

# CITY OF CAMBRIDGE, MASSACHUSETTS

## INMAN SQUARE

### INTERSECTION SAFETY IMPROVEMENT PROJECT

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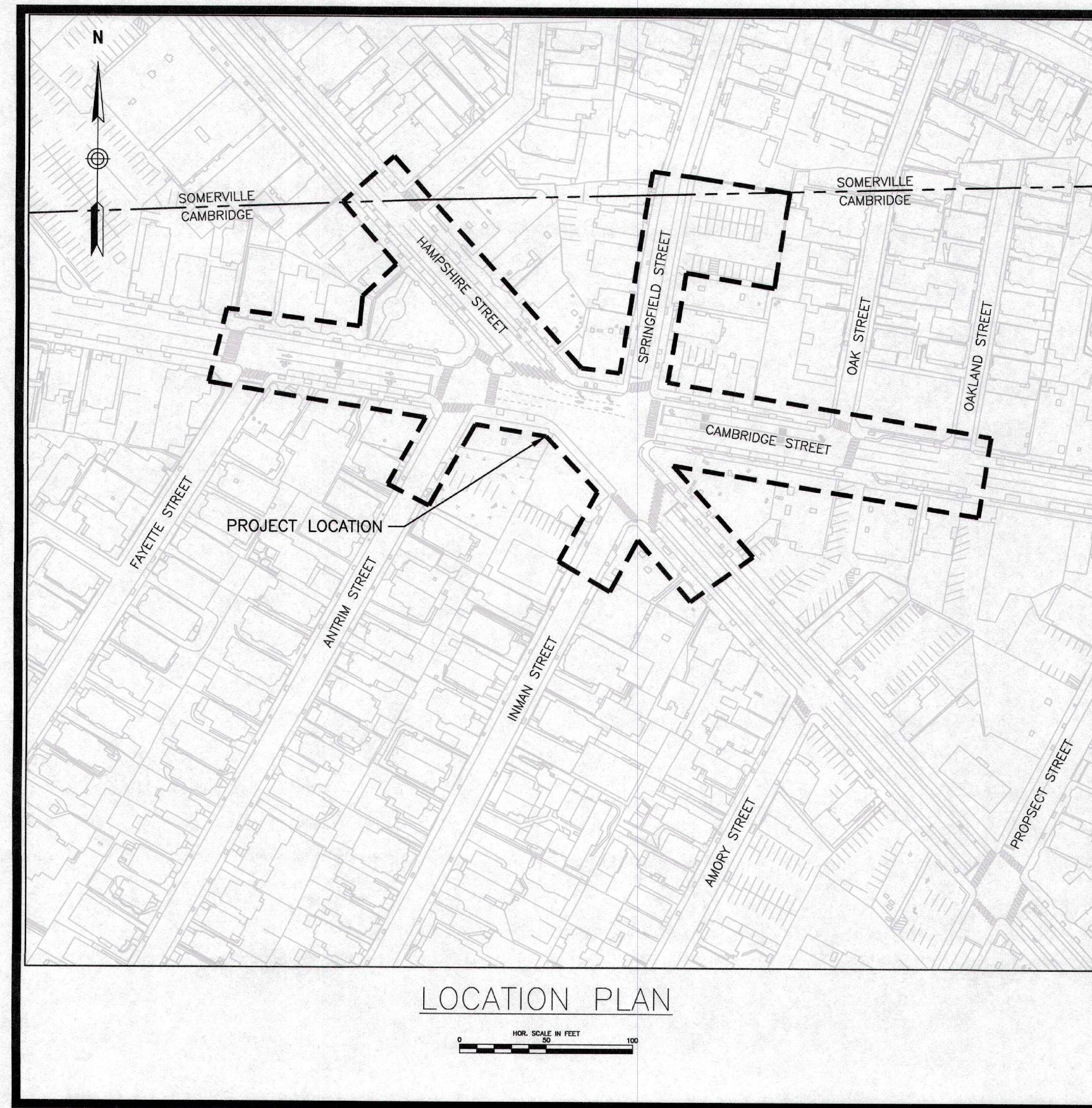
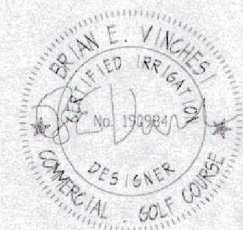
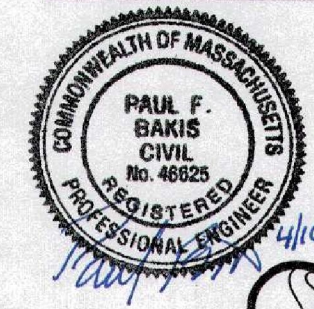
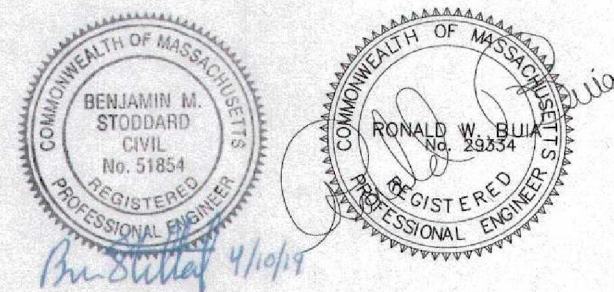
APRIL 2019

FILE NO. 8514

PREPARED FOR:



PREPARED BY PROJECT DESIGN TEAM:



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						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>G-2</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	DRAWING INDEX	File No. <b>8514</b>
						Designed by	ARK						
						Drawn by	ARK						
						Checked by	PFB	No.	Description	Date			
						Approved by	PFB		REVISIONS				



**EXISTING LEGEND**

	TBM
	SURVEY CONTROL STATION
	DRILL HOLE
	UTILITY POLE
	UTILITY POLE/LIGHT POLE
	TRAFFIC SIGNAL
	MANHOLE
	DRAIN MANHOLE
	SEWER MANHOLE
	ELECTRIC MANHOLE
	PEDESTRIAN SIGNAL
	WATER GATE
	FIRE HYDRANT
	GAS GATE
	ARIA DRAIN
	CATCH BASIN
	MARKER POST
	SIGN
	WATER HANDHOLE
	SOIL BORING
	LIGHT POLE
	METAL POST
	GUARD POST
	CONCRETE POST
	TRASH CAN
	DECIDUOUS TREE
	SHRUB
	TREE LINE
	CHAIN LINK FENCE
	CURBING(TYPE)
	ELECTRIC LINE
	DRAIN LINE
	GAS LINE
	WATER LINE
	SEWER LINE
	COMBINED SEWER LINE
	TELEPHONE LINE
	CABLE TELEVISION LINE
	SPOT ELEVATION
	INDEX CONTOUR
	INTERMEDIATE CONTOUR
	OVERHEAD WIRE
	SIGNAL MAST ARM

**PROPOSED LEGEND**

	SANITARY SEWER
	STORM DRAIN
	DRAIN SERVICE LATERAL
	SANITARY SERVICE LATERAL
	WATER LINE
	GAS LINE
	TYPE 1 CATCH BASIN
	FIRE HYDRANT
	WATER GATE
	FLEX COUPLING
	DRAIN MANHOLE
	SANITARY MANHOLE
	CUT/CAP EXIST. PIPE
	TEST PIT
	SHEET KEYNOTE
	PEDESTRIAN RAMP
	TACTILE SURFACE
	PARKING METER
	DOUBLE PARKING METER
	SIGN POST
	SHELTER
	LANDING AREA (CROSS SLOPE <2%)
	REAR DOOR CLEAR ZONE
	BRICK SIDEWALK
	COLD PLANE AND OVERLAY
	PERVIOUS PAVEMENT
	RAISED CROSSWALK
	TREE WELL
	SIGNAL MAST ARM
	SIGNAL POST

**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 BASES AND SURFACE COURSES ARE INDICATED IN THE BORING LOGS. REFER TO APPENDIX B OF THE SPECIFICATIONS.
- DIVERSION, BYPASS, AND CONTROL OF SANITARY SEWER, 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 02140, AND ALL DEWATERING PERMITS.
- THE CONTRACTOR SHALL TEMPORARILY 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 BASIN LATERALS WHICH ARE NOT RECONNECTED SHALL BE ABANDONED BY CAPPING BOTH ENDS. CAP SHALL BE WATERTIGHT. ABANDONMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH SPEC. 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. 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 SYSTEM 07160.
- EXISTING AND PROPOSED ROADWAY CENTERLINE ELEVATIONS ARE SHOWN ON THE ROADWAY DESIGN DRAWINGS. ELEVATIONS SHOWN ON CIVIL DRAWING PROFILES ARE EXISTING CENTERLINE ELEVATION ONLY. ALL STATIONING IS TO CENTER OF 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.
- CONTRACTOR SHALL REFER TO THE CAMBRIDGE WATER DEPARTMENT, CONSTRUCTION AND OPERATING PRACTICES IN THE CONTRACT SPECIFICATION FOR ADDITIONAL CONSTRUCTION DETAILS.
- 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. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL ASSUME THAT THERE ARE EXISTING WATER, GAS, AND OTHER UTILITY CONNECTIONS TO EACH AND EVERY BUILDING EN ROUTE, 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 PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL PREMARK THE EXCAVATION AREA IN WHITE AND NOTIFY THE DIG SAFE CENTER (TEL. NO. 1-888-DIG-SAFE) AT LEAST 72 BUSINESS HOURS PRIOR TO ANY EXCAVATION WORK. IN ADDITION, NOTIFICATION SHALL ALSO BE GIVEN TO ALL AFFECTED PRIVATE AND/OR PUBLIC UTILITIES TO PERMIT STREET MARKING OF THEIR LINES.
- ALL EXISTING MANHOLE FRAMES, COVERS, CATCH BASIN 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. ALL TEST PIT EXCAVATIONS SHALL BE MADE TO DETERMINE THE LOCATIONS OF EXISTING UTILITIES OR STRUCTURES AND PERFORMED 30 DAYS 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 WILL BE MADE BY THE UTILITY OWNER. AT THOSE LOCATIONS WHERE EXPLORATORY 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 TEST PITS.
- WHERE TEMPORARY OR PERMANENT UTILITY RELOCATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY 120 DAYS IN ADVANCE OF CONSTRUCTION AND SHALL COORDINATE THE NEW WORK WITH THE UTILITY RELOCATION.
- THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF WATER MAINS WITH THE RESIDENT ENGINEER AND THE CITY WATER DEPARTMENT.
- LOCATIONS OF NEW WATER, SANITARY, AND DRAINAGE SERVICE CONNECTIONS SHALL BE DETERMINED DURING CONSTRUCTION, IN CONSULTATION WITH PROPERTY OWNER AND CITY.
- 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.
- 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 DEHED MOLIS MATERIALS, RUBBISH, EXCAVATED MATERIAL AND DEBRIS, UNLESS OTHERWISE NOTE, 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 RELATED 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW PLOWING AND SNOW REMOVAL FROM ALL AREAS WHERE PRESENCE IS MAINTAINED, INCLUDING BUT NOT LIMITED TO, UNPAVED SURFACES, PARKED EQUIPMENT AREAS, OR ANY AREAS OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR STREET SWEEPING, SNOW REMOVAL FROM SIDEWALKS, TRASH REMOVAL, AND RECYCLABLE MATERIAL REMOVAL FROM ALL AREAS WHERE CONSTRUCTION RESTRICTS VEHICULAR OR PEDESTRIAN ACCESS TO STREETS OR SIDEWALKS, AND WHERE THE CONTRACTOR'S PRESENCE INTERFERES WITH MUNICIPAL TRASH REMOVAL, STREET SWEEPING, OR SNOW PLOWING AND REMOVAL.
- AREAS WITHIN THIS CONTRACT ARE SUBJECT TO THE UTILITY RELATED ABATEMENT MEASURE REGULATIONS OF THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.00 AND SECTIONS 02010, 02080, AND 02095 OF THE SPECIFICATIONS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO ENVIRONMENTAL DATA (SOIL AND GROUNDWATER) FROM BORINGS AND MONITORING WELLS AS REPRESENTATIVE OF SUBSURFACE CONDITIONS IN URBAN AREAS. THE ENVIRONMENTAL DATA ARE APPENDED TO THE SPECIFICATIONS.

- 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 SEWER AND DRAIN PIPE REPLACED BY THE PROPOSED SEWER AND 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.
- WHERE NEW SYSTEMS ARE TO BE LAID INTO EXISTING SYSTEMS, WHICH ARE REQUIRED TO BE SHUTDOWN TO MAKE THE TIE-IN, 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. THE CONTRACTOR SHALL COORDINATE SUPPORT AND BE RESPONSIBLE FOR COSTS AND FEES. WHERE EXISTING GAS, ELECTRIC, AND TELECOM UTILITIES CROSS THE PROPOSED TRENCH LIMITS, THE 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.
- ALL CONSTRUCTION SHALL BE CARRIED OUT PER SPECIFICATION SECTION 01063-SEQUENCING OF WORK.
- TROLLEY TRACKS MAY BE ENCOUNTERED ON HAMPSHIRE STREET, CAMBRIDGE STREET, AND/OR SPRINGFIELD STREET WITHIN AREAS OF PROPOSED FULL DEPTH PAVEMENT. TROLLEY TRACKS SHALL BE REMOVED PER SPECIFICATION SECTION 02210 - EARTH EXCAVATION, BACKFILL, FILL AND GRADING.

**SURVEYING NOTES:**

- SURVEY BASEMAP PLAN WAS PREPARED FROM AN ACTUAL ON THE GROUND FIELD SURVEY CONDUCTED BY WSP IN DECEMBER 2016 COMBINED WITH UTILITY TRACING CONDUCTED BY BSI ENGINEERING, INC. IN DECEMBER 2017. REFER TO EC SHEETS FOR EXISTING CONDITIONS PLAN.
- 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.

**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-CRATED 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 CANNOT BE AVOIDED. BREAKAGE OF THE LIMBS SHALL NOT BE PERMITTED. IN ADDITION TO THE "CONSTRUCTION PRUNING" SPECIFICALLY IDENTIFIED, ALL TREES 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 DIG SAFE 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 A NEW TREE.

**ABBREVIATIONS**

GENERAL		GENERAL (CONT)	
ABAN	ABANDON	MIN	MINIMUM
ADJ	ADJUST	PC	POINT OF CURVATURE
APPROX	APPROXIMATE	PCC	POINT OF COMPOUND CURVATURE
BIT	BITUMINOUS	PED	PEDESTRIAN
BC	BOTTOM OF CURB	PRC	POINT OF REVERSE CURVATURE
BL	BASELINE	PROP	PROPOSED
BLDG	BUILDING	PT	POINT OF TANGENCY
BOW	BOTTOM OF WALL	PVMT	PAVEMENT
BS	BOTTOM STAIR	R	RADIUS OF CURVATURE
CB	CATCH BASIN	R&D	REMOVE AND DISPOSE
CBCI	CATCH BASIN WITH CURB INLET	R&R	REMOVE AND RESET
CEM	CEMENT	REL	RELOCATE
CI	CURB INLET	RET	RETAIN
CLF	CHAIN LINK FENCE	REM	REMOVE
CL	CENTERLINE	ROW	RIGHT-OF-WAY
CONC	CONCRETE	RR	RAILROAD
CS	CURB STOP	R&R	REMOVE AND RESET
DWL	DASHED WHITE LINE	R&S	REMOVE AND STACK
DWY	DRIVEWAY	SBL	SEPARATED BIKE LANE
ELEV (OR EL)	ELEVATION	SMH	SEWER MANHOLE
EOP	EDGE OF PAVEMENT	STA	STATION
EXIST (OR EX)	EXISTING	SDWK	SIDEWALK
FDN	FOUNDATION	TAN	TANGENT
GG	GAS GATE	TEMP	TEMPORARY
GI	GUTTER INLET	TC	TOP OF CURB
GRAN	GRANITE	TMP	TRAFFIC MANAGEMENT PLAN
GRAV	GRAVEL	TOW	TOP OF WALL
HMA	HOT MIX ASPHALT	TS	TOP STAIR
HYD	HYDRANT	TYP	TYPICAL
L	LENGTH OF CURVE	UP	UTILITY POLE
LP	LIGHT POLE	VAR	VARIES
MAX	MAXIMUM	WCR	WHEELCHAIR RAMP
MB	MAILBOX	WG	WATER GATE
MH	MANHOLE		

NOTE: PROPOSED MATERIAL ITEMS ARE INDICATED IN BOLD PRINT

**PAVEMENT MARKING SYMBOLS**

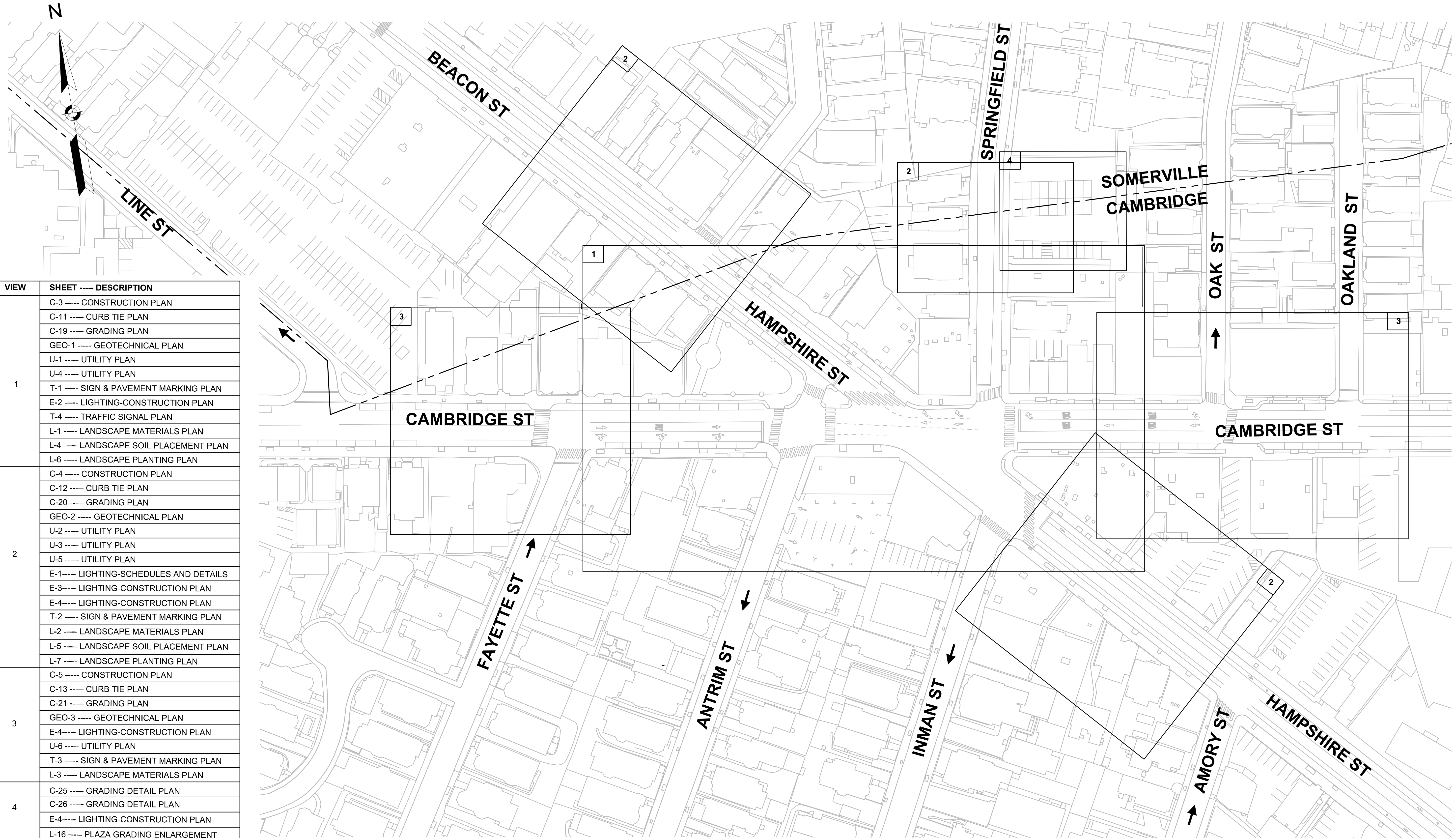
EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE
		CROSSWALK
		BIKE LANE CROSSWALK
		SOLID WHITE LINE (4" WIDE LINE)
		DOTTED WHITE LINE (4" LINES, 2" LINE, 6" SPACE)
		DOTTED YELLOW LINE (4" WIDE LINE, 2" LINE, 6" SPACE)
		DOTTED WHITE LINE EXTENSION (4" WIDE LINE, 2" LINE, 6" SPACE)
		DOTTED YELLOW LINE EXTENSION (4" WIDE LINE, 2" LINE, 6" SPACE)
		DOUBLE YELLOW LINE (2 - 4" LINES, 4" SPACE)
		BICYCLIST SYMBOL WITH ARROW

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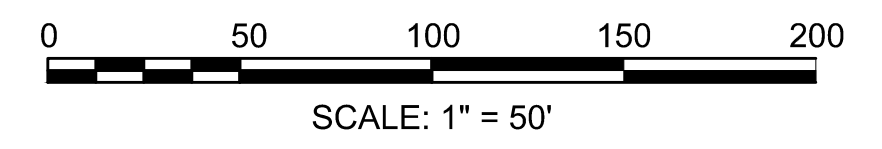
CAD FILE: I:\img\16042.44\Inman Square\HDDWG\100% Submission\16042.22\100% (Legend And Notes).dwg LAYOUT: SHEET PLOTTED: 4/10/2019 11:23 AM BY: moyer.david

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>G-3</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	LEGEND AND GENERAL NOTES	File No. <b>8514</b>
						Designed by	DTM						
						Drawn by	DTM						
						Checked by	PFB	No.	Description	Date			
						Approved by	PFB		REVISIONS				





VIEW	SHEET	DESCRIPTION
1	C-3	CONSTRUCTION PLAN
	C-11	CURB TIE PLAN
	C-19	GRADING PLAN
	GEO-1	GEOTECHNICAL PLAN
	U-1	UTILITY PLAN
	U-4	UTILITY PLAN
	T-1	SIGN & PAVEMENT MARKING PLAN
	E-2	LIGHTING-CONSTRUCTION PLAN
	T-4	TRAFFIC SIGNAL PLAN
	L-1	LANDSCAPE MATERIALS PLAN
	L-4	LANDSCAPE SOIL PLACEMENT PLAN
2	L-6	LANDSCAPE PLANTING PLAN
	C-4	CONSTRUCTION PLAN
	C-12	CURB TIE PLAN
	C-20	GRADING PLAN
	GEO-2	GEOTECHNICAL PLAN
	U-2	UTILITY PLAN
	U-3	UTILITY PLAN
	U-5	UTILITY PLAN
	E-1	LIGHTING-SCHEDULES AND DETAILS
	E-3	LIGHTING-CONSTRUCTION PLAN
	E-4	LIGHTING-CONSTRUCTION PLAN
3	T-2	SIGN & PAVEMENT MARKING PLAN
	L-2	LANDSCAPE MATERIALS PLAN
	L-5	LANDSCAPE SOIL PLACEMENT PLAN
	L-7	LANDSCAPE PLANTING PLAN
	C-5	CONSTRUCTION PLAN
	C-13	CURB TIE PLAN
4	C-21	GRADING PLAN
	GEO-3	GEOTECHNICAL PLAN
	E-4	LIGHTING-CONSTRUCTION PLAN
	U-6	UTILITY PLAN
	T-3	SIGN & PAVEMENT MARKING PLAN
	L-3	LANDSCAPE MATERIALS PLAN
	C-25	GRADING DETAIL PLAN
	C-26	GRADING DETAIL PLAN
	E-4	LIGHTING-CONSTRUCTION PLAN
	L-16	PLAZA GRADING ENLARGEMENT PLAN

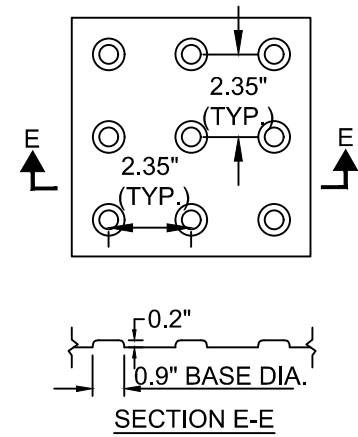


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CAD FILE: I:\eng\16042.44 Inman Square\HDDWG\100% Submission\16042.221\00% HD(Key Plan).dwg LAYOUT: 1 PLOTTED: 4/10/2019 11:55 AM BY: murphy\_conor

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	G-4
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
						Job No.	20170208.005A				Drawing	GENERAL OVERALL KEY PLAN		
						Designed by	DTM							
						Drawn by	DTM							
						Checked by	PFB	No.	Description	Date				
						Approved by	PFB		REVISIONS					



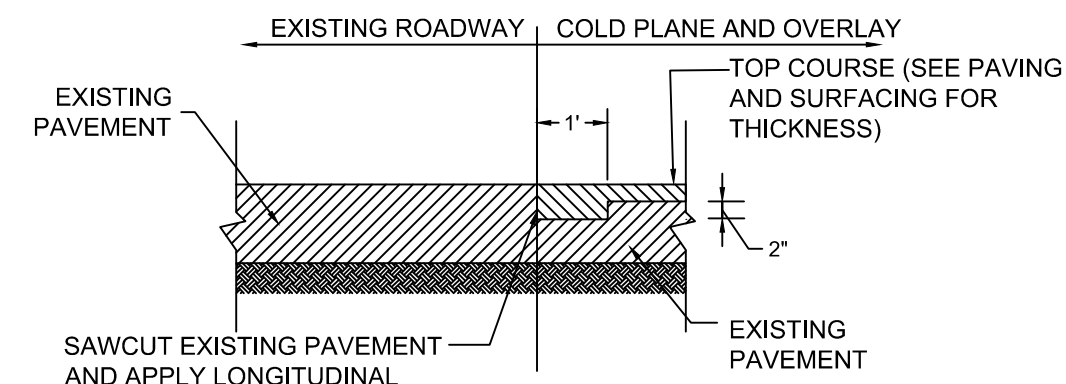


SECTION E-E  
SCALE: N.T.S.

- NOTES:
1. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.
  2. DETECTABLE WARNING PANELS SHALL EXTEND A MIN. OF 2' IN RAMP AND BE CONSTRUCTED OF CAST IRON.
  3. DETECTABLE WARNING PANELS WITHIN THE LIMITS OF BRICK OR CONCRETE PAVEMENT INTERSECTIONS (AT-GRADE OR RAISED) TO BE COATED WITH YELLOW POWDER COAT PAINT PROVIDED BY THE MANUFACTURER.

**DETECTABLE WARNING PANEL**

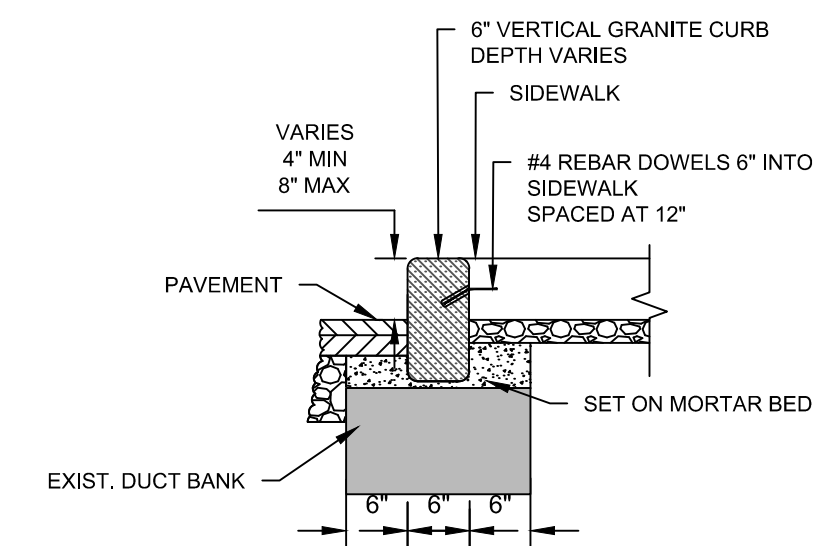
SCALE: N.T.S.



- NOTES:
1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT

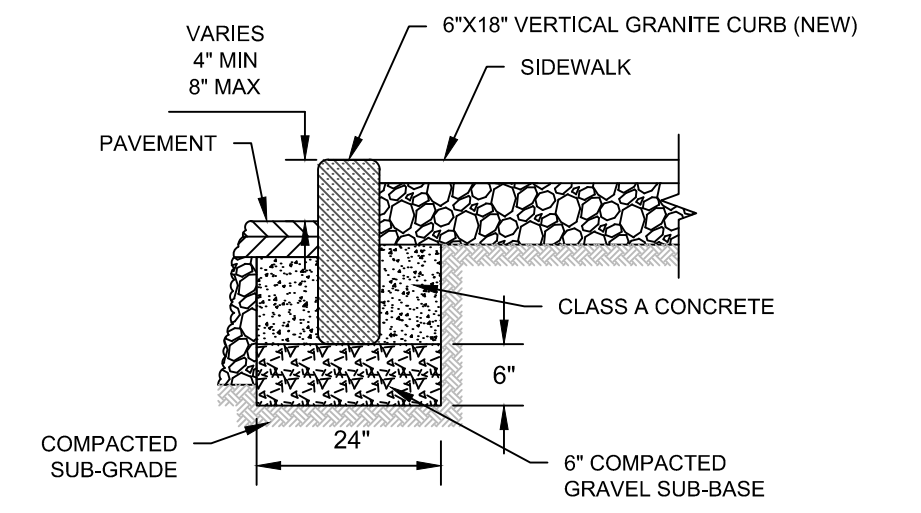
**COLD PLANE AND OVERLAY JOINT DETAIL**

SCALE: N.T.S.



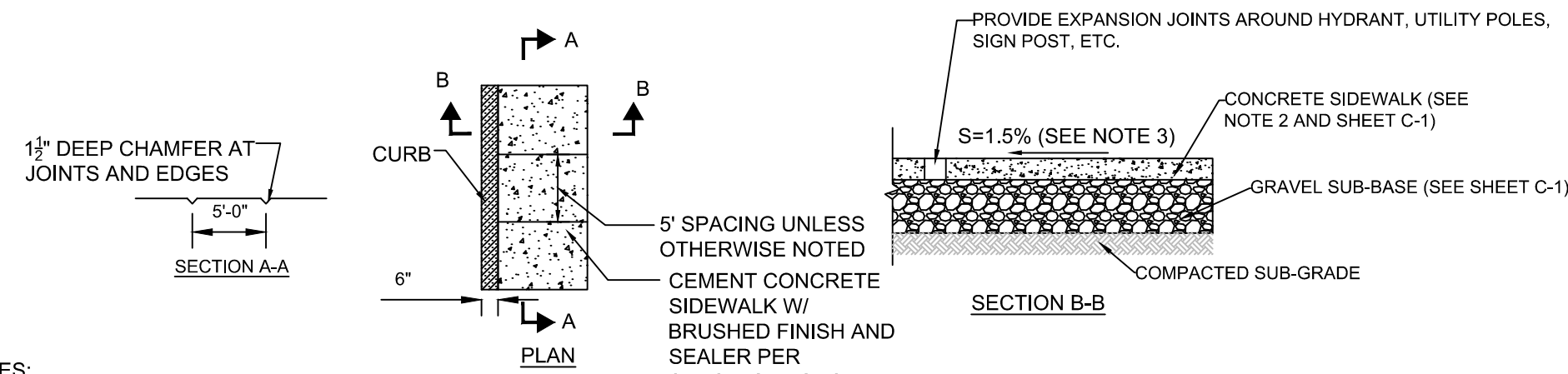
**SHALLOW GRANITE CURB**

SCALE: N.T.S.



**VERTICAL GRANITE CURB**

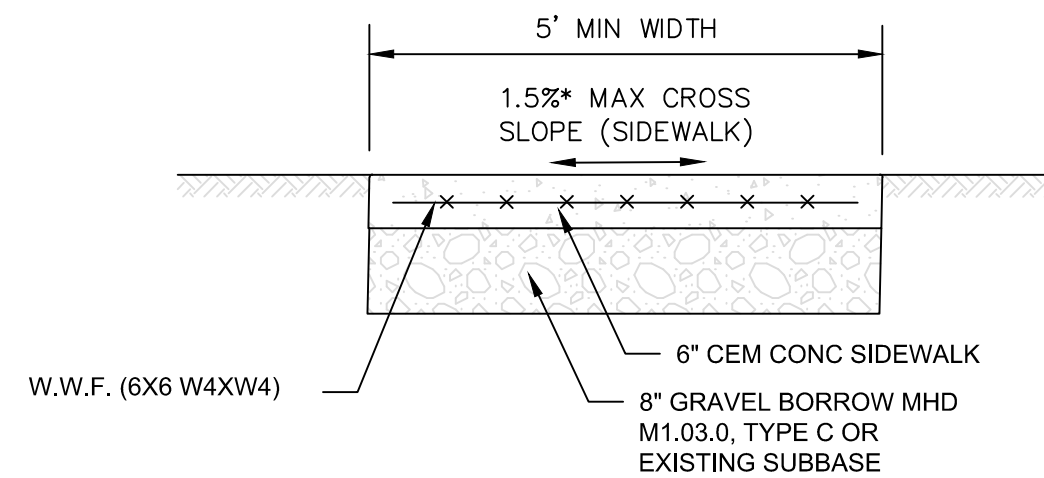
SCALE: N.T.S.



- NOTES:
1. NEW SIDEWALK SHALL MATCH WIDTH OF EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
  2. SIDEWALK MATERIAL TO MATCH EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
  3. SIDEWALKS TO BE BUILT ACCORDING TO PROWAG AND MA AAB REGULATIONS, 1.5% MAX (0.5% TOLERANCE) CROSS SLOPE.
  4. SEE ROADWAY GRADING AND DETAILED GRADING SHEETS FOR SIDEWALK GRADES.
  5. MINIMUM CLEARANCE OF 3' SHALL BE PROVIDED AT EXISTING TREE PITS. MINIMUM CLEARANCE OF 4' SHALL BE PROVIDED AT ALL OTHER LOCATIONS.

**CONCRETE SIDEWALK**

SCALE: N.T.S.

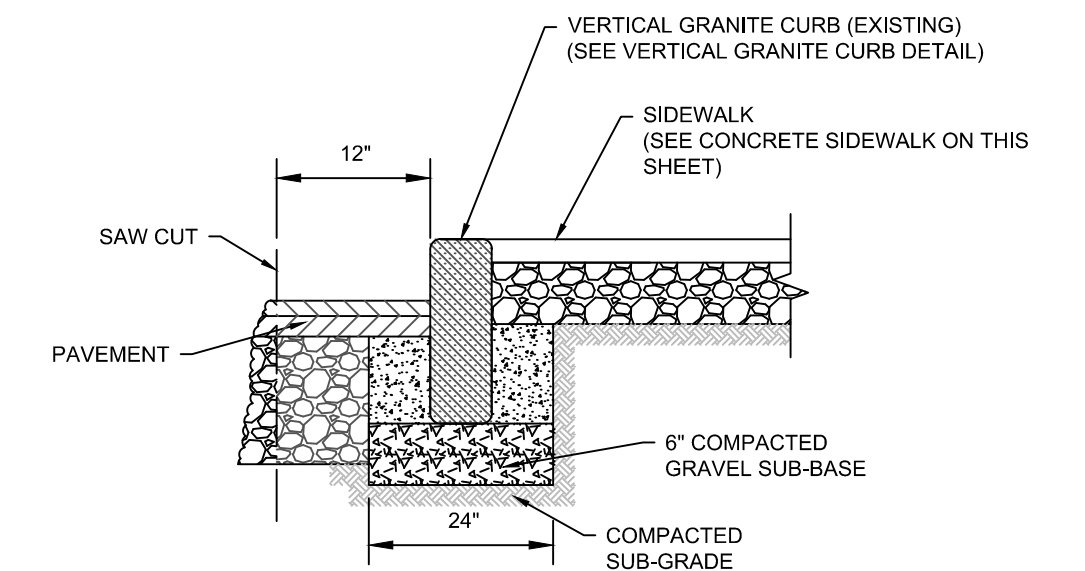


- NOTES:
1. REINFORCED CEMENT CONCRETE DRIVEWAY SHALL BE EXCLUSIVE TO THE FIRE STATION DRIVEWAY.

**REINFORCED CEMENT CONCRETE DRIVEWAY**

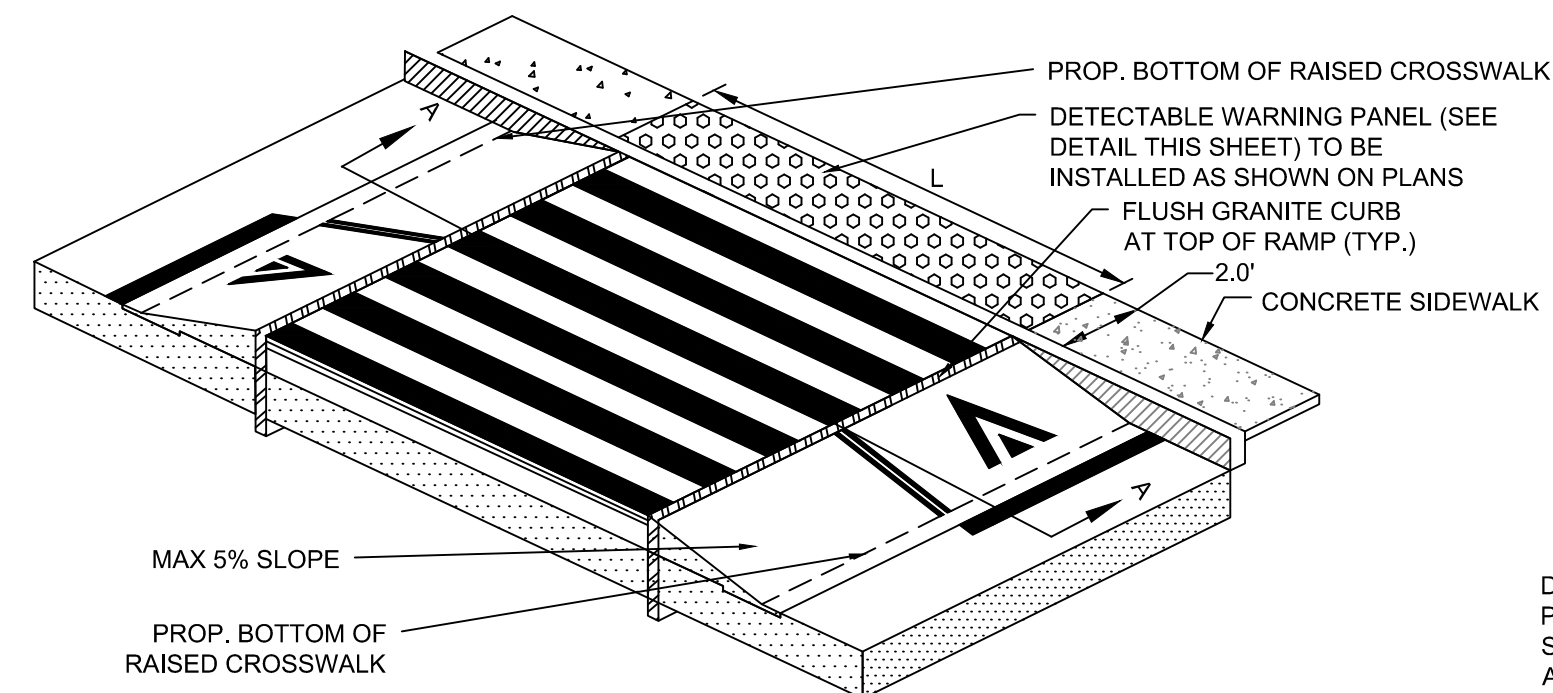
SCALE: N.T.S.

\*TOLERANCE FOR CONSTRUCTION ±0.5%



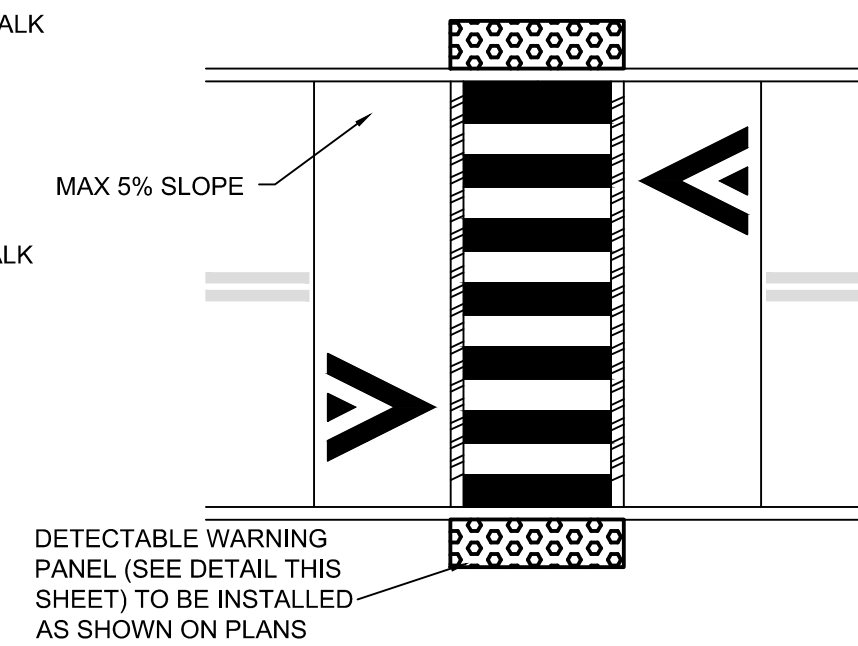
**RESET CURB**

SCALE: N.T.S.



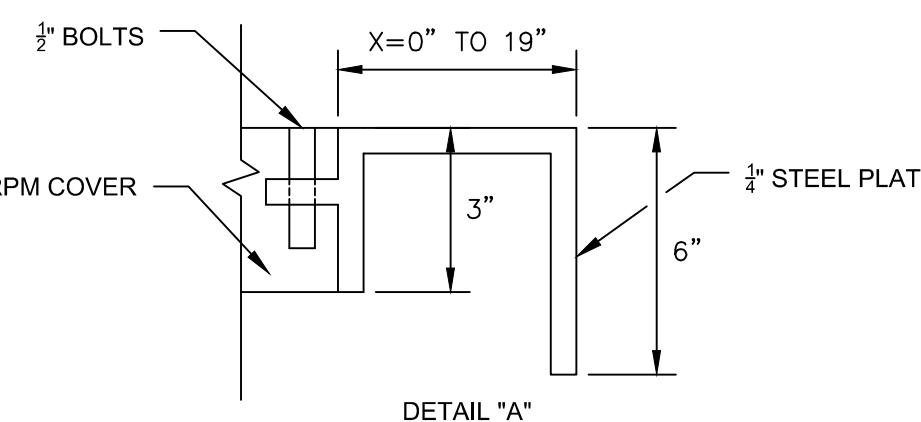
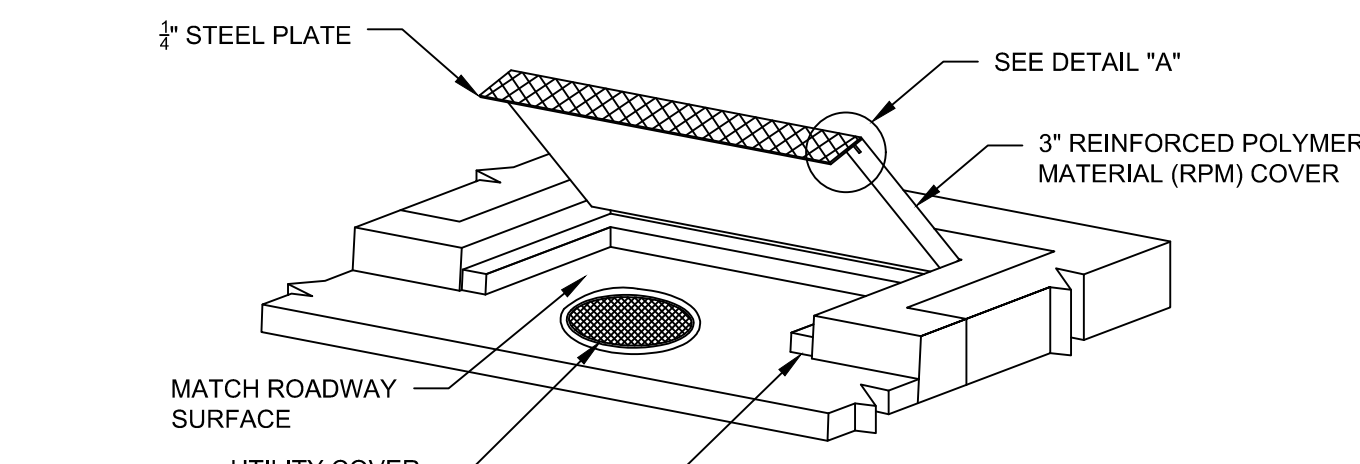
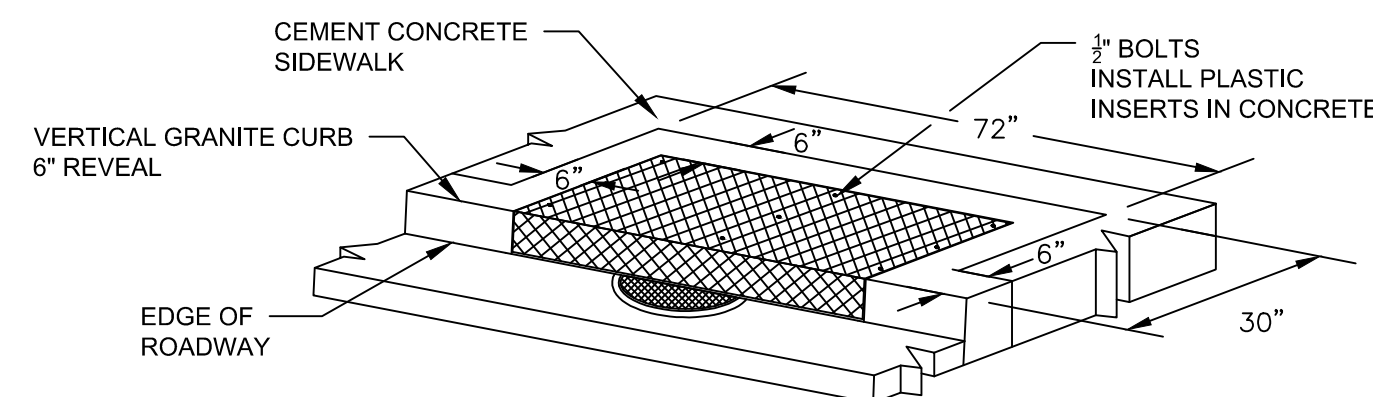
**RAISED CROSSWALK ISOMETRIC PLAN**

SCALE: N.T.S.



**RAISED CROSSWALK PLAN VIEW**

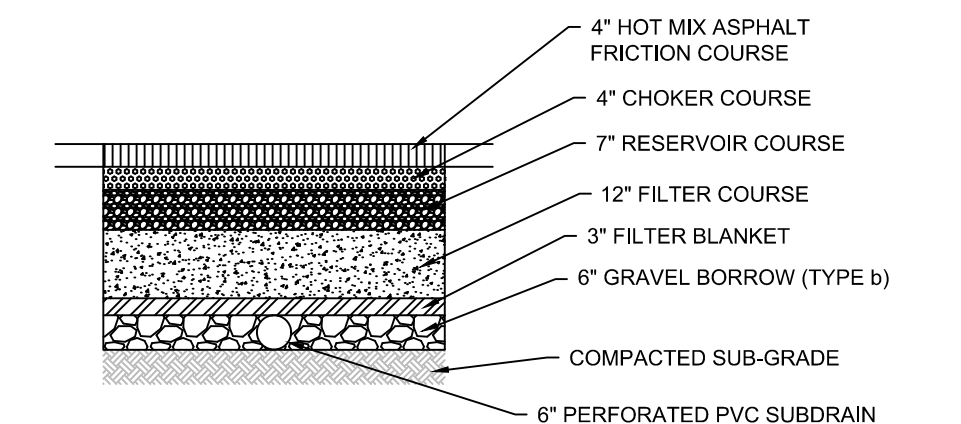
SCALE: N.T.S.



- NOTES:
1. ALL HOLES ARE 3/8" DIA. WITH 1/2" NUTS WELDED UNDER THE FRAME.

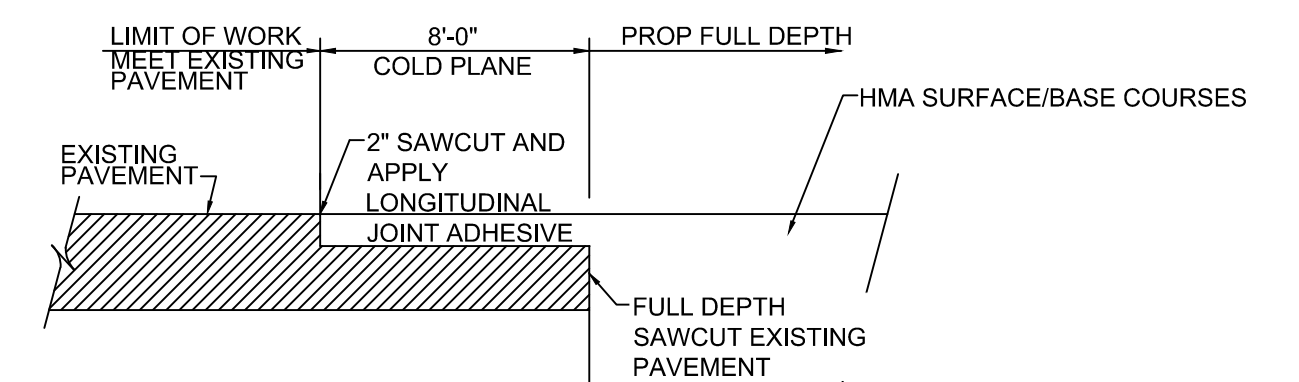
**REMOVABLE FALSE CURB UTILITY COVER**

SCALE: N.T.S.



**PERVIOUS SEPARATED BIKE LANE**

SCALE: N.T.S.



- NOTES:
1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE, TACK COAT AND FINAL PAVEMENT.
  2. APPLY TACK COAT TO COLD PLANED SURFACES PRIOR TO BEING OVERLAID AT THE RATE OF 0.10 GALLONS PER SQUARE YARD.
  3. 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**

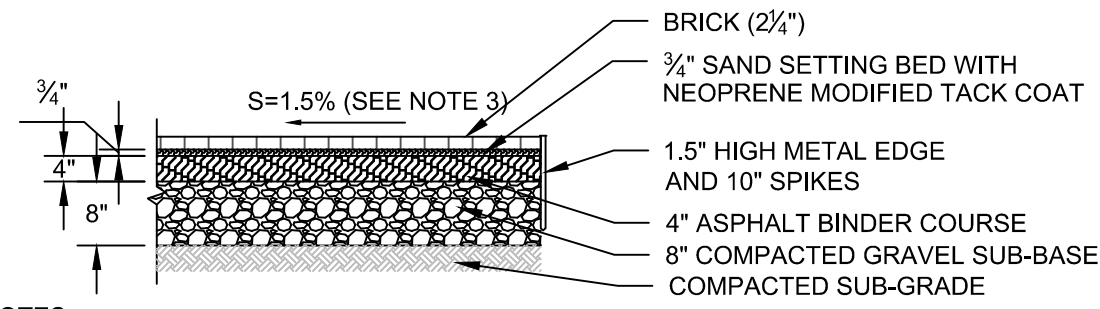
SCALE: N.T.S.

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CAD FILE: I:\eng\16042.44 Inman Square\HDWG\100% Submission\16042.22\100% (Construction Details).dwg LAYOUT: G-5 PLOTTED: 4/8/2019 2:17 PM BY: moyer, david

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>G-5</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	CONSTRUCTION DETAILS SHEET 1 OF 5	File No. <b>8514</b>
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						Drawn by	NRW						
						Checked by	DTM	No.		Description			
						Approved by	PMF			REVISIONS			

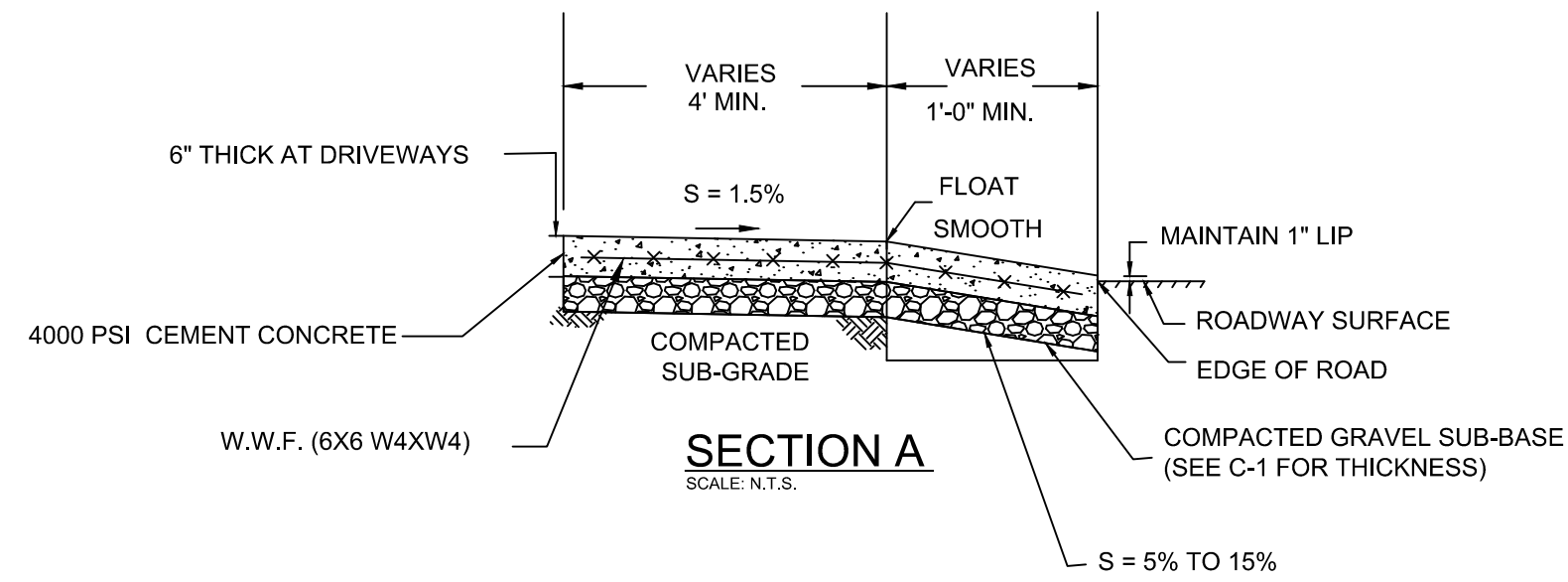




**NOTES:**

1. NEW SIDEWALK SHALL MATCH WIDTH OF EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
2. SIDEWALK MATERIAL TO MATCH EXISTING SIDEWALK, UNLESS OTHERWISE NOTED.
3. SIDEWALKS TO BE BUILT ACCORDING TO PROWAG AND MA AAB REGULATIONS, 2.0% MAX (0% TOLERANCE) CROSS SLOPE.
4. SEE ROADWAY GRADING, RESTORATION PLANS, AND CROSS SECTION SHEETS FOR SIDEWALK GRADES.

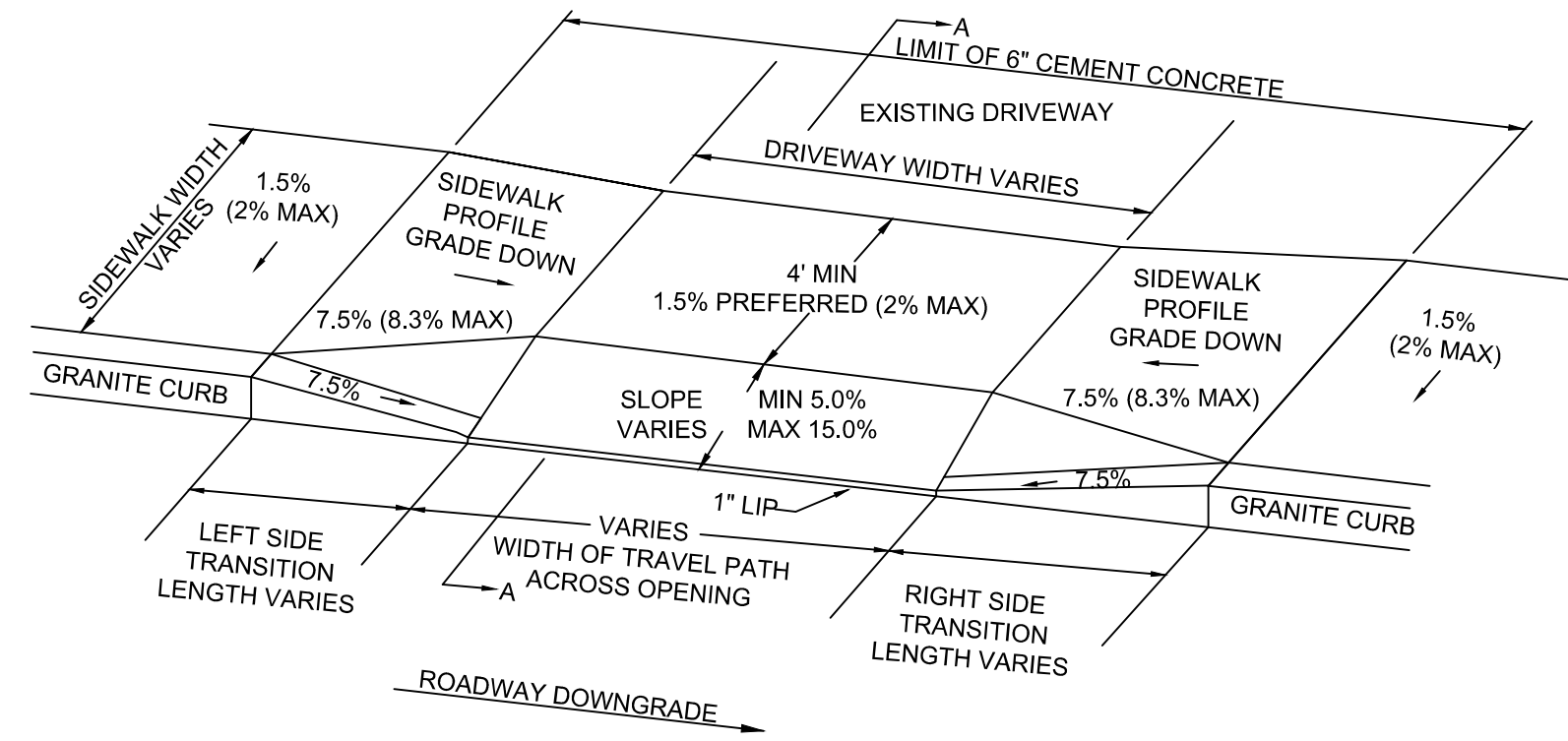
**BRICK SIDEWALK**  
SCALE: N.T.S.



**TRANSITION CHART \***

ROADWAY 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.

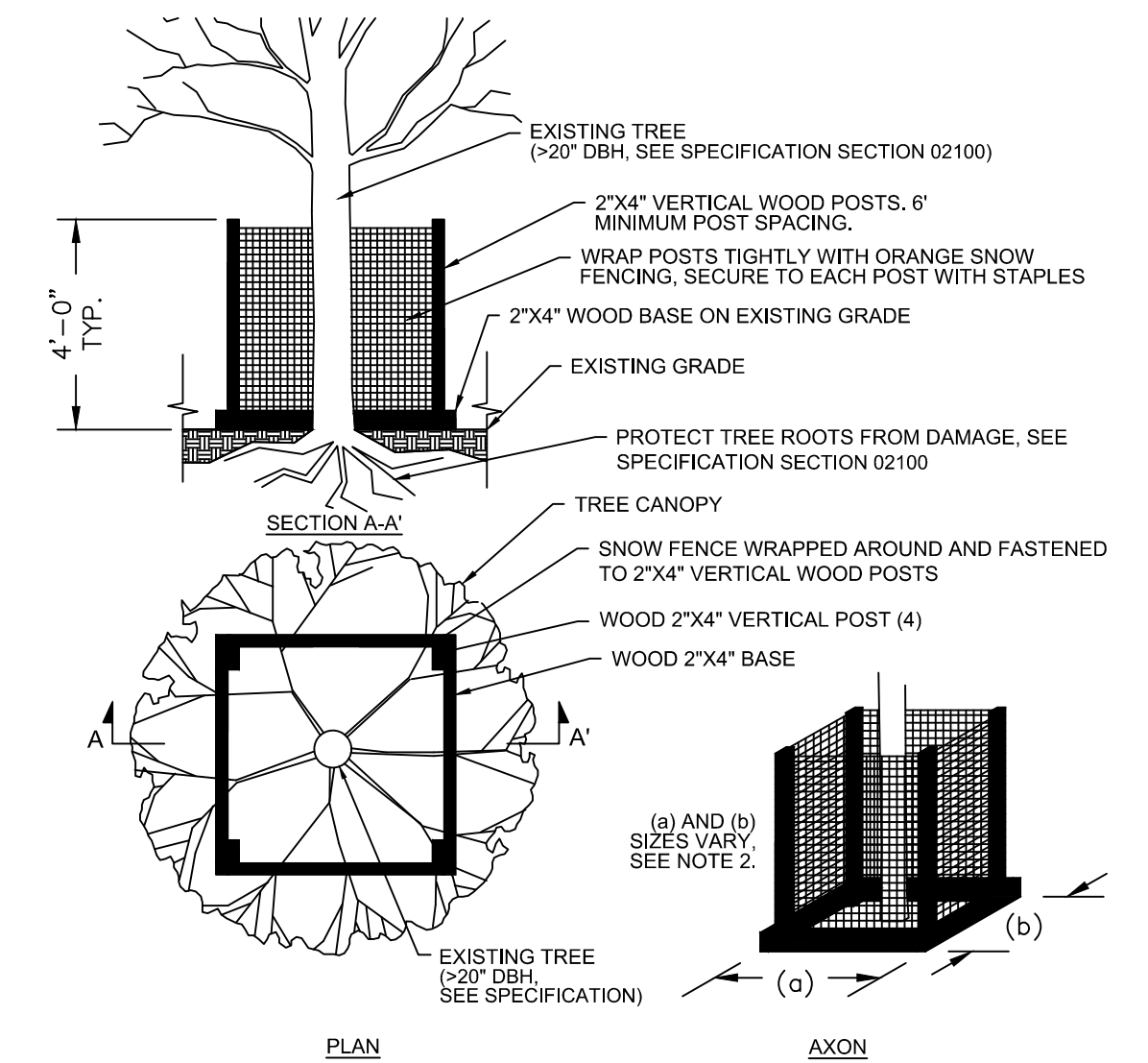
\*BASED ON A DESIGN SLOPE OF 7.5% AND 6" CURB REVEAL.



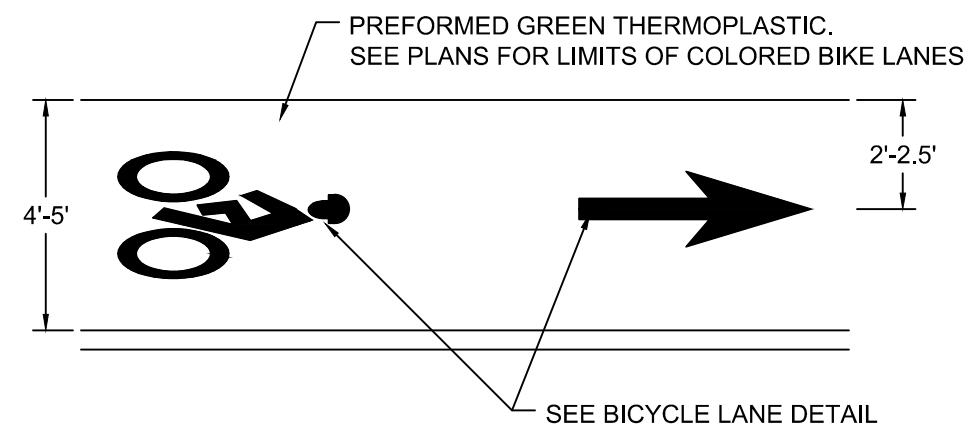
DW #	DRIVEWAY LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
1	501+07	12.50' R	1.44%	9'-0"	6'-6"
2	501+29	14.50' L	1.24%	6'-6"	9'-0"
3	502+09	14.50' L	1.24%	9'-0"	6'-6"
4	502+16	12.50' R	1.44%	6'-6"	9'-0"
5	502+46	14.50' L	0.97%	7'-8"	6'-6"
6	502+79	12.50' R	2.00%	6'-6"	9'-0"

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

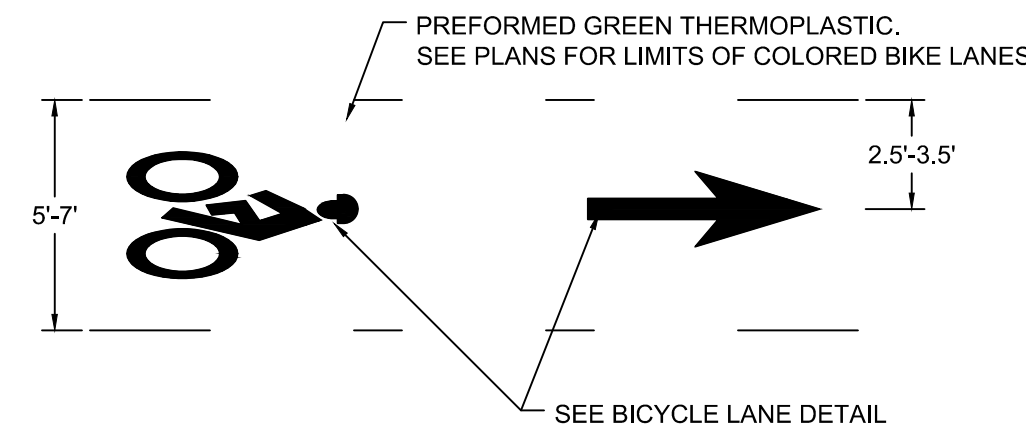
- NOTES:**
1. TREE BOX RESTS ON EXISTING GRADE AND IS NOT ANCHORED TO THE GROUND.
  2. SIZE OF TREE PROTECTION BOX VARIES BASED UPON TRUNK SIZE AND LIMITS OF SURFACE ROOTS. FINAL SIZE TO BE DETERMINED BY CITY ARBORIST IN FIELD DURING PRE-CONSTRUCTION SITE WALK.
  3. TREE PROTECTION SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES AND MAINTAINED IN GOOD CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
  4. SUBMIT SHOP DRAWINGS SHOWING ALL MATERIALS AND ATTACHMENTS.



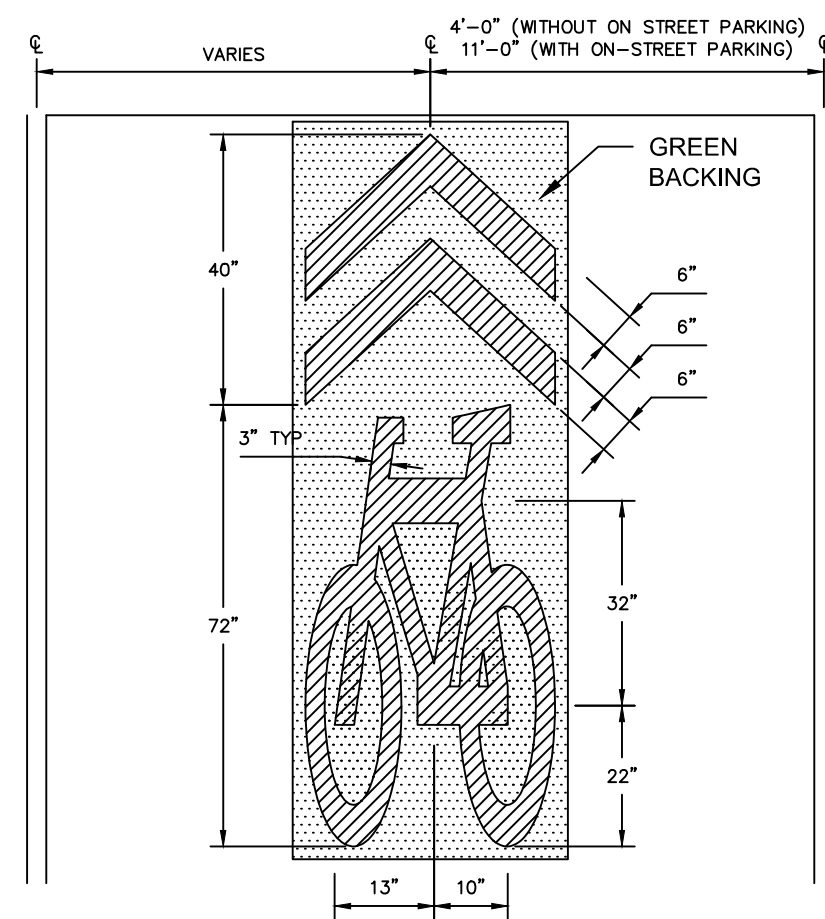
**TREE PROTECTION DEVICE**  
SCALE: N.T.S.



**COLORED BIKE LANE PAVMT. MARKING**  
SCALE: N.T.S.



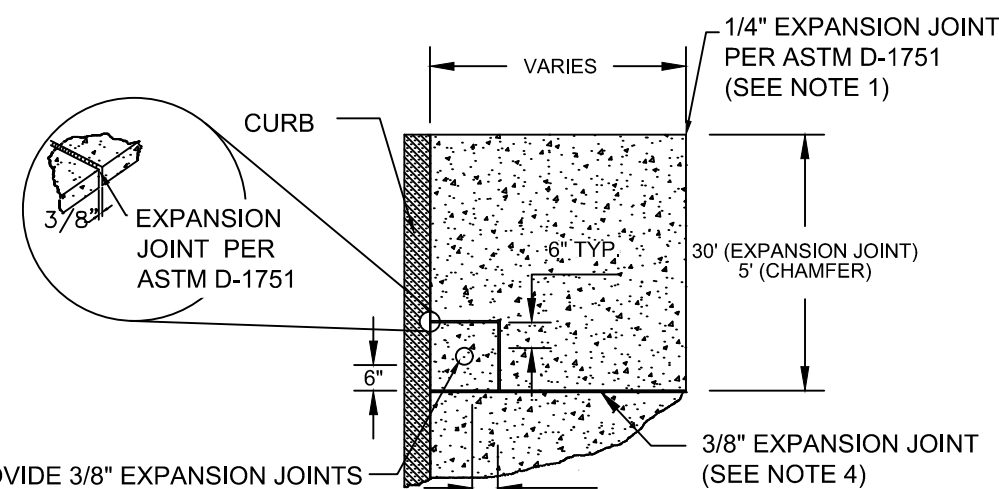
**BIKE LANE CROSSING PAVMT. MARKING**  
SCALE: N.T.S.



**NOTES:**

1. REFER TO FIGURE 9C-9 IN THE MUTCD FOR MORE DETAIL.
2. SHARED LANE MARKINGS SHALL BE PERFORMED THERMOPLASTIC.
3. SHARED LANE MARKINGS SHALL BE ONE PIECE.

**SHARED LANE PAVMT. MARKING**  
SCALE: N.T.S.

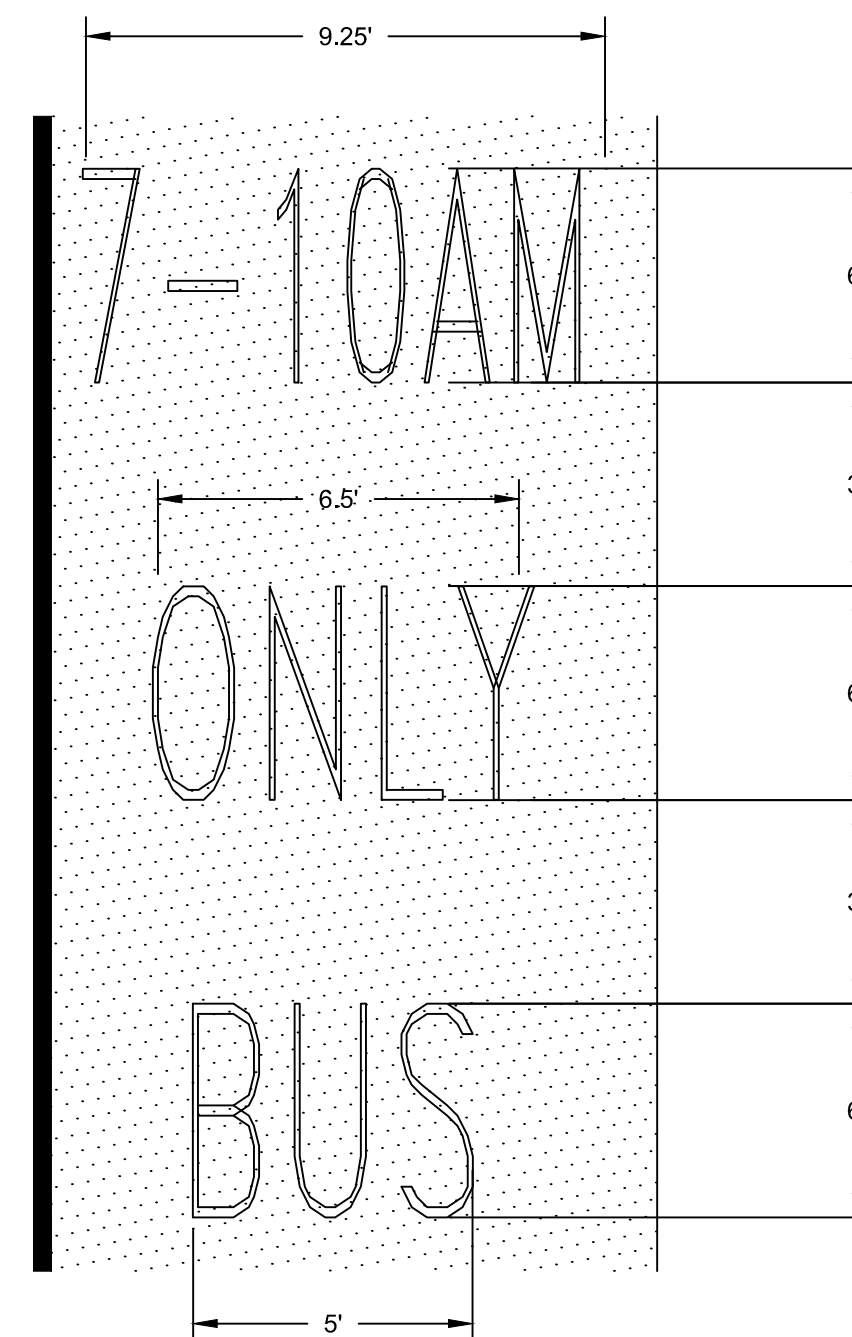


PROVIDE 3/8" EXPANSION JOINTS AROUND HYDRANTS, UTILITY POLES, SIGN POSTS, ETC., AS SHOWN

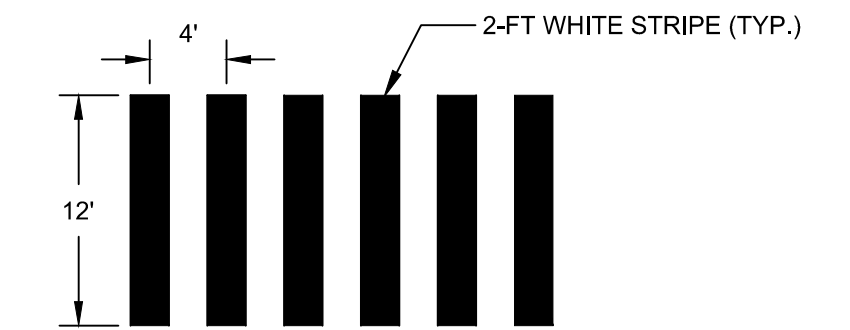
**NOTES:**

1. EXPANSION JOINTS SHALL BE INSTALLED AT BACK OF SIDEWALK STEPS, WALLS, BUILDINGS, AND OTHER STRUCTURES.
2. EXPANSION JOINTS AT BUILDINGS SHALL BE CAULKED.
3. EXPANSION JOINTS SHALL BE USED AT TRANSITIONS BETWEEN NEW AND EXISTING SIDEWALK JOINTS.
4. EXPANSION JOINTS OF 3/8-IN THICK FOAM SHALL BE PLACED EVERY 30 FEET PERPENDICULAR TO CURB ALIGNMENT EXTENDING THROUGH THE SIDEWALK DEPTH. SEE SECTION 02524-3.2C OF THE CONTRACT DOCUMENTS.

**EXPANSION JOINT**  
SCALE: N.T.S.



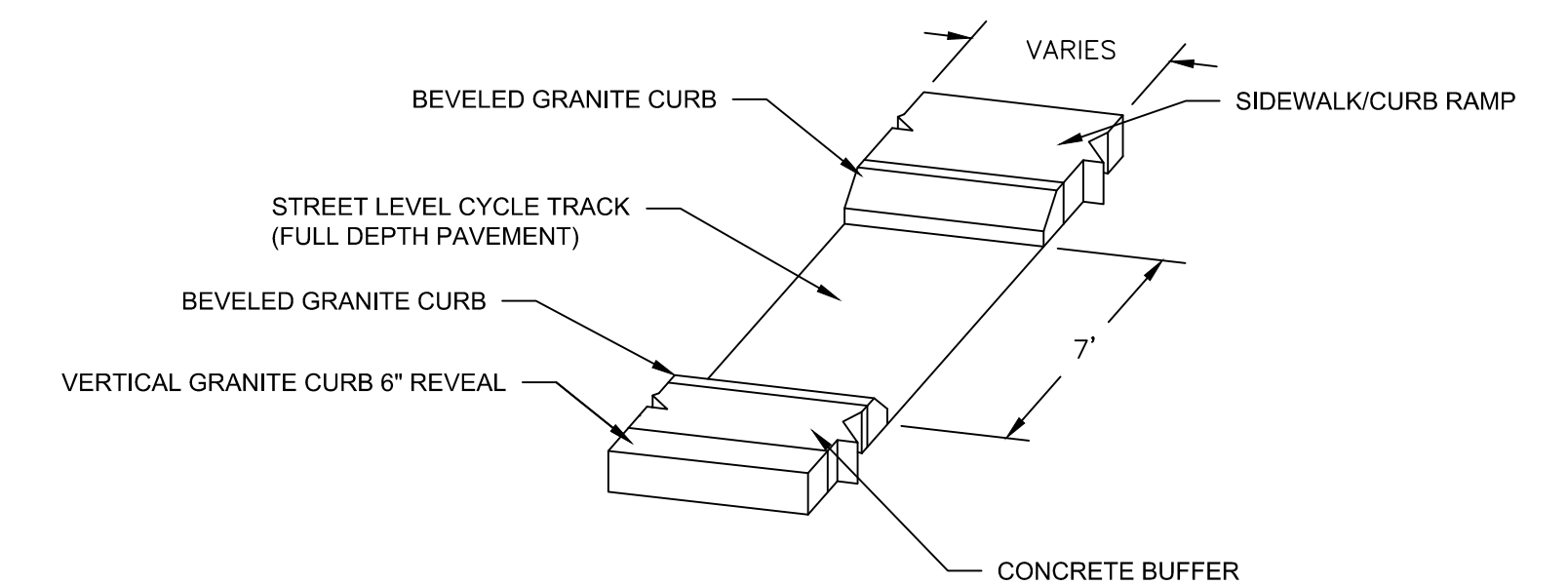
**BUS LANE PAVMENT MARKING DETAIL**  
SCALE: N.T.S.



**NOTE:**

1. CROSSWALK LINE SHOULD BE BETWEEN ONE AND THREE FEET FROM THE CURB.

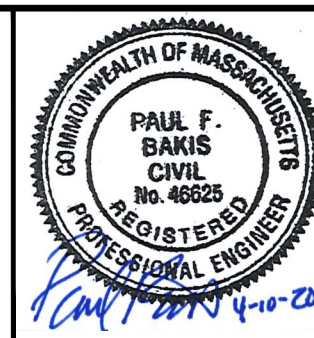
**CAMBRIDGE STANDARD CROSSWALK**  
SCALE: N.T.S.



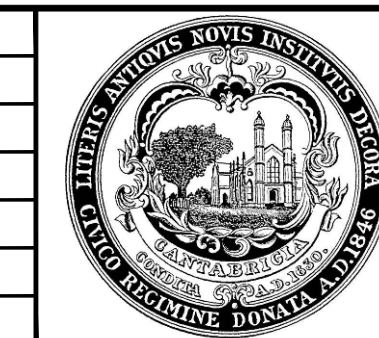
**STREET LEVEL CYCLE TRACK**  
SCALE: N.T.S.

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CAD FILE: I:\eng\16042.44 Inman Square\HD\DWG\100% Submission\Y16042.22\100% (Construction Details).dwg LAYOUT: G-6 PLOTTED: 4/8/2019 2:17 PM BY: moyer, david



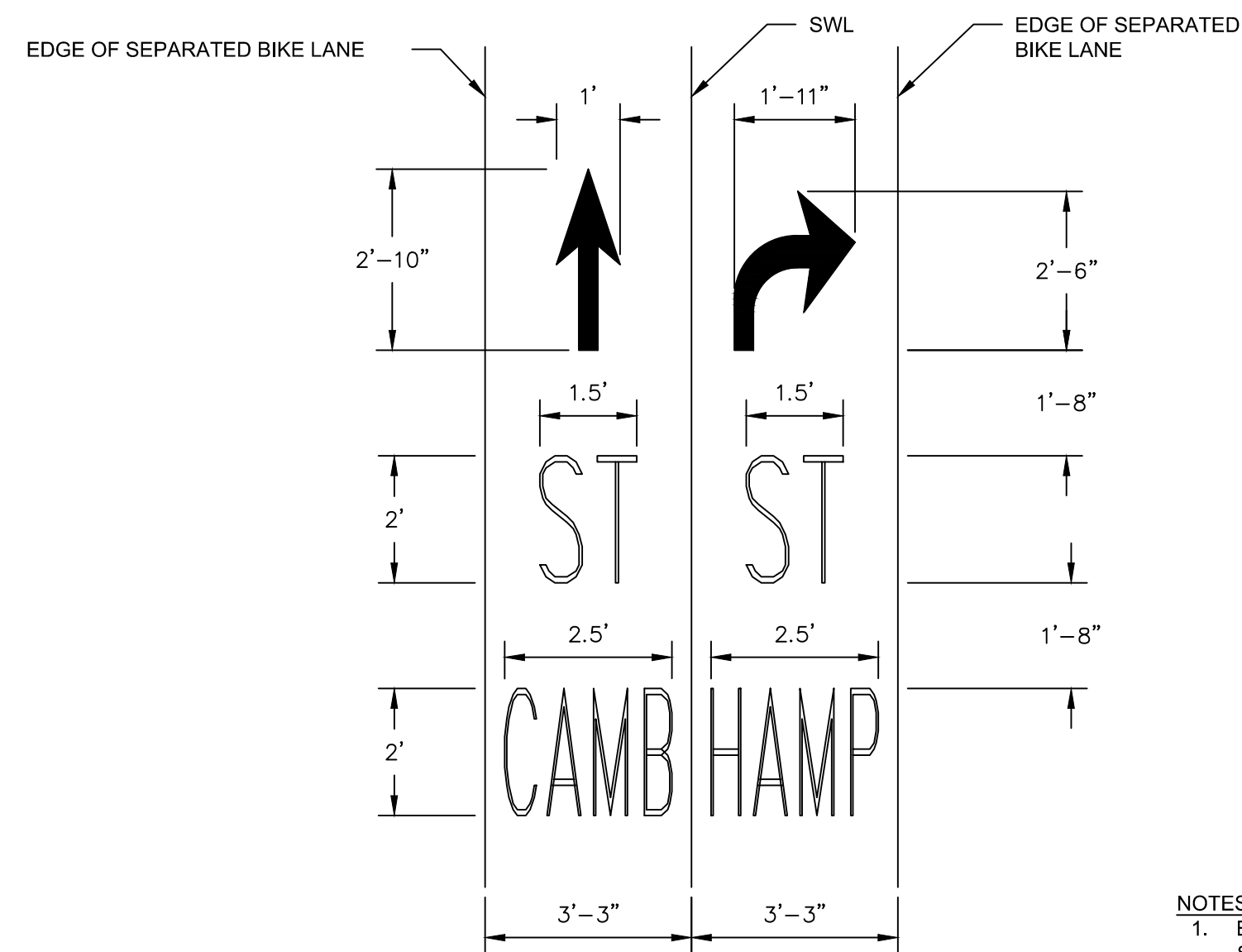
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	DTM		
Drawn by	NRW		
Checked by	DTM	No.	Description
Approved by	PMF		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION DETAILS SHEET 2 OF 5

Sheet	G-6
File No.	8514

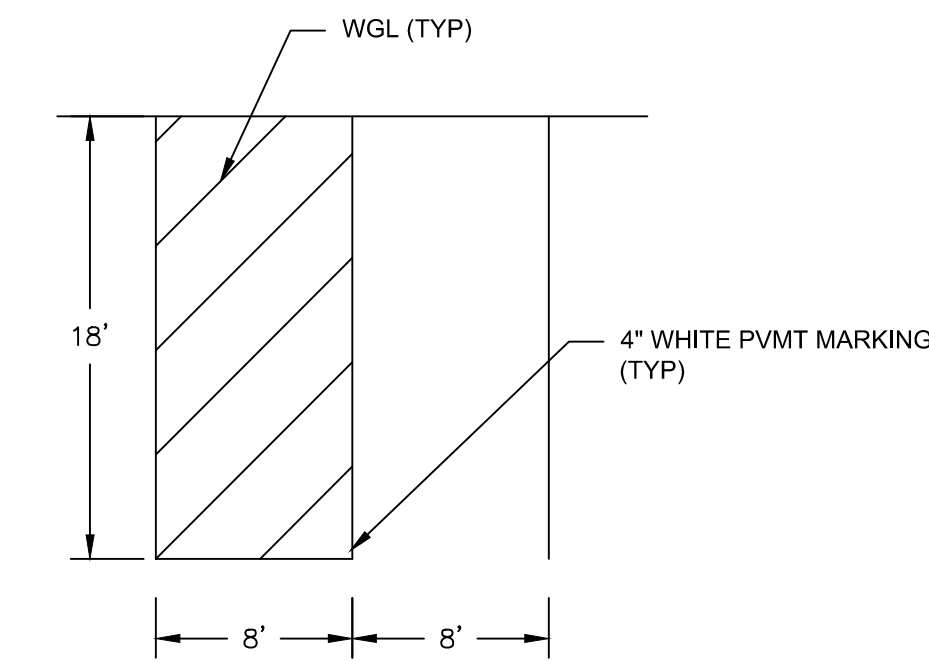
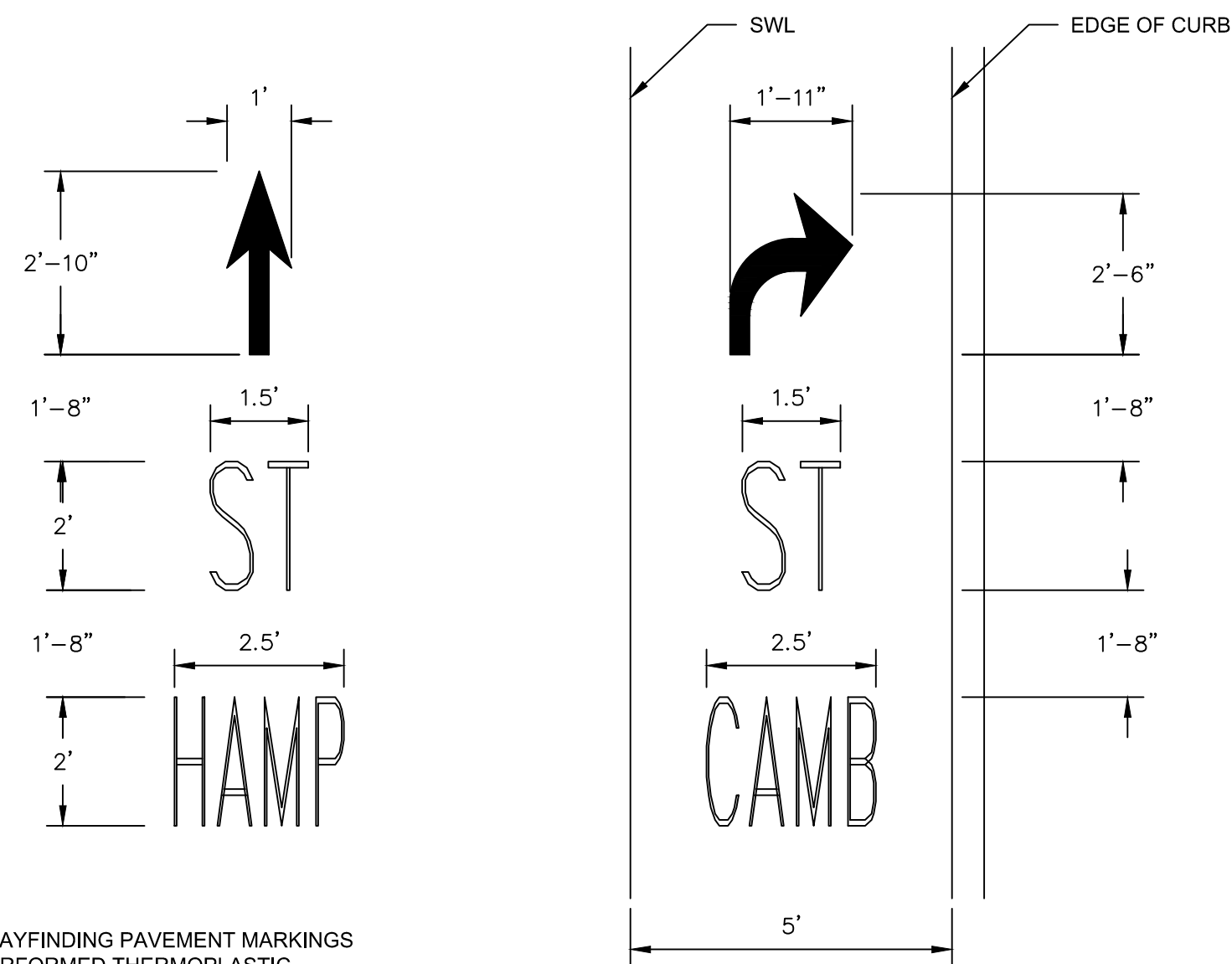




- NOTES:**
- BIKE LANE WAYFINDING PAVEMENT MARKINGS SHALL BE PERFORMED THERMOPLASTIC.
  - BIKE LANE WAYFINDING PAVEMENT MARKINGS SHALL BE CENTERED IN BIKE LANE.

**BIKE LANE WAYFINDING PAVEMENT MARKING DETAILS**

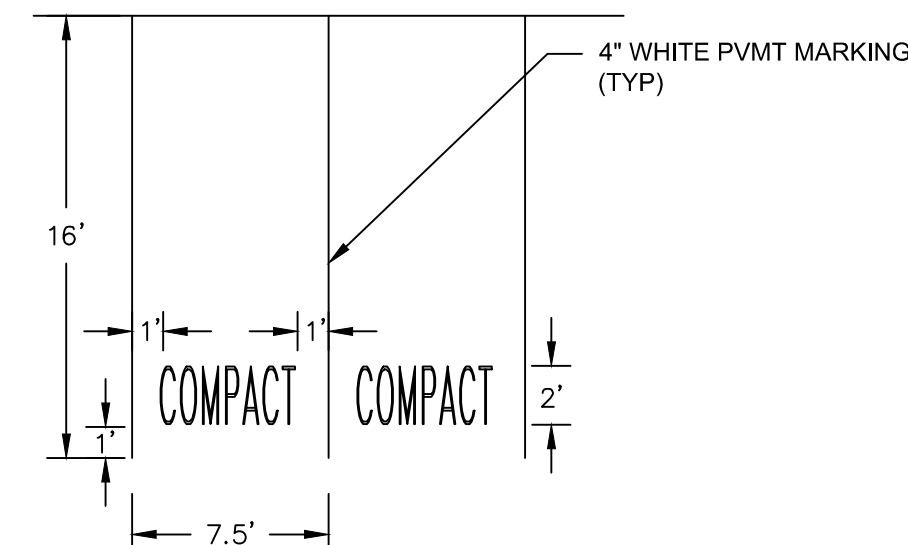
SCALE: N.T.S.



- NOTES:**
- ACCESSIBLE AISLE SHALL HAVE A MAX SLOPE OF 1:50 IN ALL DIRECTIONS.

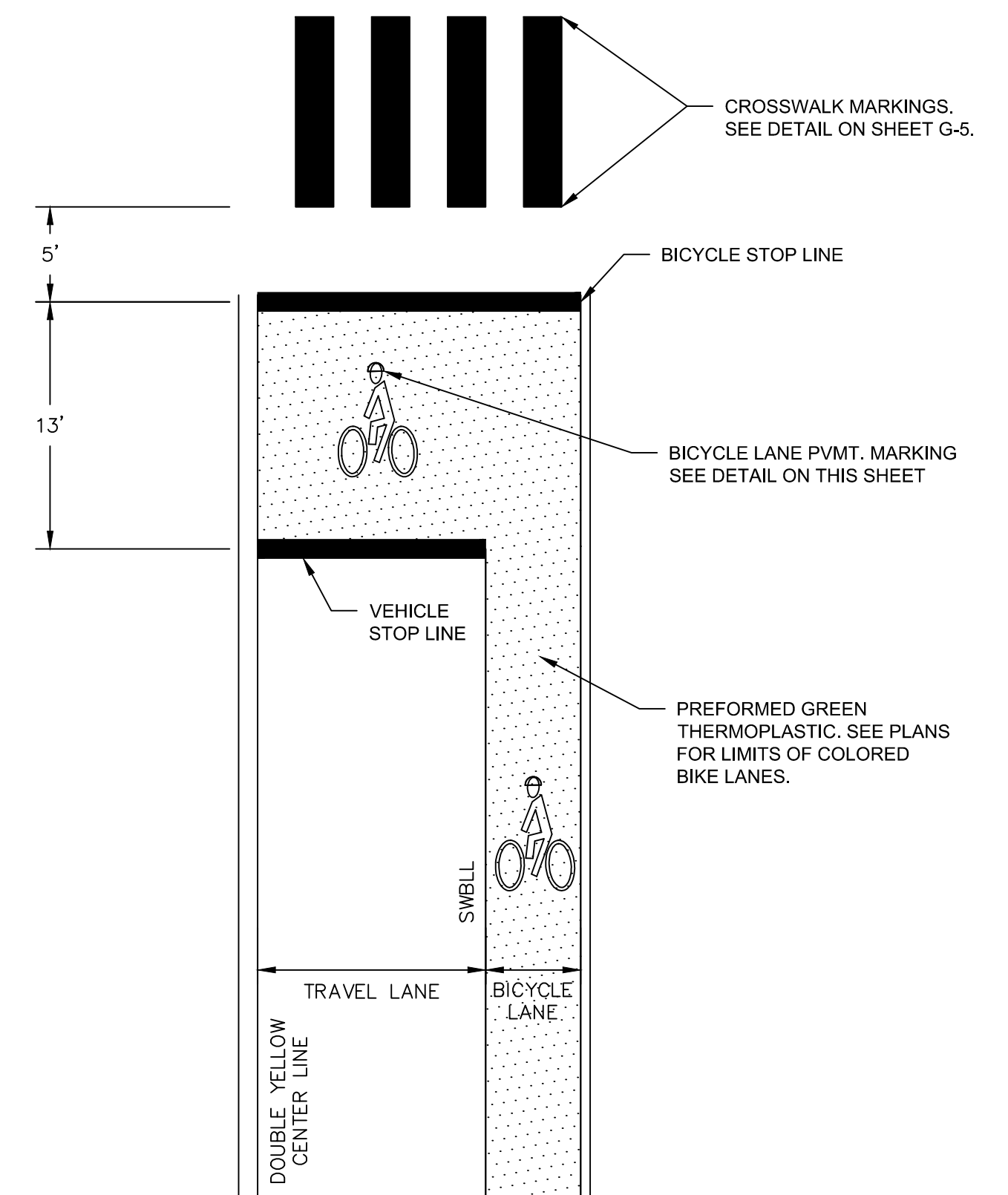
**ACCESSIBLE PARKING SPACE AISLE**

SCALE: N.T.S.



**COMPACT PARKING SPACE**

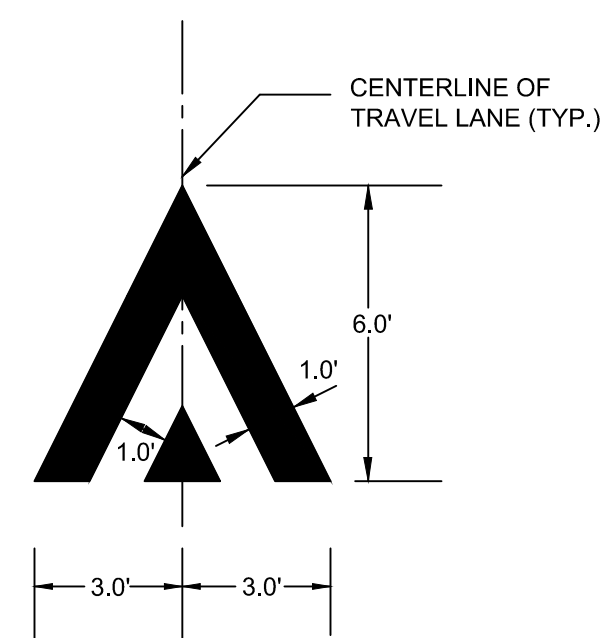
SCALE: N.T.S.



- NOTES:**
- PLACE VEHICLE STOP LINE 13' IN ADVANCE OF THE BICYCLE STOP LINE.
  - SEE PLAN SHEETS FOR BICYCLE BOX LOCATIONS AND SYMBOL LOCATIONS.
  - DO NOT PLACE SYMBOLS ON LANE LINES, CROSSWALK LINES, OR STOP LINES.
  - CENTER SYMBOLS BETWEEN VEHICLE STOP LINE AND BICYCLE STOP LINE.
  - INSTALL GREEN PAVEMENT SO THAT CROSSWALK MARKINGS ARE NOT DISTURBED.

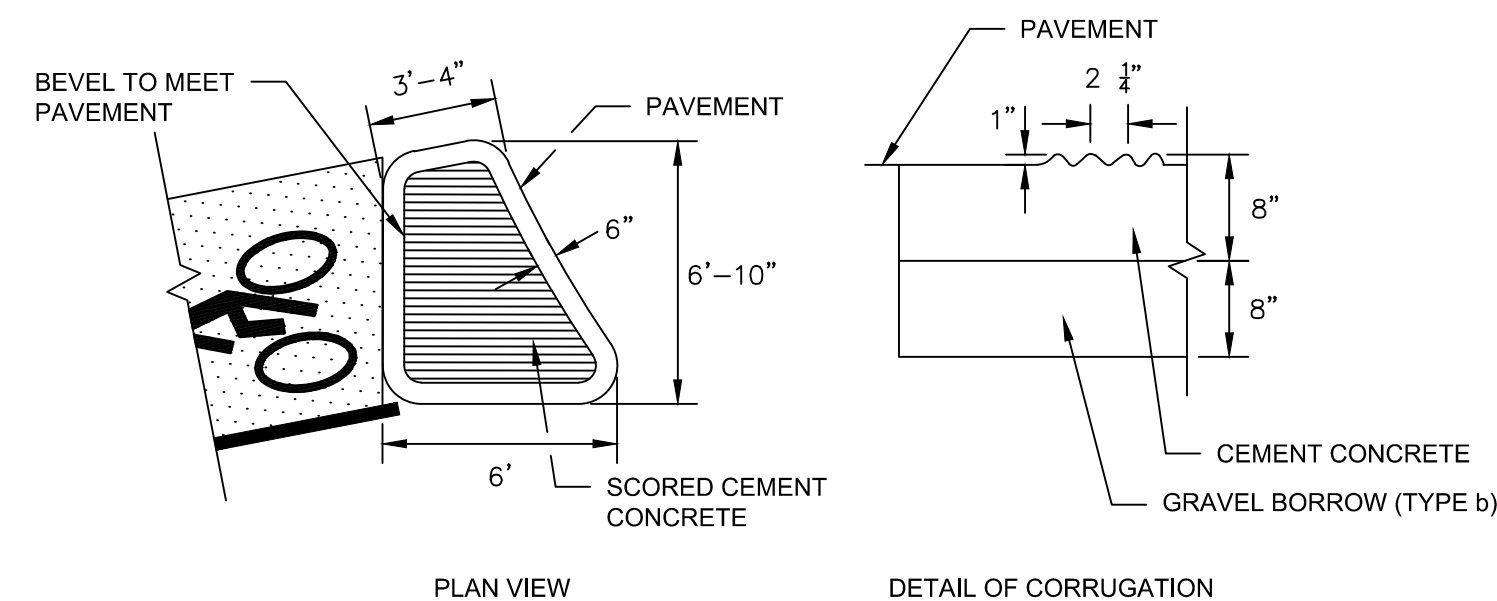
**BIKE BOX**

SCALE: N.T.S.



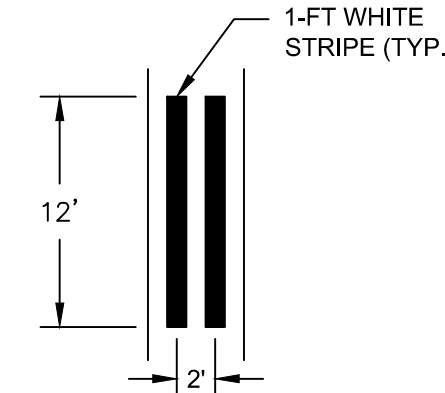
**RAMP MARKING DETAIL**

SCALE: N.T.S.



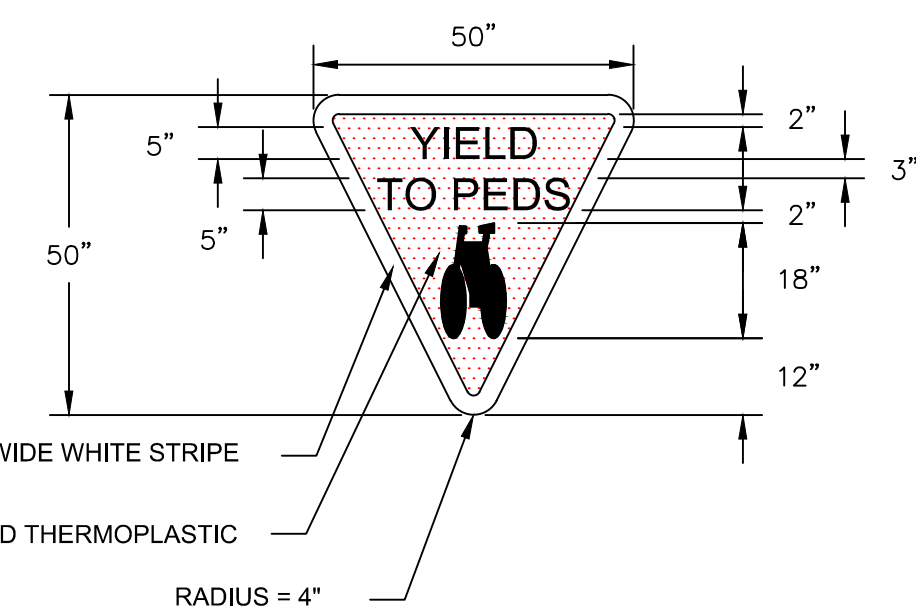
**SCORED CEMENT CONCRETE PAVEMENT ISLAND**

SCALE: N.T.S.



**BIKE LANE CROSSWALK**

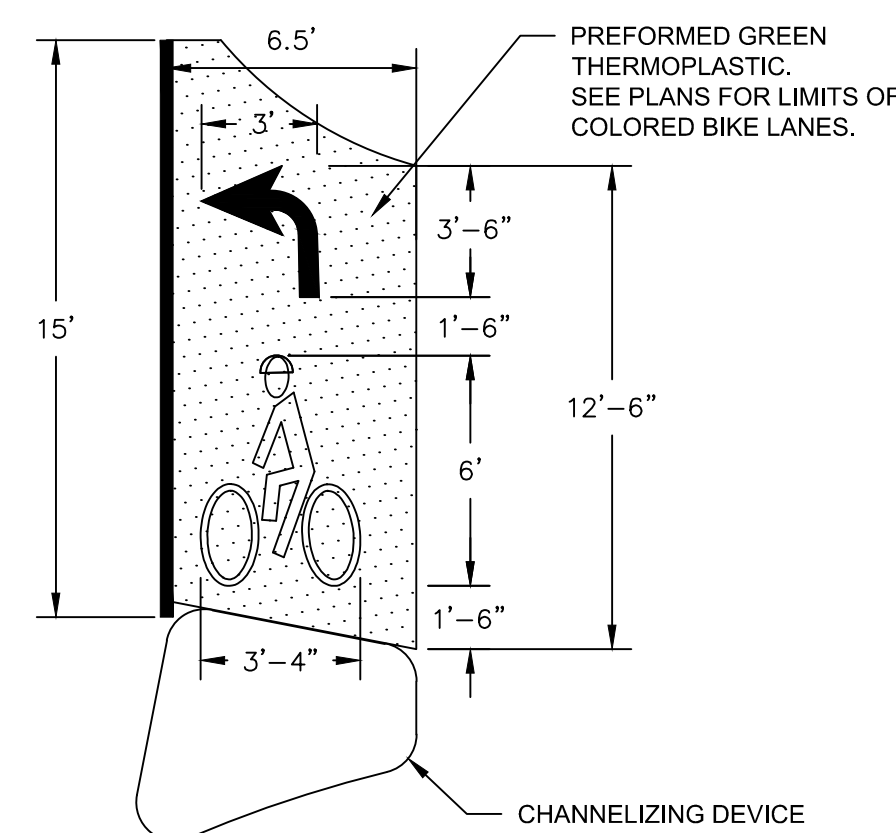
SCALE: N.T.S.



**BIKES YIELD TO PEDS PAVEMENT MARKING DETAIL**

SCALE: N.T.S.

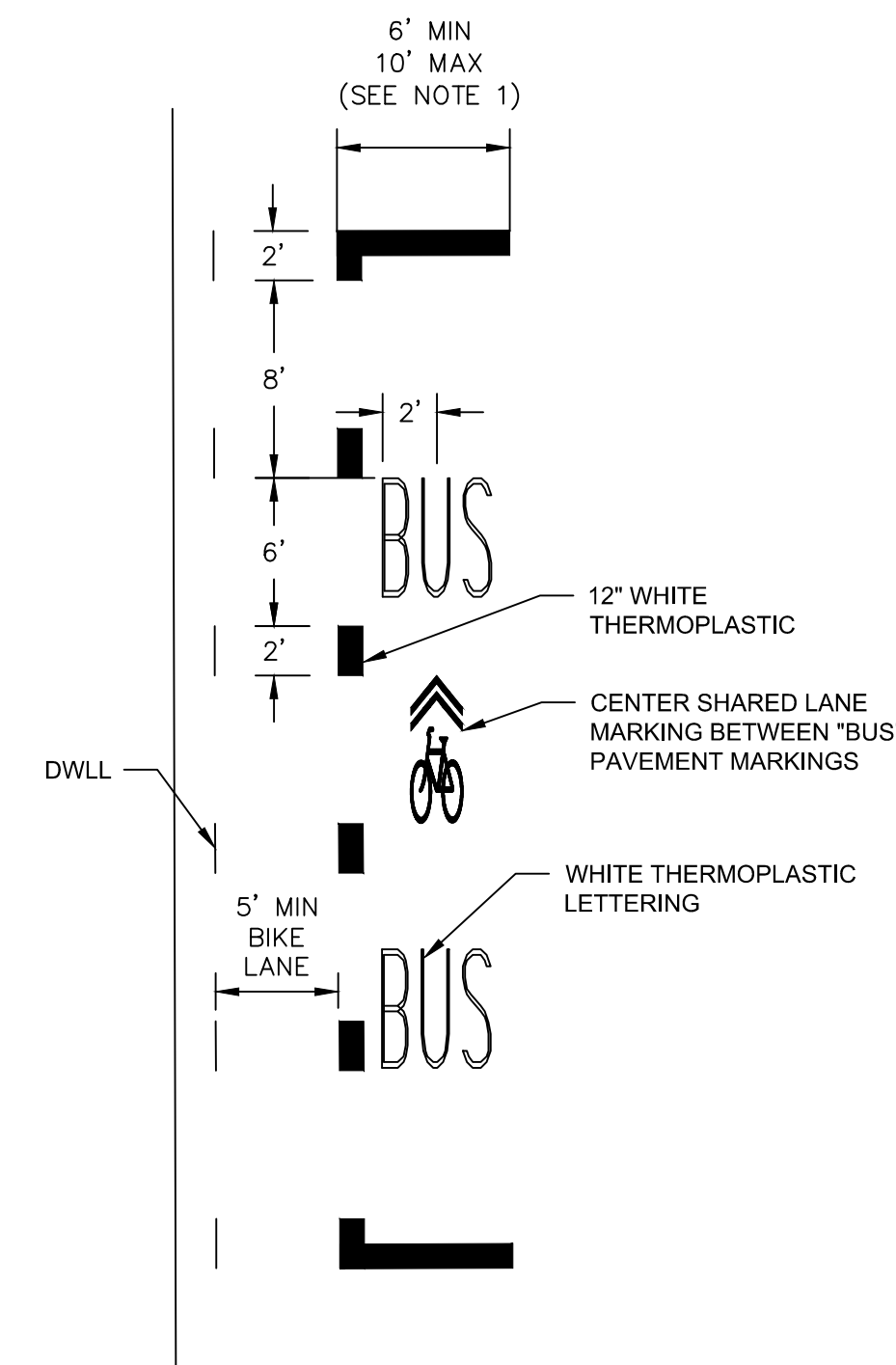
- NOTES:**
- BIKES YIELD TO PEDS PAVEMENT MARKINGS SHALL BE SURFACE APPLIED TAPE.



**BIKE TWO-STAGE LEFT TURN BOX DETAIL**

SCALE: N.T.S.

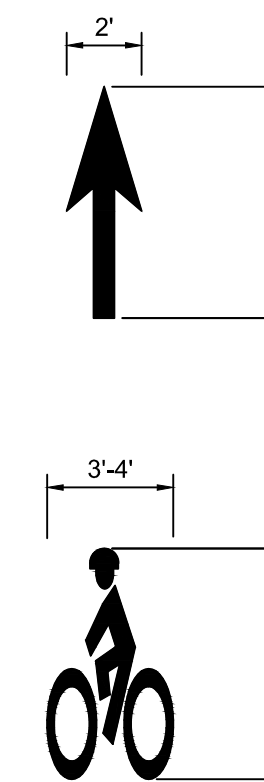
- NOTES:**
- REFER TO FIGURE 9C-6 IN THE MUTCD FOR MORE DETAIL.
  - BICYCLE LANE MARKINGS SHALL BE PERFORMED THERMOPLASTIC.



- NOTES:**
- BUS STOP PVMT MARKINGS SHOULD BE 7' FROM FACE OF CURB UNLESS OTHERWISE NOTED.
  - REFER TO SIGN AND PAVEMENT MARKING PLAN FOR LENGTH OF BUS STOP PAVEMENT MARKINGS.

**BUS STOP PAVEMENT MARKING**

SCALE: N.T.S.

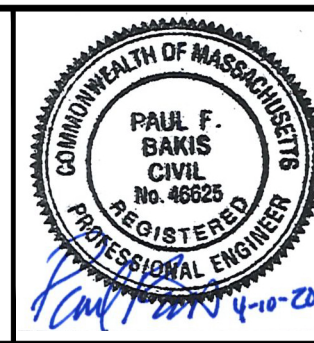


**BICYCLE LANE PVMT. MARKING**

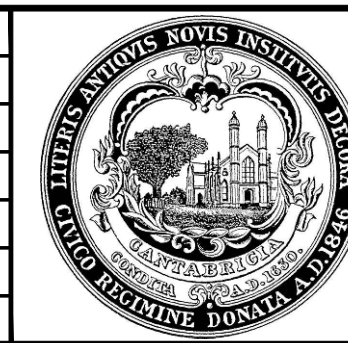
SCALE: N.T.S.

ISSUED FOR BID

CAD FILE: I:\eng\16042.44 Inman Square\HD\DWG\100% Submission\16042.22\100% (Construction Details).dwg LAYOUT: G-7 PLOTTED: 4/10/2019 1:22 PM BY: moyer, david



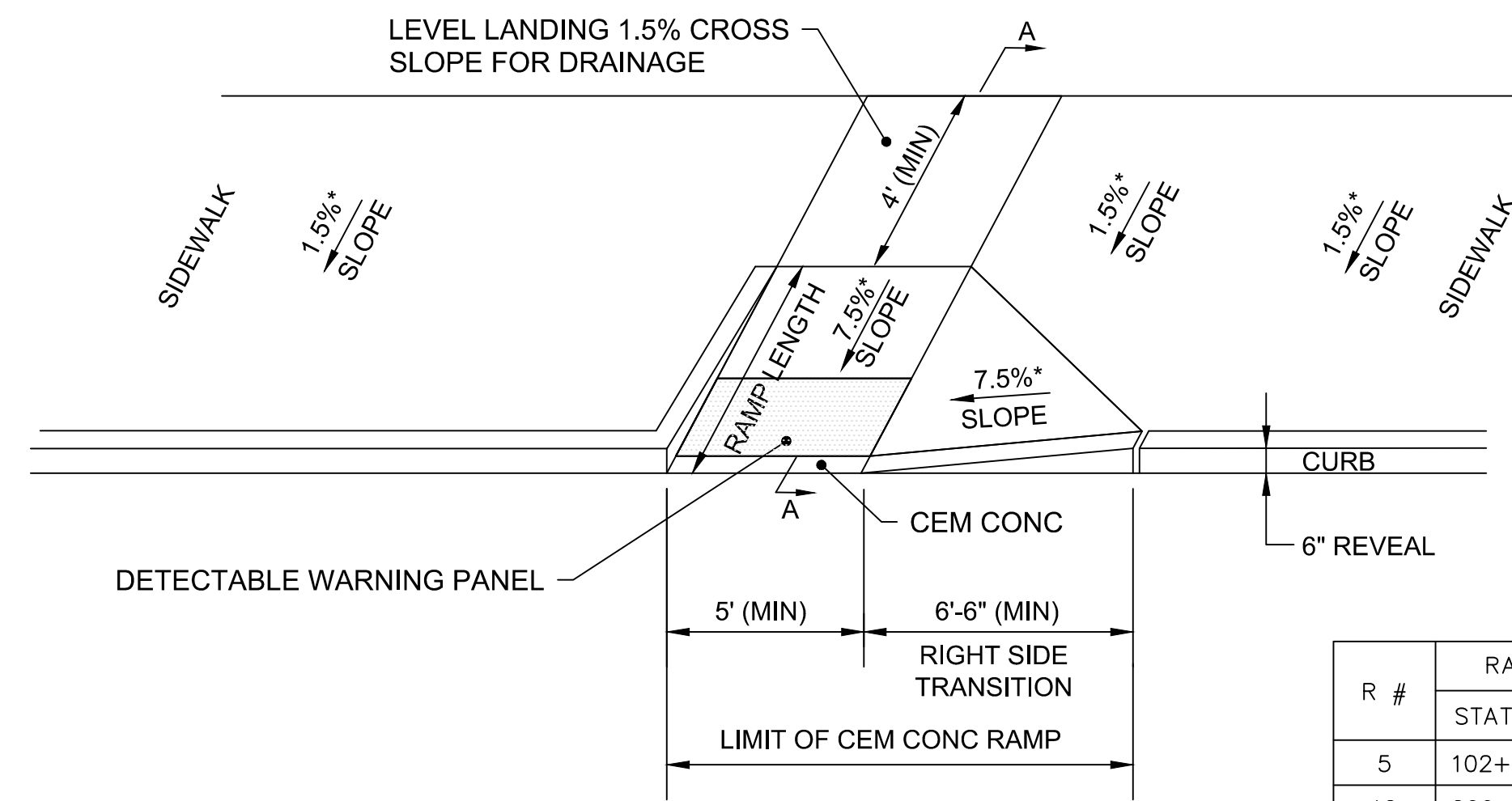
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Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	DTM			
Drawn by	NRW			
Checked by	DTM	No.	Description	Date
Approved by	PMF		REVISIONS	



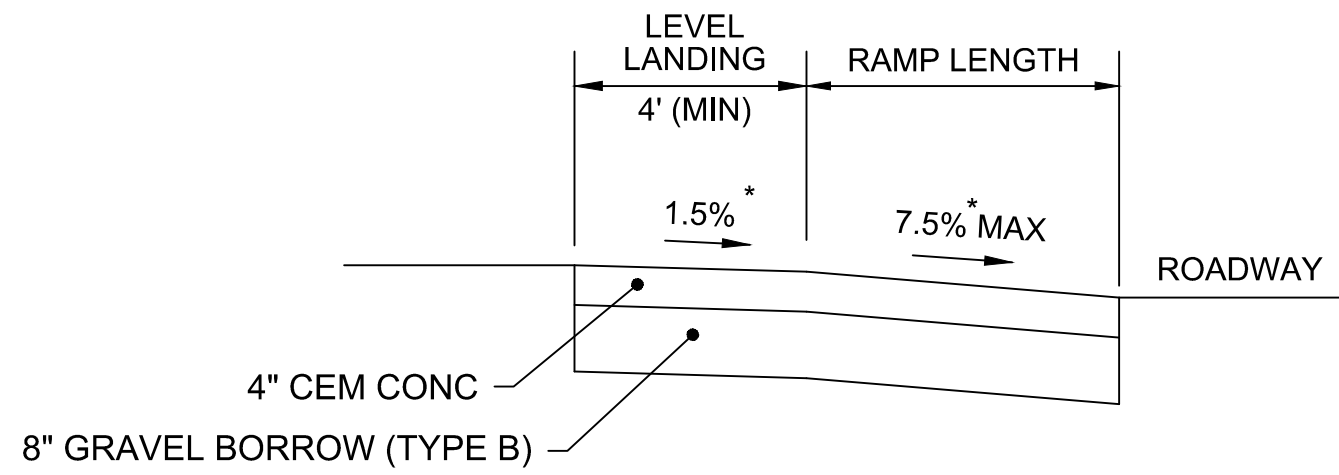
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION DETAILS SHEET 3 OF 5

Sheet	G-7
File No.	8514



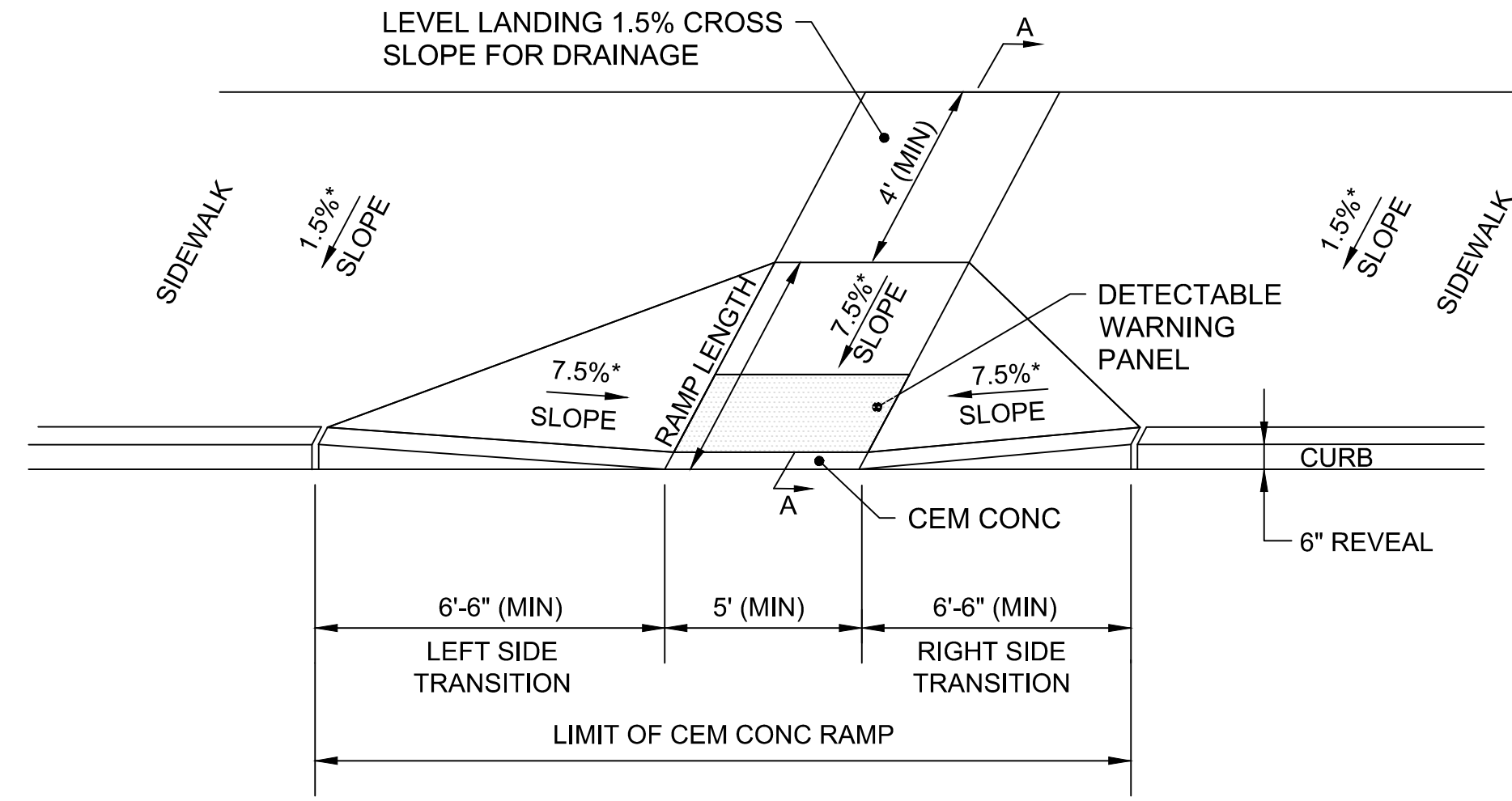


R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
5	102+64	26.88' L	0.34%	N/A	6'-6"
12	200+42	37.77' L	1.40%	N/A	6'-6"
16	200+82	12.09' L	0.58%	N/A	6'-6"

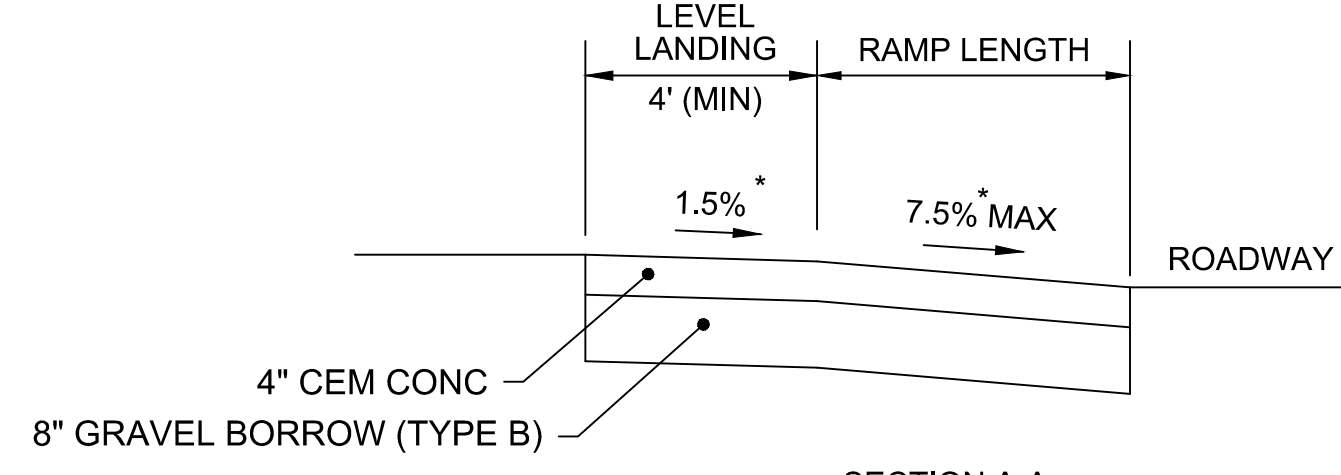


\* TOLERANCE FOR CONSTRUCTION = ±0.5%

**CURB RAMP DETAIL #1**  
SCALE: N.T.S.

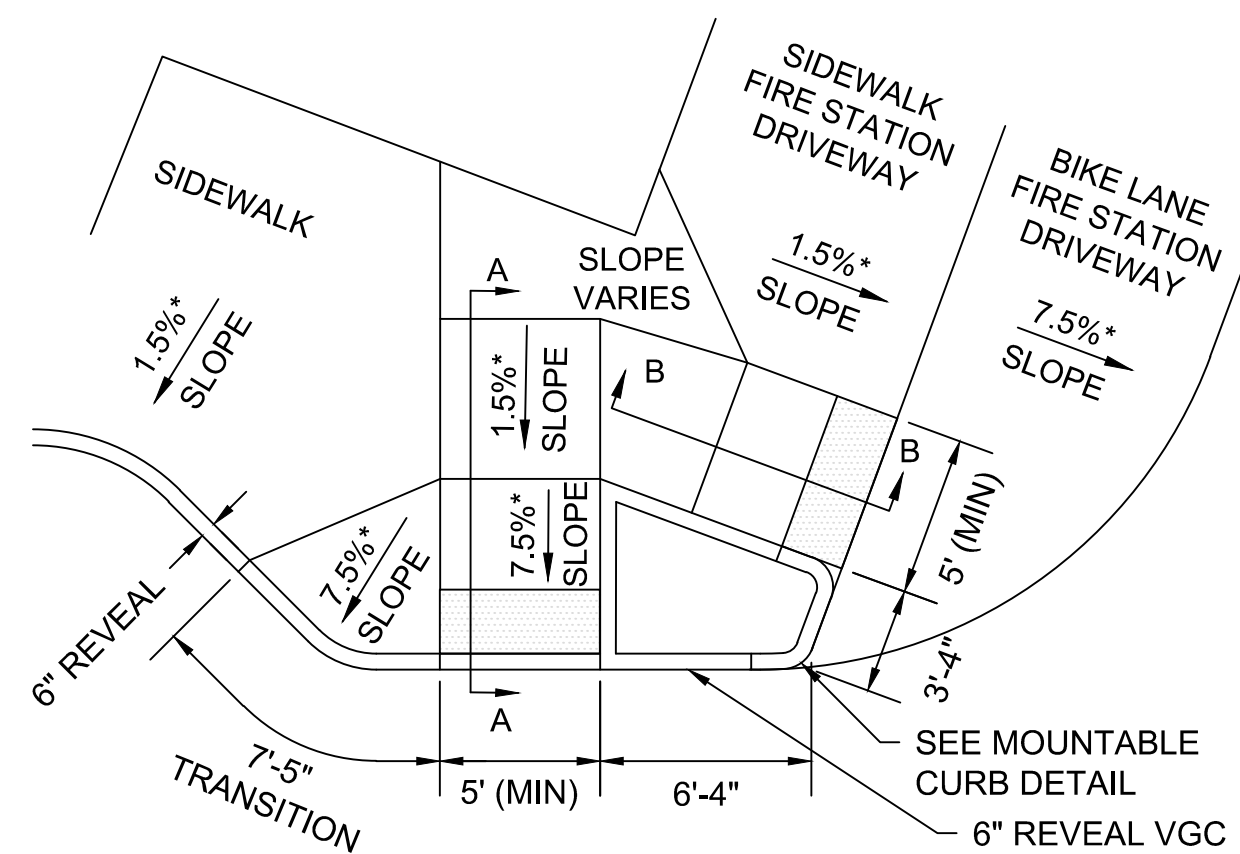


R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
1	100+82	18.00' L	2.20%	7'-8"	6'-6"
2	100+82	29.09' R	1.00%	6'-6"	9'-0"
3	100+98	38.31' R	0.72%	6'-6"	7'-8"
6	102+69	31.16' R	2.67%	6'-6"	11'-0"
7	103+58	22.00' R	0.28%	6'-6"	7'-8"
8	104+67	32.65' L	1.00%	7'-8"	6'-6"
9	105+87	25.00' L	0.42%	7'-8"	6'-6"
11	106+19	29.75' R	0.65%	7'-8"	6'-6"
13	500+38	12.80' L	0.55%	6'-6"	7'-8"
14	200+59	29.45' R	0.61%	6'-6"	7'-8"
17	200+84	22.90' R	0.67%	6'-6"	7'-8"
19	202+77	32.00' L	0.27%	6'-6"	3'-10"
20	203+08	19.95' L	1.53%	4'-6"	6'-6"
21	203+04	19.43' R	1.08%	6'-6"	2'-11"
23	300+51	35.57' L	0.62%	6'-6"	7'-8"
25	300+51	35.57' L	1.20%	9'-0"	6'-6"

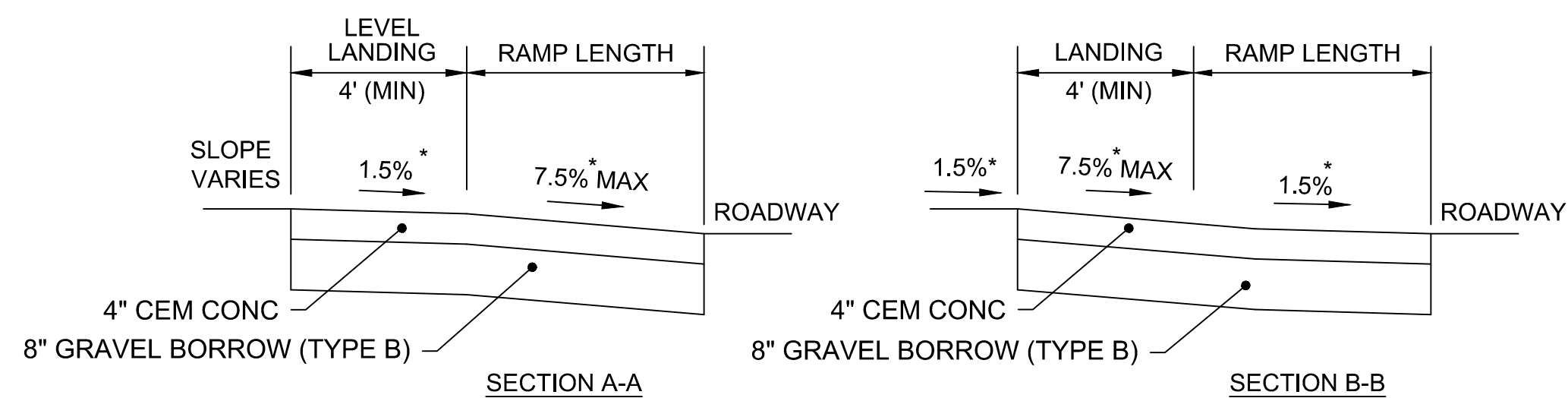


\* TOLERANCE FOR CONSTRUCTION = ±0.5%

**CURB RAMP DETAIL #2**  
SCALE: N.T.S.



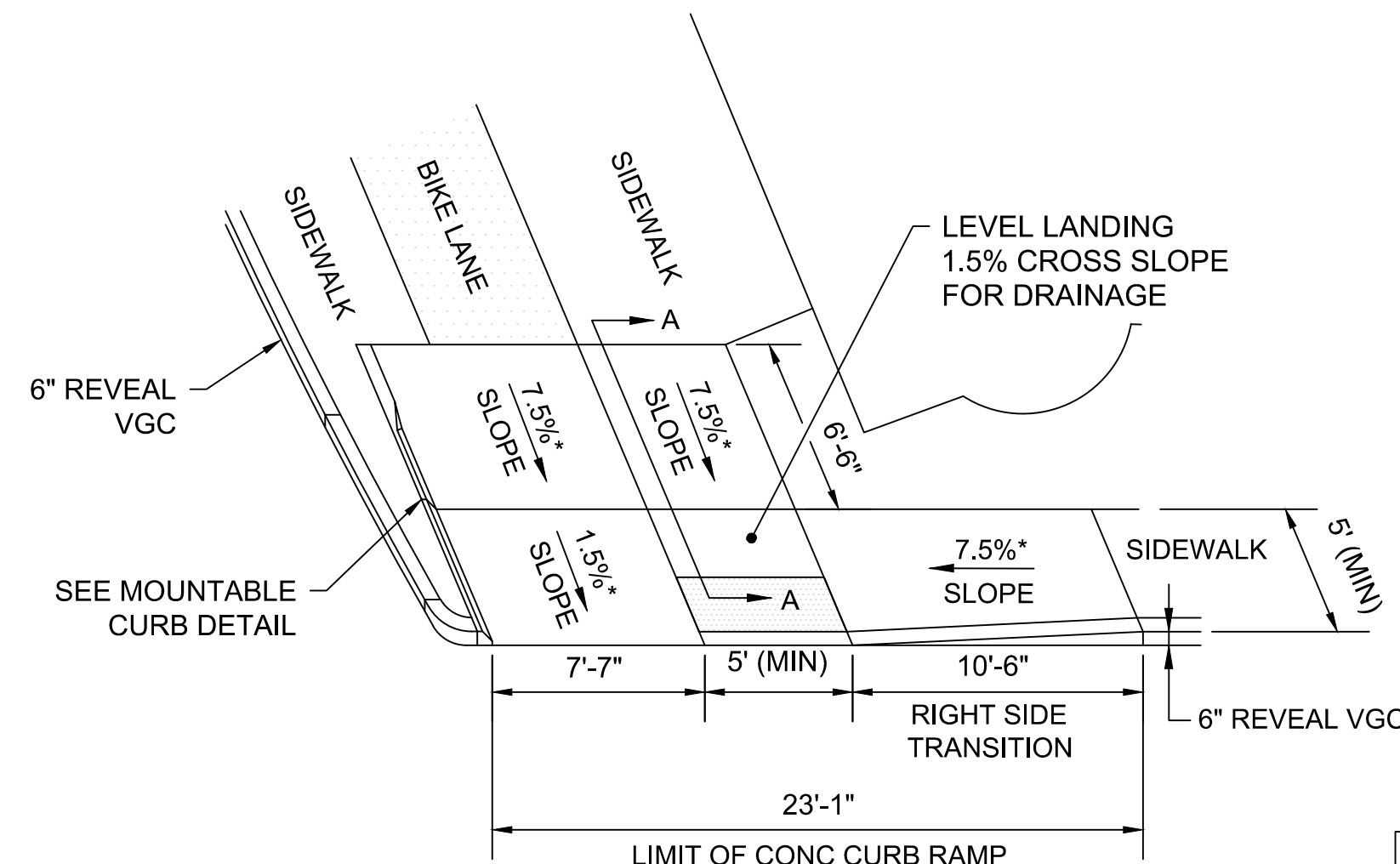
R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
10	105+86	20.49' R	1.52%	6'-6"	N/A



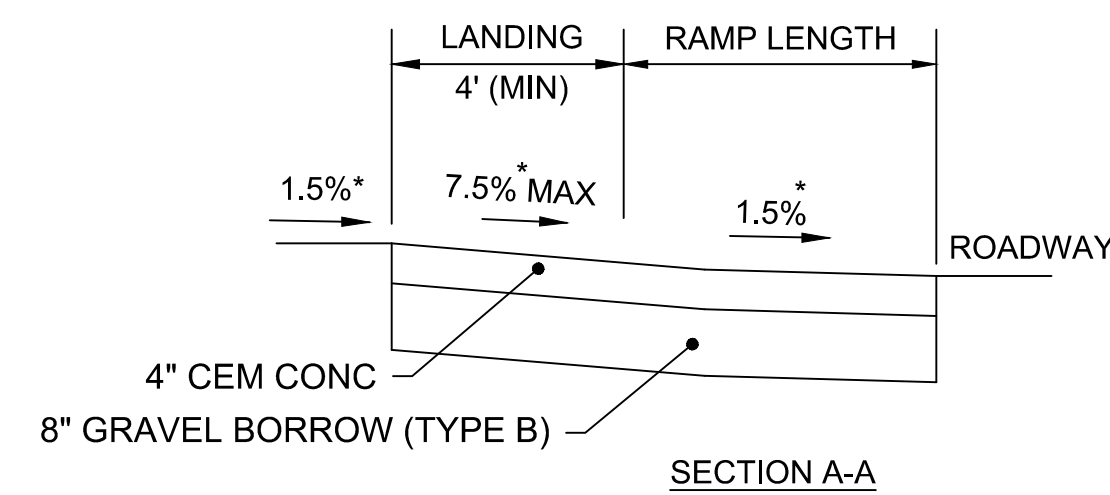
\* TOLERANCE FOR CONSTRUCTION = ±0.5%

\* TOLERANCE FOR CONSTRUCTION = ±0.5%

**CURB RAMP DETAIL #3**  
SCALE: N.T.S.



R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
4	101+29	34.26' R	1.22%	N/A	10'-8"



\* TOLERANCE FOR CONSTRUCTION = ±0.5%

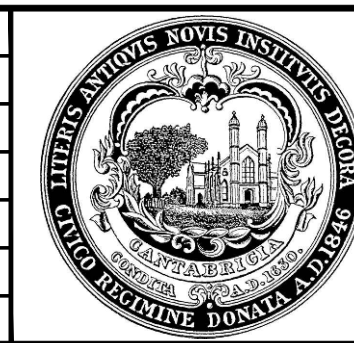
**CURB RAMP DETAIL #4**  
SCALE: N.T.S.

ISSUED FOR BID

CAD FILE: I:\eng\160422\44 Inman Square\HD\DWG\100% Submission\160422\21\100% (Construction Details).dwg LAYOUT: G-8 PLOTTED: 4/8/2019 2:18 PM BY: moyer, david



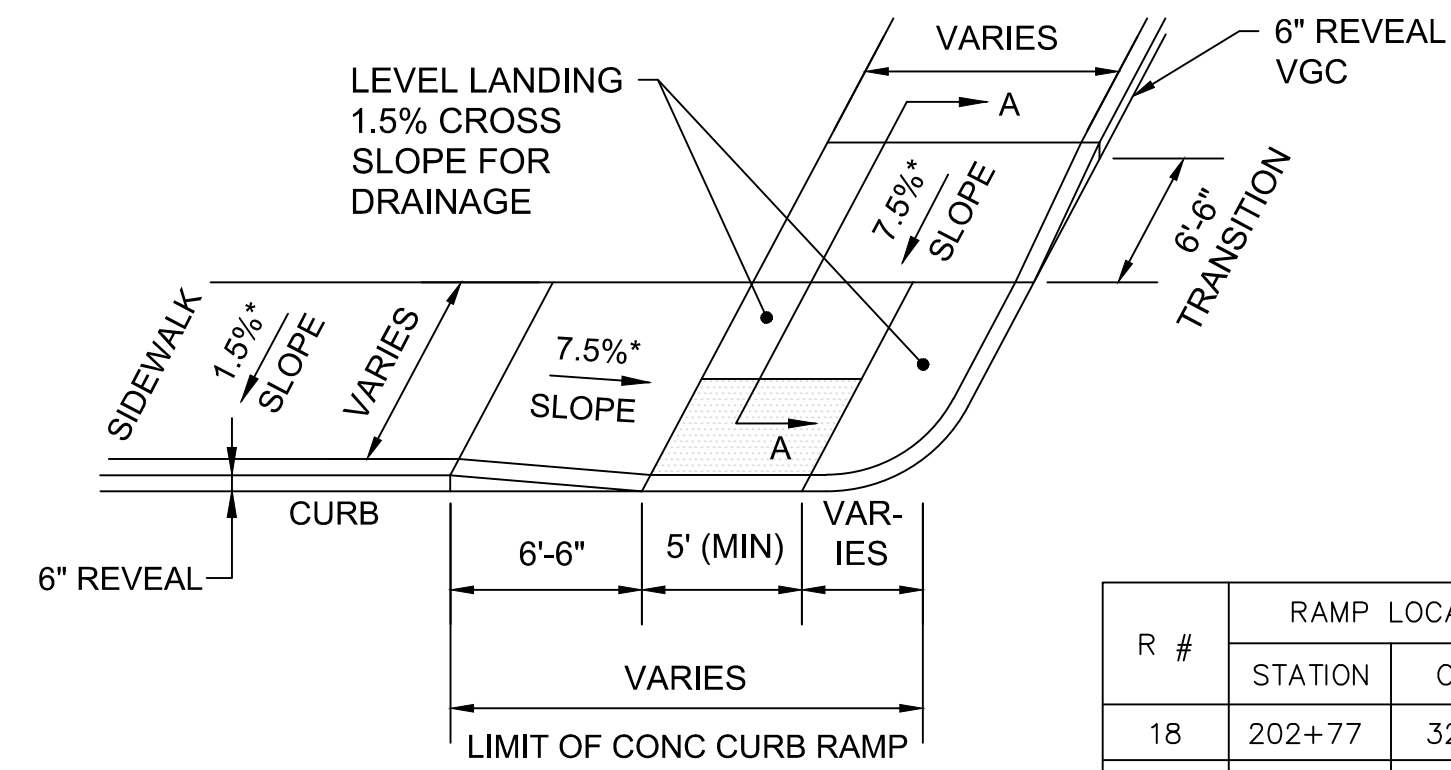
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	DTM		
Drawn by	NRW		
Checked by	DTM	No.	Description
Approved by	PMF		Date



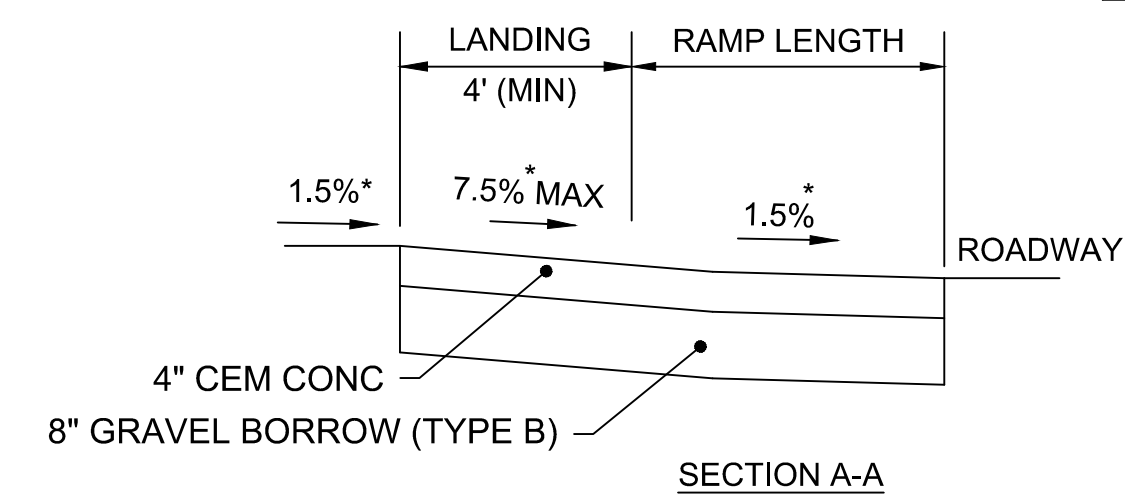
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION DETAILS SHEET 4 OF 5

Sheet	G-8
File No.	8514



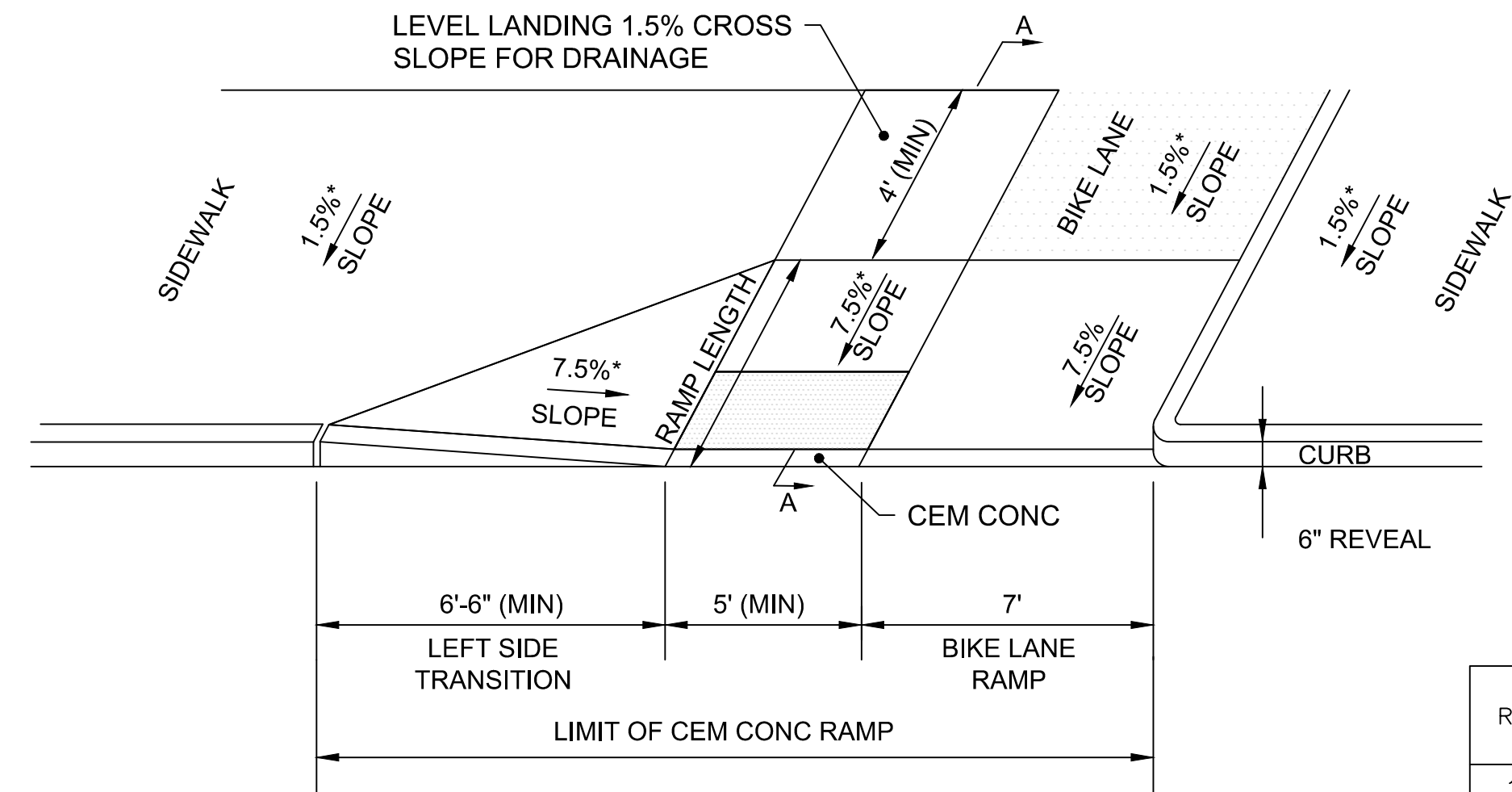


R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
18	202+77	32.00' L	0.43%	7'-8"	6'-6"
24	301+85	28.85' R	1.30%	6'-6"	5'-0"

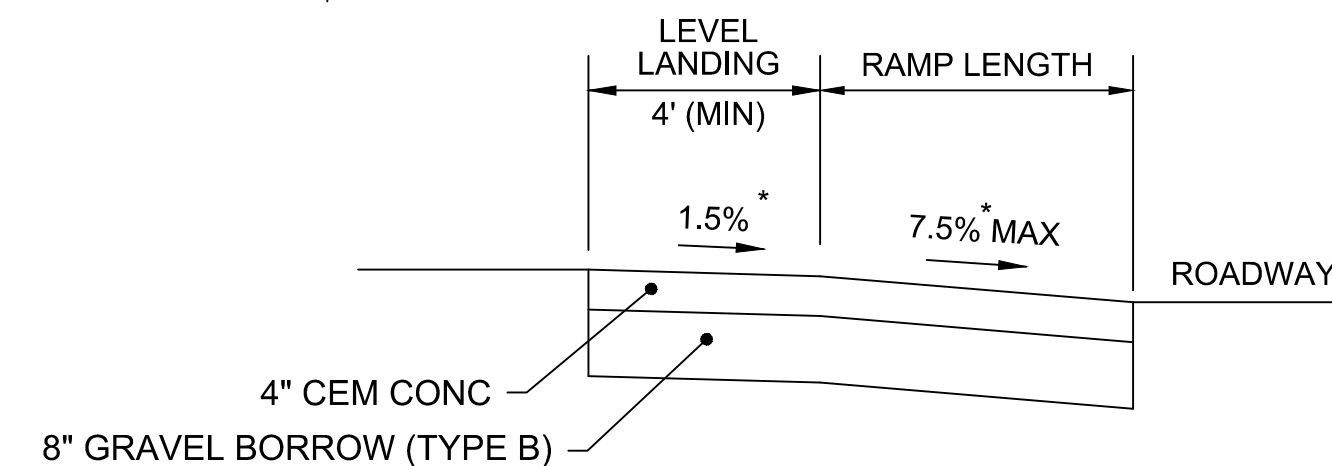


\* TOLERANCE FOR CONSTRUCTION = ±0.5%

**CURB RAMP DETAIL #5**  
SCALE: N.T.S.

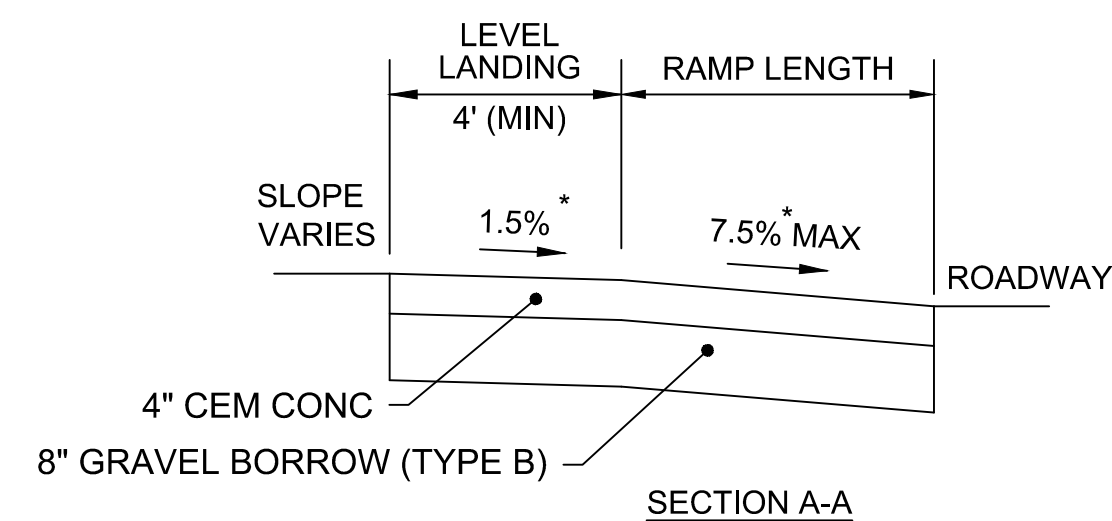
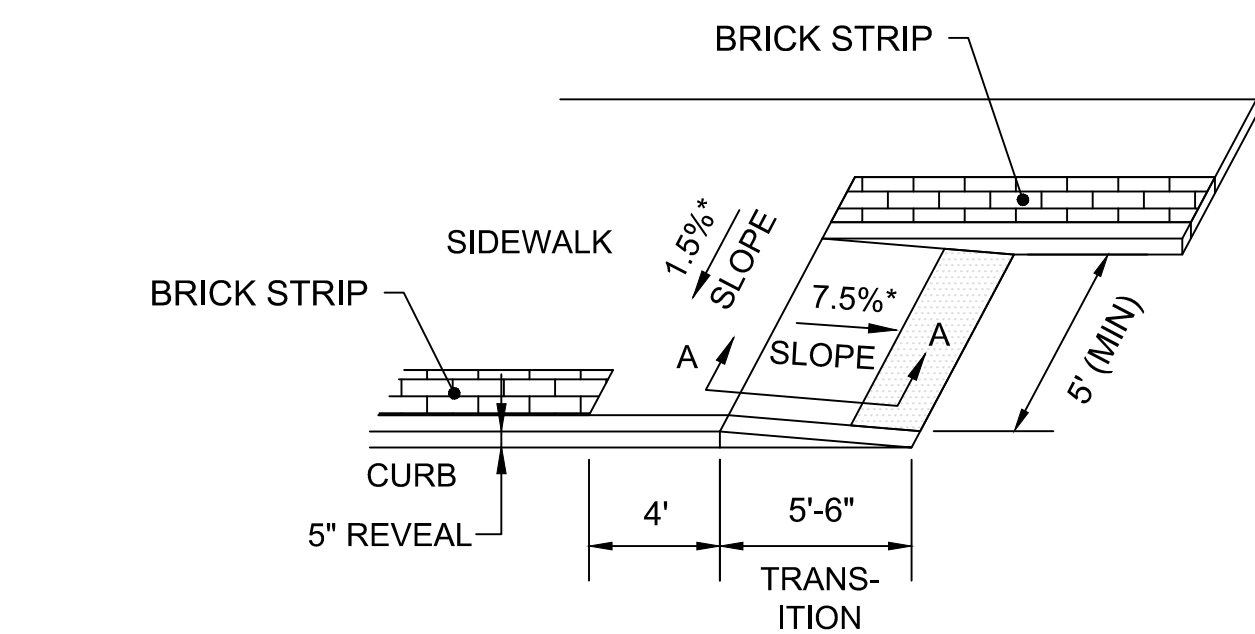


R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH	
	STATION	OFFSET		LEFT SIDE	RIGHT SIDE
15	500+37	13.15' R	0.52%	7'-8"	N/A



\* TOLERANCE FOR CONSTRUCTION = ±0.5%

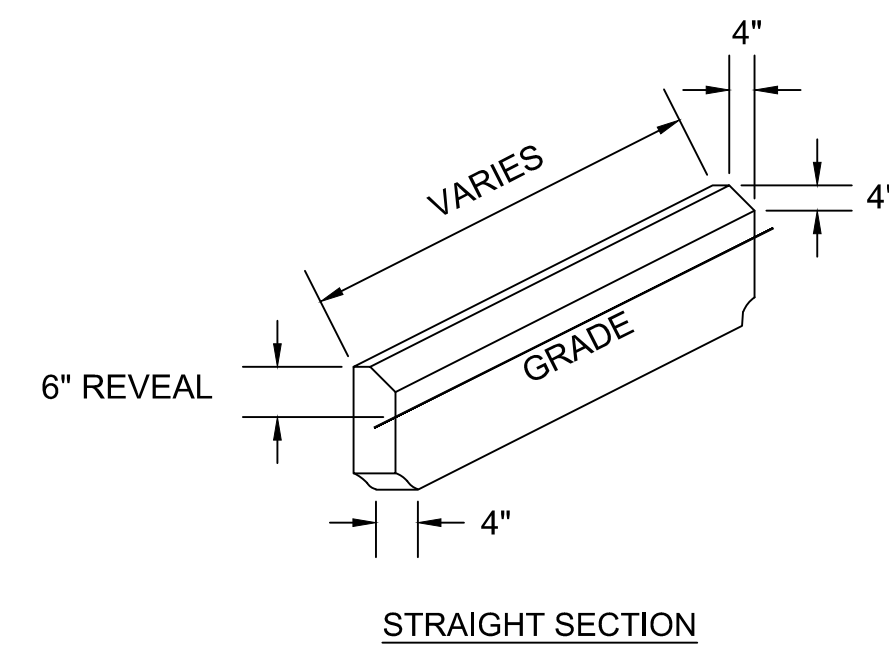
**CURB RAMP DETAIL #7**  
SCALE: N.T.S.



