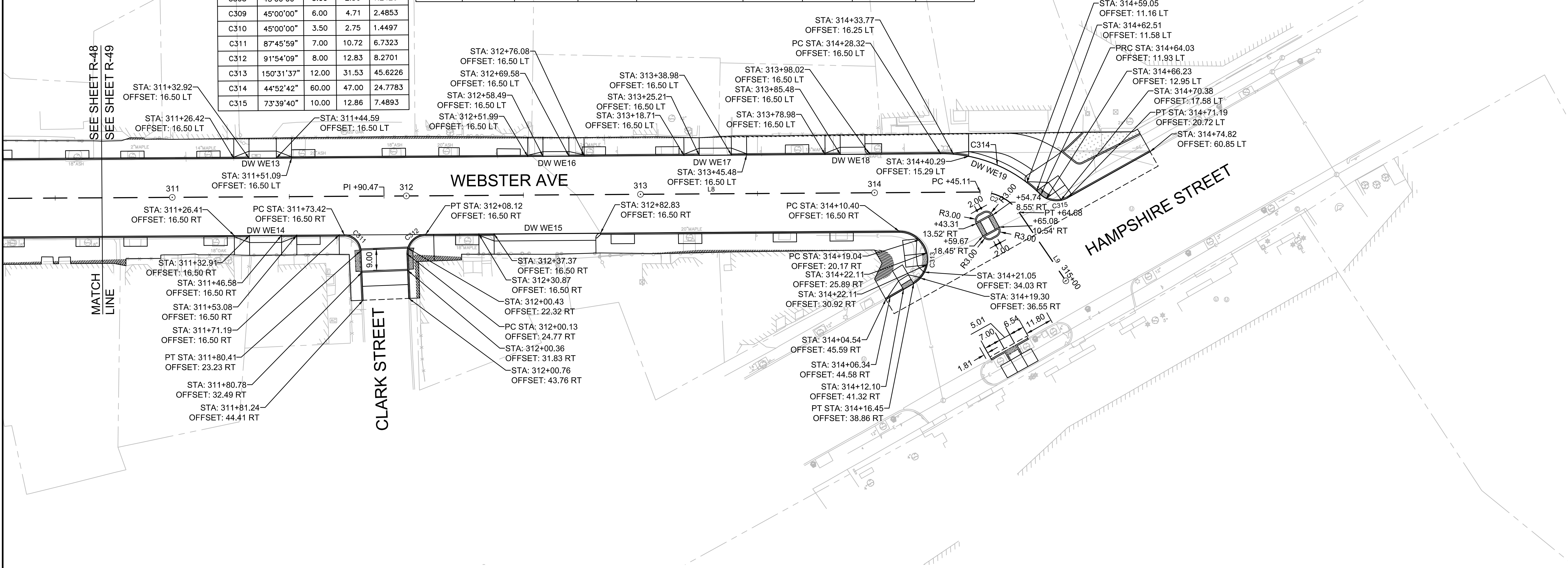
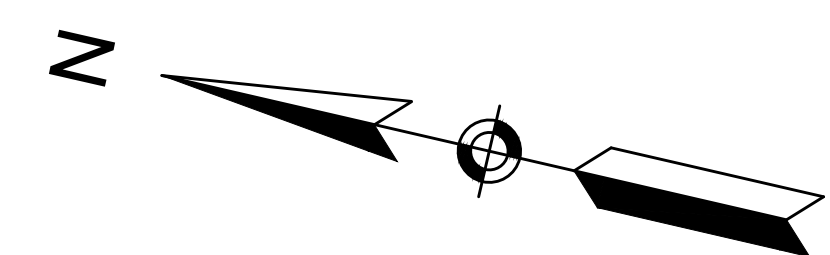


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE - ALIGNMENT & CURB TIE PLAN PLAN 2 OF 3

Sheet	R-48
File No.	10565

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C300	89°47'29"	6.00	9.40	5.9782
C301	53°20'12"	6.00	5.59	3.0135
C302	89°29'35"	6.00	9.37	5.9471
C303	45°00'00"	6.00	4.71	2.4853
C304	45°00'00"	3.50	2.75	1.4497
C305	36°41'39"	6.00	3.84	1.9898
C306	90°00'00"	6.00	9.42	6.0000
C307	45°00'00"	6.00	4.71	2.4853
C308	45°00'00"	3.00	2.36	1.2426
C309	45°00'00"	6.00	4.71	2.4853
C310	45°00'00"	3.50	2.75	1.4497
C311	87°45'59"	7.00	10.72	6.7323
C312	91°54'09"	8.00	12.83	8.2701
C313	150°31'37"	12.00	31.53	45.6226
C314	44°52'42"	60.00	47.00	24.7783
C315	73°39'40"	10.00	12.86	7.4893

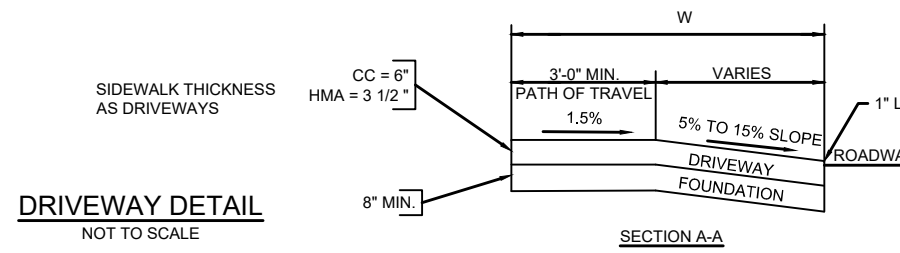
WEBSTER AVE CONSTRUCTION BASELINE DATA									
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING	
L7	309+60.47	2959504.4125	766192.5887		S13°21'05"E 230.00'	311+90.47	2959280.6280	766245.7009	
L8	311+90.47	2959280.6280	766245.7009		S13°23'07"E 254.65'	314+45.11	2959032.8966	766304.6520	
C2	314+45.11	2959032.8966	766304.6520	R=20.00 L=19.57' Δ=56°03'02" T=10.65'		314+64.68	2959014.7124	766299.9019	
L9	314+64.68	2959014.7124	766299.9019		S42°39'55"W 35.32'	315+00.00	2958988.7420	766275.9664	



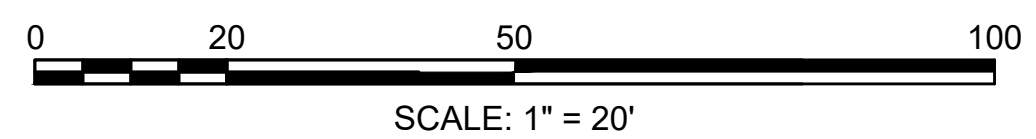
SEE SHEET R-48
SEE SHEET R-49

MATCH LINE

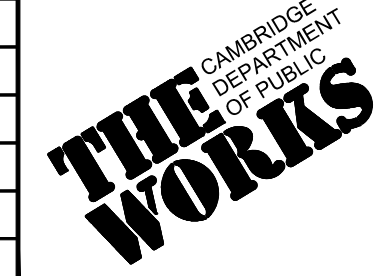
LEGEND:
HSL = HIGH SIDE TRANSITION LENGTH - SEE E 107.9.0
W1 = RAMP WIDTH
W = SIDEWALK WIDTH
+ = TOLERANCE FOR CONSTRUCTION ±.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT



DW#	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
WE13	WEBSTER	311+39	16.50 LT	3.0	5.0	12.0	0.00%	6.50	6.50	18.38	18.22	18.20	18.16	17.63	18.20	18.16	17.63	18.29	18.12
WE14	WEBSTER	311+40	16.50 RT	3.0	8.25	13.8	0.65%	6.50	6.50	18.49	18.38	18.49	18.41	17.92	18.49	18.40	18.01	18.67	18.55
WE15	WEBSTER	312+59	16.50 RT	3.0	8.5	43.0	0.28%	-	6.50	-	-	17.95	17.87	17.52	18.26	18.17	17.64	18.24	18.12
WE16	WEBSTER	312+64	16.50 LT	2.0	7.75	10.85	-0.55%	6.50	6.50	17.76	17.62	17.73	17.63	17.28	17.71	17.60	17.22	17.79	17.64
WE17	WEBSTER	313+32	16.50 LT	3.0	7.5	13.7	-0.58%	6.50	6.50	17.55	17.42	17.51	17.44	16.91	17.44	17.35	16.83	17.41	17.27
WE18	WEBSTER	313+91	16.50 LT	3.0	8.0	10.2	0.59%	6.50	-	17.41	17.33	17.38	17.34	16.88	17.32	17.28	16.94	-	-
WE19	WEBSTER	314+50	12.27 LT	6.0	9.5	27.0	1.78%	6.50	-	-	17.43	17.67	17.62	17.15	17.62	17.57	17.63	-	-

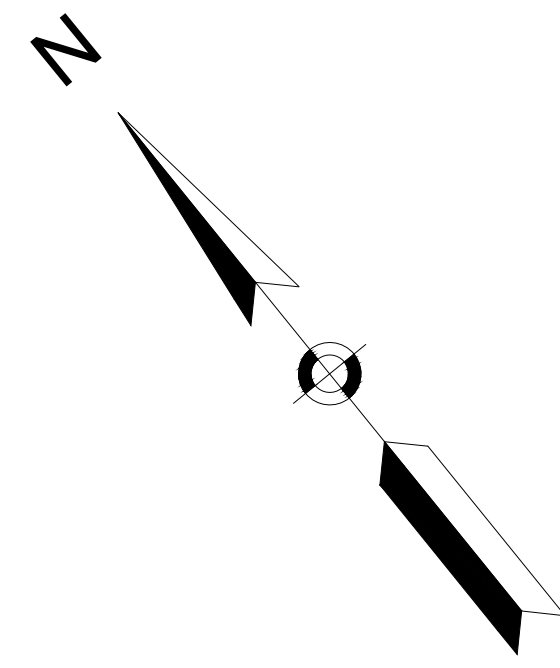


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE - ALIGNMENT & CURB TIE PLAN PLAN 3 OF 3

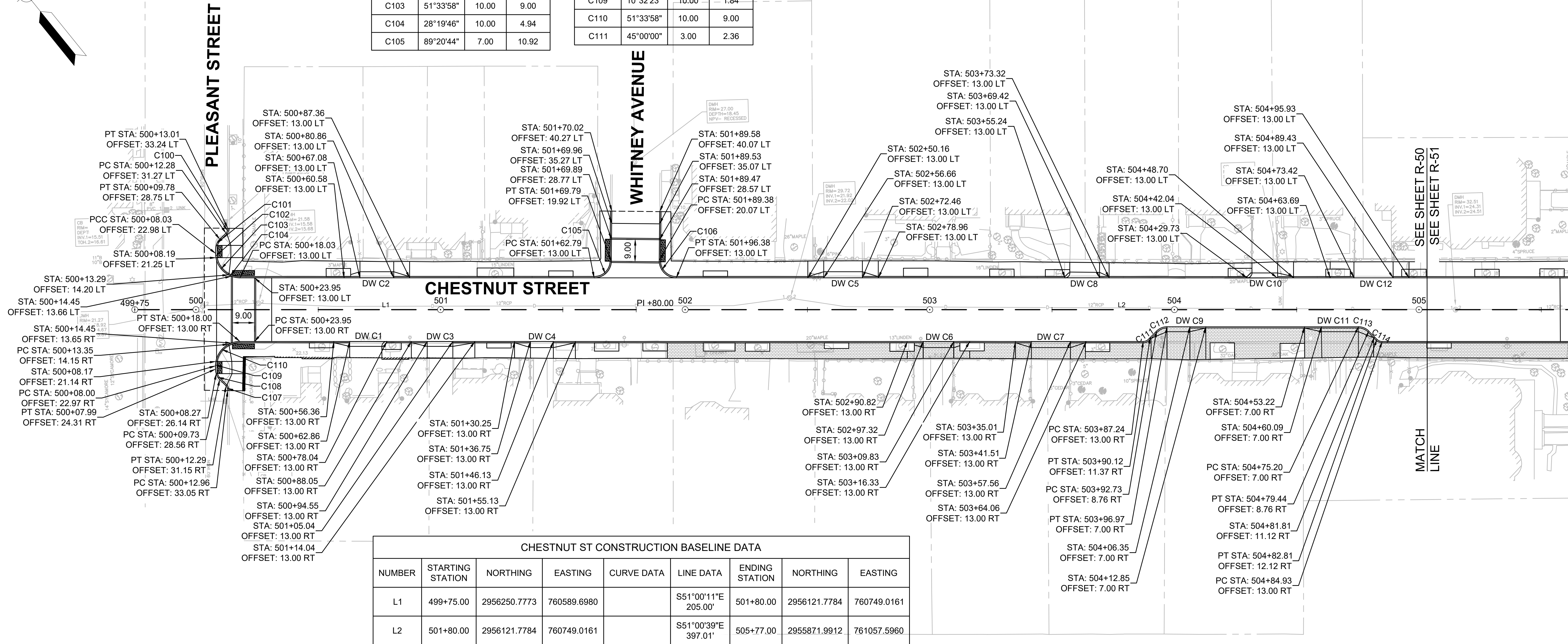
Sheet	R-49
File No.	10565



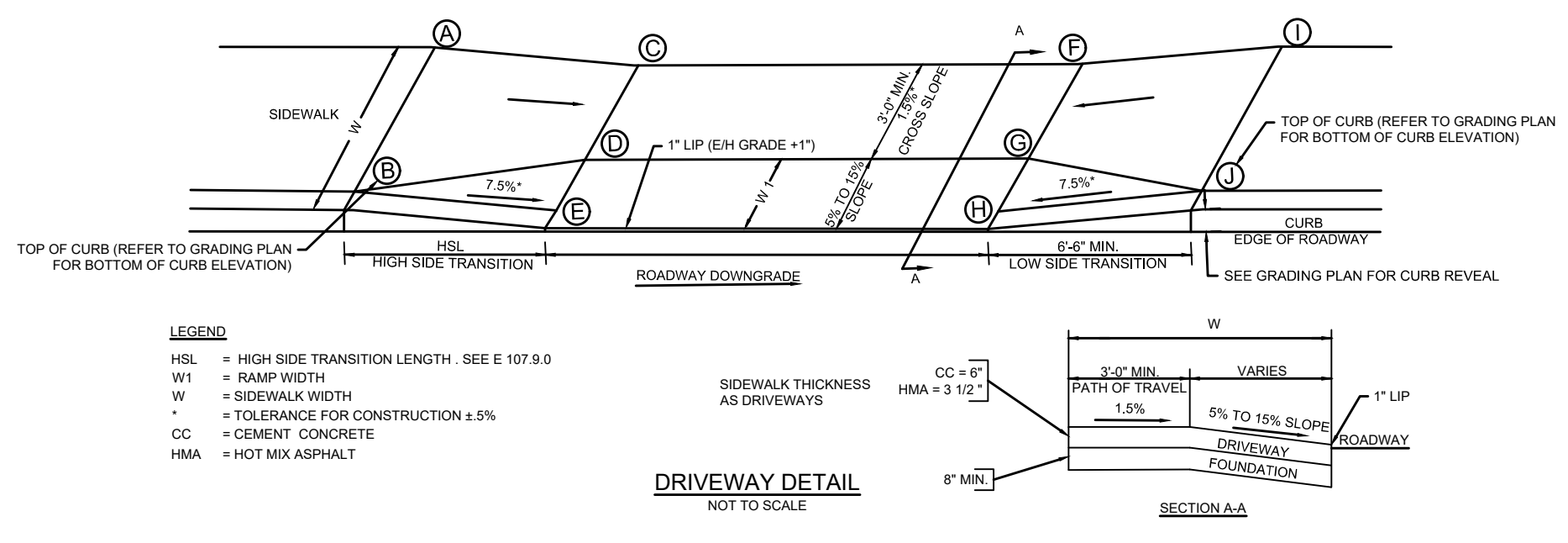
CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C100	45°00'00"	3.00	2.36
C101	45°00'00"	6.00	4.71
C102	9°19'17"	10.74	1.75
C103	51°33'58"	10.00	9.00
C104	28°19'46"	10.00	4.94
C105	89°20'44"	7.00	10.92

CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C106	90°35'31"	7.00	11.07
C107	45°00'00"	3.00	2.36
C108	45°00'00"	6.00	4.71
C109	10°32'23"	10.00	1.84
C110	51°33'58"	10.00	9.00
C111	45°00'00"	3.00	2.36

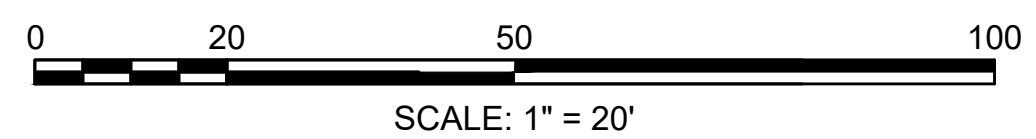
CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C112	45°00'00"	6.00	4.71
C113	45°00'00"	6.00	4.71
C114	45°00'00"	3.00	2.36



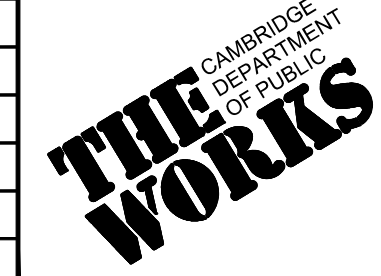
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	499+75.00	2956250.7773	760589.6980		S51°00'11"E 205.00'	501+80.00	2956121.7784	760749.0161
L2	501+80.00	2956121.7784	760749.0161		S51°00'39"E 397.01'	505+77.00	2955871.9912	761057.5960



DW#	DRIVEWAYS										ELEVATIONS									
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH												
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
C1	CHESTNUT	500+69	13.0 RT	2.0	6.6	13.0	-4.38%	-	6.5	-	-	23.21	23.14	22.84	22.72	22.65	22.27	22.72	22.62	
C2	CHESTNUT	500+74	13.0 LT	2.5	6.7	13.8	4.28%	6.5	6.5	22.69	22.64	22.96	22.90	22.49	23.54	23.48	23.08	23.74	23.64	
C3	CHESTNUT	501+00	13.0 RT	2.0	6.8	10.5	-4.10%	9.0	6.5	24.70	24.68	24.32	24.25	23.90	23.73	23.66	23.47	23.70	23.68	
C4	CHESTNUT	501+41	13.0 RT	2.5	6.8	9.4	-4.27%	9.0	6.5	26.57	26.47	26.20	26.12	25.67	25.80	25.72	25.27	25.50	25.40	
C5	CHESTNUT	502+65	13.0 LT	2.5	7.0	15.8	2.53%	6.5	6.5	30.25	30.15	30.34	30.26	29.81	30.74	30.66	30.21	30.91	30.81	
C6	CHESTNUT	503+03	13.0 RT	2.5	6.9	12.5	-1.44%	6.5	6.5	31.49	31.42	31.36	31.28	30.83	31.18	31.10	30.65	31.15	31.05	
C7	CHESTNUT	503+50	13.0 RT	2.5	7.0	16.0	-0.56%	6.5	6.5	31.76	31.73	31.73	31.66	31.29	31.64	31.57	31.20	31.67	31.64	
C8	CHESTNUT	503+63	13.0 LT	2.2	6.2	12.2	0.57%	-	3.9	-	-	31.97	31.90	31.49	32.01	31.95	31.56	32.01	31.92	
C9	CHESTNUT	504+02	7.0 RT	2.0	13.3	9.4	-1.07%	6.5	6.5	32.20	32.14	32.02	31.85	31.75	32.00	31.83	31.65	32.05	31.99	
C10	CHESTNUT	504+37	13.0 LT	2.0	6.6	10.5	-1.34%	-	6.5	-	-	32.36	32.29	31.91	32.22	32.15	31.77	32.37	32.27	
C11	CHESTNUT	504+53	7.0 RT	2.0	12.7	15.1	-0.53%	7.8	6.9	32.65	32.46	32.54	32.38	32.13	32.46	32.30	32.05	32.73	32.54	
C12	CHESTNUT	504+81	13.0 LT	-	6.5	16.0	0.69%	9.7	6.5	32.42	32.33	33.02	-	31.93	32.56	-	32.04	32.59	32.49	

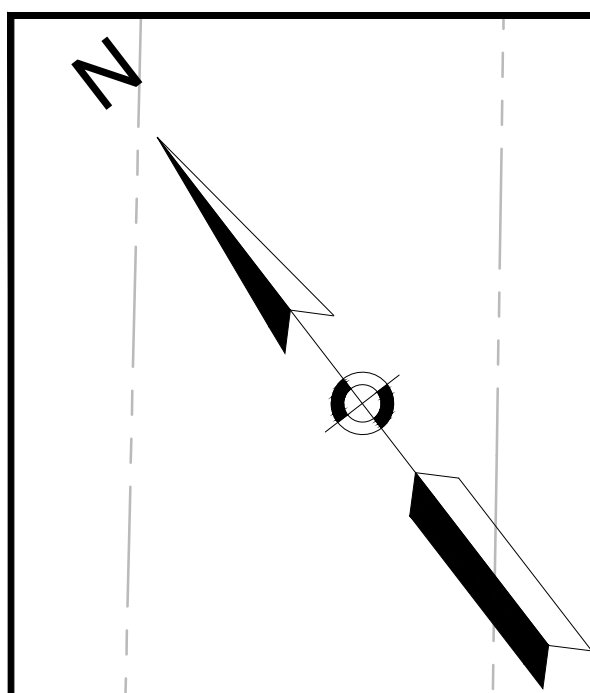


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF

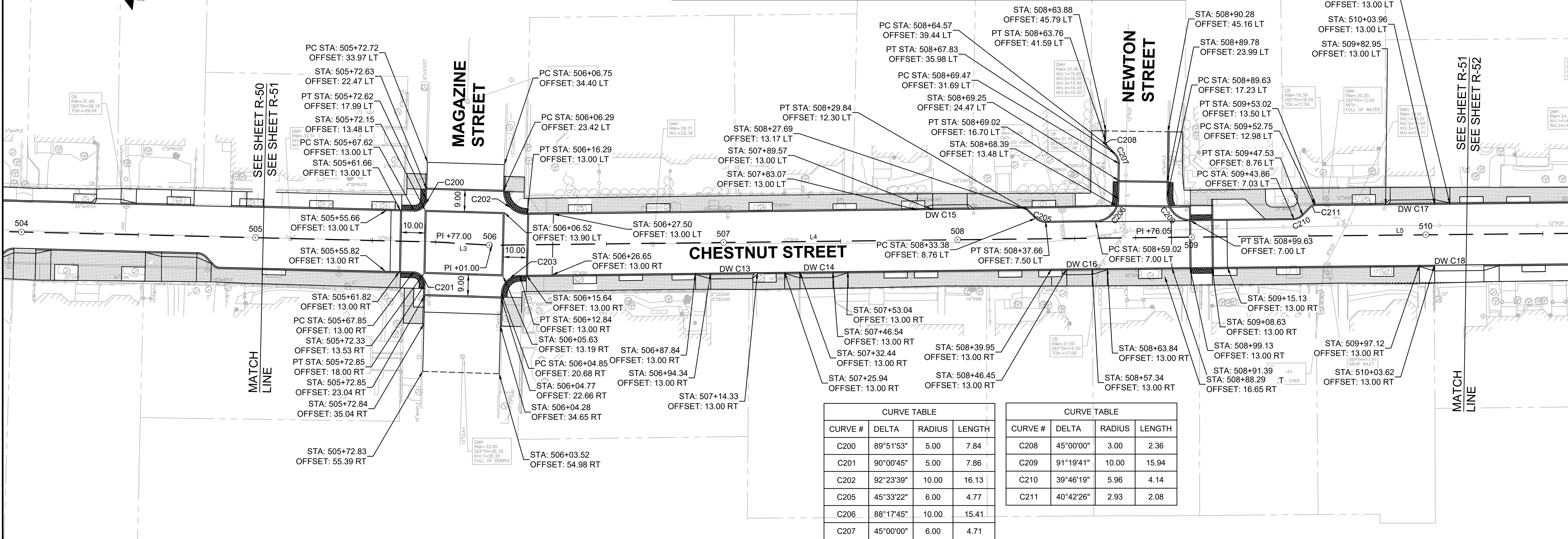


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - ALIGNMENT & CURB TIE PLAN PLAN 1 OF 4

Sheet	R-50
File No.	10565

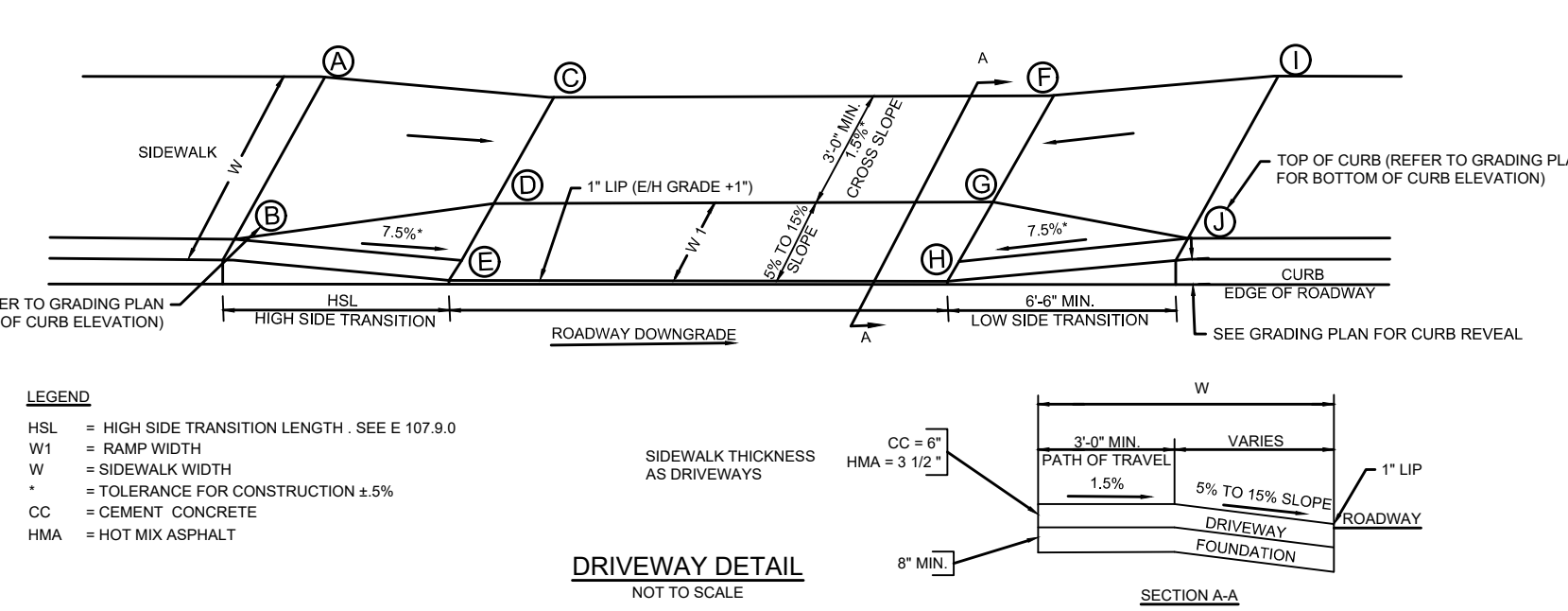


CHESTNUT ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	505+77.00	2955871.9912	761057.5960		S49°11'20"E 24.00'	506+01.00	2955856.3046	761075.7621
L4	506+01.00	2955856.3046	761075.7621		S53°04'33"E 275.04'	508+76.05	2955691.0701	761295.6413
L5	508+76.05	2955691.0701	761295.6413		S52°58'57"E 225.95'	511+02.00	2955555.0368	761476.0491



CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C200	89°51'53"	5.00	7.84
C201	90°00'45"	5.00	7.86
C202	92°23'39"	10.00	16.13
C205	45°33'22"	6.00	4.77
C206	88°17'45"	10.00	15.41
C207	45°00'00"	6.00	4.71

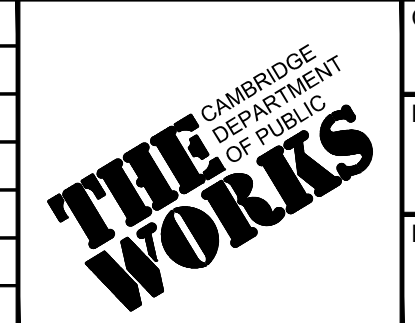
CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C208	45°00'00"	3.00	2.36
C209	91°19'41"	10.00	15.94
C210	39°46'19"	5.96	4.14
C211	40°42'26"	2.93	2.08



DW#	DRIVEWAYS										ELEVATIONS									
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH												
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
C13	CHESTNUT	507+03	13.0 RT	2.5	6.9	18.0	5.17%	-	6.5	-	27.73	27.65	27.20	28.66	28.58	28.13	28.99	28.93		
C14	CHESTNUT	507+49	13.0 RT	2.5	7.1	14.1	4.89%	6.5	8.5	26.02	25.91	26.17	26.09	25.64	26.86	26.78	27.25	27.12		
C15	CHESTNUT	507+97	13.0 LT	2.0	6.8	14.7	-4.07%	6.5	-	24.70	24.60	24.46	24.38	24.00	23.86	23.78	23.40	-	-	
C16	CHESTNUT	508+52	13.0 RT	2.5	7.3	10.9	3.22%	6.5	6.5	21.91	21.81	22.08	22.01	21.65	22.50	22.43	22.00	22.75	22.60	
C17	CHESTNUT	509+94	13.0 LT	2.0	7.4	19.0	2.58%	-	6.5	-	20.24	20.14	19.76	20.73	20.63	20.25	21.06	20.85		
C18	CHESTNUT	510+14	13.0 RT	2.5	7.5	21.0	-4.09%	6.5	6.5	21.73	21.63	21.57	21.48	21.03	20.71	20.62	20.17	20.58	20.48	



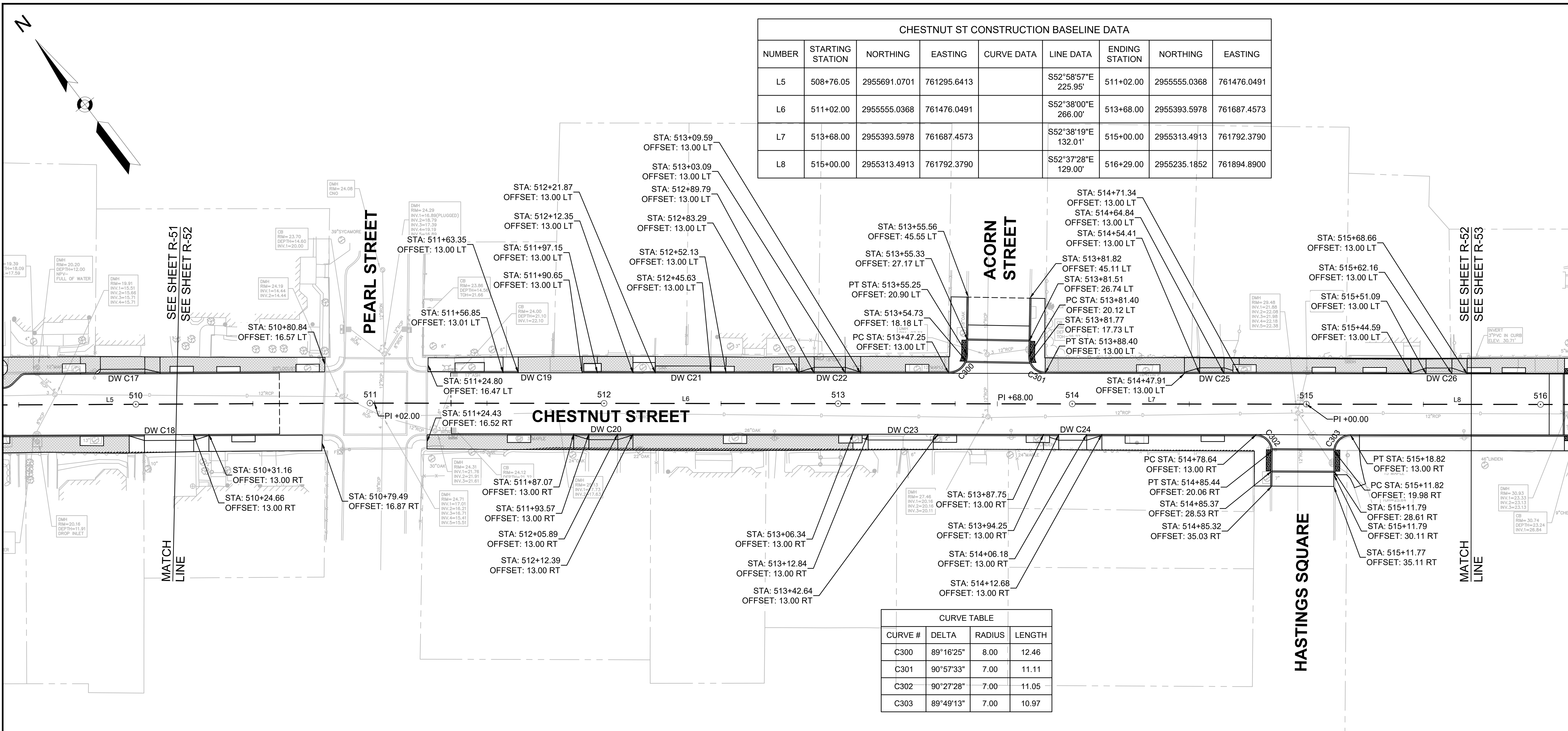
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Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - ALIGNMENT & CURB TIE PLAN PLAN 2 OF 4

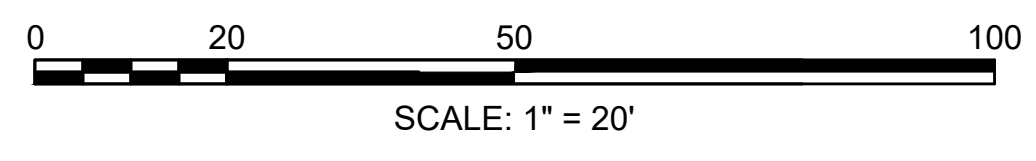
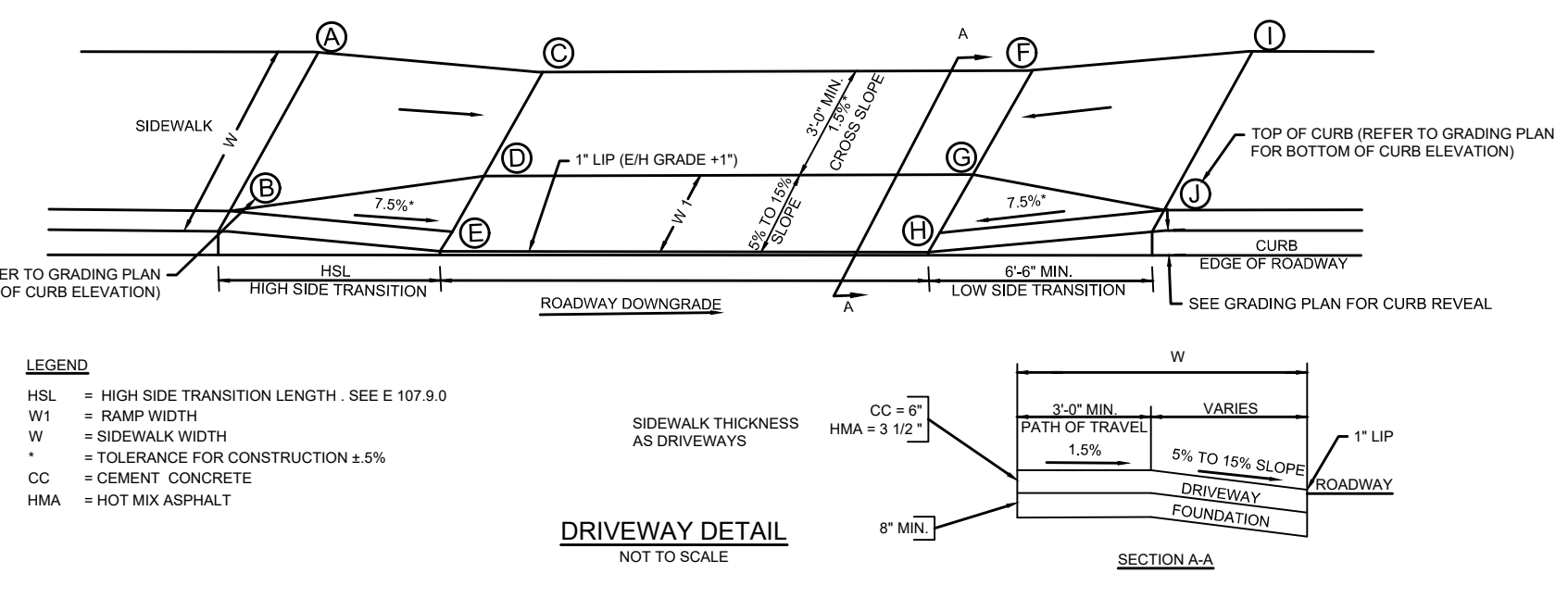
Sheet	R-51
File No.	10565

CHESTNUT ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	508+76.05	2955691.0701	761295.6413		S52°58'57"E 225.95'	511+02.00	2955555.0368	761476.0491
L6	511+02.00	2955555.0368	761476.0491		S52°38'00"E 266.00'	513+68.00	2955393.5978	761687.4573
L7	513+68.00	2955393.5978	761687.4573		S52°38'19"E 132.01'	515+00.00	2955313.4913	761792.3790
L8	515+00.00	2955313.4913	761792.3790		S52°37'28"E 129.00'	516+29.00	2955235.1852	761894.8900

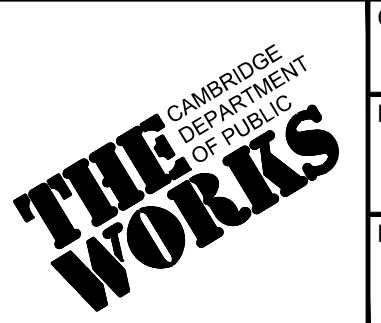


CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C300	89°16'25"	8.00	12.46
C301	90°57'33"	7.00	11.11
C302	90°27'28"	7.00	11.05
C303	89°49'13"	7.00	10.97

DW#	DRIVEWAYS																		
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
C19	CHESTNUT	511+77	13.0 LT	-	6.8	27.3	1.39%	6.5	6.5	24.95	24.85	24.97	-	24.45	25.34	-	24.83	25.51	25.41
C20	CHESTNUT	512+00	13.0 RT	2.5	6.9	12.3	-1.38%	6.5	6.5	25.64	25.54	25.50	25.42	24.97	25.33	25.25	24.80	25.31	25.21
C21	CHESTNUT	512+34	13.0 LT	3.0	7.1	23.8	1.09%	-	-	-	-	25.66	25.60	25.32	25.98	25.92	25.58	26.14	26.03
C22	CHESTNUT	512+96	13.0 LT	2.5	7.0	13.3	1.35%	6.5	6.5	26.63	26.53	26.63	26.56	26.13	26.64	26.57	26.31	26.74	26.70
C23	CHESTNUT	513+27	13.0 RT	2.5	6.6	27.8	-1.51%	-	6.5	-	-	27.26	27.20	26.77	26.87	26.80	26.35	26.80	26.70
C24	CHESTNUT	514+00	13.0 RT	2.5	6.6	11.9	-1.43%	6.5	6.5	28.19	28.09	28.10	28.04	27.63	27.94	27.88	27.46	27.85	27.75
C25	CHESTNUT	514+60	13.0 LT	2.5	7.0	10.4	0.96%	6.5	6.5	28.71	28.61	28.73	28.65	28.20	28.83	28.75	28.30	28.95	28.85
C26	CHESTNUT	515+57	13.0 LT	2.5	6.7	11.1	2.08%	6.5	6.5	29.86	29.79	29.93	29.87	29.58	30.04	29.98	29.81	30.30	30.27

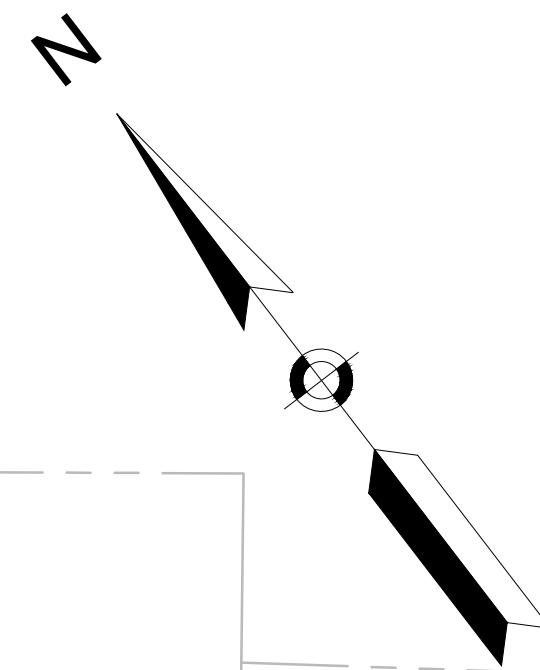


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF

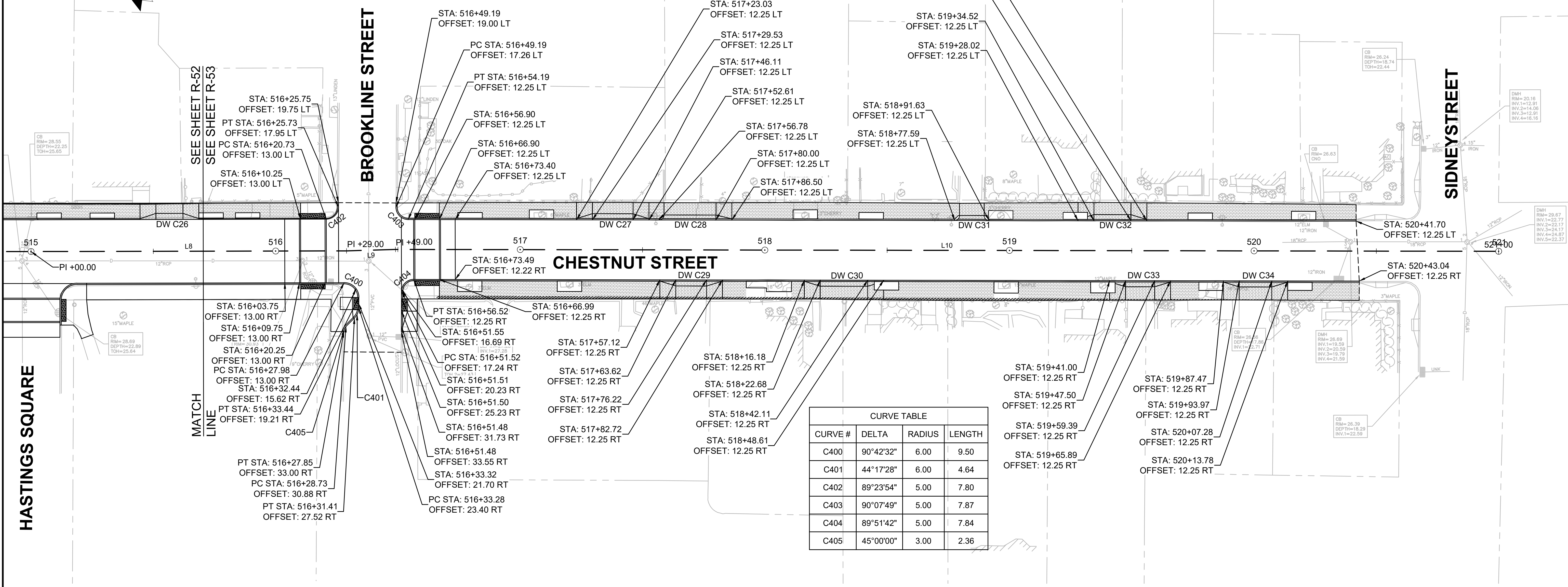


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - ALIGNMENT & CURB TIE PLAN PLAN 3 OF 4

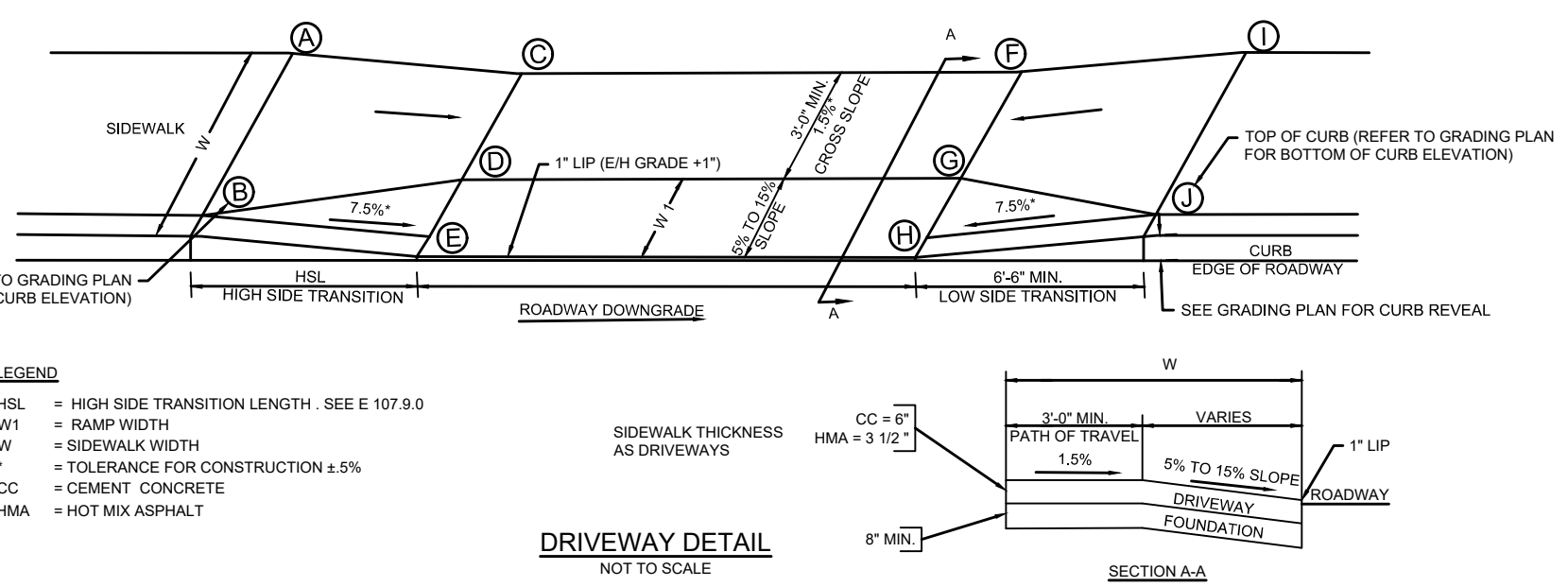
Sheet	R-52
File No.	10565



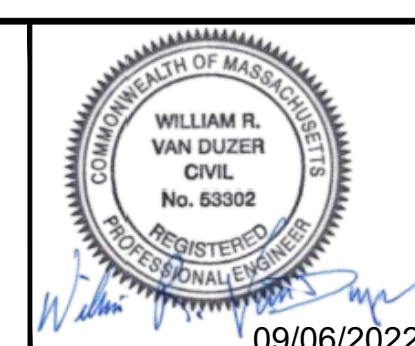
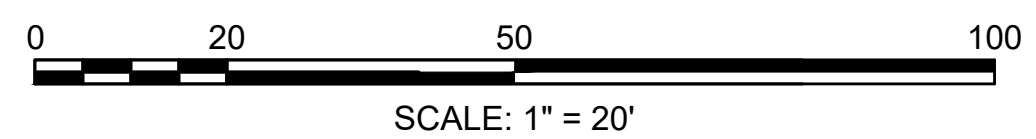
CHESTNUT ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	515+00.00	2955313.4913	761792.3790		S52°37'28"E 129.00'	516+29.00	2955235.1852	761894.8900
L9	516+29.00	2955235.1852	761894.8900		S54°14'20"E 20.00'	516+49.00	2955223.4956	761911.1212
L10	516+49.00	2955223.4956	761911.1212		S52°24'39"E 451.00'	521+00.00	2954948.3886	762268.4962



CURVE TABLE			
CURVE #	DELTA	RADIUS	LENGTH
C400	90°42'32"	6.00	9.50
C401	44°17'28"	6.00	4.64
C402	89°23'54"	5.00	7.80
C403	90°07'49"	5.00	7.87
C404	89°51'42"	5.00	7.84
C405	45°00'00"	3.00	2.36



DW#	RAMP REFERENCE POINT		WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS										
	BASELINE	STATION					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
C27	CHESTNUT	517+38	12.25 LT	2.5	7.1	16.6	-2.11%	6.5	6.5	30.28	30.17	30.21	30.13	29.68	29.86	29.78	29.33	29.85	29.75
C28	CHESTNUT	517+69	12.25 LT	2.0	7.1	21.2	-1.65%	-	6.5	-	-	29.46	29.38	29.15	29.25	29.17	28.80	29.18	29.07
C29	CHESTNUT	517+70	12.25 RT	2.5	7.8	12.6	2.06%	6.5	6.5	29.64	29.52	29.61	29.53	29.08	29.87	29.79	29.34	30.12	29.90
C30	CHESTNUT	518+32	12.25 RT	2.5	7.9	19.4	1.29%	6.5	6.5	28.60	28.48	28.68	28.60	28.15	28.91	28.83	28.40	29.03	28.91
C31	CHESTNUT	518+85	12.25 LT	2.0	7.1	10.1	-0.89%	-	-	-	-	27.85	27.77	27.61	27.84	27.76	27.52	-	-
C32	CHESTNUT	519+42	12.25 LT	2.5	7.4	15.1	-0.66%	6.5	6.5	27.70	27.59	27.66	27.59	27.21	27.49	27.42	27.11	27.44	27.33
C33	CHESTNUT	519+53	12.25 RT	2.5	8.0	11.9	0.59%	6.5	6.5	27.59	27.47	27.64	27.56	27.11	27.72	27.63	27.18	27.79	27.67
C34	CHESTNUT	520+00	12.25 RT	2.5	7.8	13.3	0.68%	6.5	6.5	27.25	27.13	27.29	27.21	26.86	27.36	27.28	26.95	27.49	27.37

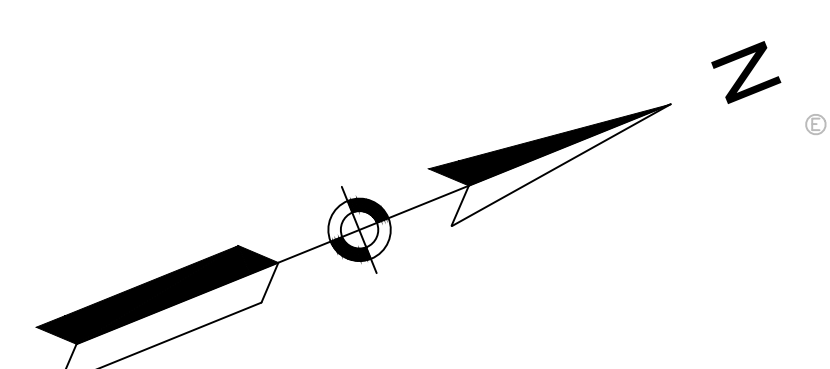


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
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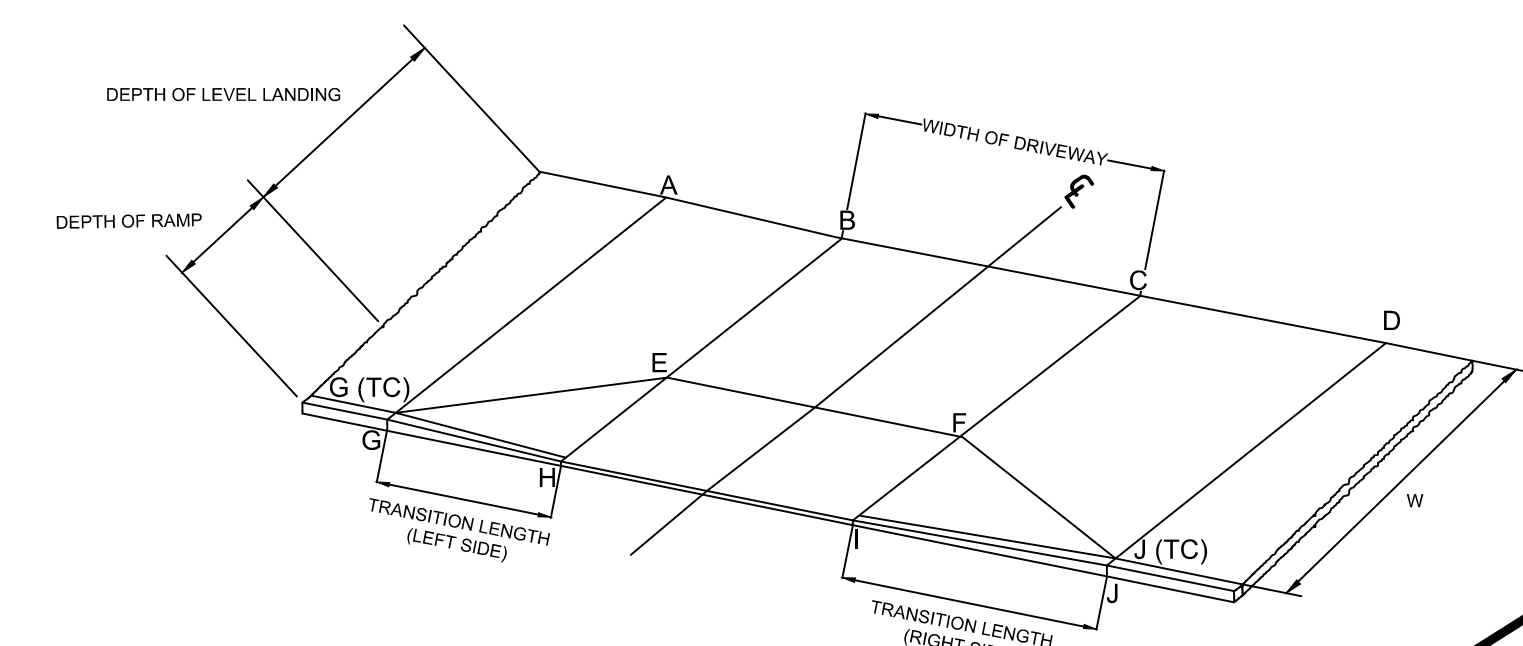
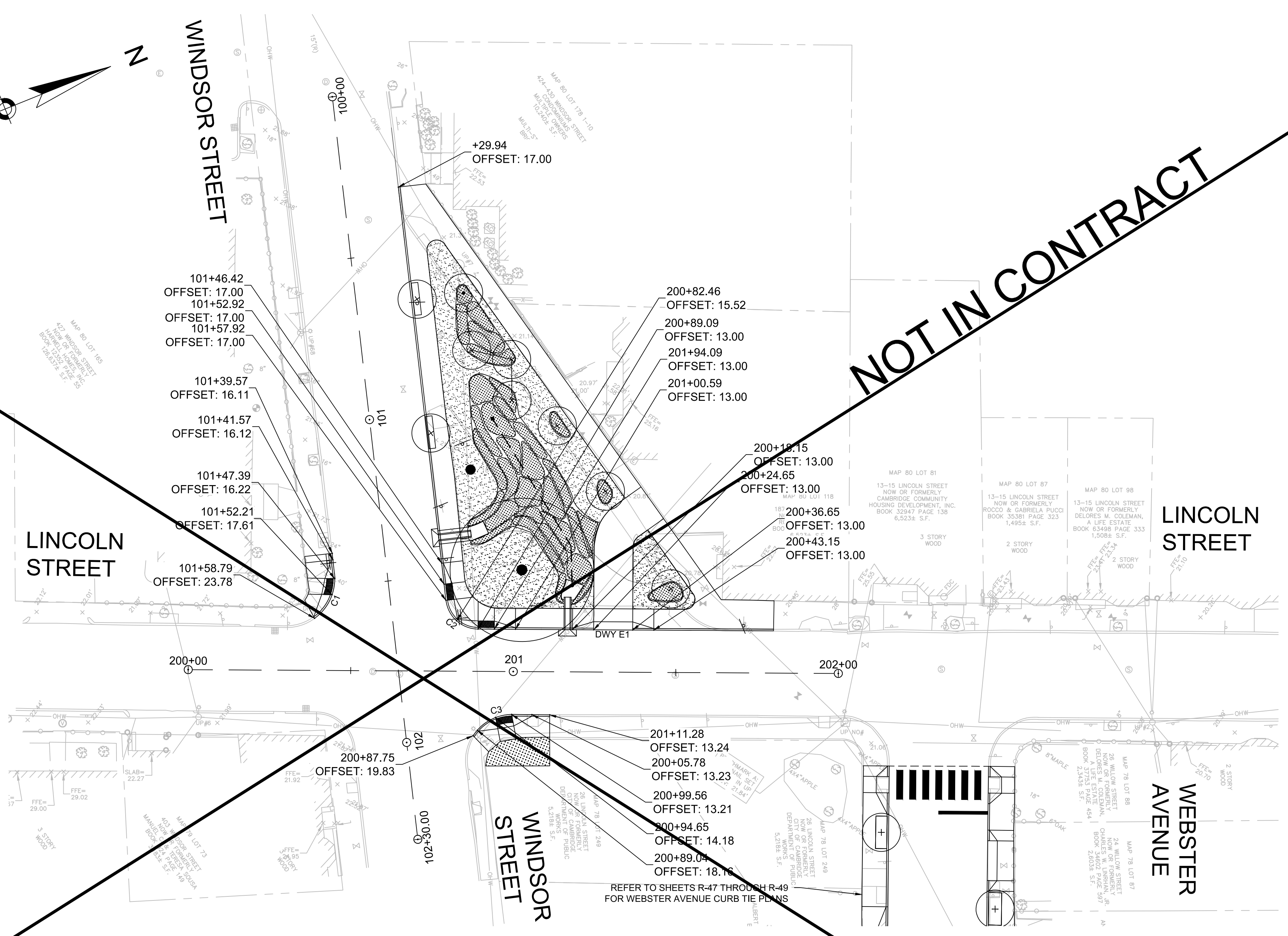


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - ALIGNMENT & CURB TIE PLAN PLAN 4 OF 4

Sheet	R-53
File No.	10565



NOT IN CONTRACT

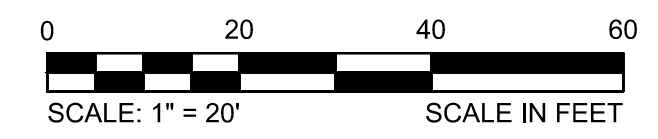


CONCRETE DRIVEWAY AT SIDEWALK
SCALE: N.T.S.

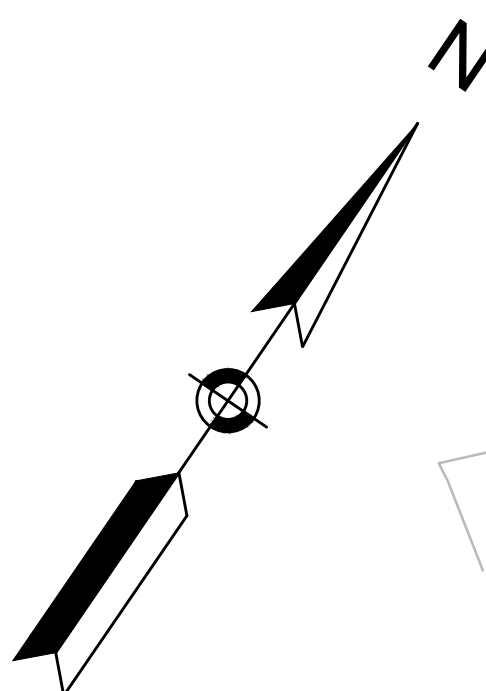
DW#	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS									
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J
E1	LINCOLN ST.	201+18.15	13' LT	2.50'	4.00'	12.00'	0.40%	6.50'	6.50'	20.97	20.53	20.41	20.91	20.47	20.38	20.41	20.39	20.33	20.30

LINCOLN STREET CONSTRUCTION BASELINE DATA - 100 SERIES ALIGNMENT								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00	2960642.0559	765937.0597		S15°26'06"W 230.00'	102+30.00	2960420.3428	765875.8440
LINCOLN STREET CONSTRUCTION BASELINE DATA - 200 SERIES ALIGNMENT								
L1	200+00	2960495.2336	765829.9093		S67°39'47"E	202+00.00	2960419.2227	766014.9021

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	60°28'22.00"	15.00'	15.83'	8.74'
C2	572°57'28.06"	10.00'	14.50'	8.86'
C3	56°33'22.85"	14.25'	14.07'	7.67'

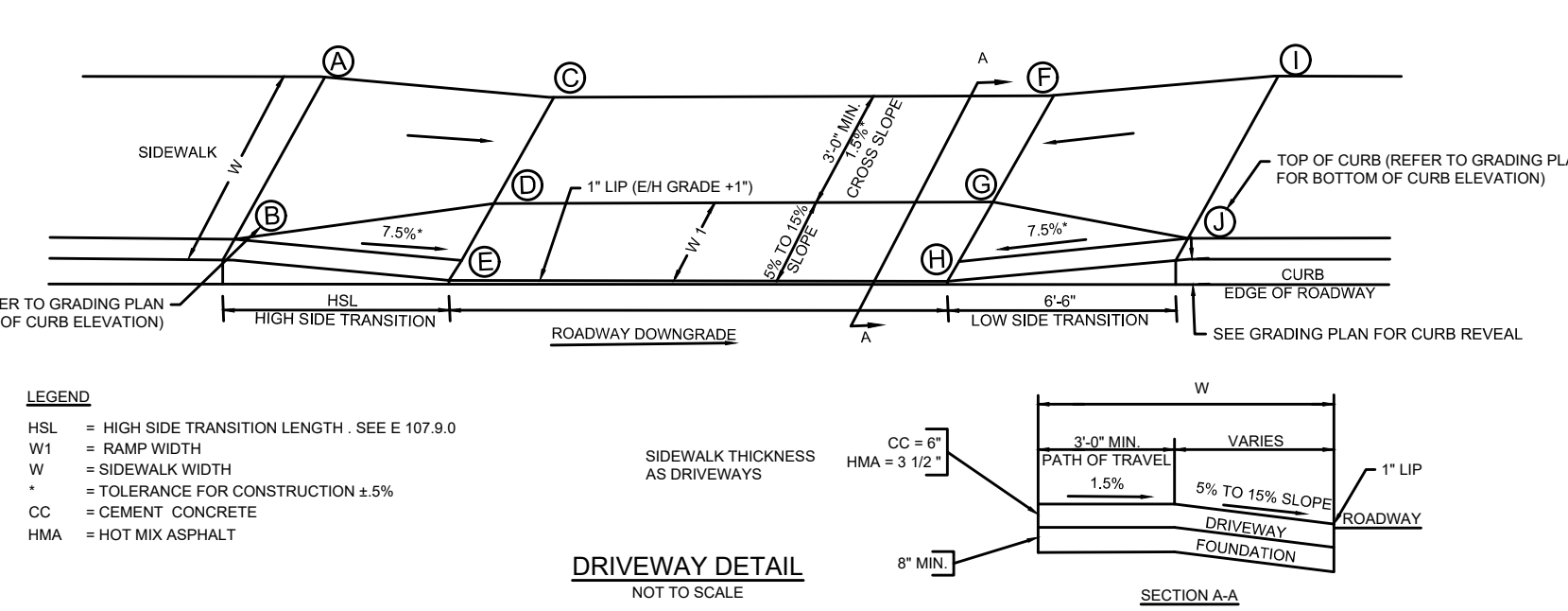
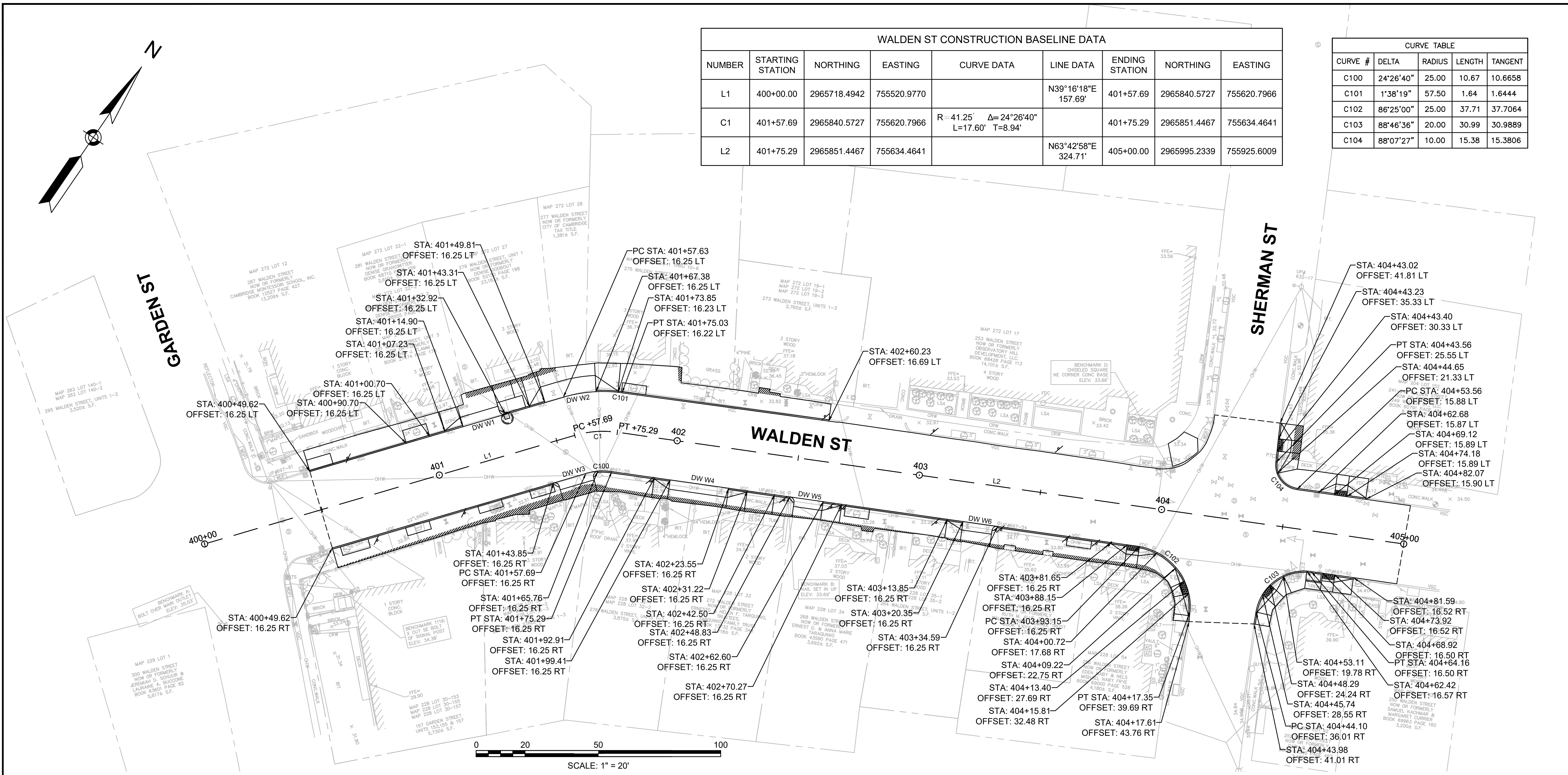


			27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com	Scale 1" = 20' Date AUGUST 2022 Job No. 20170208.037A Designed by KEA Drawn by KEA Checked by BJM Approved by BMS		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing LINCOLN STREET CURB TIE PLAN SHEET 1 OF 1	Sheet R-54 File No. 10565
				No. Description Date REVISIONS			

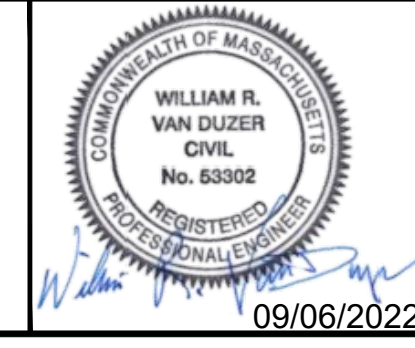


WALDEN ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	400+00.00	2965718.4942	755520.9770		N39°16'18"E 157.69'	401+57.69	2965840.5727	755620.7966
C1	401+57.69	2965840.5727	755620.7966	R=41.25' Δ=24°26'40" L=17.60' T=8.94'		401+75.29	2965851.4467	755634.4641
L2	401+75.29	2965851.4467	755634.4641		N63°42'58"E 324.71'	405+00.00	2965995.2339	755925.6009

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C100	24°26'40"	25.00	10.67	10.6658
C101	1°38'19"	57.50	1.64	1.6444
C102	86°25'00"	25.00	37.71	37.7064
C103	88°46'36"	20.00	30.99	30.9889
C104	88°07'27"	10.00	15.38	15.3806



DW#	DRIVEWAYS										ELEVATIONS									
	RAMP REFERENCE POINT			WIDTH OF RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS										
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G	H	I	J	
W1	WALDEN	401+22	16.25 LT	4.0	8.2	16.0	-0.58%	7.67	--	32.32	32.27	32.28	32.22	31.72	32.34	32.20	31.58	32.37	32.24	
W2	WALDEN	401+60	16.25 LT	4.2	9.2	23.4	0.72%	6.50	9.50	32.34	32.20	32.32	32.25	31.74	32.48	32.41	31.89	32.66	32.48	
W3	WALDEN	401+55	16.25 RT	3.4	7.9	14.4	-0.99%	--	--	--	--	32.29	32.23	31.72	32.21	32.15	31.64	--	--	
W4	WALDEN	402+12	16.25 RT	3.8	8.2	24.1	-0.40%	7.67	6.50	32.55	32.43	32.80	32.73	32.10	32.61	32.57	31.91	32.51	32.39	
W5	WALDEN	402+56	16.25 RT	3.7	7.7	11.8	-0.68%	7.67	--	32.88	32.78	32.86	32.80	32.25	32.78	32.73	32.15	32.73	32.15	
W6	WALDEN	403+26	16.25 RT	3.5	8.3	12.2	-0.80%	--	6.50	--	--	33.42	33.35	32.97	33.36	33.29	32.82	33.30	33.27	

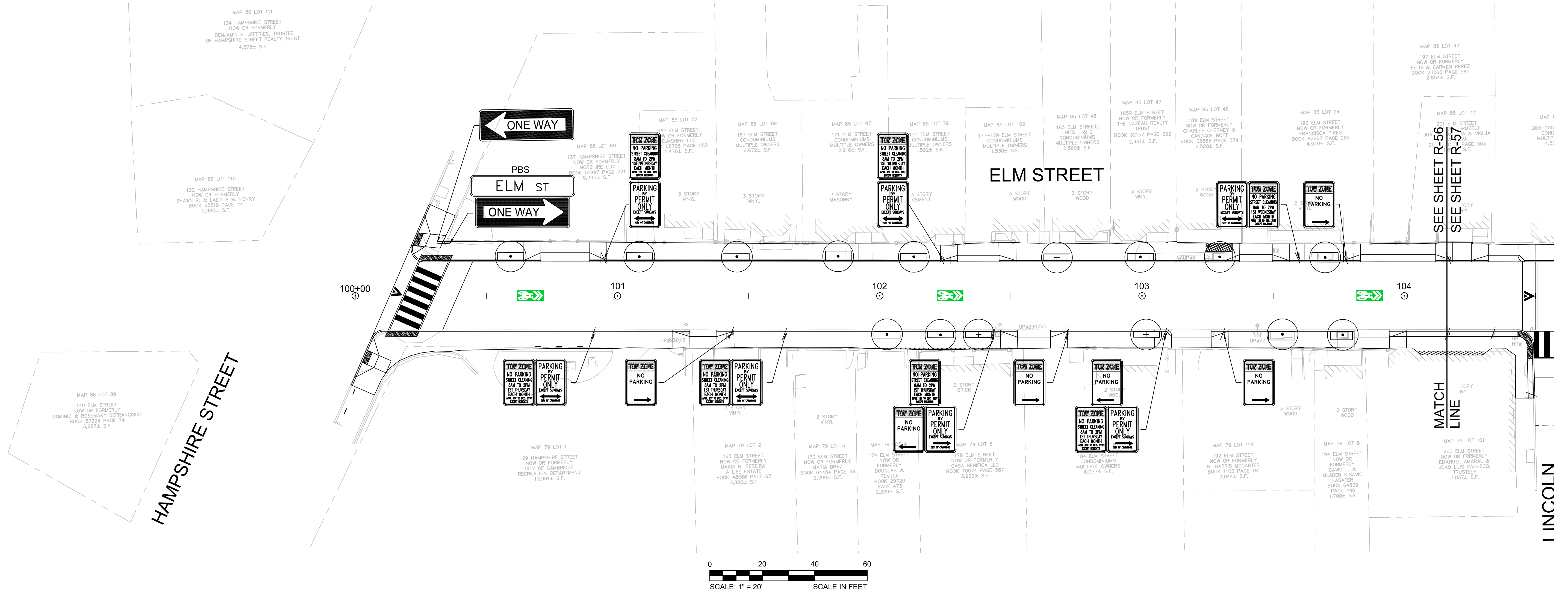
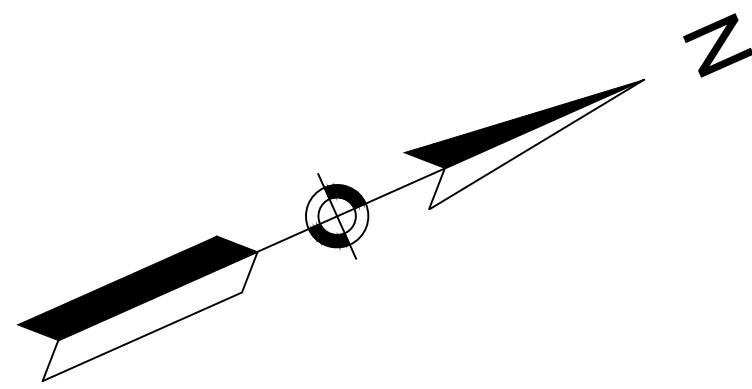


Scale	AS NOTED
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN STREET - ALIGNMENT AND CURB TIE PLAN PLAN 1 OF 1

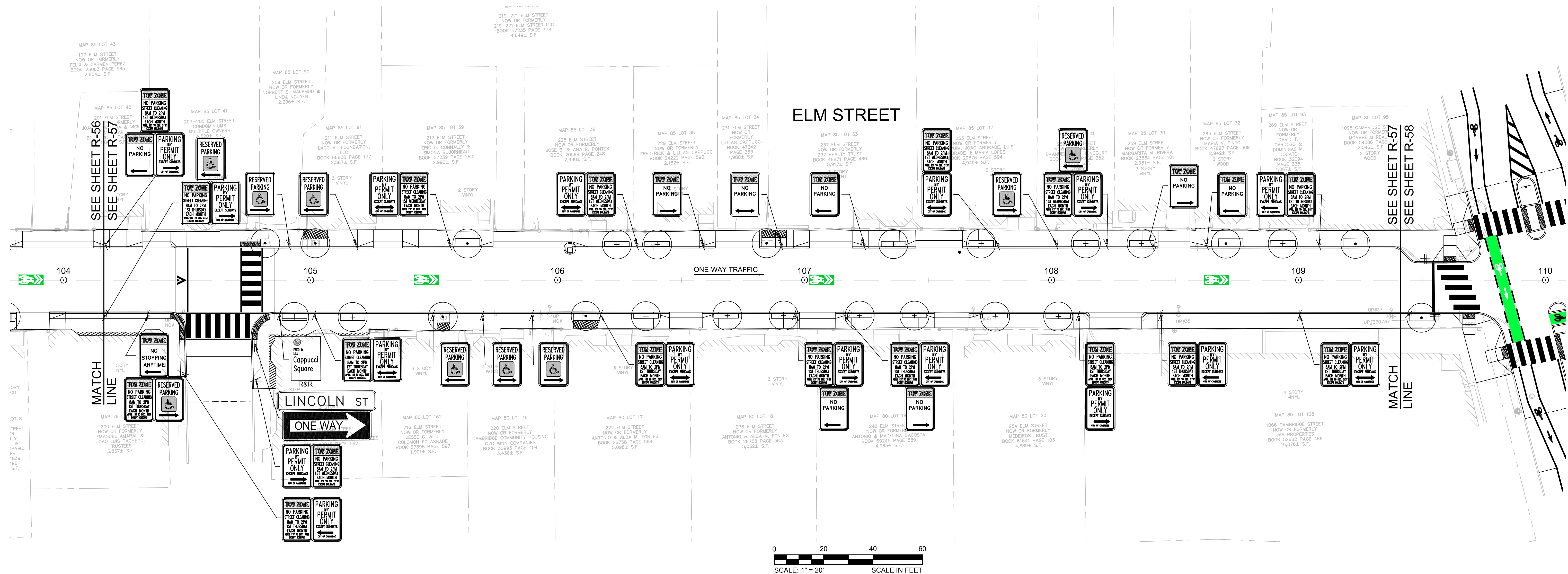
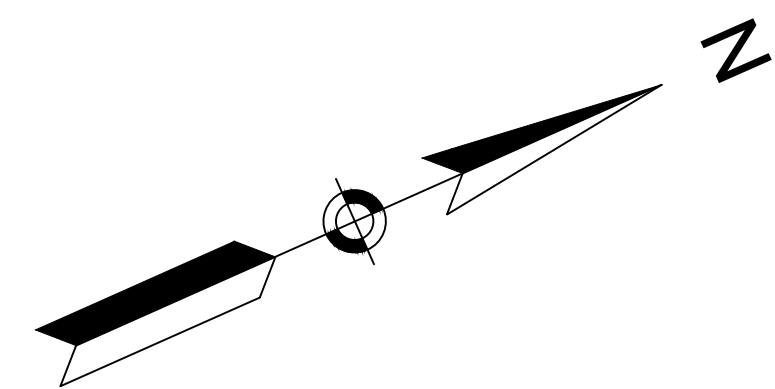
Sheet	R-55
File No.	10565



NOTES:

