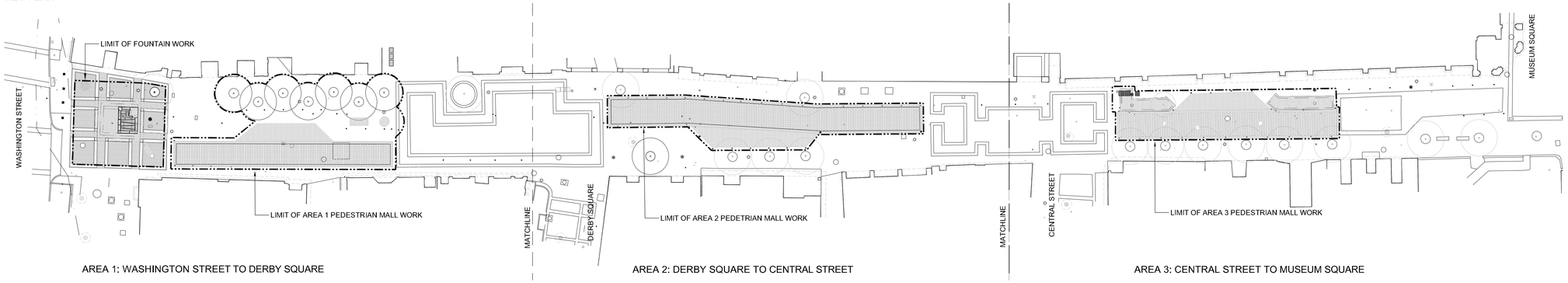
ESSEX STREET: SALEM, MASSACHUSETTS

FOUNTAIN REPAIR SCOPE & PEDESTRIAN MALL SCOPE

100 % CONSTRUCTION DOCUMENTS
APRIL 17, 2013

KEY PLAN



LEGEND

KEY	NOTE
	LIMIT OF WORK
	REMOVE AND DISPOSE
	MAILBOX AND WASTE RECEPTACLE TO BE RELOCATED.
(XX.XX)	EXISTING SPOT GRADE
XX.XX	PROPOSED SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
	DEMOLISH AND DISPOSE OF FOUNTAIN BASIN, KIOSK, WALLS, AND PLANTERS. INFILL GROUND PLANE AS INDICATED ON SHEETS L2.01-L2.02
	EXISTING BRICK AND COBBLE TO BE REMOVED AND STOCKPILED FOR REUSE. REFER TO SPOT GRADES PER SHEET L 2.01- L 2.02 AND PAVING DETAILS PER SHEET. L4.04

FOUNTAIN REPAIR SCOPE

L1.01	SITE REMOVALS PLAN
L2.01	MATERIALS AND GRADING
L3.01	SITE SECTIONS
L4.01	FOUNTAIN SECTIONS
L4.02	FOUNTAIN DETAILS
L4.02B	PRECAST CONCRETE DETAILS
L4.03	PRECAST CONCRETE DETAILS
L4.04	PAVING DETAILS AND TREE SCHEDULE

ELECTRICAL

E0.01	ELECTRICAL LEGEND AND GENERAL NOTES
ED1.01	ELECTRICAL DEMOLITON PLAN
E1.01	ELECTRICAL NEW WORK PLAN
E2.01	ELECTRICAL SCHEDULES AND DETAILS

SHEET INDEX

GENERAL

L0.00	SHEET INDEX, GENERAL NOTES, KEY PLAN
L0.01	EXISTING CONDITIONS
L0.02	EXISTING CONDITIONS
L1.01	SITE REMOVALS PLAN
L1.02	SITE REMOVALS PLAN
L1.03	SITE REMOVALS PLAN
L2.01	MATERIALS AND GRADING
L2.02	MATERIALS AND GRADING
L2.03	MATERIALS AND GRADING
L3.01	SITE SECTIONS
L4.01	FOUNTAIN SECTIONS
L4.02	FOUNTAIN DETAILS
L4.02B	PRECAST CONCRETE DETAILS
L4.03	PRECAST CONCRETE DETAILS
L4.04	PAVING DETAILS AND TREE SCHEDULE

ELECTRICAL

E0.01	ELECTRICAL LEGEND AND GENERAL NOTES
ED1.01	ELECTRICAL DEMOLITON PLAN
E1.01A	ELECTRICAL NEW WORK PLAN
E1.01B	ELECTRICAL NEW WORK FOUNTAIN PLAN
E2.01	ELECTRICAL SCHEDULES AND DETAILS

FOUNTAIN MECHANICAL

WP1.1	WATER FEATURE PLUMBING SYSTEM
WE1.1	WATER FEATURE ELECTRICAL SYSTEM

PEDESTRIAN MALL SCOPE

L1.02	SITE REMOVALS PLAN
L1.03	SITE REMOVALS PLAN
L2.02	MATERIALS, GRADING, AND LAYOUT
L2.03	MATERIALS, GRADING, AND LAYOUT
L4.04	HARDSCAPE DETAILS AND TREE SCHEDULE