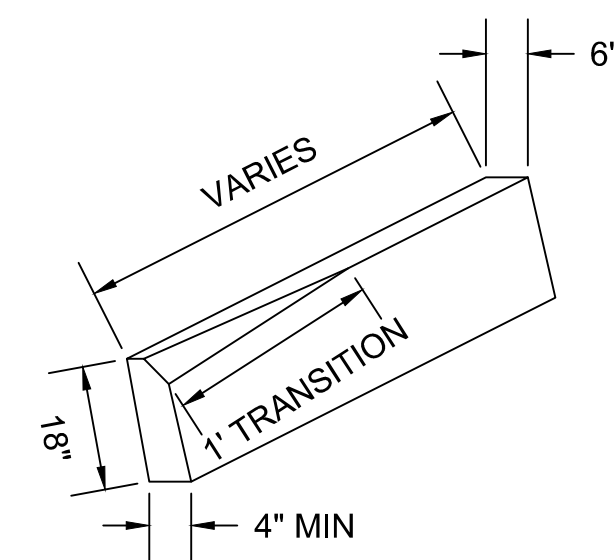
\* TOLERANCE FOR CONSTRUCTION = ±0.5%

**CURB RAMP DETAIL #6**  
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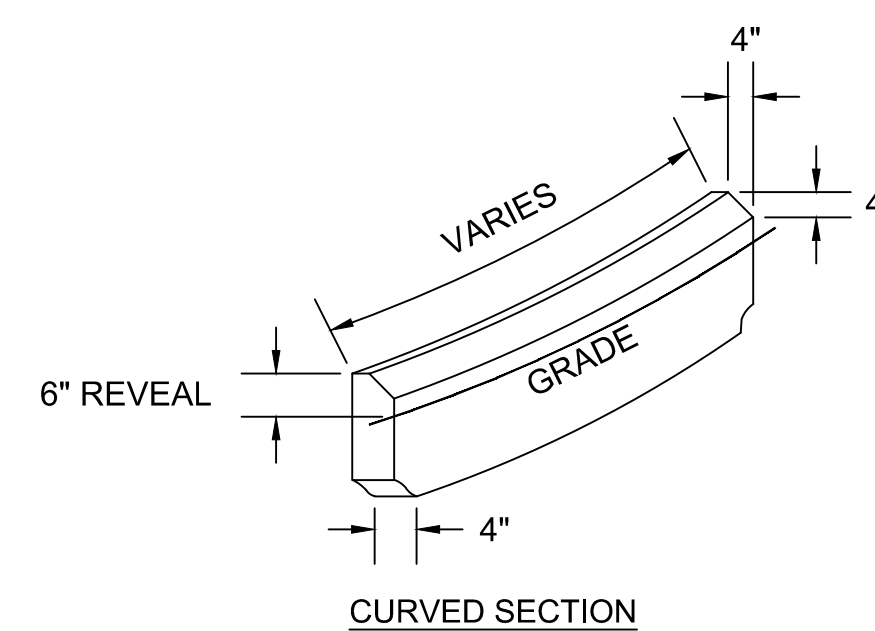
R #	RAMP LOCATION		ROADWAY GUTTER SLOPE	TRANS. LENGTH
	STATION	OFFSET		
22	203+35	23.12' L	0.58%	8'-0"



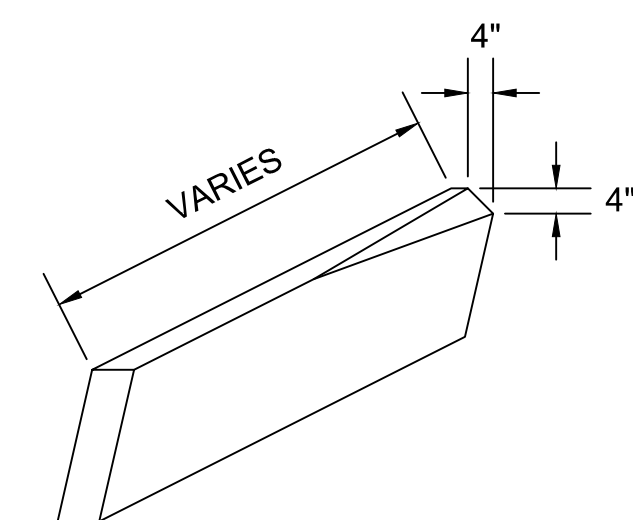
STRAIGHT SECTION



RIGHT SECTION



CURVED SECTION



LEFT SECTION

**BEVELED CURB DETAIL**  
SCALE: N.T.S.

**BEVELED CURB TRANSITION DETAIL**  
SCALE: N.T.S.

ISSUED FOR BID

CAD FILE: I:\eng\16042.44 Inman Square\HD\DWG\100% Submission\16042.22\100% (Construction Details).dwg LAYOUT: G-9 PLOTTED: 4/8/2019 2:18 PM BY: moyer, david

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	G-9
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
						Job No.	20170208.005A				Drawing	CONSTRUCTION DETAILS SHEET 5 OF 5		
						Designed by	DTM							
						Drawn by	NRW							
						Checked by	DTM	No.		Description				
						Approved by	PMF			REVISIONS				

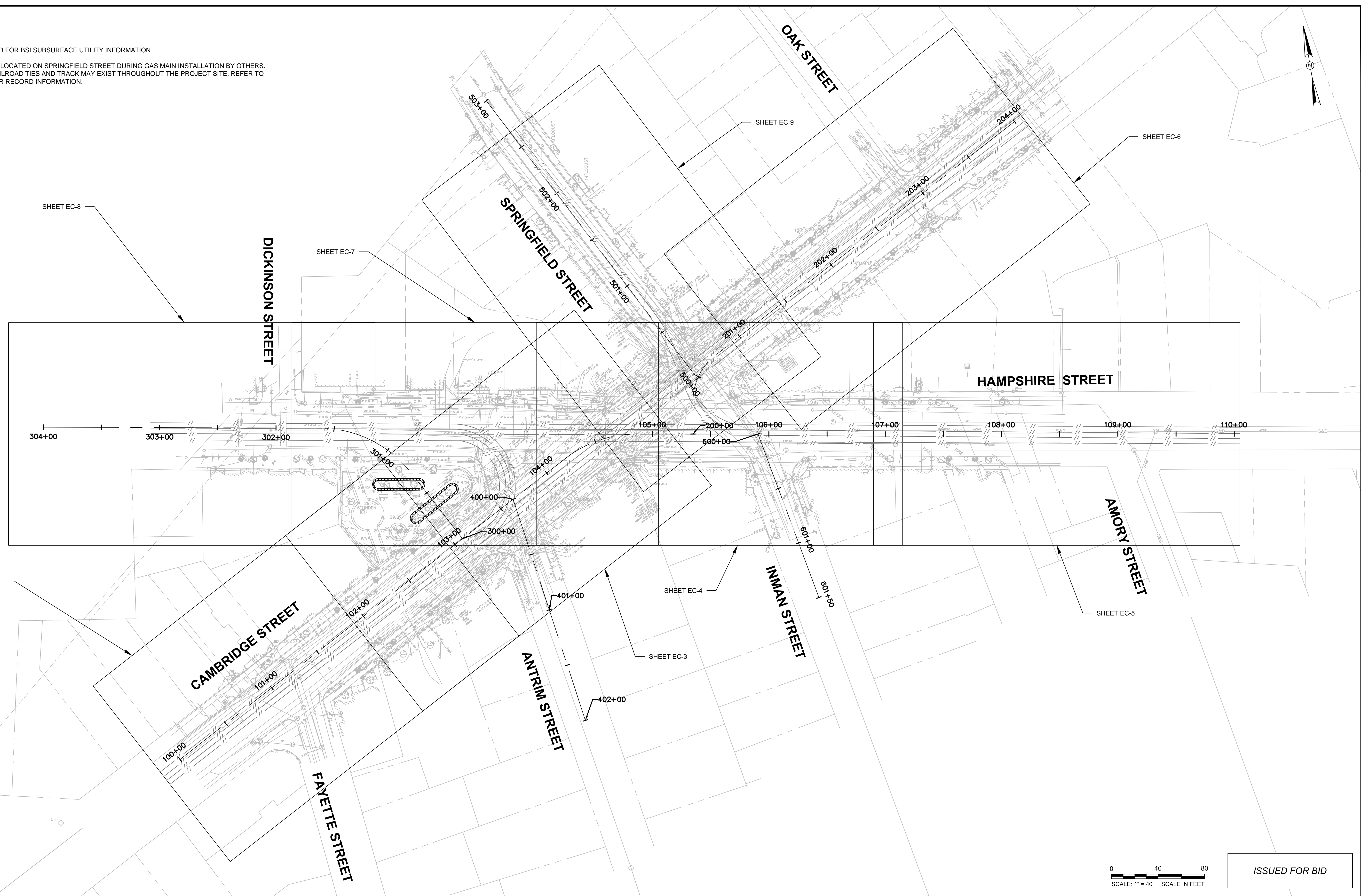




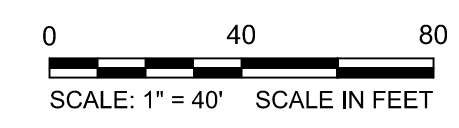


**NOTES:**

1. SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
2. RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.



CAD FILE: G:\clients\cambridge\MA20170208.005A - Inman Square Intersection\Drawings\CWP\Production Drawings\Inman\_KLE\_Erasing Conditions\_BV.dwg LAYOUT: EC-1 PLOTTED: 4/10/2019 1:06 PM BY: ben.stoddard



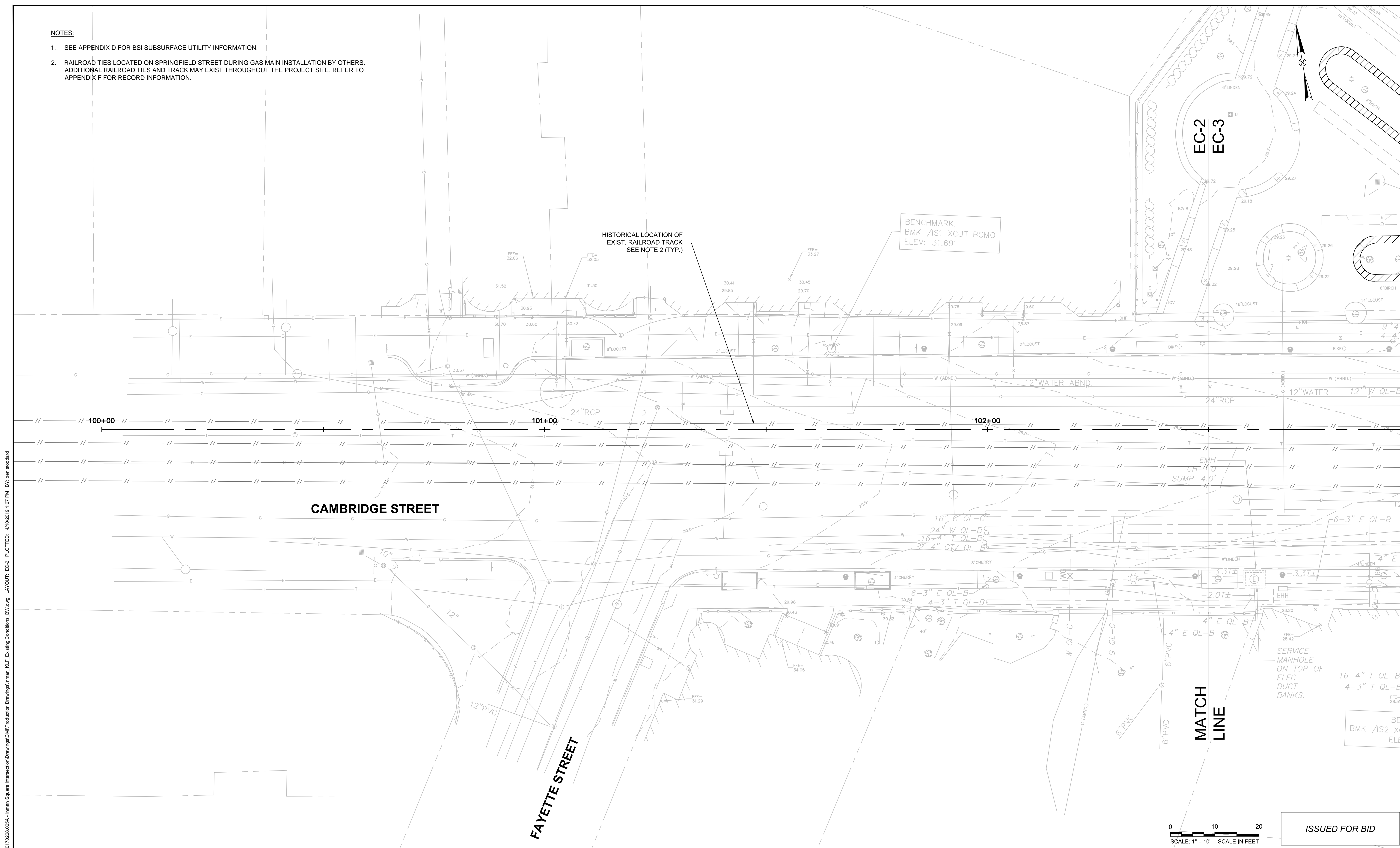
ISSUED FOR BID

						<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>APRIL 2019</td><td></td><td></td></tr> <tr><td>Job No.</td><td>20170208.005A</td><td></td><td></td></tr> <tr><td>Designed by</td><td>KEA</td><td></td><td></td></tr> <tr><td>Drawn by</td><td>KEA</td><td></td><td></td></tr> <tr><td>Checked by</td><td>BMS</td><td>No.</td><td>Description</td></tr> <tr><td>Approved by</td><td>BMS</td><td></td><td>REVISIONS</td></tr> </table>	Scale	AS NOTED			Date	APRIL 2019			Job No.	20170208.005A			Designed by	KEA			Drawn by	KEA			Checked by	BMS	No.	Description	Approved by	BMS		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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>EXISTING CONDITIONS SHEET 1 OF 9</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	EXISTING CONDITIONS SHEET 1 OF 9	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>EC-1</td></tr> <tr><td>File No.</td><td>8514</td></tr> </table>	Sheet	EC-1	File No.	8514
Scale	AS NOTED																																														
Date	APRIL 2019																																														
Job No.	20170208.005A																																														
Designed by	KEA																																														
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS																																														
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT																																														
Drawing	EXISTING CONDITIONS SHEET 1 OF 9																																														
Sheet	EC-1																																														
File No.	8514																																														



**NOTES:**

- SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
- RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.



CAD FILE: G:\clients\cambridge\MA20170208.005A - Inman Square Intersection Drawings\CWP\Production Drawings\Inman\_KLE\_Erasing Conditions\_BW.dwg LAYOUT: EC-2\_PLOTTED: 4/10/2019 1:07 PM BY: ben.mcdonald

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

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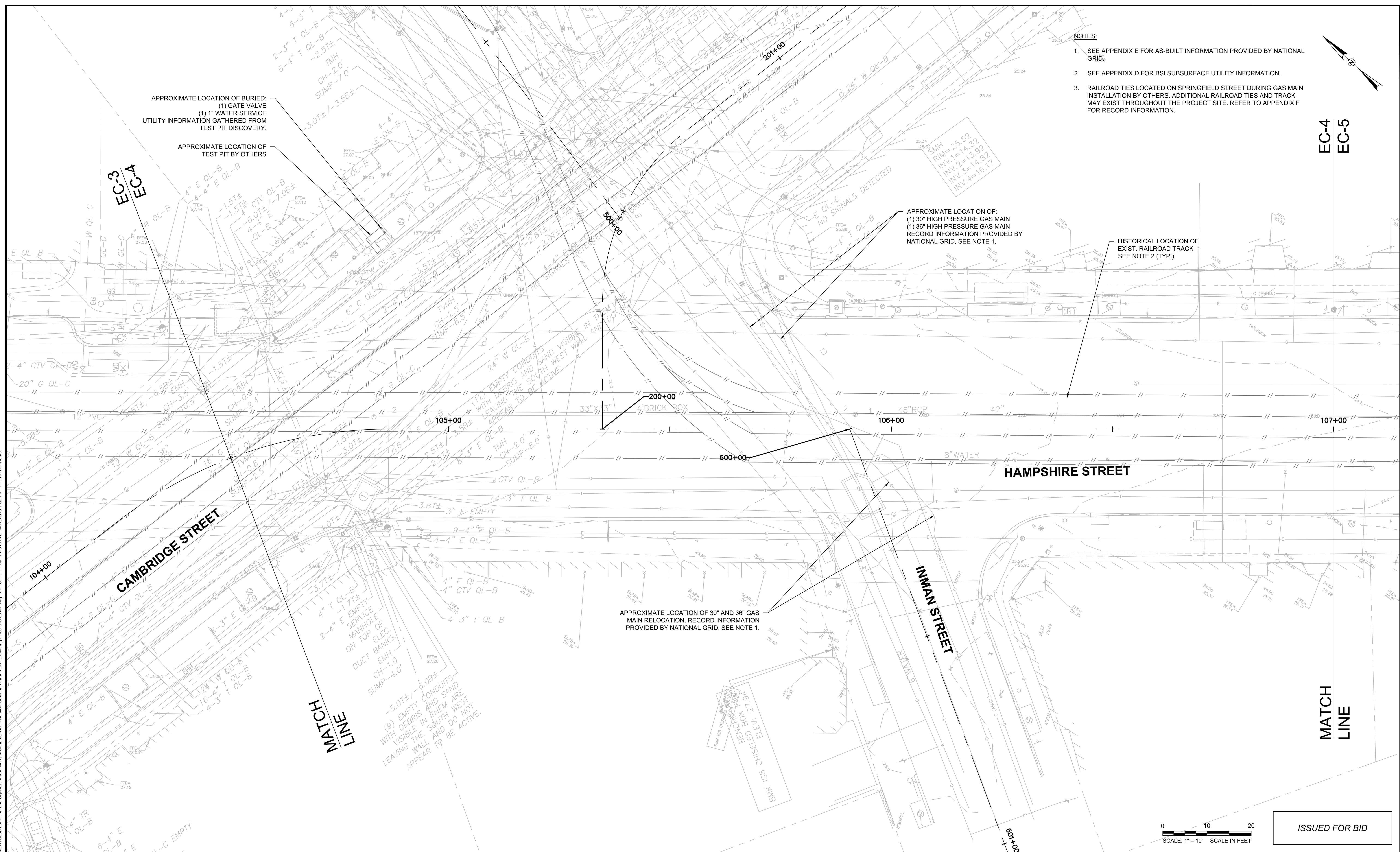
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						Date	APRIL 2019					
						Job No.	20170208.005A			Drawing EXISTING CONDITIONS SHEET 2 OF 9	File No. <b>8514</b>	
						Designed by	KEA					
						Drawn by	KEA					
						Checked by	BMS	No.	Description			
						Approved by	BMS		REVISIONS			







CAD FILE: G:\clients\cambridge\MA20170208.005A - Inman Square Intersection Drawings\CV\Production Drawings\Inman\_KLE\_Easement Conditions\_BV.dwg LAYOUT: EC-4\_PLOTTED: 4/10/2019 1:08 PM BY: ben standard



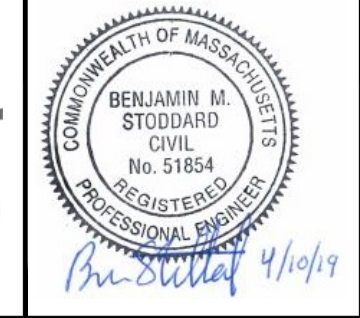
- NOTES:**
1. SEE APPENDIX E FOR AS-BUILT INFORMATION PROVIDED BY NATIONAL GRID.
  2. SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
  3. RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.

EC-4  
EC-5

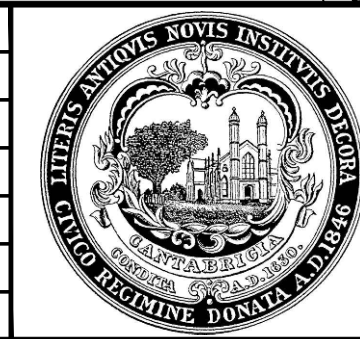
MATCH  
LINE

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

ISSUED FOR BID



Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KEA			
Drawn by	KEA			
Checked by	BMS	No.	Description	Date
Approved by	BMS		REVISIONS	



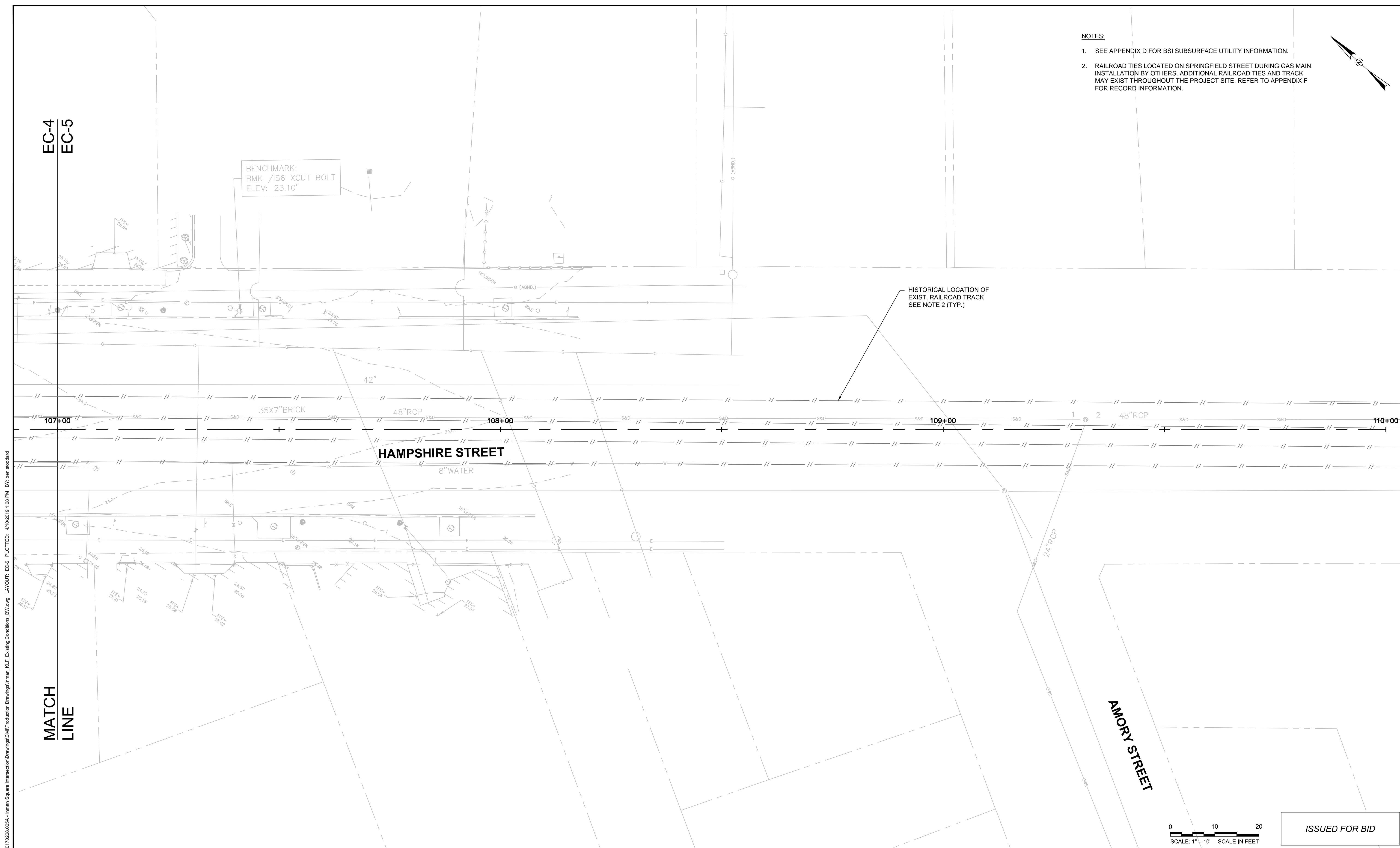
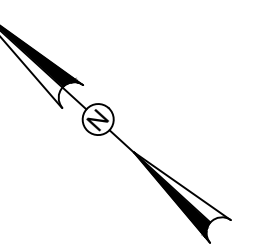
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	EXISTING CONDITIONS SHEET 4 OF 9

Sheet	EC-4
File No.	8514



**NOTES:**

1. SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
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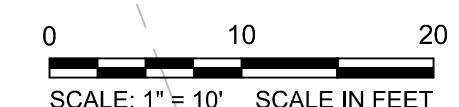


HISTORICAL LOCATION OF EXIST. RAILROAD TRACK SEE NOTE 2 (TYP.)

BENCHMARK:  
BMK 1/16 XCUT BOLT  
ELEV: 23.10'

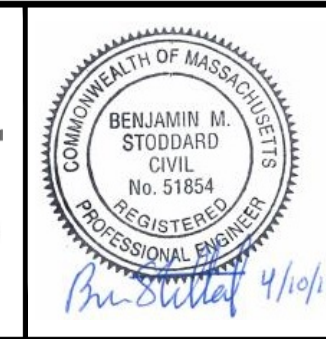
EC-4  
EC-5

MATCH  
LINE

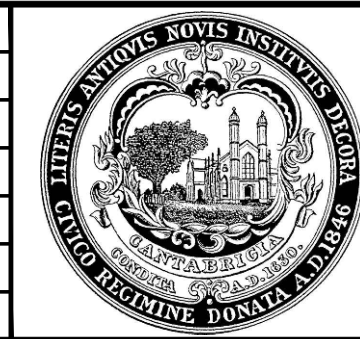


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CAD FILE: G:\clients\cambridge\MA\20170208.005A - Inman Square Intersection\Drawings\CWP\Production Drawings\Inman\_KLE\_Existing Conditions\_BV.dwg LAYOUT: EC-5 PLOTTED: 4/10/2019 1:08 PM BY: ben.stoddard



Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KEA		
Drawn by	KEA		
Checked by	BMS	No.	Description
Approved by	BMS		REVISIONS



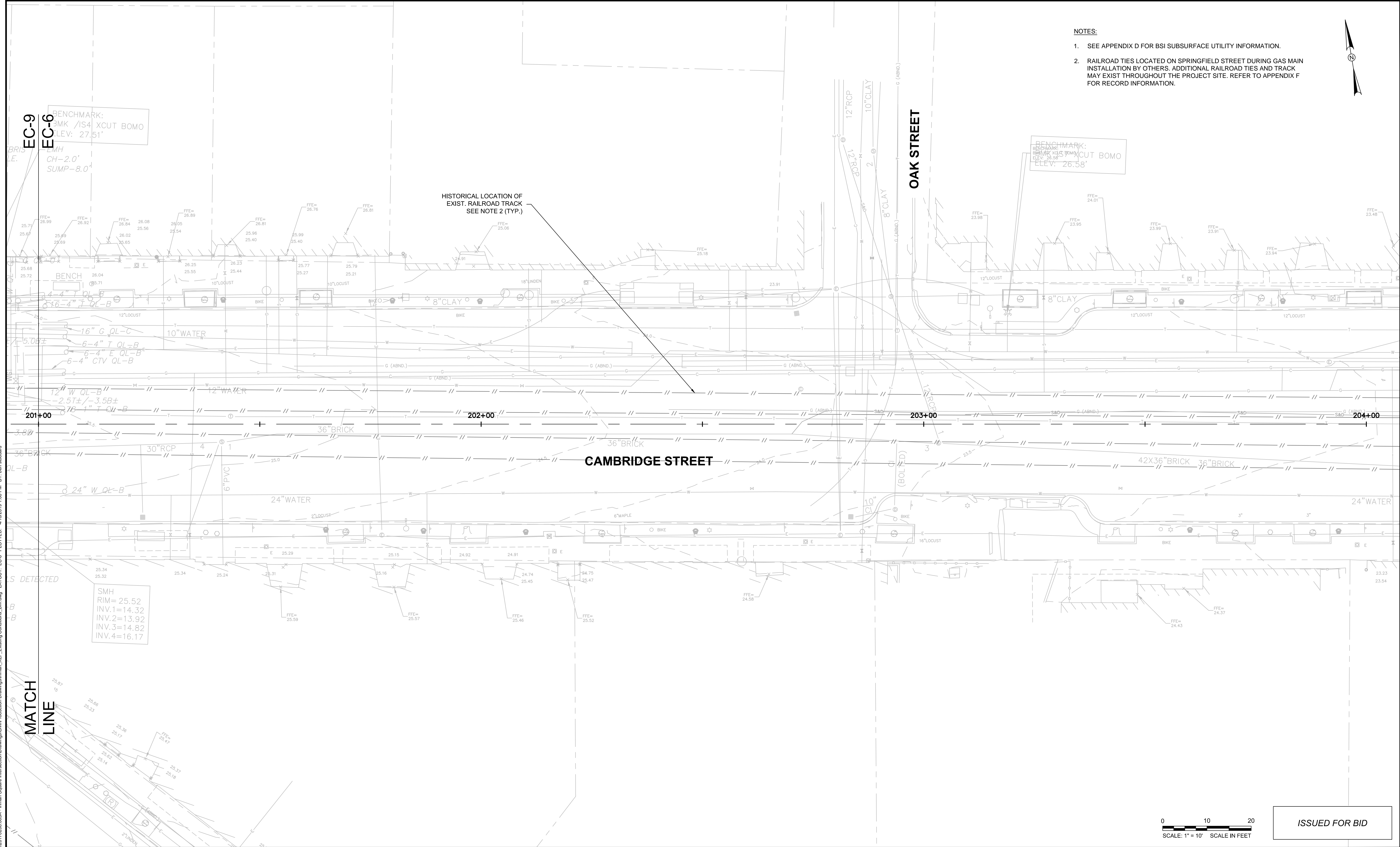
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	EXISTING CONDITIONS SHEET 5 OF 9

Sheet	EC-5
File No.	8514



**NOTES:**

1. SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
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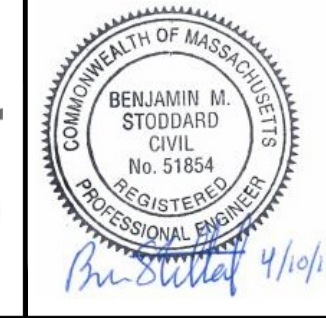
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**MATCH LINE**

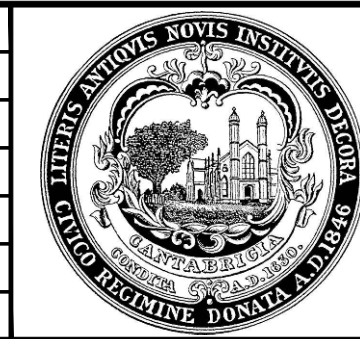
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INV.1=14.32  
INV.2=13.92  
INV.3=14.82  
INV.4=16.17



**ISSUED FOR BID**



Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KEA			
Drawn by	KEA			
Checked by	BMS	No.	Description	Date
Approved by	BMS		REVISIONS	

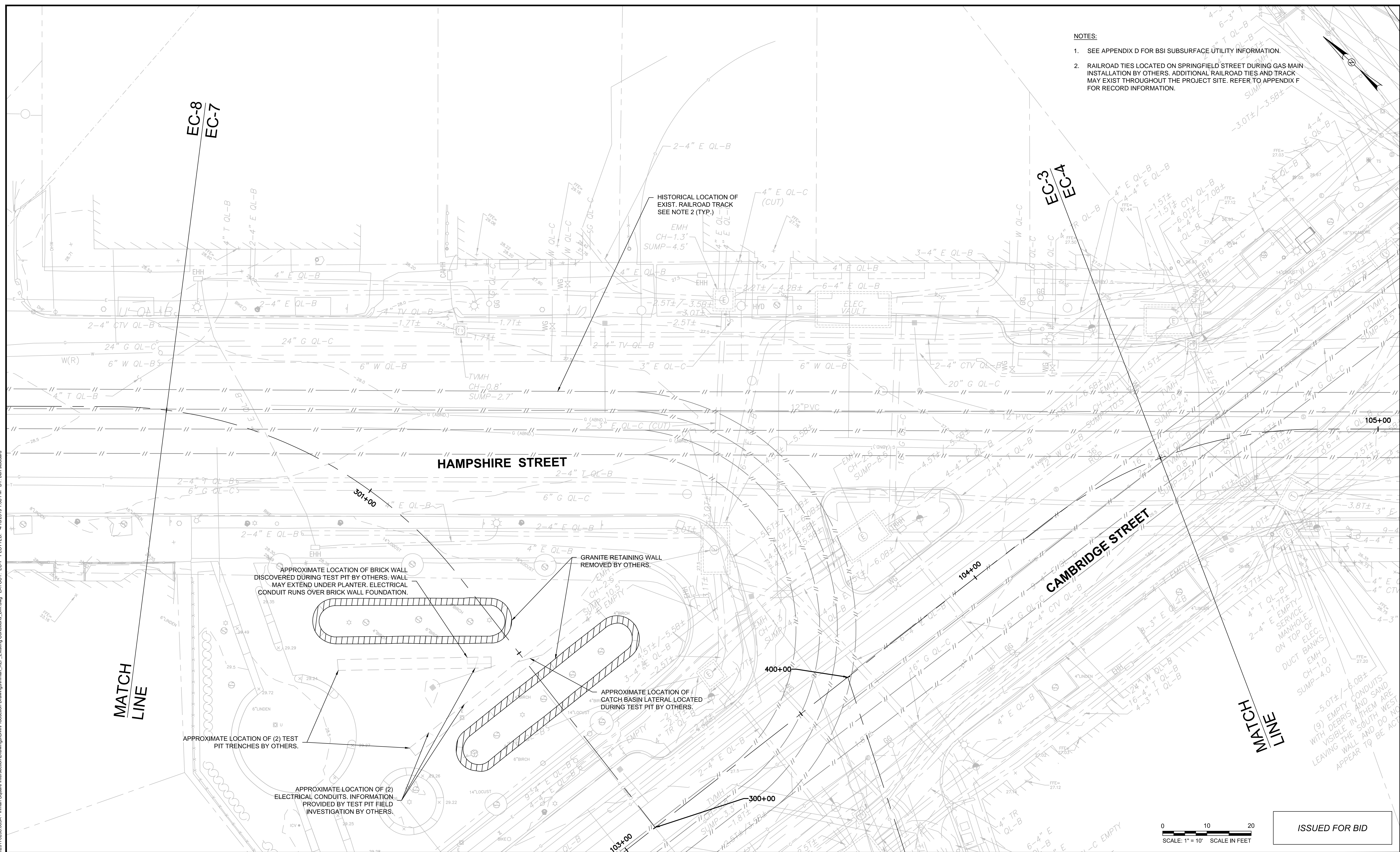


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	EXISTING CONDITIONS SHEET 6 OF 9

Sheet	<b>EC-6</b>
File No.	<b>8514</b>



- NOTES:
- SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
  - RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.



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

ISSUED FOR BID

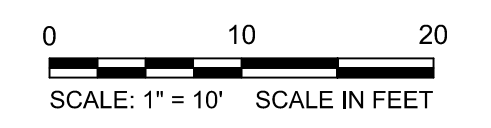
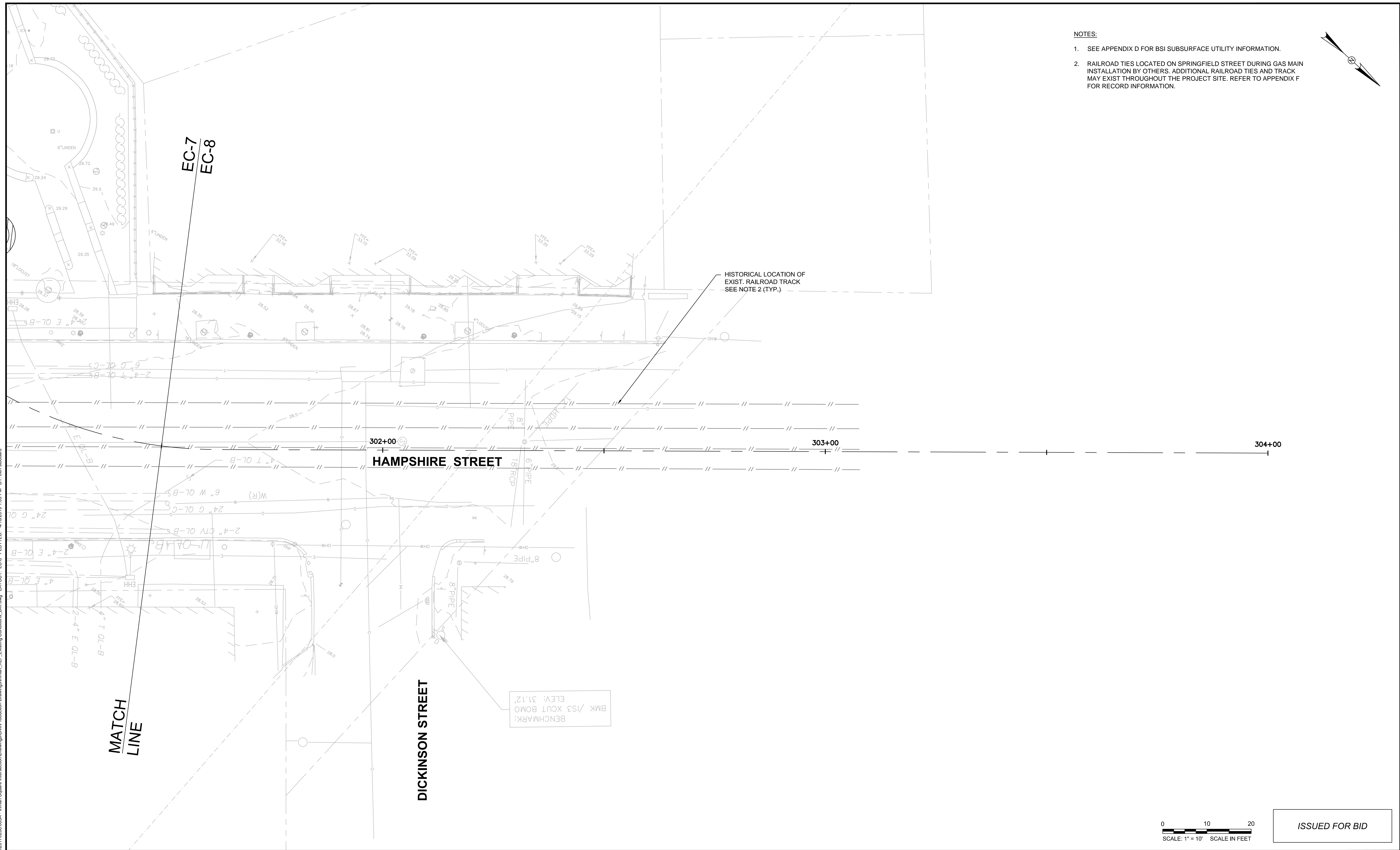
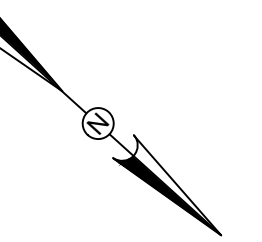
CAD FILE: G:\clients\cambridge\MA20170208.005A - Inman Square Intersection\Drawings\CWP\Production Drawings\Inman\_KLF\_Easing Conditions\_BW.dwg LAYOUT: EC-7 PLOTTED: 4/10/2019 1:08 PM BY: ben.mccard

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	EC-7
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
						Job No.	20170208.005A				Drawing	EXISTING CONDITIONS SHEET 7 OF 9		
						Designed by	KEA							
						Drawn by	KEA							
						Checked by	BMS	No.	Description	Date				
						Approved by	BMS		REVISIONS					



NOTES:

1. SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
2. RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.

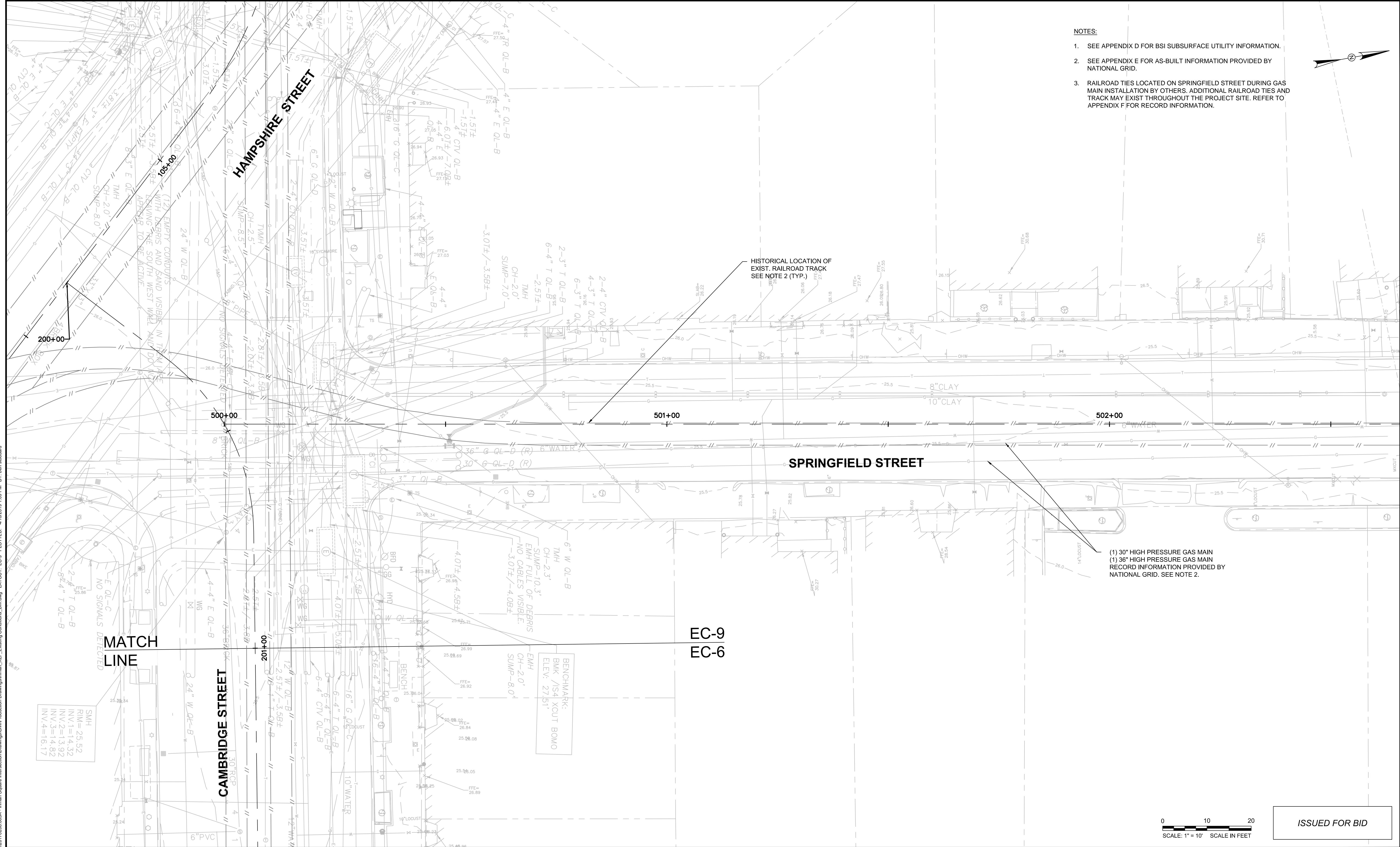


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						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>EC-8</b>
						Date	APRIL 2019	Job No.	20170208.005A		Designed by	KEA	
Drawn by	KEA	Checked by	BMS	No.		Description		Date		Drawing	EXISTING CONDITIONS SHEET 8 OF 9	File No. <b>8514</b>	
Approved by	BMS					REVISIONS							





- NOTES:**
- SEE APPENDIX D FOR BSI SUBSURFACE UTILITY INFORMATION.
  - SEE APPENDIX E FOR AS-BUILT INFORMATION PROVIDED BY NATIONAL GRID.
  - RAILROAD TIES LOCATED ON SPRINGFIELD STREET DURING GAS MAIN INSTALLATION BY OTHERS. ADDITIONAL RAILROAD TIES AND TRACK MAY EXIST THROUGHOUT THE PROJECT SITE. REFER TO APPENDIX F FOR RECORD INFORMATION.

HISTORICAL LOCATION OF EXIST. RAILROAD TRACK SEE NOTE 2 (TYP.)

(1) 30" HIGH PRESSURE GAS MAIN  
 (1) 36" HIGH PRESSURE GAS MAIN  
 RECORD INFORMATION PROVIDED BY NATIONAL GRID. SEE NOTE 2.

EC-9  
 EC-6



ISSUED FOR BID

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**KLEINFELDER**  
Bright People. Right Solutions.

**TOOLE**  
DESIGN

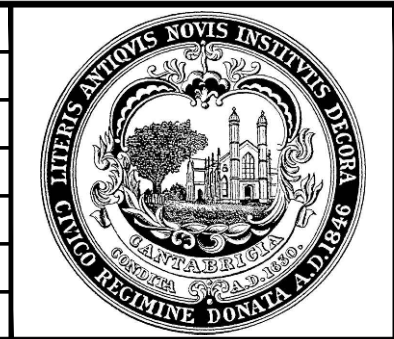
**MCMAHON**  
TRANSPORTATION ENGINEERS & PLANNERS

**Stantec**

**kmdg**

BENJAMIN M. STODDARD  
 CIVIL  
 No. 51854  
 REGISTERED PROFESSIONAL ENGINEER  
 State of Massachusetts

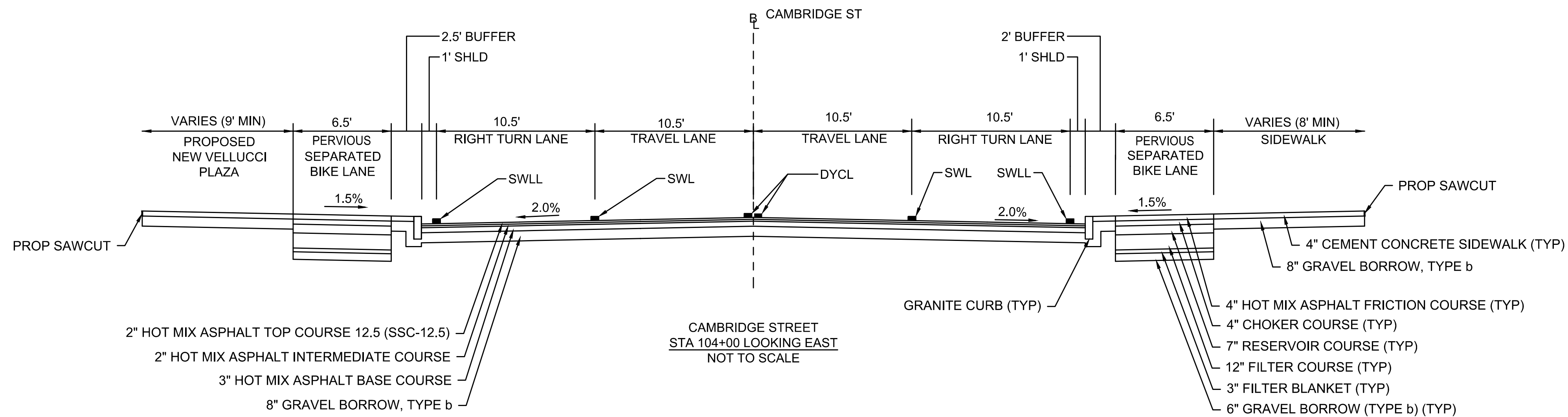
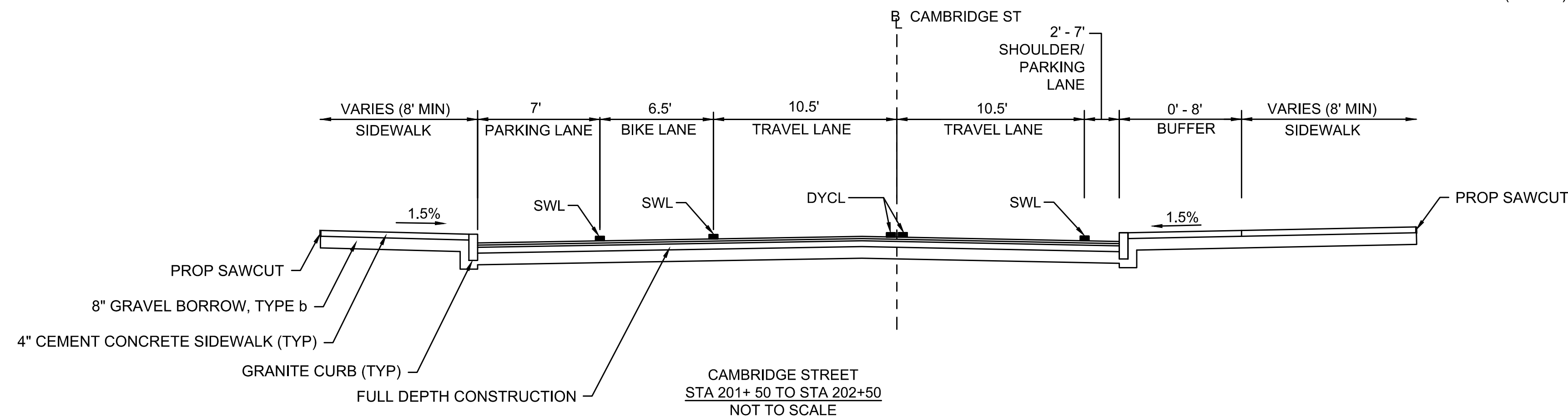
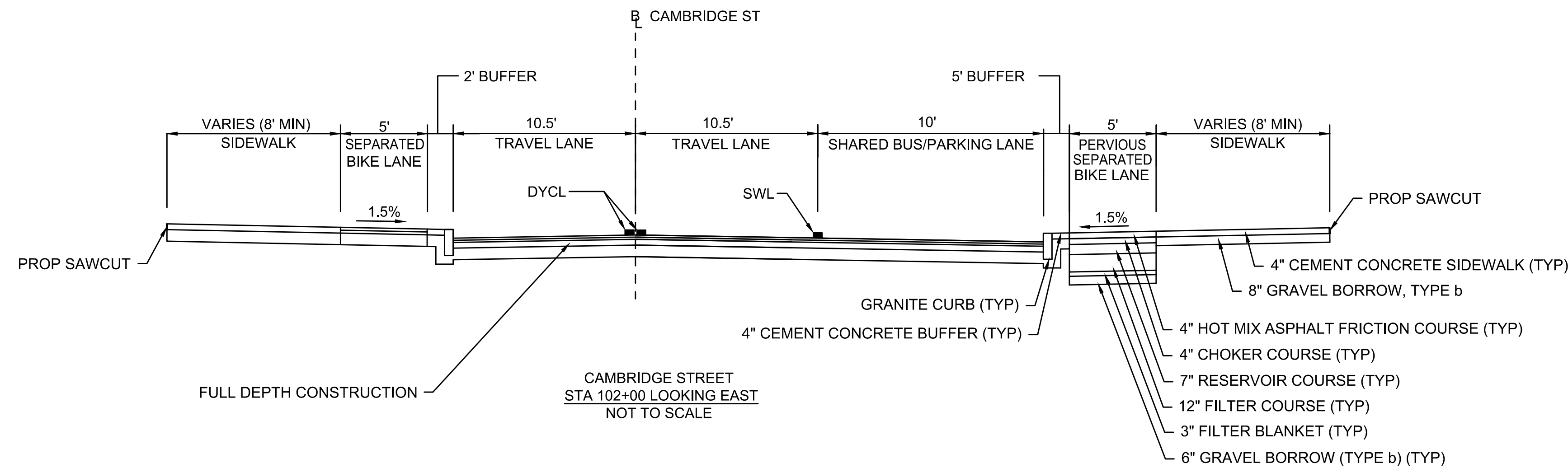
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Approved by	BMS		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	EXISTING CONDITIONS SHEET 9 OF 9

Sheet	EC-9
File No.	8514





**PAVEMENT NOTES**

**PROPOSED MILLING & OVERLAY**

MILLING: 2" MILLING  
 SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)

**PROPOSED FULL-DEPTH CONSTRUCTION**

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
 2" HOT MIX ASPHALT INTERMEDIATE COURSE  
 BASE: 3" HOT ASPHALT BASE COURSE  
 SUB-BASE: 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, CONCRETE BUFFER**

SURFACE: 4" CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER  
 SUBBASE: 8" GRAVEL BORROW (TYPE b)

**CEMENT CONCRETE WHEELCHAIR RAMPS, BUS ISLAND AND DRIVEWAYS**

SURFACE: 6" CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER  
 SUBBASE: 8" GRAVEL BORROW (TYPE b)

**CEMENT CONCRETE DRIVEWAY AT FIRESTATION**

SURFACE: 6" REINFORCED CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER  
 SUBBASE: 8" GRAVEL BORROW (TYPE b)

**PROPOSED SEPARATED BIKE LANE**

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
 2" HOT MIX ASPHALT INTERMEDIATE COURSE  
 SUBBASE: 8" GRAVEL BORROW (TYPE b)

**PROPOSED SEPARATED BIKE LANE AT FIRE STATION DRIVEWAY**

SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
 2" HOT MIX ASPHALT INTERMEDIATE COURSE  
 BASE: 3" HOT MIX ASPHALT BASE COURSE  
 SUBBASE: 6" GRAVEL BORROW (TYPE b)

**PROPOSED PERVIOUS SEPARATED BIKE LANE**

SURFACE: 4" HMA OPEN GRADED FRICTION COURSE  
 BASE: 4" CHOKER COURSE  
 7" RESERVOIR COURSE  
 12" FILTER COURSE  
 3" FILTER BLANKET  
 6" GRAVEL BORROW (TYPE b)

**NOTE:**

SEE SPECIFICATIONS FOR MAKEUP OF PROPOSED PERVIOUS SEPARATED BIKE LANE, INCLUDING AGGREGATE SIZES FOR CHOKER COURSE, RESERVOIR COURSE, AND BASE COURSE, AS WELL AS PROPERTIES OF FILTER BLANKET, FILTER COURSE, AND HMA OPEN GRADED FRICTION COURSE.

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						Job No.	20170208.005A				Drawing	TYPICAL SECTIONS SHEET 1 OF 2	File No. <b>8514</b>
						Designed by	DTM						
						Drawn by	DTM						
						Checked by	PFB	No.	Description	Date			
						Approved by	PFB		REVISIONS				



**PAVEMENT NOTES**

PROPOSED MILLING & OVERLAY

- MILLING: 2" MILLING
- SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)

PROPOSED FULL-DEPTH CONSTRUCTION

- SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
2" HOT MIX ASPHALT INTERMEDIATE COURSE
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- SUB-BASE: 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, CONCRETE BUFFER

- SURFACE: 4" CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

CEMENT CONCRETE WHEELCHAIR RAMPS, BUS ISLAND AND DRIVEWAYS

- SURFACE: 6" CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

CEMENT CONCRETE DRIVEWAY AT FIRESTATION

- SURFACE: 6" REINFORCED CEMENT CONCRETE (4,000 PSI, 3/4", 610) OVER
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

PROPOSED SEPARATED BIKE LANE

- SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
2" HOT MIX ASPHALT INTERMEDIATE COURSE
- SUBBASE: 8" GRAVEL BORROW (TYPE b)

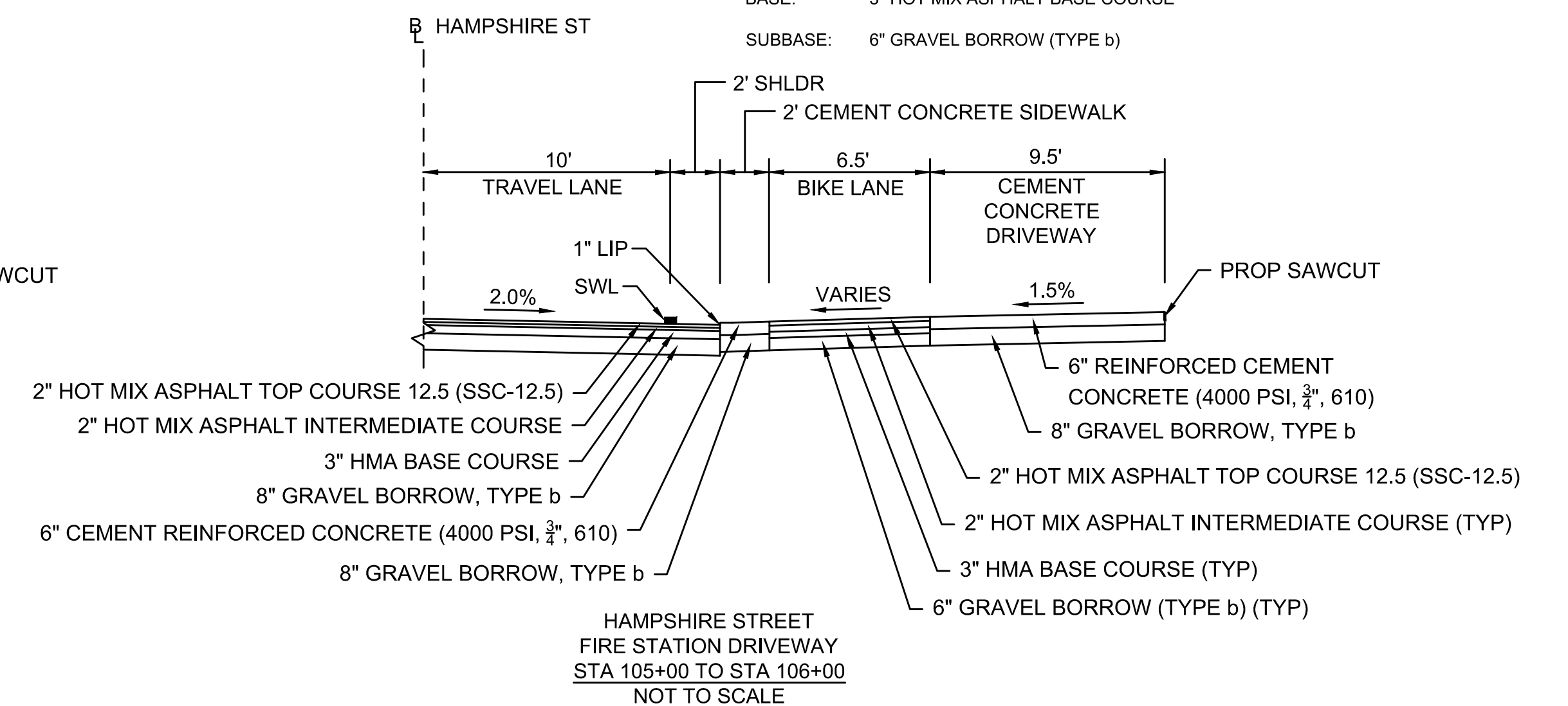
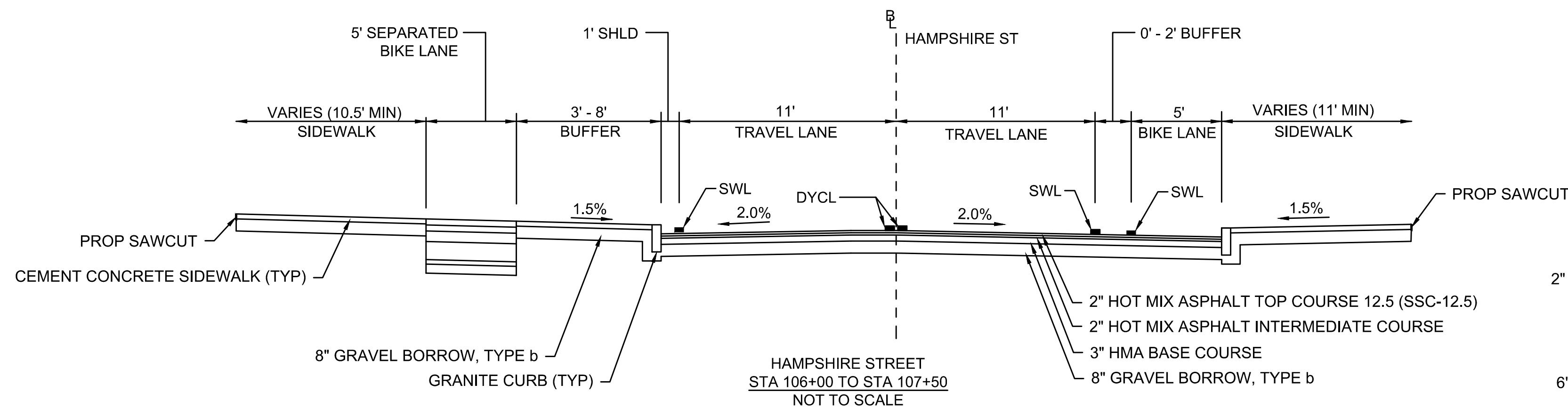
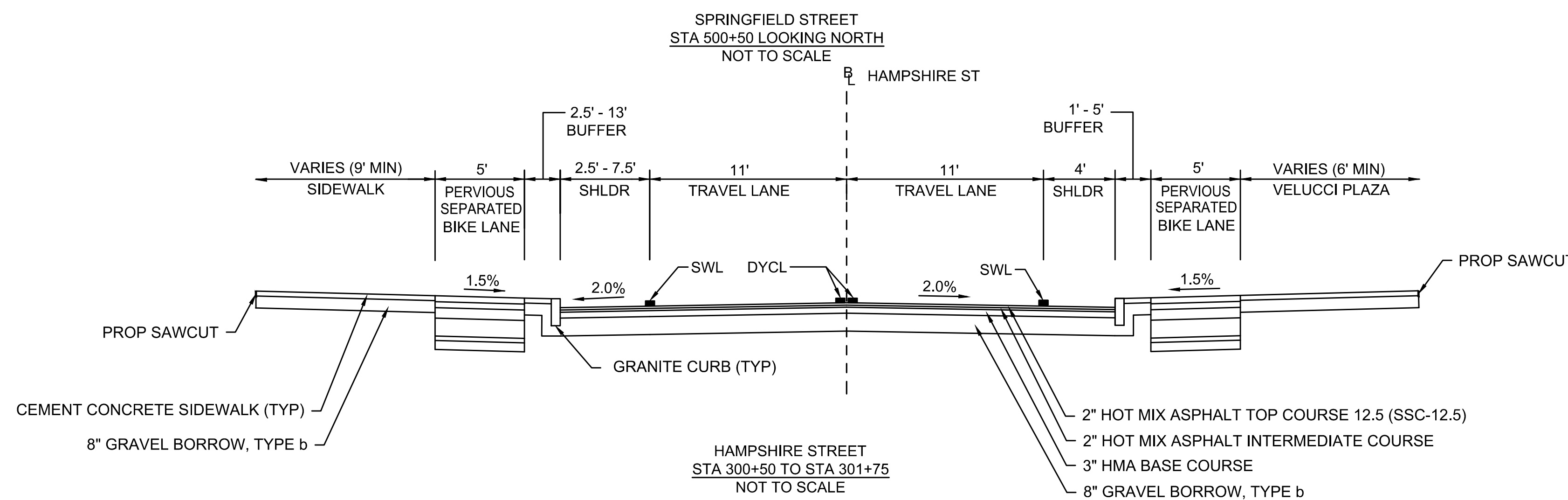
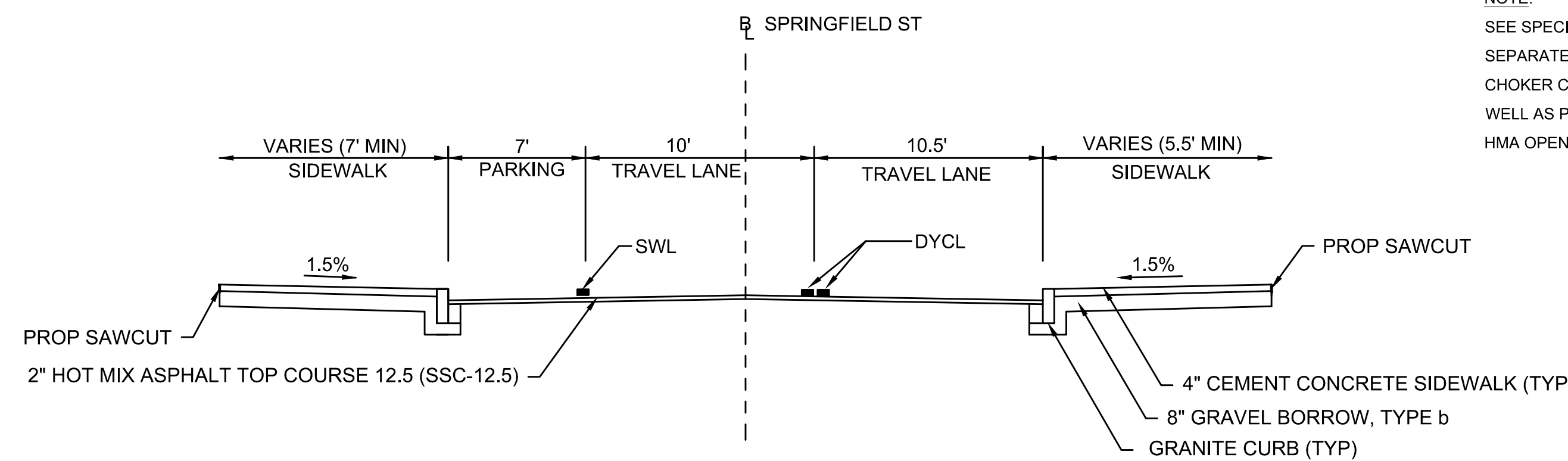
PROPOSED PERVIOUS SEPARATED BIKE LANE

- SURFACE: 4" HMA OPEN GRADED FRICTION COURSE
- BASE: 4" CHOKER COURSE  
7" RESERVOIR COURSE  
12" FILTER COURSE  
3" FILTER BLANKET  
6" GRAVEL BORROW (TYPE b)

PROPOSED SEPARATED BIKE LANE AT FIRE STATION DRIVEWAY

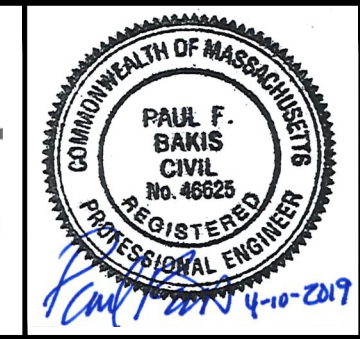
- SURFACE: 2" HOT MIX ASPHALT TOP COURSE 12.5 (SSC-12.5)  
2" HOT MIX ASPHALT INTERMEDIATE COURSE
- BASE: 3" HOT MIX ASPHALT BASE COURSE
- SUBBASE: 6" GRAVEL BORROW (TYPE b)

NOTE:  
SEE SPECIAL PROVISIONS FOR MAKEUP OF PROPOSED PERVIOUS SEPARATED BIKE LANE, INCLUDING AGGREGATE SIZES FOR CHOKER COURSE, RESERVOIR COURSE, AND BASE COURSE, AS WELL AS PROPERTIES OF FILTER BLANKET, FILTER COURSE, AND HMA OPEN GRADED FRICTION COURSE.

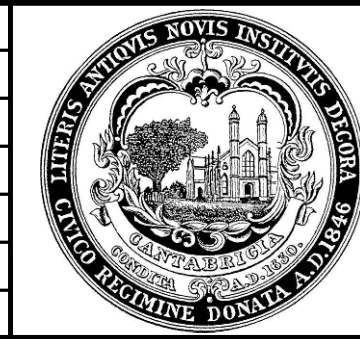


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			REVISIONS

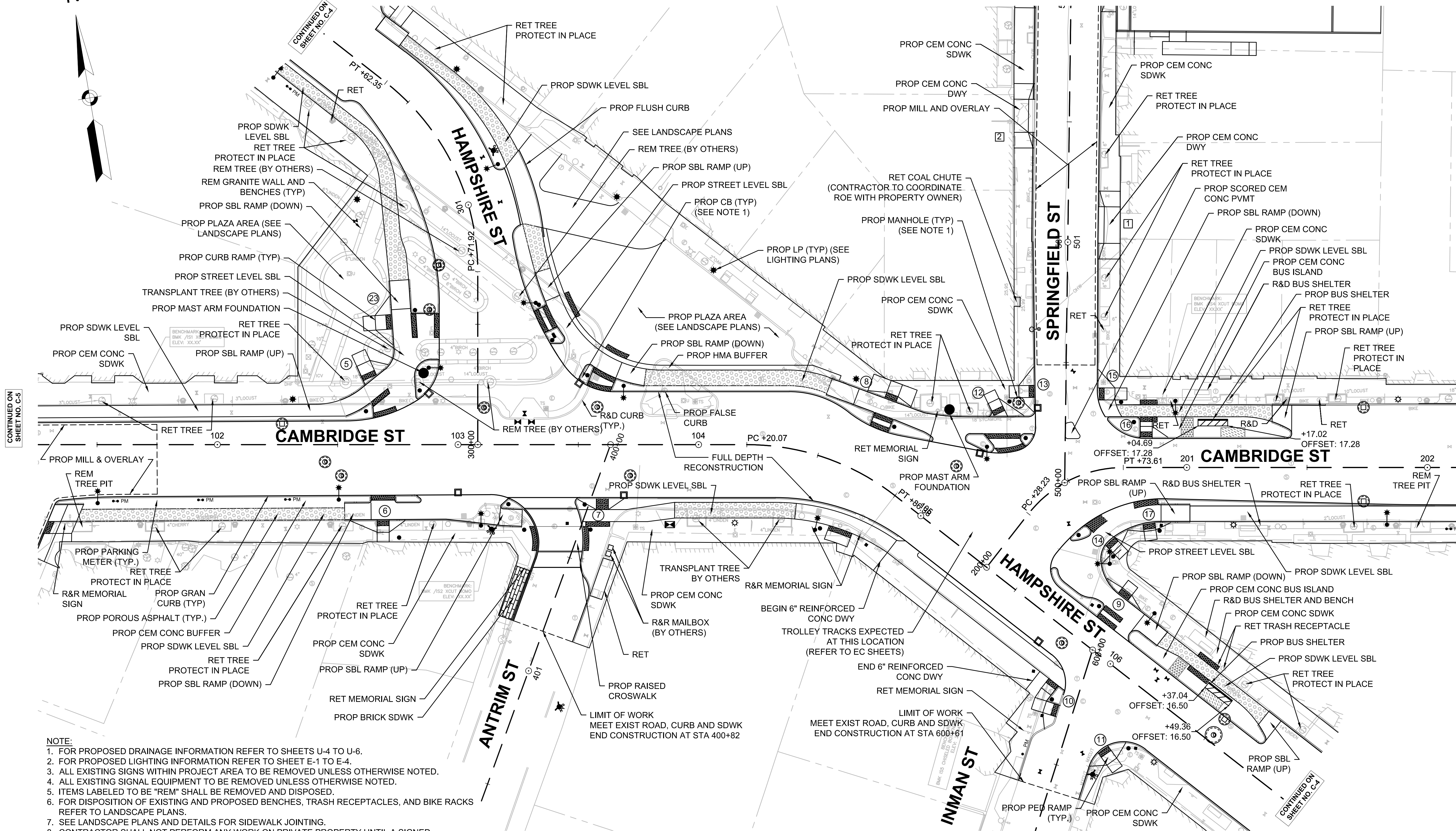
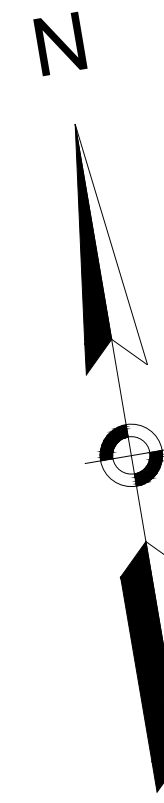


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	TYPICAL SECTIONS SHEET 2 OF 2

Sheet	C-2
File No.	8514



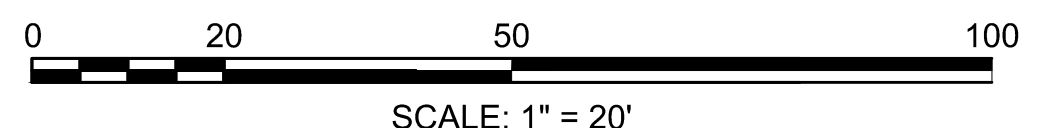
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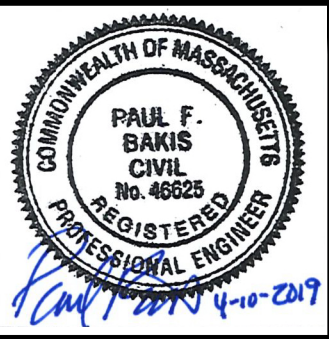
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- NOTE:**
1. FOR PROPOSED DRAINAGE INFORMATION REFER TO SHEETS U-4 TO U-6.
  2. FOR PROPOSED LIGHTING INFORMATION REFER TO SHEET E-1 TO E-4.
  3. ALL EXISTING SIGNS WITHIN PROJECT AREA TO BE REMOVED UNLESS OTHERWISE NOTED.
  4. ALL EXISTING SIGNAL EQUIPMENT TO BE REMOVED UNLESS OTHERWISE NOTED.
  5. ITEMS LABELED TO BE "REM" SHALL BE REMOVED AND DISPOSED.
  6. FOR DISPOSITION OF EXISTING AND PROPOSED BENCHES, TRASH RECEPTACLES, AND BIKE RACKS REFER TO LANDSCAPE PLANS.
  7. SEE LANDSCAPE PLANS AND DETAILS FOR SIDEWALK JOINTING.
  8. 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.
  9. ALL BEVELED CURB SECTIONS IDENTIFIED ON THE PLANS SHALL INCLUDE A 1' TRANSITION FROM BEVELED CURB TO VERTICAL GRANITE CURB.

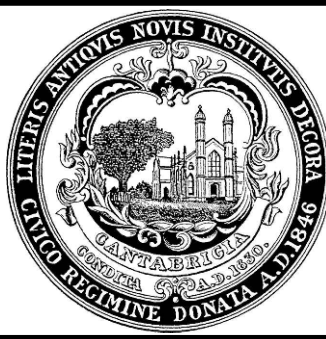


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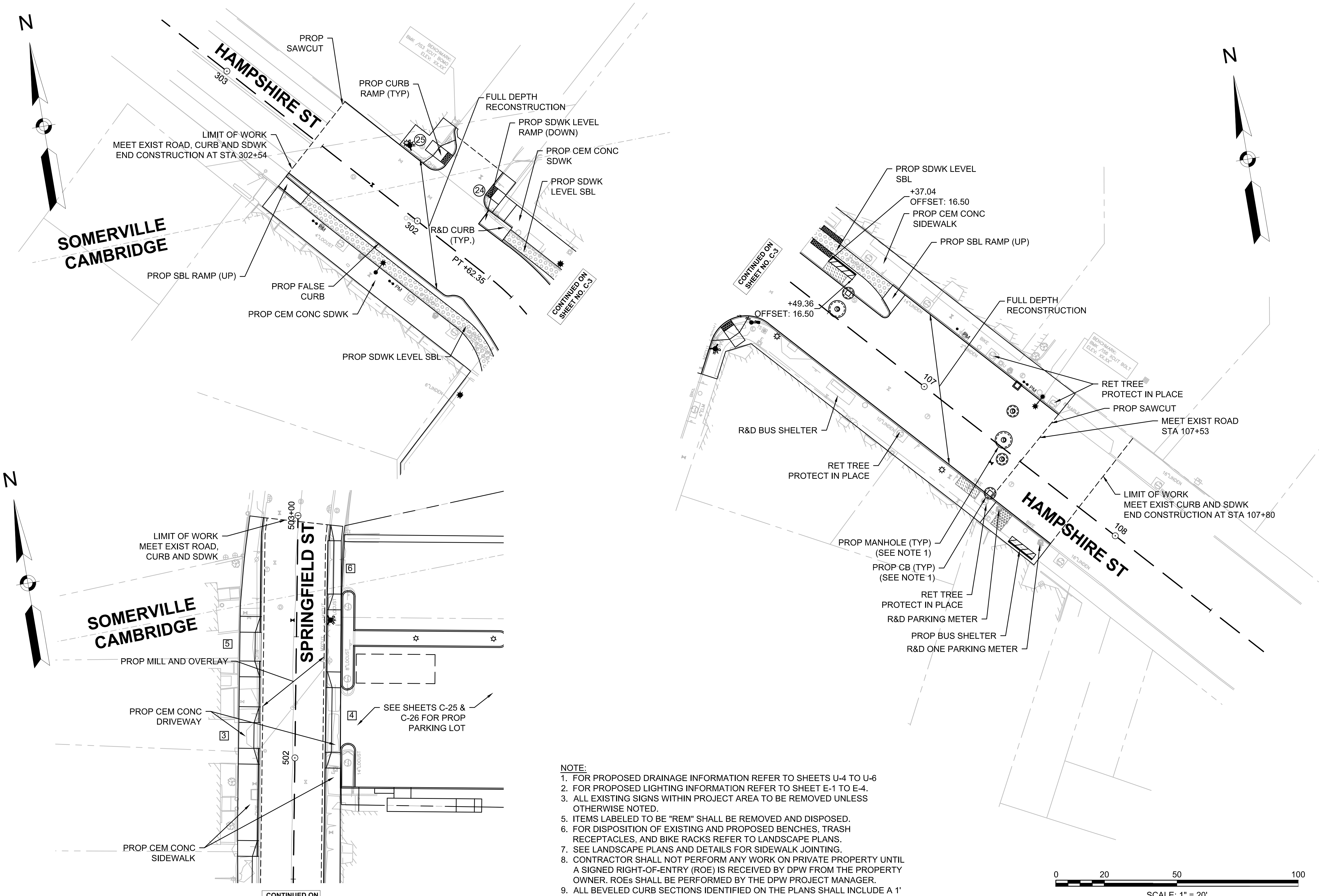
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Approved by	PFB		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CONSTRUCTION PLAN SHEET 1 OF 3

Sheet	C-3
File No.	8514





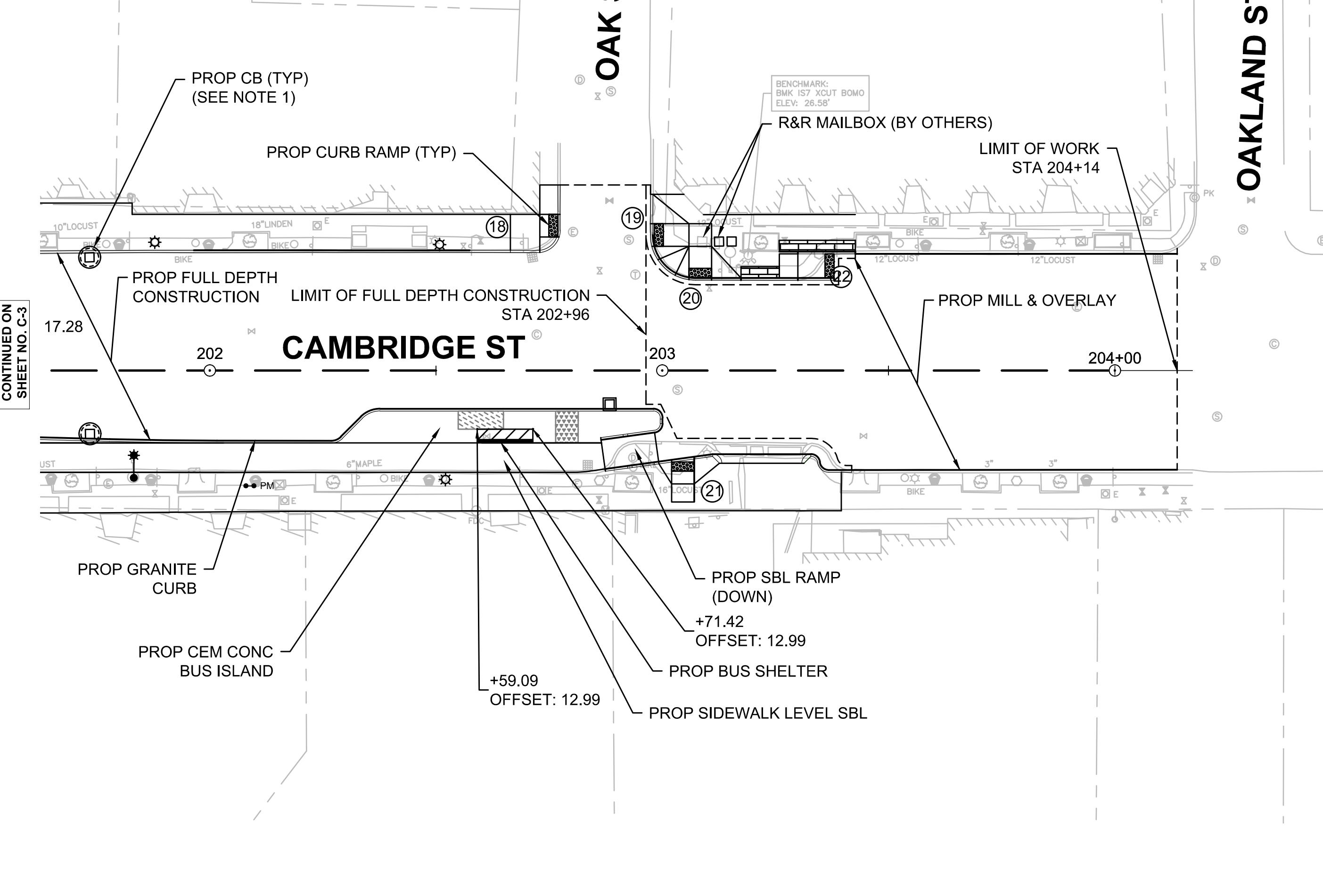
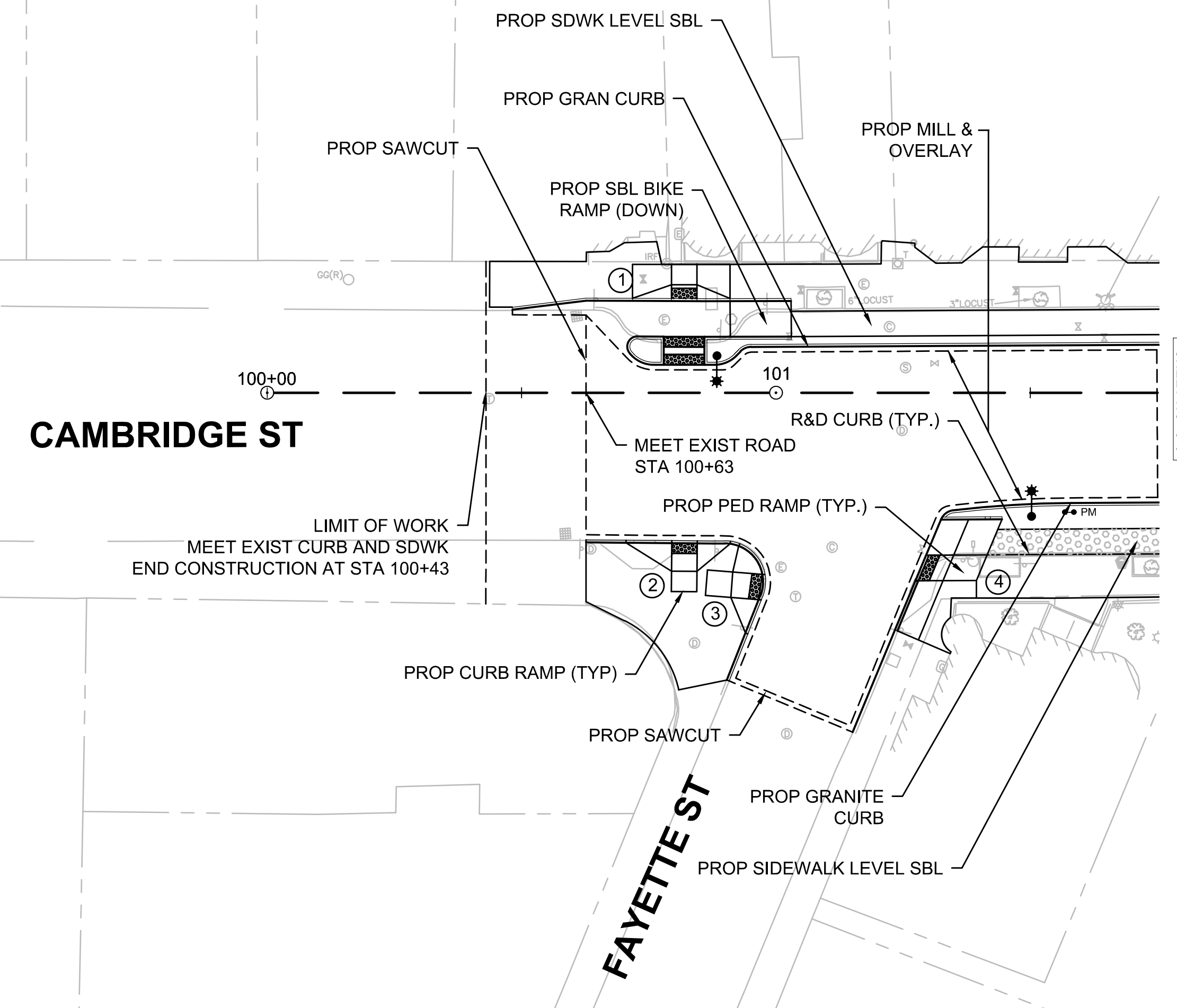
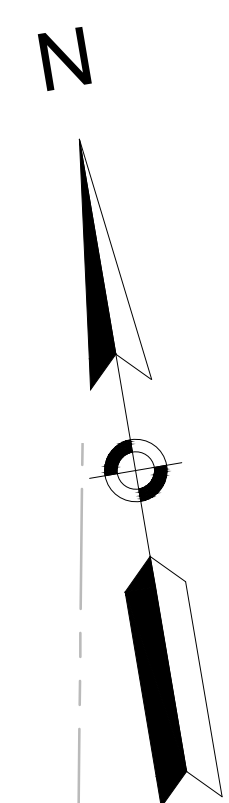
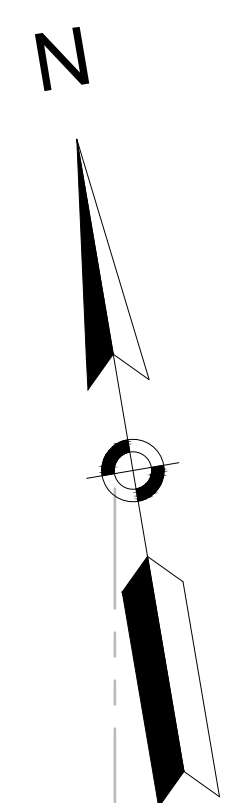
**NOTE:**

1. FOR PROPOSED DRAINAGE INFORMATION REFER TO SHEETS U-4 TO U-6
2. FOR PROPOSED LIGHTING INFORMATION REFER TO SHEET E-1 TO E-4.
3. ALL EXISTING SIGNS WITHIN PROJECT AREA TO BE REMOVED UNLESS OTHERWISE NOTED.
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6. SEE LANDSCAPE PLANS AND DETAILS FOR SIDEWALK JOINTING.
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8. ALL BEVELED CURB SECTIONS IDENTIFIED ON THE PLANS SHALL INCLUDE A 1' TRANSITION FROM BEVELED CURB TO VERTICAL GRANITE CURB.

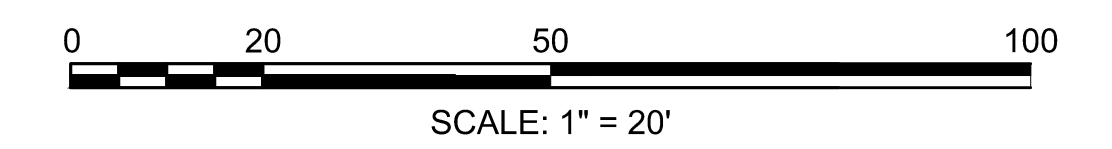
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File No.	8514																																																		





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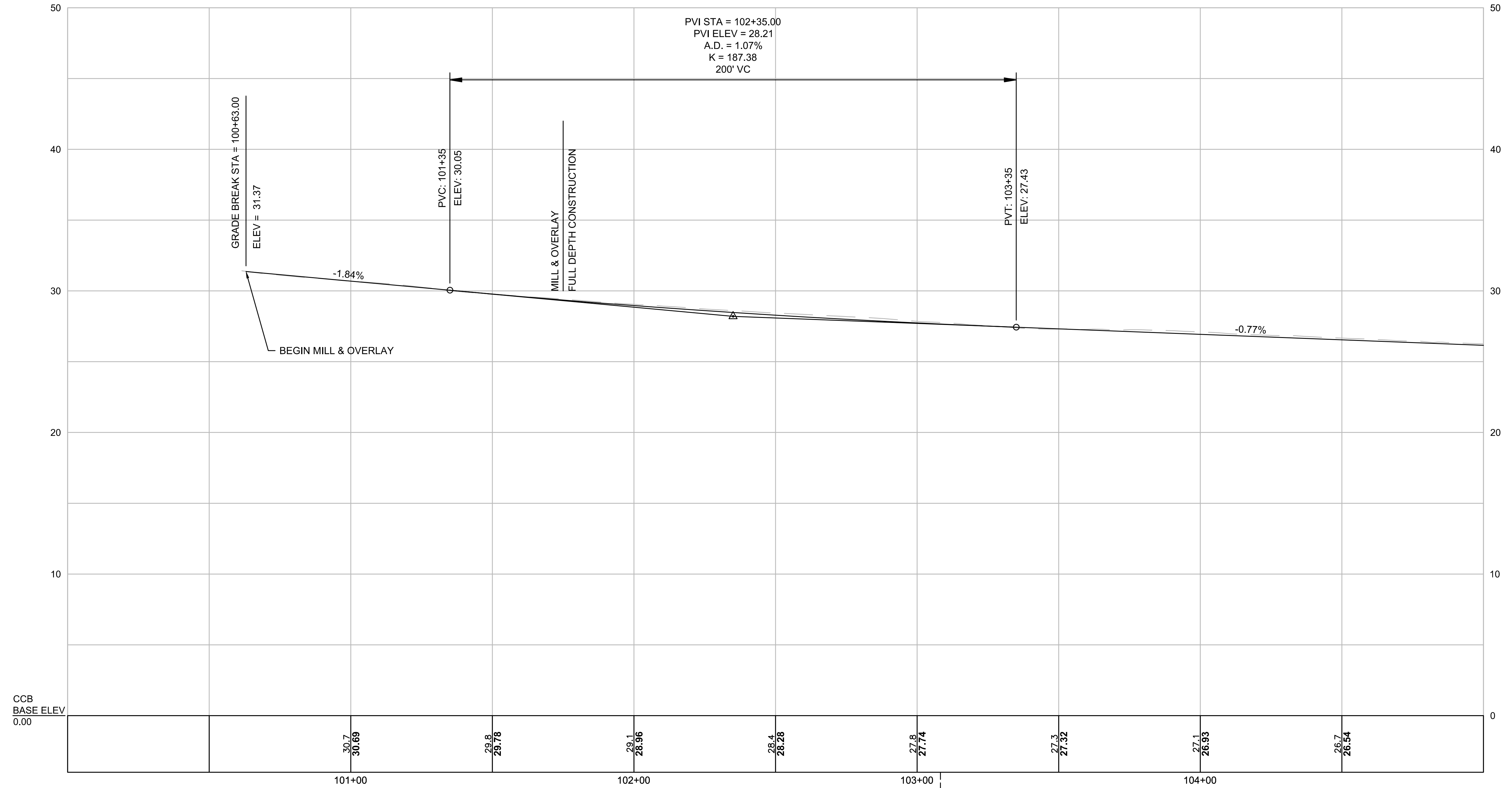
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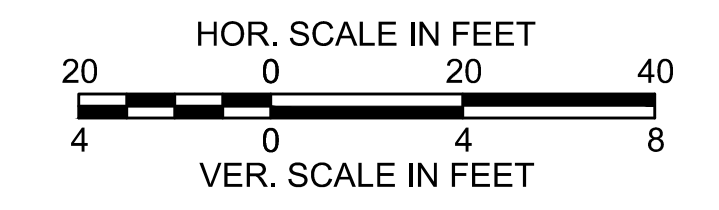
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						Job No.	20170208.005A				Drawing	CONSTRUCTION PLAN SHEET 3 OF 3	File No. <b>8514</b>
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# CAMBRIDGE-HAMPSHIRE (100)

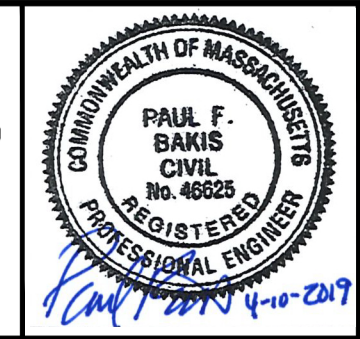


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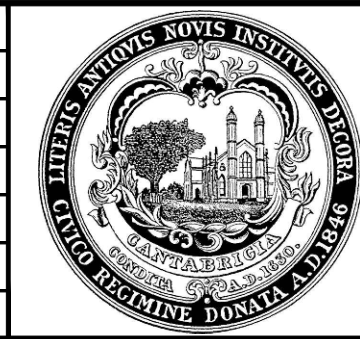


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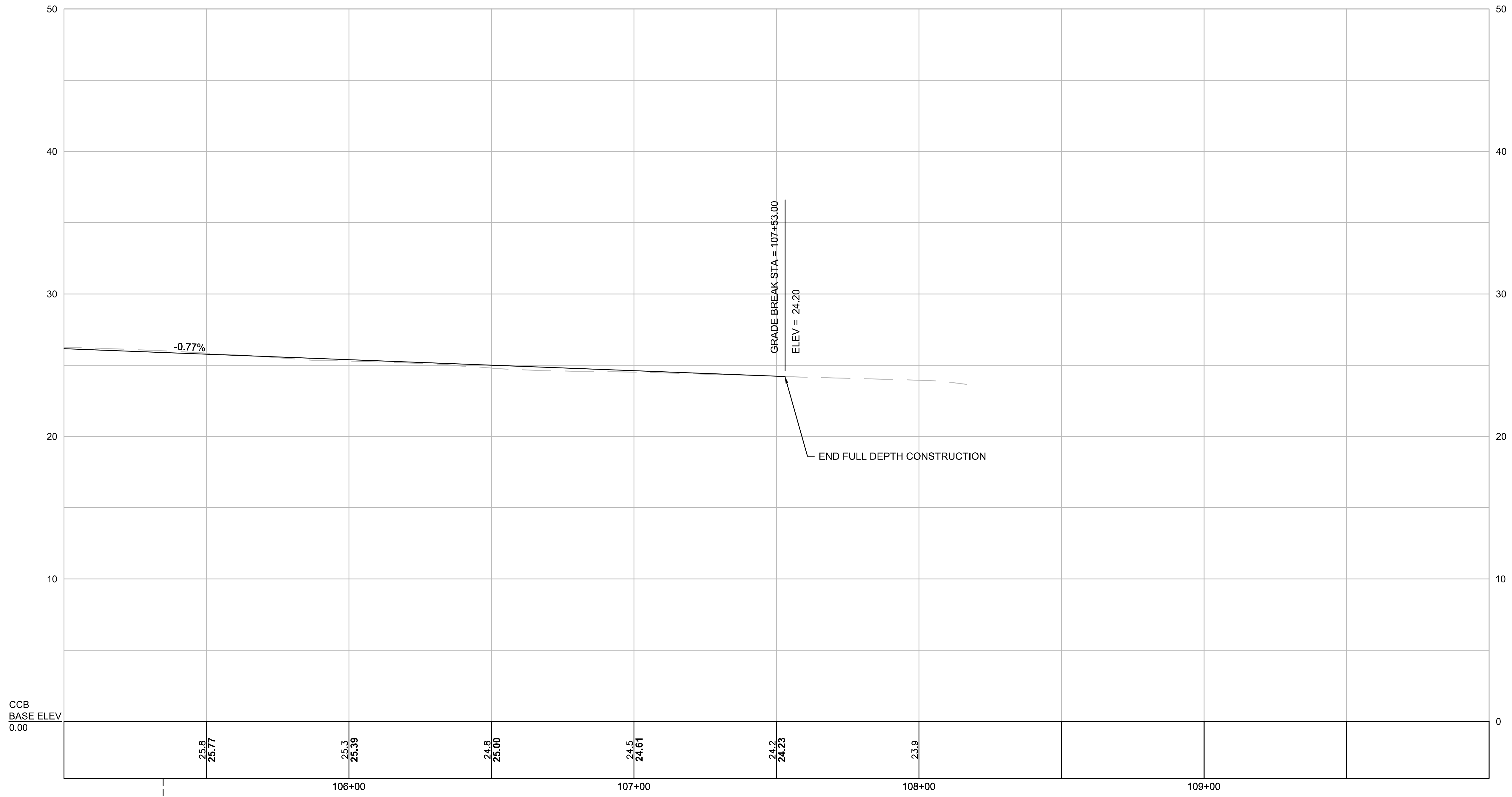


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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CAMBRIDGE - HAMPSHIRE ROADWAY PROFILE SHEET 1 OF 2

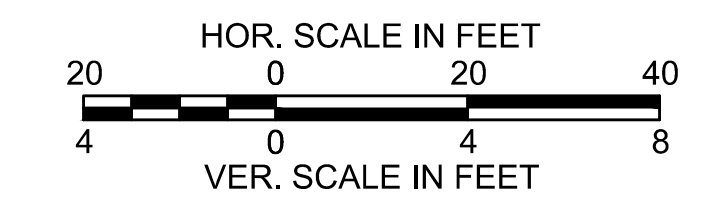
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# CAMBRIDGE-HAMPSHIRE (100)



CAMBRIDGE - HAMPSHIRE STA 105+34.75  
 CAMBRIDGE STA 200+00.00  
 N 2961416.7409  
 E 764069.5260



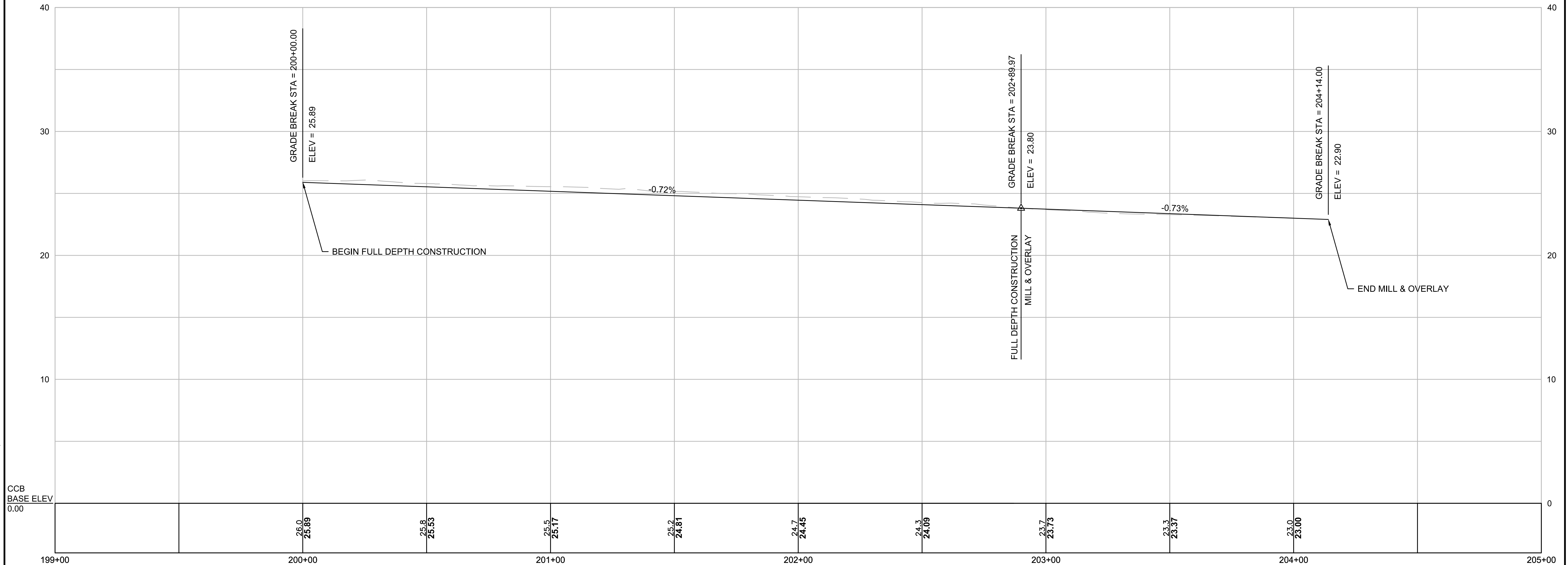
ISSUED FOR BID

CAD FILE: I:\eng\1604244\Inman Square\HD\DWG\100% Submission\1604222100% HD\Profile.dwg LAYOUT: C-7 PLOTTED: 4/9/2019 3:11 PM BY: moyar\_david

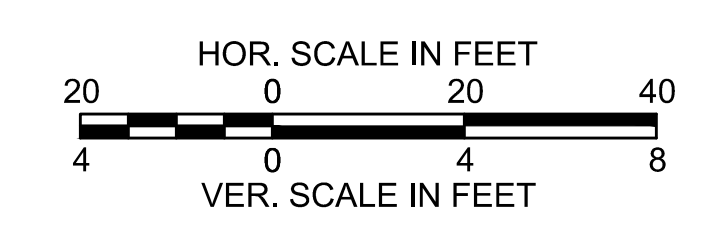
						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td></tr> <tr><td>Date</td><td>APRIL 2019</td></tr> <tr><td>Job No.</td><td>20170208.005A</td></tr> <tr><td>Designed by</td><td>DTM</td></tr> <tr><td>Drawn by</td><td>DTM</td></tr> <tr><td>Checked by</td><td>PFB</td></tr> <tr><td>Approved by</td><td>PFB</td></tr> </table>	Scale	AS NOTED	Date	APRIL 2019	Job No.	20170208.005A	Designed by	DTM	Drawn by	DTM	Checked by	PFB	Approved by	PFB		<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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>CAMBRIDGE - HAMPSHIRE ROADWAY PROFILE SHEET 2 OF 2</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	CAMBRIDGE - HAMPSHIRE ROADWAY PROFILE SHEET 2 OF 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td style="text-align: center; font-size: 1.2em;">C-7</td></tr> <tr><td>File No.</td><td style="text-align: center; font-size: 1.2em;">8514</td></tr> </table>	Sheet	C-7	File No.	8514
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# CAMBRIDGE STREET (200)



CAMBRIDGE - HAMPSHIRE STA 105+34.75 =  
 CAMBRIDGE STA 200+00.00  
 N 2961416.7409  
 E 764069.5260



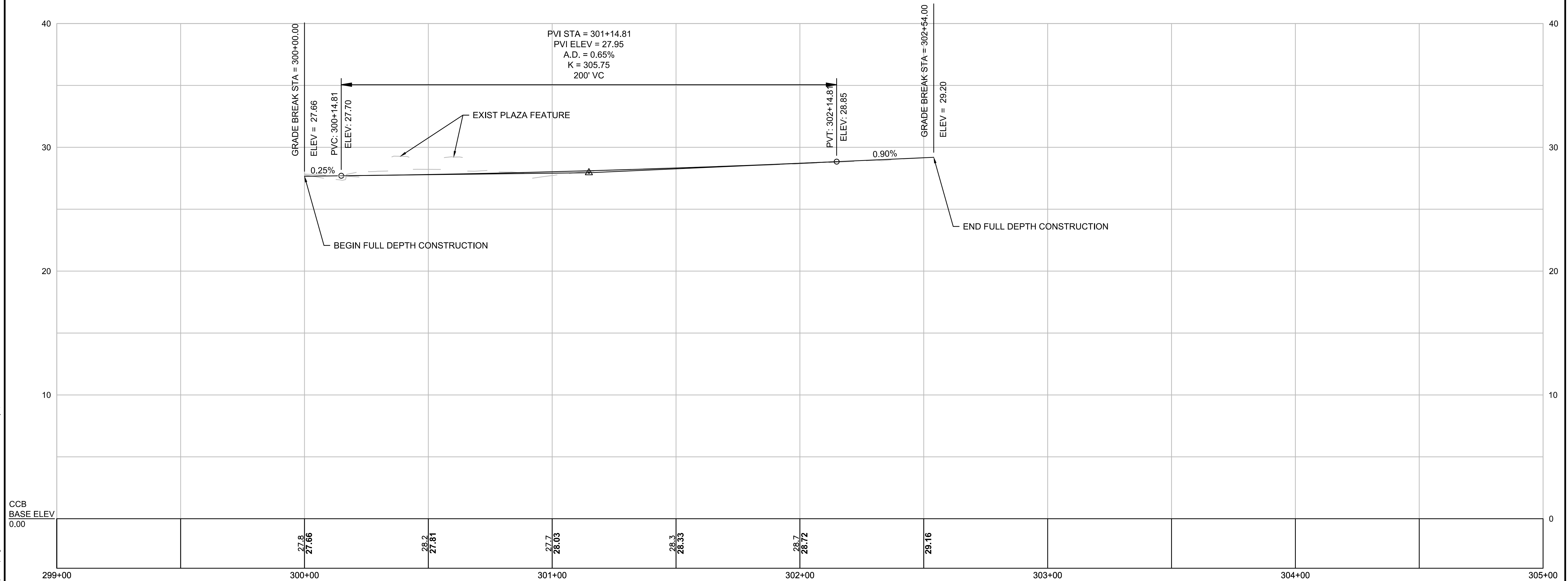
ISSUED FOR BID

CAD FILE: I:\eng\16042-44\Inman Square\HD\DWG\100% Submission\16042-22\100% HD\profiles.dwg LAYOUT: C-8 PLOTTED: 4/9/2019 3:12 PM BY: moyer.david

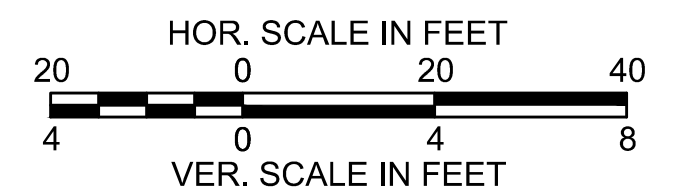
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# HAMPSHIRE STREET (300)



CAMBRIDGE - HAMPSHIRE STA 103+08.23 =  
 HAMPSHIRE STA 300+00.00  
 N 2961502.3387  
 E 763869.5011



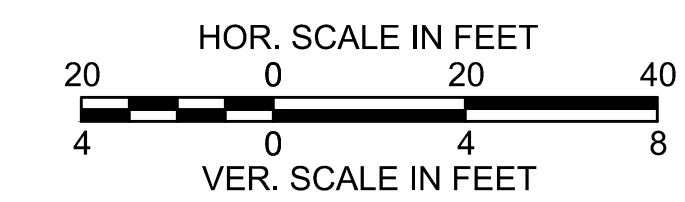
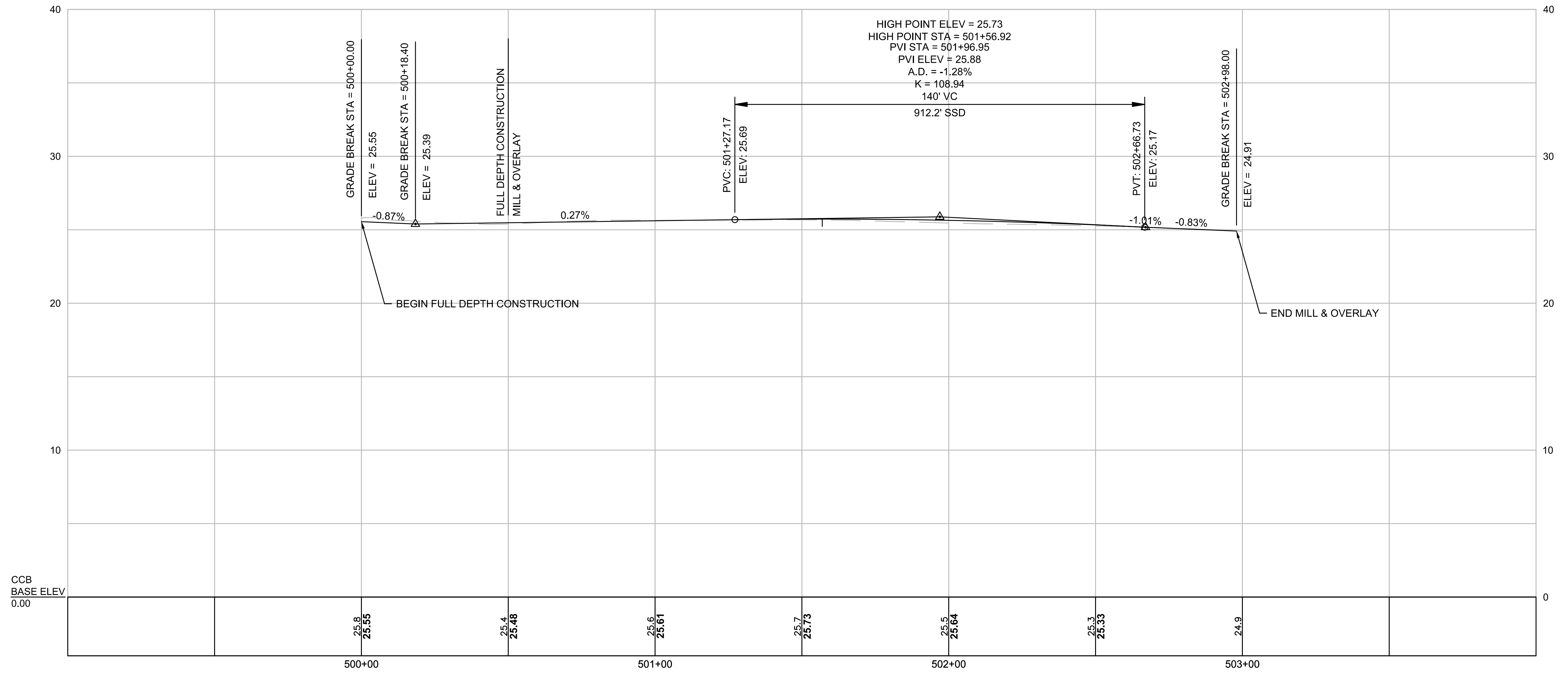
ISSUED FOR BID

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							Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>C-9</b>												
							Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No. <b>8514</b>												
							Drawing HAMPSHIRE STREET ROADWAY PROFILE SHEET 1 OF 1													
Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by DTM Drawn by DTM Checked by PFB Approved by PFB		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	Description	Date										Revisions				
No.	Description	Date																		



# SPRINGFIELD STREET (500)



ISSUED FOR BID

CAD FILE: I:\eng\16042.44 Inman Square\HD\DWG\100% Submission\16042.22\100%HD(profiles).dwg LAYOUT: C-10 PLOTTED: 4/9/2019 3:12 PM BY: moyer, david

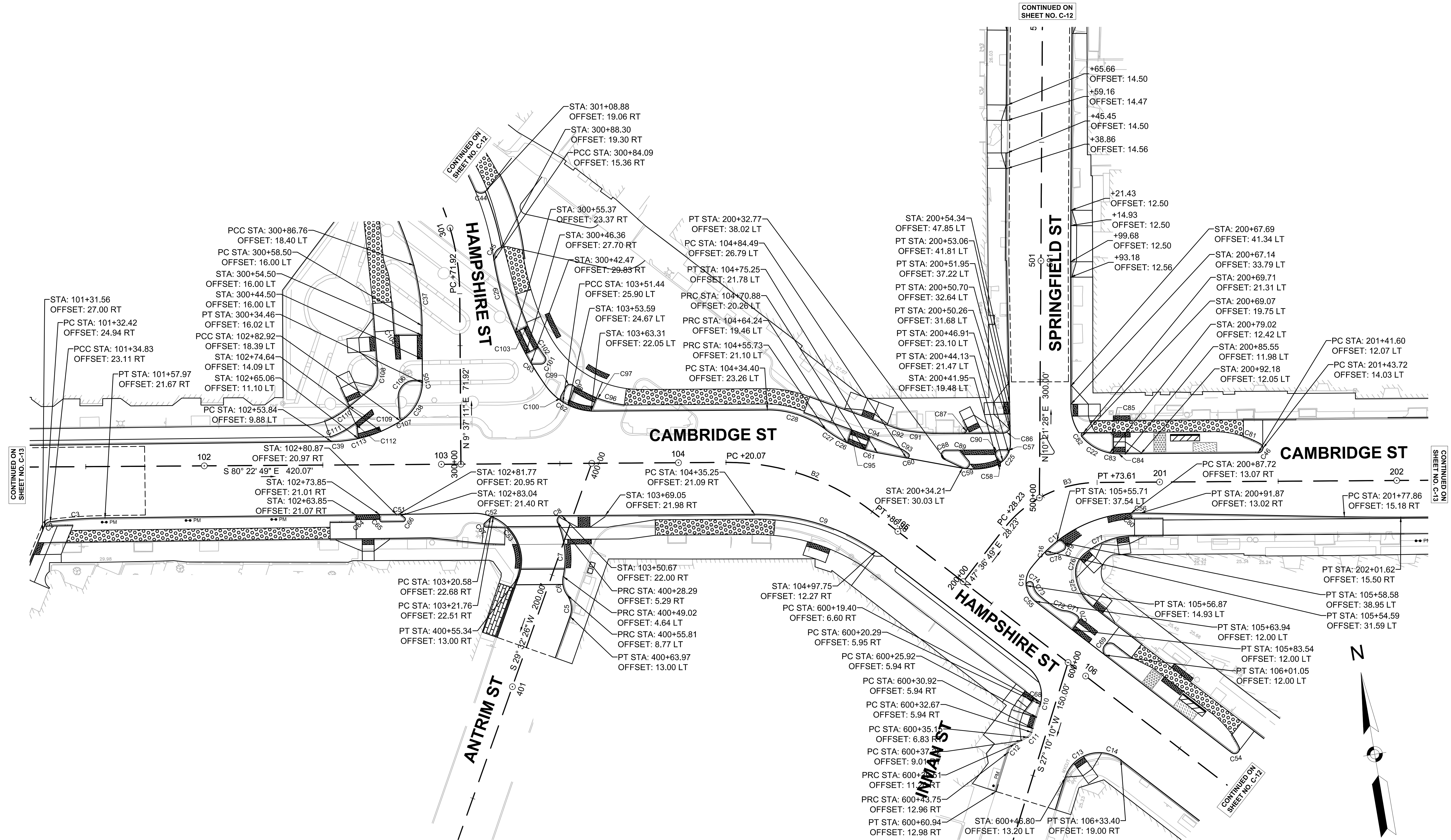
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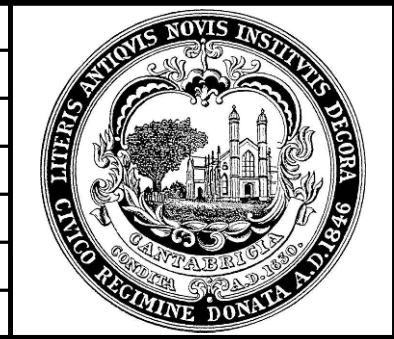
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Scale	AS NOTED			
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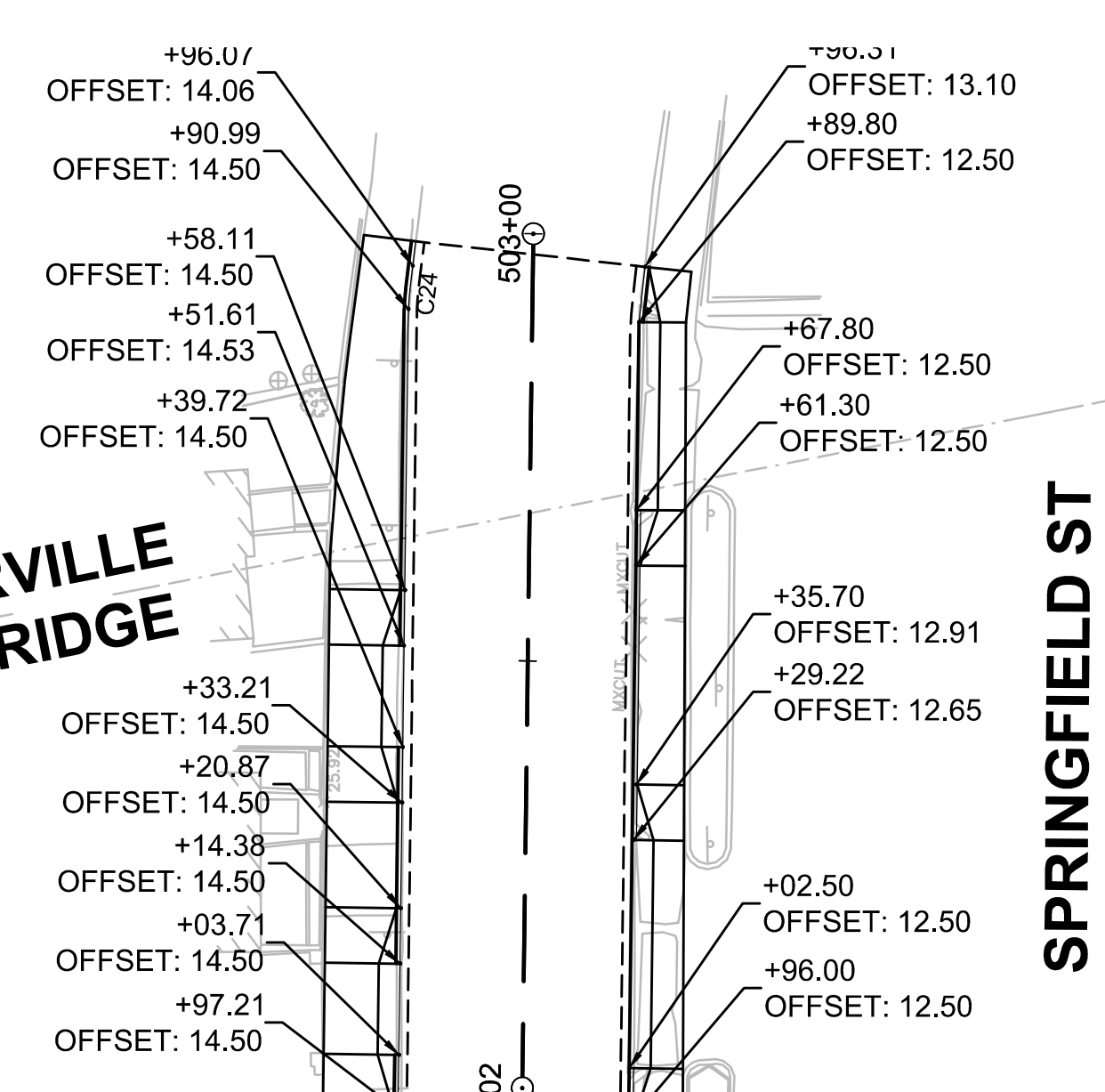
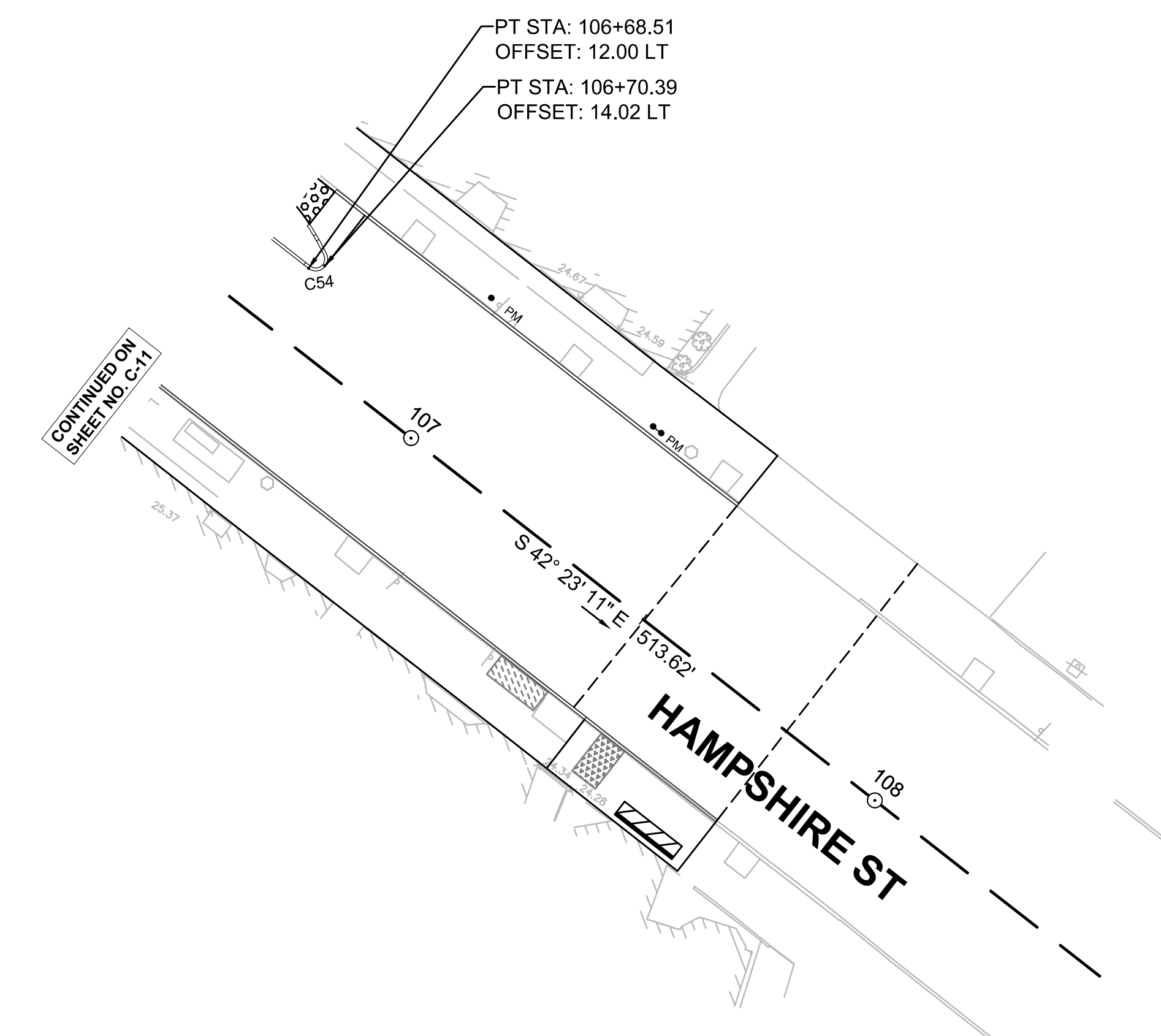
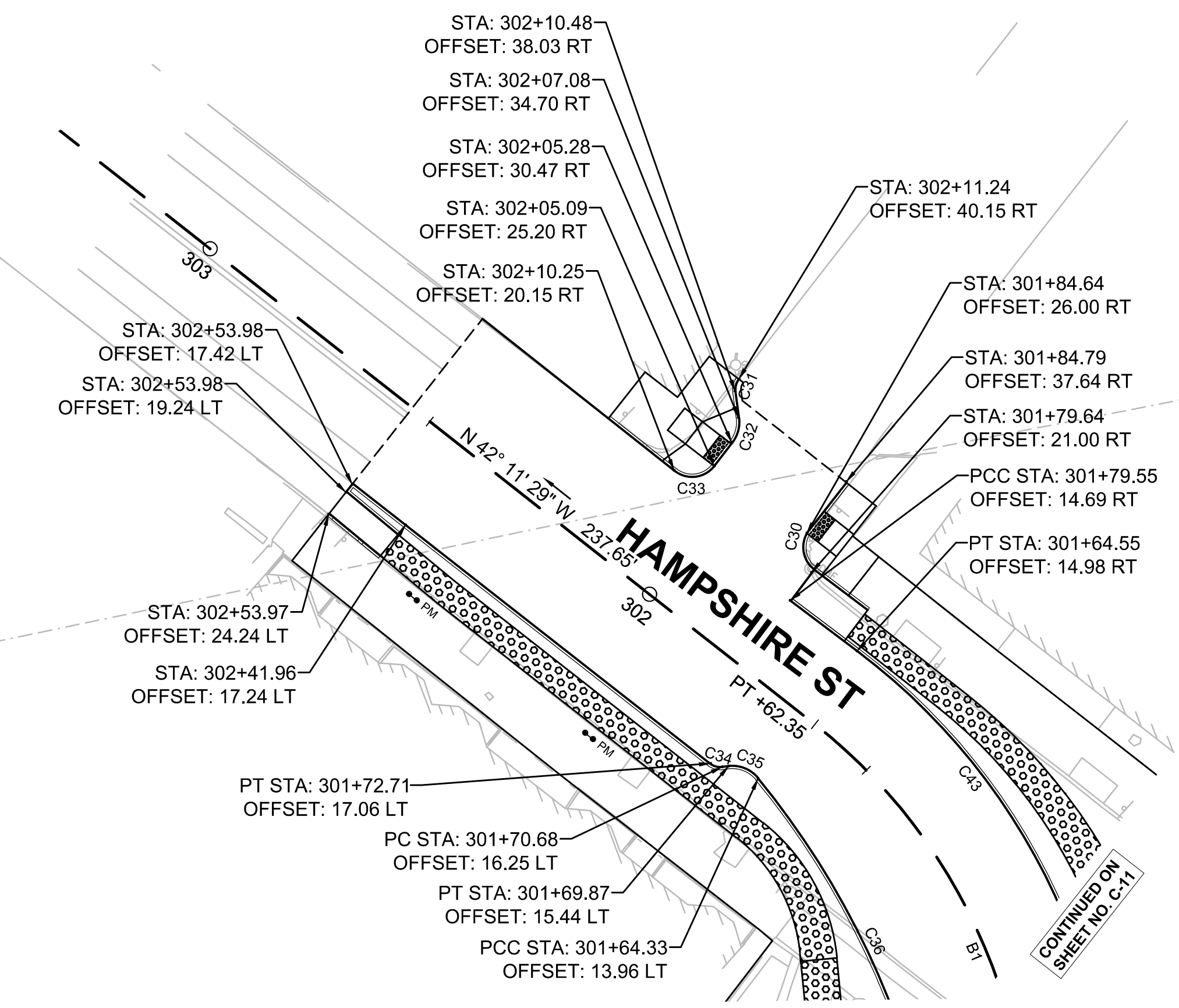
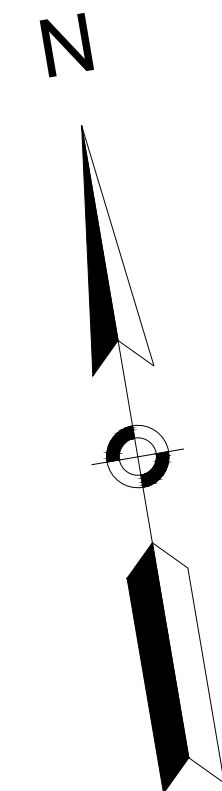
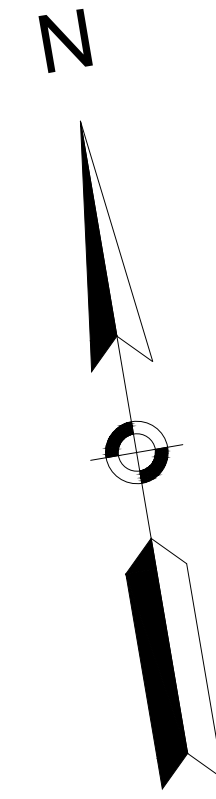
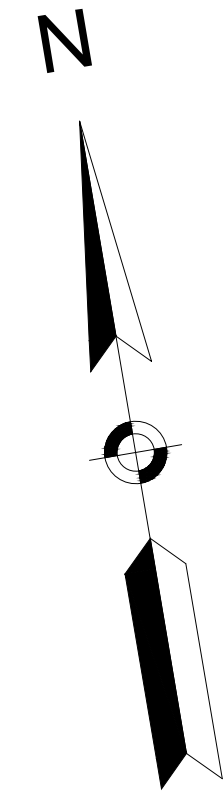


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN SHEET 1 OF 4

Sheet	C-11
File No.	8514

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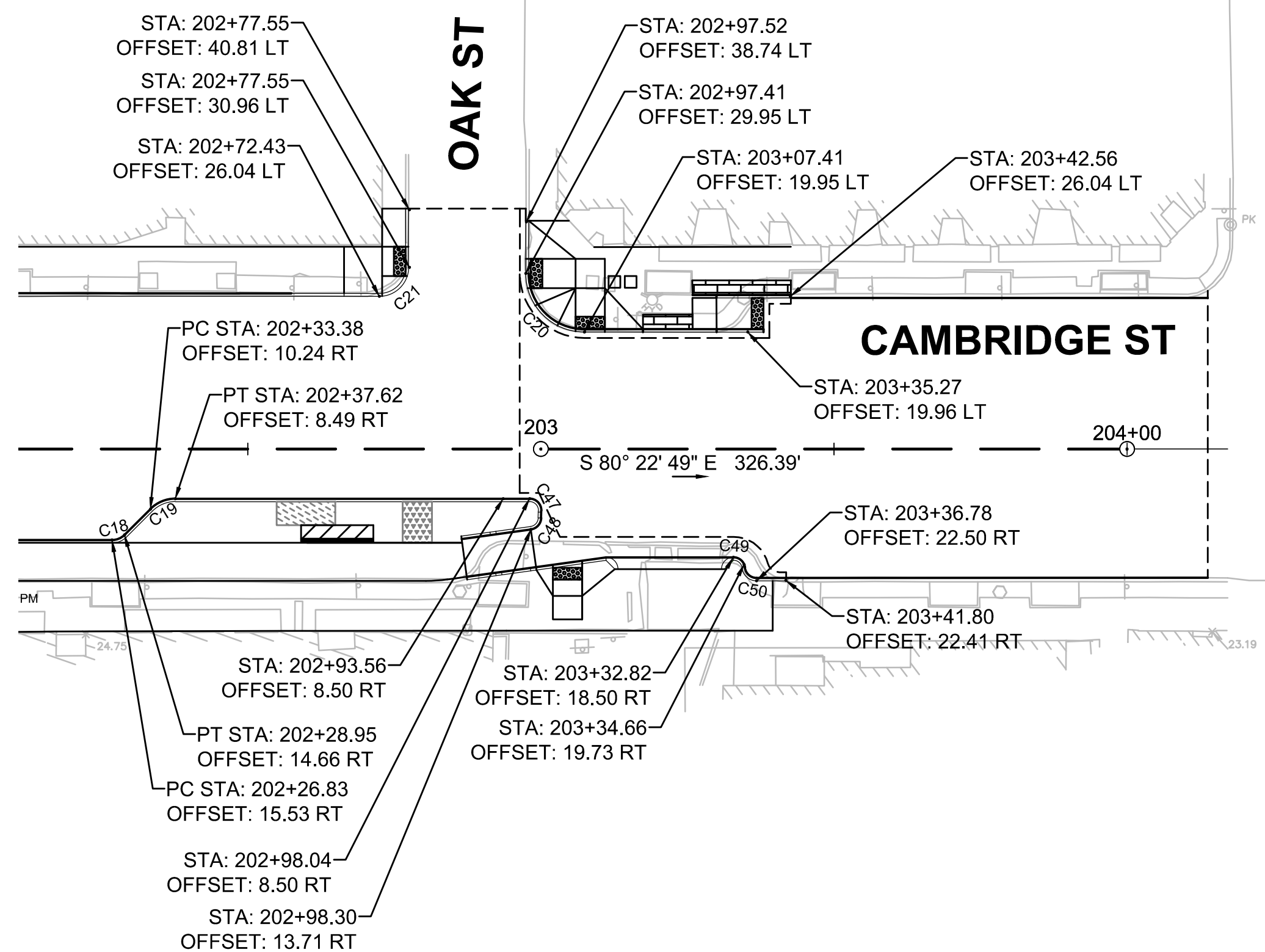
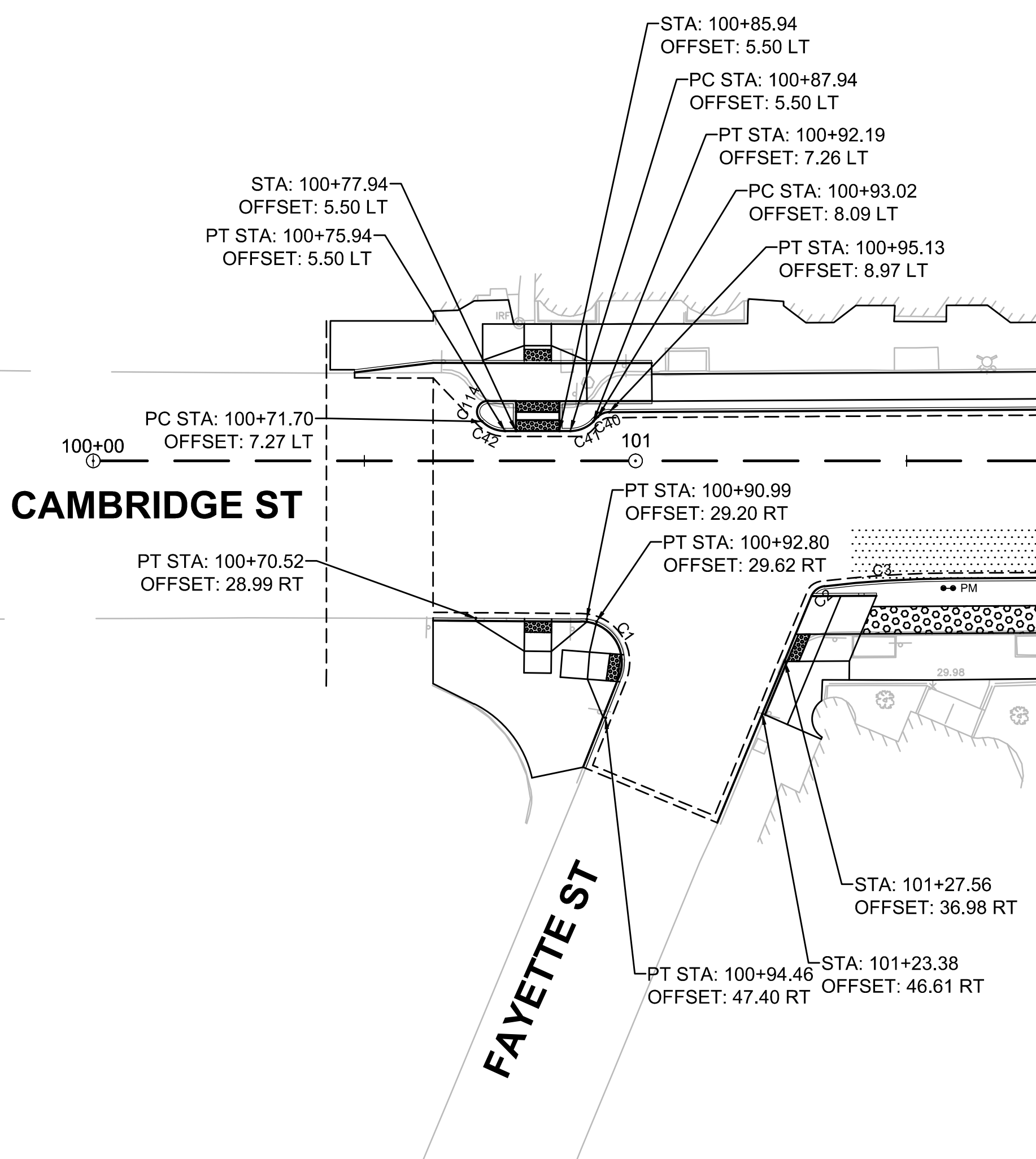
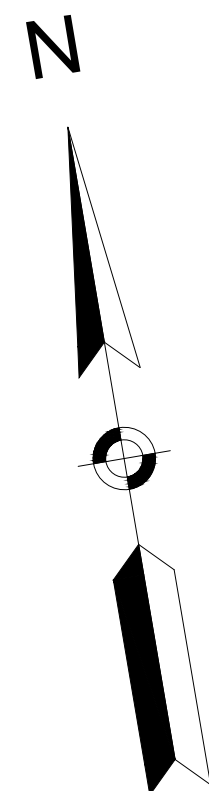
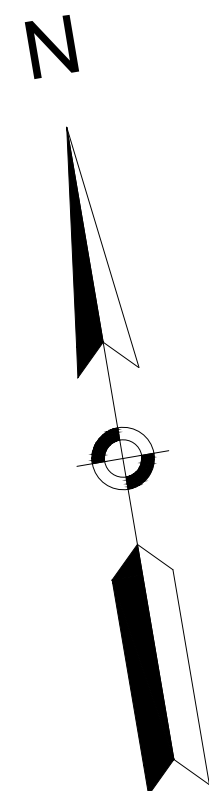


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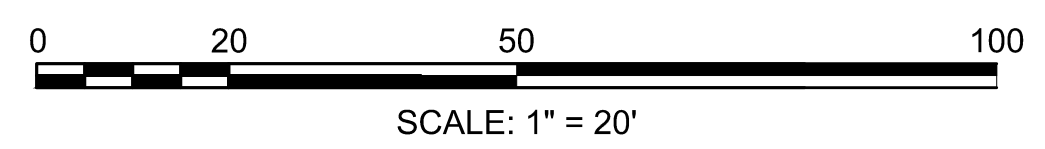
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								Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No. <b>8514</b>
								Drawing CURB TIE PLAN SHEET 2 OF 4	
Scale AS NOTED		Date APRIL 2019		Job No. 20170208.005A		Designed by DTM			
Drawn by DTM		Checked by PFB		Approved by PFB		No. Description Date		REVISIONS	





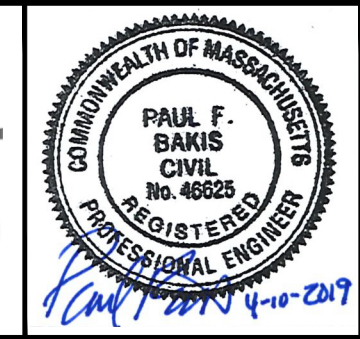
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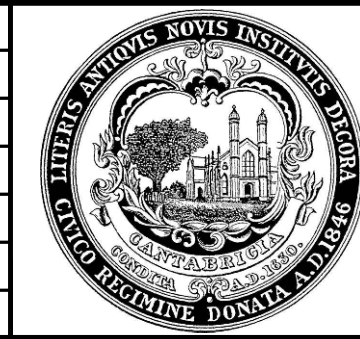


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Drawn by	DTM		
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
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Drawing	CURB TIE PLAN SHEET 3 OF 4

Sheet	C-13
File No.	8514



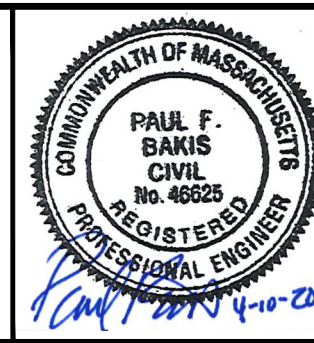
CURVE TABLE				
CURVE #	RADIUS	LENGTH	TANGENT	DELTA
C1	8.00	15.62	11.827	111°50'53"
C2	3.00	3.17	1.749	60°28'34"
C3	204.50	23.19	11.608	6°29'51"
C5	10.00	9.56	5.179	54°45'36"
C6	10.00	8.17	4.330	46°49'19"
C7	38.00	23.35	12.059	35°12'44"
C8	2.00	3.95	3.035	113°13'46"
C9	90.00	54.26	27.981	34°32'29"
C10	15.00	17.48	9.887	66°46'33"
C11	3.00	2.36	1.243	45°00'00"
C12	6.00	4.71	2.485	45°00'00"
C13	15.00	28.91	21.600	110°26'39"
C14	15.00	28.91	21.600	110°26'39"
C15	10.00	8.49	4.517	48°37'15"
C16	1.00	2.43	2.697	139°19'08"
C17	2.00	2.93	1.801	83°59'44"
C18	3.00	2.36	1.243	45°00'00"
C19	6.00	4.70	2.481	44°55'34"
C20	10.00	15.71	10.000	90°00'00"
C21	5.00	7.86	5.002	90°01'04"
C22	20.00	14.39	7.524	41°13'58"
C24	20.00	2.21	1.108	6°20'26"
C25	10.00	4.21	2.134	24°05'40"
C26	50.00	10.51	5.275	12°02'38"
C27	50.00	10.51	5.275	12°02'38"
C28	40.00	26.59	13.808	38°05'18"
C29	125.00	59.95	30.564	27°28'48"
C30	5.00	7.95	5.097	91°05'46"
C31	3.00	2.36	1.243	45°00'00"
C32	6.00	4.71	2.485	45°00'00"
C33	5.00	7.92	5.064	90°43'31"
C34	3.00	2.36	1.243	45°00'00"
C35	6.00	6.03	3.295	57°33'14"
C36	150.00	64.38	32.692	24°35'26"
C37	100.00	25.77	12.955	14°45'47"
C38	20.00	17.86	9.576	51°10'05"
C39	55.00	10.41	5.219	10°50'27"
C40	3.00	2.34	1.234	44°43'06"
C41	6.00	4.72	2.489	45°03'38"
C42	6.00	4.72	2.489	45°03'38"

CURVE TABLE				
CURVE #	RADIUS	LENGTH	TANGENT	DELTA
C43	115.00	90.13	47.523	44°54'17"
C44	3.00	5.50	3.909	104°59'27"
C45	5.00	6.84	4.074	78°20'48"
C46	2.00	5.25	7.537	150°16'35"
C47	2.00	3.16	2.014	90°24'22"
C48	2.00	2.85	1.730	81°42'42"
C49	2.00	2.89	1.764	82°49'09"
C50	2.00	2.89	1.764	82°49'09"
C51	2.00	1.37	0.712	39°10'51"
C52	1.00	1.16	0.652	66°13'58"
C53	20.00	30.01	18.644	85°58'50"
C54	2.00	5.36	8.485	153°28'29"
C55	10.00	7.85	4.141	44°59'04"
C56	55.00	4.16	2.079	4°19'43"
C57	1.00	1.99	1.545	114°10'22"
C58	1.00	1.62	1.049	92°45'58"
C59	2.00	5.40	8.945	154°47'34"
C60	1.00	2.61	3.677	149°34'27"
C61	50.00	5.38	2.693	6°09'58"
C62	25.00	23.79	12.881	54°31'03"
C63	1.00	1.05	0.577	59°57'04"
C64	1.00	1.57	1.000	90°00'00"
C65	1.00	1.57	1.000	90°00'00"
C66	1.00	2.46	2.810	140°49'09"
C67	1.00	2.36	2.444	135°29'59"
C68	1.00	1.57	1.000	90°00'00"
C69	3.00	9.42	INFINITY	180°00'00"
C70	2.00	3.14	2.000	90°00'00"
C71	10.00	5.55	2.847	31°47'18"
C72	10.00	5.55	2.847	31°47'18"
C73	7.00	5.50	2.898	44°59'04"
C74	1.50	4.71	INFINITY	180°00'00"
C75	20.00	16.29	8.625	46°39'17"
C76	10.00	9.70	5.267	55°32'55"
C77	33.50	23.27	12.128	39°48'09"
C78	15.00	6.76	3.436	25°48'14"
C79	2.00	3.66	2.606	104°59'06"
C80	1.00	1.43	0.868	81°53'53"
C81	40.00	7.79	3.910	11°09'52"
C82	1.00	2.25	2.104	129°10'00"

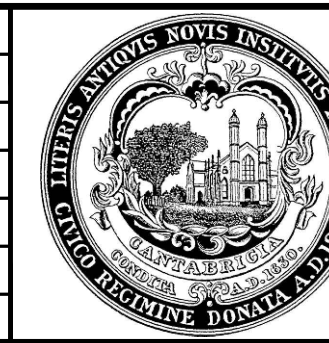
CURVE TABLE				
CURVE #	RADIUS	LENGTH	TANGENT	DELTA
C83	1.00	1.74	1.183	99°36'02"
C84	20.00	4.39	2.202	12°33'55"
C85	2.00	3.14	2.000	90°00'00"
C86	3.00	4.76	3.044	90°49'42"
C87	2.00	4.04	3.182	115°41'52"
C88	2.00	5.38	8.723	154°10'26"
C89	2.00	1.78	0.955	51°02'00"
C90	2.00	4.50	4.190	128°58'00"
C91	100.00	16.93	8.483	9°41'53"
C92	15.00	2.78	1.392	10°36'26"
C93	15.00	4.97	2.506	18°58'21"
C94	1.00	1.60	1.033	91°50'52"
C95	1.00	1.57	1.000	90°00'00"
C96	50.50	11.21	5.629	12°43'14"
C97	1.00	1.55	0.981	88°53'15"
C98	1.00	1.36	0.805	77°40'01"
C99	2.00	3.34	2.210	95°43'14"
C100	2.00	3.02	1.878	86°23'56"
C101	2.00	4.40	3.918	125°54'42"
C102	50.00	3.81	1.906	4°22'00"
C103	1.00	1.51	0.941	86°30'17"
C104	1.00	1.50	0.935	86°10'07"
C105	1.00	1.61	1.043	92°23'44"
C106	7.00	11.46	7.484	93°49'53"
C107	1.00	2.14	1.827	122°36'17"
C108	10.00	9.62	5.218	55°06'34"
C109	1.00	1.32	0.776	75°39'31"
C110	30.00	10.19	5.147	19°28'15"
C111	37.00	11.12	5.600	17°12'43"
C112	1.00	2.12	1.791	121°38'51"
C113	1.00	1.46	0.895	83°38'54"
C114	2.00	4.72	4.840	135°05'53"

ISSUED FOR BID

CAD FILE: I:\eng\16042.44 Inman Square\HDDWG\100% Submission\16042.22\100%HD\Cur Tie.dwg LAYOUT: 4 PLOTTED: 4/9/2019 4:38 PM BY: moyer, david



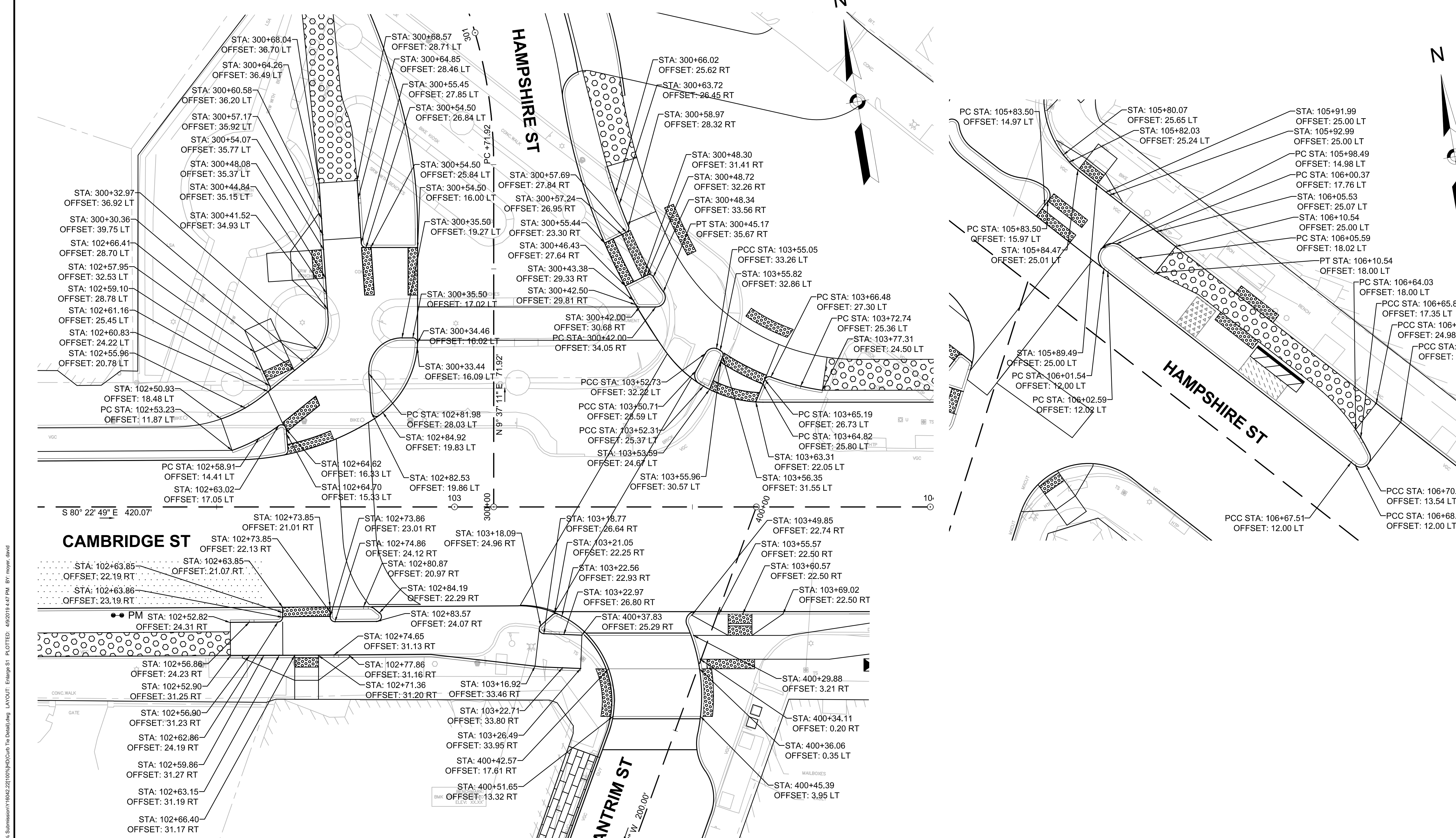
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	DTM		
Drawn by	DTM		
Checked by	PFB	No.	Description
Approved by	PFB		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	CURB TIE PLAN SHEET 4 OF 4