1. ALL EXISTING SIGNS SHALL BE REMOVED AND REPLACED UNLESS OTHERWISE NOTED. ALL REINSTALLED SIGNS OR PROPOSED SIGNS SHALL BE LOCATED A LATERAL CLEARANCE OF 1' FROM THE CURB.
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				<p>Scale 1" = 20'</p> <p>Date AUGUST 2022</p> <p>Job No. 20170208.037A</p> <p>Designed by KEA</p> <p>Drawn by KEA</p> <p>Checked by BJM</p> <p>Approved by BMS</p>		<p>Client CITY OF CAMBRIDGE, MASSACHUSETTS</p> <p>Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</p> <p>Drawing ELM STREET - STRIPING AND SIGNAGE PLAN SHEET 1 OF 3</p>	<p>Sheet R-56</p> <p>File No. 10565</p>
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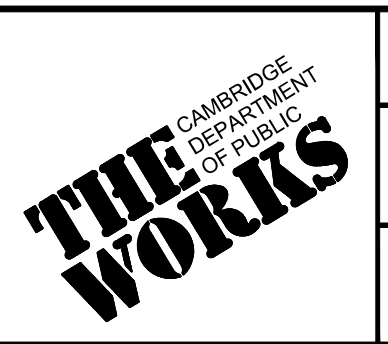


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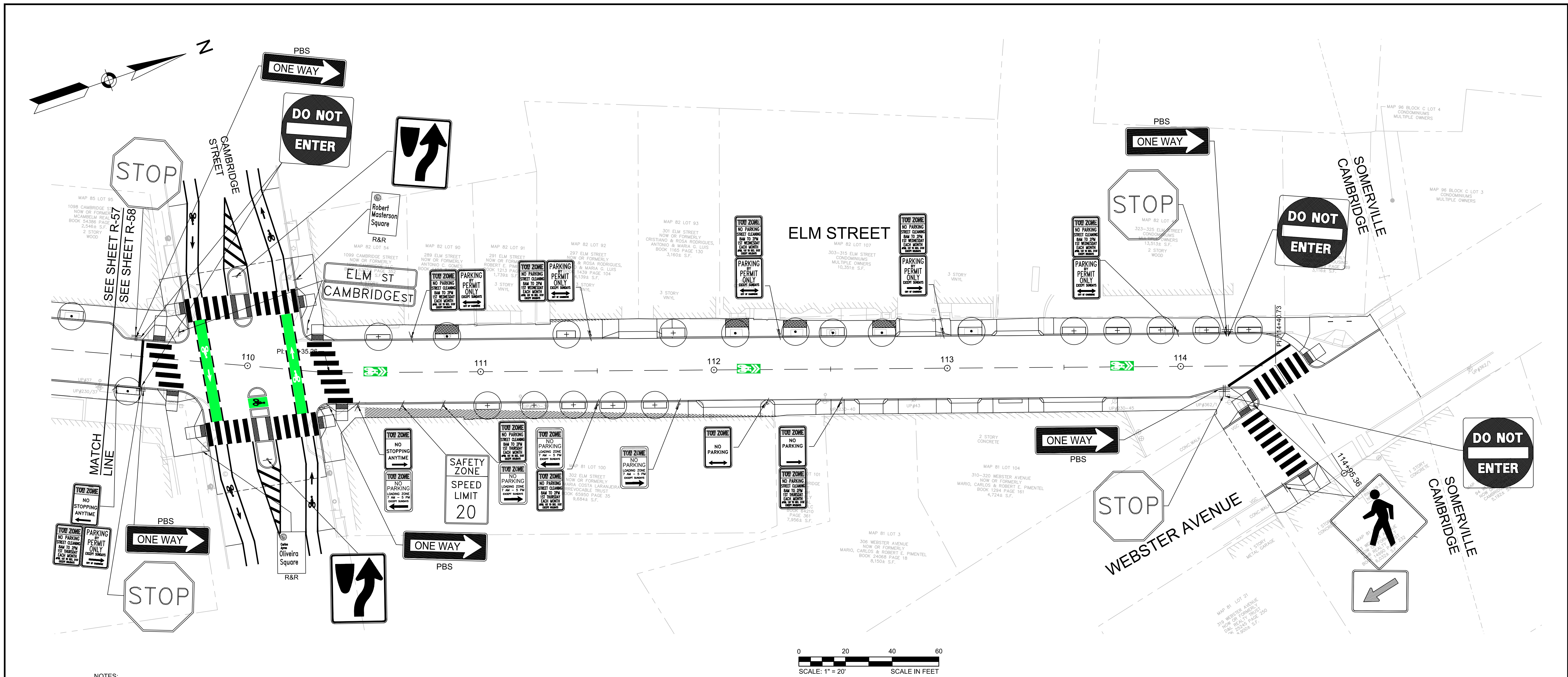


Scale	1" = 20'		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BJM	No.	Description
Approved by	BMS		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	ELM STREET - STRIPING AND SIGNAGE PLAN SHEET 2 OF 3

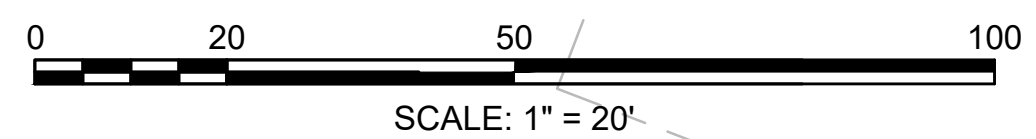
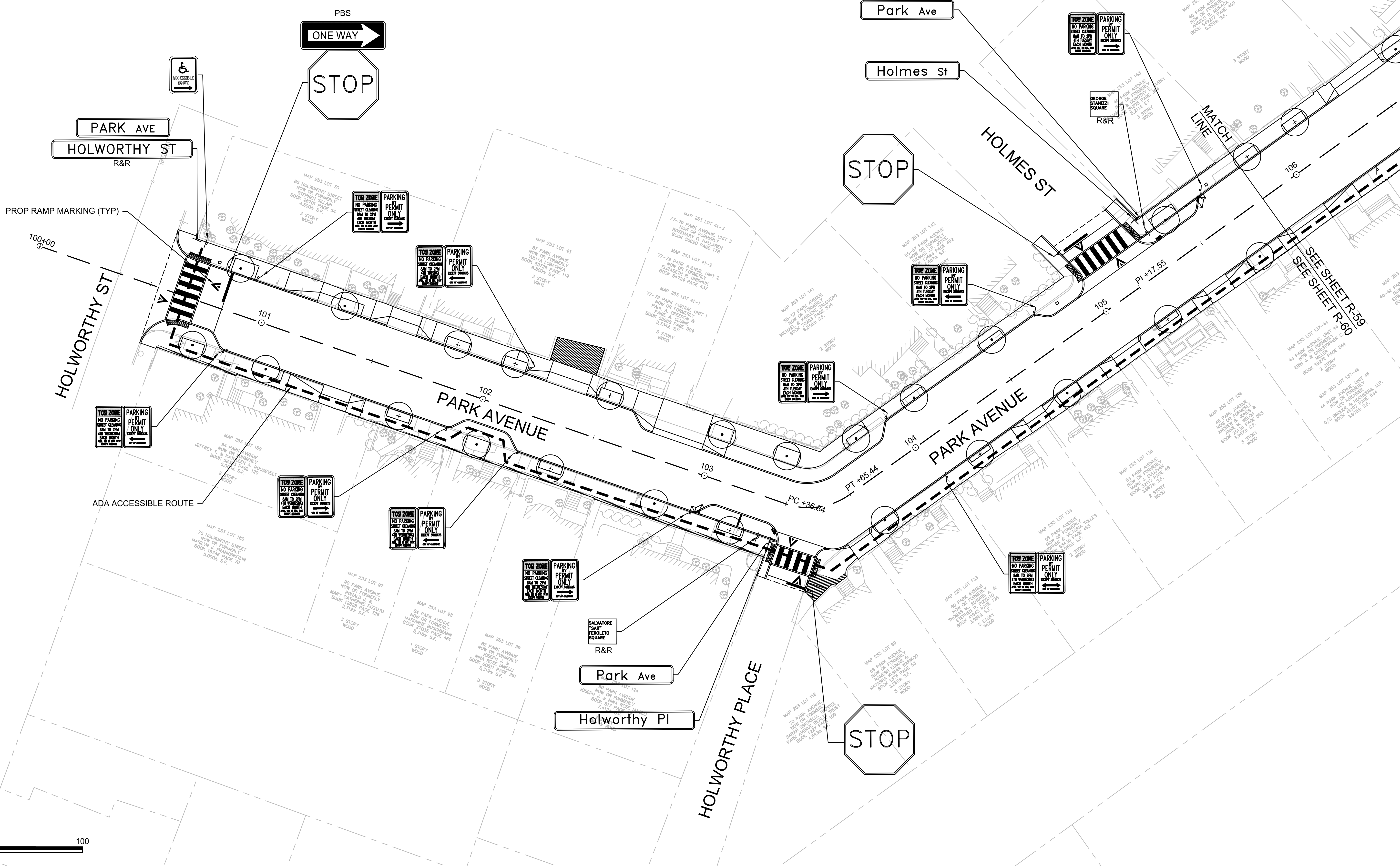
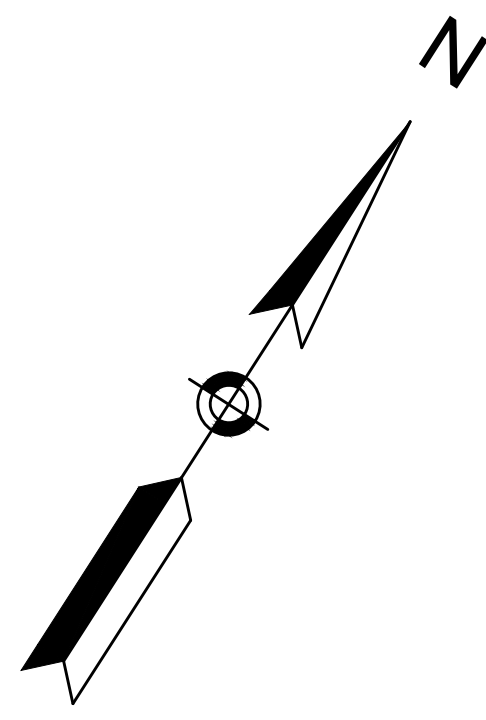
Sheet	R-57
File No.	10565



NOTES:

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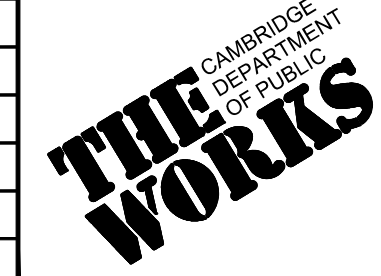
		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Scale</td> <td>1" = 20'</td> </tr> <tr> <td>Date</td> <td>AUGUST 2022</td> </tr> <tr> <td>Job No.</td> <td>20170208.037A</td> </tr> <tr> <td>Designed by</td> <td>KEA</td> </tr> <tr> <td>Drawn by</td> <td>KEA</td> </tr> <tr> <td>Checked by</td> <td>BJM</td> </tr> <tr> <td>Approved by</td> <td>BMS</td> </tr> </table>	Scale	1" = 20'	Date	AUGUST 2022	Job No.	20170208.037A	Designed by	KEA	Drawn by	KEA	Checked by	BJM	Approved by	BMS		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Client</td> <td>CITY OF CAMBRIDGE, MASSACHUSETTS</td> </tr> <tr> <td>Project</td> <td>CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</td> </tr> <tr> <td>Drawing</td> <td>ELM STREET - STRIPING AND SIGNAGE PLAN SHEET 3 OF 3</td> </tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	Drawing	ELM STREET - STRIPING AND SIGNAGE PLAN SHEET 3 OF 3	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Sheet</td> <td>R-58</td> </tr> <tr> <td>File No.</td> <td>10565</td> </tr> </table>	Sheet	R-58	File No.	10565
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Date	AUGUST 2022																														
Job No.	20170208.037A																														
Designed by	KEA																														
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS																														
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT																														
Drawing	ELM STREET - STRIPING AND SIGNAGE PLAN SHEET 3 OF 3																														
Sheet	R-58																														
File No.	10565																														



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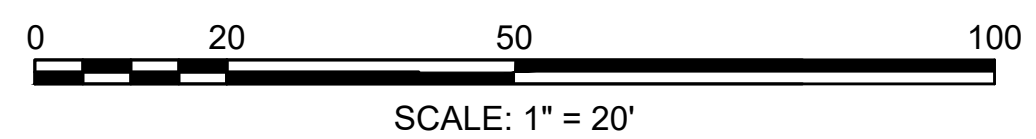
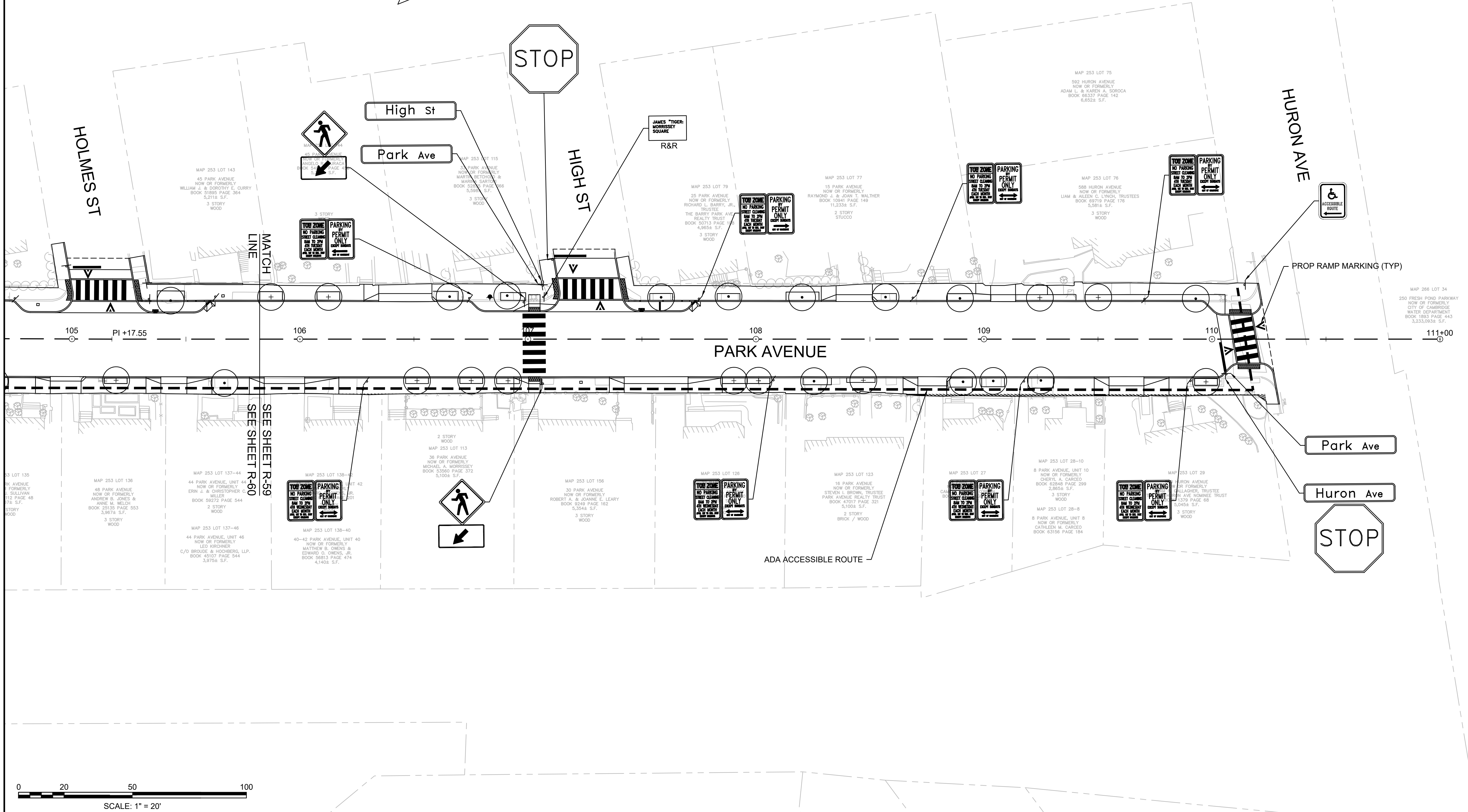
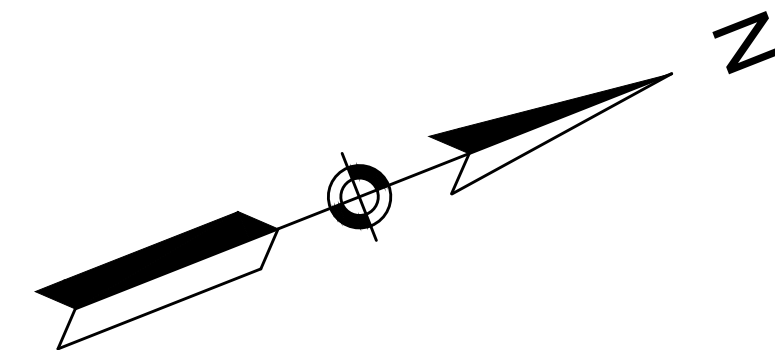
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Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	DTM		
Drawn by	DTM		
Checked by	PFB	No.	Description
Approved by	PFB		REVISIONS



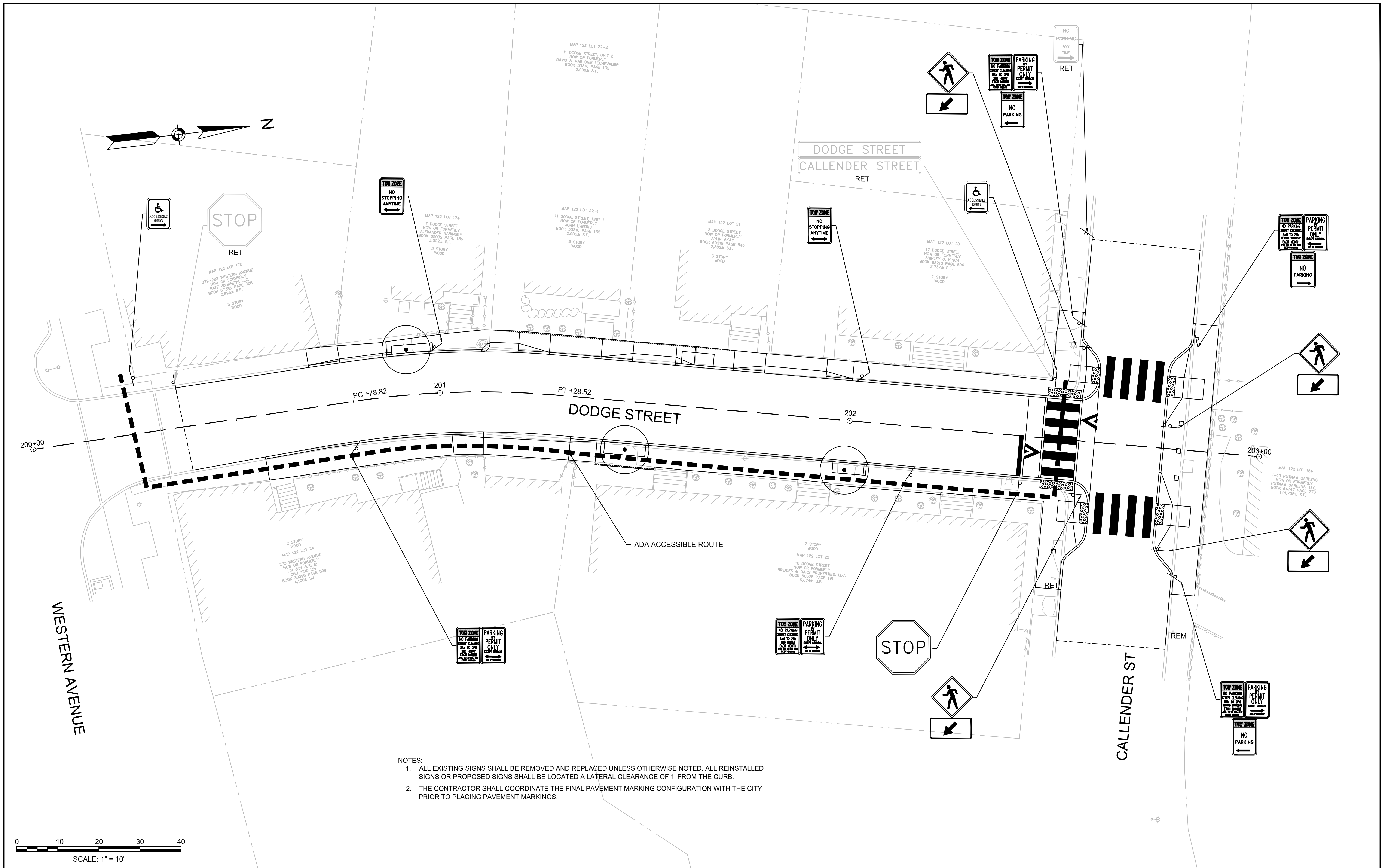
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVE - STRIPING & SIGNAGE PLAN PLAN 1 OF 2

Sheet	R-59
File No.	10565

09/06/2022



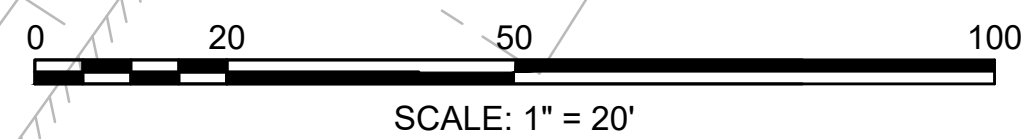
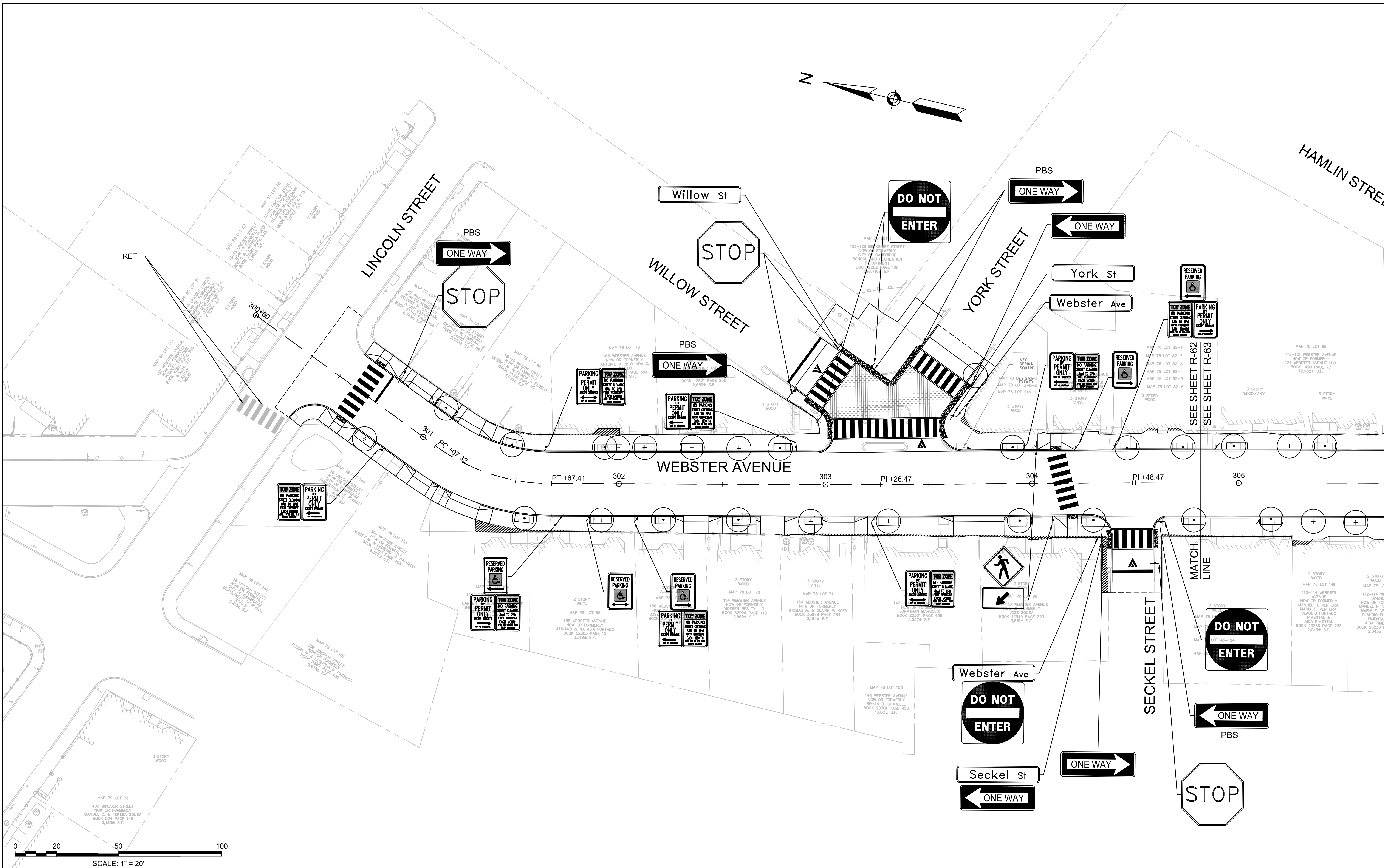
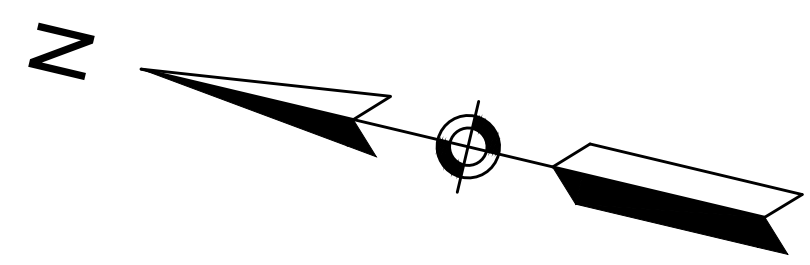
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				Date	SEPTEMBER 2022				Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
				Job No.	20170208.037A				Drawing	PARK AVE - STRIPING & SIGNAGE PLAN PLAN 2 OF 2		
				Designed by	DTM							
				Drawn by	DTM							
				Checked by	PFB	No.	Description	Date				
				Approved by	PFB		REVISIONS					



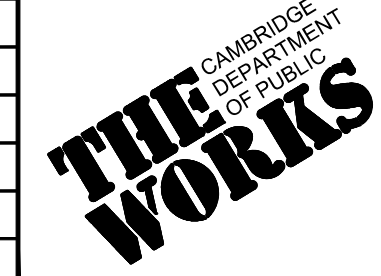
- NOTES:
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				Scale	1"=20'		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-61
				Date	SEPTEMBER 2022			Project		CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Job No.	20170208.037A	Drawing	DODGE STREET - SIGN AND PAVEMENT MARKINGS PLAN 1 OF 1							
Designed by	SBM									
Drawn by	AJM									
Checked by	WRV	No.	Description	Date						
Approved by	PMF	REVISIONS								

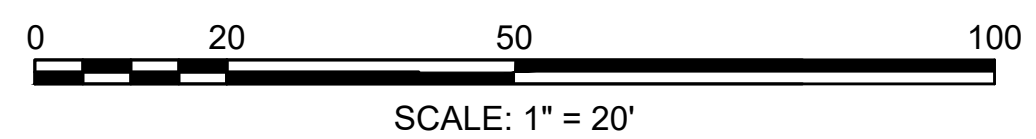
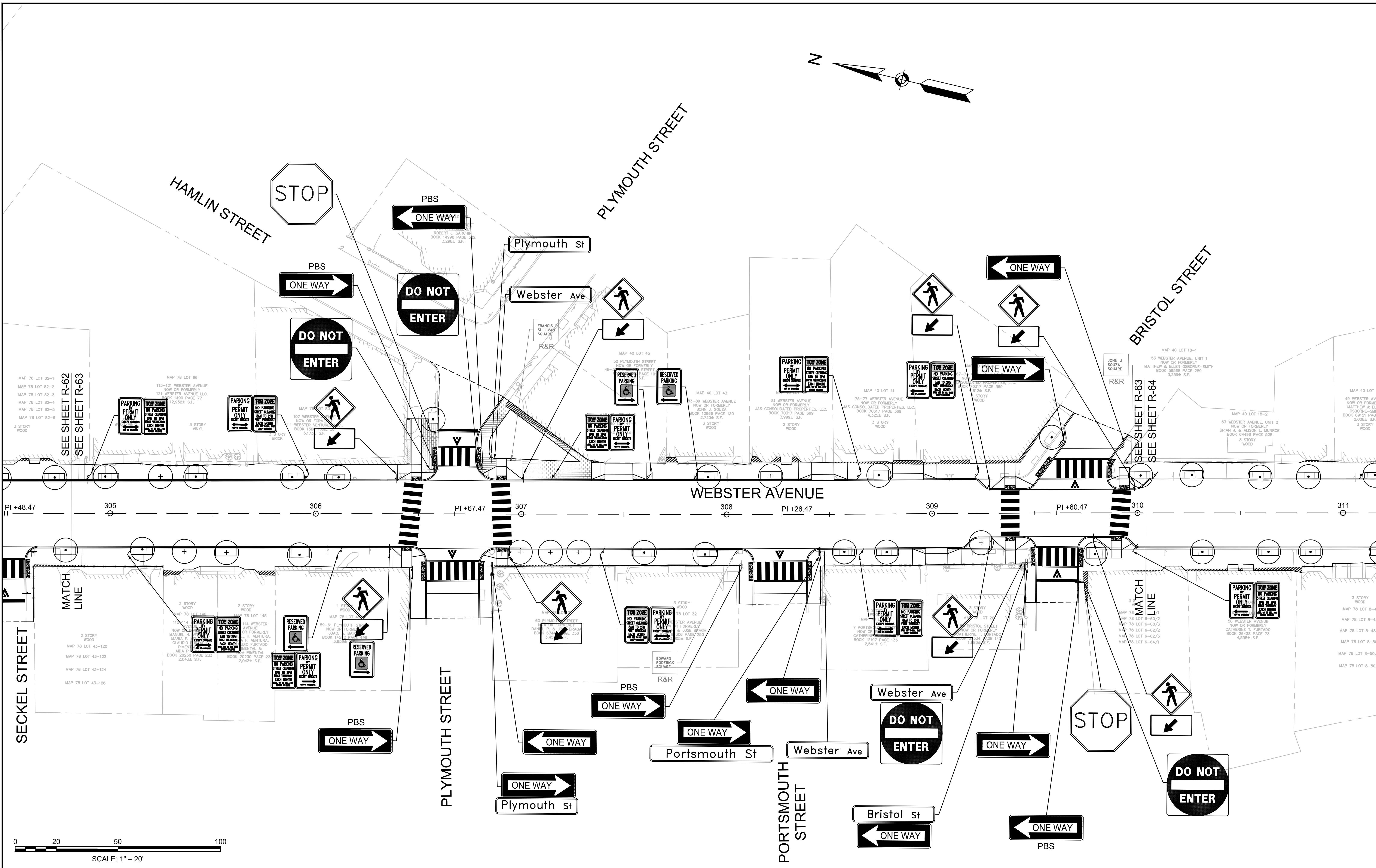
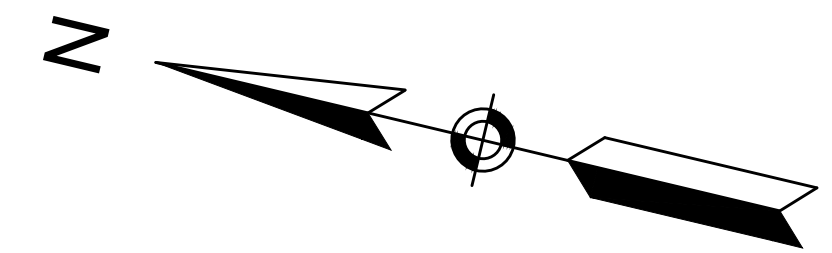


Scale	1"=20'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER STREET - STRIPING AND SIGNAGE PLAN PLAN 1 OF 3

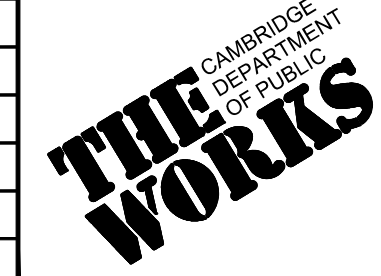
Sheet	R-62
File No.	10565



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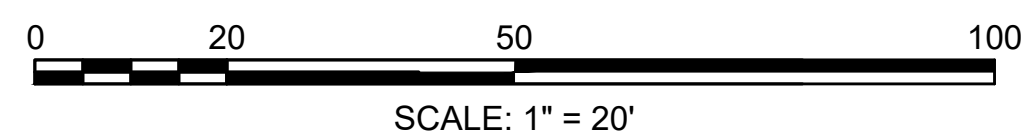
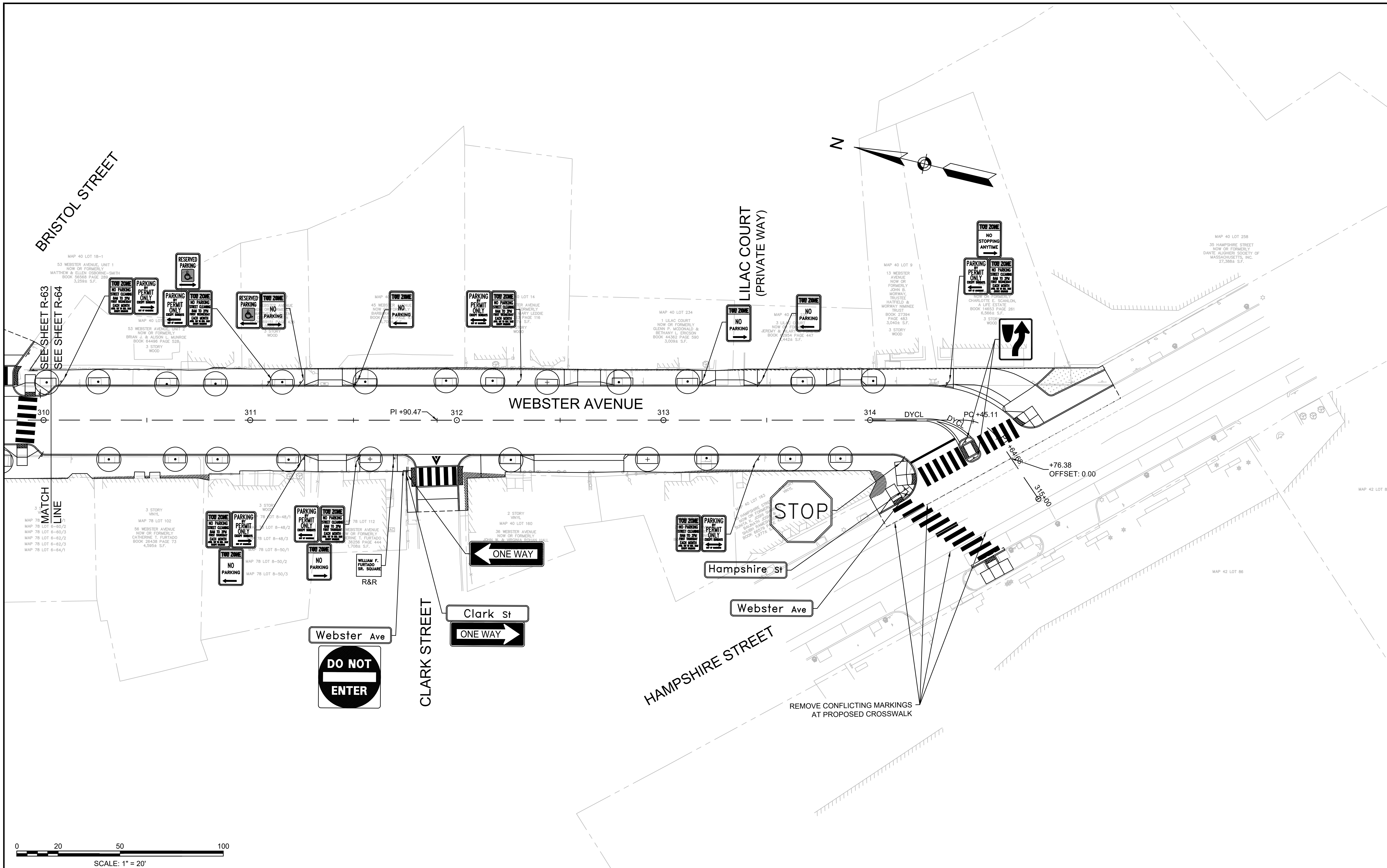


Scale	1"=20'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS

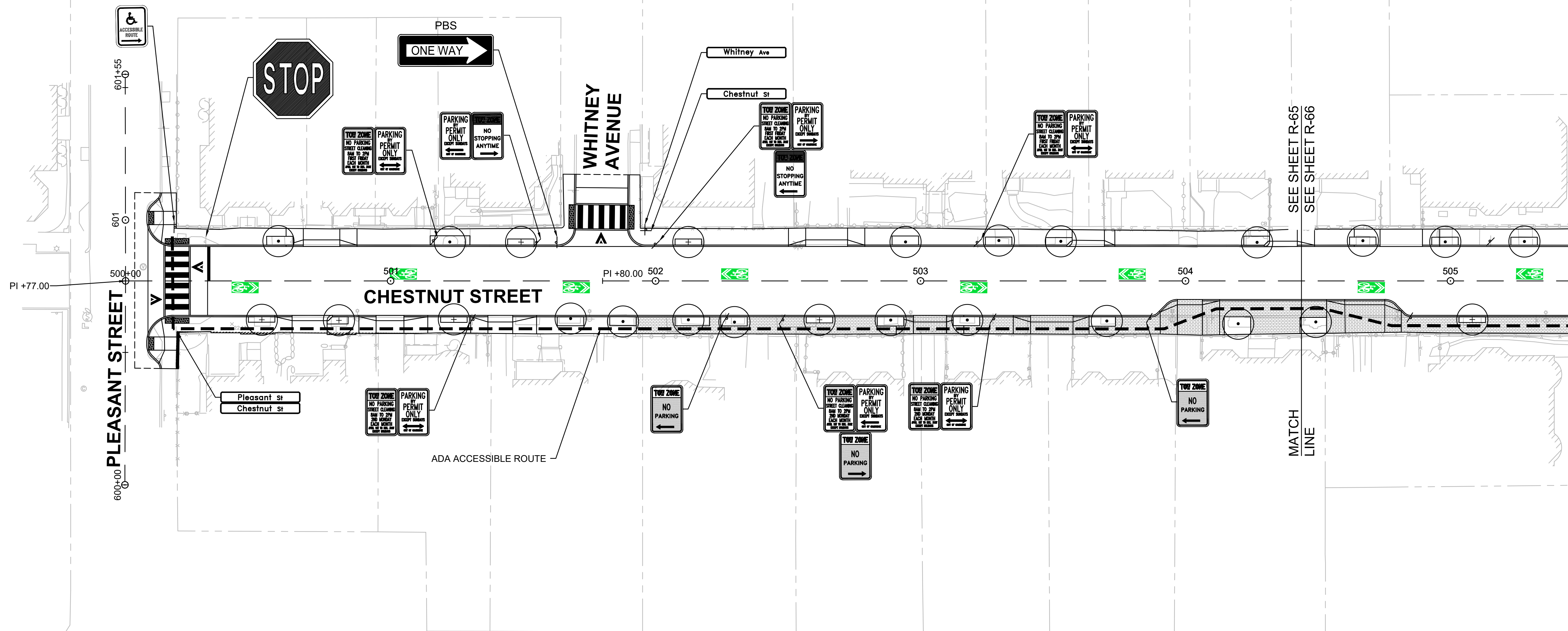
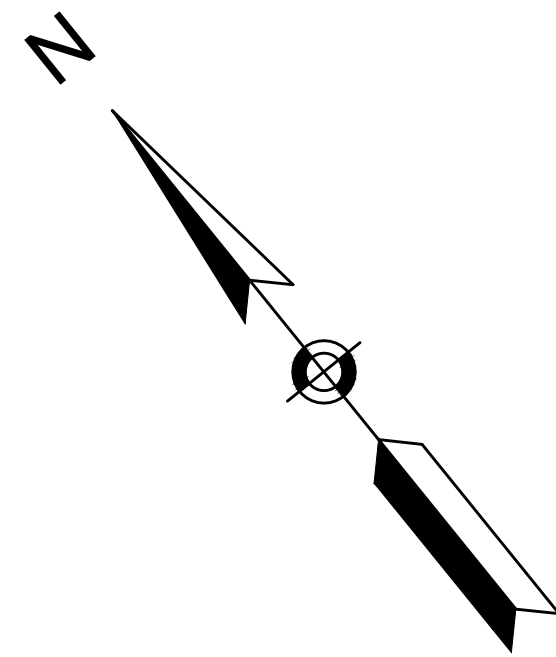


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE - STRIPING AND SIGNAGE PLAN PLAN 2 OF 3

Sheet	R-63
File No.	10565

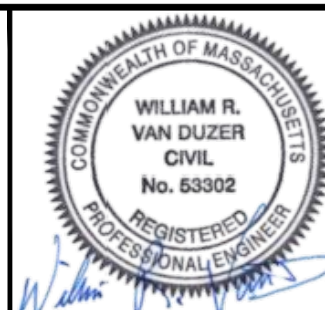


				Scale 1"=20' Date SEPTEMBER 2022 Job No. 20170208.037A Designed by SBM Drawn by AJM Checked by WRV Approved by PMF		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing WEBSTER AVENUE - STRIPING AND SIGNAGE PLAN PLAN 3 OF 3	Sheet R-64 File No. 10565
				09/06/2022		Revisions	

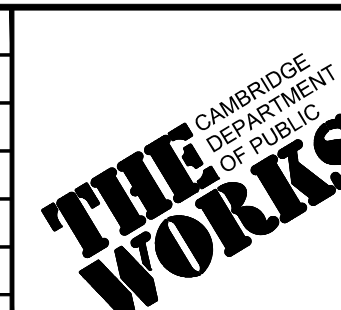


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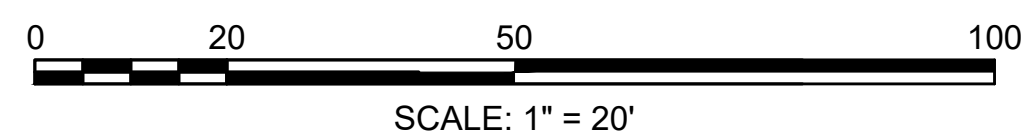
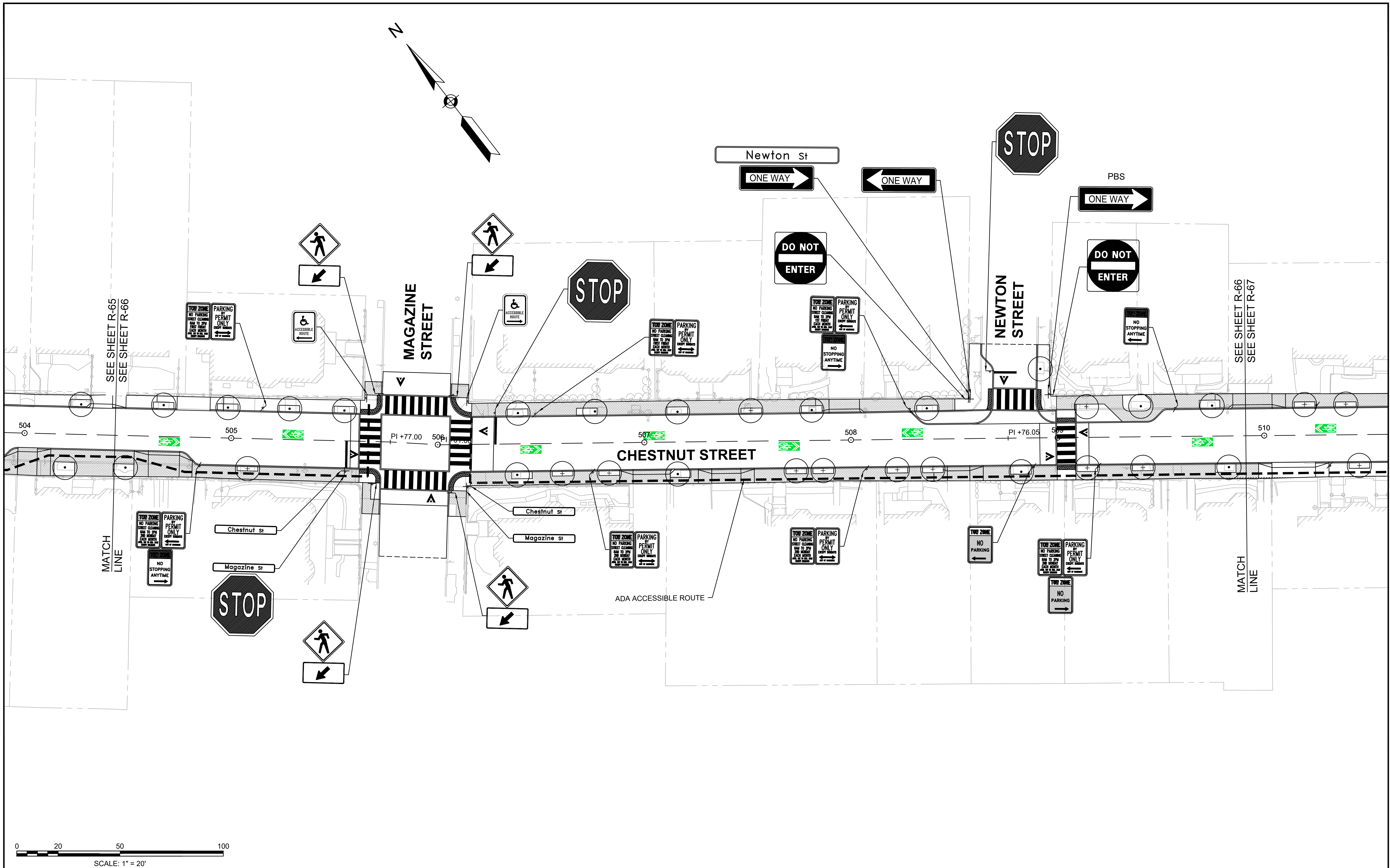


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Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - STRIPING AND SIGNAGE PLAN PLAN 1 OF 4

Sheet	R-65
File No.	10565

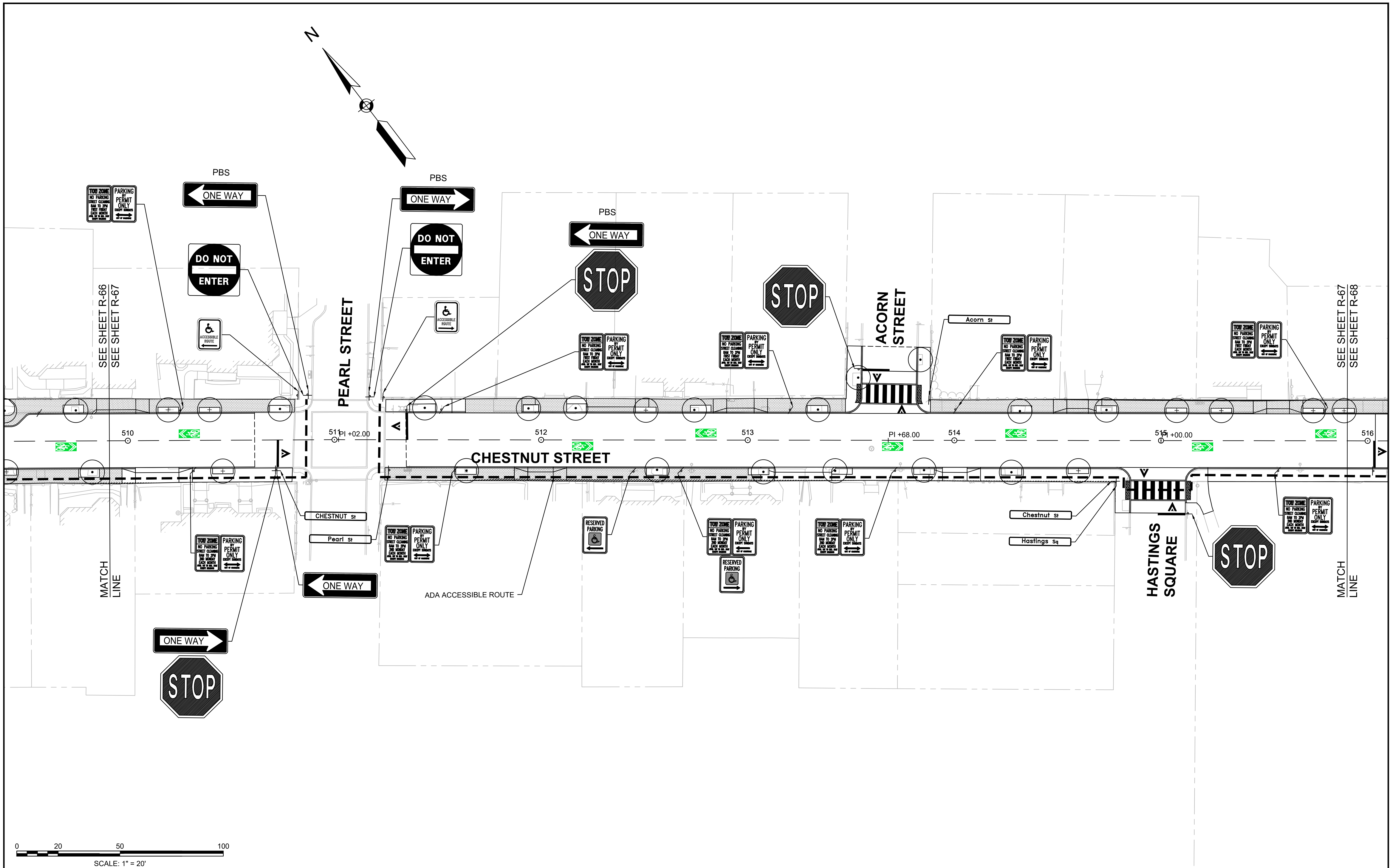


Scale	1"=20'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - STRIPING AND SIGNAGE PLAN PLAN 2 OF 4

Sheet	R-66
File No.	10565



0 20 50 100
SCALE: 1" = 20'



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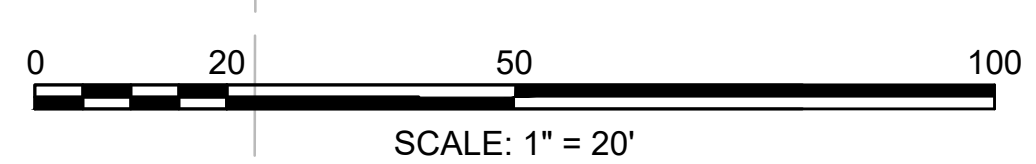
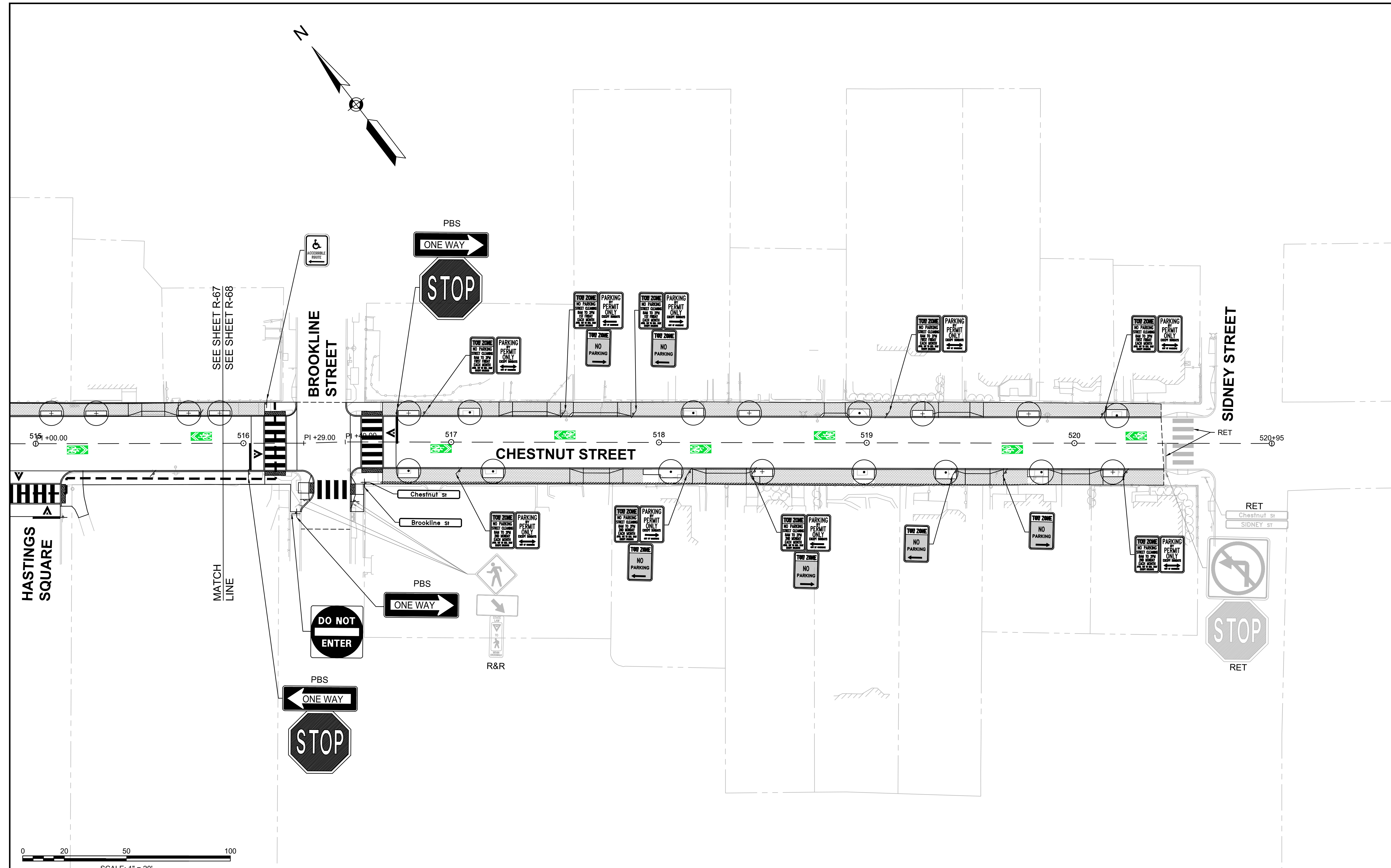
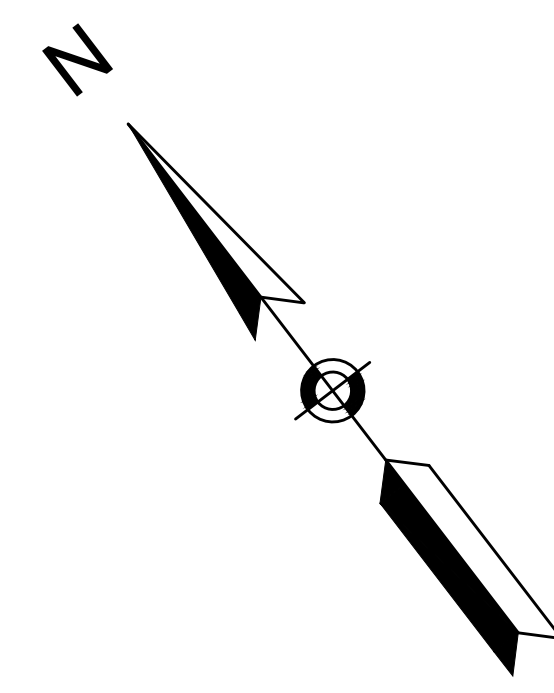


Scale	1"=20'		
Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SBM		
Drawn by	AJM		
Checked by	WRV	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - STRIPING AND SIGNAGE PLAN PLAN 3 OF 4

Sheet	R-67
File No.	10565

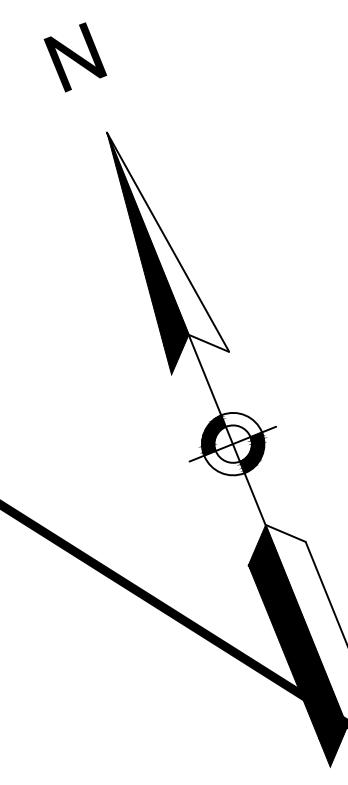


Scale	1"=20'			
Date	SEPTEMBER 2022			
Job No.	20170208.037A			
Designed by	SBM			
Drawn by	AJM			
Checked by	WRV	No.	Description	Date
Approved by	PMF		REVISIONS	

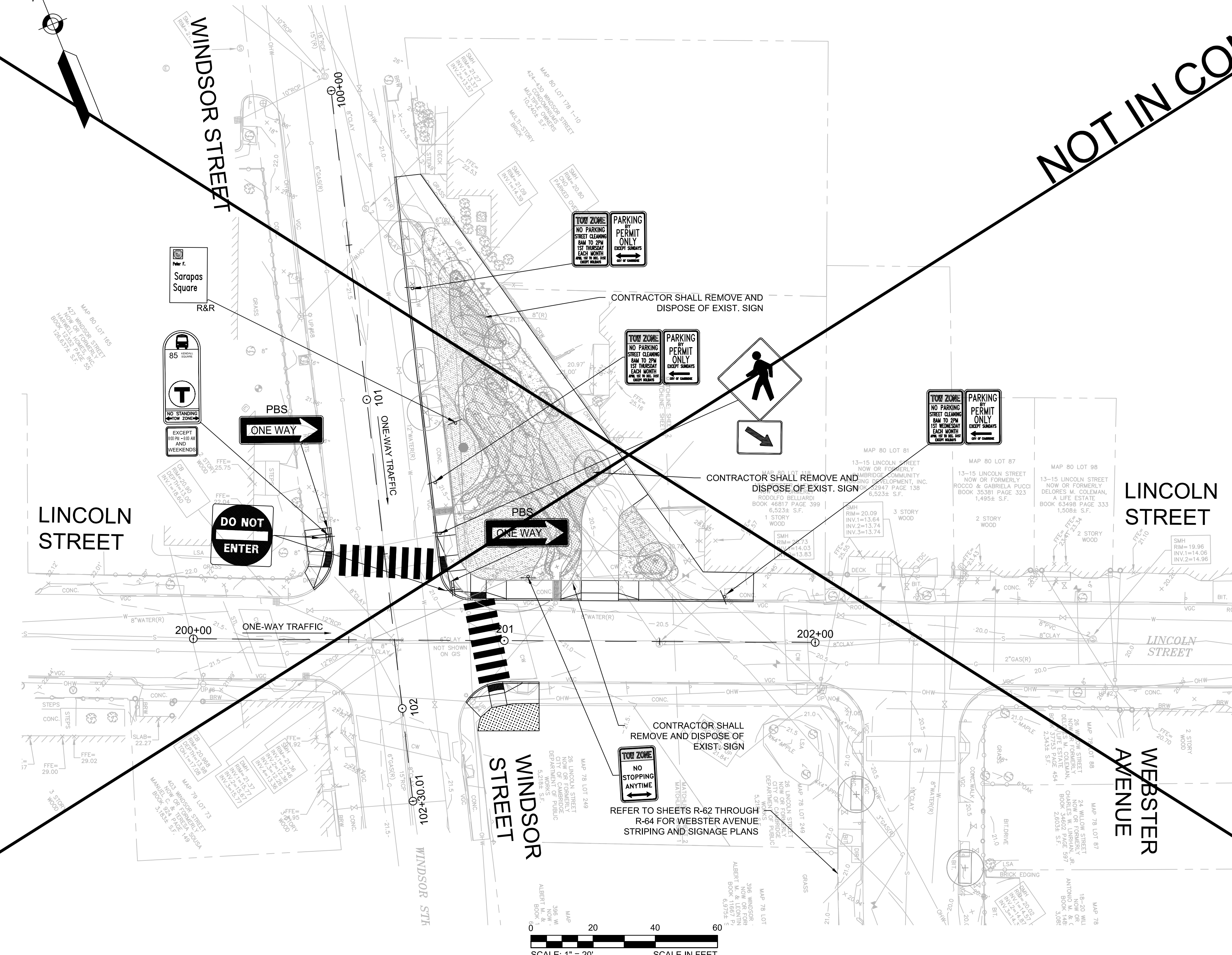


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET - STRIPING AND SIGNAGE PLAN PLAN 4 OF 4

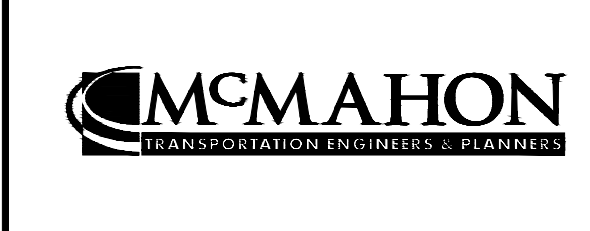
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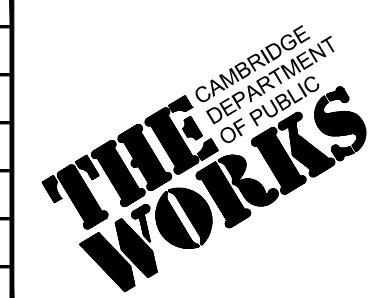
NOT IN CONTRACT



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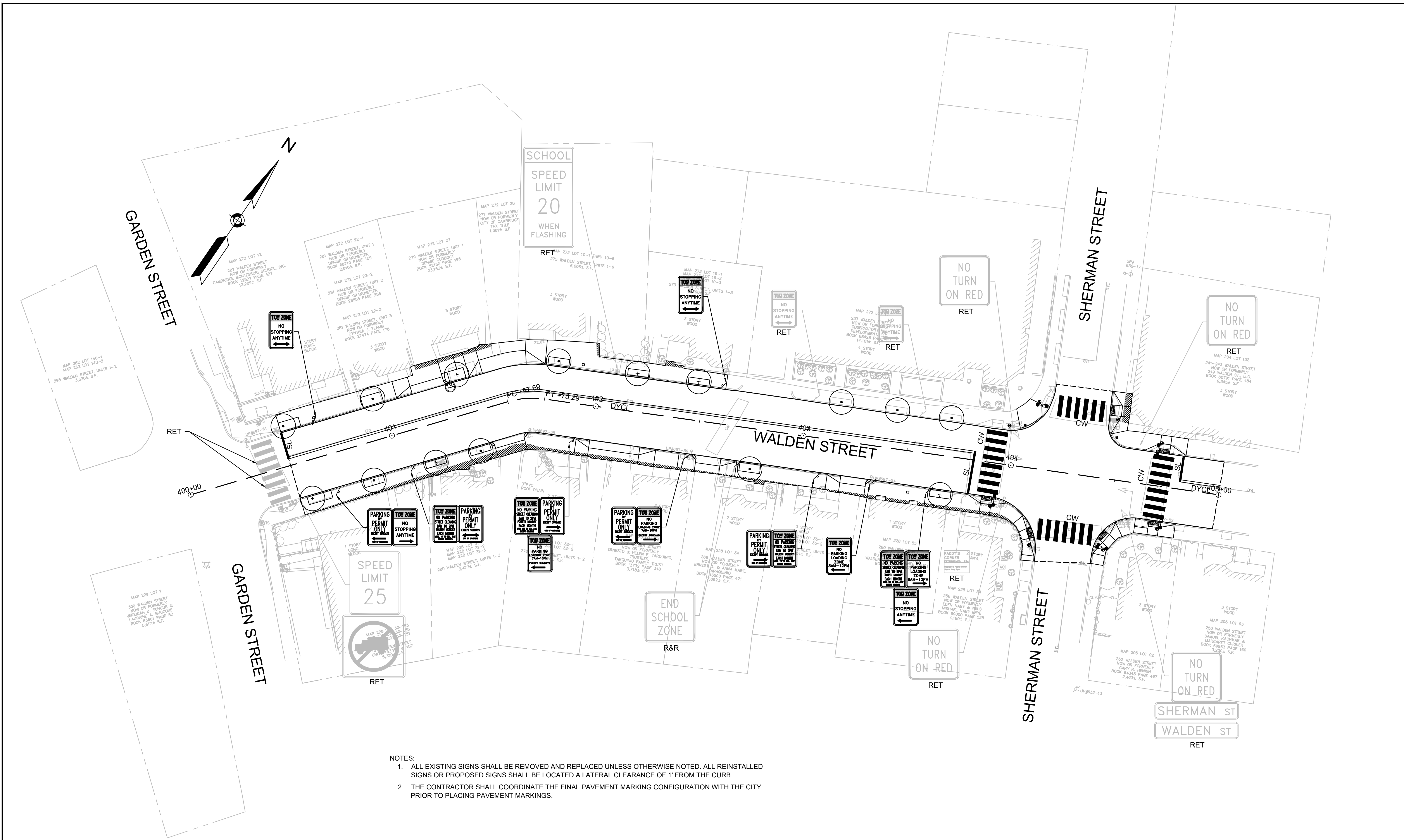


Scale	1" = 20'	
Date	AUGUST 2022	
Job No.	20170208.037A	
Designed by	KEA	
Drawn by	KEA	
Checked by	BJM	
Approved by	BMS	
REVISIONS		
No.	Description	Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	LINCOLN STREET - STRIPING AND SIGNAGE PLAN SHEET 1 OF 1

Sheet	R-69
File No.	10565



NOTES:
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0 20 50 100
 SCALE: 1" = 20'

		 27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com		Scale	1"=20'		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-70
				Date	SEPTEMBER 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
				Job No.	20170208.037A	Drawing		WALDEN STREET - STRIPING AND SIGNAGE PLAN PLAN 1 OF 1		
				Designed by	SBM					
				Drawn by	AJM					
				Checked by	WRV	No.		Description		Date
				Approved by	PMF			REVISIONS		

TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACKGROUND	LEGEND	BORDER			
CT-150RA	12	18		SEE CAMBRIDGE STANDARDS			17	SEE CAMBRIDGE STANDARDS			P5-1 (16), MT W/ CT-390Da (1)	1.50	25.50
CT-150LA	12	18		SEE CAMBRIDGE STANDARDS			17	SEE CAMBRIDGE STANDARDS			P5-1 (17)	1.50	25.50
CT-150DA	12	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	1.50	3.00
CT-200LA	12	18		SEE CAMBRIDGE STANDARDS			3	SEE CAMBRIDGE STANDARDS			P5-1 (1), MT W/ CT-110RA (2)	1.50	4.50
CT-210Ab	24	18		SEE CAMBRIDGE STANDARDS			10	SEE CAMBRIDGE STANDARDS			P5-1 (10)	3.00	30.00
CT-210Ad	24	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			P5-1	3.00	3.00
CT-210Bd	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	3.00	6.00
CT-210Ca	24	18		SEE CAMBRIDGE STANDARDS			16	SEE CAMBRIDGE STANDARDS			P5-1 (16)	3.00	48.00
CT-210Cd	24	18		SEE CAMBRIDGE STANDARDS			5	SEE CAMBRIDGE STANDARDS			P5-1 (5)	3.00	15.00
CT-210Da	24	18		SEE CAMBRIDGE STANDARDS			11	SEE CAMBRIDGE STANDARDS			P5-1 (11)	3.00	33.00
CT-210Ea	24	18		SEE CAMBRIDGE STANDARDS			12	SEE CAMBRIDGE STANDARDS			P5-1 (12)	3.00	36.00
CT-210Eb	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	3.00	6.00
CT210Lab	24	18		SEE CAMBRIDGE STANDARDS			5	SEE CAMBRIDGE STANDARDS			MT W/ R7-8R (1), MT W/ CT-110RA (1), MT W/ CT-150RA (3)	3.00	15.00
CT-210LbD	24	18		SEE CAMBRIDGE STANDARDS			3	SEE CAMBRIDGE STANDARDS			P5-1 (3)	3.00	9.00
CT-210LcA	24	18		SEE CAMBRIDGE STANDARDS			7	SEE CAMBRIDGE STANDARDS			P5-1 (6), MT W/ R7-8R (1)	3.00	21.00
280.50													

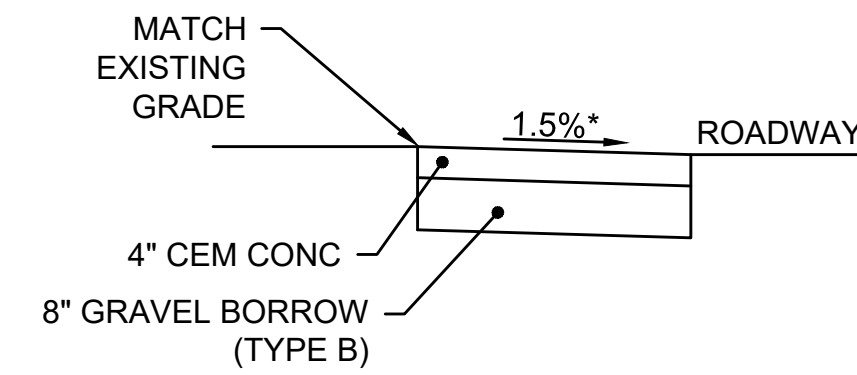
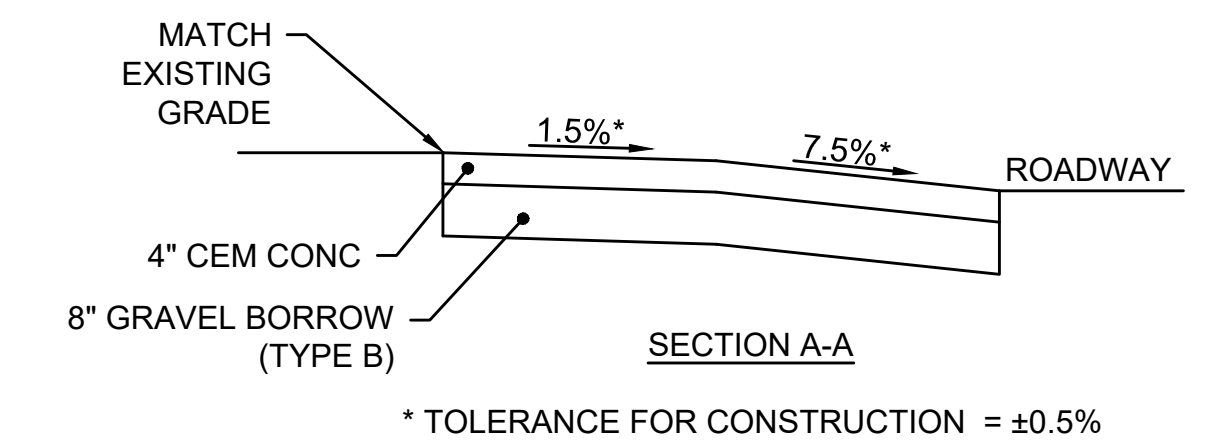
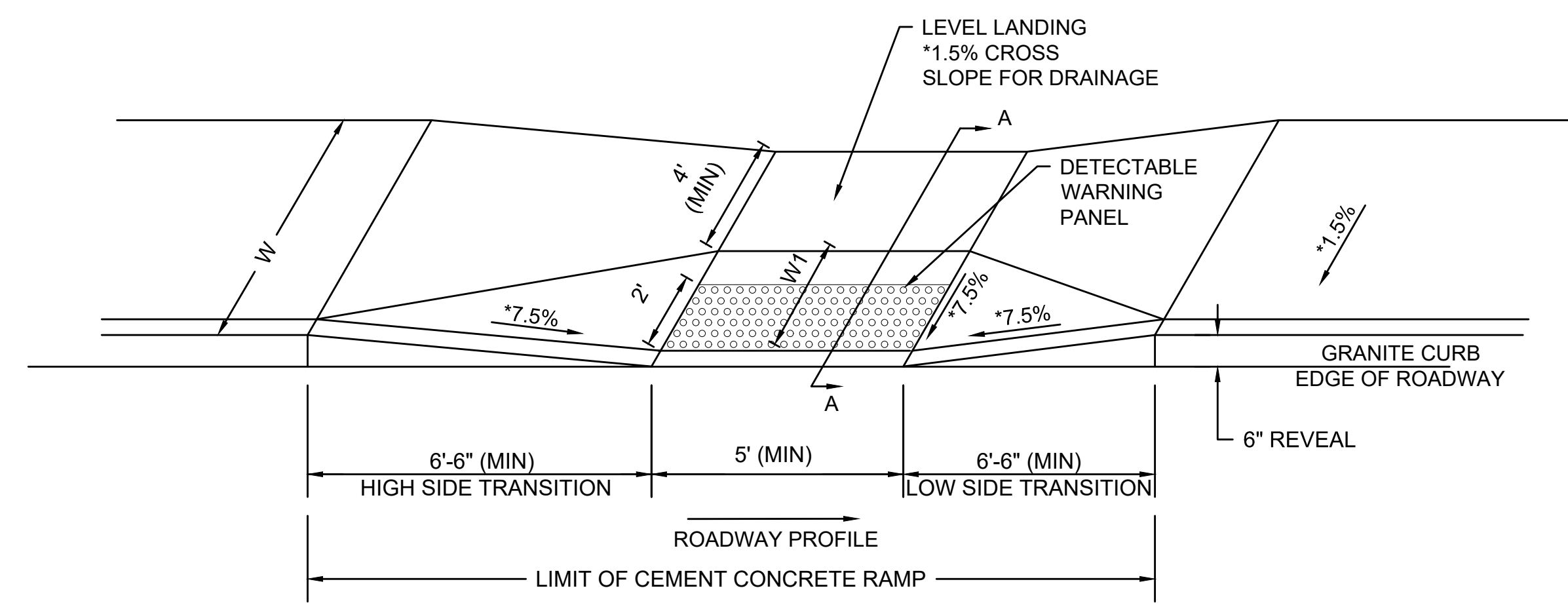
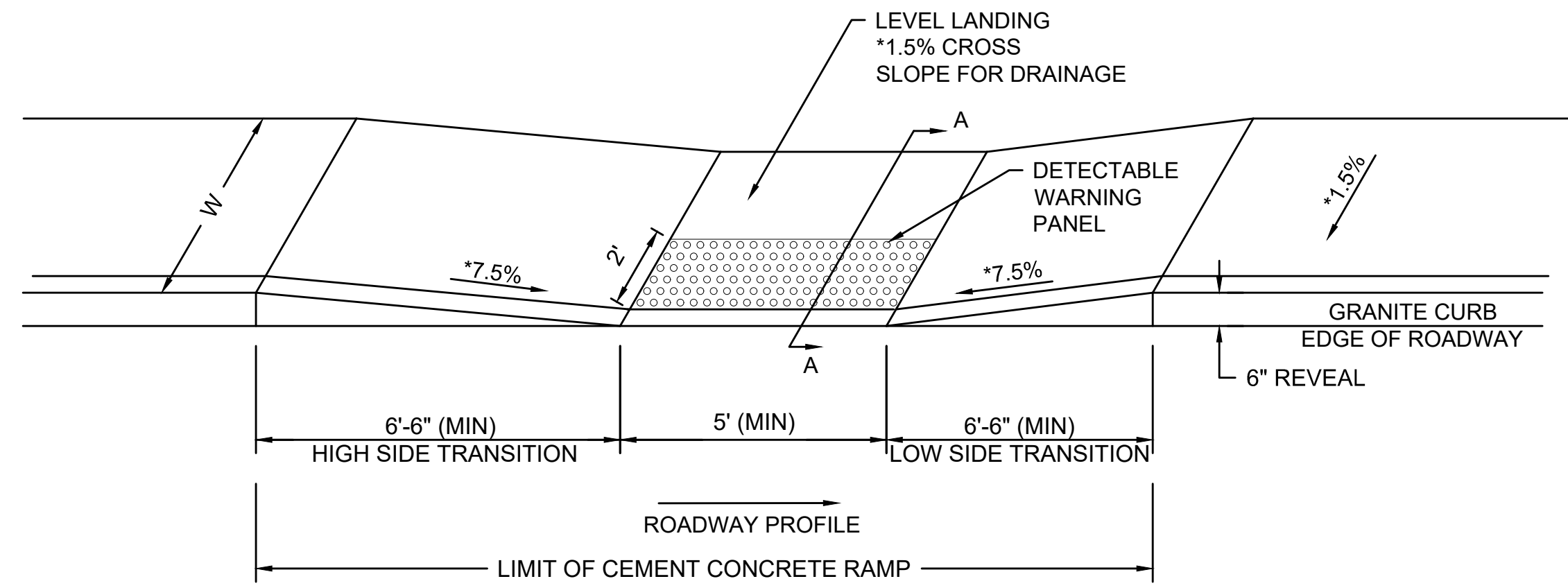
TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACKGROUND	LEGEND	BORDER			
CT-210LcD	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	3.00	6.00
CT-210LdA	24	18		SEE CAMBRIDGE STANDARDS			8	SEE CAMBRIDGE STANDARDS			P5-1 (5), MT W/ R7-8R (1), MT W/ CT-150RA (2)	3.00	24.00
CT-210LdB	24	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-150RA	3.00	3.00
CT-210LEa	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			MT W/ CT-150RA (1), MT W/ CT-110RA (1)	3.00	6.00
CT210Rab	24	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-150LA	3.00	3.00
CT-210Rad	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	3.00	6.00
CT-210RBd	24	18		SEE CAMBRIDGE STANDARDS			4	SEE CAMBRIDGE STANDARDS			P5-1 (4)	3.00	12.00
CT-210RCa	24	18		SEE CAMBRIDGE STANDARDS			6	SEE CAMBRIDGE STANDARDS			P5-1 (3), MT W/ R7-8L (2), MT W/ CT-150LA (1)	3.00	18.00
CT-210RCd	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (2)	3.00	6.00
CT-210RDa	24	18		SEE CAMBRIDGE STANDARDS			9	SEE CAMBRIDGE STANDARDS			P5-1 (2), MT W/ R7-8L (3), MT W/ CT-150LA (4)	3.00	27.00
CT-210RDb	24	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-150LA	3.00	3.00
CT-210REa	24	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			MT W/ CT-110LA (1), MT W/ CT-150LA (1)	3.00	6.00
CT-210REb	24	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-150LA	3.00	3.00
CT-390Ad	12	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-110LA	1.50	1.50
CT-390Da	12	18		SEE CAMBRIDGE STANDARDS			4	SEE CAMBRIDGE STANDARDS			P5-1 (3), MT W/ R7-8R(1)	1.50	6.00
130.50													

				Scale	1"=20'		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-72	
				Date	SEPTEMBER 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565	
27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com				Designed by	SBM	Approved by PMF	Drawing	TRAFFIC SIGN SUMMARY PLAN 2 OF 3			
				Drawn by	AJM						
				Checked by	WRV						
				09/06/2022							

TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACKGROUND	LEGEND	BORDER			
R1-1	30	30		SEE MUTCD STANDARDS			27	SEE MUTCD STANDARDS			P5-1 (27)	6.25	168.75
R4-7	24	30		SEE MUTCD STANDARDS			4	SEE MUTCD STANDARDS			P5-1 (4)	5.00	20.00
R5-1	30	30		SEE MUTCD STANDARDS			20	SEE MUTCD STANDARDS			P5-1 (20)	6.25	125.00
R6-1 (PBS)	36	12		SEE MUTCD STANDARDS			21	SEE MUTCD STANDARDS			P5-1 (17), MT W/ R1-1 (4)	3.00	63.00
R6-1L	36	12		SEE MUTCD STANDARDS			11	SEE MUTCD STANDARDS			P5-1 (9), MT W/ R1-1 (1), MT W/ D3-25 (1)	3.00	33.00
R6-1R	36	12		SEE MUTCD STANDARDS			13	SEE MUTCD STANDARDS			P5-1 (11), MT W/ R1-1 (1), MT W/ D3-25 (1)	3.00	39.00
R7-8	12	18		SEE MUTCD STANDARDS			2	SEE MUTCD STANDARDS			P5-1 (2)	1.50	3.00
R7-8L	12	18		SEE MUTCD STANDARDS			10	SEE MUTCD STANDARDS			P5-1 (9), MT W/ CT-150RA (1)	1.50	15.00
R7-8R	12	18		SEE MUTCD STANDARDS			10	SEE MUTCD STANDARDS			P5-1 (9), MT W/ W11-2 (1)	1.50	15.00
W11-2	30	30		SEE MUTCD STANDARDS			23	SEE MUTCD STANDARDS			P5-1 (23)	6.25	143.75
W16-7pL	24	12		SEE MUTCD STANDARDS			22	SEE MUTCD STANDARDS			MT W/ W11-2 (22)	2.00	44.00
W16-7pR	24	12		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MT W/ W11-2	2.00	2.00
SP-1	12	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-210RAAd	1.50	1.50
SP-2	12	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-200LA	1.50	1.50
SP-3	12	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			P5-1	1.50	1.50
												676.00	

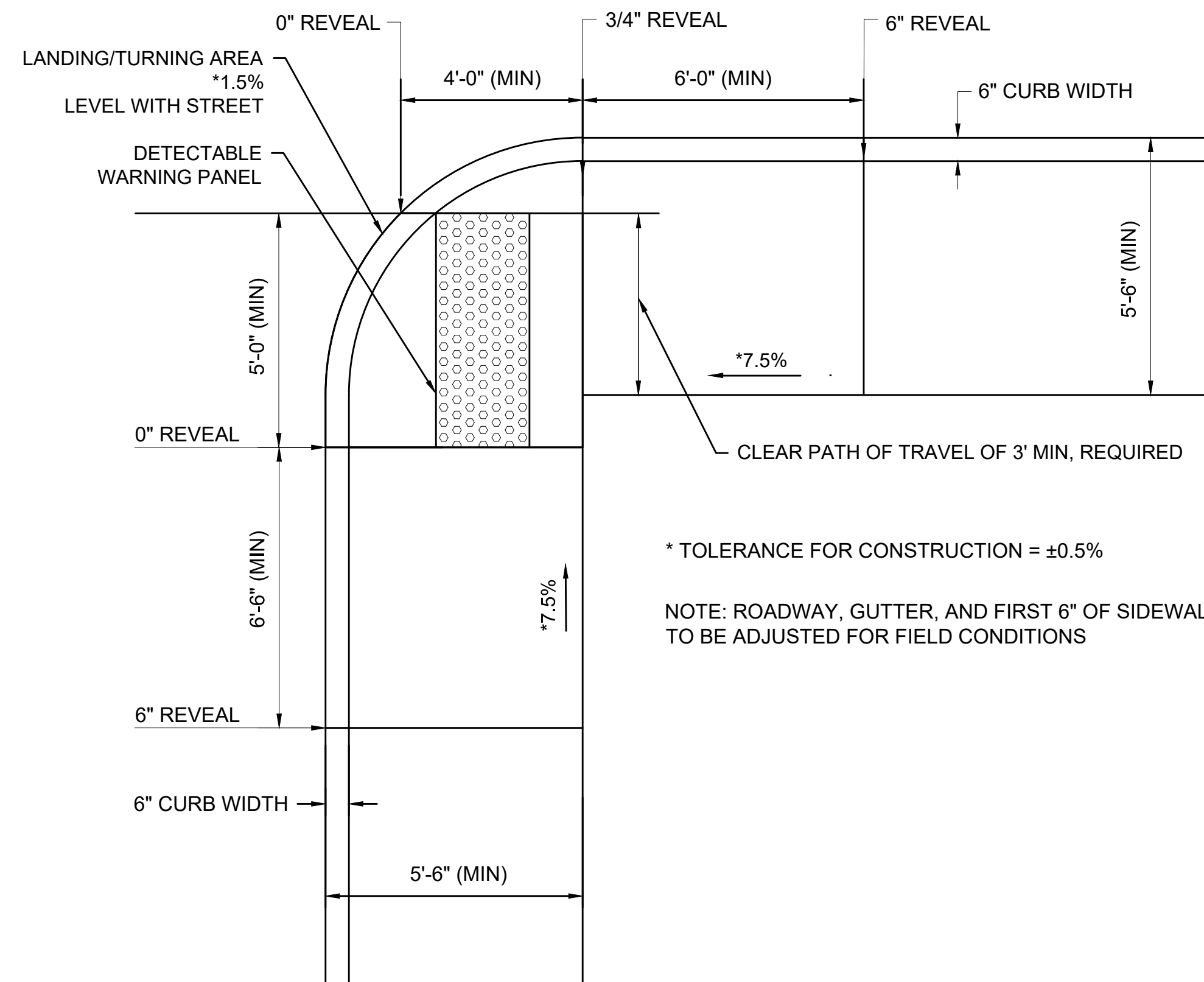
TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACKGROUND	LEGEND	BORDER			
SP-4	12	18		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			MT W/ CT-110LA	1.50	1.50
SP-5	12	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			MT W/ 110-RA (1), MT W/ CT-390Da (1)	1.50	3.00
SP-6	12	18		SEE CAMBRIDGE STANDARDS			2	SEE CAMBRIDGE STANDARDS			P5-1 (1), MT W/ CT-390Da (1)	1.50	3.00
SP-7	12	40		SEE MBTA STANDARDS			1	SEE MBTA STANDARDS			P5-1	3.33	3.33
SP-8	24	36		SEE CAMBRIDGE STANDARDS			1	SEE CAMBRIDGE STANDARDS			P5-1	6.00	6.00
AR-1 (L)	12	15		SEE CAMBRIDGE STANDARDS			5	SEE CAMBRIDGE STANDARDS			P5-1 (5)	1.25	6.25
AR-1 (R)	12	15		SEE CAMBRIDGE STANDARDS			5	SEE CAMBRIDGE STANDARDS			P5-1 (5)	1.25	6.25
												29.33	

		 27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com		Scale	1"=20'		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-73	
				Date	SEPTEMBER 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565	
				Job No.	20170208.037A		Designated by	SBM			
				Drawn by	AJM		Checked by	WRV	No.	Description	Date
				Approved by	PMF		REVISIONS				



SECTION A-A

* TOLERANCE FOR CONSTRUCTION = ±0.5%



* TOLERANCE FOR CONSTRUCTION = ±0.5%

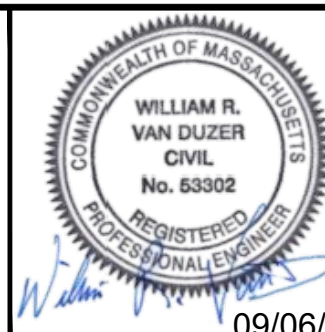
NOTE: ROADWAY, GUTTER, AND FIRST 6\"/>

WCR#	RAMP REFERENCE POINT			WIDTH OF SIDEWALK (W)	RAMP OPEN WIDTH (W1)	DEPTH OF LEVEL LANDING	RW GUTTER SLOPE	TRANSITION LENGTH	
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE
P1	PARK	107+02	12.00LT	7.5	3.5	4.0	0.60%	6.5	7.67
P2	PARK	107+02	16.50 RT	7.0	3.0	4.0	1.20%	--	6.5
D1	DODGE	202+59	16.25 LT	7.5	4.0	4.0	0.75%	7.67	6.5
D2	DODGE	202+76	15.00 LT	9.0	4.0	5.0	1.20%	9	6.5
D3	DODGE	202+59	17.75 RT	7.5	3.5	4.0	0.80%	6.5	7.67
D4	DODGE	202+76	16.00RT	8.5	4.0	4.5	0.60%	7.67	6.5
WE1	WEBSTER	--	--	10.5	4.5	6.0	1.00%	--	--
WE2	WEBSTER	314+65	11.95 LT	9.0	5.7	5.0	0.38%	7.67	6.5
WE3	WEBSTER	314+60	28.25 RT	9.5	4.0	5.5	0.60%	6.5	7.67
WE4	WEBSTER	314+65	40.00 RT	8.70	4.0	4.7	0.40%	7.67	6.5
WE5	WEBSTER	309+95	11.50 LT	10.5	6.0	4.5	1.00%	7.67	--
WE6	WEBSTER	309+90	11.50 RT	10.5	6.5	4.0	0.60%	6.5	7.67
WE7	WEBSTER	309+35	11.50 RT	10.5	6.5	4.0	0.60%	7.67	6.5
WE8	WEBSTER	309+35	11.50 LT	10.5	6.5	4.0	0.80%	6.5	7.67
WE9	WEBSTER	306+80	16.50 LT	10.5	6.5	4.0	0.40%	6.5	7.67
WE10	WEBSTER	306+80	16.50 RT	9.0	5.0	4.0	0.60%	--	7.67
WE11	WEBSTER	306+45	16.00 RT	10.0	5.0	5.0	0.60%	7.67	6.5
WE12	WEBSTER	306+50	16.00 LT	8.0	4.0	4.0	0.60%	6.5	7.67
WE13	WEBSTER	306+50	15.25 RT	8.0	4.0	4.0	0.00%	6.50	6.5
WE14	WEBSTER	300+60	15.25 LT	8.0	4.0	4.0	0.75%	6.5	7.67
C1	CHESTNUT	500+08	23.50RT	12.0	5.0	7.0	1.20%	9	6.5
C2	CHESTNUT	500+08	23.75 LT	11.0	5.0	6.0	1.40%	6.5	9
W1	WALDEN	403+90	16.25 RT	9.0	5.0	4.0	1.00%	7.67	6.5
W2	WALDEN	404+14	29.50 RT	6.5	2.5	4.0	1.60%	9	6.5
W3	WALDEN	404+47	26.50 RT	7.5	3.5	4.0	0.80%	6.5	7.67
W4	WALDEN	404+71	16.50 RT	7.0	3.0	4.0	0.60%	7.67	6.5
W5	WALDEN	404+66	15.50 LT	8.5	4.5	4.0	0.60%	6.5	7.67
W6	WALDEN	404+44	33.00 LT	9.5	5.5	4.0	1.20%	6.5	9



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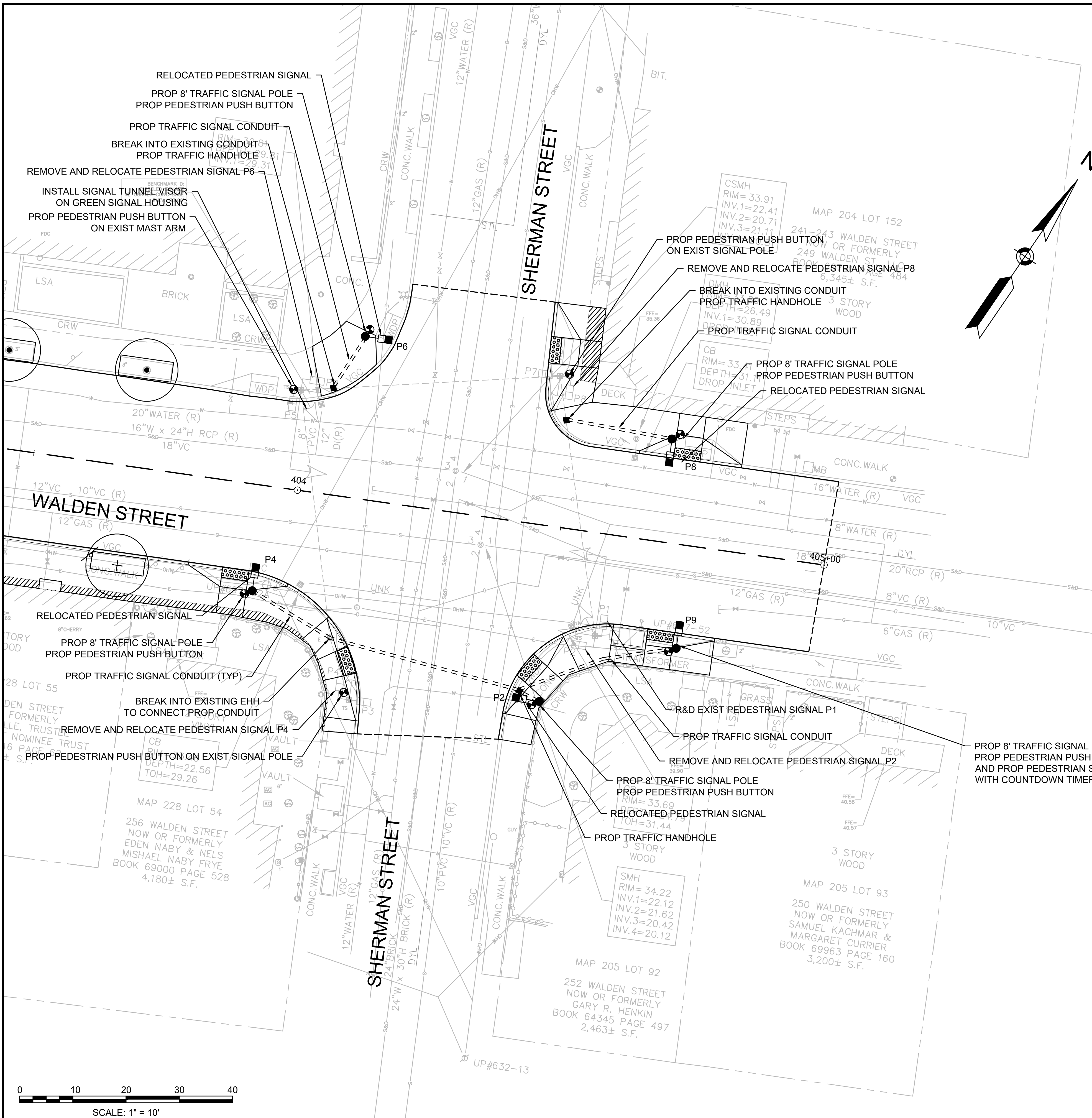


Scale	1"=20'
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF
No.	
Description	REVISIONS
Date	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PEDESTRIAN RAMP DETAILS PLAN 1 OF 1

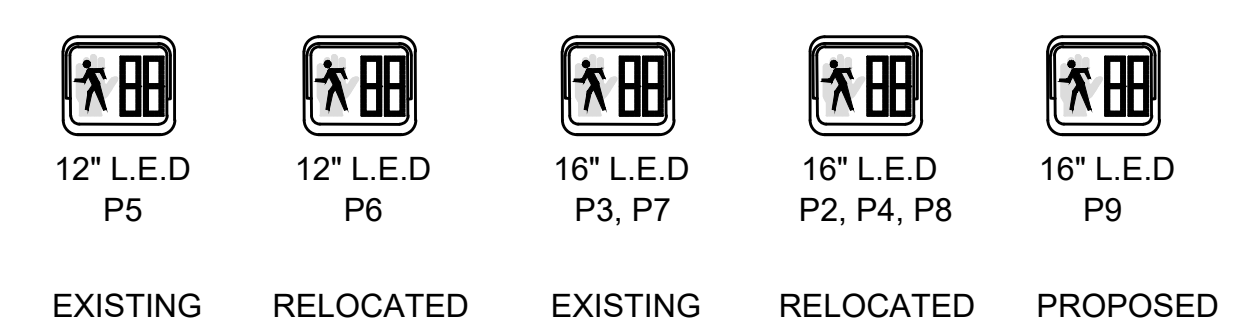
Sheet	R-74
File No.	10565



MAJOR ITEMS REQUIRED		
PAY ITEM	QUANTITY	ITEM
2890	80	3" ELECTRICAL CONDUIT TYPE NM - PLASTIC (UL)
	5	8' SIGNAL POLE, BASE, & FDN
	1	PEDESTRIAN SIGNAL HEAD, SINGLE SECTION W/ COUNTDOWN TIMER
	8	ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTON ASSEMBLY W/ SIGN & SADDLE
	1	TRAFFIC SIGNAL TUNNEL VISOR
	2	PULL BOX 12 X 12 INCHES - SD2.031

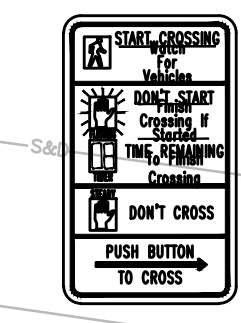
PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE INSTALLATION.

PEDESTRIAN SIGNAL IDENTIFICATION

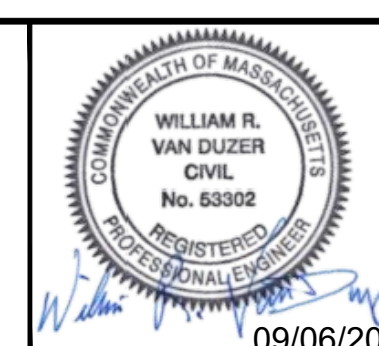


- NOTES:**
 1. EXISTING SIGNAL TIMINGS SHALL BE RETAINED.
 2. EXISTING SIGNAL EQUIPMENT SHALL BE RETAINED, UNLESS OTHERWISE NOTED.

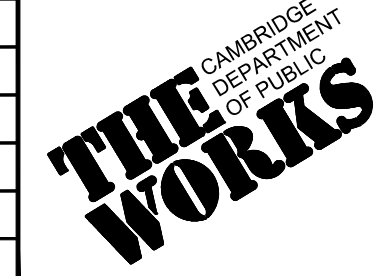
PEDESTRIAN PUSH BUTTON SIGN DETAIL



R10-3e
9"X15"

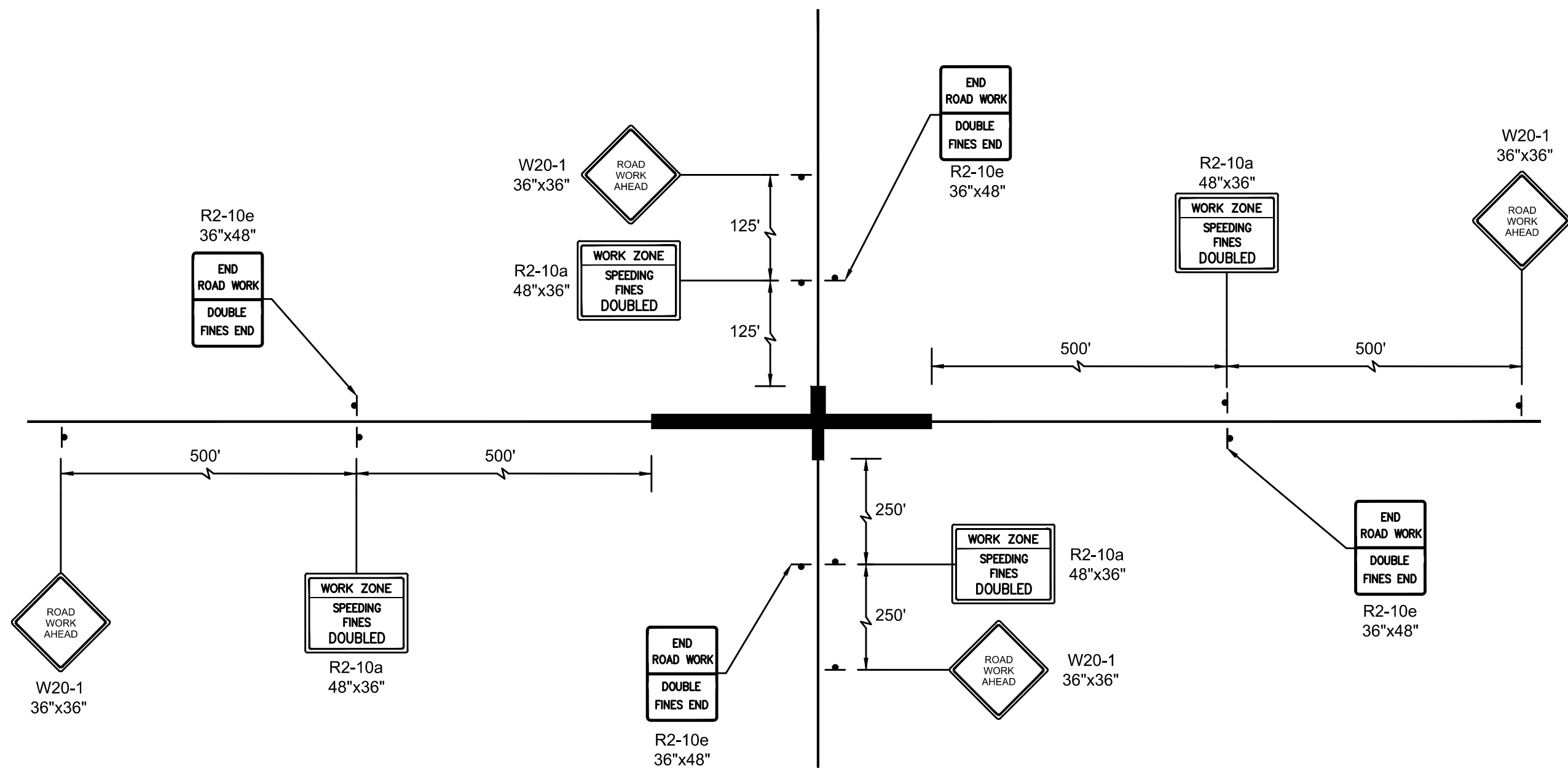


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Date	SEPTEMBER 2022		
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Drawn by	AJM		
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Approved by	PMF		REVISIONS

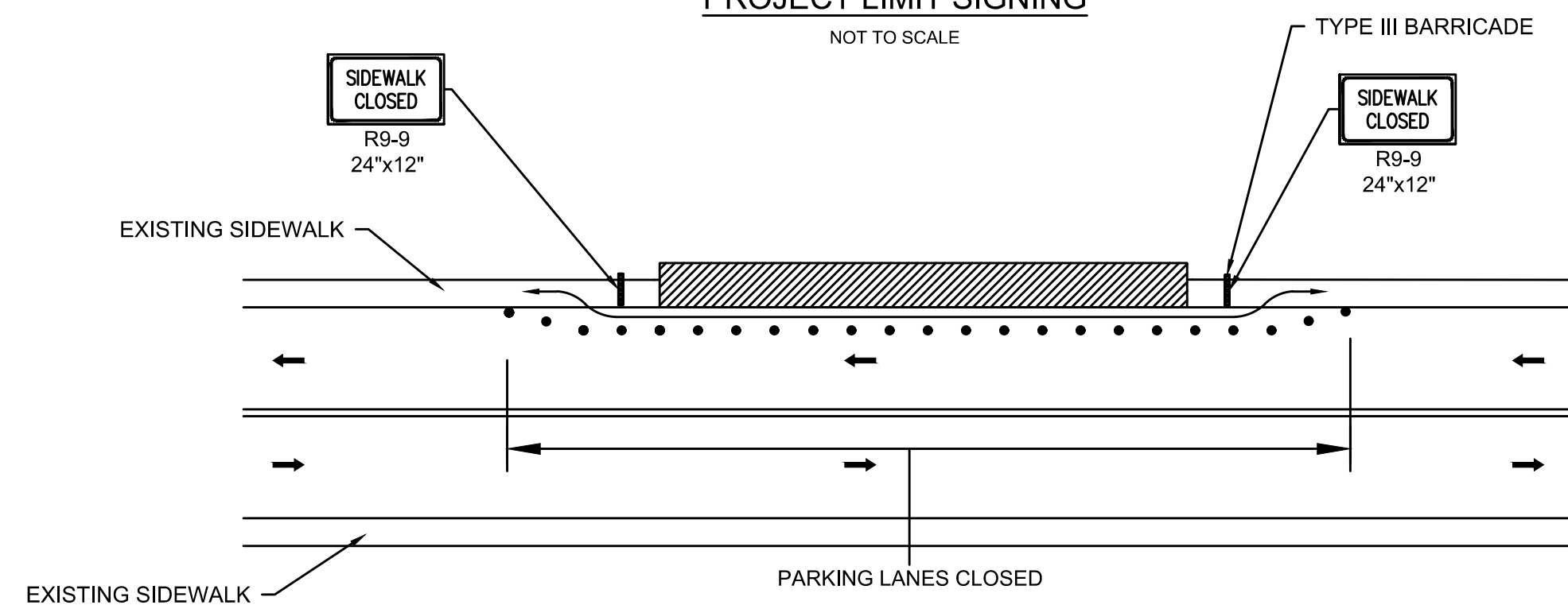


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WALDEN STREET - TRAFFIC SIGNAL PLAN PLAN 1 OF 1

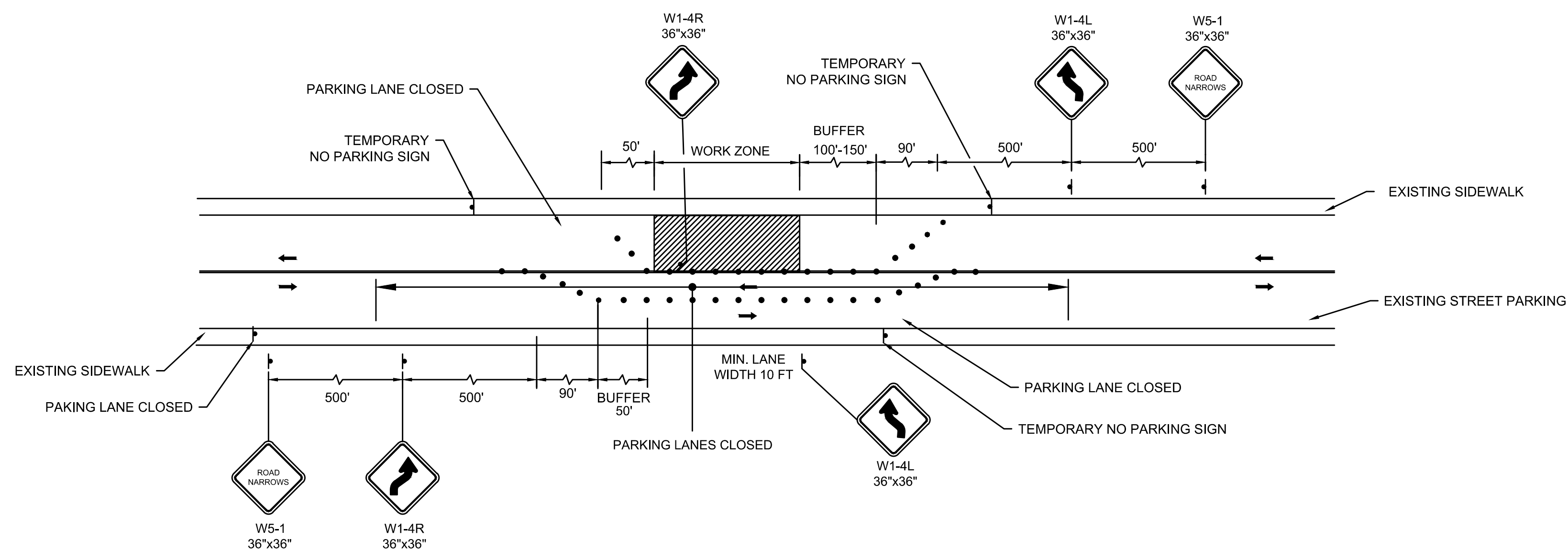
Sheet	TS-1
File No.	10565



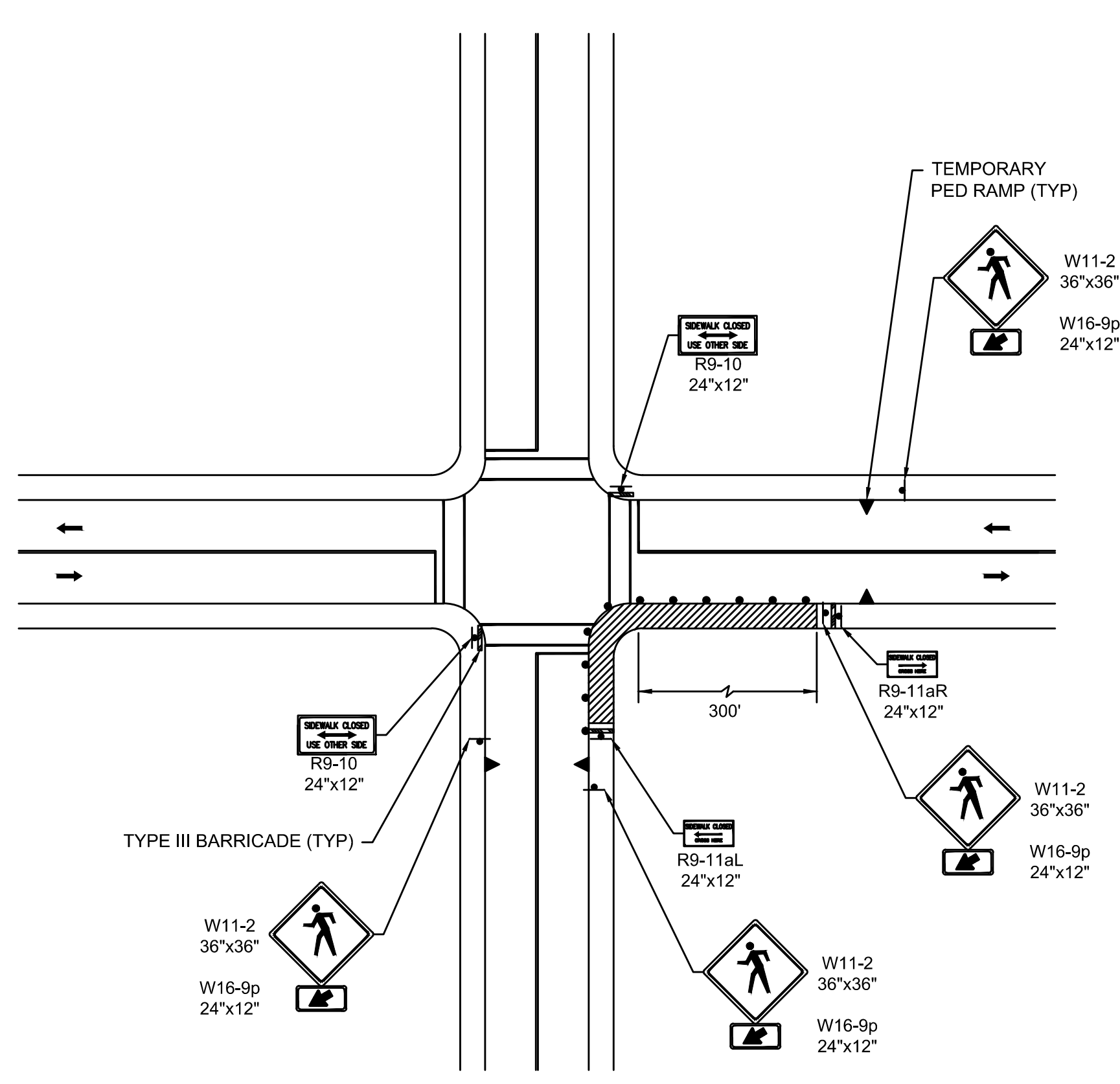
PROJECT LIMIT SIGNING
NOT TO SCALE



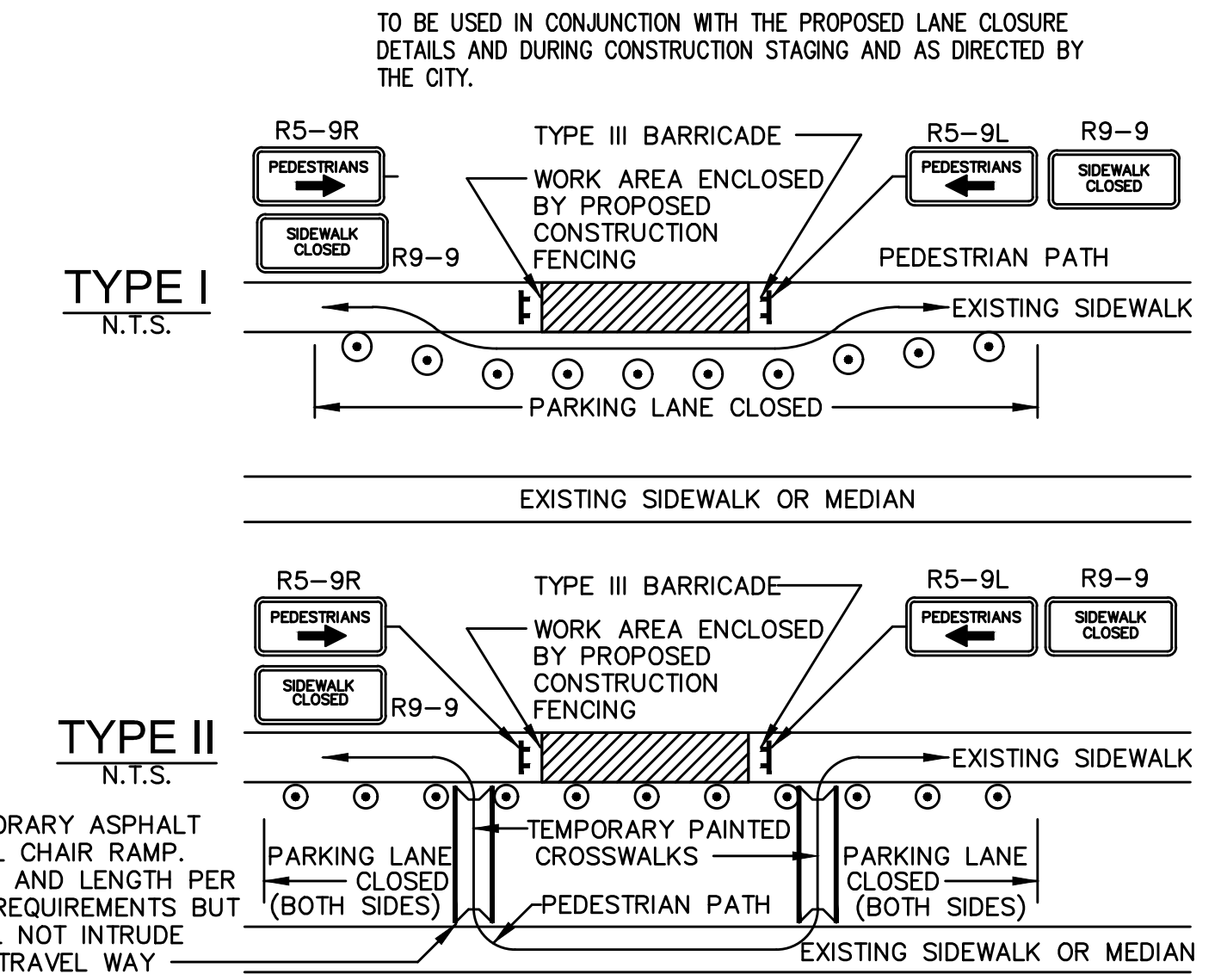
SIDEWALK CLOSURE
NOT TO SCALE



TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSURE
NOT TO SCALE



SIDEWALK CORNER CLOSURE
NOT TO SCALE



- PEDESTRIAN BYPASS NOTES:**
1. ADDITIONAL ADVANCE WARNING MAY BE REQUIRED BY THE CITY.
 2. CONTROLS FOR PEDESTRIAN TRAFFIC ONLY ARE SHOWN. VEHICULAR TRAFFIC SHALL BE MAINTAINED AS DETAILED ELSEWHERE.
 3. STREET LIGHTING SHALL BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
 4. EXISTING PEDESTRIAN RAMPS SHALL BE CONSIDERED WHEN LOCATING TEMPORARY PAINTED CROSSWALKS. TEMPORARY BITUMINOUS RAMPS ARE REQUIRED FOR TEMPORARILY RELOCATED CROSSWALKS.
 5. → DIRECTION OF PEDESTRIAN TRAVEL
 6. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHALL BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS REQUIRED BY THE ENGINEER.
 7. TEMPORARY ASPHALT WHEEL CHAIR RAMPS ARE REQUIRED FOR TEMPORARILY RELOCATED CROSS WALKS WHERE EXISTING WHEEL CHAIR RAMPS DO NOT EXIST.

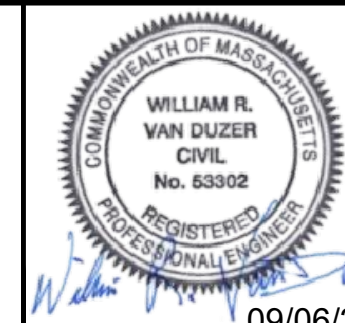
PEDESTRIAN BYPASS DETAIL
NOT TO SCALE

- LEGEND:**
- WORK AREA
 - SIGN
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - PEDESTRIAN WALKWAY AND RAMP
 - FLOW DIRECTION
 - PEDESTRIAN CHANNELIZING DEVICE

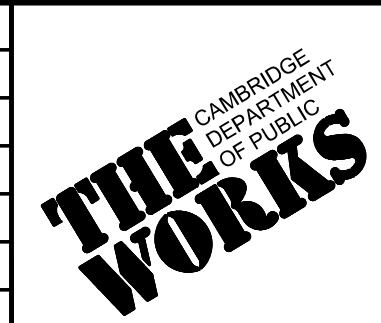
- TEMPORARY TRAFFIC CONTROL NOTES:**
1. ALL TRAFFIC CONTROL DEVICES AND WORK ZONE SET-UPS ARE TO BE IN ACCORDANCE WITH MASSDOT AND MUTCD STANDARDS.
 2. DRUM SPACING SHALL BE 25 FEET ON ALL STREETS.
 3. MINIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS AND CONES) IS EQUAL IN FEET TO THE POSTED SPEED LIMIT IN MILES PER HOUR.
 4. ALL SIGNS SHOWN SHALL BE MOUNTED ON SUITABLE TEMPORARY SUPPORTS SUCH THAT SIGNS ARE CLEARLY VISIBLE TO APPROACHING TRAFFIC.
 5. MAINTAIN ACCESS TO ALL DRIVEWAYS AND PEDESTRIAN SIDEWALKS AT ALL TIMES, UNLESS OTHERWISE NOTED.
 6. THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
 7. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
 8. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
 9. MINIMUM LANE WIDTH IS 10 FEET, MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
 10. ADA COMPLIANT PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES, INCLUDING PROPER BARRICADES, RAILINGS, RAMPS, AND SIGNAGE FOR PEDESTRIAN DETOURS OR BYPASSES.
 11. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.



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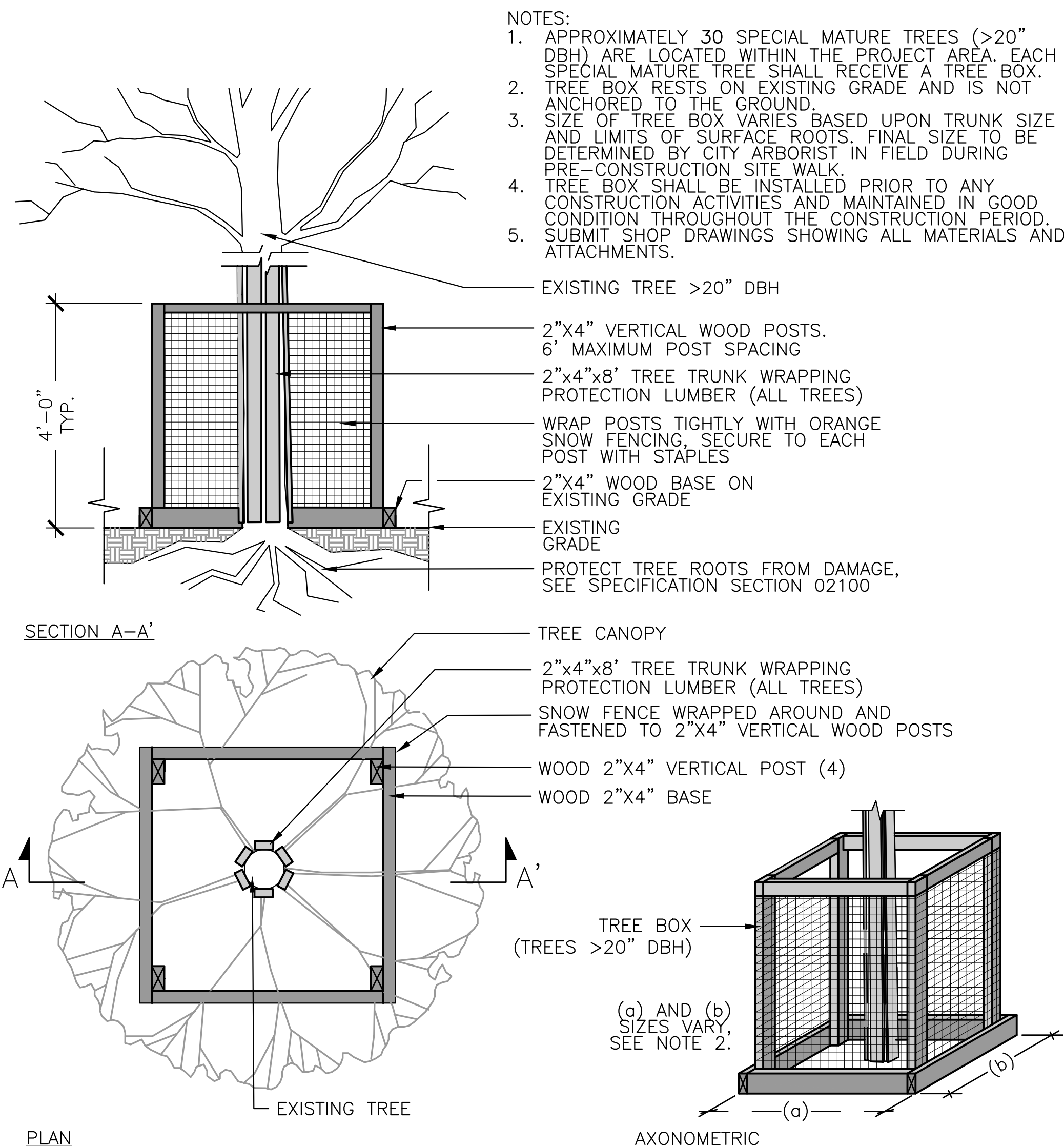


Scale	1"=20'
Date	SEPTEMBER 2022
Job No.	20170208.037A
Designed by	SBM
Drawn by	AJM
Checked by	WRV
Approved by	PMF
09/06/2022	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	TEMPORARY TRAFFIC CONTROL PLAN PLAN 1 OF 1

Sheet	TMP-1
File No.	10565



TREE PROTECTION
NOT TO SCALE

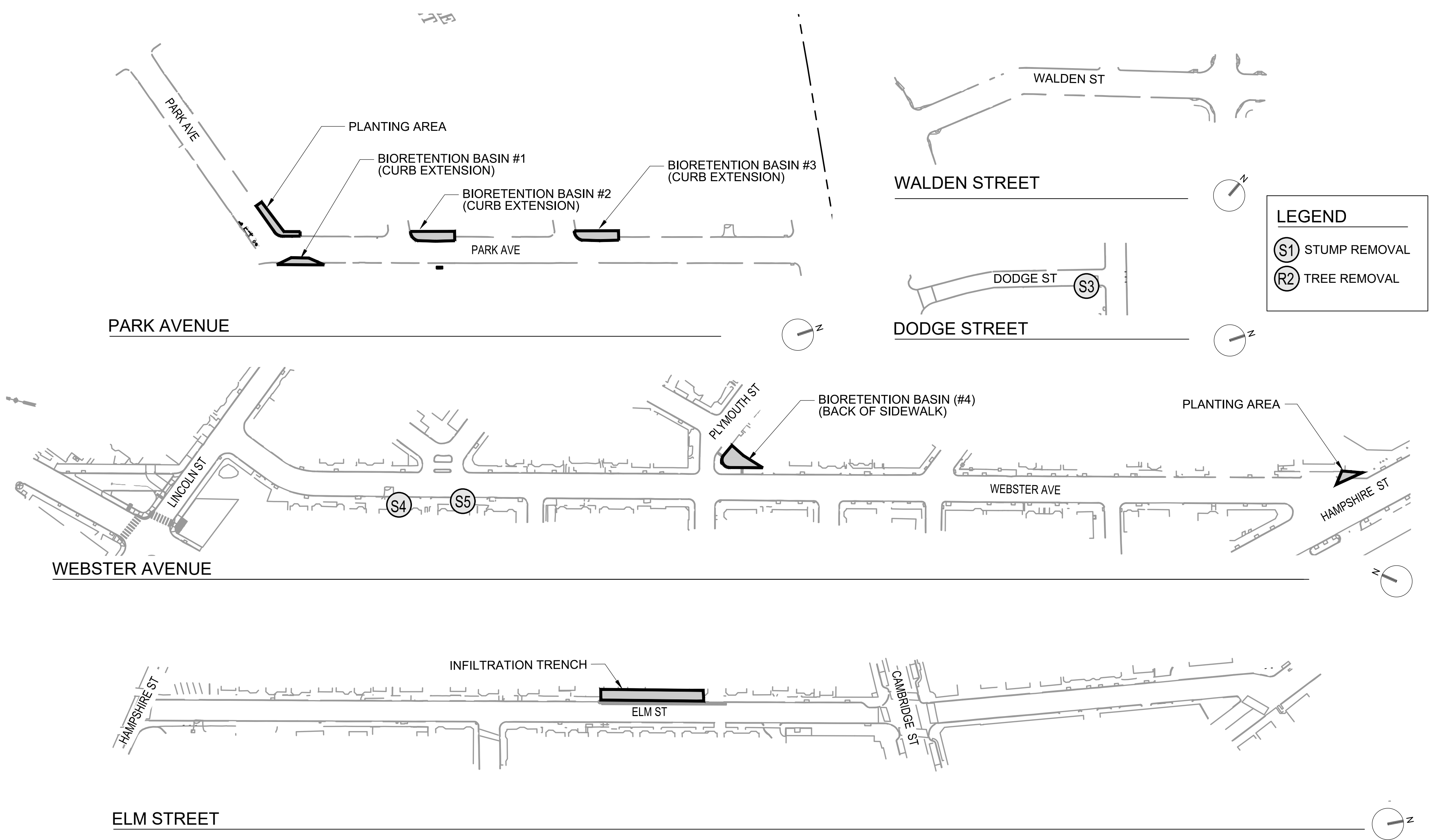
TREE REMOVAL SCHEDULE

#	STREET NAME	DBH	QTY.
R1	CUSHING PLAZA W	4"	1
R2	CUSHING PLAZA W	4"	1
R3	CUSHING PLAZA E	3"	1
R4	CUSHING PLAZA E	4"	1
R5	CUSHING PLAZA E	5"	1
R6	CUSHING PLAZA E	4"	1
	TOTAL		6

STUMP REMOVAL SCHEDULE

#	STREET NAME	ADDRESS	QTY.
S1	CHESTNUT STREET	242	1
S2	CHESTNUT STREET	183	1
S3	DODGE STREET	10	1
S4	WEBSTER AVENUE	142-144	1
S5	WEBSTER AVENUE	158	1
	TOTAL		5

TREE AND STUMP REMOVAL SCHEDULE



KEY PLAN: GREEN INFRASTRUCTURE AND PLANTING AREAS
SCALE: NTS

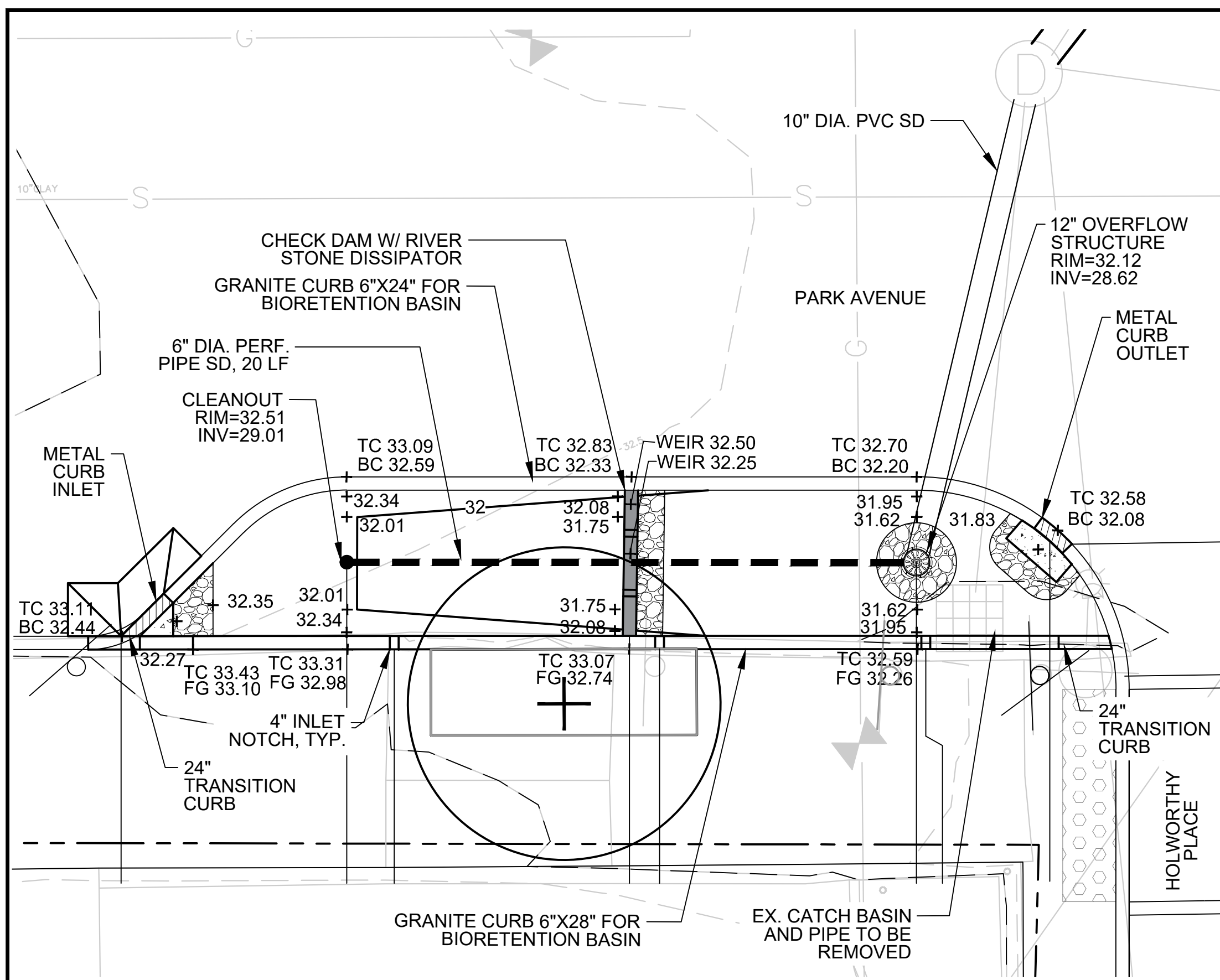


Scale	AS SHOWN	
Date	AUGUST 2022	
Job No.	20170208.037A	
Designed by	HH/JB	
Drawn by	AK/AG	
Checked by	RK/JB	
Approved by	DB	
	No. Description Date	
	REVISIONS	

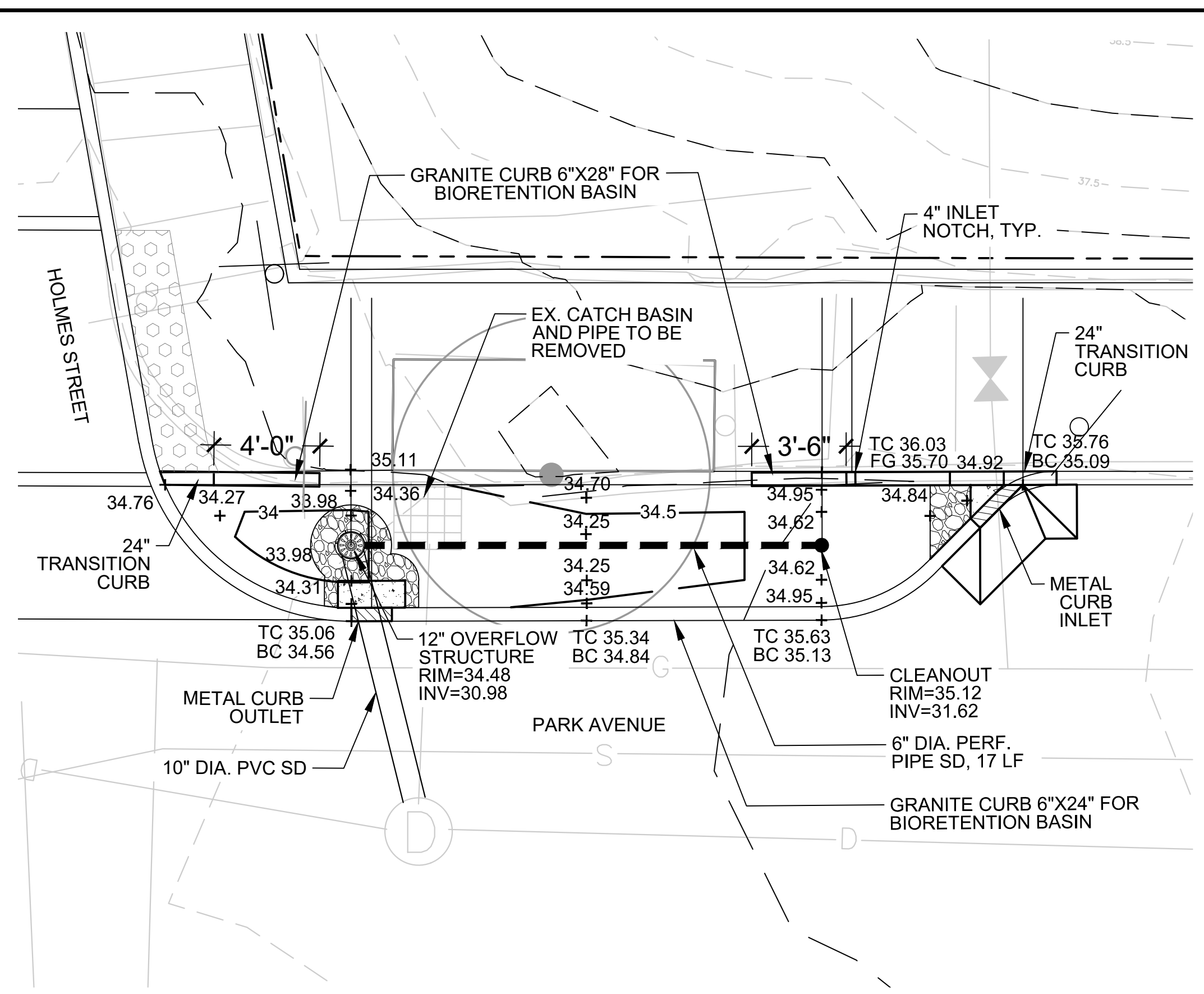


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	GREEN INFRASTRUCTURE KEY PLAN SHEET 1 OF 15

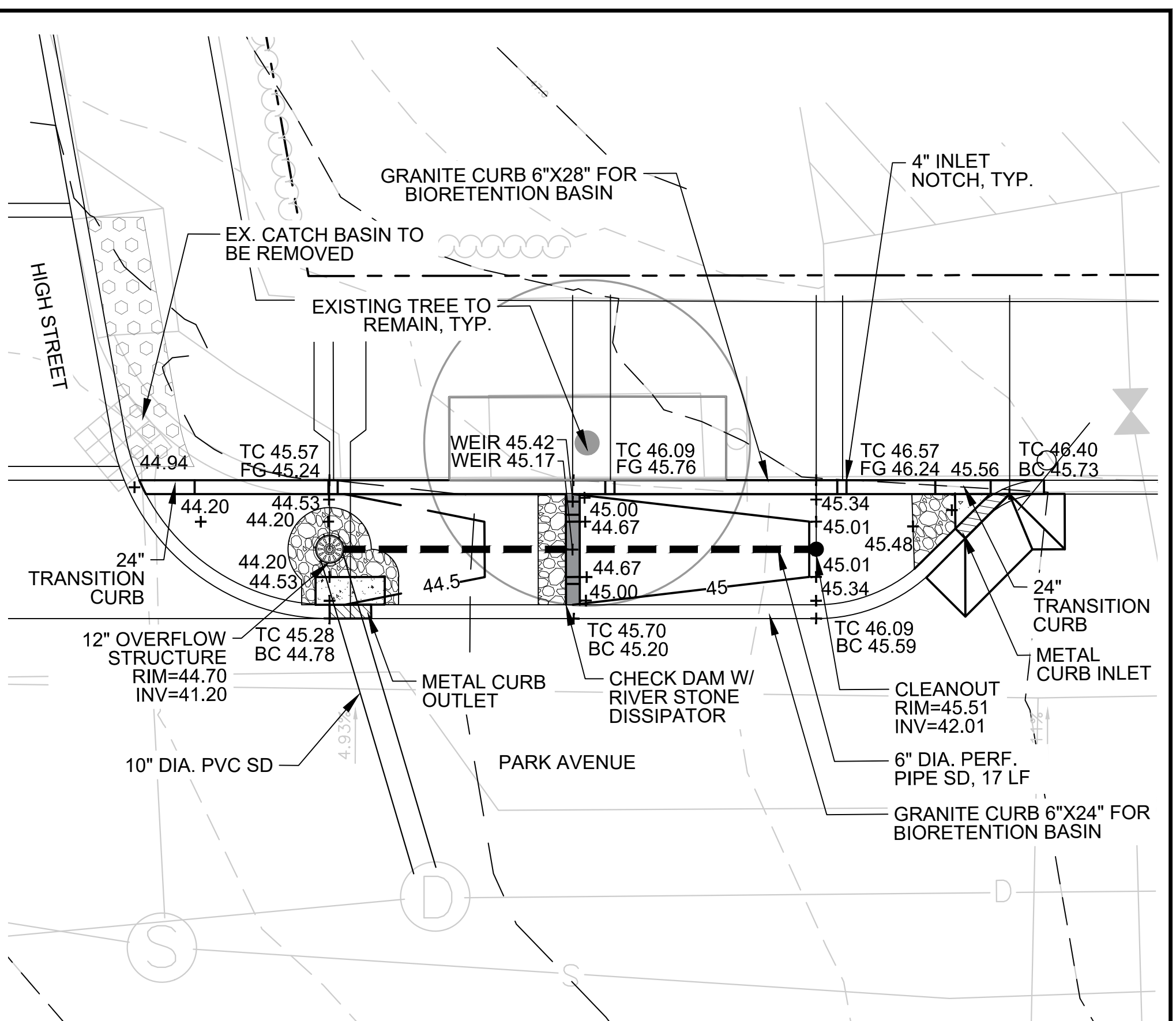
Sheet	L-1
File No.	10565



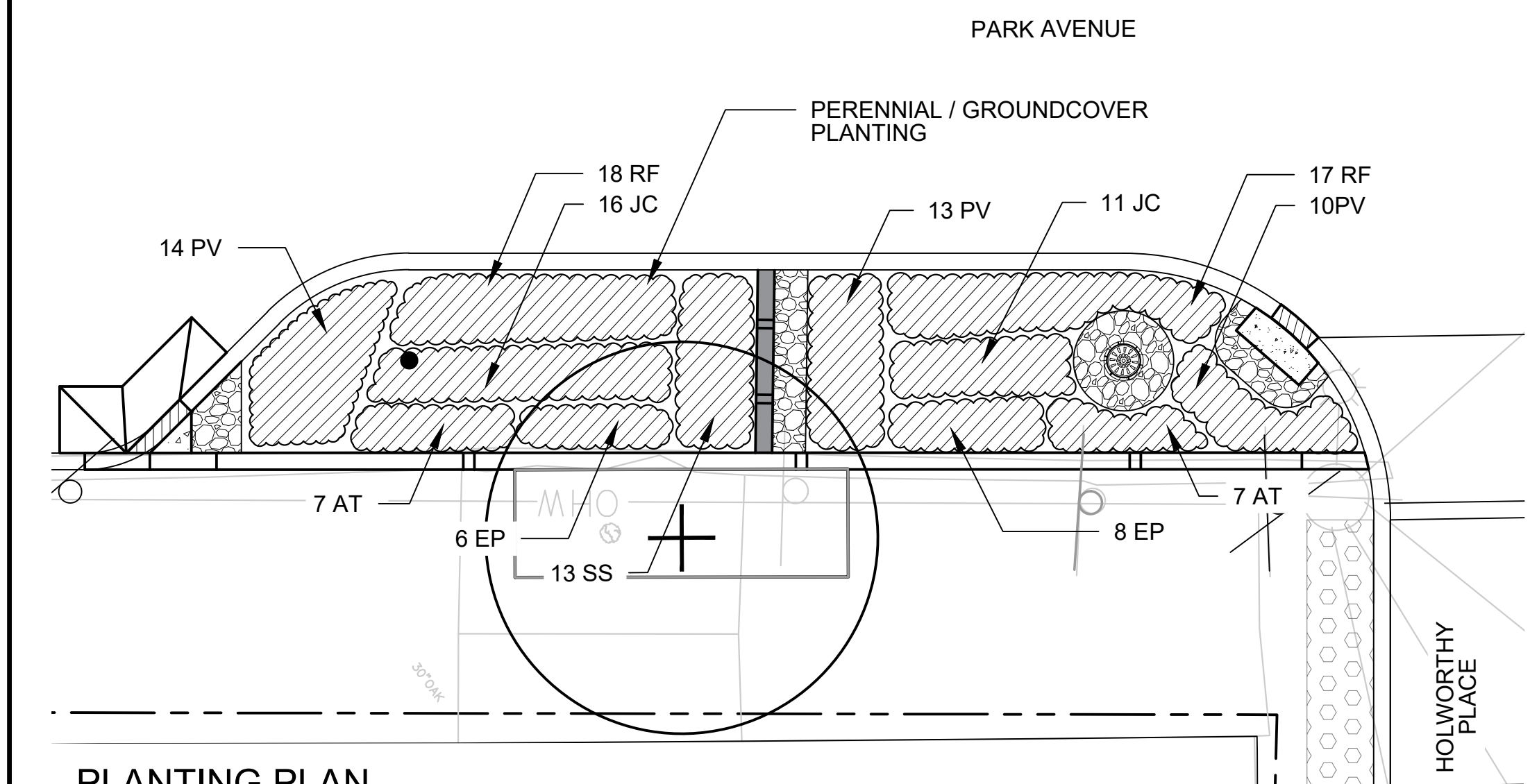
LAYOUT AND GRADING PLAN



LAYOUT AND GRADING PLAN



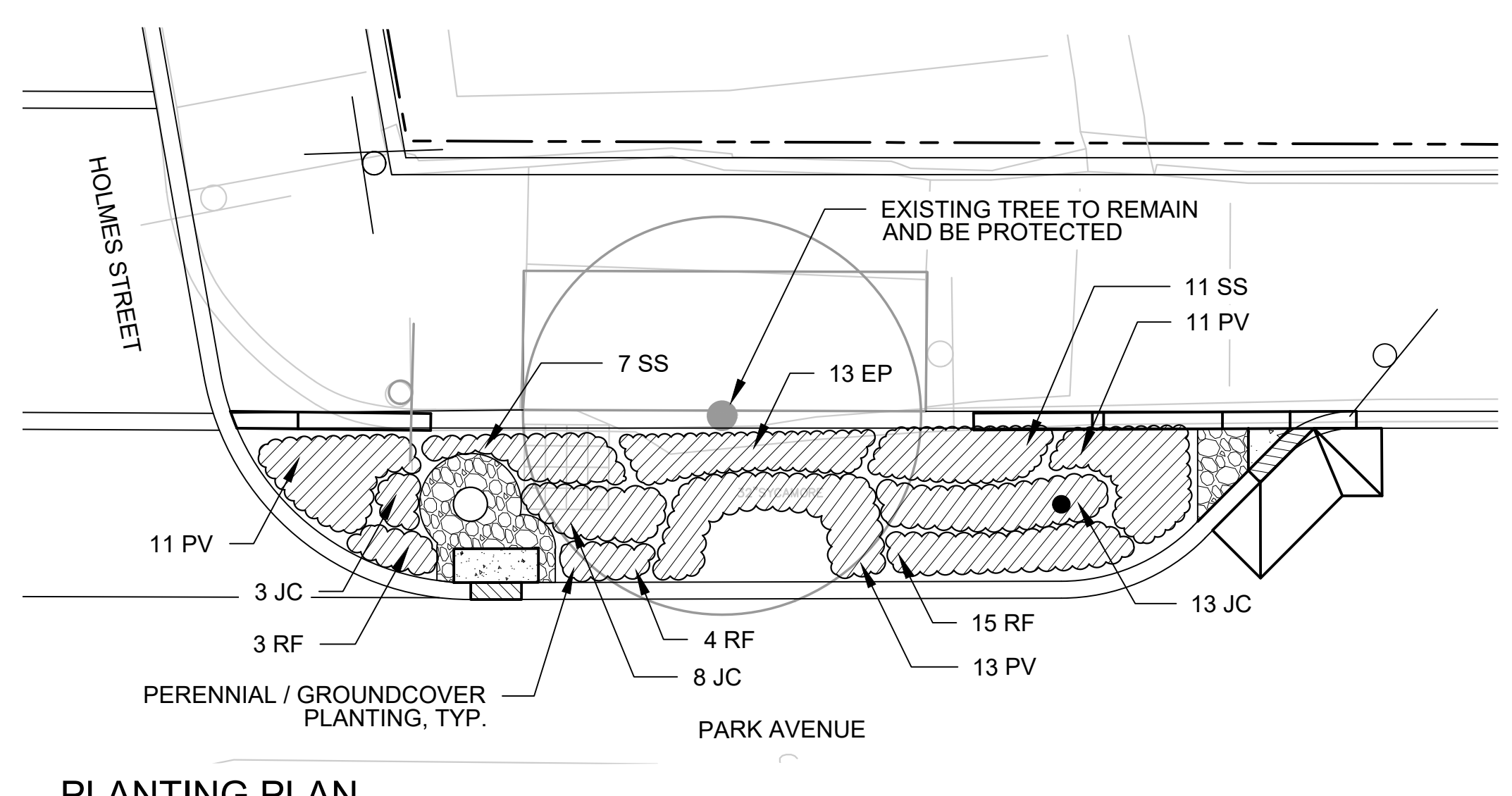
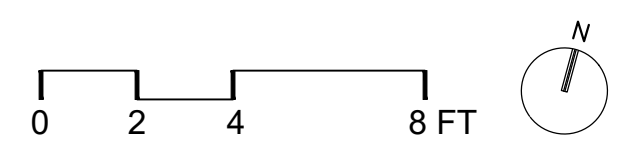
LAYOUT AND GRADING PLAN



PLANTING PLAN

PARK AVENUE - BIORETENTION BASIN 1

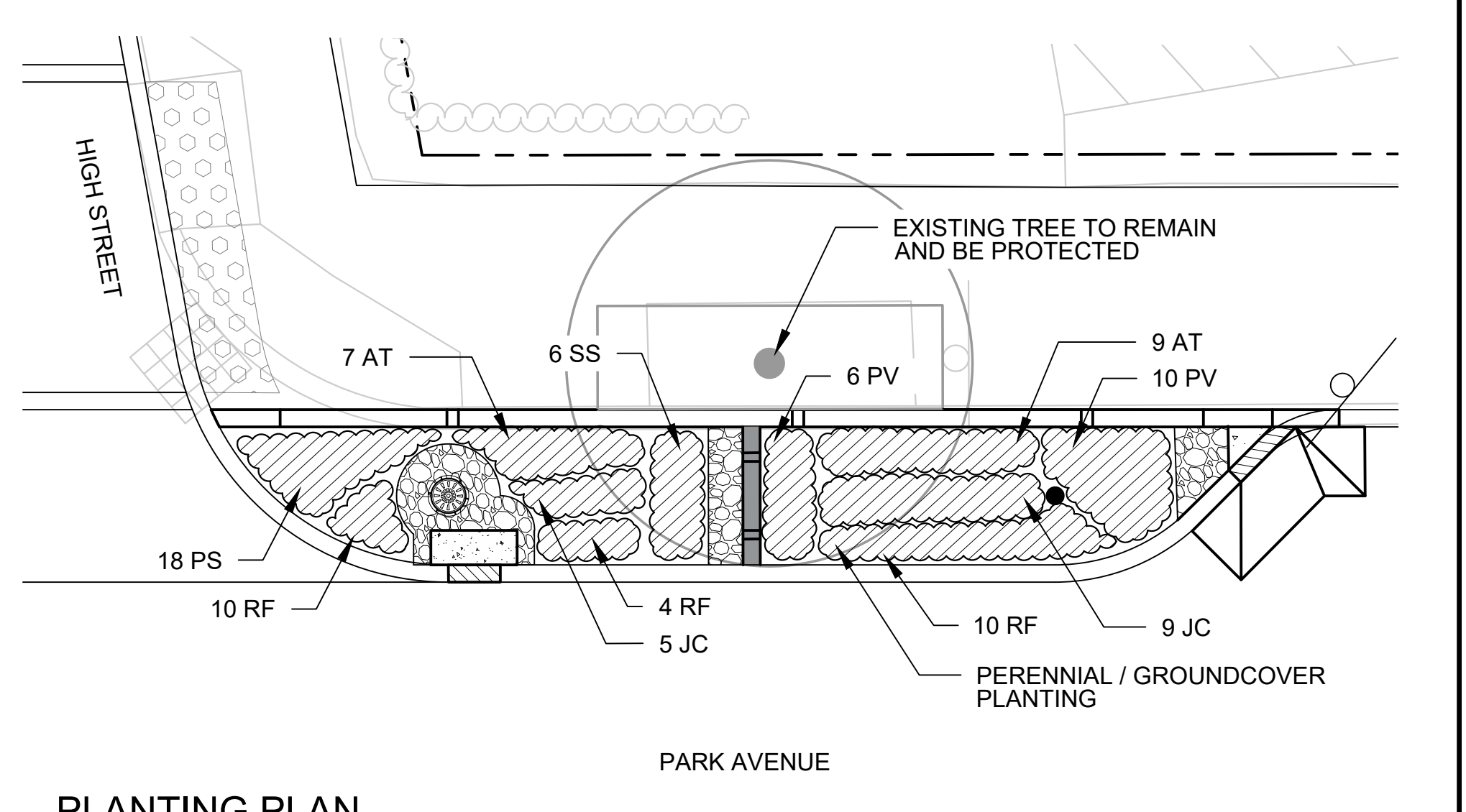
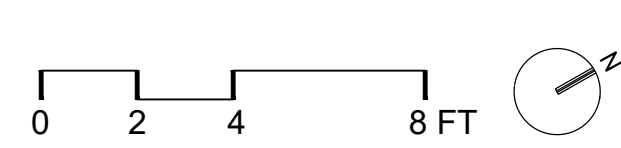
SCALE: 1/4" = 1'-0"



PLANTING PLAN

PARK AVENUE - BIORETENTION BASIN 2

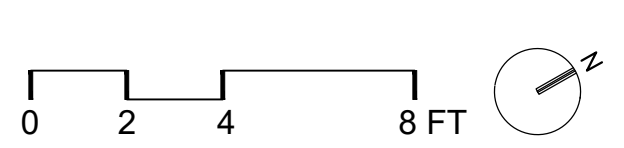
SCALE: 1/4" = 1'-0"



PLANTING PLAN

PARK AVENUE - BIORETENTION BASIN 3

SCALE: 1/4" = 1'-0"



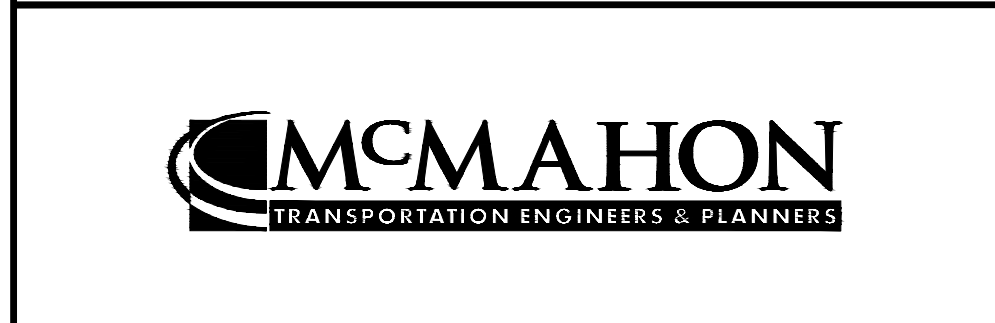
- NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING CONSTRUCTION.
 - FINISH GRADING SHALL BE INSPECTED BY OWNER'S REPRESENTATIVE IN THE FIELD AND APPROVED PRIOR TO PLANTING.
 - ALL BIORETENTION ELEMENTS INCLUDING SPLASH PADS, RIVERSTONE AND EDGING SHALL BE INSTALLED PRIOR TO PLANTING.
 - STORMWATER SHALL BE TEMPORARILY DIVERTED FROM THE BIORETENTION BASIN UNTIL ALL PLANT MATERIAL HAS BECOME FULLY ESTABLISHED AND HAS BEEN ACCEPTED BY THE OWNER'S REPRESENTATIVE.
 - CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING PLAN SHOWN.
 - SEE SHEET L-15 FOR PLANT SCHEDULE.

LAYOUT AND MATERIALS LEGEND

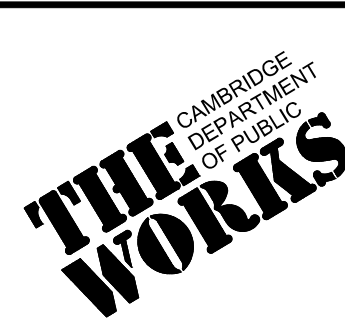
---	PROPERTY LINE	●	CLEANOUT	①	L-10
⊕	CENTER LINE	—	4" INLET NOTCH	②	L-11
—	ALIGN	▒	CONCRETE SPLASH PAD	④	L-11
—35—	PROPOSED CONTOUR	▒	GRANITE CHECK DAM W/ RIVER STONE DISSIPATOR	①	L-12
+ 35.25	SPOT GRADE	▒	RIVER STONE DISSIPATOR		
17+50.25	STATION POINT	○	OVERFLOW STRUCTURE		
---	UNDERDRAIN	—	METAL INLET/OUTLET ASSEMBLY		
---	DRAIN CONNECTION				

PLANTING LEGEND

○	EXISTING TREE	①	L-15
+	SHADE TREE	③	L-15
▒	PERENNIAL/ GROUNDCOVER PLANTING		



Scale	AS SHOWN		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	HH / JB		
Drawn by	AK / AG		
Checked by	RK / JB	No.	Description
Approved by	DB		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PARK AVENUE BIORETENTION BASINS SHEET 2 OF 15

Sheet	L-2
File No.	10565

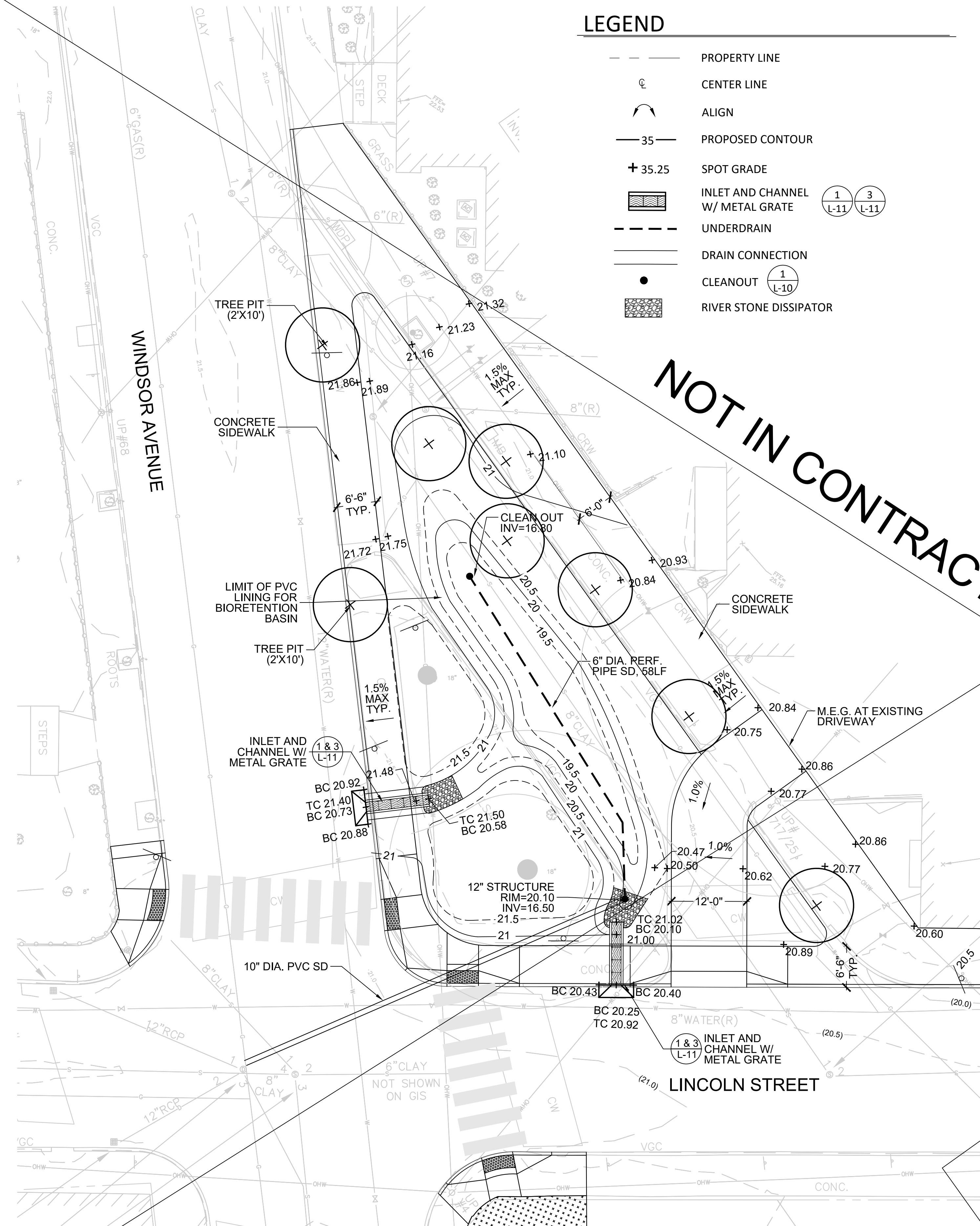
LEGEND

- PROPERTY LINE
- ⊕ CENTER LINE
- ALIGN
- 35— PROPOSED CONTOUR
- + 35.25 SPOT GRADE
- INLET AND CHANNEL W/ METAL GRATE (1 L-11) (3 L-11)
- UNDERDRAIN
- DRAIN CONNECTION
- CLEANOUT (1 L-10)
- RIVER STONE DISSIPATOR

LEGEND

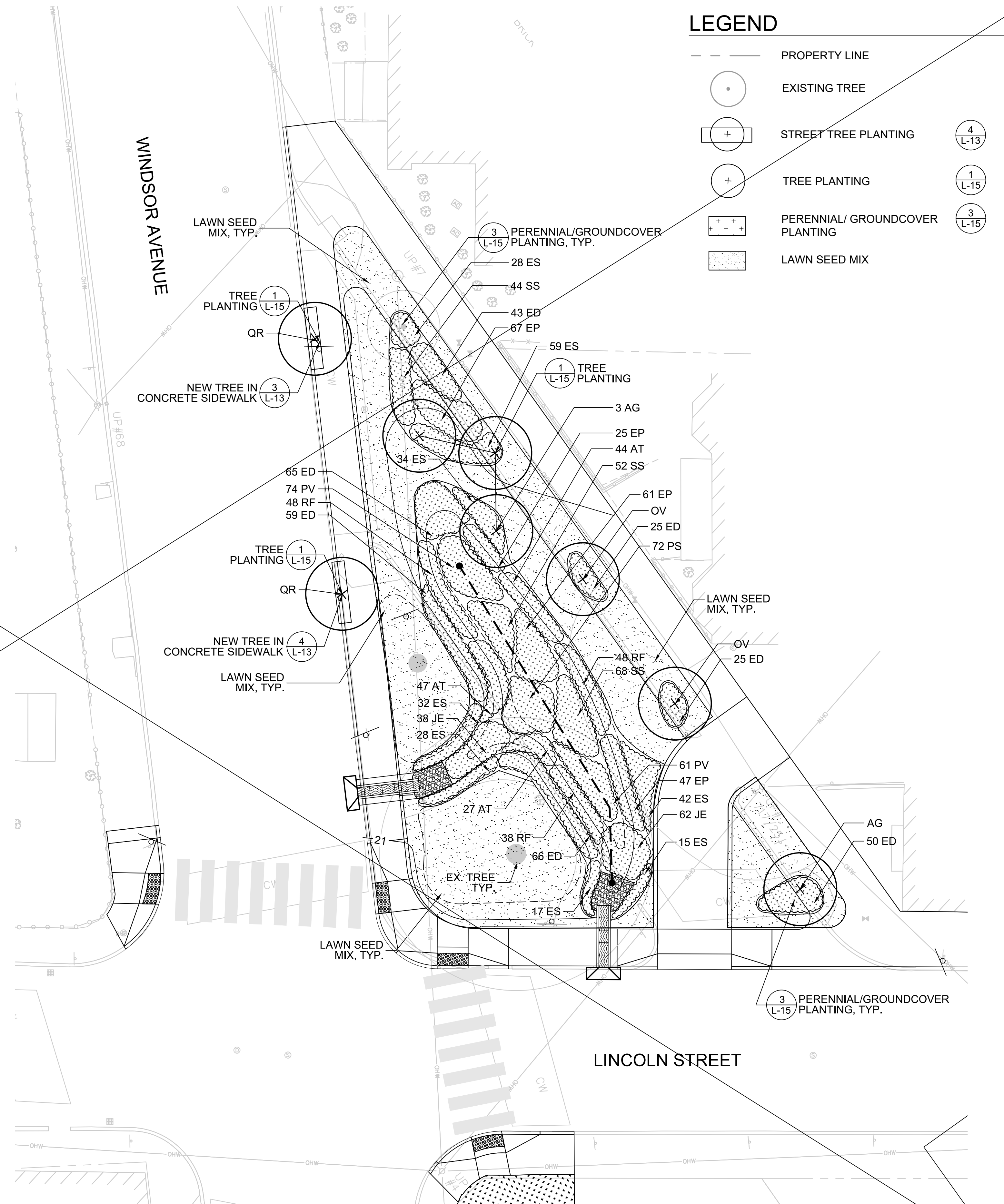
- EXISTING TREE
- ⊕ STREET TREE PLANTING (4 L-13)
- ⊕ TREE PLANTING (1 L-15)
- ⊕ PERENNIAL/ GROUNDCOVER PLANTING (3 L-15)
- LAWN SEED MIX

NOT IN CONTRACT



WEBSTER AVENUE TRIANGLE - LAYOUT AND GRADING ENLARGEMENT PLAN

SCALE: 1" = 10'-0"



WEBSTER AVENUE TRIANGLE - PLANTING ENLARGEMENT PLAN

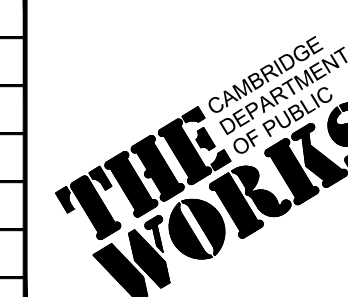
SCALE: 1" = 10'-0"

0 5 10 20 FT



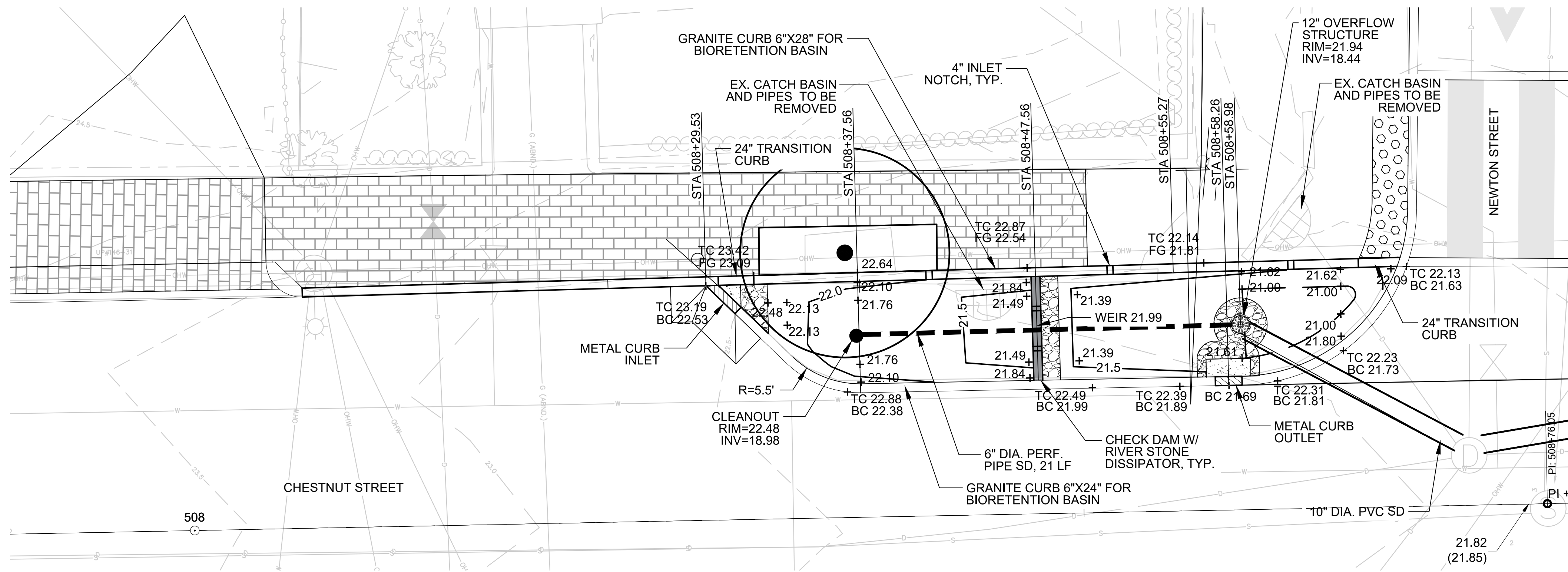
27 Congress Street, Salem, MA 01970
tel. 978-740-0096 www.hatch.com

Scale	AS SHOWN		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	JB		
Drawn by	AK / AG		
Checked by	JB	No.	Description
Approved by	DB		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE TRIANGLE - BIORETENTION BASIN 6 SHEET 3 OF 15

Sheet	L-3
File No.	10565

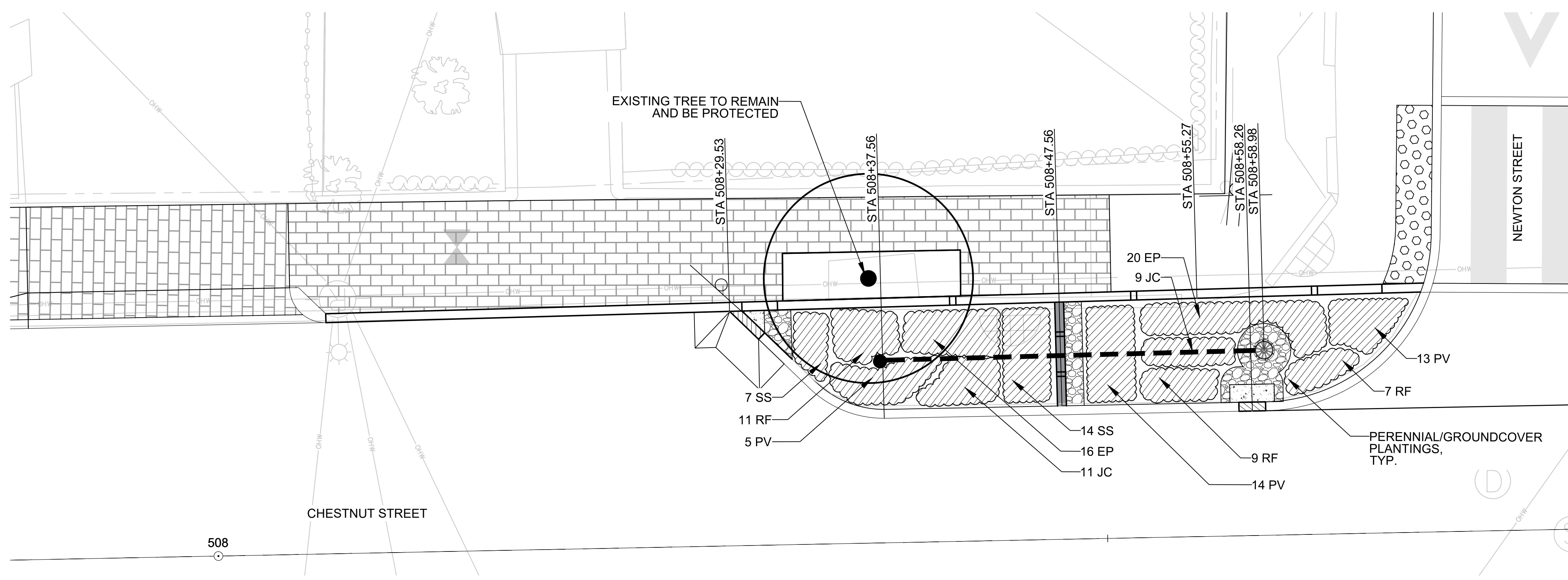


LAYOUT AND MATERIALS LEGEND

	PROPERTY LINE
	CENTER LINE
	ALIGN
	PROPOSED CONTOUR
	SPOT GRADE
	STATION POINT
	UNDERDRAIN
	DRAIN CONNECTION
	CLEANOUT (1 L-10)
	4" INLET NOTCH (2 L-11)
	CONCRETE SPLASH PAD
	GRANITE CHECK DAM W/ RIVER STONE DISSIPATOR (4 L-11)
	RIVER STONE DISSIPATOR
	OVERFLOW STRUCTURE
	METAL INLET/OUTLET ASSEMBLY (1 L-12)
	BRICK SIDEWALK (SEE SHEET GC-4)

CHESTNUT STREET- BIORETENTION BASIN 5 (CURB EXTENSION) - LAYOUT AND GRADING ENLARGEMENT PLAN

SCALE: 1/4" = 1'-0"



PLANTING LEGEND

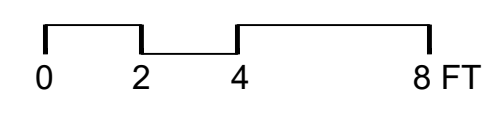
	EXISTING TREE (1 L-13)
	PERENNIAL/ GROUNDCOVER PLANTING (3 L-15)
	BRICK SIDEWALK (SEE SHEET GC-4)

NOTES:

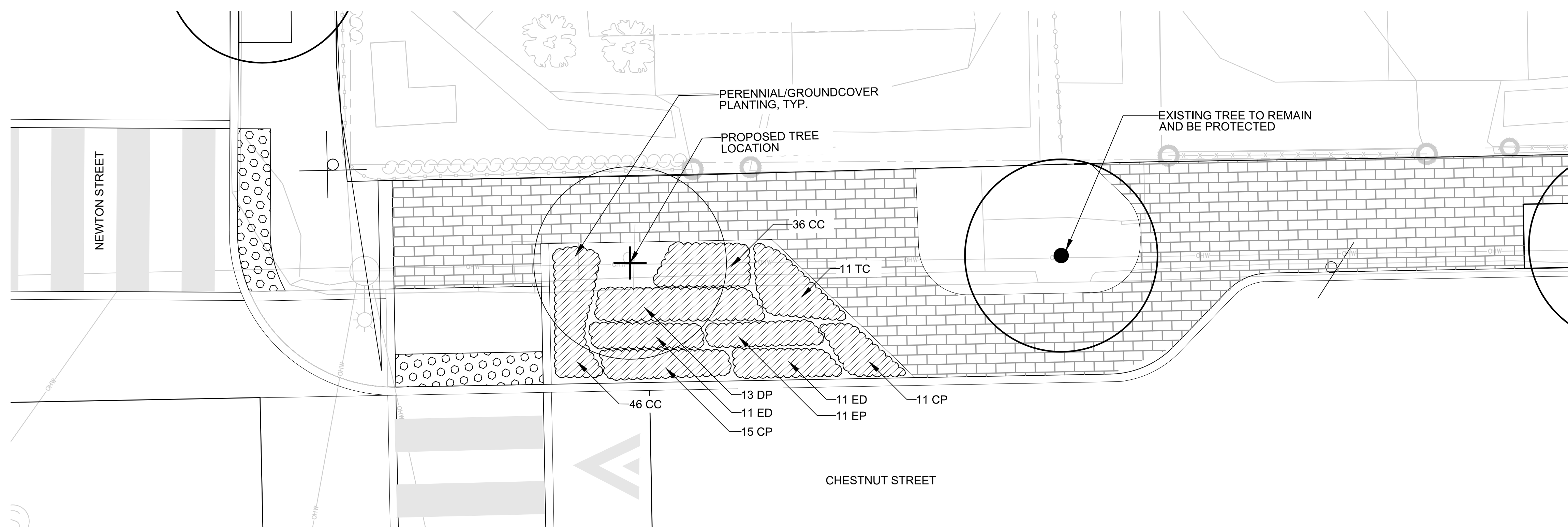
1. CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING CONSTRUCTION.
2. FINISH GRADING SHALL BE INSPECTED BY OWNER'S REPRESENTATIVE IN THE FIELD AND APPROVED PRIOR TO PLANTING.
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5. CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING PLAN SHOWN.
6. SEE SHEET L-15 FOR PLANT SCHEDULE.

CHESTNUT STREET - BIORETENTION BASIN 5 (CURB EXTENSION) - PLANTING ENLARGEMENT PLAN

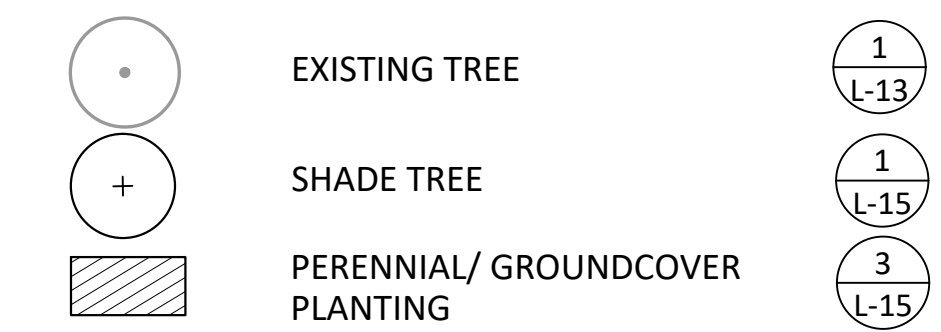
SCALE: 1/4" = 1'-0"



		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		Scale AS SHOWN				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	L-4
				Date	AUGUST 2022			Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
				Job No.	20170208.037A			Drawing	CHESTNUT STREET BIORETENTION BASIN 5 SHEET 4 OF 15		
				Designed by	HH/JB						
				Drawn by	AK/AG						
				Checked by	RK/JB	No.	Description				
				Approved by	DB		REVISIONS				



PLANTING LEGEND



NOTES:

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5. CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING PLAN SHOWN.
6. SEE SHEET L-15 FOR PLANT SCHEDULE.

CHESTNUT STREET - PLANTING ENLARGEMENT

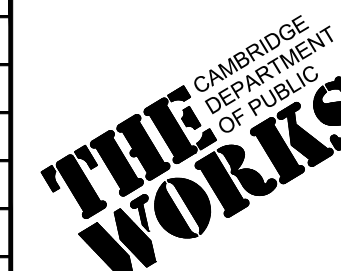
SCALE: 1/4" = 1'-0"



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tel. 978-740-0096 www.hatch.com



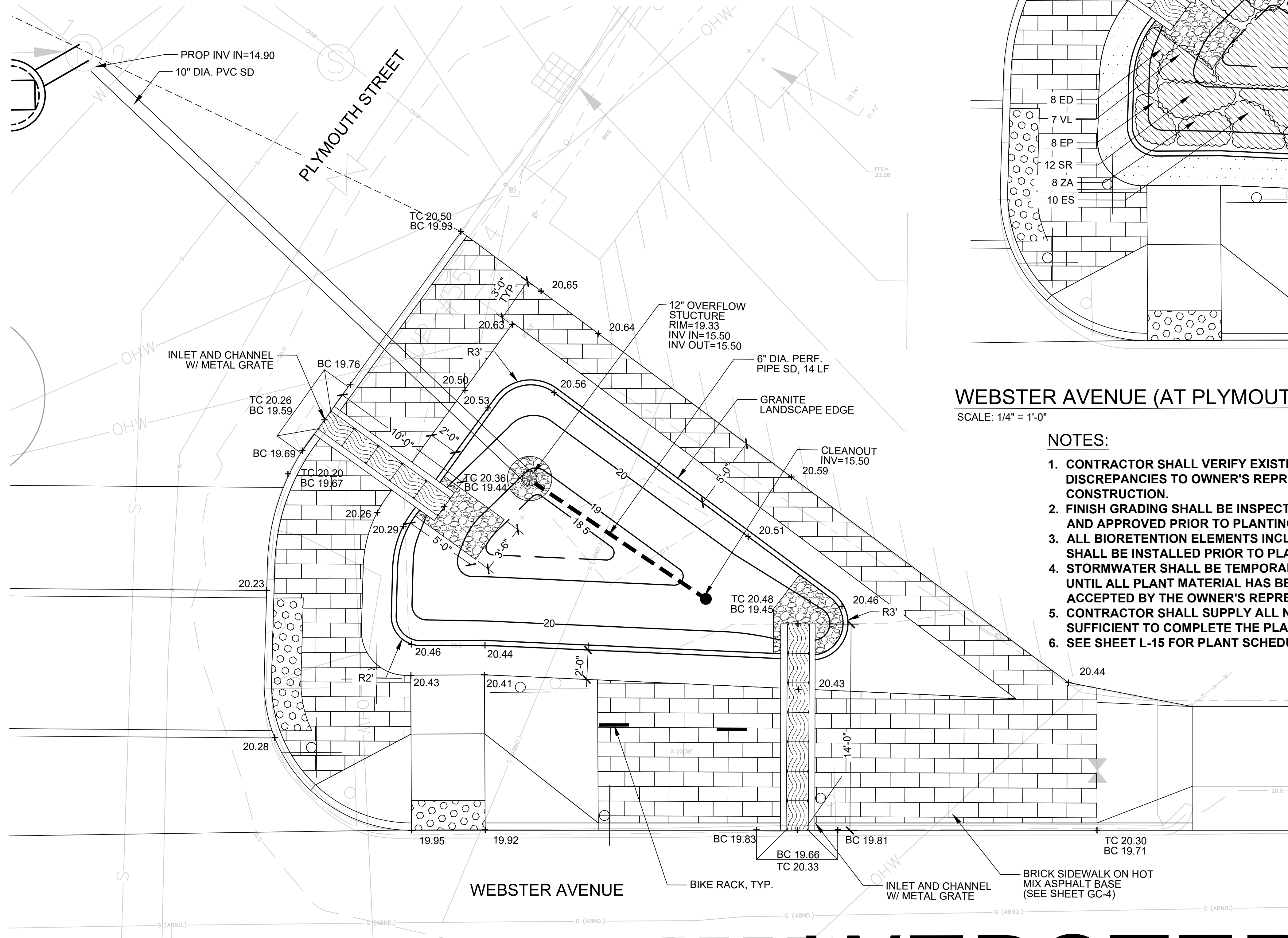
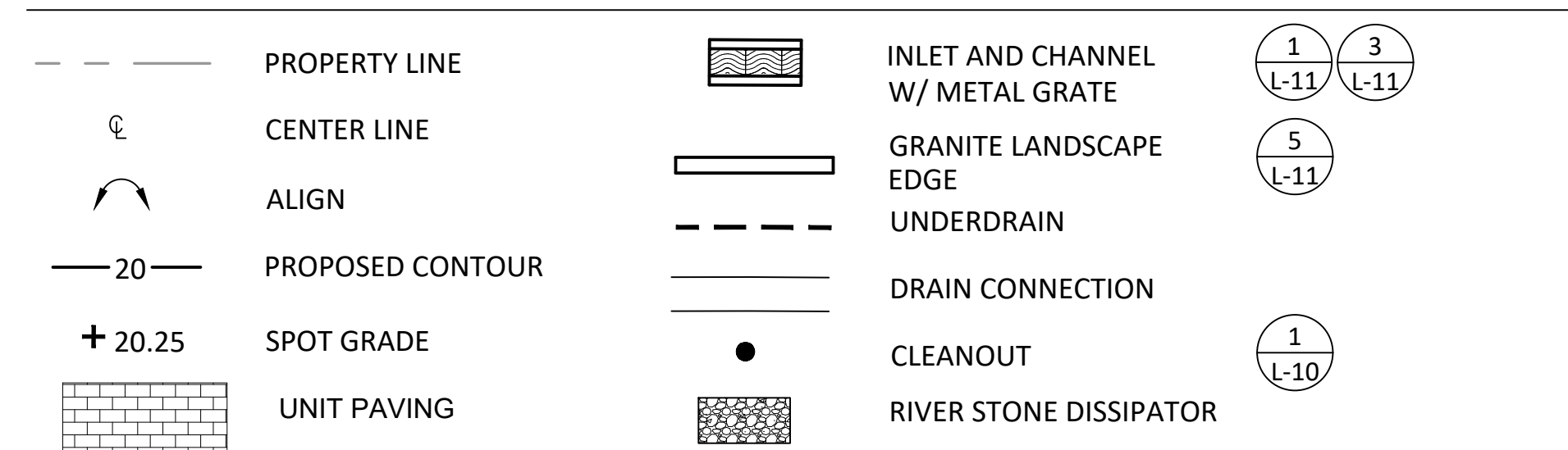
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Date	AUGUST 2022			
Job No.	20170208.037A			
Designed by	JB			
Drawn by	AK/AG			
Checked by	JB	No.	Description	Date
Approved by	DB		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CHESTNUT STREET PLANTING AREA SHEET 5 OF 15

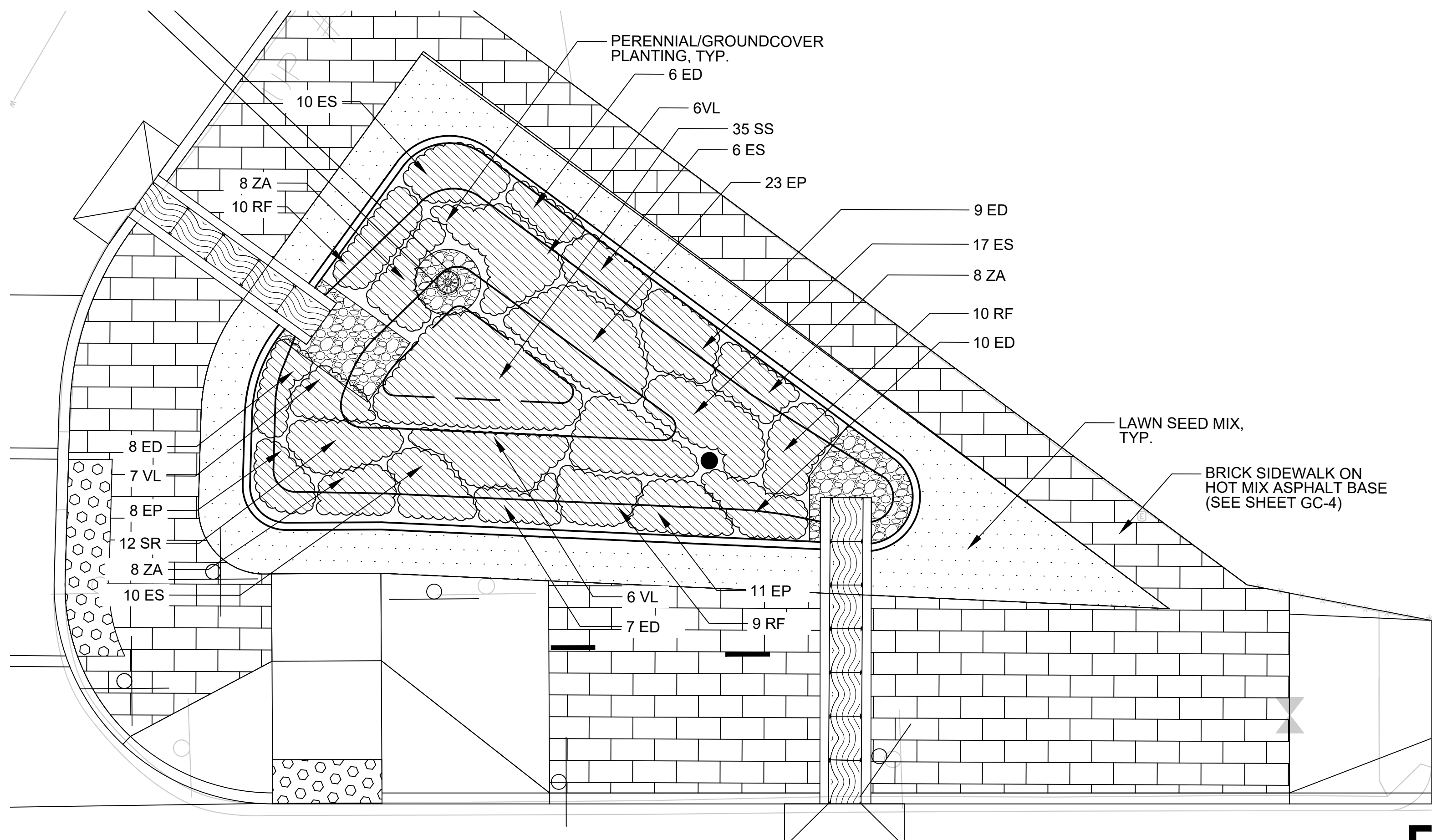
Sheet	L-5
File No.	10565

LAYOUT AND GRADING LEGEND



WEBSTER AVENUE (AT PLYMOUTH) - BIORETENTION BASIN 4 - LAYOUT AND GRADING PLAN

SCALE: 1/4" = 1'-0"



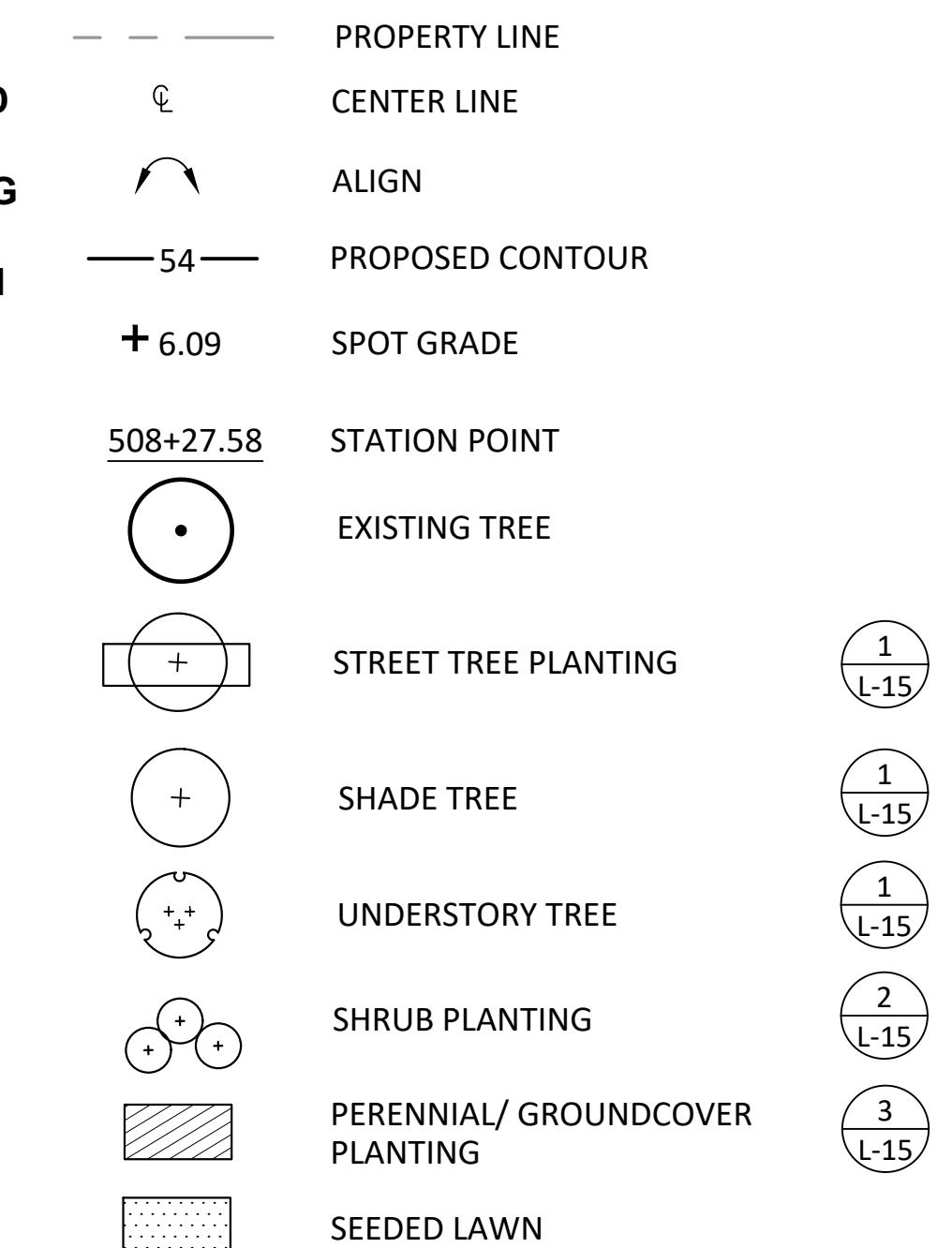
WEBSTER AVENUE (AT PLYMOUTH) - BIORETENTION BASIN 4 - PLANTING PLAN

SCALE: 1/4" = 1'-0"

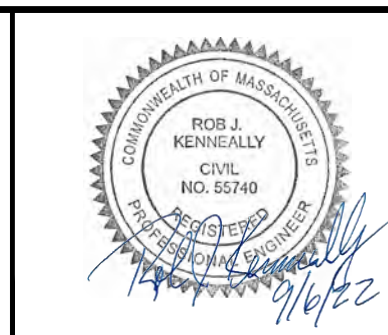
NOTES:

1. CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING CONSTRUCTION.
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5. CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING PLAN SHOWN.
6. SEE SHEET L-15 FOR PLANT SCHEDULE.

PLANTING LEGEND



0 2 4 8 FT




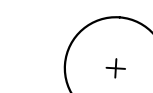
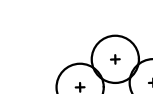
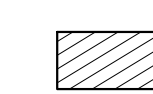
Scale AS SHOWN			
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	HH/JB		
Drawn by	AK/AG		
Checked by	RK/JB	No.	Description
Approved by	DB		Date
			REVISIONS

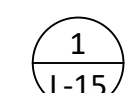
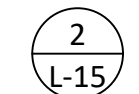



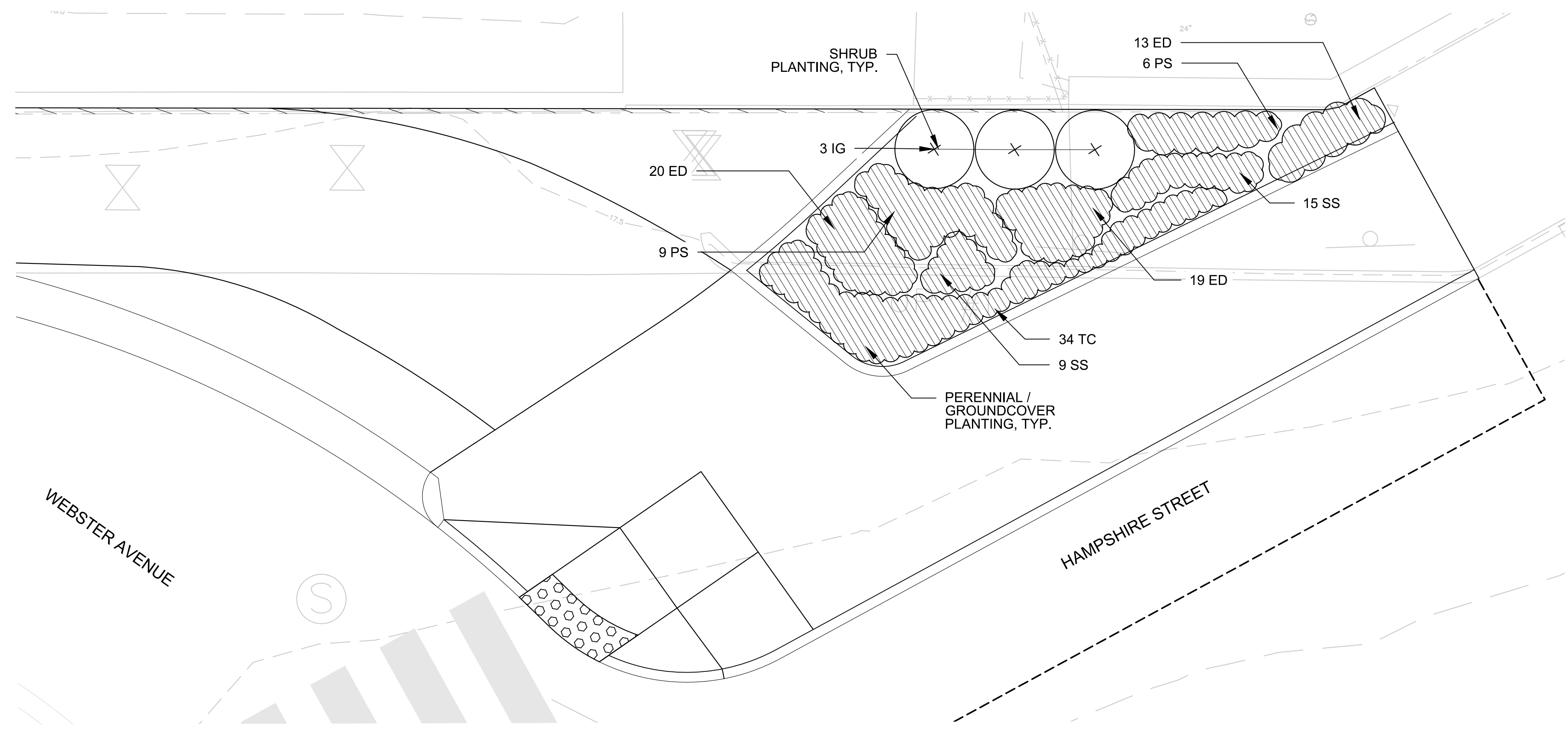
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	WEBSTER AVENUE (AT PLYMOUTH) BIORETENTION BASIN 4 SHEET 6 OF 15

Sheet	L-6
File No.	10565

LEGEND

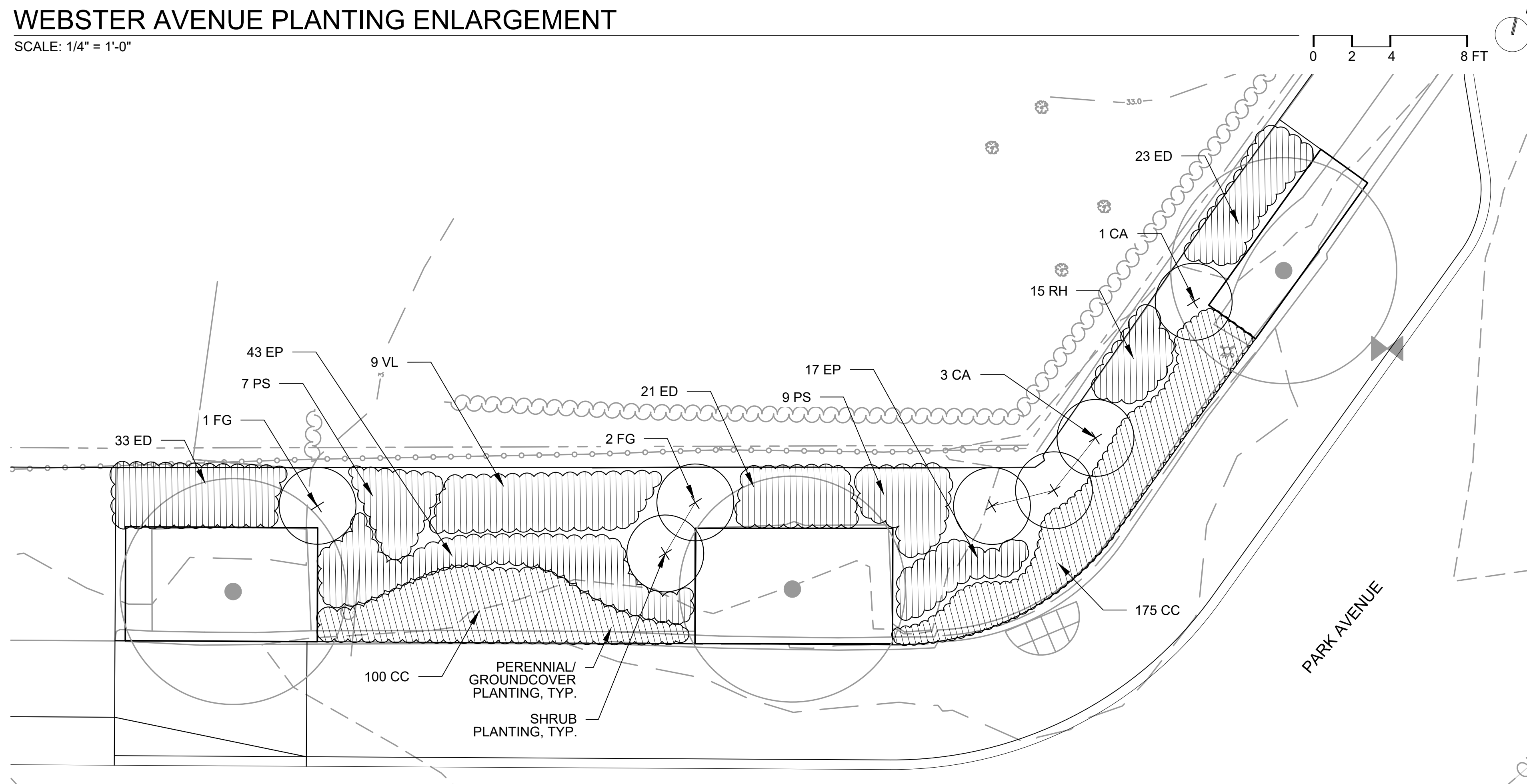
-  EXISTING TREE
-  SHADE TREE
-  SHRUB PLANTING
-  PERENNIAL / GROUNDCOVER PLANTING

-  1
L-15
-  2
L-15
-  3
L-15



WEBSTER AVENUE PLANTING ENLARGEMENT

SCALE: 1/4" = 1'-0"

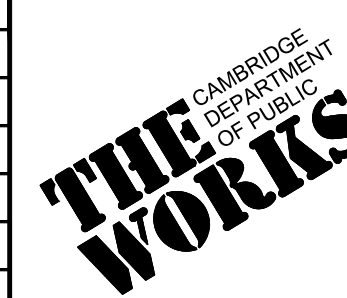


PARK AVENUE PLANTING ENLARGEMENT

SCALE: 1/4" = 1'-0"



Scale	AS SHOWN		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	JB		
Drawn by	AK/AG		
Checked by	JB	No.	Description
Approved by	DB		Date

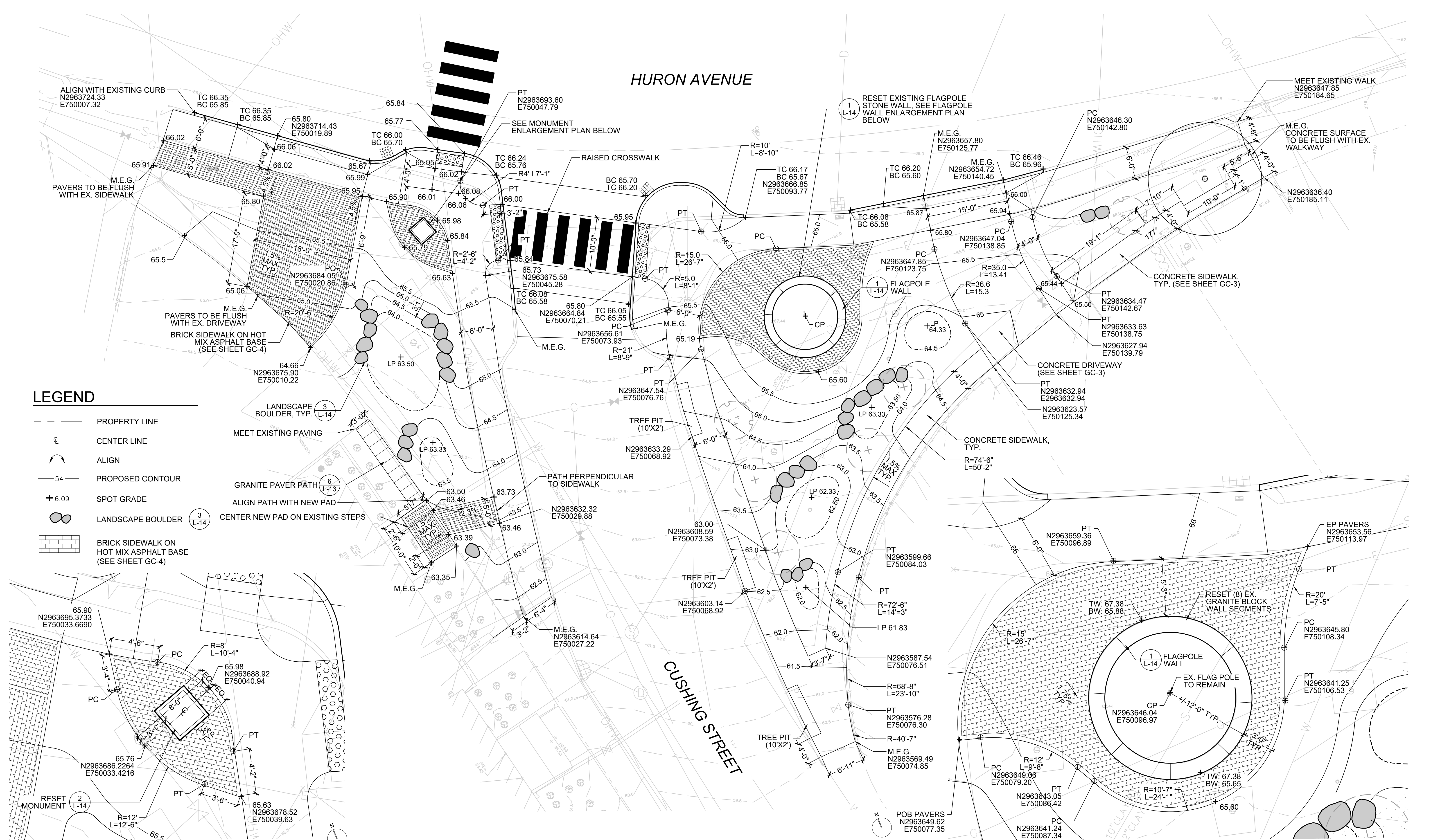


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PLANTING AREA ENLARGEMENTS SHEET 7 OF 15

Sheet	L-7
File No.	10565

HURON AVENUE

CUSHING STREET



LEGEND

- PROPERTY LINE
- ⊙ CENTER LINE
- ALIGN
- 54— PROPOSED CONTOUR
- + 6.09 SPOT GRADE
- ⊙ LANDSCAPE BOULDER (3 L-14)
- BRICK SIDEWALK ON HOT MIX ASPHALT BASE (SEE SHEET GC-4)

MONUMENT - ENLARGEMENT PLAN

SCALE: 1/4" = 1'-0" 0 2 4 8 FT

CUSHING PLAZA - LAYOUT AND GRADING ENLARGEMENT PLAN

SCALE: 1/8" = 1'-0" 0 4 8 16 FT

FLAG POLE WALL - ENLARGEMENT PLAN

SCALE: 1/4" = 1'-0" 0 2 4 8 FT

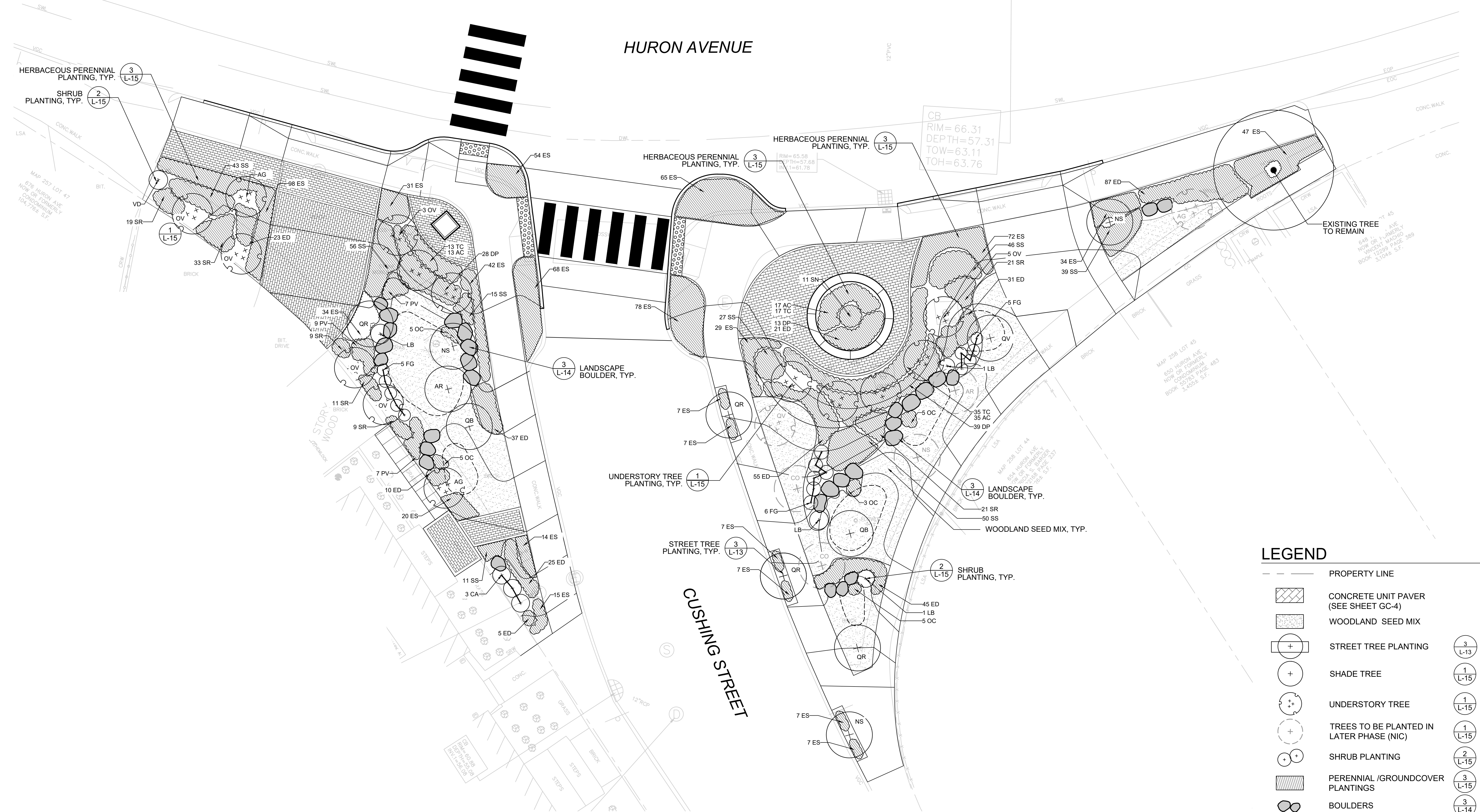


Scale	AS SHOWN		
Date	AUGUST 2022		
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Drawn by	AK / AG		
Checked by	RK/JS	No.	Description
Approved by	DB		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CUSHING PLAZA SITE PLAN SHEET 8 OF 15

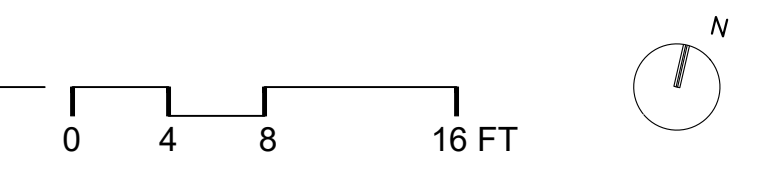
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File No.	10565



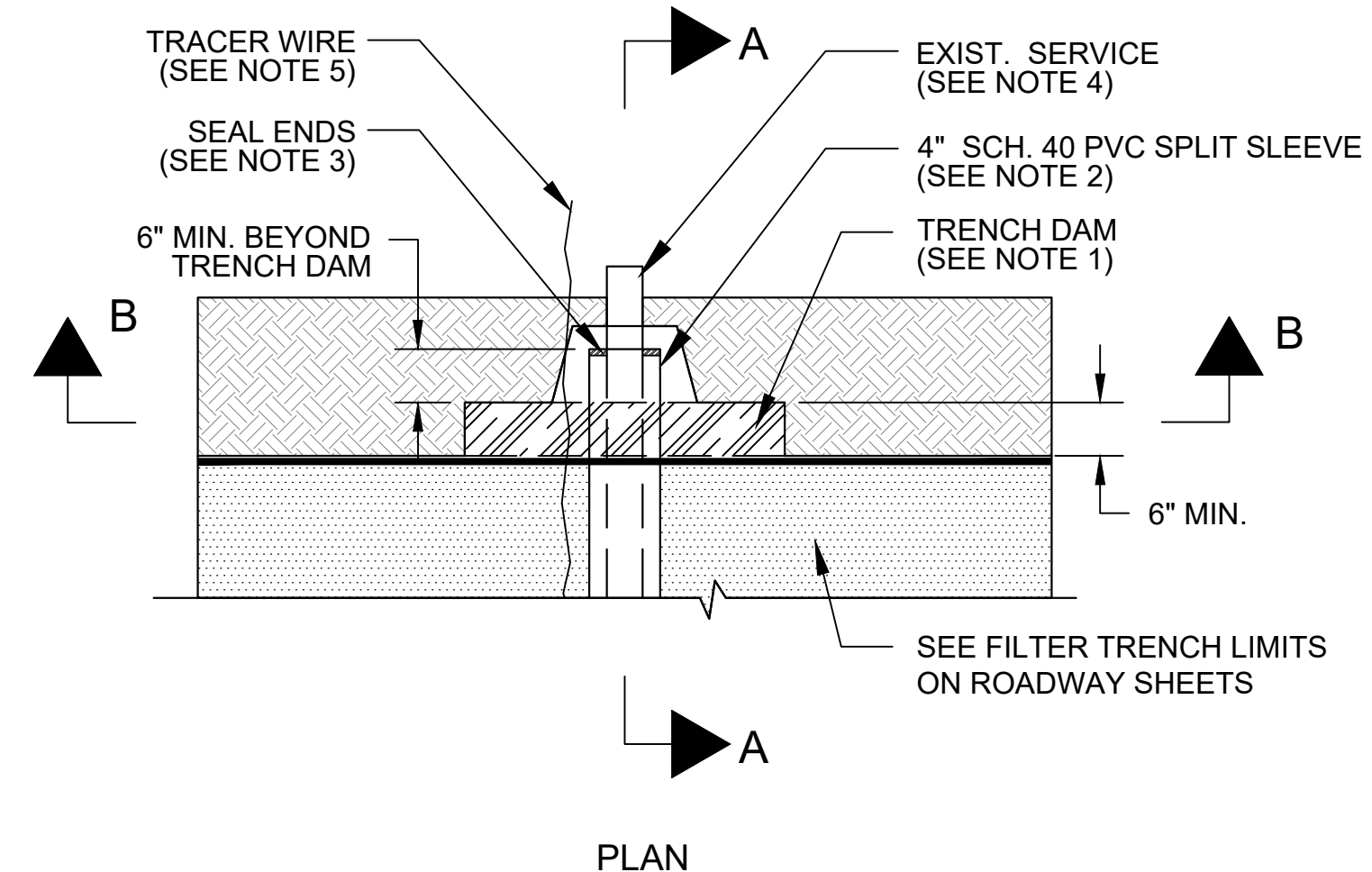
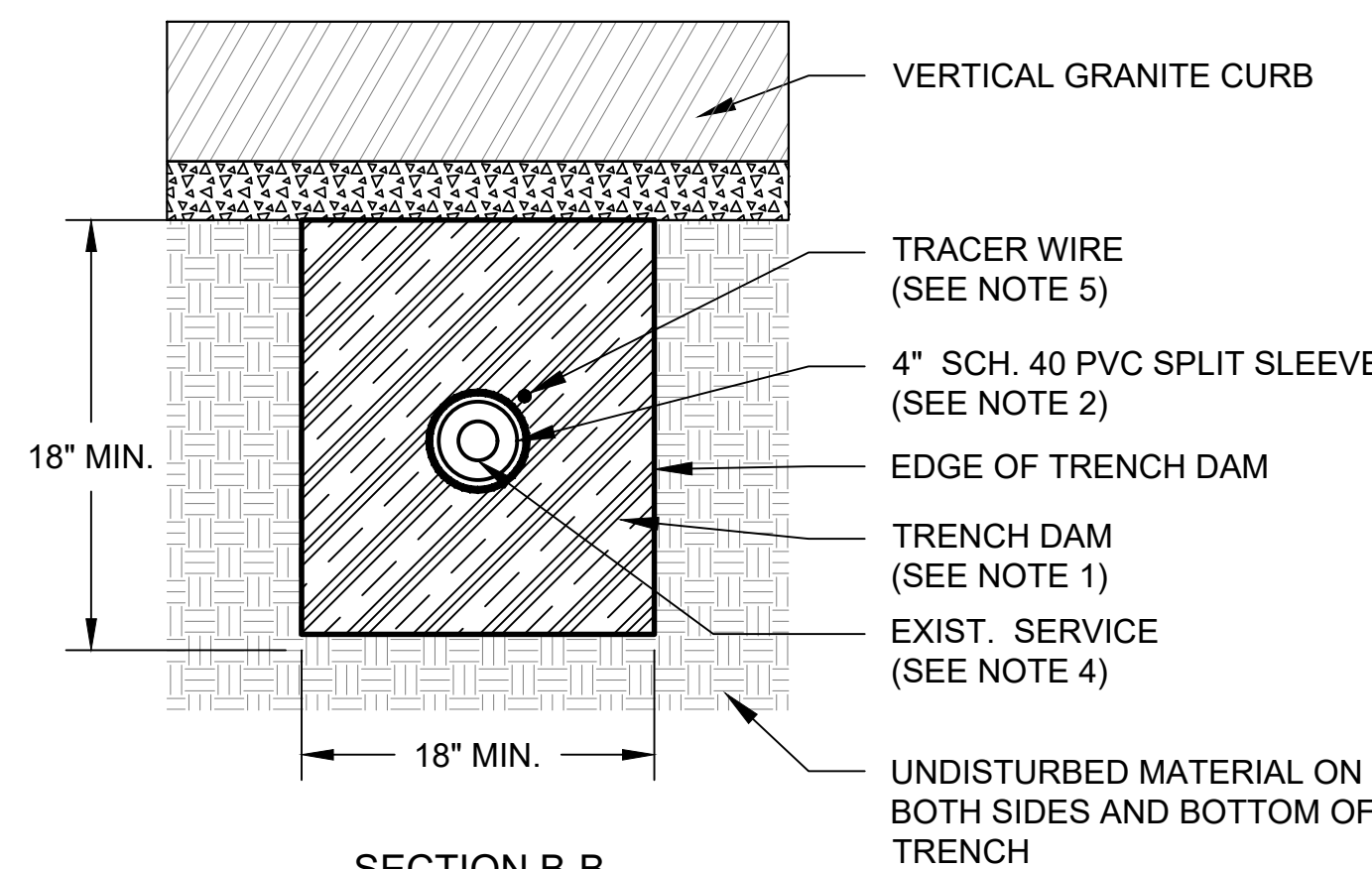
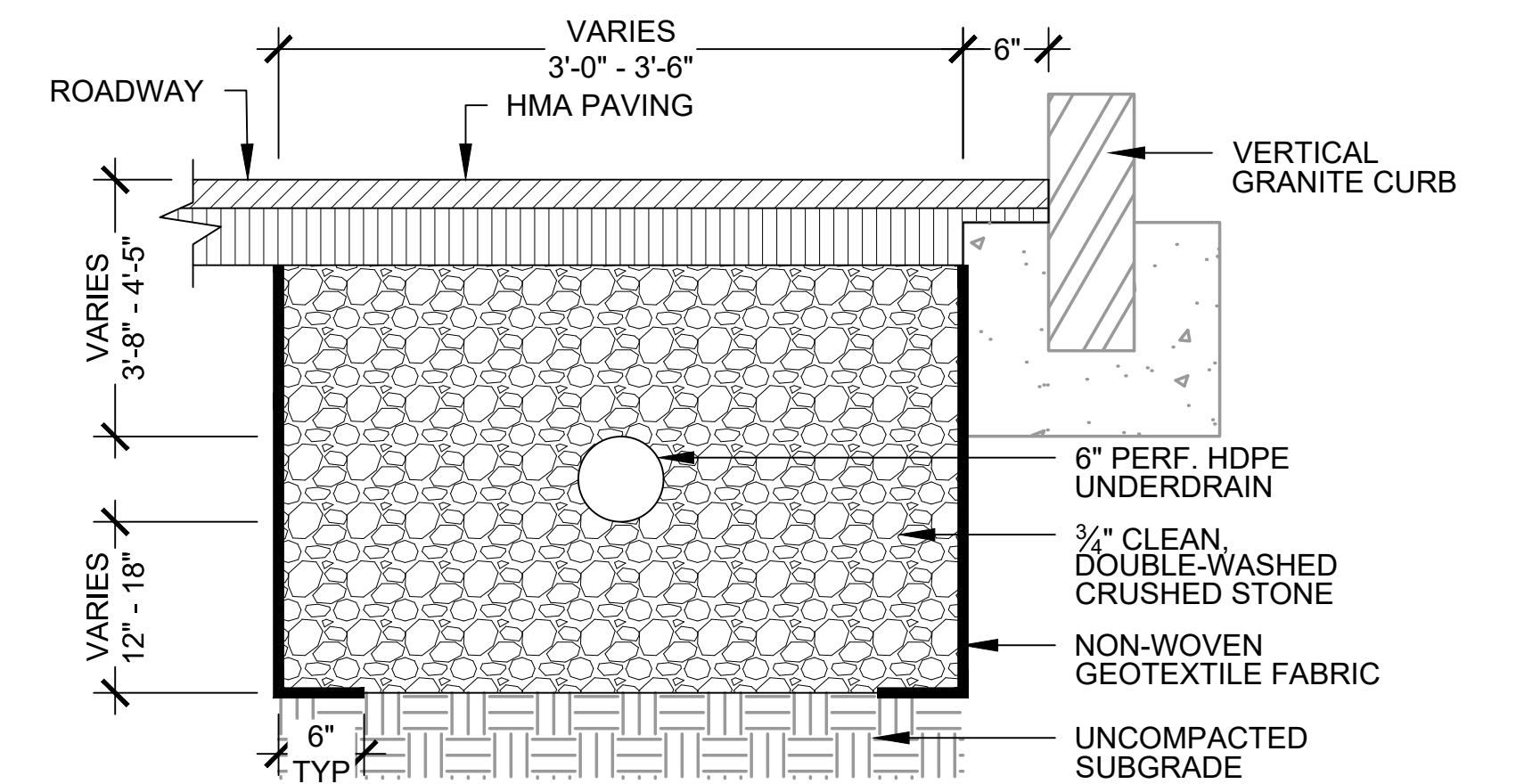
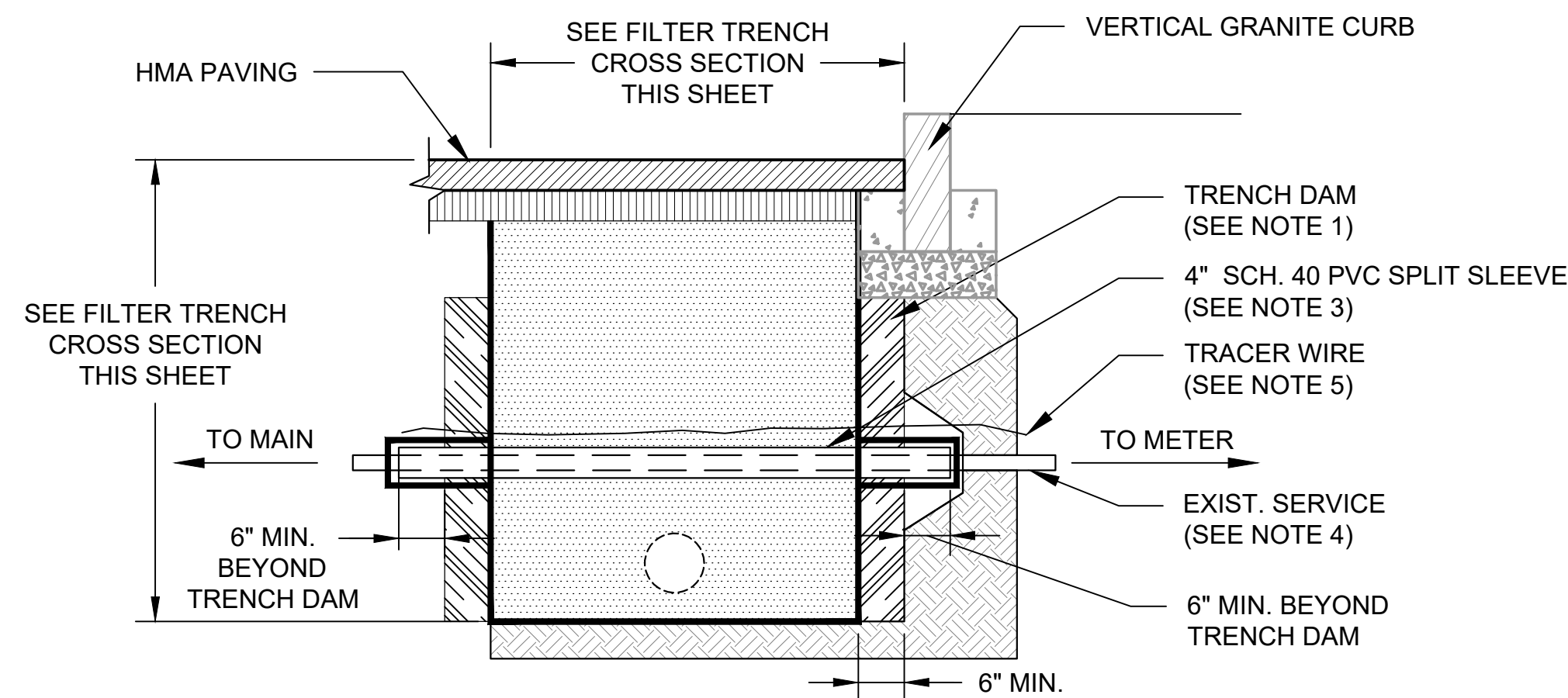
LEGEND

	PROPERTY LINE	
	CONCRETE UNIT PAVER (SEE SHEET GC-4)	
	WOODLAND SEED MIX	
	STREET TREE PLANTING	(3) L-13
	SHADE TREE	(1) L-15
	UNDERSTORY TREE	(1) L-15
	TREES TO BE PLANTED IN LATER PHASE (NIC)	(1) L-15
	SHRUB PLANTING	(2) L-15
	PERENNIAL /GROUNDCOVER PLANTINGS	(3) L-15
	BOULDERS	(3) L-14

CUSHING PLAZA - PLANTING PLAN
SCALE: 1/8" = 1'-0"

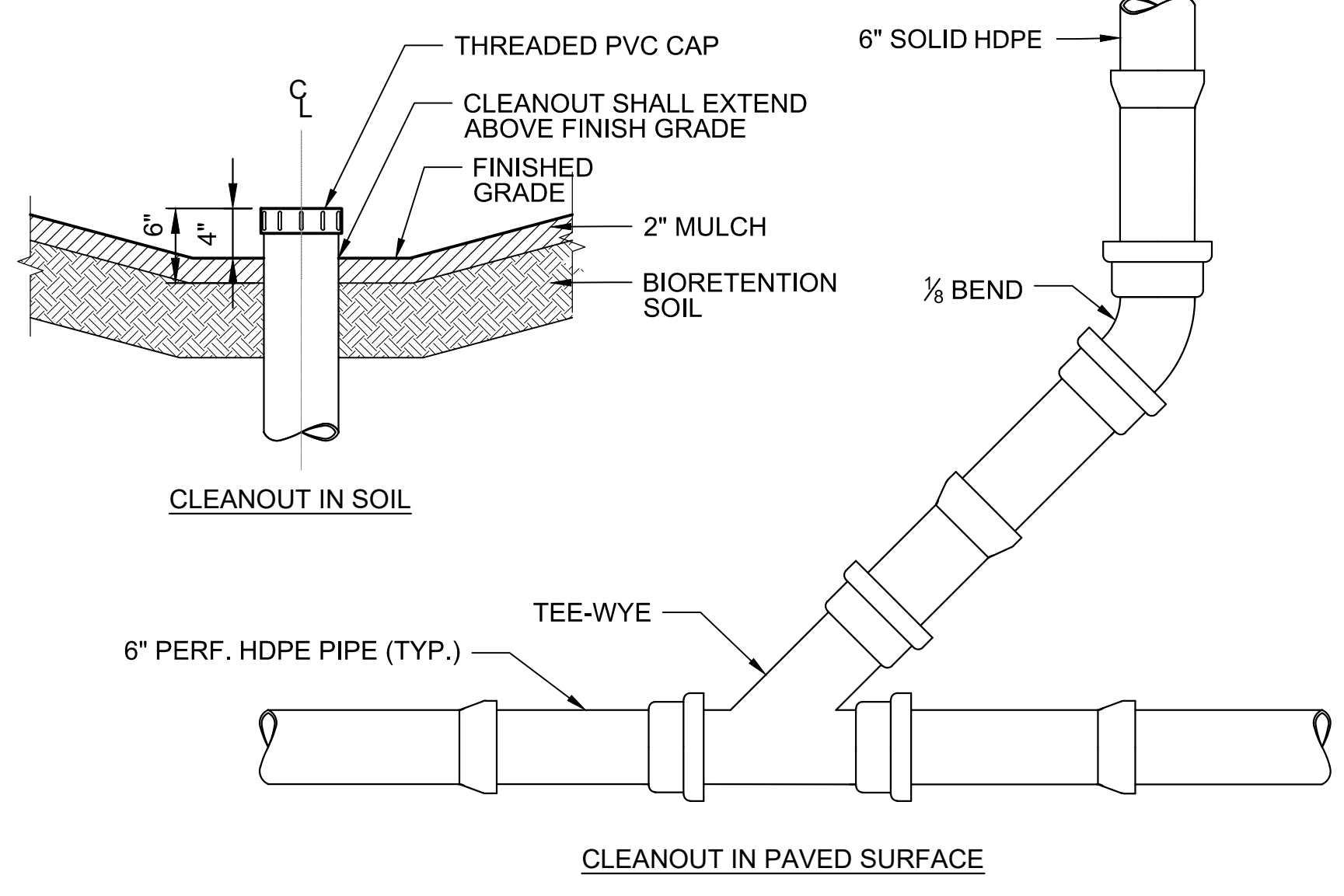
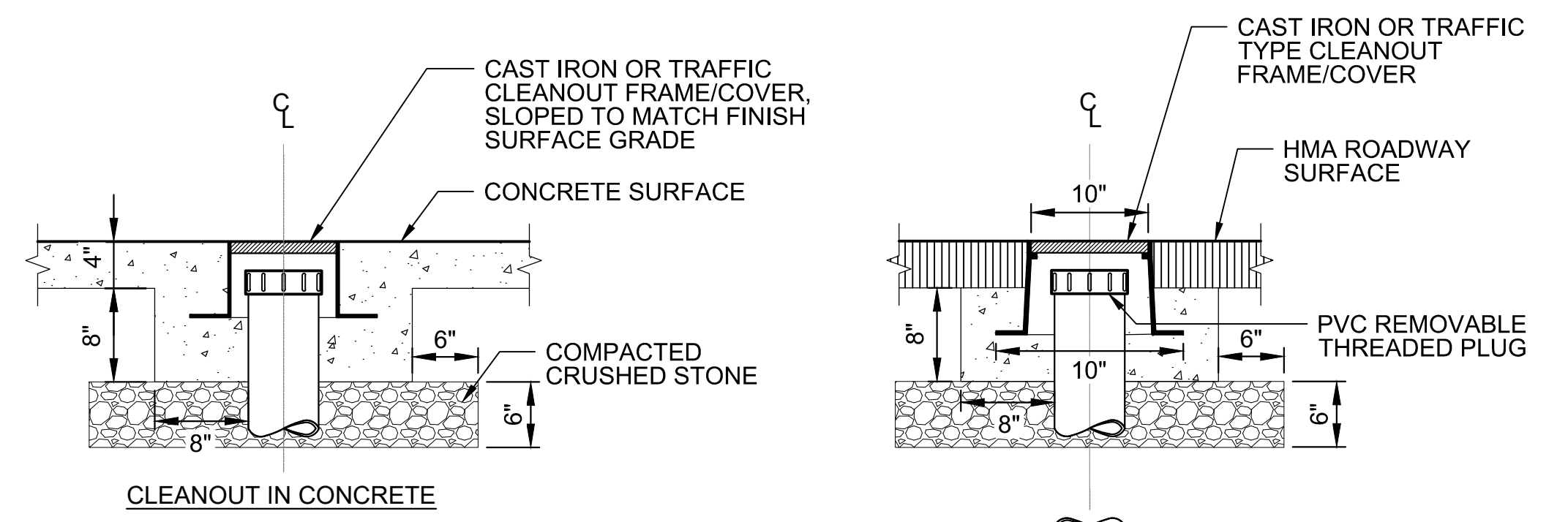


				Scale: _____ Date: AUGUST 2022 Job No.: 20170208.037A Designed by: JB Drawn by: AK / AG Checked by: JB Approved by: DB		Client: CITY OF CAMBRIDGE, MASSACHUSETTS Project: CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT Drawing: CUSHING PLAZA SITE PLAN SHEET 9 OF 15	Sheet: L-9 File No.: 10565
				Revisions: _____ Description: _____ Date: _____			



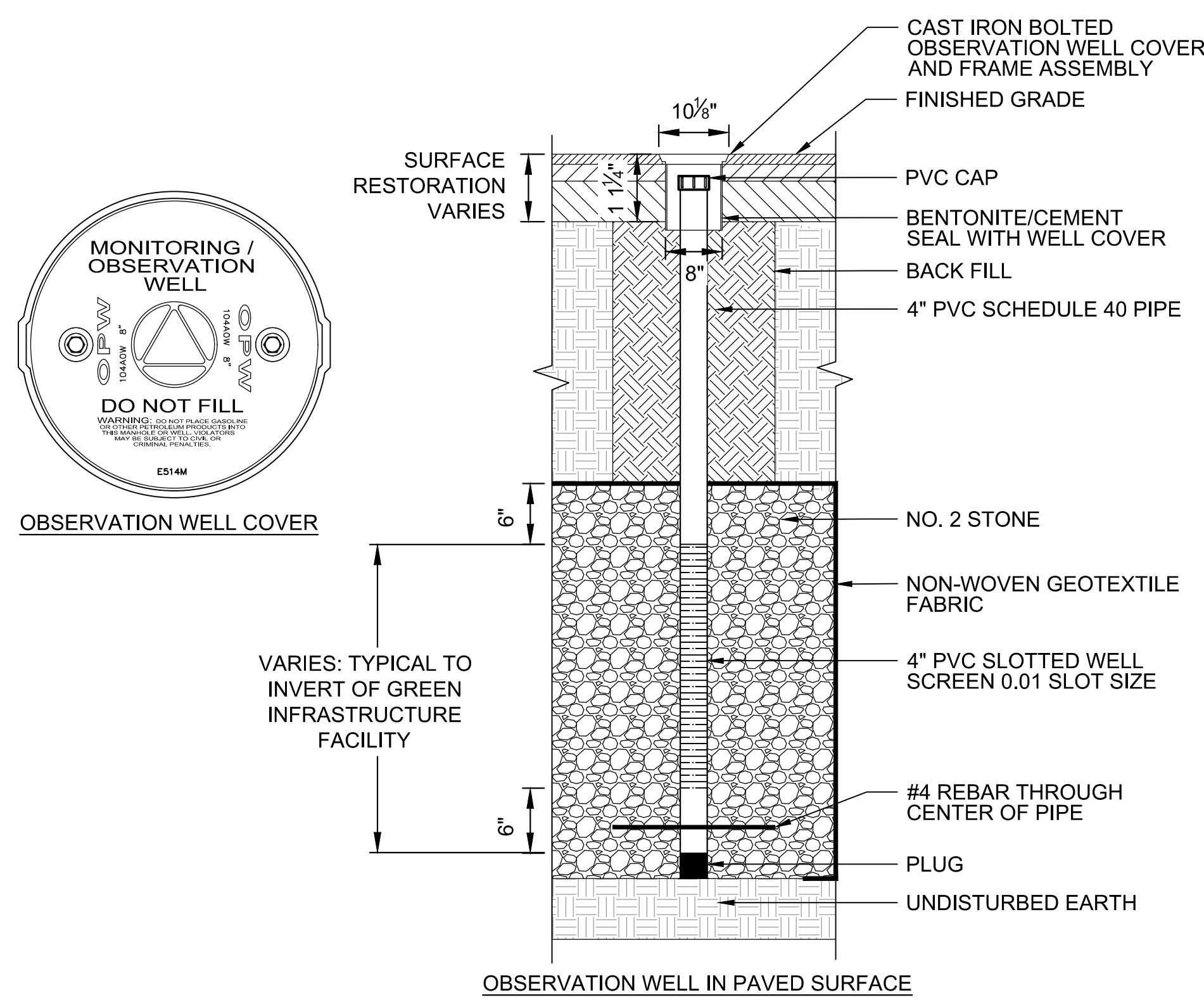
- NOTES:
- TRENCH DAM TO BE A BENTONITE CLAY MATERIAL.
 - SPLIT SLEEVE TO EXTEND A MINIMUM OF 6" BEYOND THE LIMITS OF THE FILTER TRENCH AND TRENCH DAM. SPLIT SLEEVE (SPLIT DUCT) TO BE TONGUE & GROOVE WITH STAINLESS STEEL CLAMP.
 - ENDS OF SPLIT SLEEVE TO BE SEALED WITH CLOSED CELL WATERPROOF SPRAY FOAM.
 - CONTRACTOR TO COORDINATE WITH EVERSOURCE GAS IF THE GAS SERVICE MATERIAL IS STEEL. EVERSOURCE GAS TO WRAP SERVICE. SPLIT SLEEVE TO BE OMITTED WHEN STEEL GAS SERVICE IS WRAPPED BY EVERSOURCE GAS.
 - CONTRACTOR TO PROTECT EXISTING TRACER WIRE (COPPER WITH YELLOW SHEATH). TRACER WIRE SHALL REMAIN OUTSIDE GAS SLEEVE.
 - CONTRACTOR TO VERIFY DEPTH OF EXISTING SERVICES, TO DETERMINE UNDERDRAIN AND DISTRIBUTION PIPE CLEARANCES TO BUILDING SERVICES AND TO MAINTAIN POSITIVE SLOPE.
 - TRENCH DAM SHALL ALSO BE INSTALLED AT THE DISTRIBUTION AND UNDERDRAIN PIPES (6" Ø HDPE) WITHOUT SPLIT SLEEVES.

2 INFILTRATION TRENCH UNDER HMA
SCALE: NTS



- NOTES:
- THE CONCRETE COLLAR SHALL HAVE GRAVEL BED OF 6" MIN.
 - CLEANOUT COVER AND FRAME SHALL BE EJ 00156646B01 CAST IRON OR APPROVED EQUAL.

1 CLEANOUT
SCALE: NTS



- NOTES:
- WELL COVER SHALL BE SECURED IN CONCRETE SURROUND (1' - 4" TOTAL DIAMETER) IF WELL IS NOT OTHERWISE SECURED BY SURFACE RESTORATION.
 - THE UNSLOTTED DEPTH IS LOCATED ENTIRELY IN THE SUMP.
 - THE #4 REBAR SHOULD BE 16" IN LENGTH.
 - CRUSHED STONE SHALL BE CLEAN AND DOUBLE-WASHED.
 - OBSERVATION WELL COVER AND FRAME ASSEMBLY SHALL BE OPW 104AOW-0800 CAST IRON COVER AND RING WITH STEEL SKIRT AND NEOPRENE GASKET OR APPROVED EQUAL.