Sheet	C-14
File No.	8514





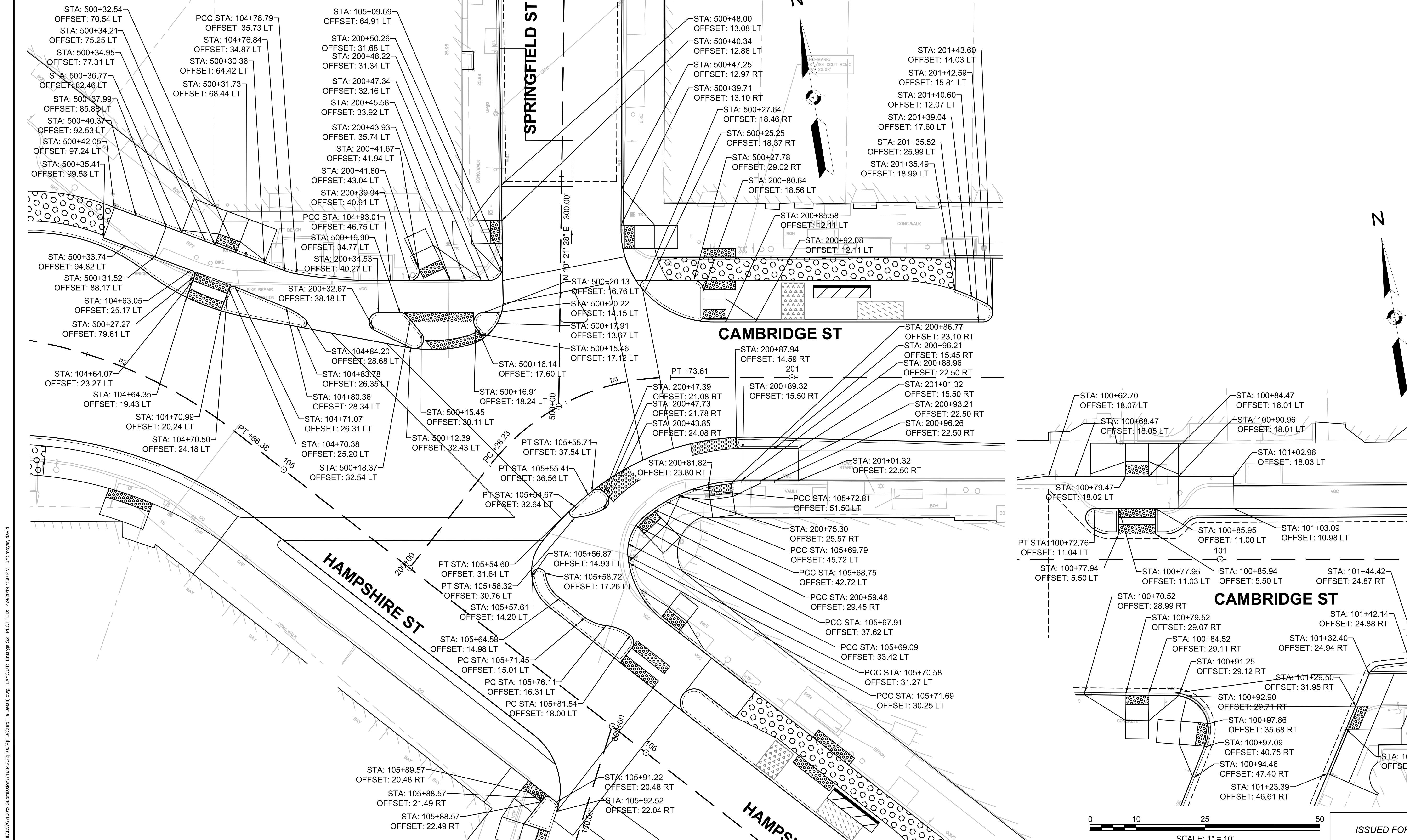
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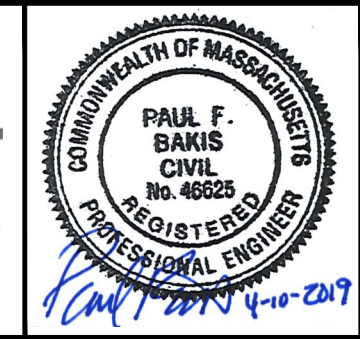
ISSUED FOR BID

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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT																																			
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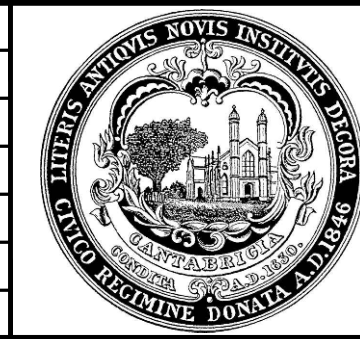




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Drawn by	ARK		
Checked by	PFB	No.	Description
Approved by	PFB		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	DETAIL CURB TIE PLAN SHEET 2 OF 2

Sheet	C-16
File No.	8514

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SCALE: 1" = 10'

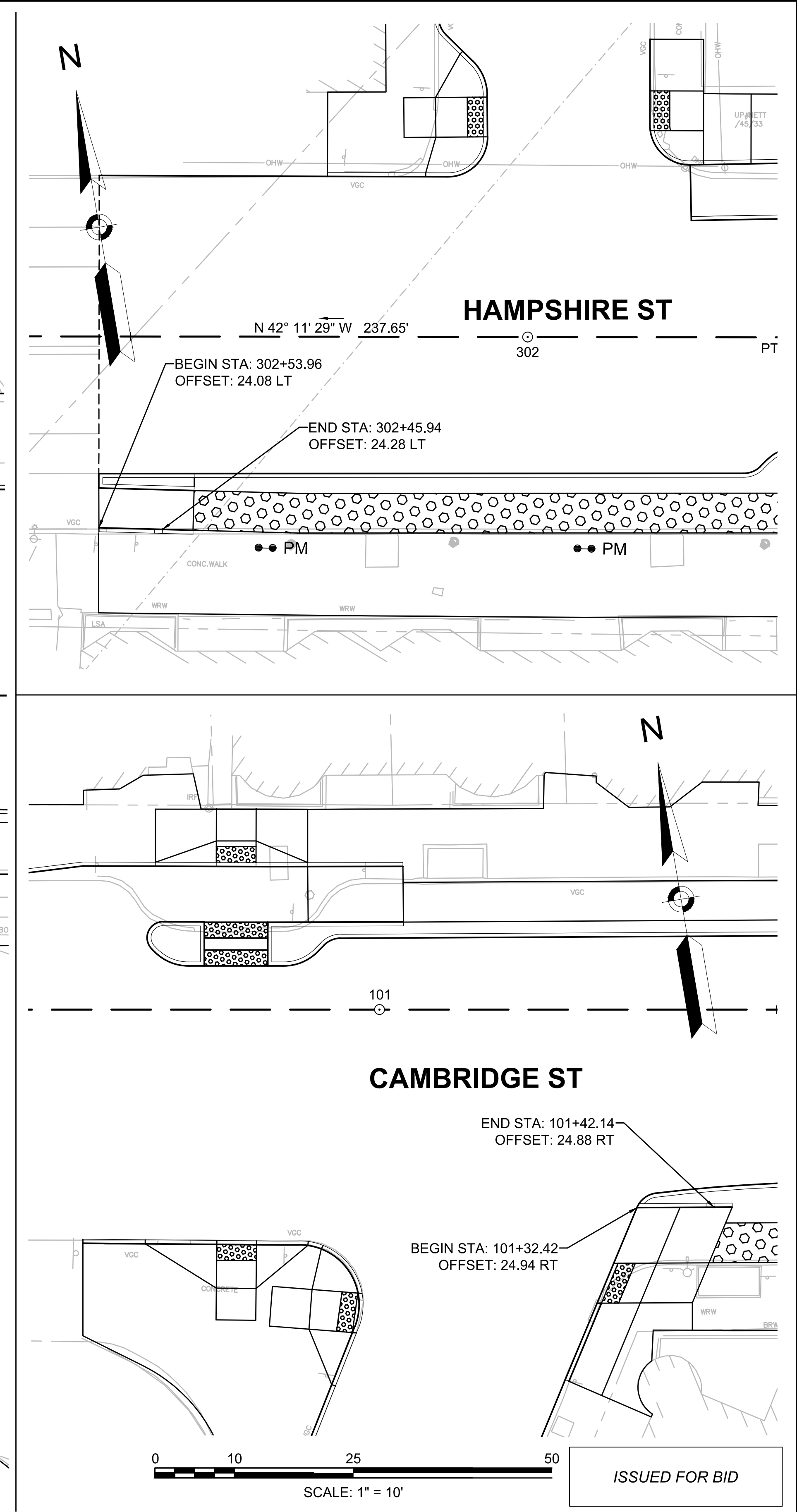
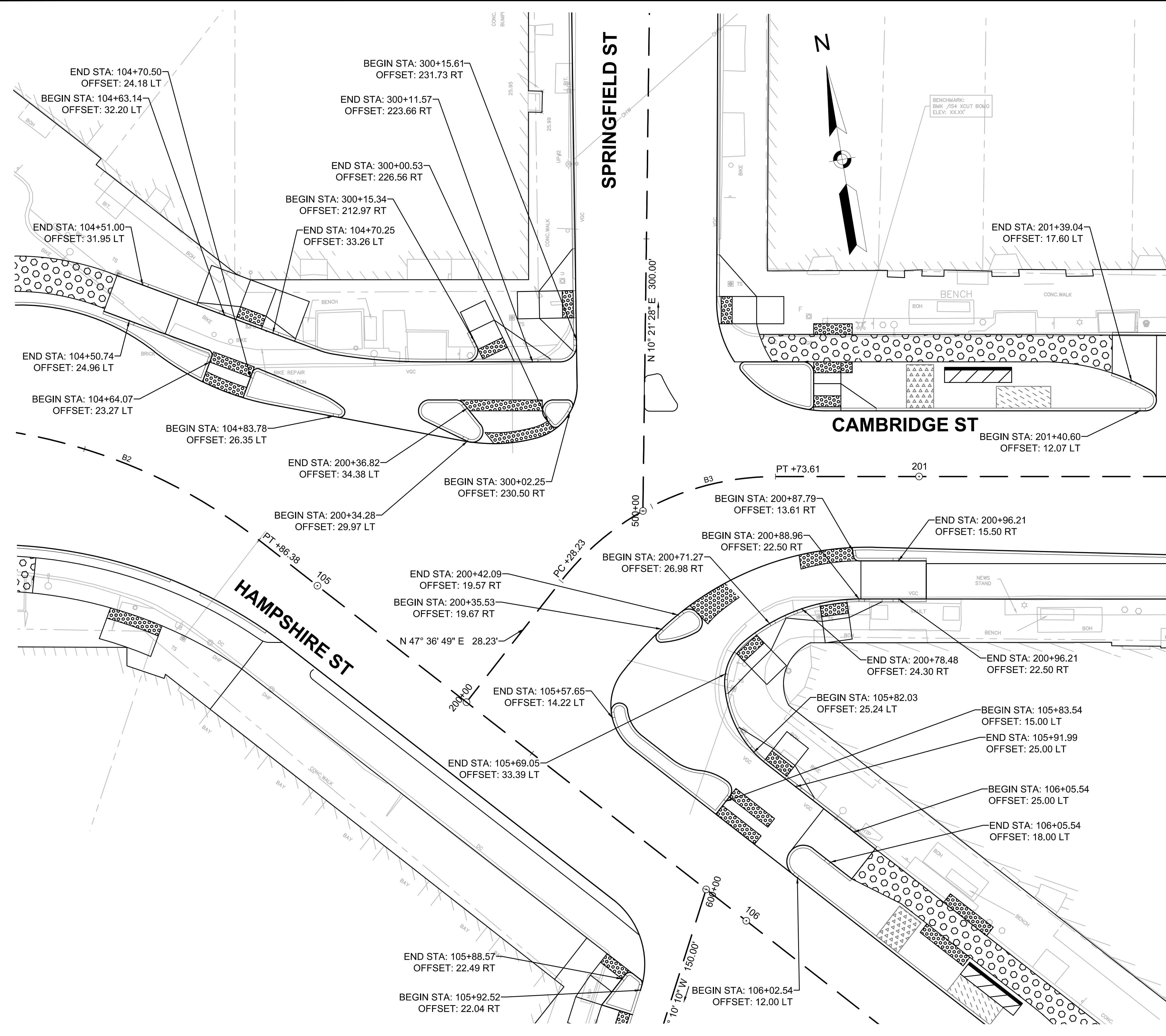
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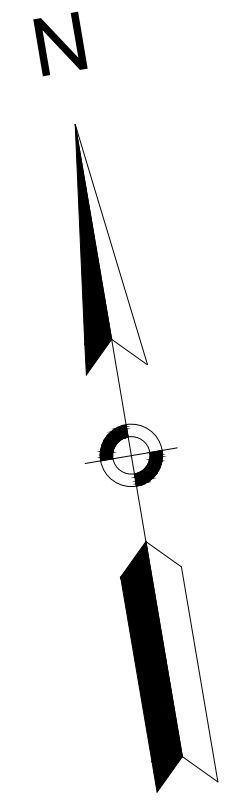


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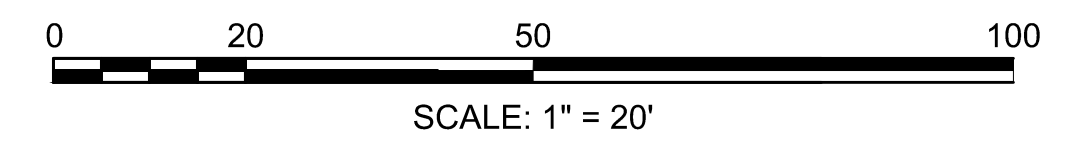
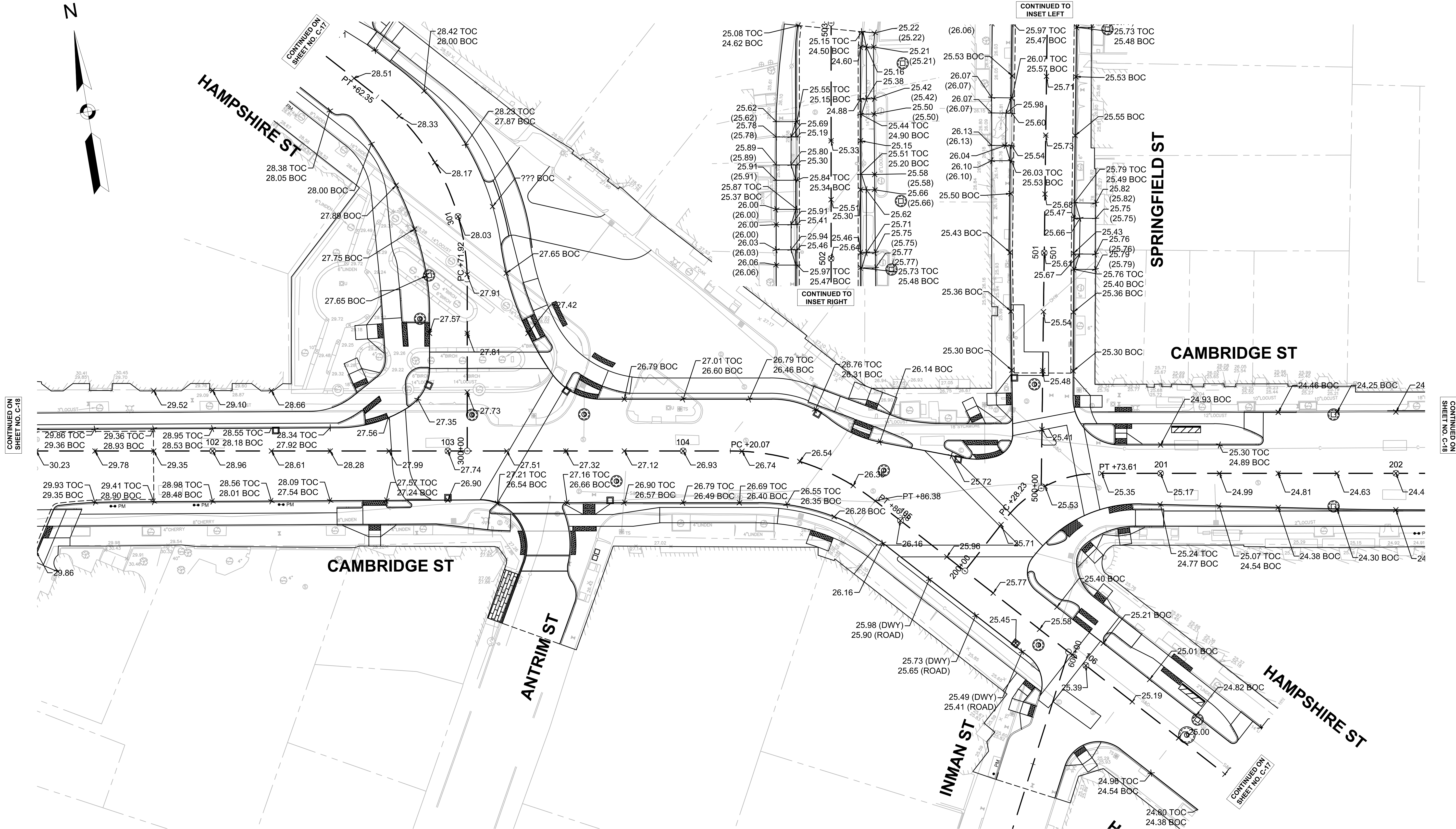
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Drawing	BEVELED CURB TIE PLAN SHEET 2 OF 2																																
Sheet	C-18																																
File No.	8514																																





CONTINUED ON SHEET NO. C-18

CONTINUED ON SHEET NO. C-18

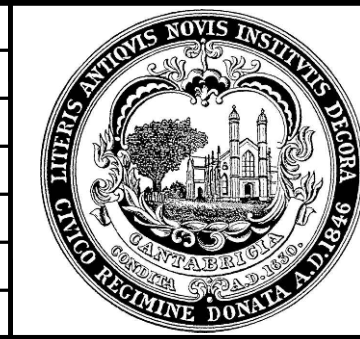


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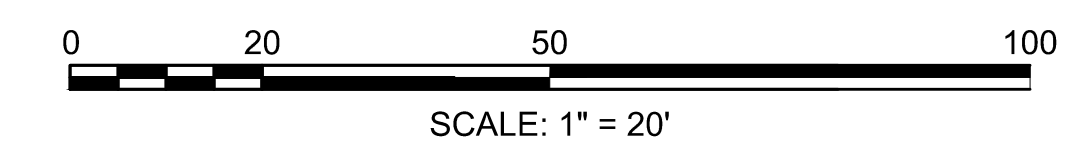
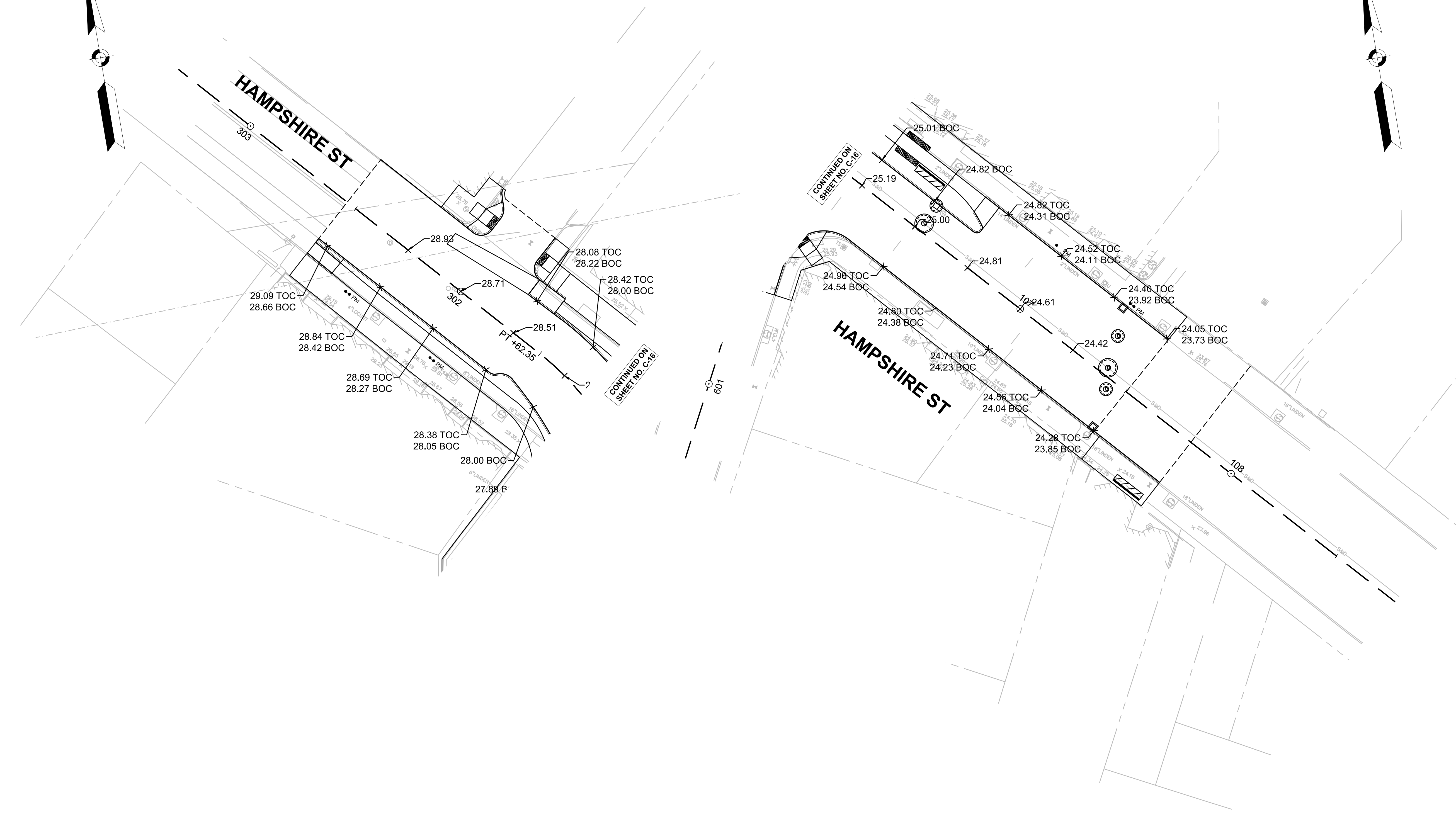
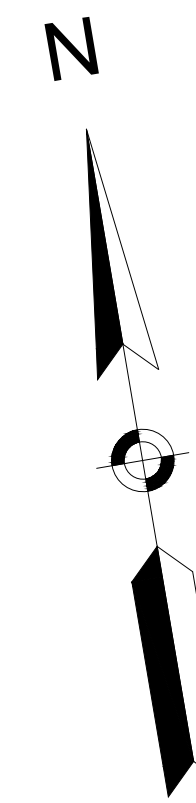
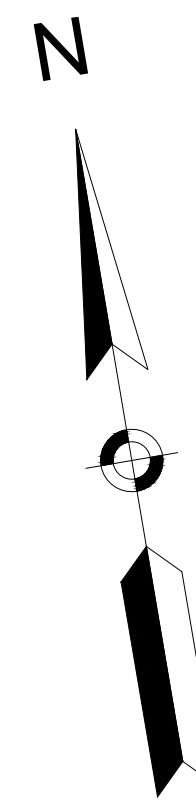
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Approved by	PFB		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	GRADING PLAN SHEET 1 OF 3

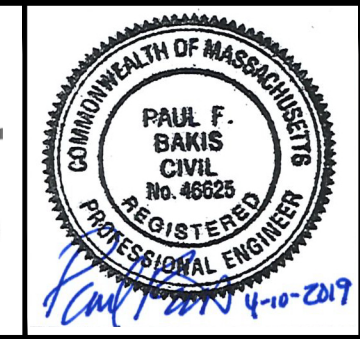
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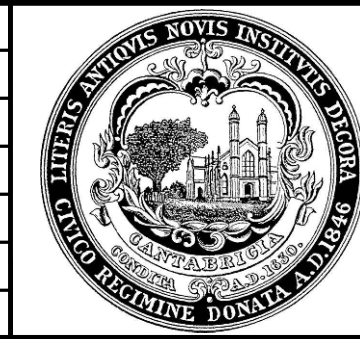


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Drawn by	DTM		
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Approved by	PFB		Date
			REVISIONS



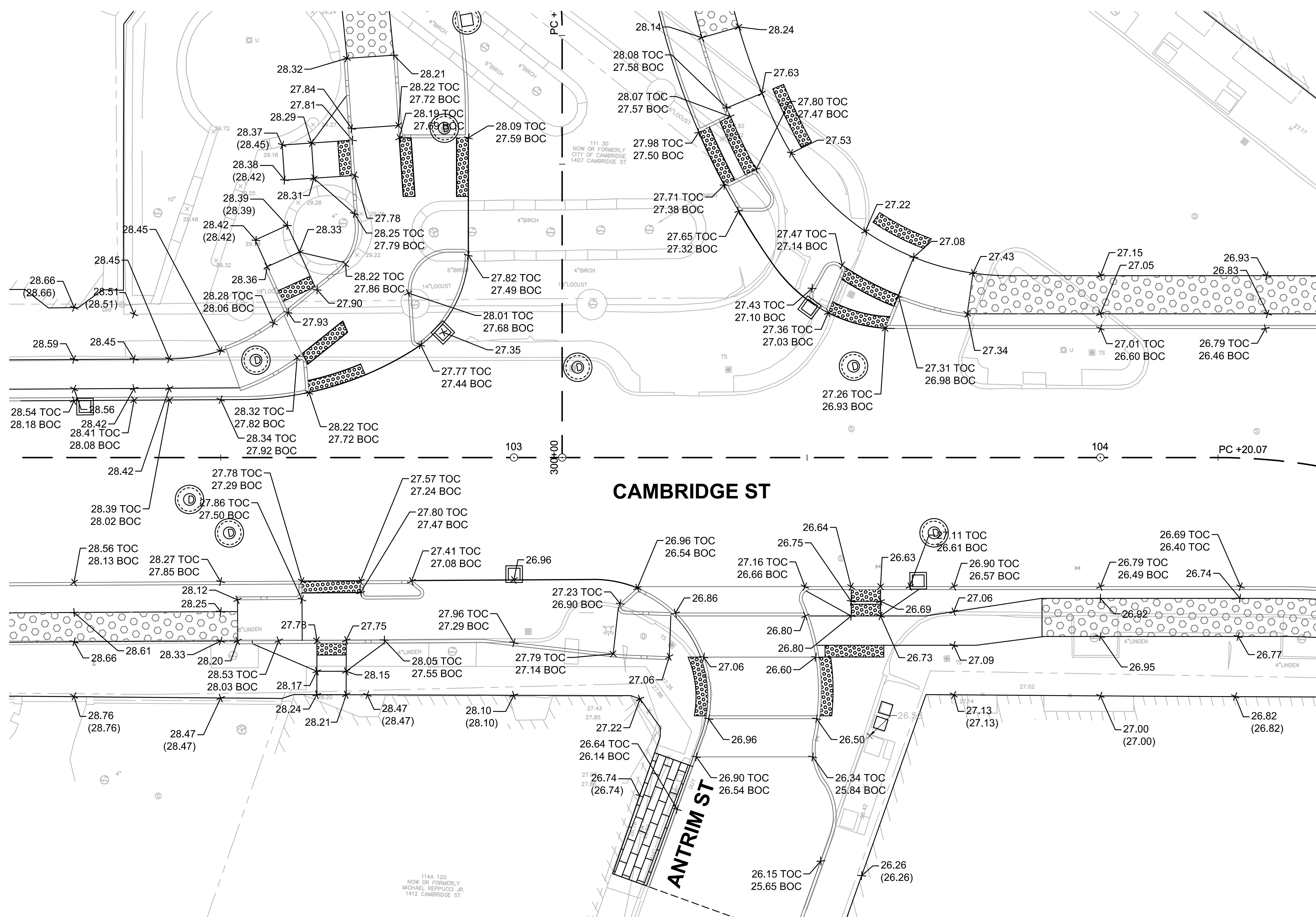
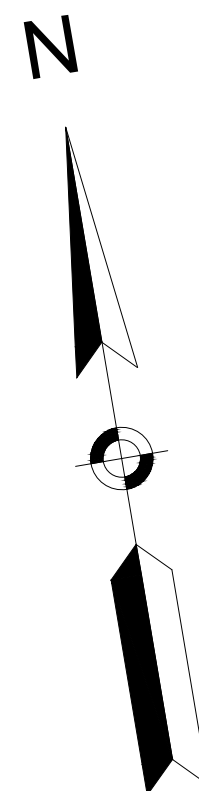
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	GRADING PLAN SHEET 2 OF 3

Sheet	C-20
File No.	8514



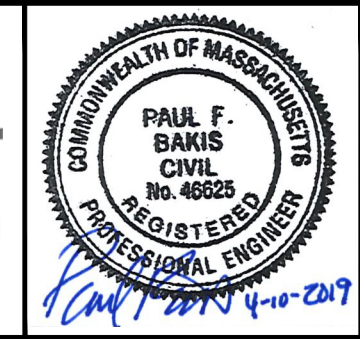




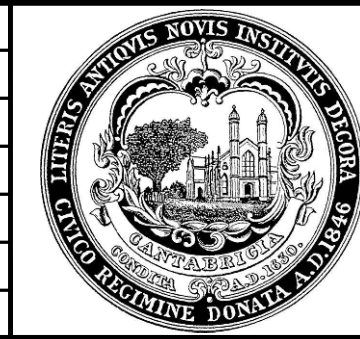


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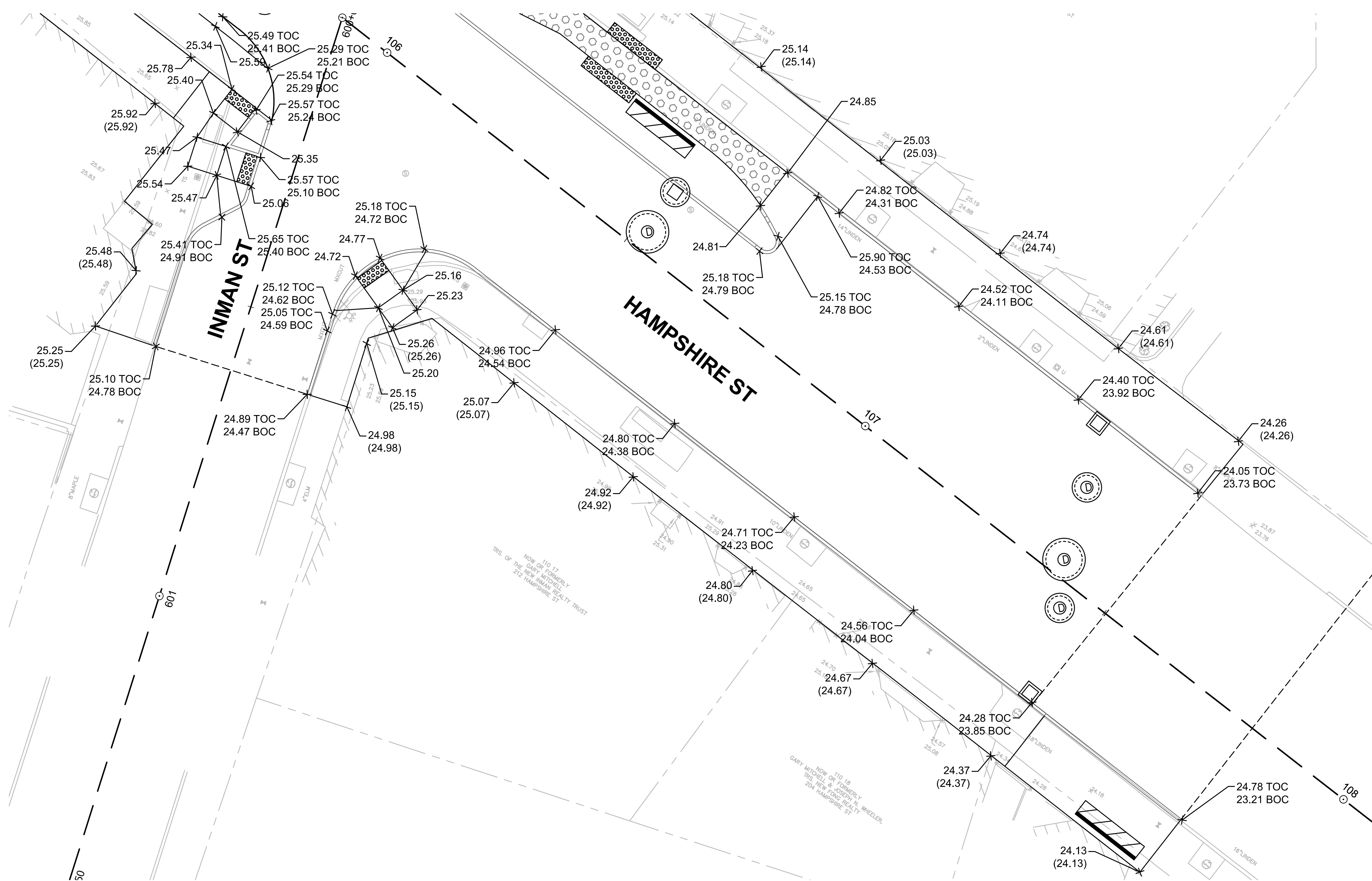
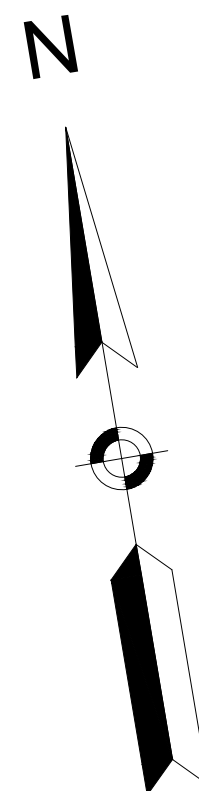
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Checked by	PFB	No.	Description
Approved by	PFB		Date
			REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	DETAIL GRADING PLAN SHEET 1 OF 6

Sheet	C-22
File No.	8514



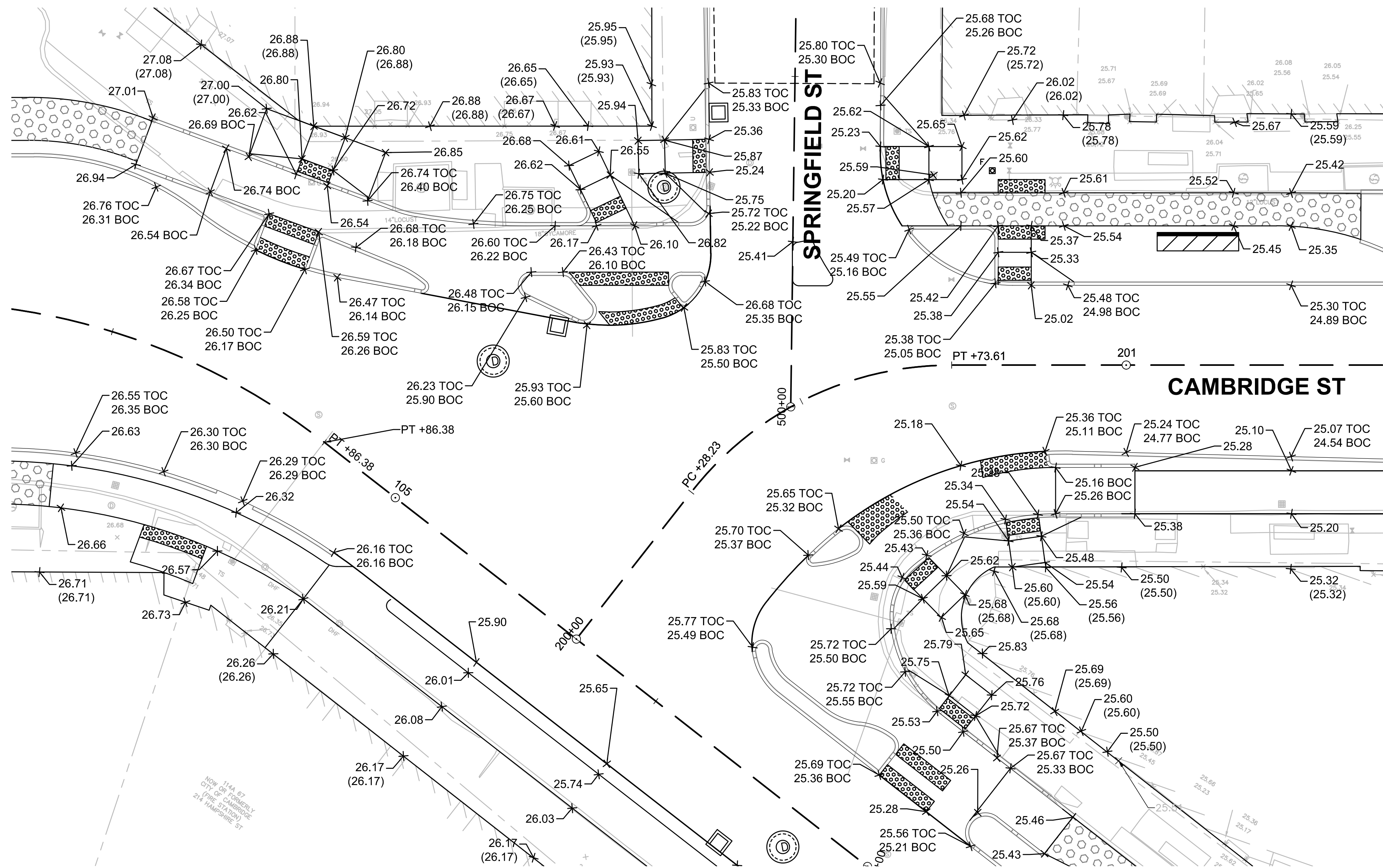
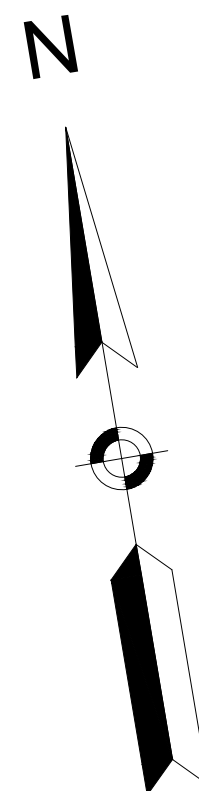


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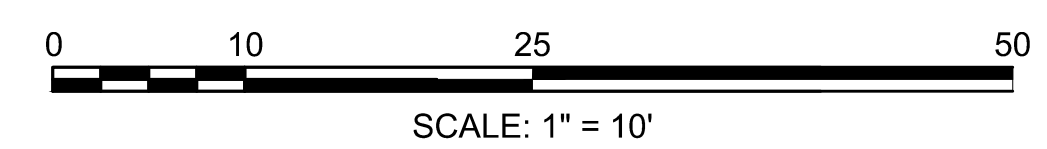
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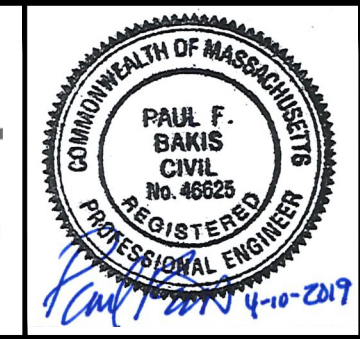
**CAMBRIDGE ST**

**SPRINGFIELD ST**

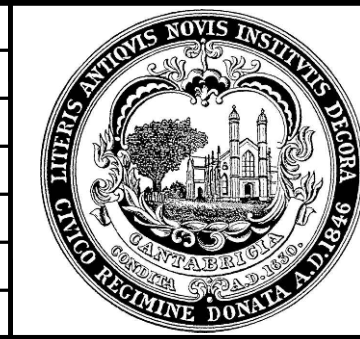


ISSUED FOR BID

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Drawn by	ARK		
Checked by	PFB	No.	Description
Approved by	PFB		Date
			REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	DETAIL GRADING PLAN SHEET 3 OF 6

Sheet	C-24
File No.	8514

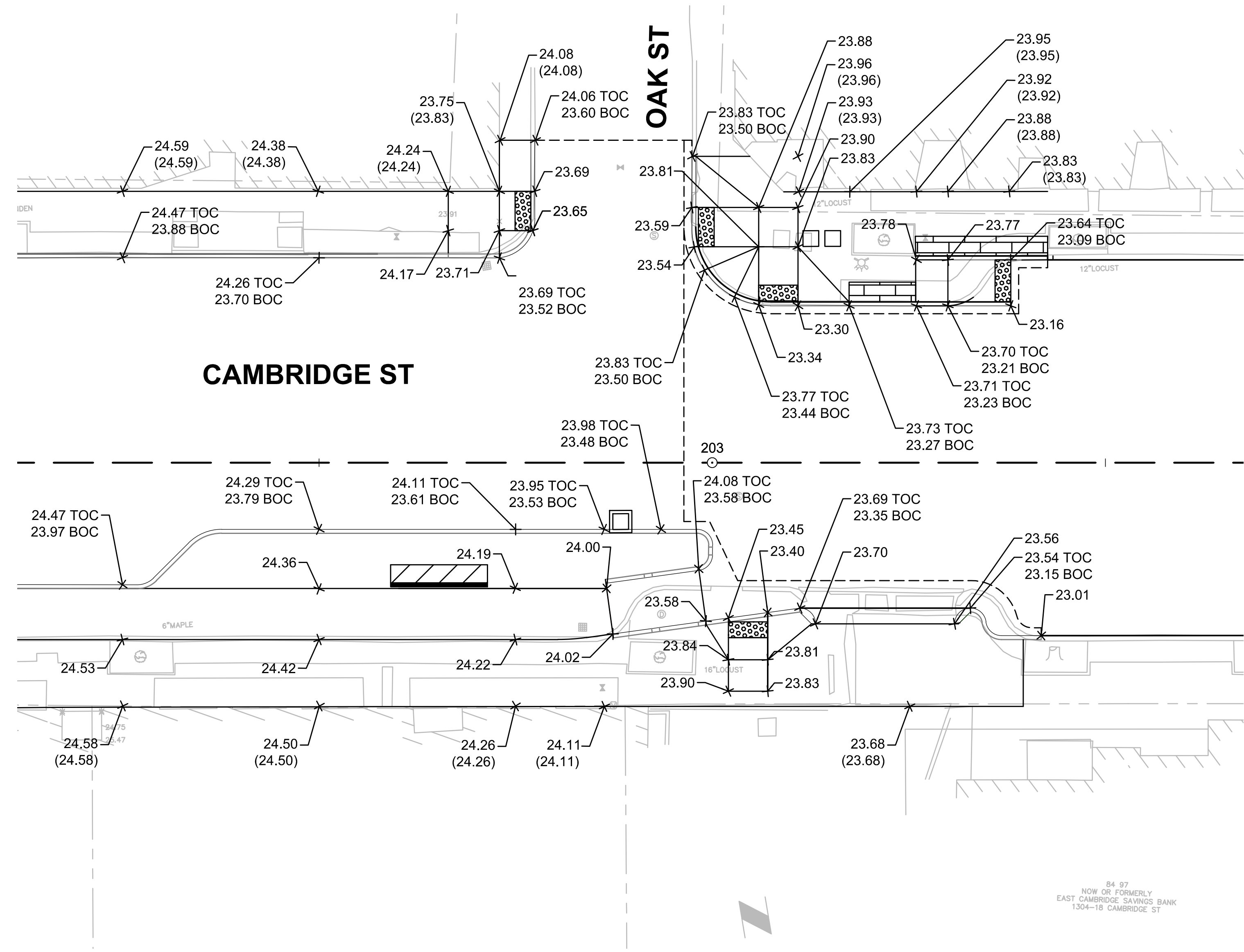
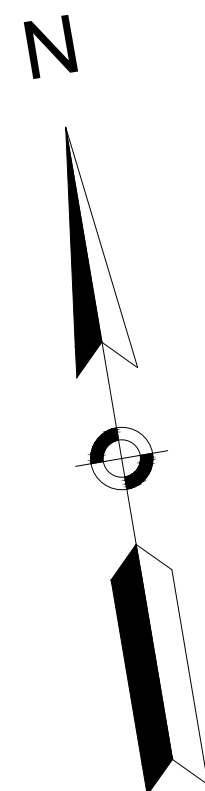










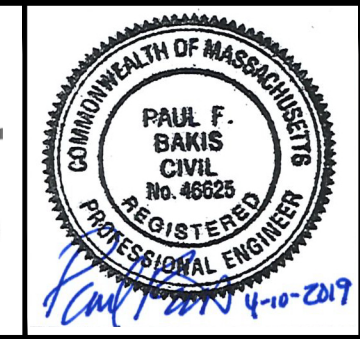


84-97  
NOW OR FORMERLY  
EAST CAMBRIDGE SAVINGS BANK  
1304-18 CAMBRIDGE ST

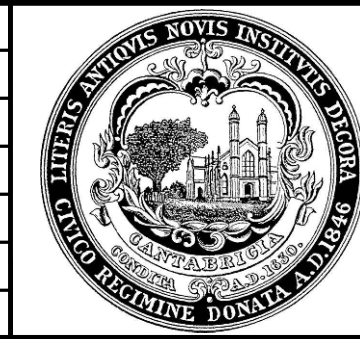


ISSUED FOR BID

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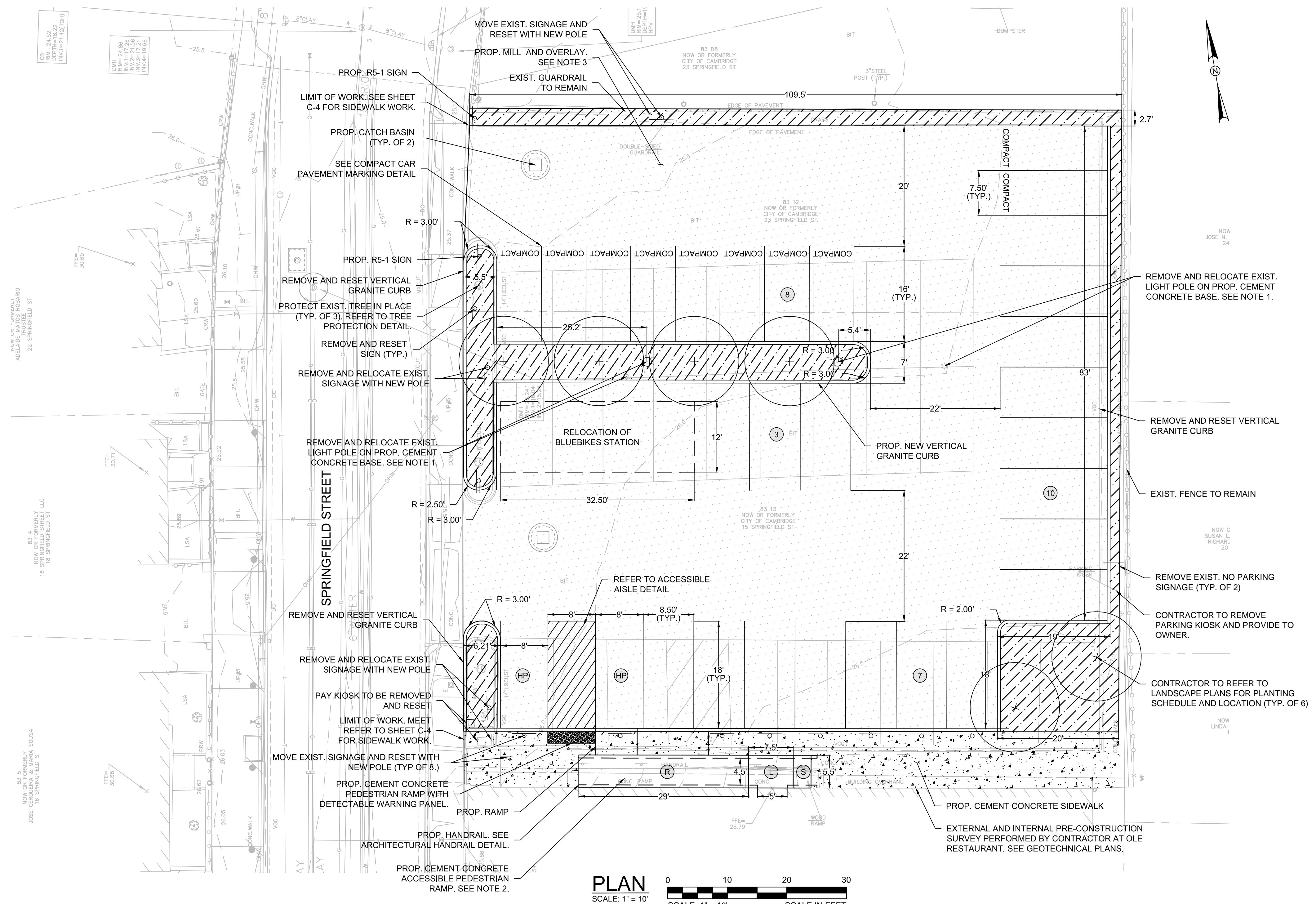


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	DETAIL GRADING PLAN SHEET 6 OF 6

Sheet	C-27
File No.	8514



CAD FILE: G:\clients\Cambridge\_MA\20170208.005A - Inman Square Intersection\Drawings\Civil\Production Drawings\Springfield St Parking Lot\_Construction Plan.dwg LAYOUT: C-X PLOTTED: 4/9/2019 10:46 AM BY: kate ackerson



### LEGEND:

- (R) RAMP
- (L) LANDING
- (S) STAIRS
- [Grid Pattern] DETECTABLE WARNING PANEL
- [Dotted Pattern] MILLING AND OVERLAY WITH HIGH SRI PAINT TOP COAT
- [Diagonal Lines] LANDSCAPE AREA
- [Horizontal Lines] ACCESSIBLE AISLE
- (HP) ACCESSIBLE SPACE
- (10) PARKING STALL COUNT
- COMPACT COMPACT PARKING SPACE

### PAVEMENT NOTES:

PROPOSED MILLING AND OVERLAY  
 MILLING: 2" MILLING  
 SURFACE: 2" HOT MIX ASPHALT TOP COURSE (SSC-12.5)

### PARKING STALL SUMMARY:

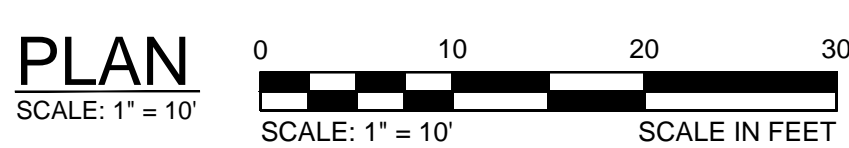
PROPOSED:

- 2 ACCESSIBLE SPACES
- 10 COMPACT
- 18 REGULAR
- 30 TOTAL NUMBER OF PARKING STALLS

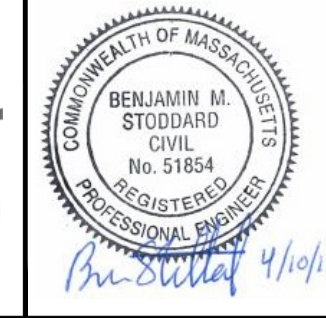
EXISTING:

- 2 ACCESSIBLE SPACES
- 26 REGULAR
- 28 TOTAL NUMBER OF PARKING STALLS

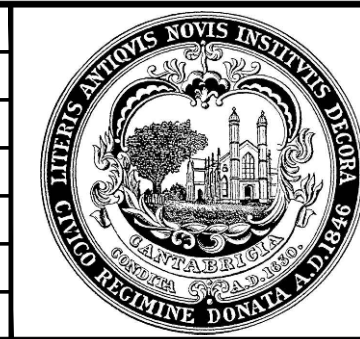
- ### NOTES:
- CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING CONCRETE LIGHT POLE BASE. SEE LIGHTING - DETAILS.
  - REFER TO STRUCTURAL DRAWINGS FOR CONCRETE RAMP DESIGN.
  - CONTRACTOR TO SHIM EXISTING ASPHALT WITH HMA BINDER AS NEEDED TO ACHIEVE FINAL GRADES. REFER TO SHEET C-26 FOR PROPOSED GRADING.



ISSUED FOR BID



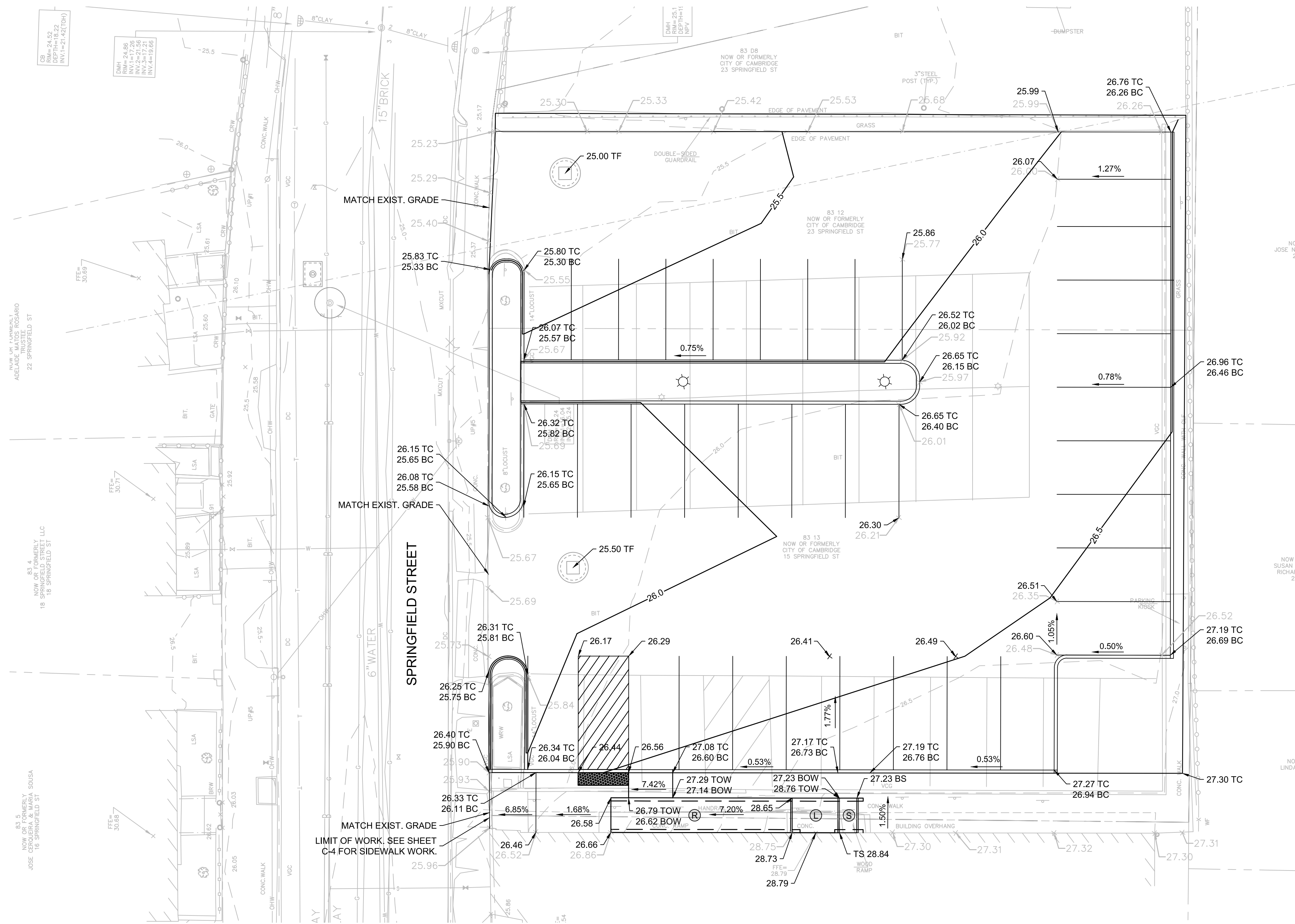
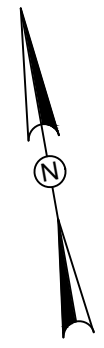
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Approved by	BMS		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	SPRINGFIELD STREET PARKING LOT CONSTRUCTION PLAN

Sheet	C-28
File No.	8514





**LEGEND:**

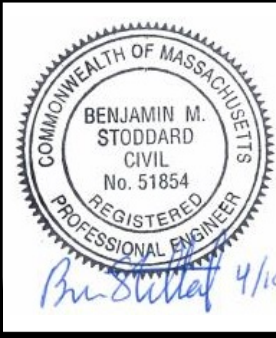
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- XX.XX EXISTING GRADE
- PROPOSED CONTOUR
- RAMP
- LANDING
- STAIRS
- DETECTABLE WARNING PANEL
- ACCESSIBLE AISLE

**PLAN**  
SCALE: 1" = 10'

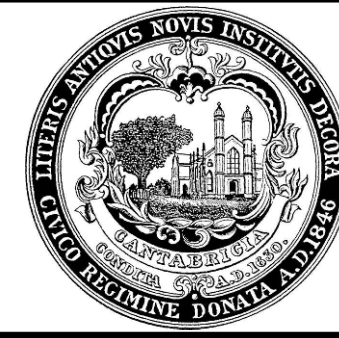
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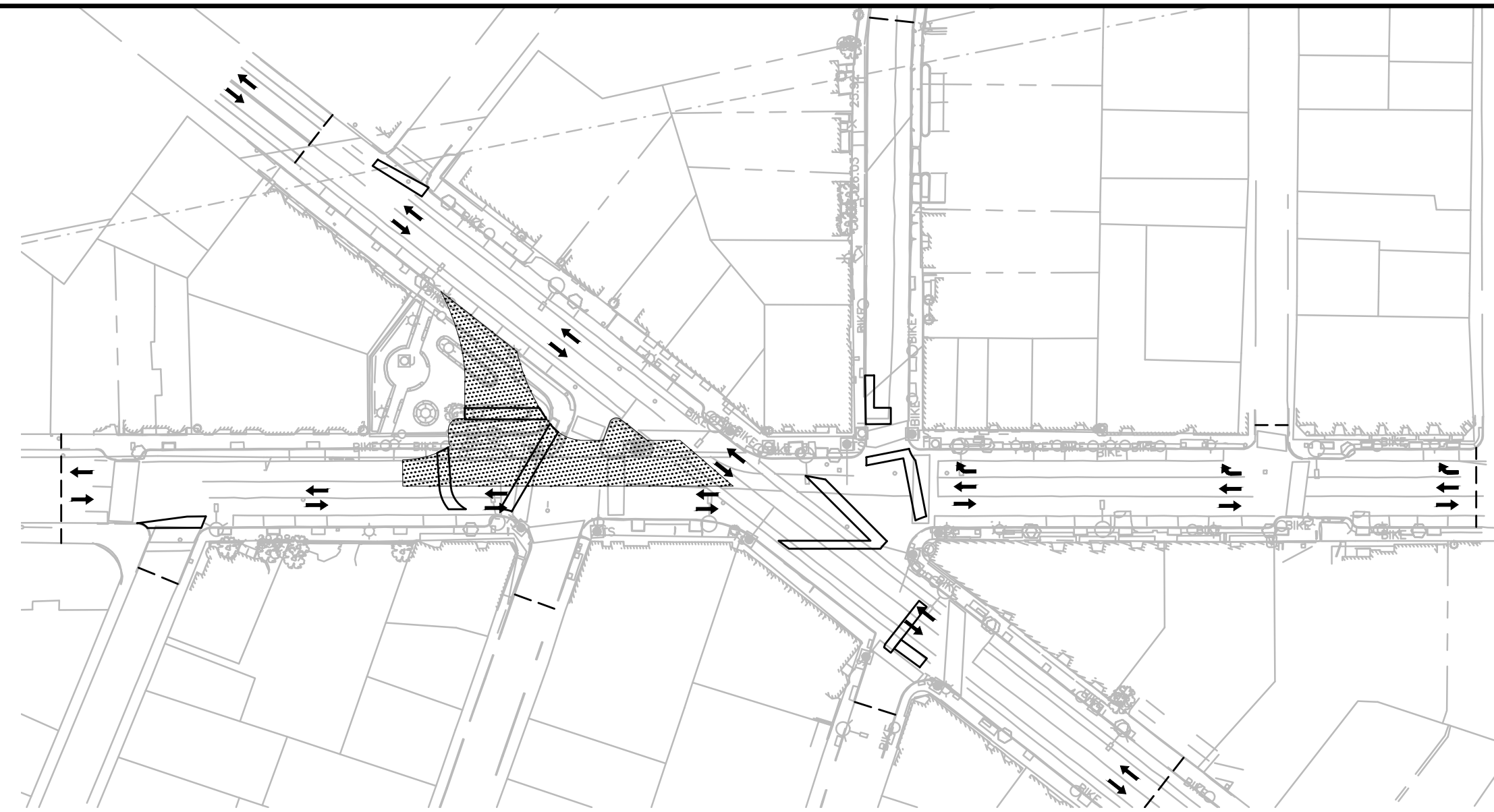
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Drawn by	KEA			
Checked by	KV	No.	Description	Date
Approved by	BMS		REVISIONS	



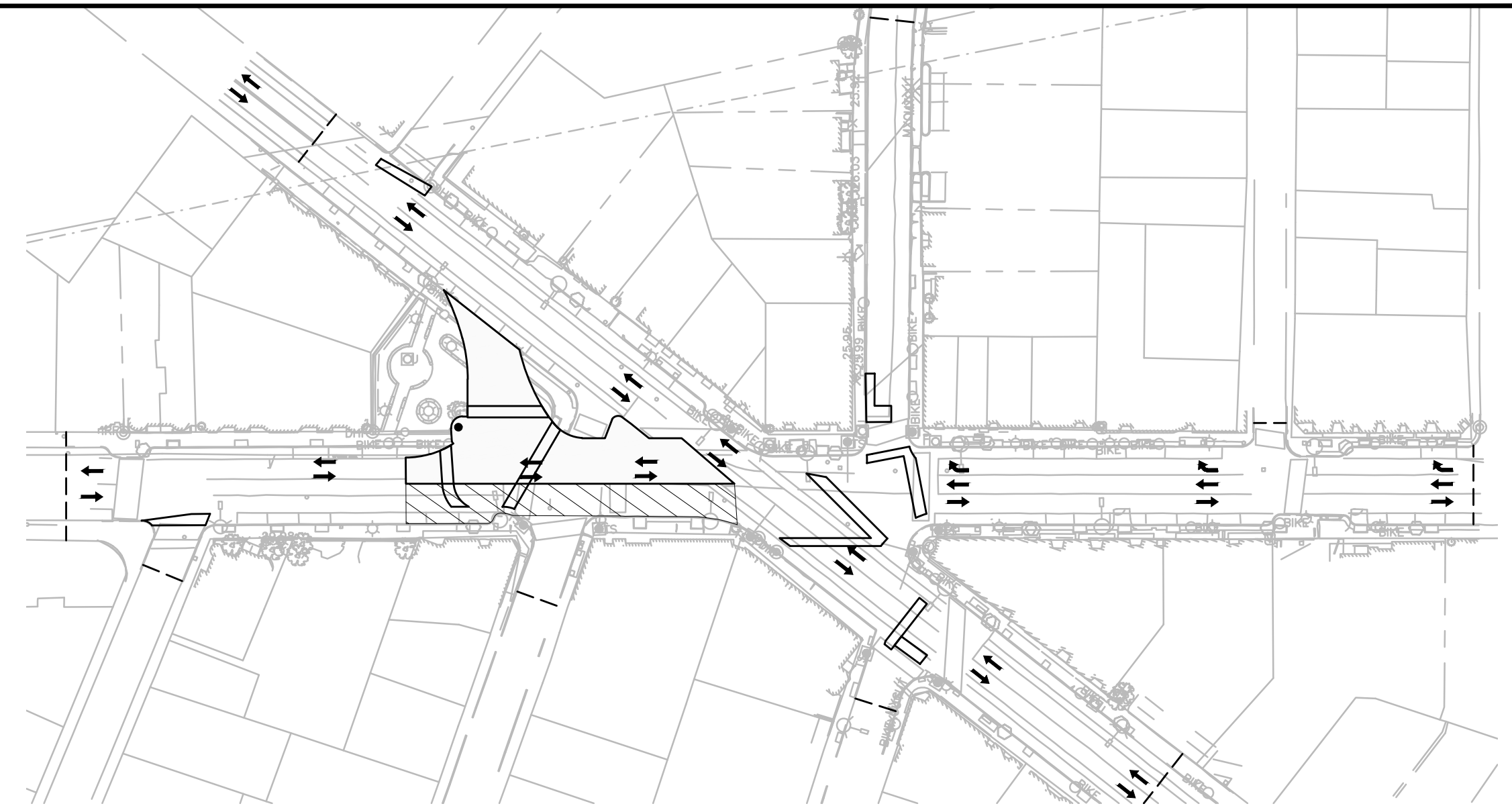
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	SPRINGFIELD STREET PARKING LOT GRADING PLAN

Sheet	C-29
File No.	8514

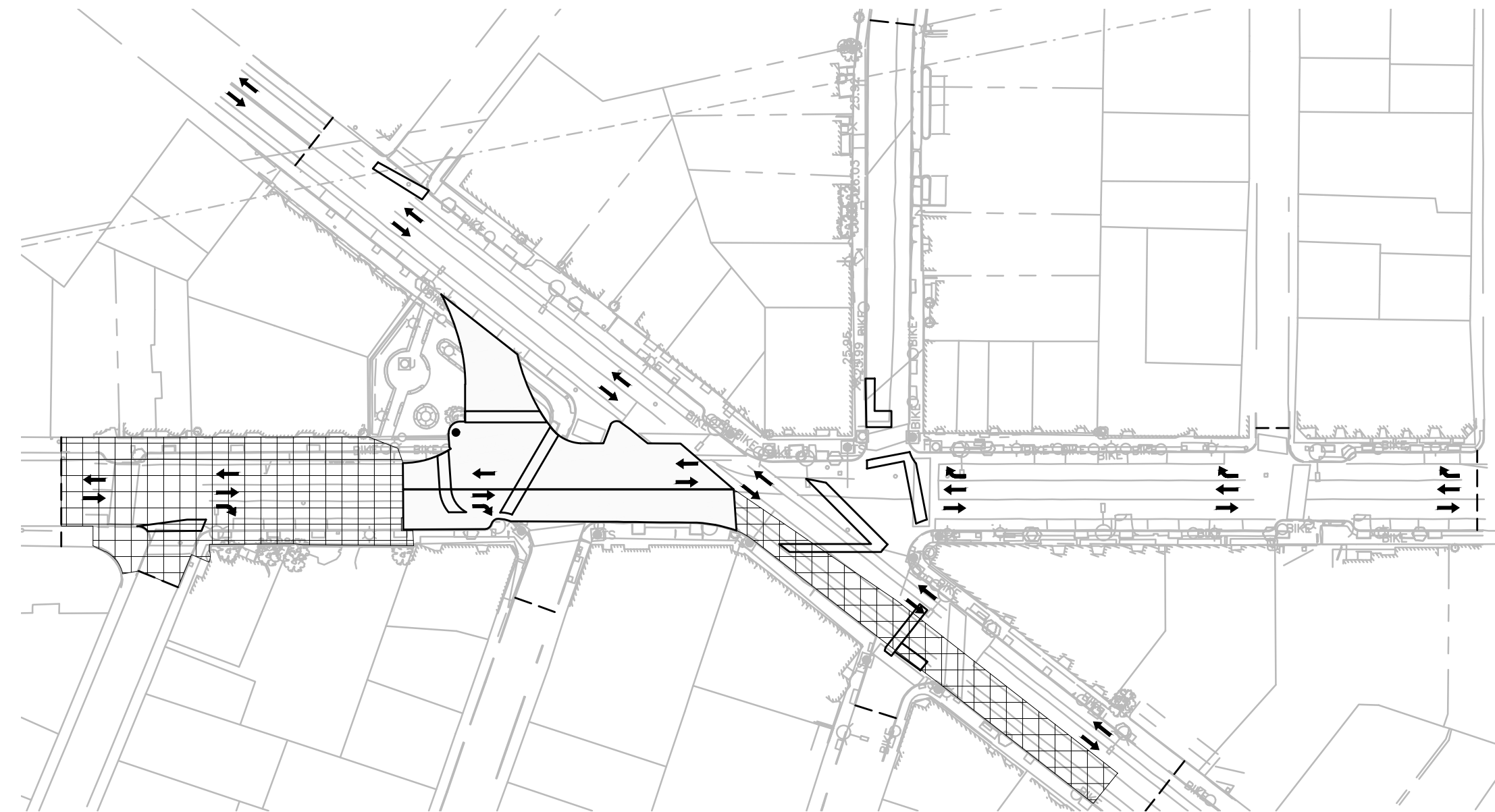




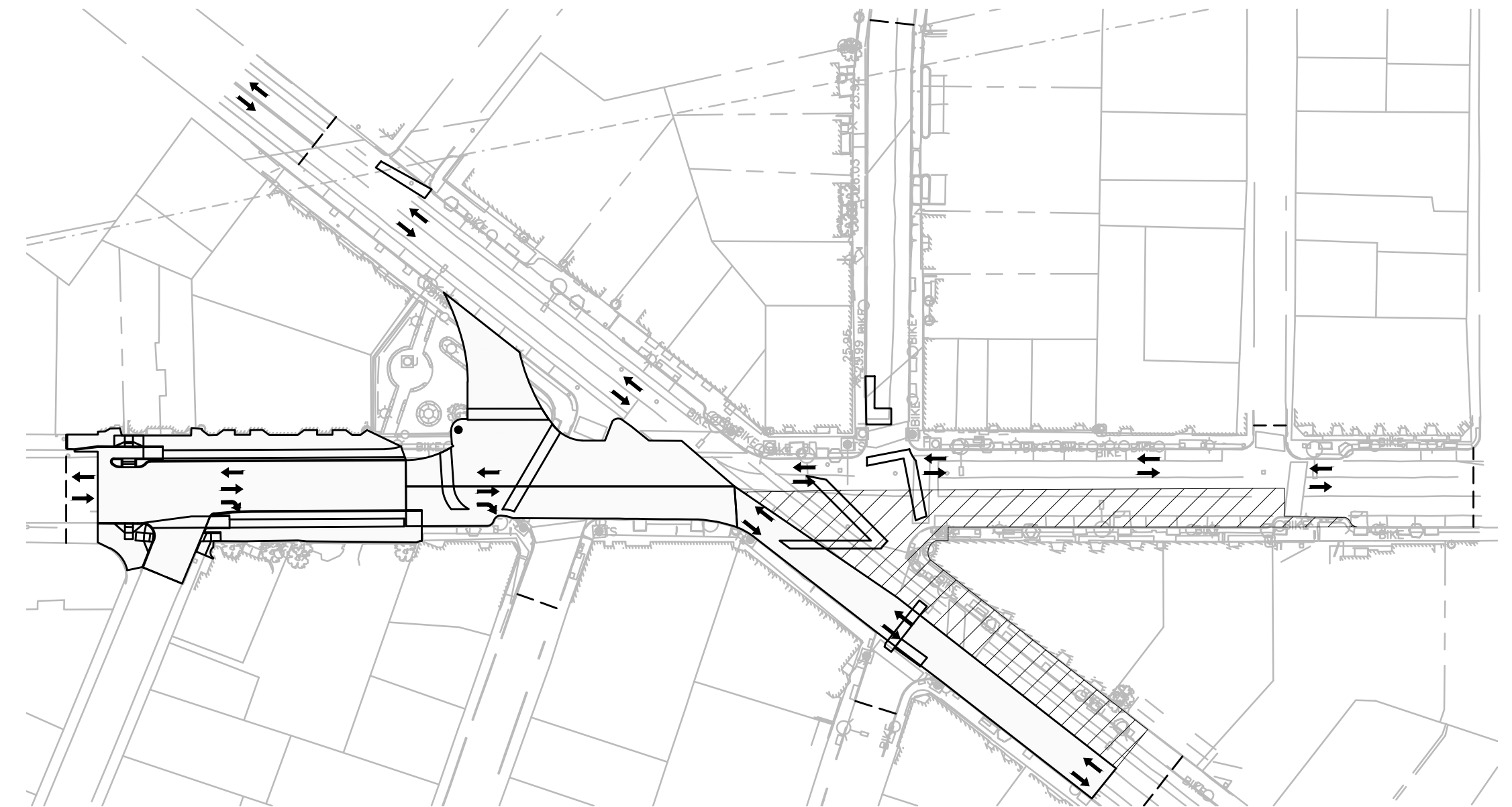
INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 1  
PLAN  
1" = 80'



INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 2  
PLAN  
1" = 80'



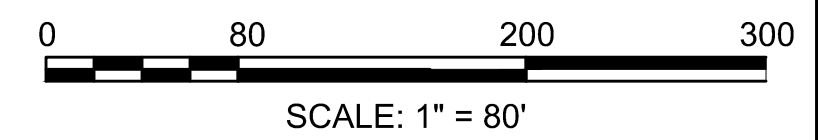
INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 3  
PLAN  
1" = 80'



INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 4  
PLAN  
1" = 80'

- PHASE 1:** FULL DEPTH CONSTRUCTION, REMOVE CORNER ISLAND (INCLUDING EXISTING SIGNAL POST) MAINTAIN EXISTING TRAFFIC PATTERN ON HAMPSHIRE STREET INSTALL MAST ARM FOUNDATION ON WESTERN SIDE OF INTERSECTION PROVIDE 20'+ ON SOUTHERN SIDE OF CAMBRIDGE STREET FOR TWO-WAY TRAVEL
- PHASE 3:** FULL DEPTH CONSTRUCTION ON HAMPSHIRE STREET MILL AND OVERLAY, SIDEWALK CONSTRUCTION ON CAMBRIDGE STREET WEST OF INTERSECTION (ROAD OPEN TO VEHICULAR TRAVEL) PROVIDE 20'+ ON EASTERN SIDE OF HAMPSHIRE STREET FOR TWO-WAY TRAVEL PROVIDE 20'+ IN THE INTERSECTION TO ALLOW FOR TWO-WAY TRAVEL THROUGH THE INTERSECTION

- PHASE 2:** FULL DEPTH CONSTRUCTION MAINTAIN EXISTING TRAFFIC PATTERN ON HAMPSHIRE STREET PROVIDE 20'+ ON NORTHERN SIDE OF CAMBRIDGE STREET FOR TWO-WAY TRAVEL
- PHASE 4:** FULL DEPTH CONSTRUCTION ON HAMPSHIRE STREET AND CAMBRIDGE STREET, SIDEWALK AND SIGNAL CONSTRUCTION ON HAMPSHIRE STREET REMOVE BUMP OUT AT OAK STREET TO ALLOW FOR TWO-WAY TRAVEL IN PHASE 5 PROVIDE 24'+ ON WESTERN SIDE OF HAMPSHIRE STREET FOR TWO-WAY TRAVEL PROVIDE 20'+ ON NORTHERN SIDE OF CAMBRIDGE STREET FOR TWO-WAY TRAVEL BIKE LANE PROVIDED FOR SOUTHBOUND TRAVEL, NORTHBOUND BIKES TO SHARE ROAD WITH VEHICLES THRU WORK ZONE



**GENERAL NOTES:**

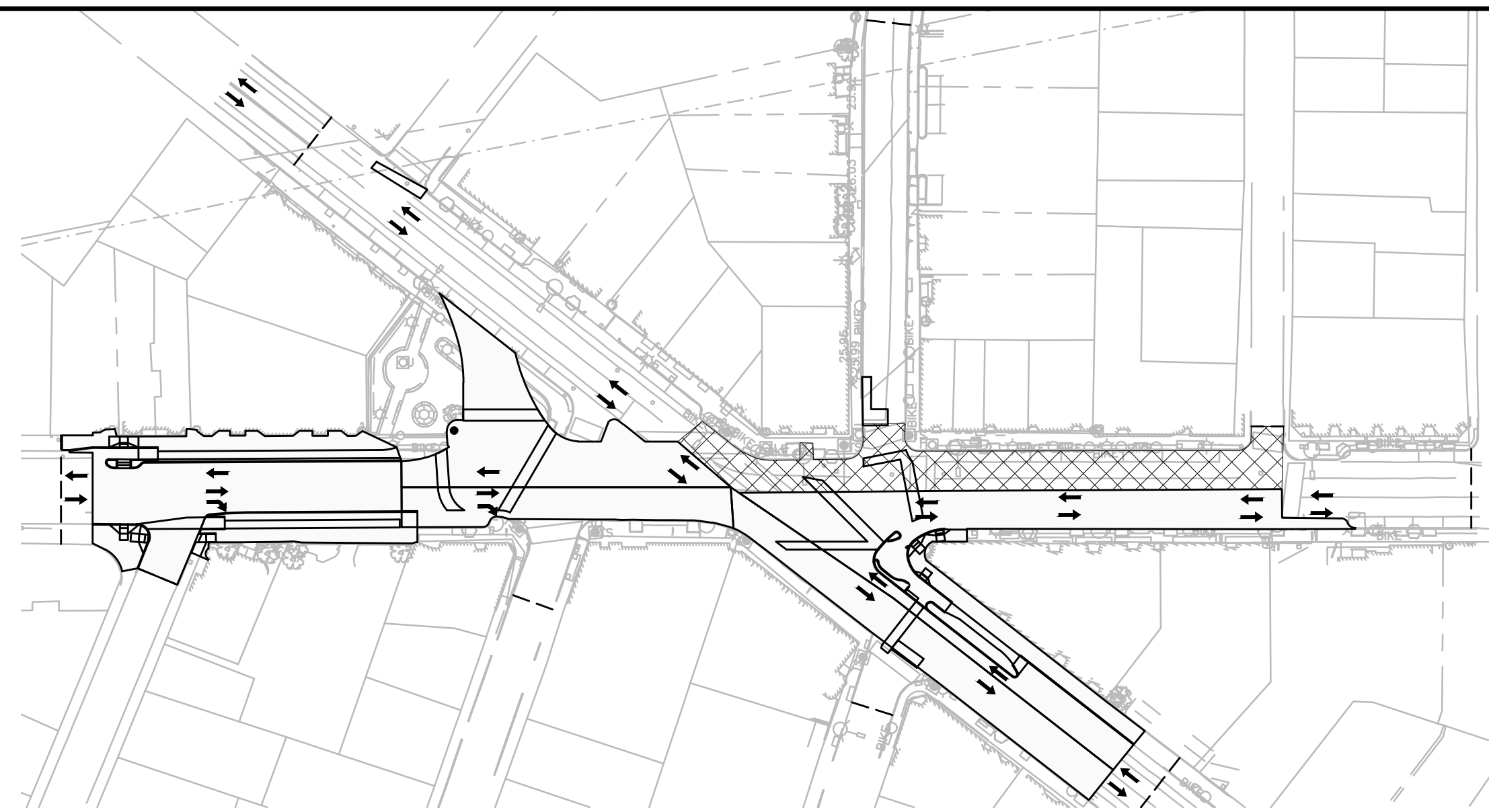
- 1) WHERE LESS THAN 25' IS PROVIDED THRU THE WORKZONE, VEHICLES SHALL SHARE THE ROAD WITH BIKES THRU THE WORKZONE UNTIL EXISTING BIKE LANES HAVE BEEN REESTABLISHED ON THE ROADWAY.
- 2) WHERE 25' OR MORE SPACE IS PROVIDED THRU THE WORKZONE, A BIKE LANE SHALL BE PROVIDED IN THE DIRECTION WITH THE HIGHER VOLUME OF BICYCLISTS, OR AS DETERMINED BY THE ENGINEER.
- 3) WHERE 30' OR MORE SPACE IS PROVIDED THRU THE WORKZONE, BIKE LANES SHALL BE PROVIDED IN BOTH DIRECTIONS.
- 4) EXISTING TRAFFIC SIGNALS SHALL BE MAINTAINED UNTIL NEW SIGNAL SYSTEM IS ABLE TO CONTROL THE INTERSECTION.

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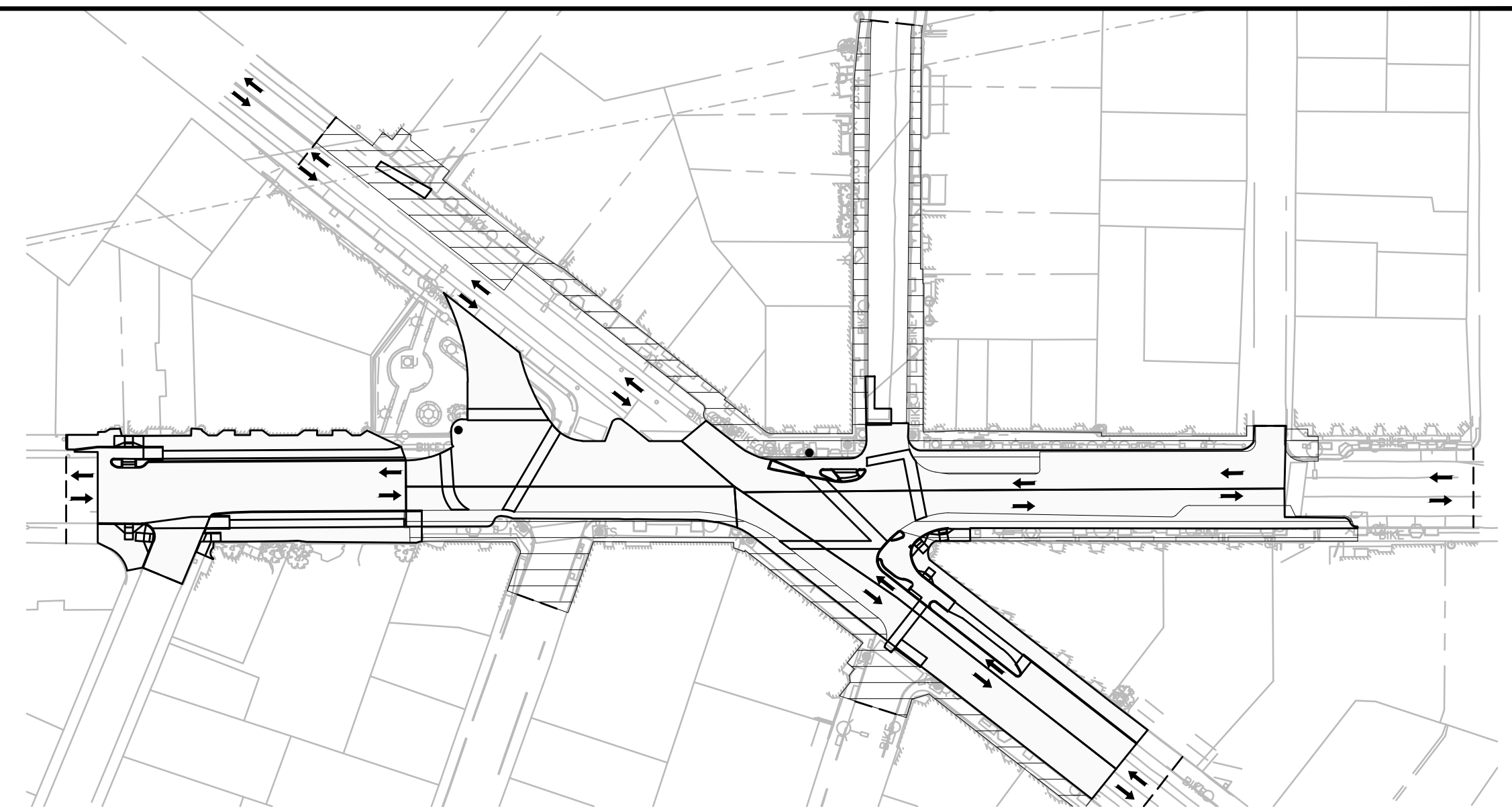
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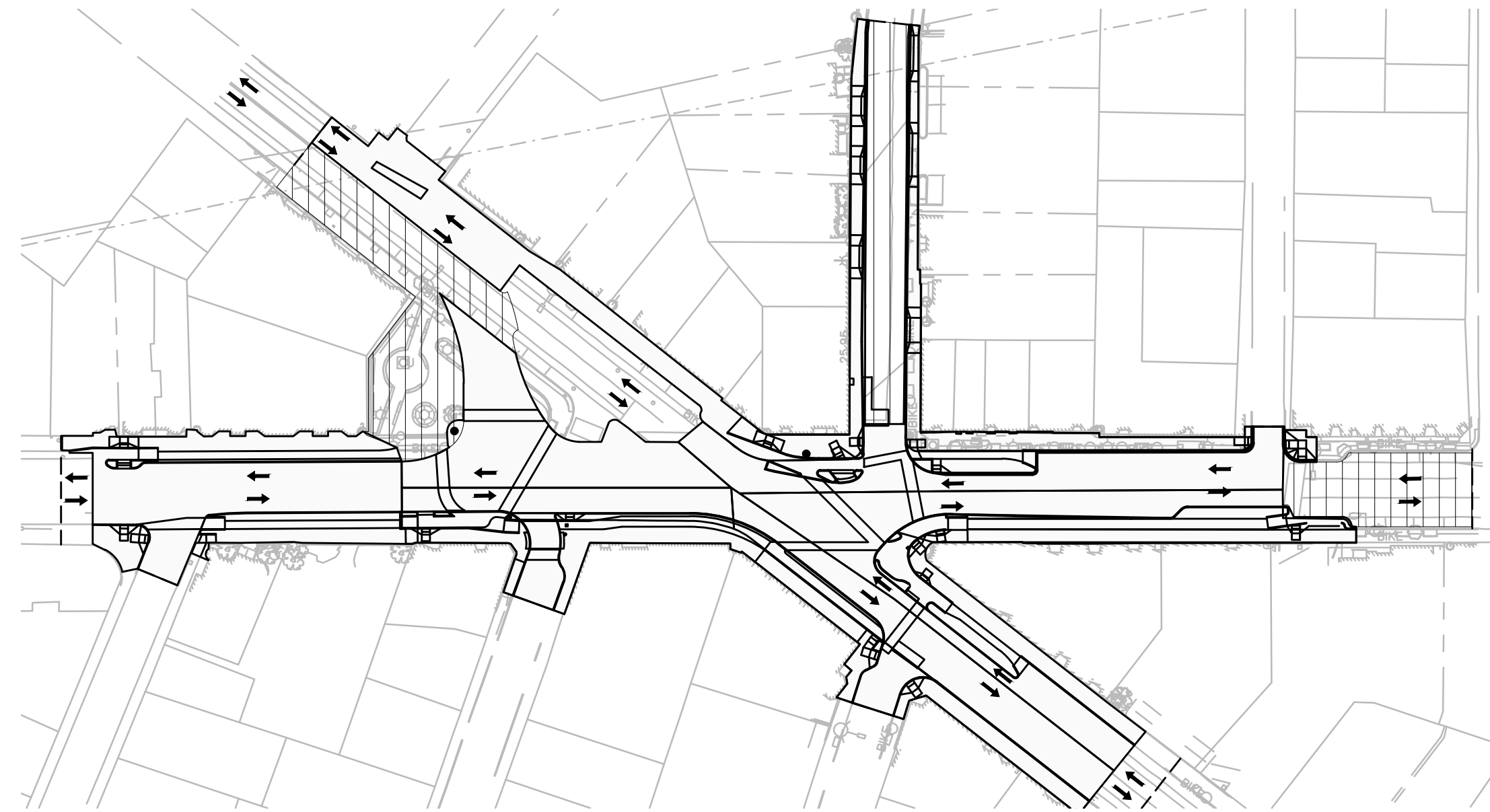




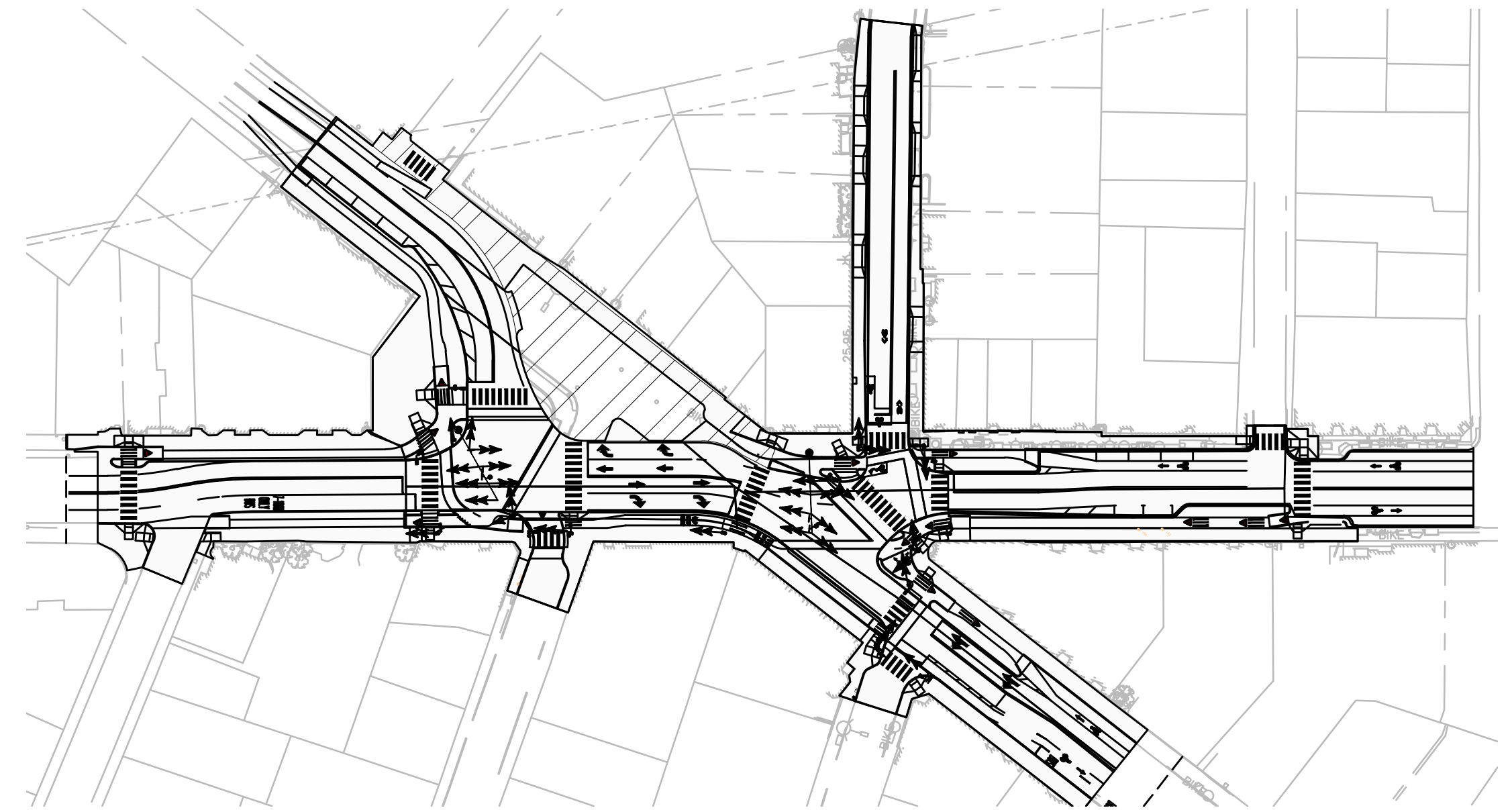
INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 5  
PLAN  
1" = 80'



INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 6  
PLAN  
1" = 80'



INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 7  
PLAN  
1" = 80'



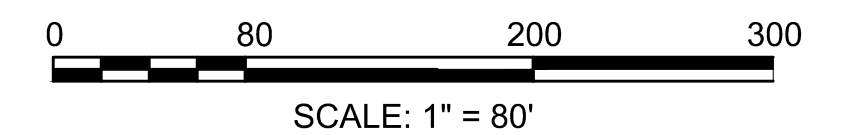
INMAN SQUARE  
CONSTRUCTION PHASING DIAGRAM - PHASE 8  
PLAN  
1" = 80'

**PHASE 5:** [Cross-hatch pattern] FULL DEPTH CONSTRUCTION ON EASTERN SIDE OF INTERSECTION AND NORTHERN SIDE OF CAMBRIDGE STREET, INSTALL MAST ARM ON EASTERN SIDE OF INTERSECTION  
CONSTRUCT ISLANDS AT CORNER OF HAMPSHIRE STREET AND SPRINGFIELD STREET  
PROVIDE 20'+ ON SOUTHERN SIDE OF CAMBRIDGE STREET FOR TWO-WAY TRAVEL  
PROVIDE 20'+ IN THE INTERSECTION TO ALLOW FOR TWO-WAY TRAVEL THROUGH INTERSECTION  
DETOUR TRAFFIC FROM SPRINGFIELD STREET

**PHASE 7:** [Vertical line pattern] FULL DEPTH CONSTRUCTION ON WESTERN SIDE OF HAMPSHIRE STREET  
SIDEWALK AND SIGNAL CONSTRUCTION IN OLD VELLUCCI PLAZA  
MILL AND OVERLAY ON SPRINGFIELD STREET AND CAMBRIDGE STREET  
PROVIDE 20'+ ON NORTHERN SIDE OF HAMPSHIRE STREET FOR TWO-WAY TRAVEL

**PHASE 6:** [Horizontal line pattern] FULL DEPTH CONSTRUCTION ON EASTERN SIDE OF HAMPSHIRE STREET  
SIDEWALK AND SIGNAL CONSTRUCTION ON HAMPSHIRE STREET, CAMBRIDGE STREET, AND SPRINGFIELD STREET  
MILL AND OVERLAY ON ANTRIM STREET AND INMAN STREET  
PROVIDE 20'+ ON WEST SIDE OF HAMPSHIRE STREET FOR TWO-WAY TRAVEL

**PHASE 8:** [Diagonal line pattern] CONSTRUCT NEW PLAZA  
FINALIZE SIDEWALK AND SIGNALS ALONG HAMPSHIRE STREET AND NEW PLAZA  
INSTALL FINAL PAVEMENT MARKINGS AND SIGNS  
PROPOSED TRAFFIC SIGNAL TO BE ACTIVATED  
NORTHBOUND BIKES TO SHARE ROAD WITH VEHICLES THRU WORK ZONE



**GENERAL NOTES:**

- 1) WHERE LESS THAN 25' IS PROVIDED THRU THE WORKZONE, VEHICLES SHALL SHARE THE ROAD WITH BIKES THRU THE WORKZONE UNTIL EXISTING BIKE LANES HAVE BEEN REESTABLISHED ON THE ROADWAY.
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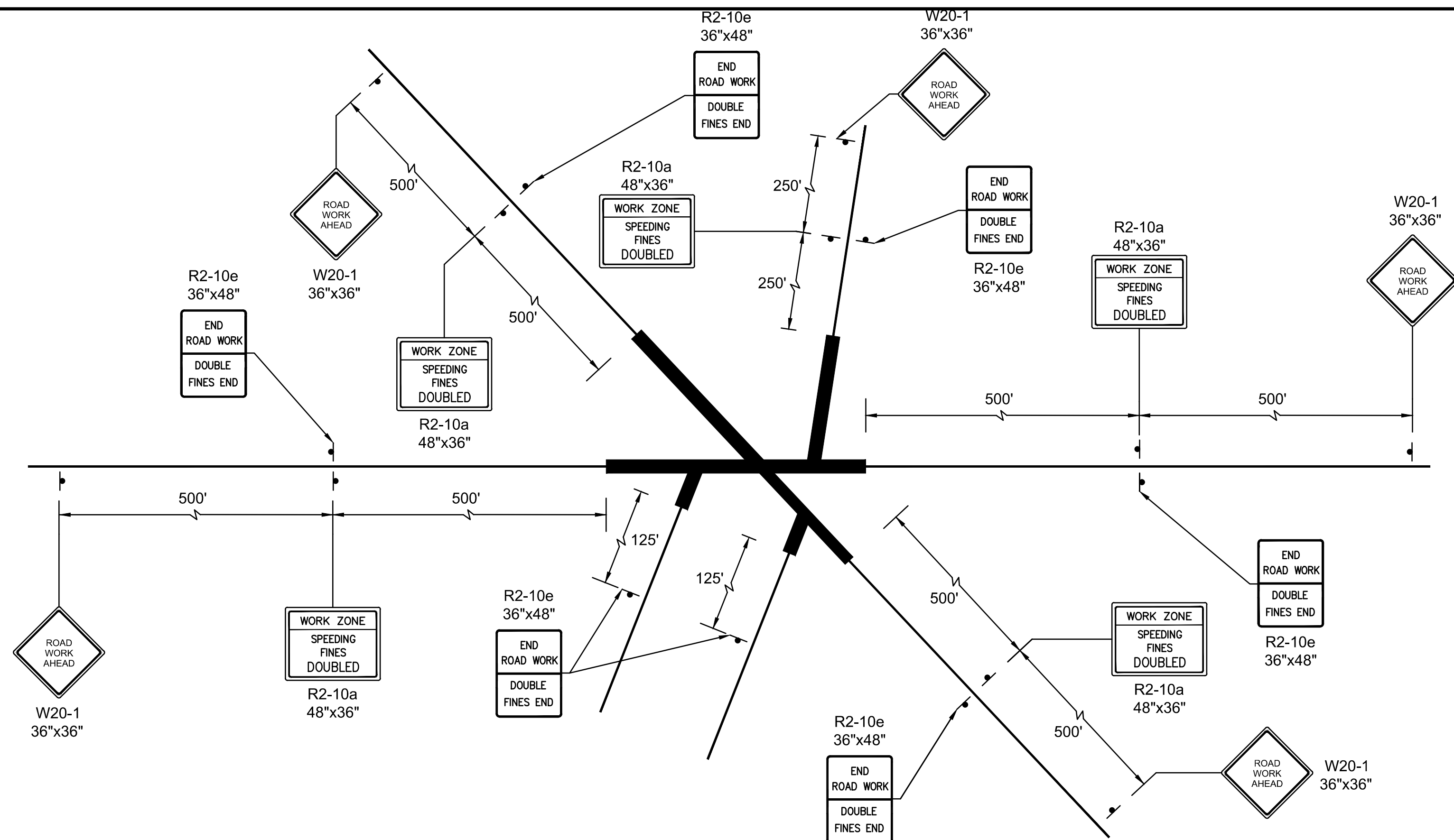
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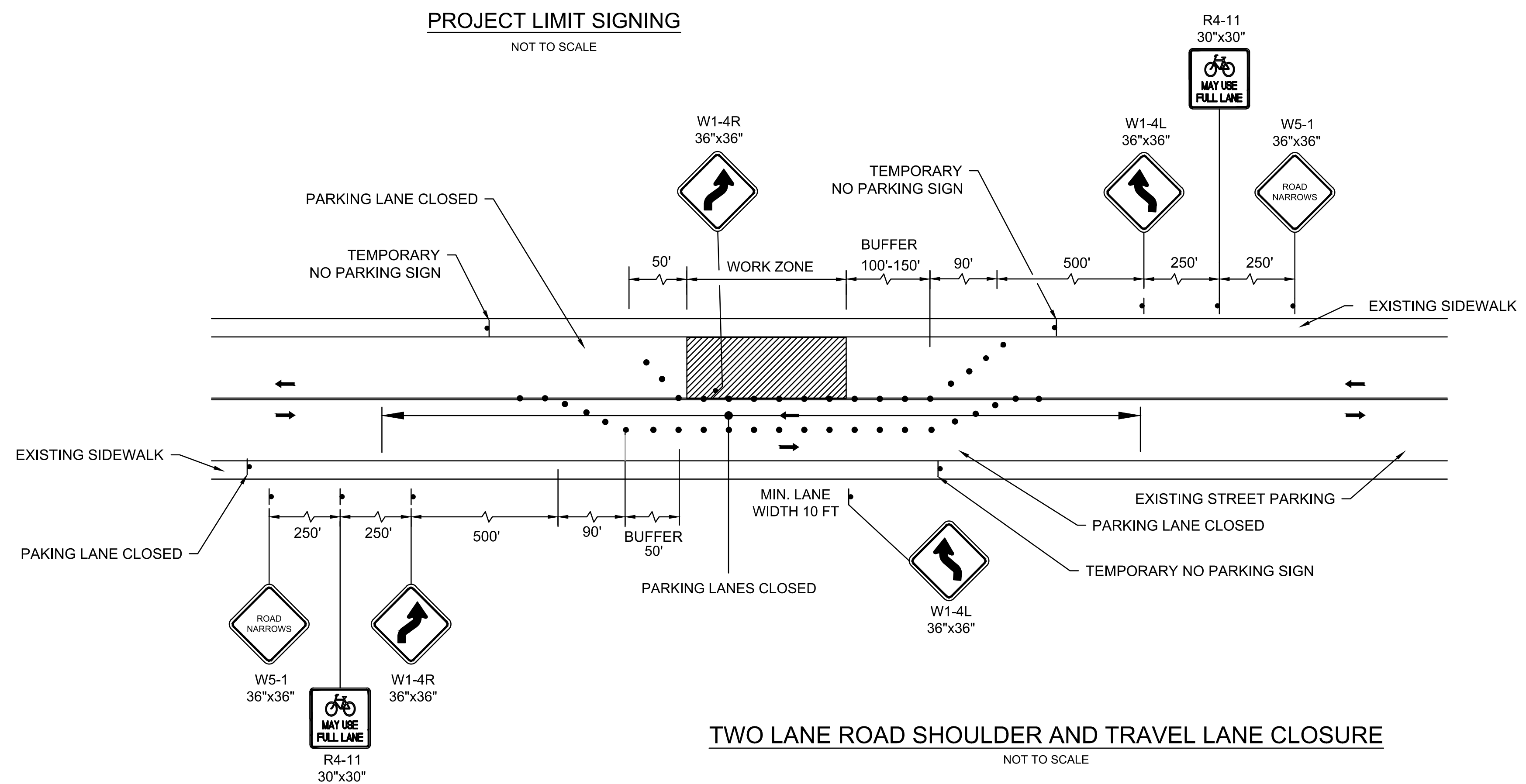
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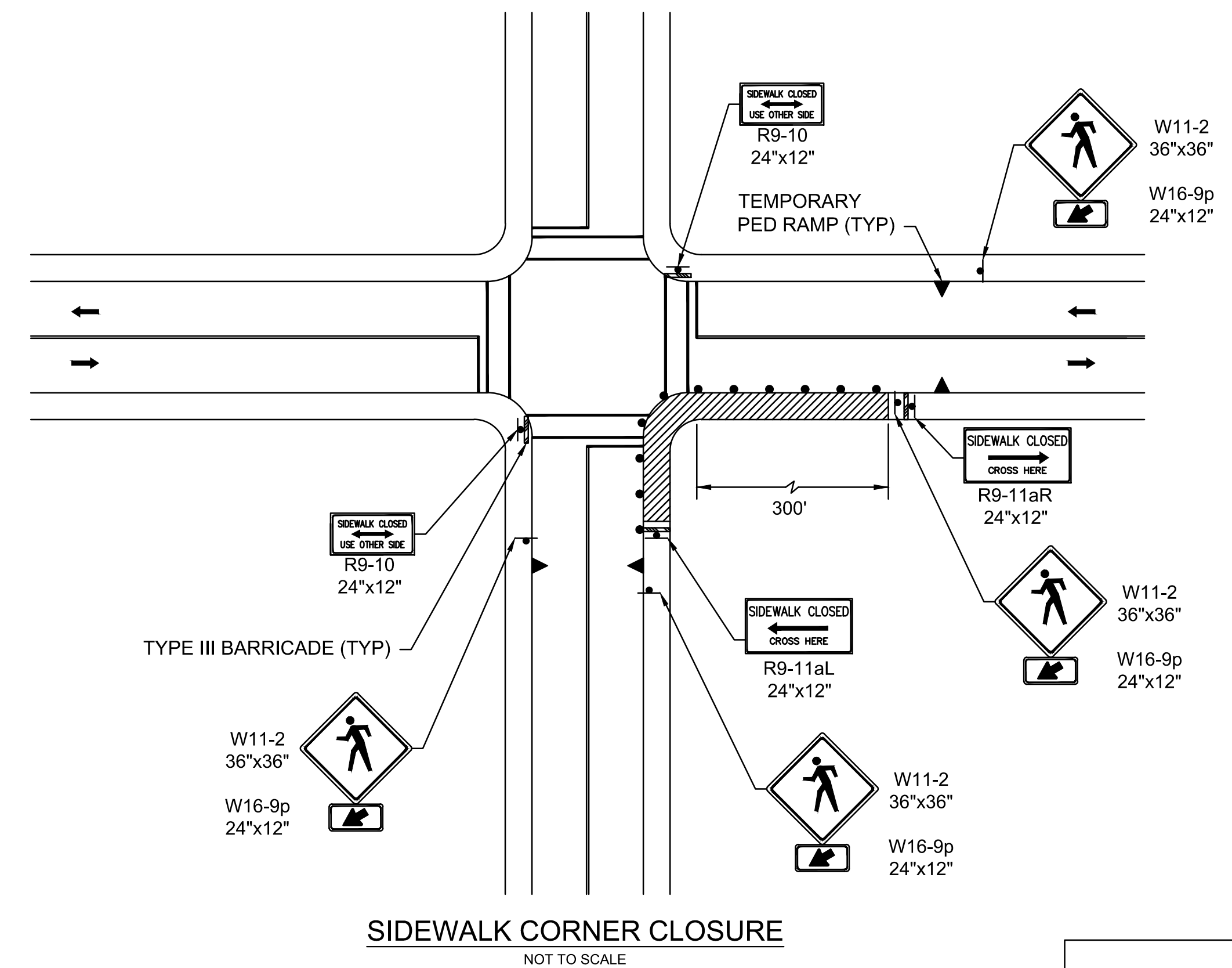
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**PROJECT LIMIT SIGNING**  
NOT TO SCALE



**TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSURE**  
NOT TO SCALE



**SIDEWALK CORNER CLOSURE**  
NOT TO SCALE

**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. TEMPORARY WOODEN ACCESS RAMPS WILL BE PROVIDED FOR ALL ABUTTERS DURING CONSTRUCTION.
7. THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MINIMUM LANE WIDTH IS 10 FEET, MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
11. ADA COMPLIANT PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES, INCLUDING PROPER BARRICADES, RAILINGS, RAMPS, AND SIGNAGE FOR PEDESTRIAN DETOURS OR BYPASSES.
12. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.

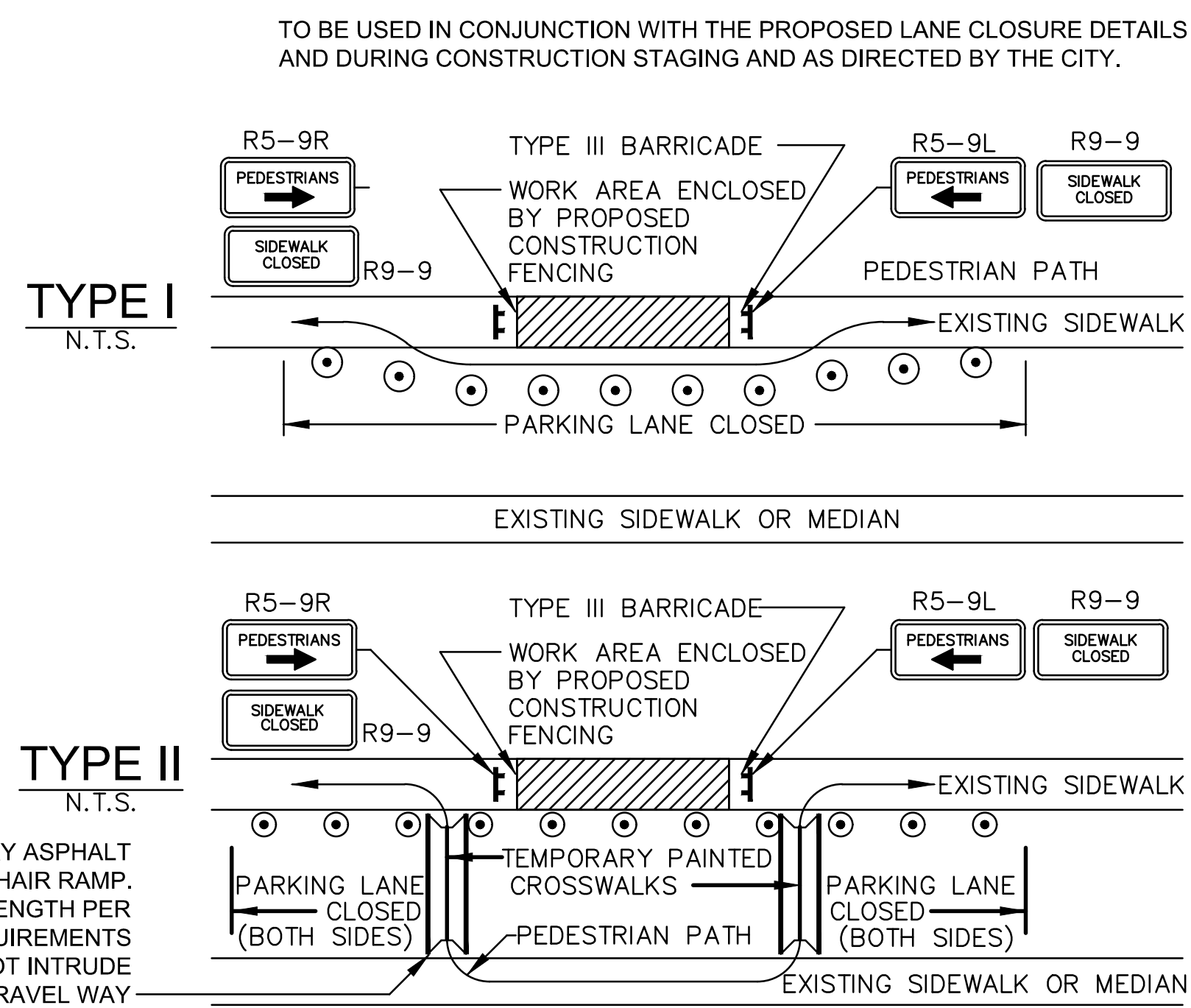
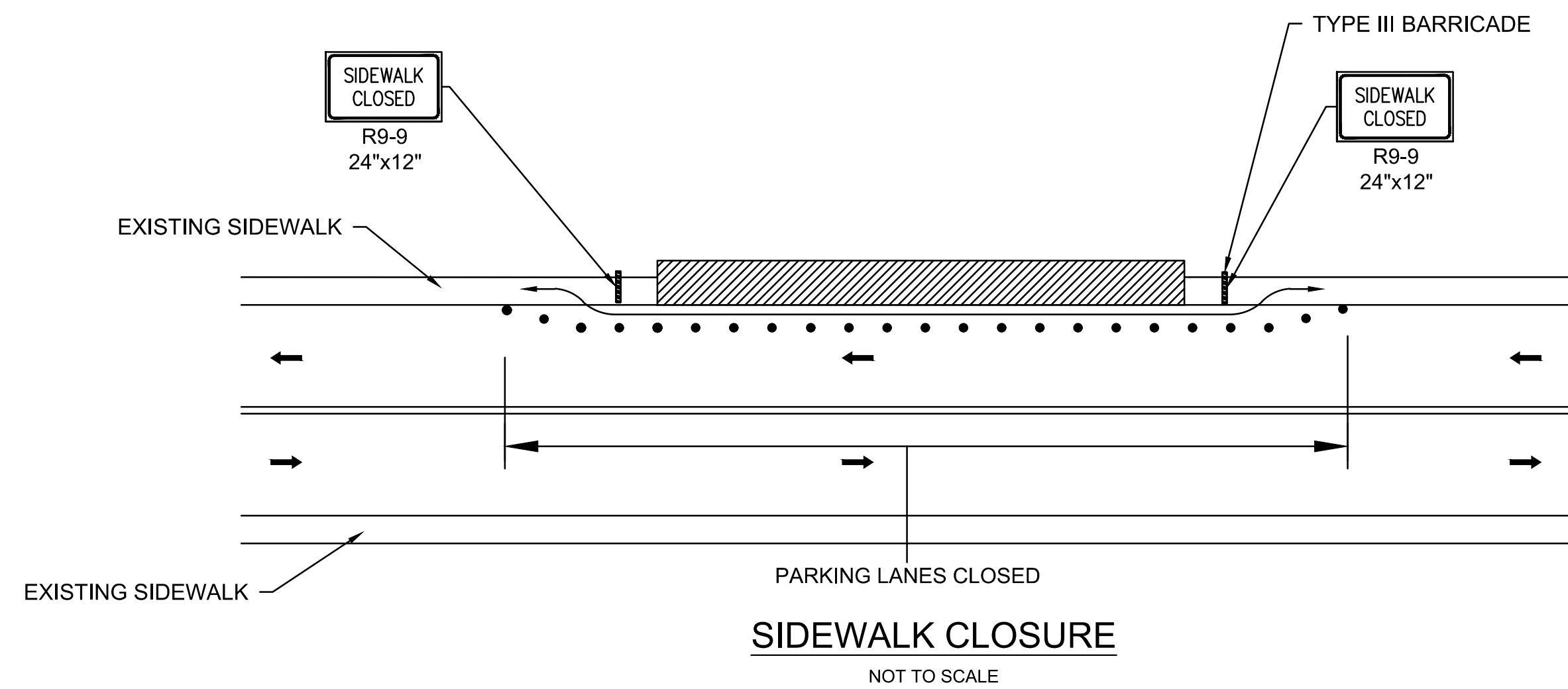
**LEGEND:**

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

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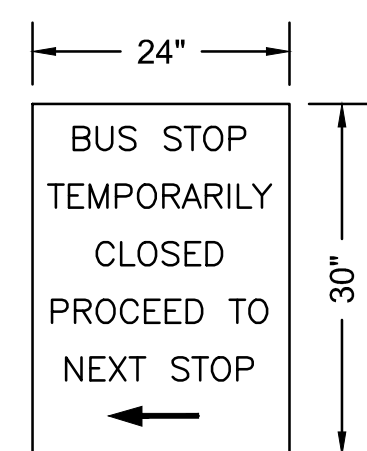
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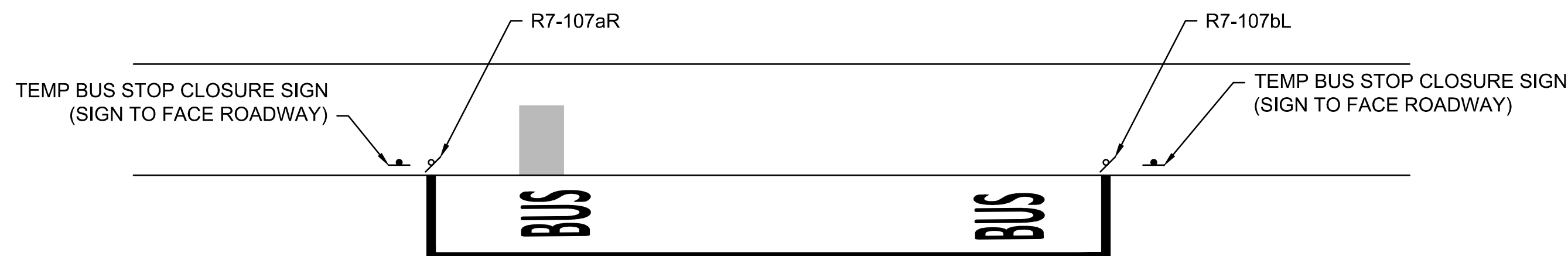
**PEDESTRIAN BYPASS NOTES:**

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.
8. ADA COMPLIANT ACCESS TO ABUTTERS SHALL BE MAINTAINED INCLUDING BUT NOT LIMITED TO THE USE OF TEMPORARY RAMPS WITH HANDRAILS.



NOTE: DIRECTION OF ARROW SHOULD DIRECT RIDERS/BUS OPERATORS TO THE NEAREST ADJACENT STOP.

**TEMPORARY BUS STOP CLOSURE SIGN**  
NOT TO SCALE



- NOTES: 1) ALL STOPS TO REMAIN OPEN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.  
2) THIS DETAIL IS NOT TO BE USED IF THE ADJACENT BUS STOP IS >400' FROM THE PROP TEMP CLOSURE LOCATION.  
3) SEE SDWK CLOSURE DETAILS TO BE USED WITH THIS SET UP.

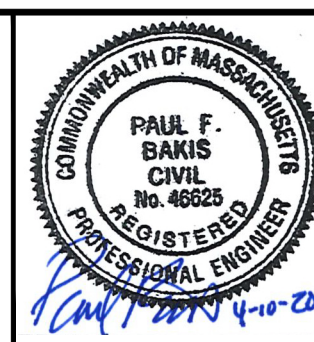
**TEMPORARY BUS STOP CLOSURE DETAIL**  
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**LEGEND:**

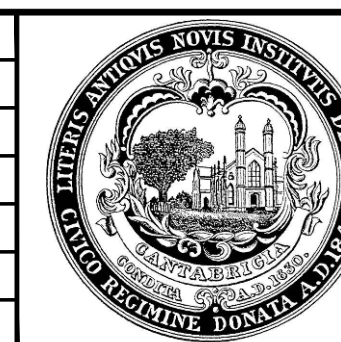
- WORK AREA
- SIGN
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- PEDESTRIAN WALKWAY AND RAMP
- FLOW DIRECTION
- PEDESTRIAN CHANNELIZING DEVICE

ISSUED FOR BID

CAD FILE: I:\eng\16042.44 Inman Square\HD\DWG\100% Submission\Y16042.22\100% (TMP).dwg LAYOUT: TMP-2 PLOTTED: 4/9/2019 2:16 PM BY: meyer, david



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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	TRAFFIC MANAGEMENT PLANS SHEET 2 OF 2

Sheet	TMP-2
File No.	8514



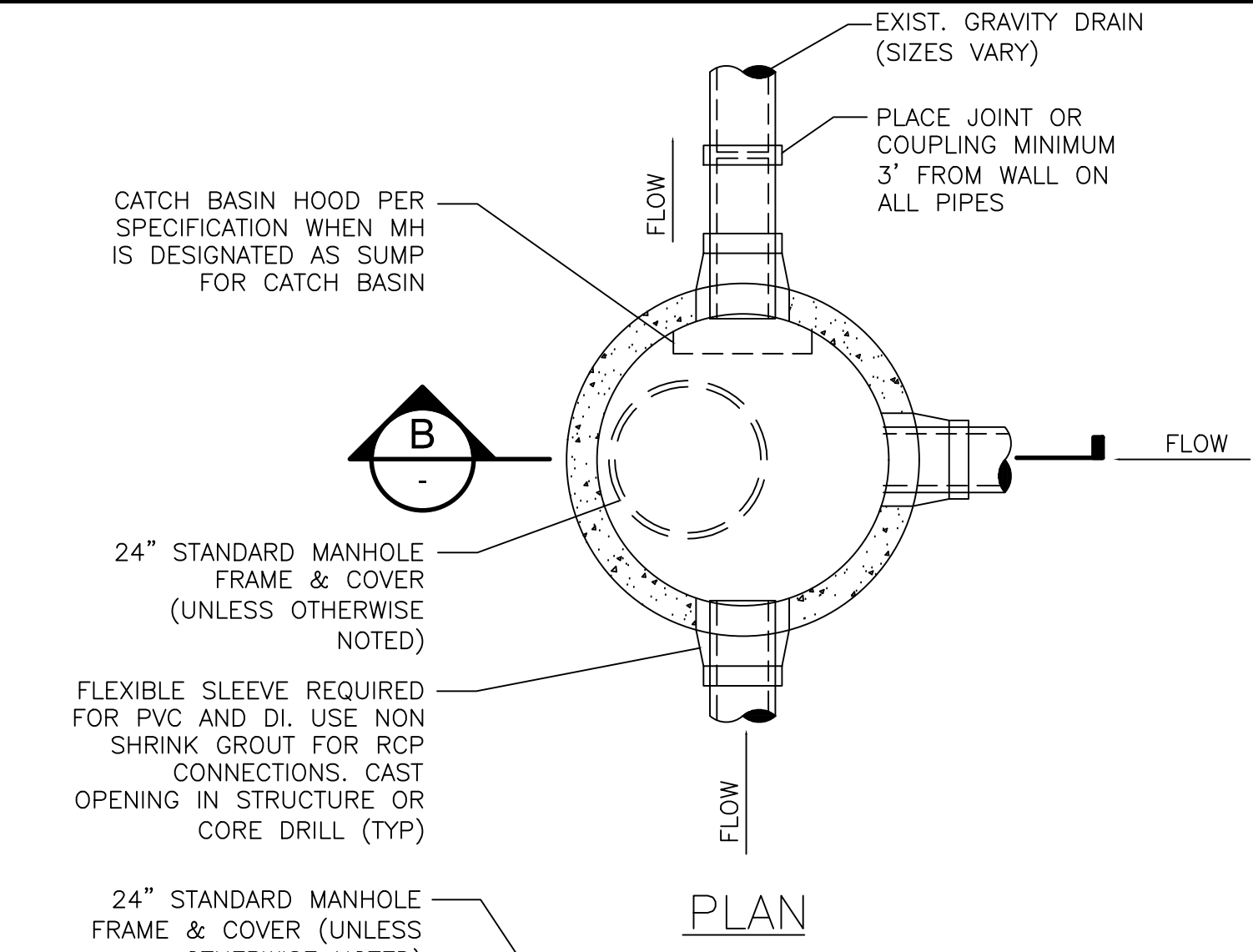
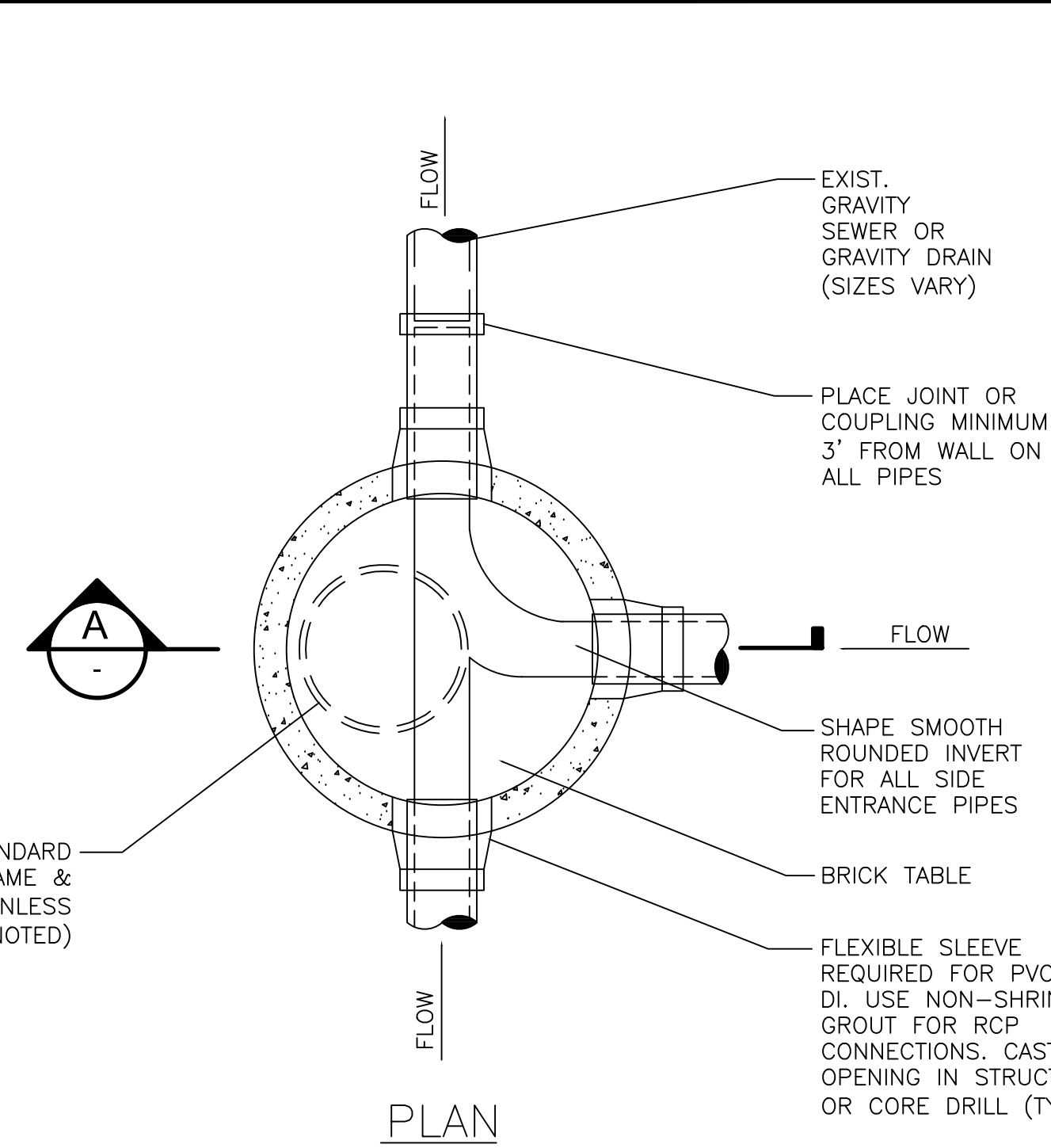
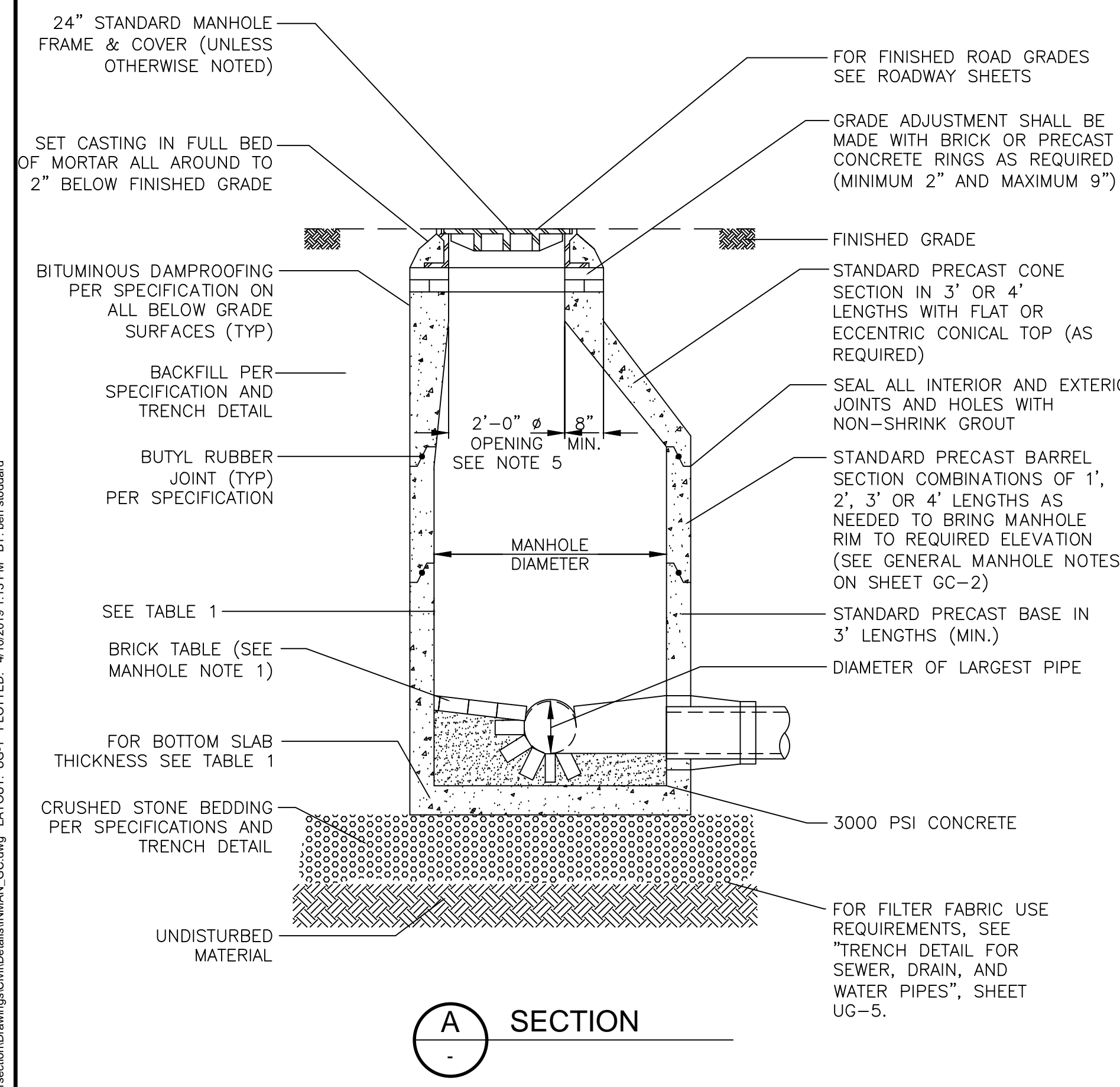


TABLE 1 : MANHOLE DIMENSIONS

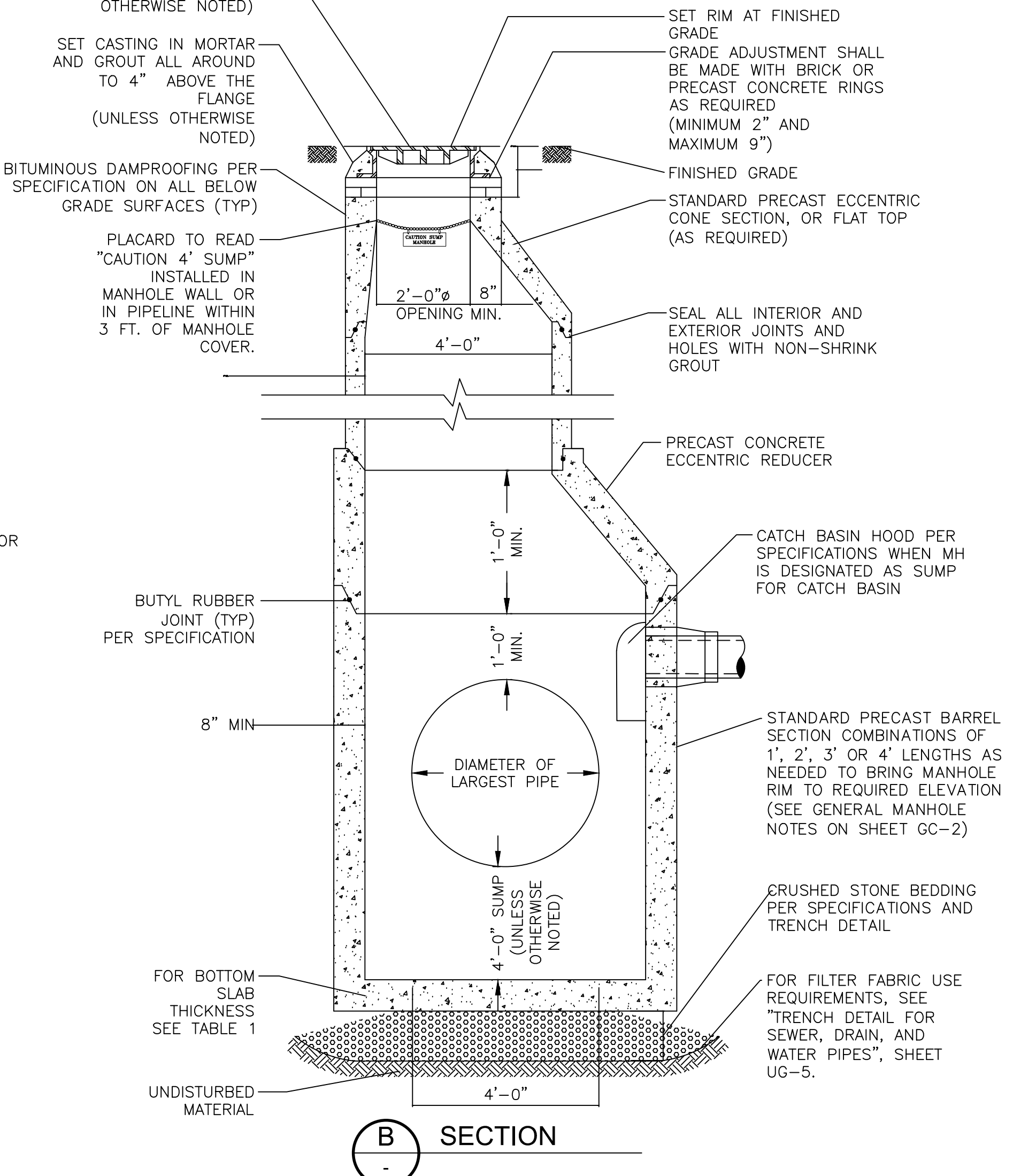
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * RCP	MAX PIPE DIAMETER * DI/PVC
4'	5"	6"	24"	30"
5'	6"	8"	36"	42"
6'	6"	8"	48"	54"
8'	8"	8"	66"	72"
10'	10"	10"	72"	84"

- GENERAL MANHOLE NOTES:
- INNER EDGE OF BRICK TABLE TO BE AT ELEV OF CROWN OF TOP OF PIPE. TABLE TO SLOPE AT 8.3% TO INSIDE OF MANHOLE BASE.
  - SEWER OR DRAIN MANHOLE DIAMETER SHALL BE 4', 5', 6', OR 8' AS SHOWN ON PLAN/PROFILE VIEWS.
  - DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H20 LOADINGS.
  - FOR DESCRIPTION OF MATERIALS, SEE SPECIFICATIONS.
  - OPENING IN TOP MANHOLE SECTION SHALL MATCH CASTING NOMINAL DIAMETER.
  - MANHOLES LARGER THAN 4' IN DIAMETER AT THE BASE SHALL BE REDUCED IN DIAMETER TO 4' AT TOP RISER SECTION

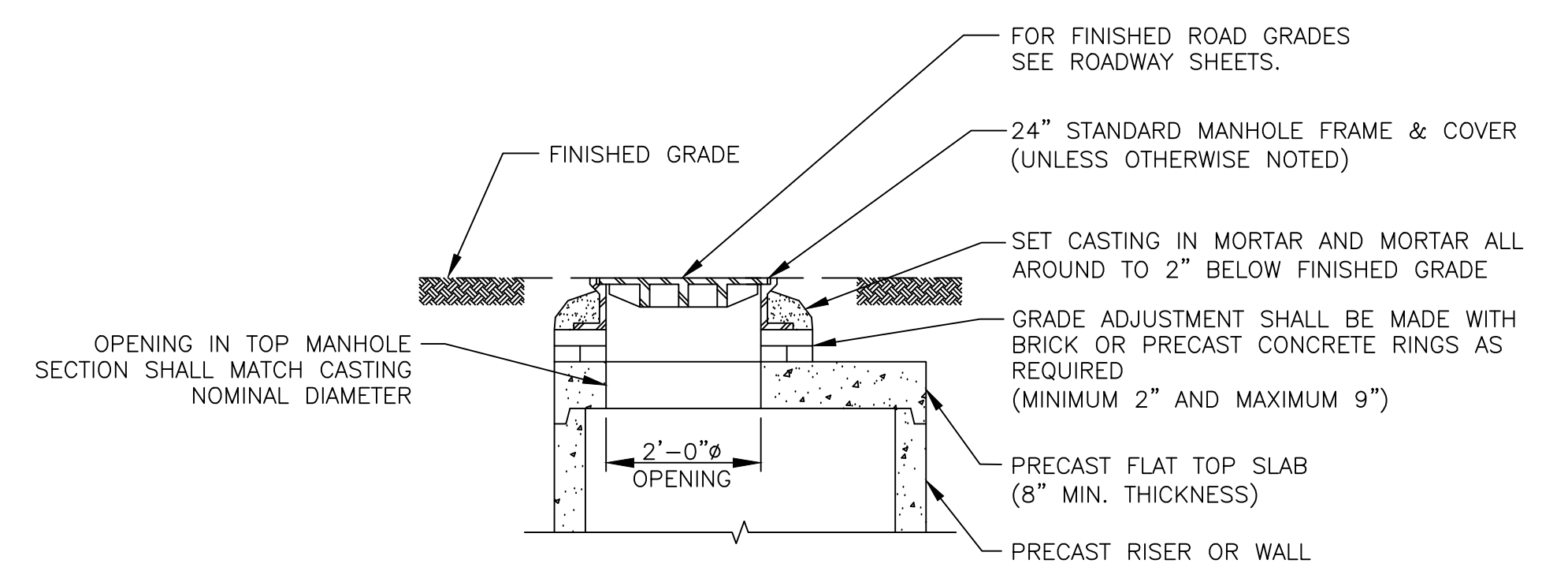
\*MAY VARY DEPENDING ON SIZE AND LOCATION OF ADDITIONAL PENETRATIONS OR RELATIONSHIP OF PENETRATIONS IN MANHOLE



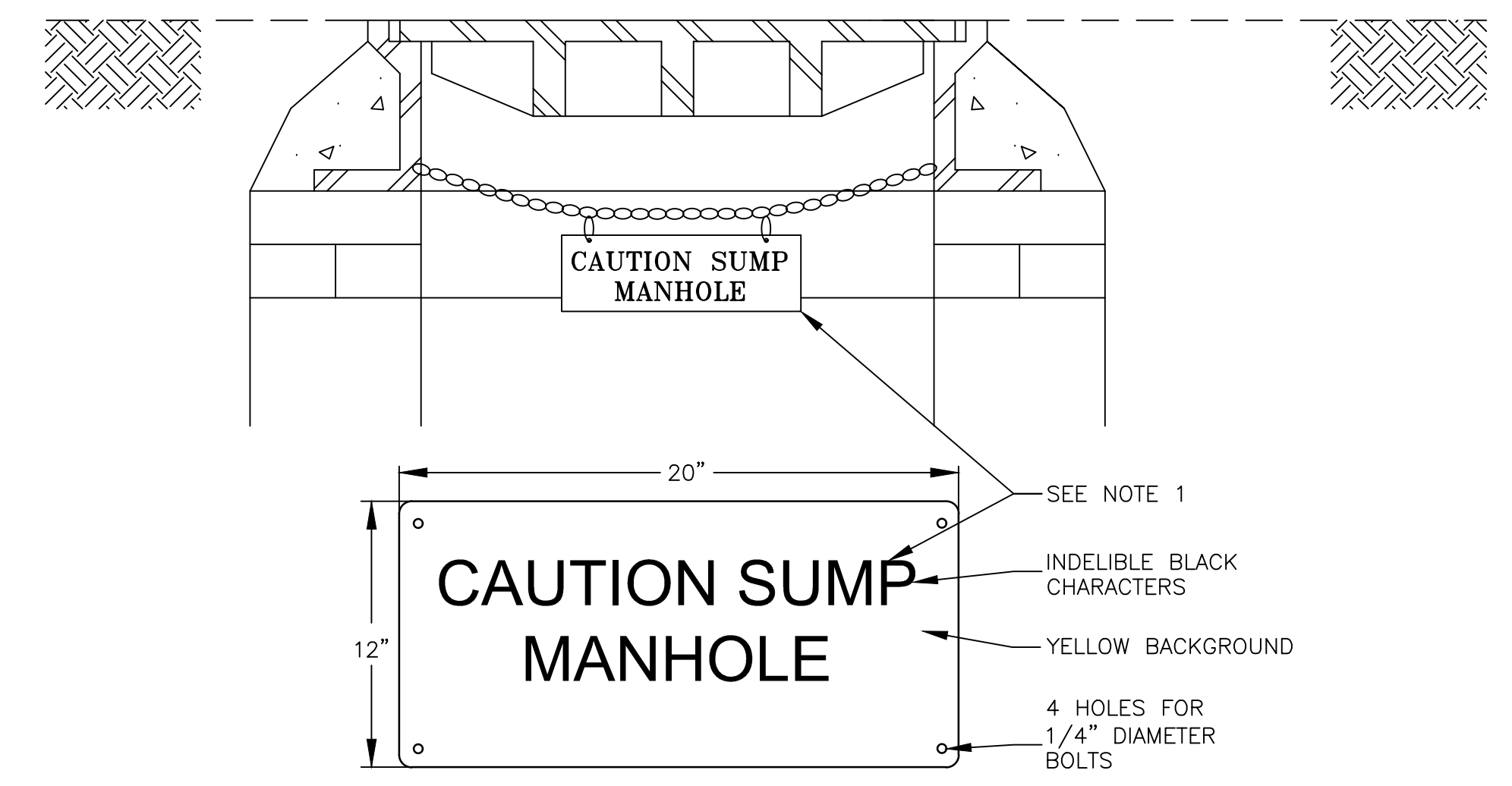
1 MANHOLE DETAIL - TYPE 1 (STANDARD MANHOLE)



2 MANHOLE DETAIL - TYPE 4 (SUMP MANHOLE)



3 TYPICAL FLAT TOP MANHOLE



NOTE:  
1. MATERIAL TO BE 0.040" ALUMINUM WITH BAKED ENAMEL FINISH OR EQUAL, STYLE AS SHOWN. SIGN TO BE ATTACHED IN CONSPICUOUS LOCATION AT ENTRY TO STRUCTURE.