4 OBSERVATION WELL
SCALE: NTS

3 TRENCH DAM
SCALE: NTS

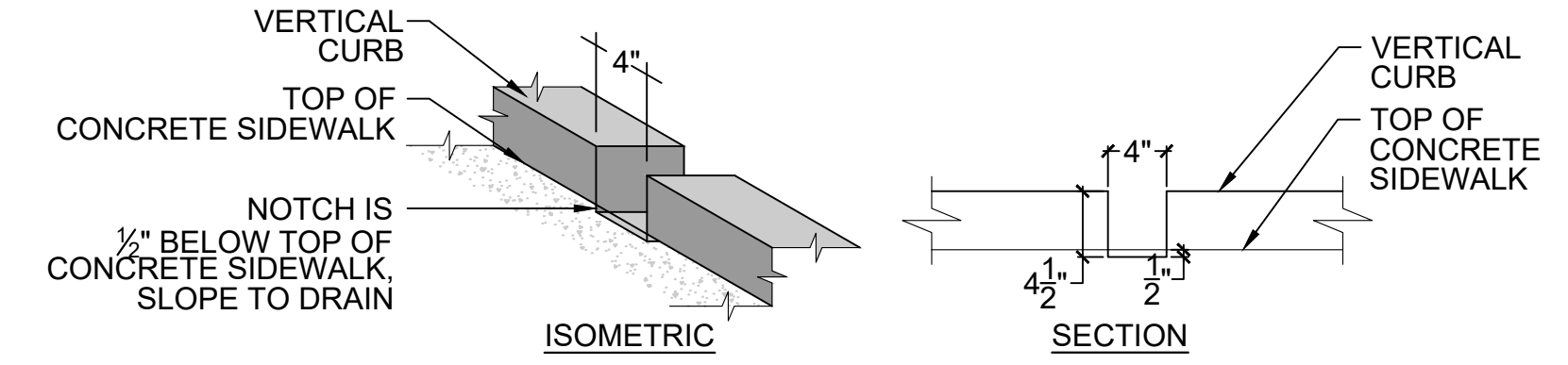
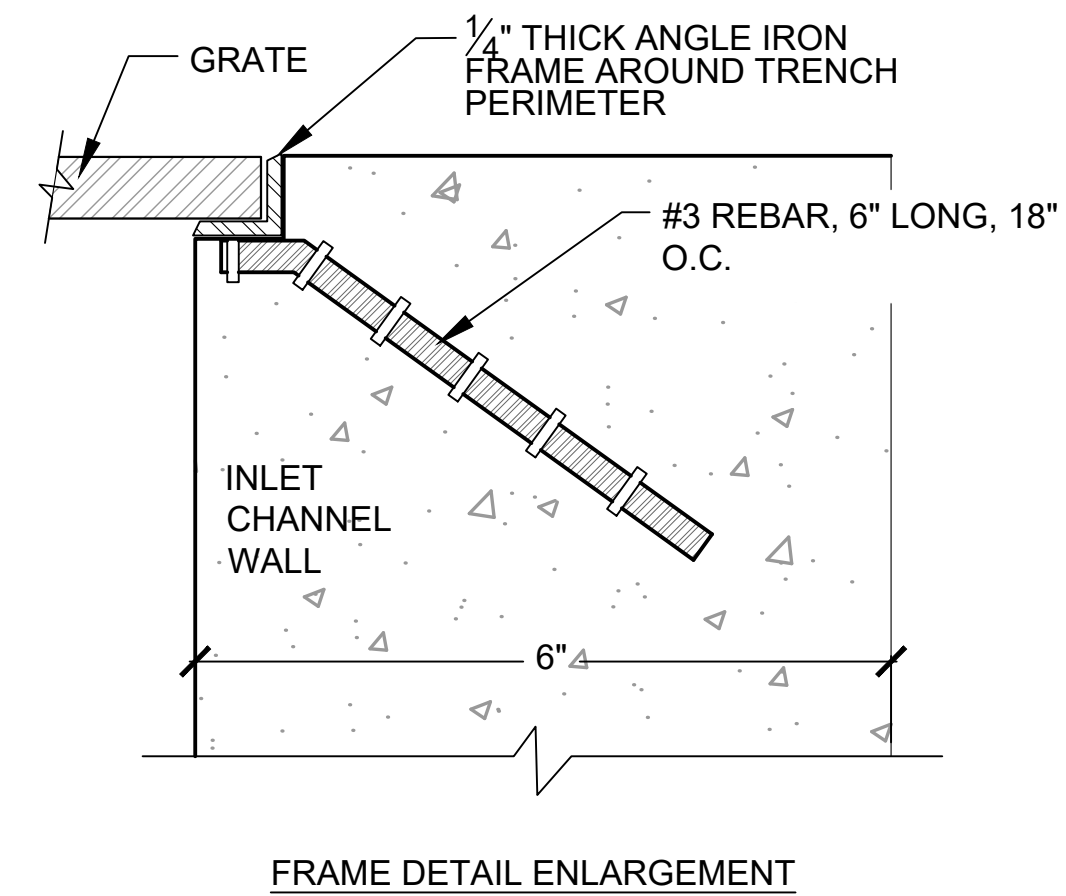
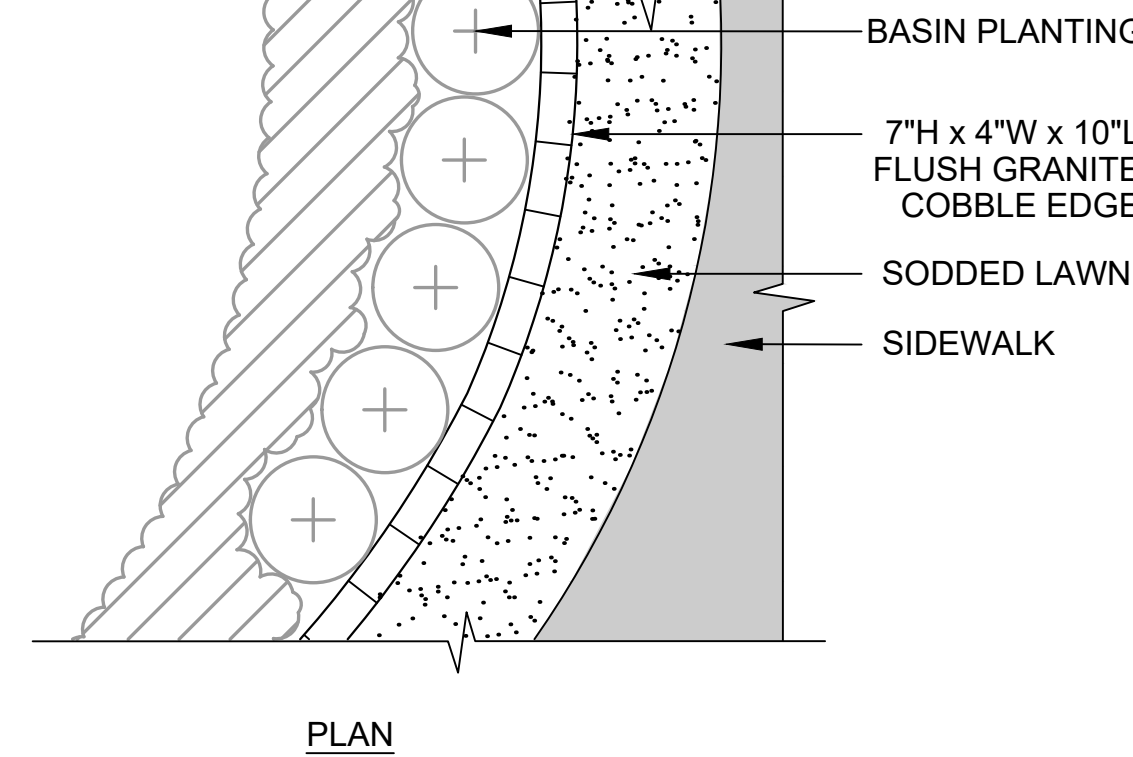
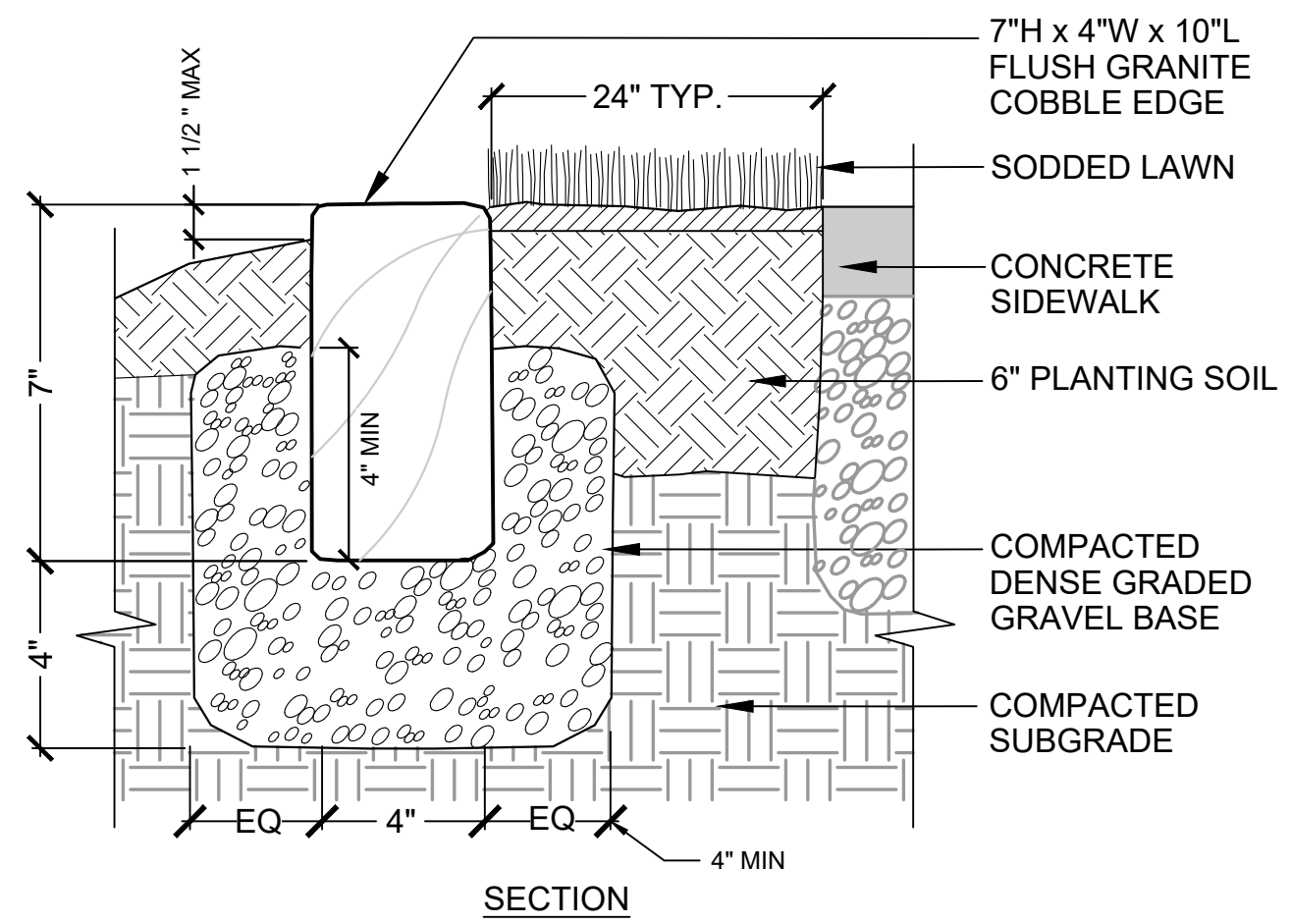


Scale	AS SHOWN		
Date	AUGUST 2022		
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Drawn by	AK/AG		
Checked by	RK	No.	Description
Approved by	DB		Date



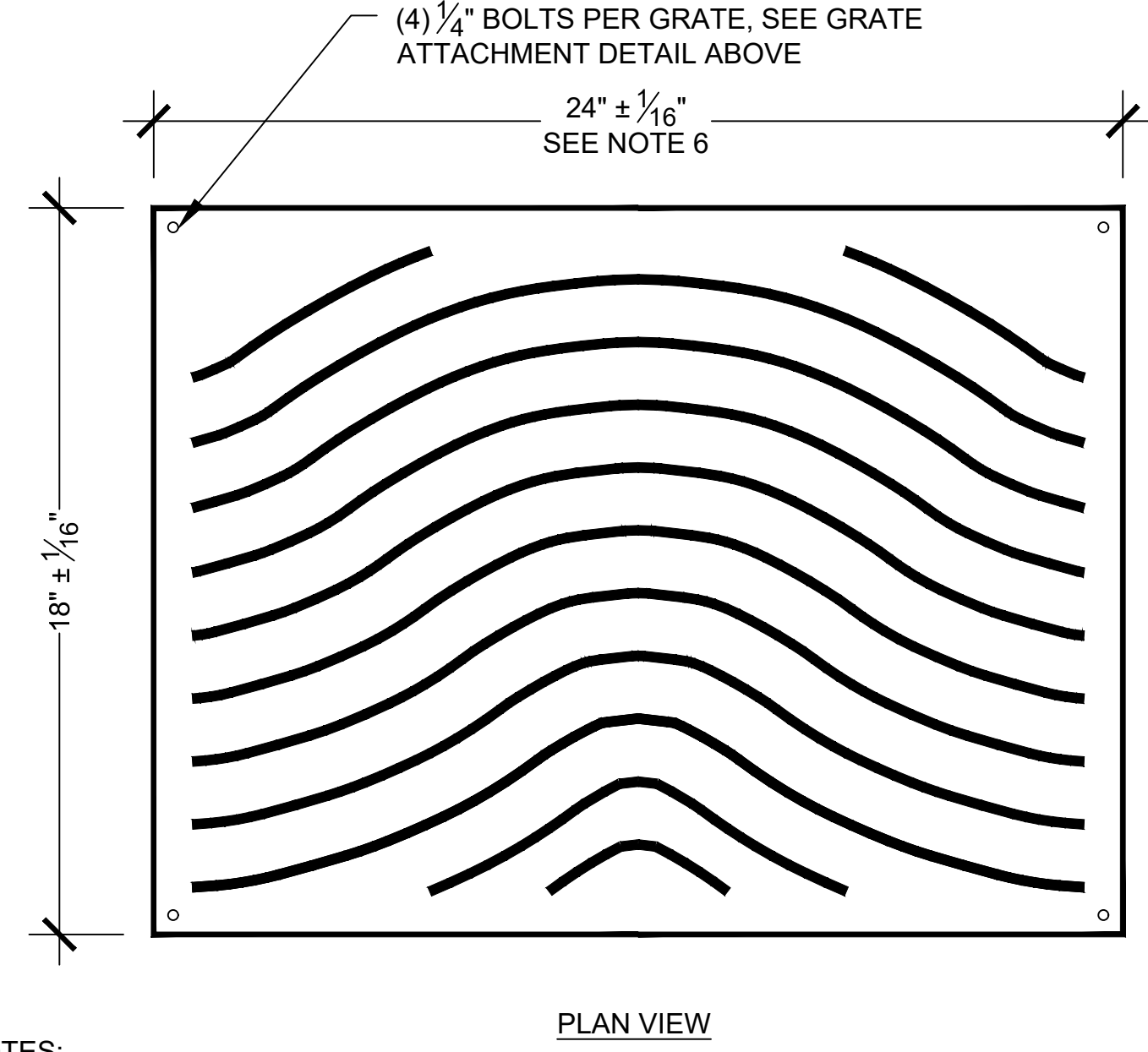
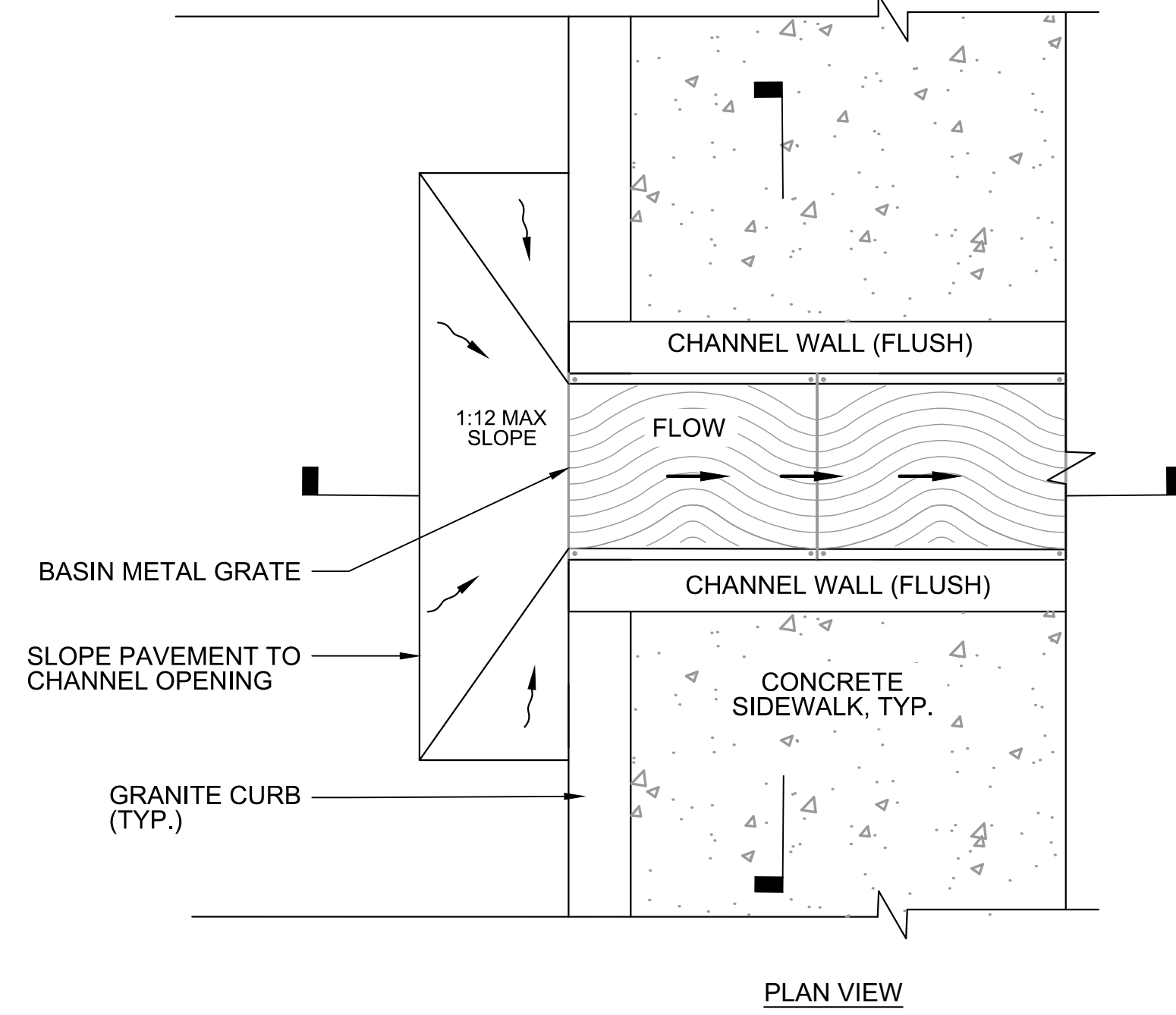
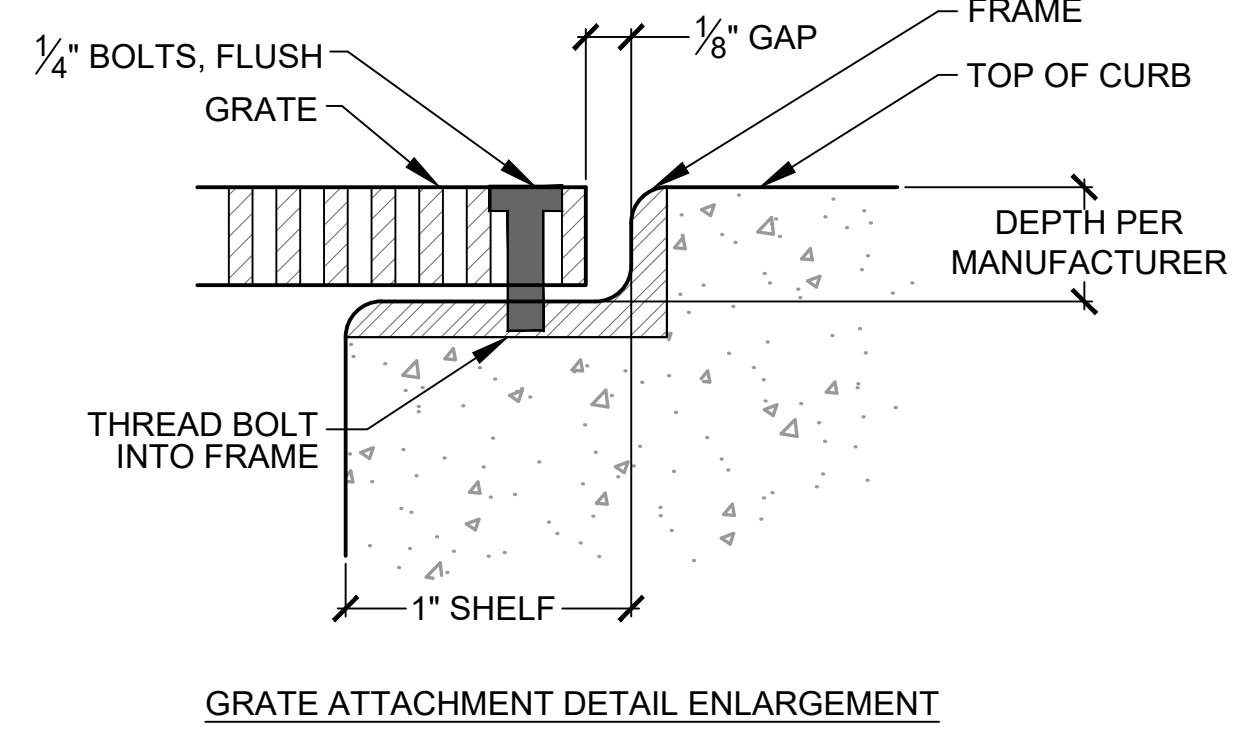
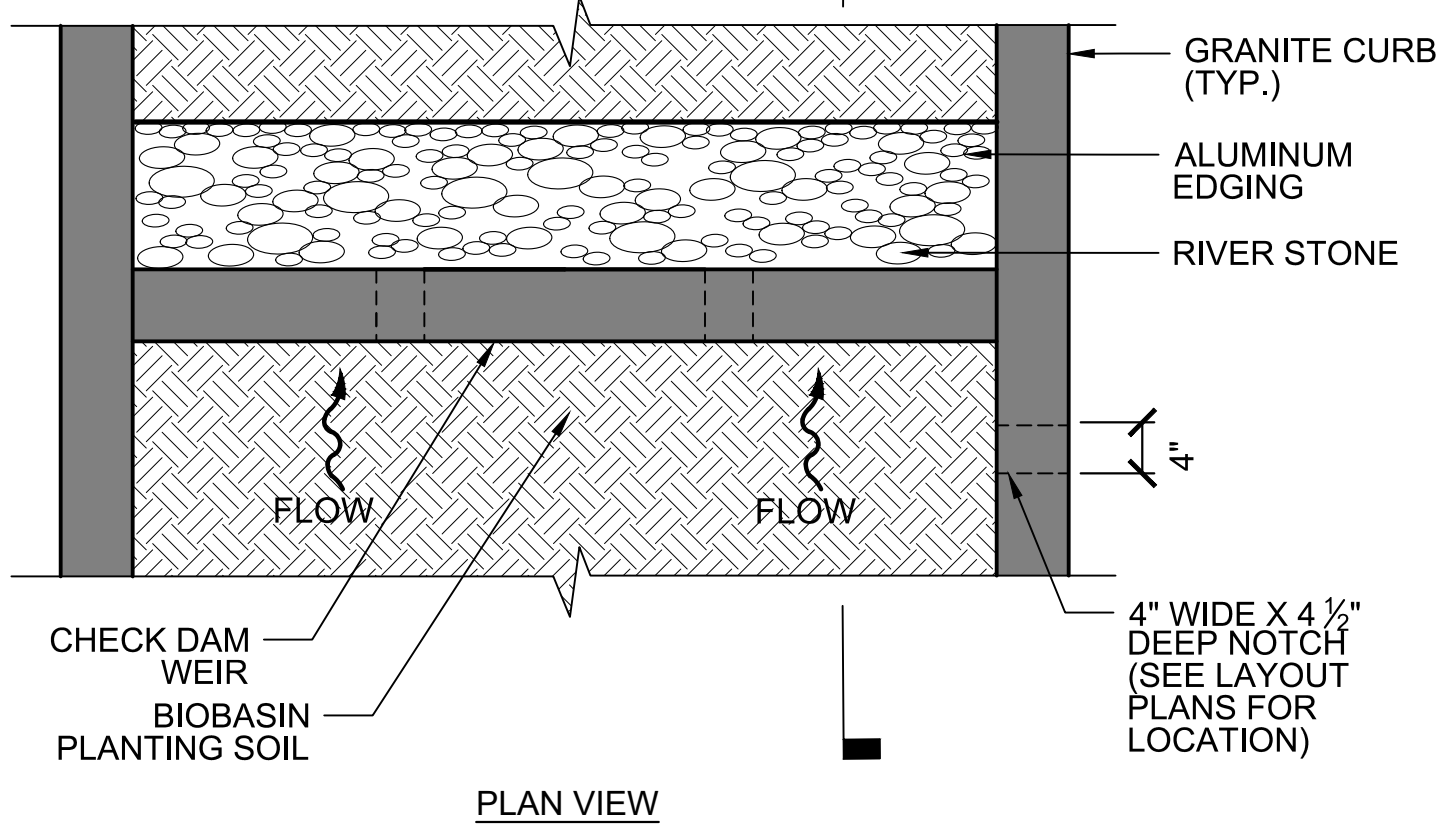
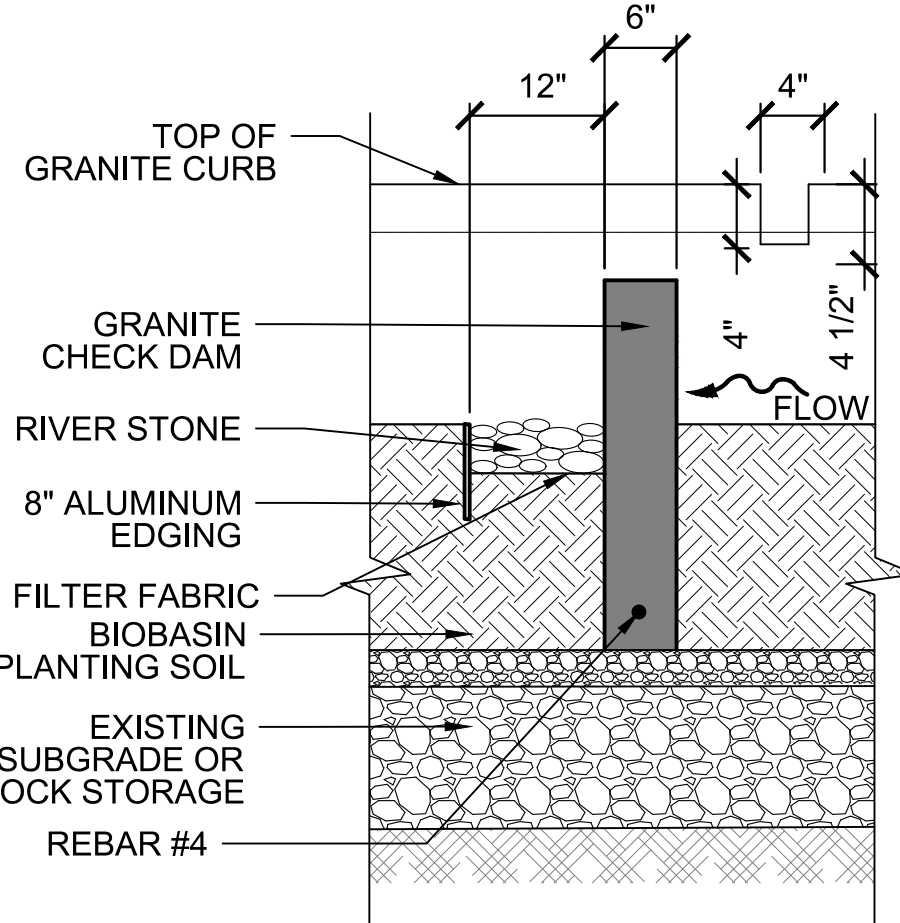
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	GREEN INFRASTRUCTURE DETAILS SHEET 10 OF 15

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2 4" INLET NOTCH FOR BIORETENTION BASIN GRANITE CURB
SCALE: NTS

5 GRANITE LANDSCAPE EDGE
SCALE: NTS

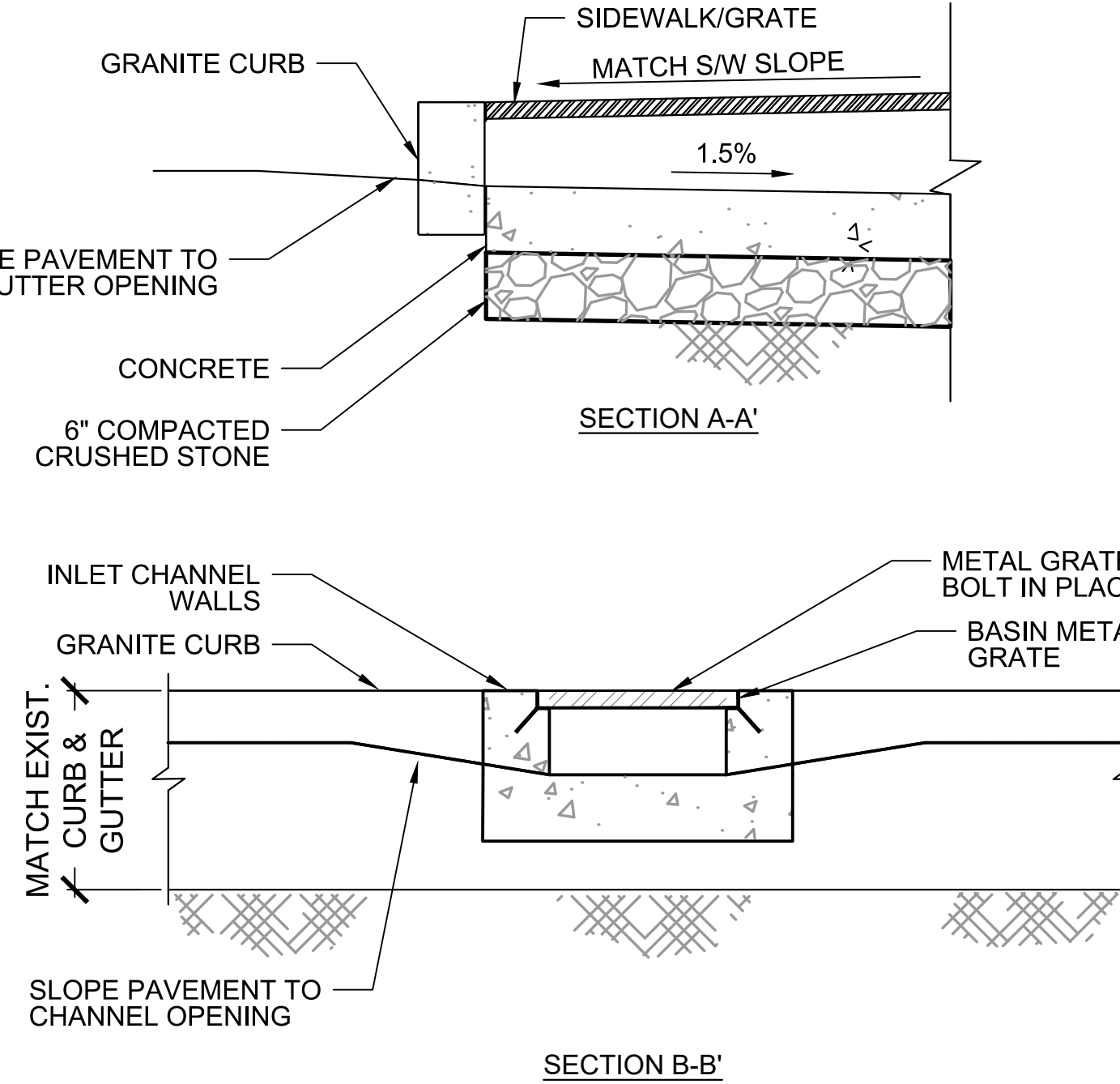


- NOTES:
1. CAST IRON FINISH.
 2. NO OPENING GREATER THAN 3/8".
 3. PROTECT THREADED HOLES IN FRAME FROM CLOGGING DURING FRAME INSTALLATION.
 4. GRATE TO BE RATED FOR H-20 LOADING, WITH A NON-SLIP SURFACE HAVING A STATIC COEFFICIENT OF FRICTION BETWEEN 0.60 AND 1.0 PER ASTM C1020. GRATES ON INCLINES GREATER THAN 4% SHALL HAVE A COEFFICIENT OF .80 TO 1.0.
 5. WAVY GRATE AS SHOWN OR APPROVED ADA-COMPLIANT EQUIVALENT.
 6. CONTRACTOR TO VERIFY SIDEWALK WIDTHS TO DETERMINE CHANNEL FRAME AND GRATE TOTAL LENGTHS PRIOR TO PROCUREMENT OF MATERIALS.

3 METAL GRATE FOR BIORETENTION BASIN INLET AND CHANNEL
SCALE: NTS

4 GRANITE CHECK DAM W/ RIVER STONE DISSIPATOR
SCALE: NTS

1 BIORETENTION BASIN INLET AND CHANNEL
SCALE: NTS

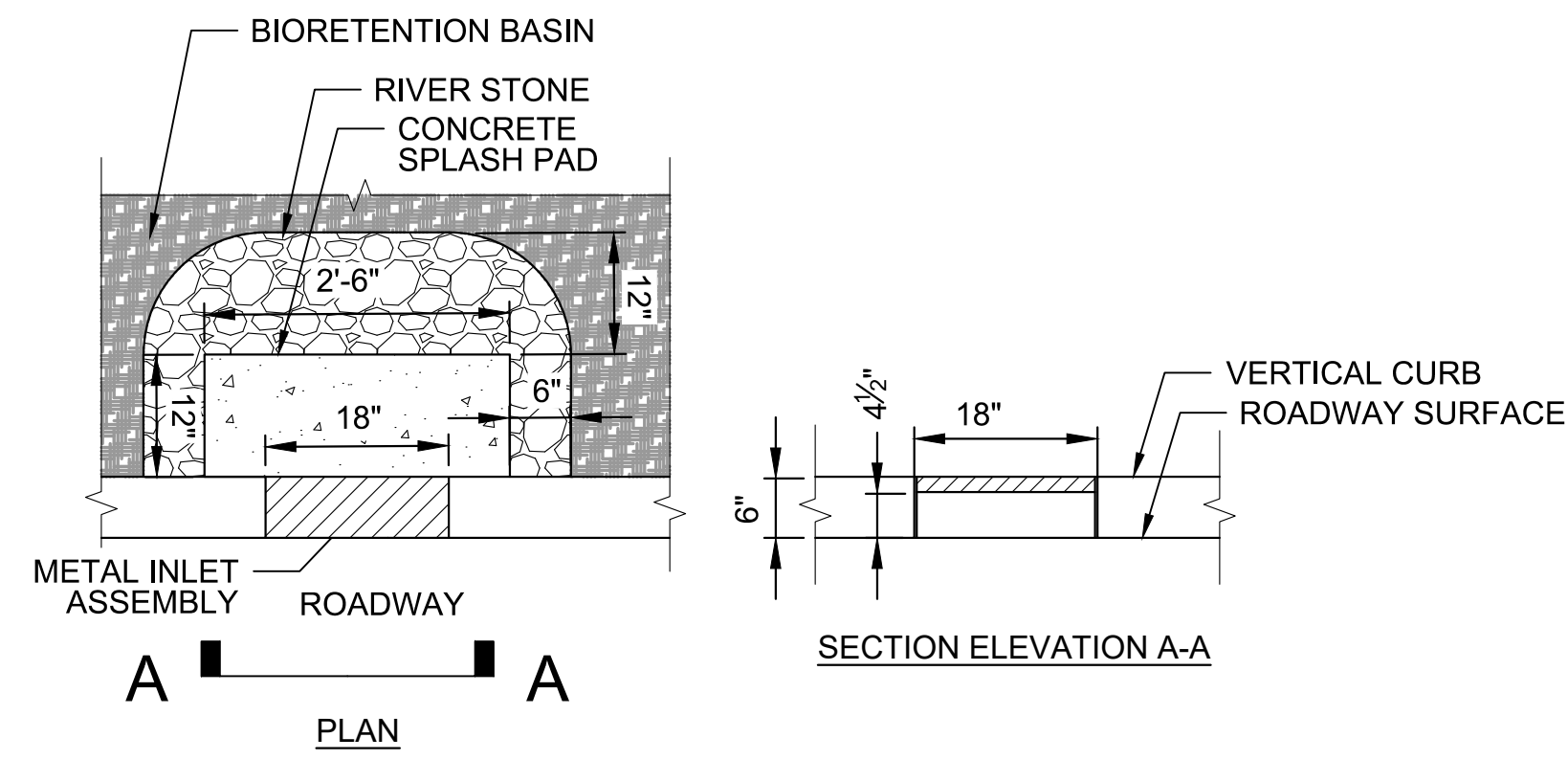


Scale	AS SHOWN		
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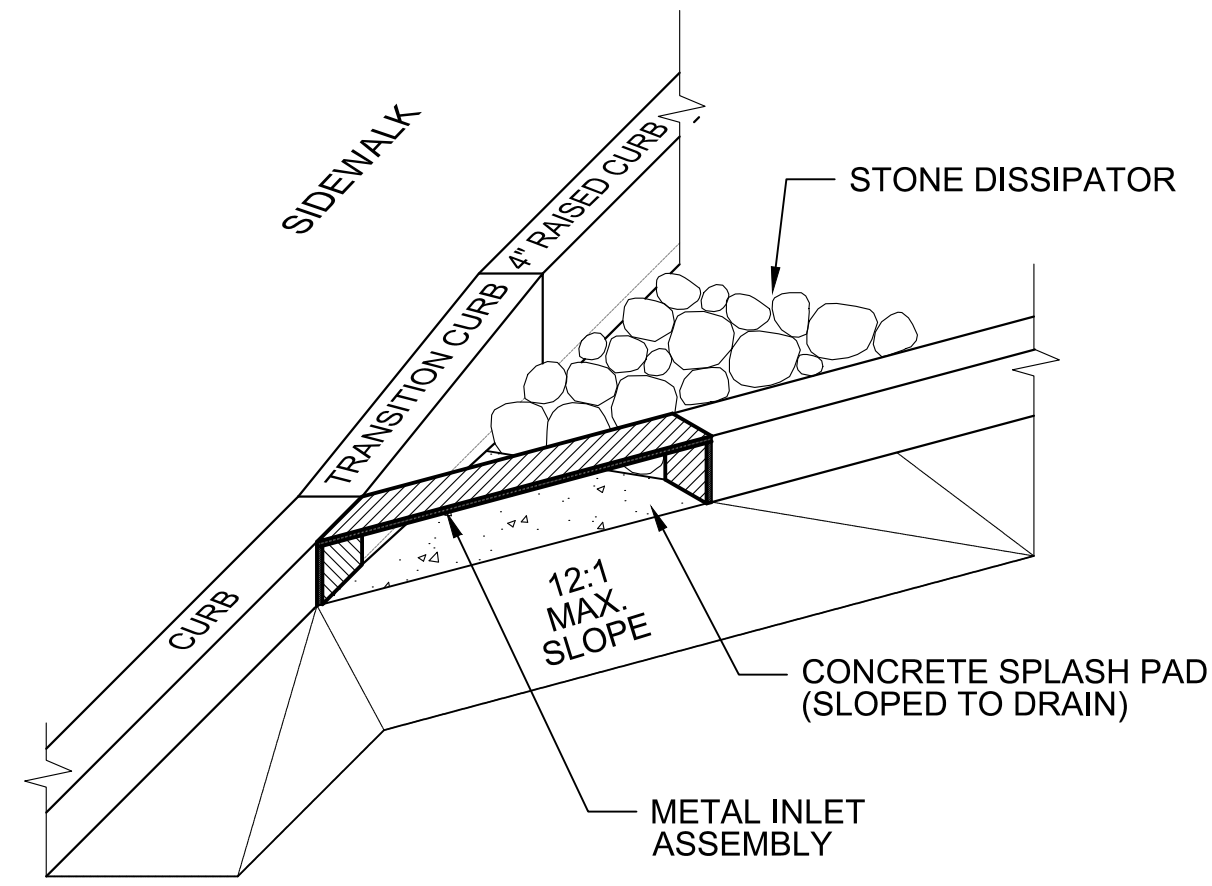


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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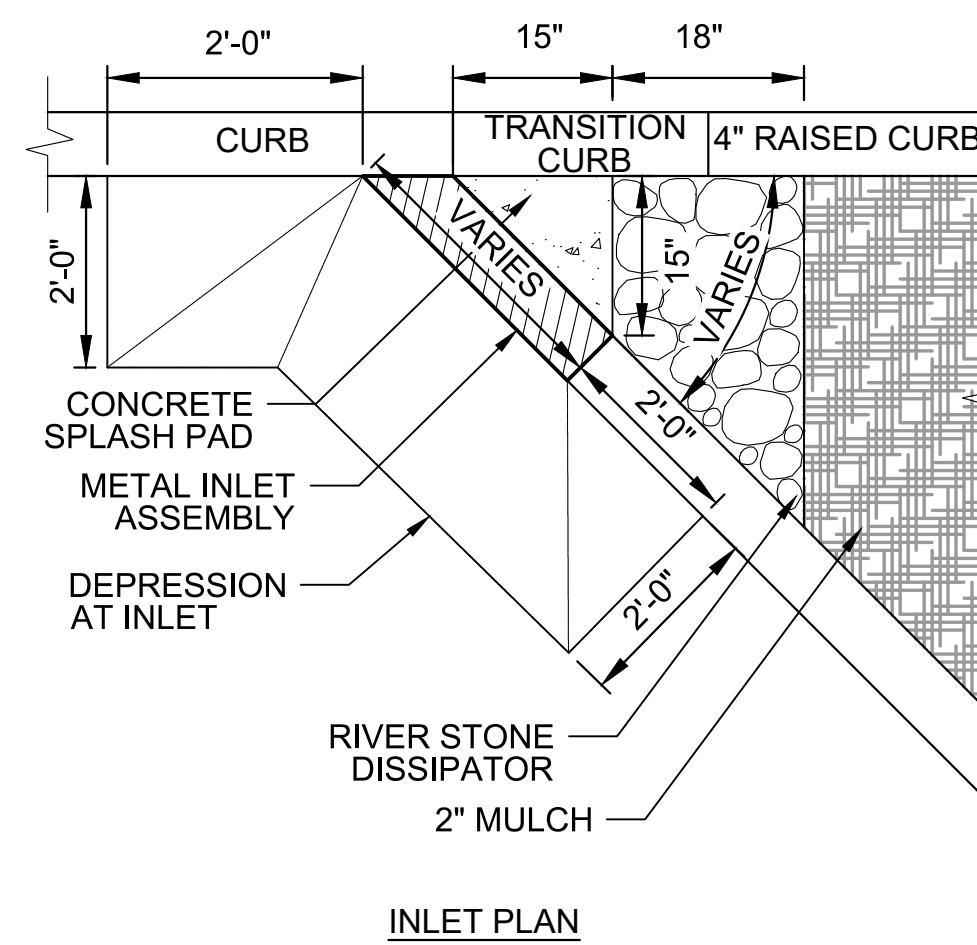
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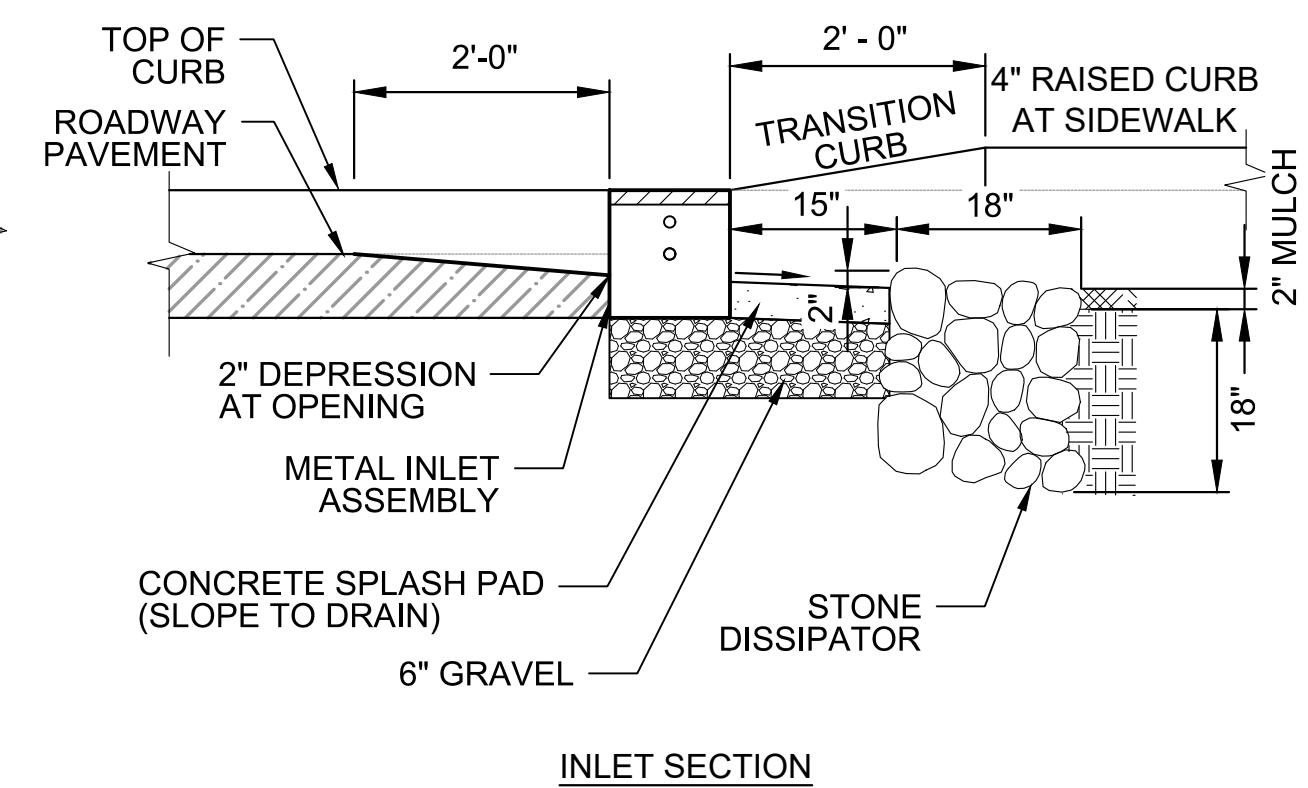
6 BIORETENTION BASIN METAL OUTLET
SCALE: NTS



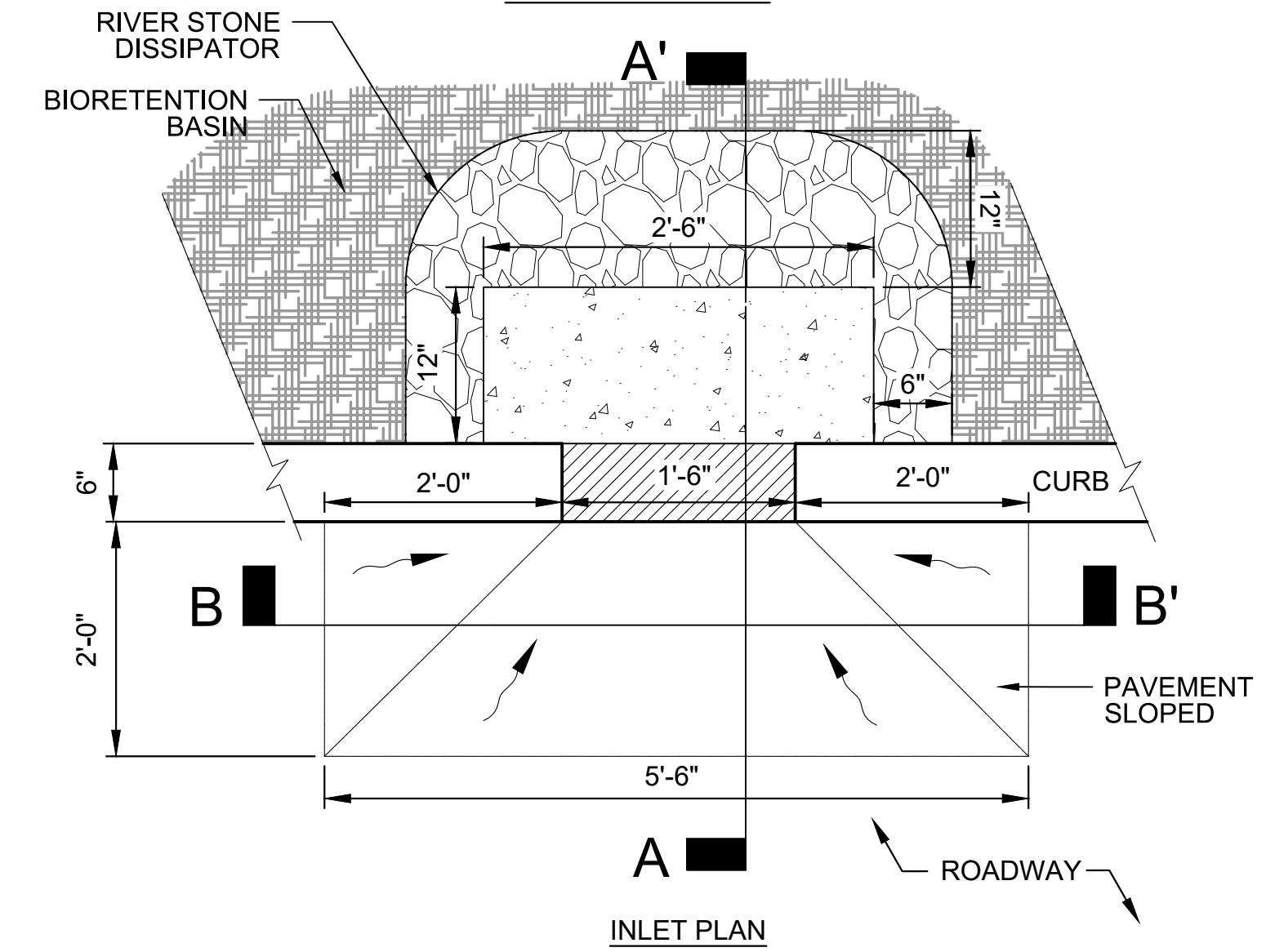
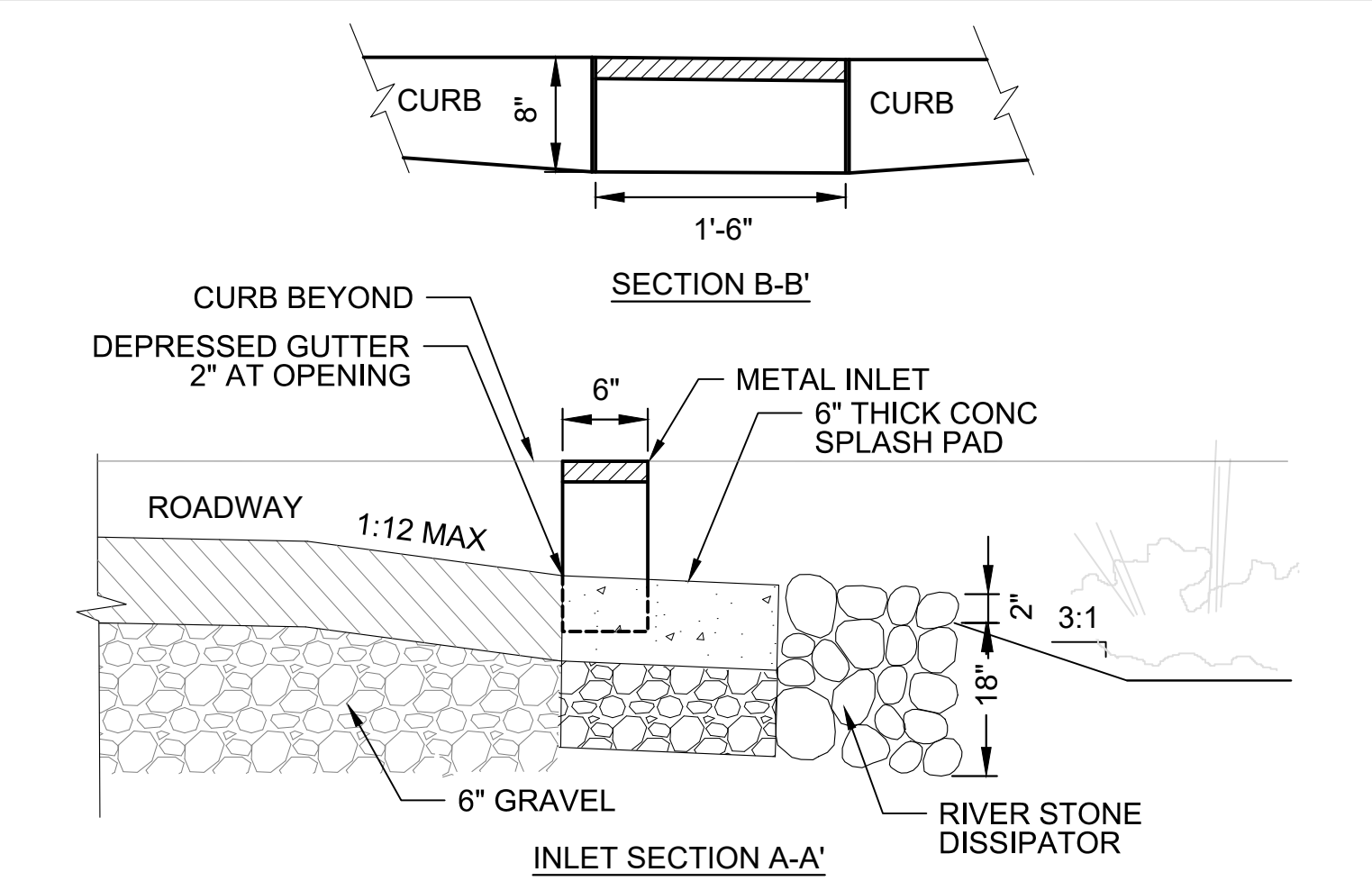
INLET PERSPECTIVE



INLET PLAN



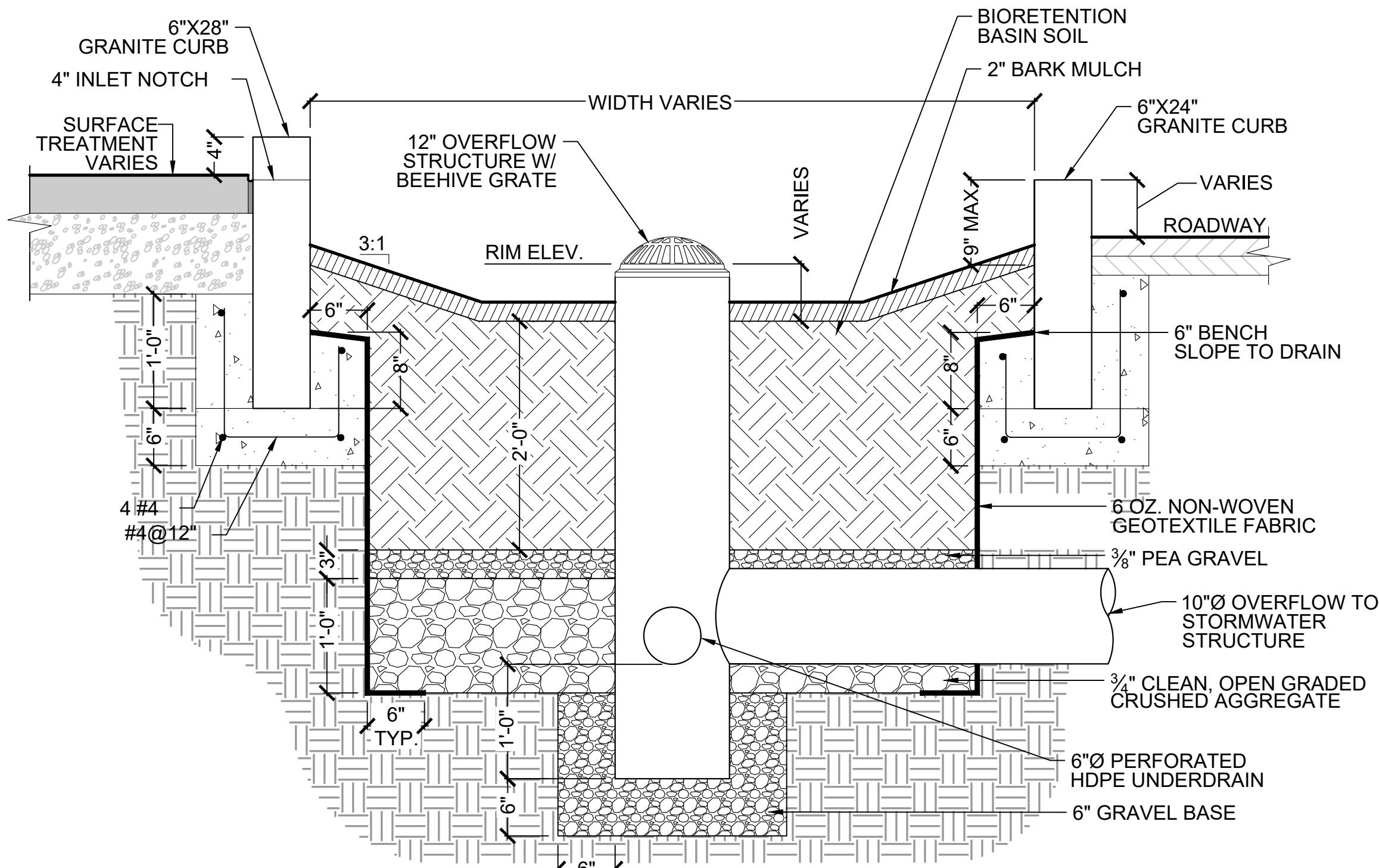
INLET SECTION



INLET PLAN

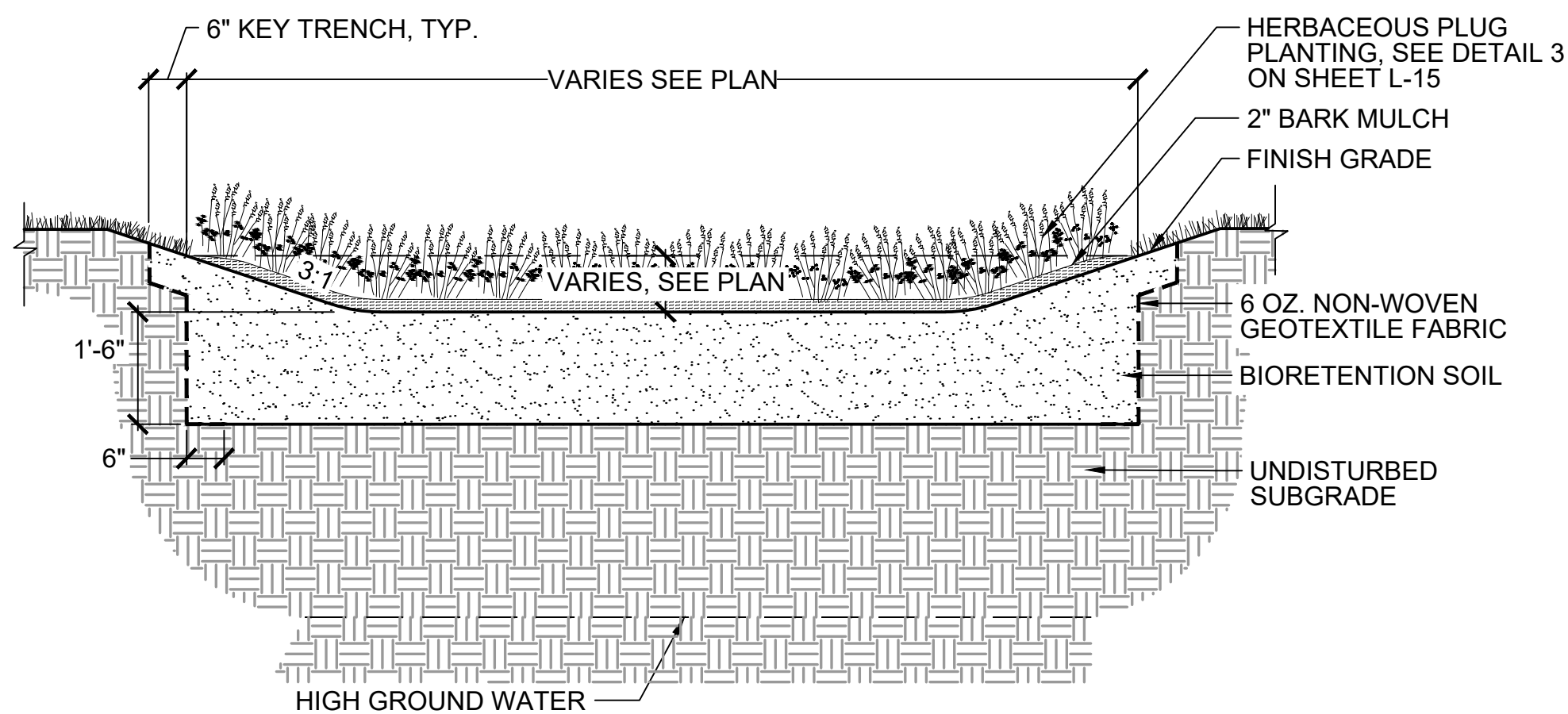
2 BIORETENTION BASIN METAL INLET (SIDE)
SCALE: NTS

3 BIORETENTION BASIN METAL INLET (ANGLED)
SCALE: NTS

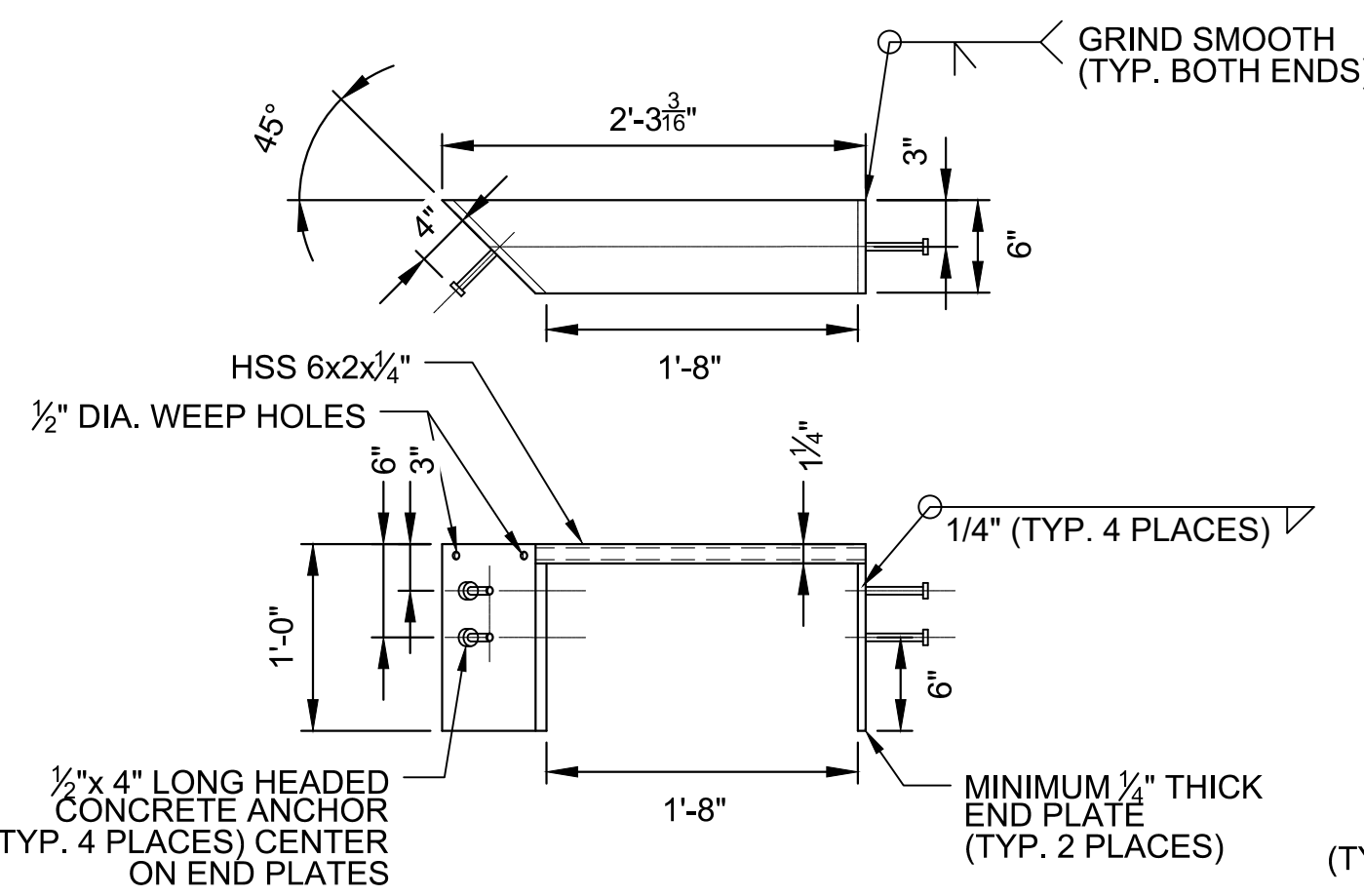


NOTES:
1. ALL STONE SUBBASE IN THE BIORETENTION BASIN SHALL BE DOUBLE-WASHED.

5 BIORETENTION BASIN - CURB EXTENSION
SCALE: NTS

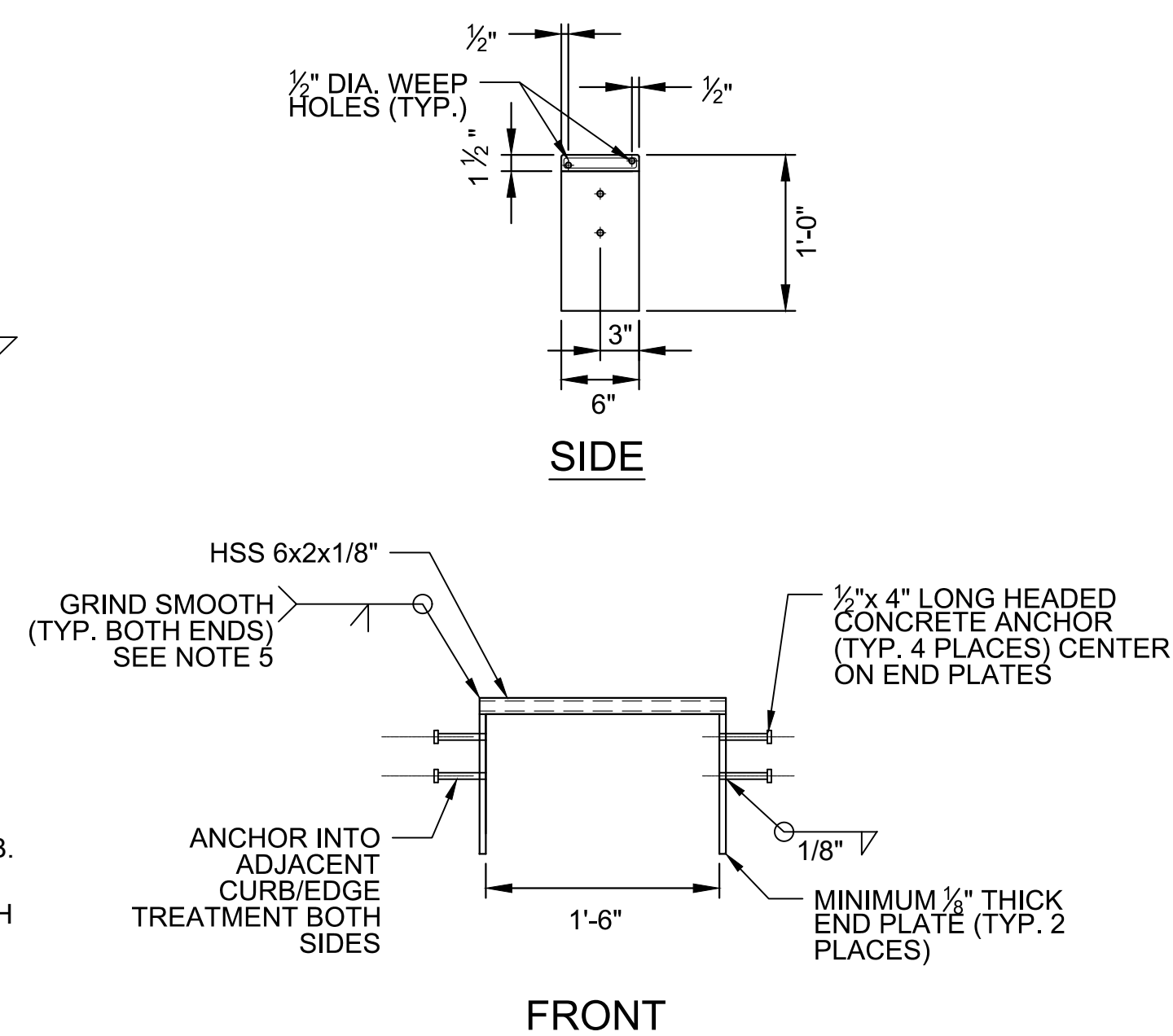


4 BIORETENTION BASIN
SCALE: NTS



NOTES:
1. HEADED CONCRETE ANCHORS SHALL MEET THE REQUIREMENTS OF ASTM A-108.
2. HSS CHANNEL SHALL MEET THE REQUIREMENTS OF ASTM A-500 GRADE B.
3. END PLATES SHALL MEET THE REQUIREMENTS OF ASTM A-36.
4. ENTIRE ASSEMBLY SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123.
5. SINGLE BEVEL GROOVE WELD.
6. ORIENTATION OF ANGLE MAY VARIES, SEE PLANS.

1 METAL INLET AND OUTLET ASSEMBLY
SCALE: NTS

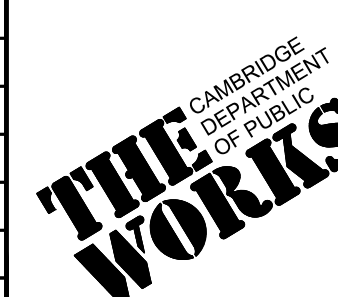


FRONT



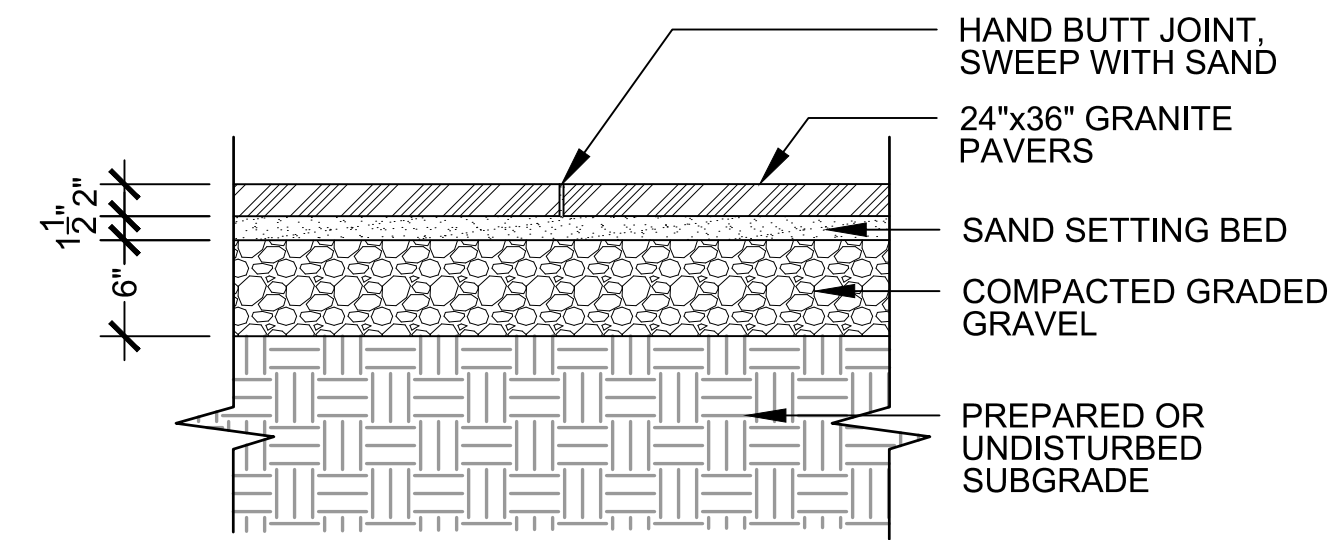
Scale	AS SHOWN
Date	AUGUST 2022
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Approved by	DB

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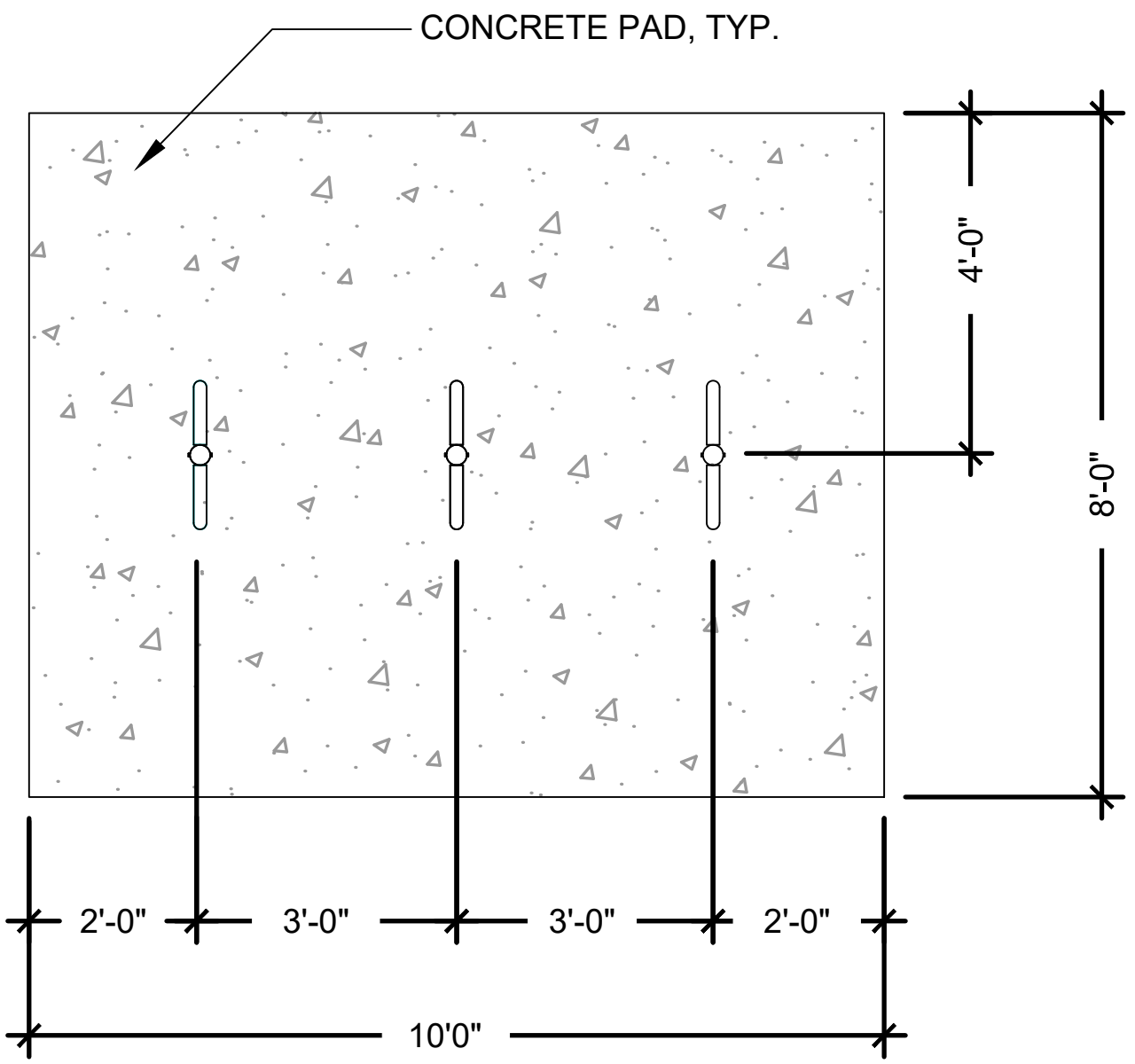
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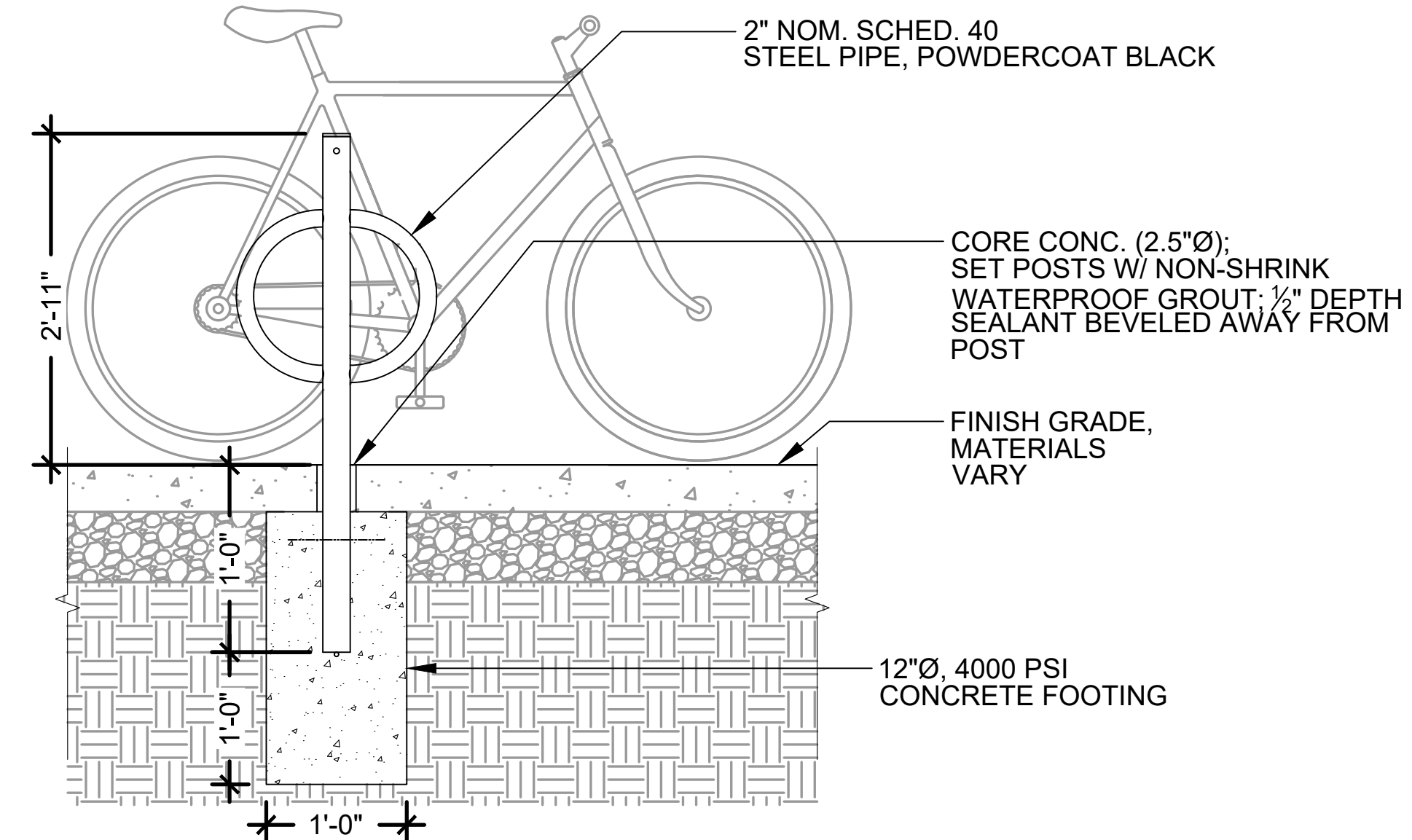


NOTE:
1. SUBMIT PRODUCT INFORMATION AND SAMPLE OF GRANITE PAVERS FOR APPROVAL PRIOR TO ORDERING MATERIAL.