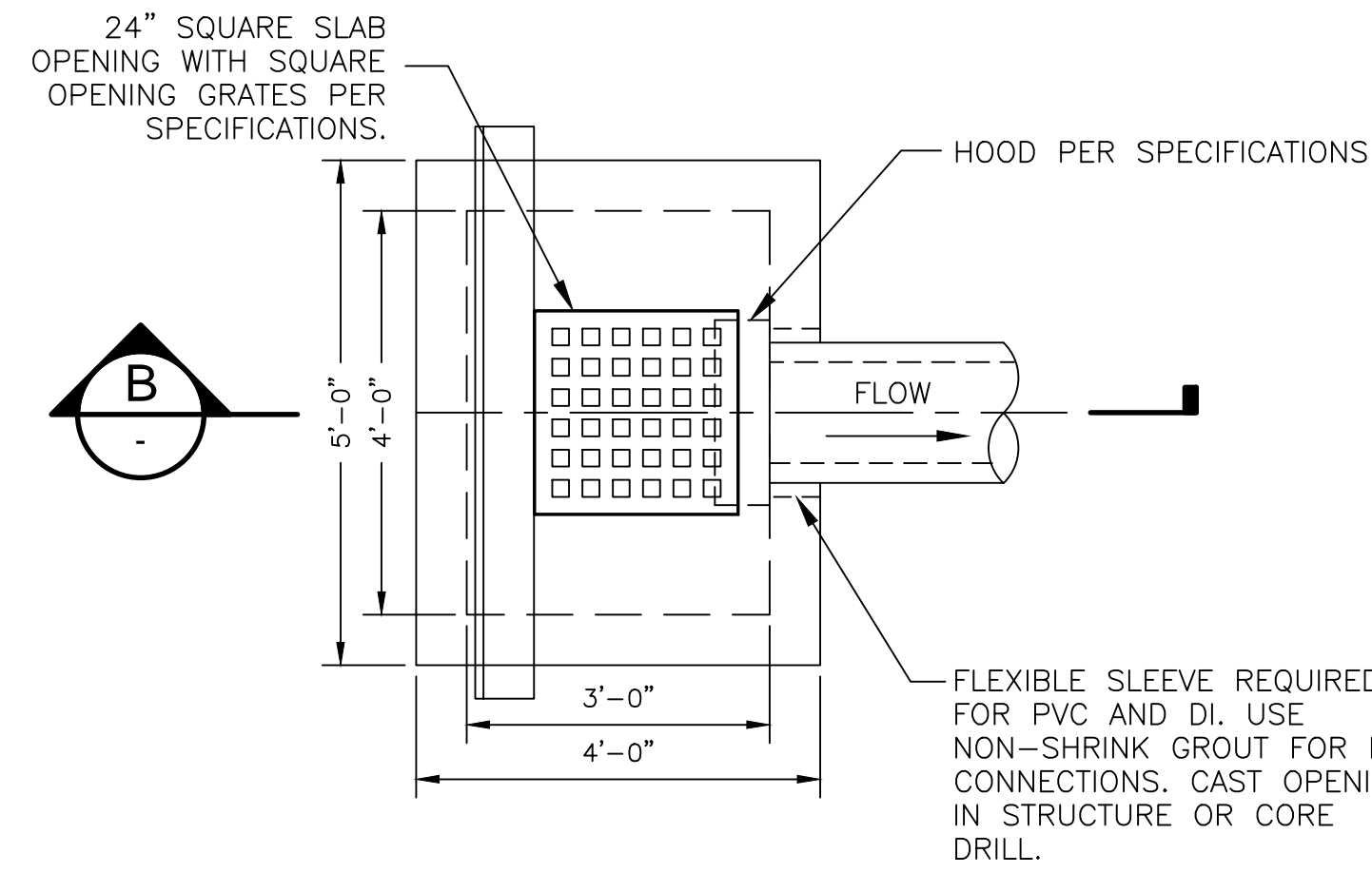
4 SUMP MANHOLE WARNING PLACARD

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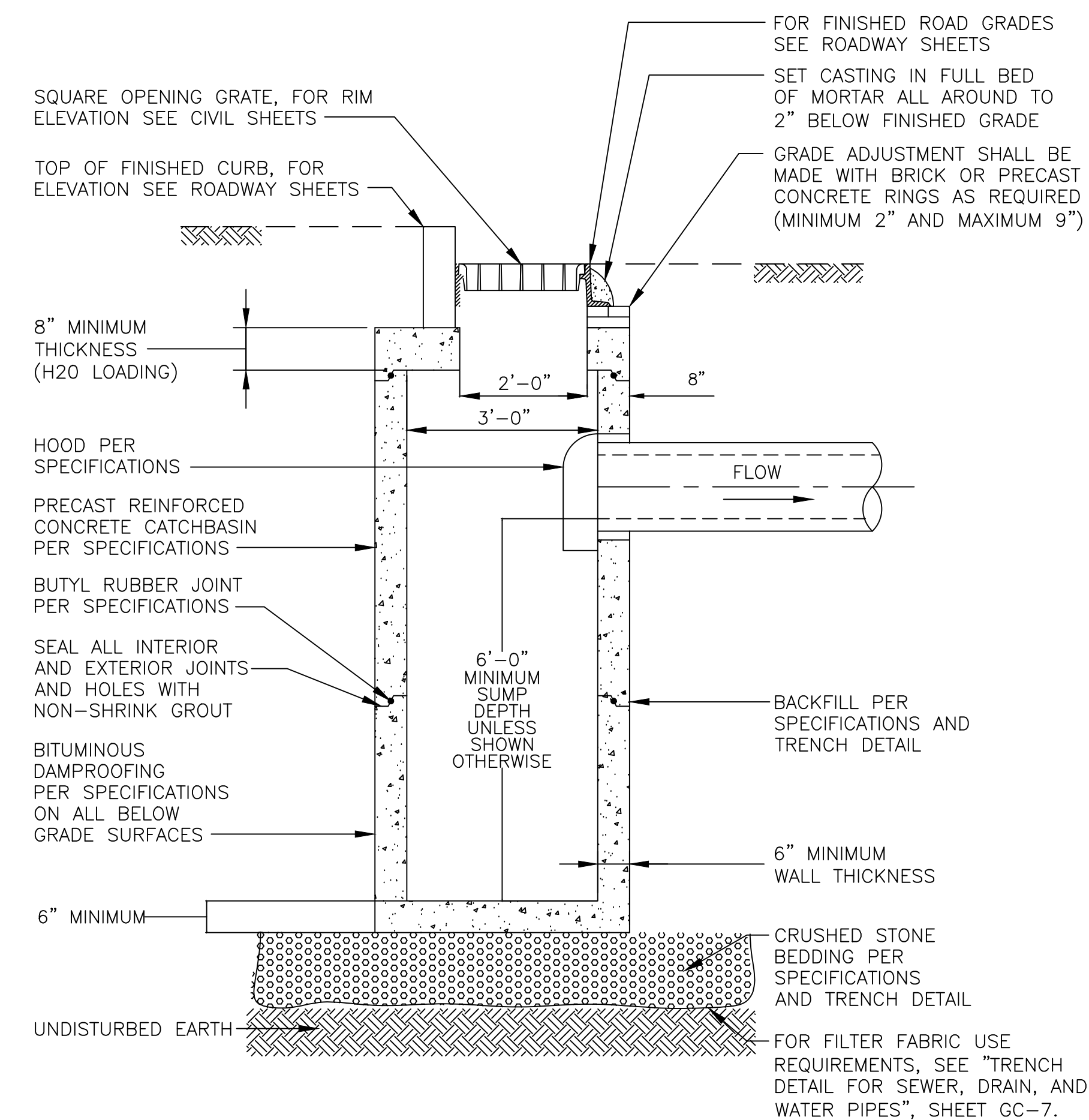
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	Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	UG-1
	Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
	Job No.	20170208.005A				Drawing	UTILITY DETAILS SHEET 1 OF 5		
	Designed by	KEA							
	Drawn by	KEA							
	Checked by	BMS	No.	Description	Date				
	Approved by	BMS		REVISIONS					



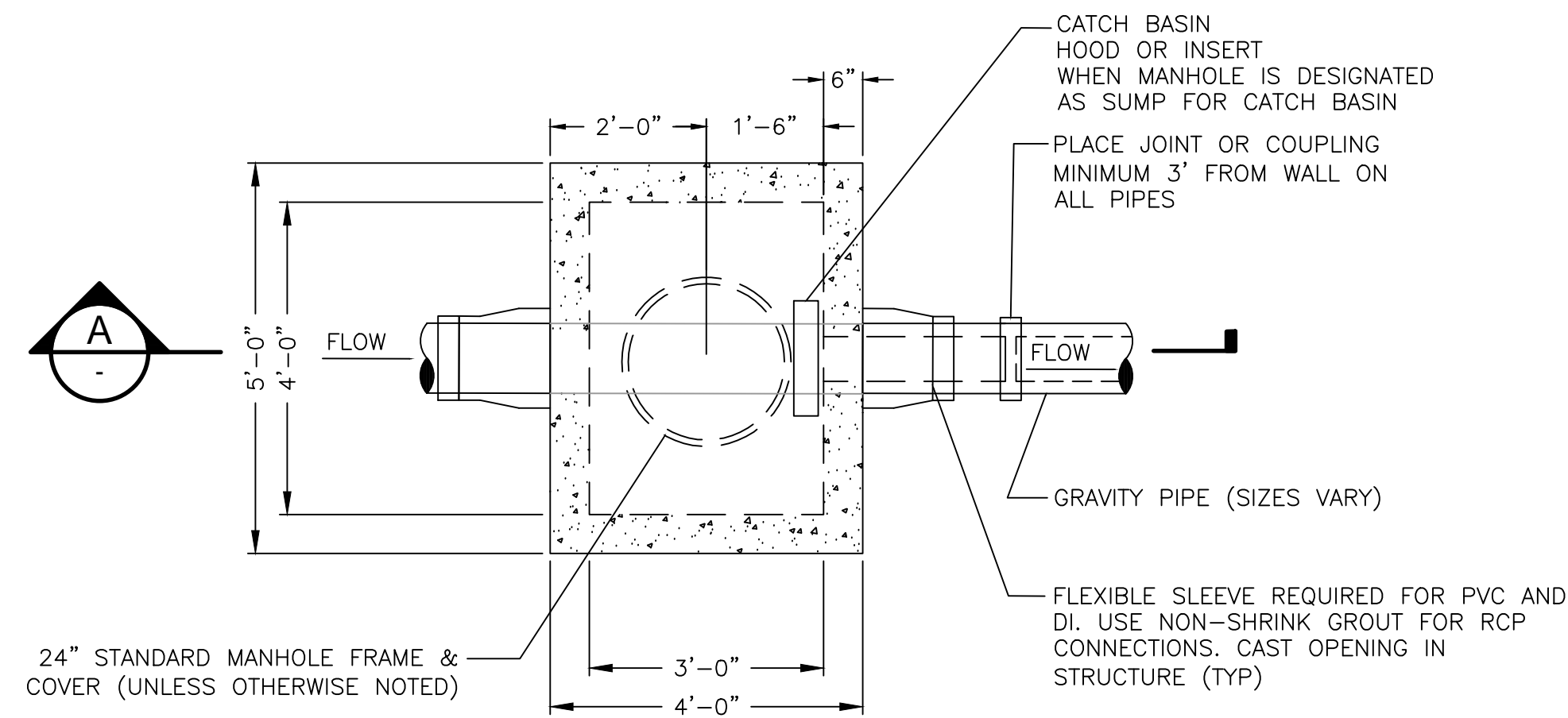


**PLAN TYPE-3 (SINGLE GRATE)**

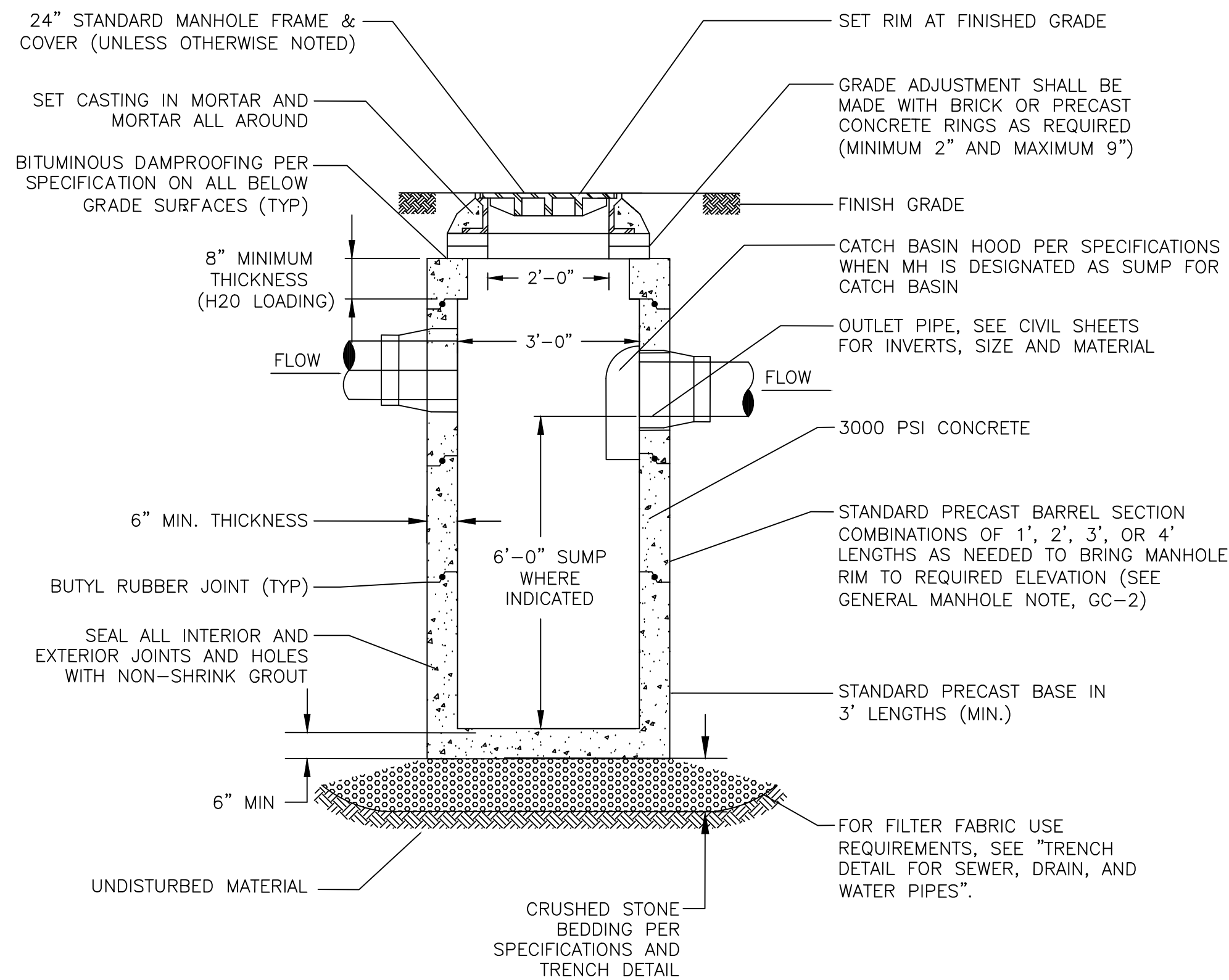


**B SECTION**  
(TYPE-3)

**5 CATCH BASIN-TYPE 3**  
(TYPE 3 WITH SINGLE SQUARE OPENING GRATE)

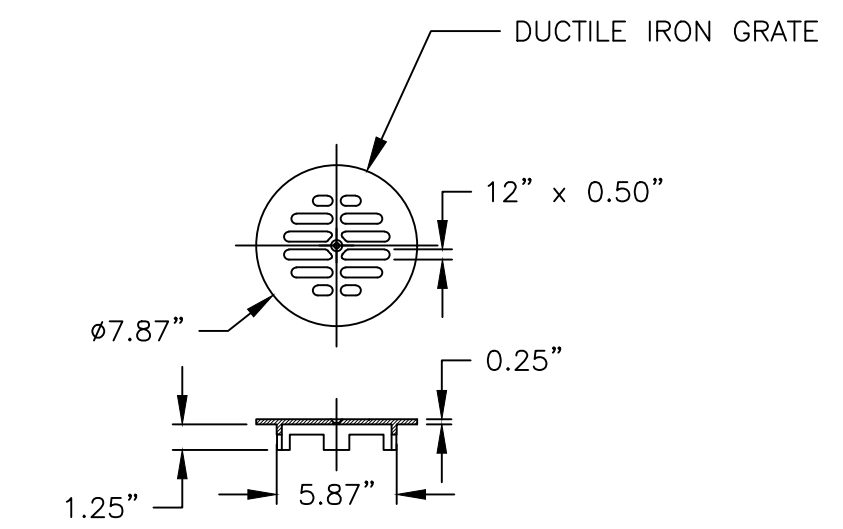


**PLAN**

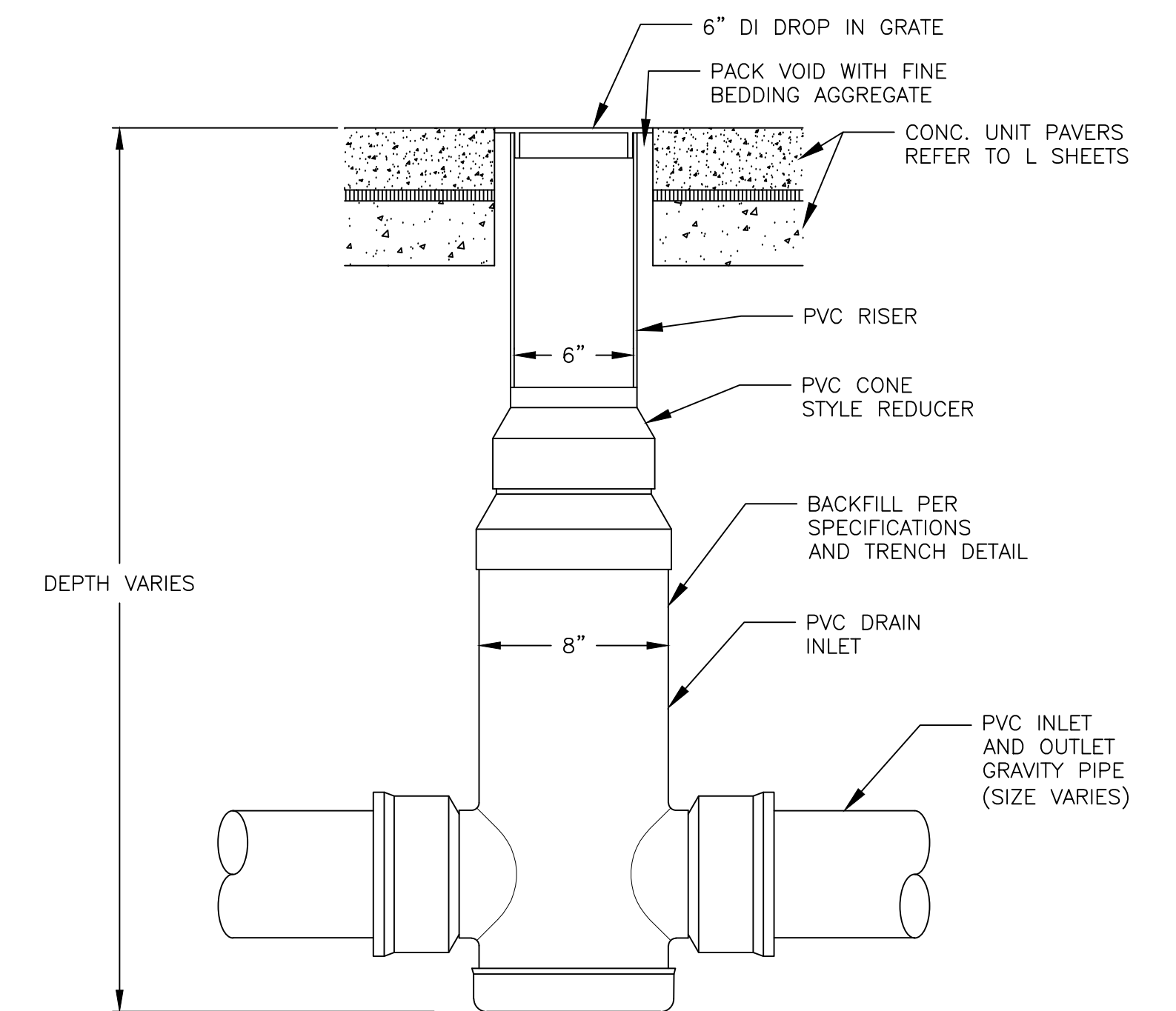


**A SECTION**

**6 MANHOLE DETAIL - TYPE 7 3'X4' SQUARE MANHOLE**



**6" DROP IN GRATE**



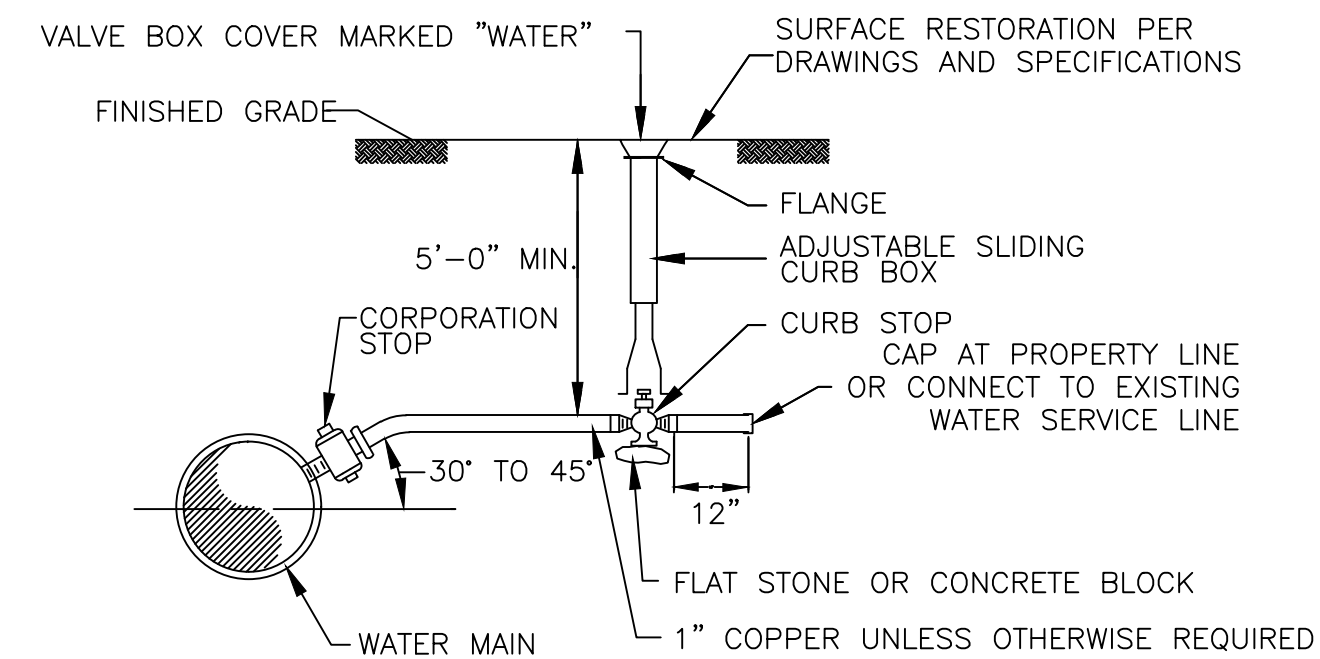
**7 PLAZA DRAIN INLET**

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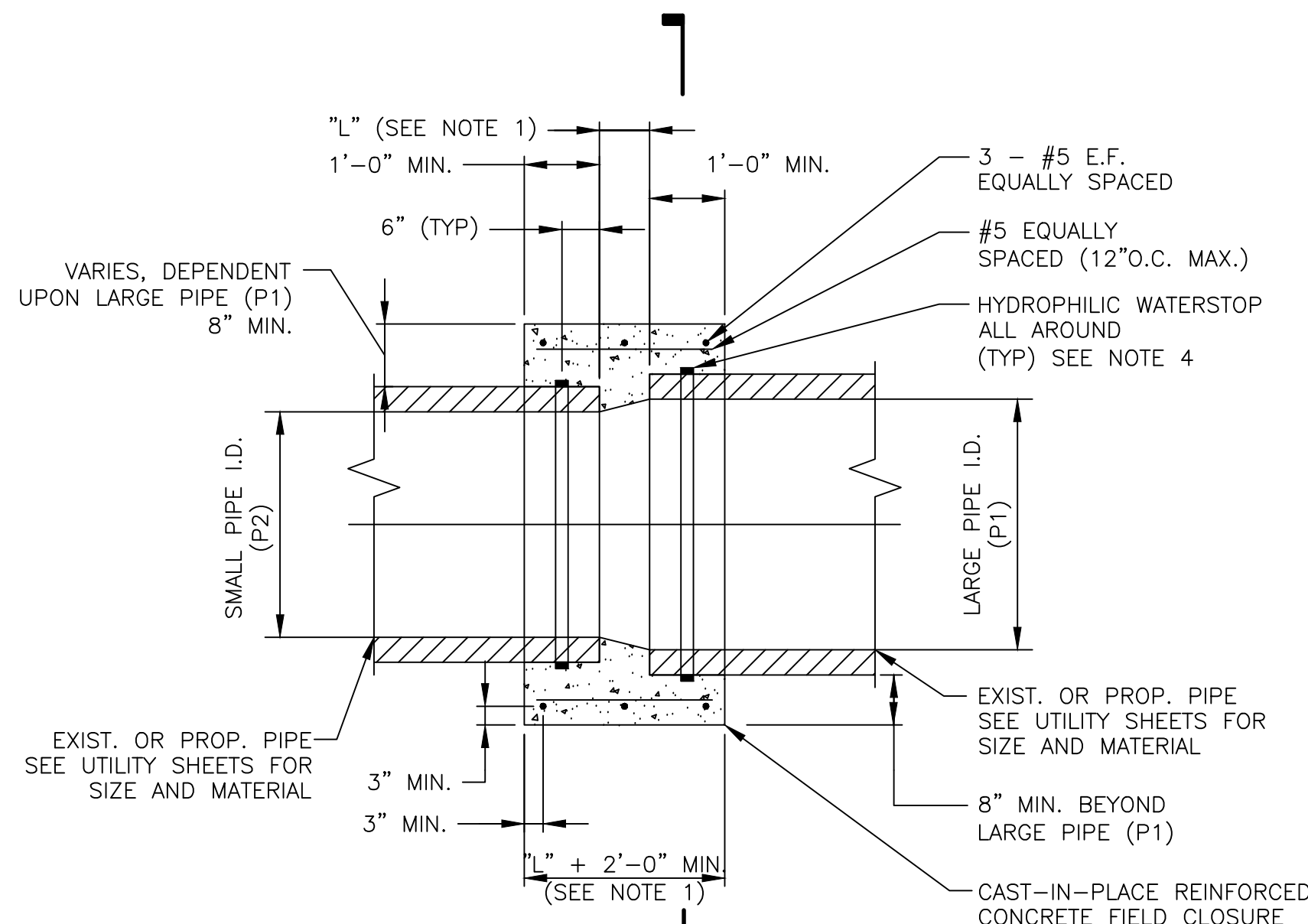
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	REVISIONS				





- NOTES:**
1. ANY WATER MAIN TO BE ENCASED IN CONCRETE FOR STRUCTURAL PURPOSES SHALL BE ENCASED WITHIN FLOWABLE FILL WITH 0% ASH CONTENT.
  2. ALL GATE VALVES SHALL BE RESILIENT SEATED AND "OPEN RIGHT."

**8 NEW WATER SERVICE DETAIL**



- 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.

**A SECTION**  
(P1=48" MAX.)

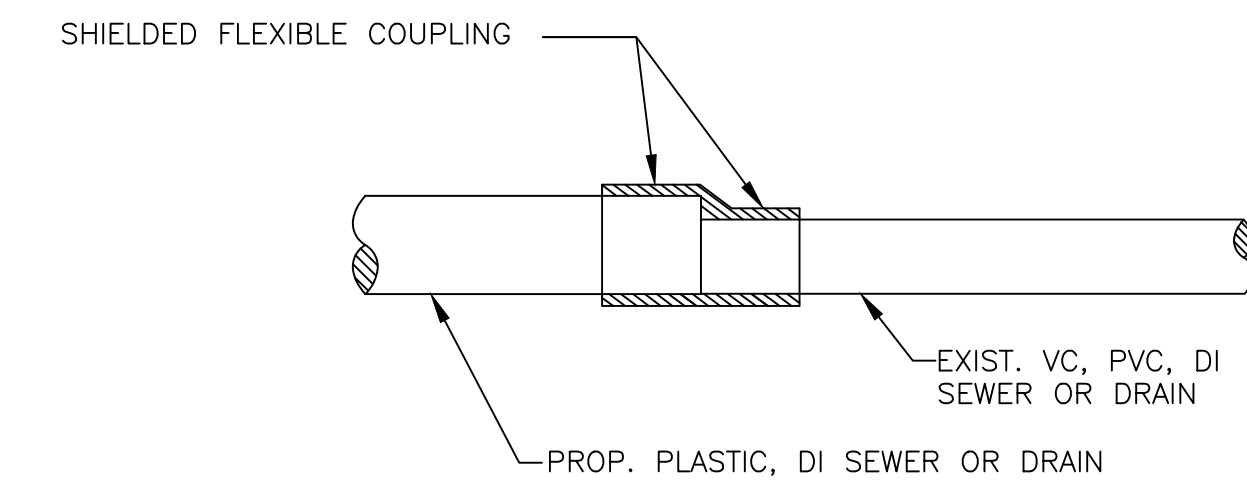
**10 PIPE FIELD CLOSURE (CAST-IN-PLACE) TYPE 1 DETAIL**  
(FOR NON-PRESSURE PIPES OF DIFFERENT MATERIALS OR SIZES)

		EXISTING PIPE MATERIAL				
NEW 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**

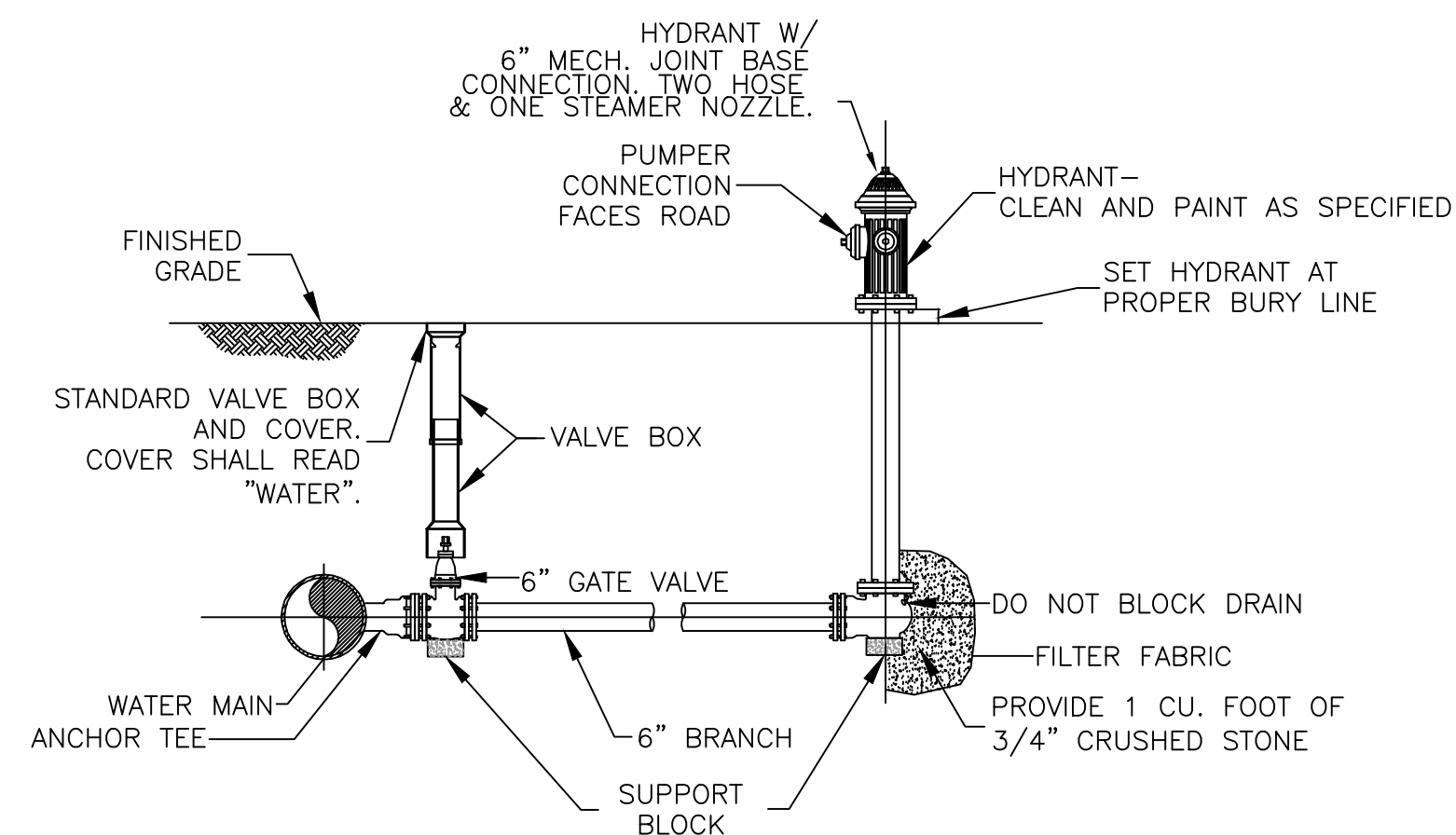
TYPE 1 = PIPE FIELD CLOSURE (CAST-IN-PLACE)  
TYPE 2 = SHIELDED FLEXIBLE COUPLING

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



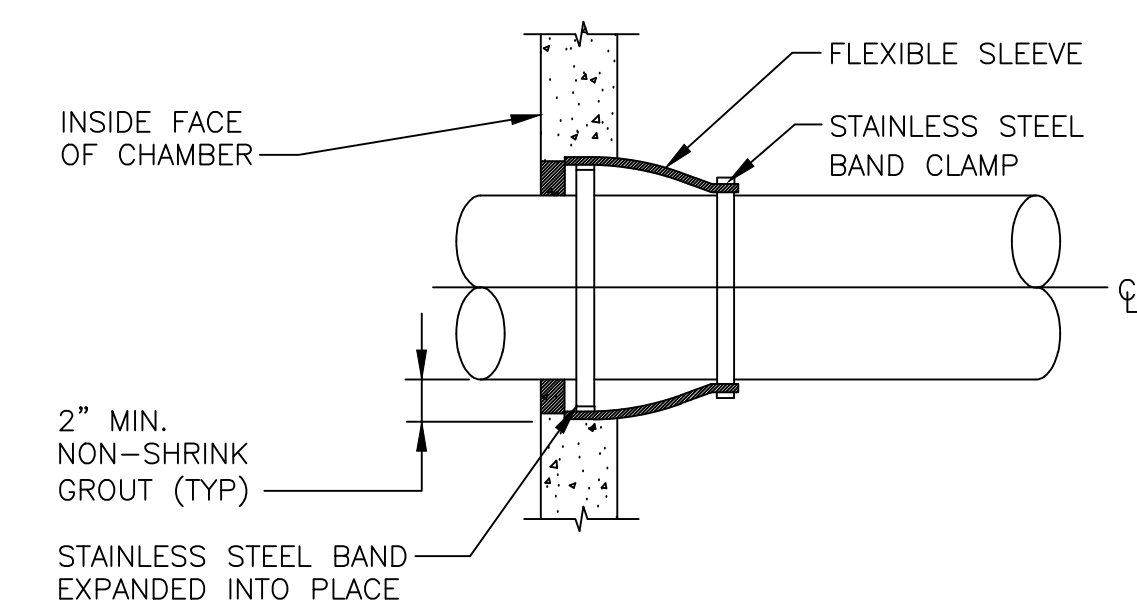
**TYPE 2 PIPE FIELD CLOSURE NOTES:**  
1. FOR ALL GRAVITY MAINS AND LATERAL PIPES (SEWERS OR DRAINS). SEE SPECIFICATIONS FOR MATERIALS AND REQUIREMENTS.

**11 PIPE FIELD CLOSURE (SHIELDED FLEXIBLE COUPLING) TYPE 2 DETAIL**



- 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 LEFT.
  4. PROVIDE JOINT RESTRAINT AND THRUST BLOCK PER CITY WATER DEPARTMENT STANDARDS PER SPECIFICATION.

**9 FIRE HYDRANT DETAIL**



**FLEXIBLE SLEEVE CONNECTION NOTE:**  
1. PRECAST OPENING OR CORE DRILLED INTO EXISTING STRUCTURE. SIZE VARIES TO ACCOMMODATE EXTENSION BONNET FLANGE DIAMETER OR PIPE.

**12 FLEXIBLE SLEEVE CONNECTION DETAIL**

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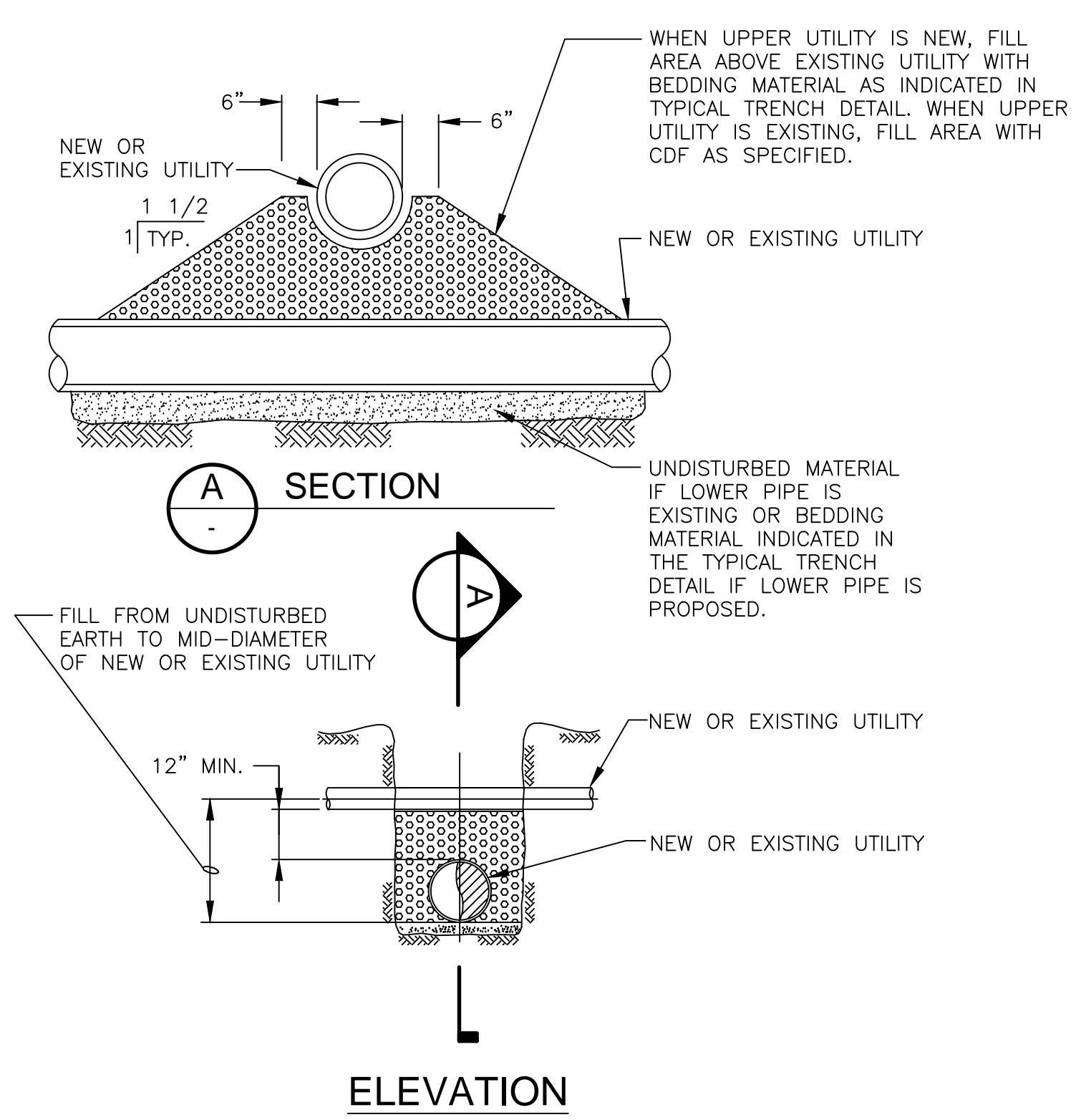
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						Job No.	20170208.005A				Project	UTILITY DETAILS SHEET 3 OF 5	File No. <b>8514</b>
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						Drawn by	KEA				Project	UTILITY DETAILS SHEET 3 OF 5	
						Checked by	BMS	No.	Description	Date	Project	UTILITY DETAILS SHEET 3 OF 5	
						Approved by	BMS		REVISIONS		Project	UTILITY DETAILS SHEET 3 OF 5	









16 UTILITY CROSSING DETAIL

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

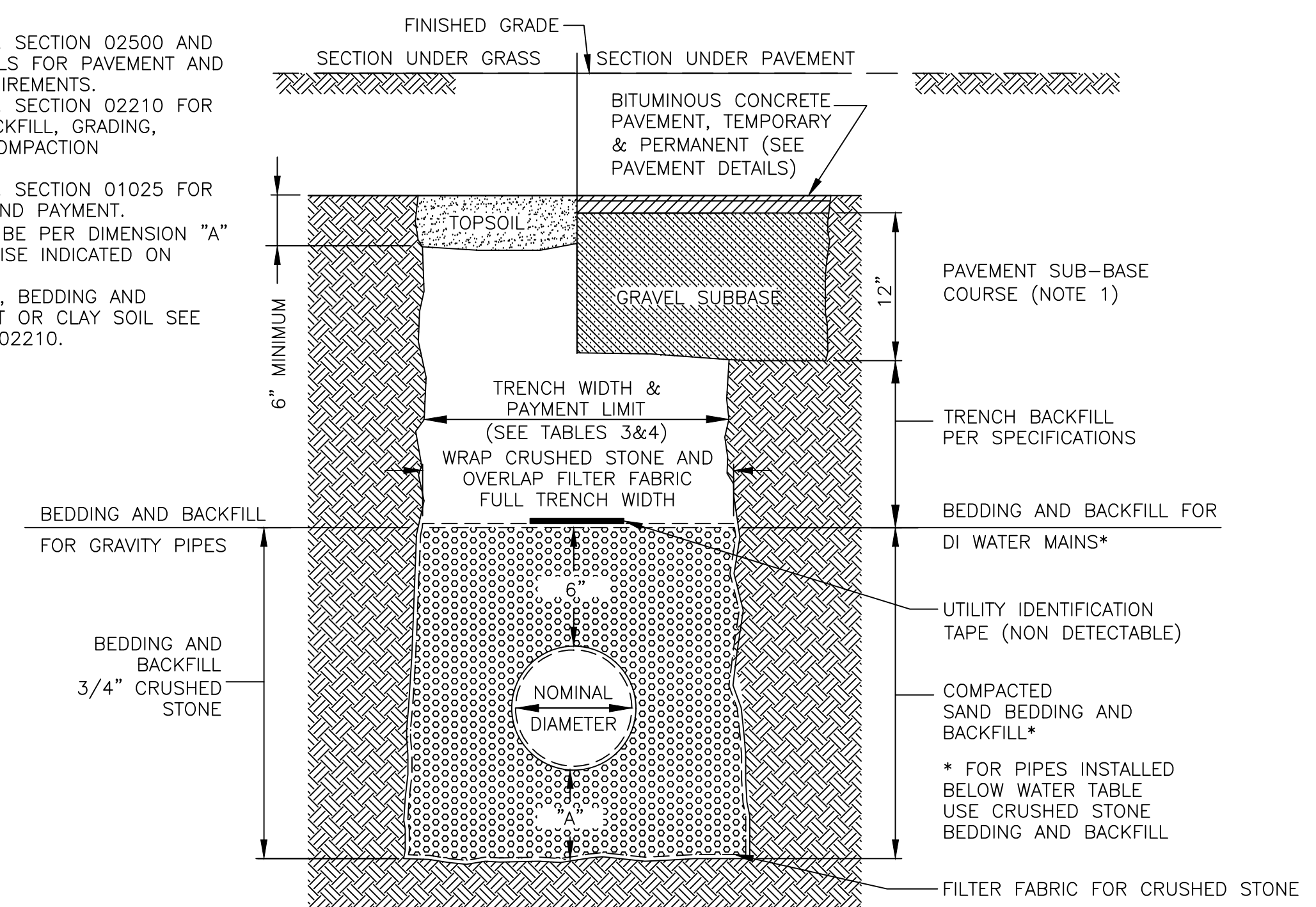


TABLE 3: TRENCH PAY LIMIT TABLE FOR PIPES

PIPE SIZE (DIA.)	MAX TRENCH WIDTH FOR PAYMENT	MAX "A" WITH 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"

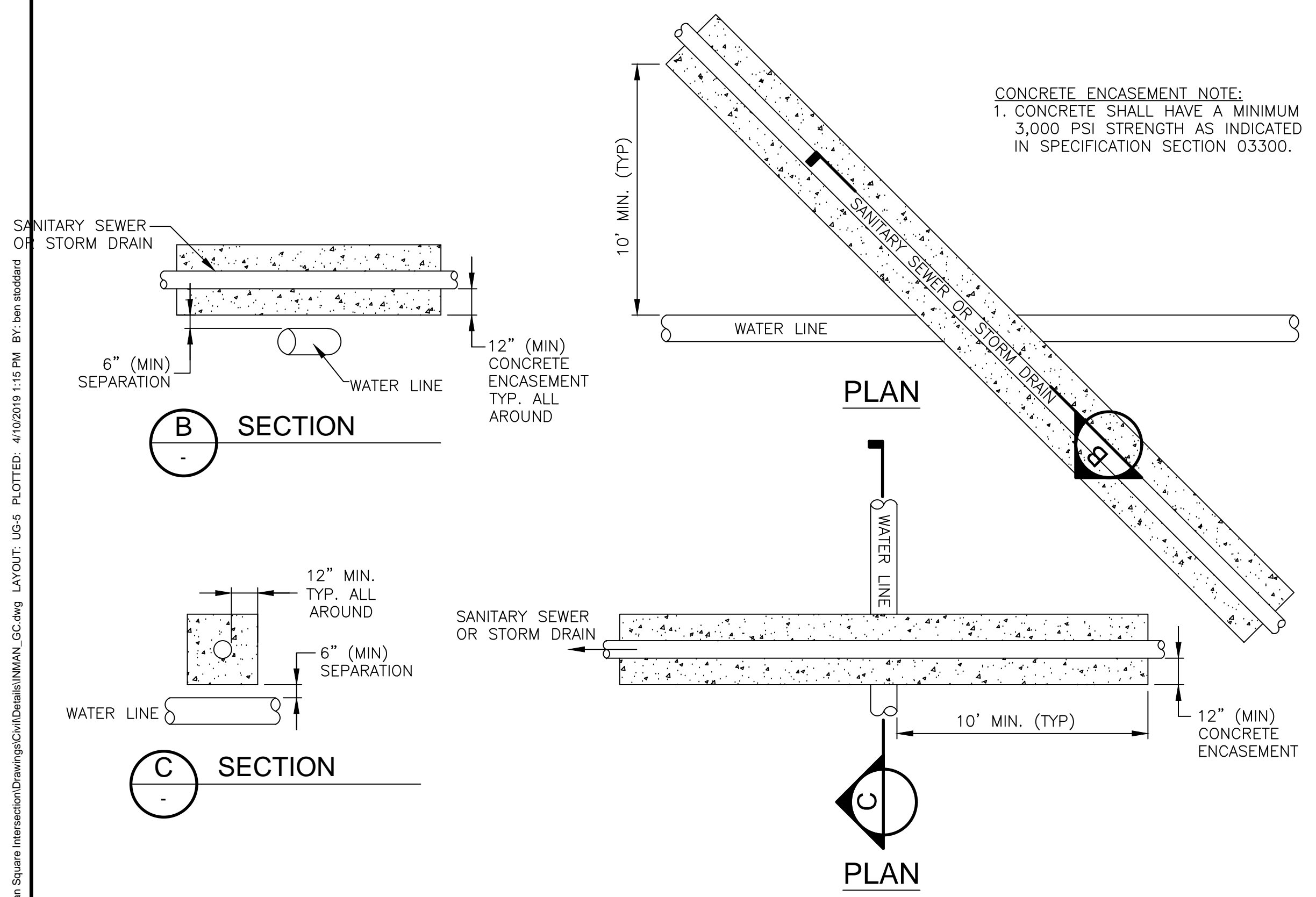
I.D. = INSIDE DIMENSION

TABLE 4: TRENCH PAY LIMIT TABLE FOR PRECAST STRUCTURES

WALL THICKNESS	MAX TRENCH WIDTH FOR PAYMENT	MAX "A" WITH 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"

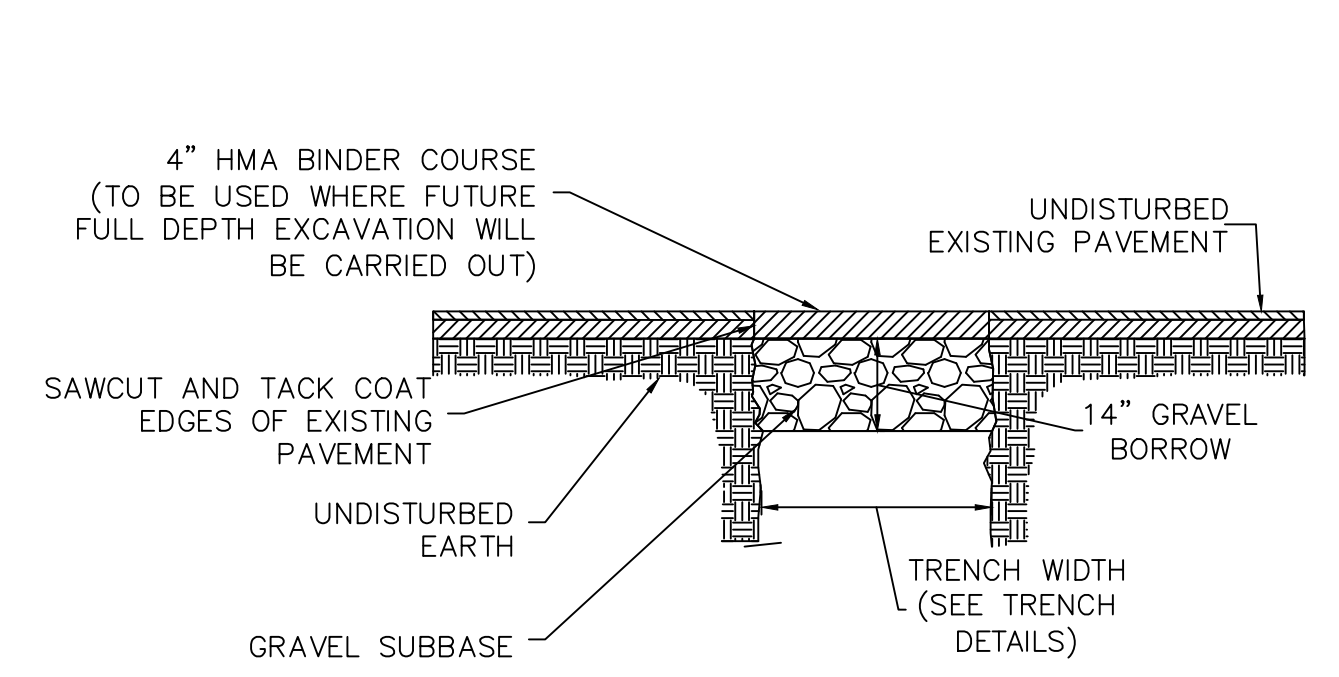
I.D. = INSIDE DIMENSION  
O.D. = OUTSIDE DIMENSION

18 TRENCH DETAIL FOR SEWER, DRAIN AND WATER PIPES



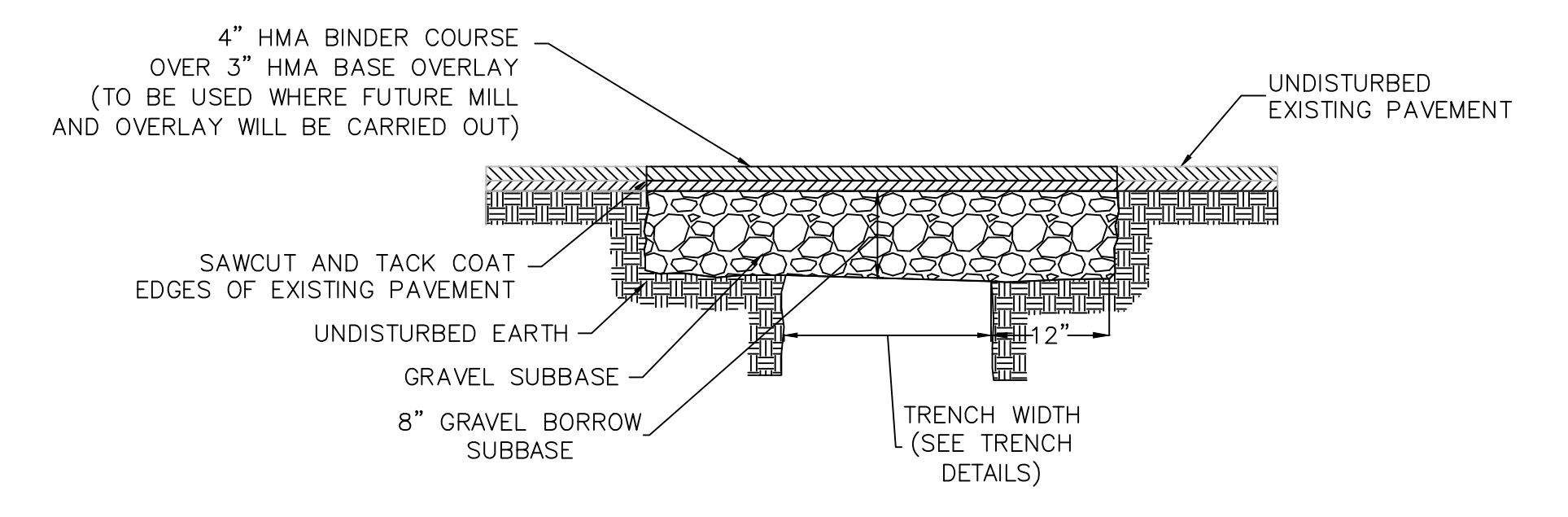
17 CONCRETE ENCASEMENT DETAIL

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



**NOTE:**  
1. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO TRENCH PAVEMENT.

19 TEMPORARY TRENCH PAVEMENT DETAIL



**NOTE:**  
1. REMOVE AND DISPOSE ALL TEMPORARY PAVEMENT AS REQUIRED. RESTORE AND COMPACT SUBBASE AS REQUIRED PRIOR TO TRENCH PAVEMENT.

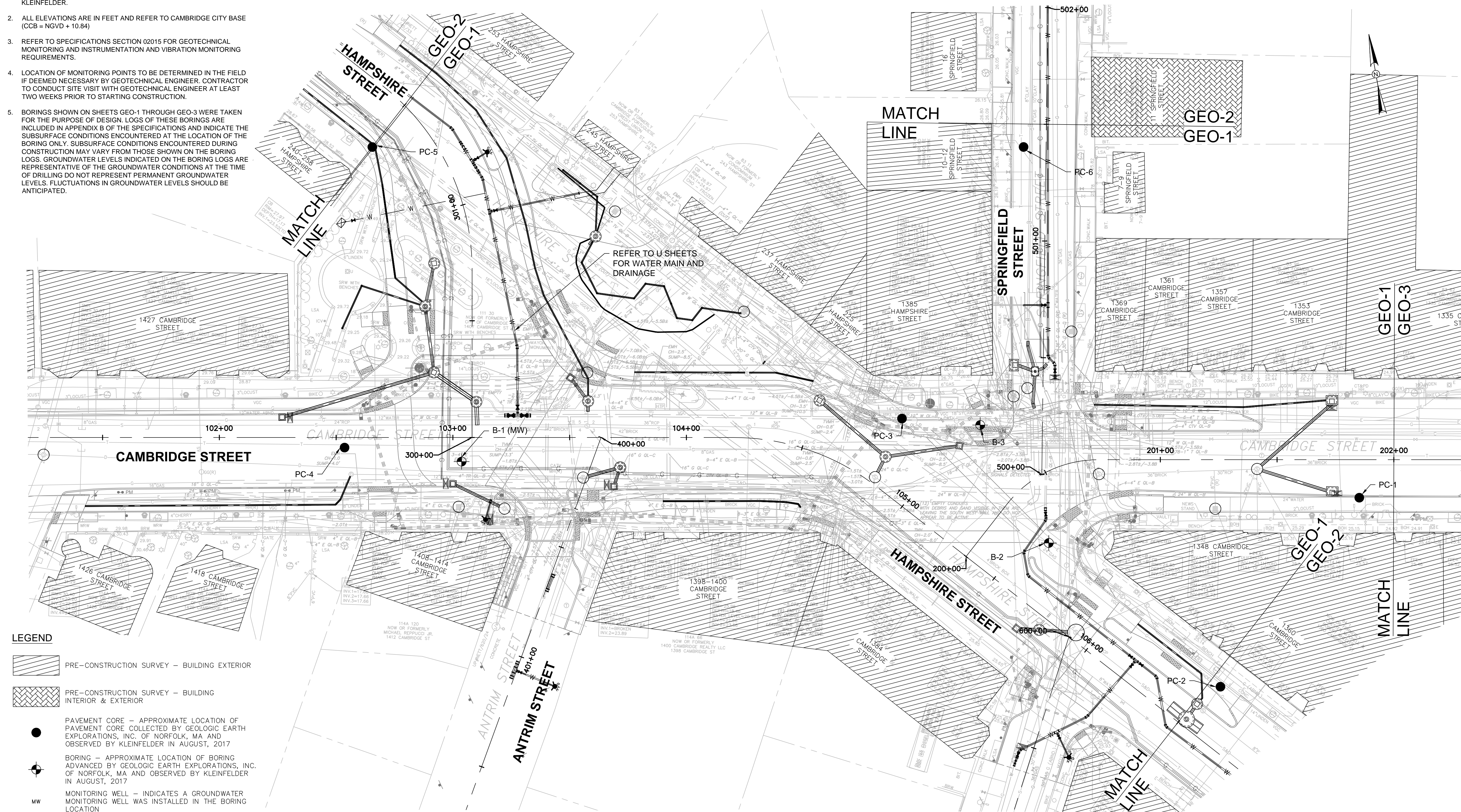
20 PERMANENT TRENCH PAVEMENT DETAIL

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**NOTES:**

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- LEGEND**
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  - PRE-CONSTRUCTION SURVEY - BUILDING INTERIOR & EXTERIOR
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  - BORING - APPROXIMATE LOCATION OF BORING ADVANCED BY GEOLOGIC EARTH EXPLORATIONS, INC. OF NORFOLK, MA AND OBSERVED BY KLEINFELDER IN AUGUST, 2017
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  - BORING - APPROXIMATE LOCATION OF BORING ADVANCED BY CAR-DEE OF MEDFORD, MA AND OBSERVED BY KLEINFELDER IN JANUARY, 2019

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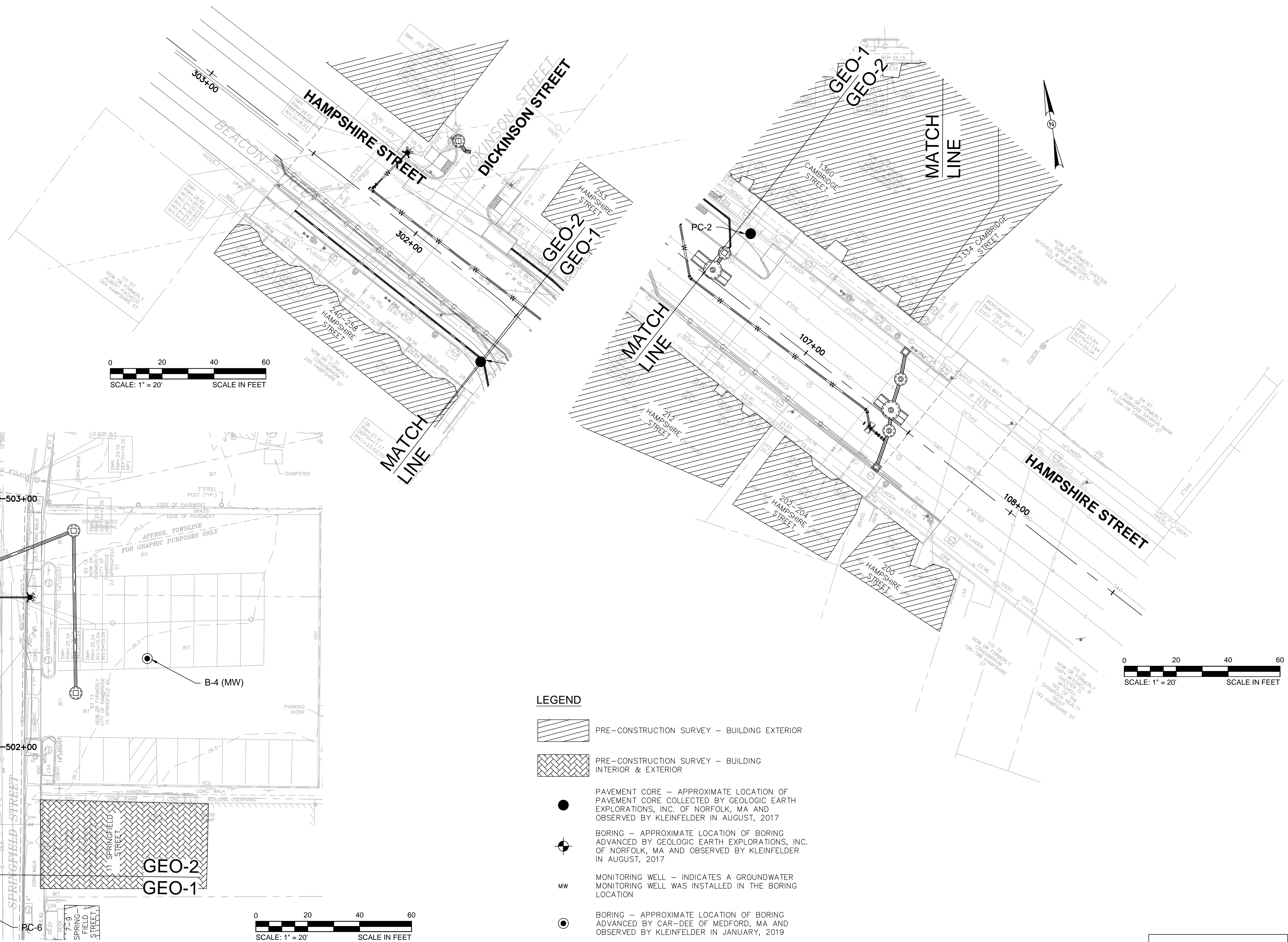
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						Job No. 20170208.005A		Drawing GEOTECHNICAL PLAN SHEET 1 OF 3	
						Designed by DD			
						Drawn by PRB			
						Checked by JM			
						Approved by BMS			

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- LEGEND**
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						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td></tr> <tr><td>Date</td><td>APRIL 2019</td></tr> <tr><td>Job No.</td><td>20170208.005A</td></tr> <tr><td>Designed by</td><td>DD</td></tr> <tr><td>Drawn by</td><td>PRB</td></tr> <tr><td>Checked by</td><td>JM</td></tr> <tr><td>Approved by</td><td>BMS</td></tr> </table>	Scale	AS NOTED	Date	APRIL 2019	Job No.	20170208.005A	Designed by	DD	Drawn by	PRB	Checked by	JM	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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>GEOTECHNICAL PLAN SHEET 2 OF 3</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	GEOTECHNICAL PLAN SHEET 2 OF 3	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td><b>GEO-2</b></td></tr> <tr><td>File No.</td><td><b>8514</b></td></tr> </table>	Sheet	<b>GEO-2</b>	File No.	<b>8514</b>
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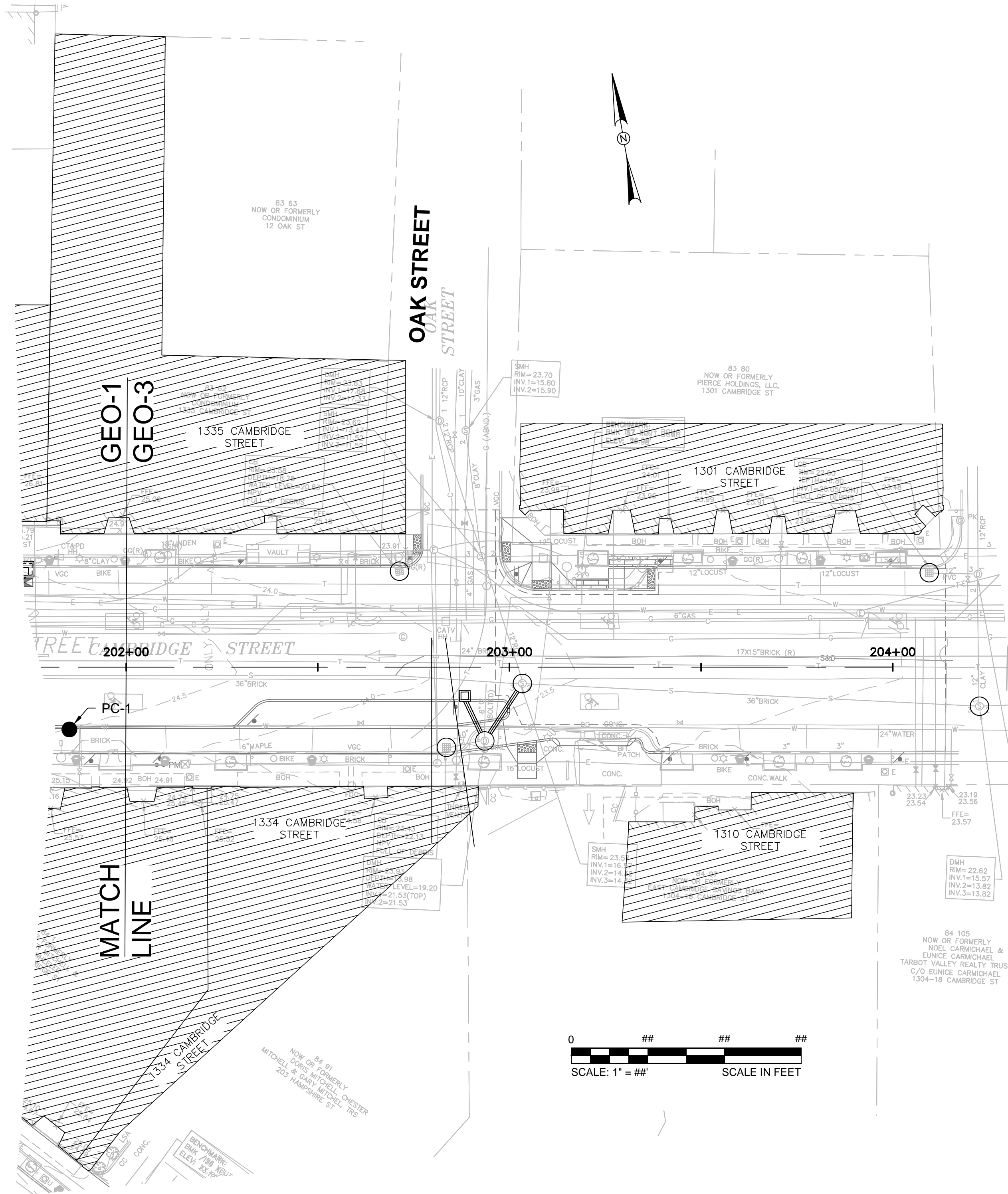


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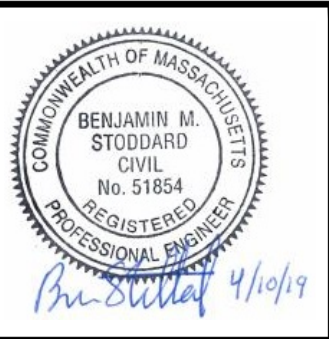
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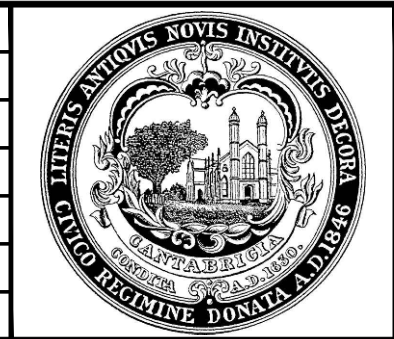


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	GEOTECHNICAL PLAN SHEET 3 OF 3

Sheet	GEO-3
File No.	8514



**A STRUCTURAL GENERAL NOTES**

- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO ARCHITECTURAL, CIVIL, ELECTRICAL FOR LOCATIONS, DIMENSIONS, AND DETAILS OF OPENINGS, SLEEVES, EMBEDMENTS, PADS, CURBS, ANCHOR BOLTS, GRADING AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN RECORD DRAWINGS AND SPECIFICATIONS OF THE EXISTING CONSTRUCTION FROM THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE ACCURACY OF ALL RELEVANT INFORMATION SHOWN ON THE RECORD DRAWINGS, INCLUDING BUT NOT LIMITED TO STRUCTURAL SUBSTRUCTURE AND SUPERSTRUCTURE CONDITIONS.  
  
EXISTING CONDITIONS AND DIMENSIONS ARE BASED ON THE EXISTING DRAWINGS, UNLESS NOTED OTHERWISE. ALL CONDITIONS AND DIMENSIONS AFFECTING THE NEW WORK SHALL BE VERIFIED IN THE FIELD, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
- CODES AND STANDARDS**  
 - THE MASSACHUSETTS STATE BUILDING CODE" - 780 CMR, NINTH EDITION  
 - INTERNATIONAL BUILDING CODE (IBC) 2015  
 - MASSACHUSETTS AMENDMENTS TO THE IBC AND IEBC  
 - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AMERICAN CONCRETE INSTITUTE ACI 318 - 14  
 - "STEEL CONSTRUCTION MANUAL" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION - 14TH EDITION  
 - "STRUCTURAL WELDING CODE - STEEL" - AMERICAN WELDING SOCIETY - AWS D1.1-2010  
 - "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" - AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-10  
 - SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" OSHA CFR PART 1926  
 - NATIONAL ELECTRIC SAFETY CODE (NEC) 2017.
- TYPICAL DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS.
- DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE ENGINEER.
- STRUCTURAL WORK SHALL BE INSPECTED AND TESTED IN CONFORMANCE WITH 780 CMR AND IBC 2015. REQUIREMENTS FOR TESTING AND INSPECTION ARE PROVIDED IN THE TECHNICAL SPECIFICATIONS, SECTION 01420 "STRUCTURAL TESTS AND SPECIAL INSPECTION".
- THE STRUCTURE IS DESIGNED TO ACT AS A STRUCTURAL UNIT UPON COMPLETION. THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL REQUIRED SHORING AND TEMPORARY BRACING TO RESIST FORCES ON THE STRUCTURES THROUGHOUT THE CONSTRUCTION PERIOD.
- EXISTING CONDITIONS ARE SHOWN BY SCREENED LINEWORK ON THE DRAWINGS. NEW WORK IS SHOWN BY DARK LINEWORK.
- NEITHER THE OWNER NOR THE ARCHITECT/STRUCTURAL ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR COMFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS. SITE OBSERVATION VISITS BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE SAFETY ITEMS.
- THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS NOTED OTHERWISE, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION, OR DEMOLITION.

**B GENERAL DESIGN LOADS**

- THE DESIGN LOADS, FACTORS AND CATEGORIES ARE SPECIFIED BELOW. UNDER NO CIRCUMSTANCES SHALL THE CONSTRUCTION LOAD ON THE STRUCTURE EXCEED THE DESIGN LOAD WITHOUT SPECIFIC WRITTEN PERMISSION FROM THE ENGINEER.  
  
 (A) LIVE LOADS  
 UNIFORM LOADS .....  
 STAIRS, WALKWAYS ..... 100 PSF OR 300 LBS CONCENTRATED  
  
 (B) SNOW LOADS  
 (1) GROUND SNOW LOAD (PG) ..... 50 PSF  
  
 (C) WIND LOADS  
 (1) BASIC WIND SPEED (V) ..... 120 MPH  
 (2) EXPOSURE CATEGORY ..... B  
 (3) OCCUPANCY CATEGORY ..... II  
 (4) IMPORTANCE FACTOR ..... 1.0  
 (5) MAIN FORCE RESISTING SYSTEM PRESSURE ..... ASCE/SEI 7-10 TABLE 27.6-(1)(2)  
 (6) COMPONENTS AND CLADDING PRESSURE ..... ASCE/SEI 7-10 TABLE 30.7-2  
  
 (D) ICE LOADS  
 - 3/4" RADIAL ICE ON ALL WIRES & CABLES IN COMBINATION WITH A 50 MPH WIND LOAD AT A TEMPERATURE OF 15 DEGREES FAHRENHEIT.

**C CAST IN PLACE CONCRETE**

- UNLESS OTHERWISE NOTED, CONCRETE SHALL BE NORMAL WEIGHT, CAST-IN-PLACE CONCRETE WITH ASTM C150, TYPE II CEMENT, AIR ENTRAINED AND HAVE A SPECIFIED COMPRESSIVE STRENGTH AS FOLLOWS:  
 - 4000 PSI - ALL CONCRETE WORK AND HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.45 UNLESS OTHERWISE INDICATED OR SPECIFIED.  
 - 3500 PSI - STATUE FOUNDATION  
 - CONTAIN SHRINKAGE REDUCING ADMIXTURE OR USE SHRINKAGE COMPENSATING CEMENT  
 - CONTAIN AN INTEGRAL CRYSTALLINE WATERPROOFING ADMIXTURE  
 - CONTAIN SYNTHETIC FIBER REINFORCEMENT IN THE AMMOUNT OF 2LBS/CUBIC YARD
- ALL PERMANENTLY EXPOSED VERTICAL AND HORIZONTAL CONCRETE SURFACES SHALL BE TREATED OR SEALED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND G-SERIES NOTES.
- FOR FOUNDATION WALLS, CONSTRUCTION JOINTS SHALL HAVE A MAXIMUM SPACING OF 25'-0". SUBMIT CONCRETE PLACEMENT SEQUENCE AND PROPOSED JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL.
- CONCRETE SLABS, SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
- PROVIDE 3/4" x 3/4" CHAMFER ON ALL EXPOSED VERTICAL AND HORIZONTAL OUTSIDE CORNERS UNLESS OTHERWISE NOTED.
- CONCRETE SURFACES NOTED TO BE ROUGHENED SHALL BE ROUGHENED TO A 1/4" AMPLITUDE.
- NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
- THE INTERFACE BETWEEN ADJOINING CONCRETE POURS SHALL BE ROUGHENED TO 1/4" AMPLITUDE, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

**D CONCRETE FINISH REQUIREMENTS**

- CONCRETE SURFACES SHALL BE FINISHED AND TREATED AS SHOWN IN THE TABLE BELOW UNO. SURFACE PREPARATION FOR ALL SURFACES SHALL COMPLY WITH PROJECT SPECIFICATIONS AND PRODUCT MANUFACTURER'S INSTALLATION REQUIREMENTS. ACID ETCHING SHALL NOT BE USED AS A MEANS TO ACHIEVE THE REQUIRED SURFACE PREPARATION.

LOCATION	CONCRETE FINISH	CONCRETE TREATMENT
SIDEWALKS	BROOM FINISH	LIQUID PENETRATING FLOOR TREATMENT
STAIRS		

- ALL CONCRETE SHALL BE WATER-CURED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
- ALL EXTERIOR SURFACES NOT SCHEDULED FOR ANOTHER FINISH SHALL RECEIVE A WATER REPELLENT COATING.

**E CAST IN PLACE CONCRETE REINFORCEMENT**

- REINFORCEMENT WORK OF DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "ACI DETAILING MANUAL" - SP-66, "CRSI MANUAL OF STANDARD PRACTICE", AND "STRUCTURAL WELDING CODE - REINFORCING STEEL" - AWS D1.4.
- STEEL REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING:  
 (A) BARS, TIES, AND STIRRUPS ASTM A615 GRADE 60  
 (B) WELDED WIRE FABRIC ASTM A185 FLAT SHEETS  
 (C) BARS DETAILED WITH WELDED CONNECTIONS ASTM A706
- REINFORCING STEEL SHALL BE UNCOATED AND DEFORMED UNLESS NOTED OTHERWISE.
- MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE 1 1/2".
- REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE NOTED. REINFORCING STEEL SHALL NOT BE CONTINUOUS THROUGH SLAB ON GRADE CONTROL JOINTS. REINFORCING SHALL BE LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS WITH ACI STANDARD HOOKS, UNLESS OTHERWISE NOTED.  
  
STANDARD HOOKS SHALL COMPLY WITH ACI 318 REQUIREMENTS FOR DEVELOPMENT OF STANDARD HOOKS IN TENSION. REFER TO TYPICAL DETAILS.
- REINFORCING STEEL TENSION LAP SPLICE (LS) AND EMBEDMENT LENGTHS (TENSION DEVELOPMENT LENGTHS (LD)), UNLESS OTHERWISE INDICATED, SHALL BE AS INDICATED IN THE CAST IN PLACE CONCRETE REINFORCEMENT SCHEDULES ON THIS SHEET.
- MECHANICAL SPLICES SHALL BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR.
- DOWELS SHALL MATCH BAR SIZE AND NUMBER, UNLESS NOTED OTHERWISE.
- WELDED WIRE FABRIC SHALL LAP A MINIMUM OF 12" AND SHALL BE WIRED TOGETHER AT ALL LAPS.
- REINFORCEMENT NOT DETAILED WITH WELDS SHALL NOT BE TACK WELDED.
- INSTALLATION OF REINFORCEMENT SHALL BE AVAILABLE FOR INSPECTION PRIOR TO THE SCHEDULED CONCRETE PLACEMENT.

CAST IN PLACE CONCRETE REINFORCEMENT EPOXY-COATED - MINIMUM EMBEDMENT LENGTH, IN.

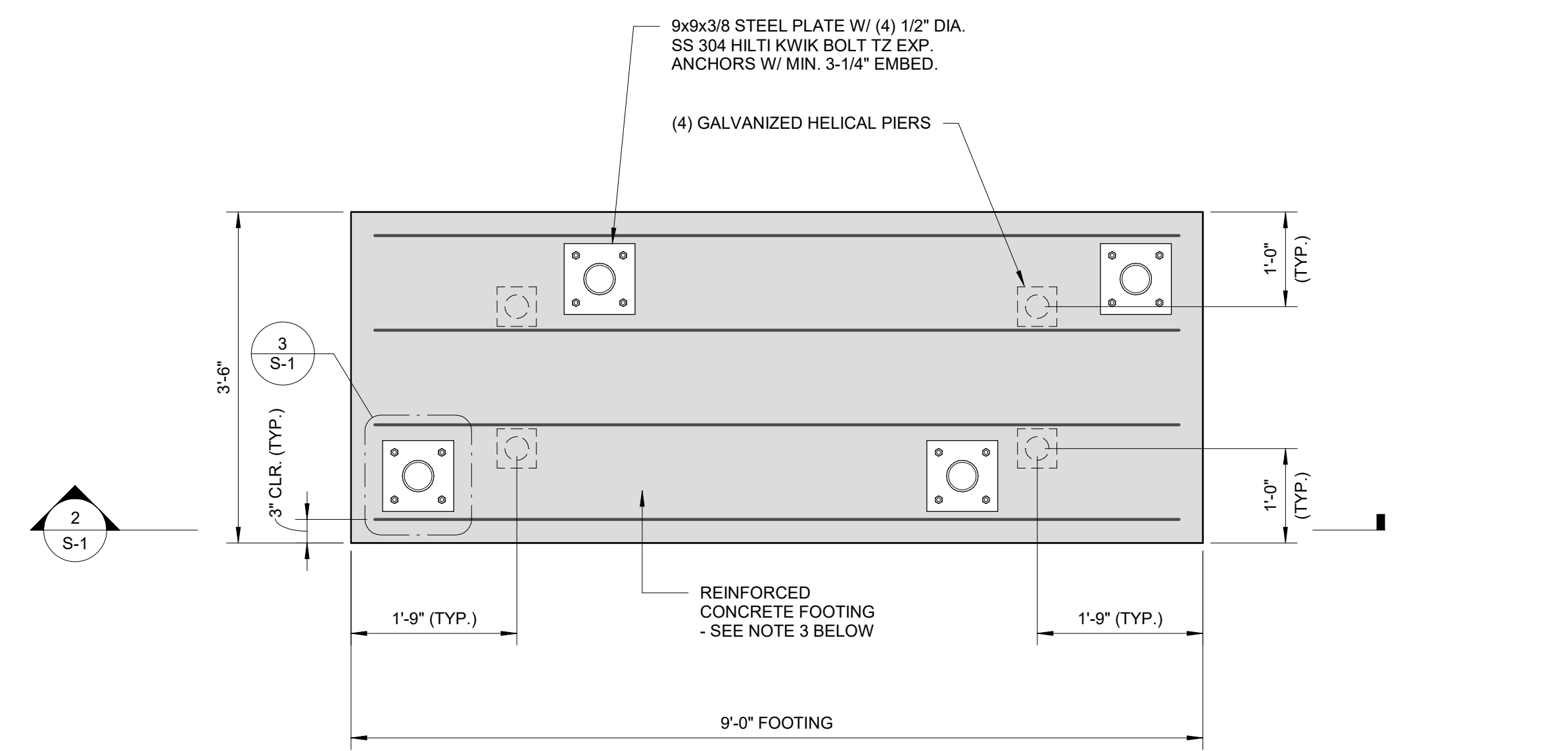
BAR SIZE	TOP BARS	OTHER BARS
4	37	29
5	47	36
6	56	43
7	81	63
8	93	71
9	91	81
10	103	91

CAST IN PLACE CONCRETE REINFORCEMENT EPOXY-COATED - MINIMUM EMBEDMENT LENGTH, IN.

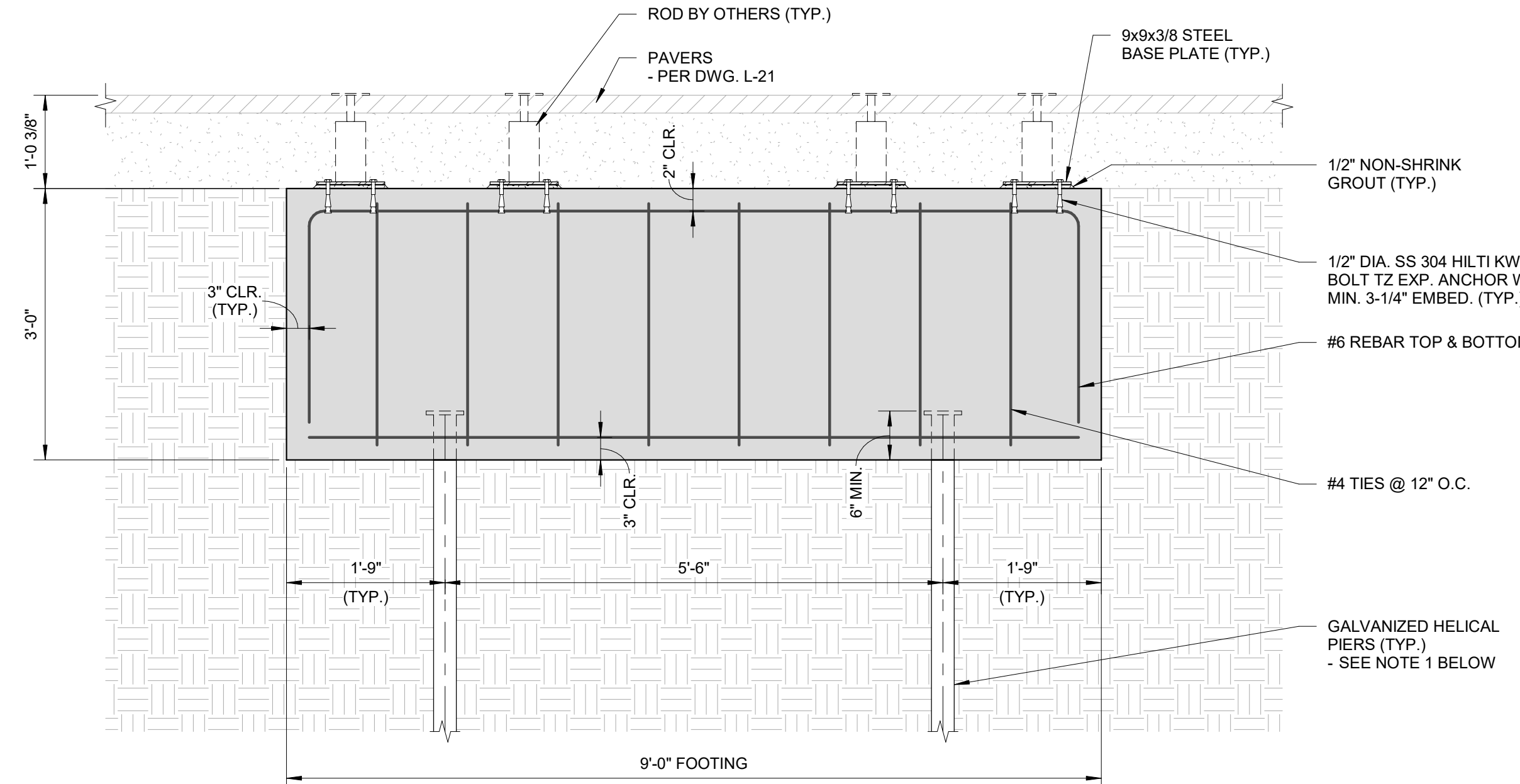
BAR SIZE	TOP BARS	OTHER BARS
4	37	29
5	47	36
6	56	43
7	81	63
8	93	71
9	91	81
10	103	91

**NOTE:**  
A TOP BAR IS DEFINED AS HORIZONTAL REINFORCING SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.

**MINIMUM EMBEDMENT LENGTH AND MINIMUM TENSION LAP SPLICE FOR 4000 PSI CONCRETE**

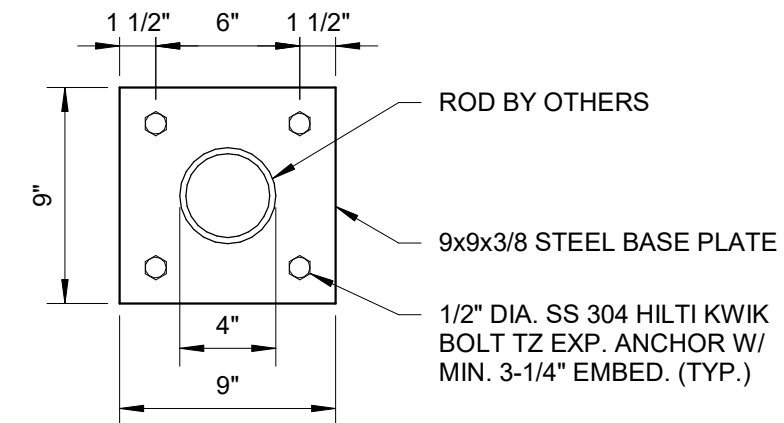


**1 DEER STATUE FOOTING PLAN**  
3/4" = 1'-0"



**2 DEER STATUE FOOTING ELEVATION**  
3/4" = 1'-0"

- NOTES:**
- EACH HELICAL PIER SHALL BE DESIGNED TO SUPPORT AN AXIAL DEAD LOAD OF 5.5 KIPS AND A TEMPORARY AXIAL LOAD OF 8.0 KIPS DUE TO WIND LOADING.
  - CONCRETE SHALL BE NORMAL WEIGHT WITH A SPECIFIED COMPRESSIVE STRENGTH OF 3,500 PSI.
  - REFER TO DRAWING L-1 AND OTHER LANDSCAPE DRAWINGS FOR LOCATION & ORIENTATION OF DEER STATUE.



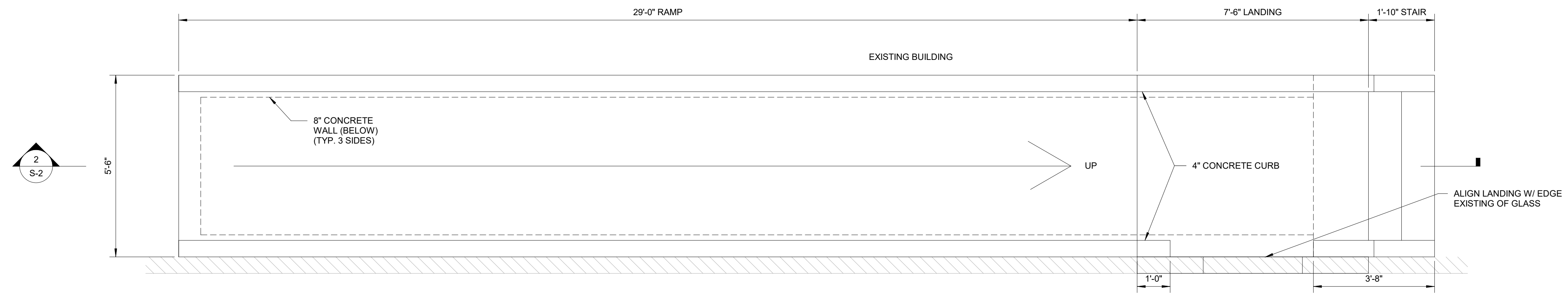
**3 STATUE BASE PLATE DETAIL**  
1 1/2" = 1'-0"

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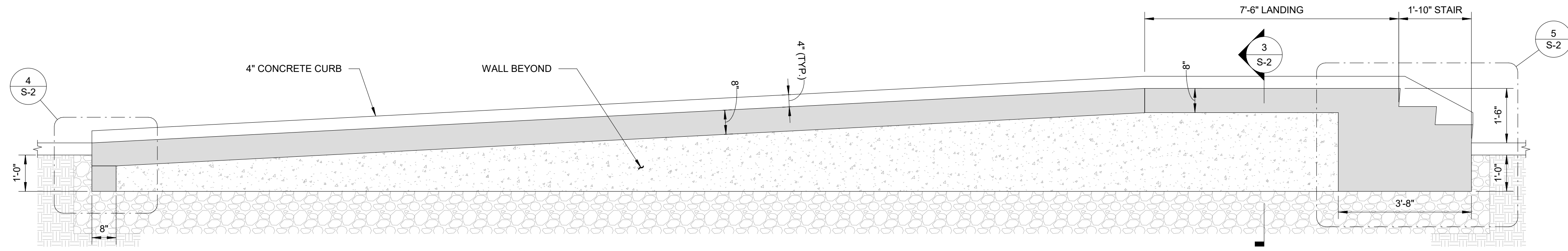
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	Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by KWO Drawn by JC Checked by KWO Approved by CS	No. _____ Description _____ Date _____ REVISIONS	Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing STRUCTURAL NOTES & STATUE FOOTING DETAILS	Sheet S-1 File No. _____
	ISSUED FOR BID			

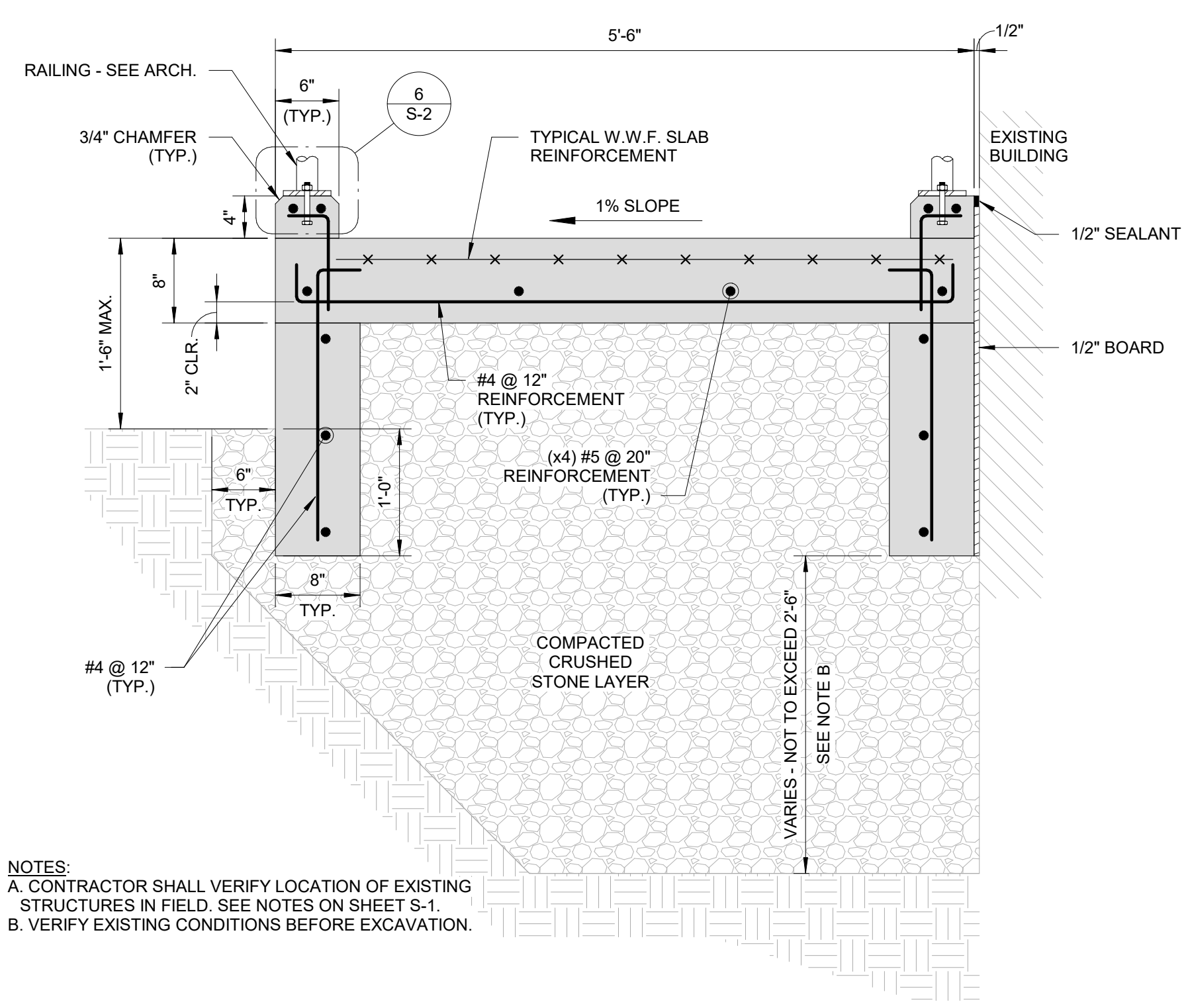




1 RAMP PLAN  
SCALE: 1/2" = 1'-0"

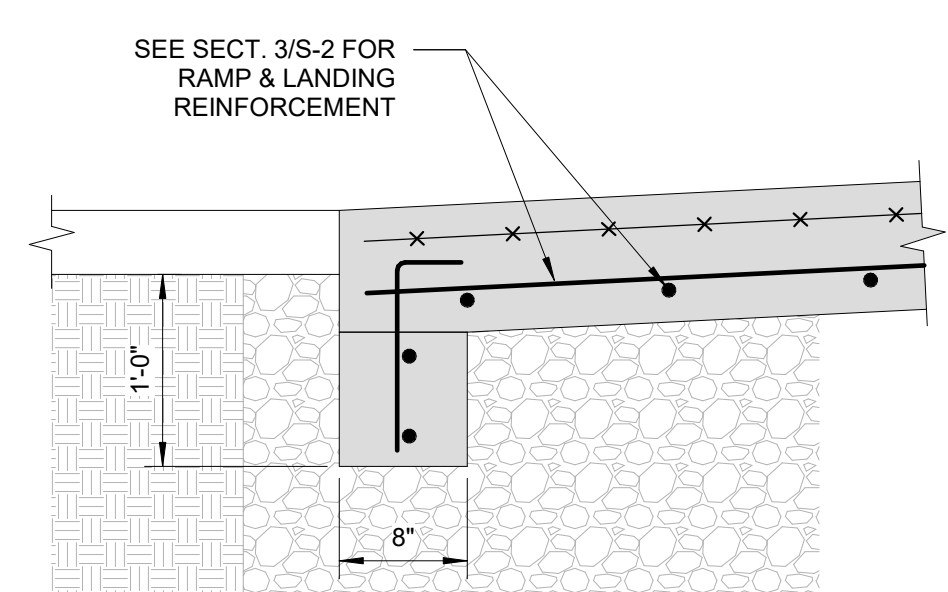


2 RAMP ELEVATION  
SCALE: 1/2" = 1'-0"

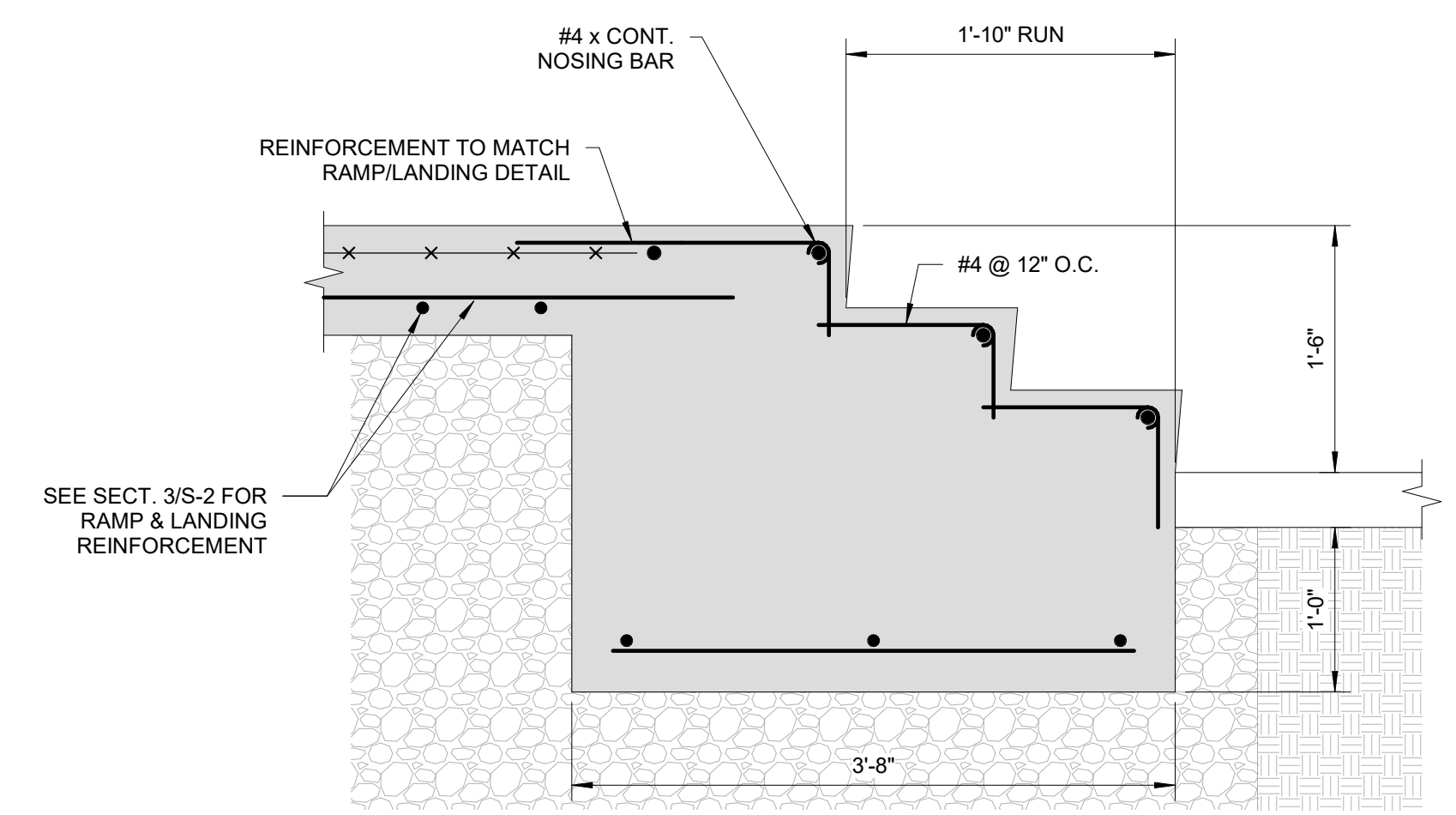


3 RAMP DETAIL  
1" = 1'-0"

NOTES:  
A. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STRUCTURES IN FIELD. SEE NOTES ON SHEET S-1.  
B. VERIFY EXISTING CONDITIONS BEFORE EXCAVATION.

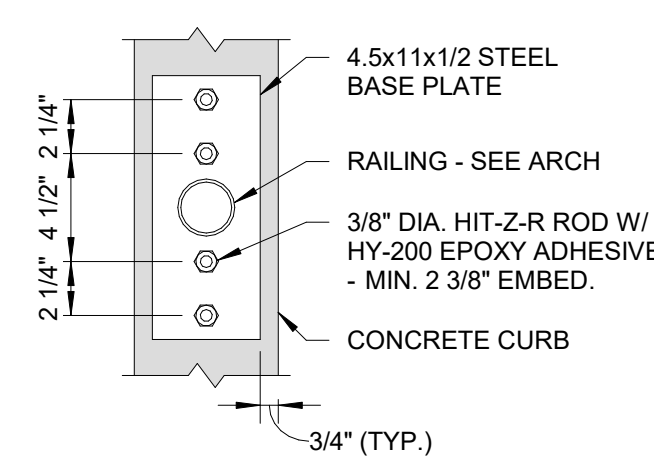


4 RAMP DETAIL  
1" = 1'-0"



5 STAIR DETAIL  
1" = 1'-0"

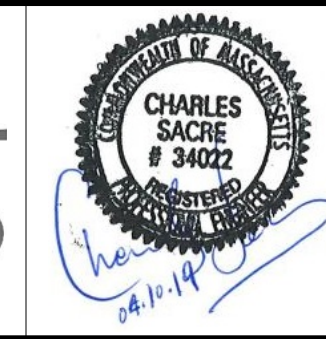
NOTES:  
1. REFER TO CIVIL AND SURVEY DRAWINGS FOR LOCATION AND ELEVATIONS OF RAMP.  
2. REFER TO ARCHITECTURAL DRAWINGS FOR HANDRAIL DETAILS.  
3. SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE: 4,000 PSI.  
4. REFER TO S-1 FOR STRUCTURAL GENERAL NOTES.



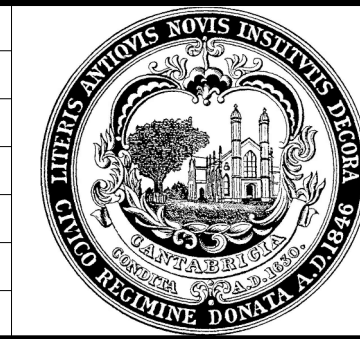
6 HANDRAIL BASE PLATE DETAIL  
1 1/2" = 1'-0"

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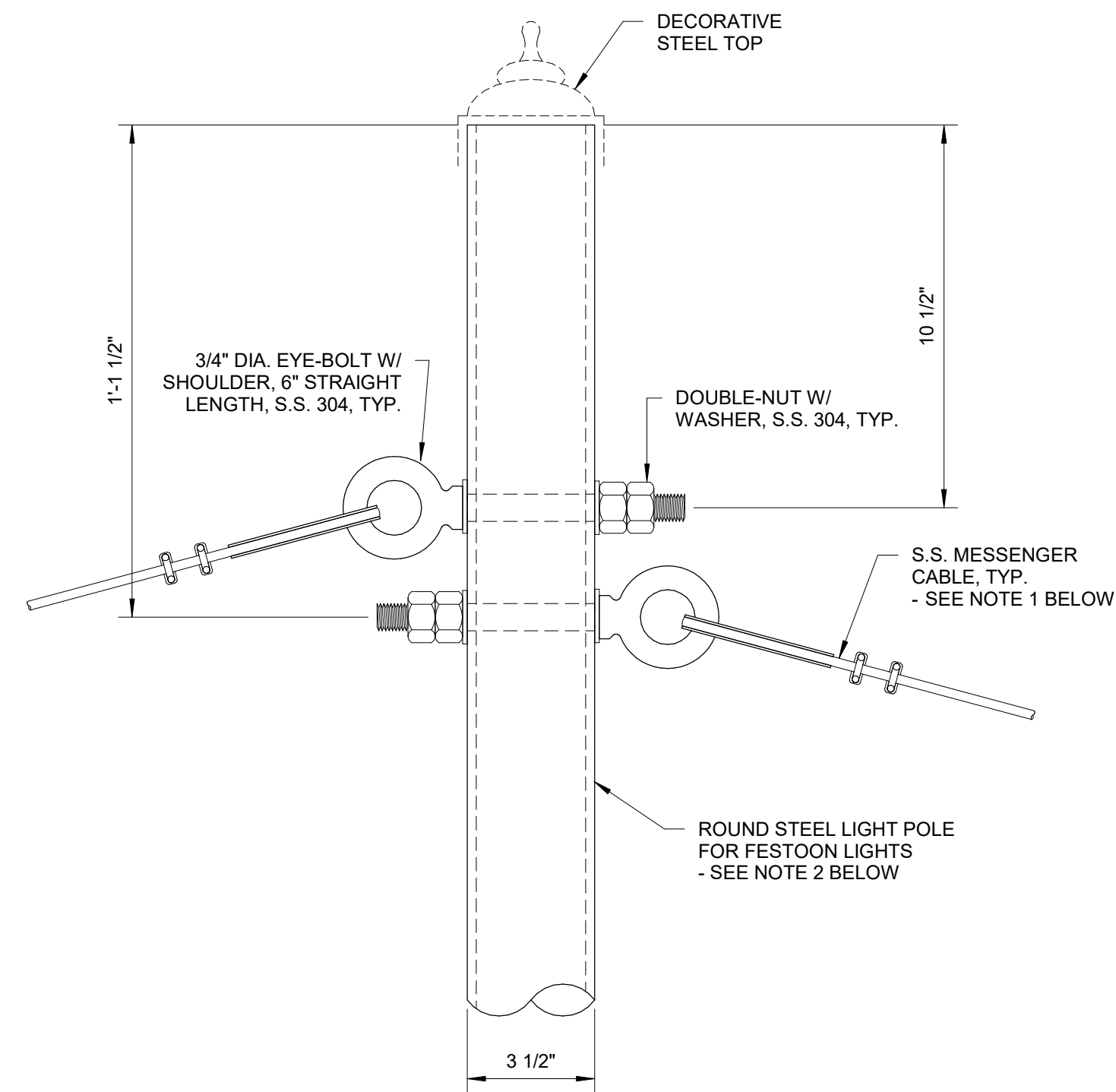


Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	CS			
Drawn by	JC			
Checked by	CS	No.	Description	Date
Approved by	CS		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	S-2
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	
Drawing	RAMP - STRUCTURAL DETAILS		

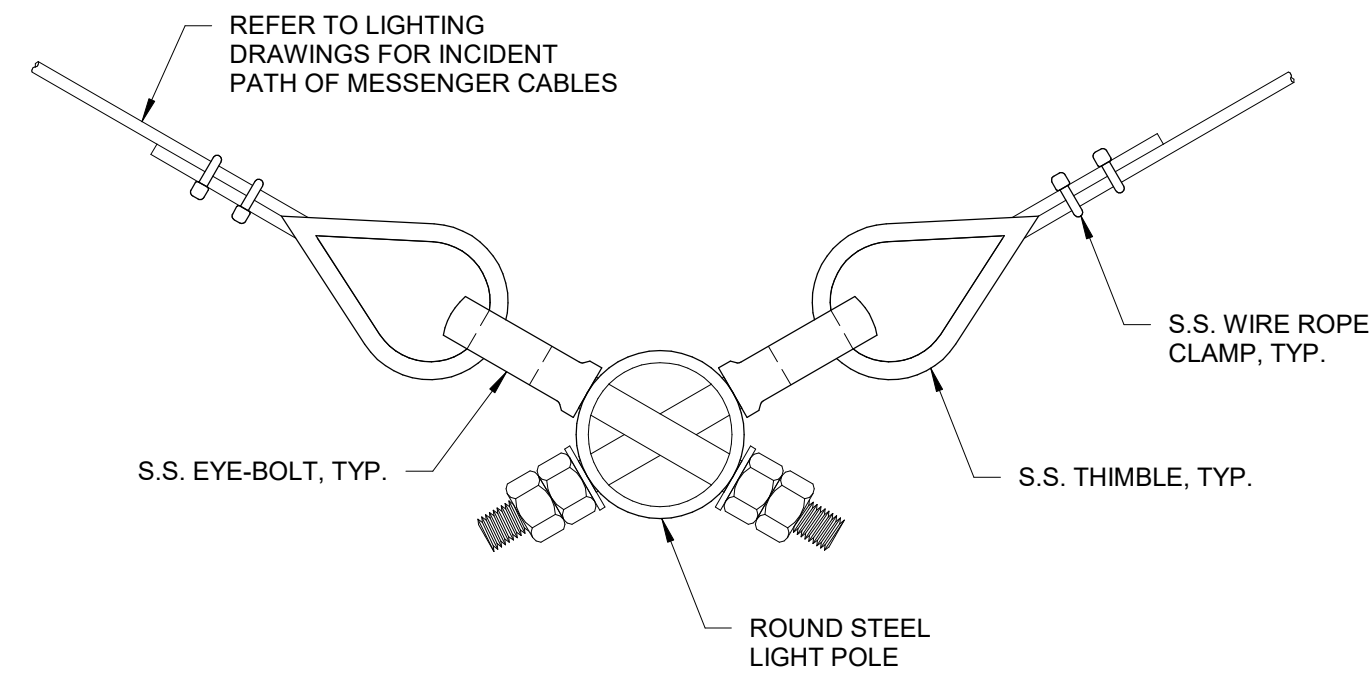




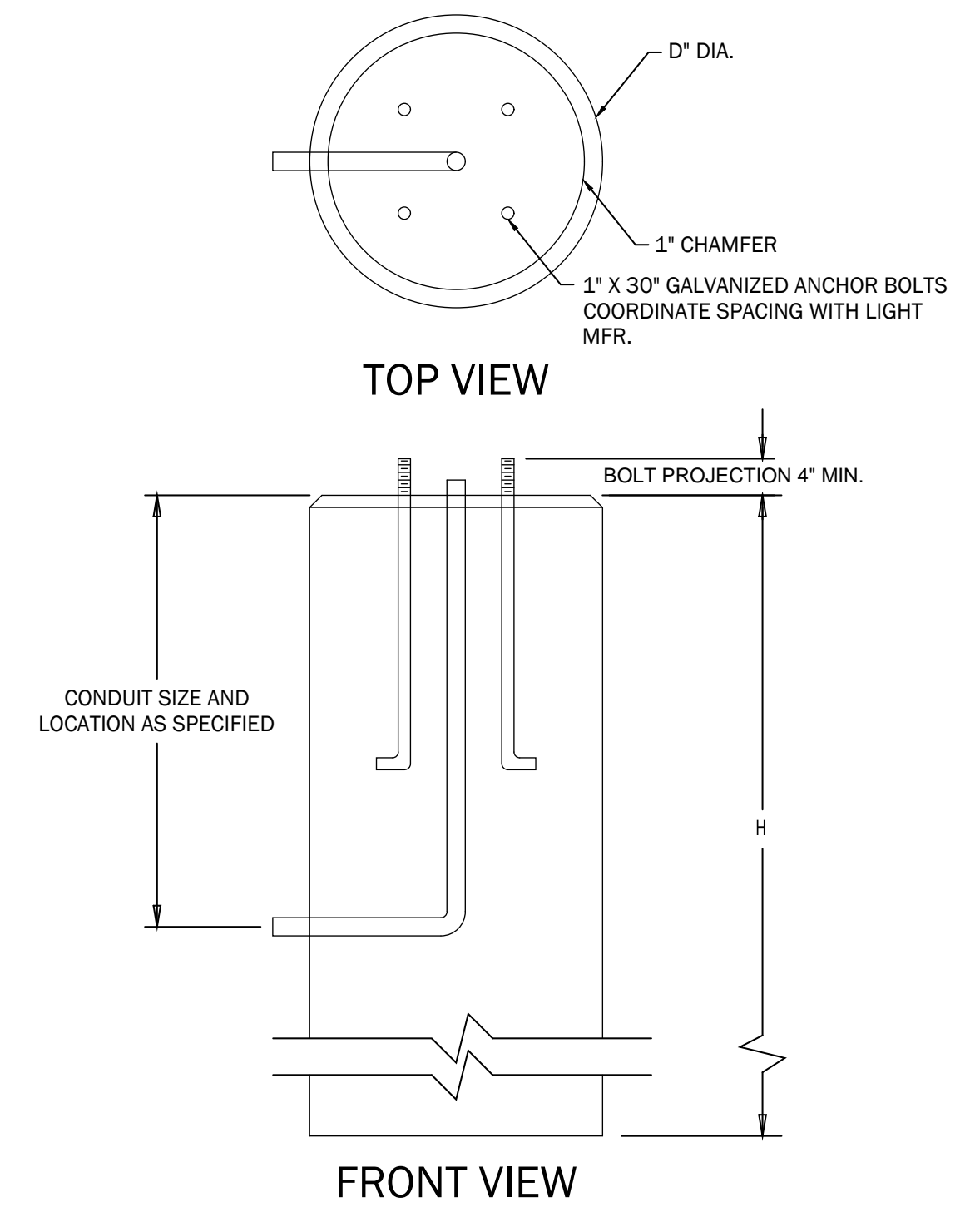
① LIGHT POLE TOP DETAIL - TYPE 2C  
3" = 1'-0"

**NOTES:**

1. MESSENGER CABLES SHALL BE STRUNG IN ACCORDANCE WITH STRINGING CHARTS PROVIDED.
2. REFER TO DRAWINGS L-1 AND E-2 FOR TYPE 2C POLE LOCATIONS.



② LIGHT POLE PLAN DETAIL - TYPE 2C  
3" = 1'-0"



③ PRECAST LIGHT STANDARD FOUNDATION  
NOT TO SCALE

**NOTES:**

1. FOR LIGHT POLE TYPES 2C: D=20-INCHES; H=48-INCHES
2. NORMAL WEIGHT CONCRETE SPECIFIED STRENGTH OF 4000 PSI AT 28 DAYS.
3. REINFORCING: (4) #4 VERTICALLY AND #3 STIRRUPS @ 12" O.C. HORIZONTALLY (NOT SHOWN).
4. REFER TO DRAWINGS L-1 AND E-2 FOR TYPE 2C POLE LOCATIONS.

**MESSENGER CABLE STRINGING CHART - 28 FEET**

CABLE: 3/16" DIA., 1x7, S.S. 302/304, 4700# RATED STRENGTH

RULING SPAN: 28 FEET	AMBIENT TEMPERATURE (°F)			
	0	30	60	90
INITIAL SAG (IN.)	16.5"	17.0"	17.8"	18.4"
INITIAL TENSION (LBS.)	6.5	6.3	6.1	5.9
FINAL SAG (IN.)	16.9"	17.5"	18.1"	18.7"
FINAL TENSION (LBS.)	39	37	36	35

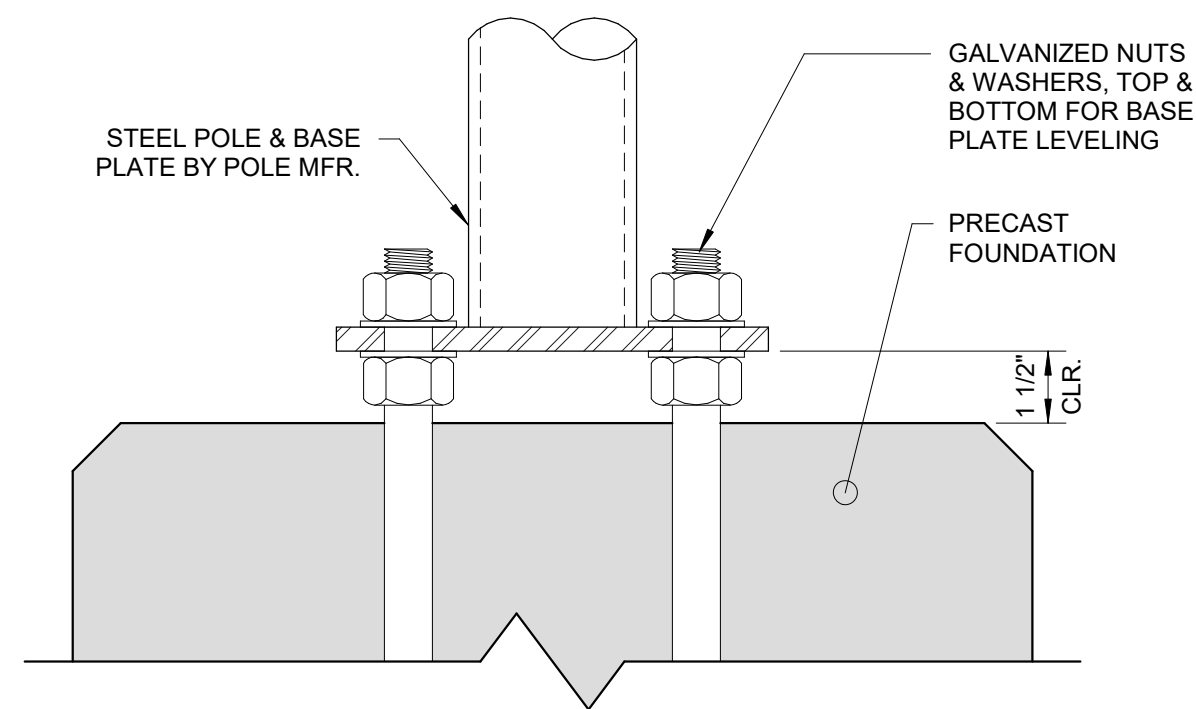
**MESSENGER CABLE STRINGING CHART - 20 FEET**

CABLE: 3/16" DIA., 1x7, S.S. 302/304, 4700# RATED STRENGTH

RULING SPAN: 20 FEET	AMBIENT TEMPERATURE (°F)			
	0	30	60	90
INITIAL SAG (IN.)	17.2"	17.5"	17.8"	18.1"
INITIAL TENSION (LBS.)	3.3	3.3	3.2	3.1
FINAL SAG (IN.)	17.3"	17.6"	17.9"	18.2"
FINAL TENSION (LBS.)	19.7	19.4	19	18.6

**NOTES:**

1. THESE TABLES PROVIDE THE INITIAL SAG AND TENSION VALUES THE MESSENGER CABLE SHALL BE STRUNG TO UPON INSTALLATION.
2. THE FINAL SAG AND TENSIONS PROVIDED ARE THE APPROXIMATE VALUES AFTER THE FESTOON LIGHT CABLE AND BULBS ARE LASHED TO THE MESSENGER CABLE.
3. THE INITIAL SAG TO BE USED VARIES WITH THE AMBIENT TEMPERATURE ON THE DAY OF INSTALLATION. THE SAG SHALL BE SELECTED FROM THE ABOVE TABLE FOR THE TEMPERATURE NEAREST THE AMBIENT TEMPERATURE.



④ LIGHT POLE BASE DETAIL - TYPE 2C  
3" = 1'-0"

**NOTES:**

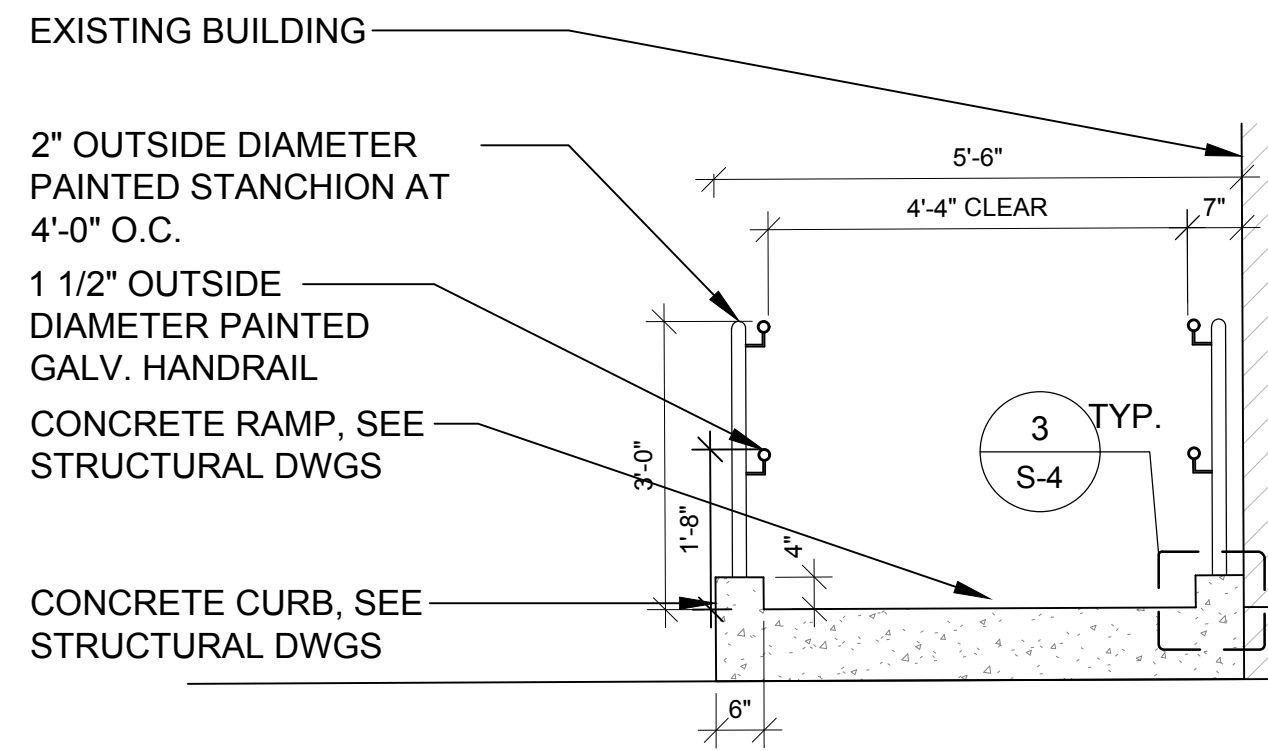
1. TO ALLOW FOR PROPER DRAINAGE DO NOT PLACE GROUT BENEATH BASE PLATE.

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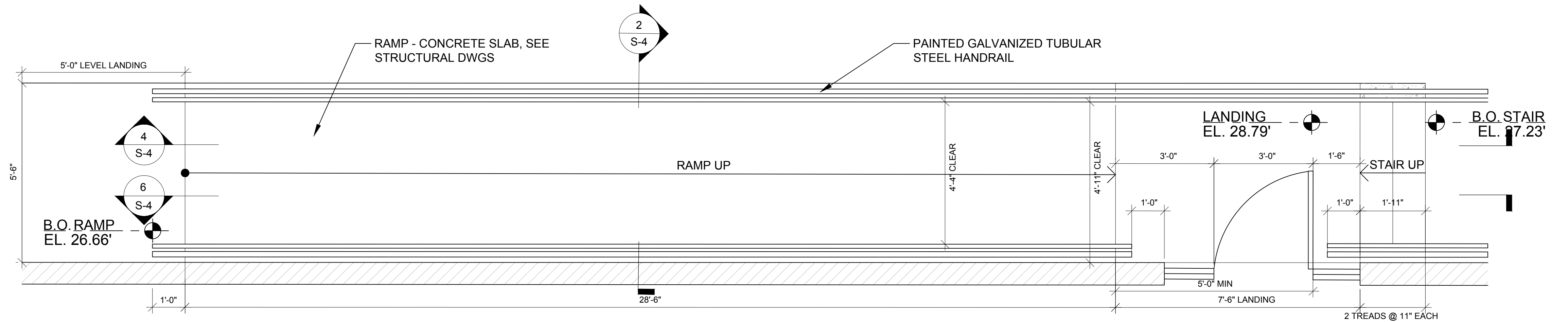
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						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>S-3</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	FESTOON LIGHT POLE - STRUCTURAL DETAILS	File No.
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						Drawn by	ML						
						Checked by	KWO	No.	Description	Date			
						Approved by	CS		REVISIONS				

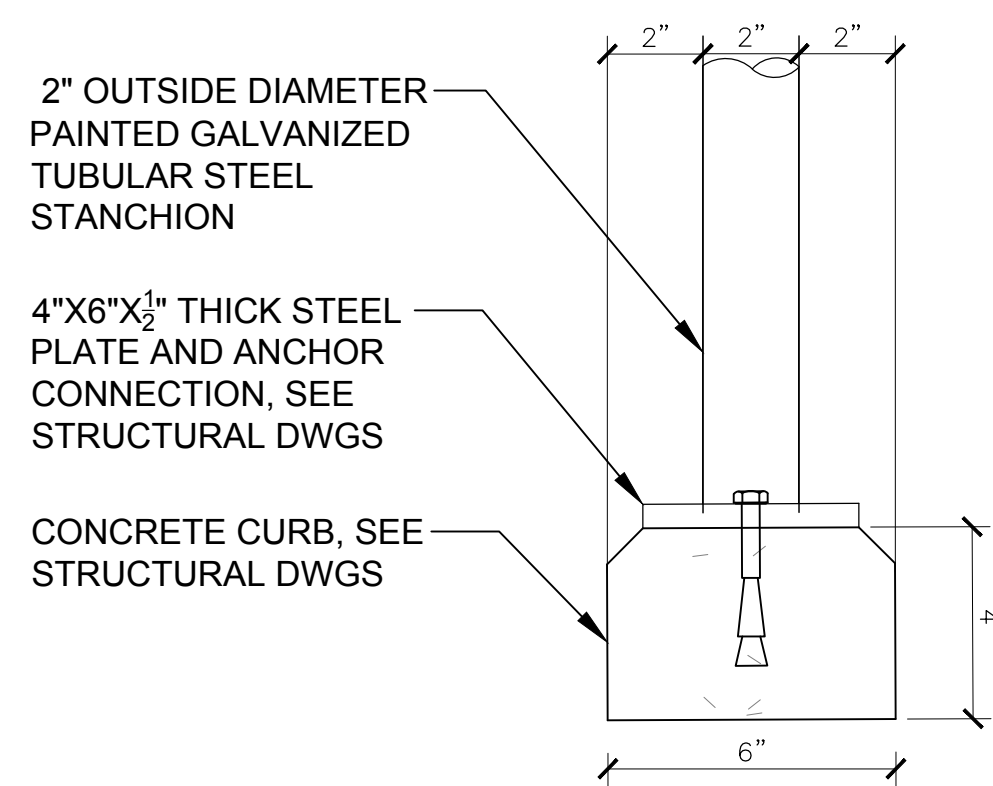




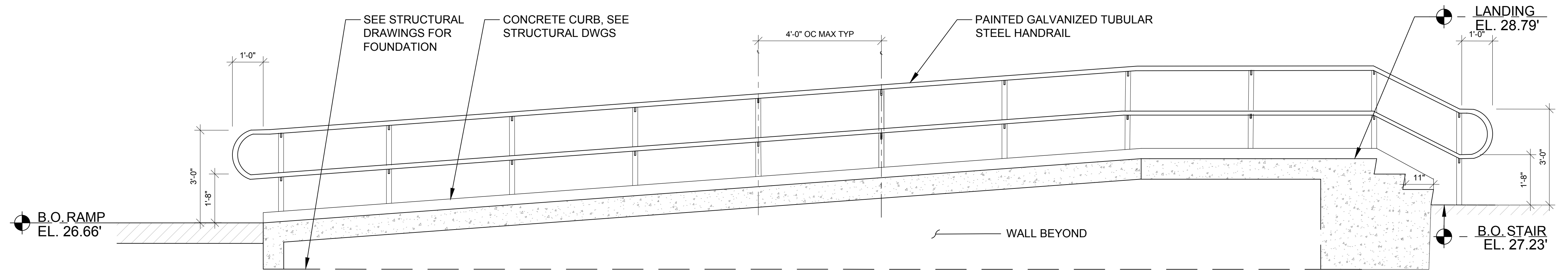
**2 RAMP SECTION**  
SCALE: 1/2" = 1'-0"



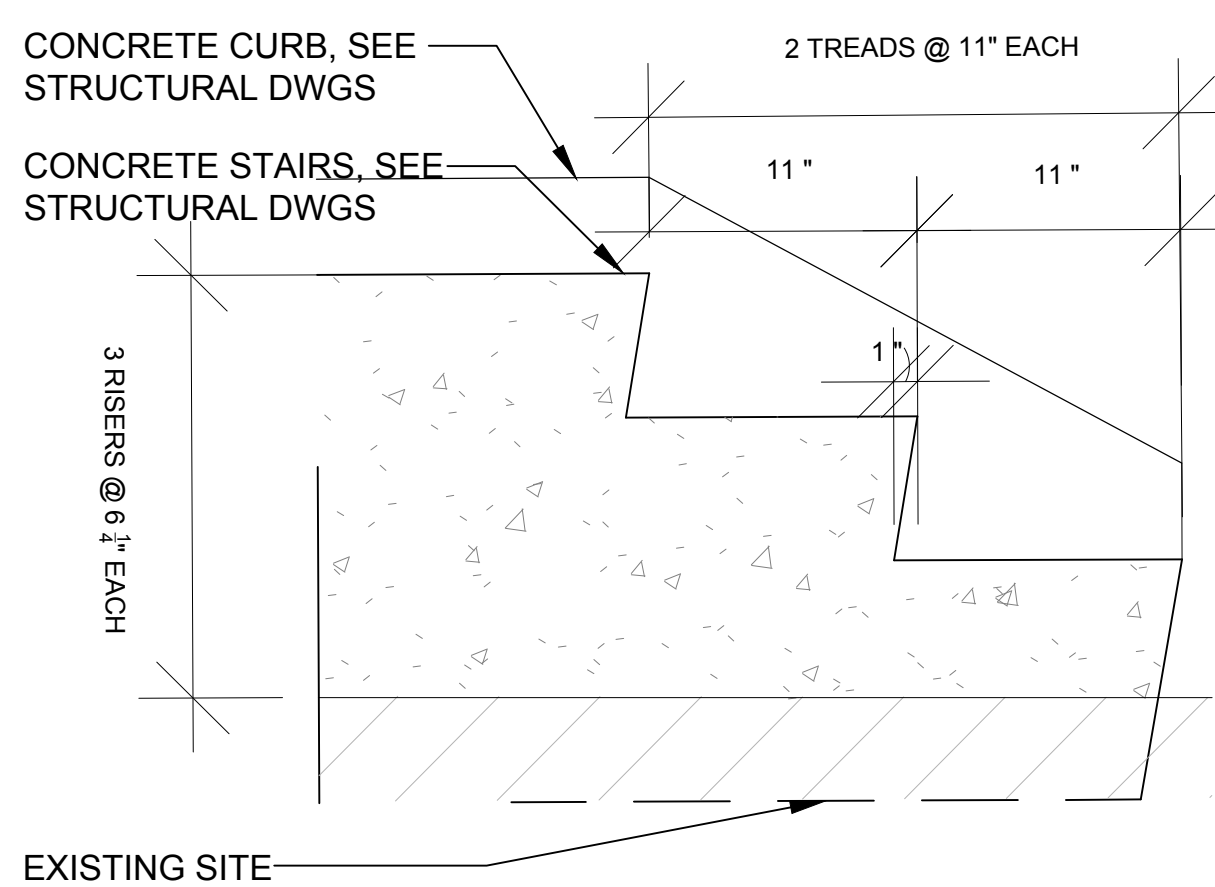
**1 RAMP PLAN**  
SCALE: 1/2" = 1'-0"



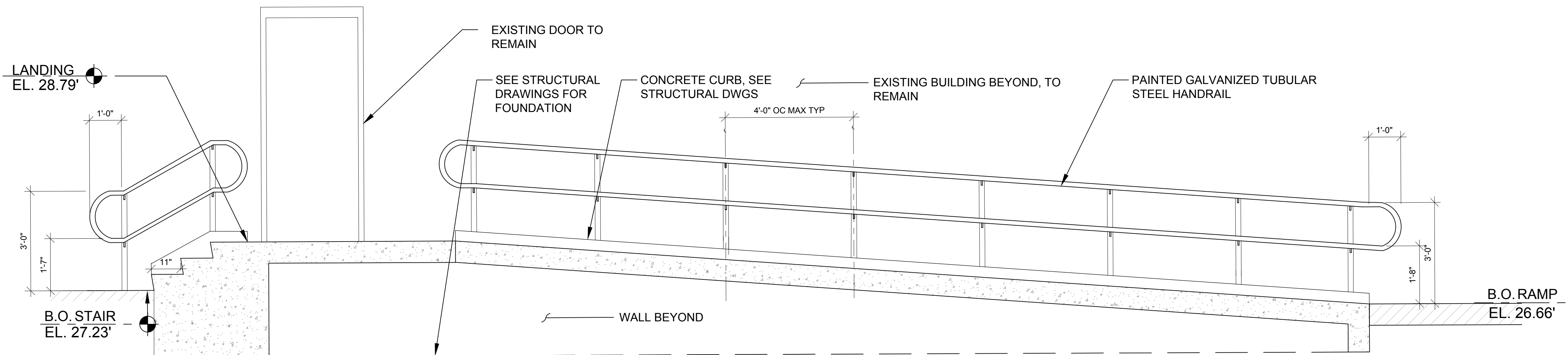
**3 EMBEDDED POST DETAIL**  
SCALE: 3" = 1'-0"



**4 RAMP NORTH LONGITUDINAL SECTION**  
SCALE: 1/2" = 1'-0"



**5 STAIR DETAIL**  
SCALE: 1-1/2" = 1'-0"

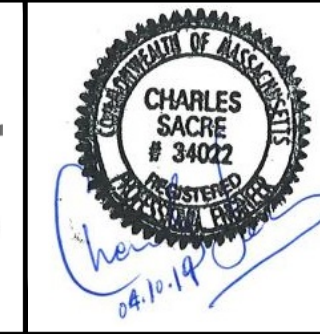


**6 RAMP SOUTH LONGITUDINAL SECTION**  
SCALE: 1/2" = 1'-0"

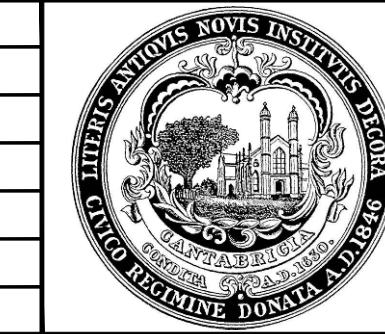
**NOTE:**  
1. CONTRACTOR TO PROVIDE A STAMPED HANDRAIL AND GUARDRAIL SHOP DRAWING AND CALCULATIONS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS.

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CAD FILE: G:\clients\cambridge\_MA\20170208\_005A - Inman Square Intersection Drawings\Production Drawings\Springfield St Parking Lot Ramp Design.dwg LAYOUT\_C-X PLOTTED: 4/10/2019 3:39 PM BY: warren.randle



Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KP			
Drawn by	WAR			
Checked by	SB	No.	Description	Date
Approved by	SB		REVISIONS	

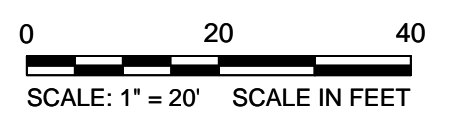
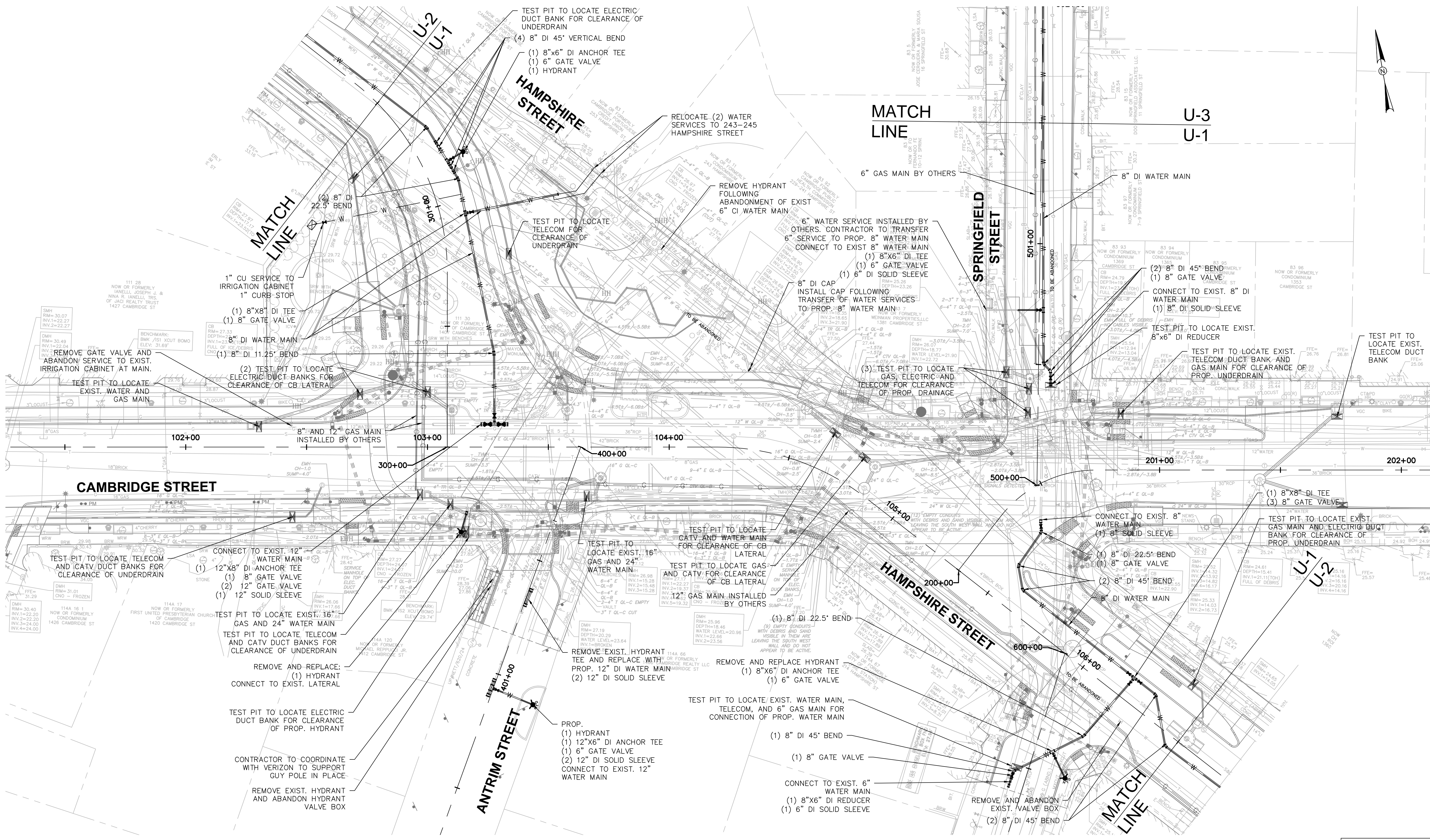


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	SPRINGFIELD STREET PARKING LOT HANDRAIL DESIGN

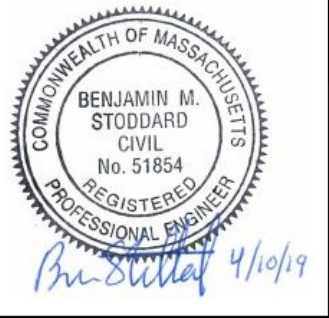
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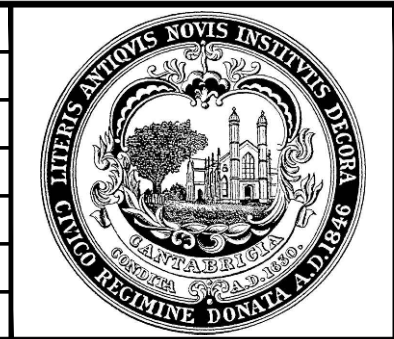
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Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KEA			
Drawn by	KEA			
Checked by	BMS	No.	Description	Date
Approved by	BMS		REVISIONS	

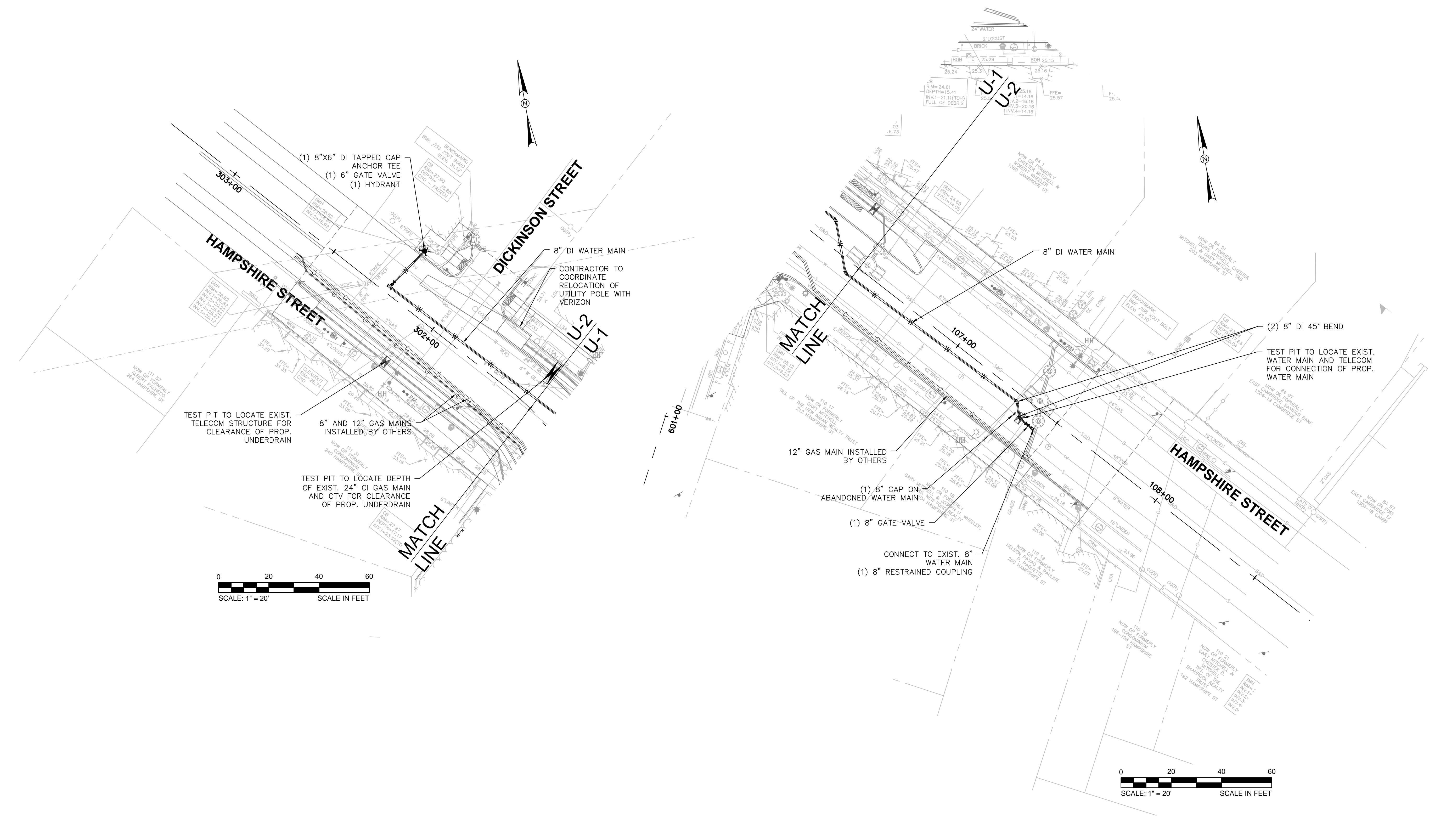


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	UTILITY - WATER MAIN SHEET 1 OF 3

Sheet	U-1
File No.	8514



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						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>U-2</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	UTILITY - WATER MAIN SHEET 2 OF 3	File No. <b>8514</b>
						Designed by	KEA						
						Drawn by	KEA						
						Checked by	BMS	No.	Description	Date			
						Approved by	BMS		REVISIONS				



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 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. REMOVE CHLORINATION TAP FOLLOWING TESTING AND ACCEPTANCE.
- WATER GATES, BOXES, 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" COPPER SERVICES. AS SHOWN IN TABLE 1 ON THIS SHEET, THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE NINE (9) KNOWN LEAD SERVICES AND SIX (6) KNOWN 3/4" SERVICES IN THE PROJECT AREA. 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" COPPER SERVICES. THE CITY OF CAMBRIDGE WATER DEPARTMENT HAS INDICATED THAT THERE ARE FOURTEEN (14) SERVICES GREATER THAN 1" IN DIAMETER. ADDITIONAL LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
- BENDS TO BE ADDED AS NEEDED FOR HORIZONTAL AND VERTICAL GRADE ADJUSTMENT CONFLICTS WITH UNFORESEEN CONDITIONS.

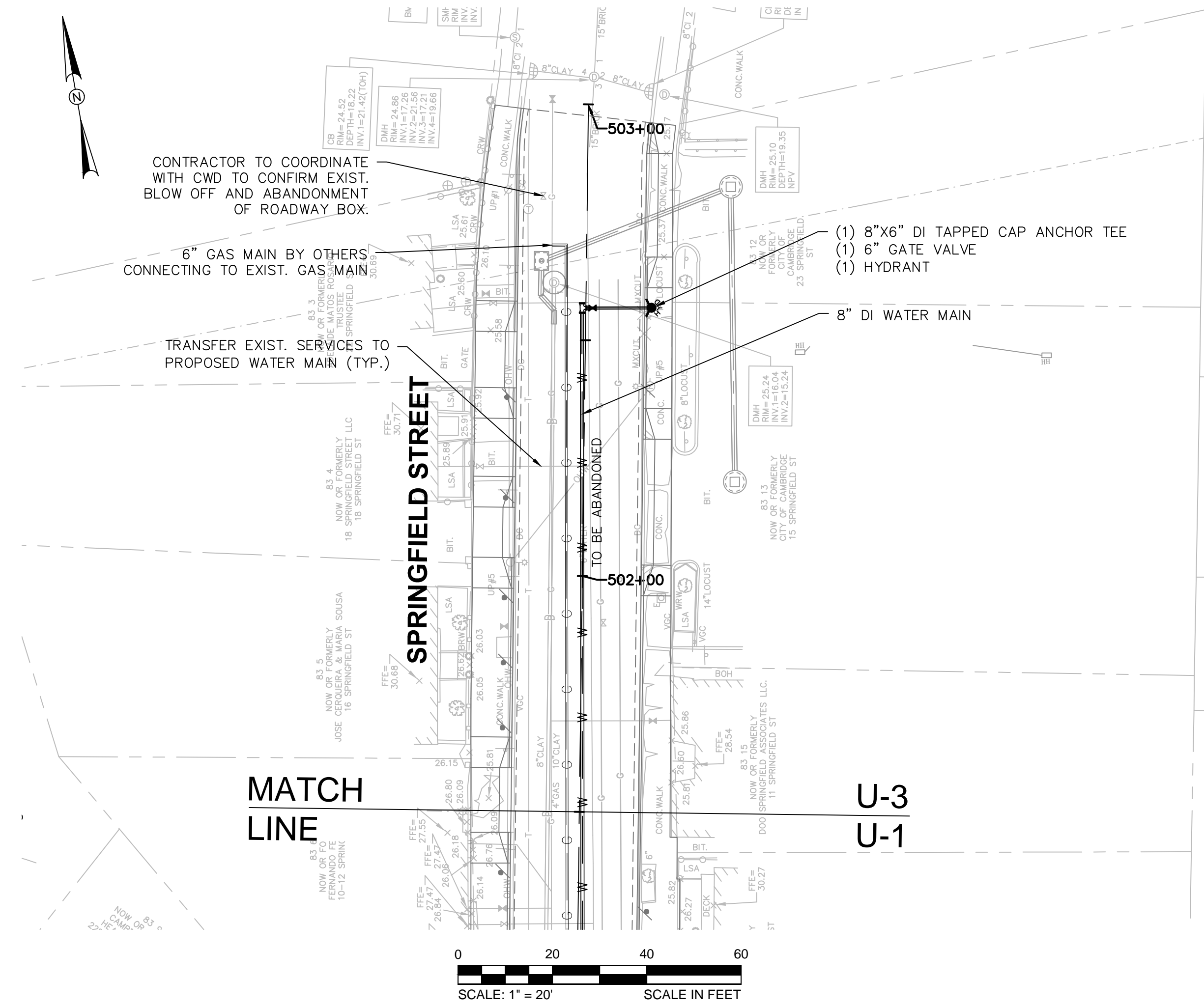


TABLE 1		
EXISTING WATER SERVICE INFORMATION		
CAMBRIDGE STREET STREET NUMBER	SIZE (IN.)	MATERIAL
1431	1-1/4	LEAD LINED
1429	1-1/4	COPPER
1427	1-1/4	LEAD LINED
1423	1-1/2	LEAD LINED
1418	2	COPPER
1398-1400	UNKNOWN	UNKNOWN
1384	2	COPPER
1385	1	COPPER
1378	1	COPPER
1354	1	LEAD LINED
1353-1369	1-1/2	COPPER
1343	3/4	LEAD LINED
1361	1-1/2	COPPER
1343	3/4	LEAD LINED
1337	3/4	LEAD LINED
1335-1341	2	COPPER
1328-30-34	1-1/2	BRASS
HAMPSHIRE STREET STREET NUMBER	SIZE (IN.)	MATERIAL
244-258	2	BRASS
251	UNKNOWN	UNKNOWN
243-245	1-1/2	COPPER
237	1-1/2	COPPER
225	1	COPPER
212	UNKNOWN	UNKNOWN
212	UNKNOWN	UNKNOWN
202-204	1-1/2	COPPER
SPRINGFIELD STREET STREET NUMBER	SIZE (IN.)	MATERIAL
7-9	1	COPPER
10-12-12A	3/4	COPPER
11	1-1/2	COPPER
16	3/4	LEAD LINED
18	3/4	LEAD LINED
22	1	COPPER

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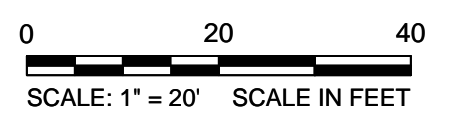
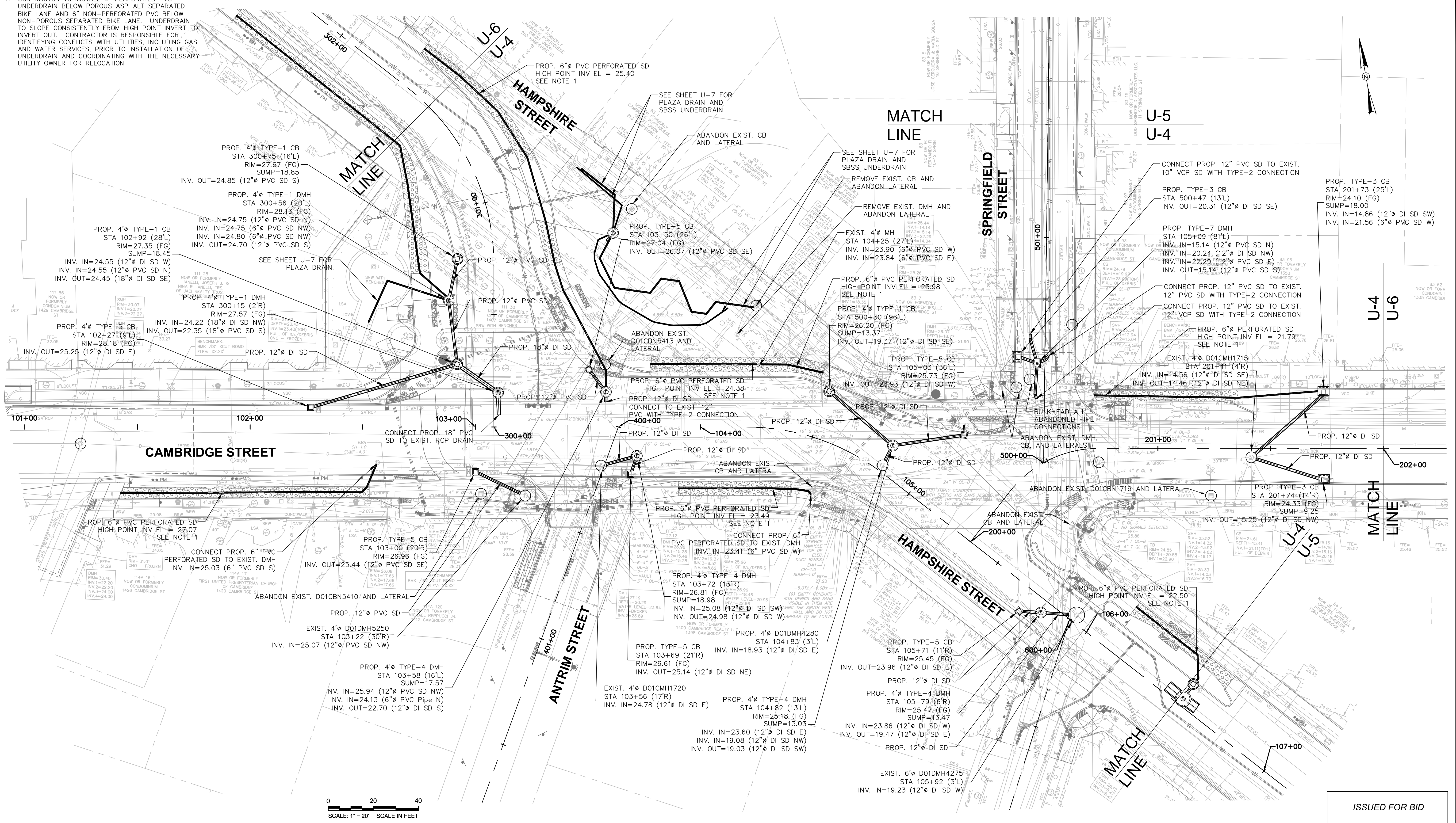
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						Scale AS NOTED				Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>U-3</b>
						Date APRIL 2019				Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No. 20170208.005A				Drawing UTILITY - WATER MAIN SHEET 3 OF 3	File No. <b>8514</b>
						Designed by KEA					
						Drawn by KEA					
						Checked by BMS	No.	Description			
						Approved by BMS		REVISIONS			



NOTES:

- CONTRACTOR TO INSTALL 6" PERFORATED PVC UNDERDRAIN BELOW POROUS ASPHALT SEPARATED BIKE LANE AND 6" NON-PERFORATED PVC BELOW NON-POROUS SEPARATED BIKE LANE. UNDERDRAIN TO SLOPE CONSISTENTLY FROM HIGH POINT INVERT TO INVERT OUT. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH UTILITIES, INCLUDING GAS AND WATER SERVICES. PRIOR TO INSTALLATION OF UNDERDRAIN AND COORDINATING WITH THE NECESSARY UTILITY OWNER FOR RELOCATION.



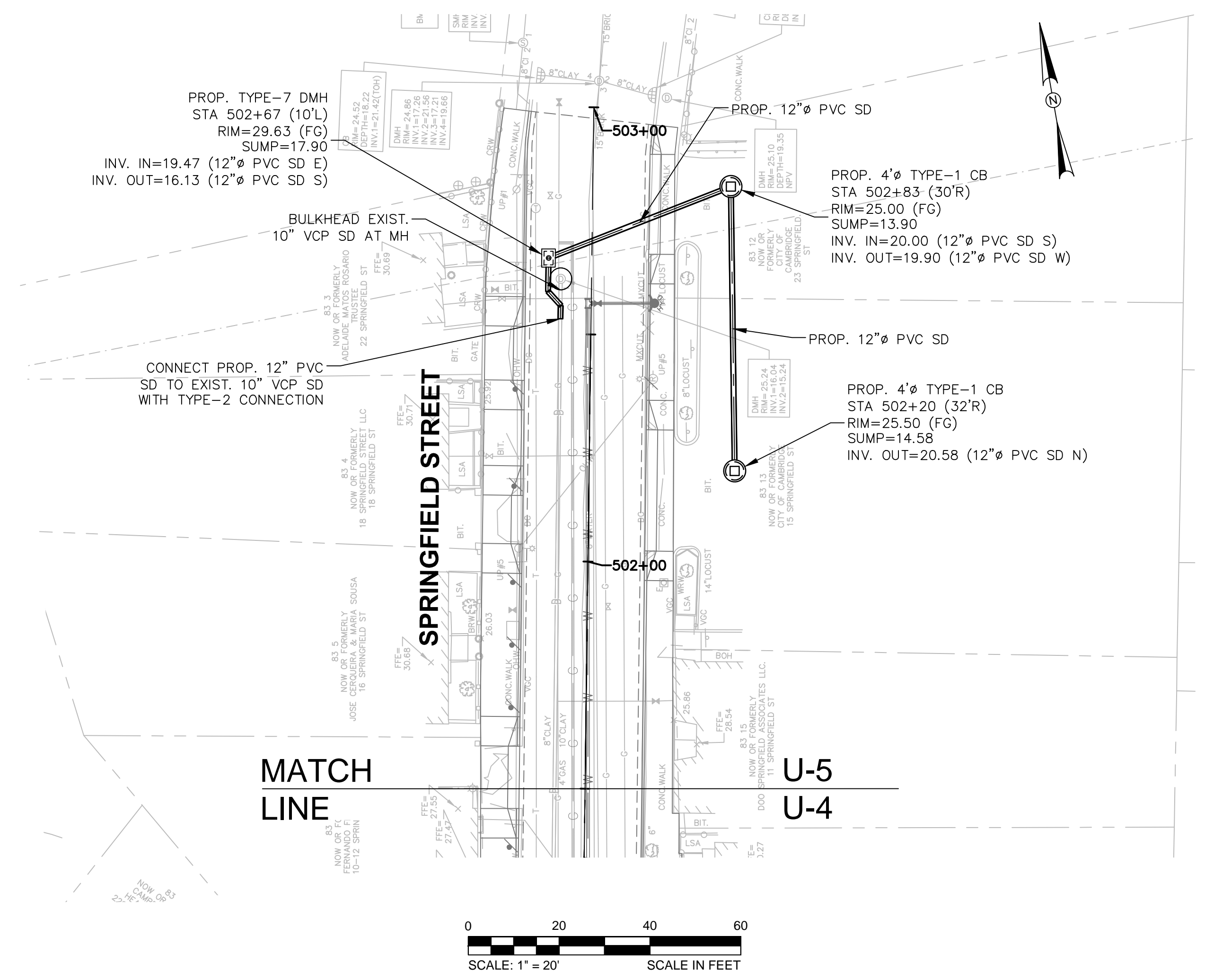
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File No.	8514																																



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Bright People. Right Solutions.