6 GRANITE PAVER PATH
SCALE: NTS

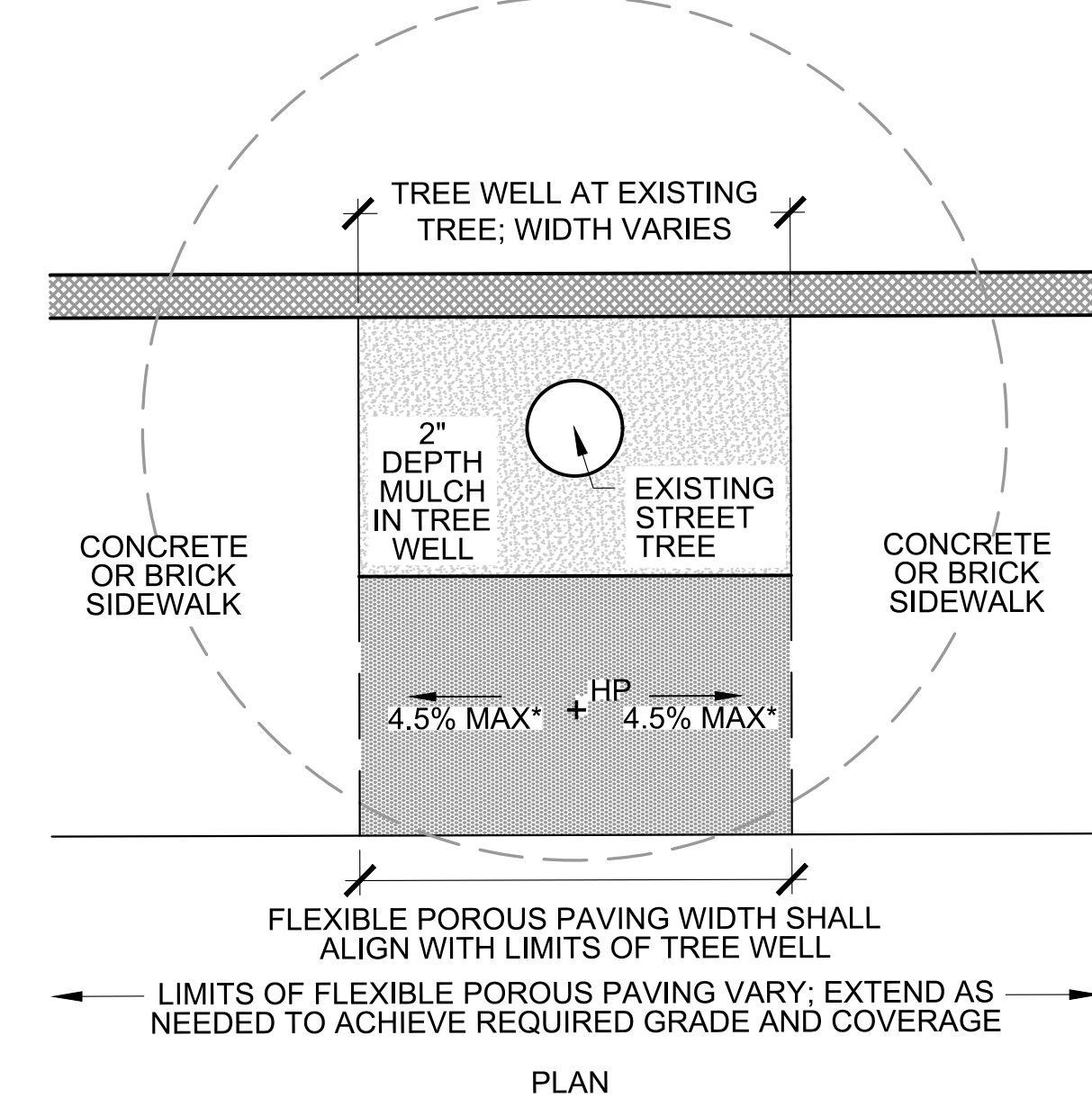


TYPICAL SPACING - CONCRETE PAD
SCALE: NTS

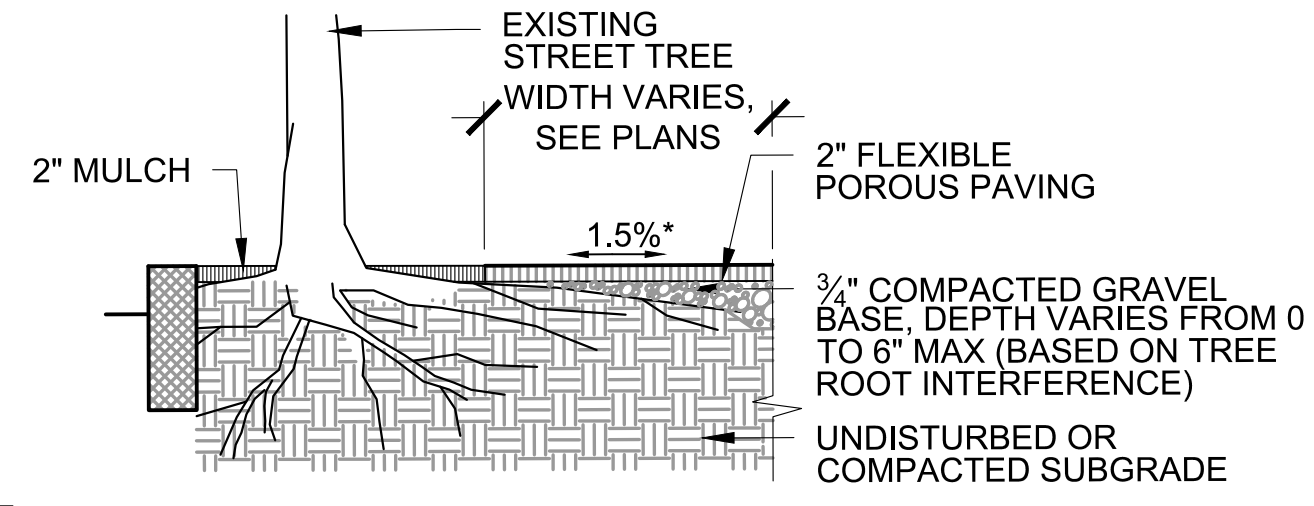


NOTES:
1. ALL JOINTS TO BE FULL WELDS (NO TACK WELDS); GRIND SMOOTH.
2. FINISHED RACK TO BE POWDERCOATED; COLOR TO BE BLACK.

5 BICYCLE RACK
SCALE: NTS



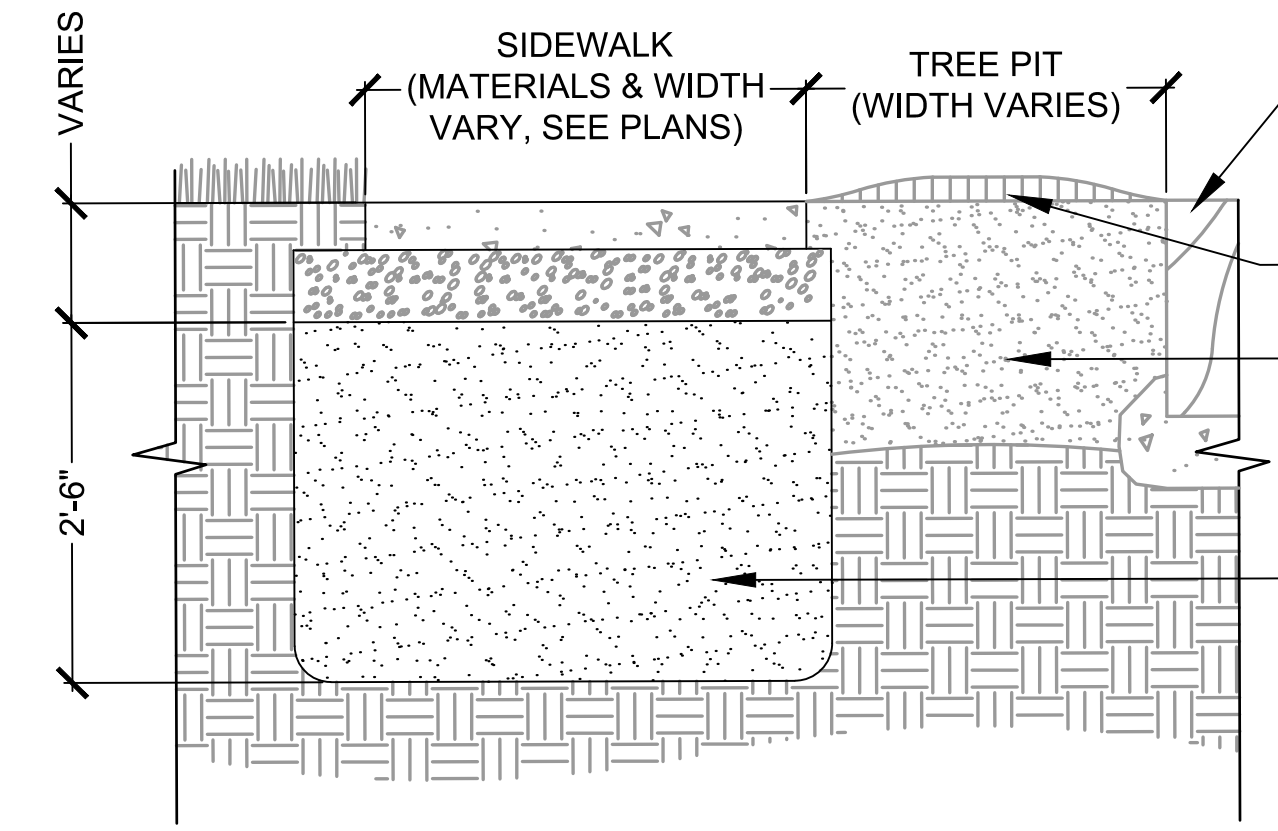
PLAN



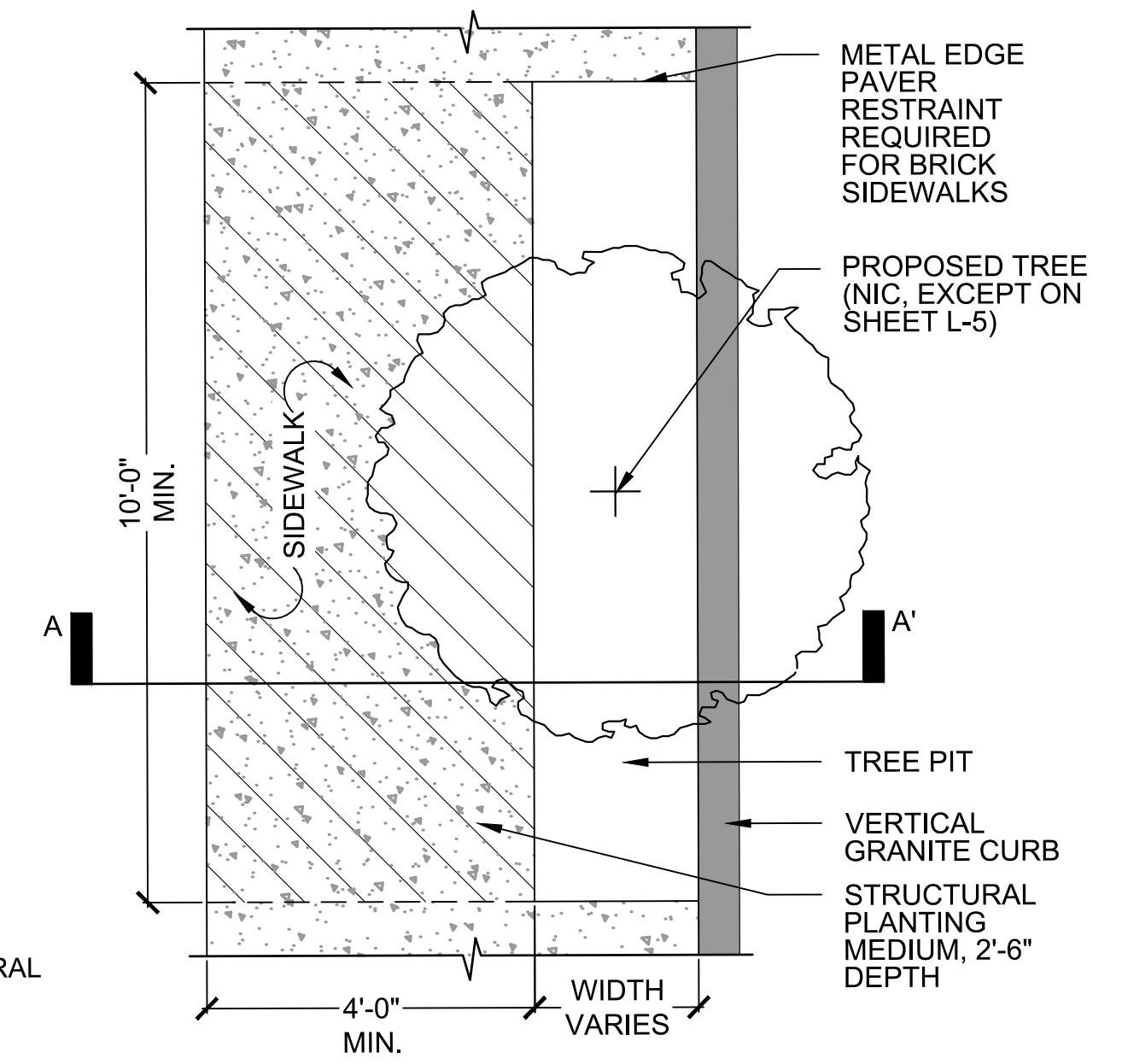
SECTION

NOTE:
1. * FLEXIBLE POROUS PAVING SIDEWALKS TO BE BUILT ACCORDING TO ADA AND MA AAB REGULATIONS, 2.0% MAX (0% TOLERANCE) CROSS SLOPE.
2. FLEXIBLE POROUS PAVING COLOR SHALL BE REDWOOD.

4 FLEXIBLE POROUS PAVING AT EXISTING TREES
SCALE: NTS



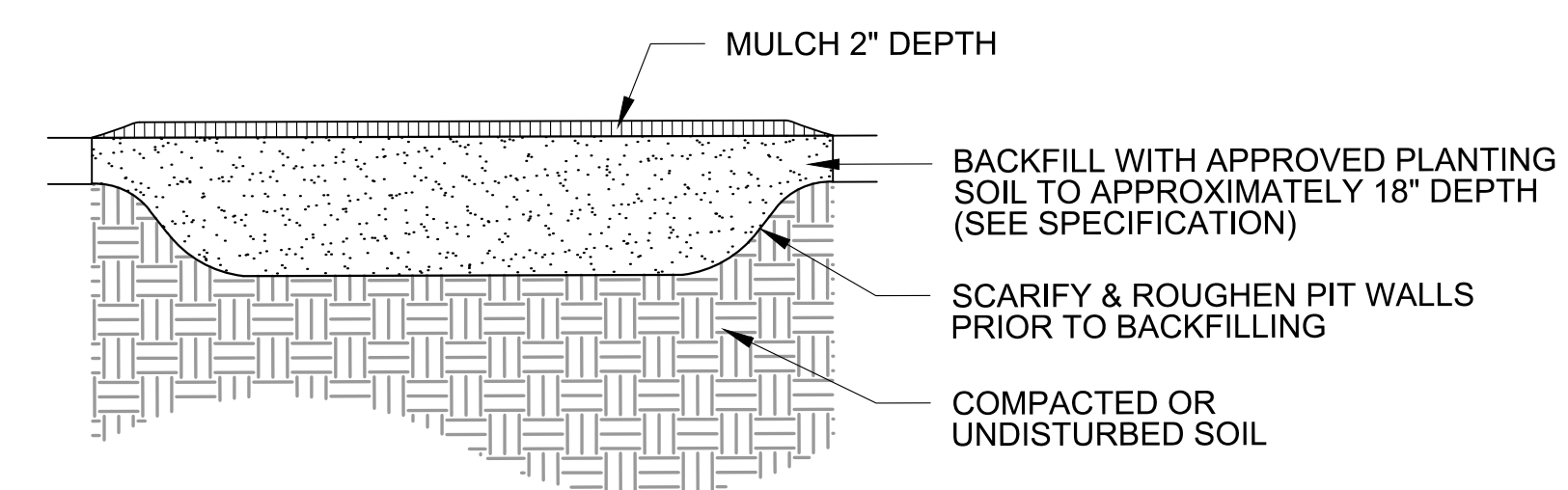
SECTION A-A'



PLAN

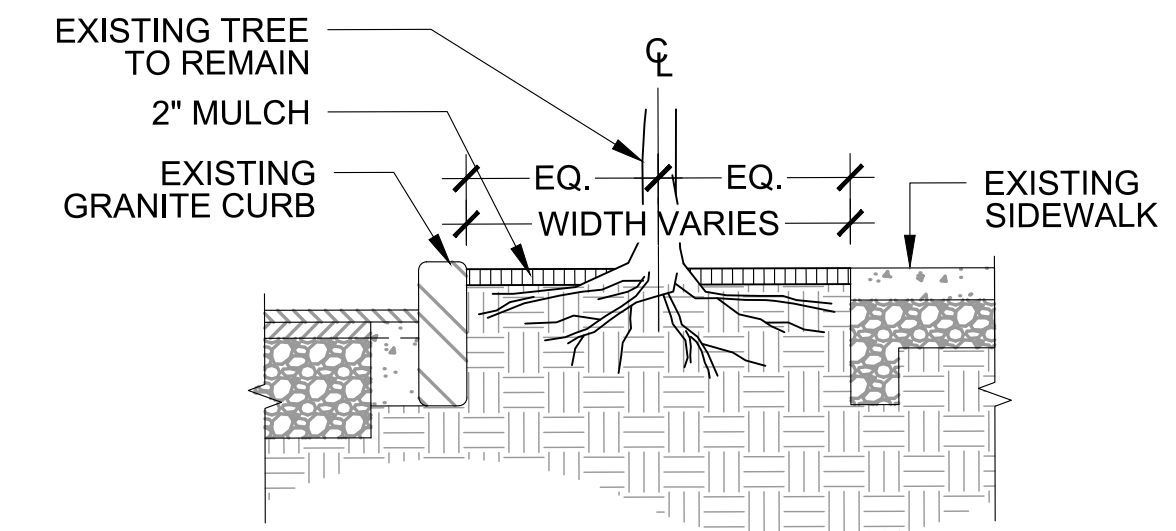
NOTE:
1. CONTRACTOR SHALL PROVIDE APPROXIMATELY 3.7 CY (100 CF) OF STRUCTURAL PLANTING MEDIUM PER EACH STREET TREE PLANTING

3 NEW TREE IN CONCRETE SIDEWALK
SCALE: NTS



NOTE: TREES PLANTED BY OTHERS.

2 NEW TREE PIT
SCALE: NTS



NOTES:
1. REMOVE ALL WEEDS AND TRIM ALL SUCKERS FLUSH.
2. SEE SPECIFICATION FOR EXISTING TREE PROTECTION AND MAINTENANCE.
3. AIRSPADE SOIL FROM AROUND EXISTING ROOTS WITHIN LIMITS OF CANOPY TO A DEPTH ACCOMMODATING NEW SIDEWALK MATERIALS. CLEAN CUT ROOTS ≤ 1" DIA. AS NEEDED WITH SHARP PRUNERS. ROOTS > 1" DIA. REQUIRE ARBORIST APPROVAL PRIOR TO REMOVAL.
4. AIRSPADE SOIL WITHIN PROPOSED TREE PIT TO LOOSEN SOIL AROUND EXISTING ROOTS. AMEND EXISTING SOIL WITH APPROVED PLANTING SOIL AND BACKFILL PER SPECIFICATIONS.
5. NEW TREE WELL LIMITS FOR EXISTING TREES SHALL BE AS SHOWN ON PLANS.

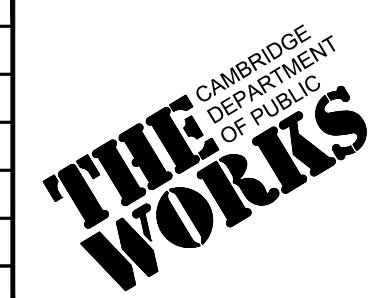
1 EXISTING STREET TREE TREATMENT
SCALE: NTS



27 Congress Street, Salem, MA 01970
tel. 978-740-0096 www.hatch.com

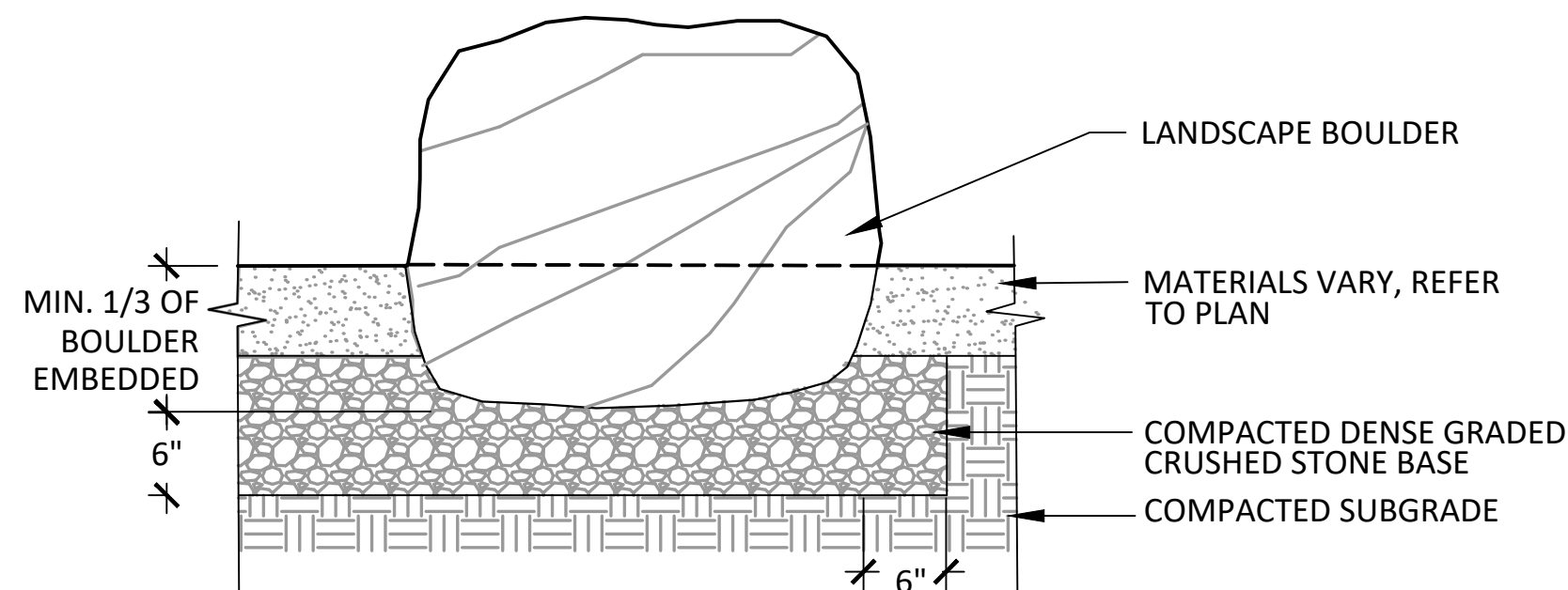


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Date	AUGUST 2022		
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Drawn by	AK/AG		
Checked by	RK/JB	No.	Description
Approved by	DB		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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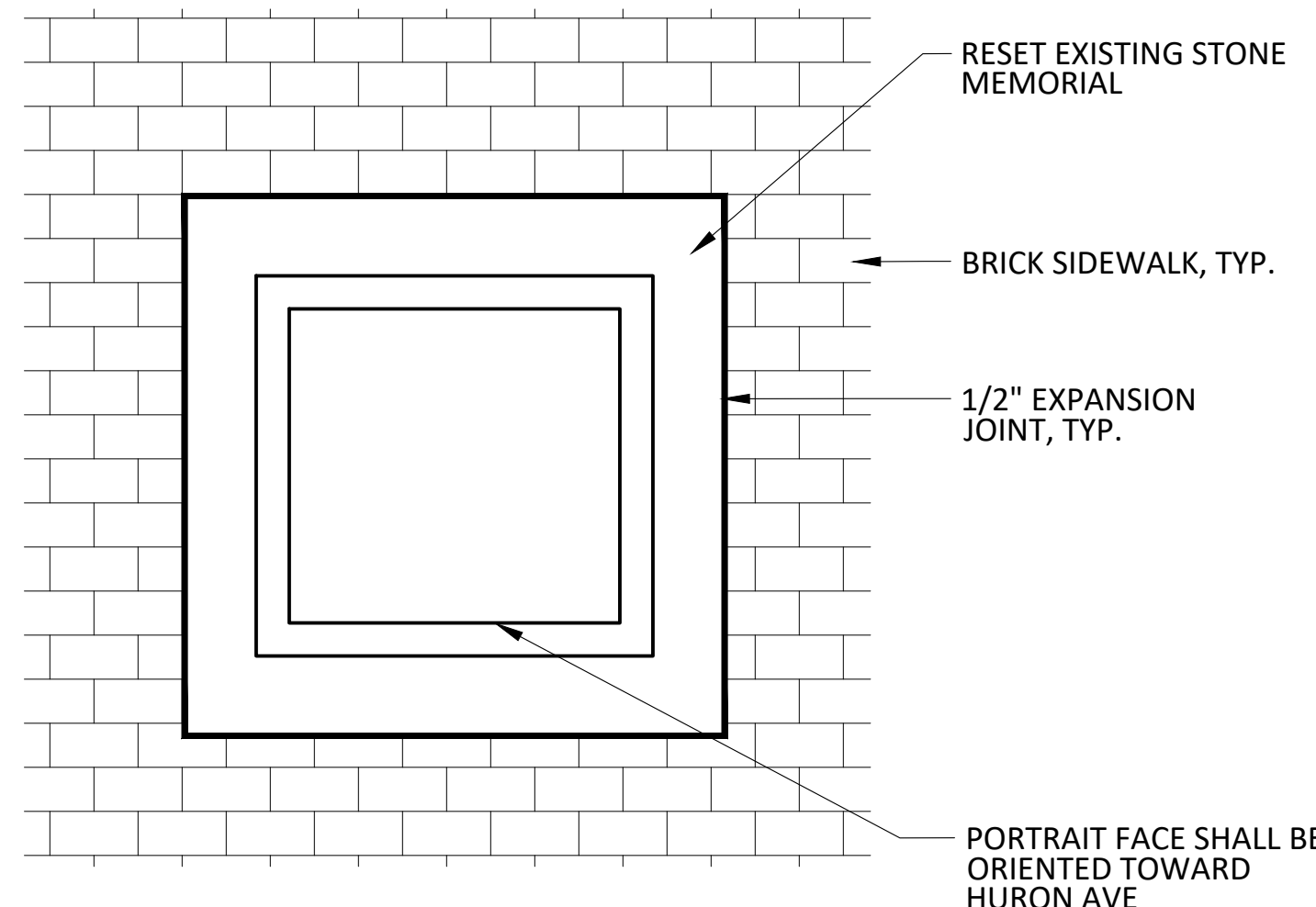
Sheet	L-13
File No.	10565



NOTE:
1. SEE SPEC 02980 SITE FURNISHINGS FOR HEIGHT AND WIDTH OF BOULDERS AND TEXT AND GRAPHICS REQUIREMENT FOR ENGRAVED BOULDERS.

3 LANDSCAPE BOULDER

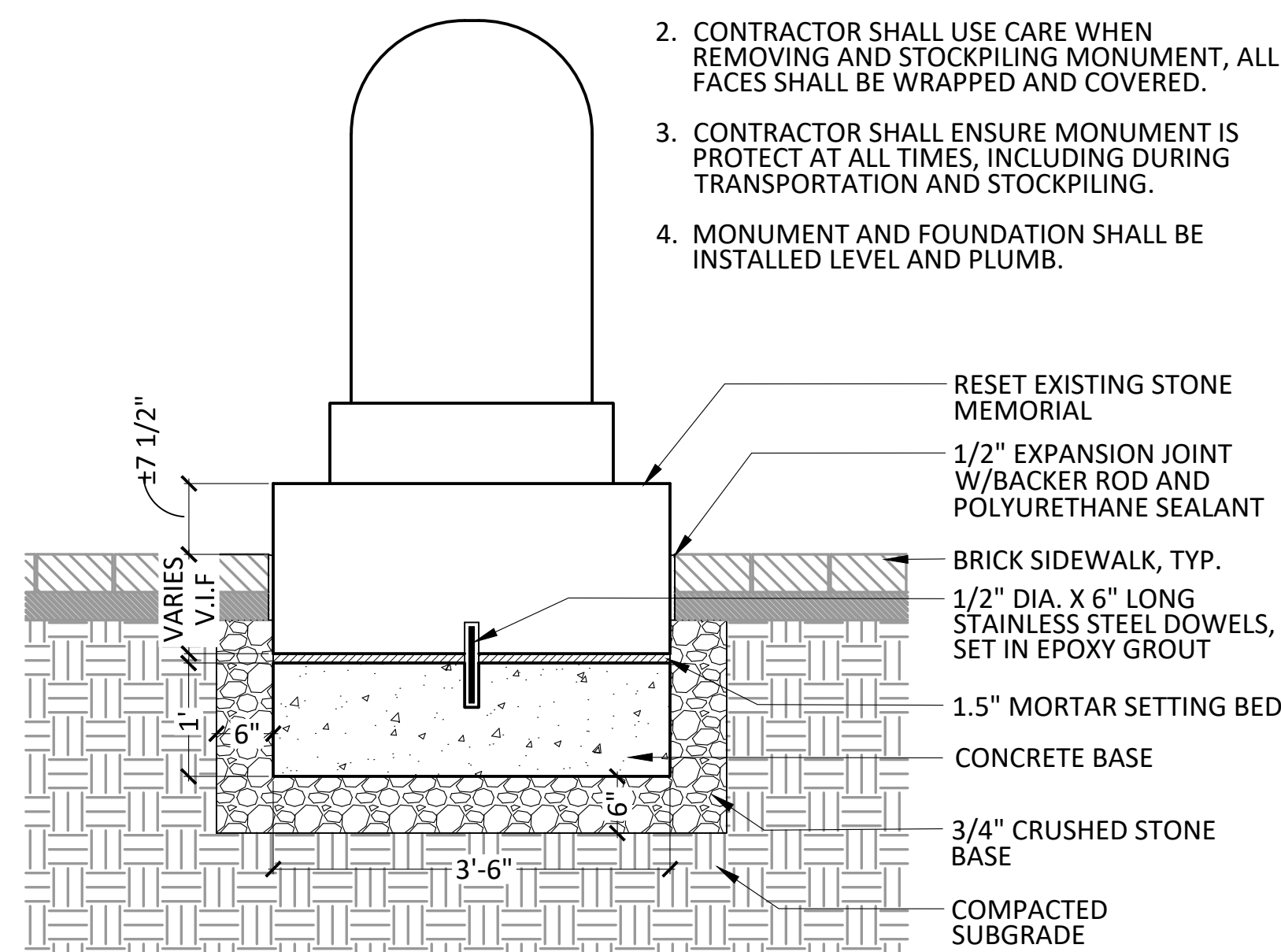
SCALE: NTS



PLAN

NOTES:

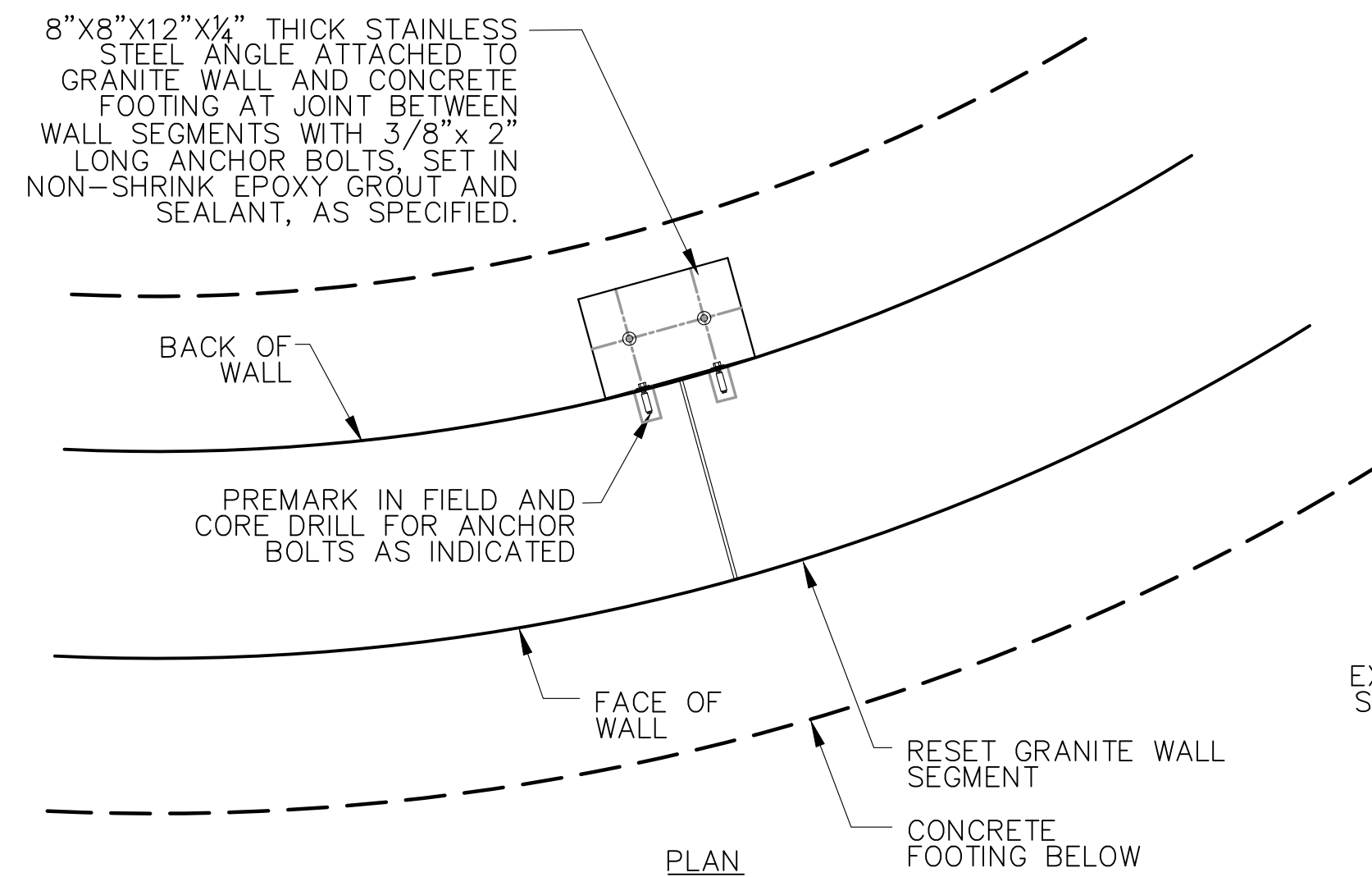
1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.
2. CONTRACTOR SHALL USE CARE WHEN REMOVING AND STOCKPILING MONUMENT, ALL FACES SHALL BE WRAPPED AND COVERED.
3. CONTRACTOR SHALL ENSURE MONUMENT IS PROTECT AT ALL TIMES, INCLUDING DURING TRANSPORTATION AND STOCKPILING.
4. MONUMENT AND FOUNDATION SHALL BE INSTALLED LEVEL AND PLUMB.



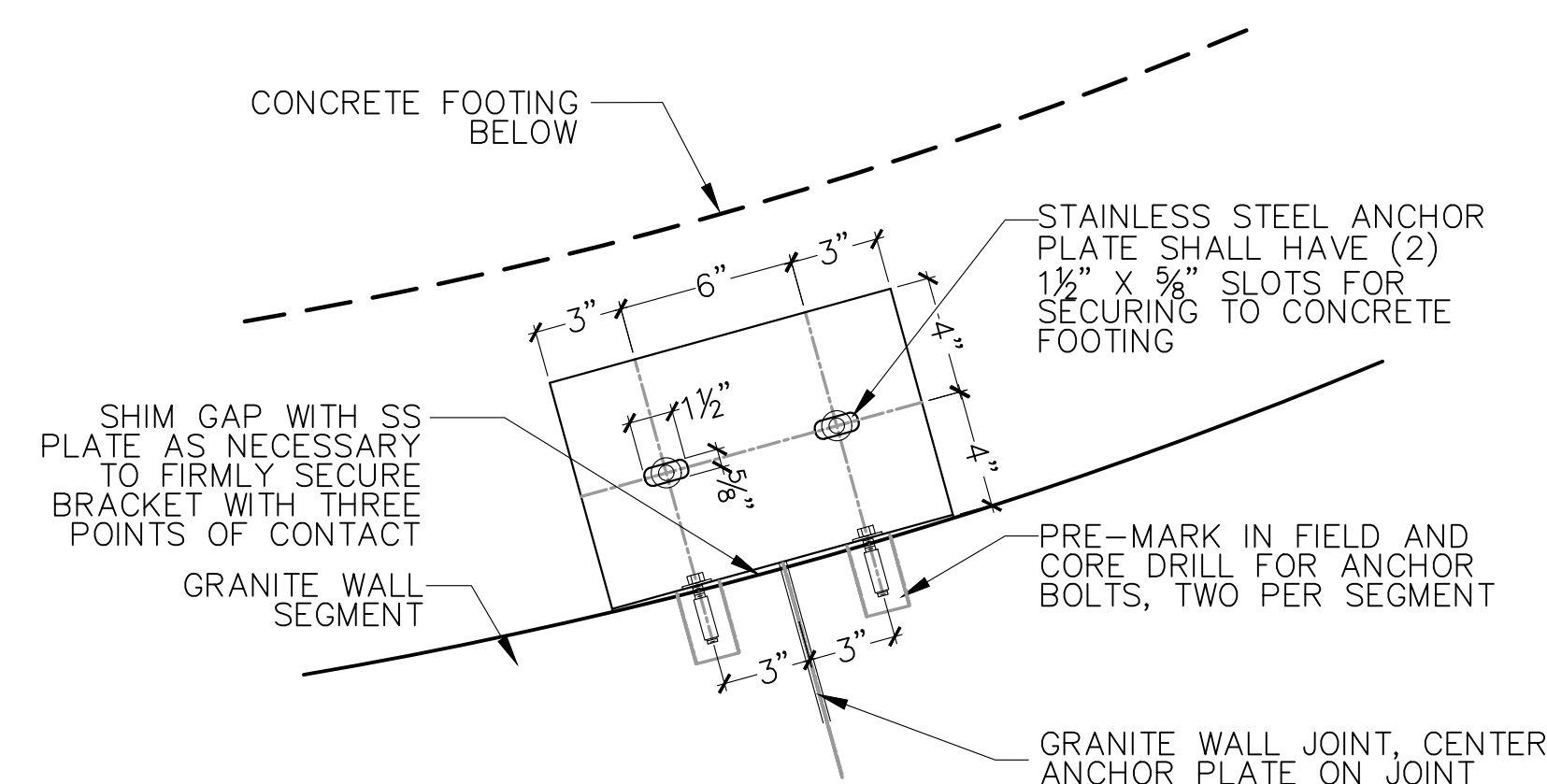
SECTION

2 RESET MONUMENT

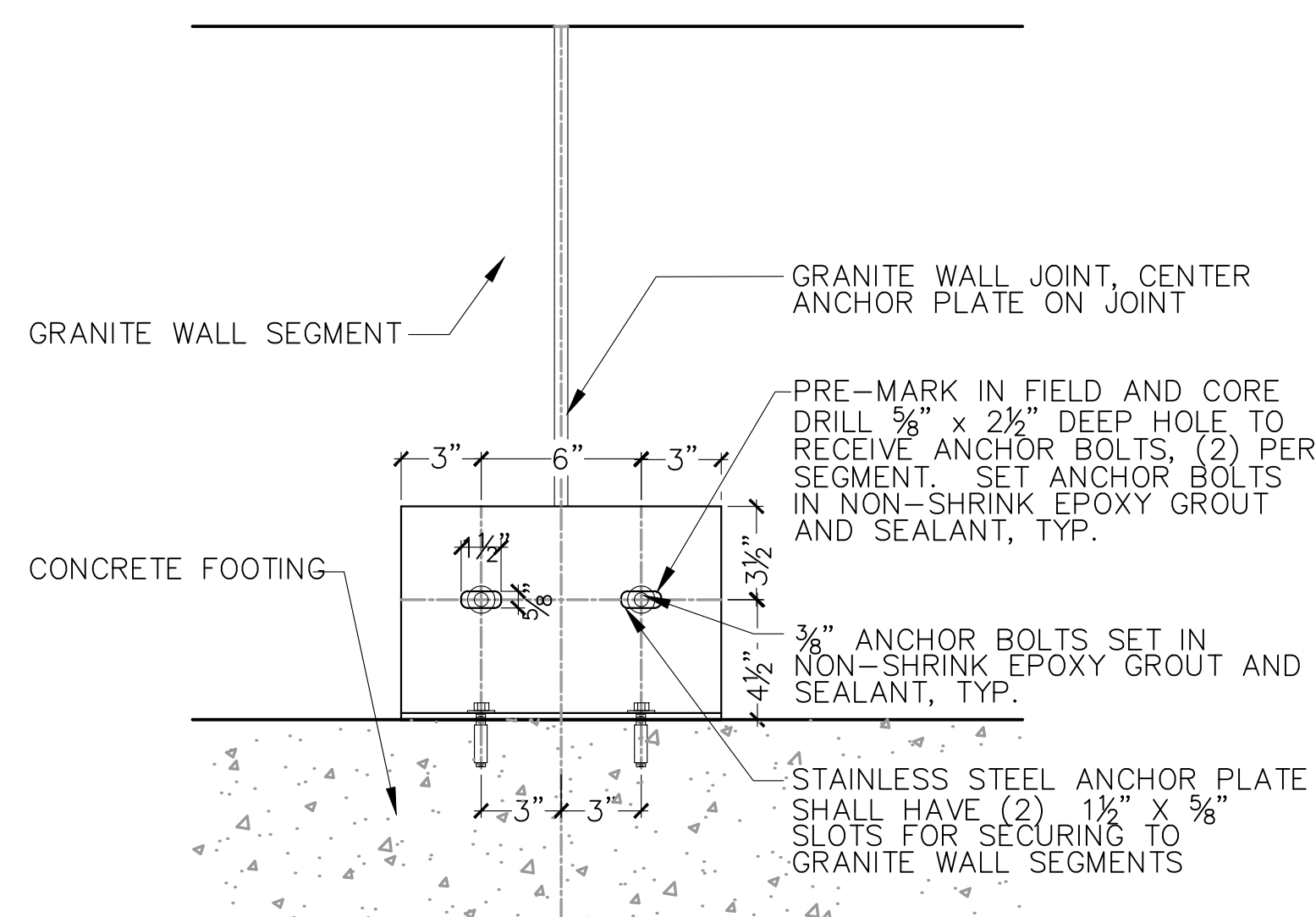
SCALE: NTS



PLAN



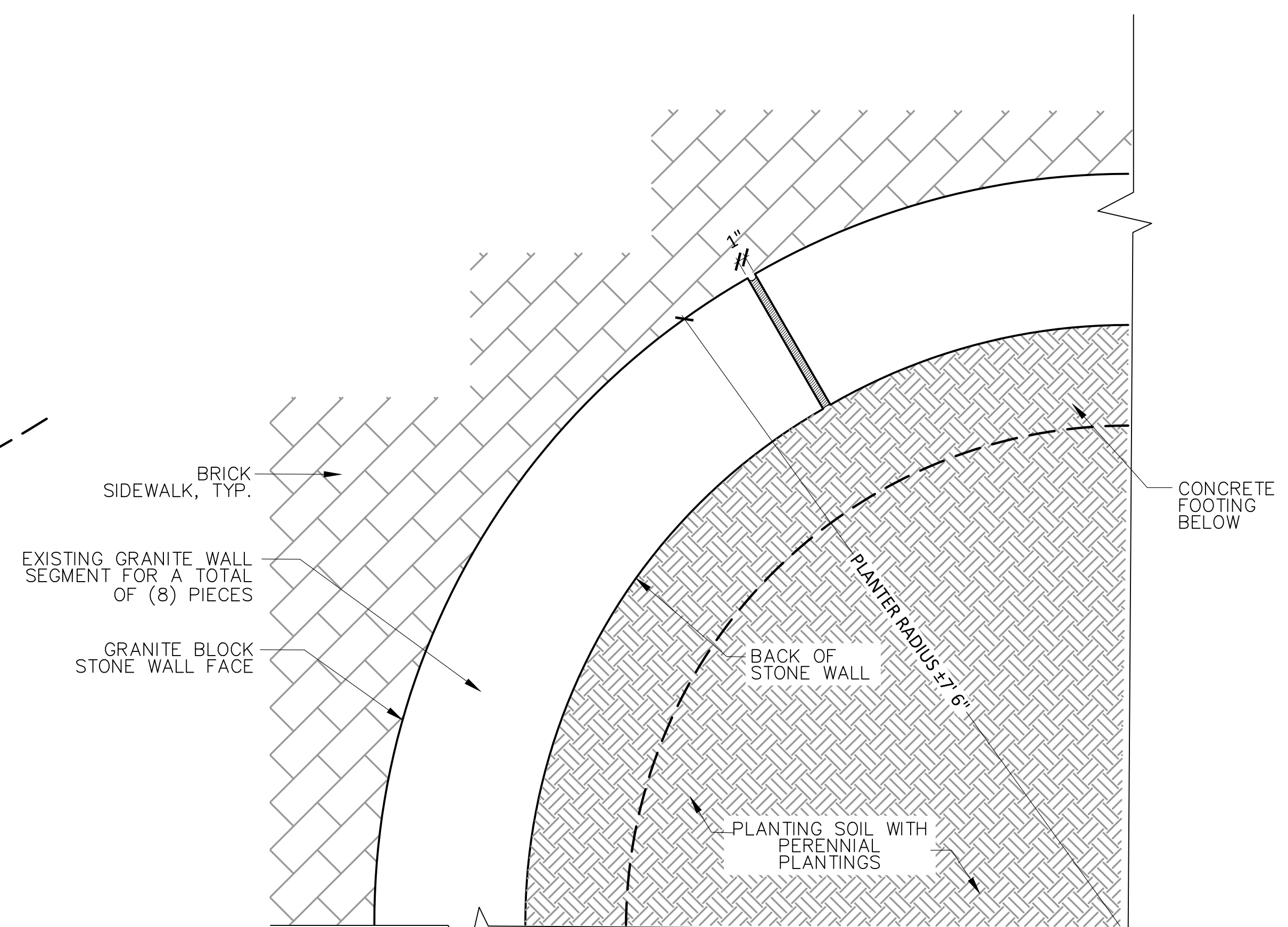
PLAN ENLARGEMENT



BACK OF WALL ELEVATION

1 FLAGPOLE WALL

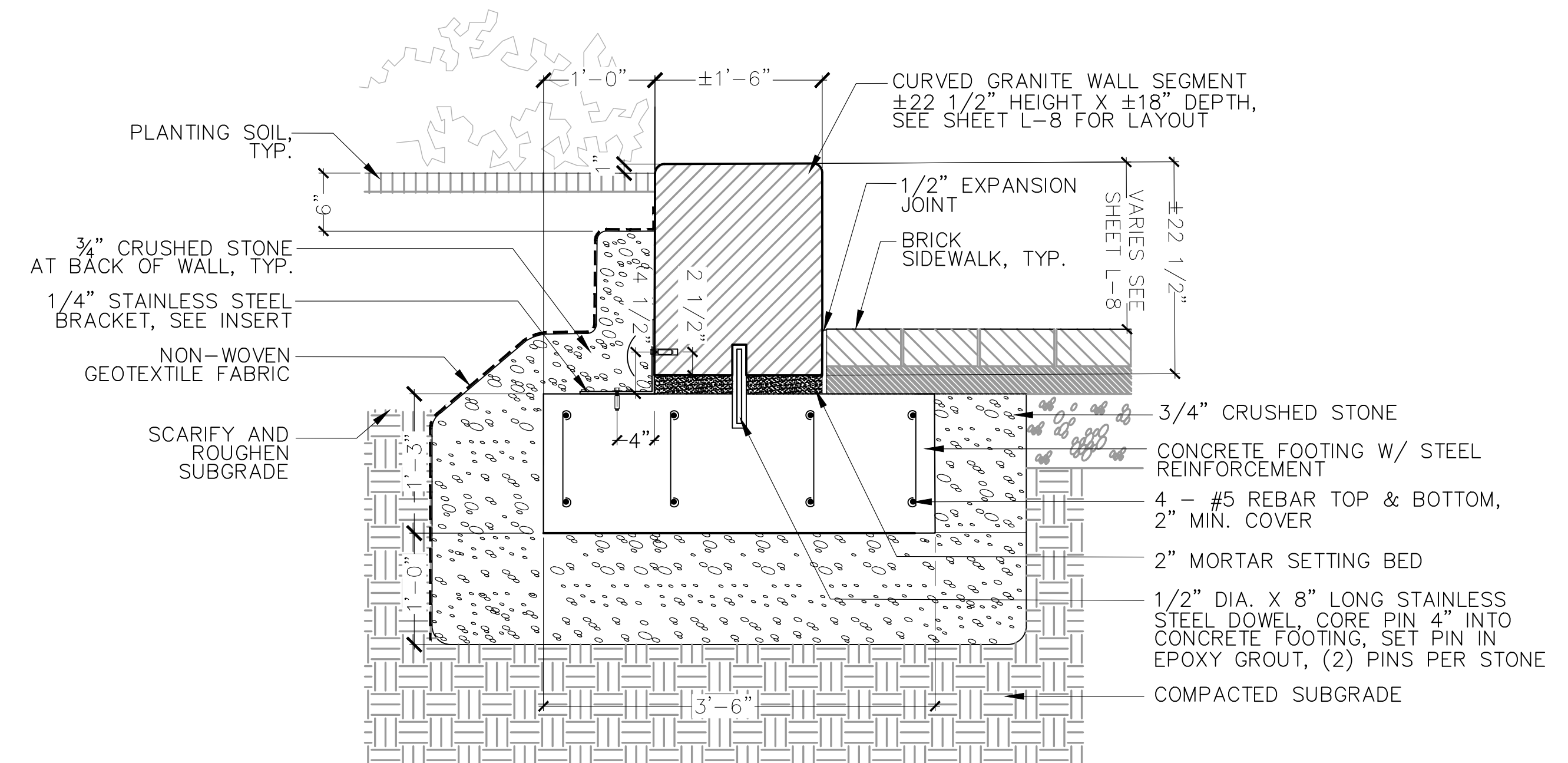
SCALE: NTS



PLAN

NOTES:

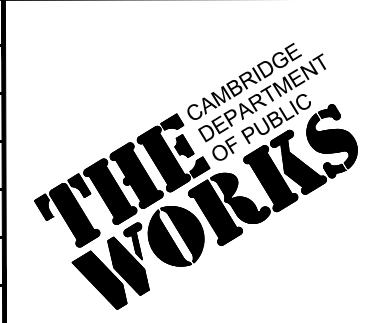
1. SEE SHEET L-8 FOR GRADING AND WALL ELEVATIONS.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.



SECTION



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Drawn by	AKIAG		
Checked by	JB	No.	Description
Approved by	DB		Date
			REVISIONS



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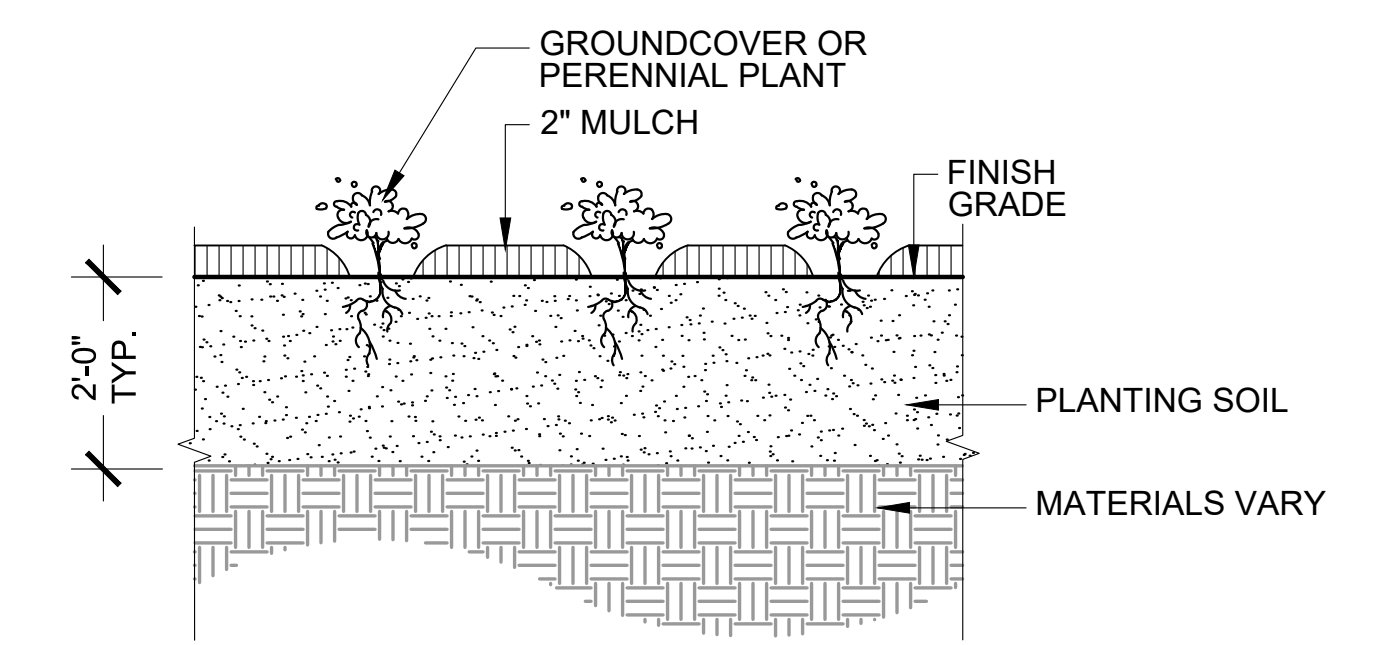
DECIDUOUS TREES						
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	MIN. SIZE	COMMENTS	
2	AG	Amelanchier grandifolia 'Autumn Brilliance'	'Autumn Brilliance' Apple Serviceberry	2" CAL.	B&B; Multi-stem	
1	AR	Acer rubrum	Red Maple	2" CAL.	B&B; Single stem	
3	NS	Nyssa sylvatica	Tupelo	2" CAL.	B&B; Single stem	
12	OV	Ostrya virginiana	American Hophornbeam	2" CAL.	B&B; Single stem	
2	QB	Quercus bicolor	Swamp White Oak	2" CAL.	B&B; Single stem	
4	QR	Quercus rubra	Red Oak	2" CAL.	B&B; Single stem	
1	QV	Quercus velutina	Black Oak	2" CAL.	B&B; Single stem	
25	TOTAL					

SHRUBS						
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	SPACING	MIN. SIZE	COMMENTS
10	CA	Clethra alnifolia	Sweet Pepperbush	3' O.C.	36" HT.	#5 CONTAINER MIN.
19	FG	Fothergilla gardenii	Dwarf Fothergilla	3' O.C.	36" HT.	#5 CONTAINER MIN.
3	IG	Ilex glabra	Inkberry	3' O.C.	48" HT.	B&B
4	LB	Lindera benzoin	Spicebush	3' O.C.	48" HT.	B&B
1	VD	Viburnum dentatum	Arrowwood Viburnum	3' O.C.	48" HT.	B&B
37	TOTAL					

PERENNIALS						
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	SPACING	MIN. SIZE	COMMENTS
65	AC	Asarum canadense	Wild Ginger	15" O.C.	1 gal	
30	AT	Asclepias tuberosa	Butterfly Milkweed	12" O.C.	1 gal	
357	CC	Cornus canadensis	Bunchberry	8" O.C.	FLAT	
93	DP	Dennstaedtia punctilobula	Hay-scented Fern	15" O.C.	1 gal	
176	EP	Echinacea purpurea 'Kim's Knee High'	Purple Coneflower	12" O.C.	1 gal	
530	ED	Eurybia divaricata	White Wood Aster	12" O.C.	1 gal	
23	OC	Osmundastrum cinnamomeum	Cinnamon Fern	12" O.C.	1 gal	
137	RF	Rudbeckia fulgida 'Goldsturm'	Black-eyed Susan	12" O.C.	1 gal	
15	RH	Rudbeckia hirta	Black-eyed Susan	12" O.C.	1 gal	
11	SN	Symphotrichum novae-angliae	New England Aster	12" O.C.	1 gal	
135	SR	Solidago rugosa 'Fireworks'	'Fireworks' Goldenrod	12" O.C.	1 gal	
110	TC	Tiarella cordifolia	Foamflower	15" O.C.	1 gal	
28	VL	Veronia lettermannii 'Iron Butterfly'	'Iron Butterfly' Ironweed	24" O.C.	1 gal	
24	ZA	Zizia aurea	Golden Alexanders	12" O.C.	1 gal	
1734	TOTAL					

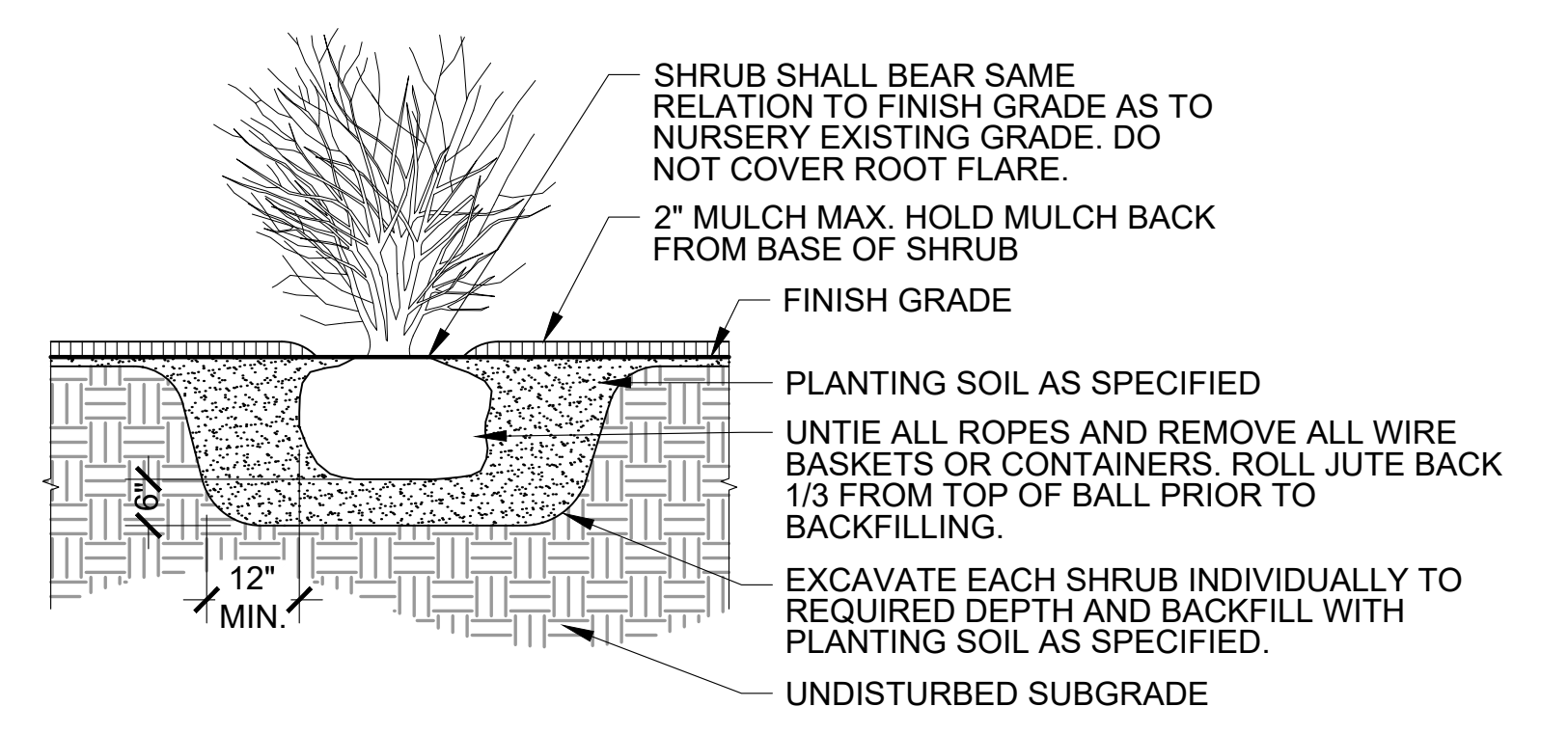
GRASSES						
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	SPACING	MIN. SIZE	COMMENTS
26	CP	Carex pennsylvanica	Pennsylvania Sedge	12" O.C.	1 gal	
786	ES	Eragrostis spectabilis	Purple Love Grass	12" O.C.	1 gal	
85	JC	Juncus communis	Common Rush	12" O.C.	1 gal	
49	PS	Panicum virgatum 'Shenandoah'	'Shenandoah' Switchgrass	18" O.C.	1 gal	
143	PV	Panicum virgatum	Switchgrass	18" O.C.	1 gal	
404	SS	Schizachyrium scoparium	Little Bluestem	12" O.C.	1 gal	
1493	TOTAL					

DECIDUOUS TREES						
QTY.	SYM.	SCIENTIFIC NAME	COMMON NAME	MIN. SIZE	COMMENTS	
1	AG	Amelanchier grandifolia 'Autumn Brilliance'	'Autumn Brilliance' Apple Serviceberry	2" CAL.	B&B; Multi-stem	
1	AR	Acer rubrum	Red Maple	2" CAL.	B&B; Single stem	
2	CO	Carya ovata	Shagbark Hickory	2" CAL.	B&B; Single stem	
1	NS	Nyssa sylvatica	Tupelo	2" CAL.	B&B; Single stem	
1	QV	Quercus velutina	Black Oak	2" CAL.	B&B; Single stem	
6	TOTAL					

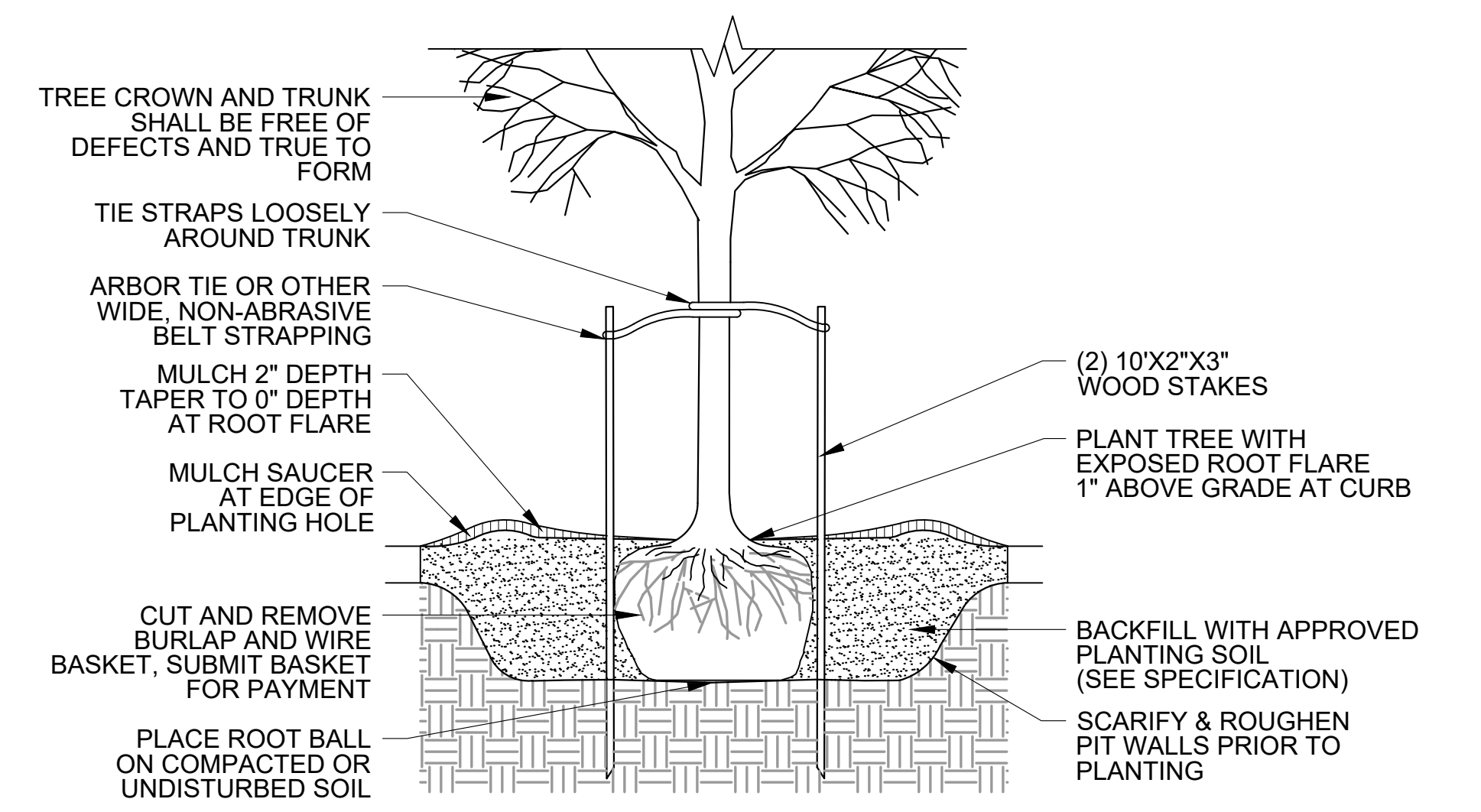


NOTE:
1. REFER TO PLANT SCHEDULE FOR SIZE AND SPACING.

3 PERENNIAL / GROUND COVER PLANTING
SCALE: NTS



2 SHRUB PLANTING
SCALE: NTS



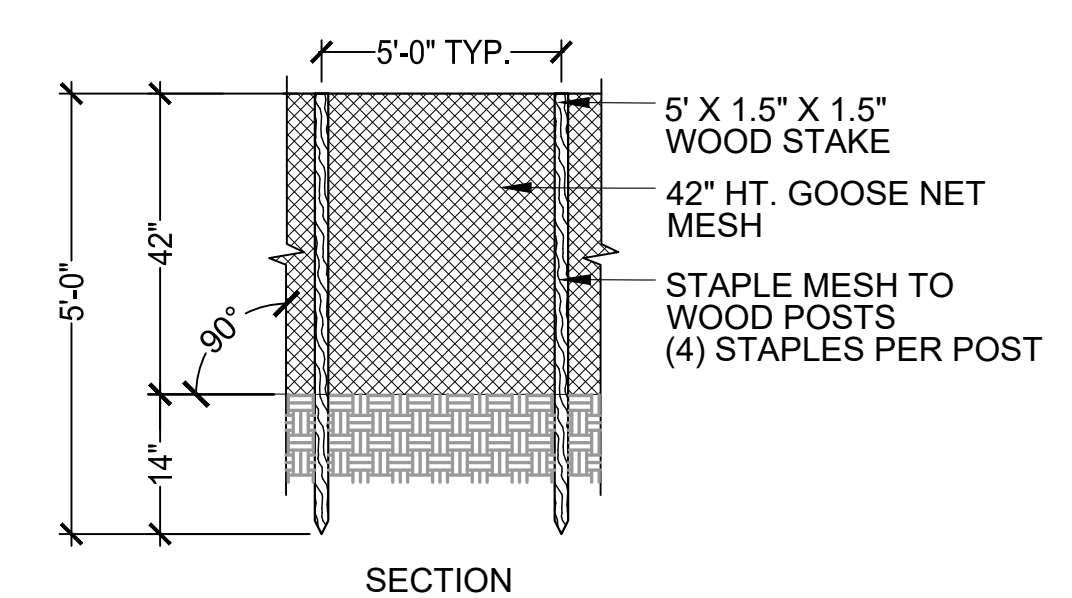
NOTE: PLANTING OF TREES WITHIN PLANTING AREAS SHOWN ON L-5 IS INCLUDED IN THIS CONTRACT. STREET TREE PLANTING WITHIN PROPOSED TREE PITS IS "BY OTHERS".

1 TREE PLANTING
SCALE: NTS

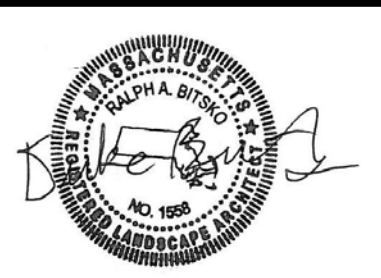
6 PLANT SCHEDULE - CUSHING PLAZA PHASE 2 (NIC)

5 PLANT SCHEDULE

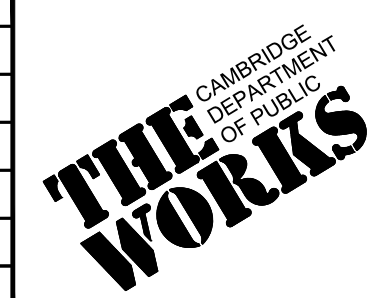
- NOTES:
- SEED ESTABLISHMENT FENCE SHALL BE IN PLACE IMMEDIATELY FOLLOWING APPLICATION OF SEED.
 - SEED ESTABLISHMENT FENCE SHALL REMAIN IN PLACE UNTIL SEED GERMINATION IS COMPLETE.
 - ANY SECTIONS OF SEED ESTABLISHMENT FENCE THAT BECOME DAMAGED SHALL BE REPLACED IMMEDIATELY.



4 SEED ESTABLISHMENT FENCE
SCALE: NTS

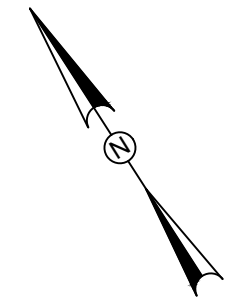


Scale	AS SHOWN		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	JB		
Drawn by	AK / AG		
Checked by	JB	No.	Description
Approved by	DB		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS SHEET 15 OF 15

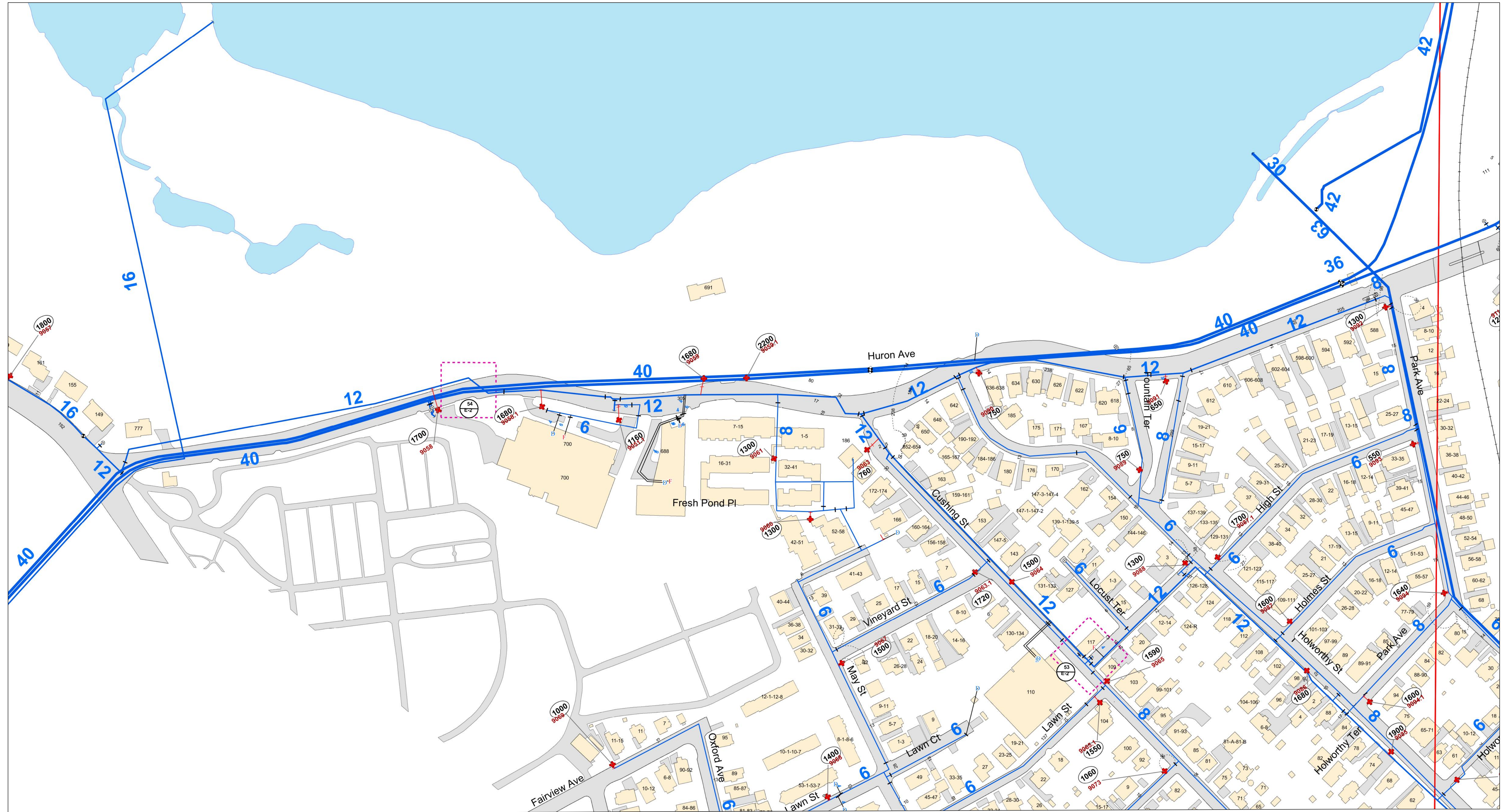
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File No.	10565



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SCALE: 1" = 100' SCALE IN FEET

NOTES:

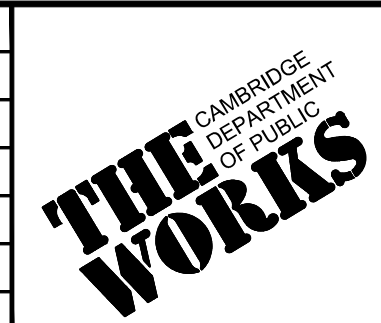
1. WATER MAIN ON HURON AVENUE WAS INSTALLED AFTER SURVEY INFORMATION USED IN THIS PLAN SET WAS COLLECTED. THE AS-BUILTS SHOWN WERE PROVIDED BY THE CAMBRIDGE WATER DEPARTMENT AND ARE MEANT TO SUPPLEMENT DATA PROVIDED IN THE SURVEY BASE PLAN.
2. CONTACT THE CAMBRIDGE WATER DEPARTMENT FOR MARK OUT OF EXISTING WATER MAINS PRIOR TO INSTALLATION OF DRAINAGE OR OTHER EXCAVATION.



TOOLE
DESIGN



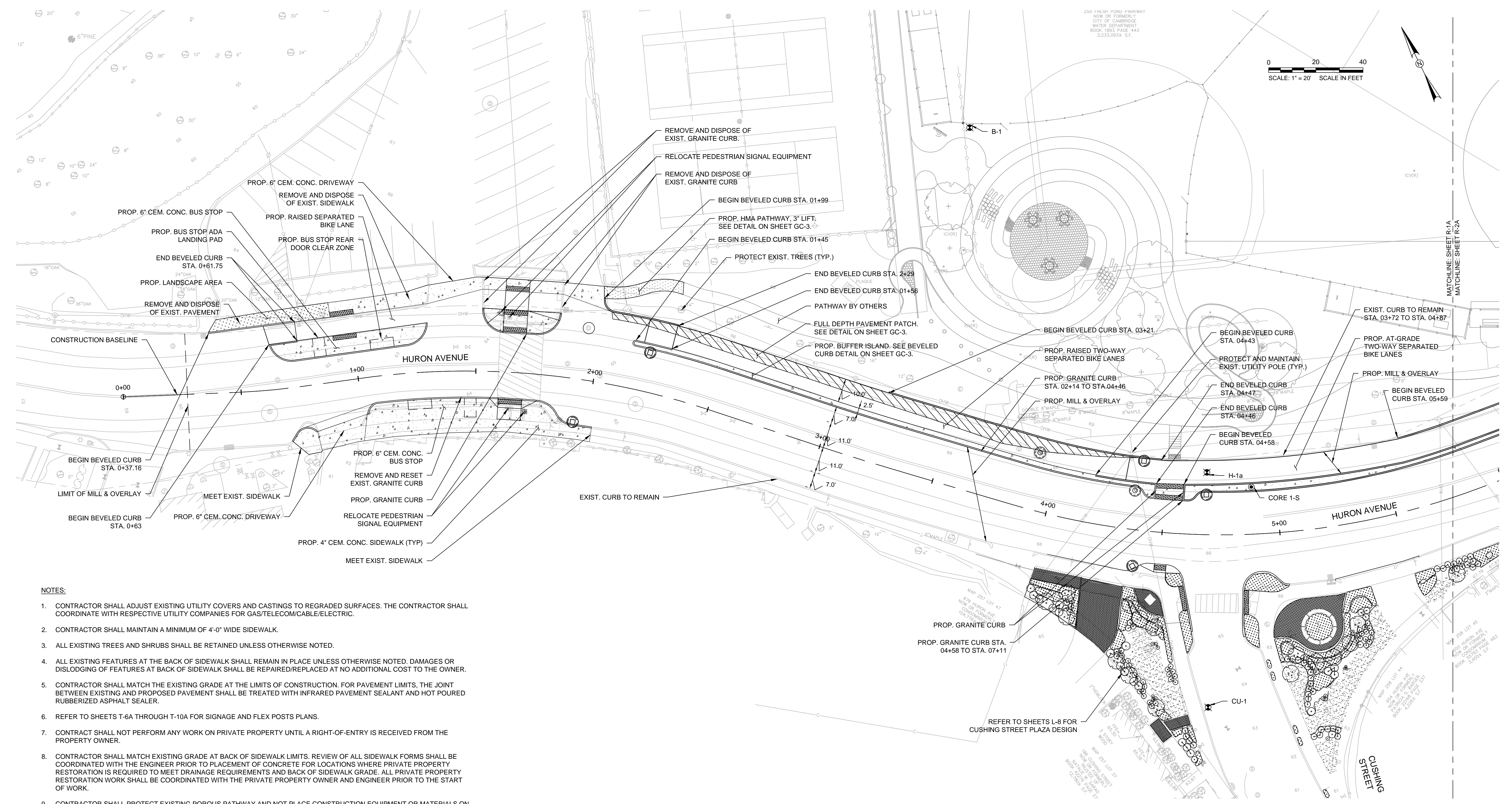
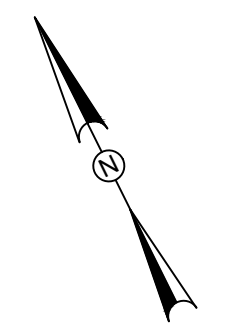
Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CITY OF CAMBRIDGE: WATER DEPARTMENT HURON AVE WATER MAIN AS-BUILT

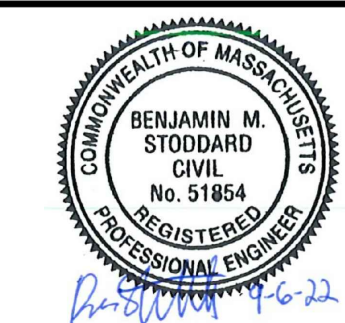
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File No.	10565

250 HURON AVENUE PARKWAY
 NOW OR FORMERLY
 CITY OF CAMBRIDGE
 WATER DEPARTMENT
 BOOK 1893 PAGE 443
 3,223,0934 S.F.



NOTES:

1. CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" WIDE SIDEWALK.
3. ALL EXISTING TREES AND SHRUBS SHALL BE RETAINED UNLESS OTHERWISE NOTED.
4. ALL EXISTING FEATURES AT THE BACK OF SIDEWALK SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED. DAMAGES OR DISLODGING OF FEATURES AT BACK OF SIDEWALK SHALL BE REPAIRED/REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL MATCH THE EXISTING GRADE AT THE LIMITS OF CONSTRUCTION. FOR PAVEMENT LIMITS, THE JOINT BETWEEN EXISTING AND PROPOSED PAVEMENT SHALL BE TREATED WITH INFRARED PAVEMENT SEALANT AND HOT POURED RUBBERIZED ASPHALT SEALER.
6. REFER TO SHEETS T-6A THROUGH T-10A FOR SIGNAGE AND FLEX POSTS PLANS.
7. CONTRACT SHALL NOT PERFORM ANY WORK ON PRIVATE PROPERTY UNTIL A RIGHT-OF-ENTRY IS RECEIVED FROM THE PROPERTY OWNER.
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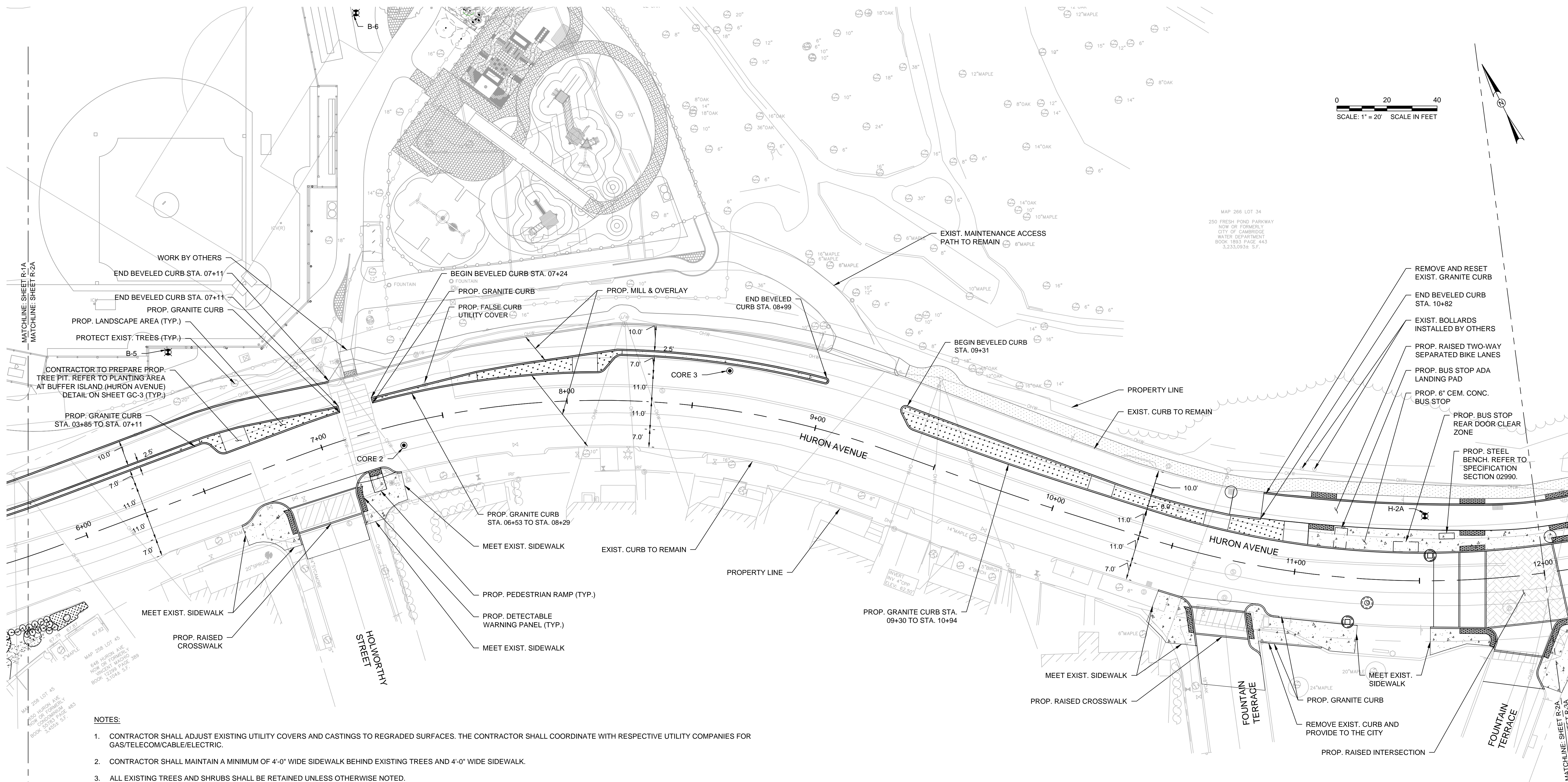


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN - STA. 00+00 TO STA. 5+75

Sheet	R-1A
File No.	10565

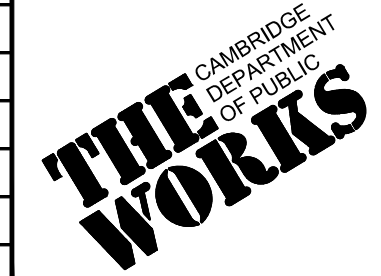


MAP 266 LOT 34
 250 FRESH POND PARKWAY
 NOW OR FORMERLY
 CITY OF CAMBRIDGE
 WATER DEPARTMENT
 BOOK 1893 PAGE 443
 3,233.083± S.F.

- NOTES:**
1. CONTRACTOR SHALL ADJUST EXISTING UTILITY COVERS AND CASTINGS TO REGRADED SURFACES. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR GAS/TELECOM/CABLE/ELECTRIC.
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 5. CONTRACTOR SHALL MATCH THE EXISTING GRADE AT THE LIMITS OF CONSTRUCTION. FOR PAVEMENT LIMITS, THE JOINT BETWEEN EXISTING AND PROPOSED PAVEMENT SHALL BE TREATED WITH INFRARED PAVEMENT SEALANT AND HOT POURED RUBBERIZED ASPHALT SEALER.
 6. REFER TO SHEETS T-6A THROUGH T-10A FOR SIGNAGE AND FLEX POSTS PLANS.
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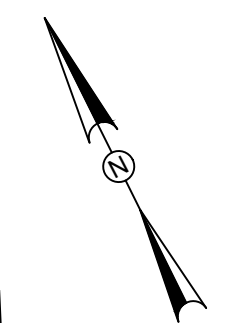


Scale	AS NOTED		
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Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
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REVISIONS			

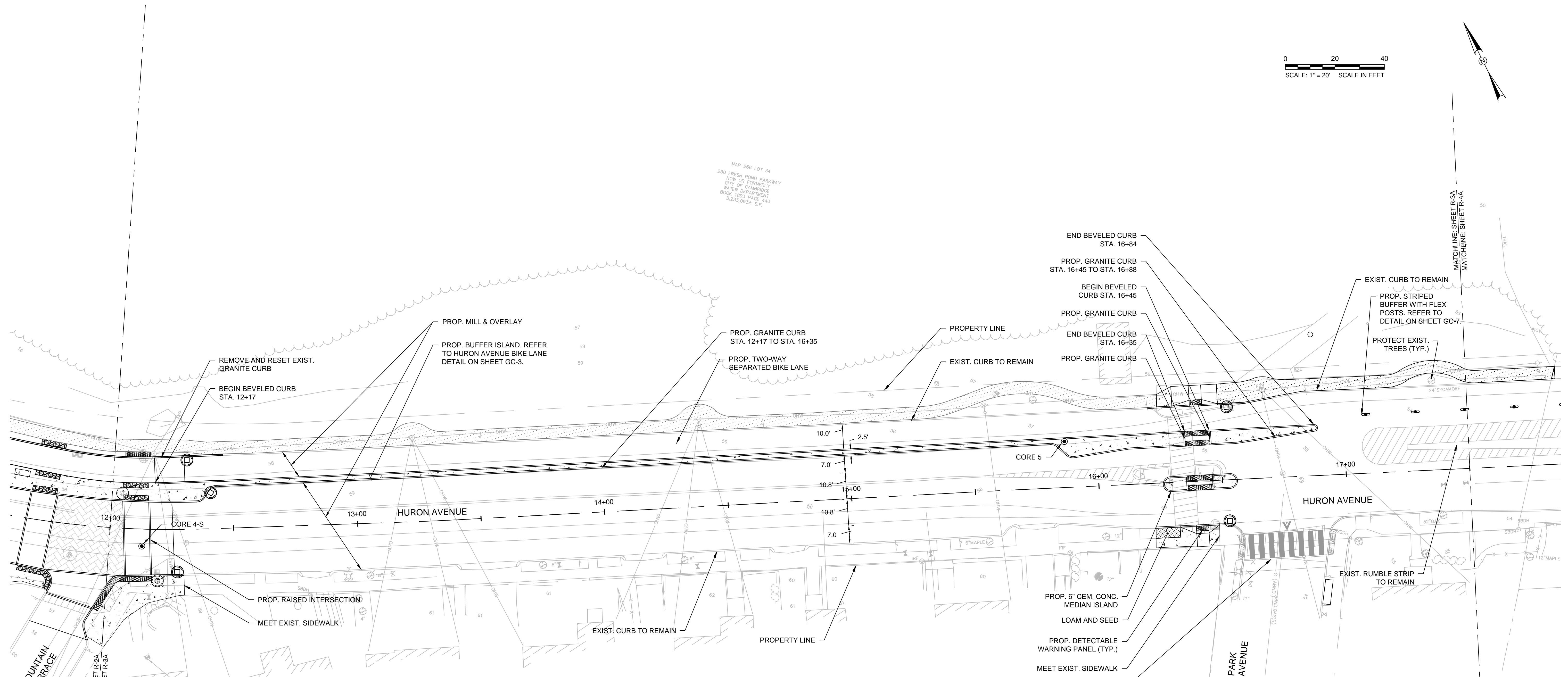


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN - STA. 5+75 TO STA. 12+00

Sheet	R-2A
File No.	10565

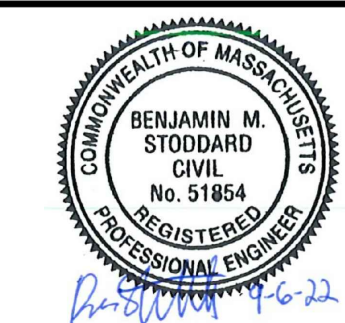


MAP 266 LOT 34
250 FRESH POND PARWAY
NOW OF FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1892 PAGE 443
3235.0831 S.F.



NOTES:

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Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS

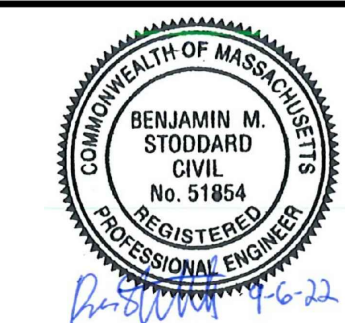
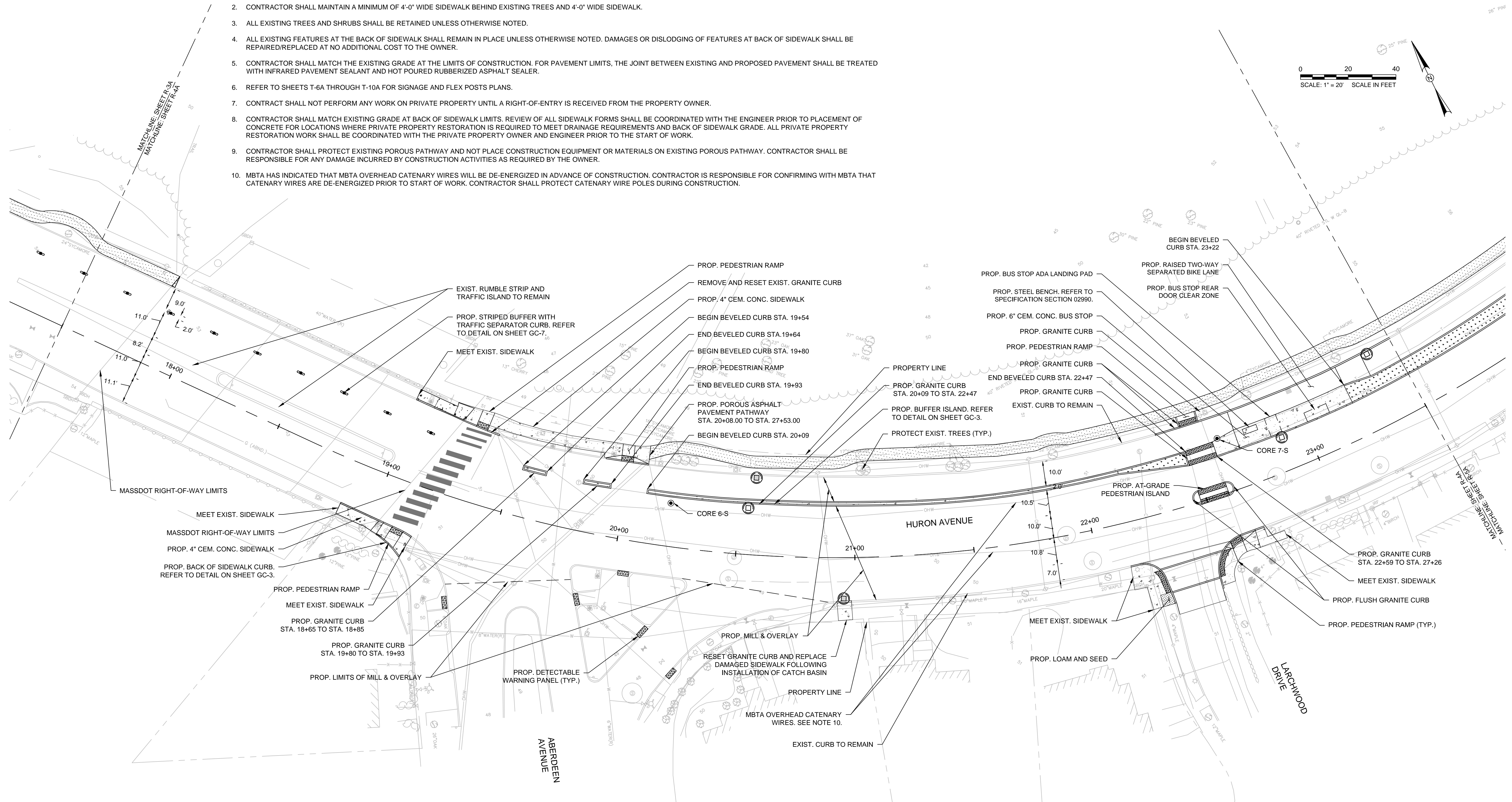
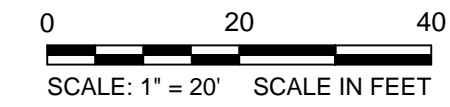


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN - STA. 12+00 TO STA. 17+50

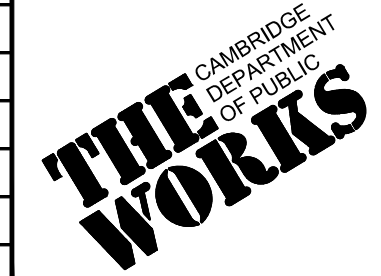
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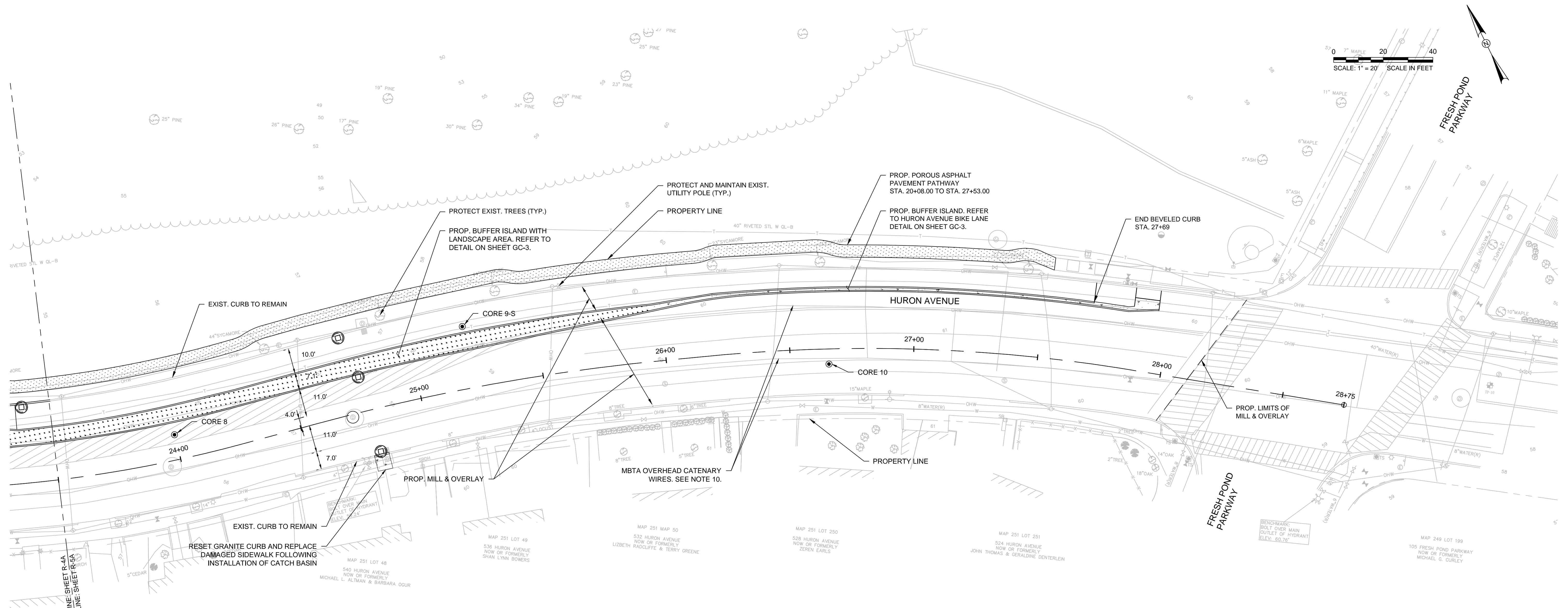


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN - STA. 17+50 TO STA. 23+50

Sheet	R-4A
File No.	10565



0 7" MAPLE 20 40
SCALE: 1" = 20' SCALE IN FEET

- NOTES:**
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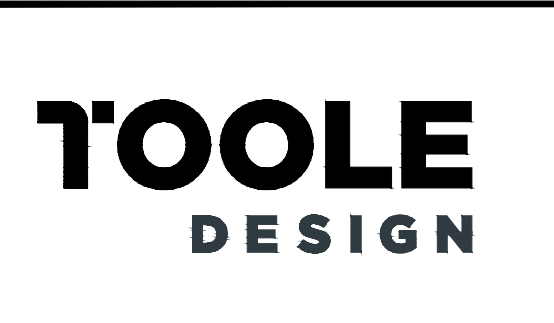
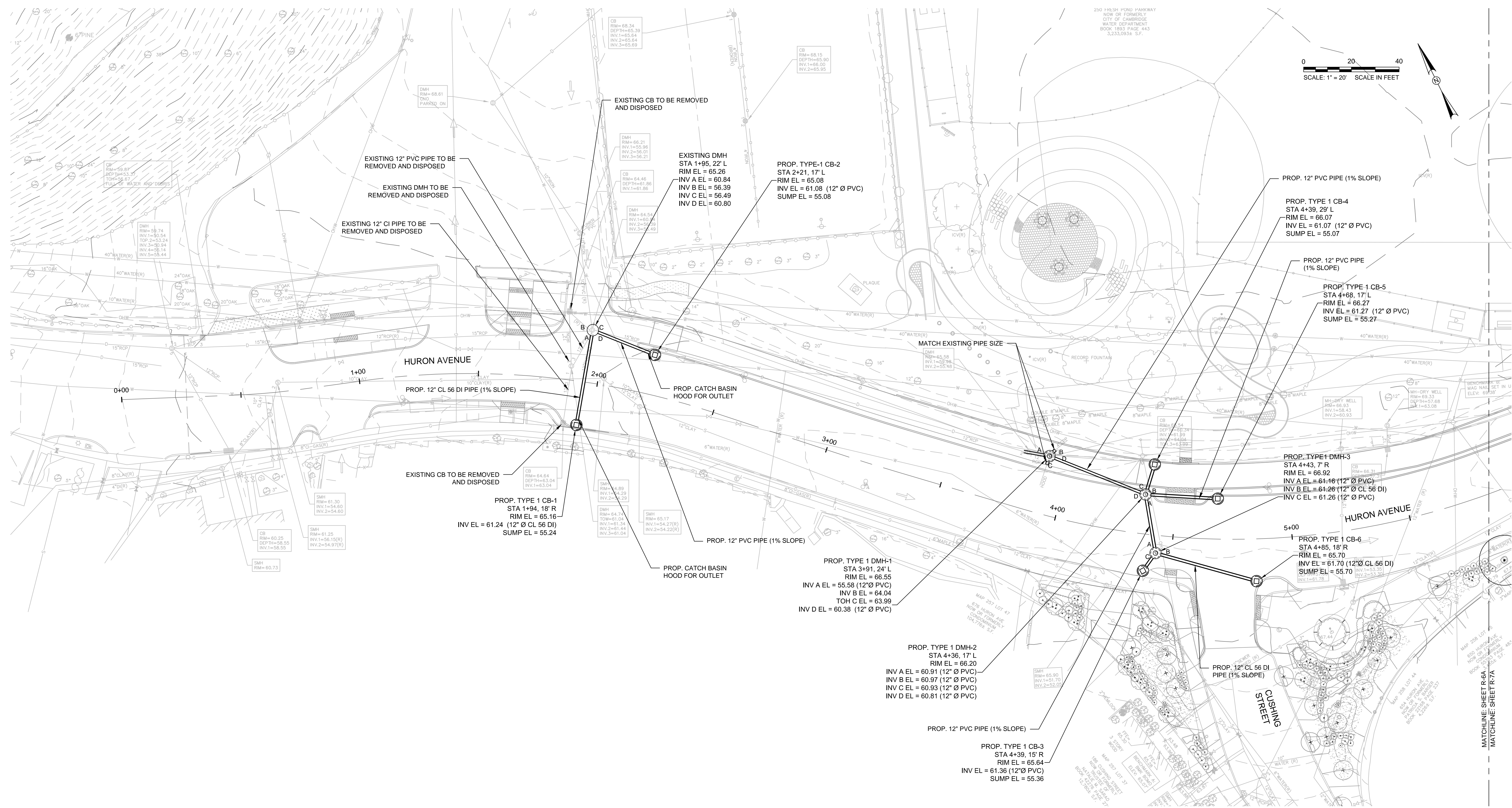


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Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		Date
			REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN - STA. 23+50 TO STA. 28+75

Sheet	R-5A
File No.	10565

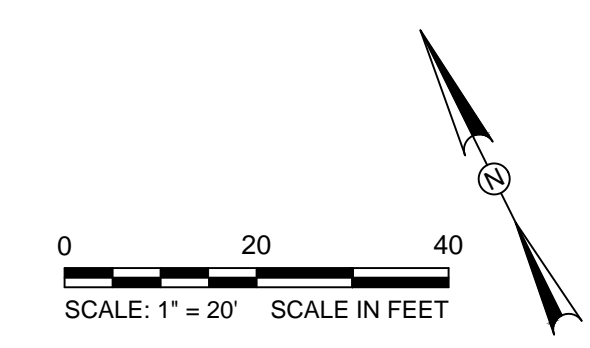


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	MCT		
Drawn by	MCT		
Checked by	BMS	No.	Description
Approved by	BMS		Date

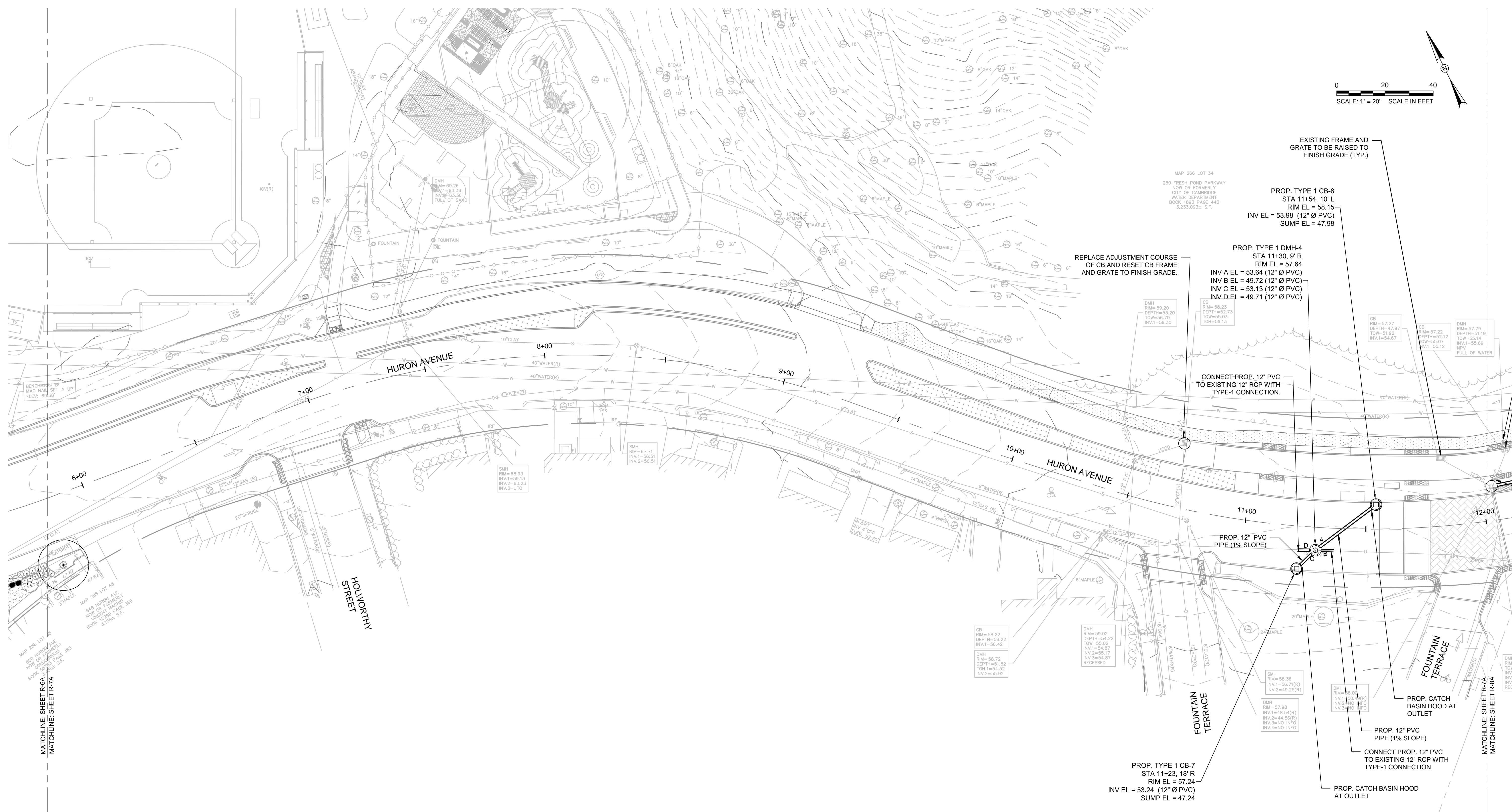


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	HURON AVENUE DRAINAGE PLAN - STA. 00+00 TO STA. 05+75

Sheet	R-6A
File No.	10565



MAP 266 LOT 34
250 FRESH POND PARKWAY
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,233.0594 S.F.



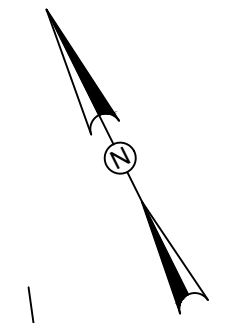
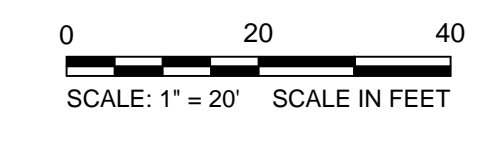
MAP 258 LOT 14
250 FRESH POND PARKWAY
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,233.0594 S.F.

MAP 258 LOT 40
840 HURON AVE
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,233.0594 S.F.

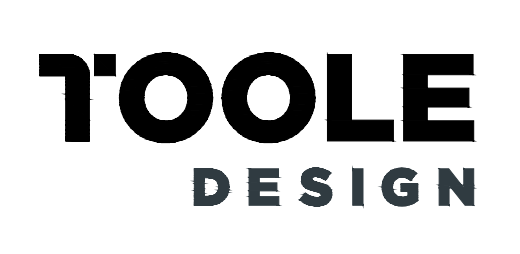
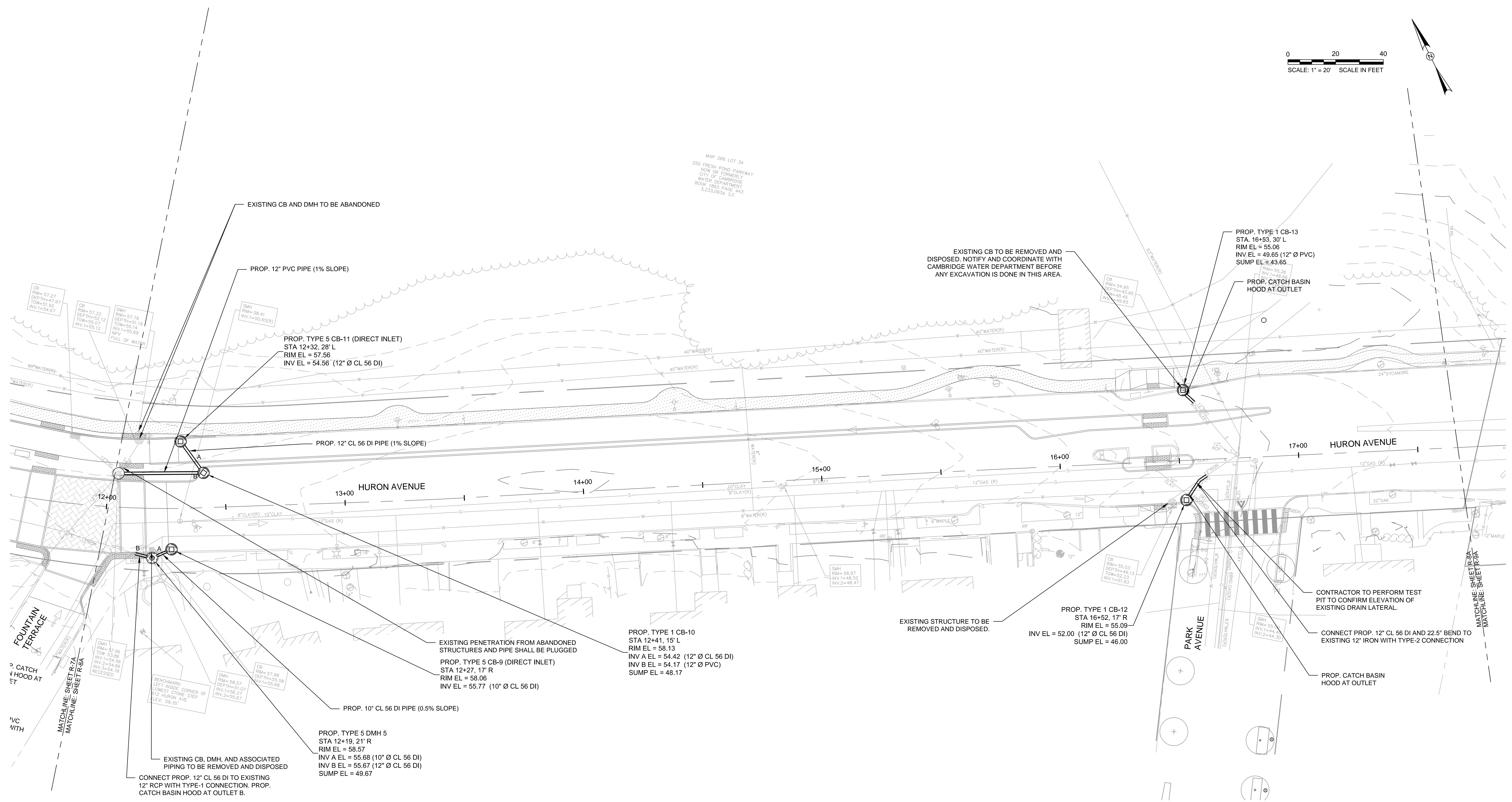
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MATCHLINE SHEET R-7A

MATCHLINE SHEET R-7A
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			Date	AUGUST 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
			Job No.	20170208.037A			Drawing	HURON AVENUE DRAINAGE PLAN - STA. 05+75 TO STA. 12+00	
			Designed by	MCT					
			Drawn by	MCT					
			Checked by	BMS	No.	Description	Date		
			Approved by	BMS	REVISIONS				



MAP 266 LOT 34
 250 FRESH POND PARKWAY
 NOW OR FORMERLY
 CITY OF CAMBRIDGE
 WATER DEPARTMENT
 BOOK 1893 PAGE 443
 3,233.0934 S.F.

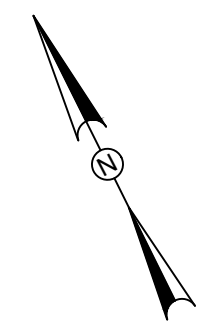
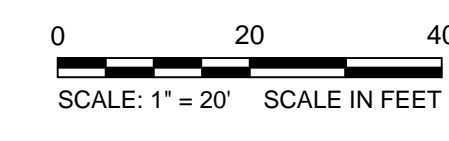
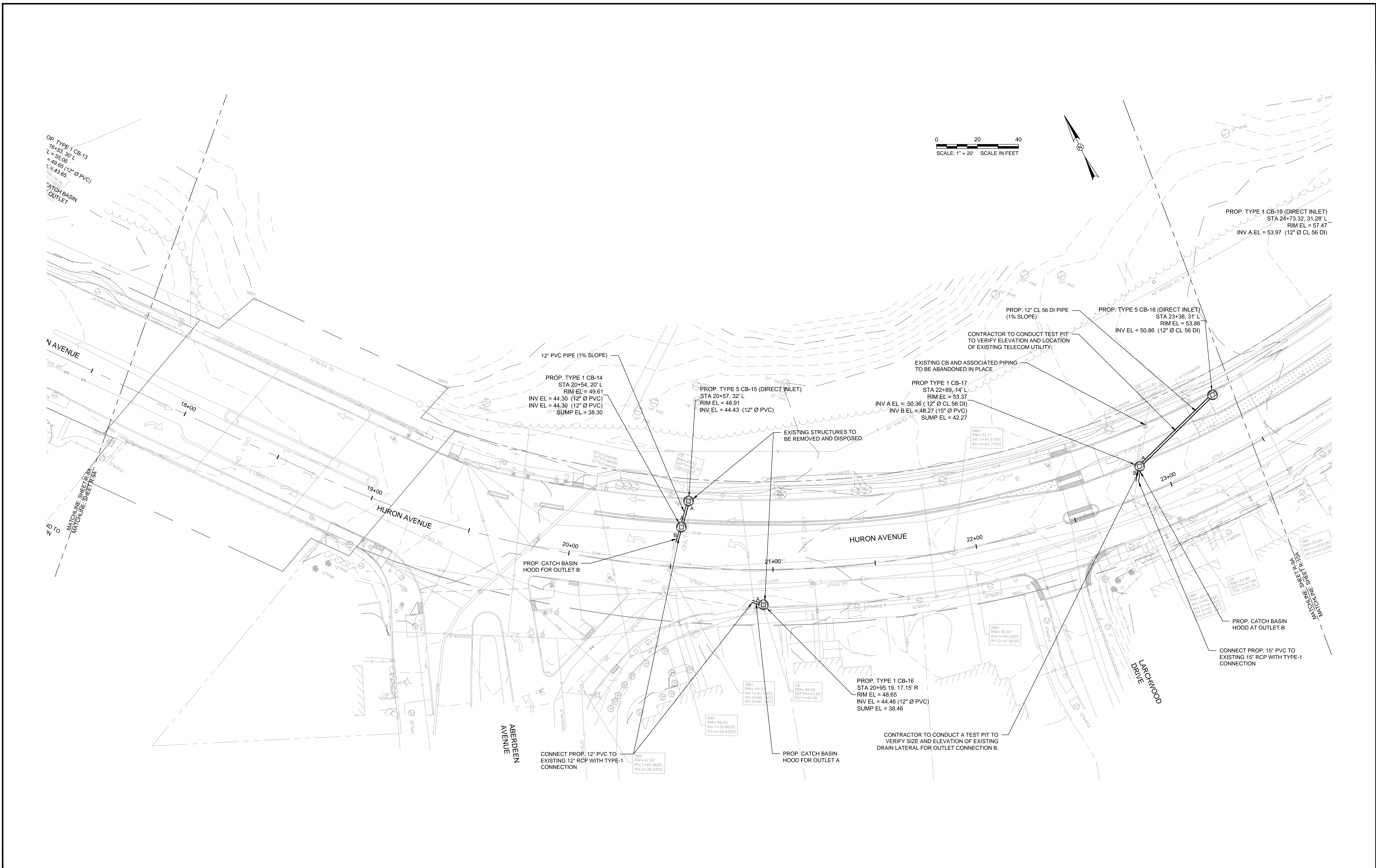


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Date	AUGUST 2022		
Job No.	20170208.037A		
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			REVISIONS



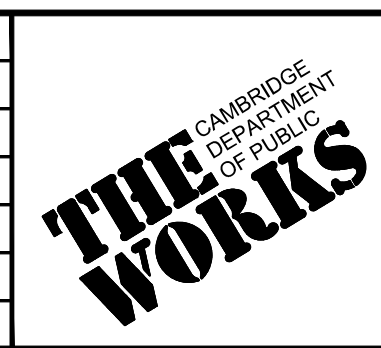
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	HURON AVENUE DRAINAGE PLAN - STA. 12+00 TO STA 17+50

Sheet	R-8A
File No.	10565



Scale	AS NOTED
Date	AUGUST 2022
Job No.	20170208.037A
Designed by	MCT
Drawn by	MCT
Checked by	BMS
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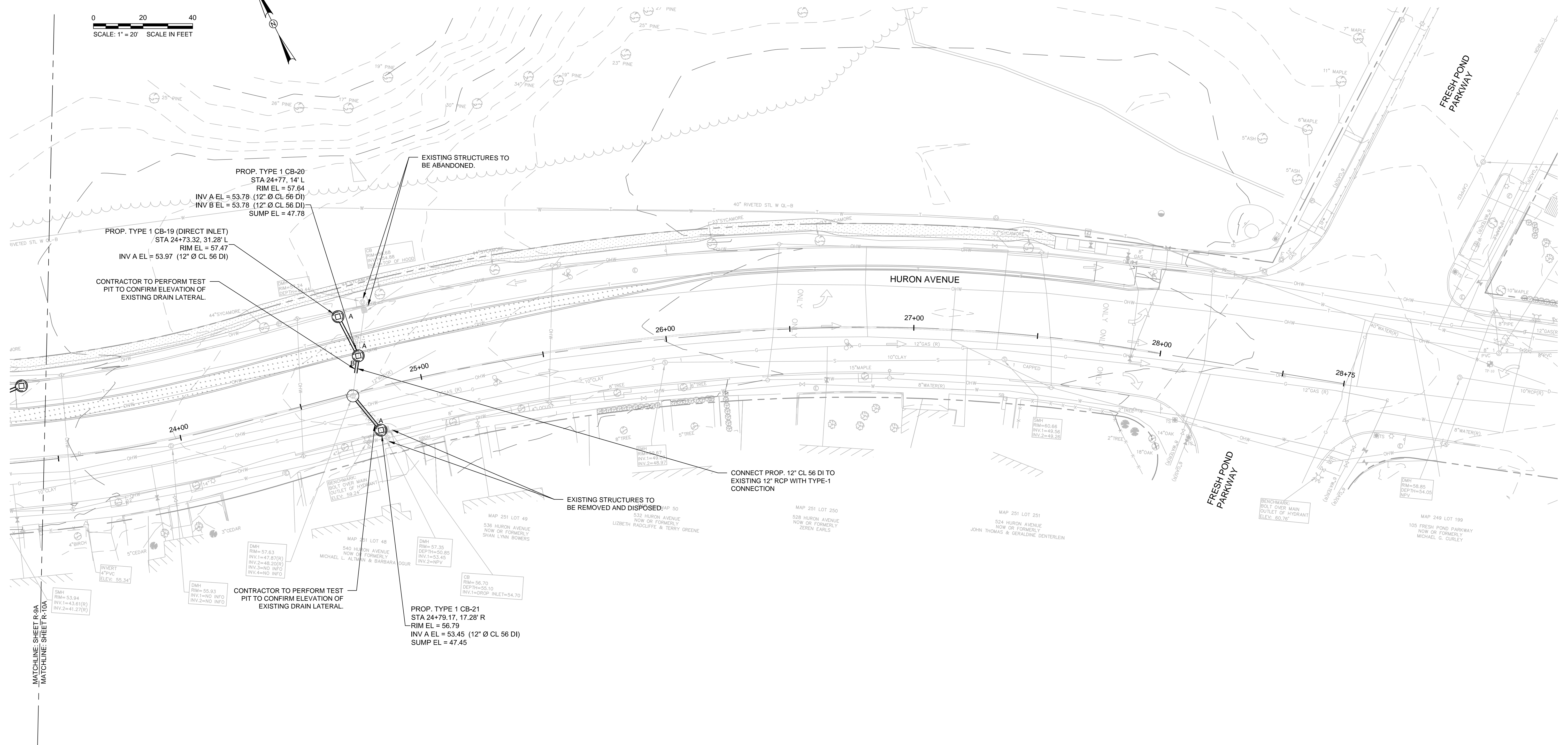
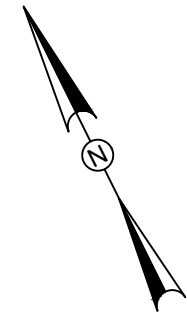
No.	Description	Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	HURON AVENUE DRAINAGE PLAN - STA. 17+50 TO STA. 23+50

Sheet	R-9A
File No.	10565

0 20 40
SCALE: 1" = 20' SCALE IN FEET



MATCHLINE: SHEET R-9A
MATCHLINE: SHEET R-10A

TOOLE
DESIGN

KLEINFELDER
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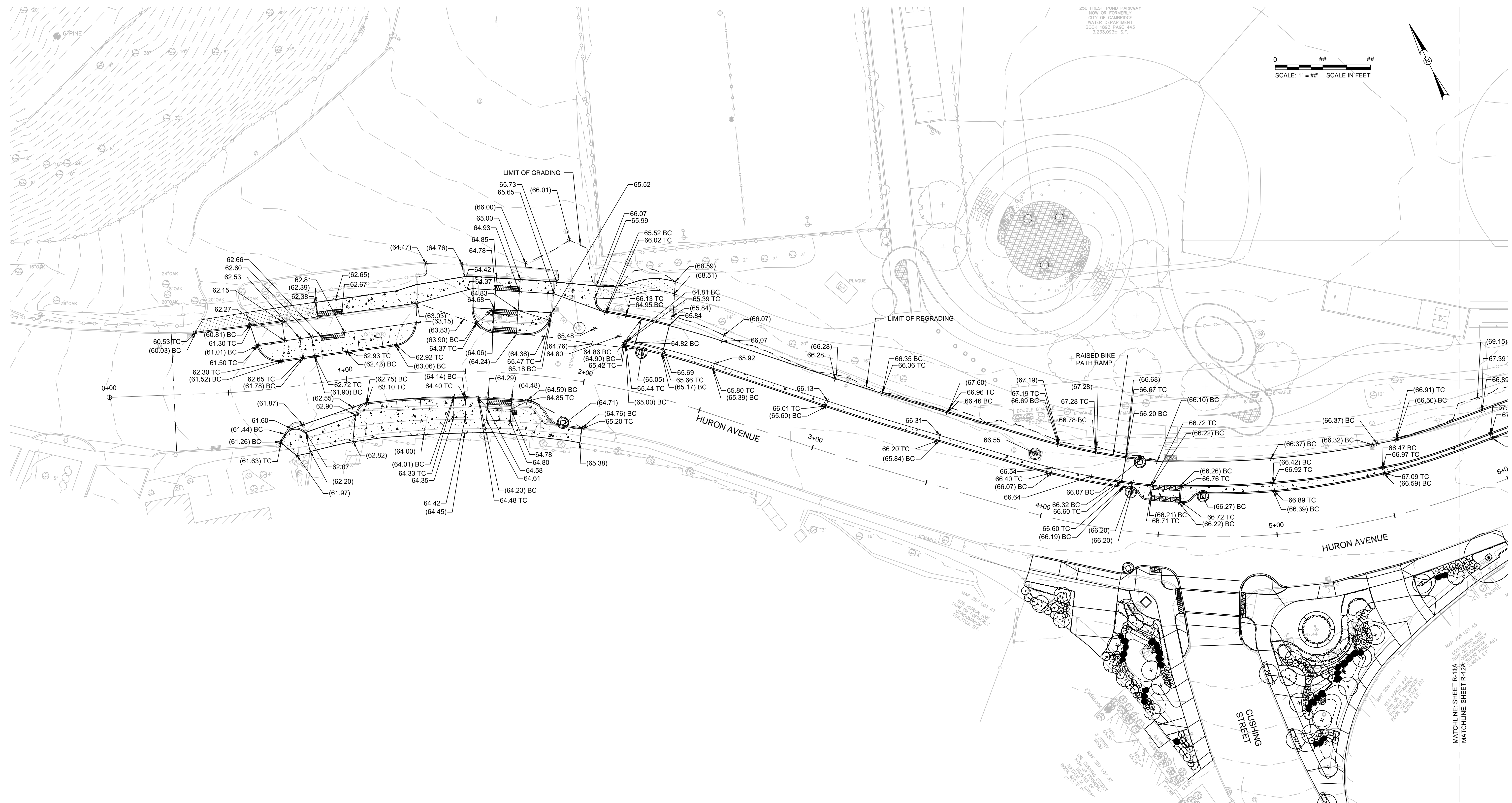


Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	MCT		
Drawn by	MCT		
Checked by	BMS	No.	Description
Approved by	BMS		Date
			REVISIONS



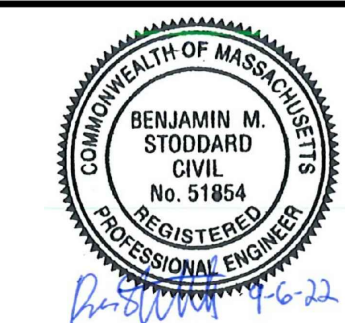
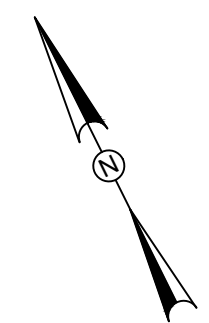
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	HURON AVENUE DRAINAGE PLAN - STA. 23+50 TO STA. 28+75

Sheet	R-10A
File No.	10565

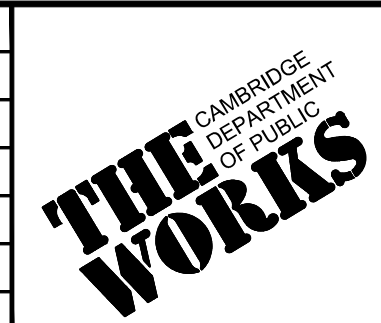


250 HURON AVENUE
 NOW OR FORMERLY
 CITY OF CAMBRIDGE
 WATER DEPARTMENT
 BOOK 1893 PAGE 443
 3,223,093a S.F.

0 ## ##
 SCALE: 1" = ##' SCALE IN FEET

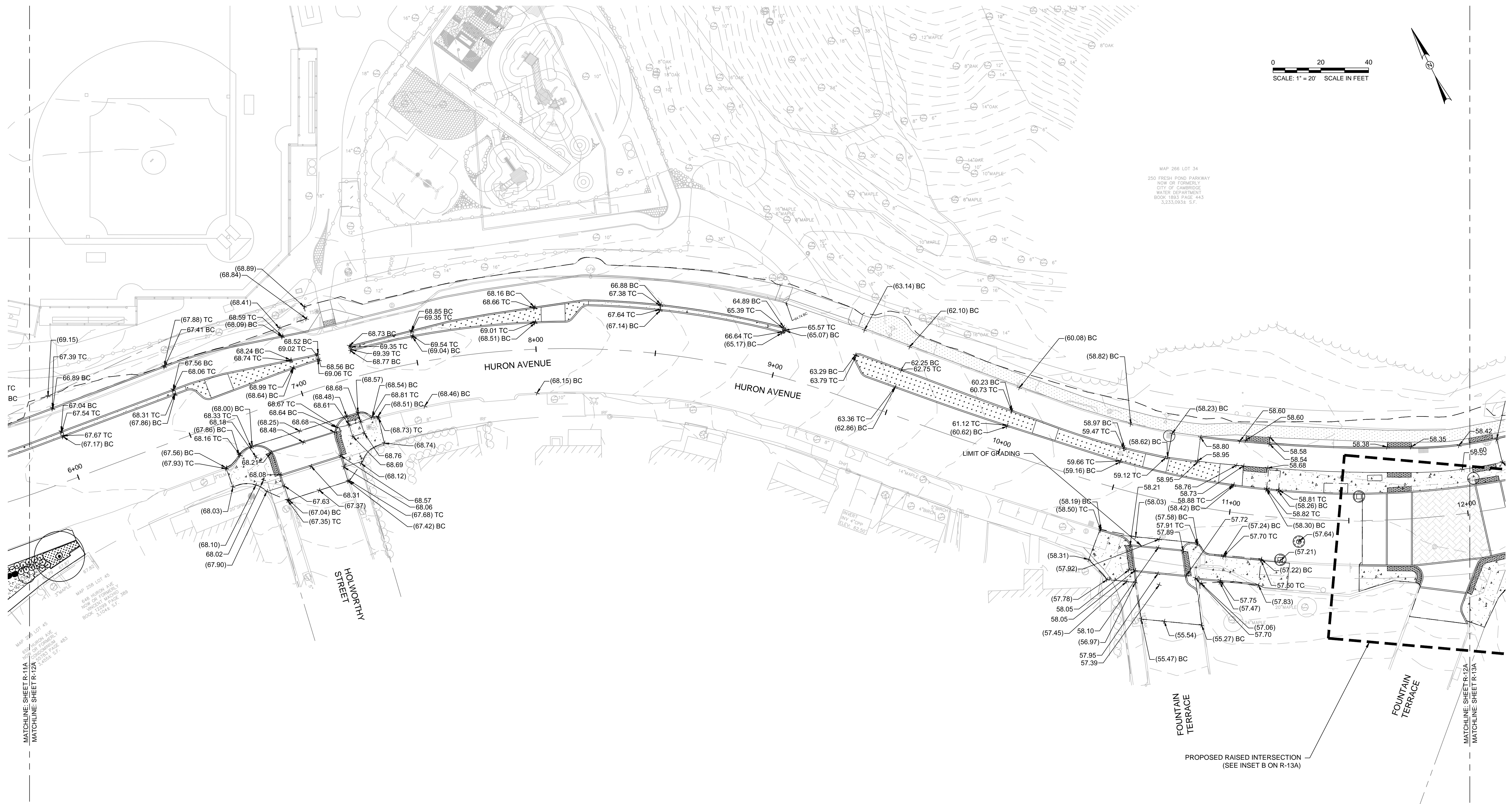


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	GRADING PLAN - STA. 0+00 TO STA. 05+75

Sheet	R-11A
File No.	10565



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SCALE: 1" = 20' SCALE IN FEET

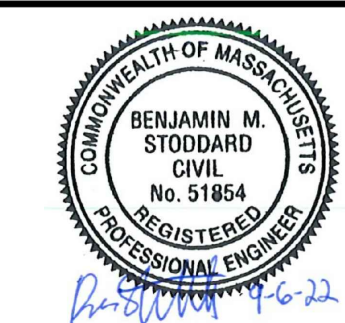
MAP 266 LOT 34
250 FRESH POND PARKWAY
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,233.0938 S.F.

MATCHLINE SHEET R-11A
MATCHLINE SHEET R-12A

MAP 266 LOT 45
640 HURON AVE
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,233.0938 S.F.

MATCHLINE SHEET R-12A
MATCHLINE SHEET R-13A

PROPOSED RAISED INTERSECTION
(SEE INSET B ON R-13A)

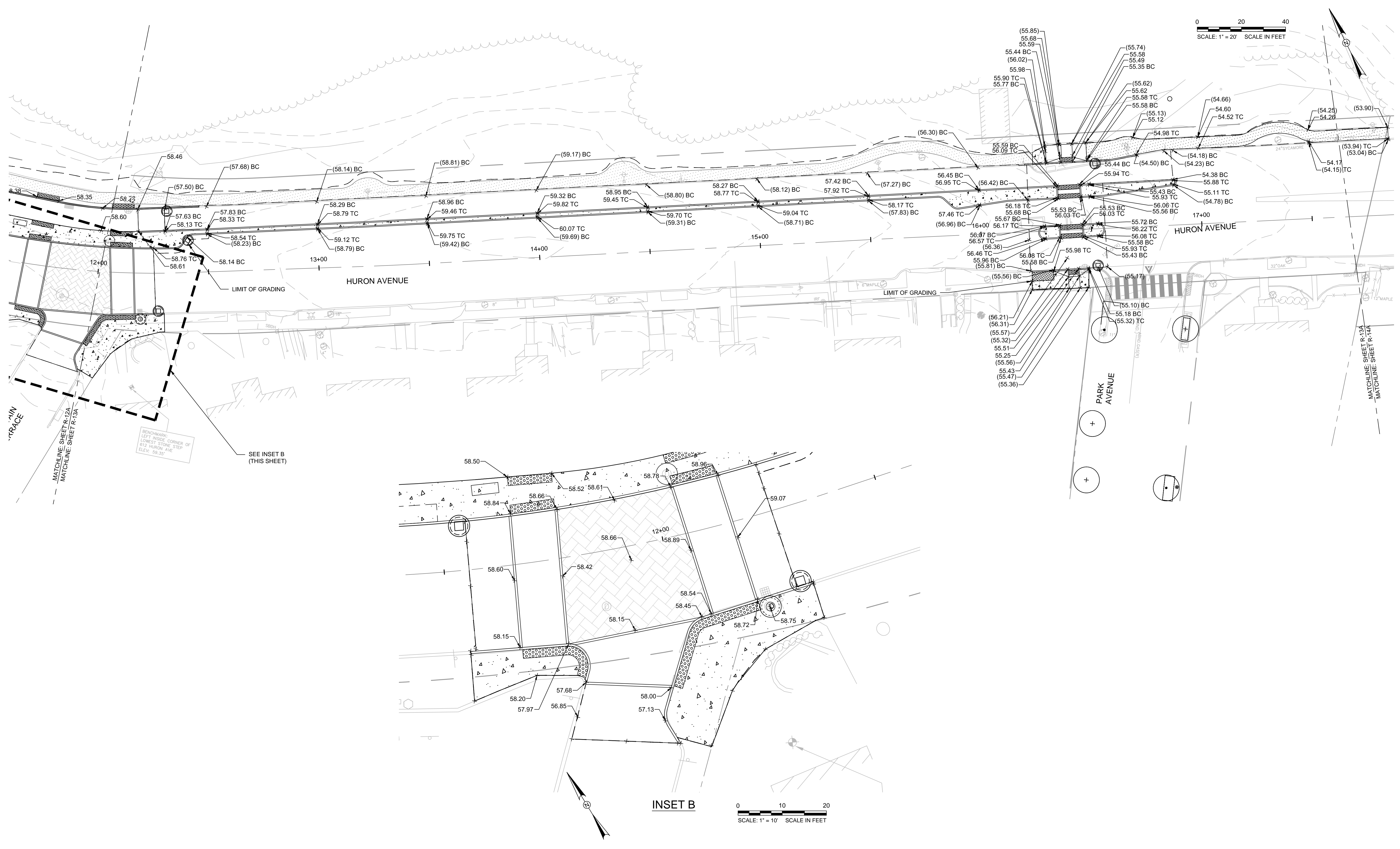


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	GRADING PLAN - STA. 5+75 TO STA. 12+00

Sheet	R-12A
File No.	10565



0 20 40
SCALE: 1" = 20' SCALE IN FEET

0 10 20
SCALE: 1" = 10' SCALE IN FEET

TOOLE
DESIGN

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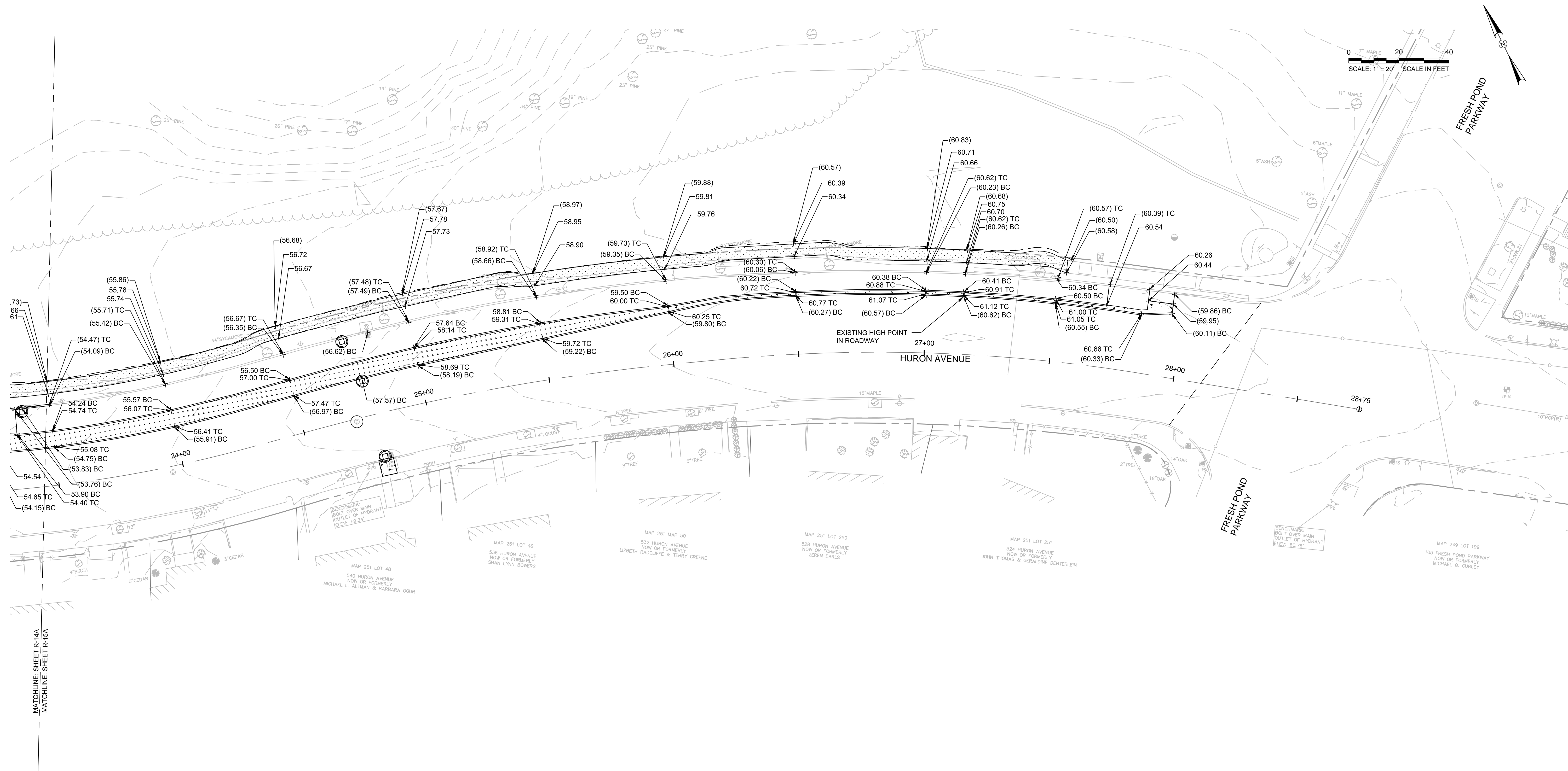
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	GRADING PLAN - STA. 12+00 TO STA. 17+50

Sheet	R-13A
File No.	10565

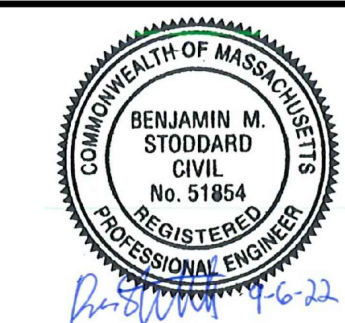


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SCALE: 1" = 20' SCALE IN FEET

			Scale AS NOTED			Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet R-14A
			Date AUGUST 2022			Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No. 10565
			Job No. 20170208.037A		Drawing GRADING PLAN - STA. 17+50 TO STA. 23+50		
			Designed by MCT				
			Drawn by MCT				
			Checked by BMS	No. Description Date			
			Approved by BMS	REVISIONS			



MATCHLINE SHEET R-14A
MATCHLINE SHEET R-15A



Scale	AS NOTED		
Date	AUGUST 2022		
Job No.	20170208.037A		
Designed by	MCT		
Drawn by	MCT		
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Approved by	BMS		REVISIONS

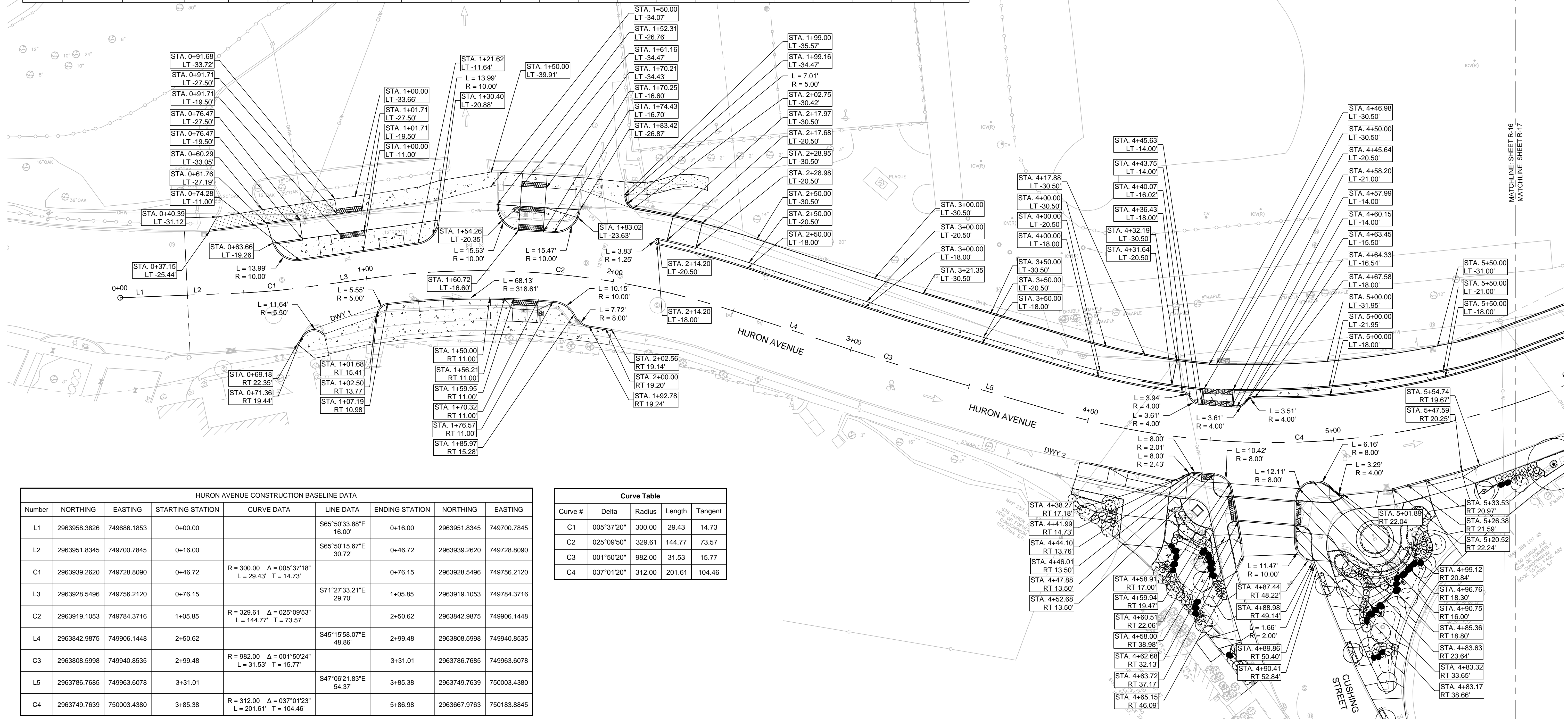
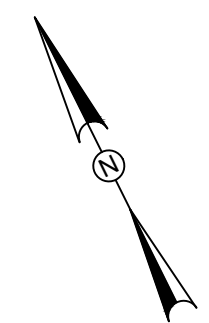


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	GRADING PLAN - STA. 23+50 TO STA.28+75

Sheet	R-15A
File No.	10565

DW#	RAMP REFERENCE POINT			DEPTH OF RAMP	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY AT GUTTER	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		ELEVATIONS											
	BASELINE	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	A	B	C	D	E	F	G (TC)	G (BC)	H	I	J (TC)	J (BC)
DWY 1	HURON AVE	00+16.35	17.97' RT	4.37-4.87	5.00	26.42	-3.32%	6.50	6.50	63.21	63.10	62.97	62.91	62.71	62.20	62.11	-	61.92	62.02	61.95	61.66
DWY 2	HURON AVE	00+65.67	25.93' LT	2.03-2.16	5.00	24.45	-4.62%	6.50	6.50	65.49	65.38	65.36	65.28	64.74	63.91	63.82	-	63.48	63.74	63.77	63.39

250 HILSH POND PARKWAY
 NOW OR FORMERLY
 CITY OF CAMBRIDGE
 WATER DEPARTMENT
 BOOK 1893 PAGE 443
 3.23.0938 S.P.



HURON AVENUE CONSTRUCTION BASELINE DATA							
Number	NORTHING	EASTING	STARTING STATION	CURVE DATA	LINE DATA	ENDING STATION	EASTING
L1	2963958.3826	749686.1853	0+00.00		S65°50'33.88"E 16.00'	0+16.00	2963951.8345
L2	2963951.8345	749700.7845	0+16.00		S65°50'15.67"E 30.72'	0+46.72	2963939.2620
C1	2963939.2620	749728.8090	0+46.72	R = 300.00 Δ = 005°37'18" L = 29.43' T = 14.73'		0+76.15	2963928.5496
L3	2963928.5496	749756.2120	0+76.15		S71°27'33.21"E 29.70'	1+05.85	2963919.1053
C2	2963919.1053	749784.3716	1+05.85	R = 329.61 Δ = 025°09'53" L = 144.77' T = 73.57'		2+50.62	2963842.9875
L4	2963842.9875	749906.1448	2+50.62		S45°15'58.07"E 48.86'	2+99.48	2963808.5998
C3	2963808.5998	749940.8535	2+99.48	R = 982.00 Δ = 001°50'24" L = 31.53' T = 15.77'		3+31.01	2963786.7685
L5	2963786.7685	749963.6078	3+31.01		S47°06'21.83"E 54.37'	3+85.38	2963749.7639
C4	2963749.7639	750003.4380	3+85.38	R = 312.00 Δ = 037°01'23" L = 201.61' T = 104.46'		5+86.98	2963667.9763

Curve Table				
Curve #	Delta	Radius	Length	Tangent
C1	005°37'20"	300.00	29.43	14.73
C2	025°09'50"	329.61	144.77	73.57
C3	001°50'20"	982.00	31.53	15.77
C4	037°01'20"	312.00	201.61	104.46

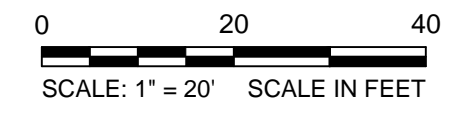


Scale	AS NOTED		
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Designed by	KEA		
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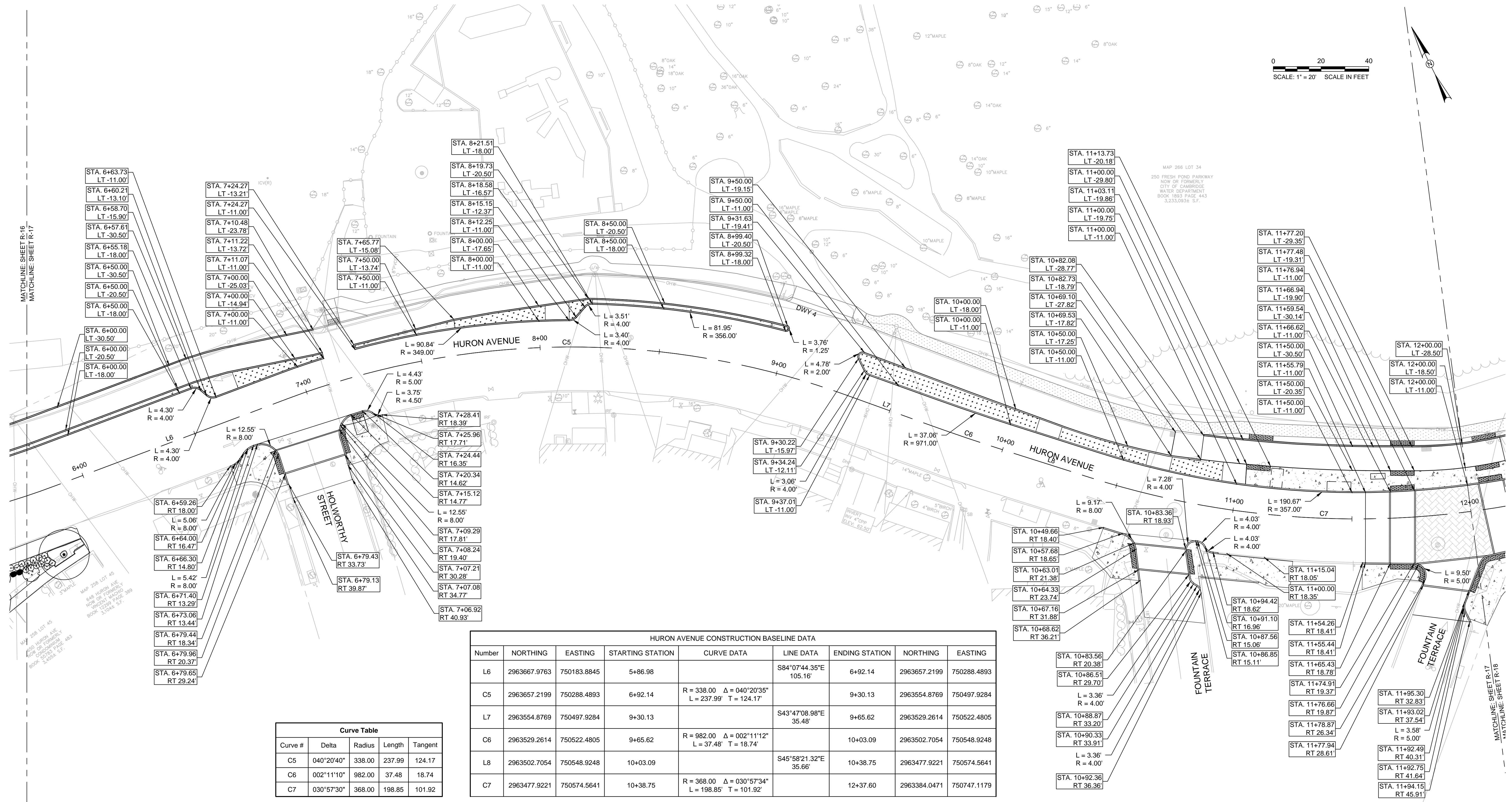


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN - STA. 00+00 TO STA. 05+75

Sheet	R-16A
File No.	10565

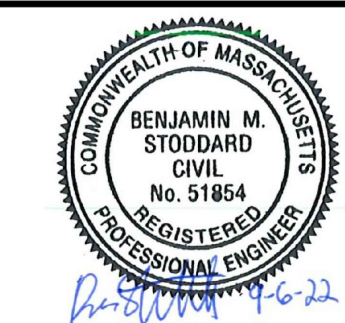


MAP 288 LOT 34
250 FRESH POND PARKWAY
NOW OR FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1893 PAGE 443
3,235.0934 S.F.