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DESIGN

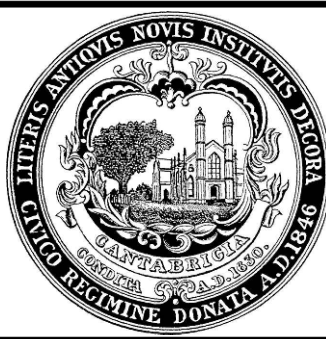
**MCMAHON**  
TRANSPORTATION ENGINEERS & PLANNERS

**Stantec**

**kmdg**

BENJAMIN M. STODDARD  
CIVIL  
No. 51854  
REGISTERED PROFESSIONAL ENGINEER  
4/10/19

Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
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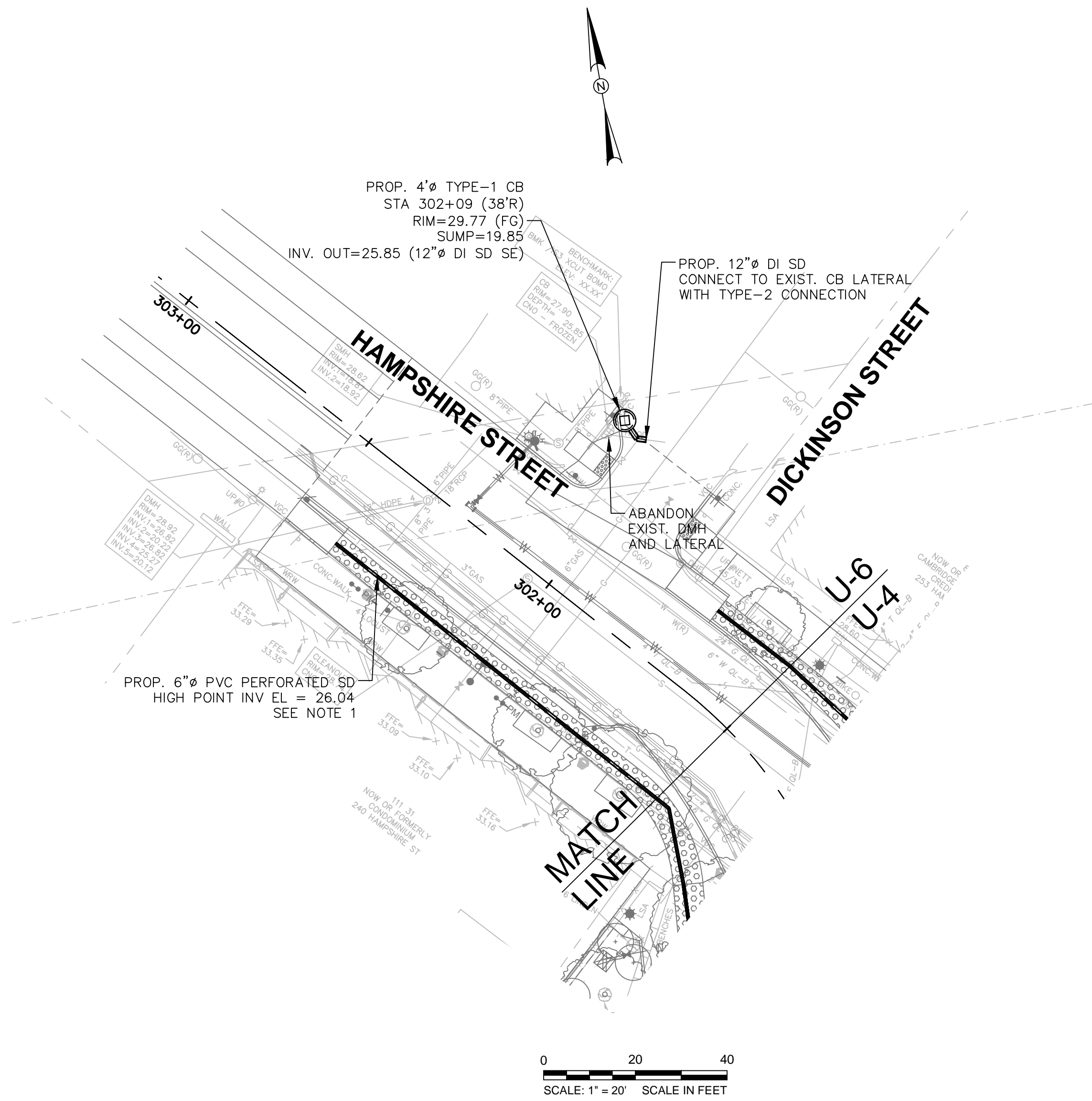


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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	UTILITY - DRAINAGE SHEET 2 OF 3

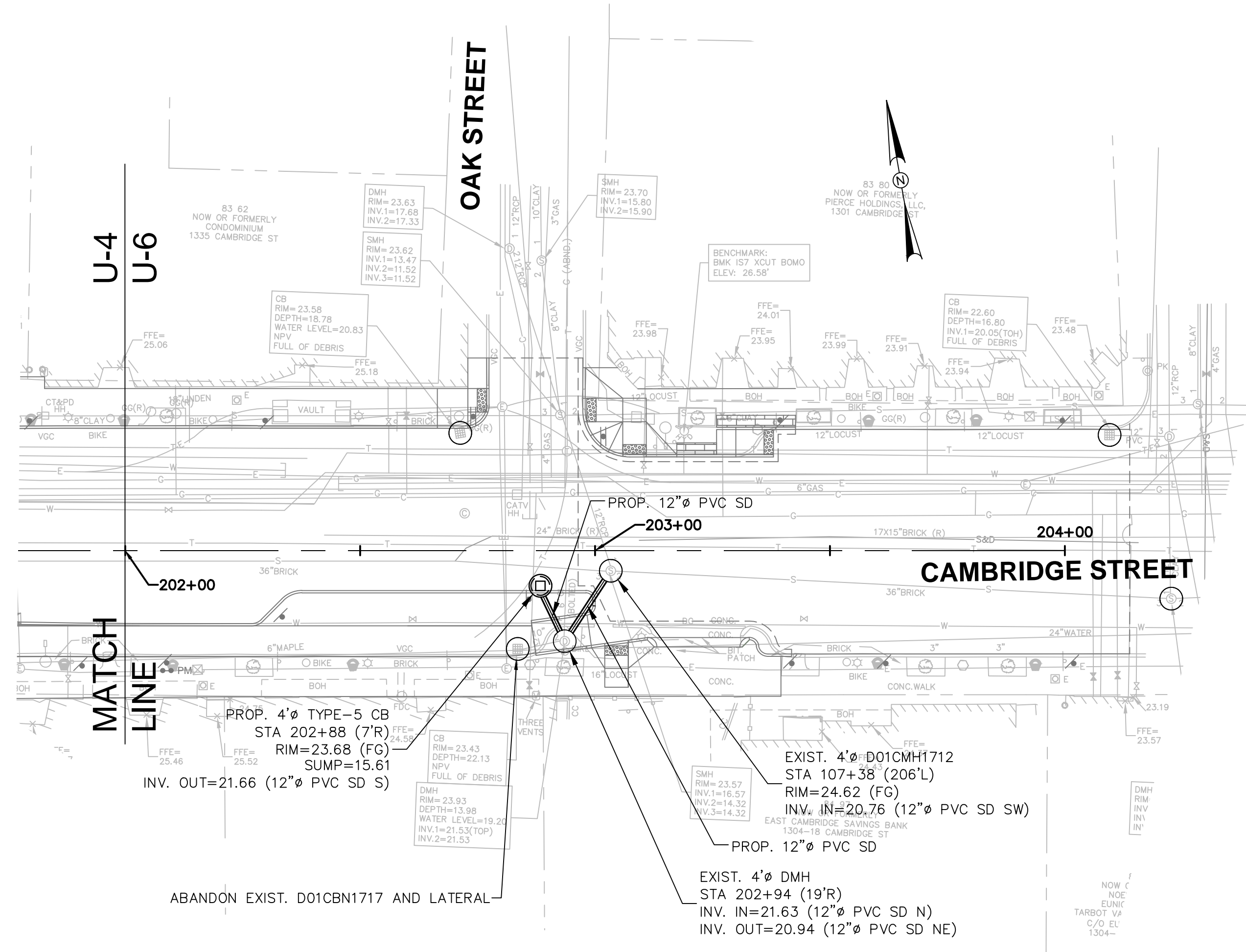
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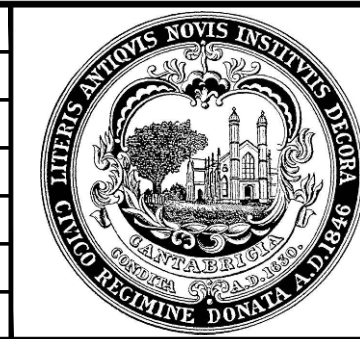


0 20 40  
SCALE: 1" = 20' SCALE IN FEET

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Scale	AS NOTED			
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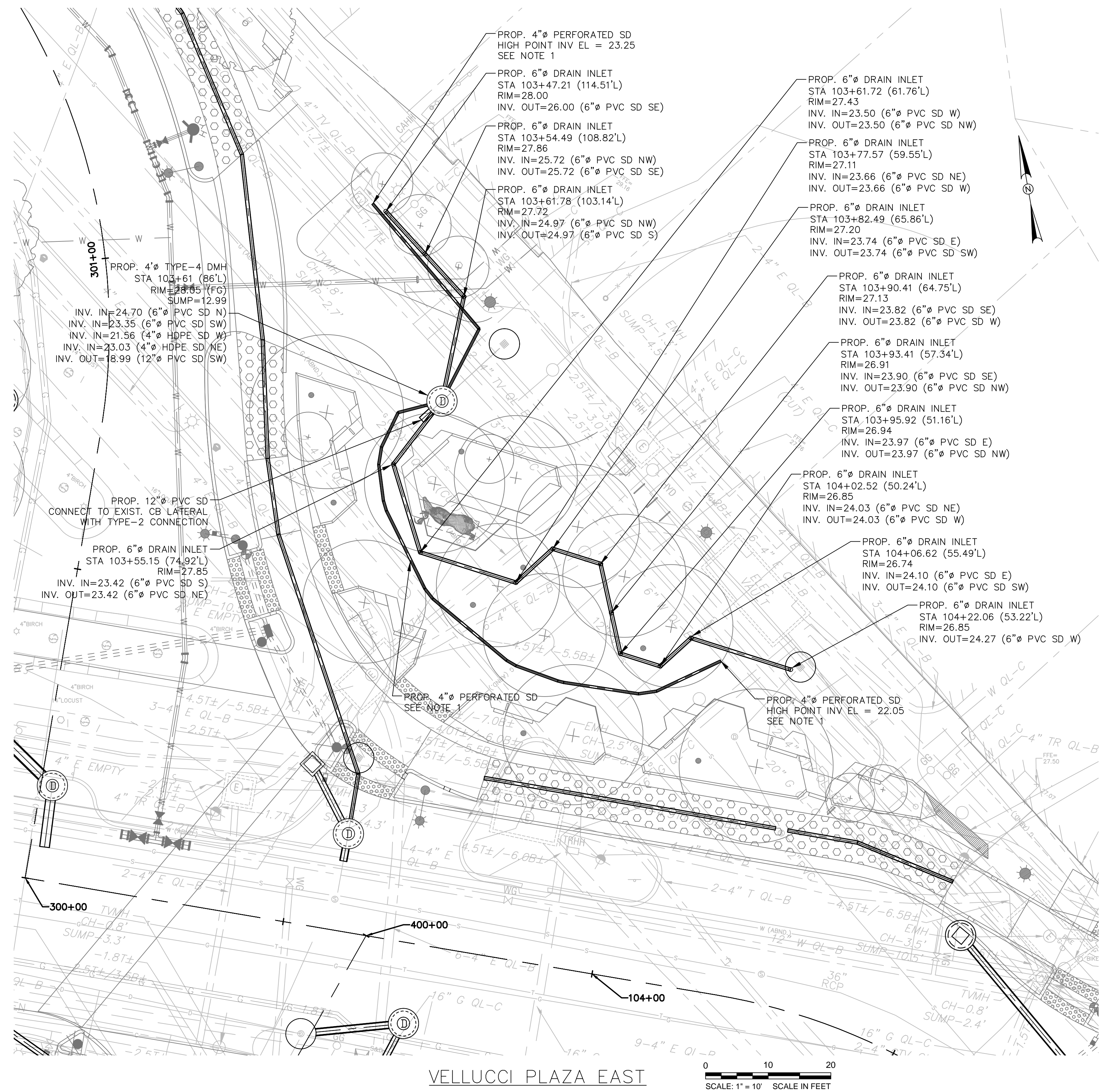
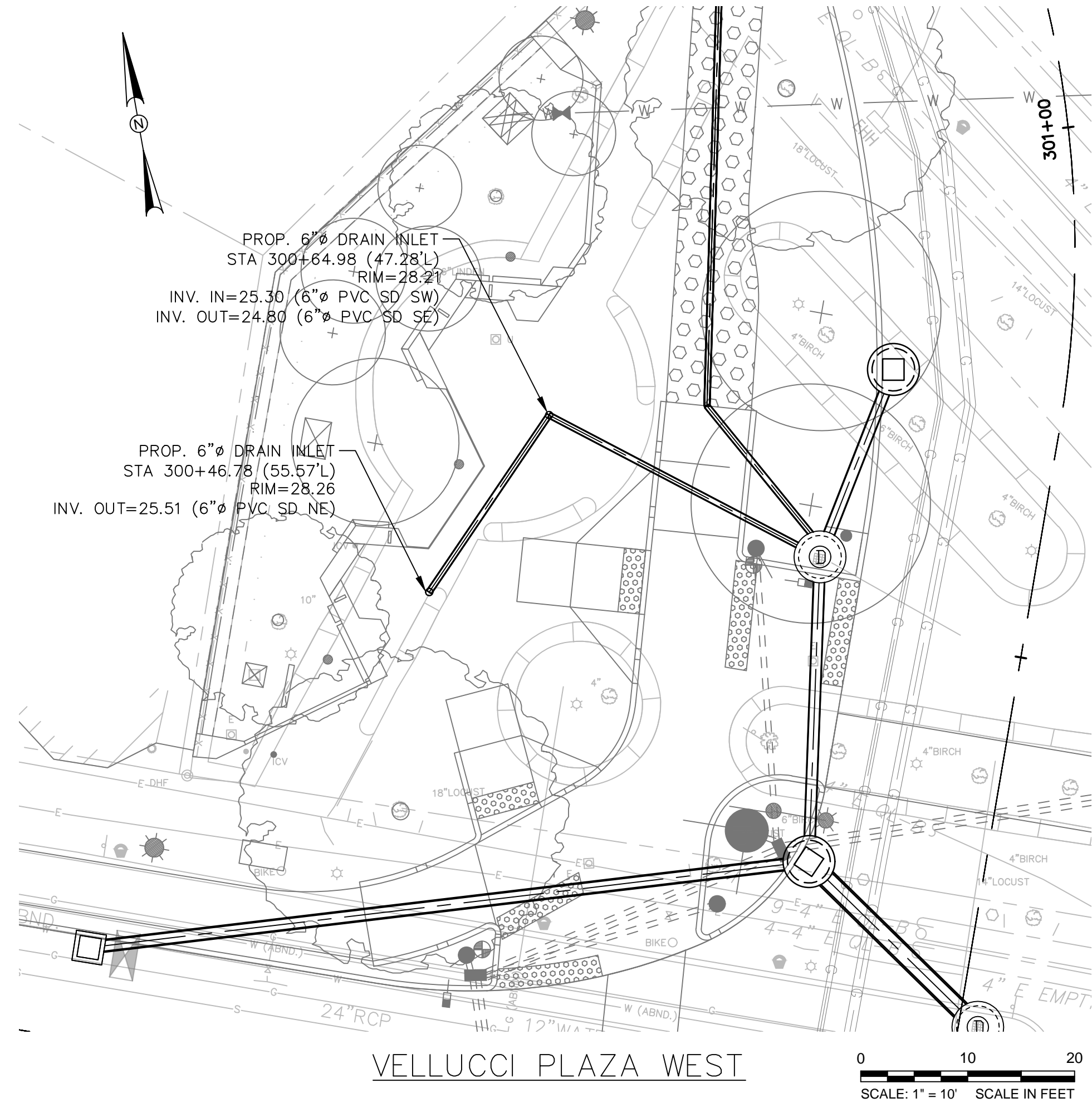
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	UTILITY - DRAINAGE SHEET 3 OF 3

Sheet	U-6
File No.	8514



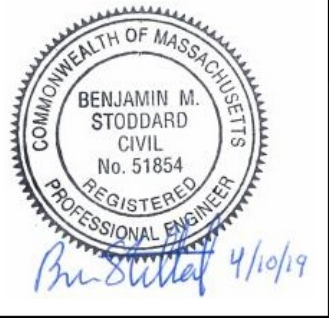
NOTES:

- CONTRACTOR TO INSTALL 4" PERFORATED PVC UNDERDRAIN BELOW SAND BASED STRUCTURAL SOIL AS SHOWN IN PLAN. UNDERDRAIN TO SLOPE CONSISTENTLY FROM HIGH POINT INVERT TO INVERT OUT. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH UTILITIES, INCLUDING GAS AND WATER SERVICES, PRIOR TO INSTALLATION OF UNDERDRAIN AND COORDINATING WITH THE NECESSARY UTILITY OWNER FOR RELOCATION.

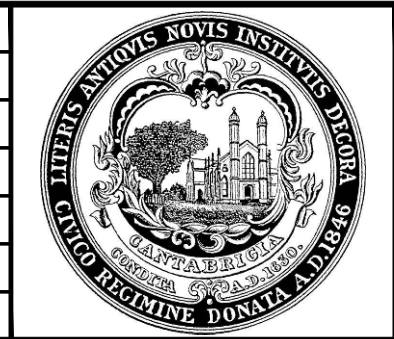


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Job No.	20170208.005A			
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Drawn by	PRB			
Checked by	BMS	No.	Description	Date
Approved by	BMS		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	UTILITY - DRAINAGE VELLUCCI PLAZA

Sheet	U-7
File No.	8514



EXISTING 'LCC' PNLBD 'P1' (MURRAY ELECTRIC LOAD CENTER)				LOCATION	
100A MAIN BREAKER, 120/240V, 1-PHASE, 3-WIRE				HAMPSHIRE & CAMBRIDGE ST EXISTING LTG CONT CAB 'LCC'	
CKT NO	BKR SIZE	LOAD DESCRIPTION	LOAD DESCRIPTION	BKR SIZE	CKT NO
1	20	IRRIGATION CONTROL PANEL	IRRIGATION CONTROL PANEL	20	2
3	20	EXISTING LOAD	EXISTING LOAD	20	4
5	20	EXISTING LOAD	EXISTING LOAD	20	6
7	20	TIMER / PHOTOCELL (STRING LIGHT RECP CONTROL)	EXISTING LOAD	20	8
9	20	PARK LIGHTING FIXTURE 2B	PARK STRING LIGHT POLE MTD RECEPTACLES	20	10

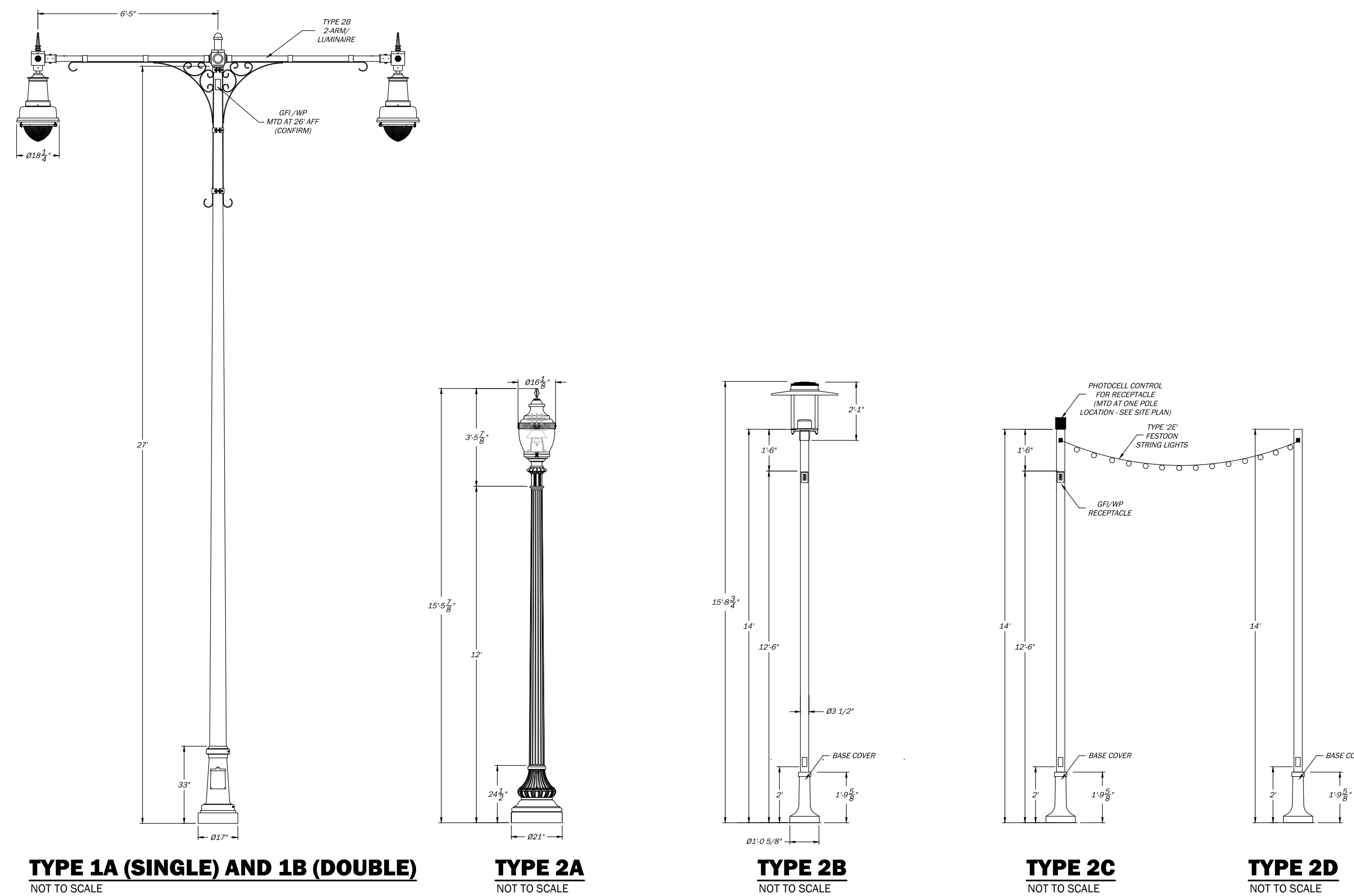
- NOTES:
- EXISTING LOADS THAT ARE DISCONNECTED BREAKER SHALL BECOME SPARE
  - CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING TIMER IN EXISTING 'LCC' FOR STRING LIGHT RECEPTACLE CONTROL.
  - FURNISH AND INSTALL BREAKER IN EXISTING SPACE. BREAKER SHALL MATCH EXISTING.

CABLE AND CONDUIT SCHEDULE								
CONDUIT NO.	CONDUIT SIZE	NO. WIRES	SIZE WIRE	GROUND WIRE	FROM	TO	PURPOSE	NOTE
C1	2"	3	#4	#6	EXISTING PARK 'LCC'	POLE BASE HANDHOLE	PARK LIGHTING FIXTURE POLE MTD RECEPTACLE	LTG FIXTURE '2B' AND RECEPTACLES
C2	3"	3	#4	#6	HANDHOLE	HANDHOLE	STREET LIGHTING FIXTURE	
C3	2"	2	#10	#10	HANDHOLE HANDHOLE	LIGHT POLE BASE LIGHT POLE BASE	STREET LIGHTING FIXTURE POLE MTD RECEPTACLE	SEE WIRING DETAIL DWG E-1
C4	2"	2	#10	#10	HANDHOLE	LIGHT POLE BASE	STREET LIGHTING FIXTURE	SEE WIRING DETAIL DWG E-1
C5	2"	2	#4	#6	HANDHOLE	LIGHT POLE BASE	EXISTING PARKING LOT FIXTURE	SPLICE EXISTING CKT AND EXTEND TO RELOCATED POLE
C6	2@1"	2	#10	#10	EXISTING PARK 'LCC'	IRRIGATION CONTROL CABINET	IRRIGATION PANEL POWER	
C7	2"	2	#10	#10	EXISTING PARK 'LCC' (VIA HH)	POLE RECEPTACLE	FESTOON STRING LIGHTS	VIA PHOTOCELL/TIMER SWITCH
C8	3"	2	#4	#6	EXISTING PARK 'LCC' / HH	HANDHOLE	FESTOON STRING LIGHTS	VIA PHOTOCELL/TIMER SWITCH

### LUMINAIRE SCHEDULE

SYMBOL	CATALOG NO.	POLE	LUMINAIRE	ARM	FINISH	TEMP	DIST	WATT
1A	POLE / ARM NILAND CAT. CB-17-LOGO TSS-27-CB-1 (X1) - GFI LED FIXTURE KING LUMINAIRE CAT. K811-P4SG-III-120(SSL)-7030-120.277-KPL31	CAMBRIDGE 17 SERIES CAST IRON CLAM SHELL 27" TAPERED SMOOTH STEEL SHAFT (28" OVERALL) DUPLX GFI RECEPTACLE MTD AT (CONFIRM) LOGO -SEAL OF THE CITY OF CAMBRIDGE	LED PENDENT FIXTURE, SHALLOW LENS CREE XPL V30E5 KPL-31 LEVELING DEVICE LUMEWAVE TOP-900 IN CONTROLLER AND ANTENNA	CAMBRIDGE SERIES SINGLE 6' STEEL ARM W/ SCROLL	GLOSS BLACK	4000K	III	120W
1B	POLE / ARM NILAND CAT. CB-17-LOGO TSS-27-CB-1 (X2) - GFI LED FIXTURE KING LUMINAIRE CAT. K811-P4SG-III-120(SSL)-7030-120.277-KPL31	CAMBRIDGE 17 SERIES CAST IRON CLAM SHELL 27" TAPERED SMOOTH STEEL SHAFT (28" OVERALL) DUPLX GFI RECEPTACLE MTD AT (CONFIRM) LOGO -SEAL OF THE CITY OF CAMBRIDGE	LED PENDENT FIXTURE, SHALLOW LENS CREE XPL V30E5 KPL-31 LEVELING DEVICE LUMEWAVE TOP-900 IN CONTROLLER AND ANTENNA	CAMBRIDGE SERIES DOUBLE 90° 6' STEEL ARM W/ SCROLL	GLOSS BLACK	4000K	III	240W
2A	POLE NILAND CAT. CCN-21-CATF-12 LED FIXTURE KING LUMINAIRE CAT. K118R-B2AR-III-75(SSL)1042-120.277-K16-A1-G23000K	CORE CAST 21 SERIES ALUMINUM POLE 21" DIA CAST ALUMINUM BASE 12" TAPERED FLUTED SHAFT	LED ACORN POST TOP FIXTURE CREE XPG2 HE7 LUMEWAVE EMP-901 CONTROLLER AND ANTENNA	NONE	TEXTURED BLACK	3000K	III	75W
2B	POLE SELUX CAT. S35-14-BK-BC1-REC-SM11131 LED FIXTURE SELUX CAT. SACL-1-LG3700-R3-50-15-BK-120	14" STEEL ROUND POLE TENON MOUNTING BLACK FINISH DUPLX GFI RECEPTACLE MTD@12'-6"AFG	LED CONTEMPORARY POST TOP FIXTURE ALUMINUM HOOD, COVER AND SUPPORTS LUMEWAVE TOP900-TL CONTROLLER AND ANTENNA* *ANTENNA NOT INSTALLED BY MANUFACTURER, CONTRACTOR TO INSTALL IN FIELD.	NONE	BLACK	3500K	VS	47W
2C	POLE FOR FESTOON STRING LIGHTS SELUX CAT. S35-14-BK-BC1-REC-SM11131	14" STEEL ROUND POLE BLACK FINISH DUPLX GFI RECEPTACLE SEE LANDSCAPE PLANS FOR DETAILS		NONE	BLACK	-	-	-
2D	POLE FOR FESTOON STRING LIGHTS SELUX CAT. S35-14-BK-BC1	14" STEEL ROUND POLE BLACK FINISH SEE LANDSCAPE PLANS FOR DETAILS		NONE	BLACK	-	-	-
2E	STRING LIGHTS DURA LAMP CAT. DLD-CL-MD-24-BK	FESTOON MOUNTED STRING LIGHTS	DURALAMP RETRO FILAMENT STYLE LED LAMP 4W (PER LAMP), 300LM, 2200K, 24" O.C. (48" MAX) DLV-S25-MD-04-22-120-D	NONE	BLACK	2200K	-	4W

ALL FIXTURES, POLES AND ARMS SHALL MATCH CURRENT CITY OF CAMBRIDGE STANDARDS AND SPECIFICATIONS.



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						Date APRIL 2019				Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No. 20170208.005A				Drawing LIGHTING - SCHEDULES SHEET 1 OF 5	File No. 8514
						Designed by KML					
						Drawn by KML					
						Checked by RWB	No.	Description	Date		
						Approved by RWB		REVISIONS			



**LIGHTING FIXTURE LEGEND**

- TYPE 1A: DECORATIVE PENDANT LIGHTING FIXTURE SINGLE POLE MOUNTED
- TYPE 1B: DECORATIVE PENDANT LIGHTING FIXTURE DOUBLE POLE MOUNTED
- TYPE 2A: LED ACORN PEDESTRIAN LIGHT FIXTURE
- TYPE 2B: LED CONTEMPORARY PEDESTRIAN LIGHT FIXTURE
- TYPE 2C/2D: STRING LIGHTING POLE MOUNT
- TYPE 2E: LED STRING LIGHTING
- EXISTING UTILITY COBRA TO REMAIN

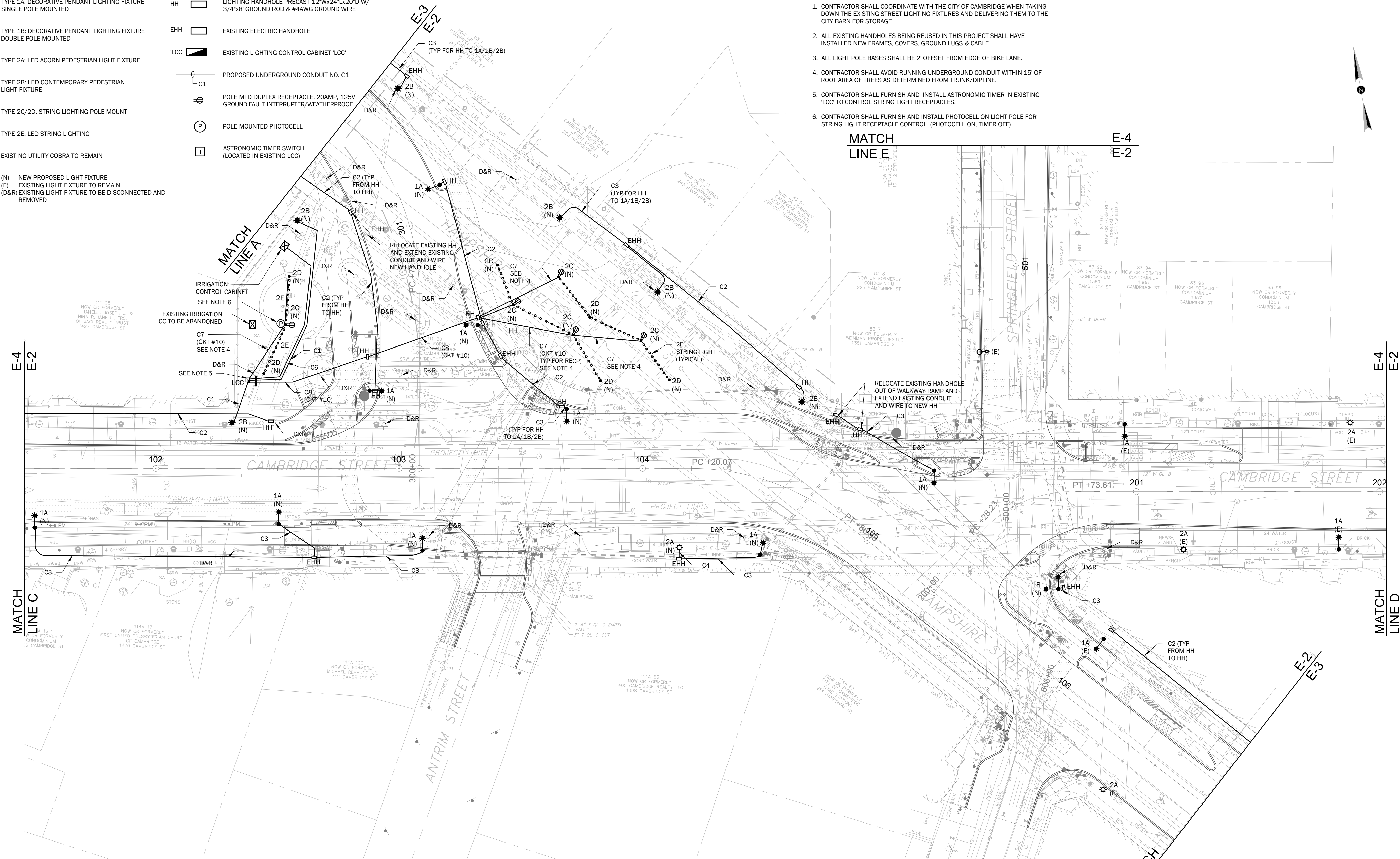
(N) NEW PROPOSED LIGHT FIXTURE  
 (E) EXISTING LIGHT FIXTURE TO REMAIN  
 (D&R) EXISTING LIGHT FIXTURE TO BE DISCONNECTED AND REMOVED

**ELECTRICAL LEGEND**

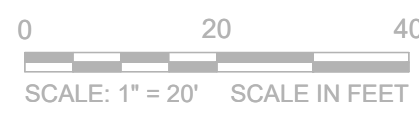
- HH LIGHTING HANDHOLE PRECAST 12"Wx24"Lx20"D W/ 3/4"x8" GROUND ROD & #4AWG GROUND WIRE
- EHH EXISTING ELECTRIC HANDHOLE
- LCC EXISTING LIGHTING CONTROL CABINET 'LCC'
- C1 PROPOSED UNDERGROUND CONDUIT NO. C1
- POLE MTD DUPLEX RECEPTACLE, 20AMP, 125V GROUND FAULT INTERRUPTER/WEATHERPROOF
- POLE MOUNTED PHOTOCELL
- ASTRONOMIC TIMER SWITCH (LOCATED IN EXISTING LCC)

**LIGHTING PLAN NOTES**

1. CONTRACTOR SHALL COORDINATE WITH THE CITY OF CAMBRIDGE WHEN TAKING DOWN THE EXISTING STREET LIGHTING FIXTURES AND DELIVERING THEM TO THE CITY BARN FOR STORAGE.
2. ALL EXISTING HANDHOLES BEING REUSED IN THIS PROJECT SHALL HAVE INSTALLED NEW FRAMES, COVERS, GROUND LUGS & CABLE
3. ALL LIGHT POLE BASES SHALL BE 2' OFFSET FROM EDGE OF BIKE LANE.
4. CONTRACTOR SHALL AVOID RUNNING UNDERGROUND CONDUIT WITHIN 15' OF ROOT AREA OF TREES AS DETERMINED FROM TRUNK/DIPLINE.
5. CONTRACTOR SHALL FURNISH AND INSTALL ASTRONOMIC TIMER IN EXISTING 'LCC' TO CONTROL STRING LIGHT RECEPTACLES.
6. CONTRACTOR SHALL FURNISH AND INSTALL PHOTOCELL ON LIGHT POLE FOR STRING LIGHT RECEPTACLE CONTROL. (PHOTOCCELL ON, TIMER OFF)



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						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td></tr> <tr><td>Date</td><td>APRIL 2019</td></tr> <tr><td>Job No.</td><td>20170208.005A</td></tr> <tr><td>Designed by</td><td>KML</td></tr> <tr><td>Drawn by</td><td>KML</td></tr> <tr><td>Checked by</td><td>RWB</td></tr> <tr><td>Approved by</td><td>RWB</td></tr> </table>	Scale	AS NOTED	Date	APRIL 2019	Job No.	20170208.005A	Designed by	KML	Drawn by	KML	Checked by	RWB	Approved by	RWB		<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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>LIGHTING - CONSTRUCTION PLAN SHEET 2 OF 5</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	LIGHTING - CONSTRUCTION PLAN SHEET 2 OF 5	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>E-2</td></tr> <tr><td>File No.</td><td>8514</td></tr> </table>	Sheet	E-2	File No.	8514
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File No.	8514																																





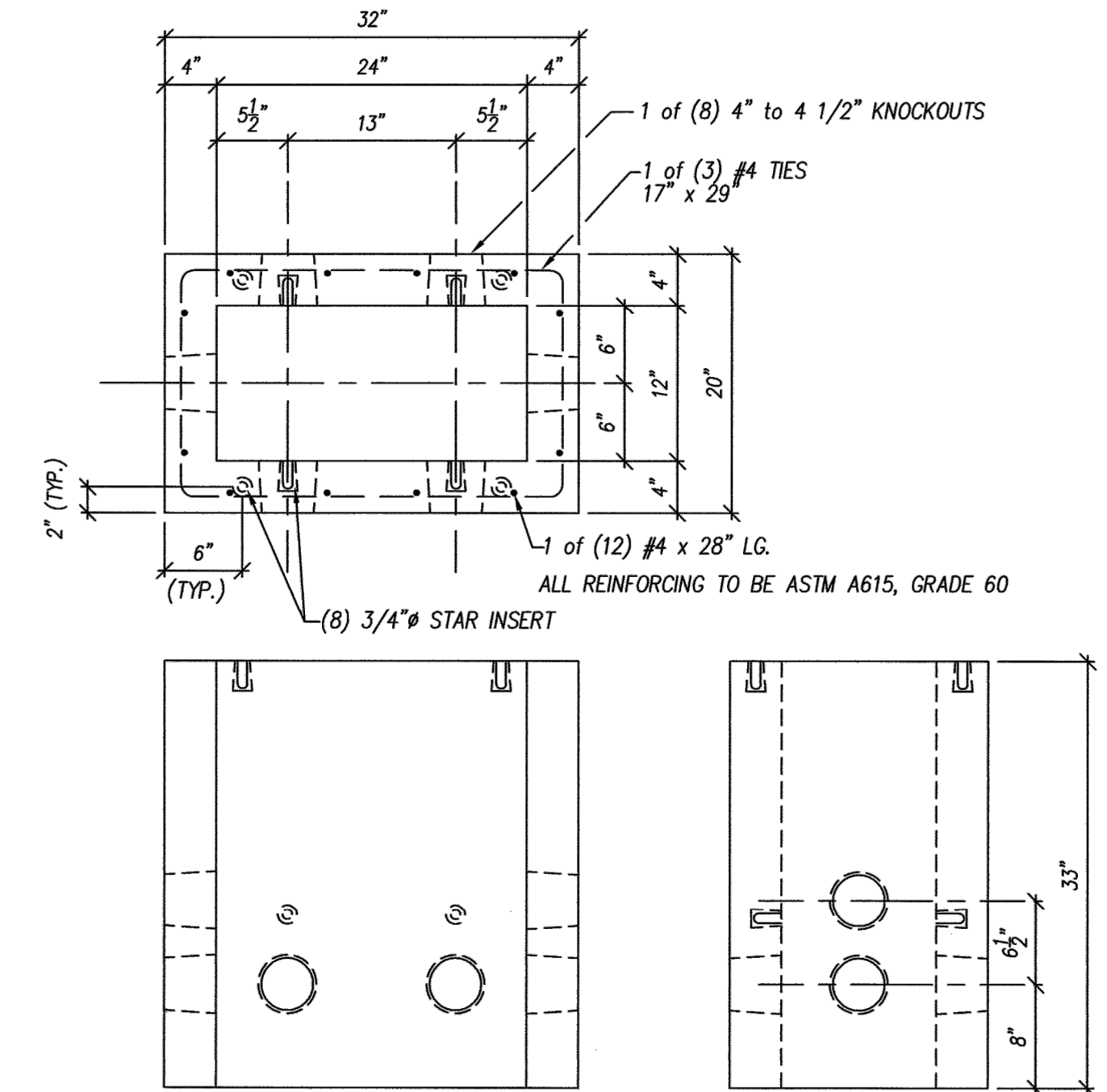






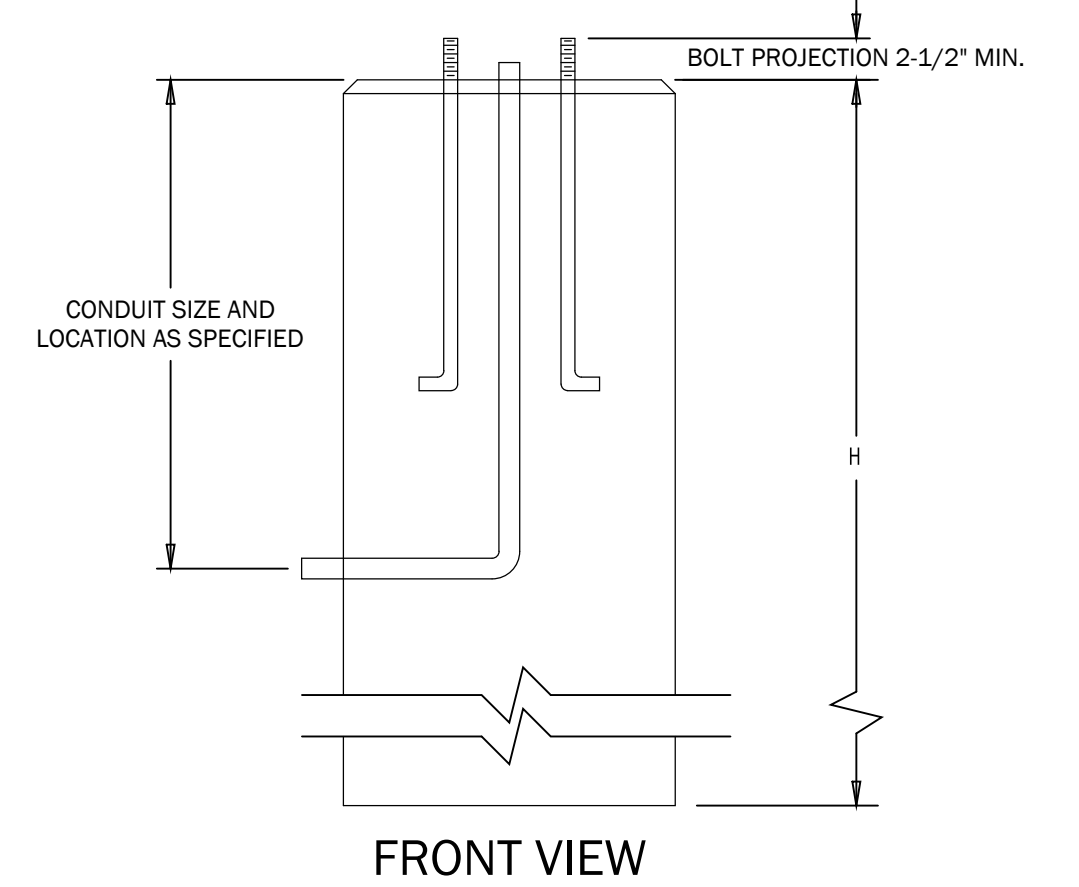
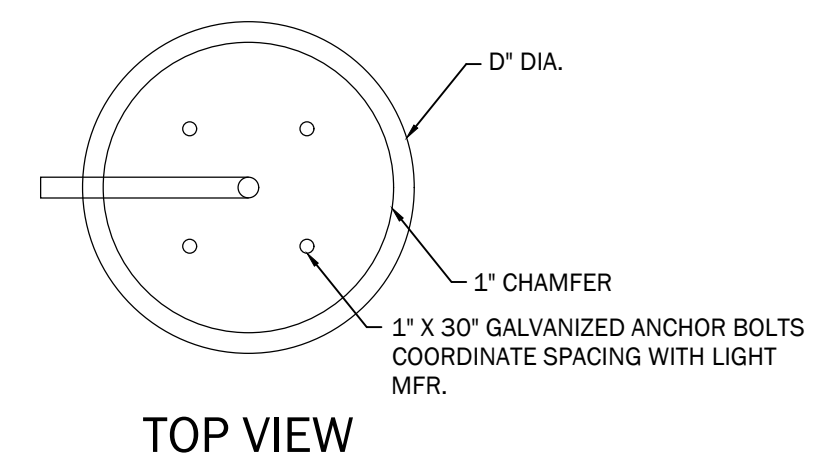


**Precast Specialties Corp.**  
 999 Adams Street, P.O. Box 86, Abington, MA 02351  
 TEL: (781)878-7220 FAX: (781)878-7464



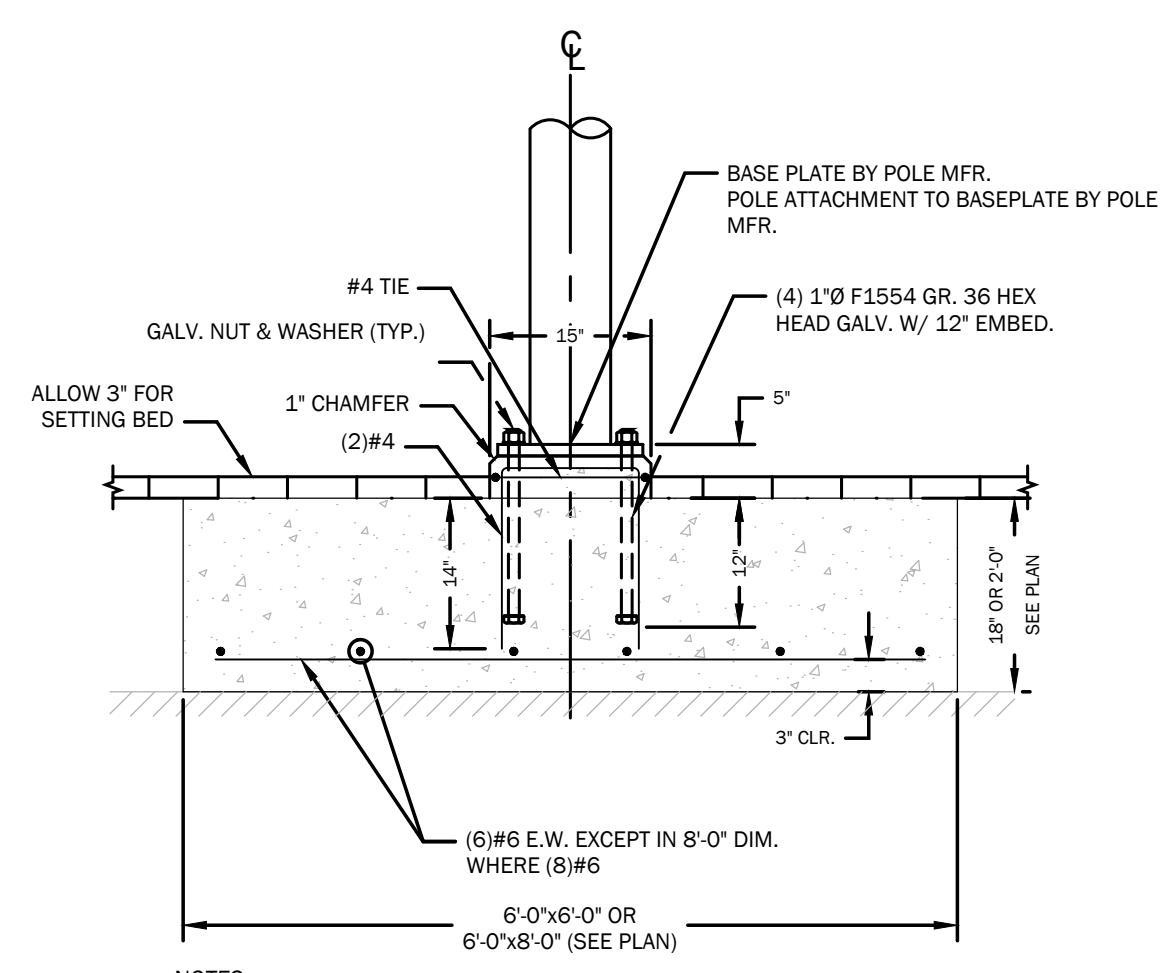
**PRECAST CONCRETE  
 ELECTRIC HANDHOLE (STANDARD)**  
 WT. = 980#

DRAWN:	DATE:	MARK:	JOB No.:	MATERIAL SPECS
PROJECT INFORMATION:				CONCRETE: 4000 PSI AT 28 DAYS w/ 3/4" AGGREGATE PER SPECIFICATION
W/ 3/4"x8" GROUND ROD & #4AWG GROUND WIRE COVER SHALL READ "LIGHTING"				



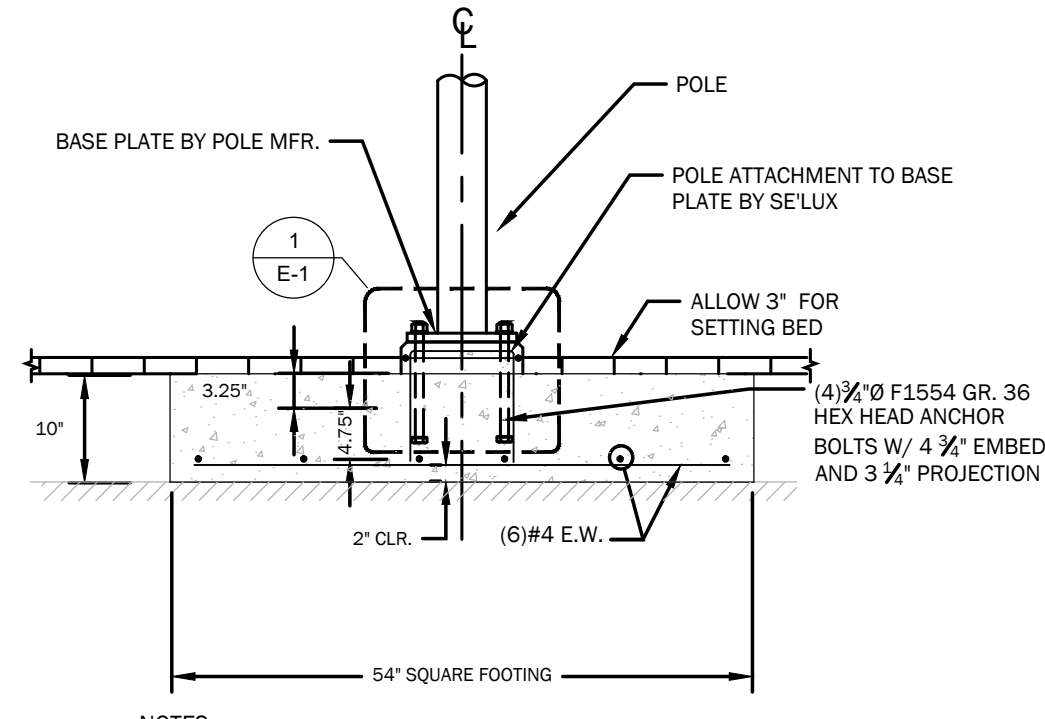
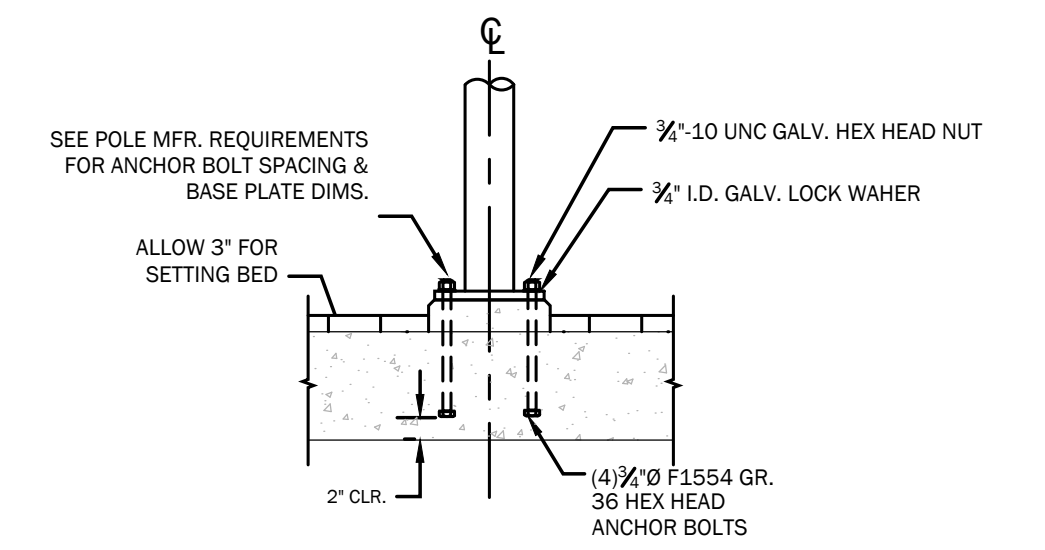
**PRECAST LIGHT STANDARD FOUNDATION**  
 NOT TO SCALE

- NOTES:  
 1 - FOR LIGHT TYPES 1A/1B: D=20-INCHES; H=48-INCHES  
 2 - FOR LIGHT TYPE 2A/2B/2C: D=24-INCHES; H=36-INCHES  
 3 - CONCRETE 4000 PSI AT 28 DAYS  
 4 - REINFORCING: 4 - #4 VERTICALLY AND #3 STIRRUPS 12" O.C. HORIZONTALLY (NOT SHOWN)



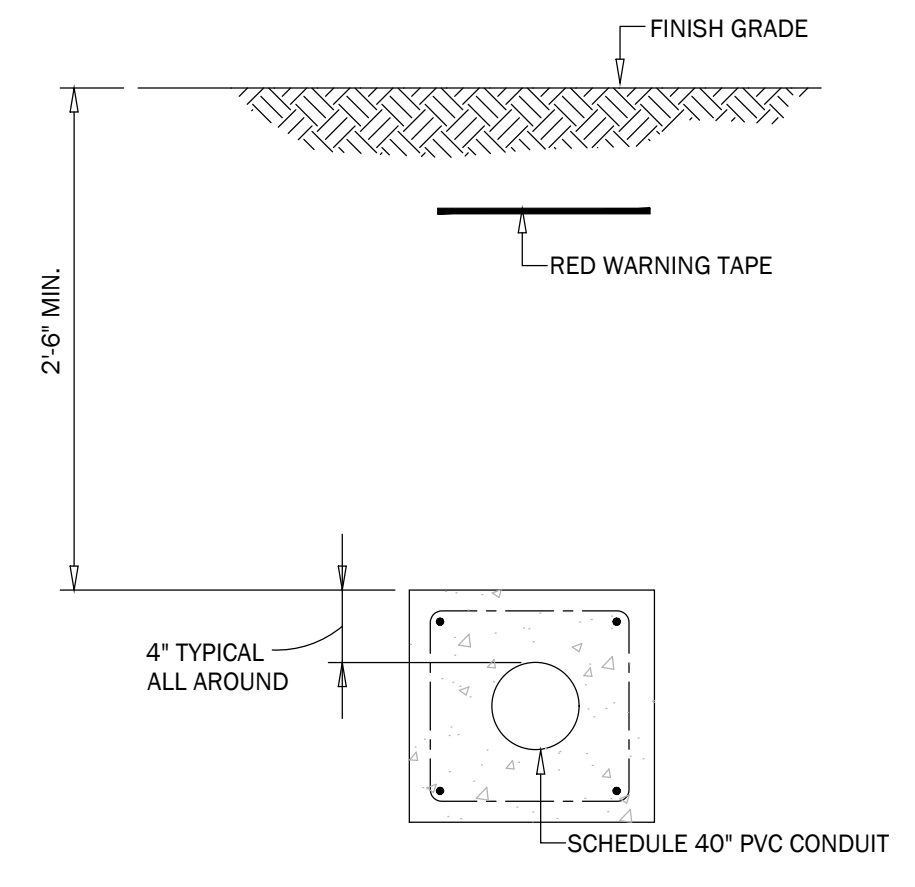
**SHALLOW FOUNDATION AND ANCHORAGE DETAIL**  
 NOT TO SCALE - POLE 1A AND 1B

- NOTES:  
 1. STRUCTURAL FASTENERS SHALL BE HOT DIPPED GALVANIZED AND CONFORM TO THE REQUIREMENTS OF AASHTO M232 (ASTM A153).



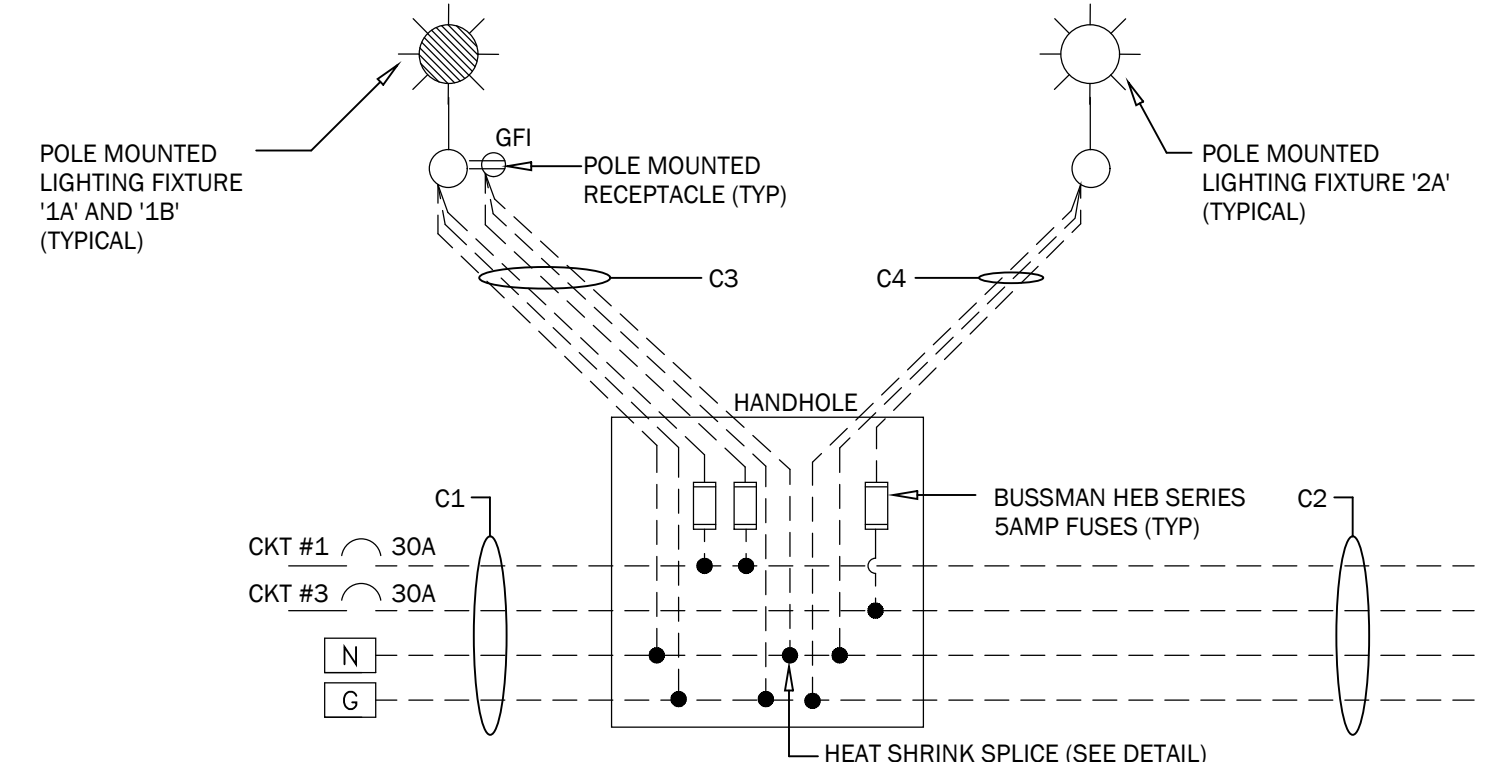
**SHALLOW FOUNDATION AND ANCHORAGE DETAIL**  
 NOT TO SCALE - POLE 2A, 2B, 2C

- NOTES:  
 1. STRUCTURAL FASTENERS SHALL BE HOT DIPPED GALVANIZED AND CONFORM TO THE REQUIREMENTS OF AASHTO M232 (ASTM A153).

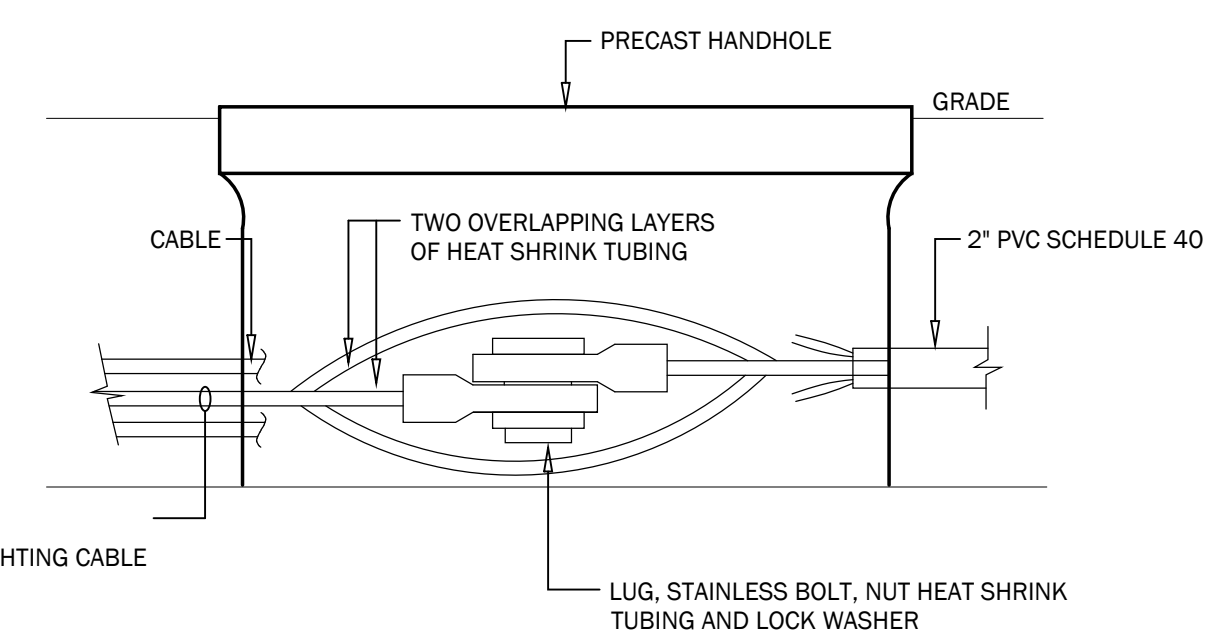


**UG CONCRETE ENCASED DUCT BANK**  
 NOT TO SCALE

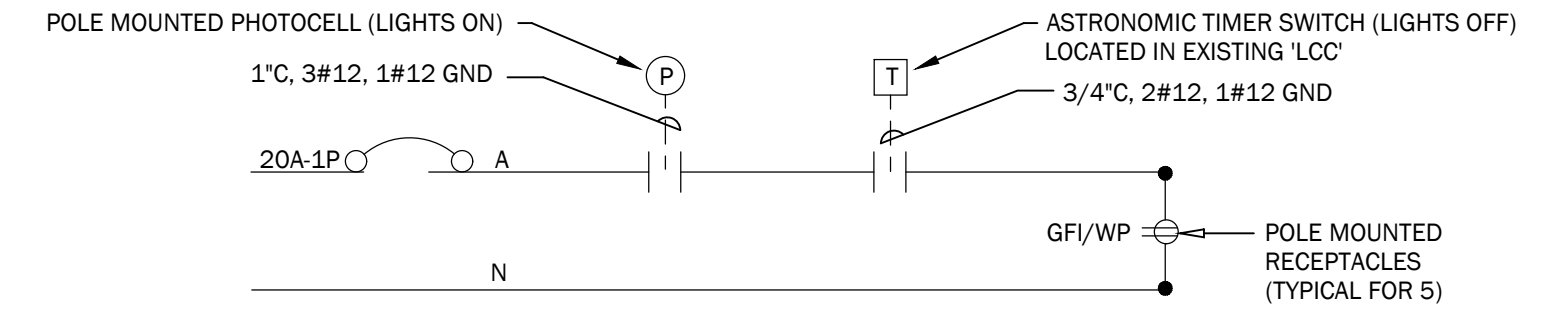
NOTE:  
 ALL CONDUITS IN THE SIDEWALK OR STREET FROM HANDHOLE TO HANDHOLE SHALL BE ENCASED IN CONCRETE. CONDUIT IN THE PARKS SHALL NOT BE ENCASED IN CONCRETE.



**TYPICAL WIRING DIAGRAM**  
 NOT TO SCALE



**TYPICAL DETAIL LIGHTING CABLE SPLICE**  
 NOT TO SCALE



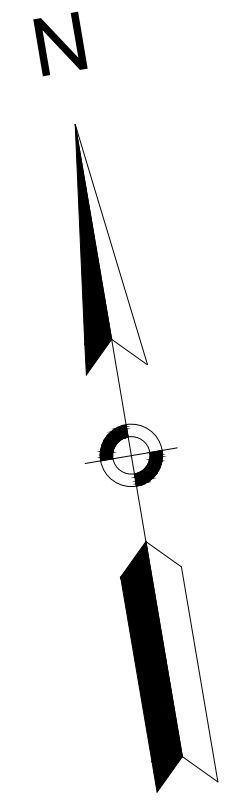
**FESTOON STRING LIGHTING CONTROL SCHEMATIC**  
 NOT TO SCALE

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CAD FILE: C:\Users\kief\OneDrive\WORKING\2017\232001\17Y16042\_441\002\LT\_10.dwg PLOTTED: 4/8/2019 10:44 AM BY: kisa.yon

						Scale AS NOTED				Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet E-5
						Date APRIL 2019				Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No. 8514
						Job No. 20170208.005A				Drawing LIGHTING - DETAILS SHEET 5 OF 5	
						Designed by KML					
						Drawn by KML					
						Checked by RWB	No.	Description	Date		
						Approved by RWB		REVISIONS			

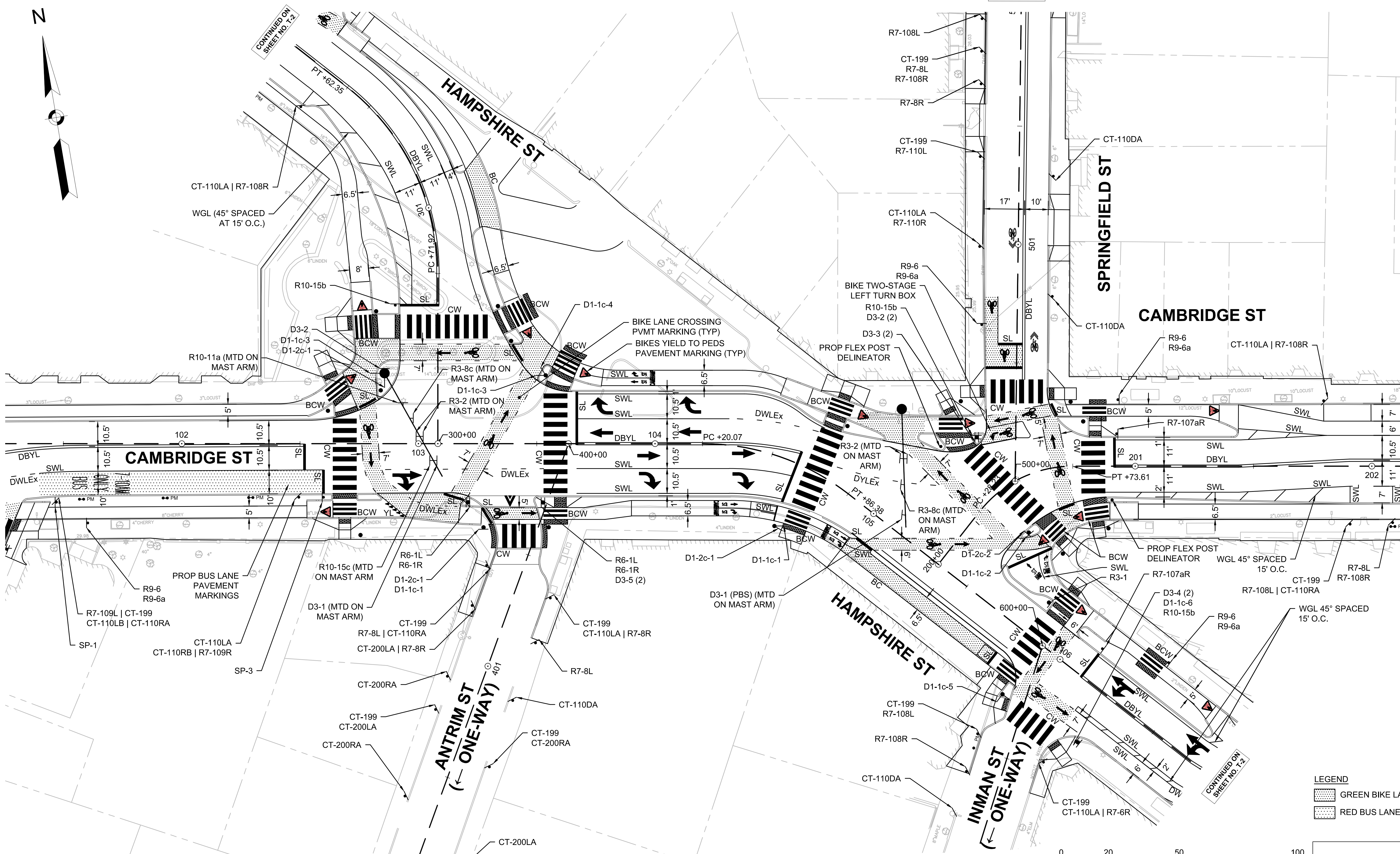




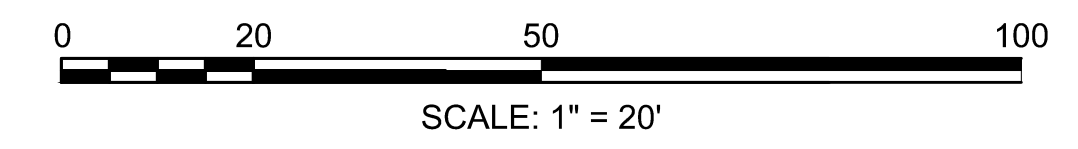
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CONTINUED ON SHEET NO. T-3

CONTINUED ON SHEET NO. T-3

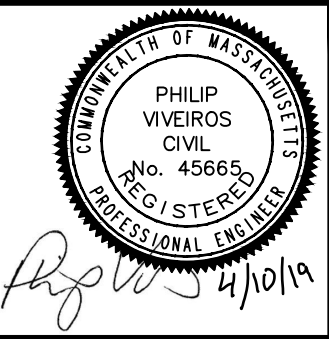


- LEGEND**
- GREEN BIKE LANE
  - RED BUS LANE

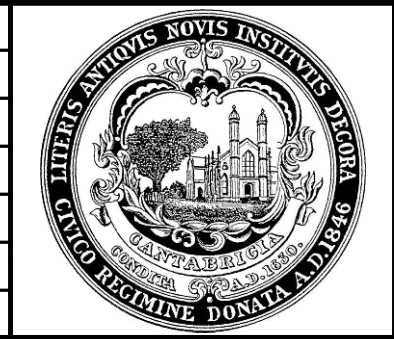


ISSUED FOR BID

CAD FILE: \\BOS\SFSA\eng\16042.22\100%\_Submission\16042.22\100%\_HDSigning & Marking.dwg LAYOUT: 1 PLOTTED: 4/10/2019 2:10 PM BY: murphy\_camor



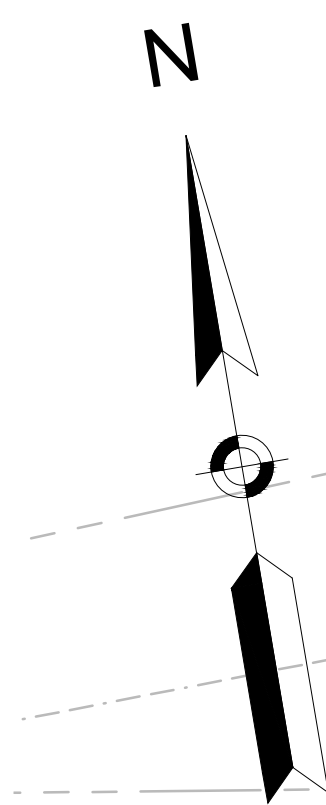
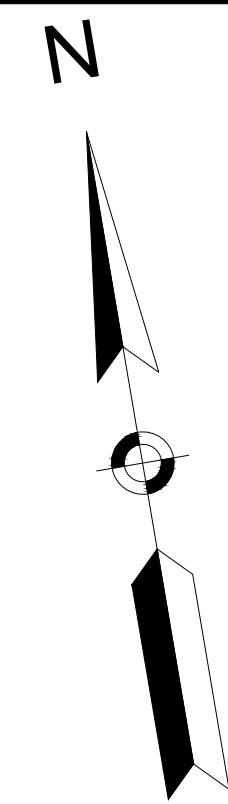
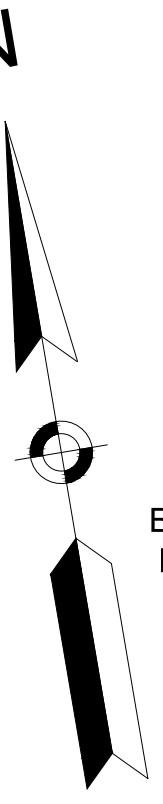
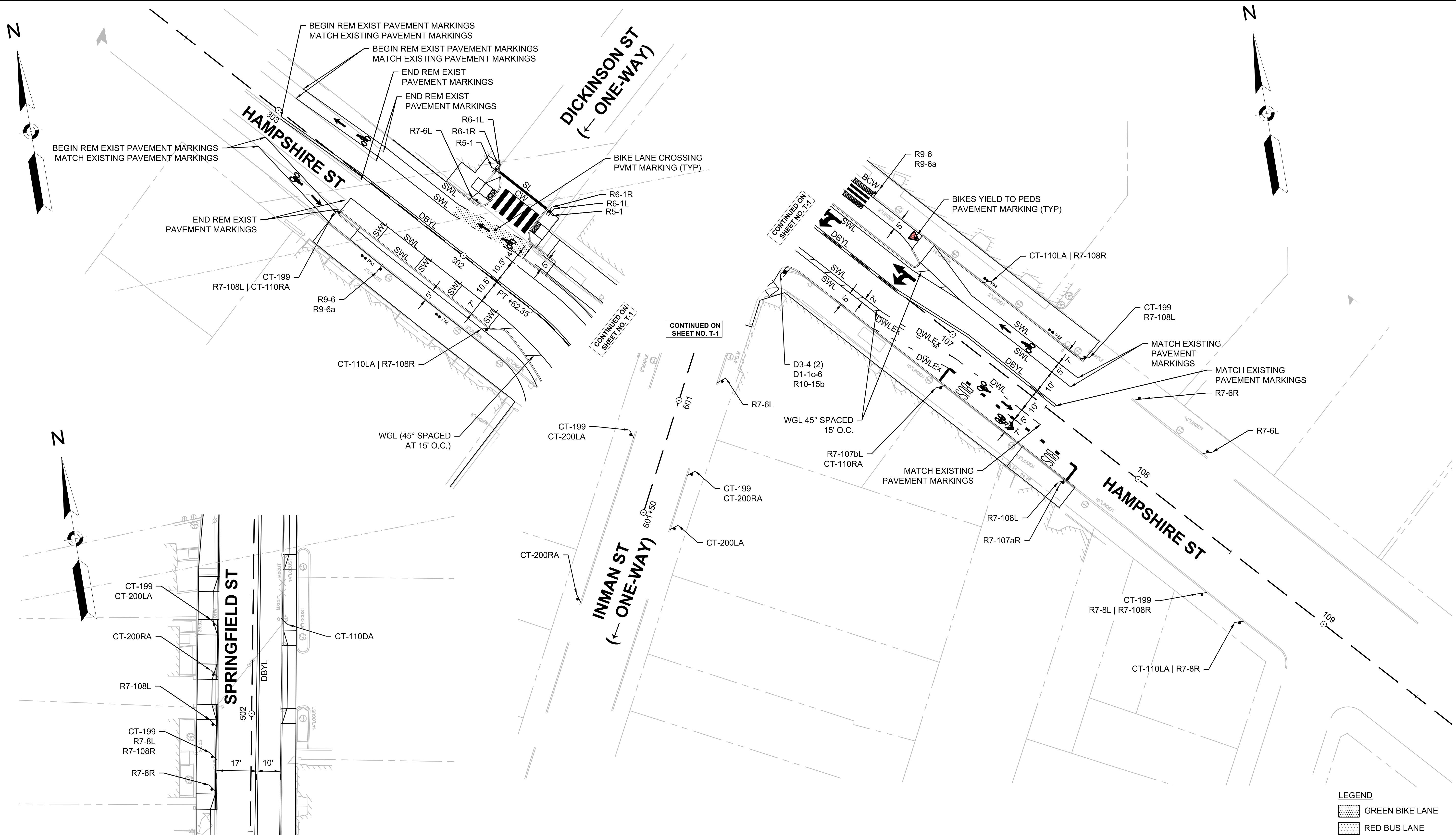
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Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	CPM			
Drawn by	CPM			
Checked by	PV	No.	Description	Date
Approved by	PV		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	SIGNING AND MARKING PLANS SHEET 1 OF 3

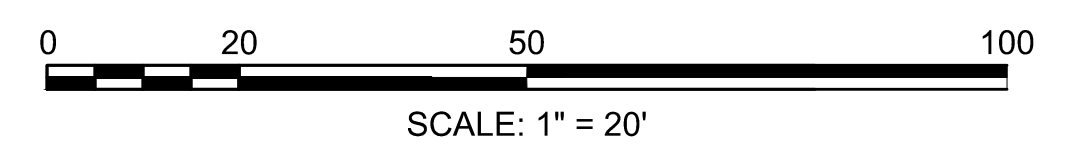
Sheet	T-1
File No.	8514





**LEGEND**

	GREEN BIKE LANE
	RED BUS LANE



ISSUED FOR BID

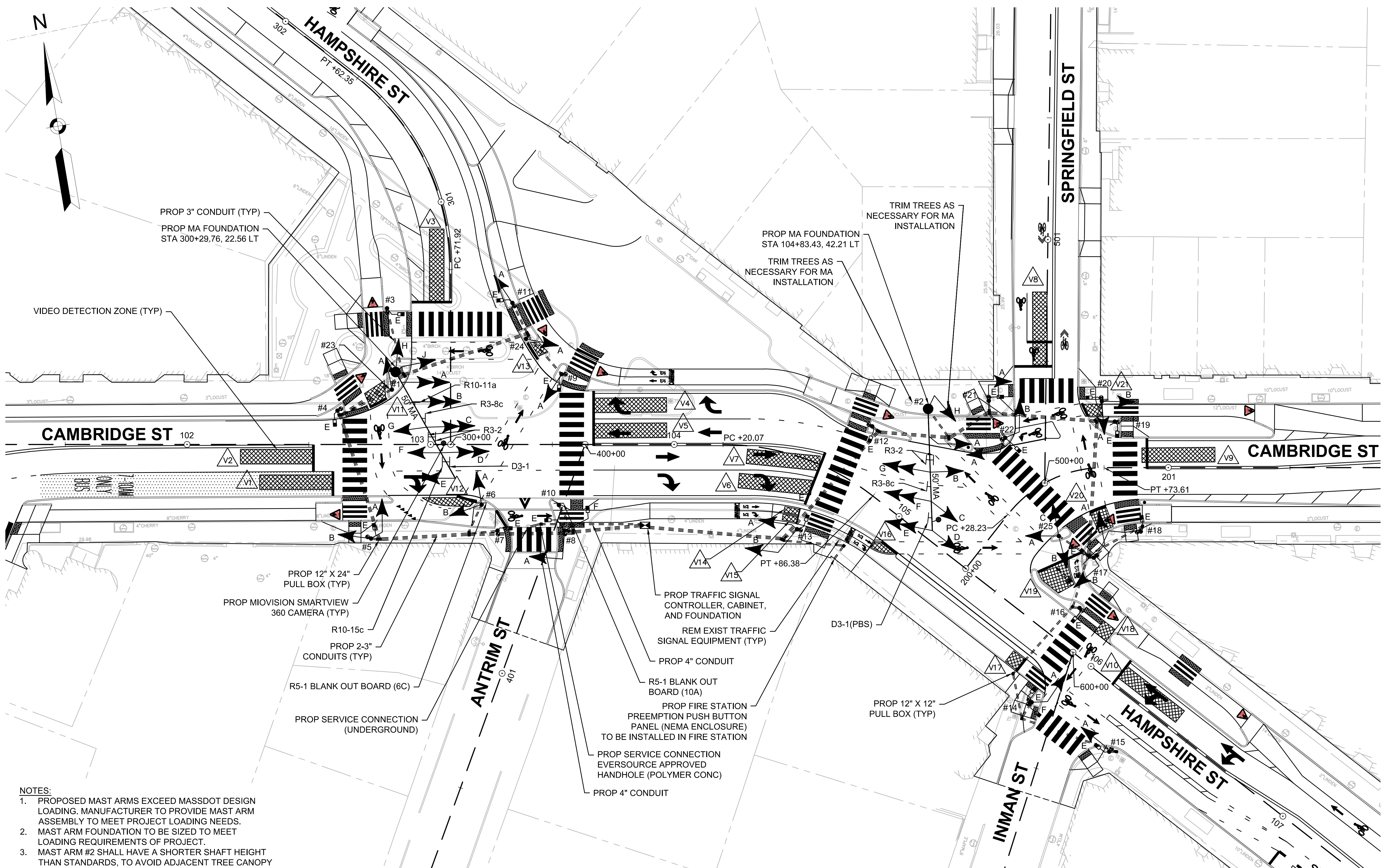
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						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td><td></td><td></td></tr> <tr><td>Date</td><td>APRIL 2019</td><td></td><td></td></tr> <tr><td>Job No.</td><td>20170208.005A</td><td></td><td></td></tr> <tr><td>Designed by</td><td>CPM</td><td></td><td></td></tr> <tr><td>Drawn by</td><td>CPM</td><td></td><td></td></tr> <tr><td>Checked by</td><td>PV</td><td>No.</td><td>Description</td></tr> <tr><td>Approved by</td><td>PV</td><td></td><td>REVISIONS</td></tr> </table>	Scale	AS NOTED			Date	APRIL 2019			Job No.	20170208.005A			Designed by	CPM			Drawn by	CPM			Checked by	PV	No.	Description	Approved by	PV		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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>SIGNING AND MARKING PLANS SHEET 2 OF 3</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	SIGNING AND MARKING PLANS SHEET 2 OF 3	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>T-2</td></tr> <tr><td>File No.</td><td>8514</td></tr> </table>	Sheet	T-2	File No.	8514
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File No.	8514																																														









- NOTES:**
1. PROPOSED MAST ARMS EXCEED MASSDOT DESIGN LOADING. MANUFACTURER TO PROVIDE MAST ARM ASSEMBLY TO MEET PROJECT LOADING NEEDS.
  2. MAST ARM FOUNDATION TO BE SIZED TO MEET LOADING REQUIREMENTS OF PROJECT.
  3. MAST ARM #2 SHALL HAVE A SHORTER SHAFT HEIGHT THAN STANDARDS, TO AVOID ADJACENT TREE CANOPY TO THE GREATEST FEASIBLE EXTENT.
  4. COLORED PAVEMENT MARKINGS WITHIN THE BIKE AND BUS LANES ARE NOT SHOWN FOR PLAN CLARITY.

0 20 50 100  
SCALE: 1" = 20'

ISSUED FOR BID

CAD FILE: \\BOS\SF\A\eng\mg\16042.44\Inman Square\HD\DWG\100%\_Submission\16042.22\100%\_HD\Signal.dwg LAYOUT: LAYOUT\_PLOTTED: 4/10/2019 1:58 PM BY: murphy\_conor

						Scale	AS NOTED					Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	T-4
						Date	APRIL 2019					Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
						Job No.	20170208.005A					Drawing	TRAFFIC SIGNAL PLAN SHEET 1 OF 2		
						Designed by	CPM								
						Drawn by	CPM								
						Checked by	PV	No.	Description	Date					
						Approved by	PV		REVISIONS						







IDENTIFICATION NUMBER	SIZE OF SIGN(in.)		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET	IDENTIFICATION NUMBER	SIZE OF WIDTH	SIGN(in.) HEIGHT	TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER								LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER					
CT-110DA	12	18		SEE CITY STANDARDS			5	SEE CITY STANDARDS			P5-1 (3) MOUNT ON UP (2)	1.50	7.50	D3-3	30	9	SPRINGFIELD ST	SEE CITY STANDARDS			2	SEE CITY STANDARDS			MOUNT ON SIGNAL POST	1.875	3.75		
CT-110LA	12	18		SEE CITY STANDARDS			10	SEE CITY STANDARDS			P5-1 (2) MNT W/CT-199(2) R7-108R (4) R7-8R (2)	1.50	15.00	D3-4	24	9	INMAN ST	SEE CITY STANDARDS			2	SEE CITY STANDARDS			MOUNT ON SIGNAL POST	1.50	3.00		
CT-110LB	12	18		SEE CITY STANDARDS			1	SEE CITY STANDARDS			MOUNT W/CT-199	1.50	1.50	D3-5	24	9	ANTRIM ST	SEE CITY STANDARDS			2	SEE CITY STANDARDS			MOUNT ON SIGNAL POST	1.50	3.00		
CT-110RA	12	18		SEE CITY STANDARDS			7	SEE CITY STANDARDS			P5-1 (1) MOUNT W/CT-199 (5) R7-8L (1)	1.50	10.50	R3-1	24	24		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST (1)	4.00	4.00		
CT-110RB	12	18		SEE CITY STANDARDS			1	SEE CITY STANDARDS			MOUNT W/CT-110LA	1.50	1.50	R3-2	24	24		SEE MUTCD STANDARDS			4	SEE MUTCD STANDARDS			MOUNT ON MAST ARM (4)	4.00	16.00		
CT-199	12	18		SEE CITY STANDARDS			19	SEE CITY STANDARDS			P5-1 (19)	1.50	28.50	R3-8c	30	30		SEE MUTCD STANDARDS			2	SEE MUTCD STANDARDS			MOUNT ON MAST ARM	6.25	12.50		
CT-200LA	12	18		SEE CITY STANDARDS			6	SEE CITY STANDARDS			P5-1 (2) MOUNT W/CT-199 (3) R7-8R (1)	1.50	9.00	R5-1	36	36		SEE MUTCD STANDARDS			4	SEE MUTCD STANDARDS			P5-1 (4)	9.00	36.00		
CT-200RA	12	18		SEE CITY STANDARDS			6	SEE CITY STANDARDS			P5-1 (4) MOUNT W/CT-199 (2)	1.50	9.00	R6-1L (PBS)	36	12	ONE WAY	SEE MUTCD STANDARDS			8	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST(2) W/R5-1 (4) W/R6-1R (2)	3.00	24.00		
D1-1c-1	18	6		SEE MUTCD STANDARDS			2	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	0.75	1.50	R6-1R (PBS)	36	12	ONE WAY	SEE MUTCD STANDARDS			8	SEE MUTCD STANDARDS			P5-1 (2) MOUNT ON SIGNAL POST(2) W/R5-1 (4)	3.00	24.00		
D1-1c-2	18	6		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	0.75	0.75	R7-6L	12	18		SEE MUTCD STANDARDS			4	SEE MUTCD STANDARDS			P5-1 (3) MOUNT W/R7-108R (1)	1.50	6.00		
D1-1c-3	18	6		SEE MUTCD STANDARDS			2	SEE MUTCD STANDARDS			(1) MOUNT ON SIGNAL POLE (1) MOUNT ON SIGNAL POST	0.75	1.50	R7-6R	12	18		SEE MUTCD STANDARDS			3	SEE MUTCD STANDARDS			P5-1 (1) MOUNT W/CT-199 (2)	1.50	4.50		
D1-1c-4	18	6		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	0.75	0.75	R7-8L	12	18		SEE MUTCD STANDARDS			6	SEE MUTCD STANDARDS			P5-1 (3) MOUNT W/CT-199 (3)	1.50	9.00		
D1-1c-5	18	6		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	0.75	0.75	R7-8R	12	18		SEE MUTCD STANDARDS			6	SEE MUTCD STANDARDS			P5-1 (4) MOUNT W/CT-199 (2)	1.50	9.00		
D1-1c-6	18	6		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	0.75	0.75	R7-107aR	12	47.75		SEE MBTA STANDARDS			4	SEE MBTA STANDARDS			P5-1 (2) MOUNT W/R7-108L (1)	4.00	16.00		
D1-2c-1	18	12		SEE MUTCD STANDARDS			3	SEE MUTCD STANDARDS			(1) MOUNT ON SIGNAL POLE (2) MOUNT ON SIGNAL POST	1.50	4.50	R7-107bL	12	30		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT W/CT-110RA	2.50	2.50		
D1-2c-2	18	12		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON SIGNAL POST	1.50	1.50	R7-108L	12	18		SEE MUTCD STANDARDS			9	SEE MUTCD STANDARDS			P5-1 (2) MOUNT W/CT-199 (7)	1.50	13.50		
D3-1 (PBS)	30	9	HAMPSHIRE ST	SEE CITY STANDARDS			2	SEE CITY STANDARDS			MOUNT ON MAST ARM	1.875	3.75	R7-108R	12	18		SEE MUTCD STANDARDS			9	SEE MUTCD STANDARDS			P5-1 (6) MOUNT W/CT-199 (2) R7-8L (1)	1.50	13.50		
D3-2	30	9	CAMBRIDGE ST	SEE CITY STANDARDS			3	SEE CITY STANDARDS			MOUNT ON SIGNAL POLE (1) MOUNT ON SIGNAL POST (2)	1.875	5.63	NOTES: 1. HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2009 EDITION, THE 1996 MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY), CITY OF CAMBRIDGE SPECIFICATIONS, AND ALL AMENDMENTS WILL GOVERN.														SUBTOTAL AREA OF SIGNS: 304.13 SF	

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CAD FILE: I:\SFS\Projects\16042\16042.dwg LAYOUT: SIGN SUMMARY-1 PLOTTED: 4/10/2019 2:12 PM BY: murphy, conor

						Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by CPM Drawn by CPM Checked by PV Approved by PV		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing SIGN SUMMARY SHEET 1 OF 2	Sheet T-6 File No. 8514
--	--	--	--	--	--	--	--	--	----------------------------



IDENTIFICATION NUMBER	SIZE OF WIDTH	SIGN(in.) HEIGHT	TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
				LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R7-109L	12	18		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT W/ CT-199	1.50	1.50
R7-109R	12	18					1				MOUNT W/ CT-110LA	1.50	1.50
R7-110L	24	18					1				MOUNT WITH CT-199	3.00	3.00
R7-110R	24	18					1				MOUNT WITH CT-110LA	3.00	3.00
R9-6	12	18					5				P5-1 (5)	1.50	7.50
R9-6a	12	9		6	3 3		5	WHITE	BLACK	BLACK	MOUNT WITH R9-6 (5)	0.75	3.75
R10-11a	30	30		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			MOUNT ON MAST ARM (1)	6.25	6.25
R10-15b	30	30					3				MOUNT ON SIGNAL POST (2) P5-1 (1)	6.25	18.75
R10-15c	30	30					1				MOUNT ON MAST ARM	6.25	6.25
SP-1	24	30		3 2.5 2.5 2.5 2.5	3 2.2 3.8 2.5 2.5 3.5		1	WHITE BLACK	BLACK/ WHITE	BLACK	P5-1	5.00	5.00
SP-2	24	30		6 6 6	5.4 3.5 3.5 5.4		1	WHITE	BLACK	BLACK	P5-1	5.00	5.00
SP-3	24	30		6 6 6	5.4 3.5 3.5 5.4		1	WHITE	BLACK	BLACK	P5-1	5.00	5.00

NOTES: 1. HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2009 EDITION, THE 1996 MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY), CITY OF CAMBRIDGE SPECIFICATIONS, AND ALL AMENDMENTS WILL GOVERN.

SUBTOTAL AREA OF SIGNS: 66.50 SF  
TOTAL AREA OF SIGNS: 370.63 SF

ISSUED FOR BID

CAD FILE: \\BOS\SF\A\eng\16042.221\100%\_Submission\16042.221\100%\_Signs & Marking.dwg LAYOUT: SIGN SUMMARY-2 PLOTTED: 4/10/2019 2:12 PM BY: murphy\_camor

						Scale	AS NOTED				Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet <b>T-7</b>
						Date	APRIL 2019				Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	
						Job No.	20170208.005A				Drawing	SIGN SUMMARY SHEET 2 OF 2	File No. <b>8514</b>
						Designed by	CPM						
						Drawn by	CPM						
						Checked by	PV	No.	Description	Date			
						Approved by	PV		REVISIONS				



**MATERIALS**

	CLEAN FILL
	CONCRETE
	GRAVEL
	SAND
	SUB GRADE
	PLANTING SOIL
	MULCH
	INSULATION - RIGID
	STRUCTURAL SOIL

**GENERAL NOTES**

- 1- DO NOT SCALE DRAWINGS
- 2- VERIFY DIMENSIONS, GRADES, BOUNDARIES, AND CONSTRUCTION AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- 3- TO THE EXTENT PRACTICABLE, VERIFY DIMENSIONS AND FIELD CONDITIONS AT THE SITE PRIOR TO THE BID SUBMISSION. CONFLICTS, OMISSIONS AND DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED IN WRITING TO THE LANDSCAPE ARCHITECT, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PRIOR TO THE BID SUBMISSION. THE CONTRACTOR WARRANTS, BY TENDERING HIS BID, THAT THE WORK IS BUILDABLE AS SHOWN.
- 4- LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR CONSTRUCTION THAT IS STARTED PRIOR TO PERMIT BEING ISSUED.
- 5- DIMENSIONS, NOTES, FINISHES AND FIXTURES SHOWN ON TYPICAL PLANS, SECTION OR DETAILS SHALL APPLY TO SIMILAR, SYMMETRICAL OR OPPOSITE HAND PLANS SECTIONS OR DETAILS, UNLESS NOTED OTHERWISE.
- 6- TYPICAL OR "TYP" SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE. DETAILS ARE USUALLY KEYED AND NOTED "TYP" ONLY ONE TIME, WHEN THEY FIRST OCCUR.
- 7- IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OF ANY DISCREPANCIES BETWEEN PROJECT MANUAL, LARGE SCALE DRAWINGS, SMALL SCALE DRAWINGS AND DETAILS. THE CONTRACTOR SHALL NOT PROCEED WITH AFFECTED WORK UNTIL LANDSCAPE ARCHITECT PROVIDES CLARIFICATION
- 8- IF CONTRACT DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE WITH ONE ANOTHER ON A PARTICULAR ITEM OR ITEMS, THE BID PROPOSAL SHALL BE BASED ON THE BETTER QUALITY OR MORE EXPENSIVE OF THE CONDITIONS INDICATED OR NOTED.
- 9- VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING CONSTRUCTION. THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR COMMUNICATING AND DISTRIBUTING ALL CONSTRUCTION DOCUMENT UPDATES TO ALL TRADES.
- 10- WORK SHALL CONFORM TO THE REQUIREMENTS OF APPLICABLE STATE, FEDERAL AND CITY/COUNTY CODES. STATE AND FEDERAL CODES ARE TO TAKE PRECEDENCE OVER THE DRAWINGS AND SPECIFICATIONS. IF ANY DISCREPANCY IS NOTED, IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT, PRIOR TO PROCEEDING WITH THE WORK.
- 11- FILE, OBTAIN AND PAY FEES FOR BUILDING DEPARTMENT PERMITS, CONTROLLED INSPECTIONS, OTHER AGENCY APPROVALS AND PERMITS WHERE REQUIRED, AND FINAL WRITE-OFFS FOR PROJECT COMPLETION. COPIES OF TRANSACTIONS SHALL BE FORWARDED TO THE OWNER OR OWNER'S REPRESENTATIVE/CONSTRUCTION MANAGER.
- 12- ALL WORK IS NEW, UNLESS NOTED OTHERWISE.
- 13- PATCH, REPAIR AND FINISH ALL SURFACES IN AREAS OUTSIDE OF THE EXISTING SCOPE THAT ARE DISTURBED AS A RESULT OF THE WORK.
- 14- APPLY, INSTALL, CONNECT, CLEAN AND/OR CONDITION MANUFACTURED ARTICLES, MATERIALS AND/OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. IN CASE OF CONFLICT BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM THE LANDSCAPE ARCHITECT BEFORE PROCEEDING.
- 15- PROVIDE 1/2" PREMOLDED ISOLATION JOINTS BETWEEN CONCRETE SLAB EDGES AND WALLS, UNLESS OTHERWISE NOTED.

**GRAPHIC SYMBOLS**

	VIEW NAME SCALE: 1/4" = 1'-0"	DRAWING TITLE	
		EXTERIOR ELEVATION KEY	
		BUILDING SECTION MARKER	
		VERTICAL ELEVATION KEY	
		DETAIL AREA MARKER	
		DETAIL SECTION MARKER	
		COLUMN GRID LINE	
		MATCH LINE	
	SLOPE MARKER		LANDSCAPE PAVING TAG
	SPOT ELEVATION - PLAN		LANDSCAPE STONE SURFACING TAG
	SPOT ELEVATION - SECTION		LANDSCAPE SOIL TAG
	REVISION CLOUD AND REVISION TAG		LANDSCAPE WALL/FENCE TAG
	ALIGN SURFACES		LANDSCAPE FURNISHINGS TAG
	CENTERLINE		

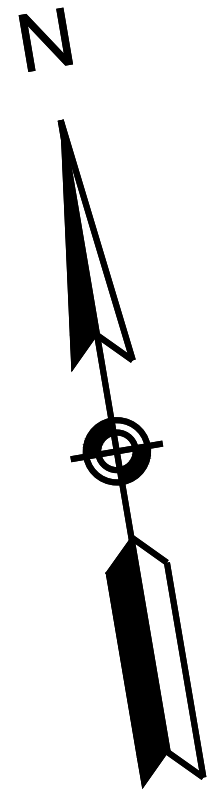
**ABBREVIATIONS LIST**

AD	AREA DRAIN
ADJ	ADJACENT
AGG	AGGREGATE
BC	BOTTOM OF CURB
BETW	BETWEEN
BIT	BITUMINOUS
BS	BOTTOM OF STEP
BW	BOTTOM OF WALL
BWSC	BOSTON WATER & SEWER
CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CONC	CONCRETE
CO	CLEAN OUT
CP	CENTER POINT
DETL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DWG	DRAWING
EA	EACH
EHH	ELECTRIC HAND HOLE
EJ	EXPANSION JOINT
EQ	EQUAL
EX	EXISTING
EXP	EXPANSION
FEE	FINISH FLOOR ELEVATION
FIN	FINISH
FP	FLAG POLE
GA	GAUGE
GALV	GALVANIZED
GRAN	GRANITE
GSO	GAS SHUT OFF
HH	ELECTRIC HANDHOLE
HT	HEIGHT
HYD	HYDRANT
INACC	INACCESSIBLE
JT	JOINT
LA	LANDSCAPE ARCHITECT
LP	LIGHT POLE
MATL	MATERIAL
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
NTS	NOT TO SCALE
NVC	NO VISIBLE CONNECTION
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PCS	PIECES
POB	POINT OF BEGINNING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAINTED
PVMT	PAVEMENT
REC	RECORD
REINF	REINFORCED
REQ	REQUIRED
SBSS	SAND BASED STRUCTURAL SOIL
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
STL	STEEL
TC	TOP OF CURB
TH	THRESHOLD
TS	TOP OF STEP
TW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD
WG	WATER GATE
WIF	WROUGHT IRON FENCE
WSO	WATER SHUT OFF
WWM	WELDED WIRE MESH

ISSUED FOR BID

	Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by KMDG Drawn by A. ALLEN Checked by K. PETSCHKE Approved by K. MARTIN	Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS	Sheet L-0 File No. 8514
	REVISIONS		



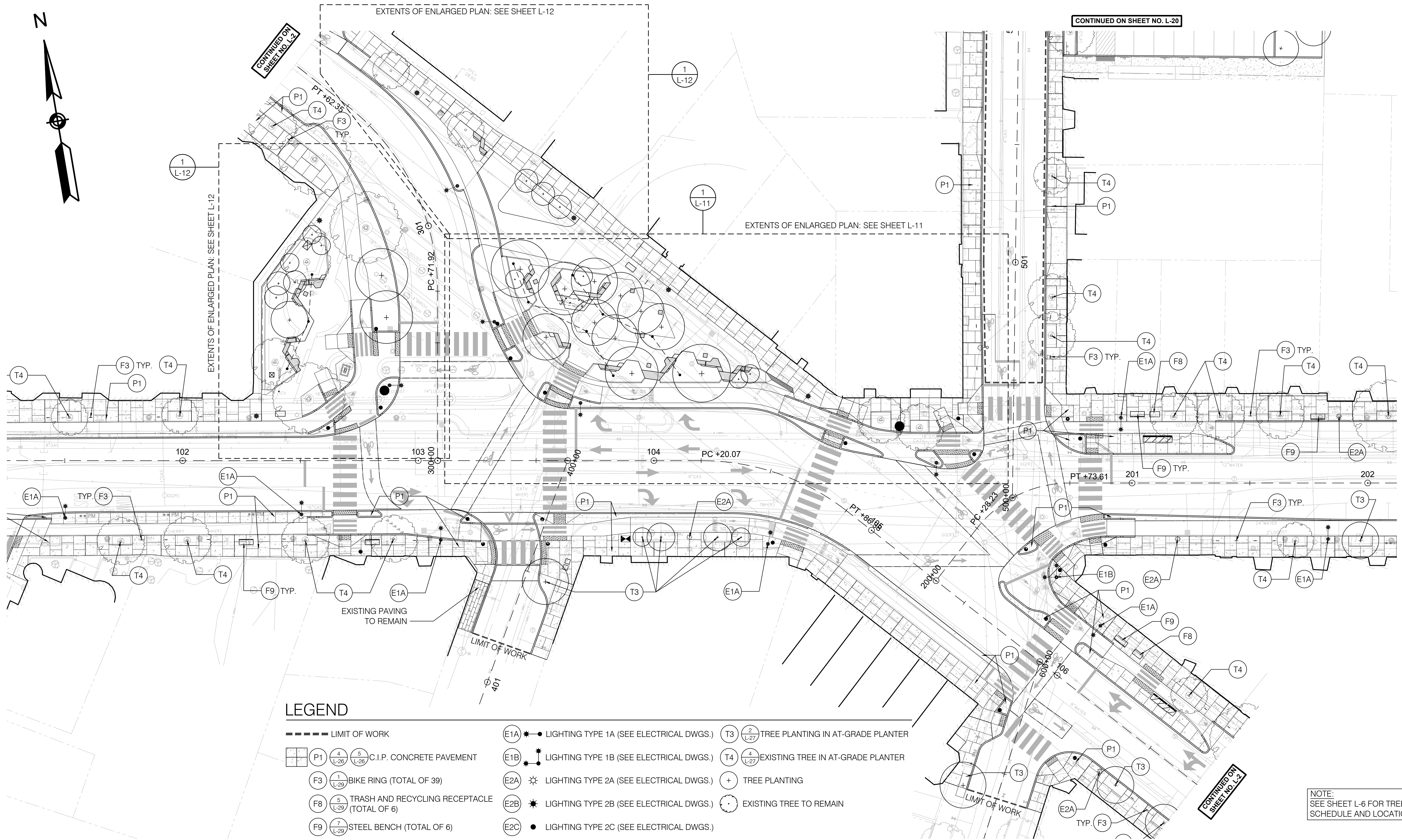


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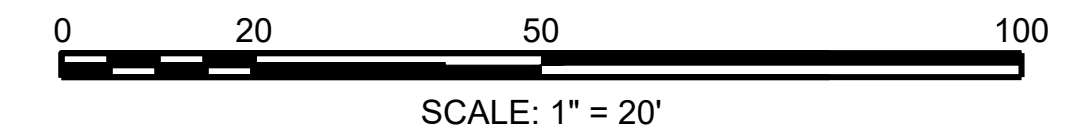
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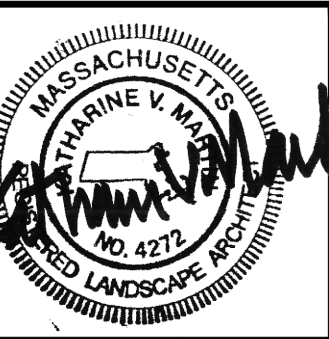
### LEGEND

- LIMIT OF WORK
- P1 C.I.P. CONCRETE PAVEMENT
- F3 BIKE RING (TOTAL OF 39)
- F8 TRASH AND RECYCLING RECEPTACLE (TOTAL OF 6)
- F9 STEEL BENCH (TOTAL OF 6)
- E1A LIGHTING TYPE 1A (SEE ELECTRICAL DWGS.)
- E1B LIGHTING TYPE 1B (SEE ELECTRICAL DWGS.)
- E2A LIGHTING TYPE 2A (SEE ELECTRICAL DWGS.)
- E2B LIGHTING TYPE 2B (SEE ELECTRICAL DWGS.)
- E2C LIGHTING TYPE 2C (SEE ELECTRICAL DWGS.)
- E2D LIGHTING TYPE 2D (SEE ELECTRICAL DWGS.)
- ⊙ EXISTING UTILITY COBRA TO REMAIN
- T3 TREE PLANTING IN AT-GRADE PLANTER
- T4 EXISTING TREE IN AT-GRADE PLANTER
- + TREE PLANTING
- ⊙ EXISTING TREE TO REMAIN

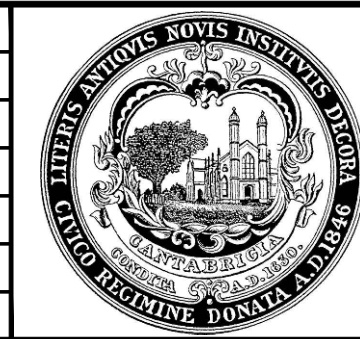


NOTE:  
SEE SHEET L-6 FOR TREE  
SCHEDULE AND LOCATIONS

ISSUED FOR BID



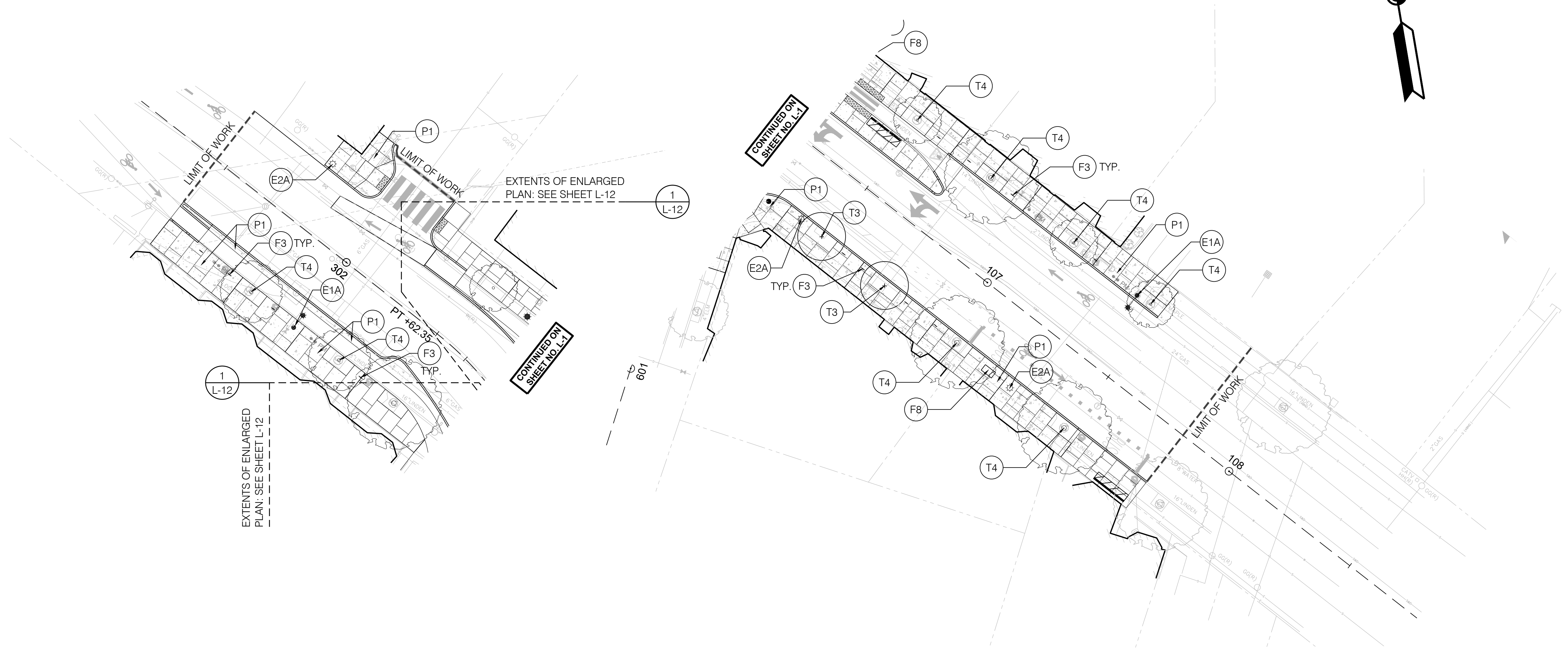
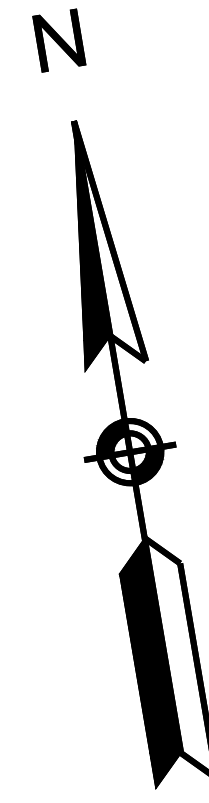
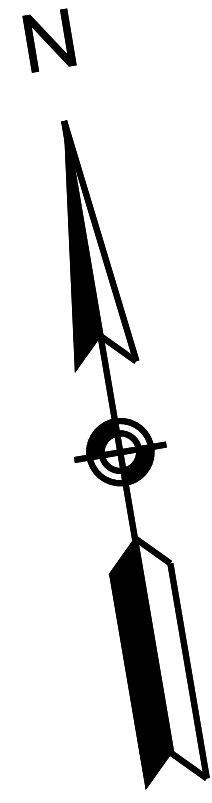
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE MATERIALS PLAN - 1

Sheet	L-1
File No.	8514

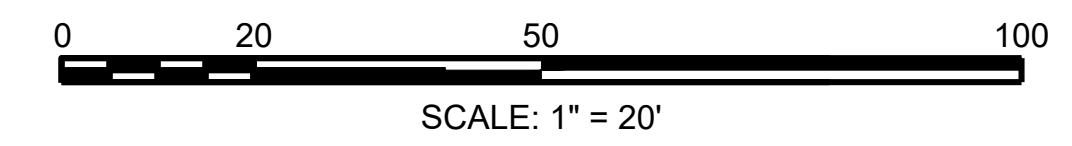




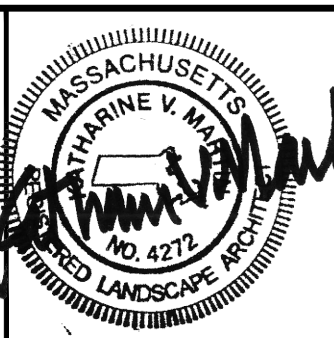
**LEGEND**

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- ⊗ EXISTING UTILITY COBRA TO REMAIN
- T3 TREE PLANTING IN AT-GRADE PLANTER
- T4 EXISTING TREE IN AT-GRADE PLANTER
- + TREE PLANTING
- EXISTING TREE TO REMAIN

NOTE:  
SEE SHEET L-6 FOR TREE  
SCHEDULE AND LOCATIONS



ISSUED FOR BID



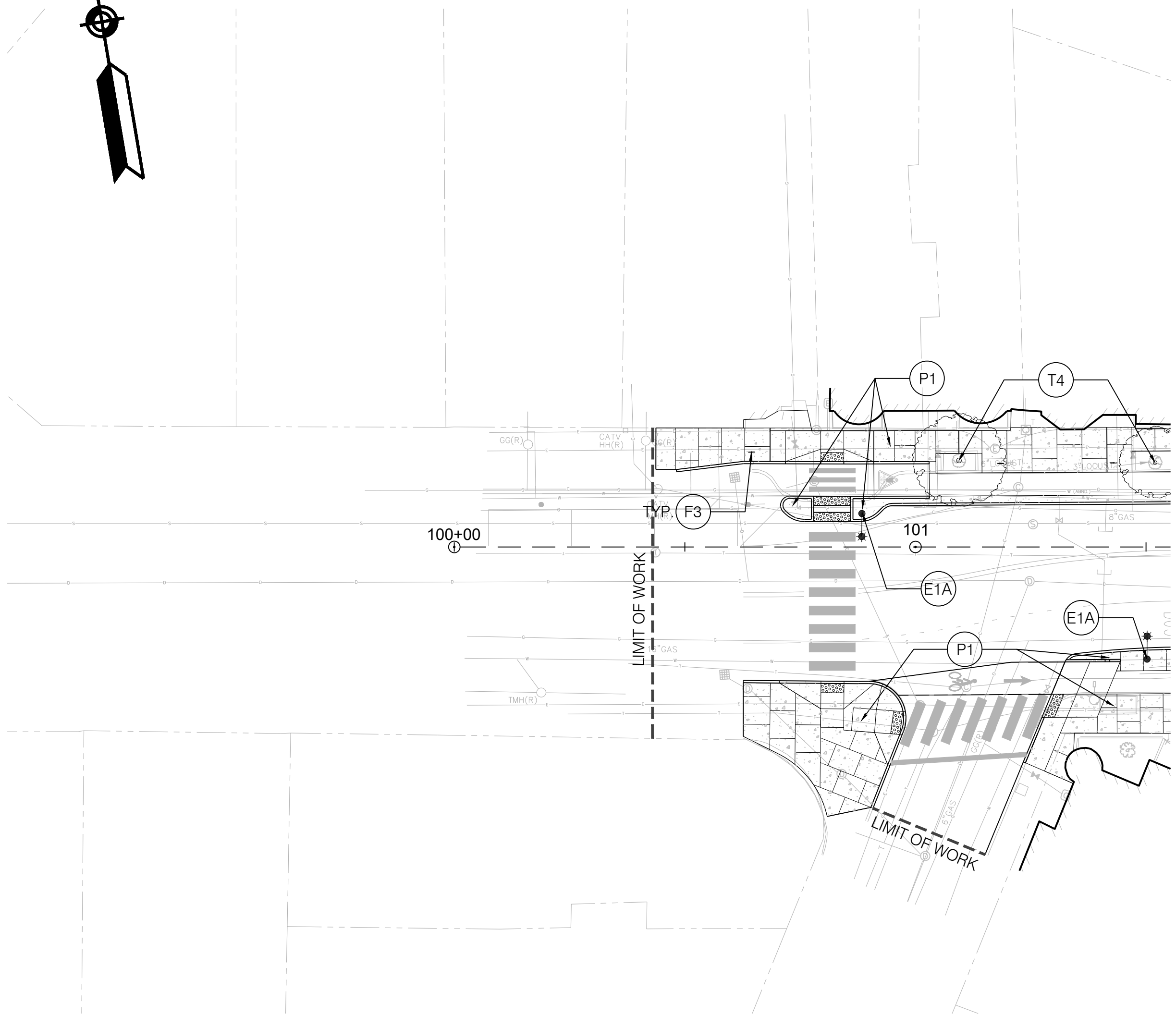
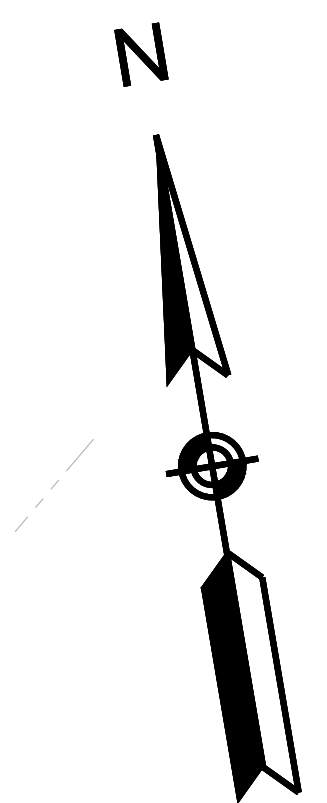
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Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
		REVISIONS	



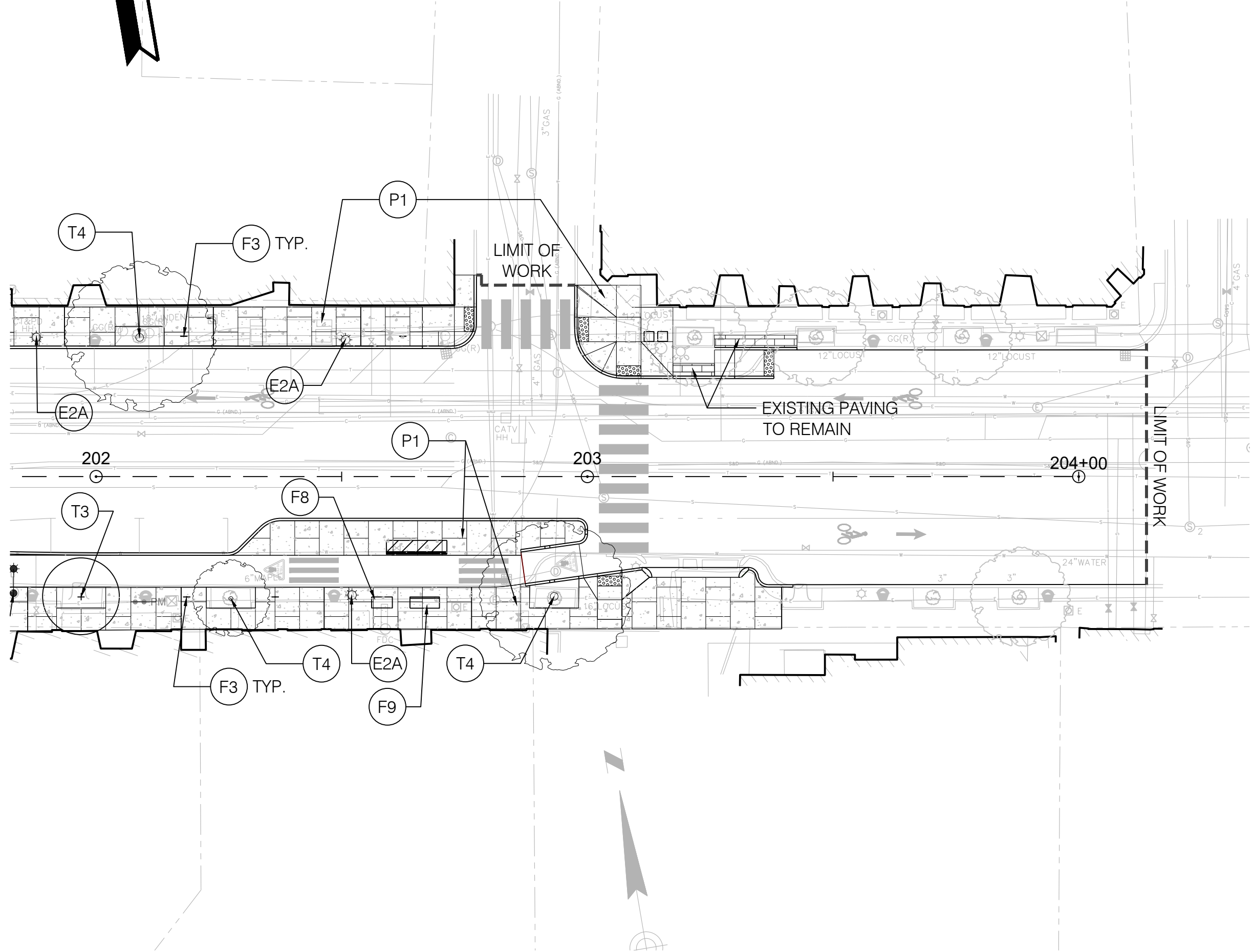
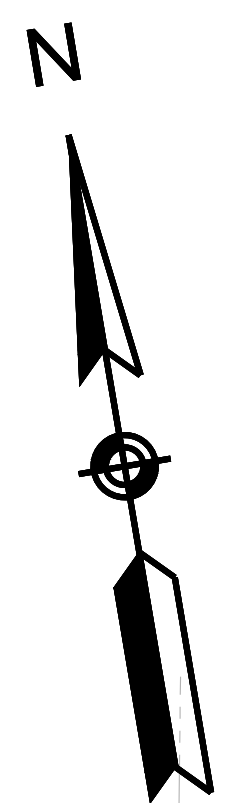
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE MATERIALS PLAN - 2

Sheet	L-2
File No.	8514





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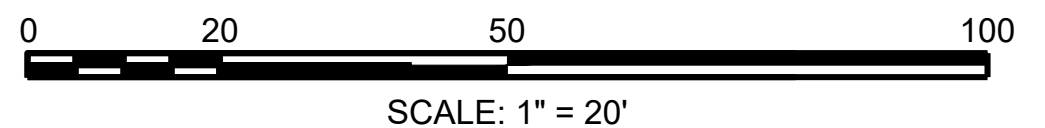


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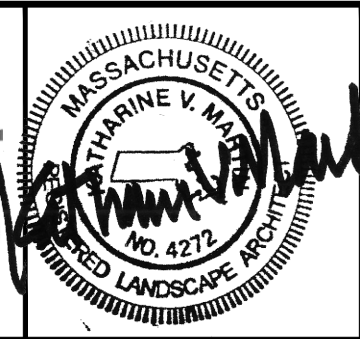
**LEGEND**

- LIMIT OF WORK
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- EXISTING TREE TO REMAIN

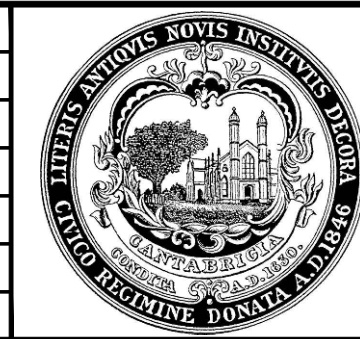
NOTE:  
SEE SHEET L-6 FOR TREE  
SCHEDULE AND LOCATIONS



ISSUED FOR BID



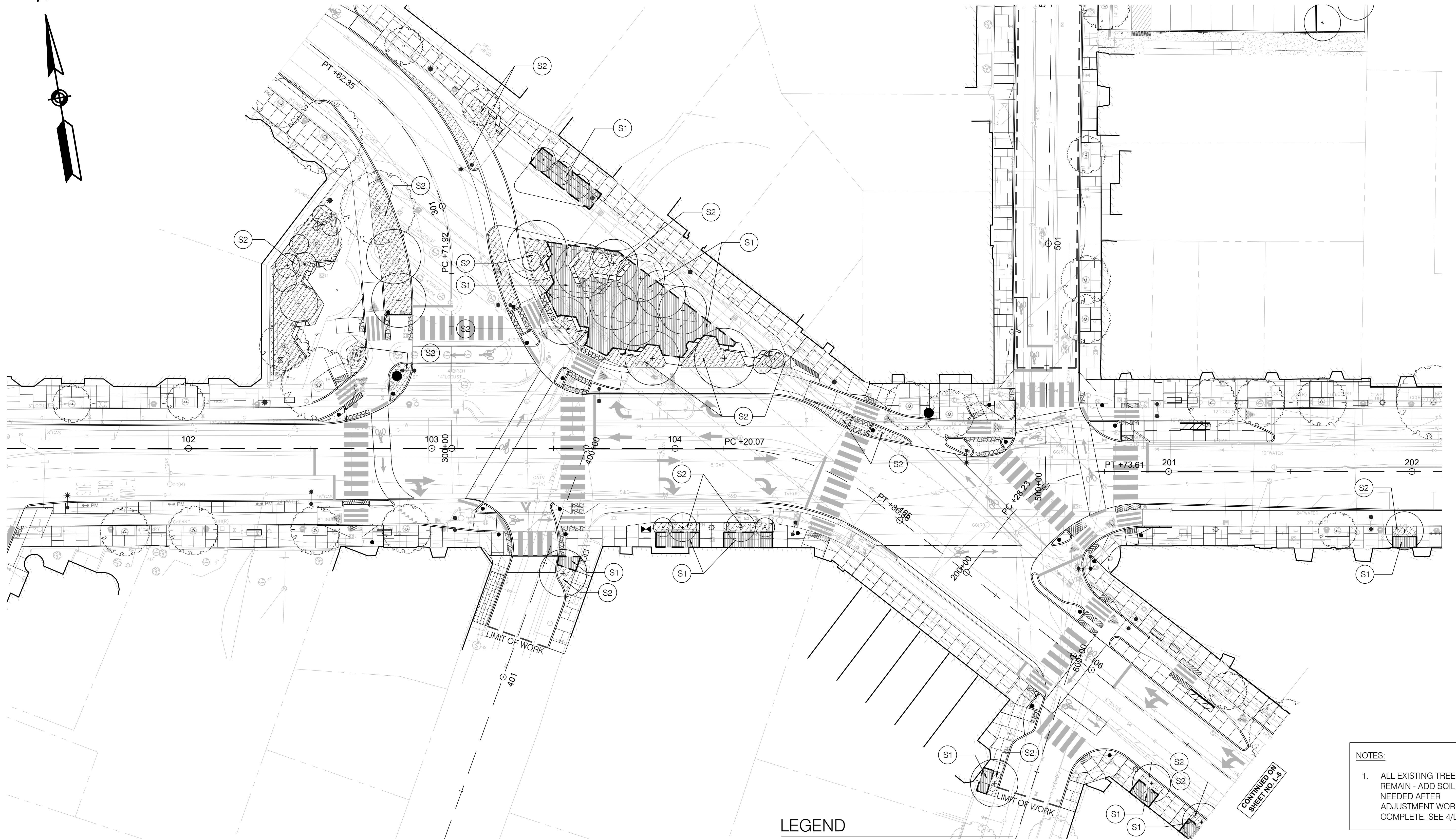
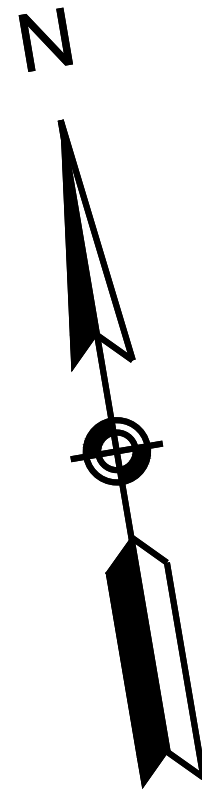
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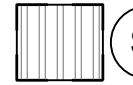
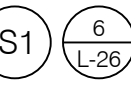
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE MATERIALS PLAN - 3

Sheet	L-3
File No.	8514





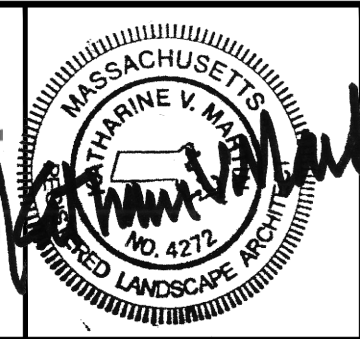
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-  S1 <sup>6</sup>/<sub>L-26</sub> SOIL PROFILE A: SAND BASED STRUCTURAL SOIL
-  S2 <sup>5</sup>/<sub>L-26</sub> SOIL PROFILE B: PLANTING BED SOIL

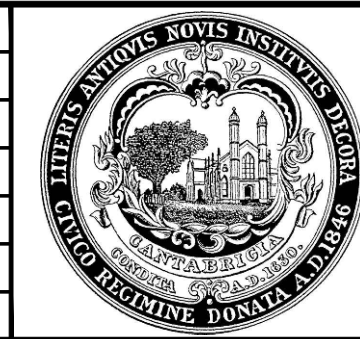
**NOTES:**

- ALL EXISTING TREES TO REMAIN - ADD SOIL AS NEEDED AFTER ADJUSTMENT WORK IS COMPLETE. SEE 4/L-30.

ISSUED FOR BID



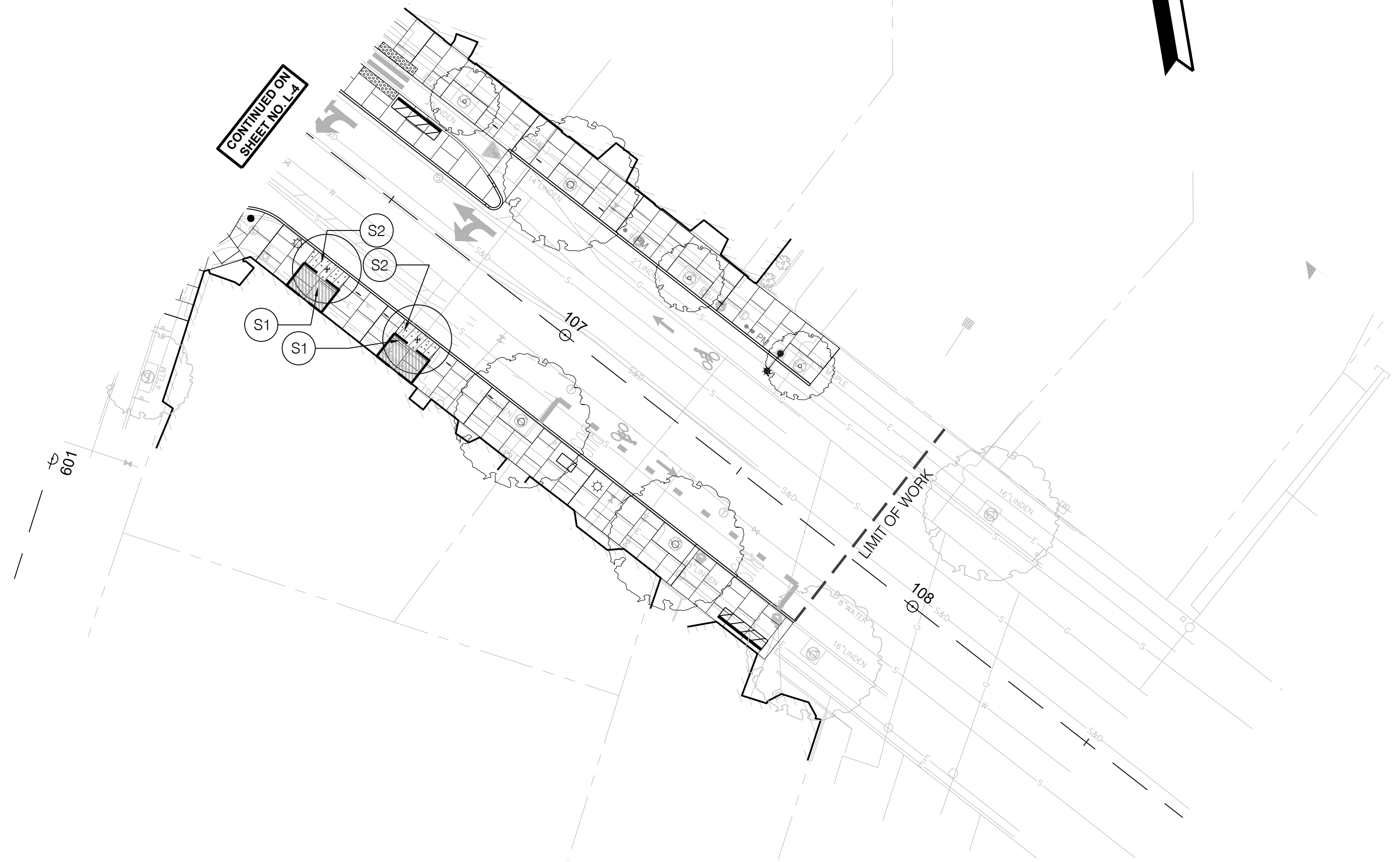
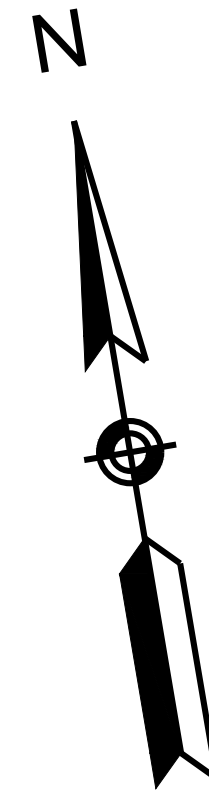
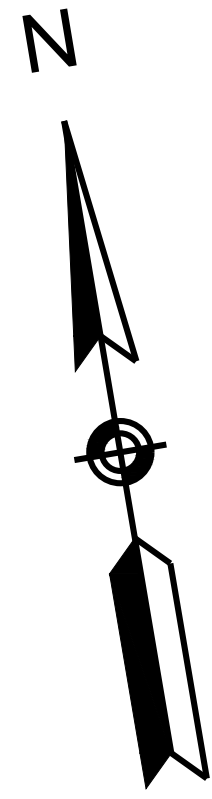
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			REVISIONS




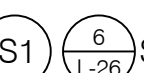

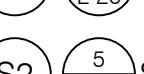
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE SOIL PLACEMENT PLAN - 1

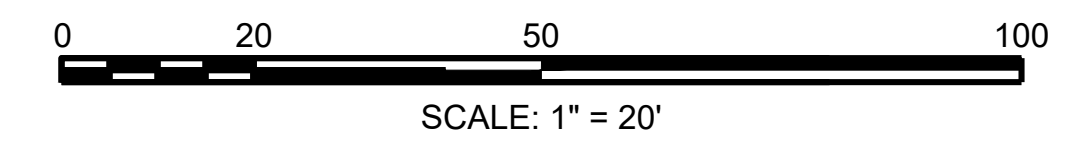
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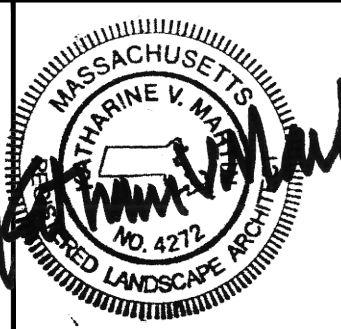
-  S1  SOIL PROFILE A: SAND BASED STRUCTURAL SOIL
-  S2  SOIL PROFILE B: PLANTING BED SOIL



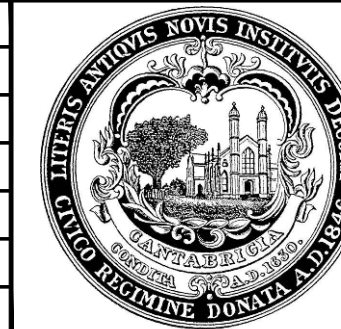
**NOTES:**

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ISSUED FOR BID



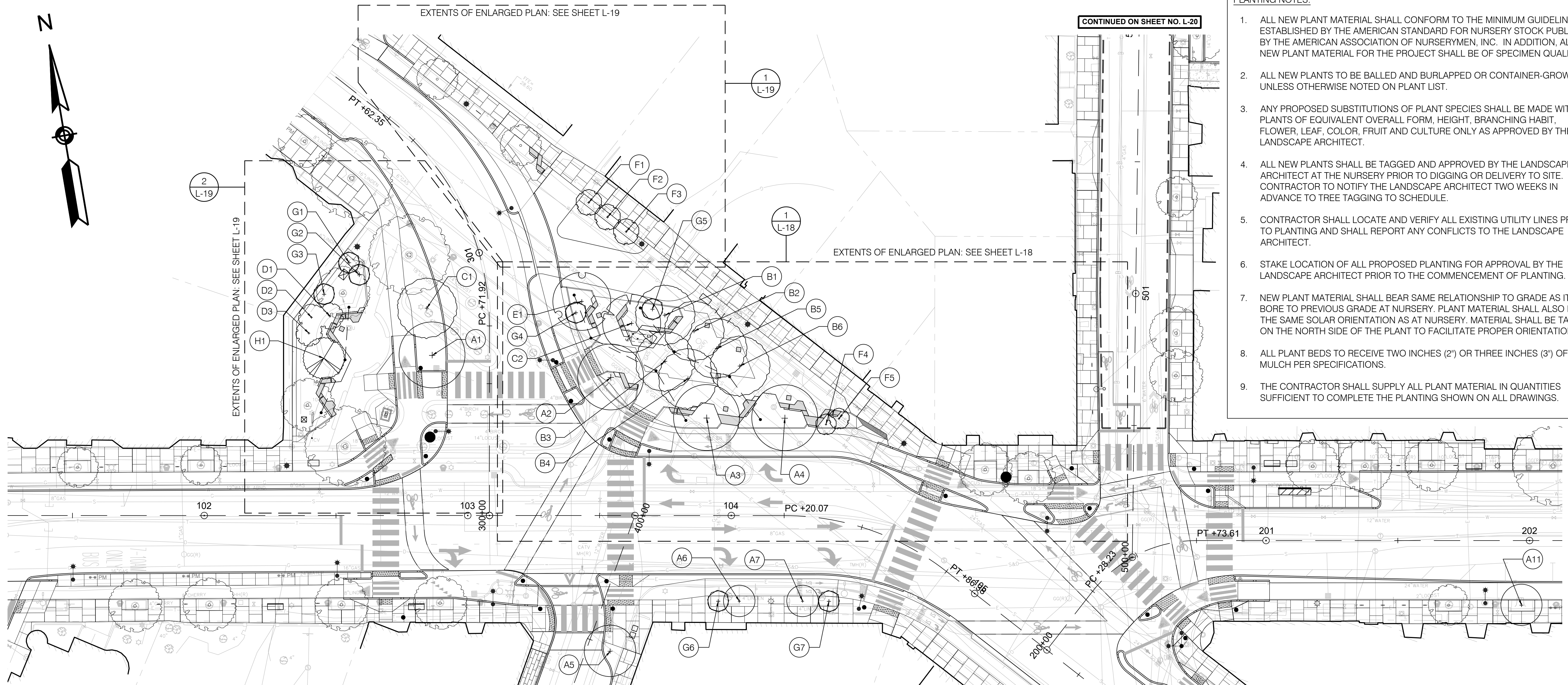
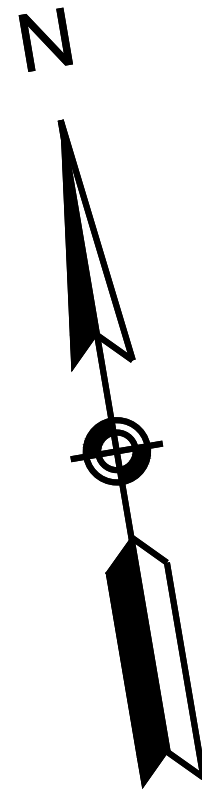
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE SOIL PLACEMENT PLAN - 2

Sheet	L-5
File No.	8514





- PLANTING NOTES:**
1. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
  2. ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER-GROWN, UNLESS OTHERWISE NOTED ON PLANT LIST.
  3. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT.
  4. ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO SITE. CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT TWO WEEKS IN ADVANCE TO TREE TAGGING TO SCHEDULE.
  5. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
  6. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
  7. NEW PLANT MATERIAL SHALL BEAR SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE AT NURSERY. PLANT MATERIAL SHALL ALSO BE IN THE SAME SOLAR ORIENTATION AS AT NURSERY. MATERIAL SHALL BE TAGGED ON THE NORTH SIDE OF THE PLANT TO FACILITATE PROPER ORIENTATION.
  8. ALL PLANT BEDS TO RECEIVE TWO INCHES (2") OR THREE INCHES (3") OF BARK MULCH PER SPECIFICATIONS.
  9. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL DRAWINGS.

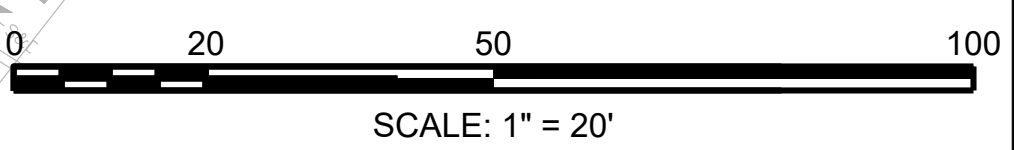
**TREE SCHEDULE - PLAZA AND STREETSCAPE**

TREE I.D.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	STATION	OFFSET (FT)
A1	Ulmus americana	American Elm	4-5" cal. B&B	SEE NOTE 1	300+60.72	21.72 L
A2	Ulmus americana	American Elm	2.5-3" cal. B&B	SEE NOTE 1	103+54.28	52.34 L
A3	Ulmus americana	American Elm	4-5" cal. B&B	SEE NOTE 1	103+90.67	36.96 L
A4	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	104+20.34	36.91 L
A5	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	400+51.60	08.71 L
A6	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	104+03.05	32.50 R
A7	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	104+34.84	30.35 R
A8	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	600+59.88	15.21 R
A9	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	106+48.24	20.51 R
A10	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	106+75.46	21.54 R
A11	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	201+96.87	24.50 R
B1	Acer rubrum	Red Maple	3-4" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	103+74.80	75.98 L
B2	Acer rubrum	Red Maple	5-6" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	103+85.86	69.95 L
B3	Acer rubrum	Red Maple	5-6" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	103+74.88	58.50 L
B4	Acer rubrum	Red Maple	4-5" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	103+83.55	51.91 L
B5	Acer rubrum	Red Maple	4-5" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	103+94.52	63.35 L
B6	Acer rubrum	Red Maple	5-6" cal. B&B	SEE NOTE 2; MIN. 7' BRANCHING HEIGHT	104+03.25	56.68 L
C1	Nyssa sylvatica 'Green Gable'™	Black Tupelo	4-5" cal. B&B	SPRING DUG, UPRIGHT REGULAR FORM	300+80.72	23.46 L
C2	Nyssa sylvatica 'Green Gable'™	Black Tupelo	4-5" cal. B&B	SPRING DUG, UPRIGHT REGULAR FORM	300+72.43	53.92 L
D1	Magnolia virginiana 'Green Shadow'	Sweetbay Magnolia	8-10' height	CONTAINER GROWN	300+77.56	60.38 L
D2	Magnolia virginiana 'Green Shadow'	Sweetbay Magnolia	8-10' height	CONTAINER GROWN	300+75.67	67.46 L
D3	Magnolia virginiana 'Green Shadow'	Sweetbay Magnolia	8-10' height	CONTAINER GROWN	300+63.15	68.52 L
E1	Liquidambar styraciflua 'Moraine'	Sweetgum	4-5" cal. B&B		300+78.78	35.35 R
F1	Amelanchier 'Autumn Brilliance'	'Autumn Brilliance' Shadblow	2.5-3" cal. B&B	SINGLE STEM	301+04.82	45.39 R
F2	Amelanchier 'Autumn Brilliance'	'Autumn Brilliance' Shadblow	2.5-3" cal. B&B	SINGLE STEM	300+99.83	50.56 R
F3	Amelanchier 'Autumn Brilliance'	'Autumn Brilliance' Shadblow	2.5-3" cal. B&B	SINGLE STEM	300+95.18	56.08 R
F4	Amelanchier 'Autumn Brilliance'	'Autumn Brilliance' Shadblow	2-2.5" cal. B&B	SINGLE STEM	104+31.82	35.47 L
F5	Amelanchier 'Autumn Brilliance'	'Autumn Brilliance' Shadblow	2-2.5" cal. B&B	SINGLE STEM	104+35.18	38.30 L
G1	Cercis canadensis 'Royal White'	Redbud	10-12' height	MULTI-STEM CONTAINER GROWN	301+19.27	47.50 L

**SCHEDULE NOTES:**

1. ULMUS CULTIVARS SHALL BE A COMBINATION OF 'VALLEY FORGE', 'PRINCETON' AND 'ACCOLADE'.
2. ACER CULTIVAR SHALL BE A MIX OF 'NORTHWIND', 'OCTOBER GLORY' AND 'AUTUMN SPIRE'.
3. SEE SHEET L-20 FOR TREE AND PLANT SCHEDULE FOR SPRINGFIELD ST. LOT.
4. SEE SHEETS L-18 + L-19 FOR SHRUB AND PERENNIAL SCHEDULES FOR PLAZA.
5. TREES A5, A6, A7, A8, A9, A10, A11, G6, AND G7 TO BE PROVIDED AND INSTALLED BY THE CITY.

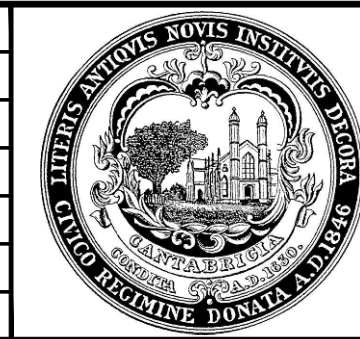
G2	Cercis canadensis 'Royal White'	Redbud	10-12' height	MULTI-STEM CONTAINER GROWN	301+08.42	45.82 L
G3	Cercis canadensis 'Royal White'	Redbud	10-12' height	MULTI-STEM CONTAINER GROWN	301+03.04	60.87 L
G4	Cercis canadensis 'Royal White'	Redbud	10-12' height	MULTI-STEM CONTAINER GROWN	300+75.66	32.88 R
G5	Cercis canadensis 'Royal White'	Redbud	10-12' height	MULTI-STEM CONTAINER GROWN	300+75.72	61.96 R
G6	Cercis canadensis 'Royal White'	Redbud	2.5-3" cal. B&B	SINGLE STEM	103+95.05	32.50 R
G7	Cercis canadensis 'Royal White'	Redbud	2.5-3" cal. B&B	SINGLE STEM	104+44.74	30.44 R
H1	Abies fraseri	Fraser Fir	16-18' HT. B&B	SYMMETRICAL	102+45.37	59.65 L



ISSUED FOR BID



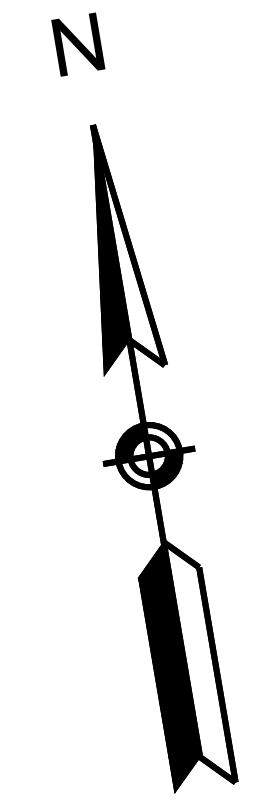
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		No.		Description		Date							
		REVISIONS											



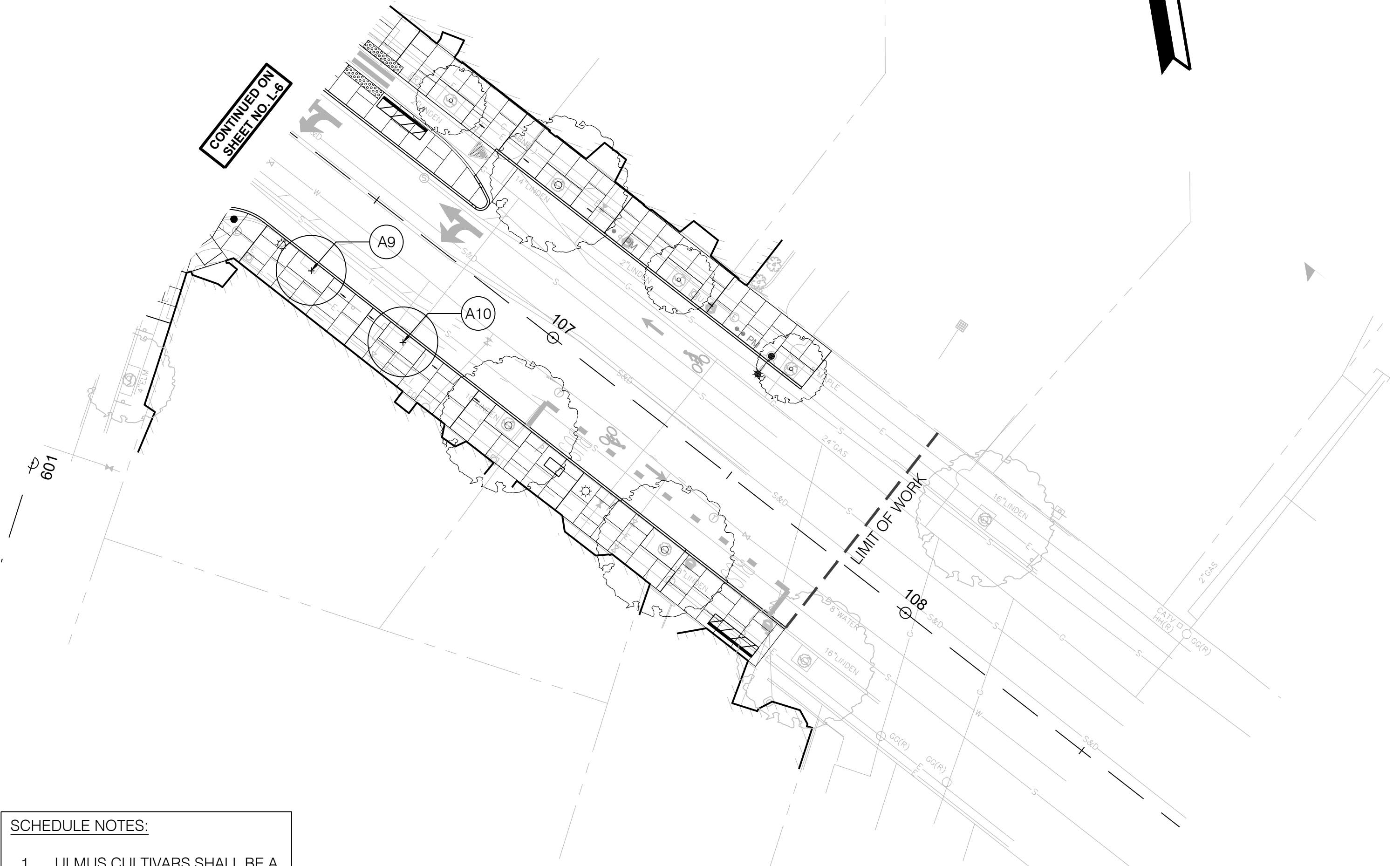
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE PLANTING PLAN - 1

Sheet	L-6
File No.	8514





- PLANTING NOTES:**
1. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
  2. ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER-GROWN, UNLESS OTHERWISE NOTED ON PLANT LIST.
  3. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT.
  4. ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO SITE. CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT TWO WEEKS IN ADVANCE TO TREE TAGGING TO SCHEDULE.
  5. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
  6. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING.
  7. NEW PLANT MATERIAL SHALL BEAR SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE AT NURSERY. PLANT MATERIAL SHALL ALSO BE IN THE SAME SOLAR ORIENTATION AS AT NURSERY. MATERIAL SHALL BE TAGGED ON THE NORTH SIDE OF THE PLANT TO FACILITATE PROPER ORIENTATION.
  8. ALL PLANT BEDS TO RECEIVE TWO INCHES (2") OR THREE INCHES (3") OF BARK MULCH PER SPECIFICATIONS.
  9. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL DRAWINGS.

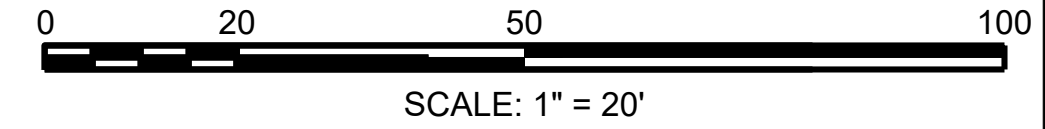


**TREE SCHEDULE - PLAZA AND STREETSCAPE**

TREE I.D.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	STATION	OFFSET (FT)
A1	Ulmus americana	American Elm	4-5" cal. B&B	SEE NOTE 1	300+60.72	21.72 L
A2	Ulmus americana	American Elm	2.5-3" cal. B&B	SEE NOTE 1	103+54.28	52.34 L
A3	Ulmus americana	American Elm	4-5" cal. B&B	SEE NOTE 1	103+90.67	36.96 L
A4	Ulmus americana	American Elm	2-3" cal. B&B	SEE NOTE 1	104+20.34	36.91 L
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C1	Nyssa sylvatica 'Green Gable'™	Black Tupelo	4-5" cal. B&B	SPRING DUG, UPRIGHT REGULAR FORM	300+80.72	23.46 L
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  4. SEE SHEETS L-18 + L-19 FOR SHRUB AND PERENNIAL SCHEDULES FOR PLAZA.
  5. TREES A5, A6, A7, A8, A9, A10, A11, G6, AND G7 TO BE PROVIDED AND INSTALLED BY THE CITY.

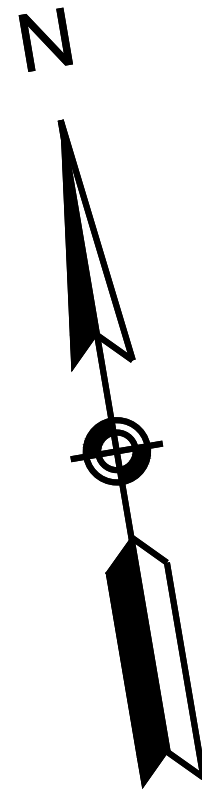
ID	Species	Size	Form	Station	Offset
G2	Cercis canadensis 'Royal White'	10-12' height	MULTI-STEM CONTAINER GROWN	301+08.42	45.82 L
G3	Cercis canadensis 'Royal White'	10-12' height	MULTI-STEM CONTAINER GROWN	301+03.04	60.87 L
G4	Cercis canadensis 'Royal White'	10-12' height	MULTI-STEM CONTAINER GROWN	300+75.66	32.88 R
G5	Cercis canadensis 'Royal White'	10-12' height	MULTI-STEM CONTAINER GROWN	300+75.72	61.96 R
G6	Cercis canadensis 'Royal White'	2.5-3" cal. B&B	SINGLE STEM	103+95.05	32.50 R
G7	Cercis canadensis 'Royal White'	2.5-3" cal. B&B	SINGLE STEM	104+44.74	30.44 R
H1	Abies fraseri	16'-18' HT. B&B	SYMMETRICAL	102+45.37	59.65 L



ISSUED FOR BID

						Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by KMDG Drawn by A. ALLEN Checked by K. PETSCHKE Approved by K. MARTIN		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing LANDSCAPE PLANTING PLAN - 2	Sheet L-7 File No. 8514
						Revisions:			





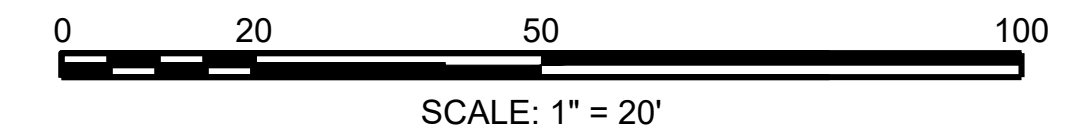
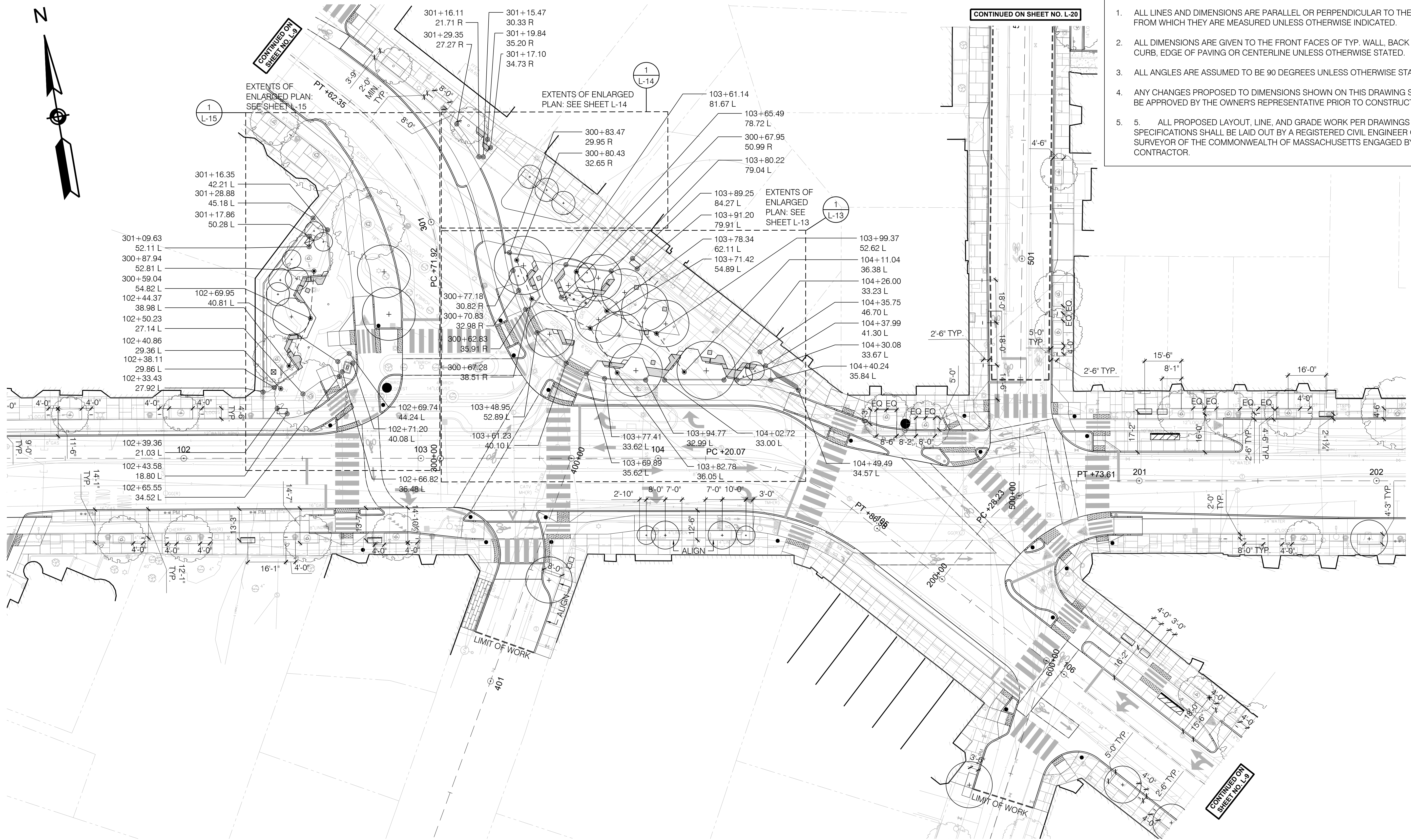
- LAYOUT NOTES:
1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
  2. ALL DIMENSIONS ARE GIVEN TO THE FRONT FACES OF TYP. WALL, BACK OF CURB, EDGE OF PAVING OR CENTERLINE UNLESS OTHERWISE STATED.
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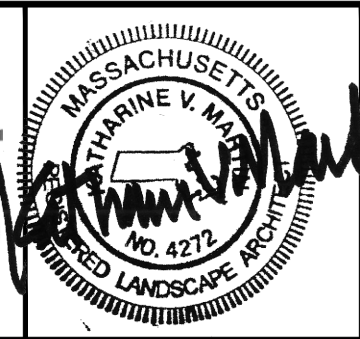
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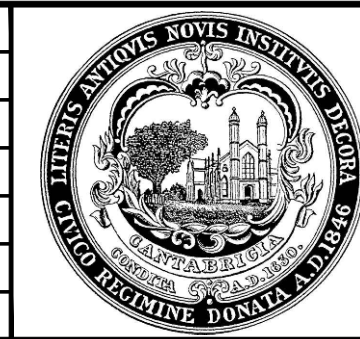
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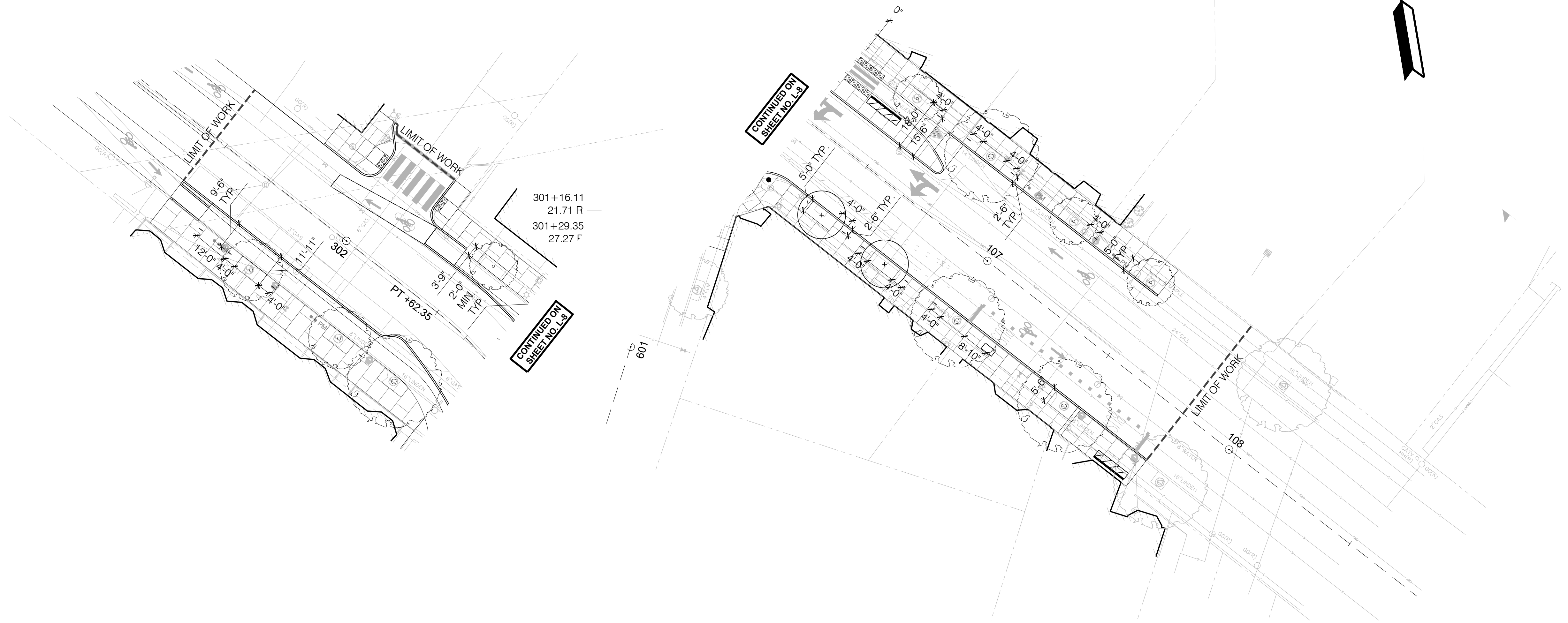
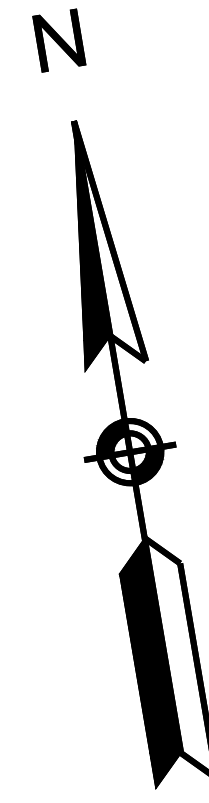
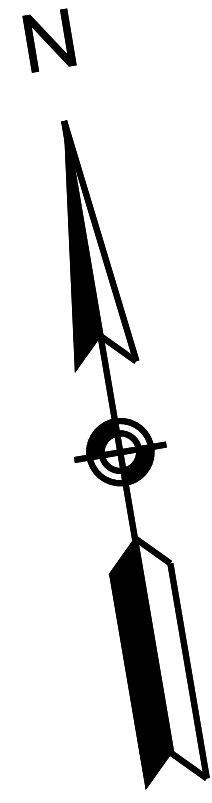
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE LAYOUT PLAN - 1

Sheet	L-8
File No.	8514



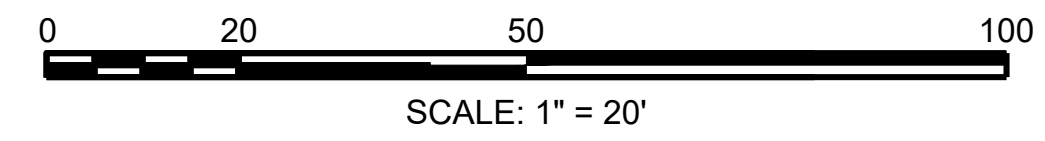


301+16.11  
21.71 R  
301+29.35  
27.27 F

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SHEET NO. L-8

CONTINUED ON  
SHEET NO. L-9

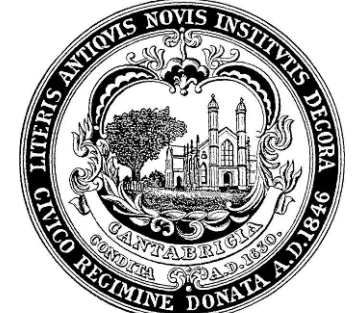
- LAYOUT NOTES:
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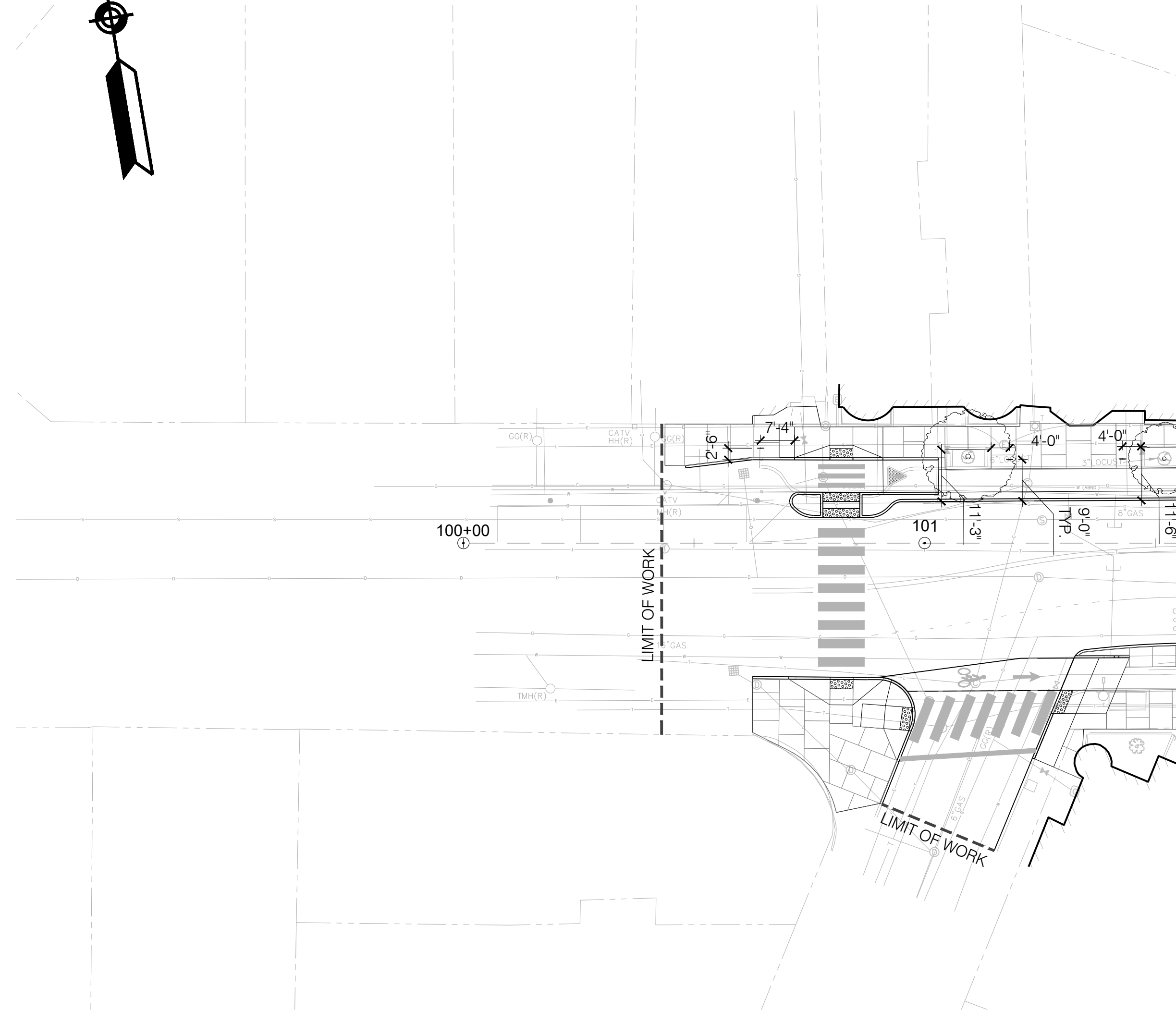
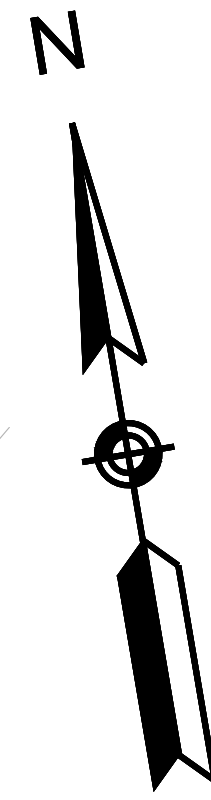
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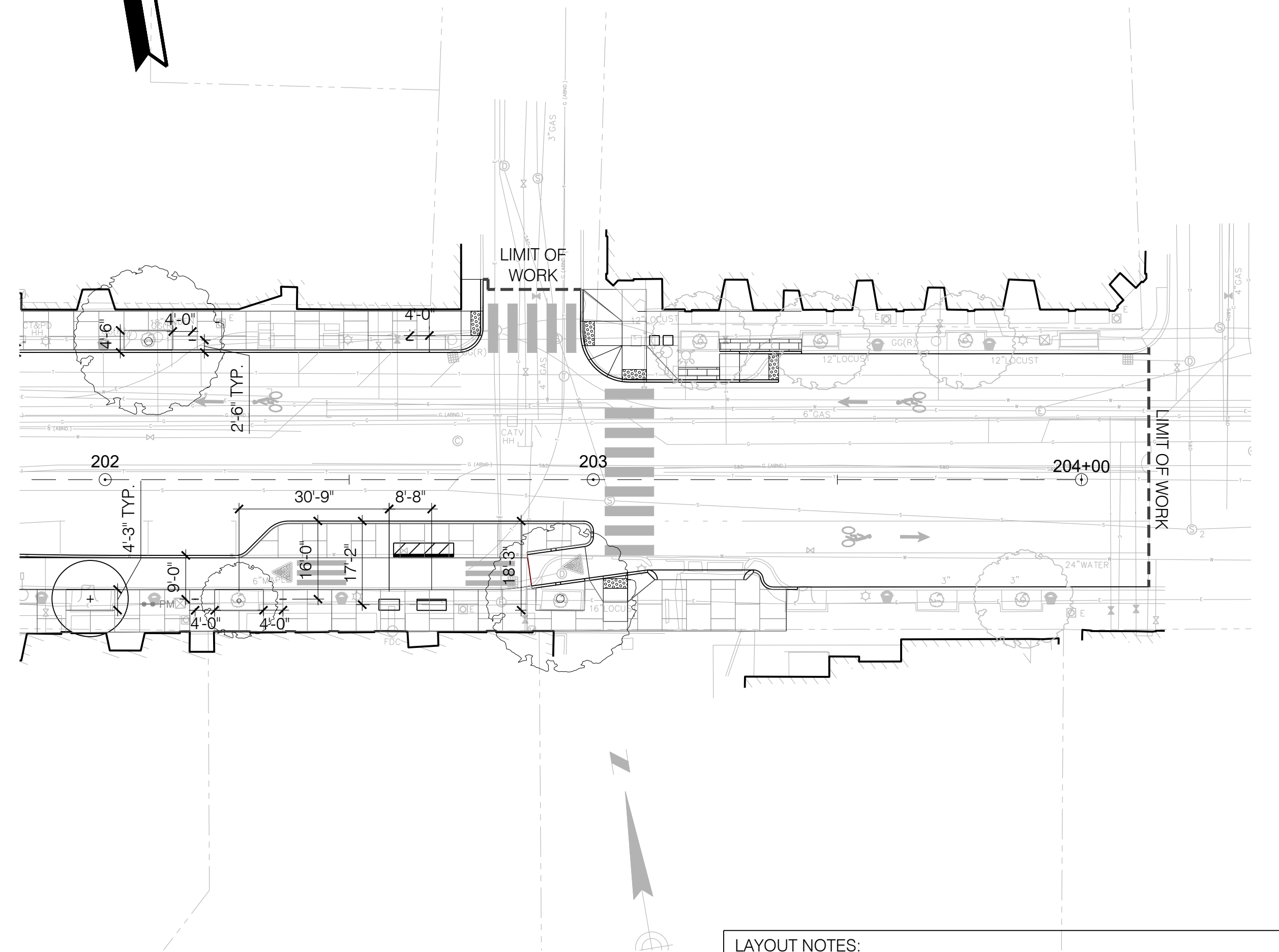
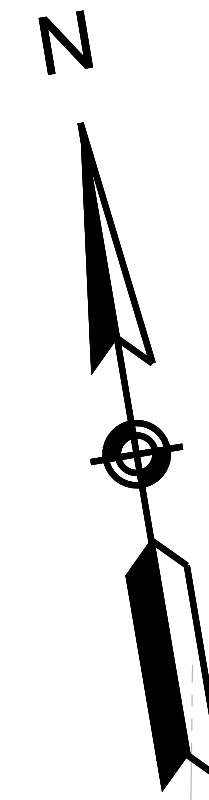
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE LAYOUT PLAN - 2

Sheet	L-9
File No.	8514



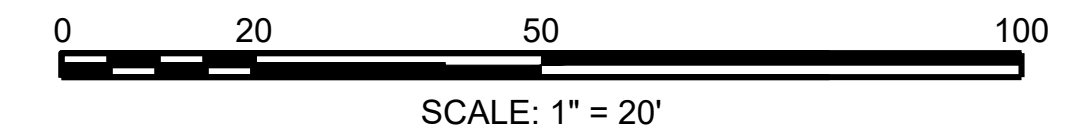


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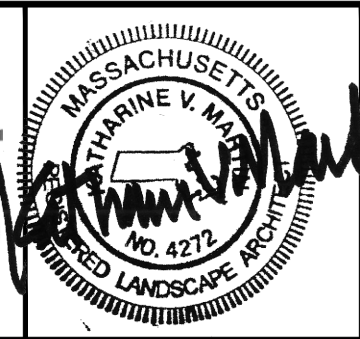


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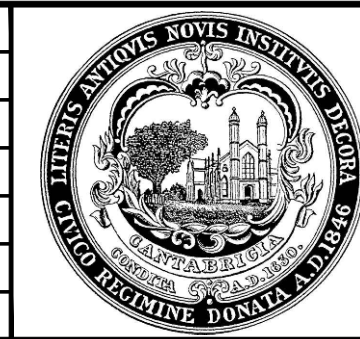
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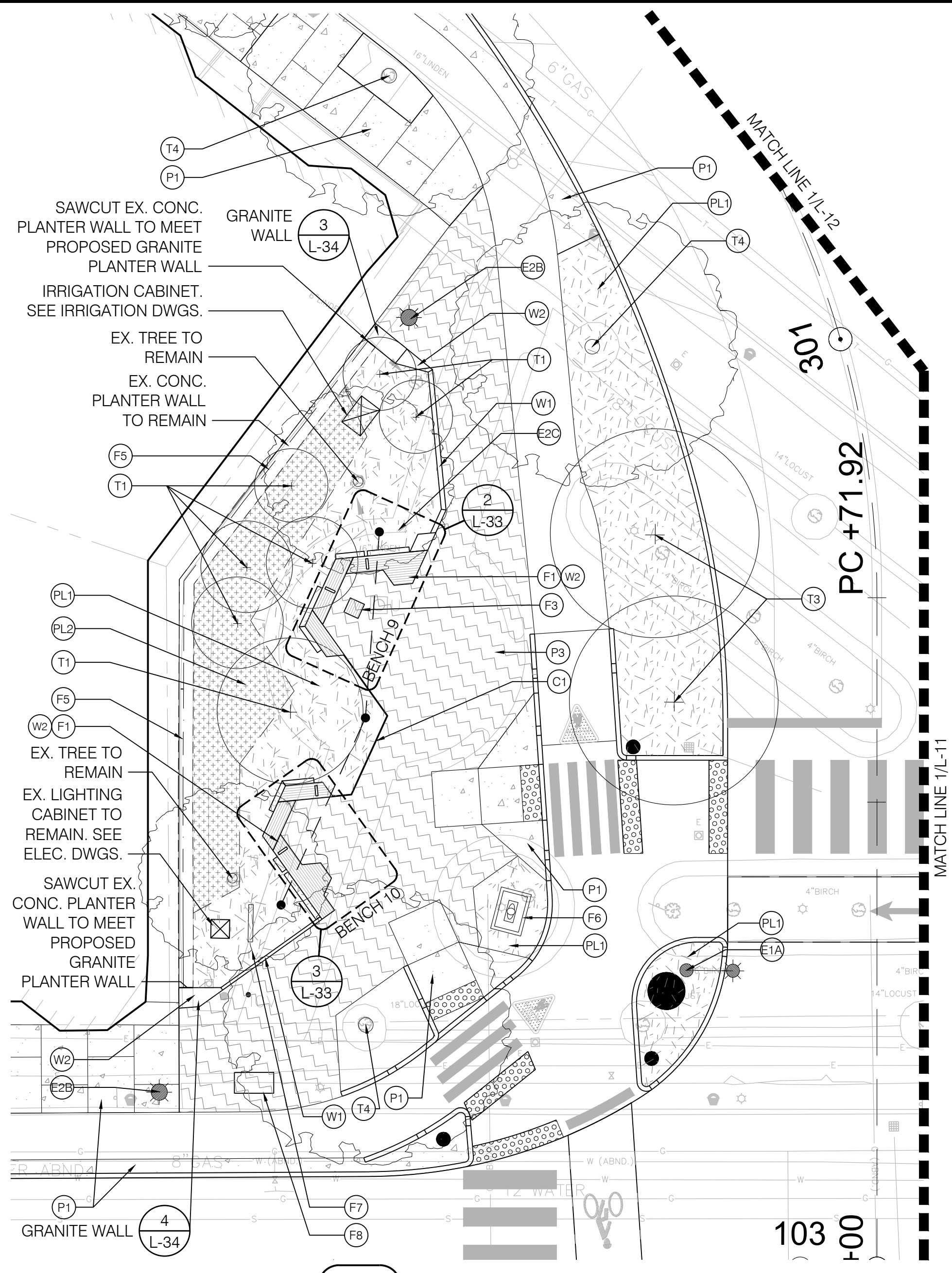
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Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE LAYOUT PLAN - 3

Sheet	L-10
File No.	8514

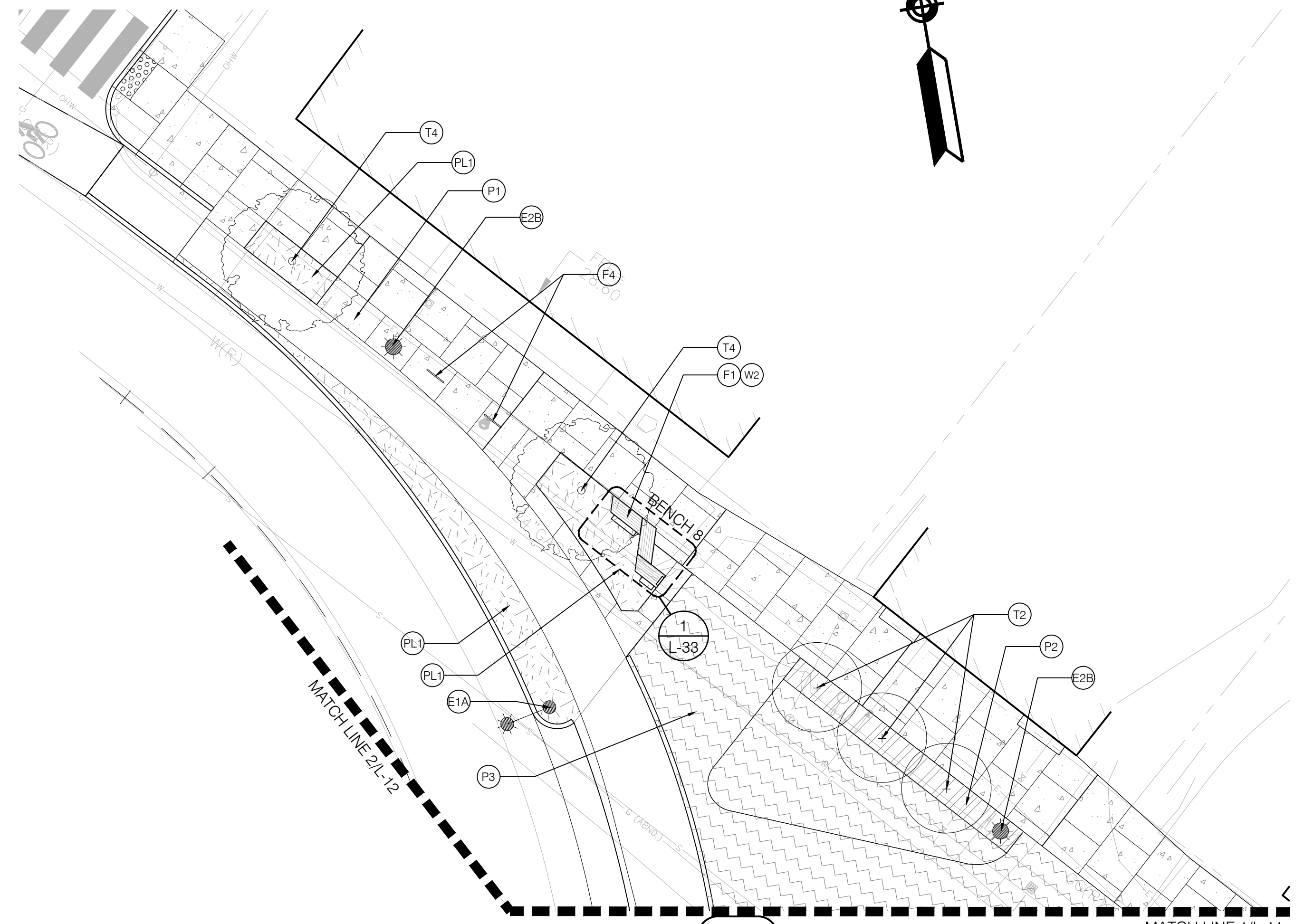




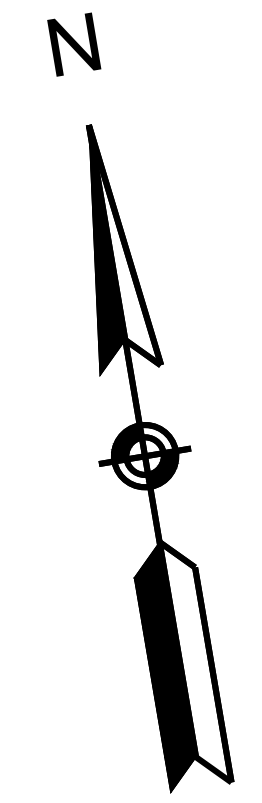




**2** VELLUCCI WEST  
SCALE: 1" = 10'-0"



**1** VELLUCCI NORTH  
SCALE: 1" = 10'-0"



**LEGEND**

- |  |   |  |  |                                       |
|--|---|--|--|---------------------------------------|
| P1  C.I.P. CONCRETE PAVEMENT               | F1  WOOD BENCH TOP ON GRANITE PLANTER WALL                | E1A  LIGHTING TYPE 1A (SEE ELECTRICAL DWGS.) | T1  TREE PLANTING IN RAISED PLANTER                      | PL1  PERENNIAL PLANTING               |
| P2  PERMEABLE PRECAST CONCRETE UNIT PAVERS | F2  OTTOMAN - WOOD BENCH TOP ON GRANITE BASE (TOTAL OF 7) | E1B  LIGHTING TYPE 1B (SEE ELECTRICAL DWGS.) | T2  TREE PLANTING IN PERMEABLE PRECAST CONC. UNIT PAVERS | PL2  SHRUB PLANTING AT RAISED PLANTER |
| P3  PRECAST CONCRETE UNIT PAVERS           | F3  BIKE RING (TOTAL OF 39)                               | E2A  LIGHTING TYPE 2A (SEE ELECTRICAL DWGS.) | T3  TREE PLANTING IN AT-GRADE PLANTER                    | PL3  BULB PLANTING                    |
| W1  GRANITE LANDSCAPE CURB                 | F4  LANDSCAPE FORMS BOLA BIKE RACK (TOTAL OF 5)           | E2B  LIGHTING TYPE 2B (SEE ELECTRICAL DWGS.) | T4  EXISTING TREE IN AT-GRADE PLANTER                    | TREE PLANTING                         |
| W2  GRANITE PLANTER WALL                   | F5  6' WOOD LATTICE FENCE AND GATE                        | E2C  LIGHTING TYPE 2C (SEE ELECTRICAL DWGS.) | EXISTING TREE TO REMAIN                                  |                                       |
| W3  GRANITE VELLUCCI MEMORIAL WALL         | F6  RELOCATED VELLUCCI STATUE ON GRANITE BASE             | E2D  LIGHTING TYPE 2D (SEE ELECTRICAL DWGS.) |  |                                       |
| C1  WEATHERED STEEL LANDSCAPE CURB         | F7  COMMUNITY MESSAGE BOARD                               | EXISTING UTILITY COBRA TO REMAIN             |  |                                       |
|  | F8  TRASH AND RECYCLING RECEPTACLE (TOTAL OF 6)           |  |  |                                       |

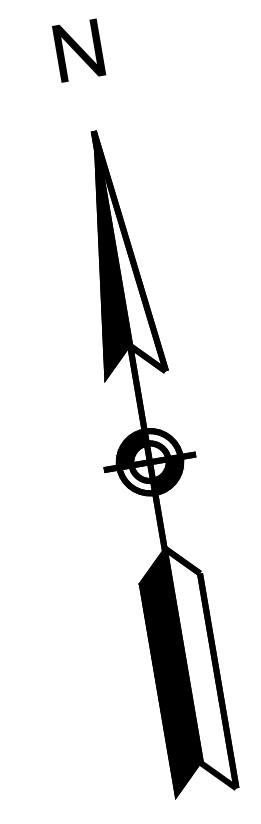


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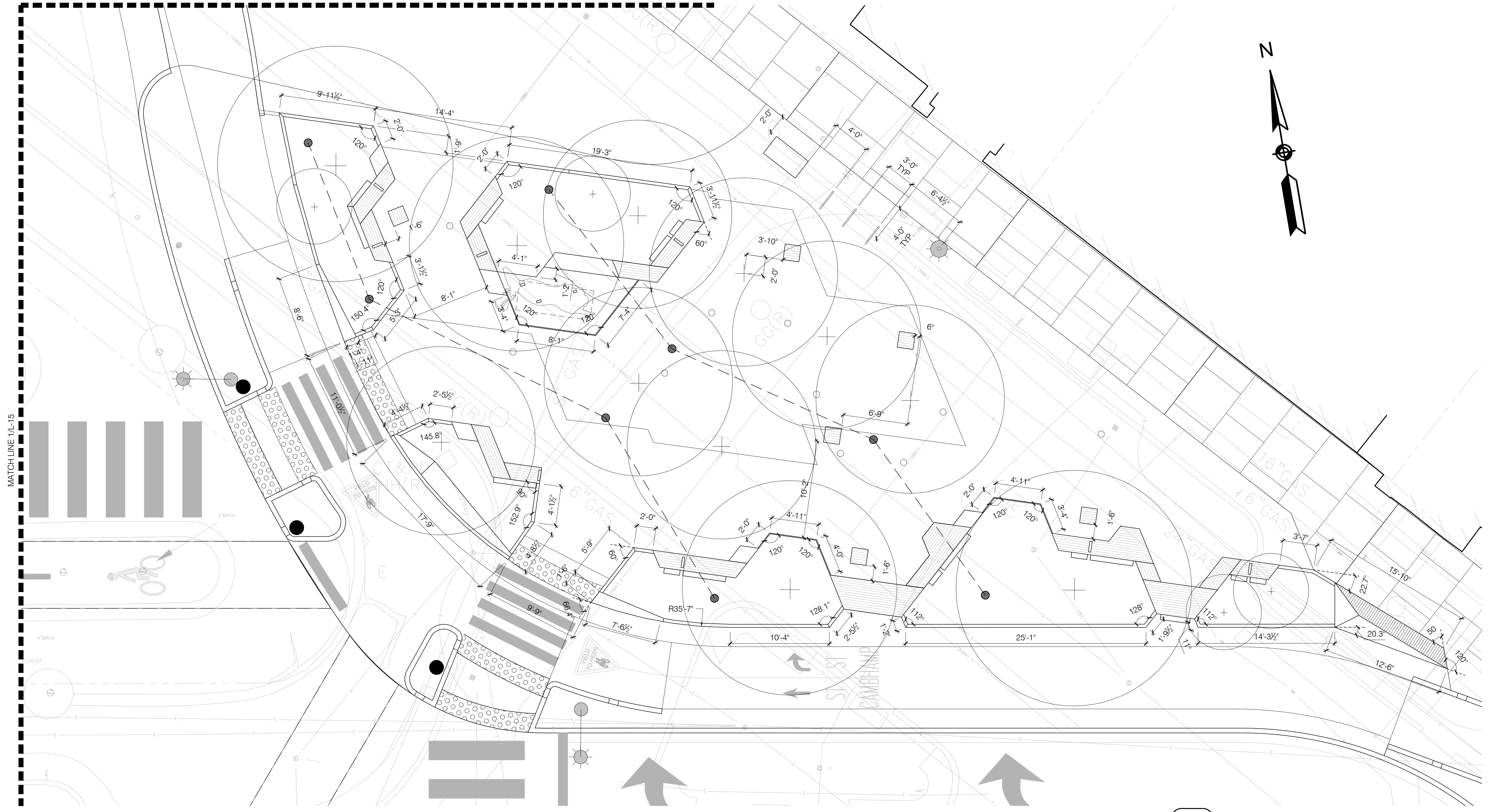
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	No. Description Date REVISIONS			



MATCH LINE 1/L-14



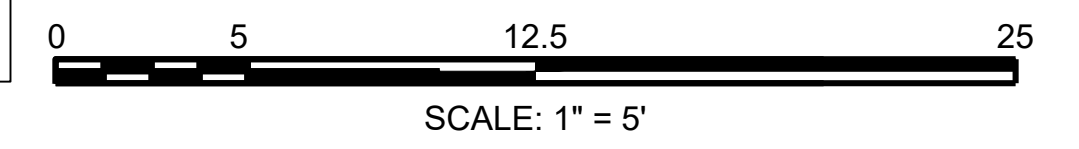
MATCH LINE 1/L-15



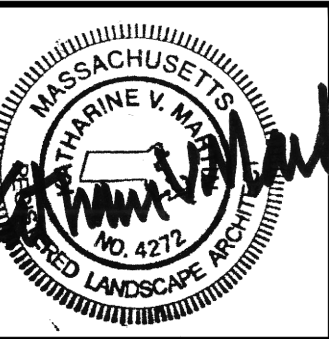
NOTES:

- FOR NOTES REGARDING LAYOUT, SEE SHEETS L-8, L-9, AND L-10.

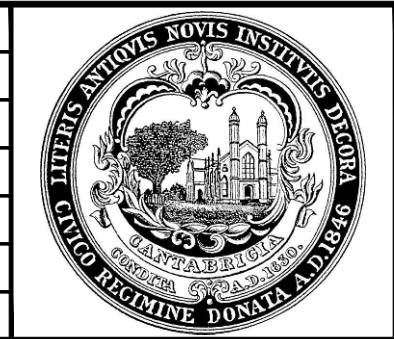
**1** VELLUCCI EAST  
SCALE: 1" = 5'-0"



ISSUED FOR BID



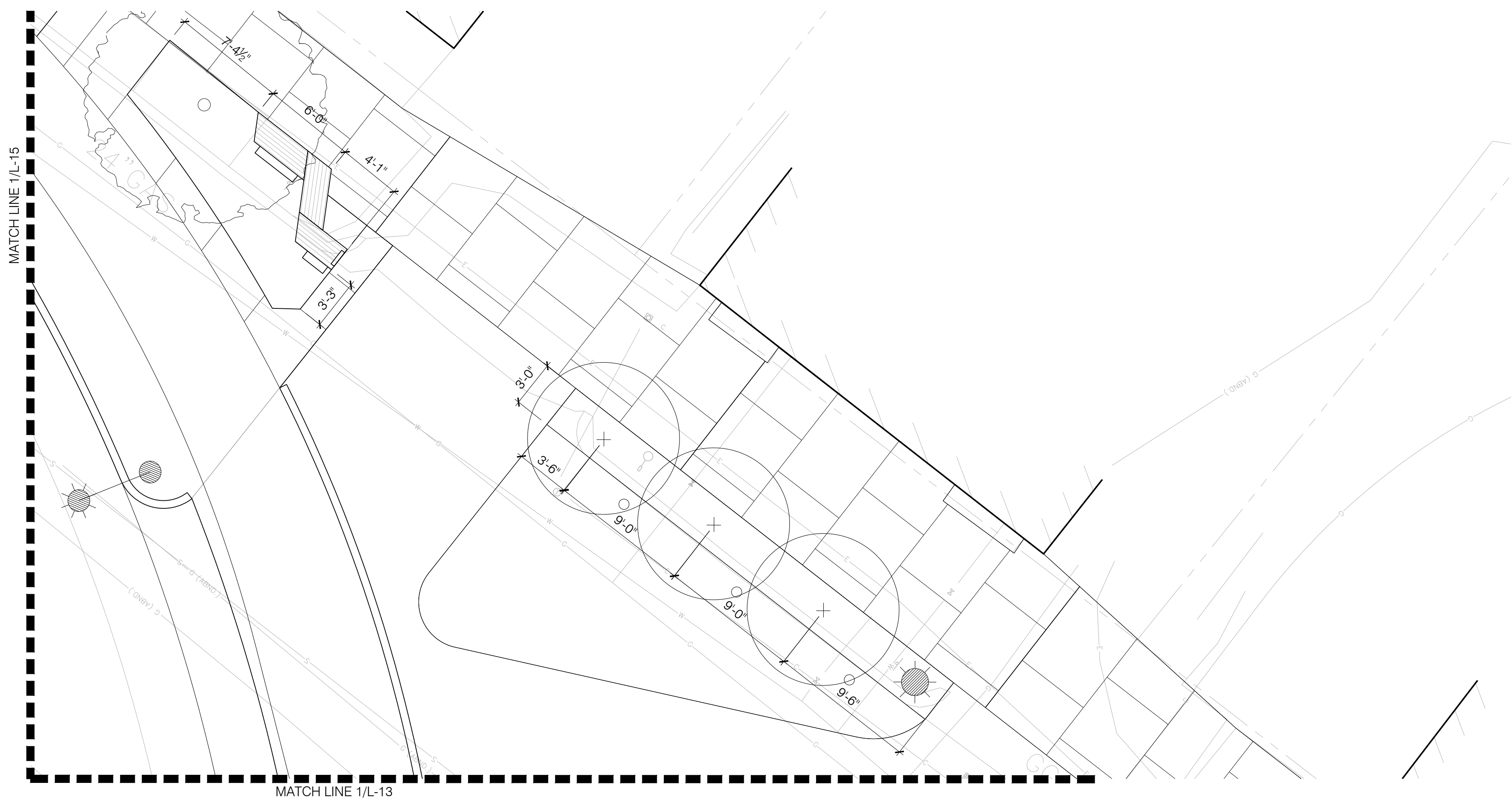
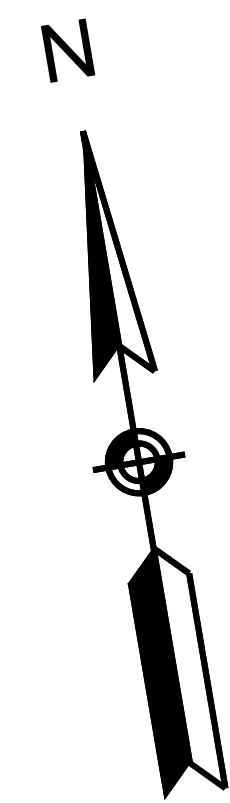
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Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	E. BUCALIU		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE LAYOUT ENLARGEMENT PLAN - 1

Sheet	L-13
File No.	8514



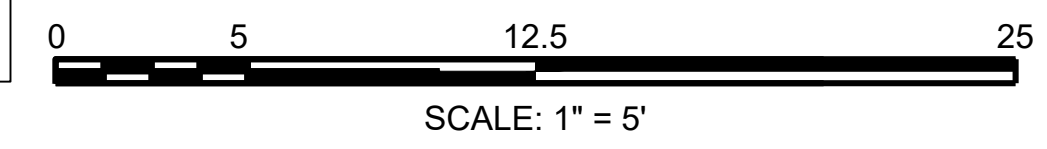


MATCH LINE 1/L-15

MATCH LINE 1/L-13

**NOTES:**  
 1. FOR NOTES REGARDING LAYOUT, SEE SHEETS L-8, L-9, AND L-10.

**1** VELLUCCI NORTH  
 SCALE: 1" = 5'-0"



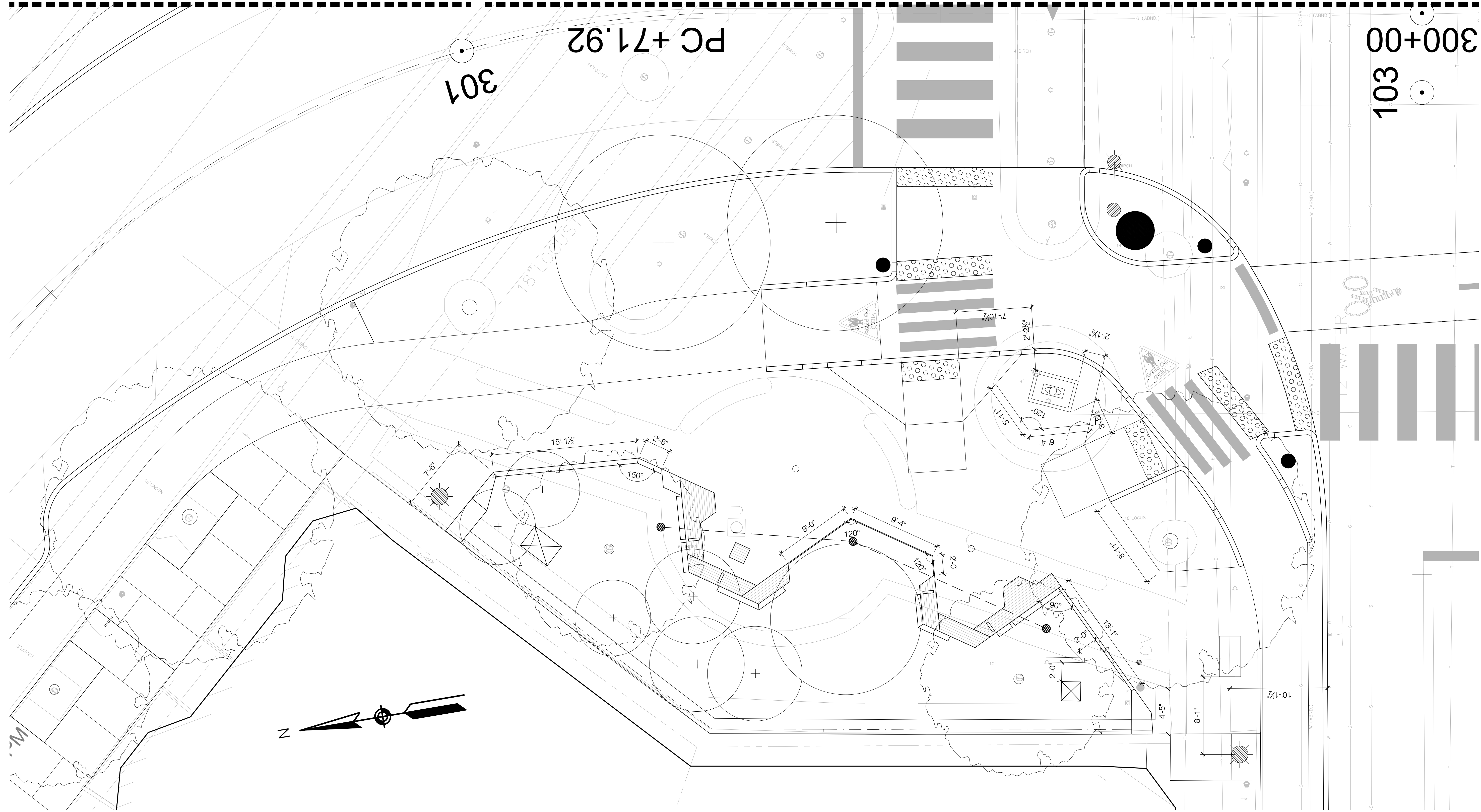
ISSUED FOR BID

							<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>APRIL 2019</td> <td></td> <td></td> </tr> <tr> <td>Job No.</td> <td>20170208.005A</td> <td></td> <td></td> </tr> <tr> <td>Designed by</td> <td>KMDG</td> <td></td> <td></td> </tr> <tr> <td>Drawn by</td> <td>E. BUCALIU</td> <td></td> <td></td> </tr> <tr> <td>Checked by</td> <td>K. PETSCHKE</td> <td>No.</td> <td>Description</td> </tr> <tr> <td>Approved by</td> <td>K. MARTIN</td> <td></td> <td>Date</td> </tr> </table>	Scale	AS NOTED			Date	APRIL 2019			Job No.	20170208.005A			Designed by	KMDG			Drawn by	E. BUCALIU			Checked by	K. PETSCHKE	No.	Description	Approved by	K. MARTIN		Date	<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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td> </tr> <tr> <td>Drawing</td> <td>LANDSCAPE LAYOUT ENLARGEMENT PLAN - 2</td> </tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	LANDSCAPE LAYOUT ENLARGEMENT PLAN - 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Sheet</td> <td>L-14</td> </tr> <tr> <td>File No.</td> <td>8514</td> </tr> </table>	Sheet	L-14	File No.	8514
Scale	AS NOTED																																														
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Drawing	LANDSCAPE LAYOUT ENLARGEMENT PLAN - 2																																														
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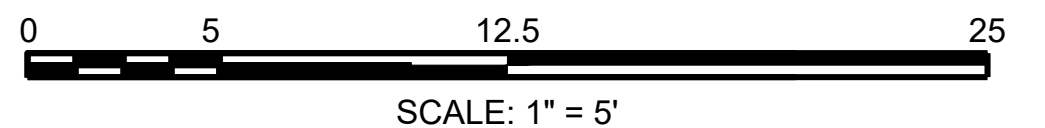
MATCH LINE 1/L-14

MATCH LINE 1/L-13



**NOTES:**  
 1. FOR NOTES REGARDING LAYOUT, SEE SHEETS L-8, L-9, AND L-10.

**1 VELLUCCI WEST**  
 SCALE: 1" = 5'-0"

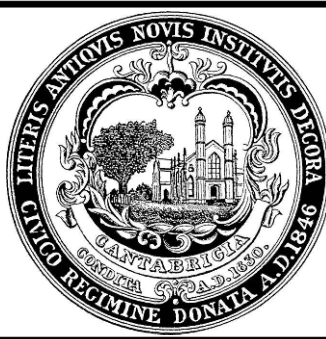


ISSUED FOR BID

Logos for project partners: **KLEINFELDER** (Bright People. Right Solutions.), **TOOLE DESIGN**, **MCMAHON** (TRANSPORTATION ENGINEERS & PLANNERS), **Stantec**, and **kmdg**.

Professional seals for landscape architects: **MARTINE V. MARTIN** (NO. 4272) and **K. MARTIN** (NO. 4272).

Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	E. BUCALIU		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
			REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE LAYOUT ENLARGEMENT PLAN - 3

Sheet	L-15
File No.	8514

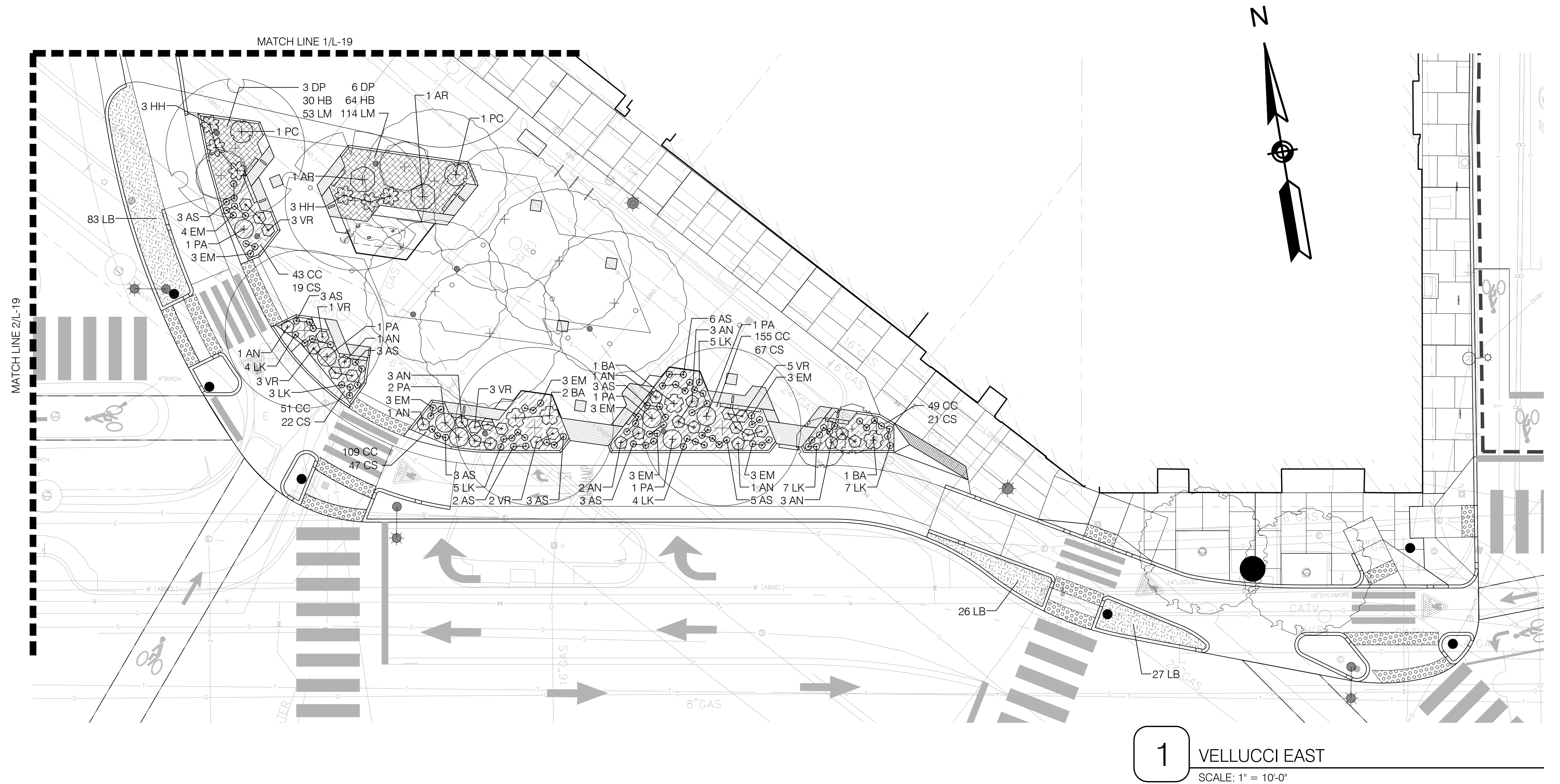












**1** VELLUCCI EAST  
SCALE: 1" = 10'-0"

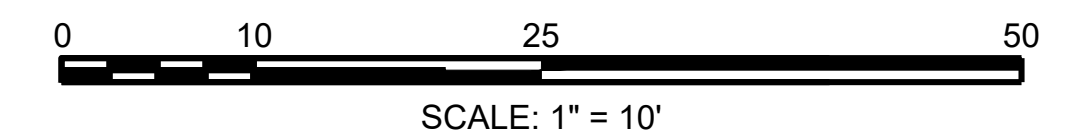
**SHRUB AND PERENNIAL SCHEDULE - PLAZA (SHEETS L-18 AND L-19)**

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
HP	1	Hamamelis x intermedia 'Pallida'	Pallida Witch Hazel	5 gal	
IG	2	Ilex glabra	Inkberry Holly	5 gal	
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
AN	19	Anemone x hybrida 'September Charm'	September Charm Anemone	2 gal	
AR	14	Actaea racemosa	Black Cohosh	2 gal	
AS	37	Allium sphaerocephalum	Drumstick Allium	1 gal	
BA	4	Baptisia australis	Blue Wild Indigo	2 gal	
EM	31	Echinacea purpurea 'Magnus'	Magnus Purple Coneflower	1 gal	
HH	19	Hosta x 'Halcyon'	Halcyon Plantain Lily	2 gal	
LK	40	Liatris spicata 'Kobold'	Spike Gayfeather	1 gal	
PA	7	Perovskia atriplicifolia	Russian Sage	2 gal	
PC	6	Polygonatum commutatum	Native Solomon's Seal	1 gal	
VR	17	Veronicastrum virginicum	Culver's Root	2 gal	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
DP	36	Dennstaedtia punctilobula	Hay-scented Fern	1 gal	36" O.C., IN DRIFTS
HB	418	Hosta x 'Blue Mouse Ears'	Blue Mouse Ears Hosta	4" pot	8" O.C., IN DRIFTS
LM	742	Liriope muscari 'Big Blue'	Big Blue Lilyturf	4" pot	12" O.C., IN DRIFTS
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
CC	473	Carex glauca 'Blue Zinger'	Blue Zinger Sedge	1 gal	12" O.C.
CS	204	Carex pensylvanica	Pennsylvania Sedge	1 gal	12" O.C.
LB	538	Leymus arenarius 'Blue Dune'	Blue Dune Lyme Grass	1 gal	18" O.C.

**NOTES:**

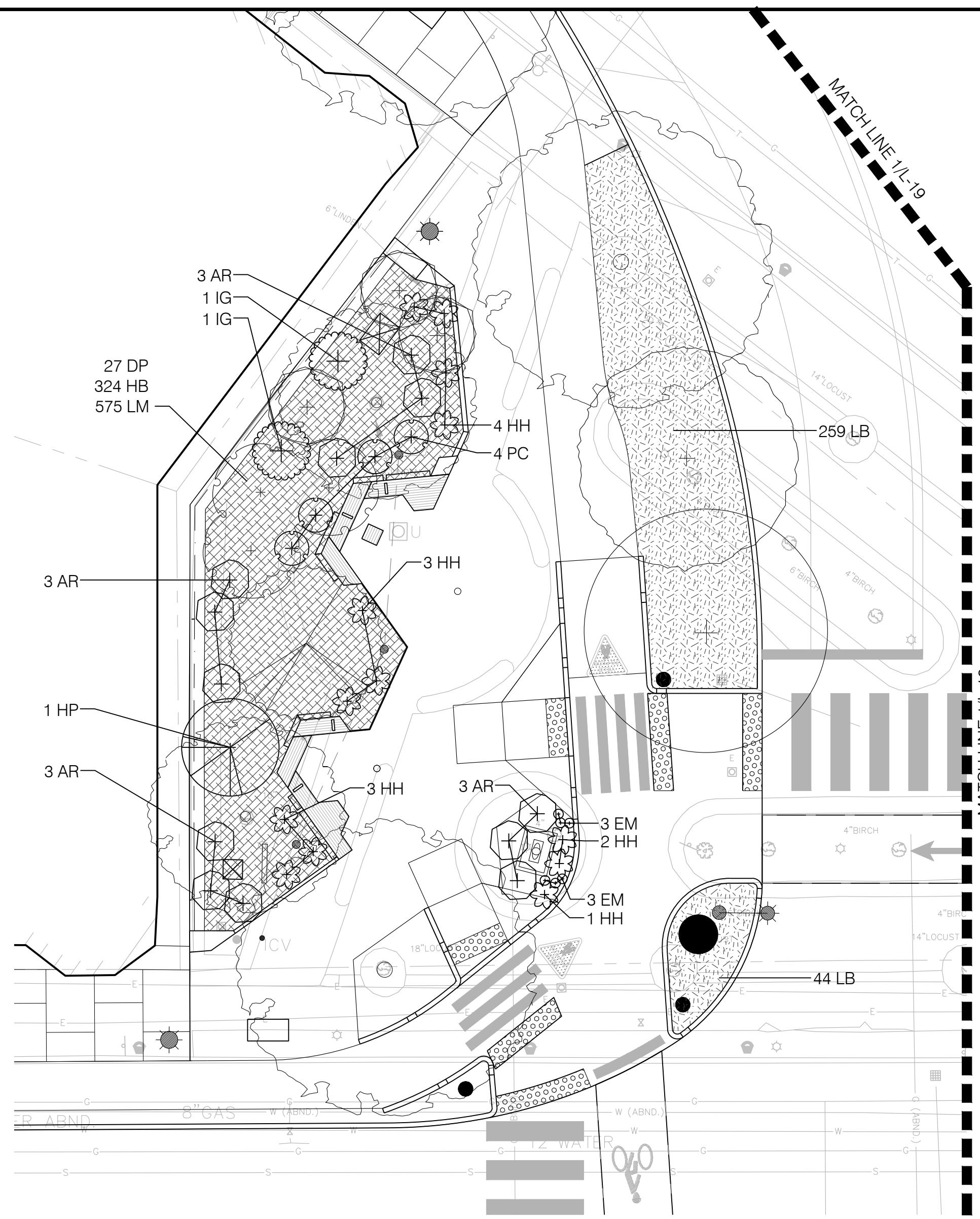
- SEE SHEET L-6 FOR TREE SCHEDULE AND LOCATIONS.
- FOR NOTES REGARDING PLANTING, SEE SHEETS L-6 AND L-7.



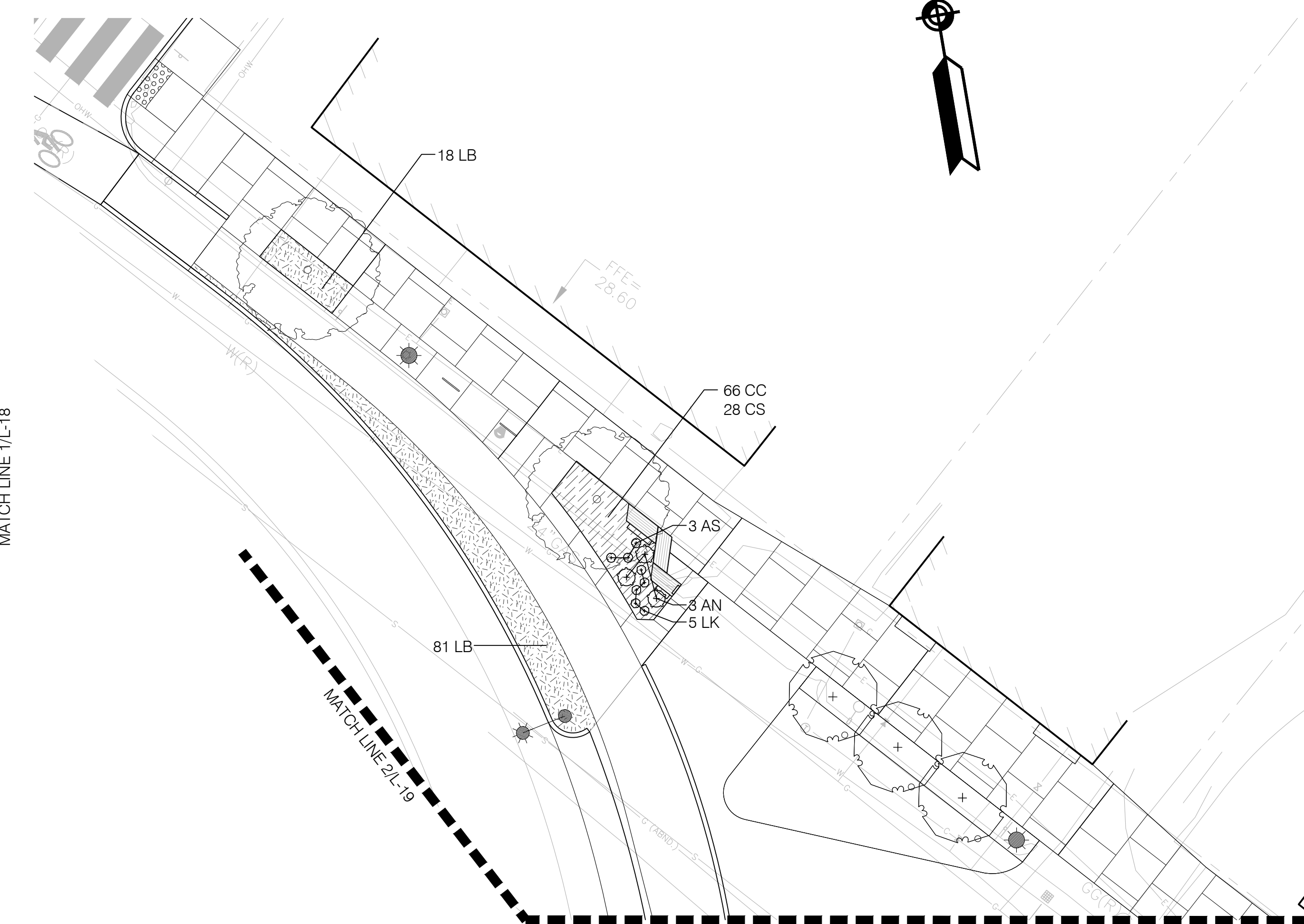
ISSUED FOR BID

						Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by KMDG Drawn by A. ALLEN Checked by K. PETSCHKE Approved by K. MARTIN			Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing PLANTING ENLARGEMENT PLAN - 1	Sheet L-18 File No. 8514
						No. Description Date REVISIONS				





**2** VELLUCCI WEST  
SCALE: 1" = 10'-0"



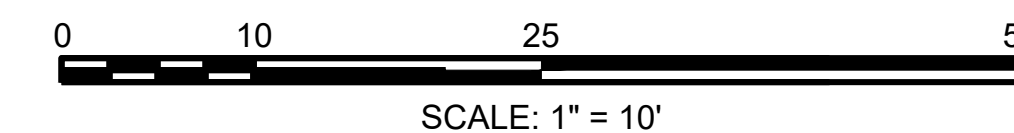
**1** VELLUCCI NORTH  
SCALE: 1" = 10'-0"

**SHRUB AND PERENNIAL SCHEDULE - PLAZA (SHEETS L-18 AND L-19)**

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
HP	1	Hamamelis x intermedia `Pallida`	Pallida Witch Hazel	5 gal	
IG	2	Ilex glabra	Inkberry Holly	5 gal	
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
AN	19	Anemone x hybrida `September Charm`	September Charm Anemone	2 gal	
AR	14	Actaea racemosa	Black Cohosh	2 gal	
AS	37	Allium sphaerocephalum	Drumstick Allium	1 gal	
BA	4	Baptisia australis	Blue Wild Indigo	2 gal	
EM	31	Echinacea purpurea `Magnus`	Magnus Purple Coneflower	1 gal	
HH	19	Hosta x `Halcyon`	Halcyon Plantain Lily	2 gal	
LK	40	Liatris spicata `Kobold`	Spike Gayfeather	1 gal	
PA	7	Perovskia atriplicifolia	Russian Sage	2 gal	
PC	6	Polygonatum commutatum	Native Solomon`s Seal	1 gal	
VR	17	Veronicastrum virginicum	Culver`s Root	2 gal	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
DP	36	Dennstaedtia punctilobula	Hay-scented Fern	1 gal	36" O.C., IN DRIFTS
HB	418	Hosta x `Blue Mouse Ears`	Blue Mouse Ears Hosta	4"pot	8" O.C., IN DRIFTS
LM	742	Liriope muscari `Big Blue`	Big Blue Lilyturf	4"pot	12" O.C., IN DRIFTS
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
CC	473	Carex glauca `Blue Zinger`	Blue Zinger Sedge	1 gal	12" O.C.
CS	204	Carex pensylvanica	Pennsylvania Sedge	1 gal	12" O.C.
LB	538	Leymus arenarius `Blue Dune`	Blue Dune Lyme Grass	1 gal	18" O.C.

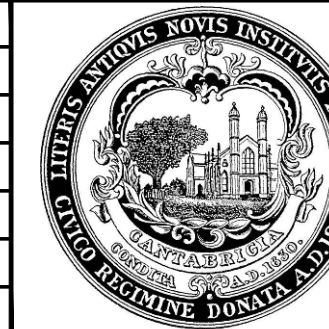
- NOTES:**
- SEE SHEET L-6 FOR TREE SCHEDULE AND LOCATIONS.
  - FOR NOTES REGARDING PLANTING, SEE SHEETS L-6 AND L-7.



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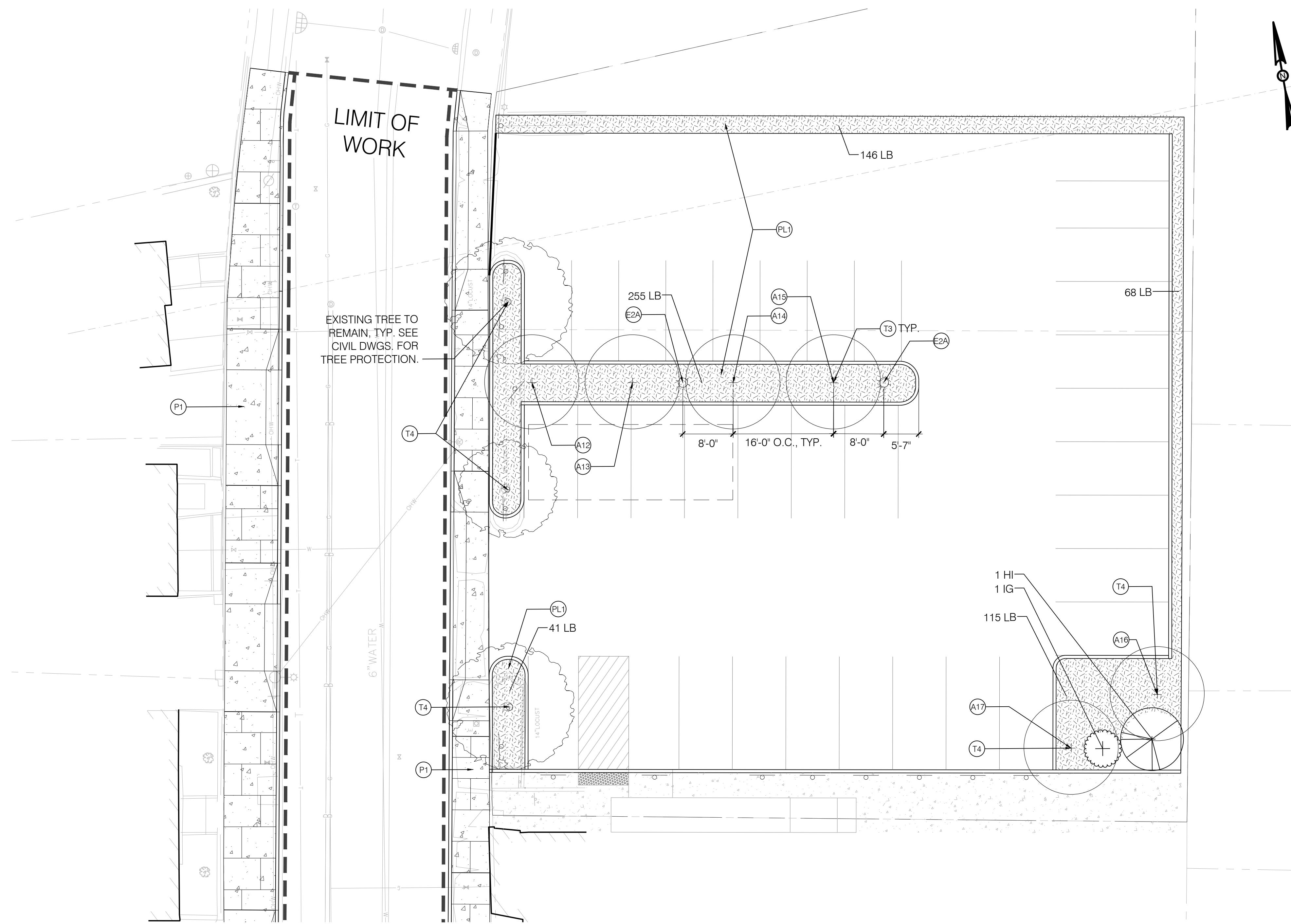
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
		REVISIONS	



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	PLANTING ENLARGEMENT PLAN - 2

Sheet	L-19
File No.	8514





CONTINUED ON SHEET NO. L-1, L-6, AND L-8



**1** SPRINGFIELD ST. PARKING LOT  
SCALE: 1" = 10'-0"

- NOTES:**
- FOR NOTES REGARDING LAYOUT, SEE SHEETS L-8, L-9, AND L-10.
  - FOR NOTES REGARDING PLANTING, SEE SHEETS L-6 AND L-7.

**MATERIALS LEGEND**

- P1 C.I.P. CONCRETE PAVEMENT
- T3 TREE PLANTING IN AT-GRADE PLANTER
- T4 EXISTING TREE IN AT-GRADE PLANTER
- PL1 PERENNIAL PLANTING
- E2A LIGHTING TYPE 2A (SEE ELECTRICAL DWGS.)

**SCHEDULE NOTES:**

- ULMUS CULTIVARS SHALL BE A COMBINATION OF 'VALLEY FORGE', 'PRINCETON' AND 'ACCOLADE'.
- SEE SHEET L-12 FOR TREE SCHEDULE FOR PLAZA AND STREETScape.
- SEE SHEETS L-18 + L-19 FOR SHRUB AND PERENNIAL SCHEDULES PLAZA PLANTS.

**PLANT SCHEDULE - SPRINGFIELD ST. LOT (SHEET L-20 ONLY)**

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
A12	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1
A13	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1
A14	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1
A15	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1
A16	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1
A17	1	Ulmus americana	American Elm	3.5-4.5" cal. B&B	SEE NOTE 1

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
HI	1	Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Hybrid Witch Hazel	5 gal	
IG	1	Ilex glabra	Inkberry Holly	5 gal	
ORNAMENTAL GRASSES		BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
LB	625	Leymus arenarius 'Blue Dune'	Blue Dune Lyme Grass	1 gal	18" O.C.

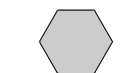
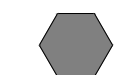
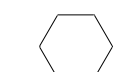
ISSUED FOR BID

	Scale AS NOTED Date APRIL 2019 Job No. 20170208.005A Designed by KMDG Drawn by A. ALLEN Checked by K. PETSCHKE Approved by K. MARTIN		Client CITY OF CAMBRIDGE, MASSACHUSETTS Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT Drawing SPRINGFIELD LOT LANDSCAPE ENLARGEMENT PLAN	Sheet <b>L-20</b> File No. <b>8514</b>
	REVISIONS			



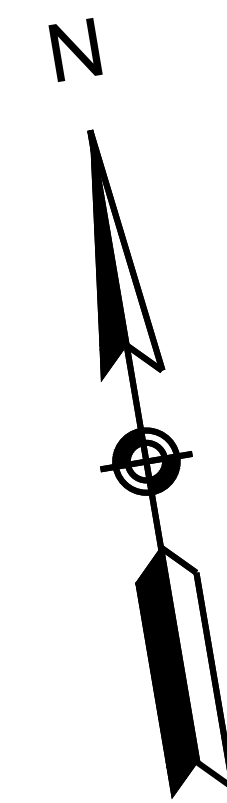
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### PAVER TYPE KEY

-  PAVER TYPE 1
-  PAVER TYPE 2
-  PAVER TYPE 3

### MODULE LABEL KEY

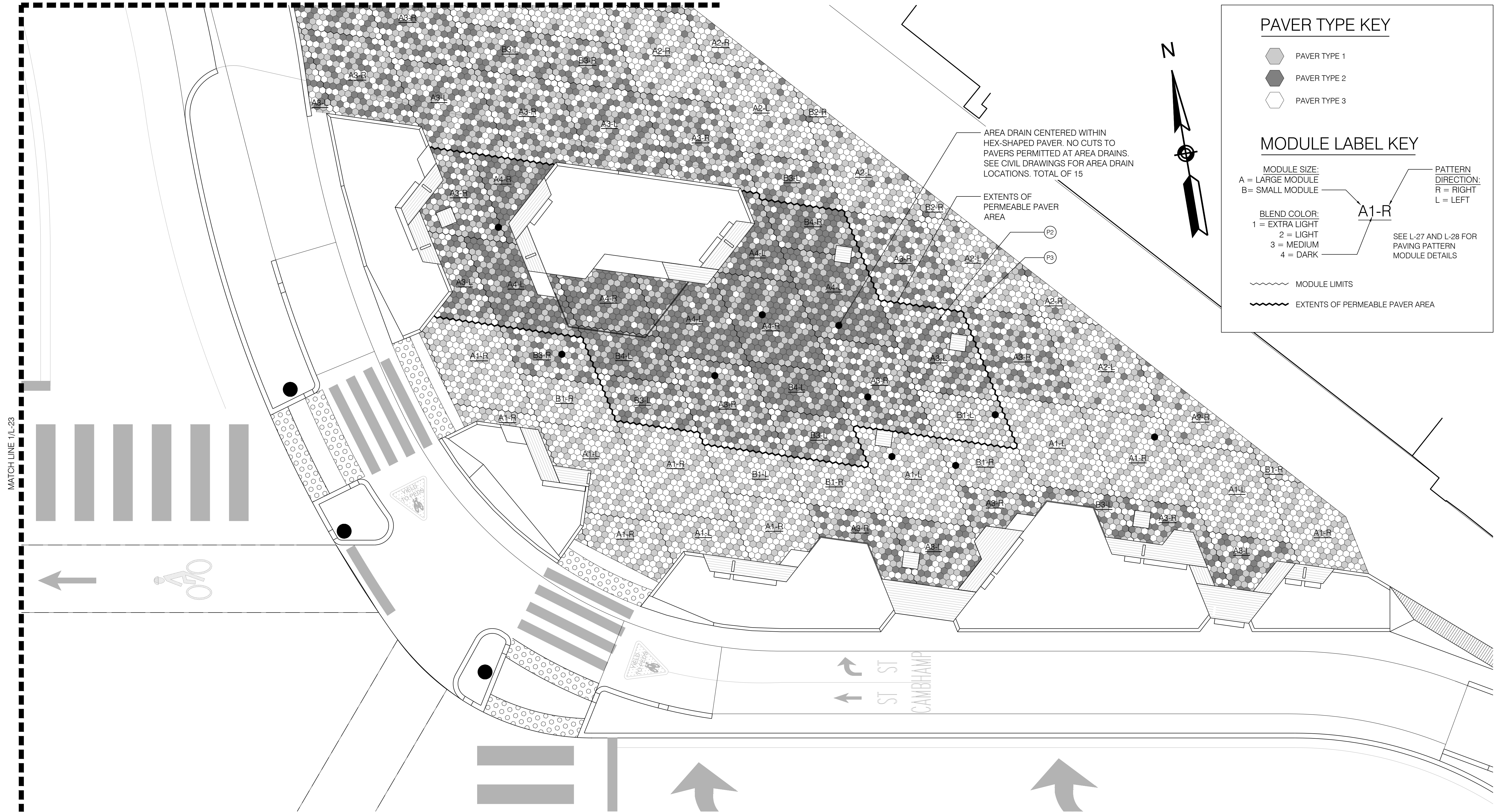
- MODULE SIZE:  
A = LARGE MODULE  
B = SMALL MODULE
- BLEND COLOR:  
1 = EXTRA LIGHT  
2 = LIGHT  
3 = MEDIUM  
4 = DARK
- PATTERN DIRECTION:  
R = RIGHT  
L = LEFT
- SEE L-27 AND L-28 FOR PAVING PATTERN MODULE DETAILS
- MODULE LIMITS
- EXTENTS OF PERMEABLE PAVER AREA



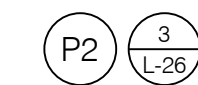
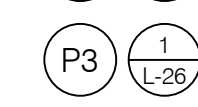
AREA DRAIN CENTERED WITHIN HEX-SHAPED PAVER. NO CUTS TO PAVERS PERMITTED AT AREA DRAINS. SEE CIVIL DRAWINGS FOR AREA DRAIN LOCATIONS. TOTAL OF 15

EXTENTS OF PERMEABLE PAVER AREA

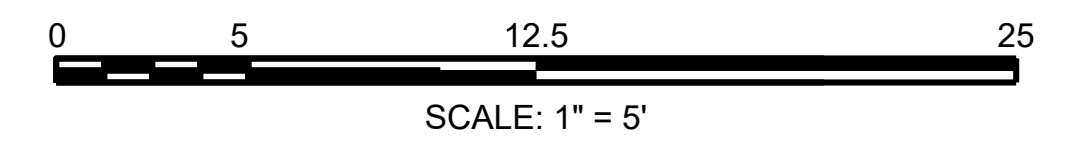
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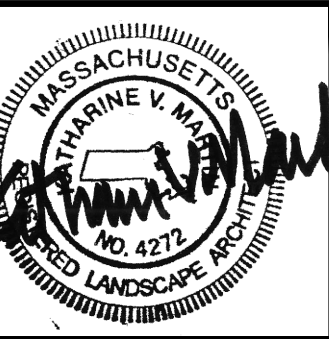
### LEGEND

-  PERMEABLE PRECAST CONC. UNIT PAVERS
-  PRECAST CONCRETE UNIT PAVERS

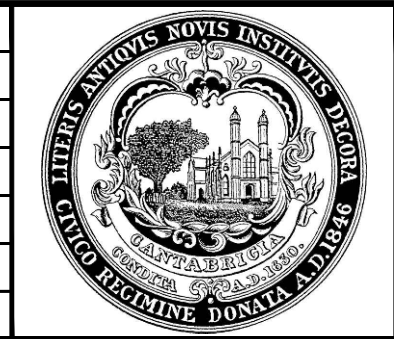
**1** VELLUCCI EAST  
SCALE: 1" = 5'-0"



ISSUED FOR BID



Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	M. KING & A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
		REVISIONS	



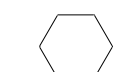


Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	PAVING ENLARGEMENT PLAN - 1

Sheet	L-21
File No.	8514



**PAVER TYPE KEY**

-  PAVER TYPE 1
-  PAVER TYPE 2
-  PAVER TYPE 3

**MODULE LABEL KEY**

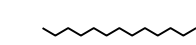

MODULE SIZE:  
 A = LARGE MODULE  
 B = SMALL MODULE

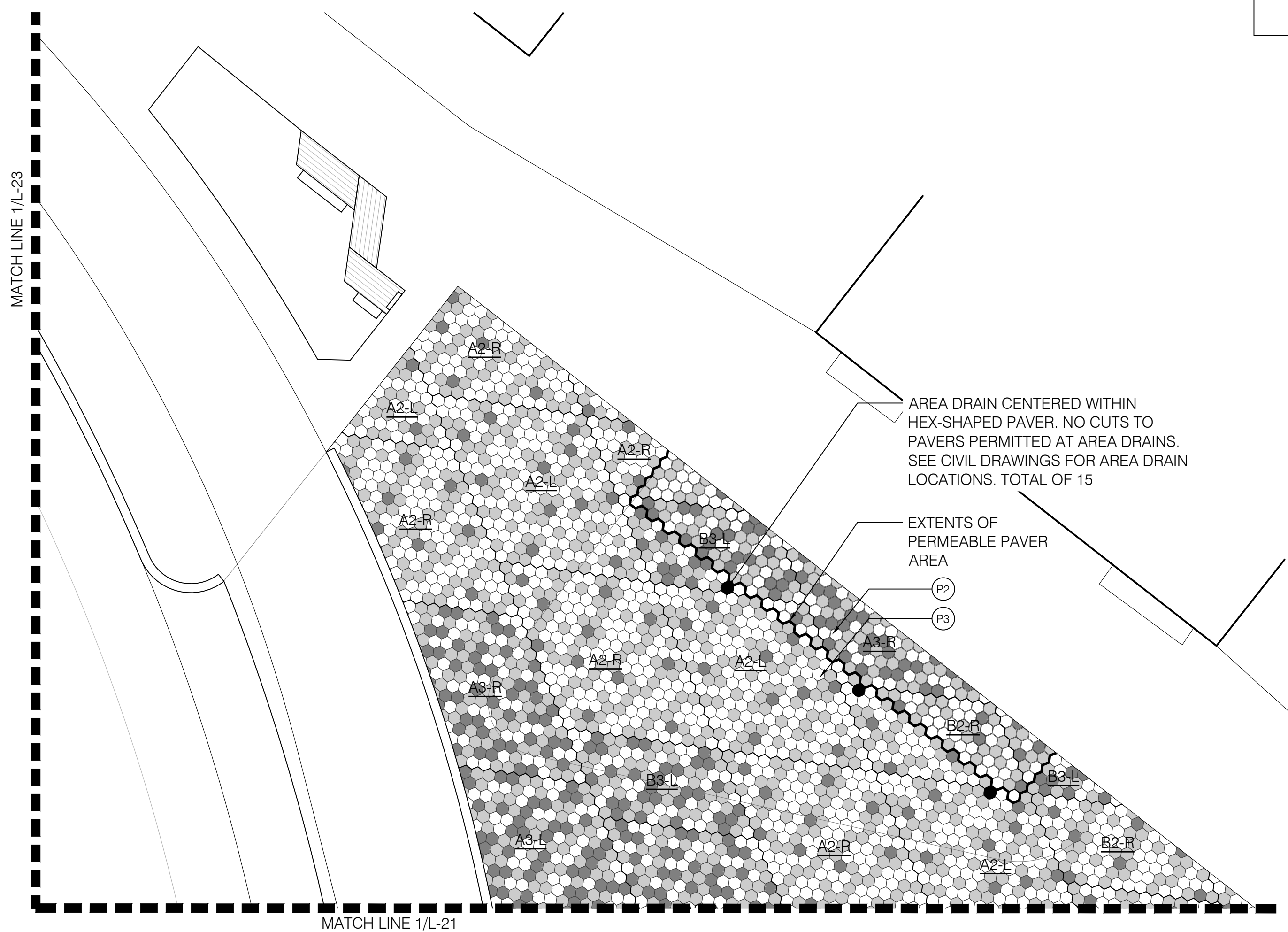
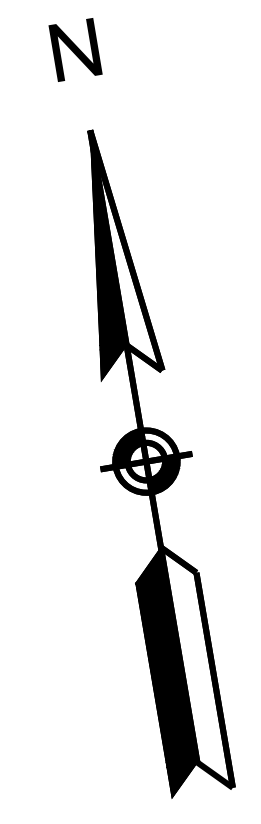
BLEND COLOR:  
 1 = EXTRA LIGHT  
 2 = LIGHT  
 3 = MEDIUM  
 4 = DARK

PATTERN DIRECTION:  
 R = RIGHT  
 L = LEFT

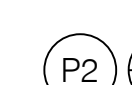

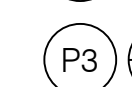
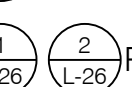
A1-R

SEE L-27 AND L-28 FOR PAVING PATTERN MODULE DETAILS

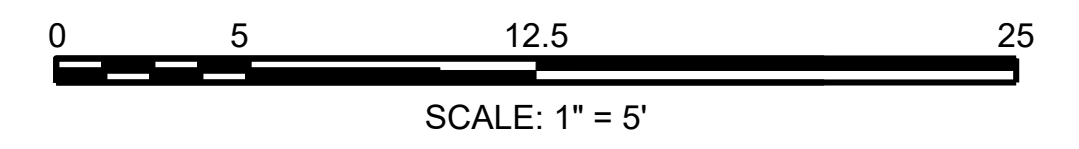
-  MODULE LIMITS
-  EXTENTS OF PERMEABLE PAVER AREA








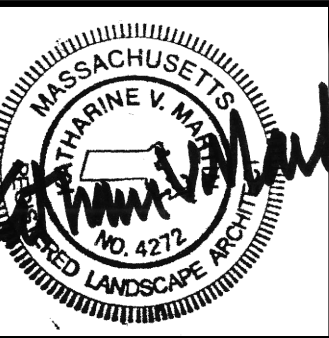
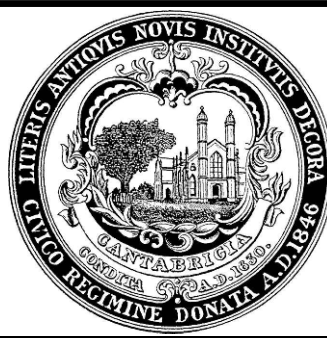
**LEGEND**

-   PERMEABLE PRECAST CONC. UNIT PAVERS
-   PRECAST CONCRETE UNIT PAVERS

**1** VELLUCCI NORTH  
 SCALE: 1" = 5'-0"



ISSUED FOR BID



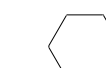
						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Scale</td><td>AS NOTED</td><td></td><td></td></tr> <tr><td>Date</td><td>APRIL 2019</td><td></td><td></td></tr> <tr><td>Job No.</td><td>20170208.005A</td><td></td><td></td></tr> <tr><td>Designed by</td><td>KMDG</td><td></td><td></td></tr> <tr><td>Drawn by</td><td>M. KING &amp; A. ALLEN</td><td></td><td></td></tr> <tr><td>Checked by</td><td>K. PETSCHKE</td><td>No.</td><td>Description</td></tr> <tr><td>Approved by</td><td>K. MARTIN</td><td></td><td>Date</td></tr> </table>	Scale	AS NOTED			Date	APRIL 2019			Job No.	20170208.005A			Designed by	KMDG			Drawn by	M. KING & A. ALLEN			Checked by	K. PETSCHKE	No.	Description	Approved by	K. MARTIN		Date		<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>INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT</td></tr> <tr><td>Drawing</td><td>PAVING ENLARGEMENT PLAN - 2</td></tr> </table>	Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	Drawing	PAVING ENLARGEMENT PLAN - 2	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Sheet</td><td>L-22</td></tr> <tr><td>File No.</td><td>8514</td></tr> </table>	Sheet	L-22	File No.	8514
Scale	AS NOTED																																														
Date	APRIL 2019																																														
Job No.	20170208.005A																																														
Designed by	KMDG																																														
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Drawing	PAVING ENLARGEMENT PLAN - 2																																														
Sheet	L-22																																														
File No.	8514																																														



MATCH LINE 1/L-22

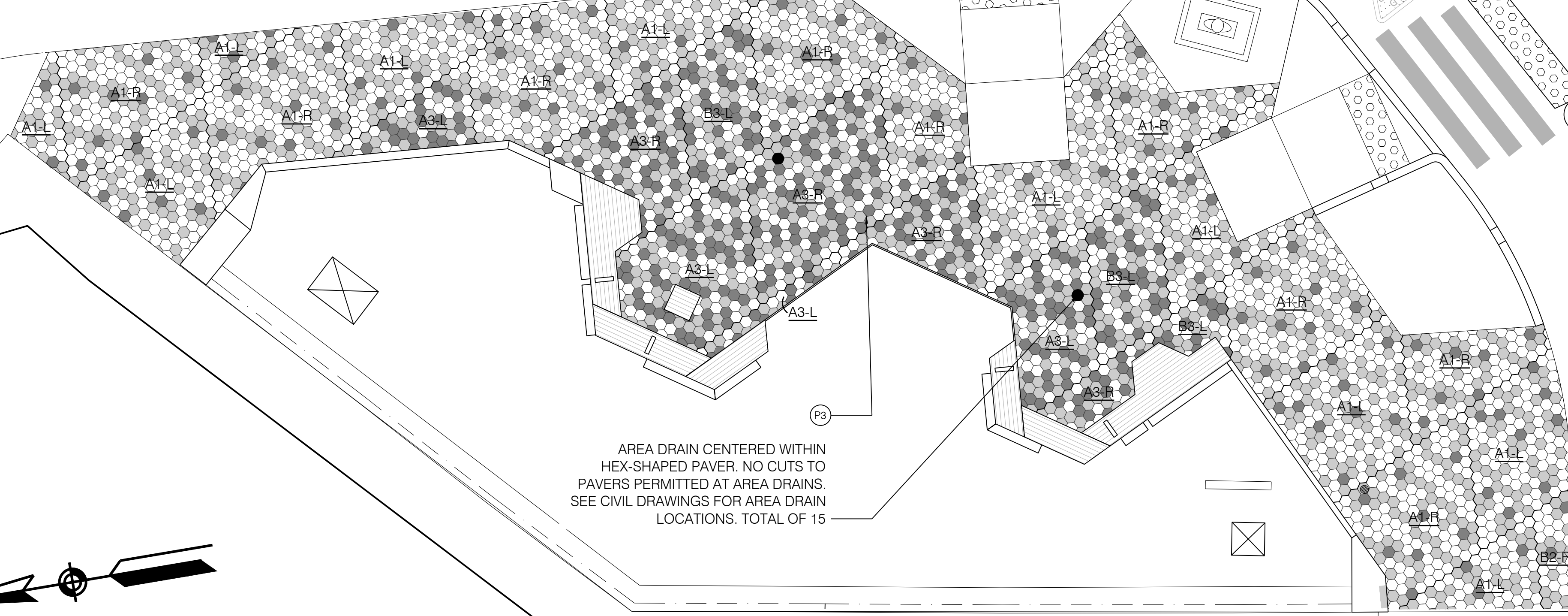
MATCH LINE 1/L-21

### PAVER TYPE KEY

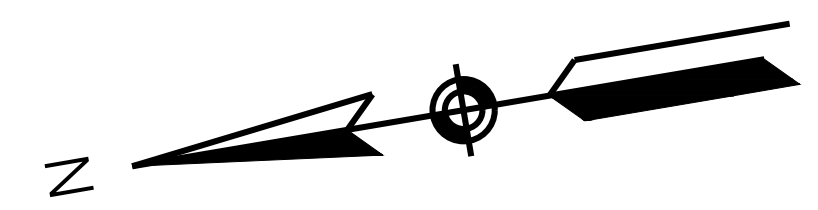
-  PAVER TYPE 1
-  PAVER TYPE 2
-  PAVER TYPE 3

### MODULE LABEL KEY

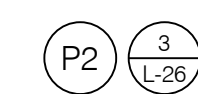
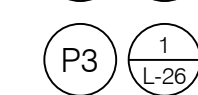
- MODULE SIZE:  
A = LARGE MODULE  
B = SMALL MODULE
- BLEND COLOR:  
1 = EXTRA LIGHT  
2 = LIGHT  
3 = MEDIUM  
4 = DARK
- PATTERN DIRECTION:  
R = RIGHT  
L = LEFT
- SEE L-24 AND L-25 FOR PAVING PATTERN MODULE DETAILS
- MODULE LIMITS
- EXTENTS OF PERMEABLE PAVER AREA



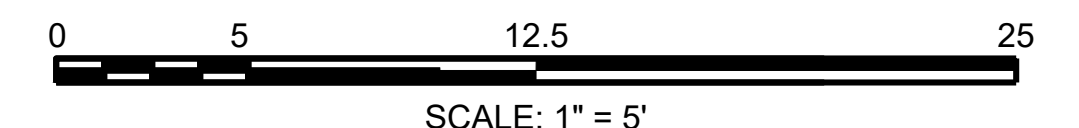
AREA DRAIN CENTERED WITHIN HEX-SHAPED PAVER. NO CUTS TO PAVERS PERMITTED AT AREA DRAINS. SEE CIVIL DRAWINGS FOR AREA DRAIN LOCATIONS. TOTAL OF 15



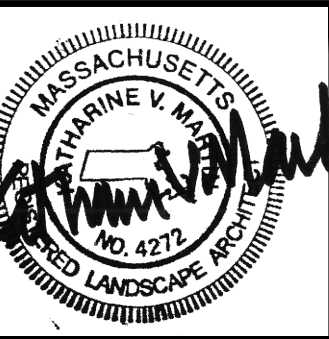
### LEGEND

-  PERMEABLE PRECAST CONC. UNIT PAVERS
-  PRECAST CONCRETE UNIT PAVERS

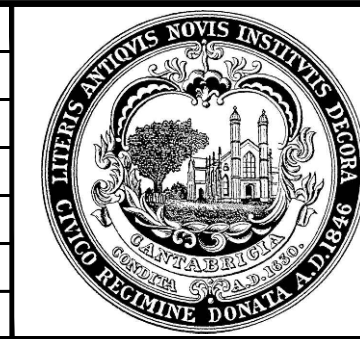
**1** VELLUCCI WEST  
SCALE: 1" = 5'-0"



ISSUED FOR BID



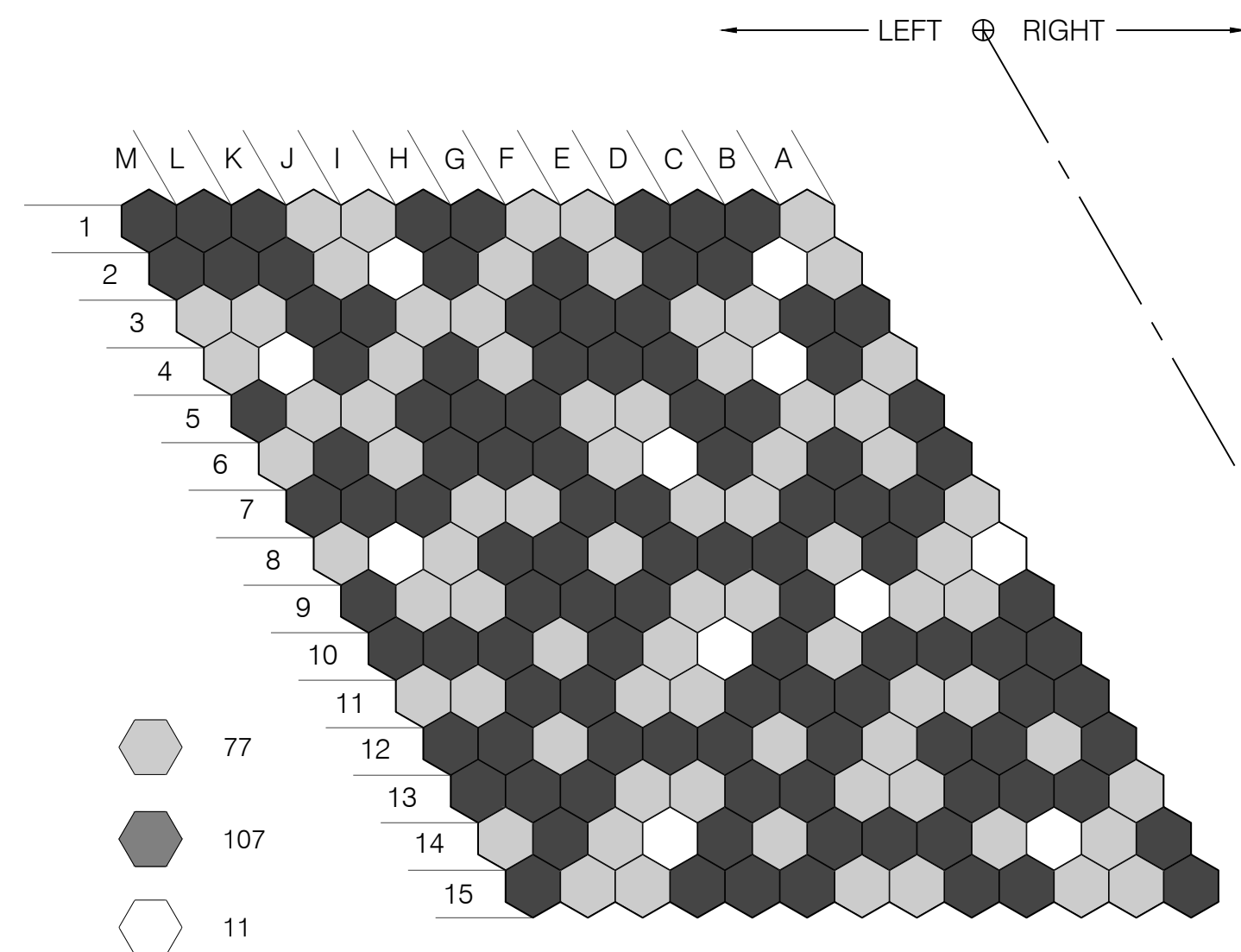
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	M. KING & A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		REVISIONS



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	PAVING ENLARGEMENT PLAN - 3

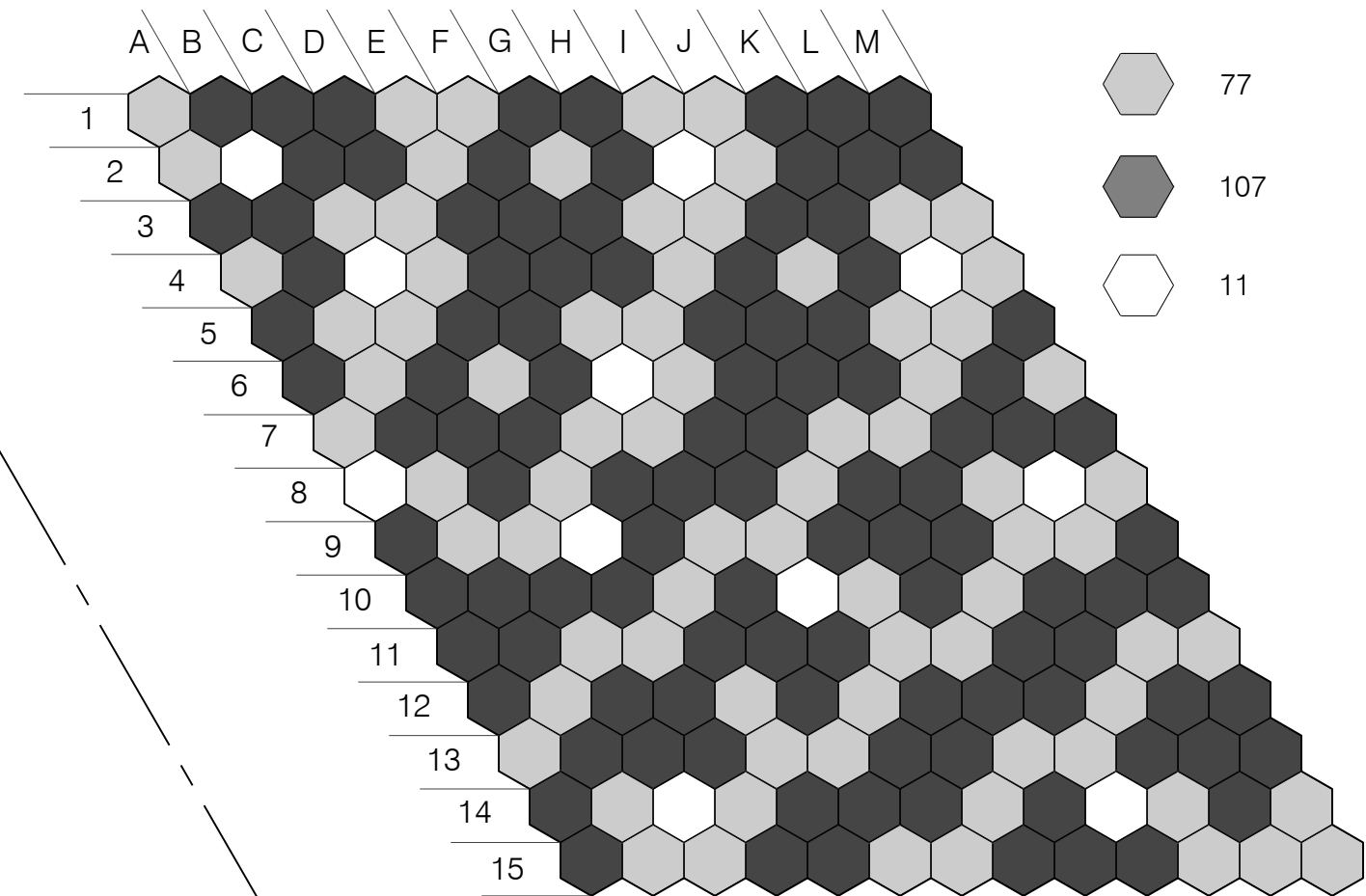
Sheet	L-23
File No.	8514





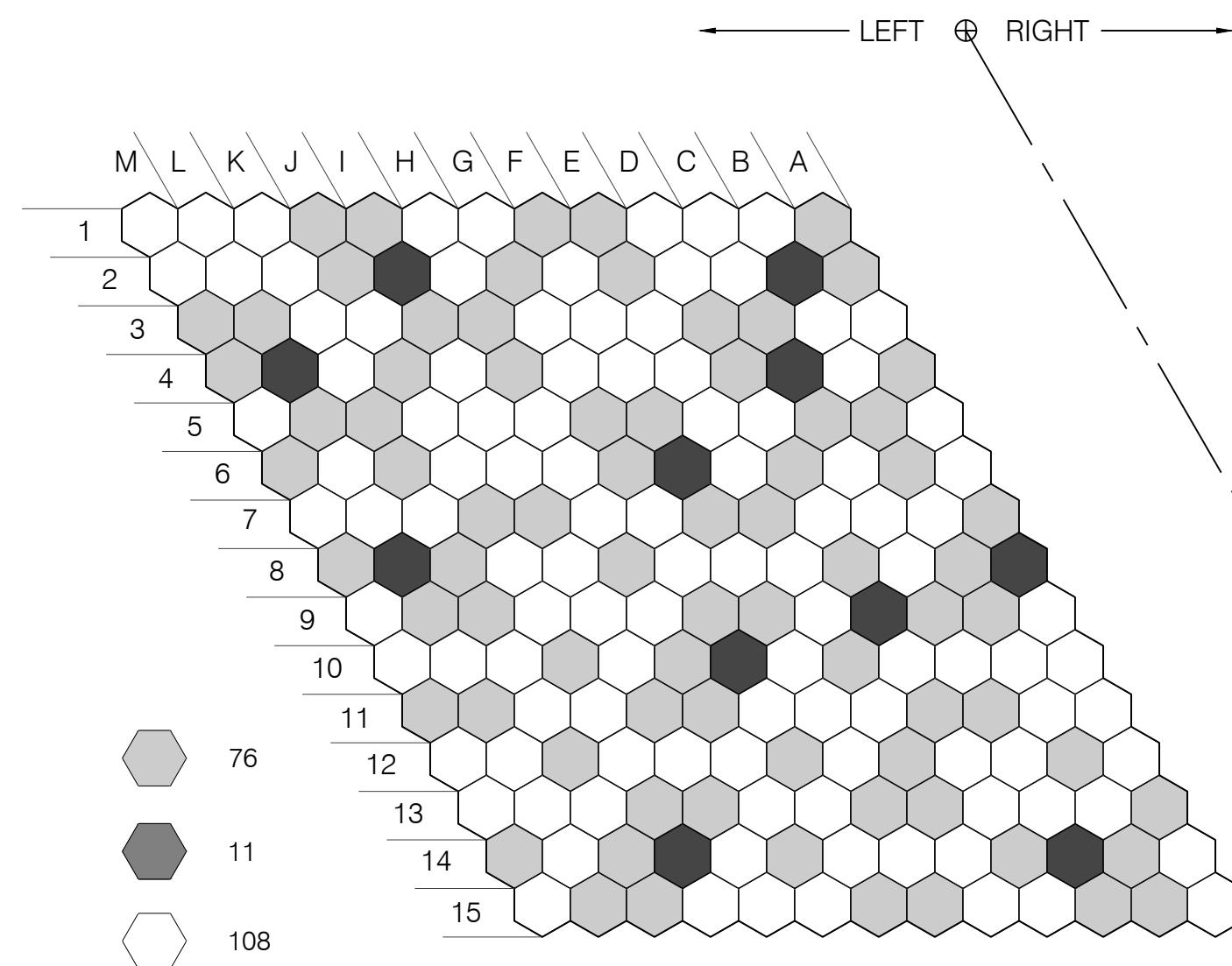
**8** MODULE A4-L - DARK

SCALE: 127/256" = 1'-0"



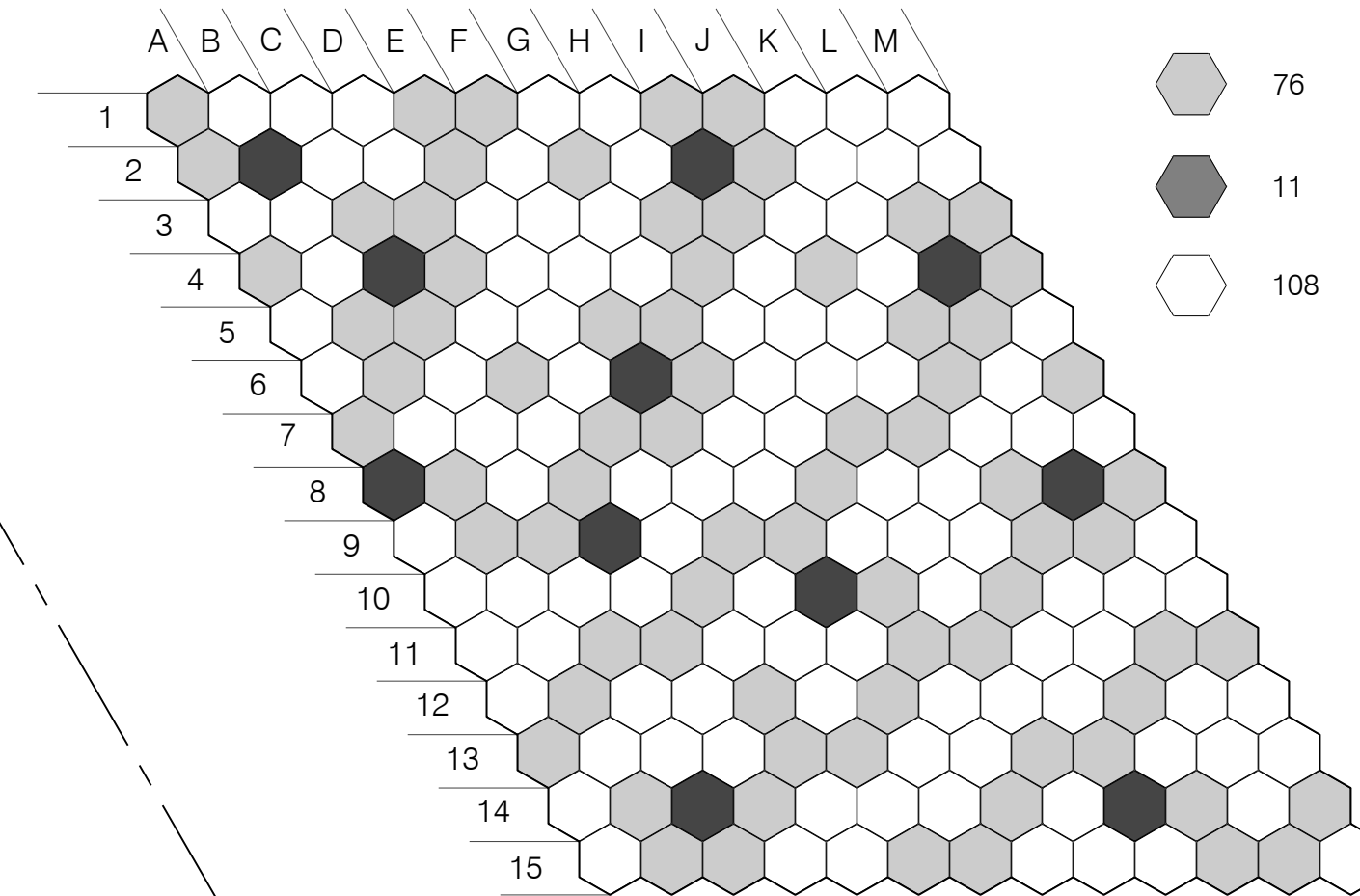
**7** MODULE A4-B - DARK

SCALE: 1/2" = 1'-0"



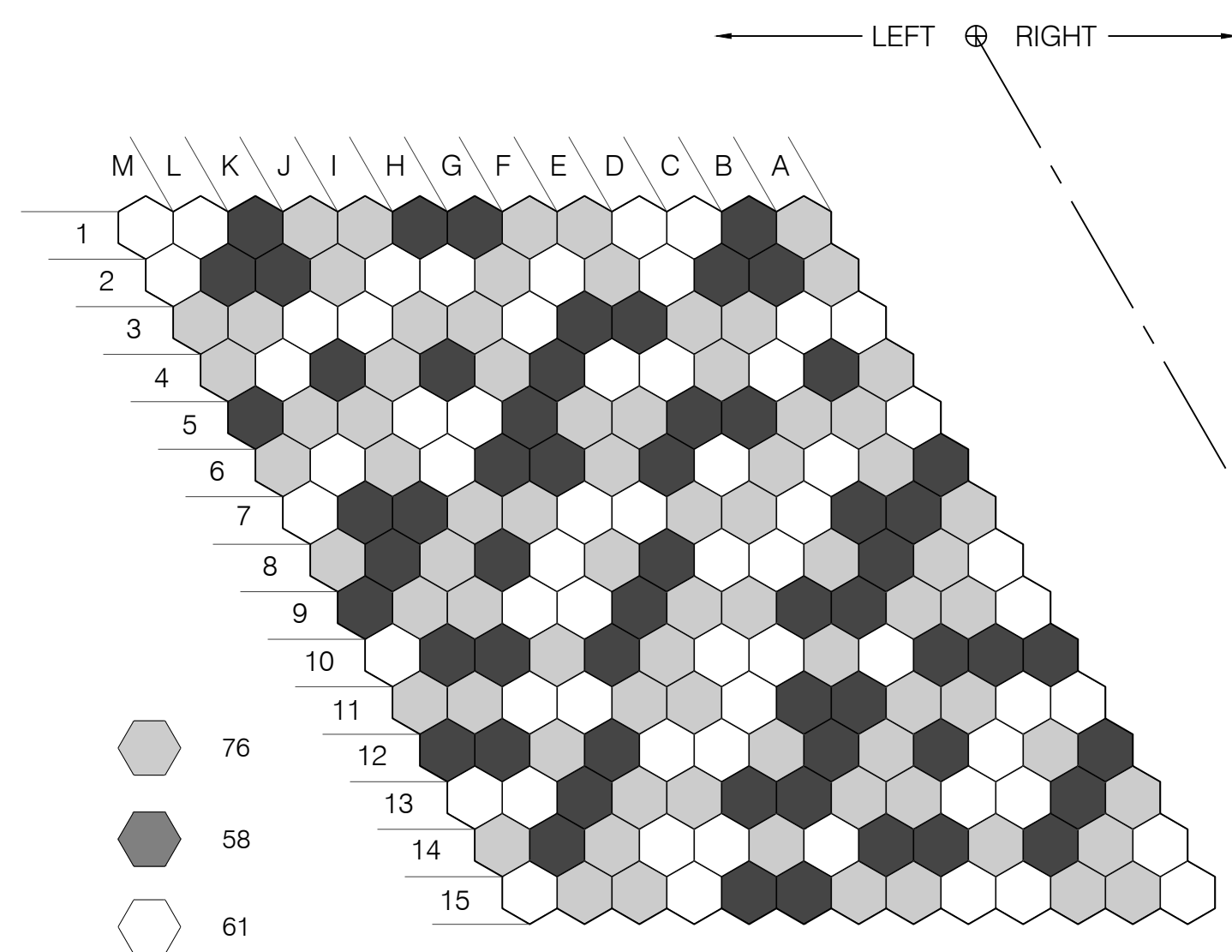
**4** MODULE A2-L - LIGHT

SCALE: 1/2" = 1'-0"



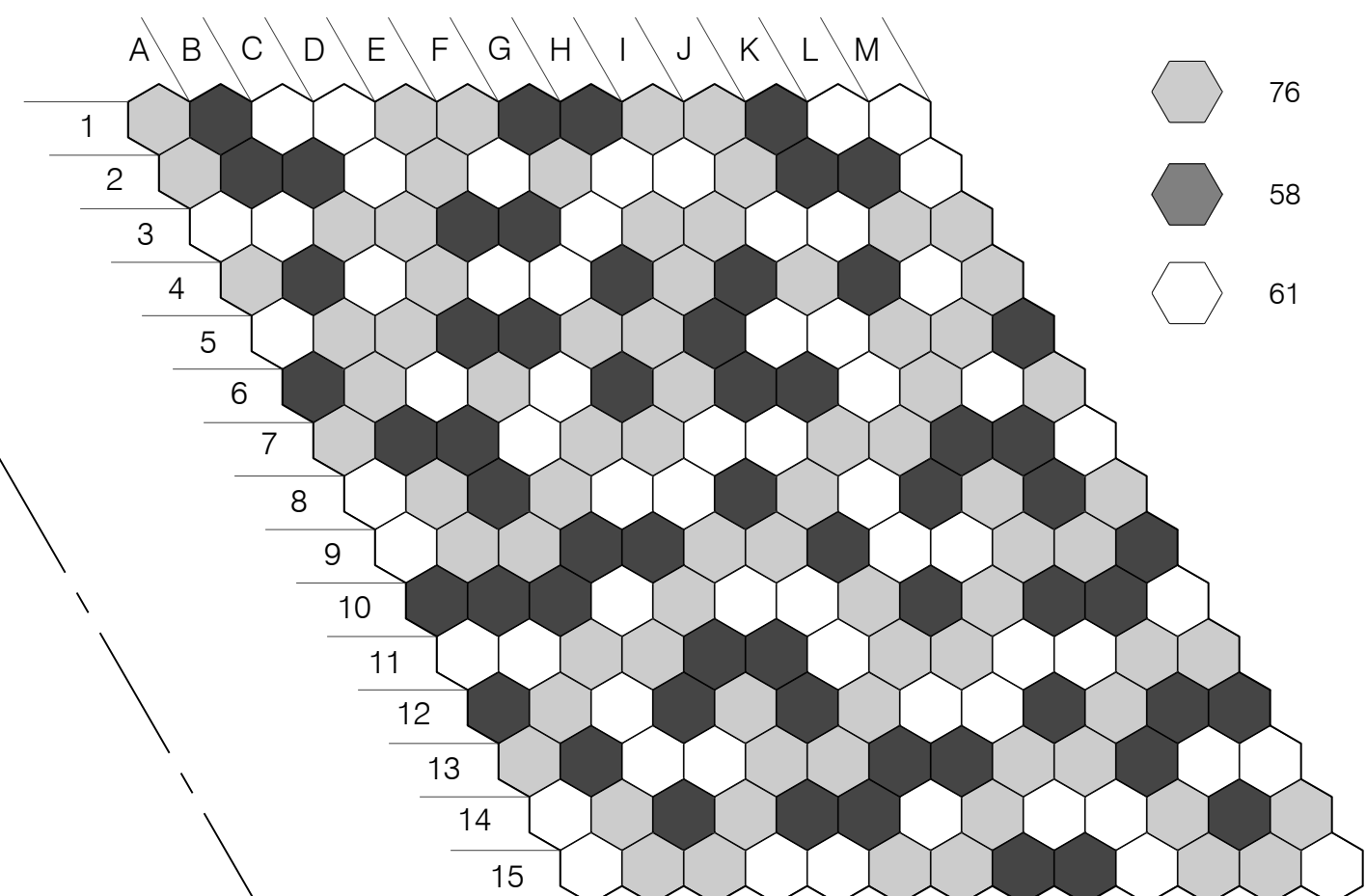
**3** MODULE A2-R - LIGHT

SCALE: 1/2" = 1'-0"



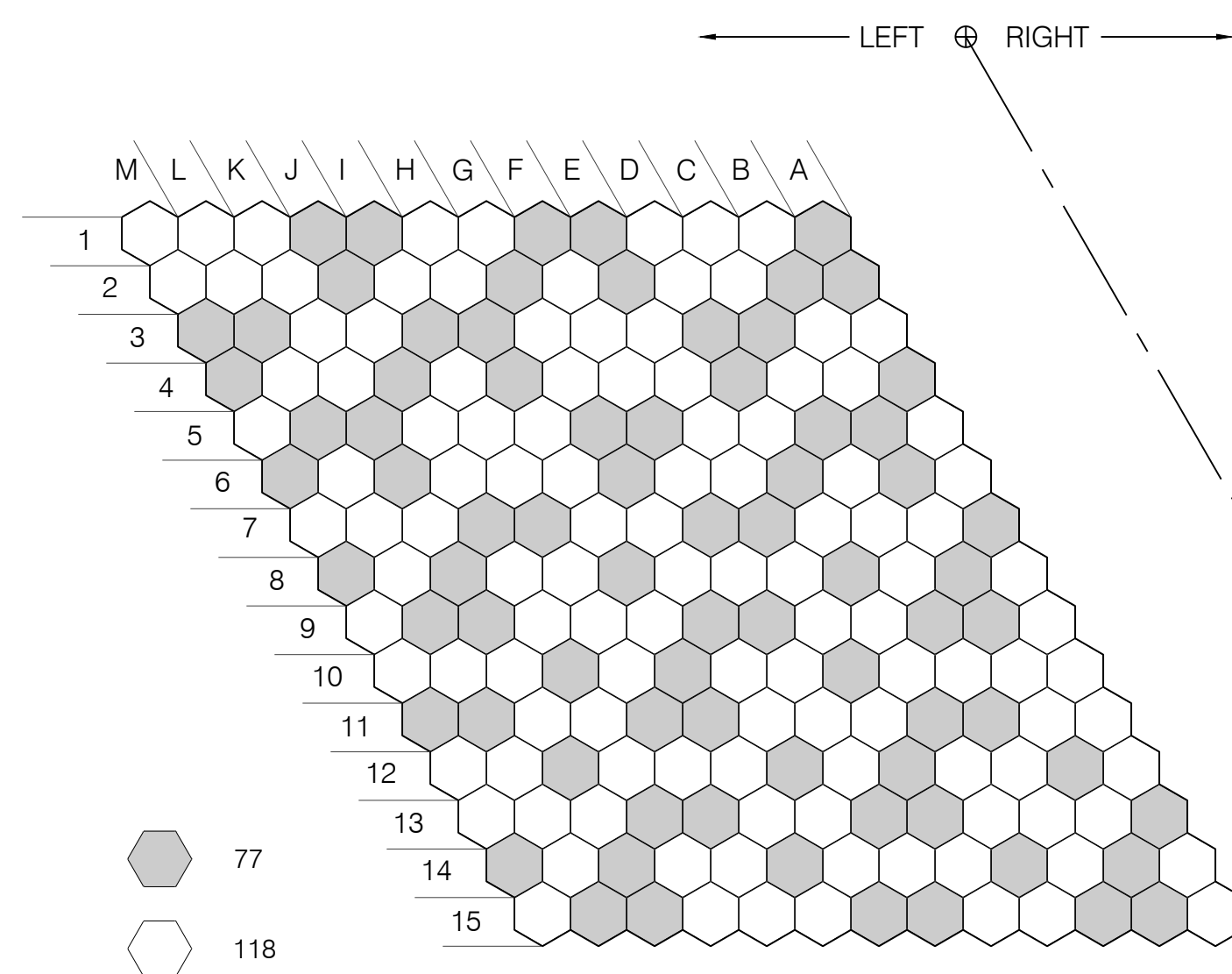
**6** MODULE A3-L - MEDIUM

SCALE: 1/2" = 1'-0"



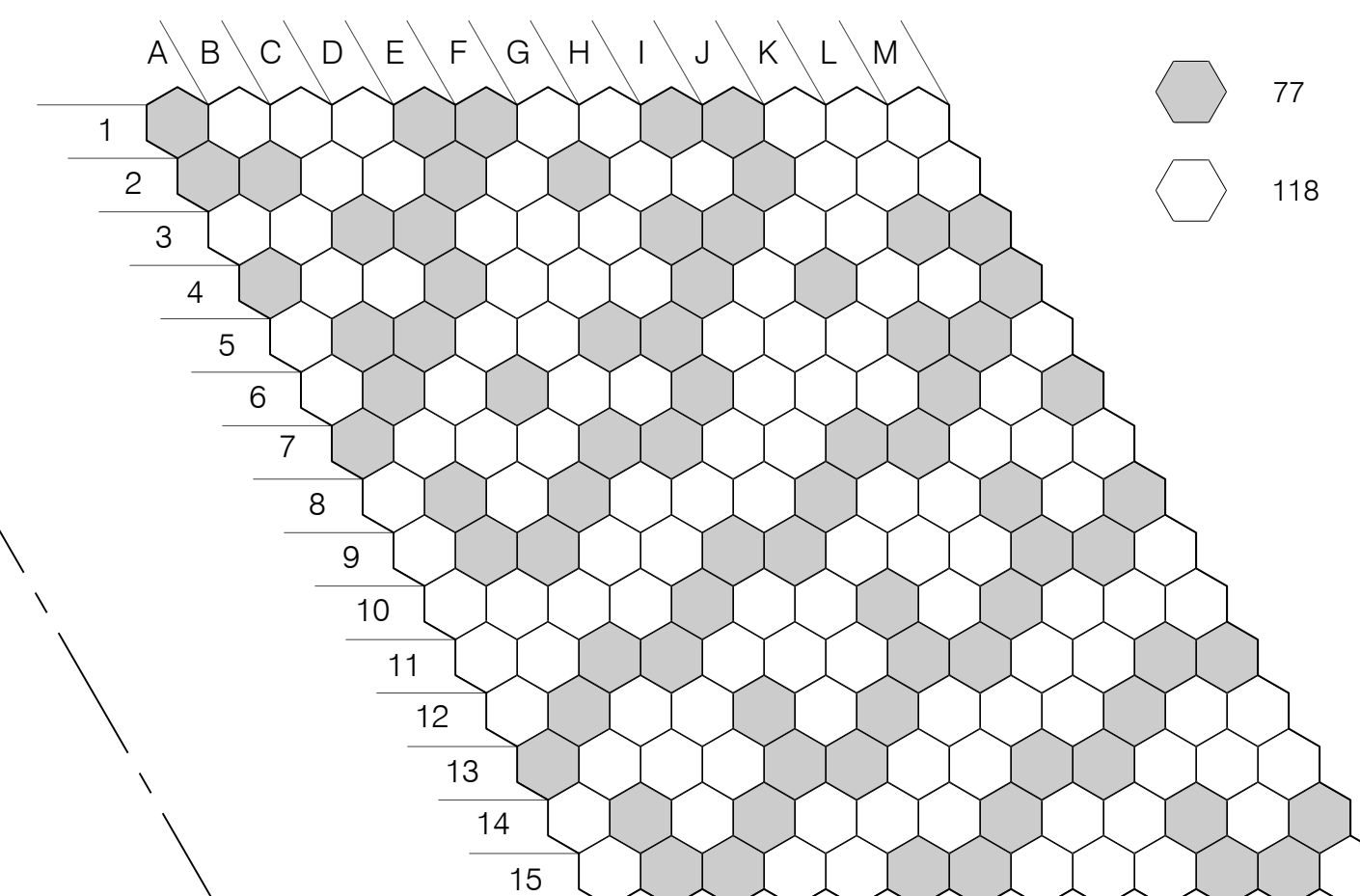
**5** MODULE A3R - MEDIUM

SCALE: 1/2" = 1'-0"



**2** MODULE A1-L - EXTRA LIGHT

SCALE: 1/2" = 1'-0"



**1** MODULE A1-R - EXTRA LIGHT

SCALE: 1/2" = 1'-0"

**MODULE LABEL KEY**

MODULE SIZE:  
A = LARGE MODULE  
B = SMALL MODULE

BLEND COLOR:  
1 = EXTRA LIGHT  
2 = LIGHT  
3 = MEDIUM  
4 = DARK

PATTERN DIRECTION:  
R = RIGHT  
L = LEFT

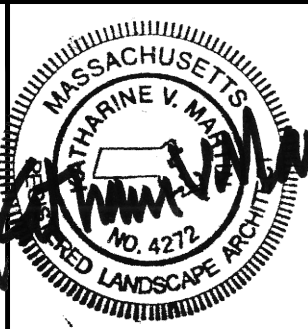
SEE L-21 - L-23 FOR PAVING ENLARGEMENT PLANS

A1-R

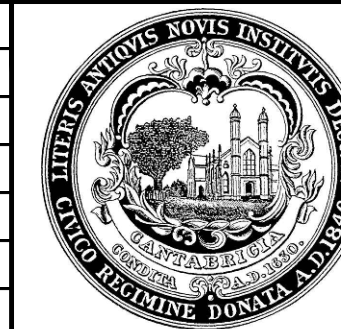
**PAVER TYPE KEY**

- PAVER TYPE 1
- PAVER TYPE 2
- PAVER TYPE 3

ISSUED FOR BID



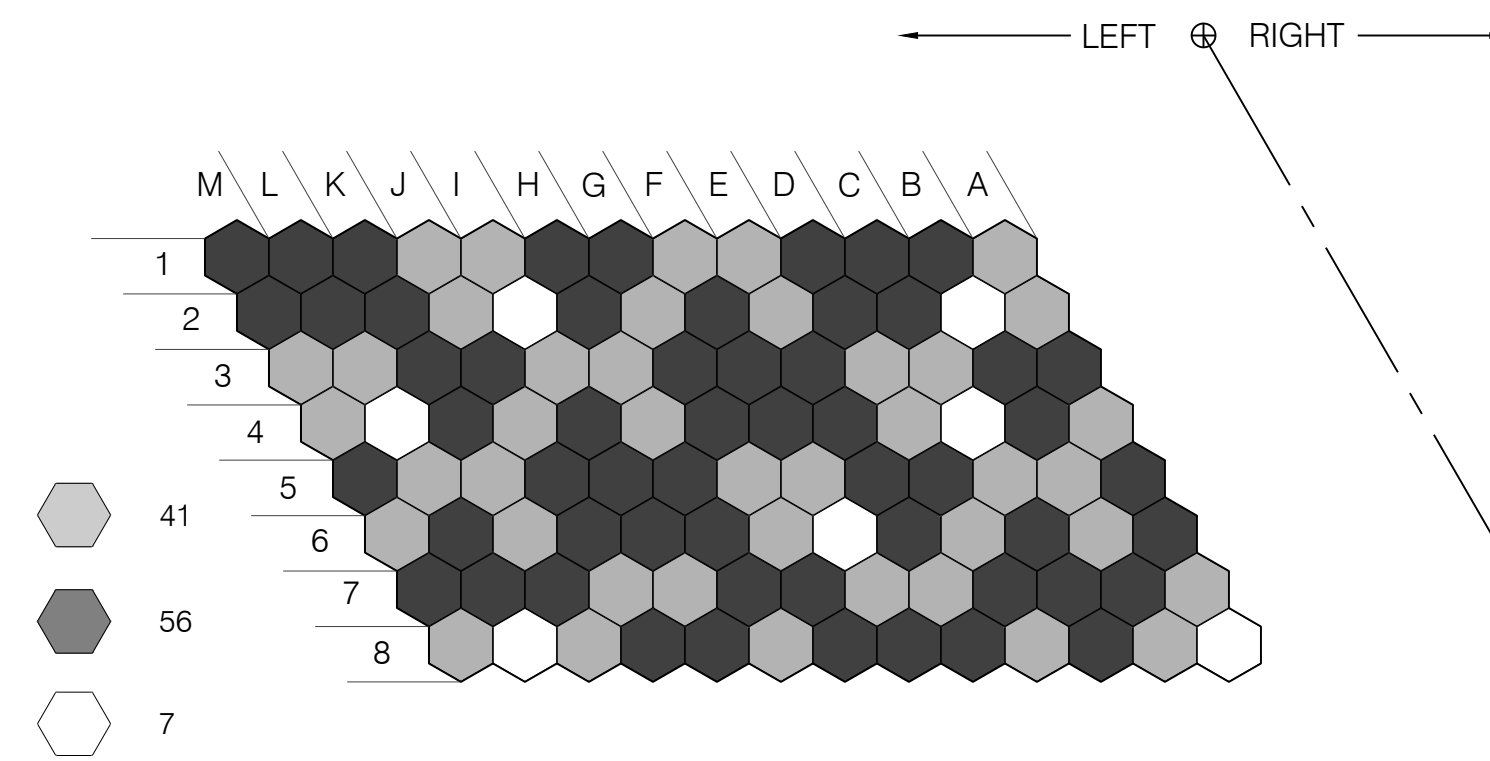
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	M. KING & A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
			REVISIONS



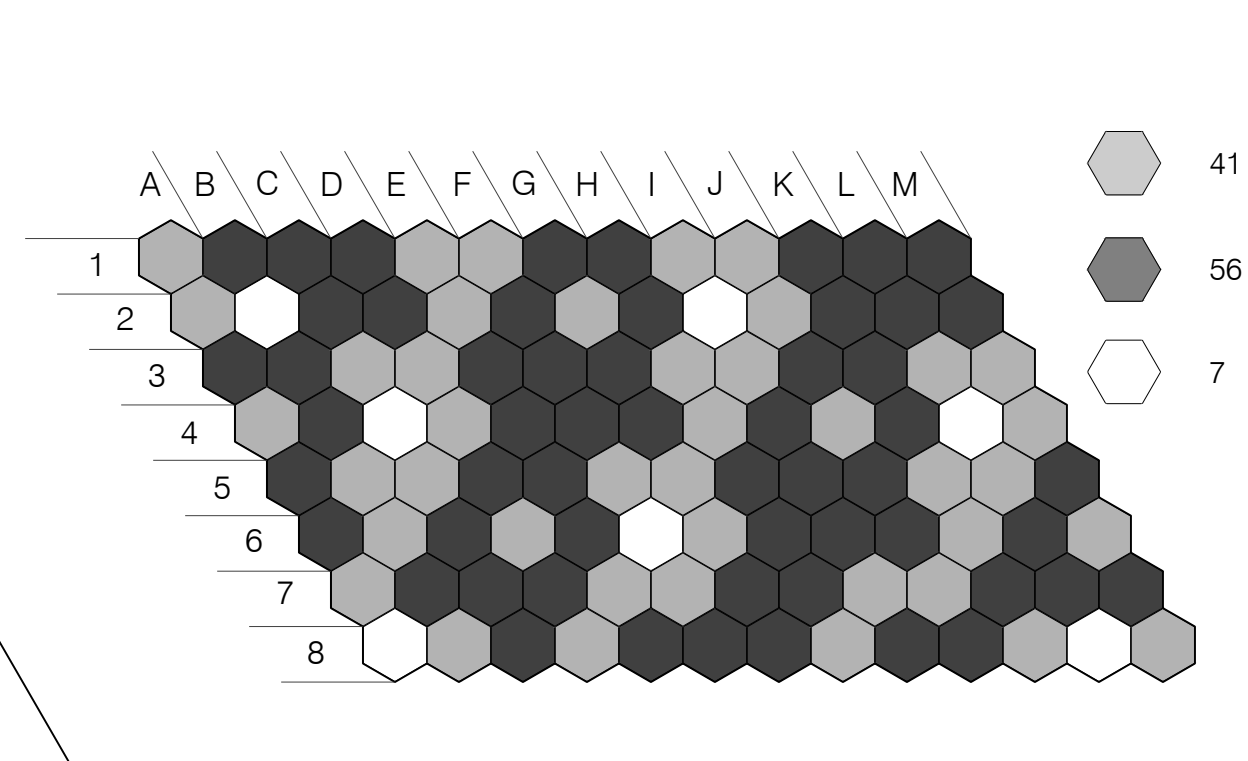
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	PAVING ENLARGEMENT PLAN DETAILS - 1

Sheet	L-24
File No.	8514

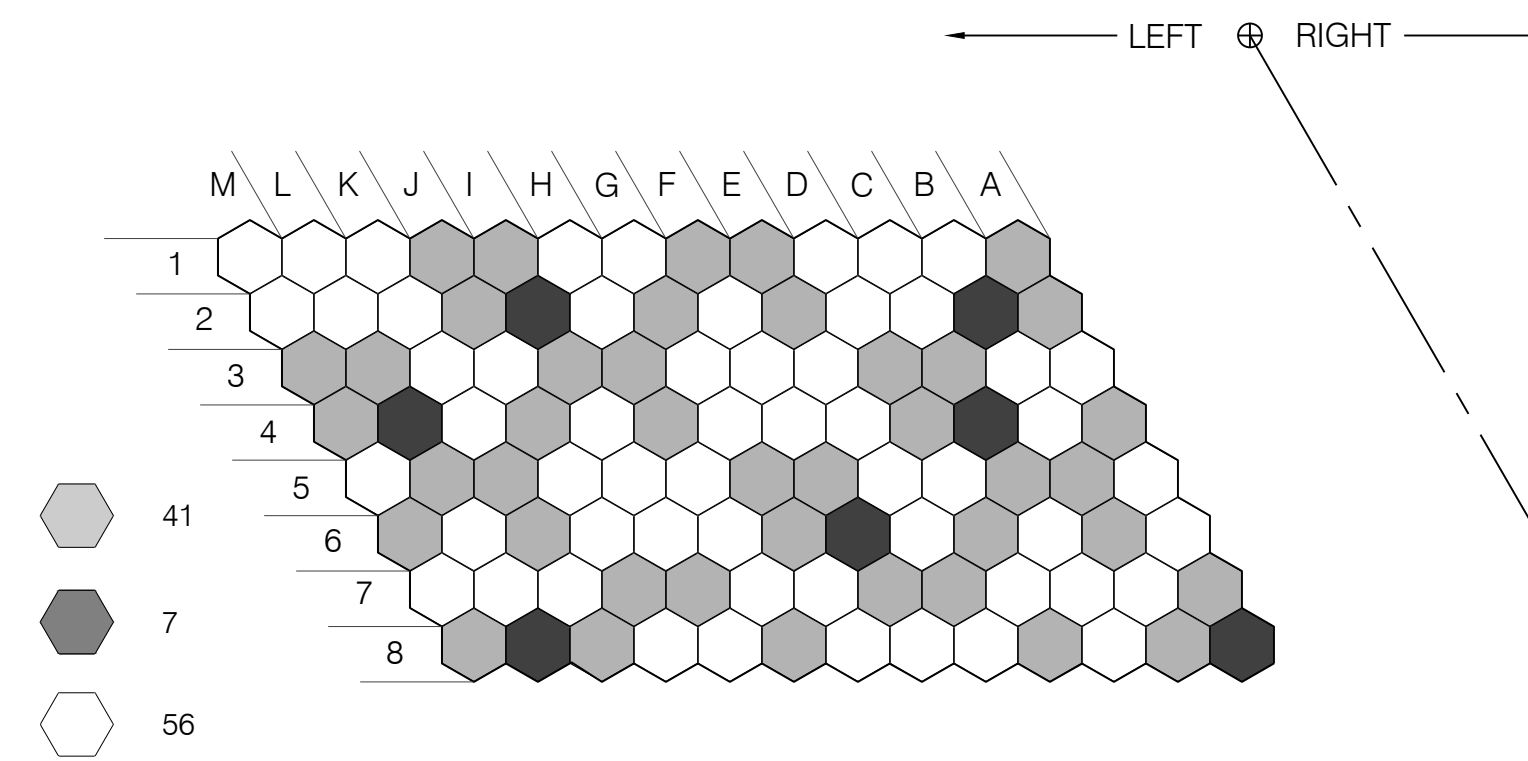




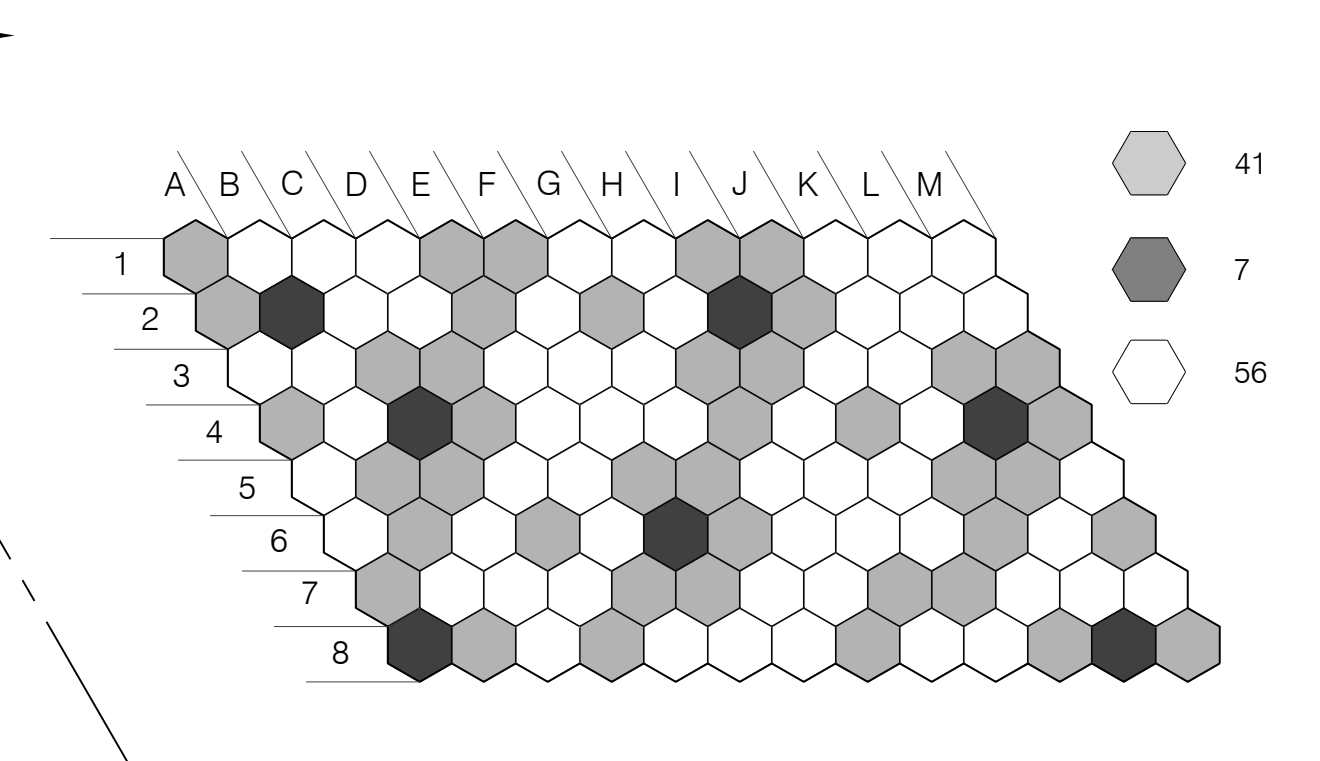
**8** MODULE B4-L - DARK  
SCALE: 1/2" = 1'-0"



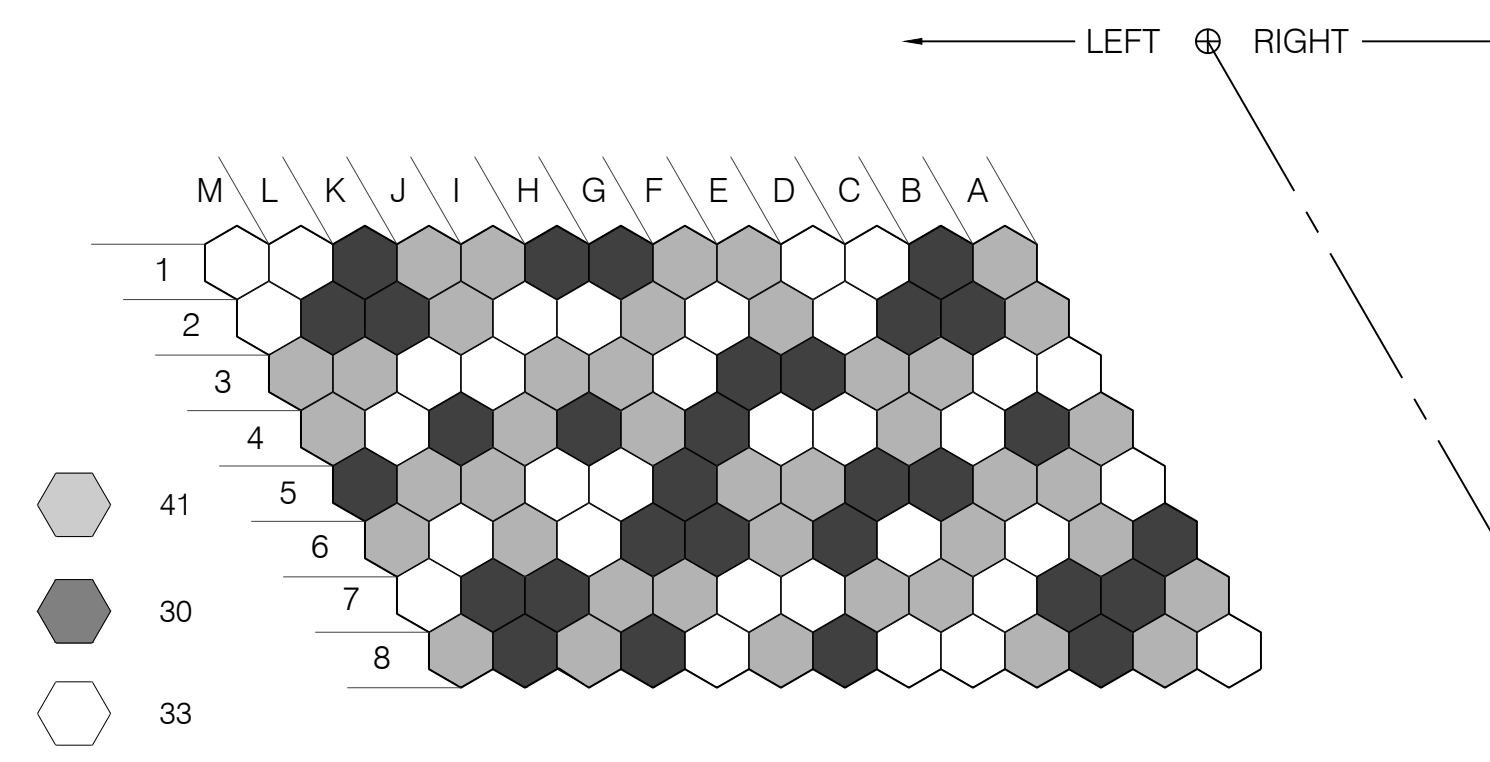
**7** MODULE B4-R - DARK  
SCALE: 1/2" = 1'-0"



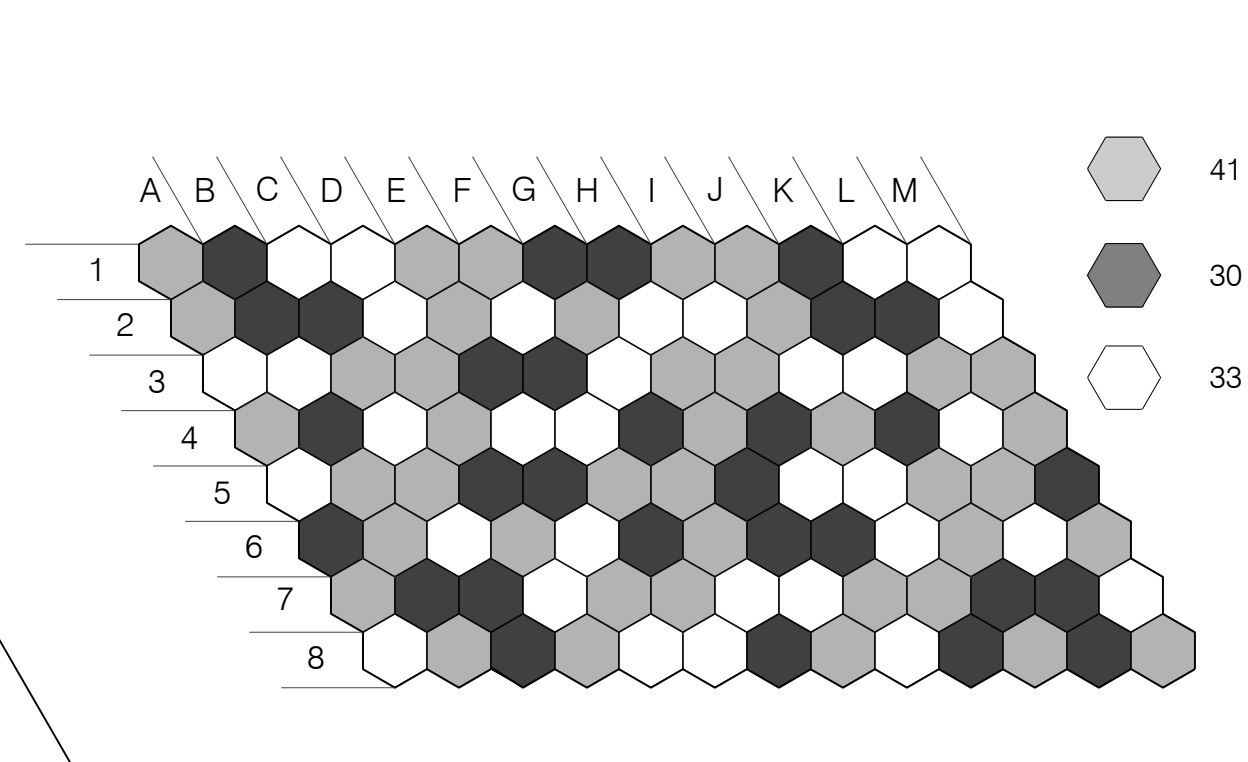
**4** MODULE B2-L - LIGHT  
SCALE: 1/2" = 1'-0"



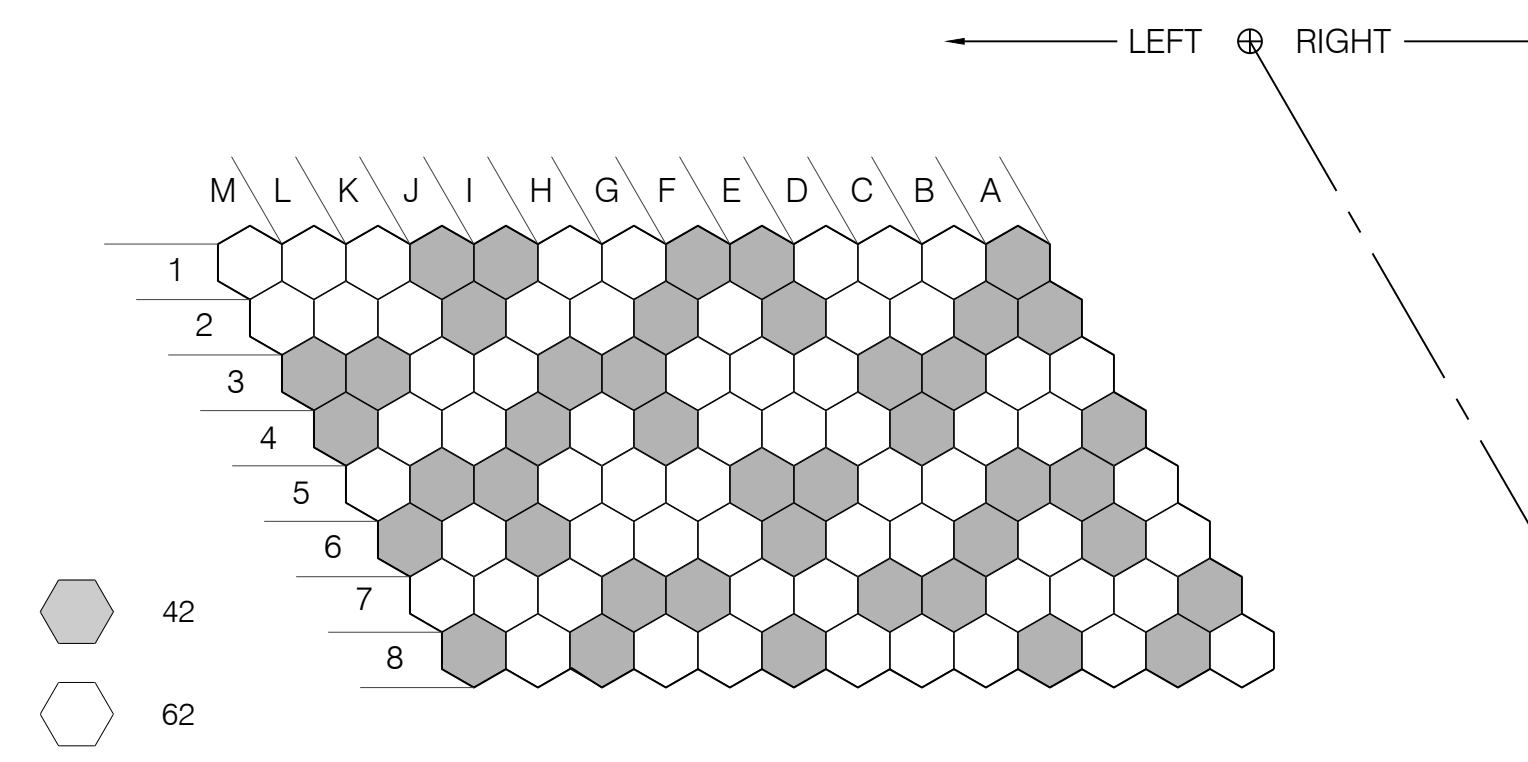
**3** MODULE B2-R - LIGHT  
SCALE: 1/2" = 1'-0"



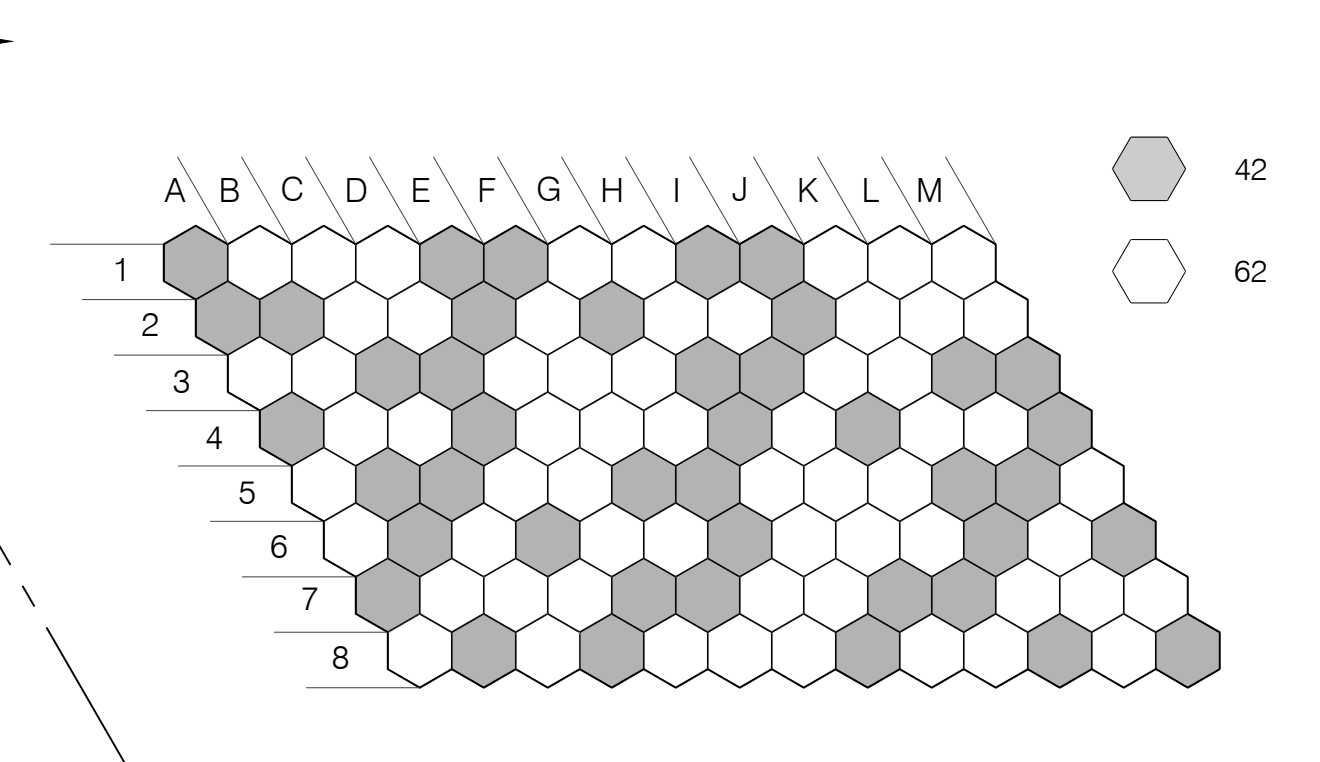
**6** MODULE B3-L - MEDIUM  
SCALE: 1/2" = 1'-0"



**5** MODULE B1-R - MEDIUM  
SCALE: 1/2" = 1'-0"



**2** MODULE B1-L - EXTRA LIGHT  
SCALE: 1/2" = 1'-0"



**1** MODULE B1-R - EXTRA LIGHT  
SCALE: 1/2" = 1'-0"

**MODULE LABEL KEY**

MODULE SIZE:  
A = LARGE MODULE  
B = SMALL MODULE

BLEND COLOR:  
1 = EXTRA LIGHT  
2 = LIGHT  
3 = MEDIUM  
4 = DARK

PATTERN DIRECTION:  
R = RIGHT  
L = LEFT

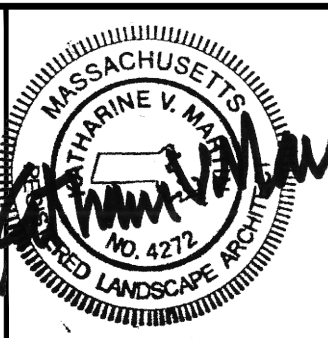
SEE L-21 - L-23 FOR PAVING ENLARGEMENT PLANS

A1-R

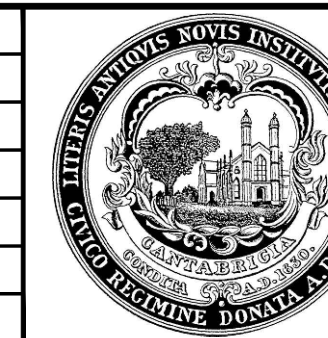
**PAVER TYPE KEY**

- PAVER TYPE 1
- PAVER TYPE 2
- PAVER TYPE 3

ISSUED FOR BID



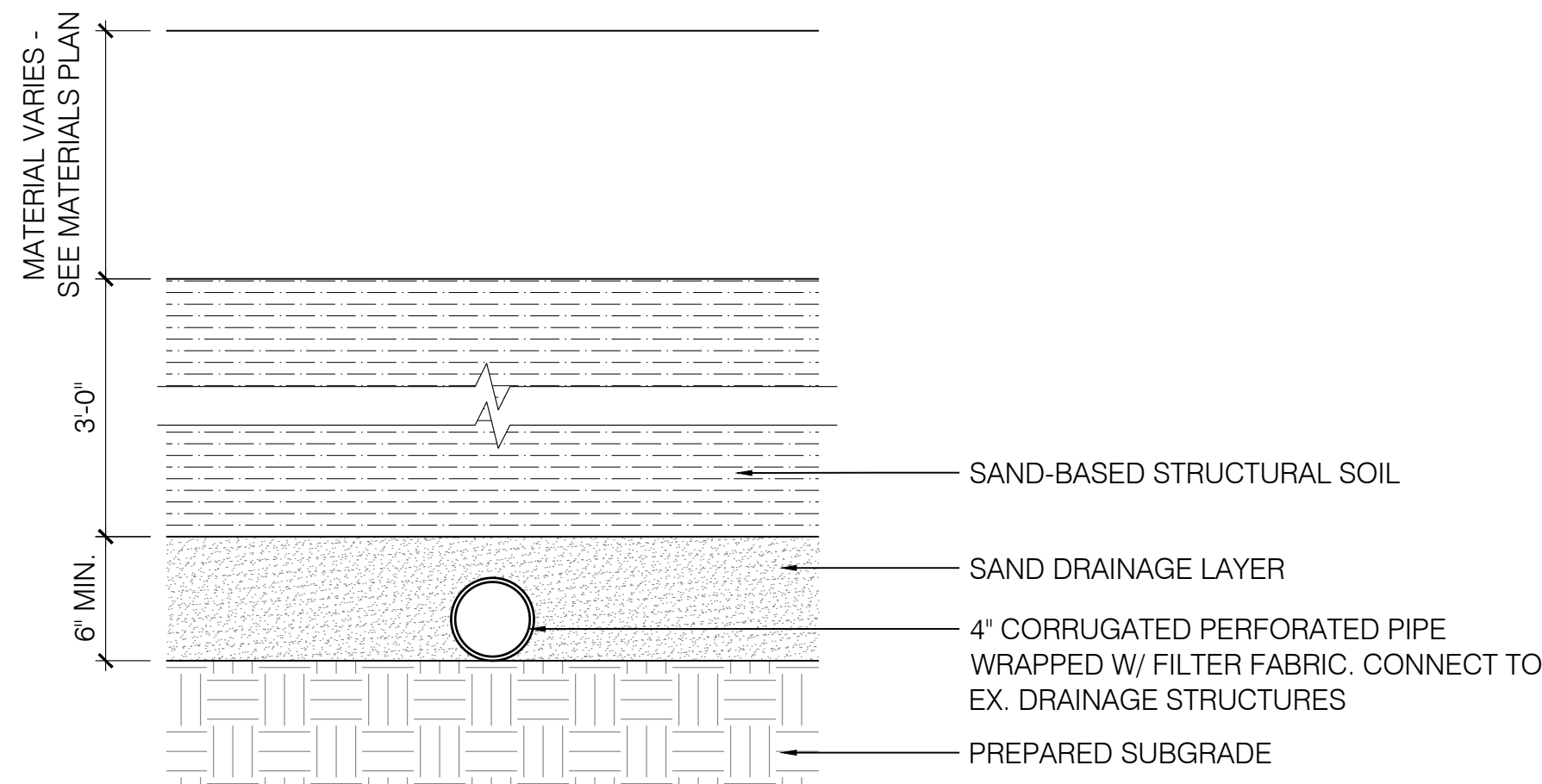
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	M. KING & A. ALLEN		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
		REVISIONS	