Curve Table				
Curve #	Delta	Radius	Length	Tangent
C5	040°20'40"	338.00	237.99	124.17
C6	002°11'10"	982.00	37.48	18.74
C7	030°57'30"	368.00	198.85	101.92

HURON AVENUE CONSTRUCTION BASELINE DATA							
Number	NORTHING	EASTING	STARTING STATION	CURVE DATA	LINE DATA	ENDING STATION	EASTING
L6	2963667.9763	750183.8845	5+86.98		S84°07'44.35"E 105.16'	6+92.14	2963657.2199
C5	2963657.2199	750288.4893	6+92.14	R = 338.00 Δ = 040°20'35" L = 237.99' T = 124.17'		9+30.13	2963554.8769
L7	2963554.8769	750497.9284	9+30.13		S43°47'08.98"E 35.48'	9+65.62	2963529.2614
C6	2963529.2614	750522.4805	9+65.62	R = 982.00 Δ = 002°11'12" L = 37.48' T = 18.74'		10+03.09	2963502.7054
L8	2963502.7054	750548.9248	10+03.09		S45°58'21.32"E 35.66'	10+38.75	2963477.9221
C7	2963477.9221	750574.5641	10+38.75	R = 368.00 Δ = 030°57'34" L = 198.85' T = 101.92'		12+37.60	2963384.0471

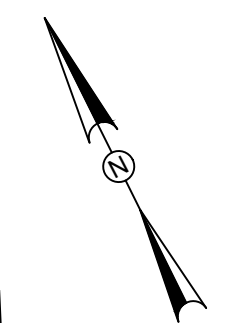


Scale	AS NOTED
Date	AUGUST 2022
Job No.	20170208.037A
Designed by	KEA
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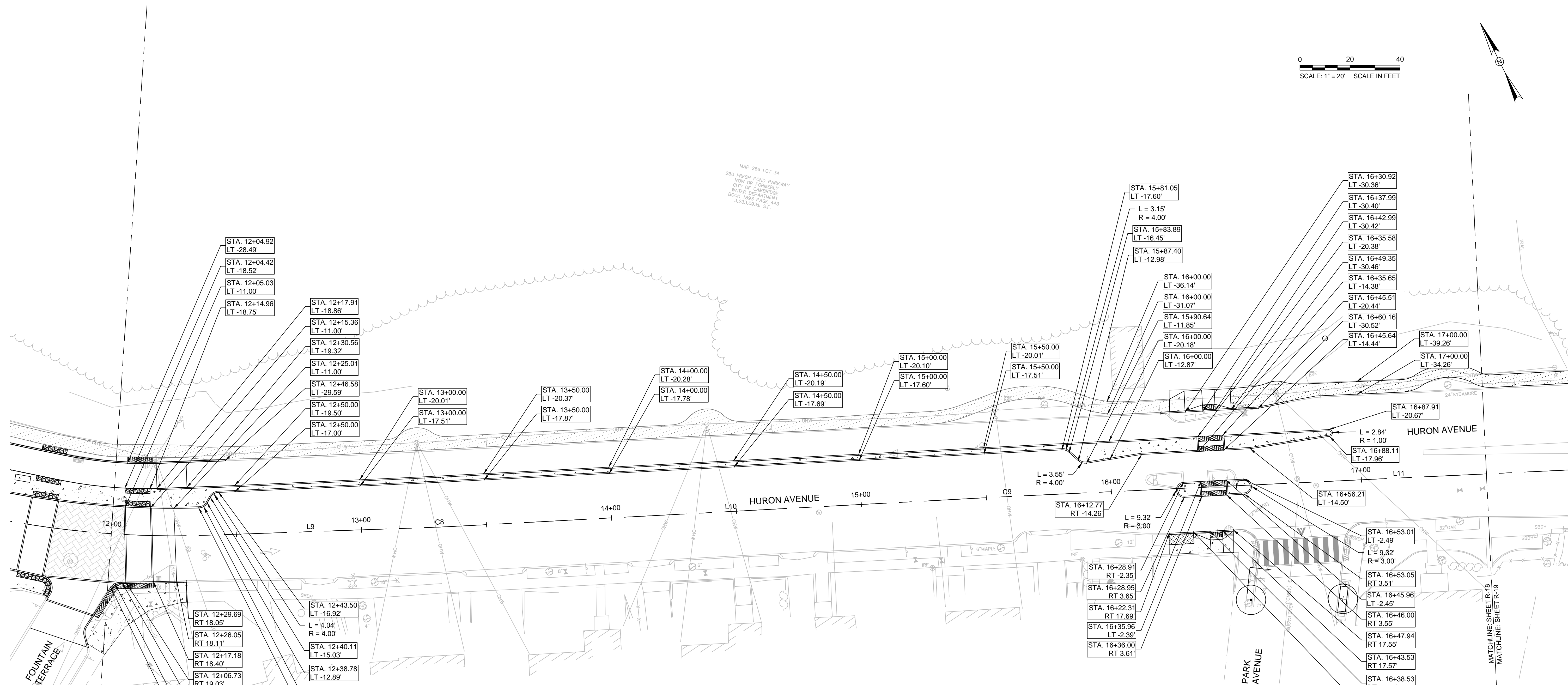


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN - STA. 05+75 TO STA. 12+00

Sheet	R-17A
File No.	10565



MAP 266 LOT 34
250 FRESH POND PARKWAY
NOW OF FORMERLY
CITY OF CAMBRIDGE
WATER DEPARTMENT
BOOK 1892 PAGE 443
323,50931 S.F.



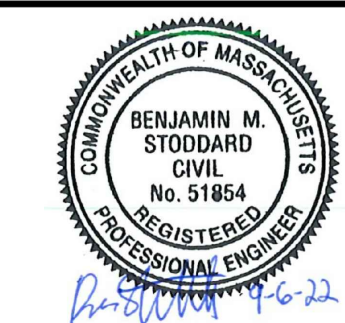
MATCHLINE SHEET R-17
MATCHLINE SHEET R-18

BENCH MARK
LEFT SIDE OF
LONELY HORSE
612 HURON
ELEV. 99.3

MATCHLINE SHEET R-18
MATCHLINE SHEET R-19

Curve Table				
Curve #	Delta	Radius	Length	Tangent
C8	001°05'40"	982.00	18.75	9.37
C9	000°22'00"	1018.00	6.51	3.25

HURON AVENUE CONSTRUCTION BASELINE DATA								
Number	NORTHING	EASTING	STARTING STATION	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L9	2963384.0471	750747.1179	12+37.60		S76°55'55.41"E 84.32'	13+21.92	2963364.9816	750829.2552
C8	2963364.9816	750829.2552	13+21.92	R = 982.00 Δ = 001°05'38" L = 18.75' T = 9.37'		13+40.67	2963360.9172	750847.5567
L10	2963360.9172	750847.5567	13+40.67		S78°01'33.29"E 214.50'	15+55.17	2963316.4150	751057.3897
C9	2963316.4150	751057.3897	15+55.17	R = 1018.00 Δ = 000°21'58" L = 6.51' T = 3.25'		15+61.68	2963315.0446	751063.7510
L11	2963315.0446	751063.7510	15+61.68		S77°39'34.80"E 306.55'	18+68.22	2963249.5302	751363.2142



Scale	AS NOTED
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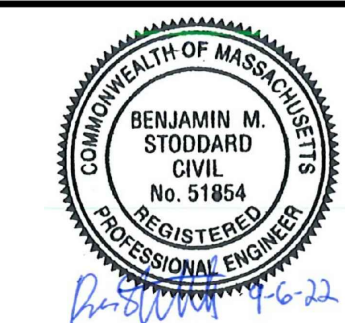
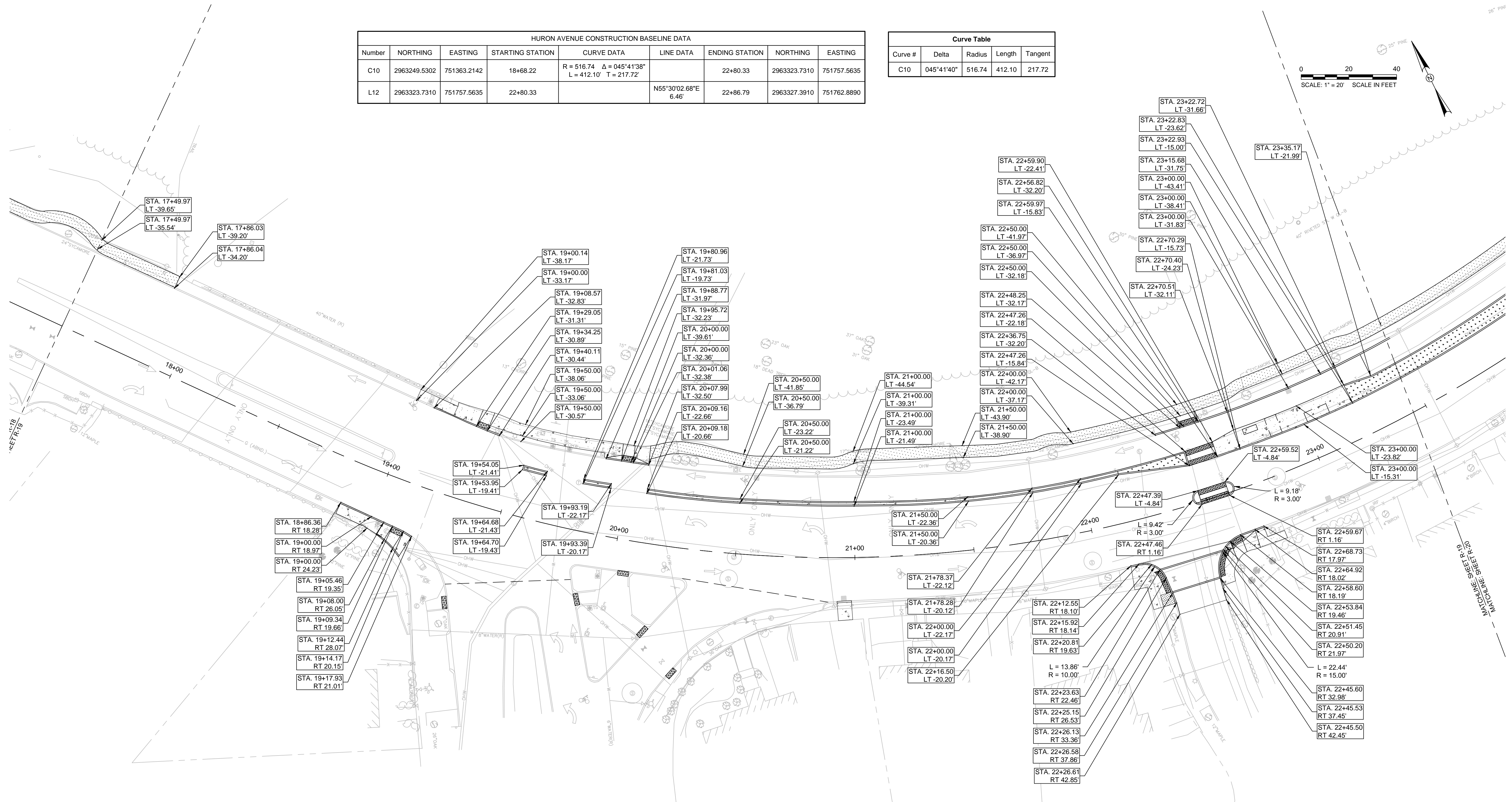
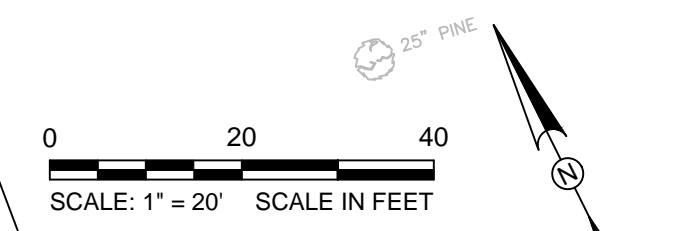


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN - STA. 12+00 TO STA. 17+50

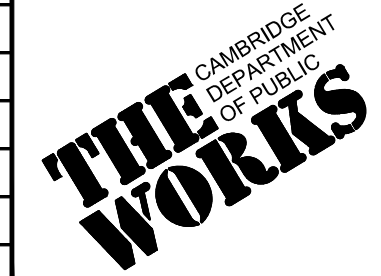
Sheet	R-18A
File No.	10565

HURON AVENUE CONSTRUCTION BASELINE DATA								
Number	NORTHING	EASTING	STARTING STATION	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C10	2963249.5302	751363.2142	18+68.22	R = 516.74 Δ = 045°41'38" L = 412.10' T = 217.72'		22+80.33	2963323.7310	751757.5635
L12	2963323.7310	751757.5635	22+80.33		N55°30'02.68"E 6.46'	22+86.79	2963327.3910	751762.8890

Curve Table				
Curve #	Delta	Radius	Length	Tangent
C10	045°41'40"	516.74	412.10	217.72

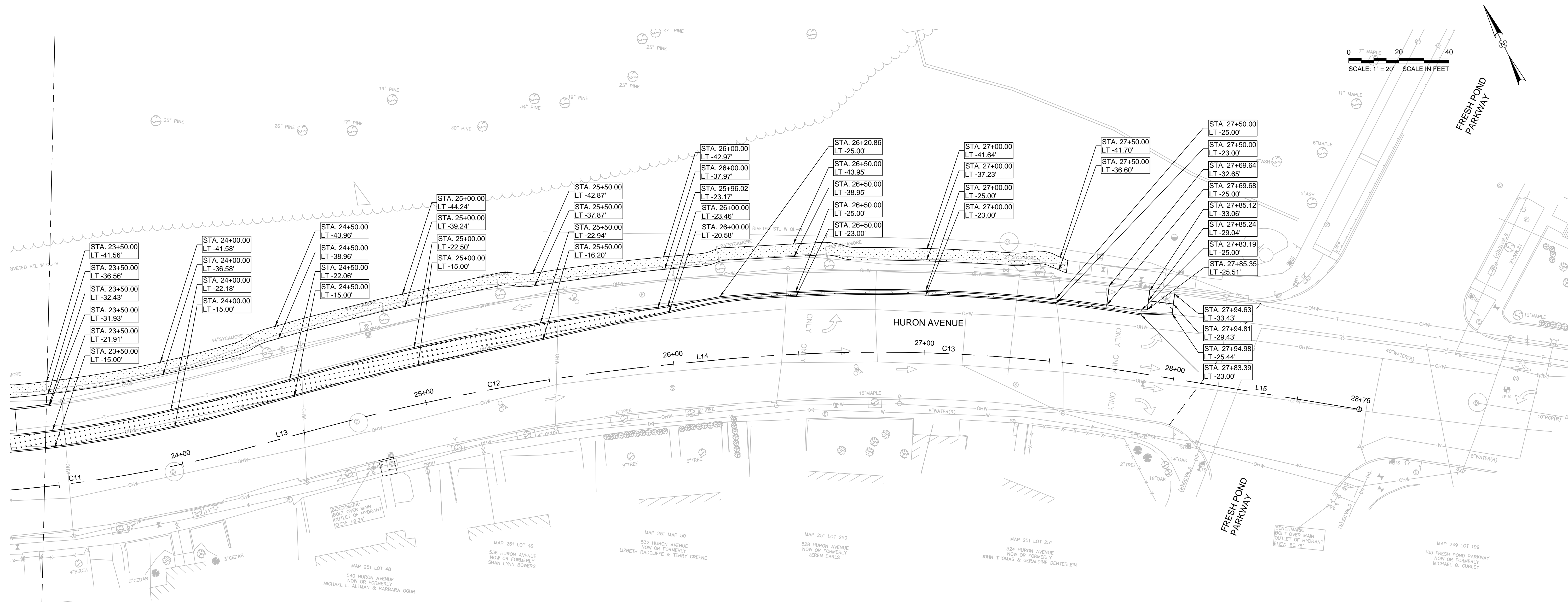


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN - STA. 17+50 TO STA. 23+50

Sheet	R-19A
File No.	10565

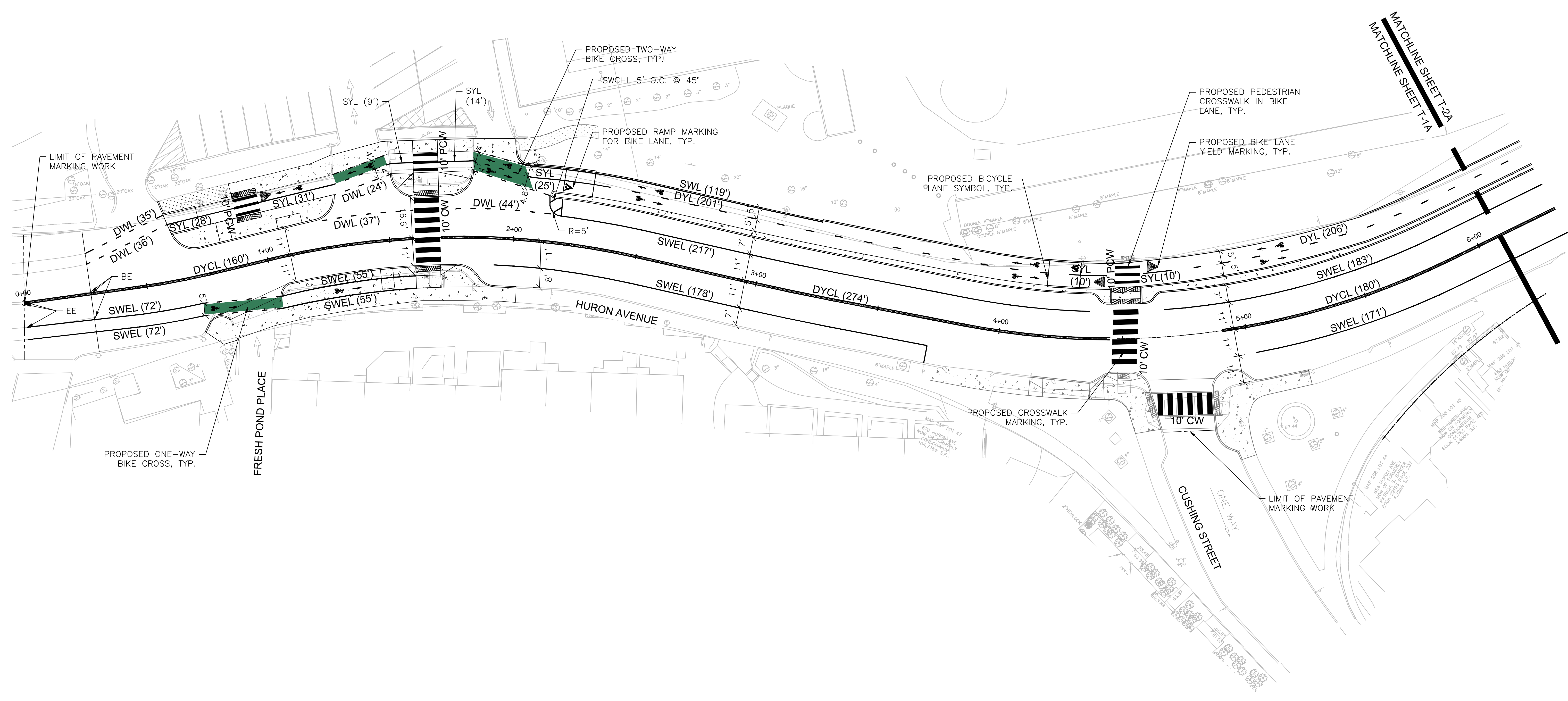
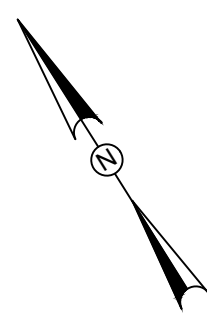
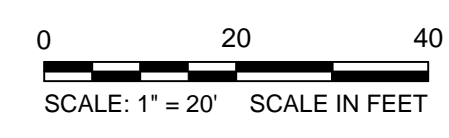


HURON AVENUE CONSTRUCTION BASELINE DATA								
Number	NORTHING	EASTING	STARTING STATION	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C11	2963327.3910	751762.8890	22+86.79	R = 527.00 Δ = 015°09'33" L = 139.43' T = 70.13'		24+26.22	2963420.5594	751866.0771
L13	2963420.5594	751866.0771	24+26.22		N40°20'29.80"E 30.15'	24+56.37	2963443.5392	751885.5941
C12	2963443.5392	751885.5941	24+56.37	R = 838.00 Δ = 009°47'09" L = 143.12' T = 71.74'		25+99.50	2963544.2062	751987.0885
L14	2963544.2062	751987.0885	25+99.50		N50°07'38.45"E 24.41'	26+23.91	2963559.8569	752005.8247
C13	2963559.8569	752005.8247	26+23.91	R = 657.30 Δ = 014°56'38" L = 171.44' T = 86.21'		27+95.35	2963650.3566	752150.8593
L15	2963650.3566	752150.8593	27+95.35		N64°52'56.10"E 79.65'	28+75.00	2963684.1670	752222.9785

Curve Table				
Curve #	Delta	Radius	Length	Tangent
C11	015°09'30"	527.00	139.43	70.13
C12	009°47'10"	838.00	143.12	71.74
C13	014°56'40"	657.30	171.44	86.21

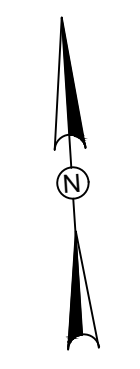
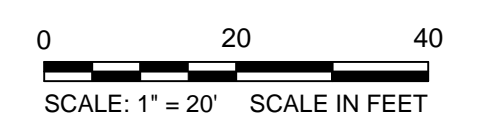
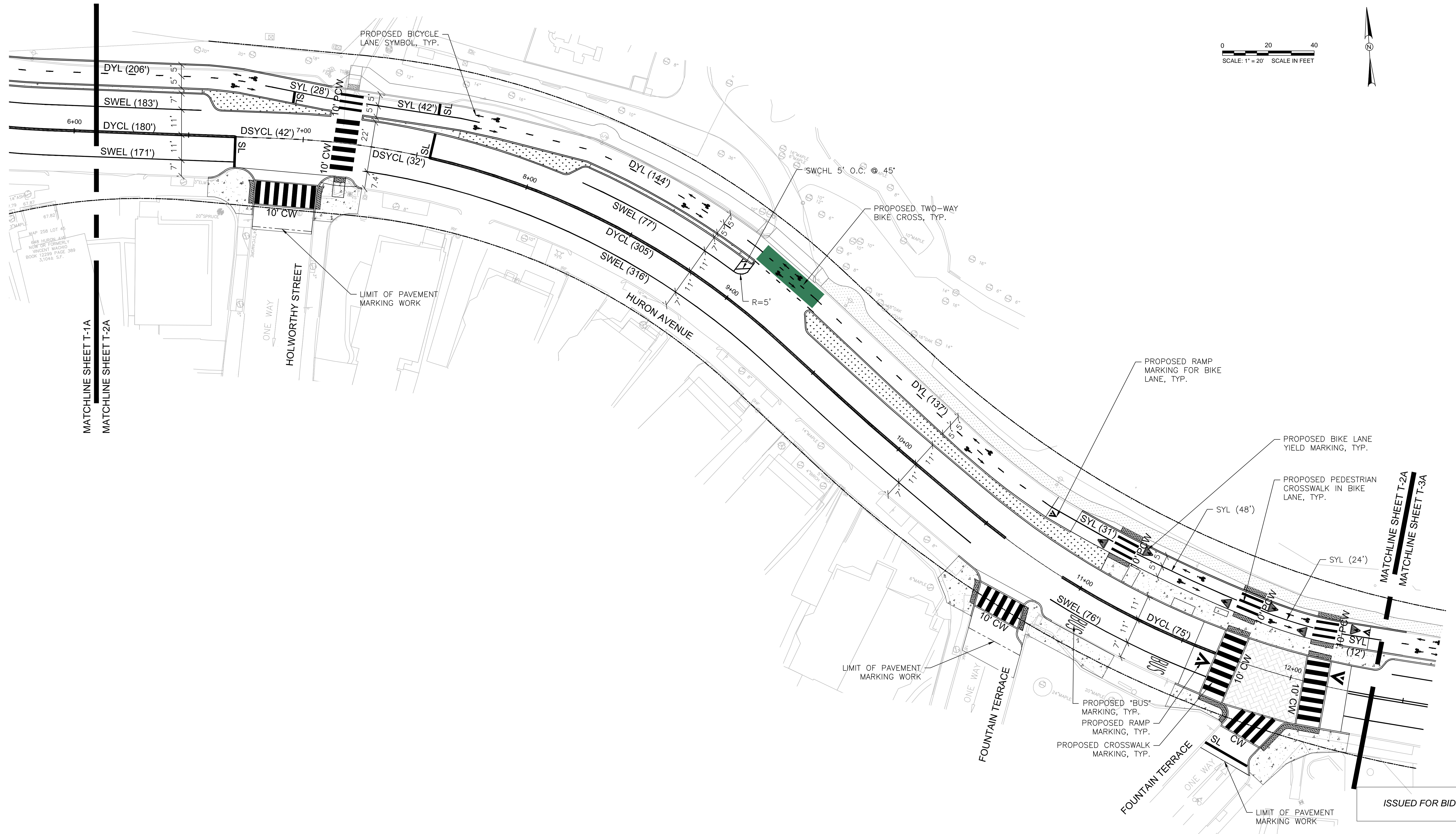
MATCHLINE SHEET R-19
MATCHLINE SHEET R-20

			Scale	AS NOTED		Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	R-20A
			Date	AUGUST 2022		Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No.	10565
			Job No.	20170208.037A			Drawing	CURB TIE PLAN - STA. 23+50 TO STA. 28+75	
			Designed by	KEA					
			Drawn by	KEA					
			Checked by	BMS	No.	Description			
			Approved by	BMS	REVISIONS				



ISSUED FOR BID

					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td><td></td><td></td></tr> <tr><td>Date</td><td>SEPTEMBER 2022</td><td></td><td></td></tr> <tr><td>Job No.</td><td>20170208.037A</td><td></td><td></td></tr> <tr><td>Designed by</td><td>SA</td><td></td><td></td></tr> <tr><td>Drawn by</td><td>SA</td><td></td><td></td></tr> <tr><td>Checked by</td><td>MLD</td><td>No.</td><td>Description</td></tr> <tr><td>Approved by</td><td>MLD</td><td></td><td>REVISIONS</td></tr> </table>	Scale	AS NOTED			Date	SEPTEMBER 2022			Job No.	20170208.037A			Designed by	SA			Drawn by	SA			Checked by	MLD	No.	Description	Approved by	MLD		REVISIONS		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Client</td><td>CITY OF CAMBRIDGE, MASSACHUSETTS</td></tr> <tr><td>Project</td><td>CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>PAVEMENT MARKING PLANS</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	Drawing	PAVEMENT MARKING PLANS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>T-1A</td></tr> <tr><td>File No.</td><td>10565</td></tr> </table>	Sheet	T-1A	File No.	10565
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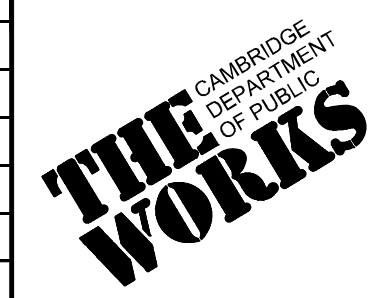
MATCHLINE SHEET T-1A
MATCHLINE SHEET T-2A

MATCHLINE SHEET T-2A
MATCHLINE SHEET T-3A

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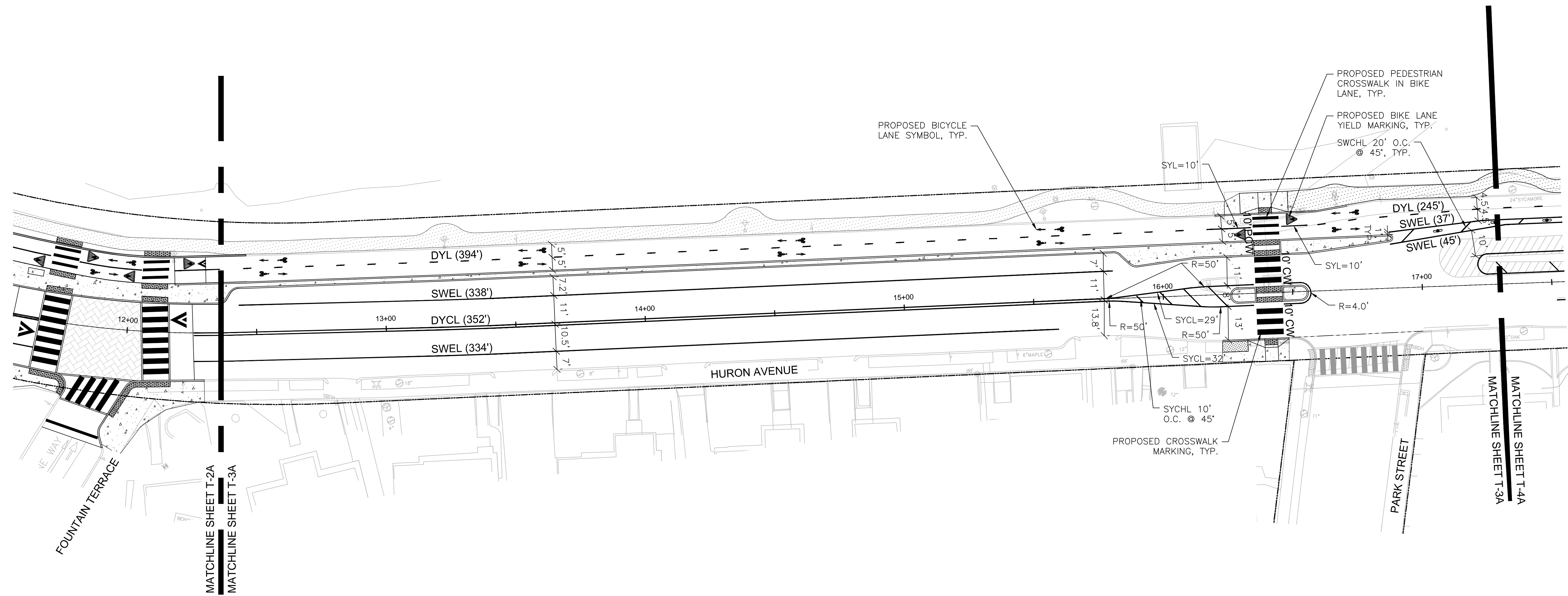
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Date	SEPTEMBER 2022		
Job No.	20170208.037A		
Designed by	SA		
Drawn by	SA		
Checked by	MLD	No.	Description
Approved by	MLD		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PAVEMENT MARKING PLANS

Sheet	T-2A
File No.	10565

0 20 40
SCALE: 1" = 20' SCALE IN FEET



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HATCH
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tel. 978-740-0096 www.hatch.com

**TOOLE
DESIGN**



SEPTEMBER 6, 2022

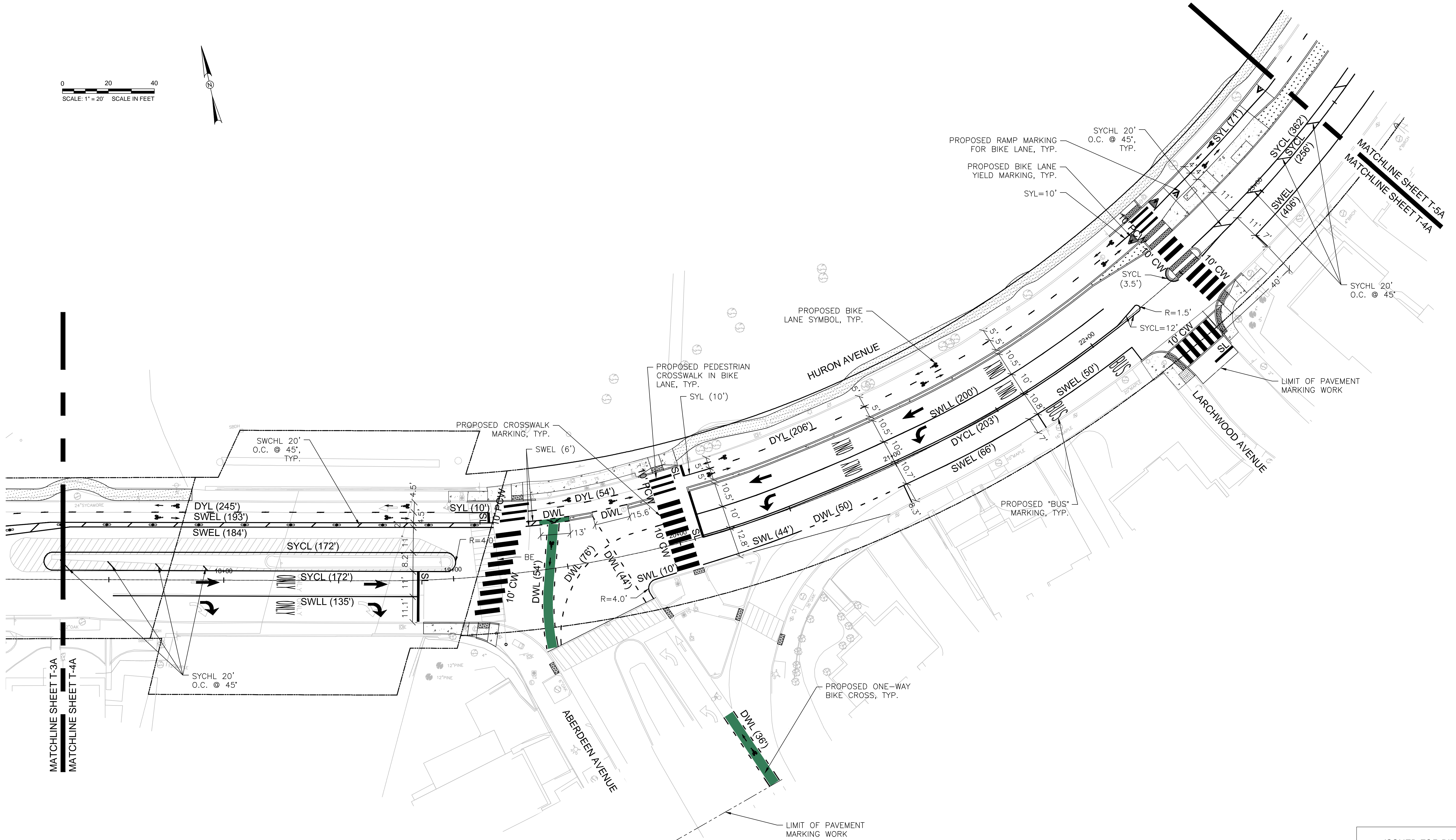
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Drawing	PAVEMENT MARKING PLANS

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0 20 40
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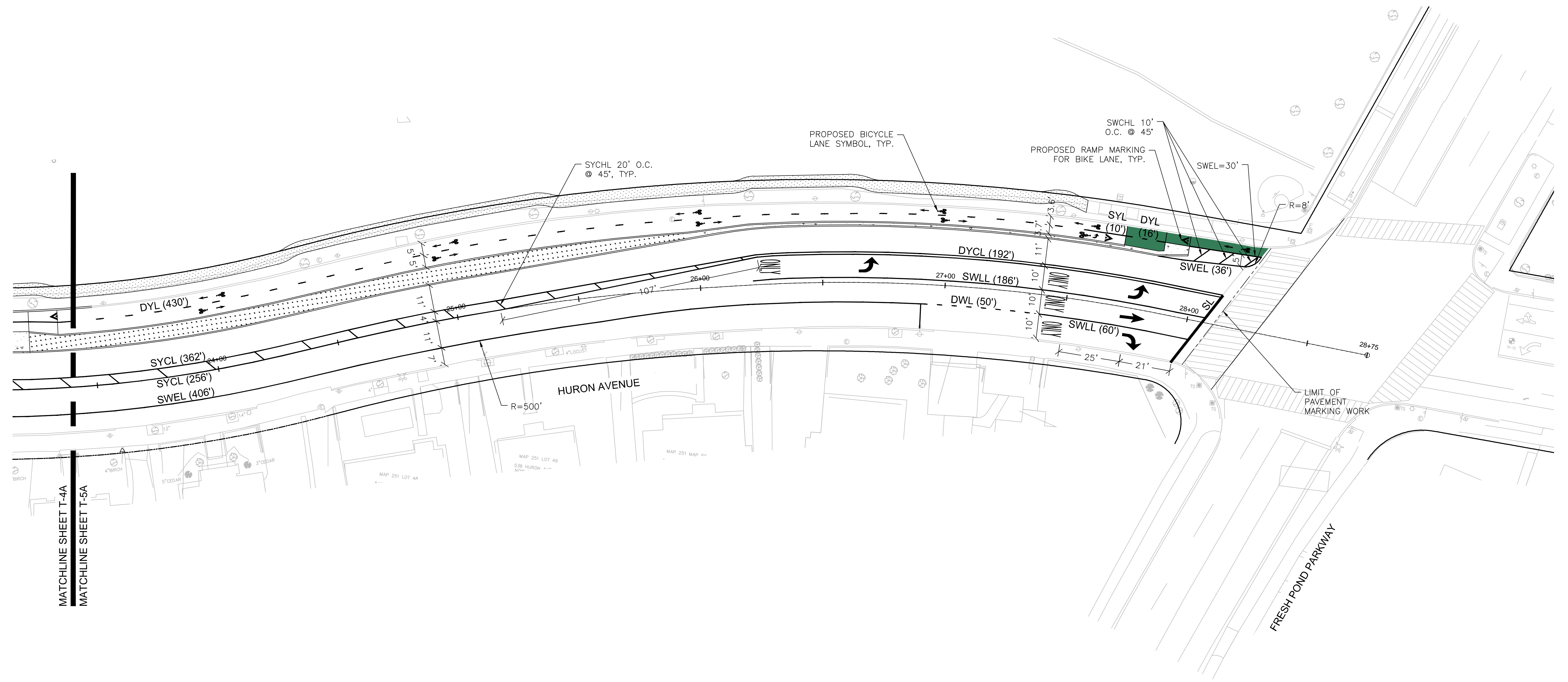
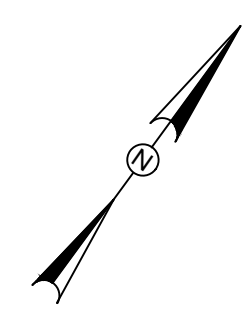
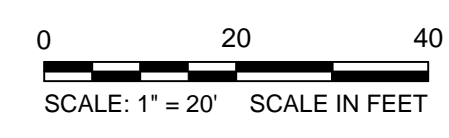


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	PAVEMENT MARKING PLANS

Sheet	T-4A
File No.	10565



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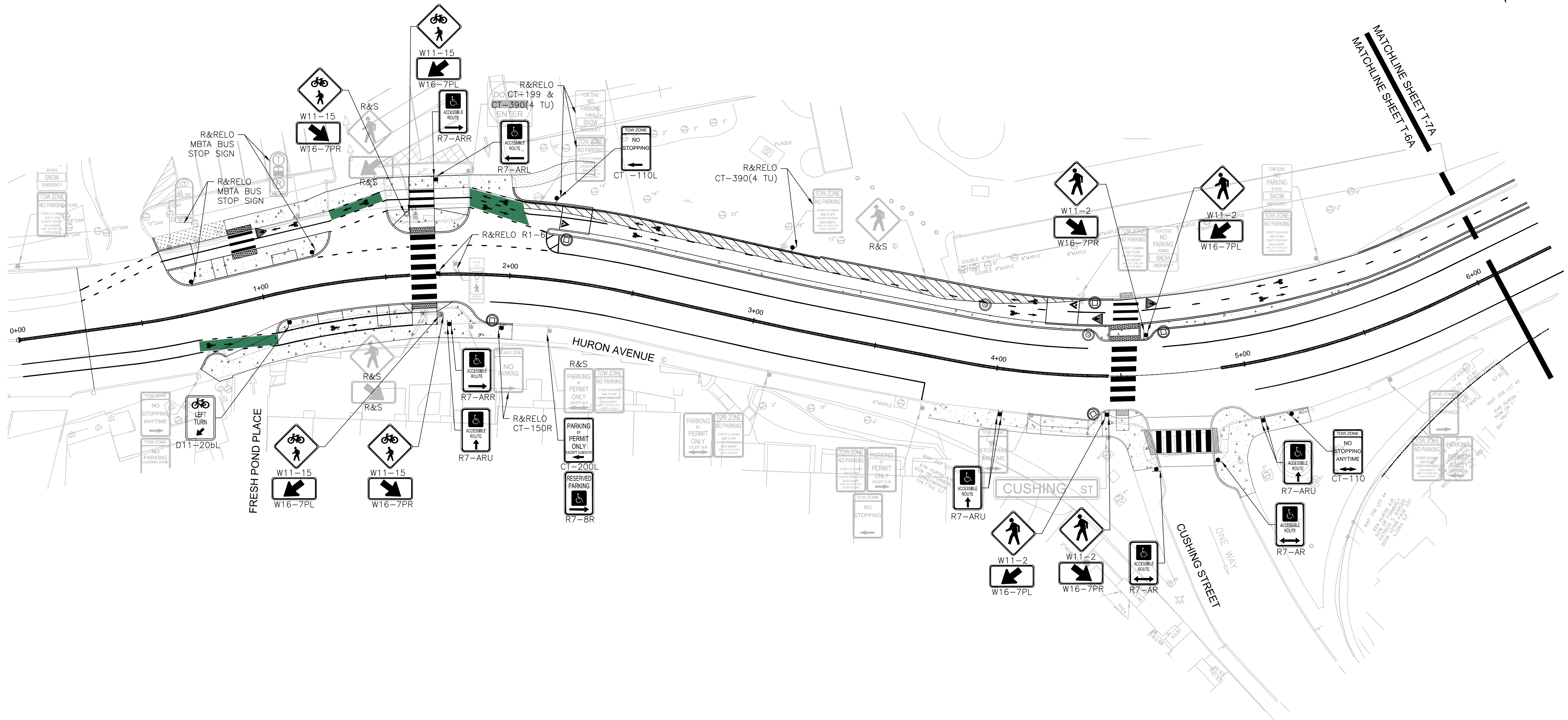
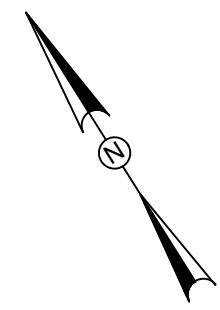
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Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	PAVEMENT MARKING PLANS

Sheet	T-5A
File No.	10565

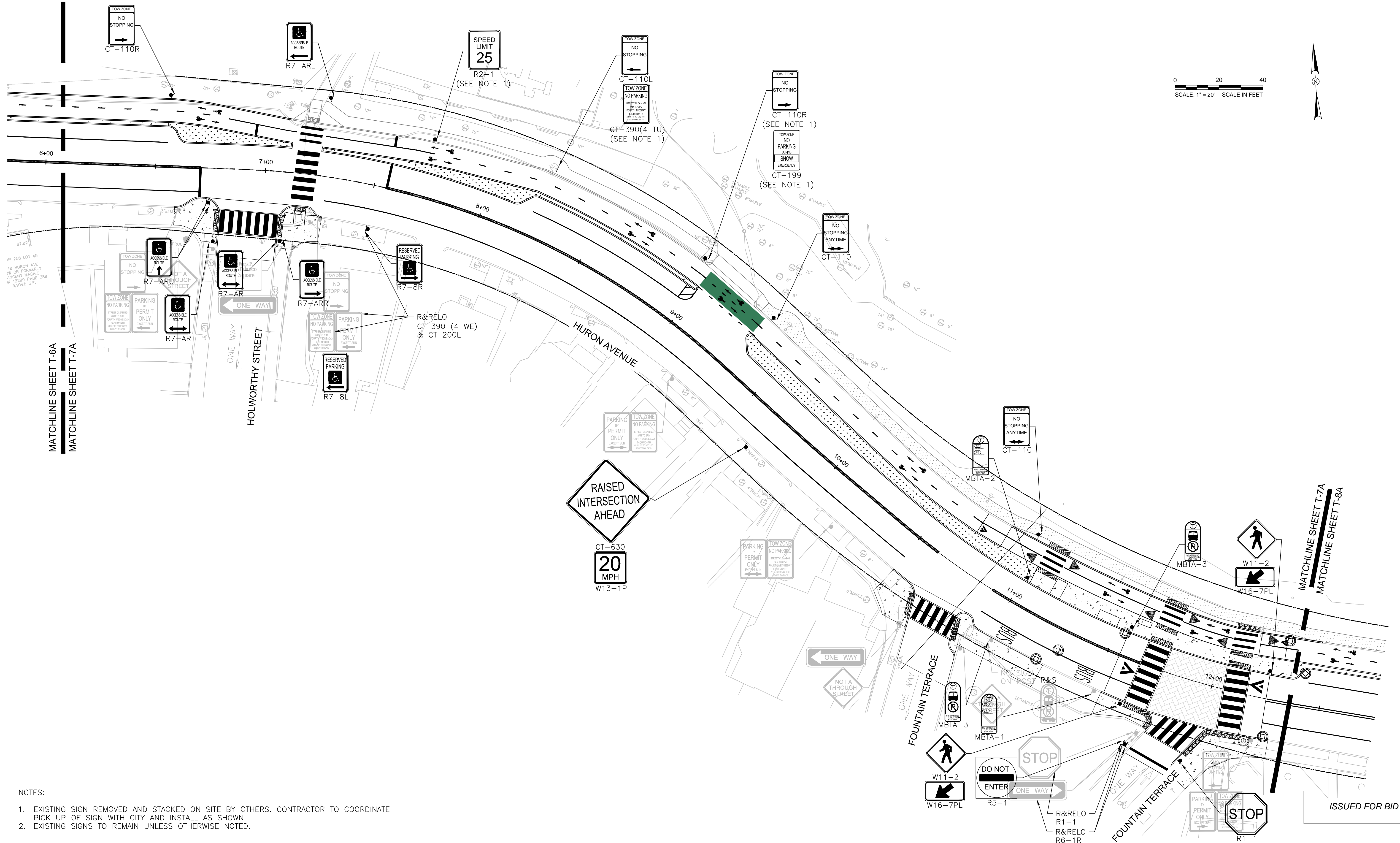
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NOTES:
1. EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED.

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		<p>27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com</p>		<p>SEPTEMBER 6, 2022</p>	<table border="1"> <tr> <td>Scale</td> <td>AS NOTED</td> </tr> <tr> <td>Date</td> <td>SEPTEMBER 2022</td> </tr> <tr> <td>Job No.</td> <td>20170208.037A</td> </tr> <tr> <td>Designed by</td> <td>SA</td> </tr> <tr> <td>Drawn by</td> <td>SA</td> </tr> <tr> <td>Checked by</td> <td>MLD</td> </tr> <tr> <td>Approved by</td> <td>MLD</td> </tr> </table>	Scale	AS NOTED	Date	SEPTEMBER 2022	Job No.	20170208.037A	Designed by	SA	Drawn by	SA	Checked by	MLD	Approved by	MLD		<table border="1"> <tr> <td>Client</td> <td>CITY OF CAMBRIDGE, MASSACHUSETTS</td> </tr> <tr> <td>Project</td> <td>CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</td> </tr> <tr> <td>Drawing</td> <td>SIGNAGE AND FLEXPOST PLANS</td> </tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	Drawing	SIGNAGE AND FLEXPOST PLANS	<table border="1"> <tr> <td>Sheet</td> <td>T-6A</td> </tr> <tr> <td>File No.</td> <td>10565</td> </tr> </table>	Sheet	T-6A	File No.	10565
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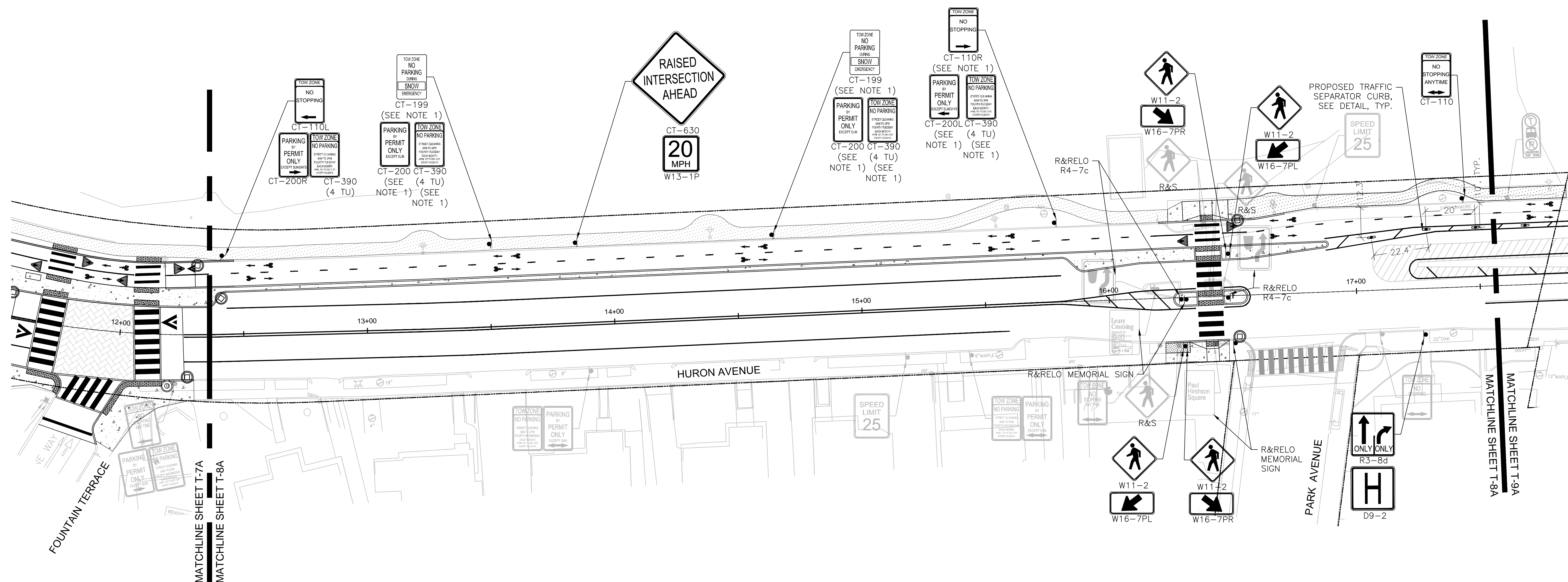
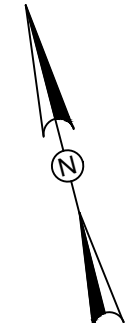


NOTES:

1. EXISTING SIGN REMOVED AND STACKED ON SITE BY OTHERS. CONTRACTOR TO COORDINATE PICK UP OF SIGN WITH CITY AND INSTALL AS SHOWN.
2. EXISTING SIGNS TO REMAIN UNLESS OTHERWISE NOTED.

ISSUED FOR BID

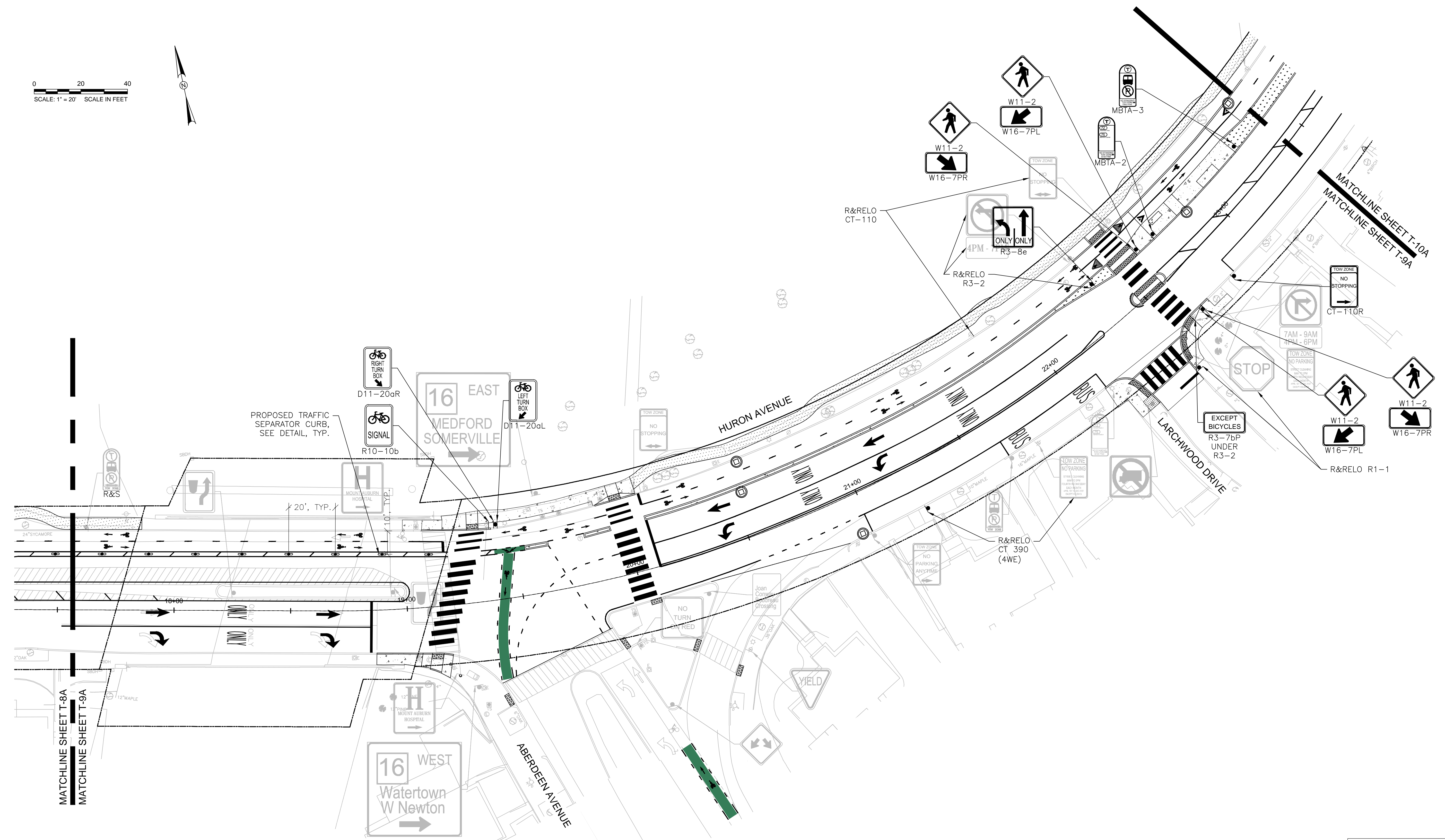
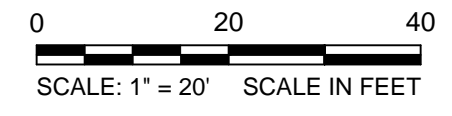
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					Date SEPTEMBER 2022		Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No. 10565
27 Congress Street, Salem, MA 01970 tel. 978-740-0096 www.hatch.com					Drawn by SA Checked by MLD Approved by MLD	No. _____ Description REVISIONS Date _____	Drawing SIGNAGE AND FLEXPOST PLANS	



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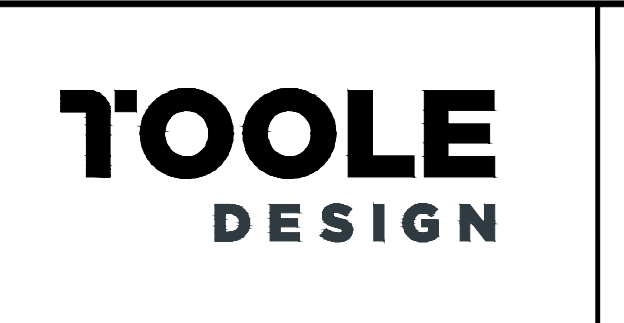
ISSUED FOR BID

					Scale AS NOTED		Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet T-8A
					Date SEPTEMBER 2022		Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	File No. 10565
					Job No. 20170208.037A	Drawing SIGNAGE AND FLEXPOST PLANS		
					Designed by SA			
					Drawn by SA			
					Checked by MLD	No.	Description	Date
					Approved by MLD	REVISIONS		



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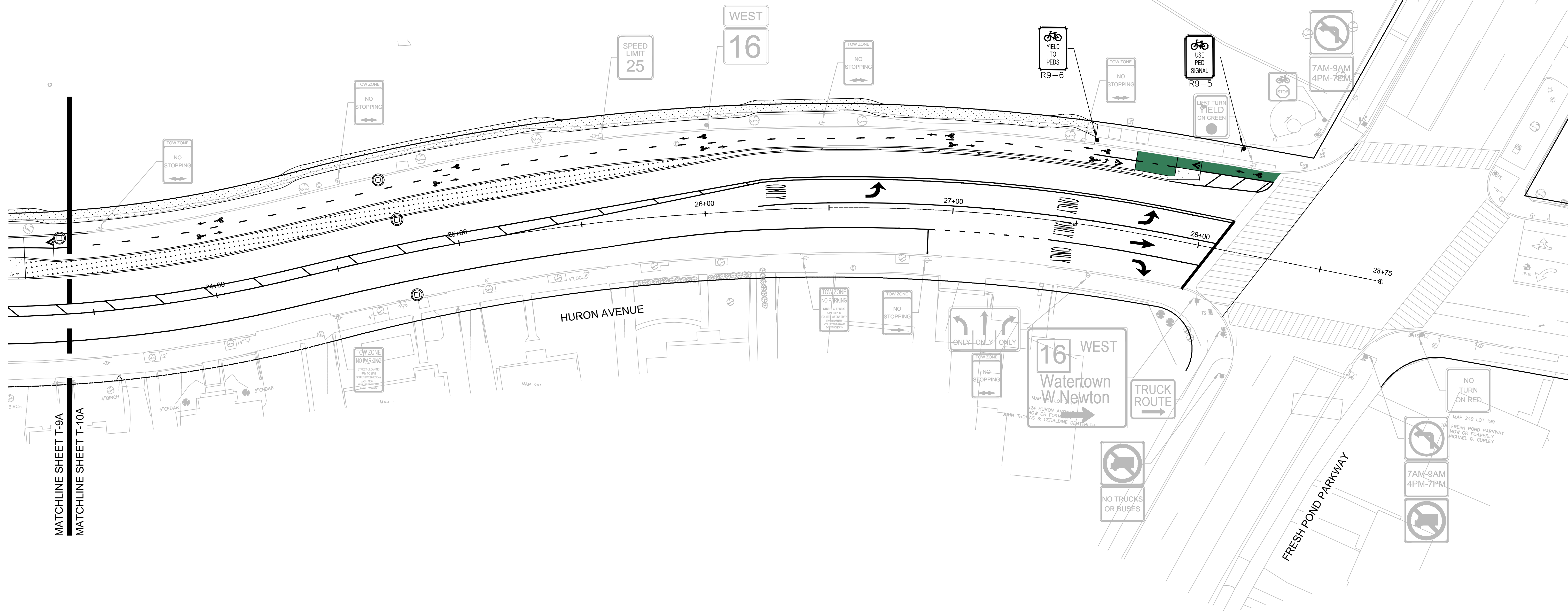
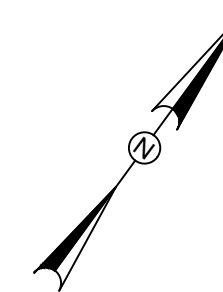
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
Drawing	SIGNAGE AND FLEXPOST PLANS

Sheet	T-9A
File No.	10565

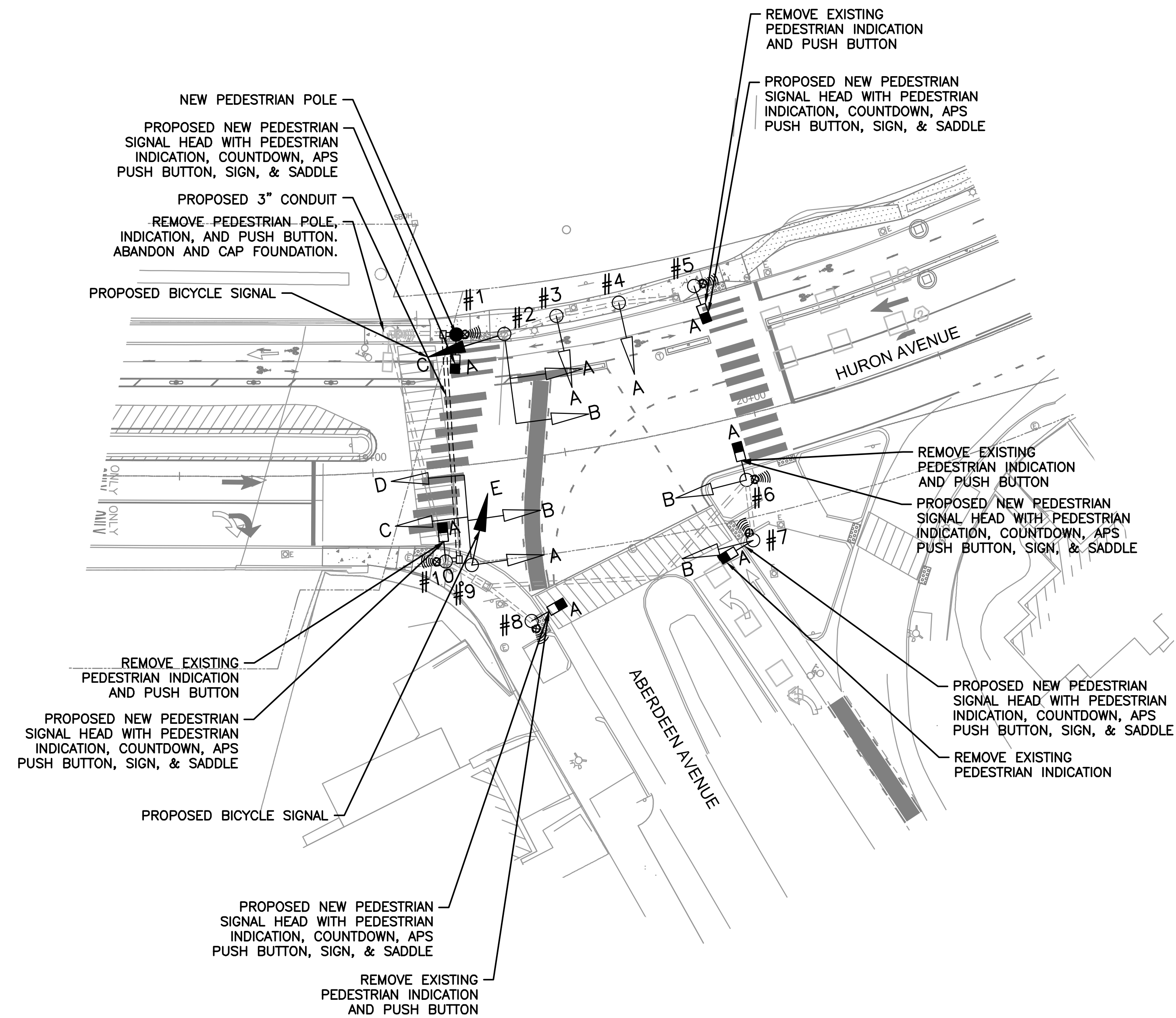
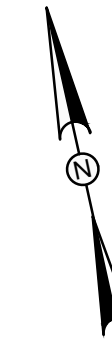
0 20 40
SCALE: 1" = 20' SCALE IN FEET



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					Date SEPTEMBER 2022		Job No. 20170208.037A	Project CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT
					Drawn by SA			
					Checked by MLD			
					Approved by MLD			
					Description REVISIONS			
					Date			
					Drawing SIGNAGE AND FLEXPOST PLANS			



LEGEND:

- PROPOSED SIGNAL EQUIPMENT
- EXISTING SIGNAL EQUIPMENT
- PROPOSED APS PUSH BUTTON
- EXISTING APS PUSH BUTTON
- PROPOSED PEDESTRIAN INDICATION
- EXISTING PEDESTRIAN INDICATION
- EXISTING VEHICLE DETECTION

NOTE:

1. LOOP DETECTORS WILL BE ABANDONED.
2. EXISTING CONDUIT LOCATION SHOWN IS APPROXIMATE.



ISSUED FOR BID

					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td></tr> <tr><td>Date</td><td>SEPTEMBER 2022</td></tr> <tr><td>Job No.</td><td>20170208.037A</td></tr> <tr><td>Designed by</td><td>SA</td></tr> <tr><td>Drawn by</td><td>SA</td></tr> <tr><td>Checked by</td><td>MLD</td></tr> <tr><td>Approved by</td><td>MLD</td></tr> </table>	Scale	AS NOTED	Date	SEPTEMBER 2022	Job No.	20170208.037A	Designed by	SA	Drawn by	SA	Checked by	MLD	Approved by	MLD		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Client</td><td>CITY OF CAMBRIDGE, MASSACHUSETTS</td></tr> <tr><td>Project</td><td>CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>TRAFFIC SIGNAL PLANS</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	CHAPTER 90 CONTRACT 24 ROADWAY IMPROVEMENT PROJECT	Drawing	TRAFFIC SIGNAL PLANS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>T-11A</td></tr> <tr><td>File No.</td><td>10565</td></tr> </table>	Sheet	T-11A	File No.	10565
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Sheet	T-11A																															
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(APPROX.)

TIMING PLAN

STREET	DIR.	HEAD	Ø1				Ø2				Ø3				FR
			L	GR	CH	CL	L	GR	CH	CL	L	GR	CH	CL	
HURON AVE	WB-LT	9A,9B	R	R	R	R	R	R	R	R	R	R	R	R	FR
HURON AVE	WB	2A,2B	R	G	Y	R	R	R	R	R	R	R	R	R	FY
HURON AVE	EB	6B,9D	R	G	Y	R	R	R	R	R	R	R	R	R	FY
HURON AVE	EB-RT	7B,9C	R	R	R	R	R	R	R	R	R	R	R	R	FR
ABERDEEN AVE	NB-LT	3A,4A	R	R	R	R	R	R	R	R	R	R	R	R	FR

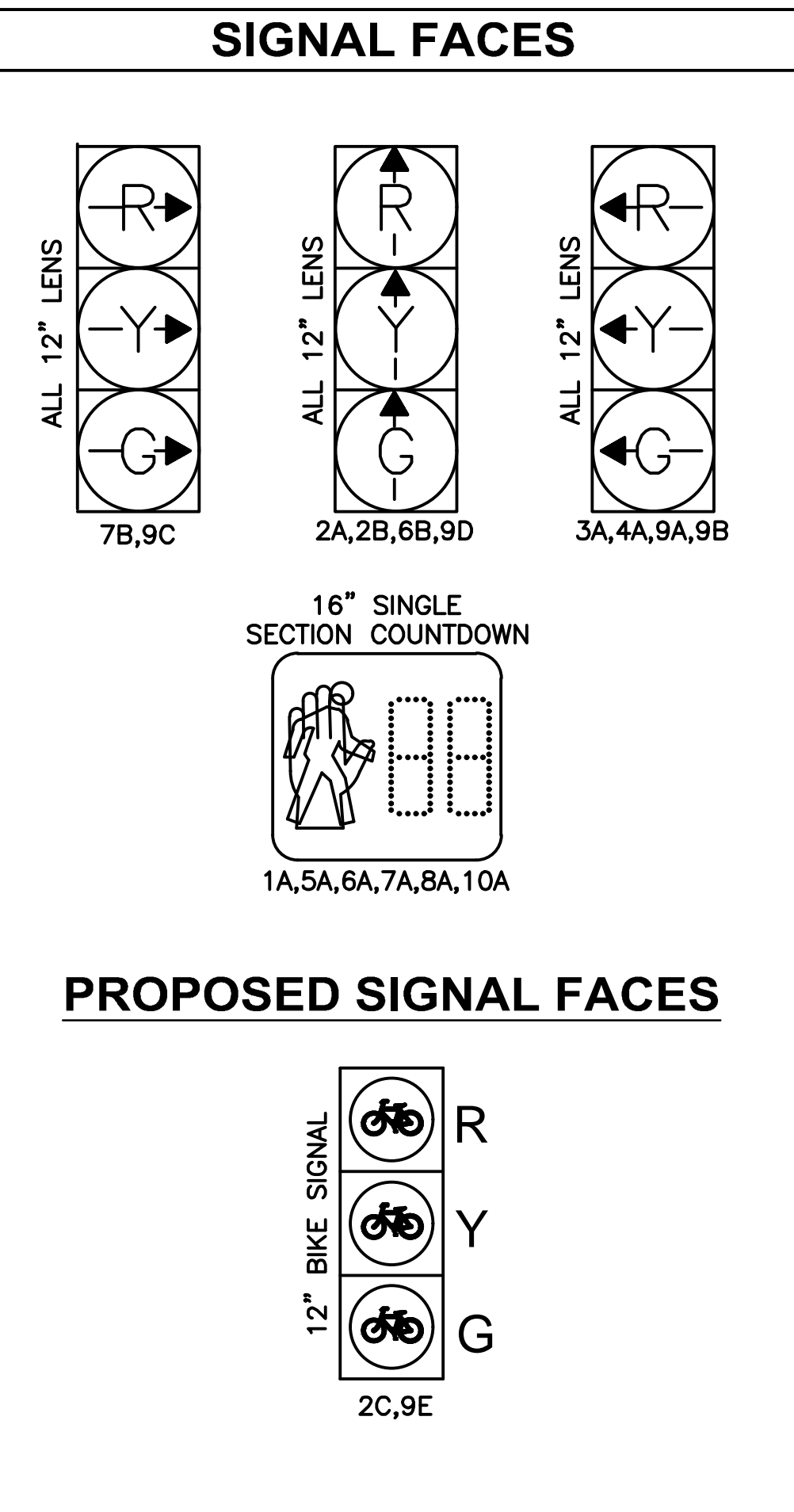
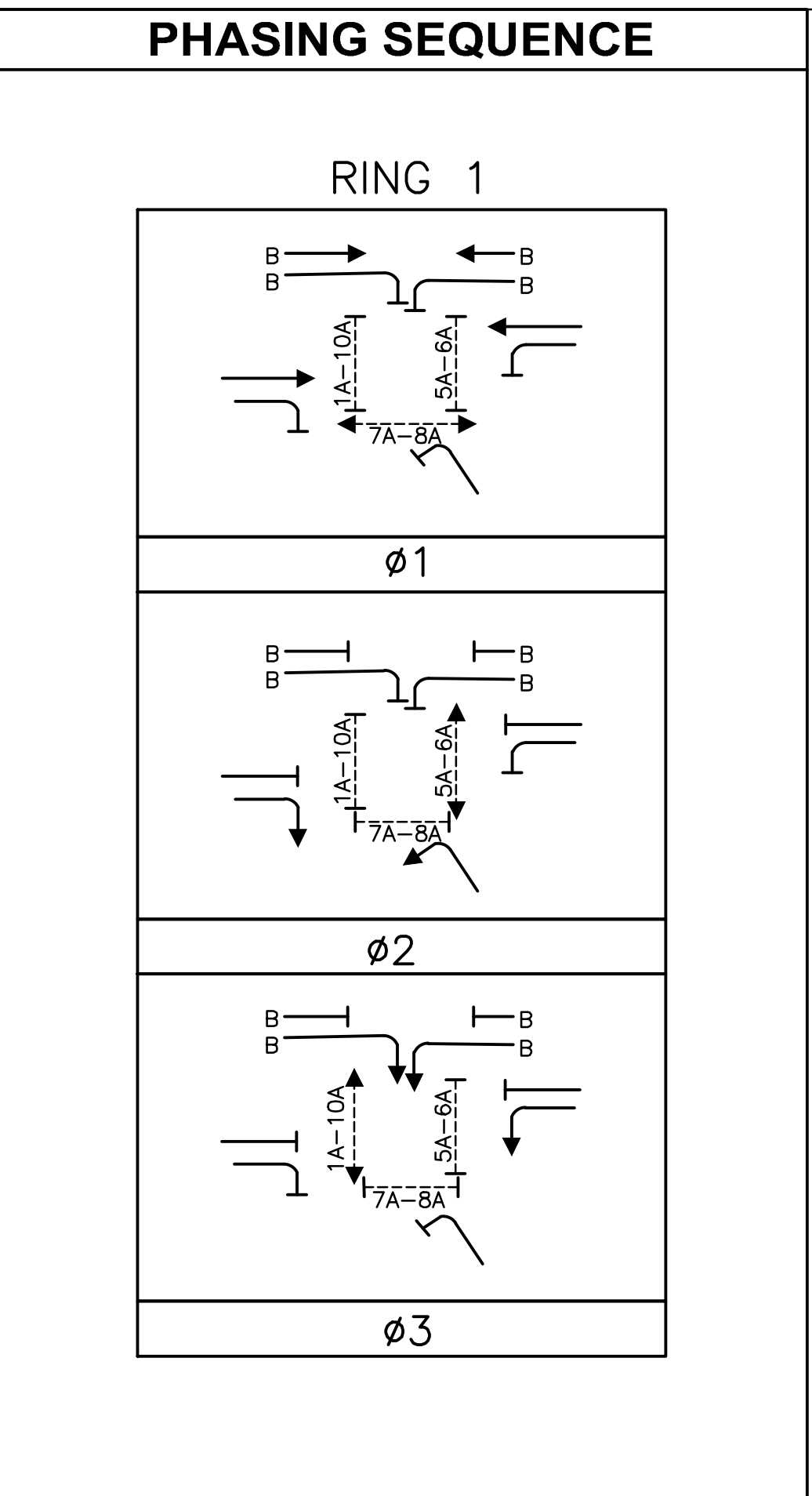
WALK	CROSSWALK	DIR.	HEAD	Ø1				Ø2				Ø3				OFF		
				L	GR	CH	CL	L	GR	CH	CL	L	GR	CH	CL			
	CROSSWALK	N-S	1A-10A	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	OFF
	CROSSWALK	N-S	5A-6A	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	OFF
	CROSSWALK	E-W	6B,9D	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OFF

BIKE	BICYCLE	DIR.	HEAD	Ø1				Ø2				Ø3				FR		
				L	GR	CH	CL	L	GR	CH	CL	L	GR	CH	CL			
	BICYCLE	SB	9E	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FR
	BICYCLE	EB	2C	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	FR

INTERVAL	Ø1			Ø2			Ø3		
	MINIMUM GREEN	EXTENSION	MAX GREEN	MINIMUM GREEN	EXTENSION	MAX GREEN	MINIMUM GREEN	EXTENSION	MAX GREEN
	7	2	34	7	2	21	7	2	20
	24		24	31		31	20		20
	24		24	17		17	19		19

INTERVAL	Ø1	Ø2	Ø3
YELLOW CHANGE		3	
RED CLEARANCE		2	
PEDESTRIAN WALK	00	7	00
PEDESTRIAN CLEARANCE		12	
BIKE YELLOW CHANGE		3	
BIKE RED CLEARANCE		2.5	
MEMORY			
RECALL			

COORDINATION PLAN						TECHNICAL NOTES					
PROGRAM	DAY	TIME	CYCLE LENGTH	OFFSET	PHASE SPLIT	1. Ø1 IS THE CO-ORD PHASE. 2. PEDESTRIAN PHASES REST IN WALK					
					Ø1 Ø2 Ø3						
MAX 1	M-F	0600-1000	90	45	39 26 25						
MAX 2	M-F	1500-2000	90	45	29 36 25						
MAX 3	M-Su	ALL OTHER	75	0	29 22 24						



CONSTRUCTION NOTES

INSTALL BICYCLE SIGNAL HEADS (QUANTITY: 2)

INSTALL NEW CONDUIT ACROSS HURON AVE (APPROXIMATELY 80 LINEAR FEET)

INSTALL NEW PEDESTRIAN POLE

INSTALL 12" X 24" HAND HOLE WITH FRAME & COVER (QUANTITY: 2)

INSTALL PEDESTRIAN HOUSING GRAPHIC LED WITH COUNTDOWN TIMER (QUANTITY: 6)

INSTALL 3-WIRE ACCESSIBLE PEDESTRIAN PUSHBUTTON, SIGN, & SADDLE SYSTEM

PLUS ALL MISCELLANEOUS EQUIPMENT, WIRING, CABLE AND MATERIAL NECESSARY TO PROVIDE A COMPLETE OPERATING TRAFFIC CONTROL SIGNAL PER CAMBRIDGE TRANSPORTATION DEPARTMENT STANDARDS AND LATEST SPECIFICATIONS.

ISSUED FOR BID

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		UNIT AREA (SQ FT)	TEXT	TEXT DIMENSIONS	NUMBER OF SIGNS REQUIRED	COLOR	POST SIZE AND NUMBER REQUIRED PER SIGN	TOTAL AREA (SQ FT)
	WIDTH	HEIGHT							
CT-110	12"	18"	1.50		SEE CITY OF CAMBRIDGE SIGN DETAIL	4	SEE CITY OF CAMBRIDGE SIGN DETAIL	MNT 4 ON 2" POST(1)	6.00
CT-110L	12"	18"	1.50			3		MNT 1 ON EX POST MNT 2 ON 2" POST(1)	4.50
CT-110R	12"	18"	1.50			2		MNT 2 ON 2" POST(1)	3.00
CT-200L	12"	18"	1.50			1		MNT 1 ON EX POST	1.50
CT-200R	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
CT-390 (4 TU)	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
CT-630	30"	30"	6.25			2		MNT 2 ON 2" POST(1)	12.50
D9-2	24"	24"	2.00		SEE MUTCD STANDARD DETAIL	1	SEE MUTCD STANDARD DETAIL	MNT 1 ON 2" POST(1)	4.00
D11-20aL	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
D11-20aR	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
D11-20bL	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
MBTA-1	-	-	-		SEE MBTA STANDARD DETAIL	1	SEE MBTA STANDARD DETAIL	MNT 1 ON EX POST	-
MBTA-2	-	-	-			2		MNT 2 ON 2" POST(1)	-
MBTA-3	-	-	-			3		MNT 1 ON EX POST MNT 2 ON 2" POST(1)	-
R1-1	30"	30"	6.25		SEE MUTCD STANDARD DETAIL	1	SEE MUTCD STANDARD DETAIL	MNT 1 ON 2" POST(1)	6.25
R3-8d	24"	12"	2.00		SEE MUTCD STANDARD DETAIL	1	SEE MUTCD STANDARD DETAIL	MNT 1 ON EX POLE	2.00

IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		UNIT AREA (SQ FT)	TEXT	TEXT DIMENSIONS	NUMBER OF SIGNS REQUIRED	COLOR	POST SIZE AND NUMBER REQUIRED PER SIGN	TOTAL AREA (SQ FT)
	WIDTH	HEIGHT							
R3-8d	30"	30"	6.25		SEE MUTCD STANDARD DETAIL	1	SEE MUTCD STANDARD DETAIL	MNT 1 ON 2" POST(1)	6.25
R3-8e	30"	30"	6.25			1		MNT 1 ON 2" POST(1)	6.25
R5-1	30"	30"	6.25			1		MNT 1 ON 2" POST(1)	6.25
R7-8L	12"	18"	1.50			1		MNT 1 ON EX POST	6.00
R7-8R	12"	18"	1.50			2		MNT 1 ON EX POST MNT 1 ON 2" POST(1)	3.00
R7-AR	12"	18"	1.50			4		MNT 4 ON 2" POST(1)	6.00
R7-ARL	12"	18"	1.50			2		MNT 2 ON 2" POST(1)	3.00
R7-ARR	12"	18"	1.50			3		MNT 3 ON 2" POST(1)	4.50
R7-ARU	12"	18"	1.50			7		MNT 7 ON 2" POST(1)	10.5
R9-5	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
R9-6	12"	18"	1.50			1		MNT 1 ON 2" POST(1)	1.50
R10-10b	12"	18"	1.50			1		MNT 1 UNDER PROP BIKE SIGNAL	1.50
W11-2	30"	30"	6.25			14		MNT 12 ON 2" POST(1)	87.50
W11-15	30"	30"	6.25			4		MNT 4 ON EX RRFB	25.00
W13-1P	18"	18"	2.25			2		MNT 2 W/CT630	4.50
W16-17PL	24"	12"	2.00			10		MNT 2 W/W11-15 MNT 8 W/W11-2	20.00
W16-17PR	24"	12"	2.00			8		MNT 2 W/W11-15 MNT 6 W/W11-2	16.00

ISSUED FOR BID



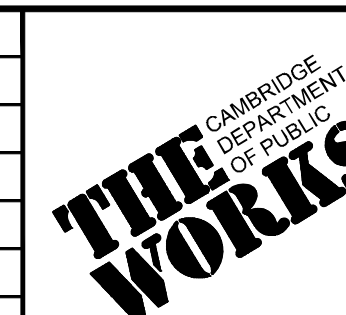
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	TRAFFIC SIGN SUMMARY

Sheet	T-13A
File No.	10565