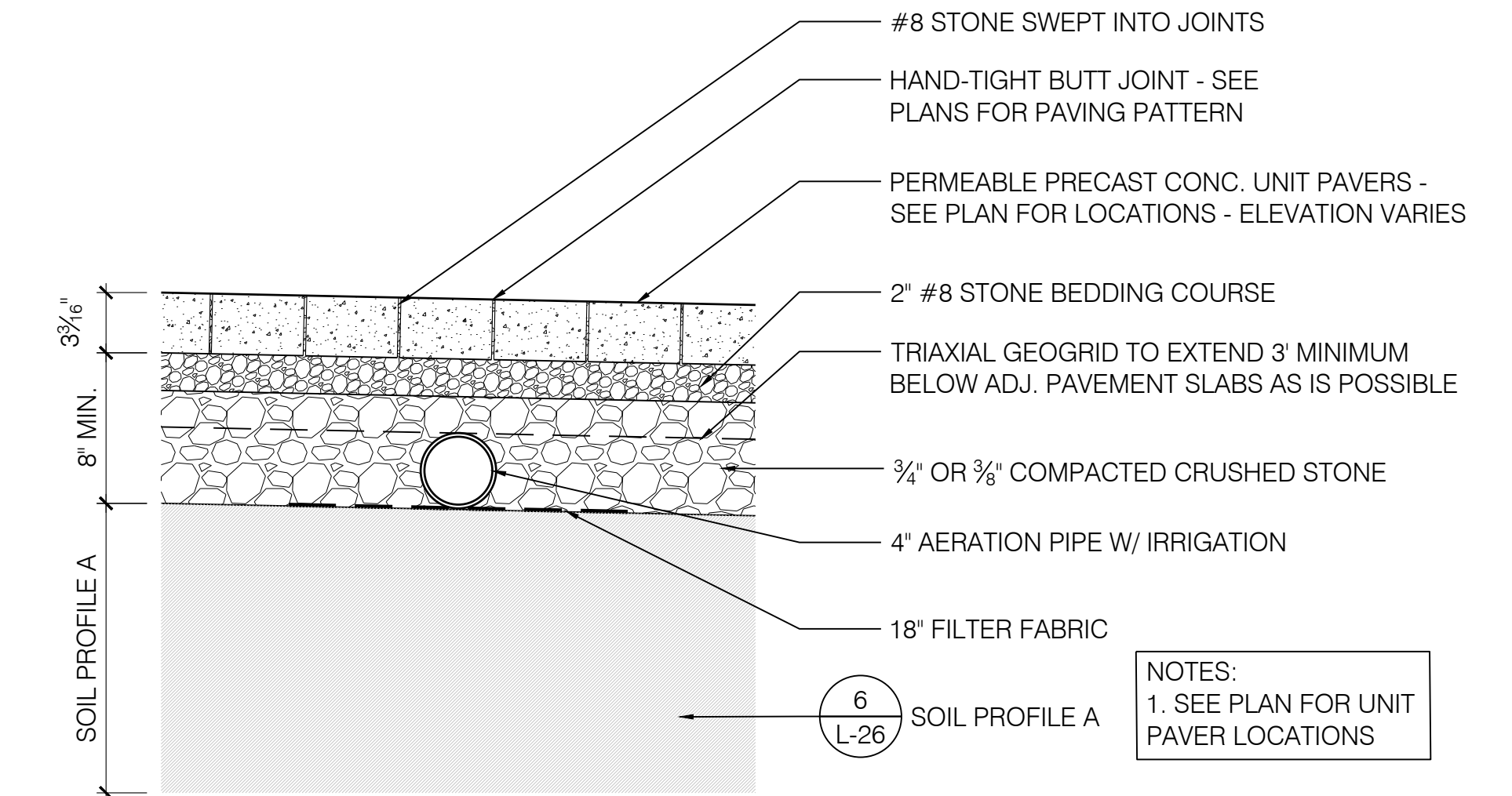
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	PAVING ENLARGEMENT PLAN DETAILS - 2

Sheet	L-25
File No.	8514

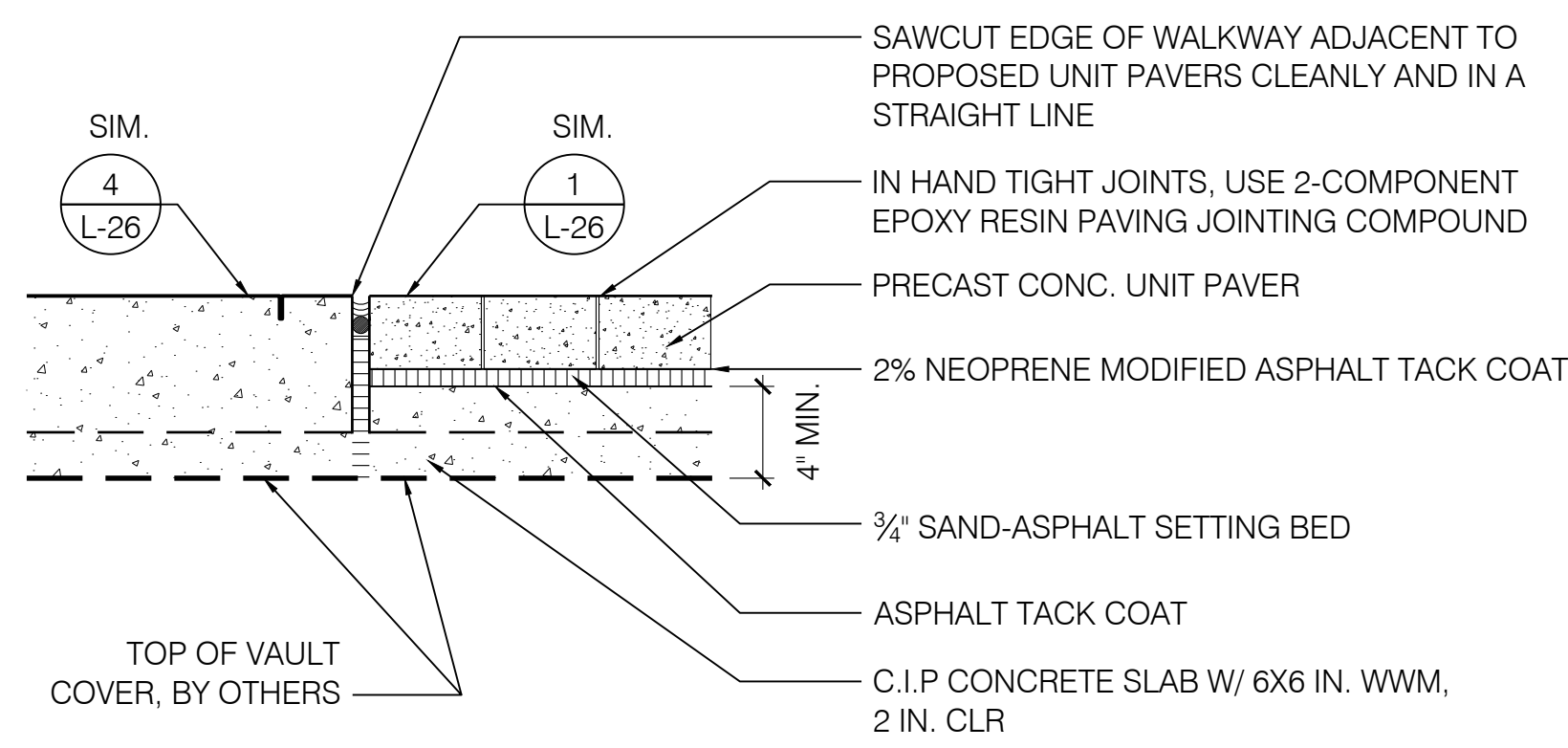




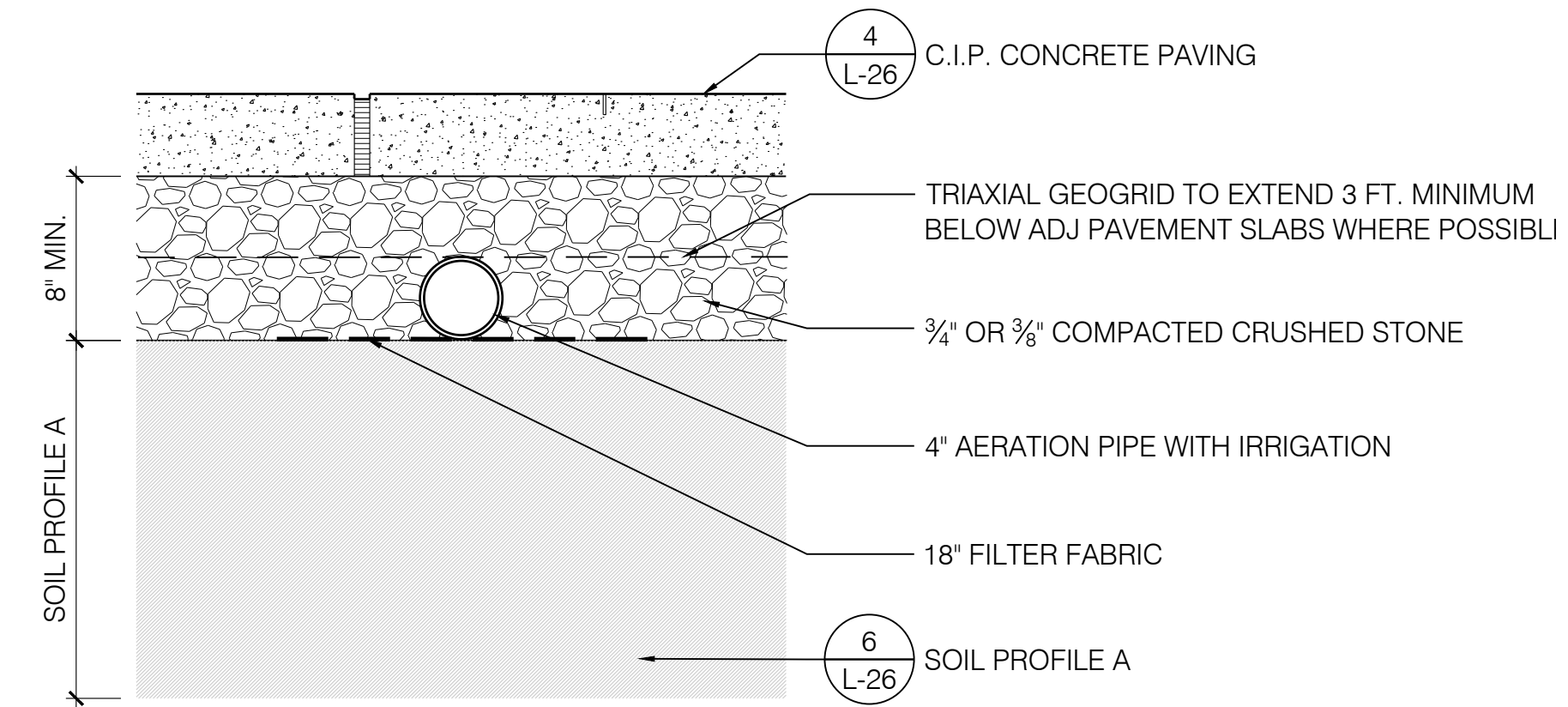
**6** SOIL PROFILE A - SAND BASED STRUCTURAL SOIL  
SCALE: 1 1/2" = 1'-0"



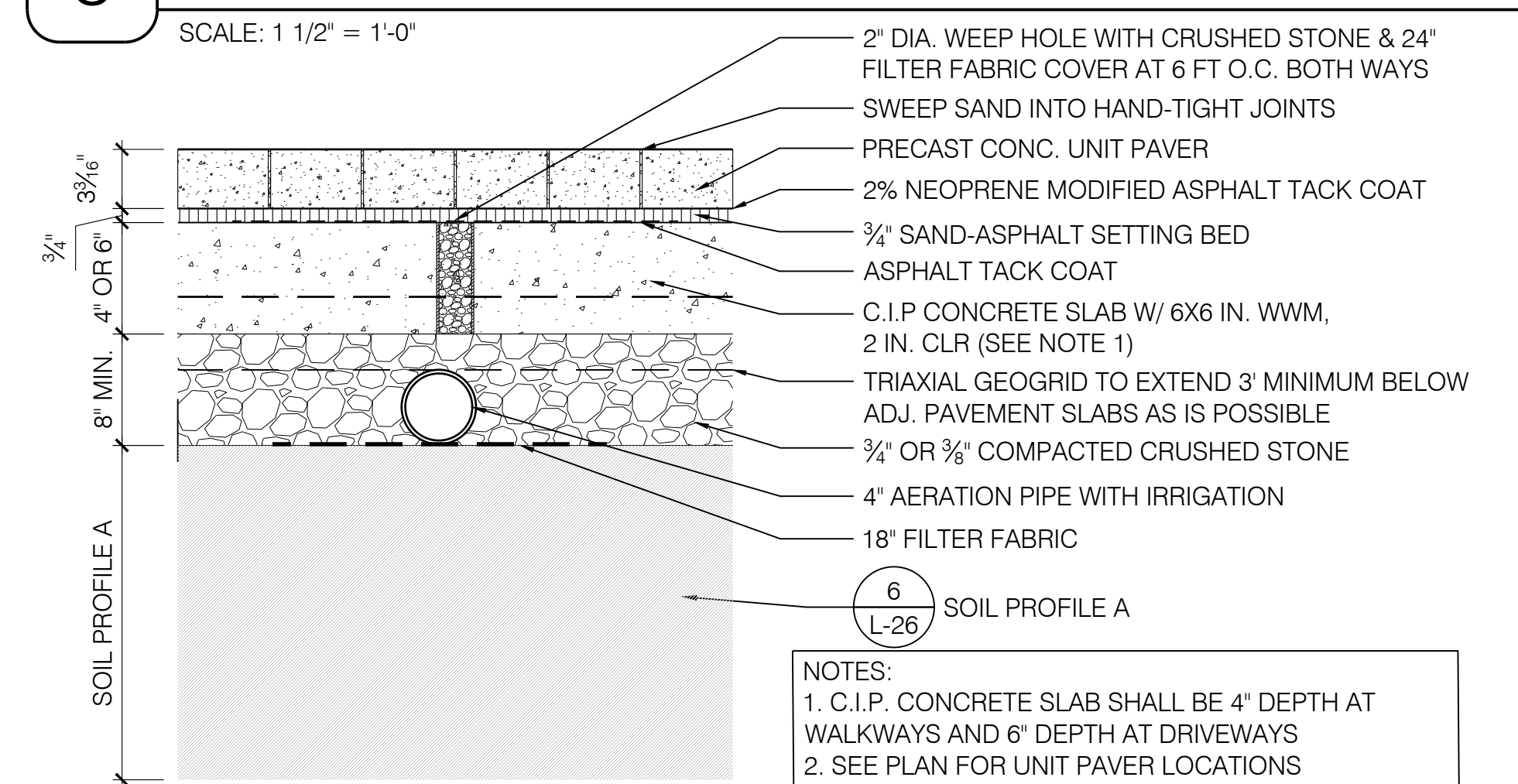
**3** PERMEABLE PRECAST CONC. UNIT PAVERS  
SCALE: 1 1/2" = 1'-0"



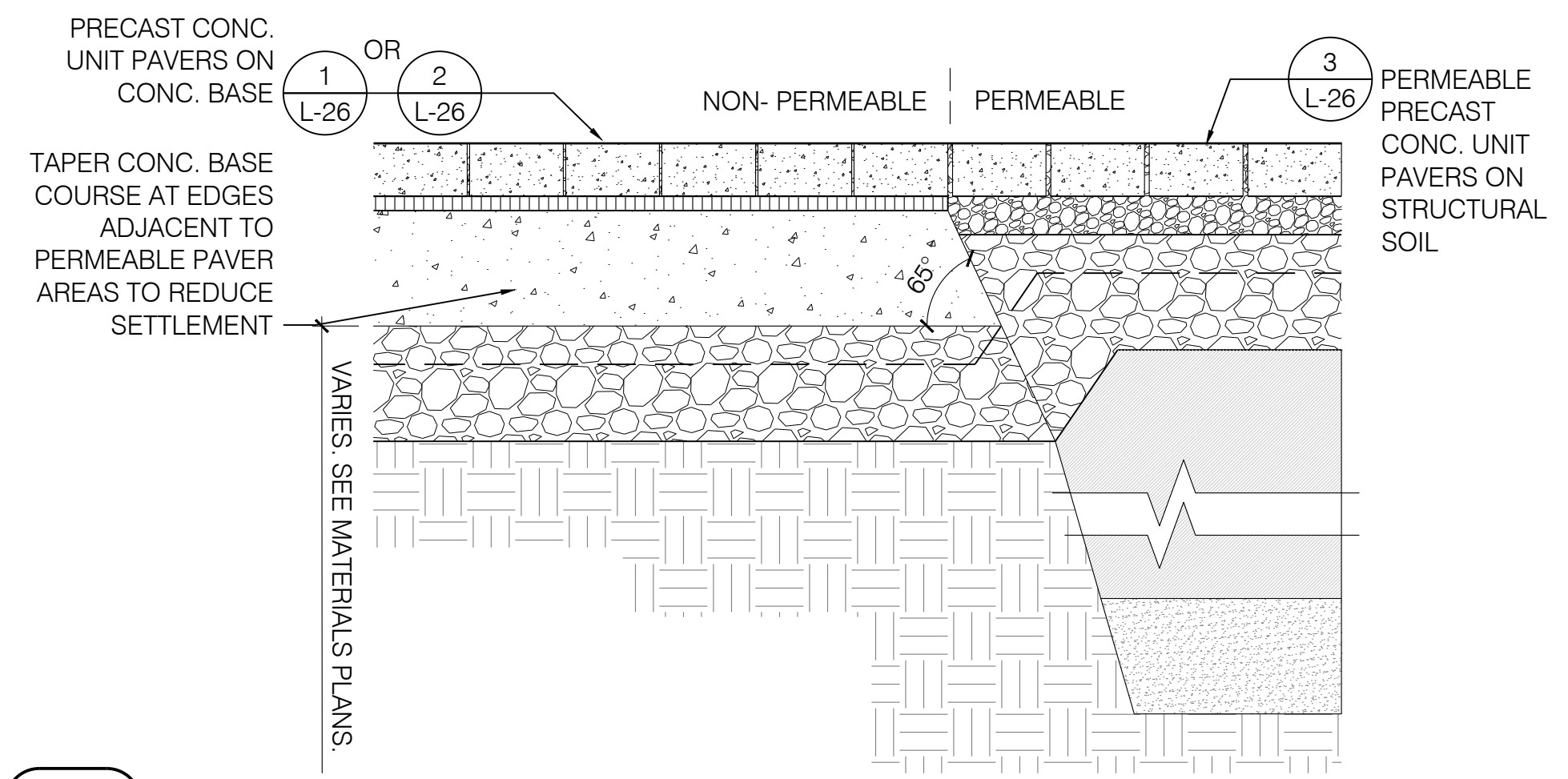
**8** PAVING AT VAULT COVER  
SCALE: 1 1/2" = 1'-0"



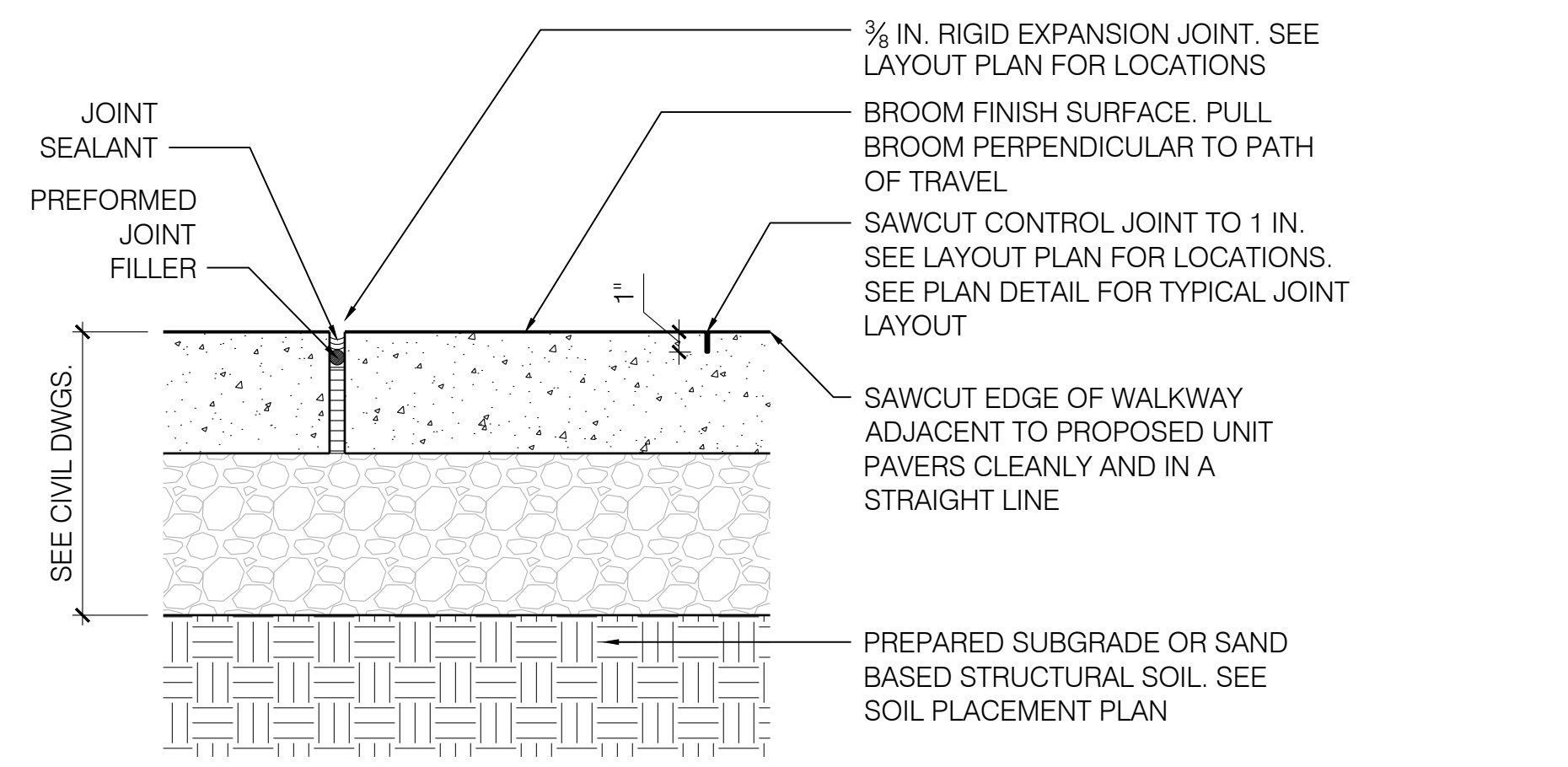
**5** C.I.P. CONCRETE PAVING ON STRUCTURAL SOIL  
SCALE: 1 1/2" = 1'-0"



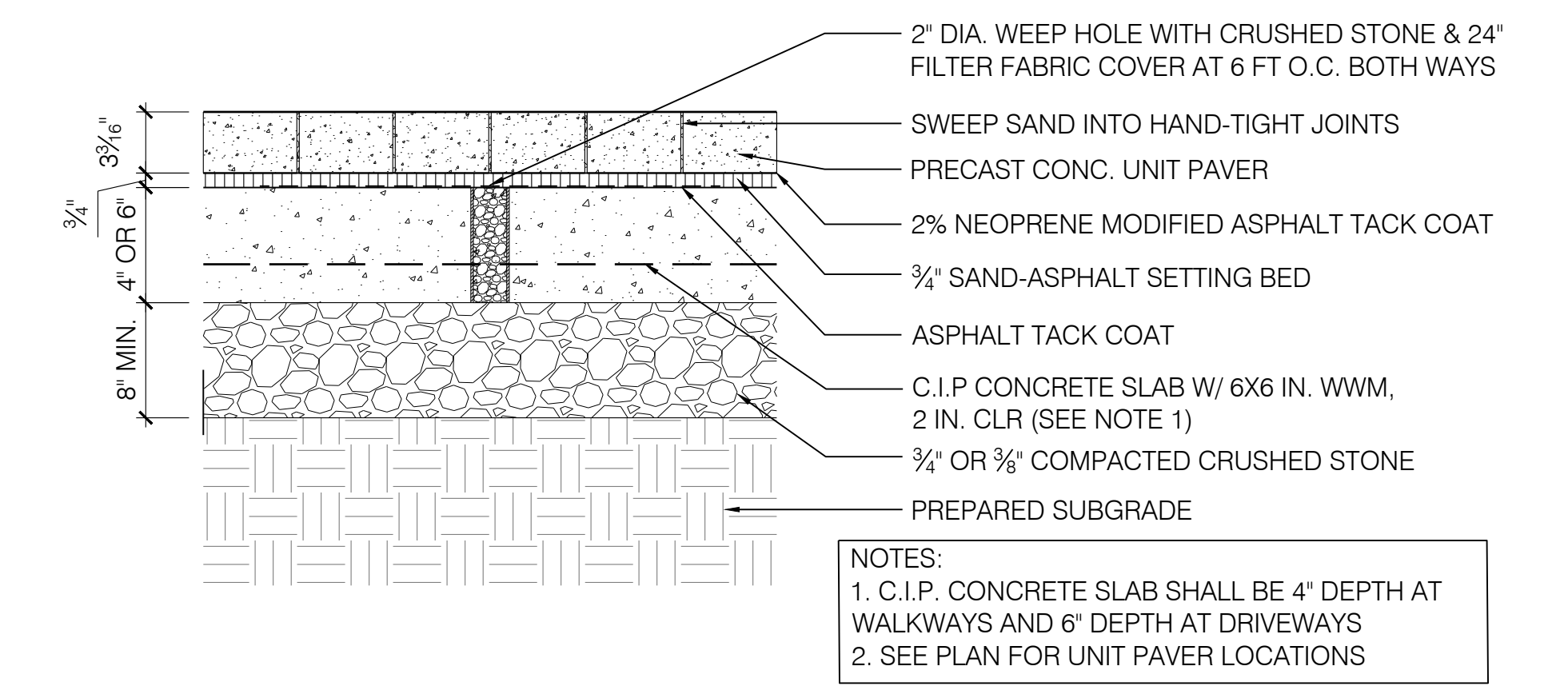
**2** PRECAST CONC. UNIT PAVERS ON STRUCTURAL SOIL  
SCALE: 1 1/2" = 1'-0"



**7** PAVER TRANSITION - PERMEABLE TO PAVERS ON CONC. BASE  
SCALE: 1 1/2" = 1'-0"



**4** C.I.P. CONCRETE PAVING  
SCALE: 1 1/2" = 1'-0"

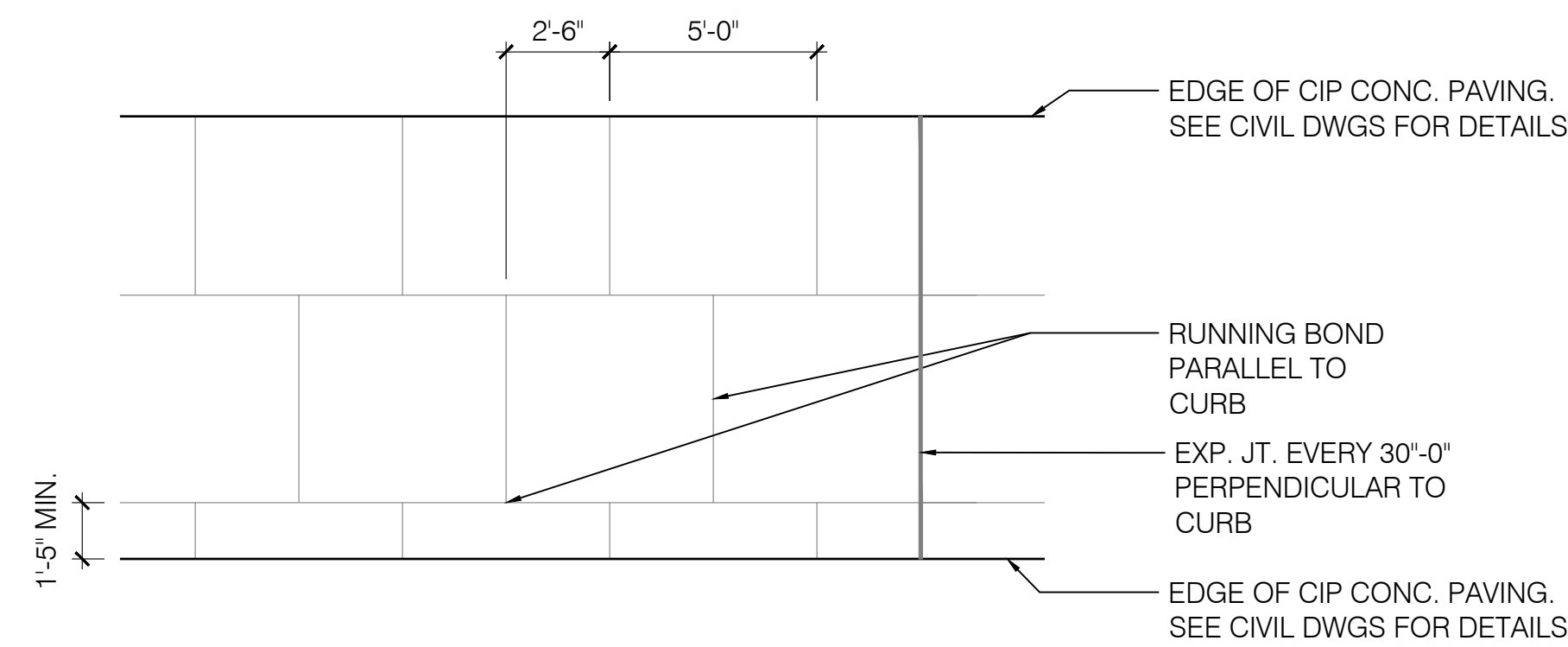


**1** PRECAST CONC. UNIT PAVERS ON CONC. BASE  
SCALE: 1 1/2" = 1'-0"

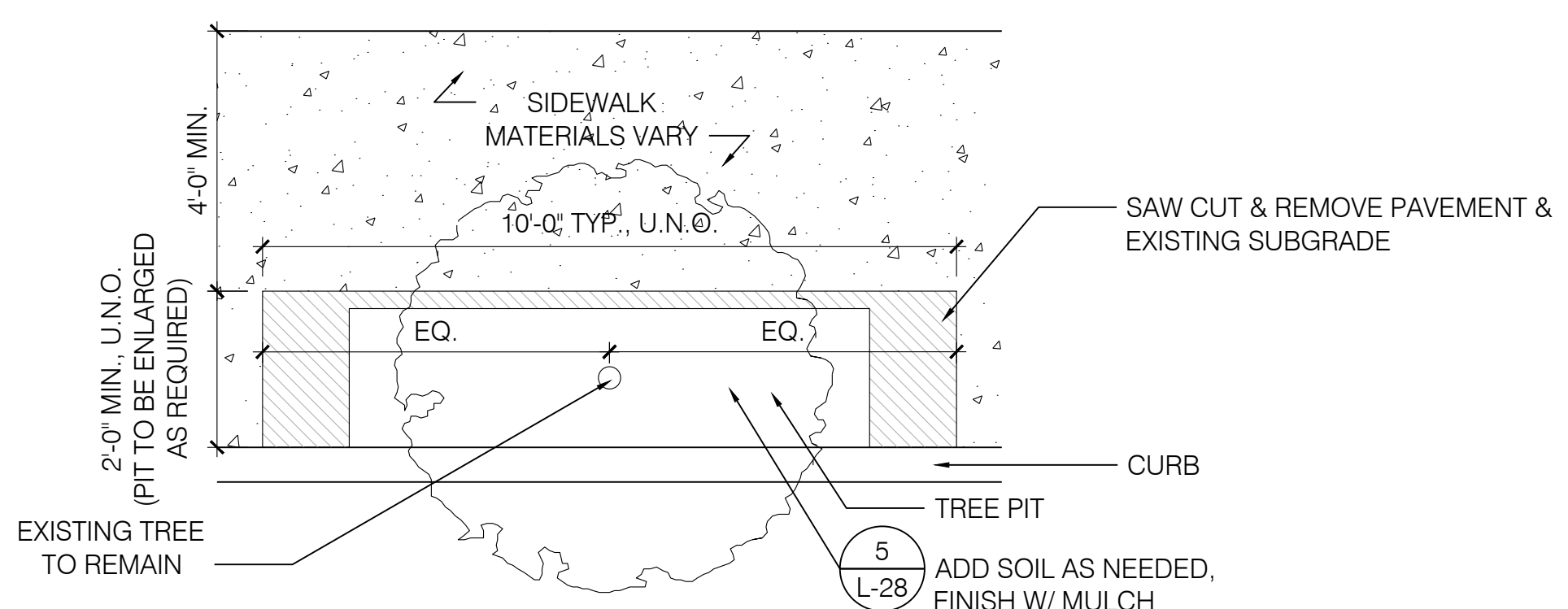
ISSUED FOR BID

						Scale	AS NOTED					Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	L-26
						Date	APRIL 2019					Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
						Job No.	20170208.005A					Drawing	LANDSCAPE DETAILS - 1		
						Designed by	KMDG								
						Drawn by	A. ALLEN								
						Checked by	K. PETSCHKE	No.		Description					
						Approved by	K. MARTIN			REVISIONS					

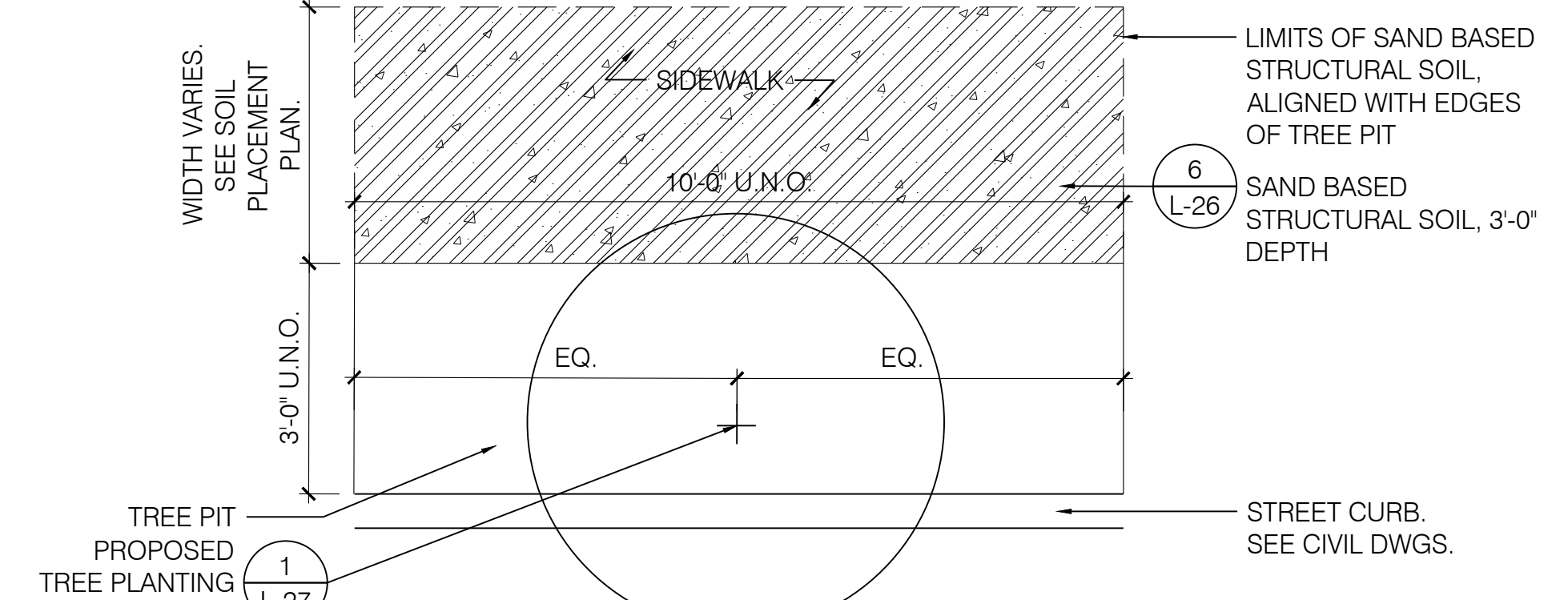




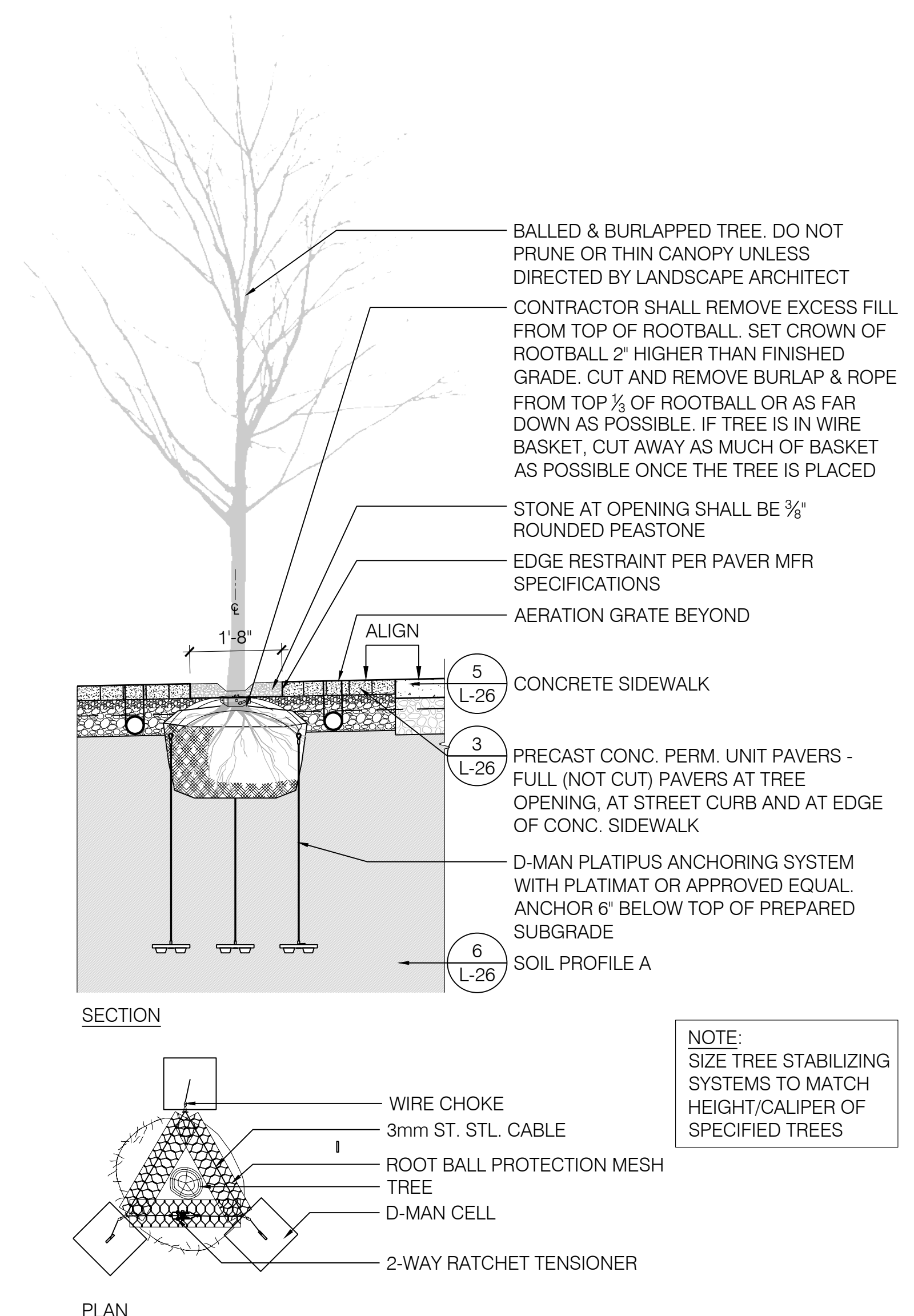
**6** TYP. CONC. PAVING JOINTING LAYOUT  
SCALE: 1/4" = 1'-0"



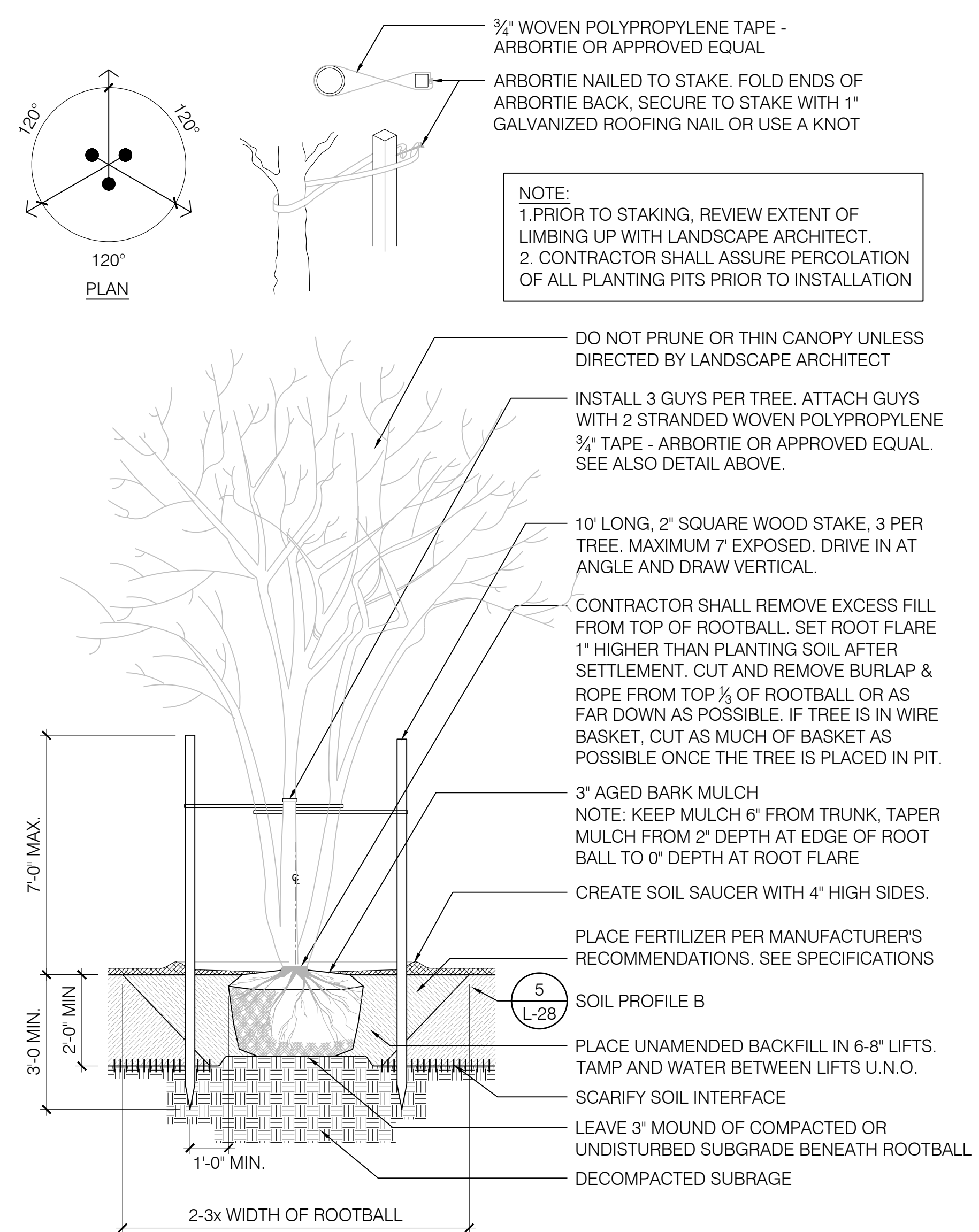
**4** TREE PLANTING DETAIL AT EXISTING TREE PIT  
SCALE: 1/2" = 1'-0"



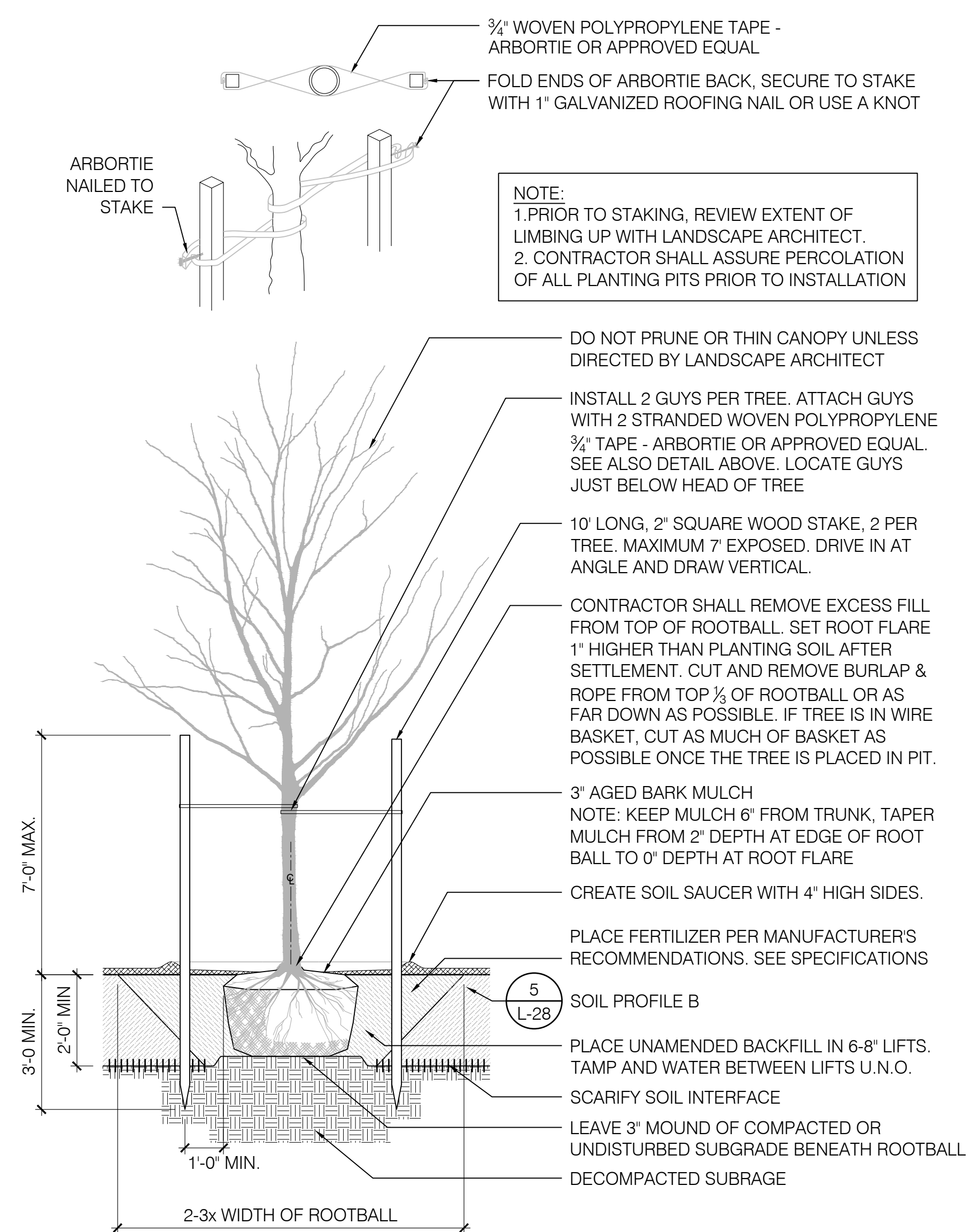
**2** TREE PLANTING DETAIL AT PROPOSED TREE PIT  
SCALE: 1/2" = 1'-0"



**5** TREE PLANTING IN PRECAST CONC. UNIT PAVERS  
SCALE: 1/2" = 1'-0"



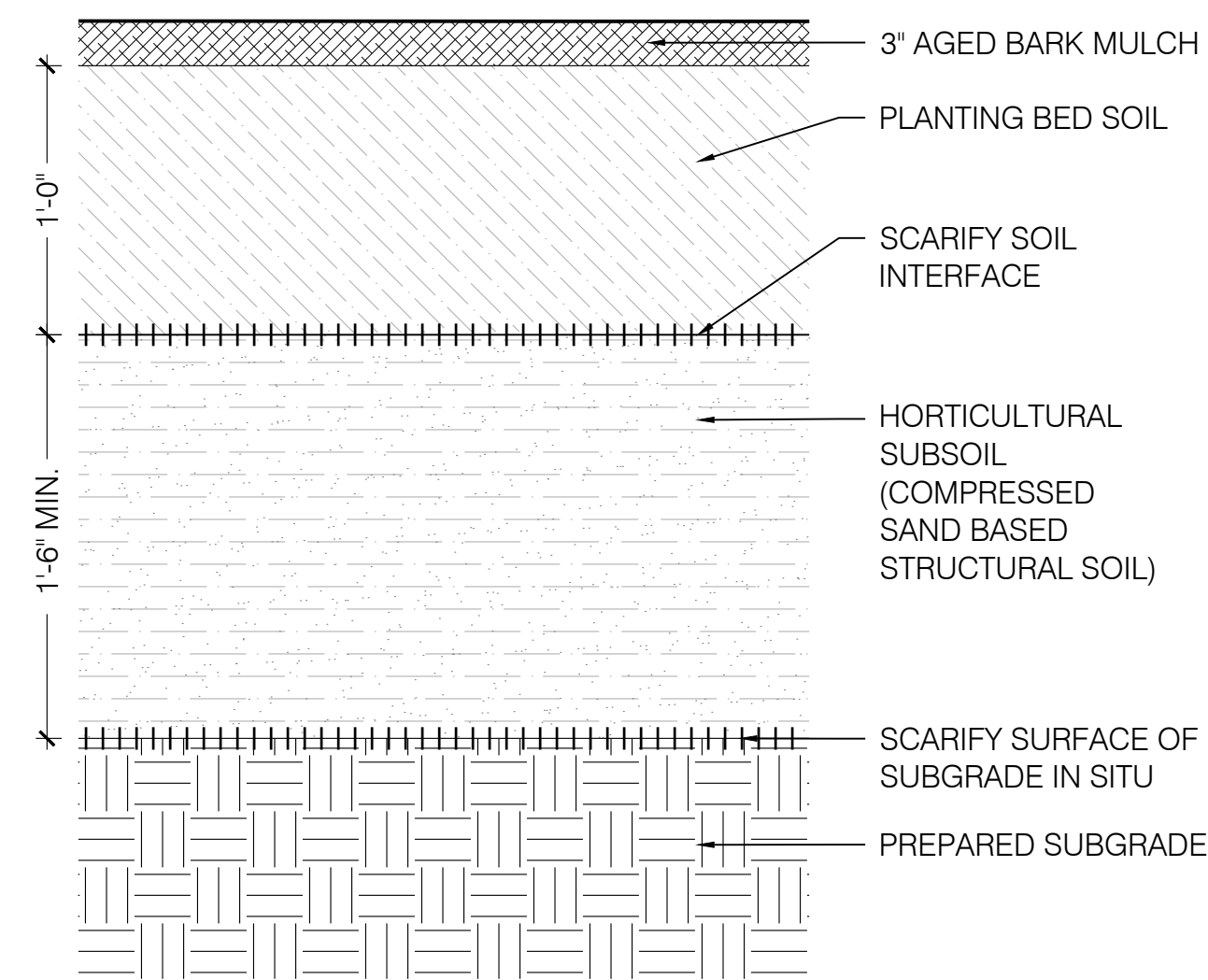
**3** MULTISTEM TREE PLANTING  
SCALE: 3/8" = 1'-0"



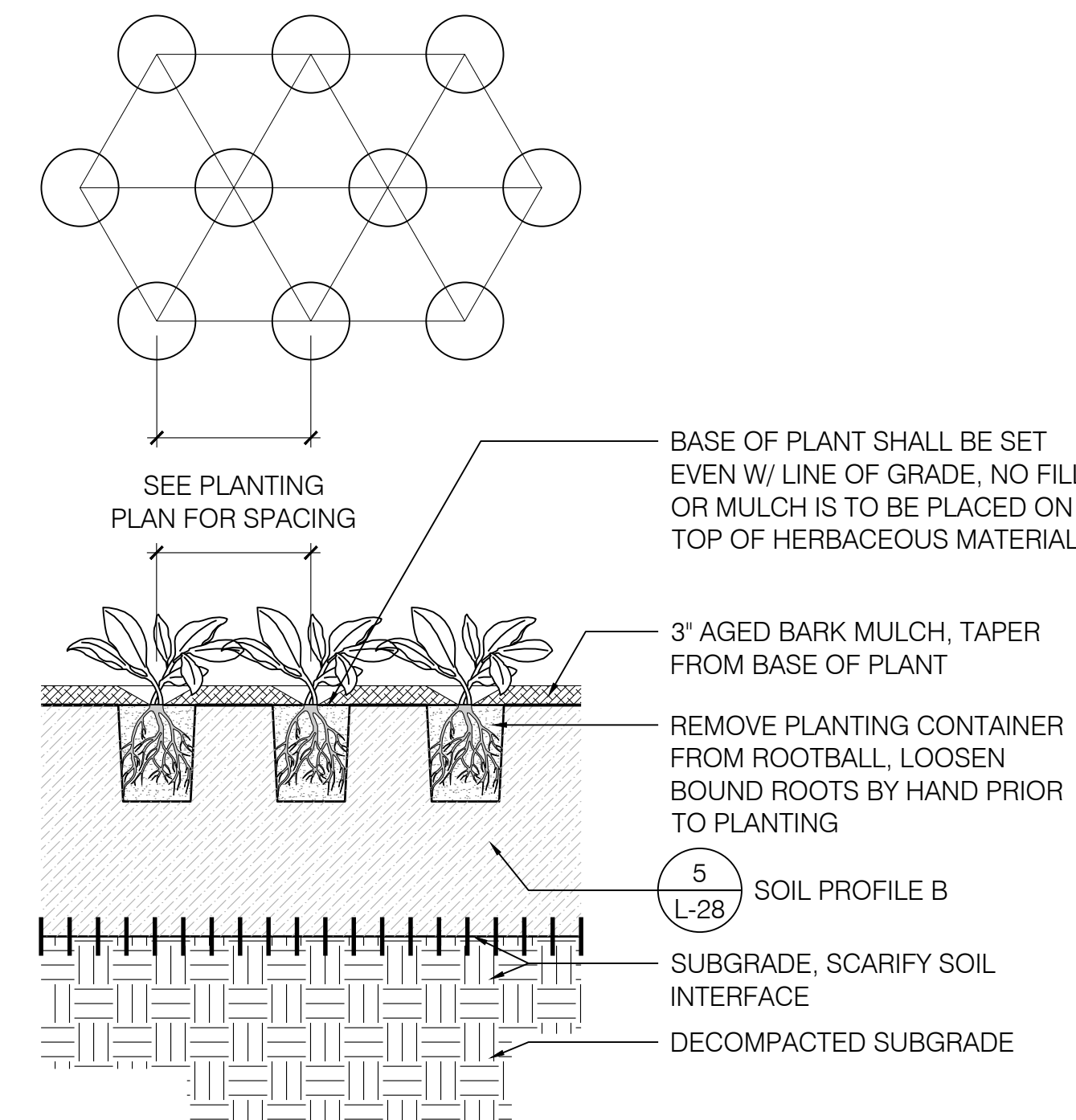
**1** TREE PLANTING  
SCALE: 3/8" = 1'-0"

ISSUED FOR BID

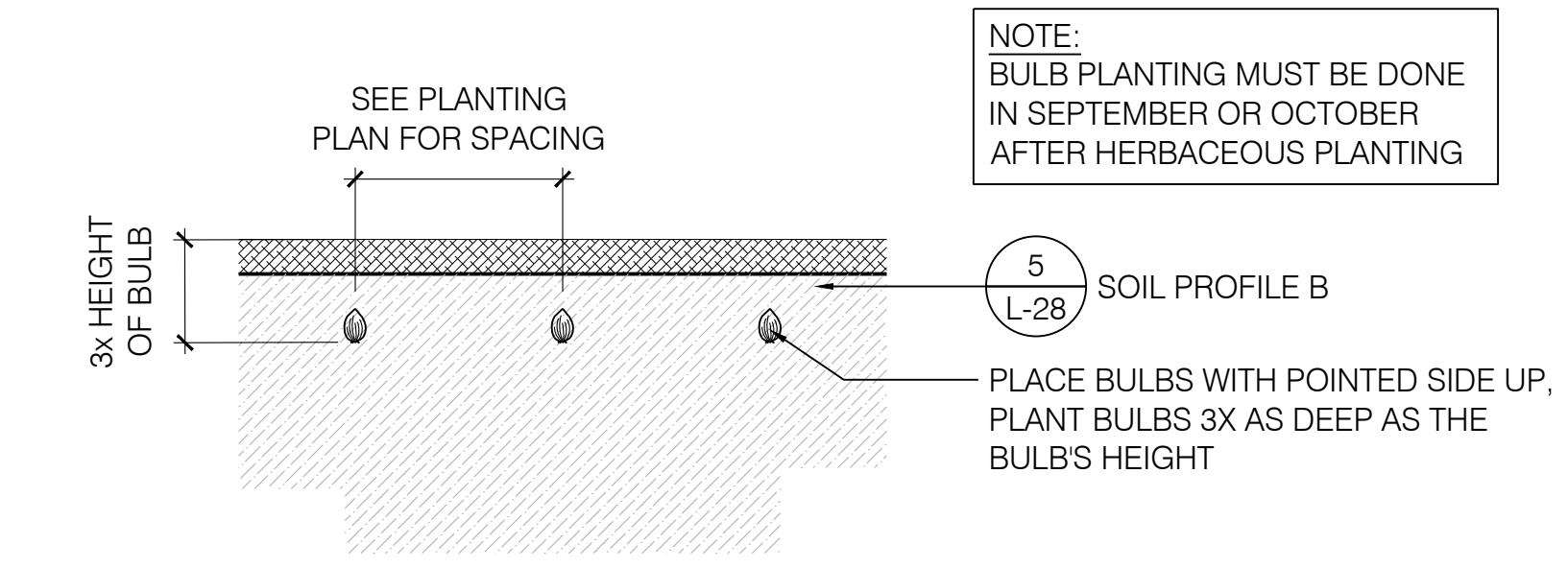




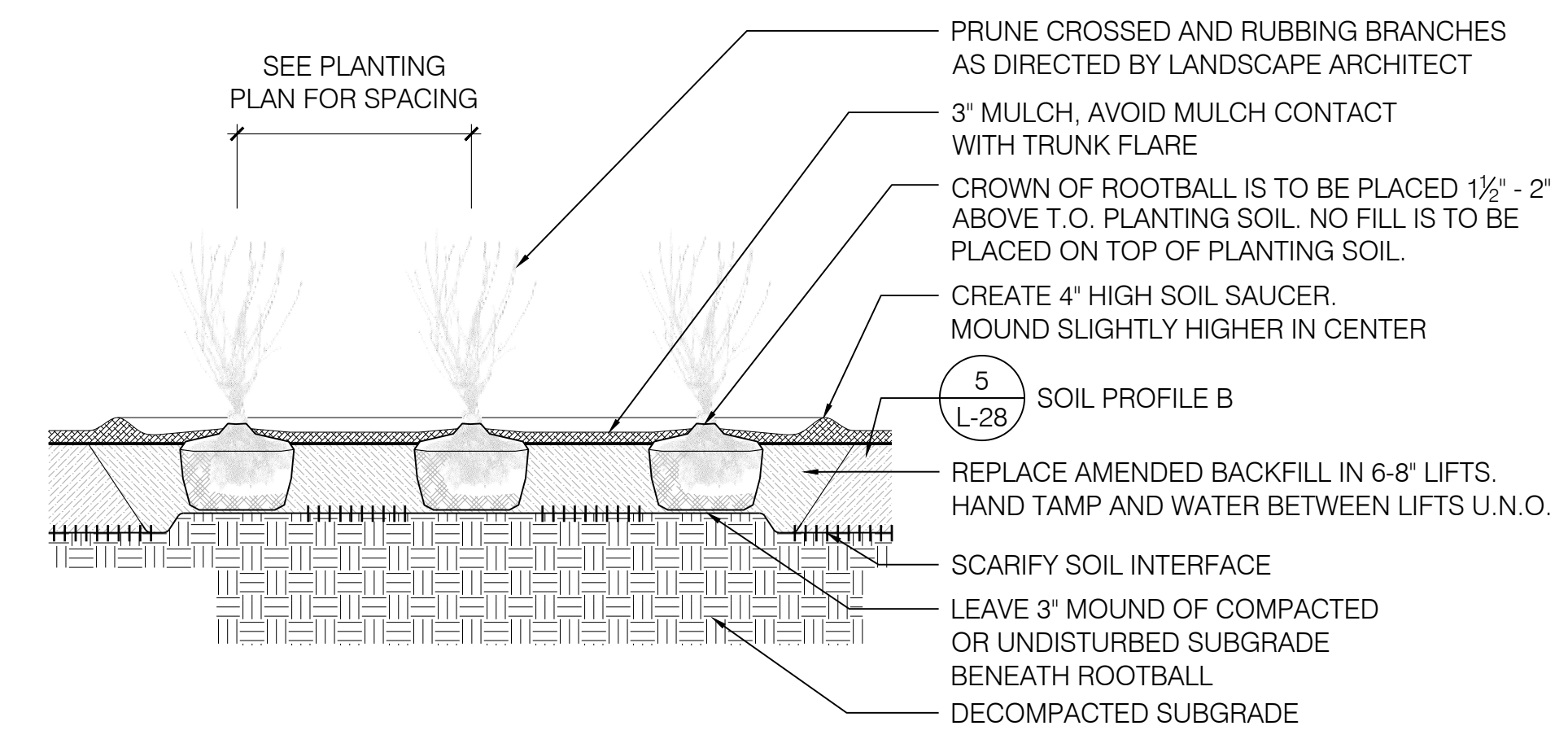
**5** SOIL PROFILE B - PLANTING BED SOIL  
SCALE: 1 1/2" = 1'-0"



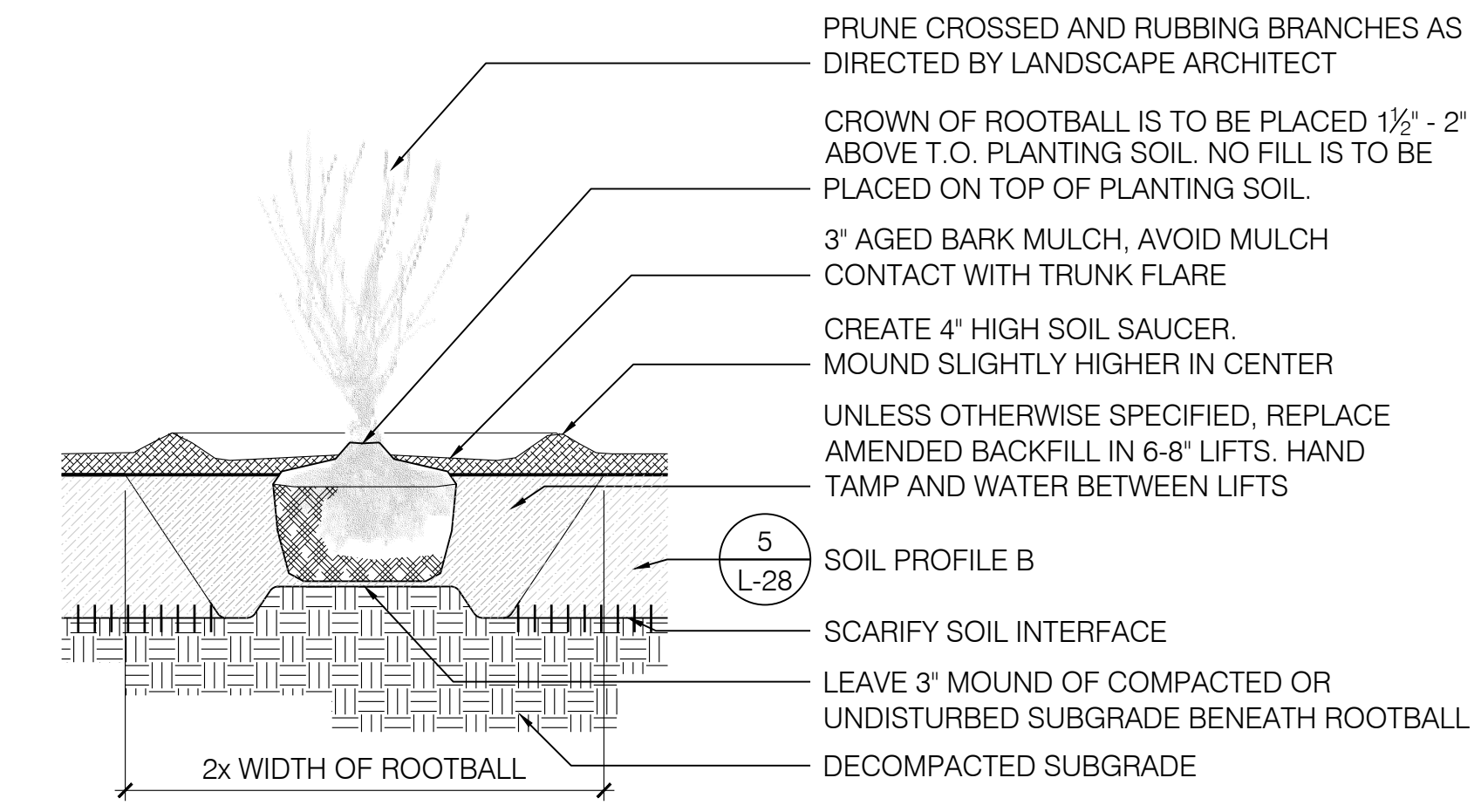
**4** PERENNIAL PLANTING  
SCALE: 1 1/2" = 1'-0"



**3** BULB PLANTING  
SCALE: 1 1/2" = 1'-0"



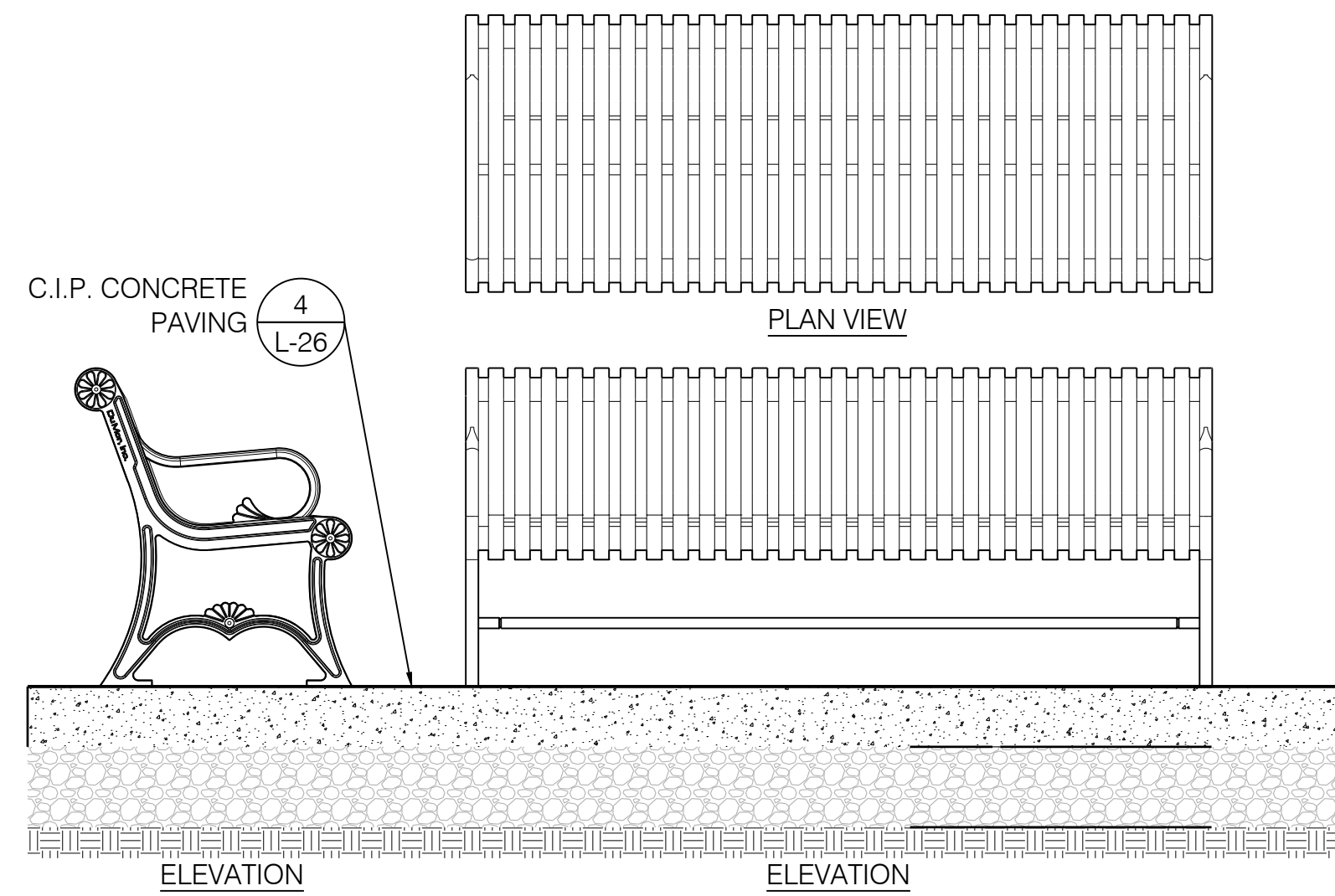
**2** MASS SHRUB PLANTING  
SCALE: 1/2" = 1'-0"



**1** INDIVIDUAL SHRUB PLANTING  
SCALE: 3/4" = 1'-0"

ISSUED FOR BID

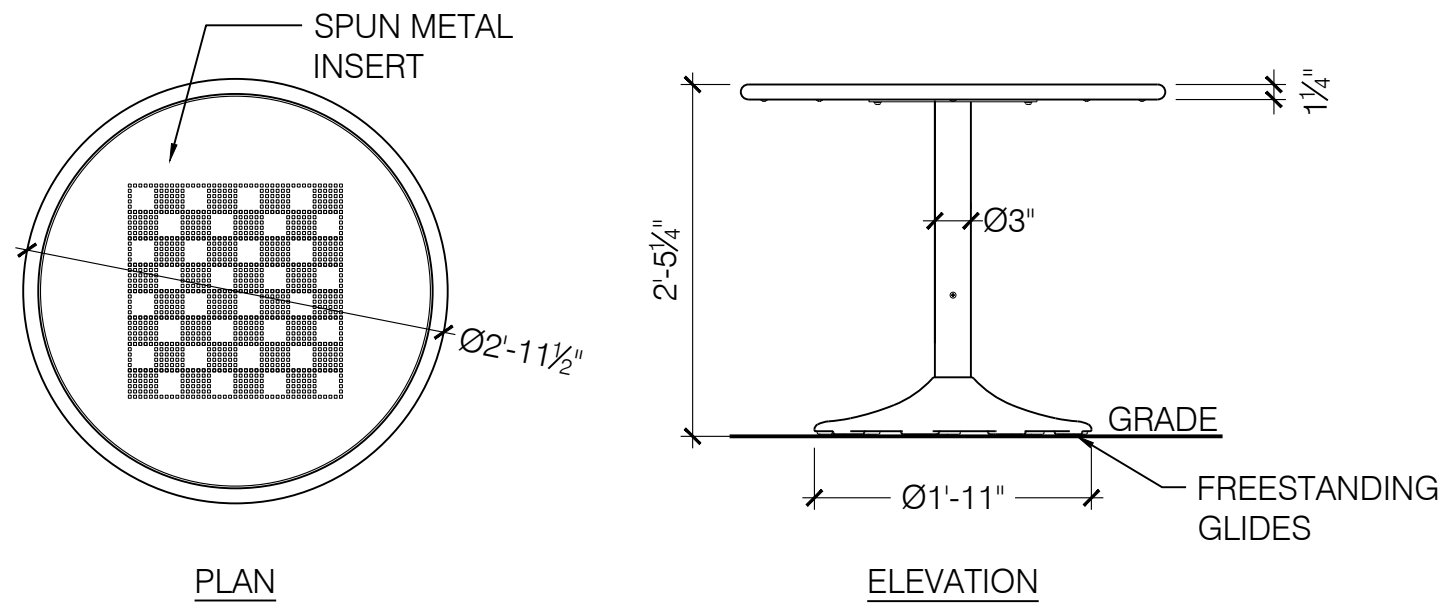




**7 STEEL BENCH - STREETSCAPE**

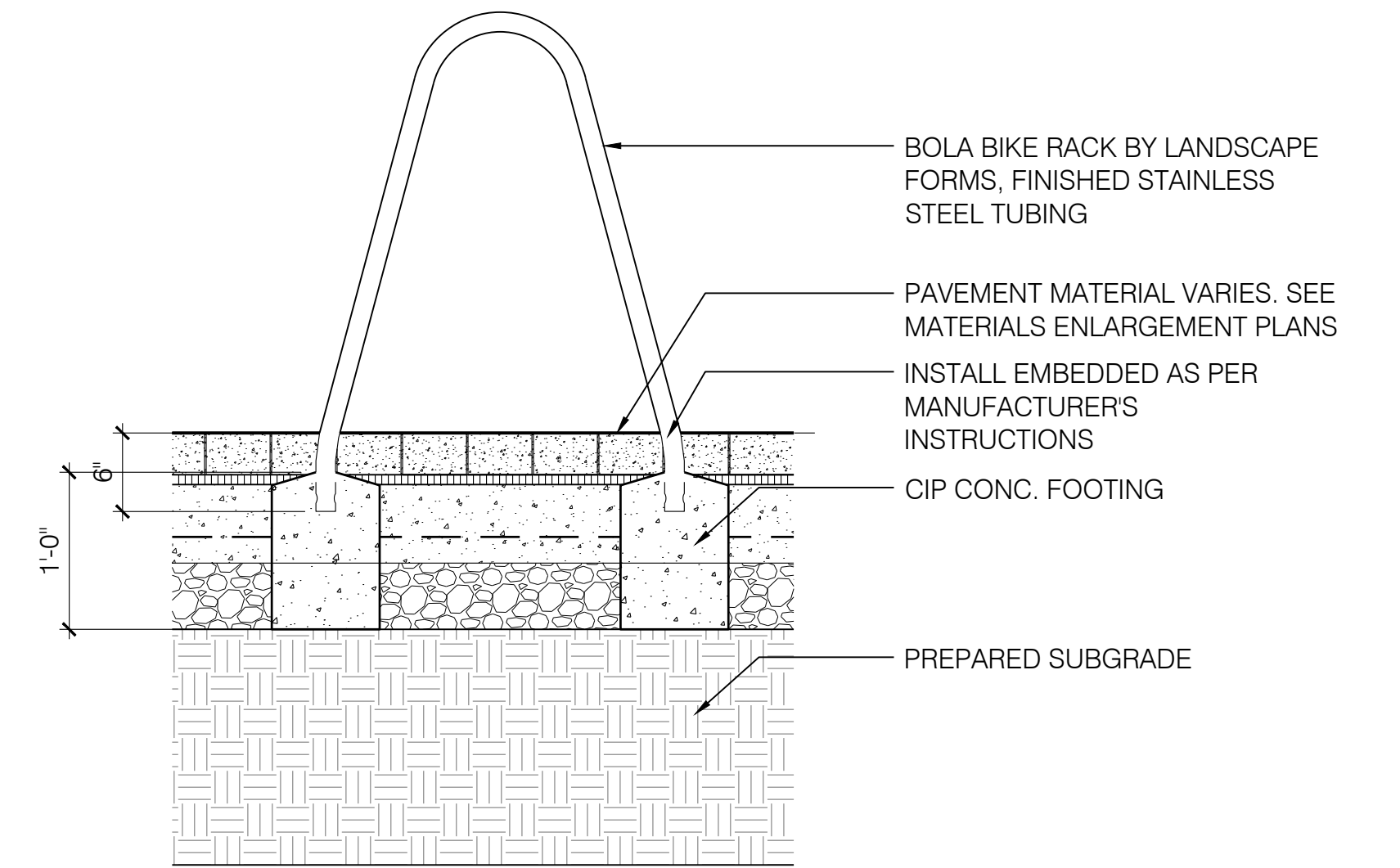
SCALE: 3/4" = 1'-0"

**NOTES:**  
 1. INSTALLATION TO BE COMPLETED ACCORDING TO MANUFACTURER'S SPECIFICATIONS  
 2. PERFORATIONS IN METAL INSERT TO BE IN STANDARD PATTERN AND IN CHECKERBOARD PATTERN FOR USE AS GAME TABLES



**4 MOVABLE TABLE**

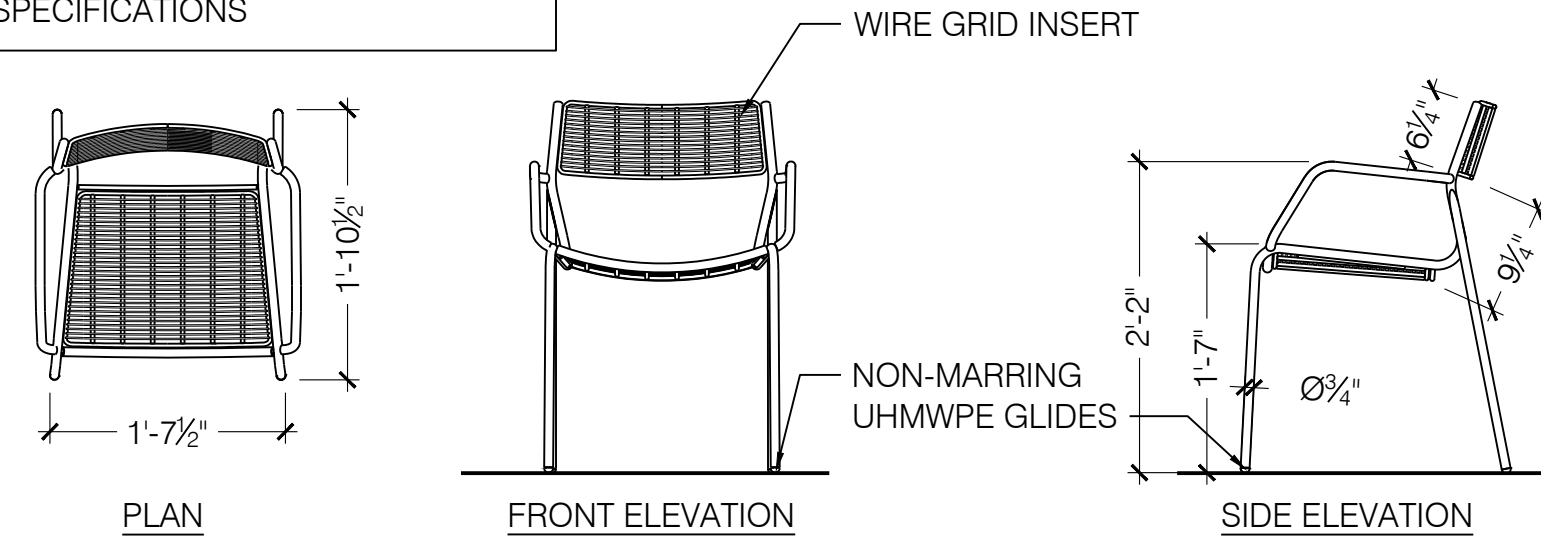
SCALE: 3/4" = 1'-0"



**2 BACK RACK - BOLA**

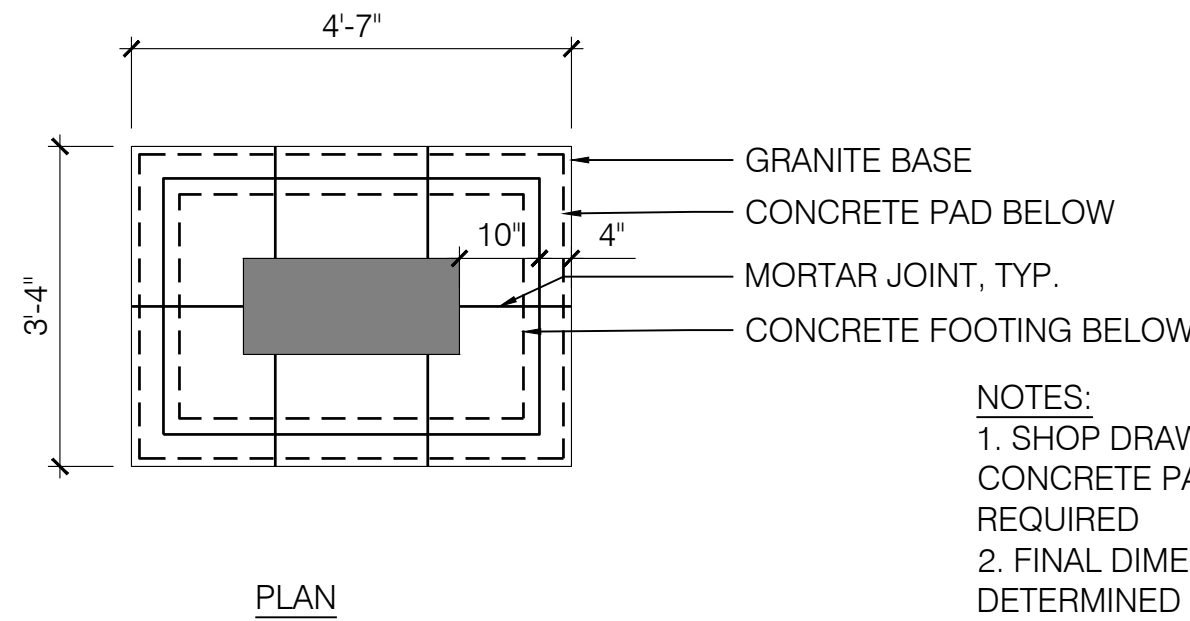
SCALE: 1" = 1'-0"

**NOTE:**  
 INSTALLATION TO BE COMPLETED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

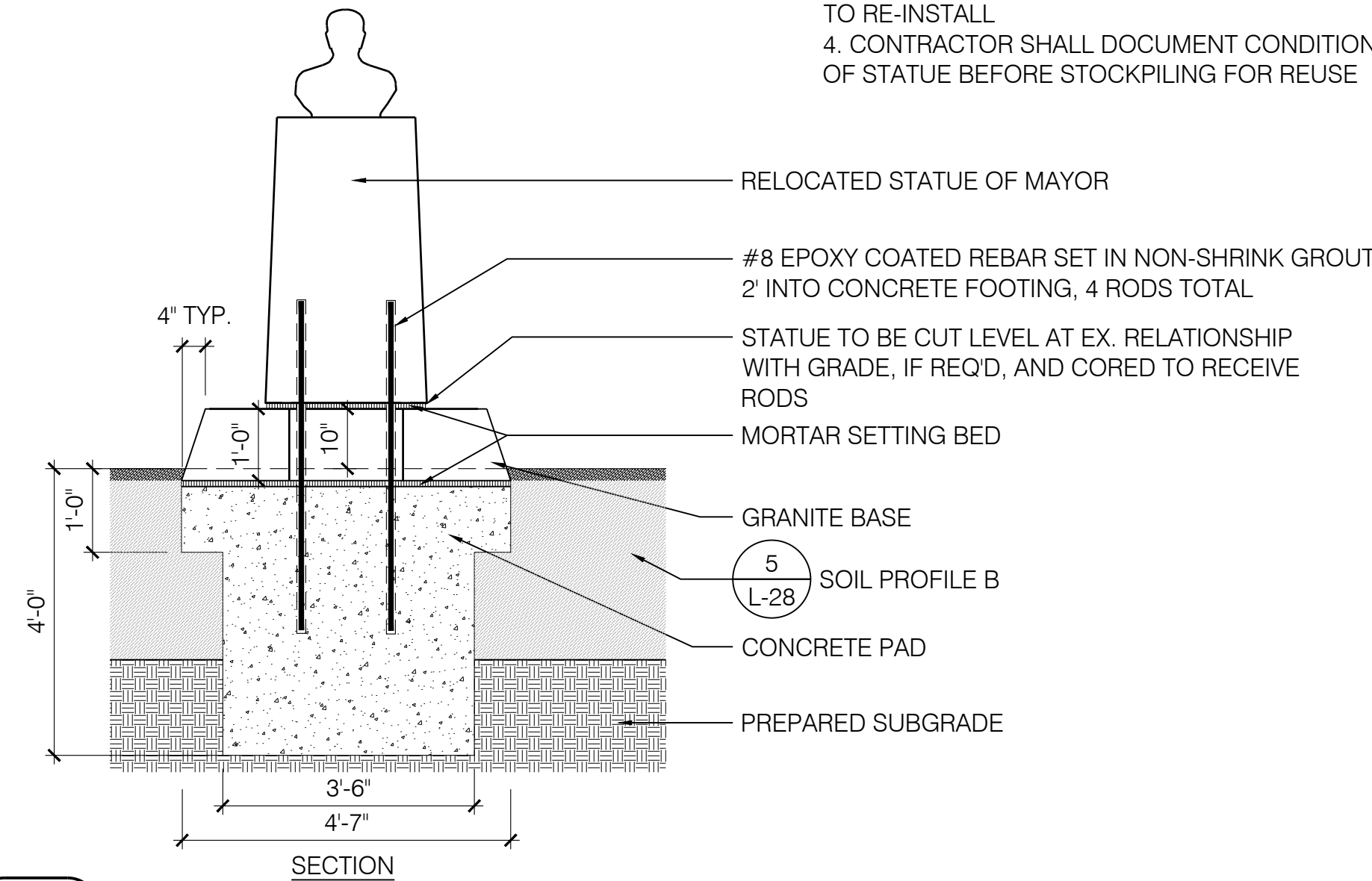


**6 MOVABLE CHAIR**

SCALE: 3/4" = 1'-0"

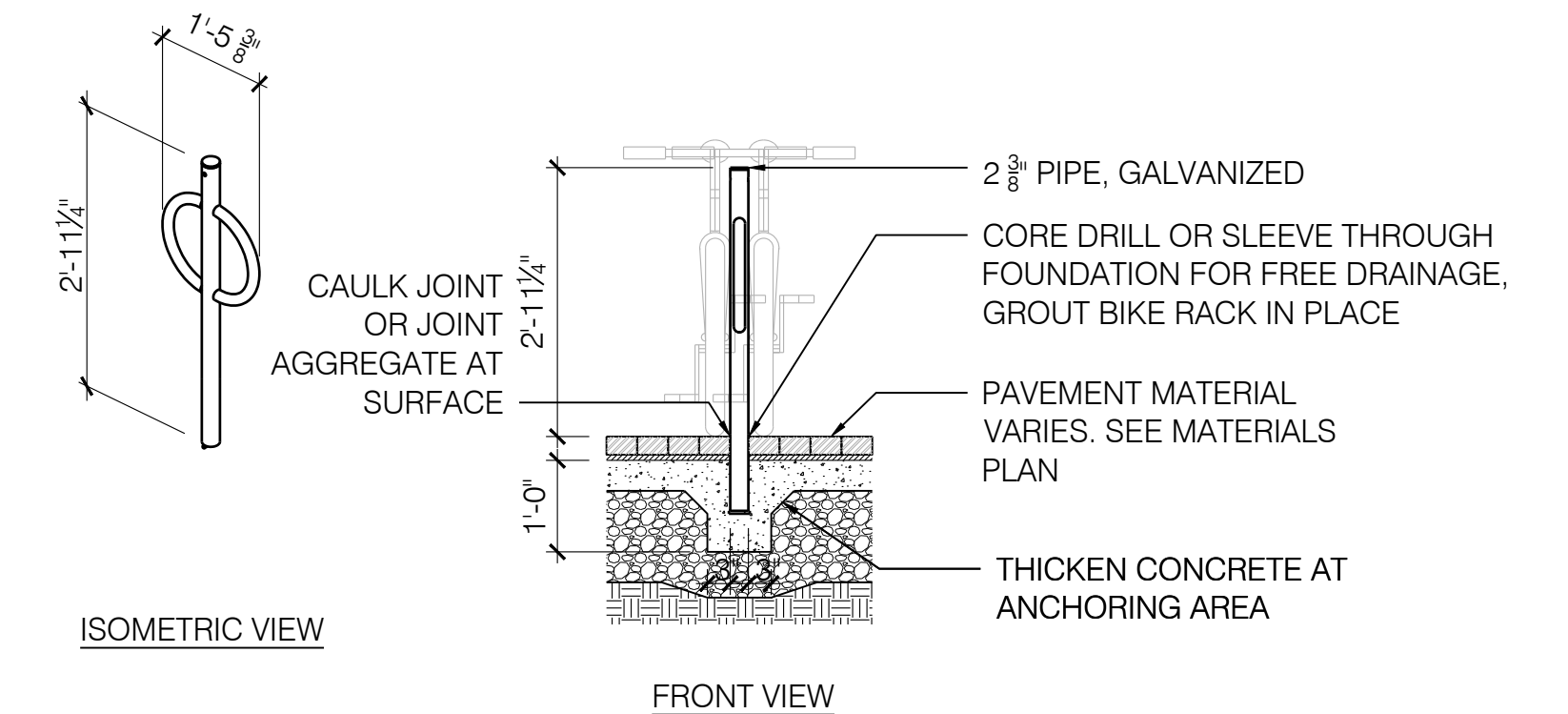


**NOTES:**  
 1. SHOP DRAWINGS FOR GRANITE BASE, CONCRETE PAD AND CONCRETE FOOTING REQUIRED  
 2. FINAL DIMENSIONS OF GRANITE BASE TO BE DETERMINED BASED ON MEASUREMENTS OF BASE OF MONUMENT  
 3. CONTRACTOR SHALL CLEAN STATUE PRIOR TO RE-INSTALL  
 4. CONTRACTOR SHALL DOCUMENT CONDITION OF STATUE BEFORE STOCKPILING FOR REUSE



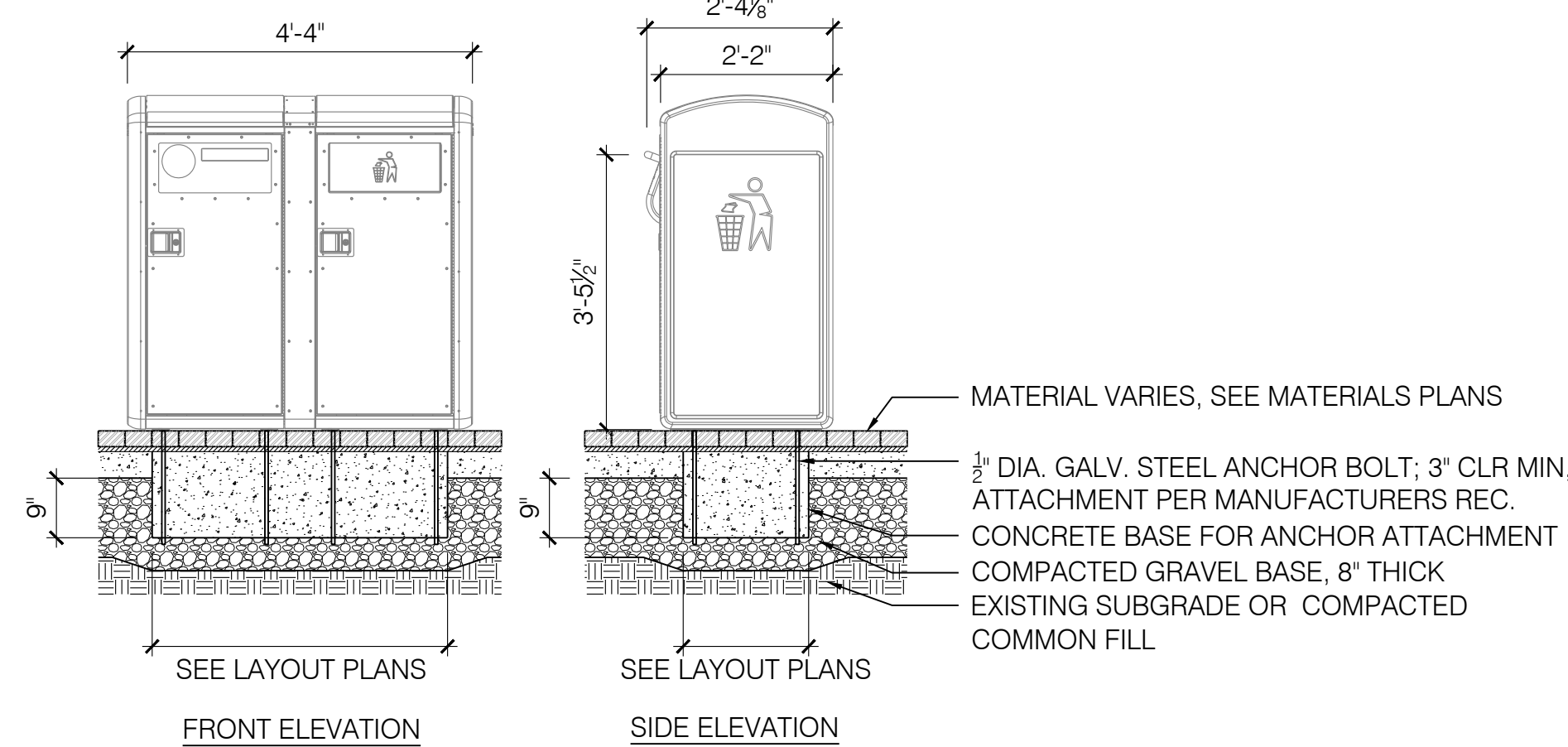
**3 RELOCATED VELLUCCI STATUE ON GRANITE BASE**

SCALE: 1/2" = 1'-0"



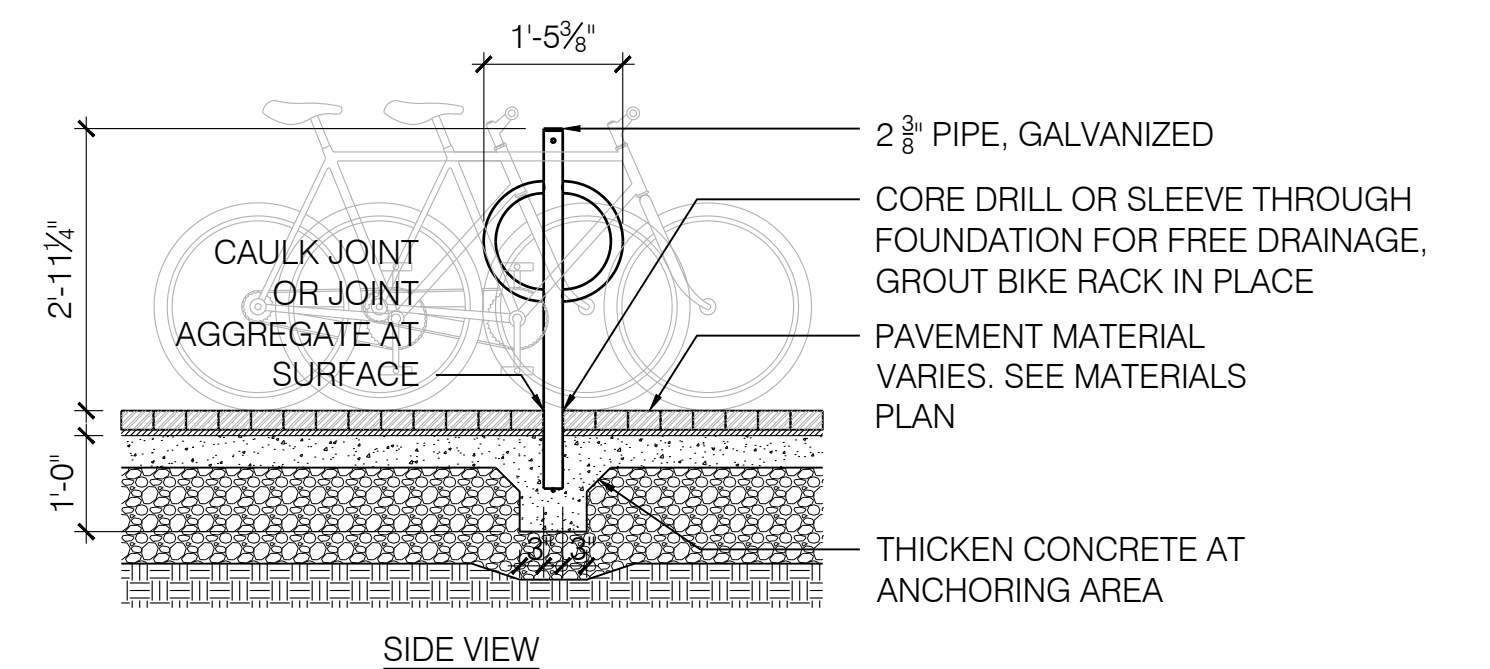
**1 BIKE RING**

SCALE: 1/2" = 1'-0"



**5 TRASH AND RECYCLING RECEPTACLE**

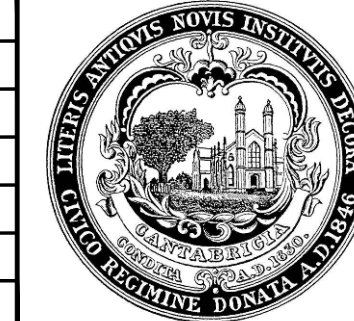
SCALE: 1/2" = 1'-0"



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Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KMDG			
Drawn by	A. ALLEN			
Checked by	K. PETSCHKE	No.	Description	Date
Approved by	K. MARTIN		REVISIONS	



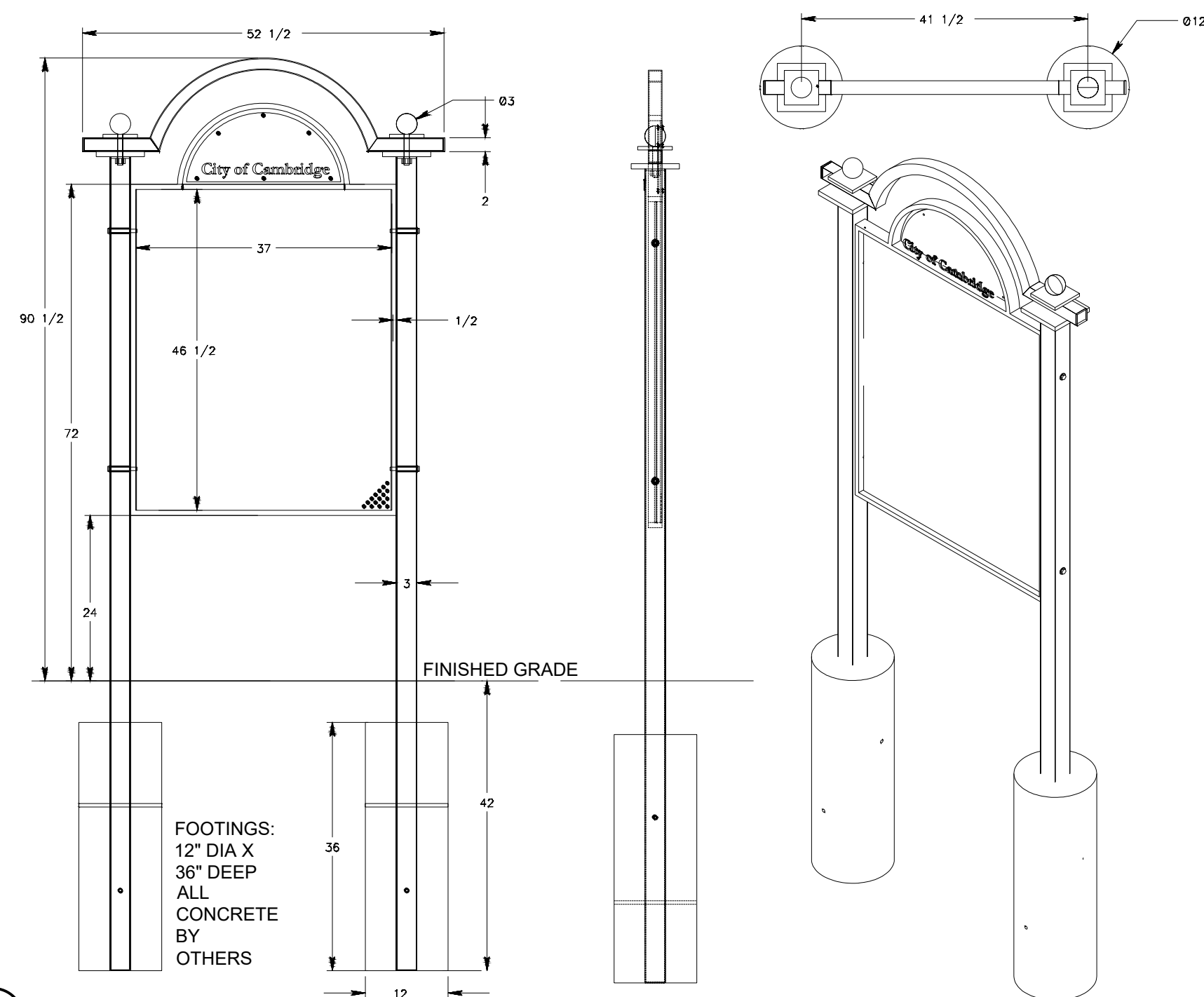
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS - 4

Sheet	L-29
File No.	8514



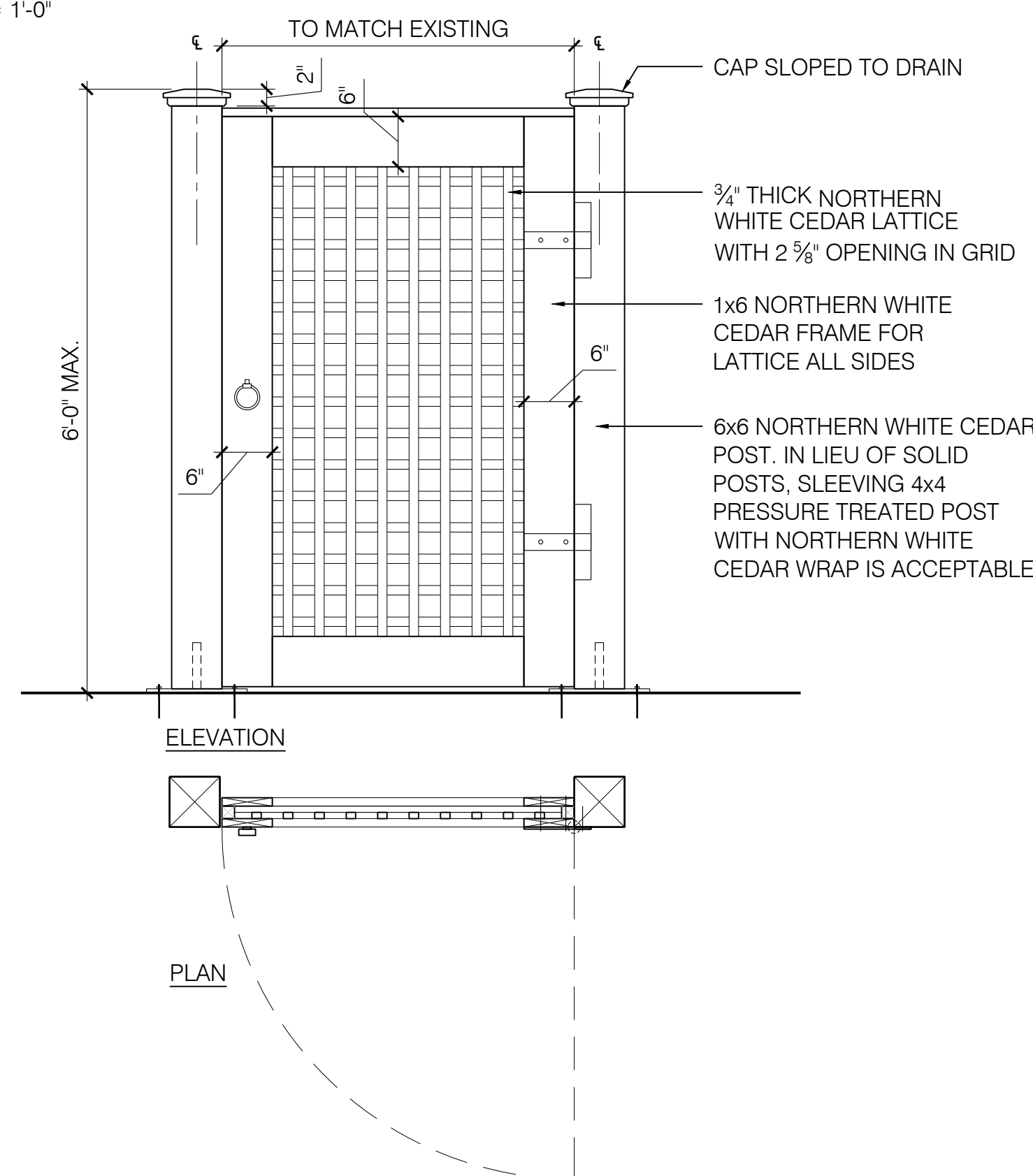
**CBB1001 2 POST BULLETIN BOARD**  
 POSTS: 11GA X 3 X 3 X LENGTH, SQUARE POST, STEEL  
 ARCH: 11GA X 2 X 2 X LENGTH, SQUARE TUBE, STEEL  
 FRAME: 1/2 X 2 X LENGTH, FLAT STOCK, STEEL

SURFACE: 11GA X SIZE, 3/8" HOLE, PERFORATED, STEEL  
 PLATES: 1/2 X 5 X 5 PLATE, STEEL  
 3/4" X 8 X 8 PLATE, STEEL  
 GRAPHIC: CAMBRIDGE SHIELD  
 HARDWARE: STAINLESS STEEL



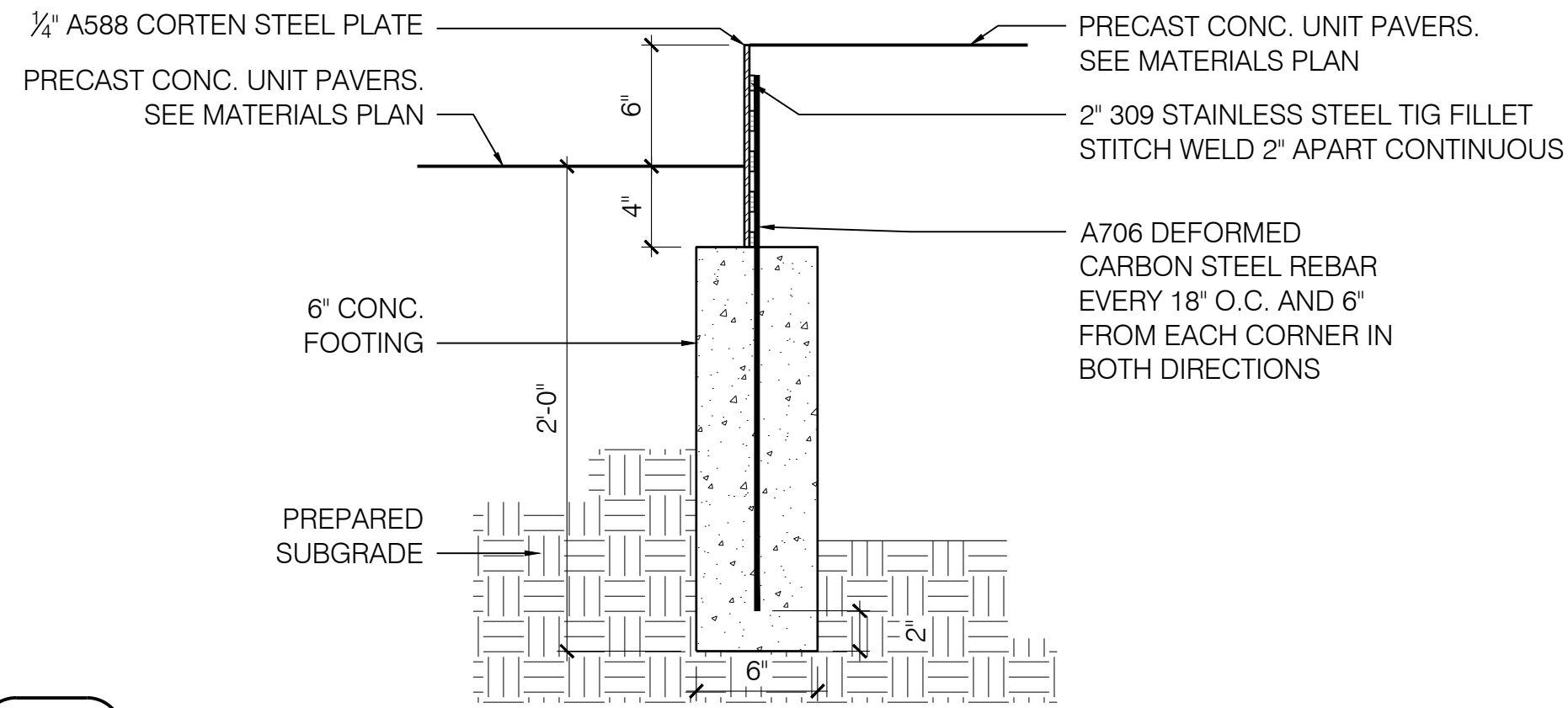
**6 COMMUNITY MESSAGE BOARD**

SCALE: 3/4" = 1'-0"



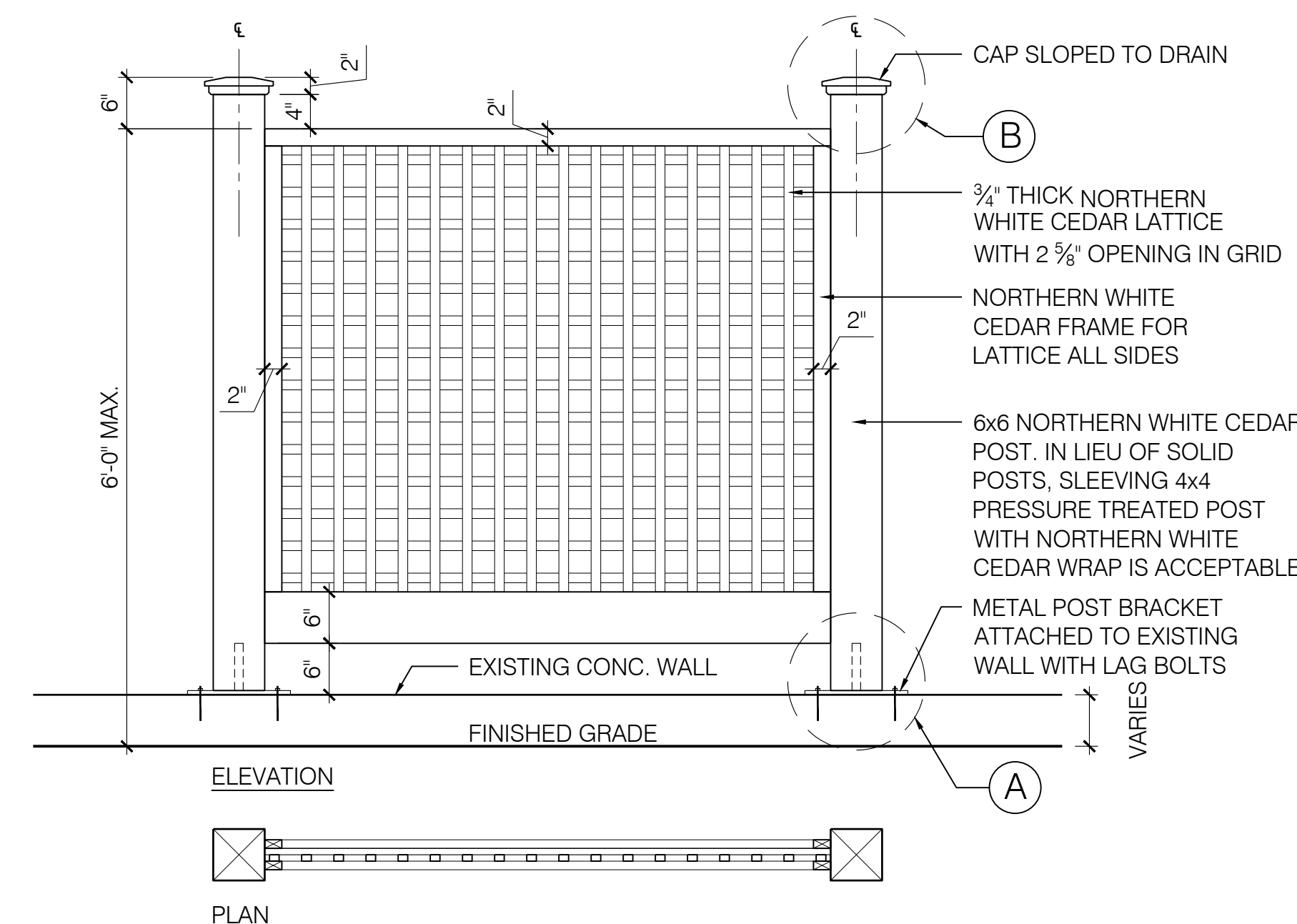
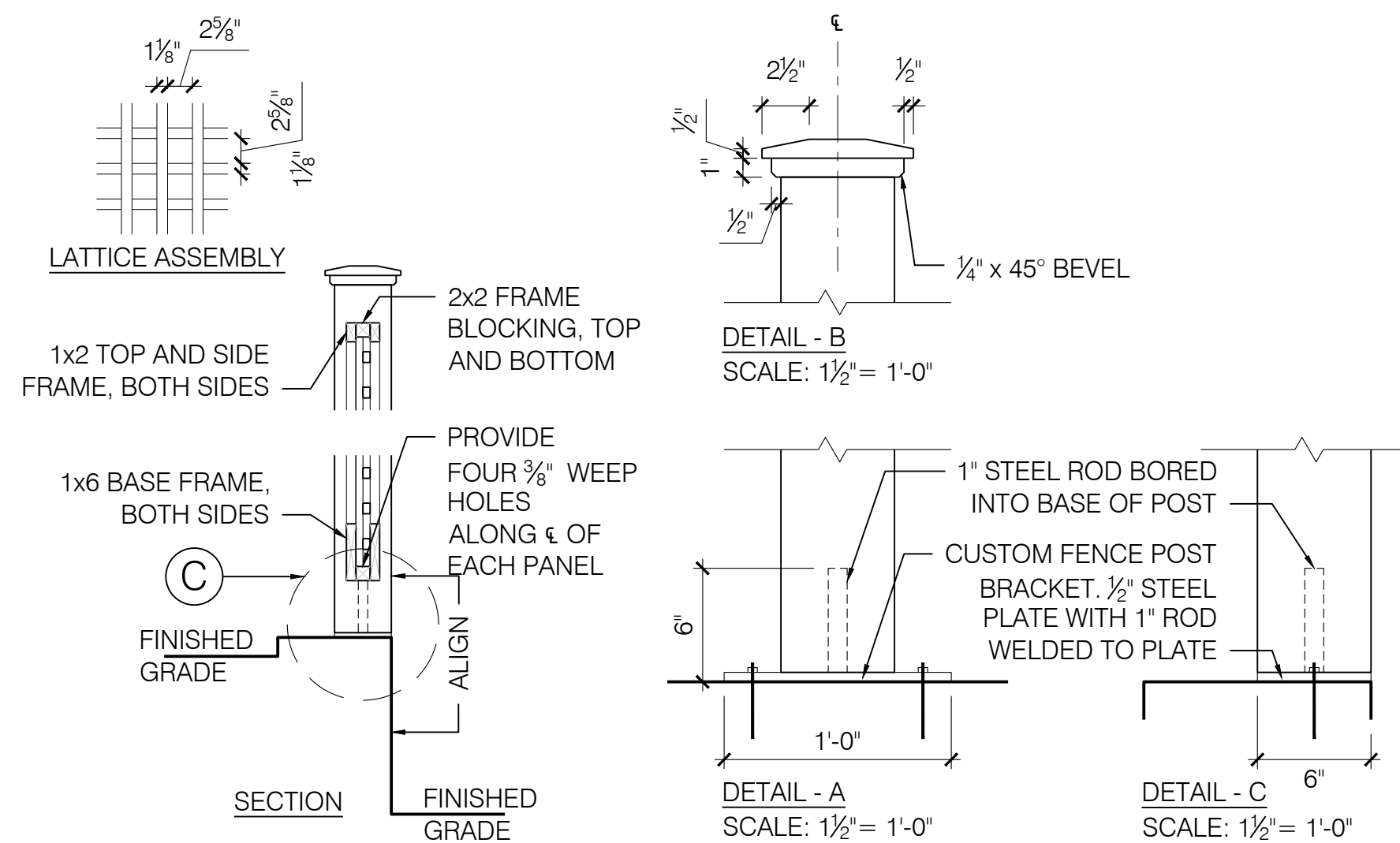
**4 6' WOOD LATTICE FENCE AND GATE**

SCALE: 3/4" = 1'-0"



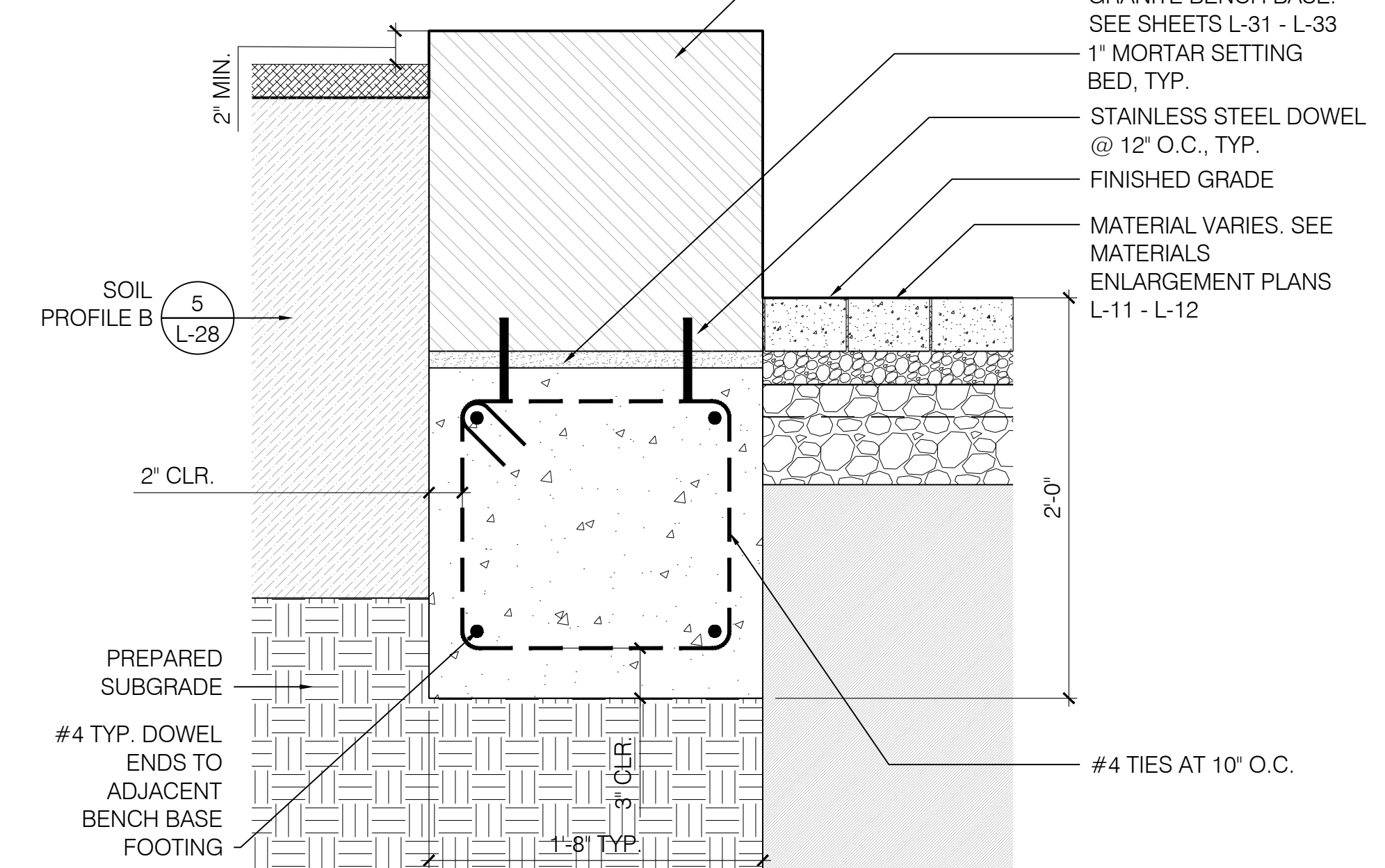
**5 WEATHERED STEEL LANDSCAPE CURB AT UNIT PAVERS**

SCALE: 1 1/2" = 1'-0"



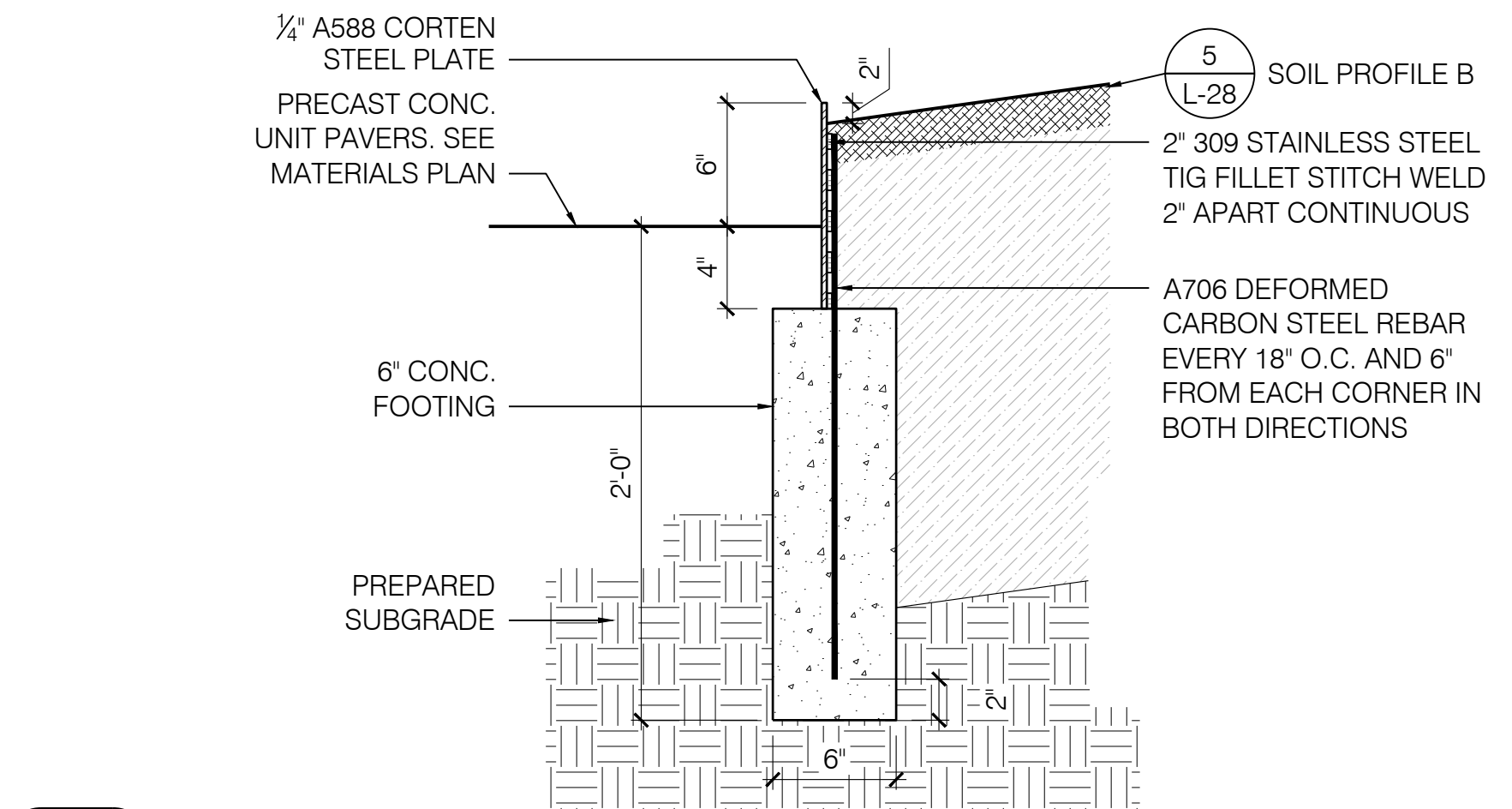
**3 GRANITE LANDSCAPE CURB**

SCALE: 1" = 1'-0"



**2 GRANITE BENCH BASE FOOTING**

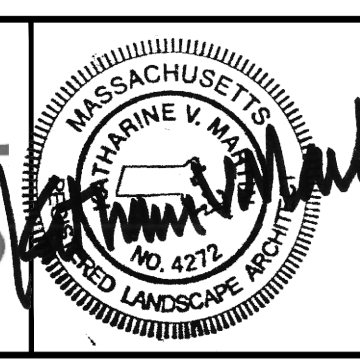
SCALE: 1 1/2" = 1'-0"



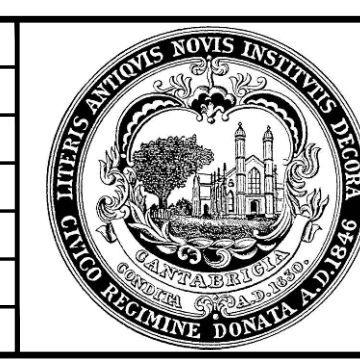
**1 WEATHERED STEEL LANDSCAPE CURB AT PLANTER**

SCALE: 1 1/2" = 1'-0"

ISSUED FOR BID



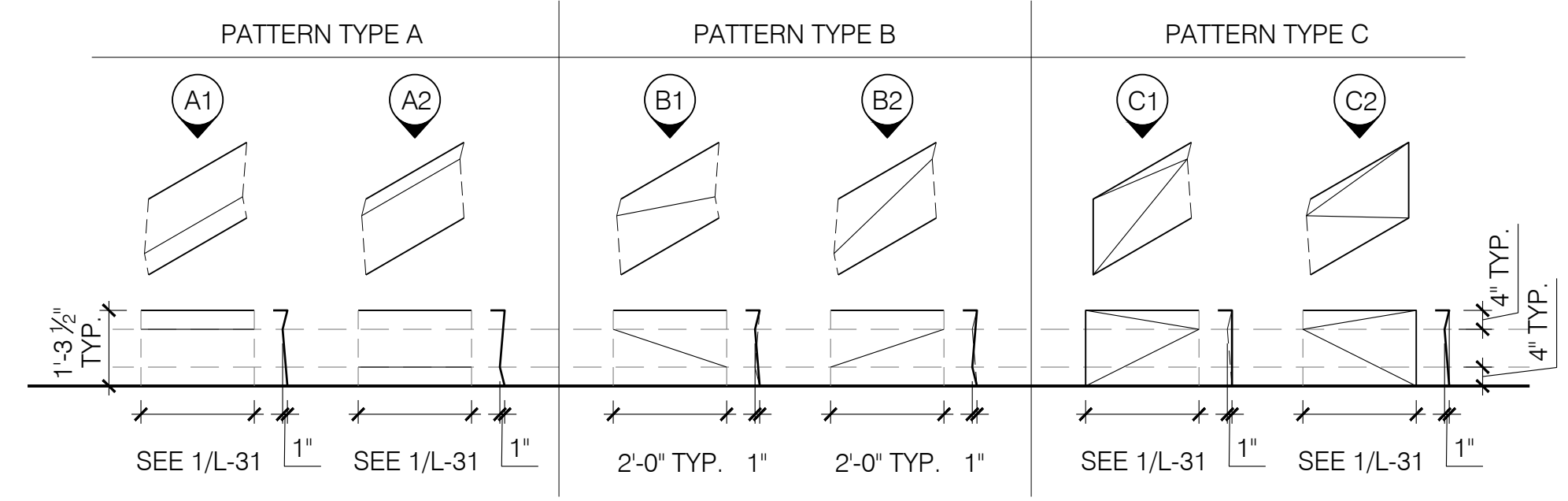
Scale	AS NOTED			
Date	APRIL 2019			
Job No.	20170208.005A			
Designed by	KMDG			
Drawn by	A. ALLEN			
Checked by	K. PETSCHKE	No.	Description	Date
Approved by	K. MARTIN		REVISIONS	



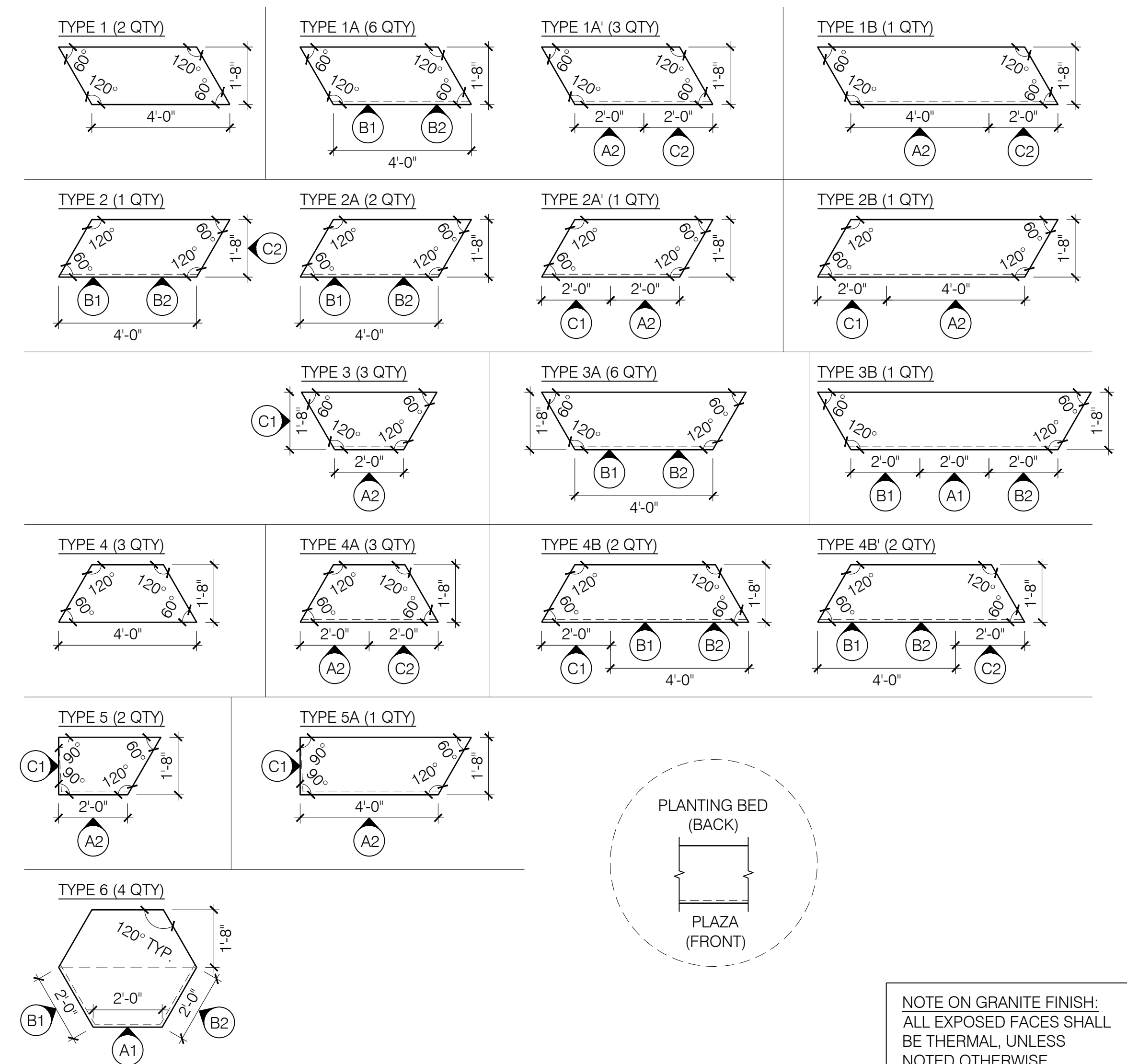
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS - 5

Sheet	L-30
File No.	8514





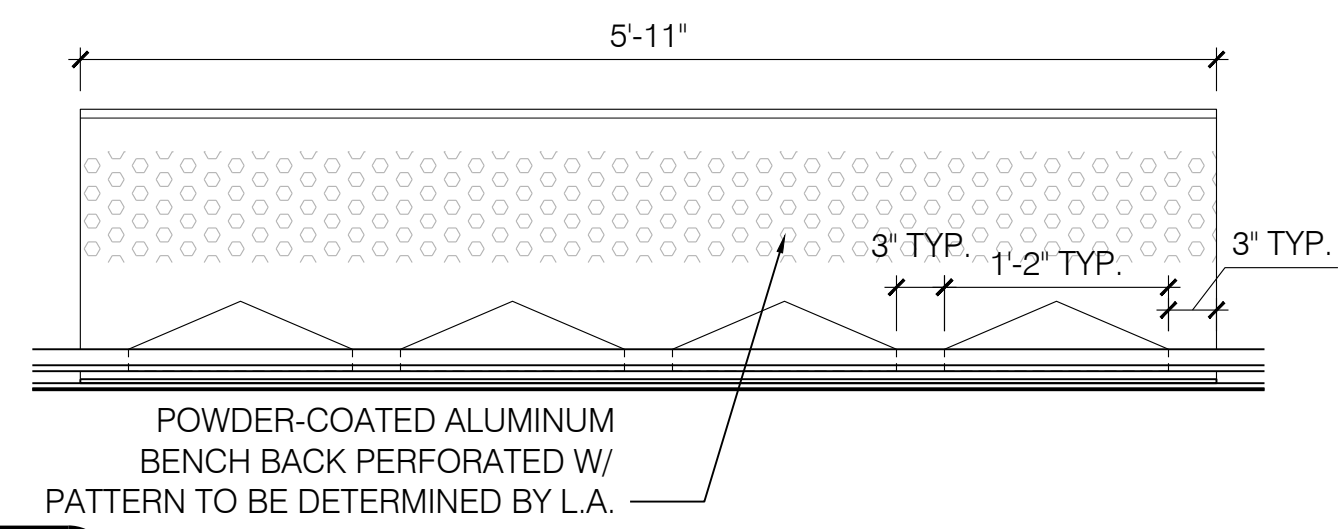
**2 GRANITE BASE MODULES - ELEVATION TYPES**  
SCALE: 3/8" = 1'-0"



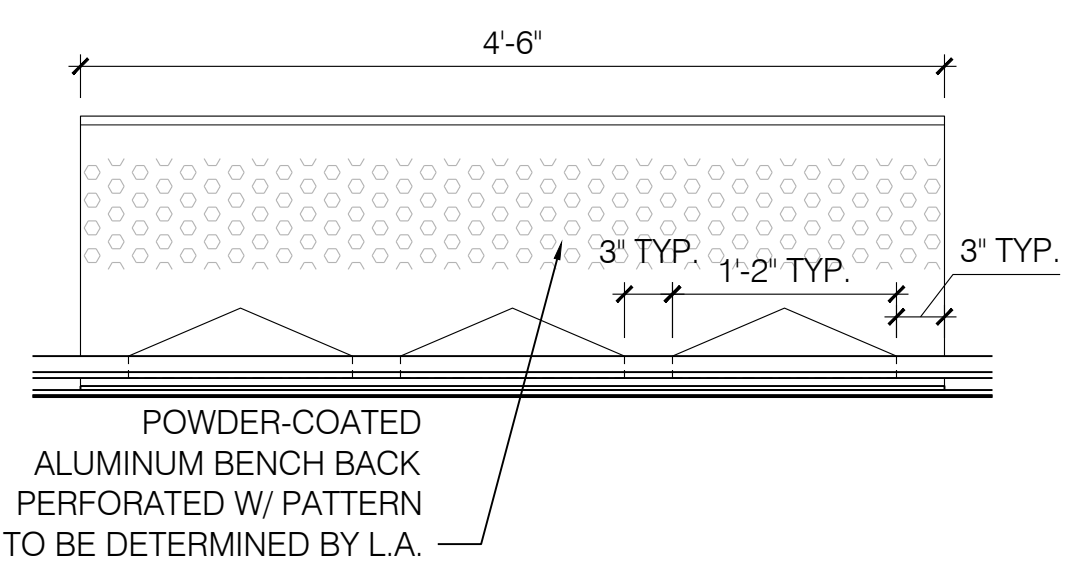
**1 GRANITE BASE MODULES - PLAN TYPES**  
SCALE: 3/8" = 1'-0"

NOTE ON GRANITE FINISH:  
ALL EXPOSED FACES SHALL  
BE THERMAL, UNLESS  
NOTED OTHERWISE

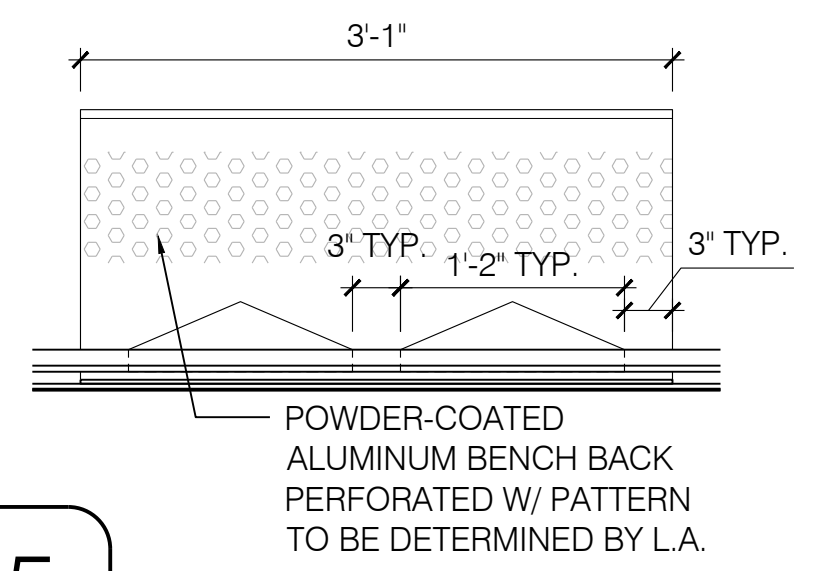
ISSUED FOR BID



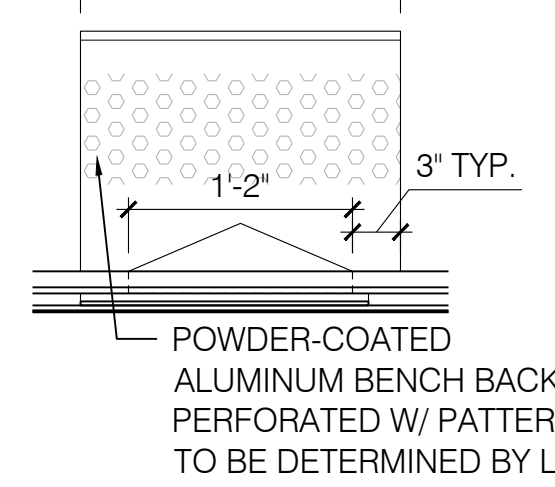
**7 BENCH BACK ELEVATION TYPE 4**  
SCALE: 1" = 1'-0"



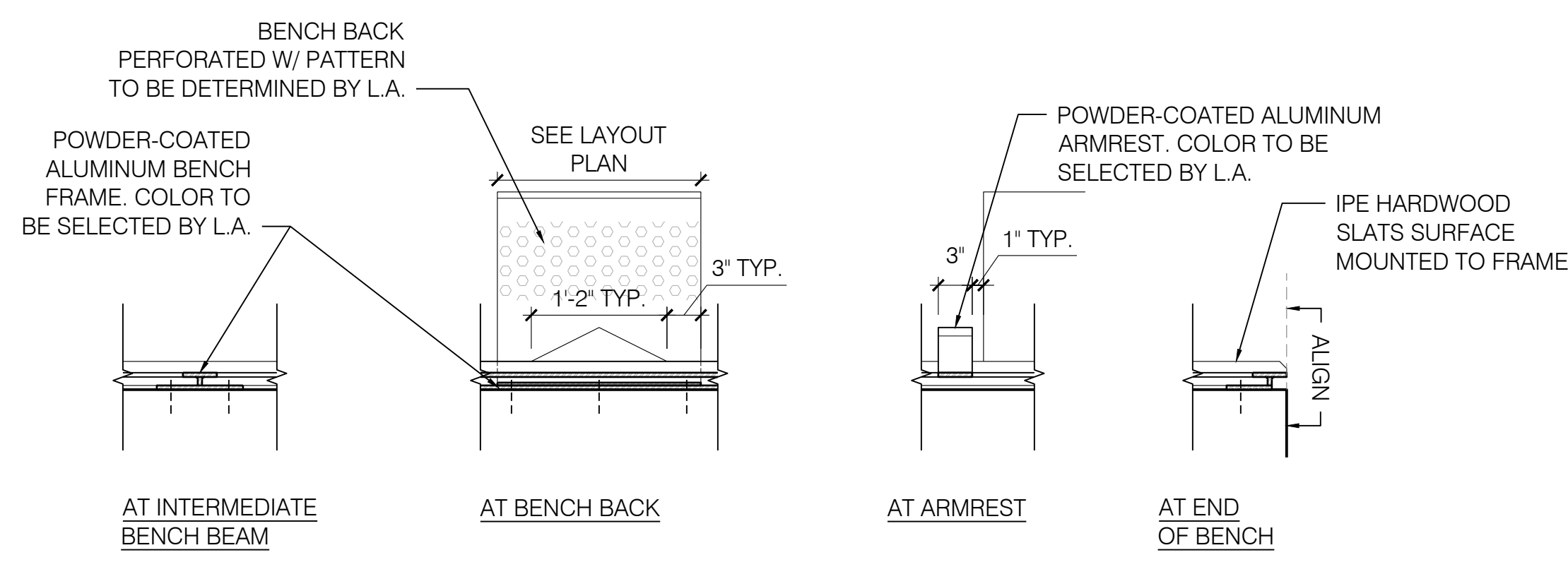
**6 BENCH BACK ELEVATION TYPE 3**  
SCALE: 1" = 1'-0"



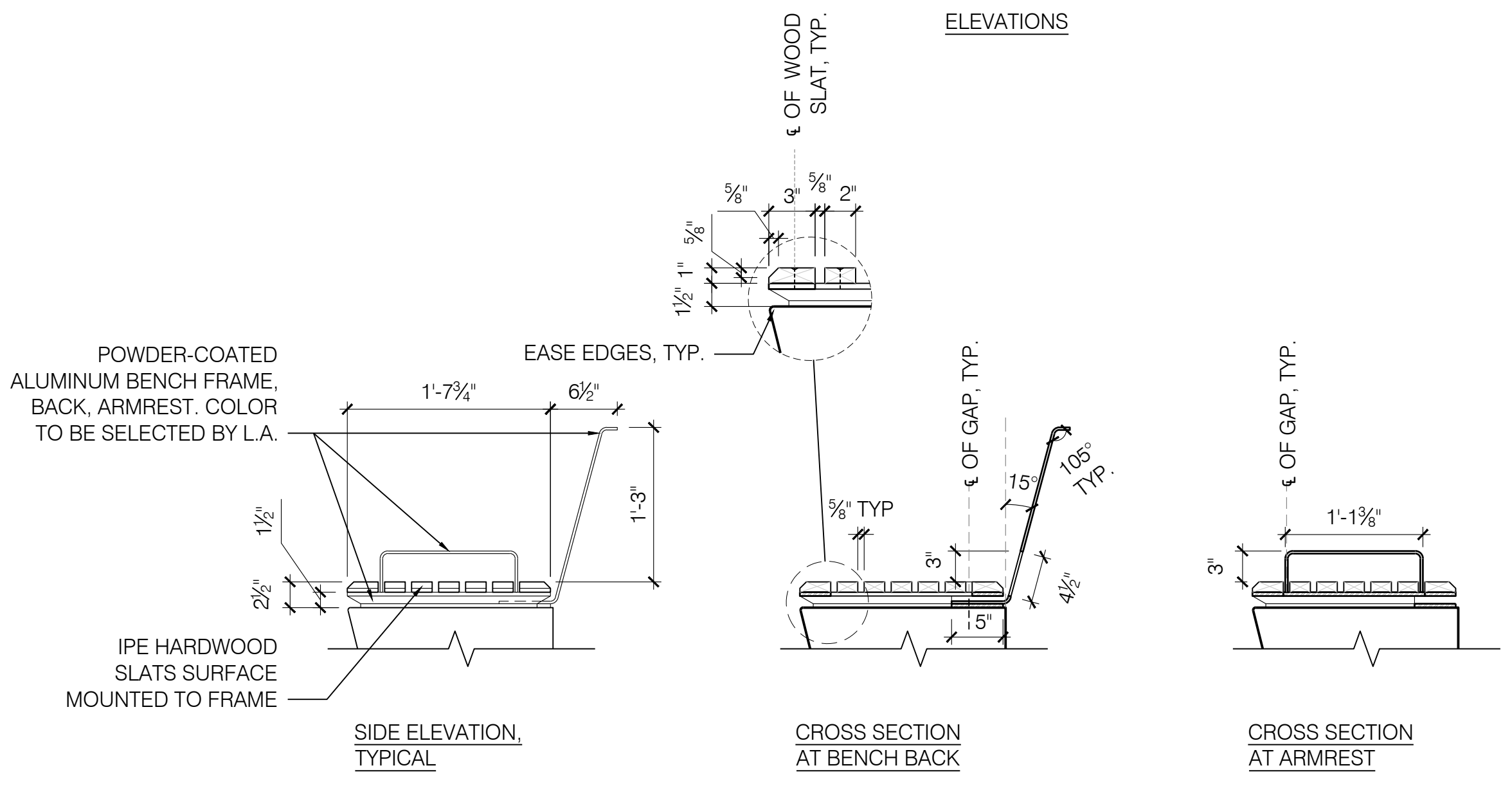
**5 BENCH BACK ELEVATION TYPE 2**  
SCALE: 1" = 1'-0"



**4 BENCH BACK ELEVATION TYPE 1**  
SCALE: 1" = 1'-0"

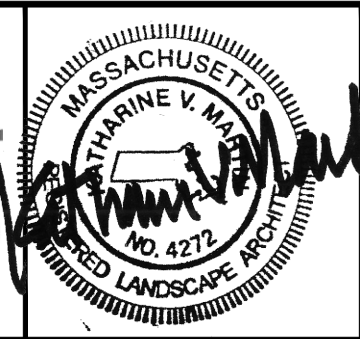


ELEVATIONS

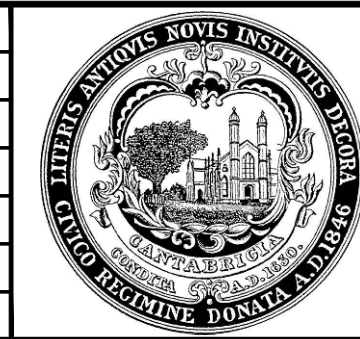


SECTIONS

**3 BENCH TOP WITH BACK - TYP. DETAILS**  
SCALE: 1" = 1'-0"



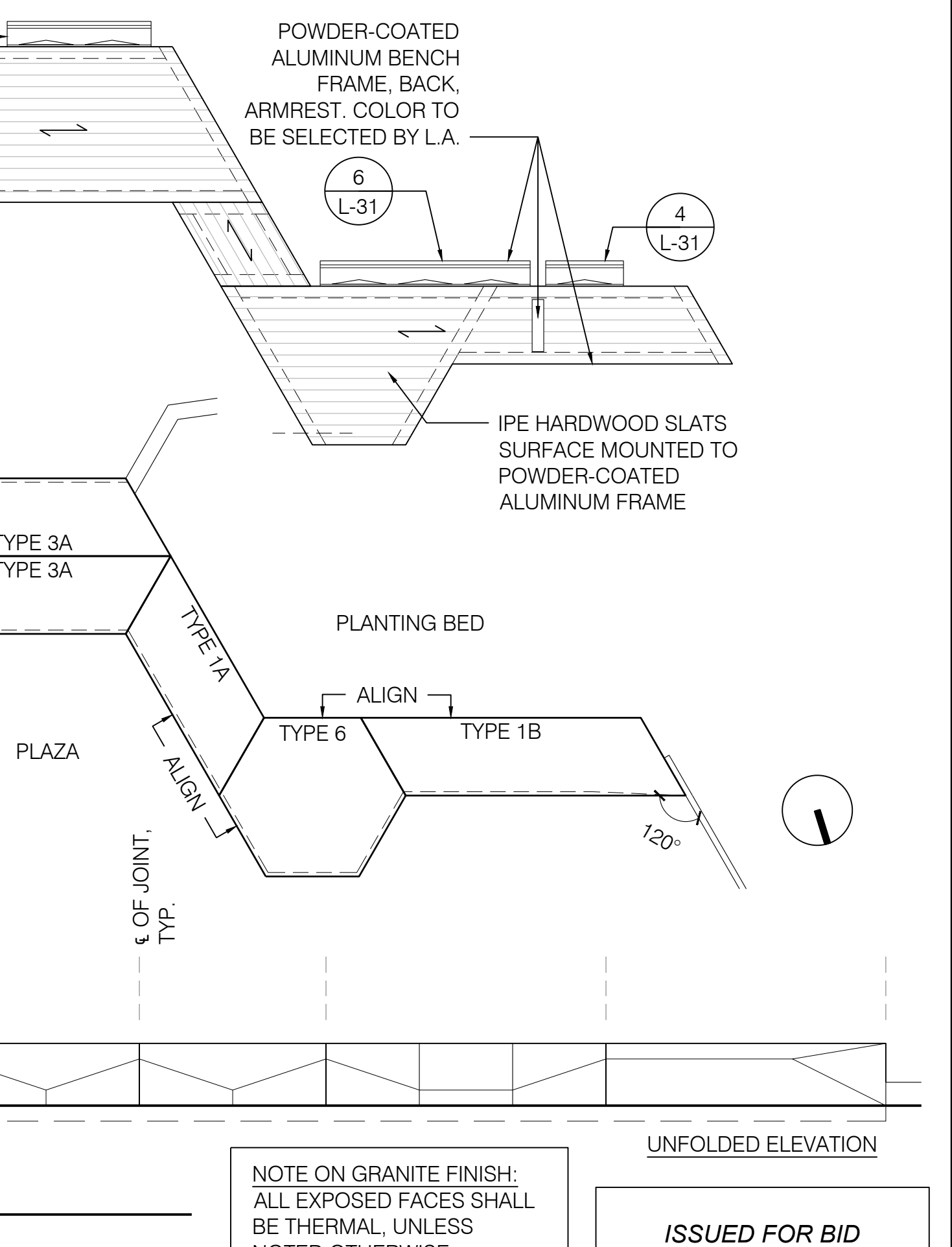
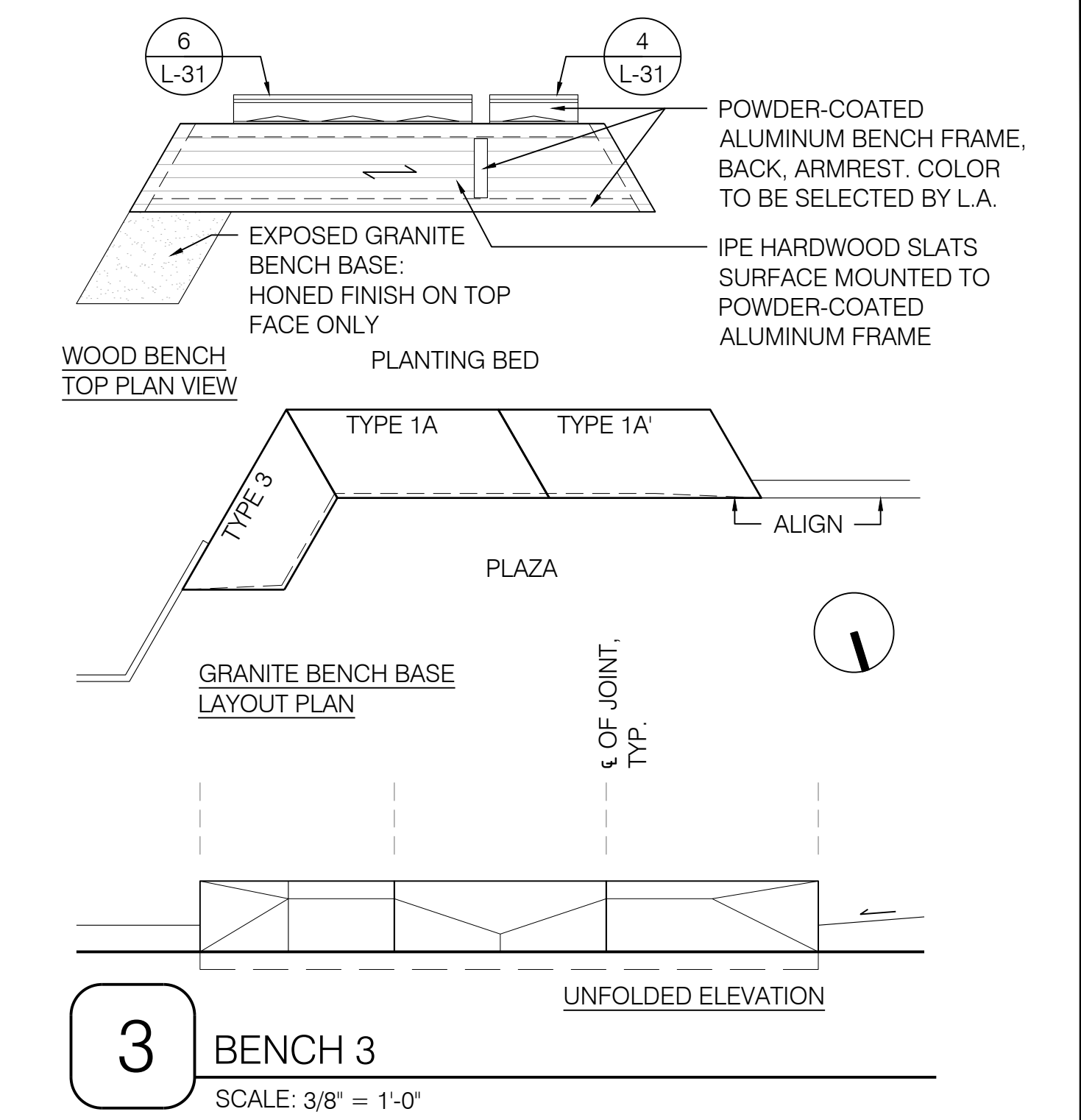
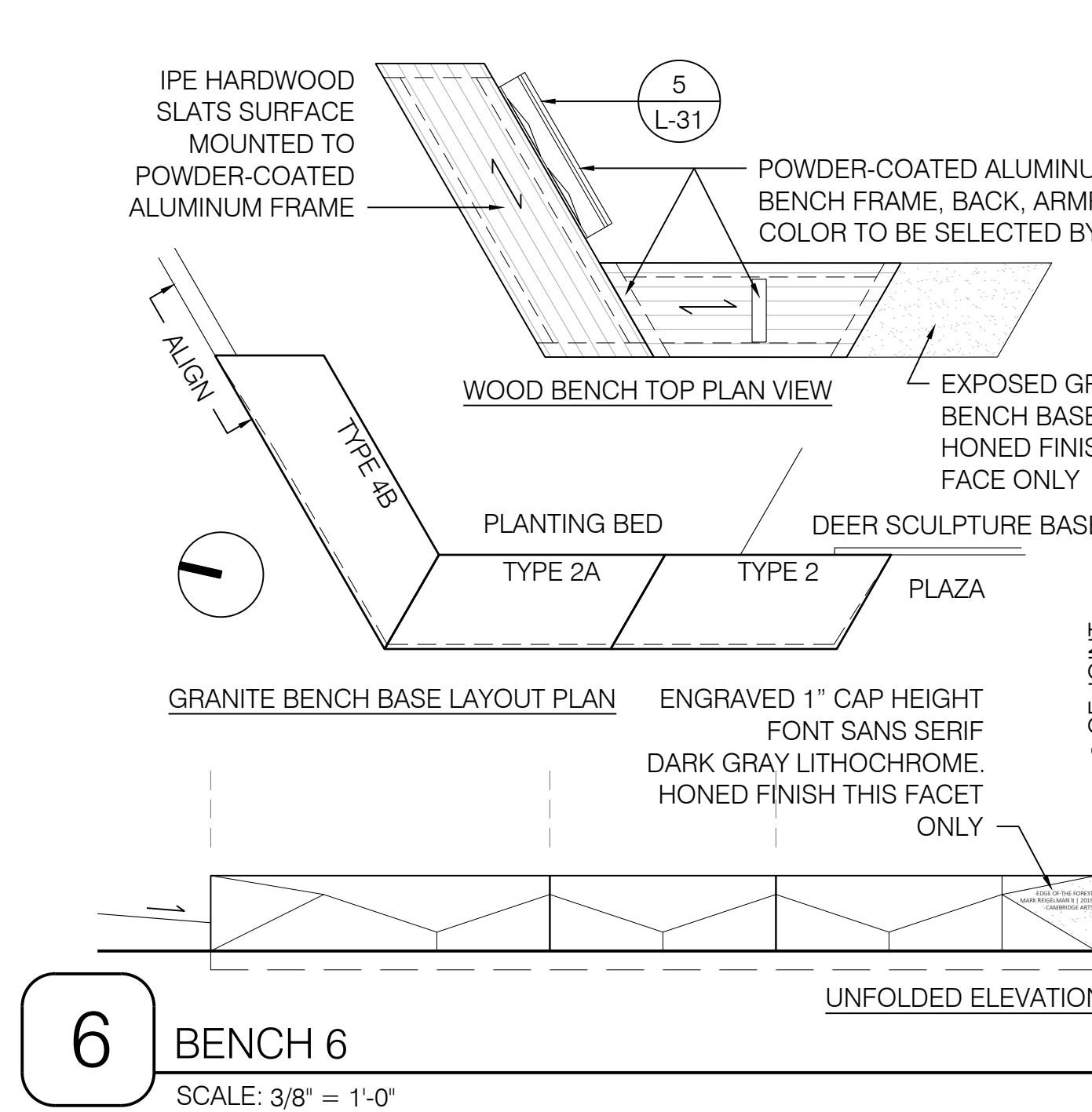
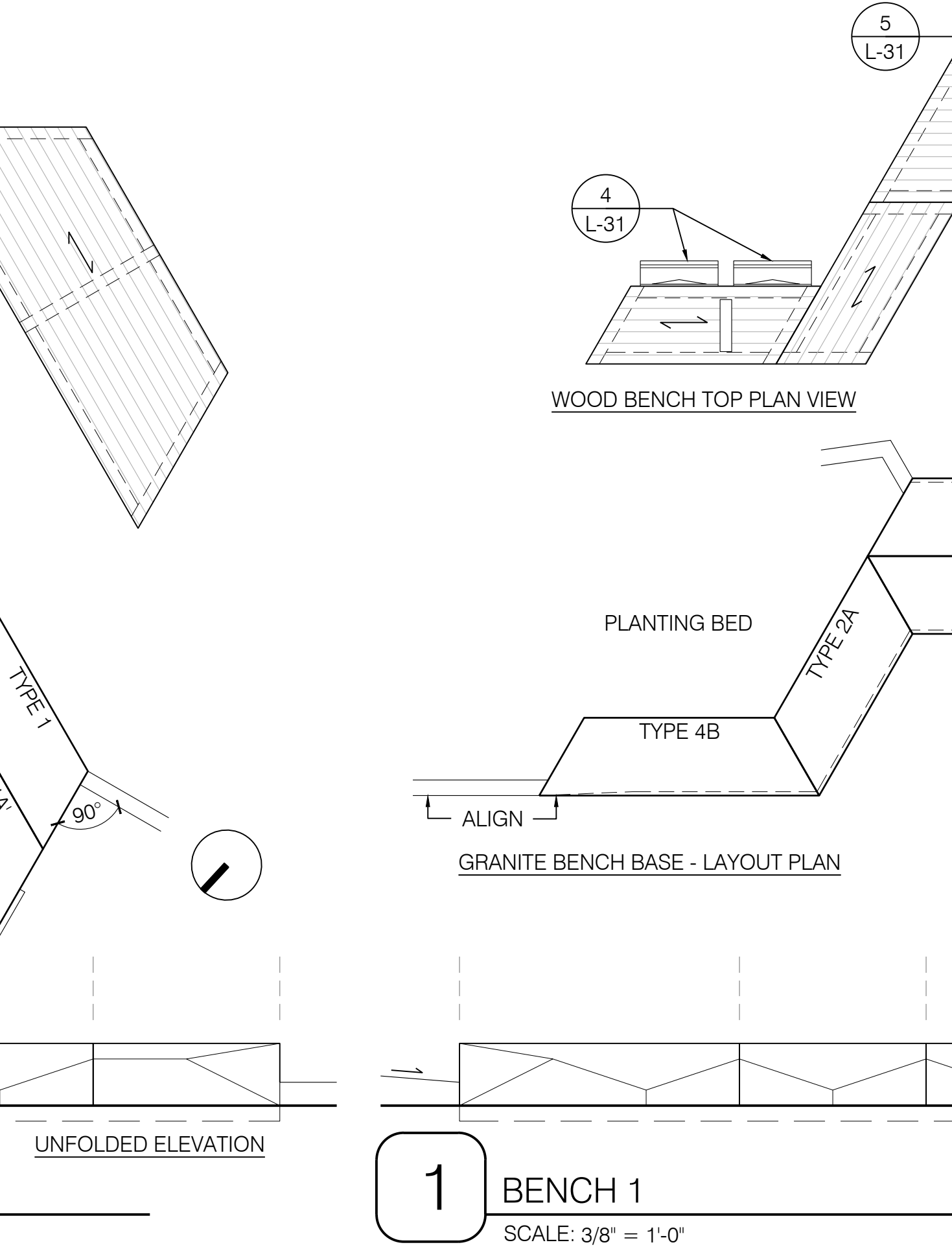
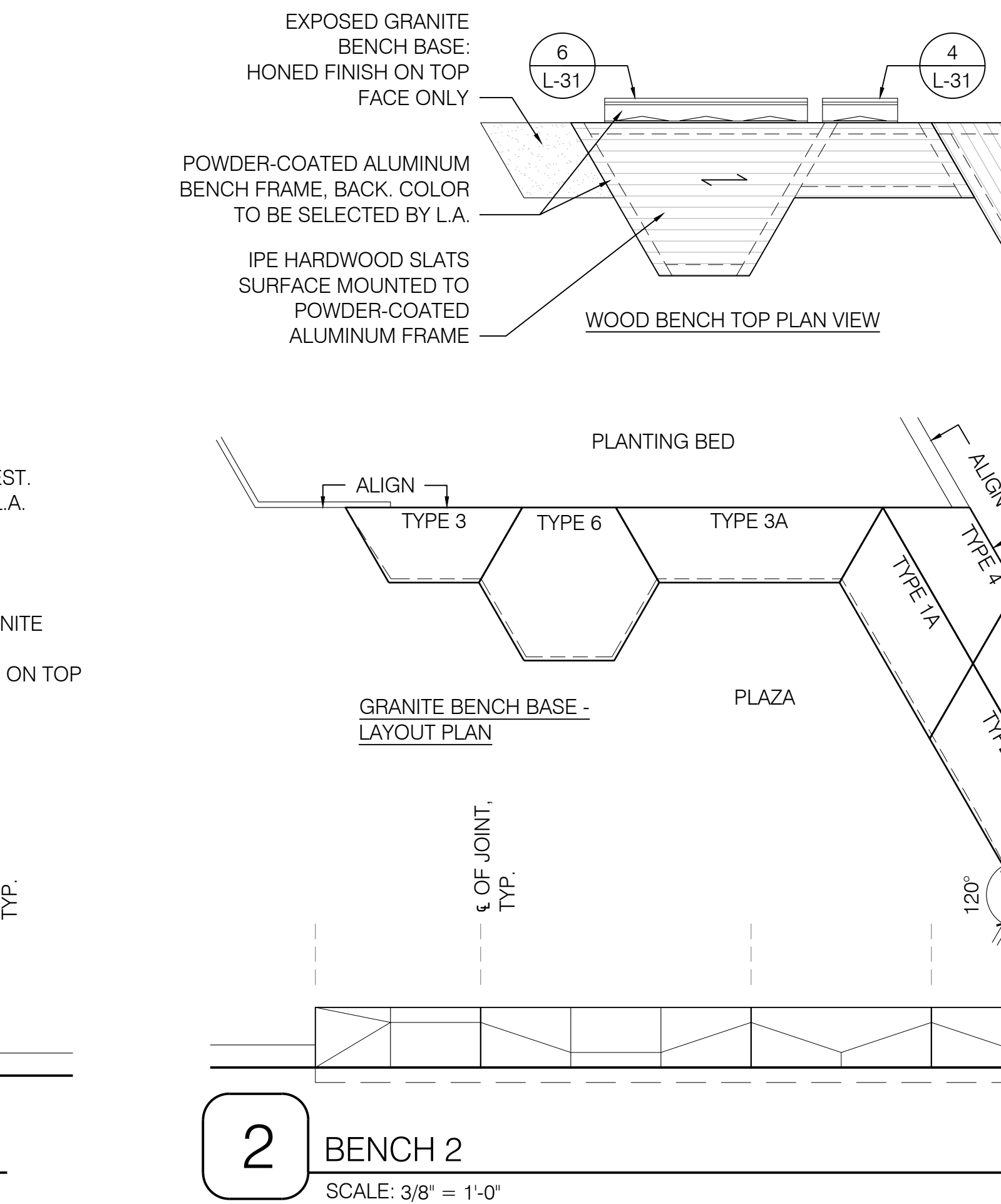
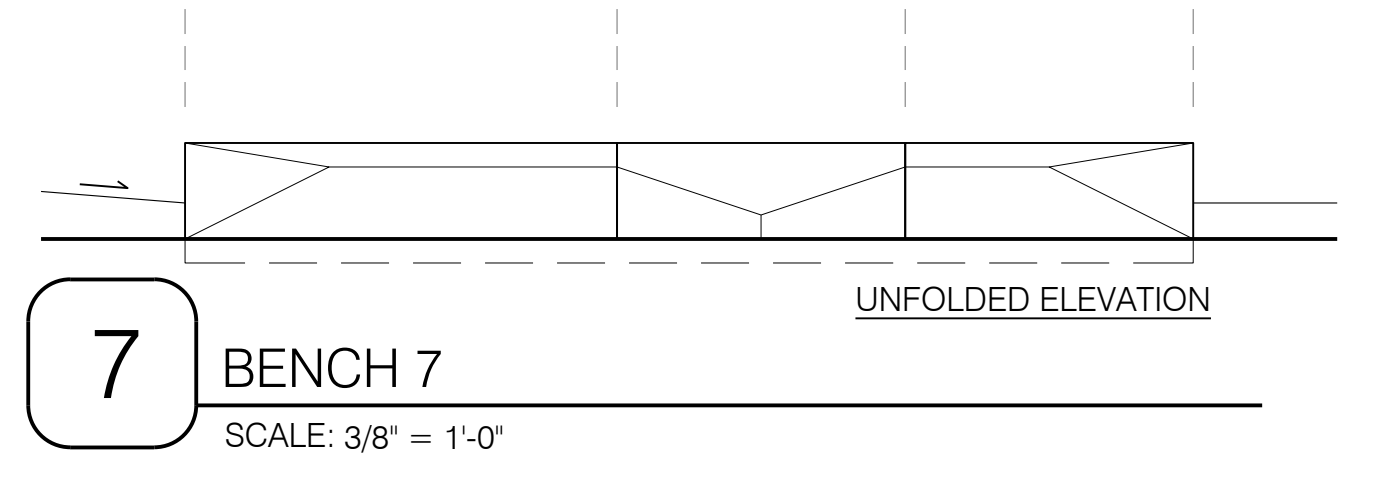
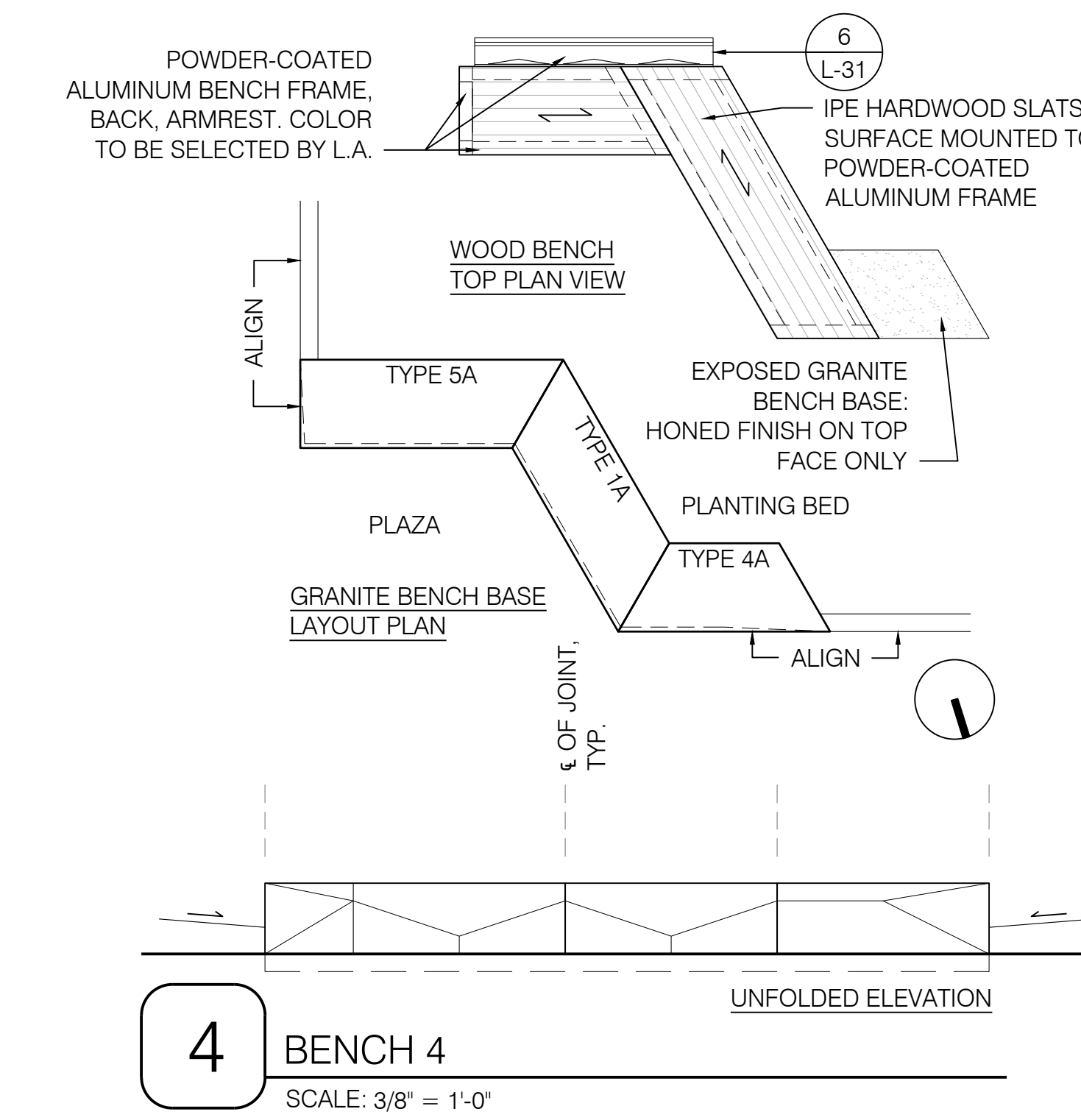
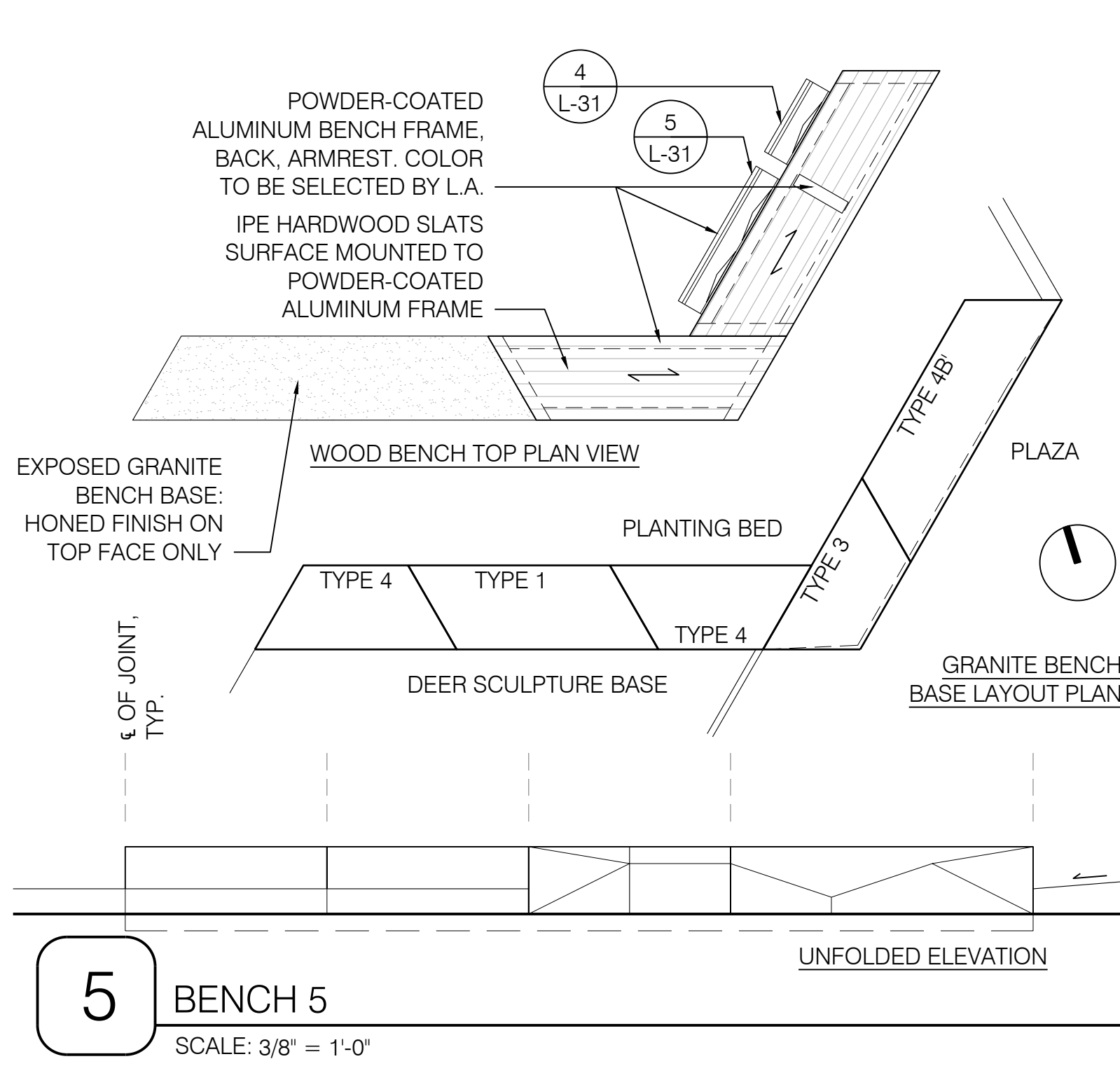
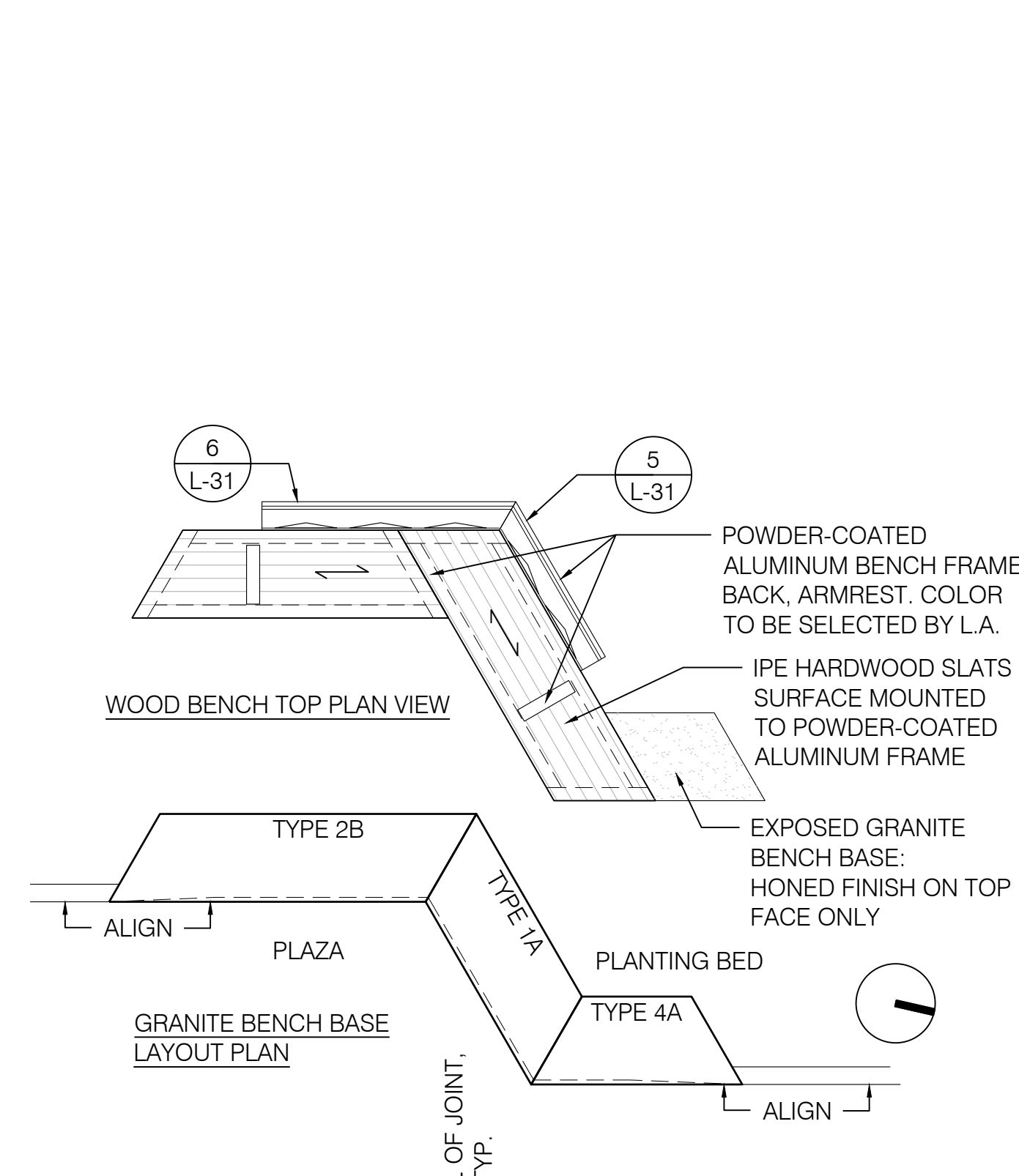
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
Designed by	KMDG		
Drawn by	E. BUCALIU		
Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date



Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS - 4

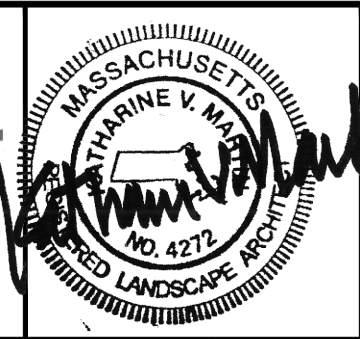
Sheet	L-31
File No.	8514



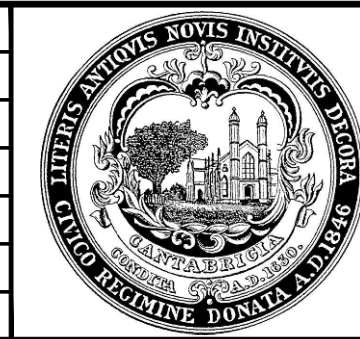


NOTE ON GRANITE FINISH:  
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ISSUED FOR BID



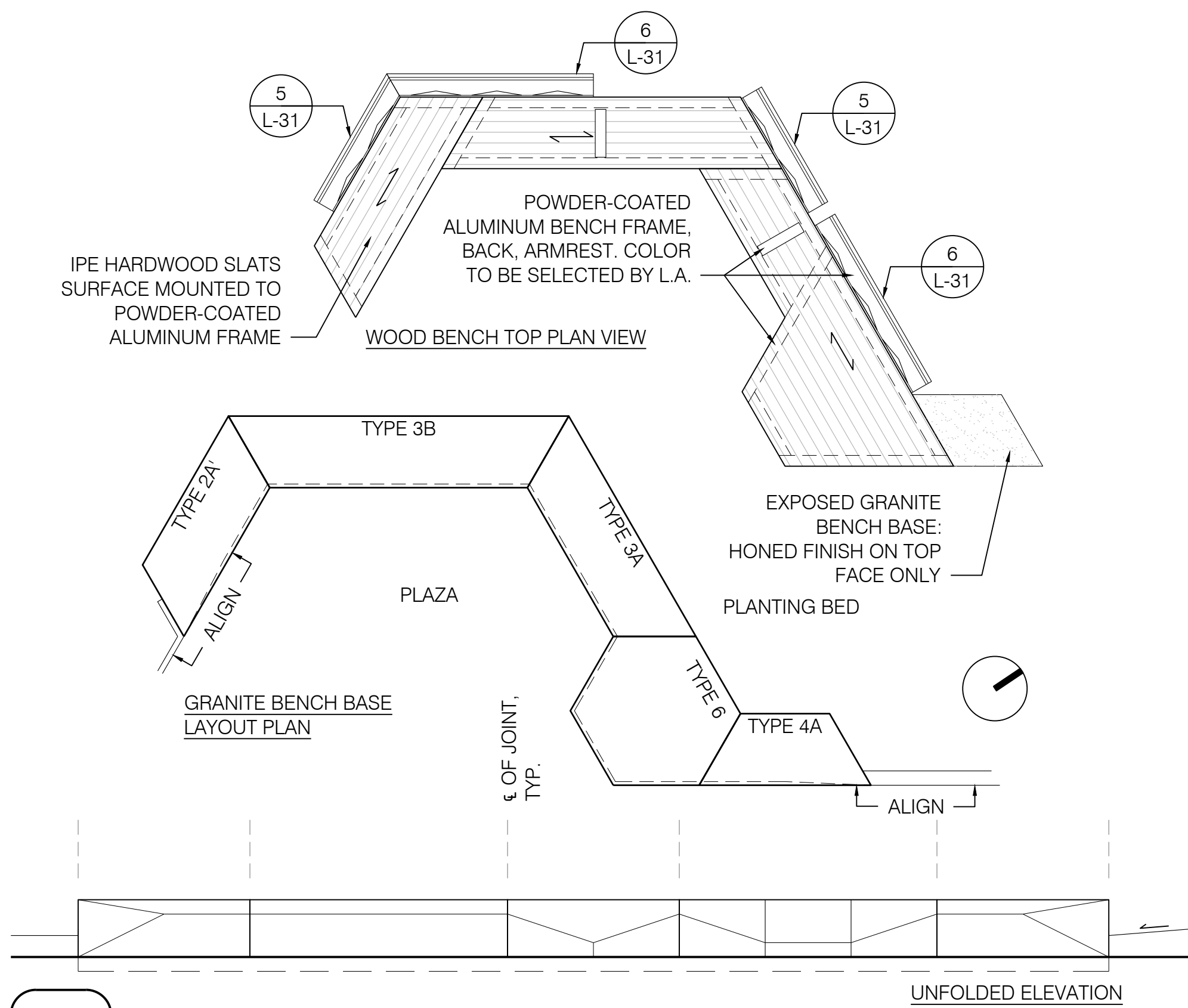
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
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Checked by	K. PETSCHKE	No.	Description
Approved by	K. MARTIN		Date
		REVISIONS	



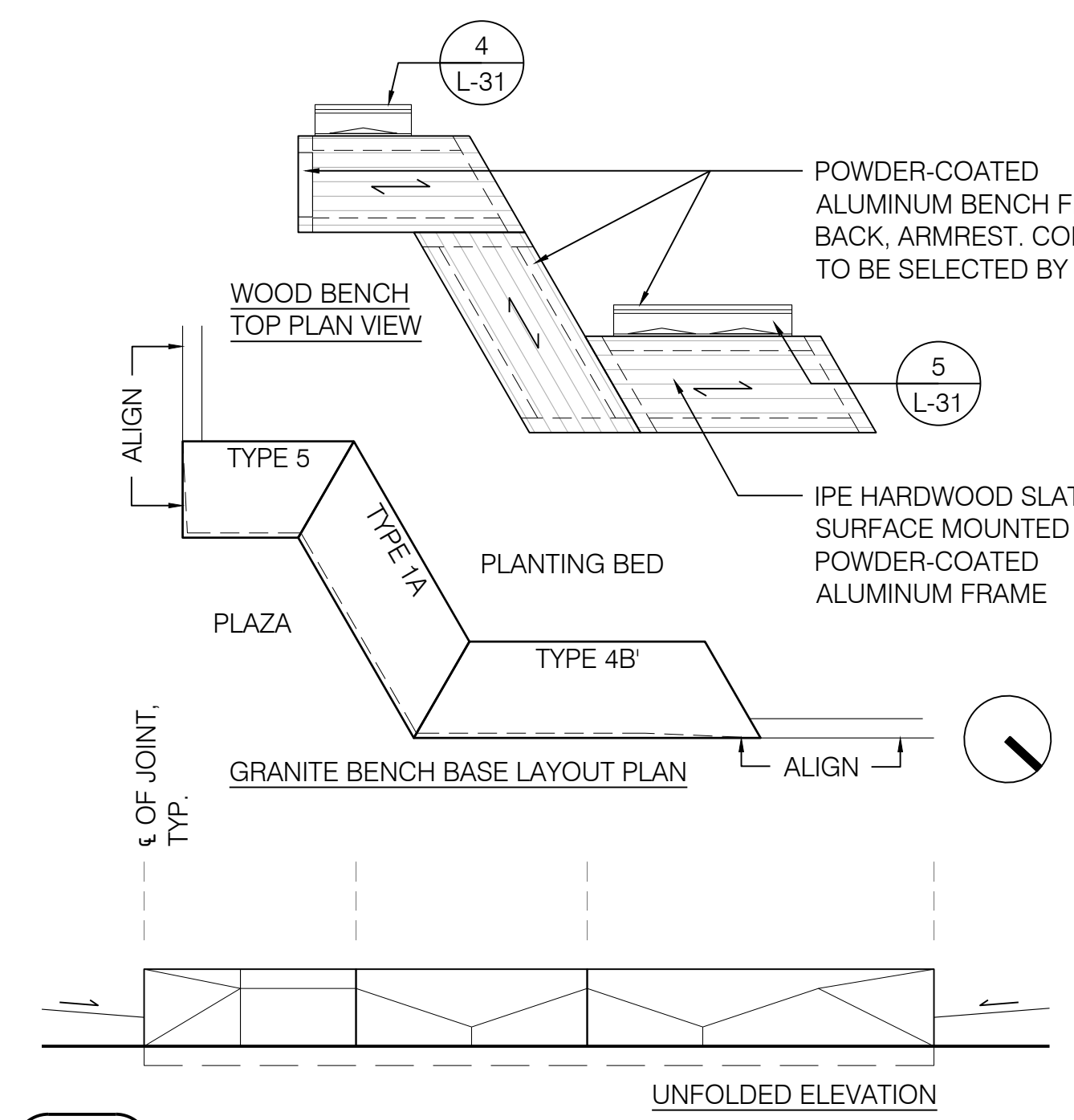
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS - 7

Sheet	L-32
File No.	8514





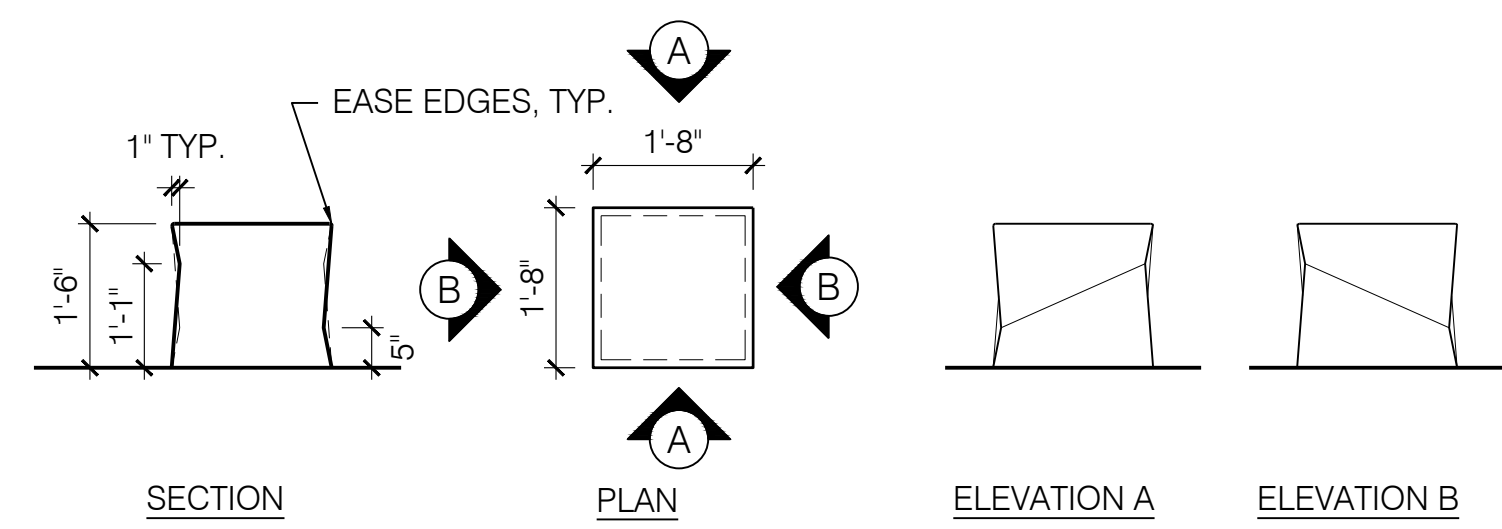
**2 BENCH 9**  
SCALE: 3/8" = 1'-0"



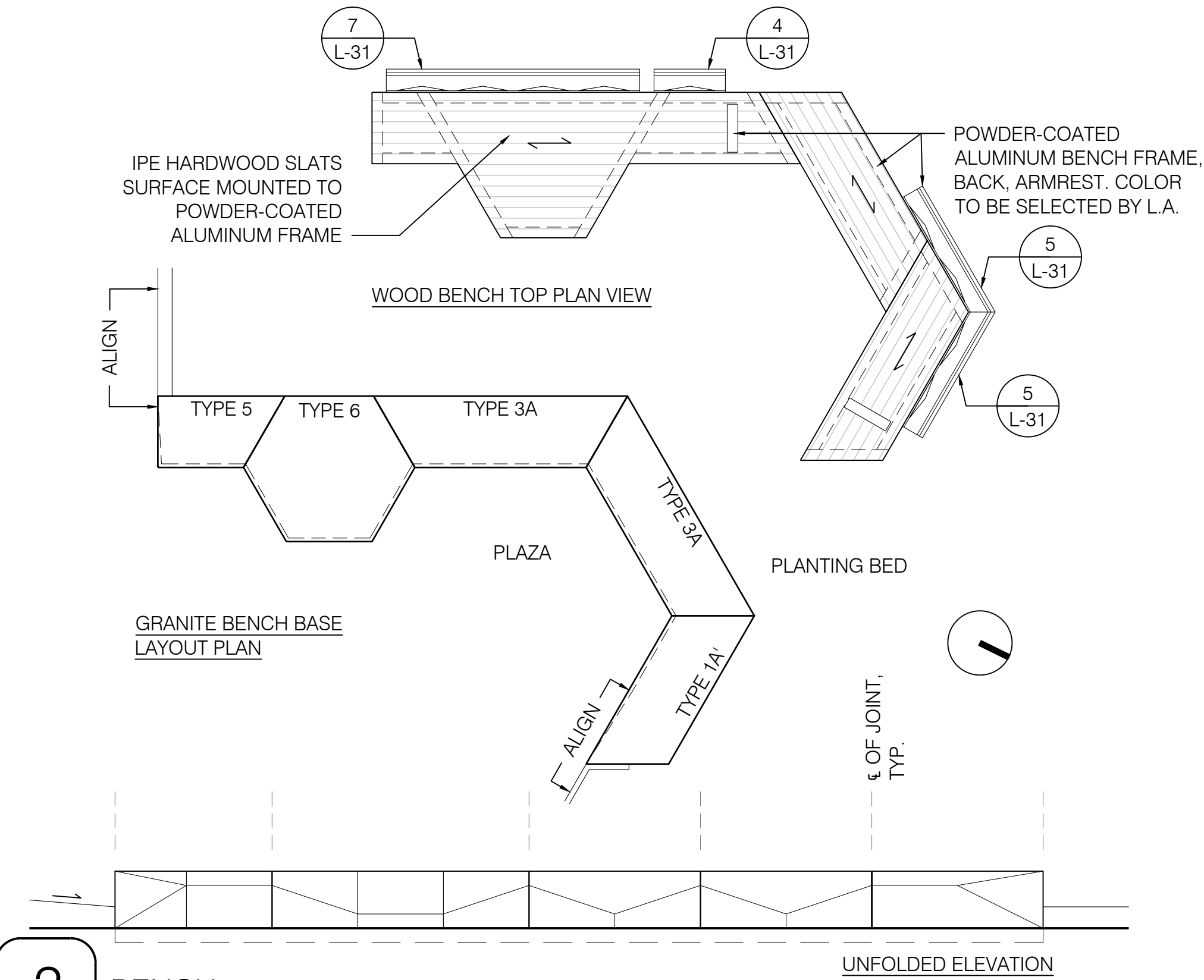
**1 BENCH 8**  
SCALE: 3/8" = 1'-0"

NOTE ON GRANITE FINISH:  
ALL EXPOSED FACES SHALL  
BE THERMAL, UNLESS  
NOTED OTHERWISE

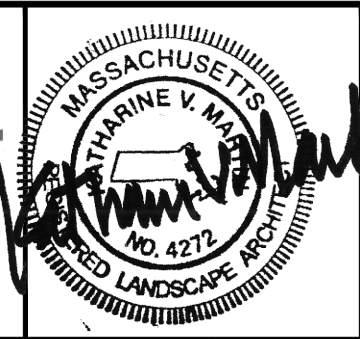
ISSUED FOR BID



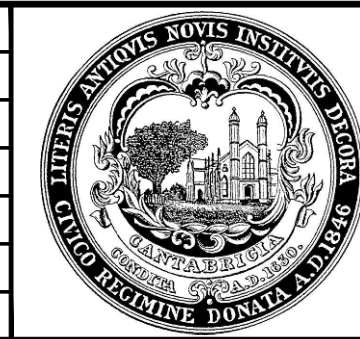
**4 OTTOMAN GRANITE BENCH BASE**  
SCALE: 1/2" = 1'-0"



**3 BENCH 10**  
SCALE: 3/8" = 1'-0"



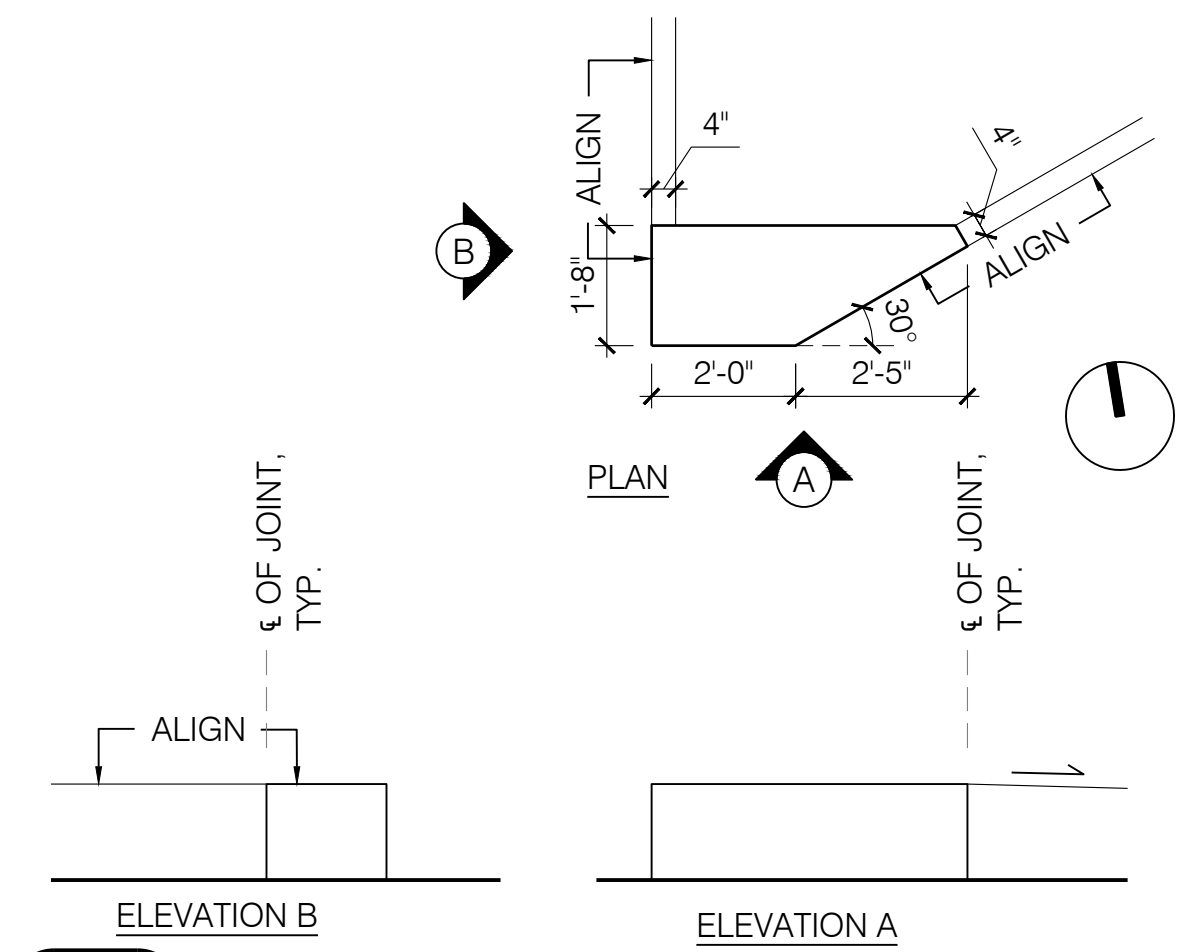
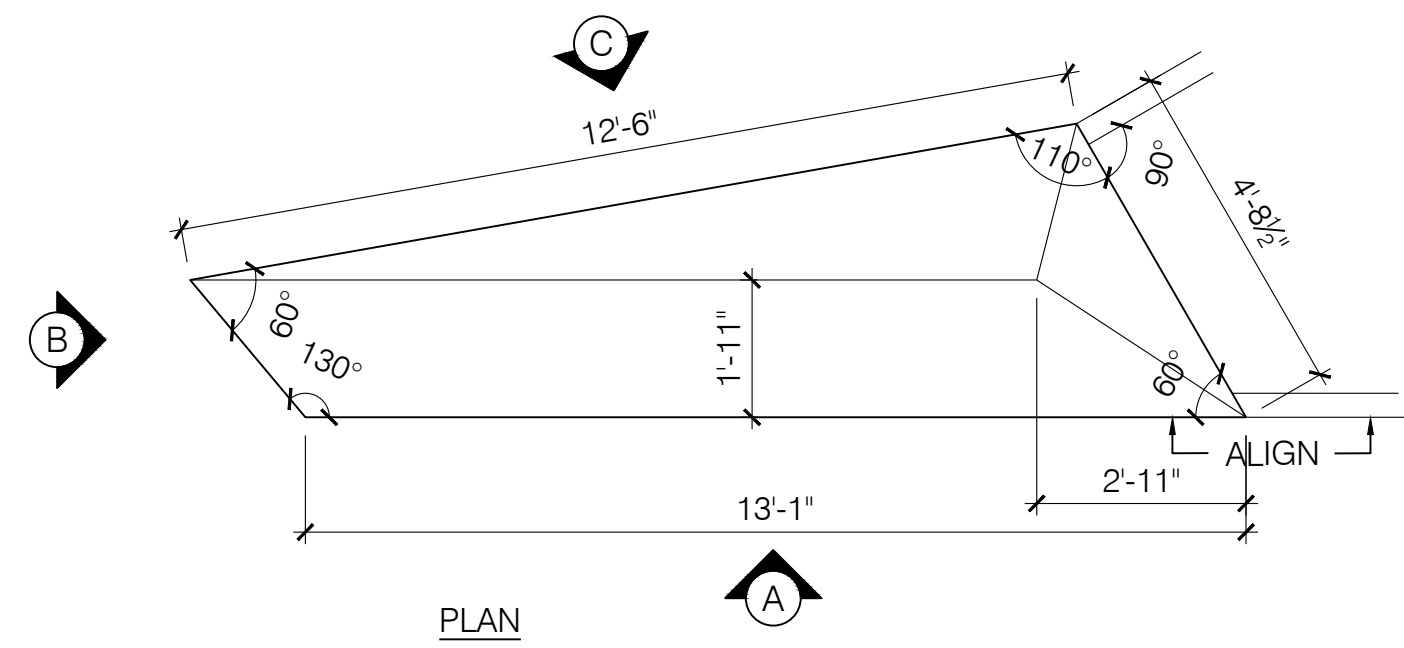
Scale	AS NOTED		
Date	APRIL 2019		
Job No.	20170208.005A		
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Checked by	K. PETSCHKE	No.	Description
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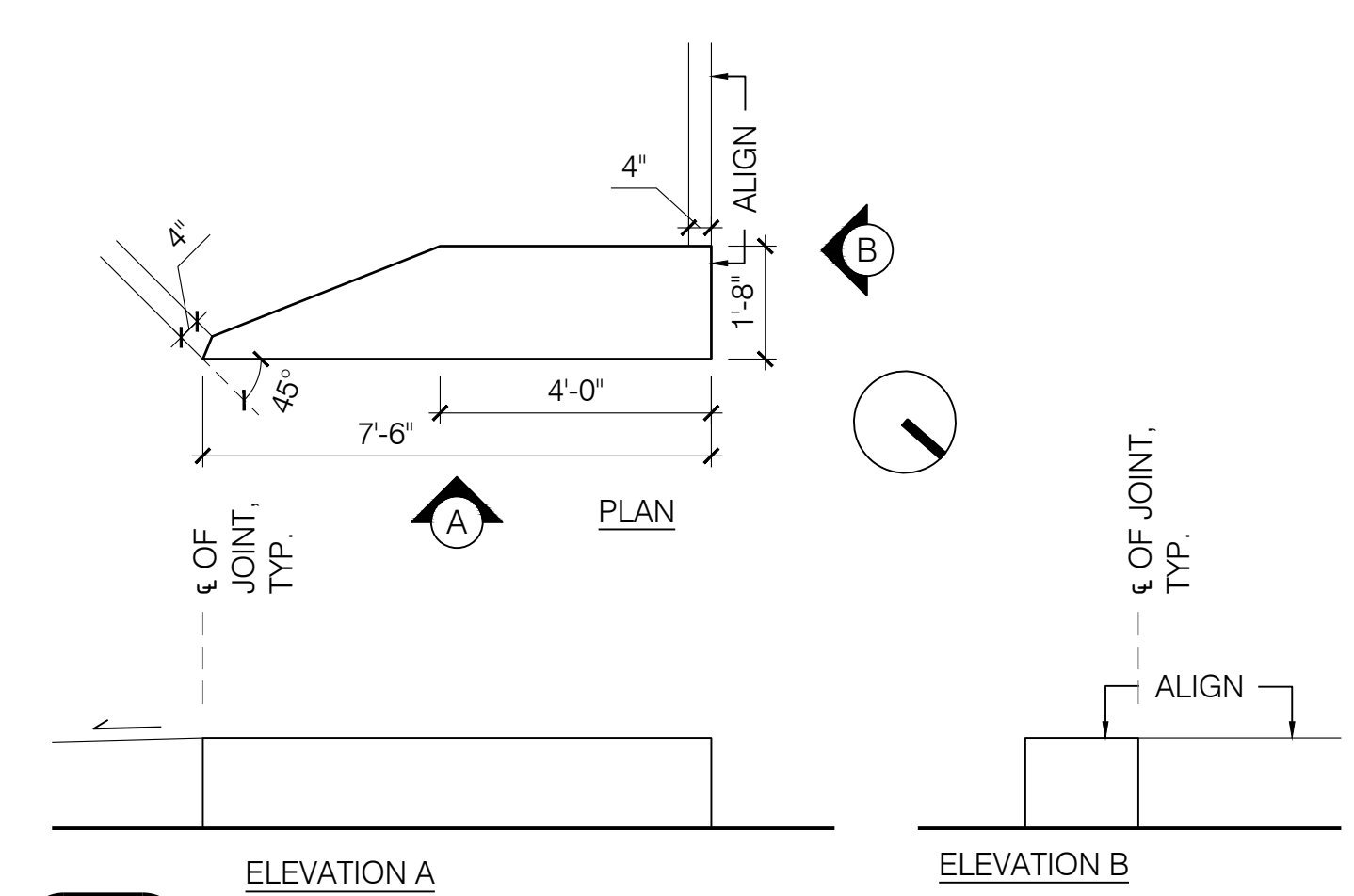
Client	CITY OF CAMBRIDGE, MASSACHUSETTS
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT
Drawing	LANDSCAPE DETAILS - 8

Sheet	L-33
File No.	8514

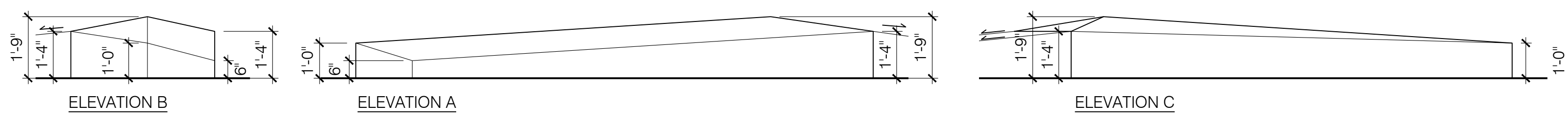




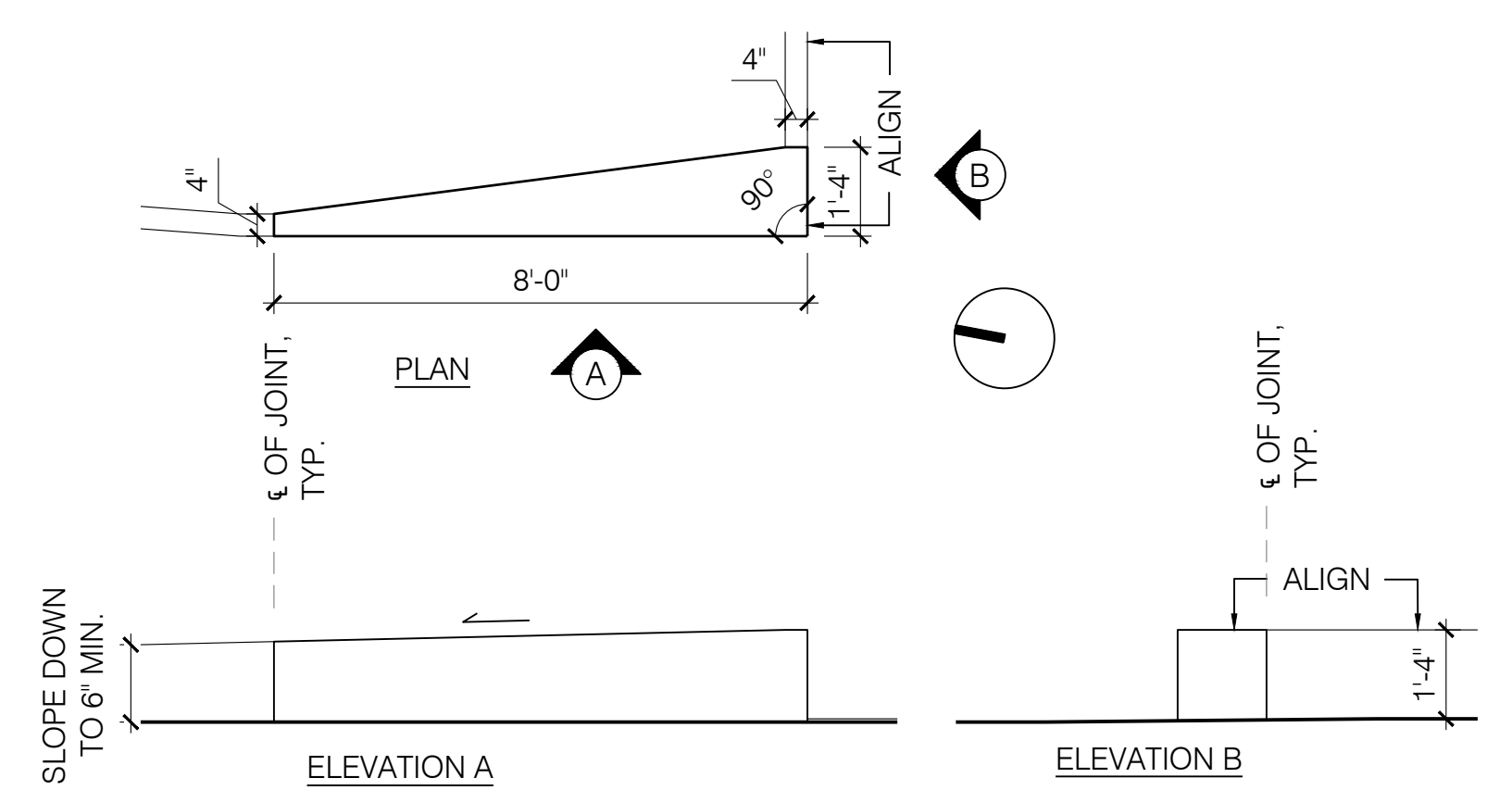
**4** GRANITE WALL 4  
SCALE: 3/8" = 1'-0"



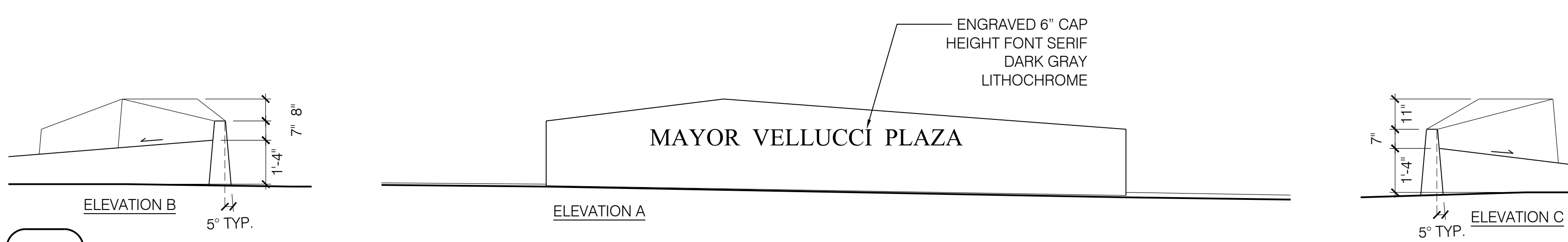
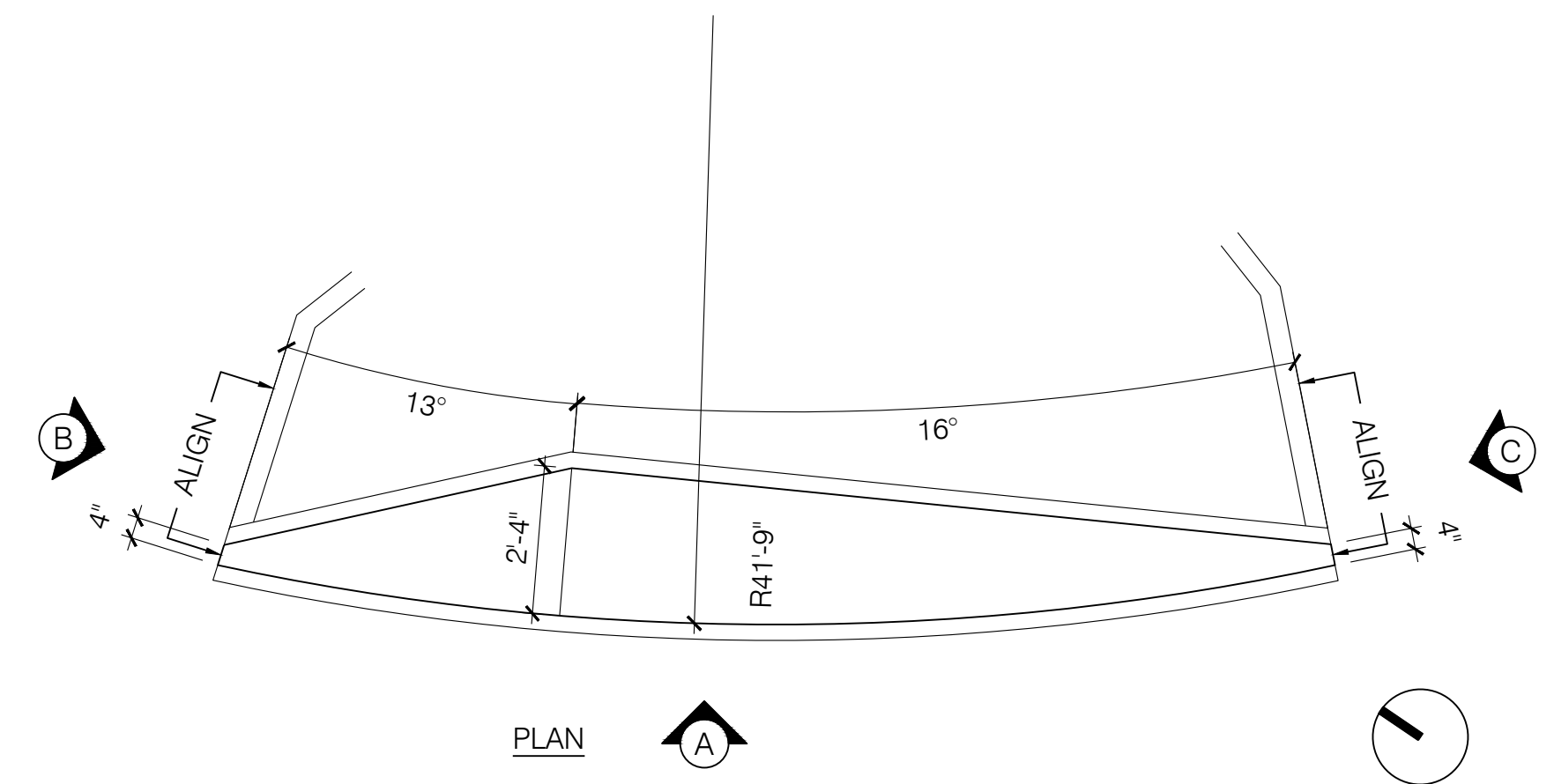
**3** GRANITE WALL 3  
SCALE: 3/8" = 1'-0"



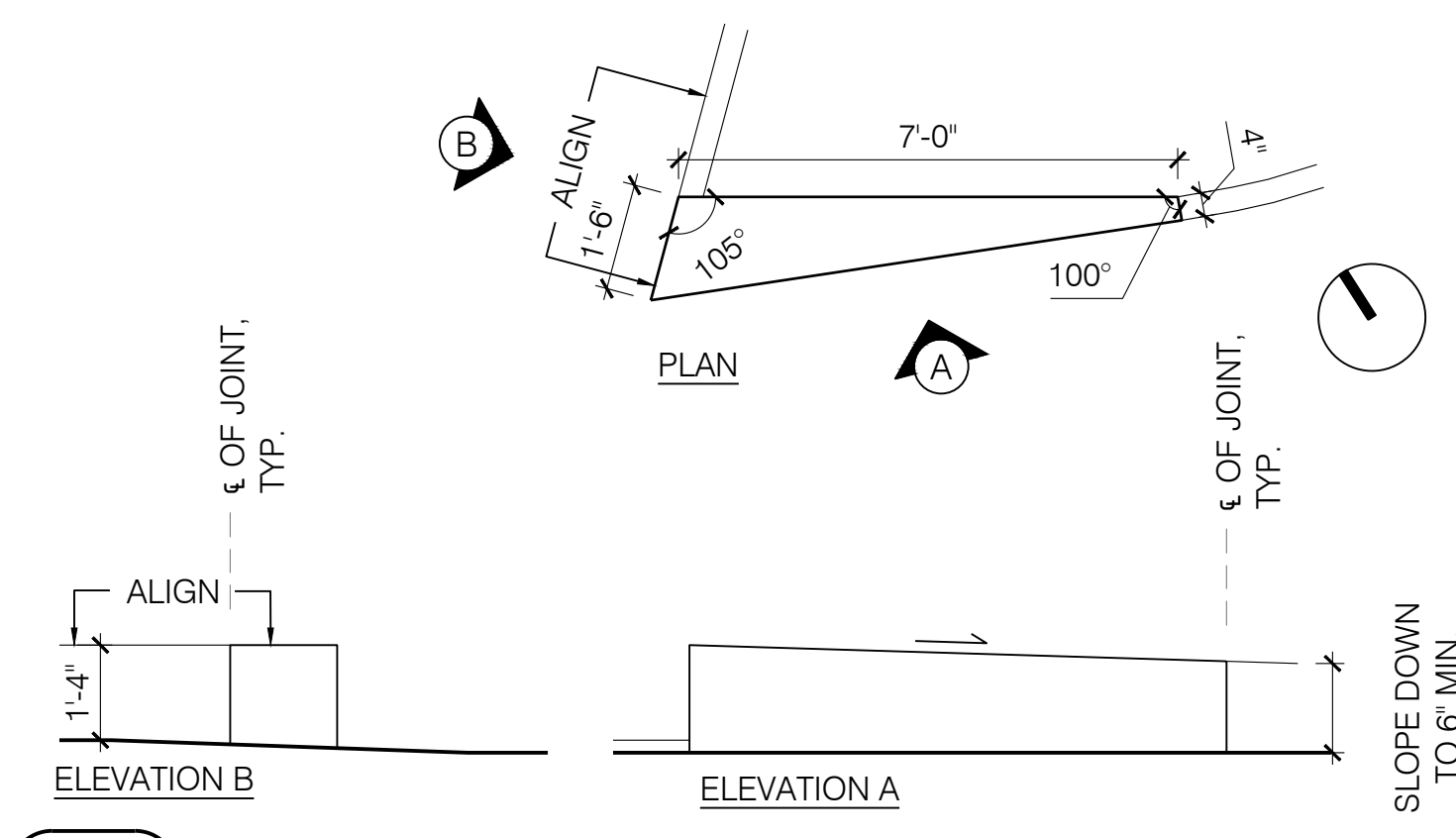
**6** GRANITE WALL 5  
SCALE: 3/8" = 1'-0"



**2** GRANITE WALL 2  
SCALE: 3/8" = 1'-0"



**5** GRANITE VELLUCCI MEMORIAL WALL  
SCALE: 3/8" = 1'-0"

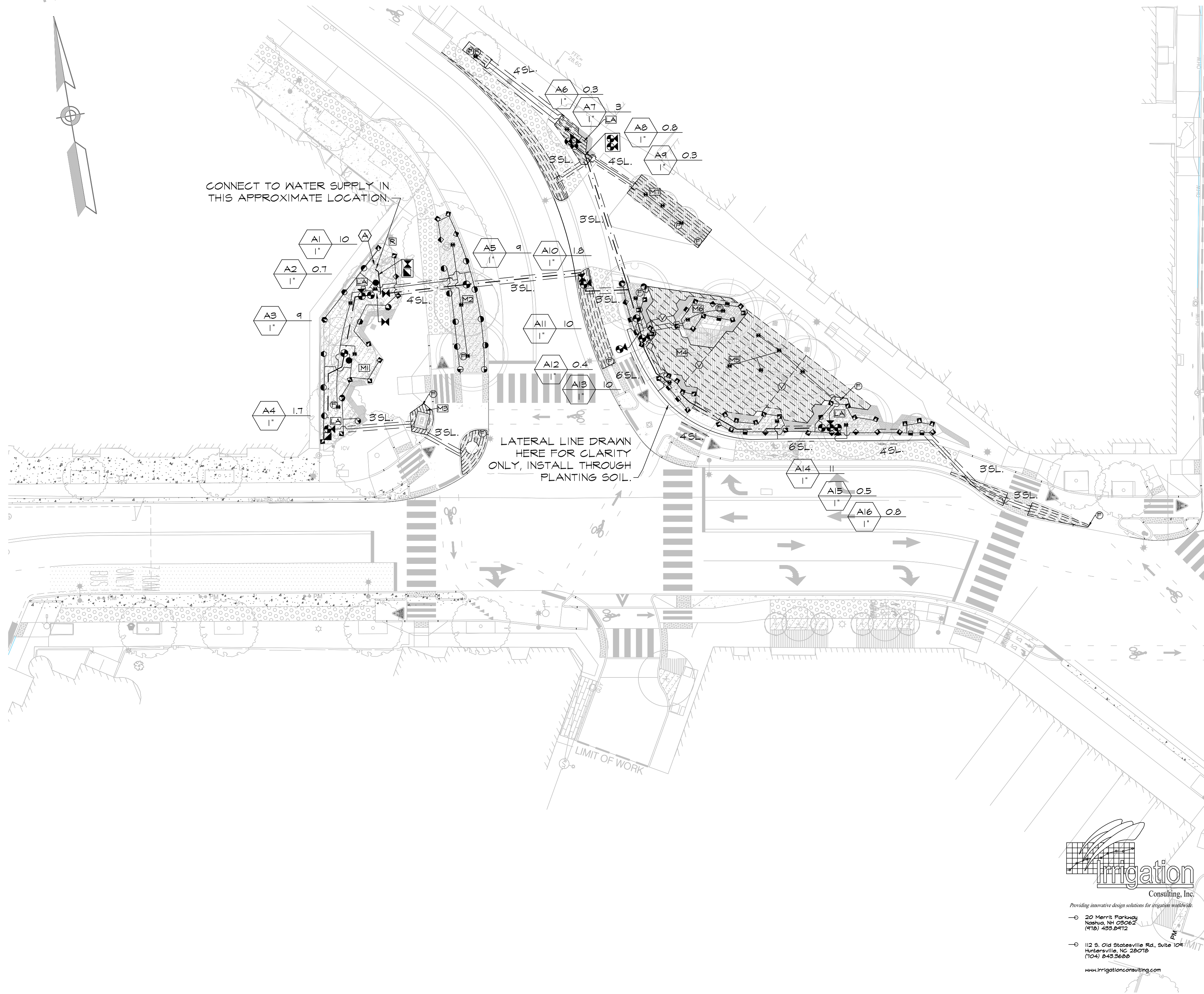
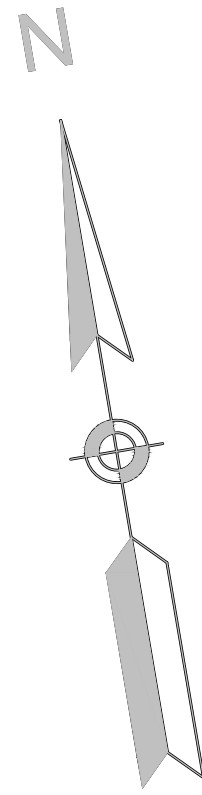


**1** GRANITE WALL 1  
SCALE: 3/8" = 1'-0"

NOTE ON GRANITE FINISH:  
ALL EXPOSED FACES SHALL  
BE THERMAL, UNLESS  
NOTED OTHERWISE

ISSUED FOR BID





CONNECT TO WATER SUPPLY IN THIS APPROXIMATE LOCATION.

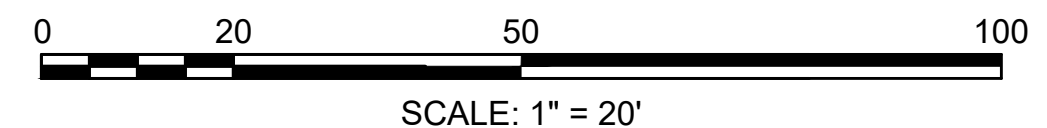
LATERAL LINE DRAWN HERE FOR CLARITY ONLY, INSTALL THROUGH PLANTING SOIL.

LIMIT OF WORK

IRRIGATION LEGEND			
SYMBOL	PSI	SPACING	DESCRIPTION
	30	12'	12-INCH POP UP SPRAY SPRINKLER W/ CHECK VALVE AND PRESS. REG.
	30	10'	
	30	8'	
	30	5'	
	30	-	DEEP DRIP TREE STAKES FOUR STAKES PER TREE, SEE DETAILS
	45	12"x12"	IN-LINE EMITTER DRIP TUBING, PLANTERS
	45	12"x24"	IN-LINE EMITTER DRIP TUBING, STRUCTURAL SOIL
			24 VOLT ELECTRIC ZONE VALVE (SEE VALVE DESIGNATOR FOR FLOW AND SIZES)
			ISOLATION GATE VALVE
			1" QUICK COUPLING VALVE
			MANUAL FLUSHING VALVE
			24 VOLT ELECTRIC ZONE VALVE W/ DISK FILTER (DRIP) (SEE VALVE DESIGNATOR FOR FLOW AND SIZES)
			1" POLYETHYLENE LATERAL PIPING
			1 1/2" CLASS-200 PVC MAINLINE PIPING
			CLASS-160 PVC PIPE SLEEVE (SIZE AS INDICATED) INSTALL SCHEDULE 40 WIRE CONDUIT ADJACENT TO ALL MAINLINE PIPE SLEEVES, MINIMUM WIRE CONDUIT SIZE TO BE 2-INCH, UNLESS OTHERWISE NOTED. SEE SLEEVING DETAIL.
			AERATION PORT
			AUTOMATIC RAIN SENSOR
			AUTOMATIC CONTROLLER
			LIGHTNING ARRESTOR WITH GROUND
			MOISTURE SENSOR
VALVE DESIGNATION:			
		STATION NO.	
		FLOW	
		VALVE SIZE	

- IRRIGATION NOTES**
- COORDINATE FINAL LOCATION OF DRIP TUBING, SPRINKLERS AND NOZZLE SELECTION WITH FINAL APPROVED LANDSCAPE.
  - PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC, CONTRACTOR SHALL FIELD VERIFY.
  - INSTALL PIPING AS FAR FROM TREES AND ROOT BALLS AS POSSIBLE WHILE MAINTAINING SPRINKLER AND DRIP TUBE SPACING.
  - CONTROL WIRE SHALL BE #14 GAUGE DTS FROM DECODERS TO VALVES. TWO-WIRE COMMUNICATION CABLE FROM CONTROLLER TO VALVES SHALL BE DOUBLE JACKETED TWO CONDUCTOR SOLID CORE BLUE, DESIGNED FOR DIRECT BURIAL. SUFFICIENT SLACK SHOULD BE LEFT IN COMMUNICATION CABLE AT DECODER LOCATIONS TO BRING DECODERS ABOVE GRADE.
  - QUICK COUPLING VALVES SHALL BE INSTALLED ON 1 INCH PVC SWING JOINTS WITH BRASS INSERTS AND STABILIZERS. (SEE DETAIL)
  - SPRINKLERS SHALL BE INSTALLED ON SWING PIPE ASSEMBLIES, MIN. LENGTH TO BE 6 INCHES, 18 INCH MAXIMUM.
  - IRRIGATION SYSTEM IS DESIGNED TO SUPPLY 12 GPM MAX FROM NEW 1 INCH SERVICE. SYSTEM TO PRODUCE 65-PSI DYNAMIC PRESSURE AT POINT OF CONNECTION.
  - CONTRACTOR SHALL TEST DYNAMIC PRESSURE BEFORE STARTING WORK, REPORT ANY DEVIATION FROM PRESSURE REQUIRED TO OWNER'S REP. BEFORE CONTINUING.
  - INSTALL CONTROLLER IN ENCLOSURE, GENERALLY WHERE SHOWN ON THE DRAWINGS, HARD WIRE TO 120 VOLT POWER SUPPLY, ROUTE COMMUNICATION CABLE TO CONTROLLER VIA CONDUIT THROUGH ENCLOSURE BASE.
  - INSTALL RAIN SENSOR ON LIGHT POLE, AS DIRECTED BY ENGINEER.
  - ABOVE GROUND WIRING SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.
  - COORDINATE LOCATION OF EXISTING AND FUTURE UTILITIES ON SITE AND CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF WORK.
  - IN-LINE DRIP TUBING TO BE INSTALLED 6" FROM MASONRY WALLS, PLANTER SIDE WALLS AND CURBING; ON AN 12" CENTER TO CENTER ROW SPACING IN PLANTERS AND 24" IN STRUCTURAL SOIL AREAS.
  - FLUSH LATERAL LINES BEFORE INSTALLING IN-LINE DRIP TUBING OR SPRINKLERS.
  - STAKE IN-LINE DRIP TUBING AT MINIMUM 5 FOOT INTERVALS AND THREE PER TREE RING TO PREVENT MOVEMENT.
  - IN-LINE DRIP TUBING TO BE INSTALLED 4" BELOW GRADE UNDER MULCH. NO DRIP TUBE SHALL BE VISIBLE TO THE NAKED EYE.
  - INSTALL MANUAL FLUSH PORTS AT LOWEST POINT OF EXHAUST HEADER, GENERALLY WHERE SHOWN ON THE DRAWINGS.
  - CONTRACTOR MUST PROVIDE PRODUCT SUBMITTALS AS PER THE WRITTEN SPECIFICATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.
  - ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. THE ENGINEER MUST BE NOTIFIED A MINIMUM OF 7-DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE SUPERVISION AND ADMINISTRATION.
  - SEE IRRIGATION DETAILS AND SPECIFICATIONS SECTION 02810 FOR ADDITIONAL NECESSARY INFORMATION.

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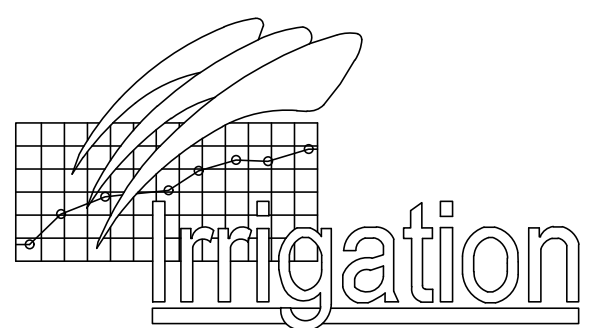
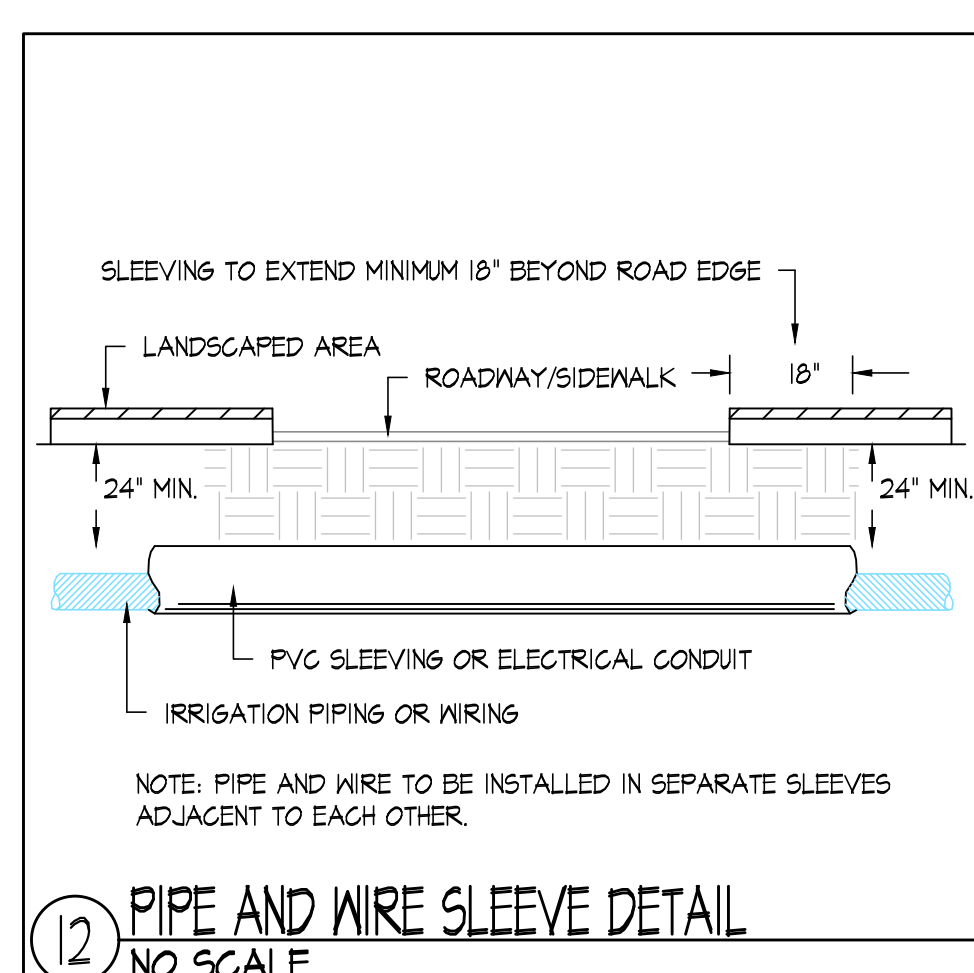
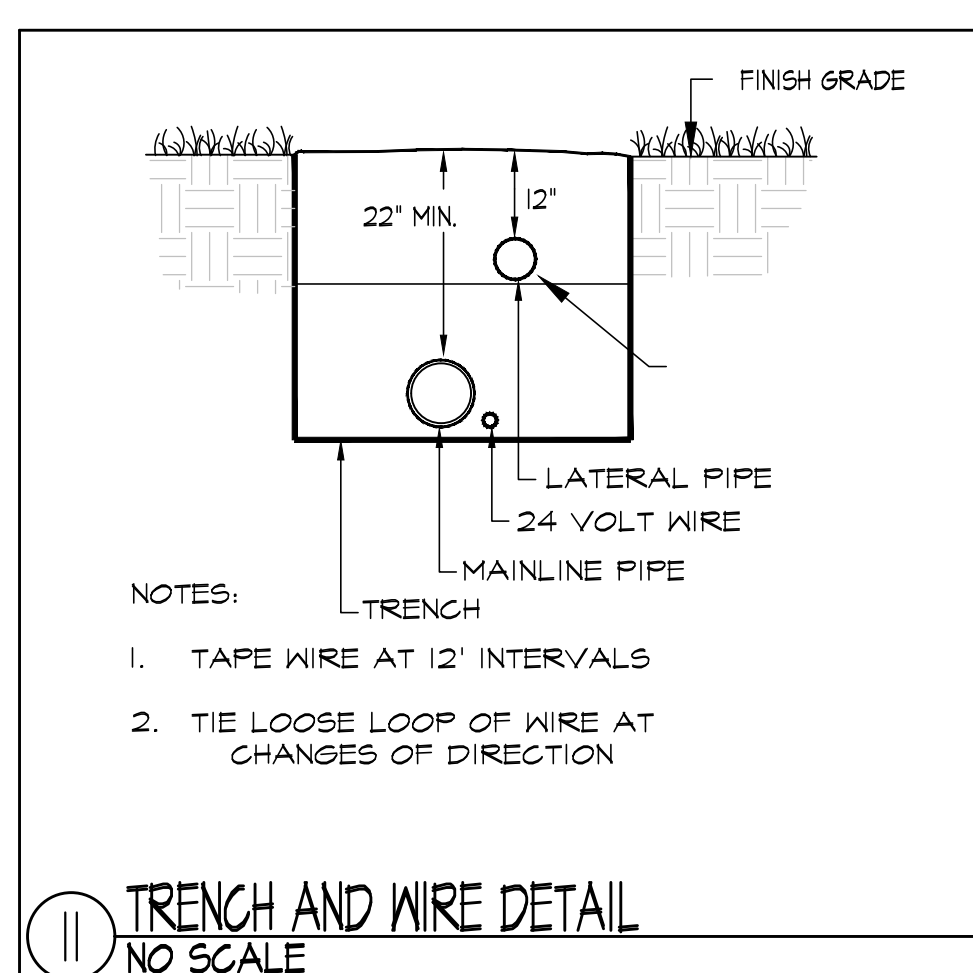
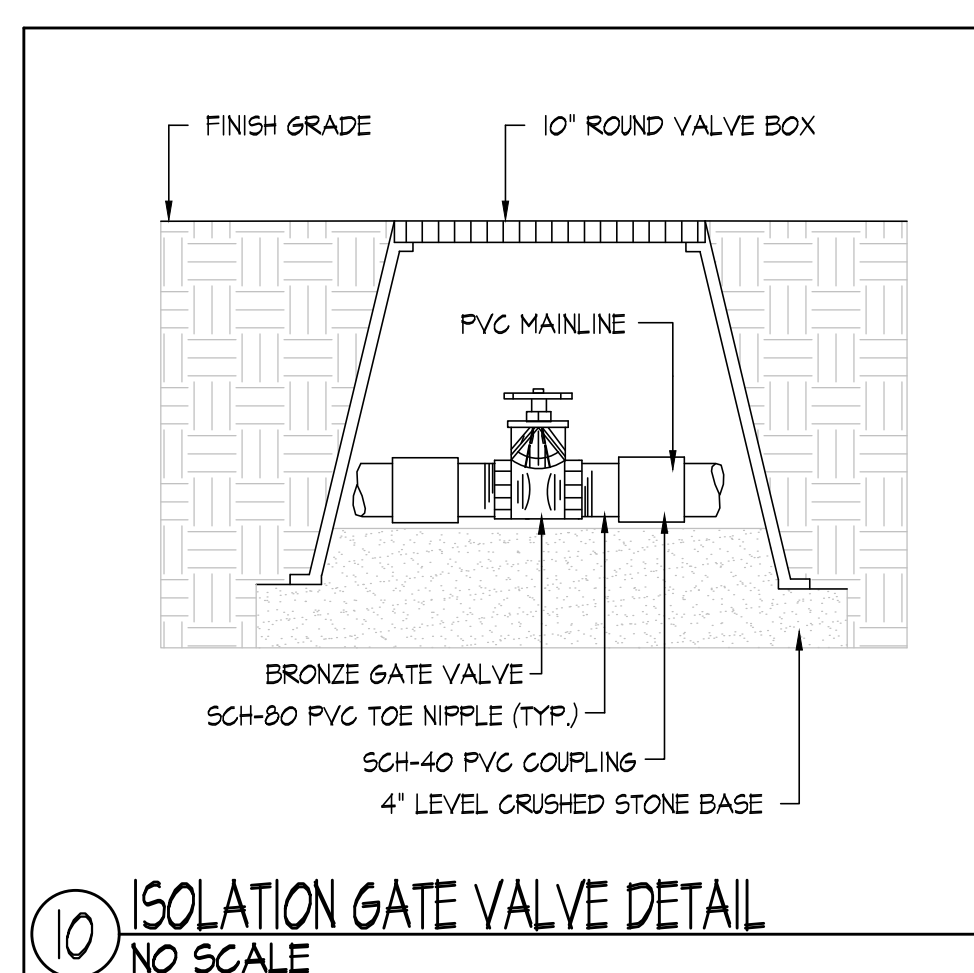
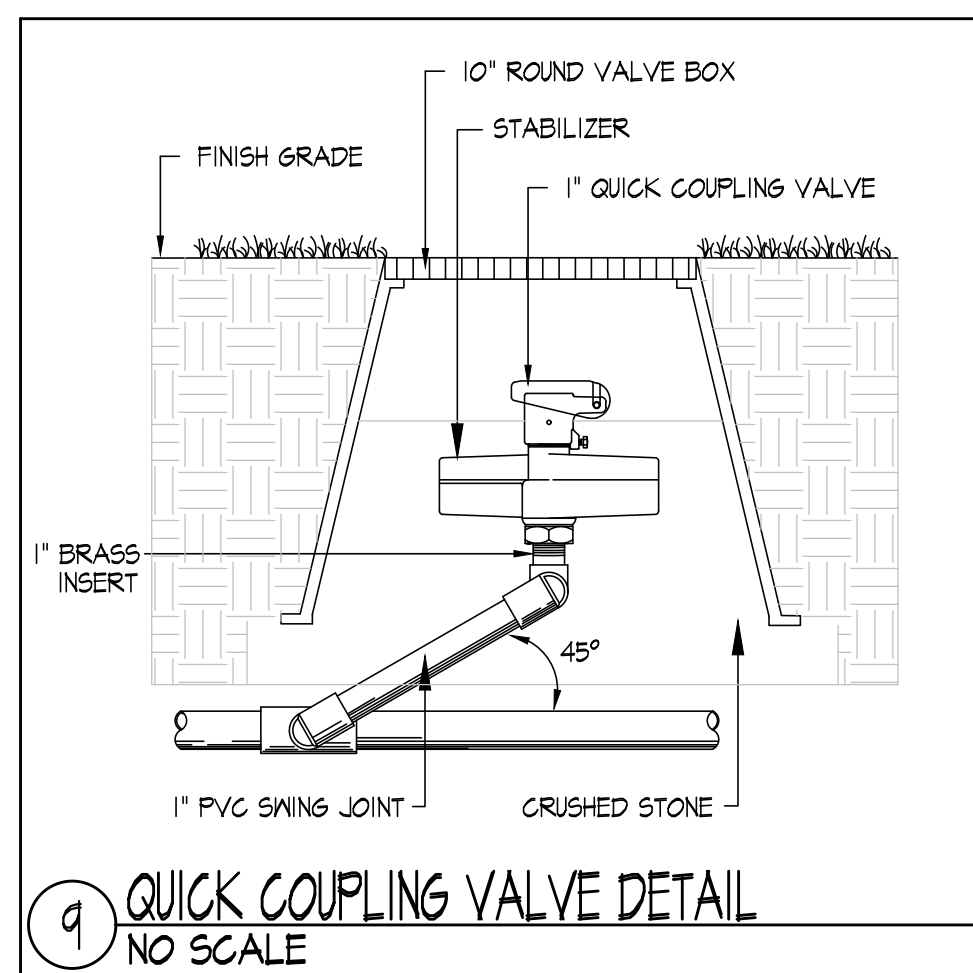
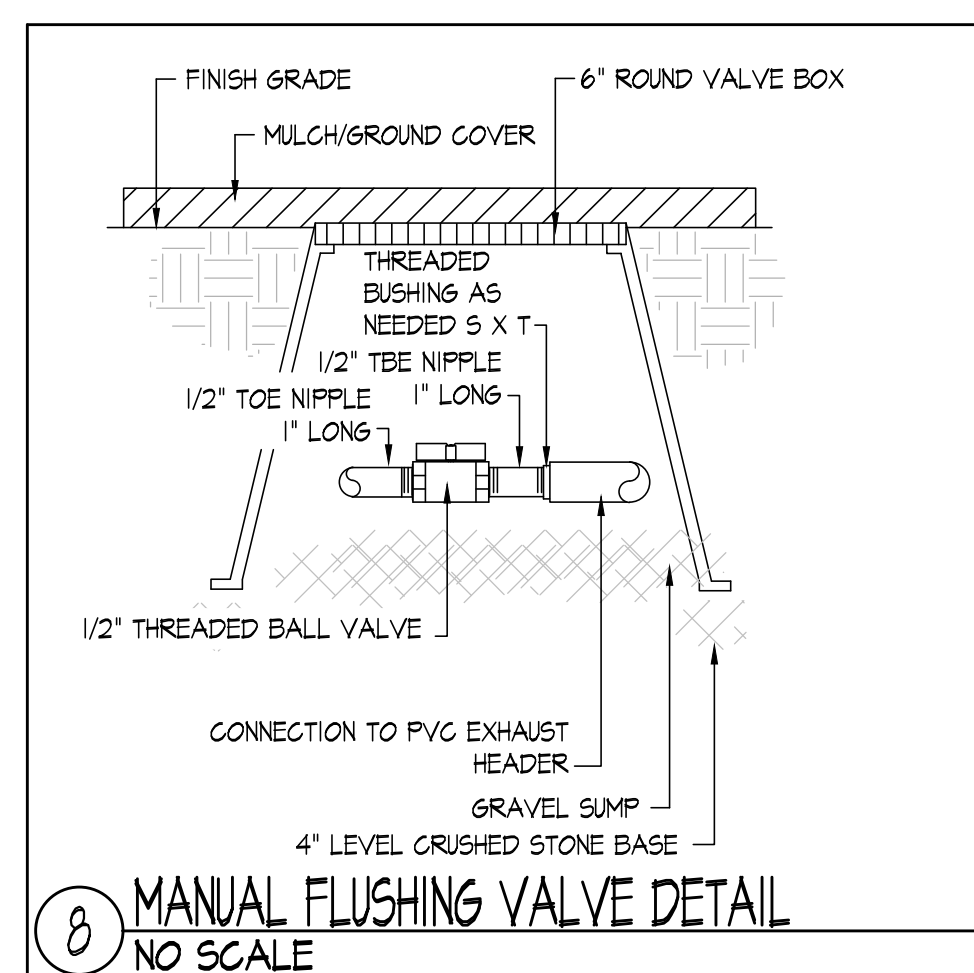
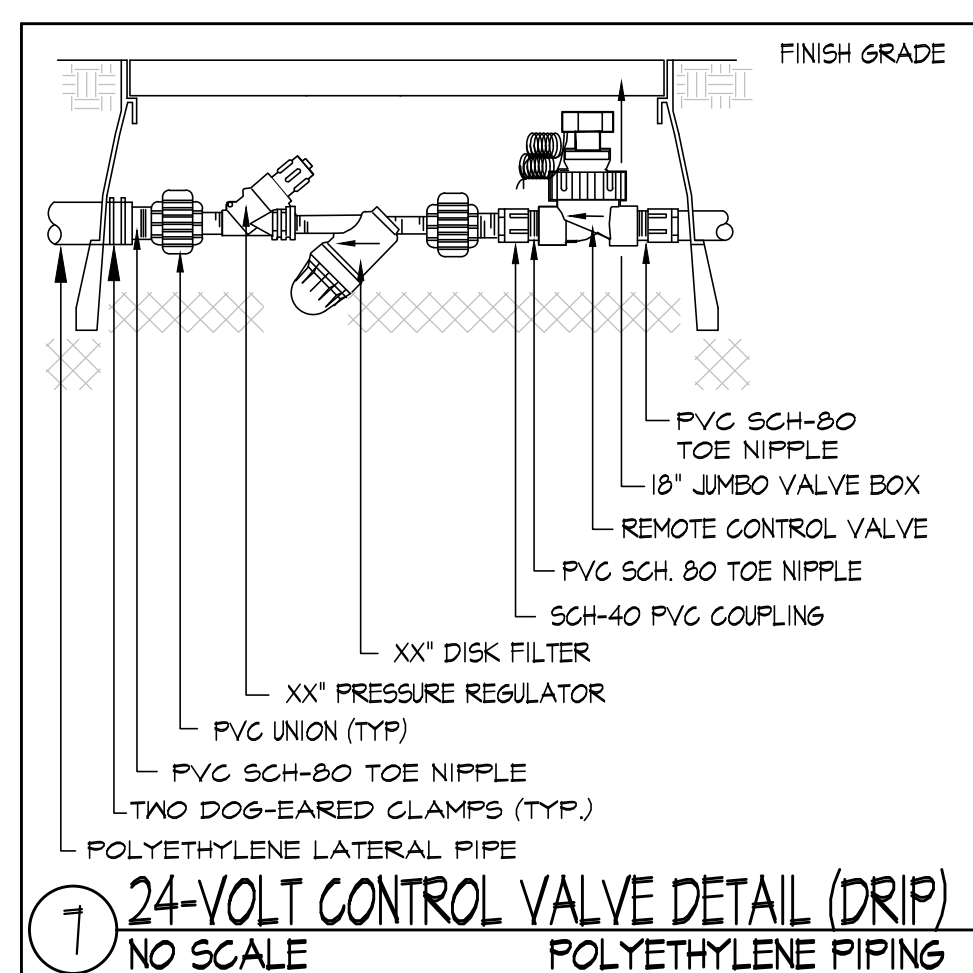
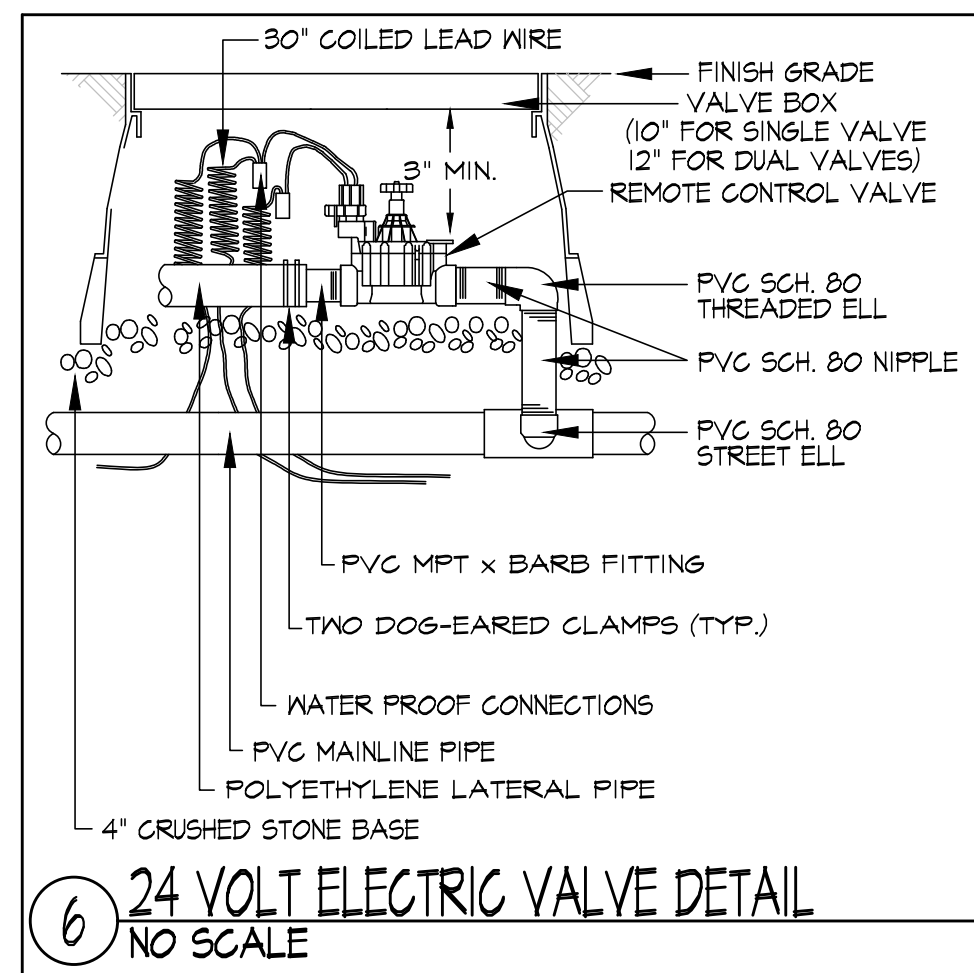
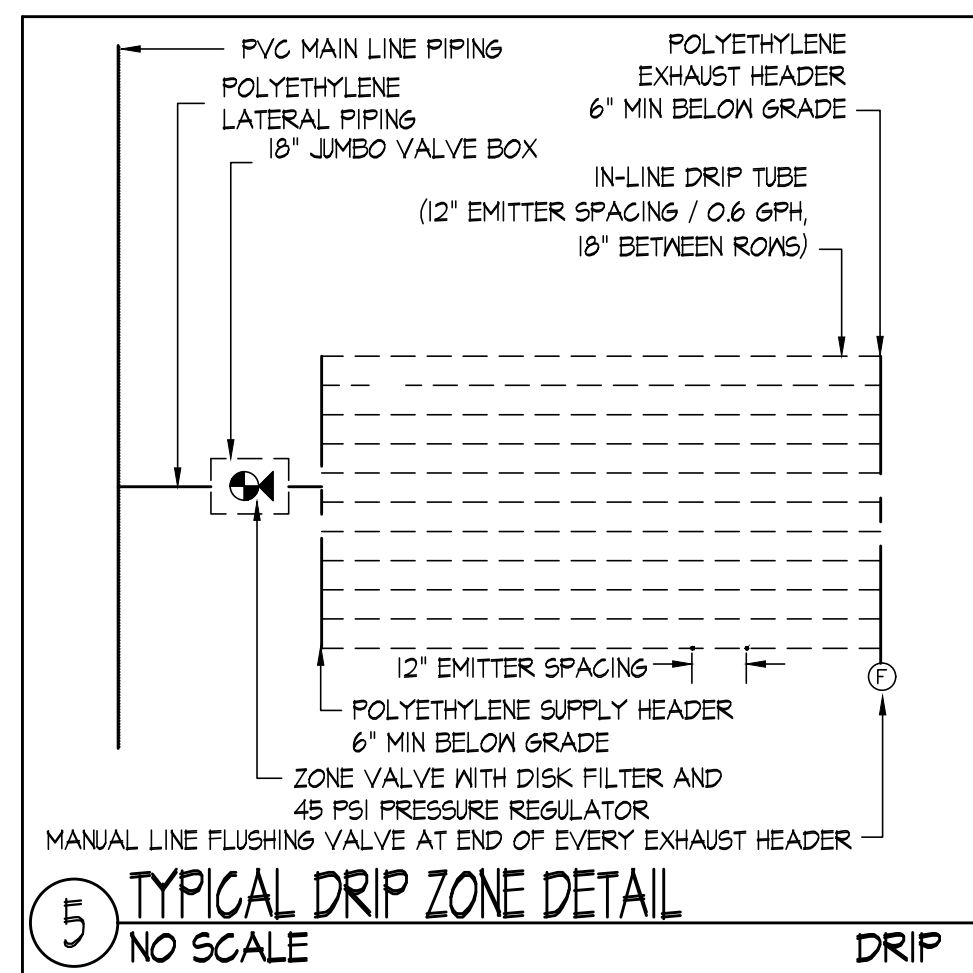
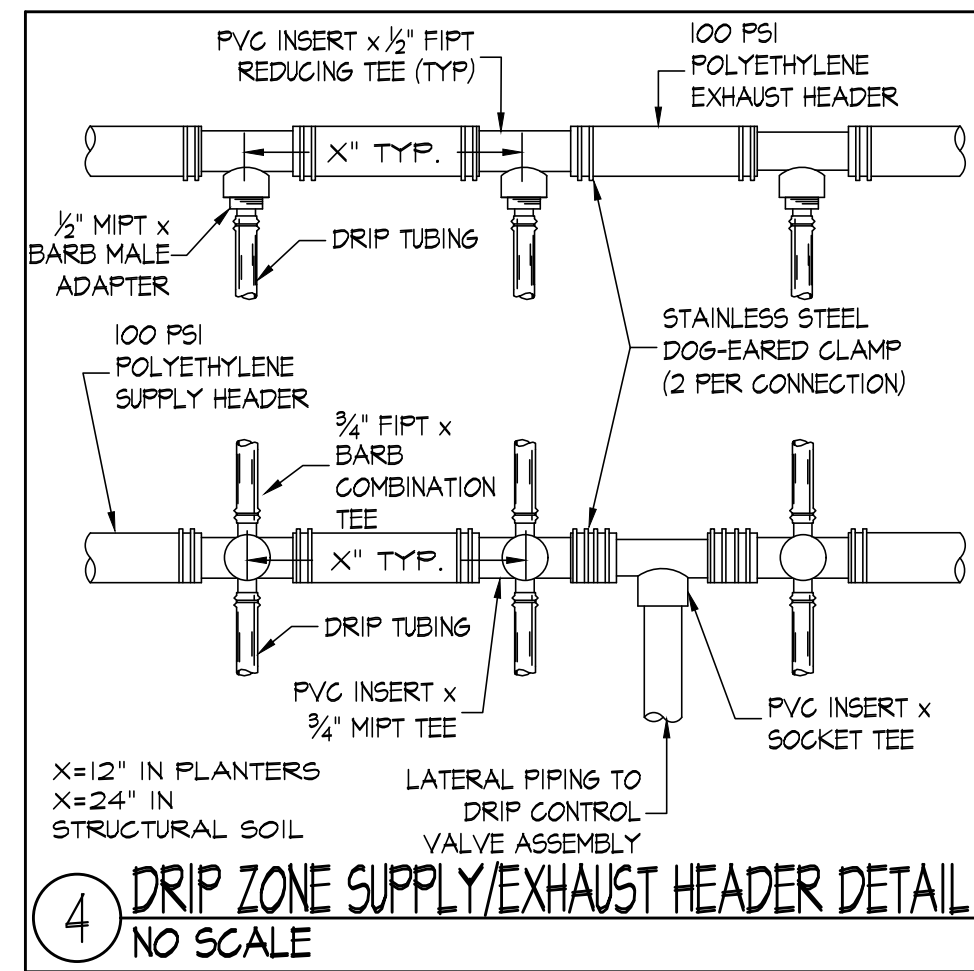
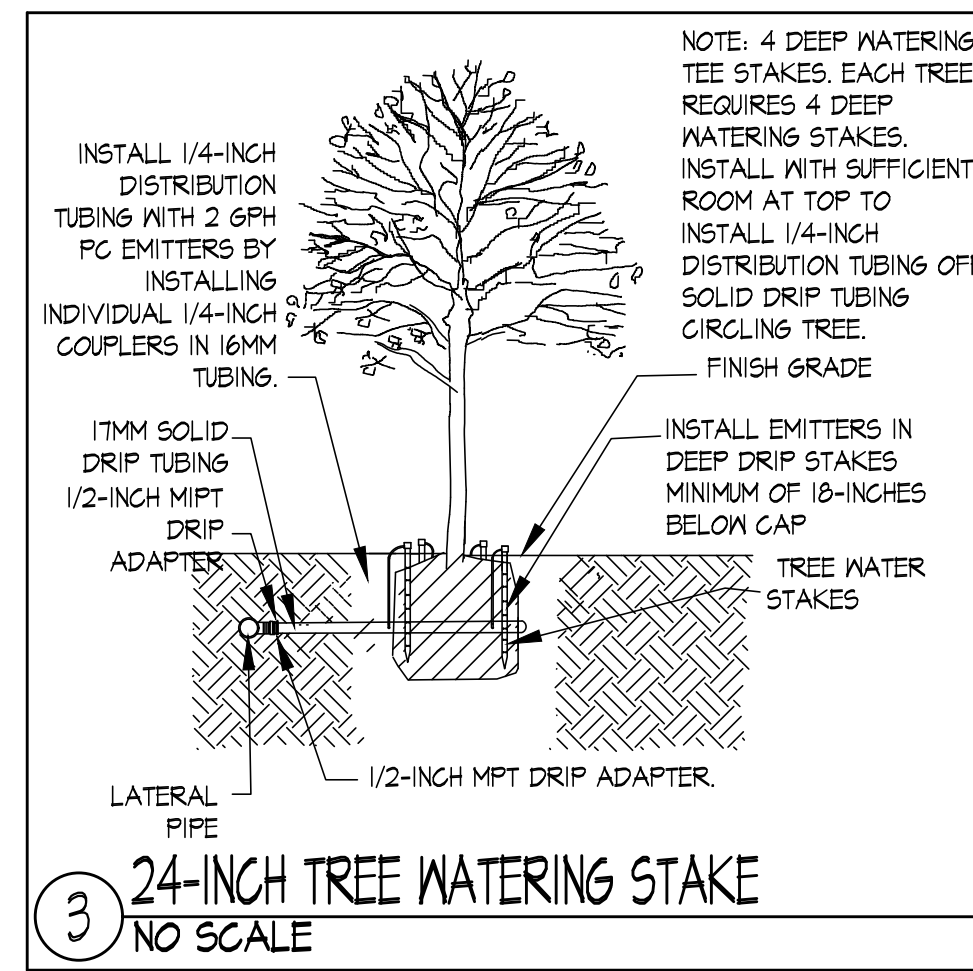
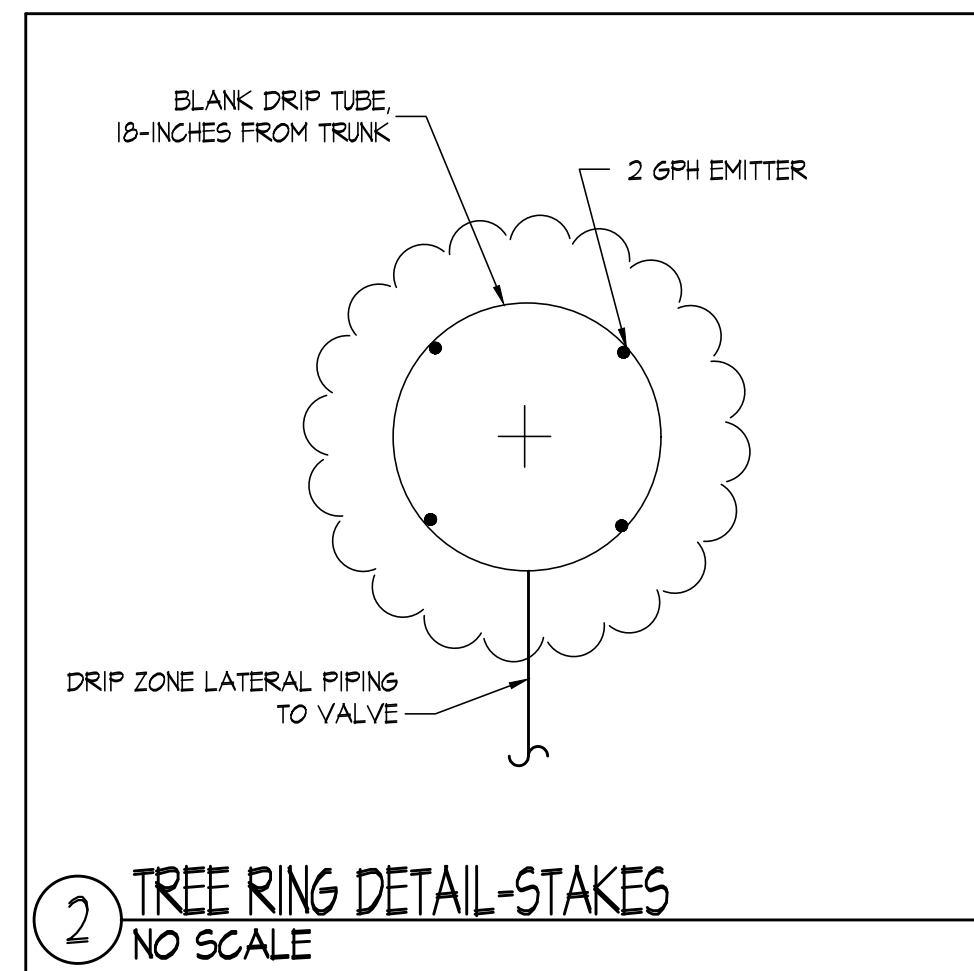
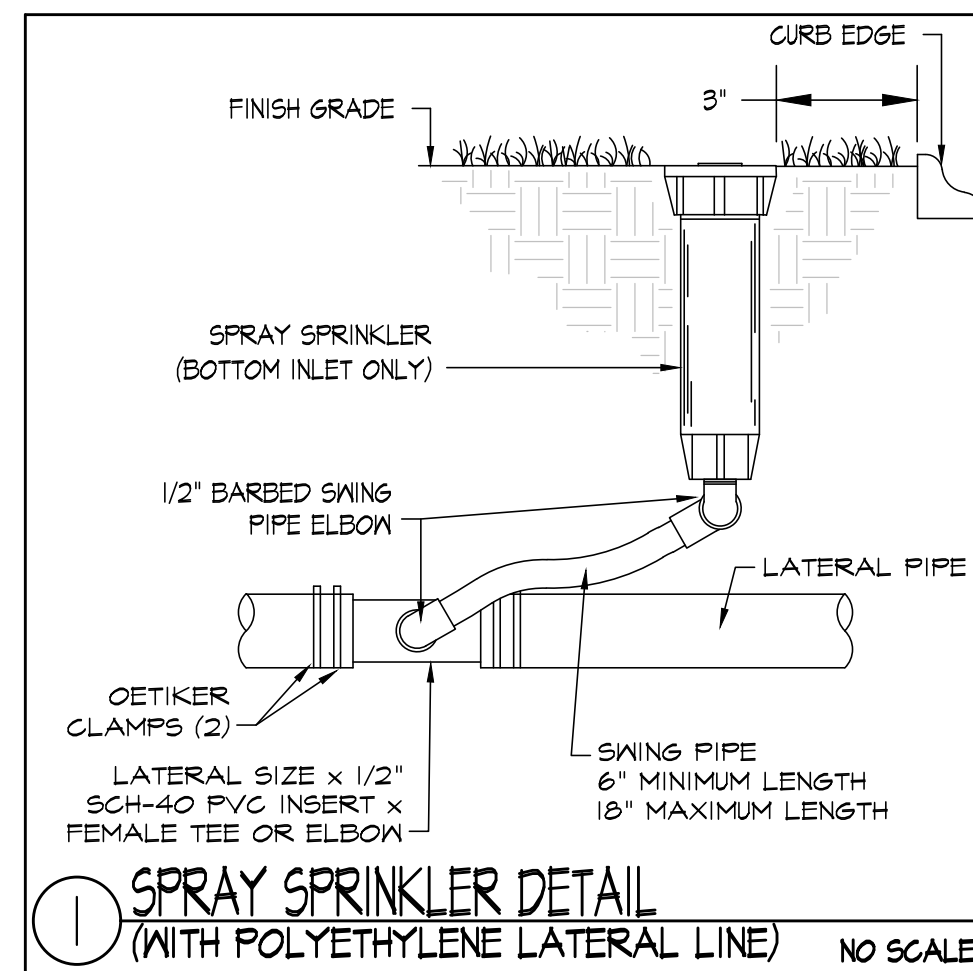


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						Scale AS NOTED				Client CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet I-1
						Date APRIL 2019				Project INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No. 8514
						Job No. 20170208.005A				Drawing IRRIGATION PLAN - 1	
						Designed by JLW					
						Drawn by JLW					
						Checked by BEV	No.	Description	Date		
						Approved by BEV		REVISIONS			

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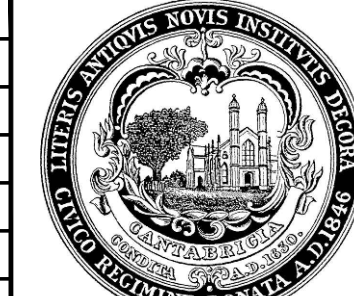
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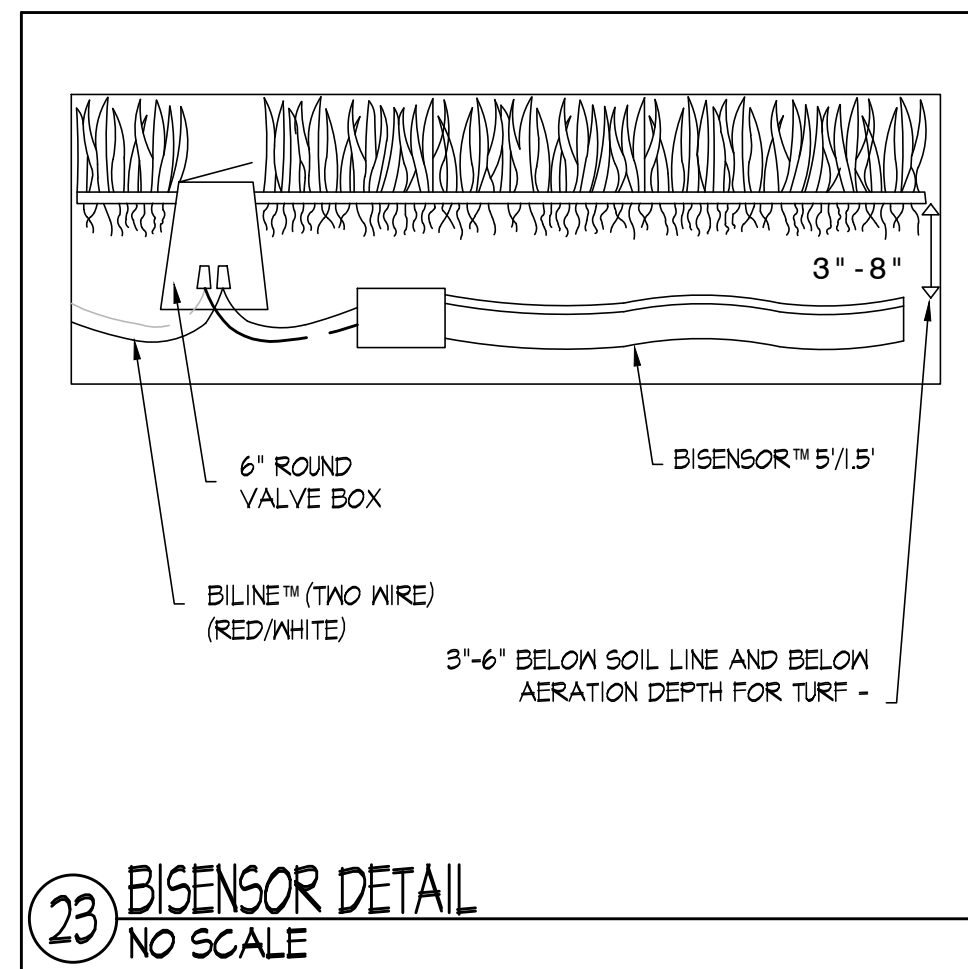
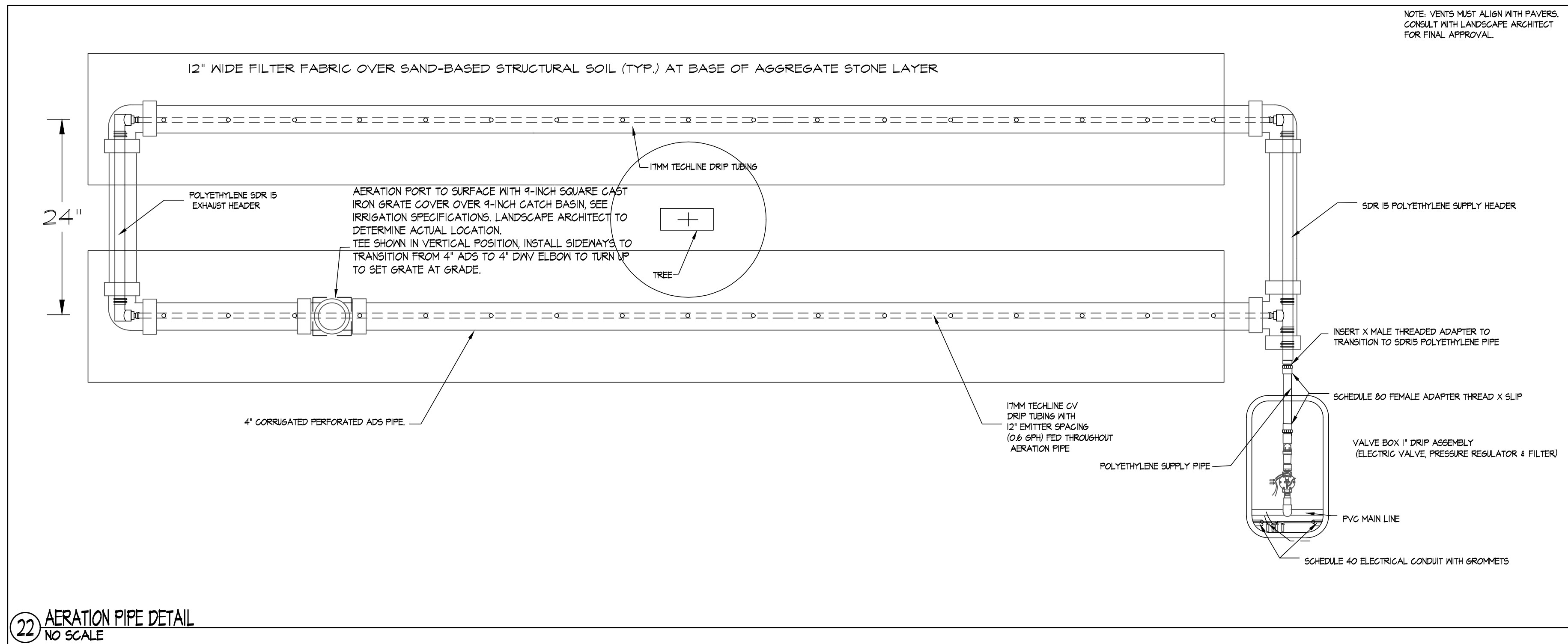
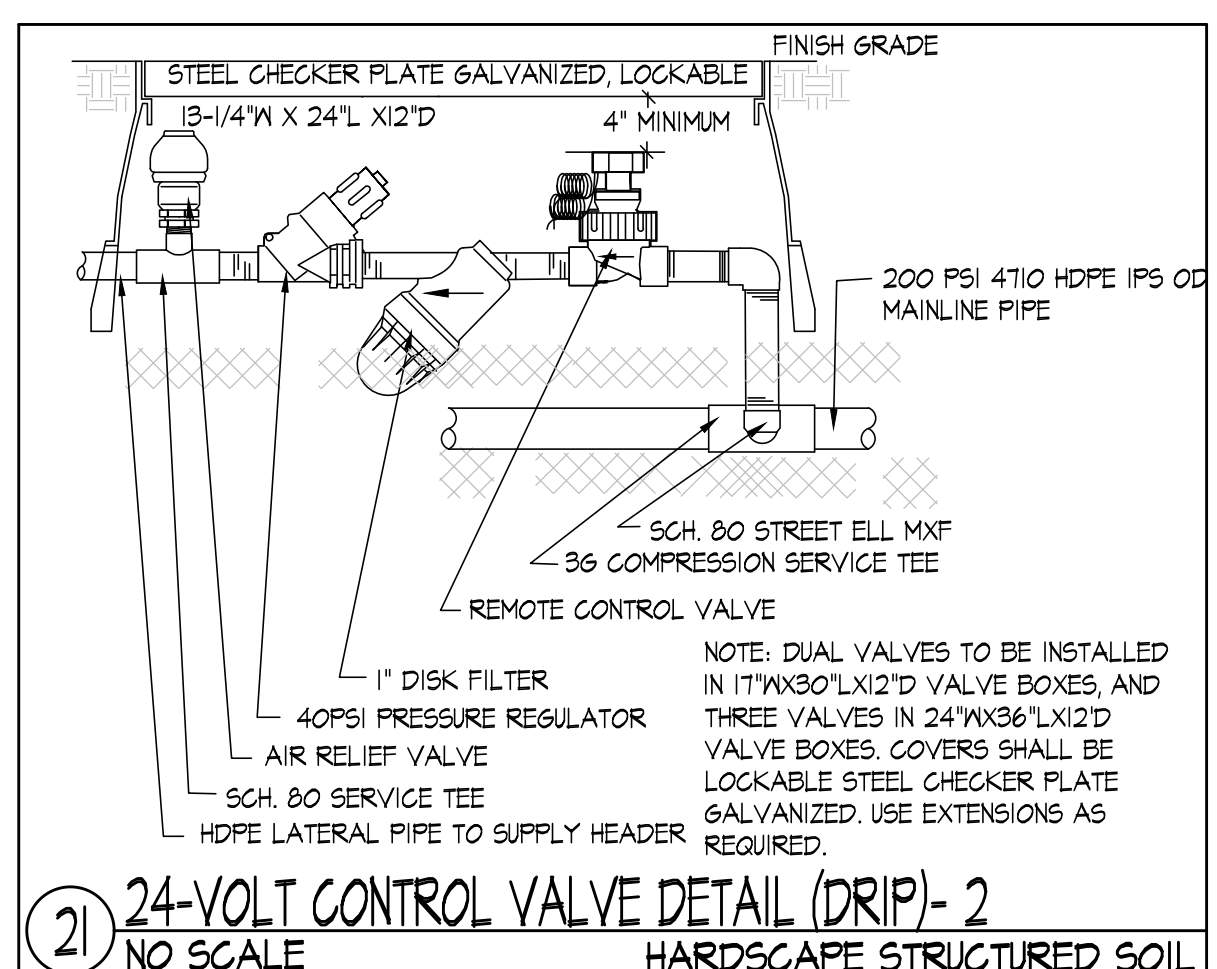
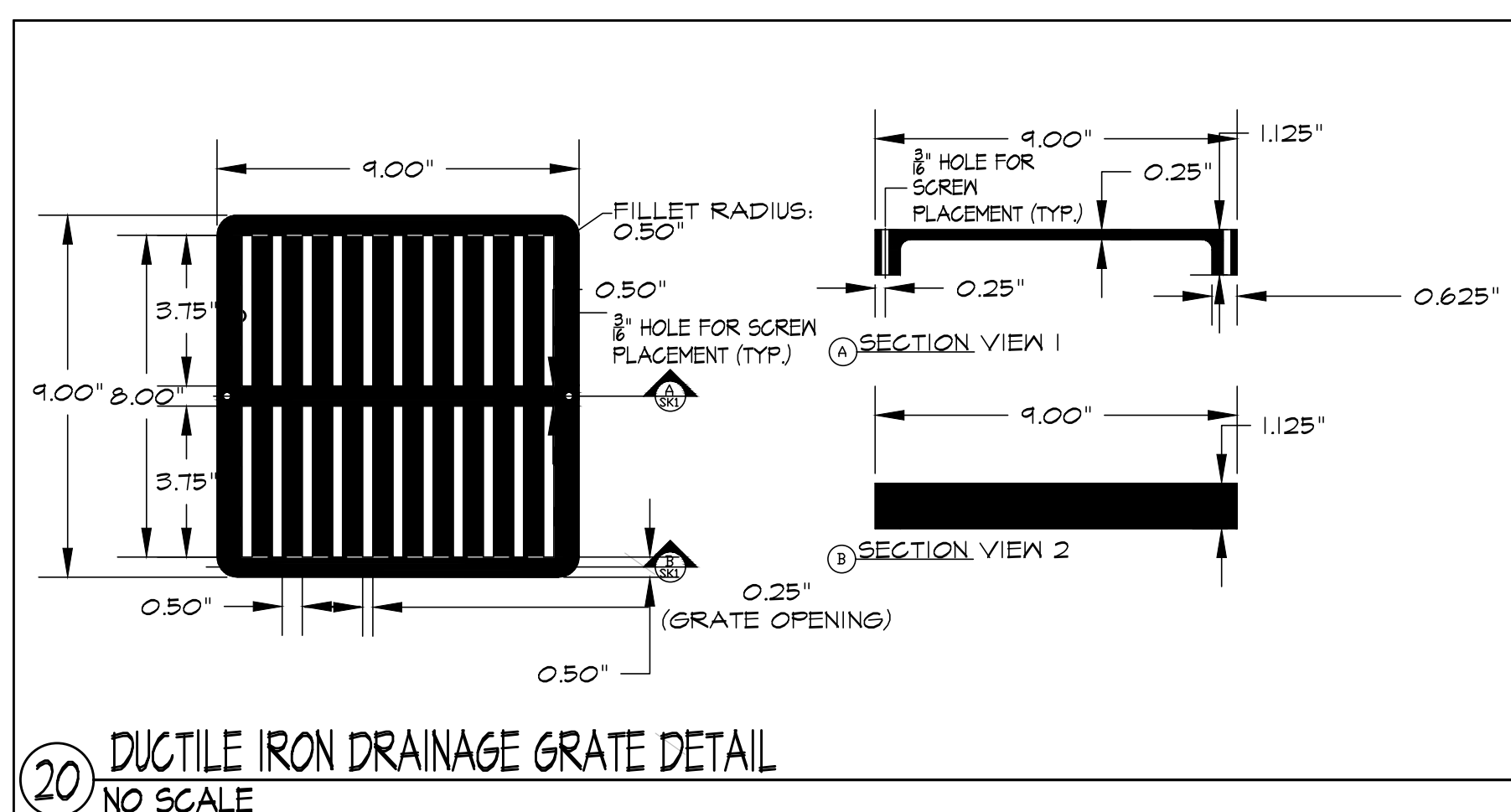
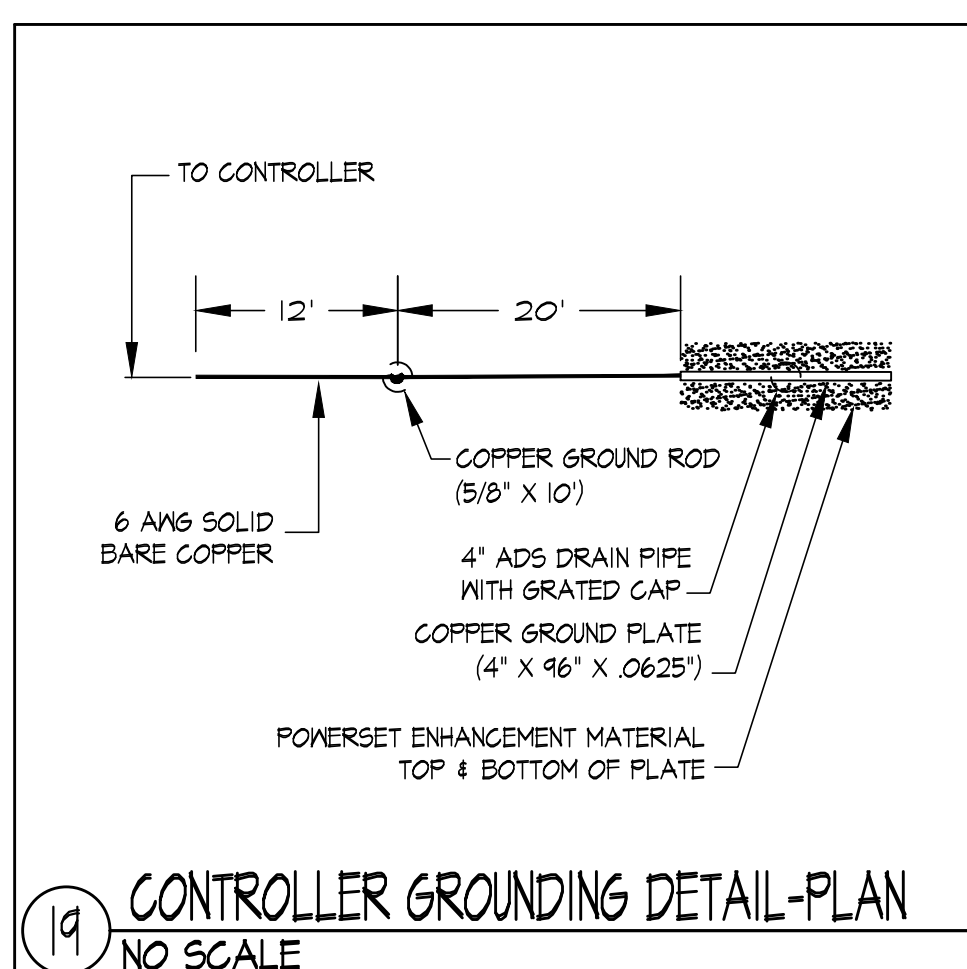
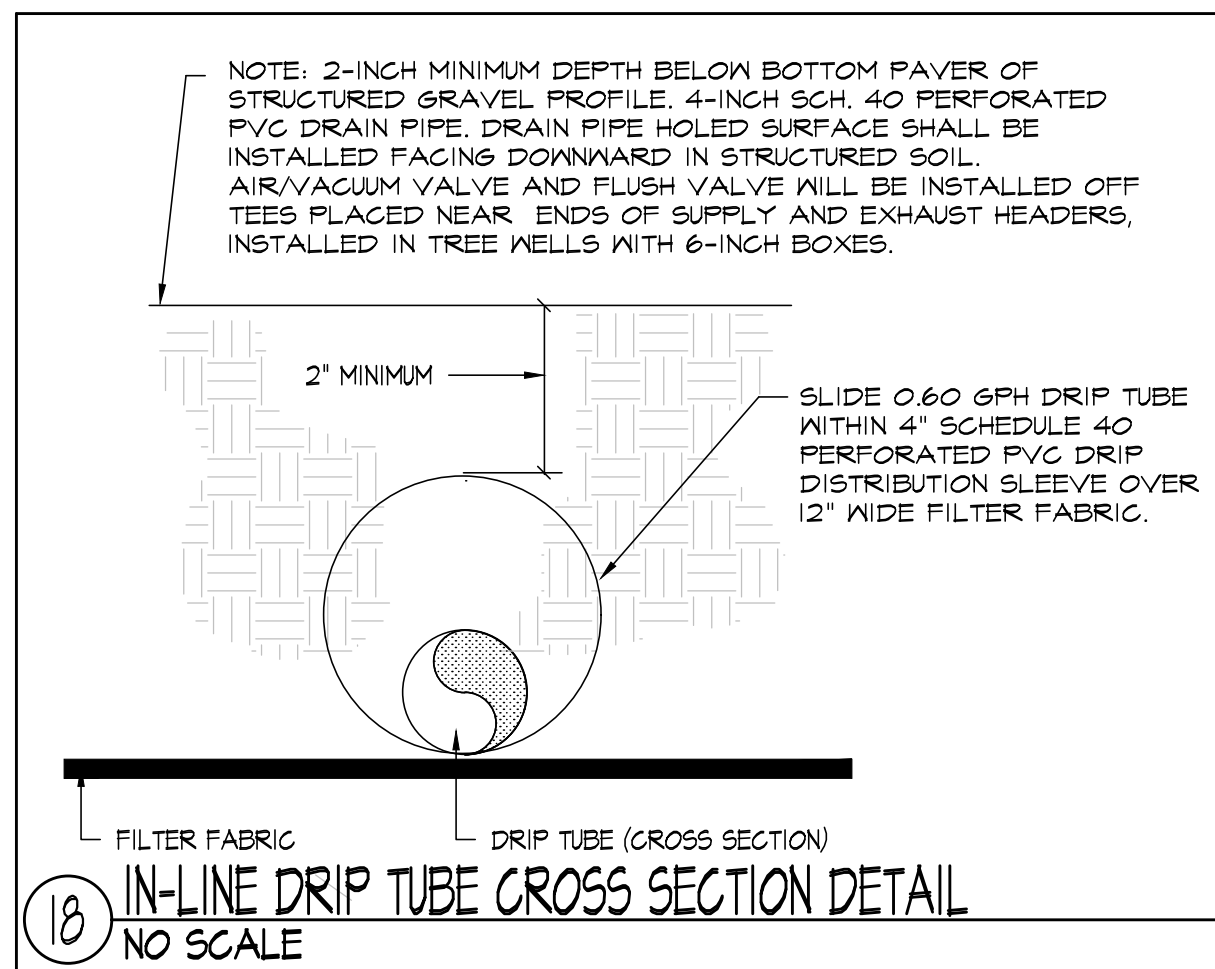
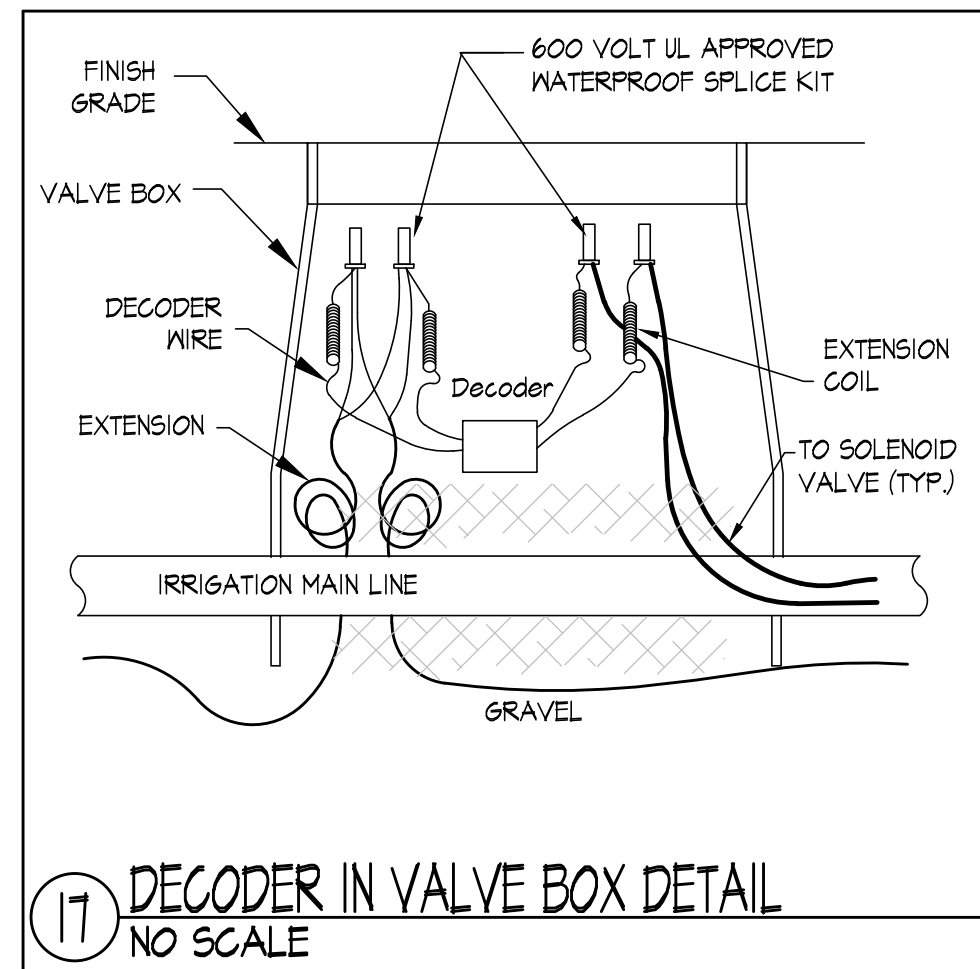
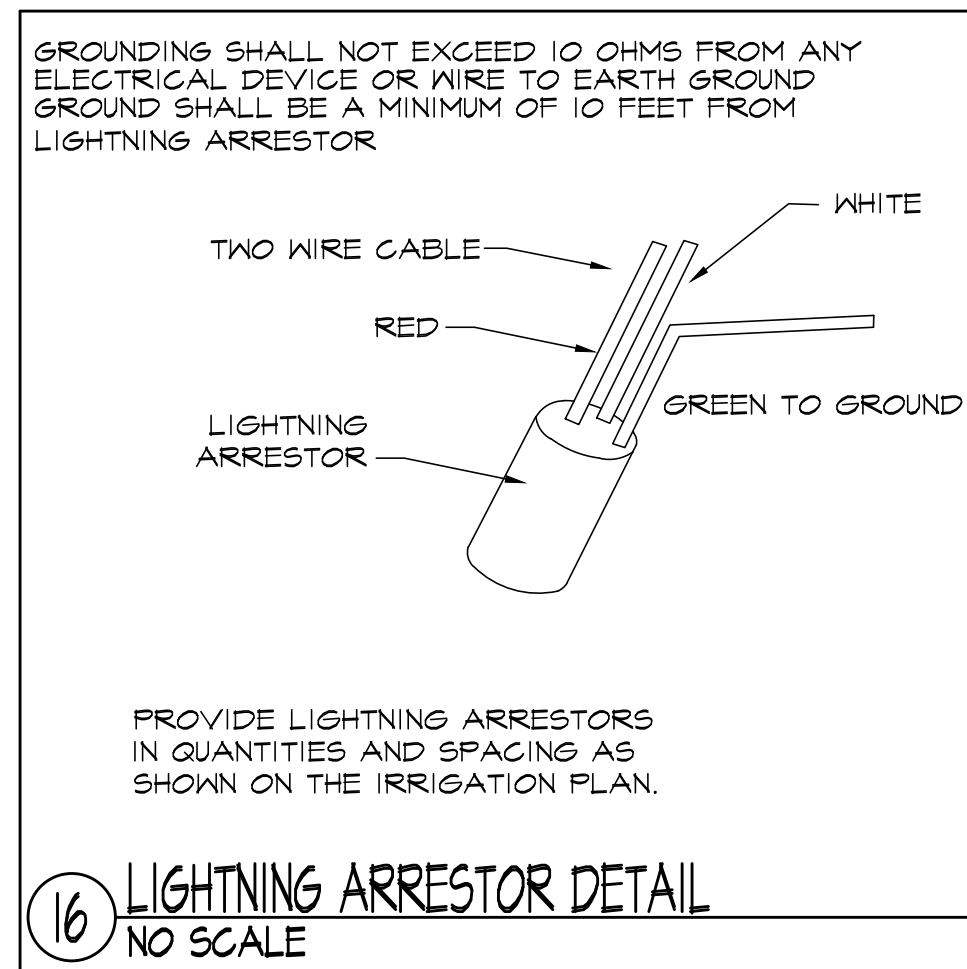
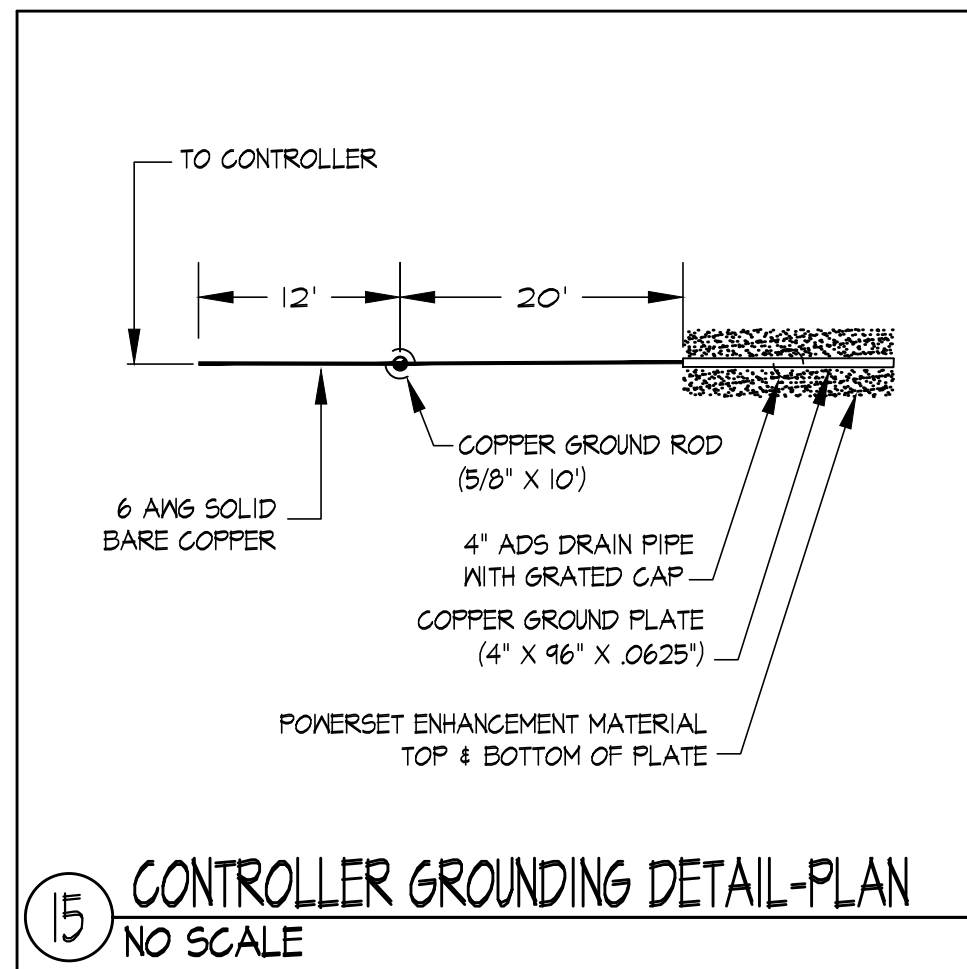
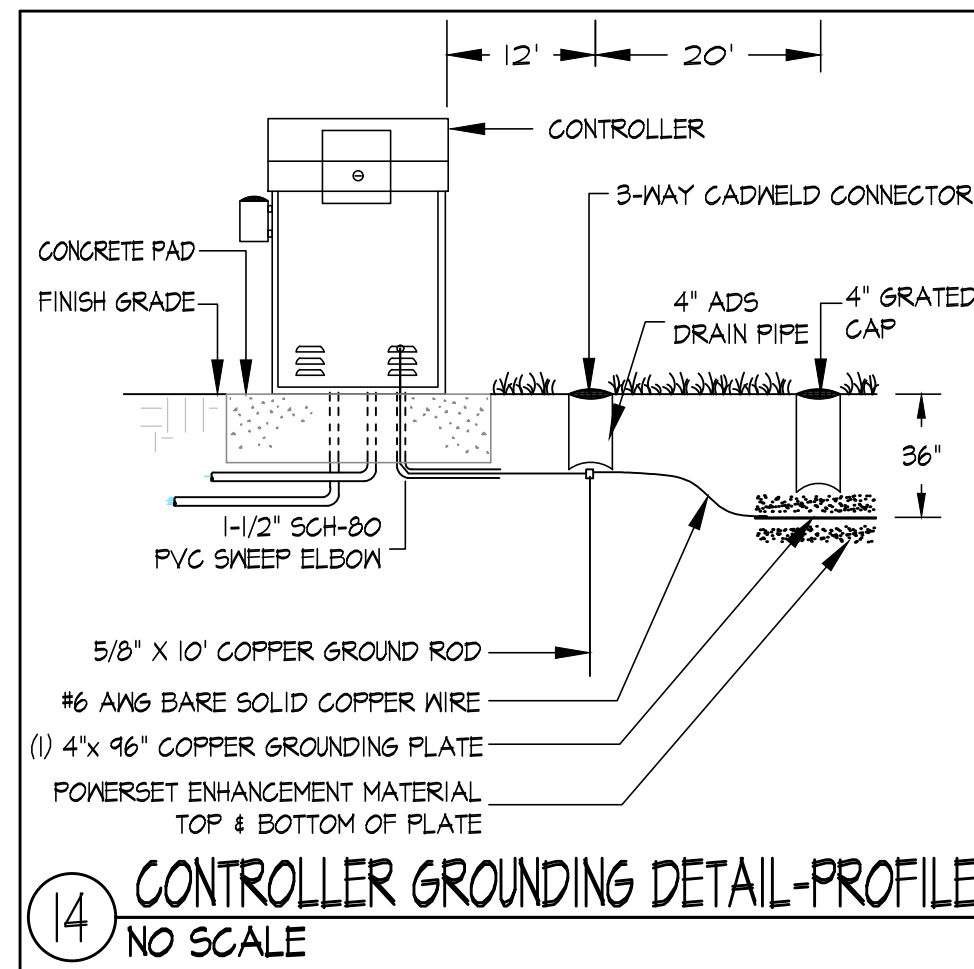
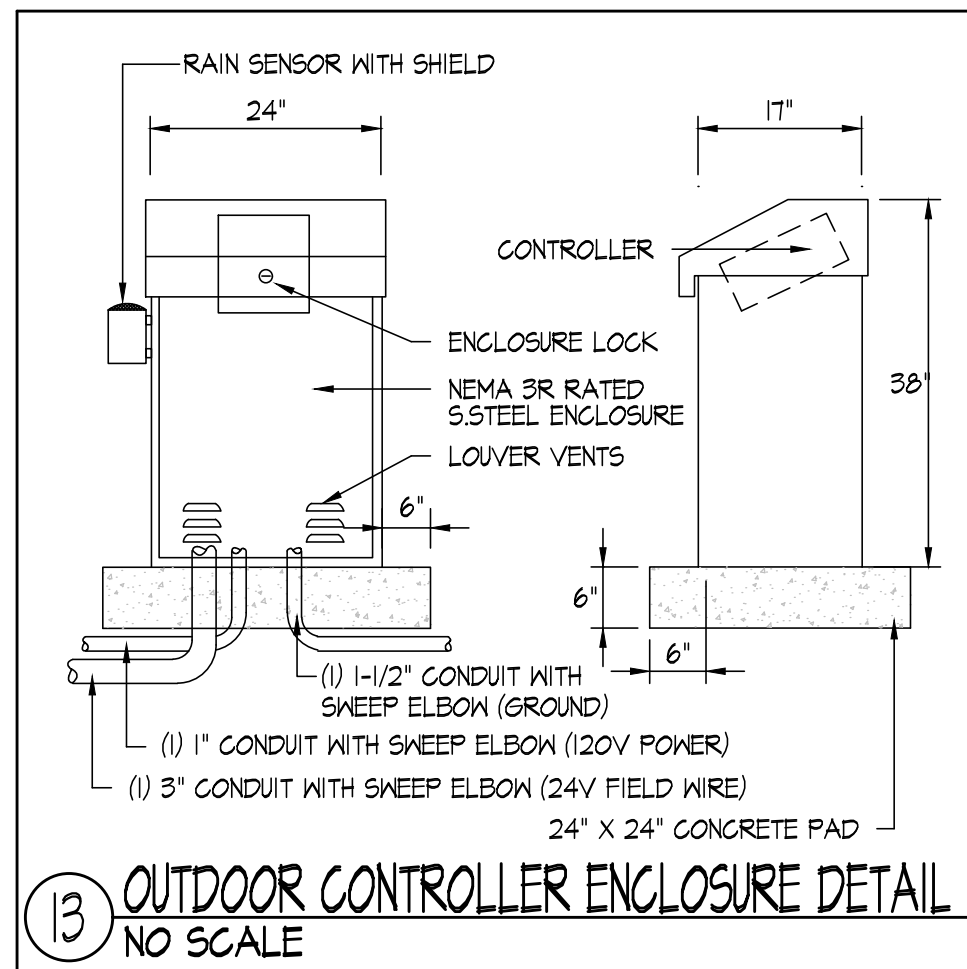


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Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	I-2
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
Drawing	IRRIGATION PLAN - 2		





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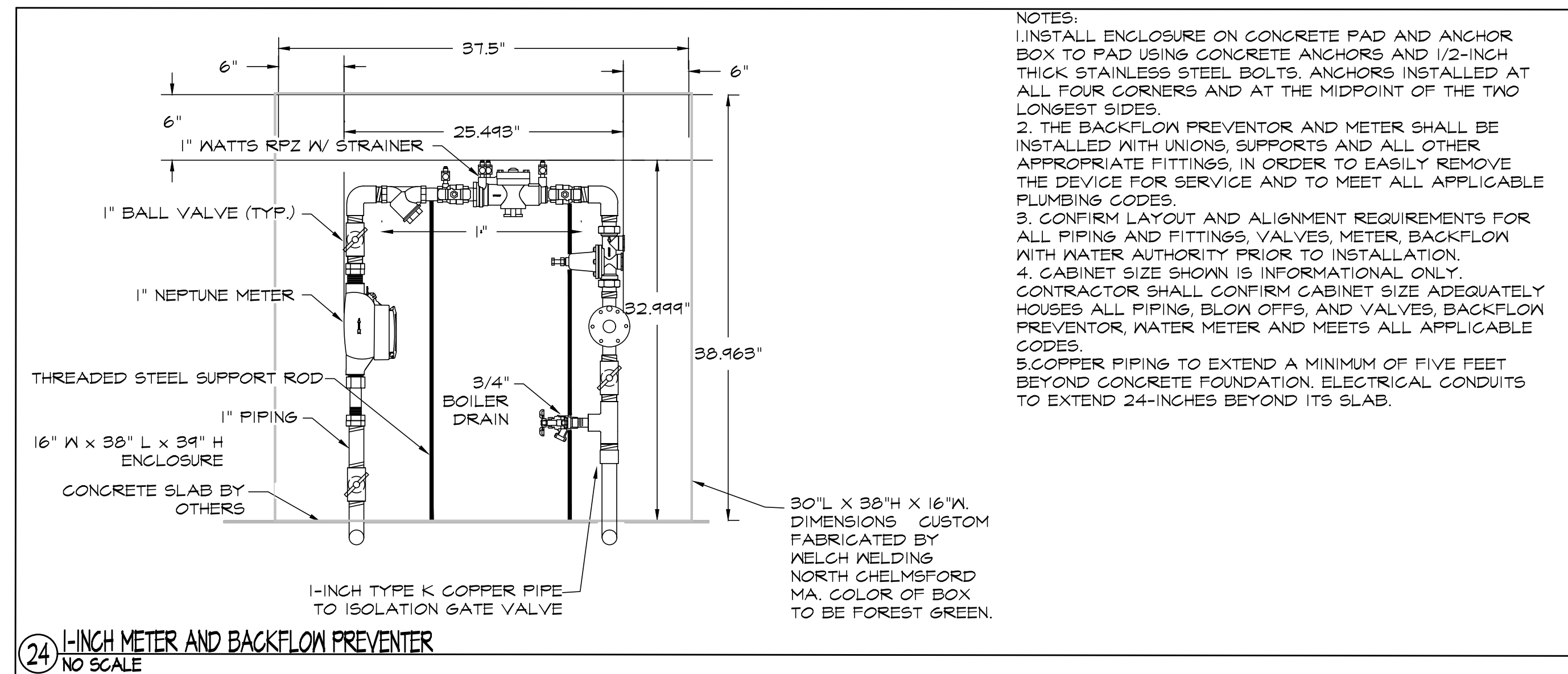
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 Client: CITY OF CAMBRIDGE, MASSACHUSETTS  
 Project: INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT  
 Drawing: IRRIGATION PLAN - 3  
 Sheet: I-3  
 File No.: 8514

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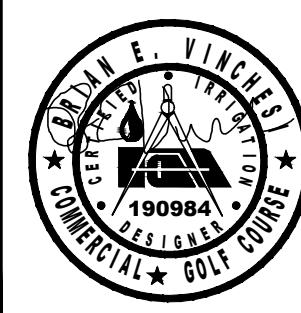
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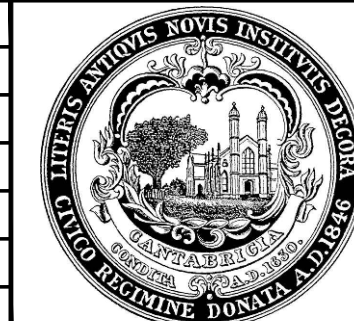
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Client	CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet	I-4
Project	INMAN SQUARE INTERSECTION SAFETY IMPROVEMENT PROJECT	File No.	8514
Drawing	IRRIGATION PLAN - 3		