ELECTRICAL

E0.01	ELECTRICAL LEGEND AND GENERAL NOTES
ED1.01	ELECTRICAL DEMOLITON PLAN
E1.01	ELECTRICAL NEW WORK PLAN
E2.01	ELECTRICAL SCHEDULES AND DETAILS

GENERAL NOTES

1. ALL GENERAL NOTES APPLY TO ALL SHEETS.

2. THE EXISTING CONDITIONS WERE COMPILED FROM A SURVEY OF THE SITE PREPARED BY **PATROWICZ LAND DEVELOPMENT ENGINEERING,** 14 BROWN STREET, SALEM, MA 01970, 978-836-6400 CELL, 978-745-4110 FAX. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO ACCURATELY REPRESENT ALL CONDITIONS, ACTUAL CONDITIONS MAY VARY FROM THOSE SHOWN. THE CONTRACTOR SHALL MAKE A FULL REVIEW OF ALL VISIBLE EXISTING CONDITIONS OF THE SITE BEFORE STARTING WORK AND SHALL REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT. SUBSURFACE CONDITIONS AT PAVING AND FOUNTAIN VARY AND ARE UNKNOWN. CONSTRUCTION CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXCAVATING AND REMOVING EXISTING WORK AS TO NOT DISTURB PERMANENT CONDITIONS BELOW PAVING AND FOUNTAIN. NOTIFY OWNER AND LANDSCAPE ARCHITECT OF ALL DISCREPANT CONDITIONS AND COORDINATE EXISTING WITH THE DESIGN INTENT. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL EXISTING CONDITIONS AS THEY EXIST ON SITE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE COORDINATION TO COMPLETE THE WORK SHOWN ON THE DRAWINGS.

4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL UTILITIES ABOVE GRADE, AT GRADE, AND UNDERGROUND, INCLUDING UTILITY PIPES AND STRUCTURES. THE CONTRACTOR SHALL NOTIFY DIG SAFE (811) TO VERIFY UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR THE COST INCURRED DUE TO DAMAGE AND REPLACEMENT OF ALL UTILITIES ON SITE.

5. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN NOT DISTURBING EXISTING UTILITIES TO REMAIN.

6. THE CONTRACTOR PREPARE AND SUBMIT A CONSTRUCTION SCHEDULE TO LANDSCAPE ARCHITECT AND UPDATE SCHEDULE PERIODICALLY TO REFLECT ACTUAL CONSTRUCTION PROGRESS AND ACTIVITIES.

7. THE CONTRACTOR SHALL REPAIR OR REMOVE AND REPLACE DEFECTIVE CONSTRUCTION, AND RESTORE DAMAGED SUBSTRATES AND FINISHES. REPAIRING INCLUDES REPLACING DEFECTIVE PARTS, REFINISHING DAMAGED SURFACES, TOUCHING UP WITH MATCHING MATERIALS, AND PROPERLY ADJUSTING OPERATING EQUIPMENT. THE CONTRACTOR SHALL RESTORE PERMANENT FACILITIES USED DURING CONSTRUCTION TO THEIR SPECIFIED CONDITION. THE CONTRACTOR SHALL REMOVE AND REPLACE DAMAGED SURFACES THAT ARE EXPOSED TO VIEW IF SURFACES CANNOT BE REPAIRED WITHOUT VISIBLE EVIDENCE OF REPAIR. THE CONTRACTOR SHALL REPAIR COMPONENTS THAT DO NOT OPERATE PROPERLY.

8. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS. DO NOT INTERRUPT UTILITIES SERVING USED AREAS WITHOUT FIRST OBTAINING PERMISSION FROM THE UTILITY COMPANY AND THE OWNER. PROVIDE TEMPORARY SERVICES AS REQUIRED.

9. DUST AND NOISE CONTROL: TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST AND TO CONTROL NOISE TO AVOID CREATING A NUISANCE. OBTAIN LANDSCAPE ARCHITECT'S AND OWNER'S APPROVAL OF MEANS, METHODS AND TECHNIQUES USED TO CONTROL DUST AND NOISE. AVOID CREATING ICE HAZARDS IN FREEZING WEATHER. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS, FACILITIES, VEGETATION, AND SITE IMPROVEMENTS TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND SELECTIVE DEMOLITION AREA. ALL WORK SHALL BE EXECUTED IN A MANNER THAT TAKES EVERY AND ALL PRECAUTIONS TO ASSURE SAFE WORK OPERATIONS.

10. THE PROPOSED GRADING IS BASED UPON EXISTING CONDITIONS INFORMATION PROVIDED BY THE SURVEY. THE CONTRACTOR SHALL FIELD VERIFY GRADES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES FOR RESOLUTION PRIOR TO STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED UNDER UNCERTAINTY AND SHALL ASSUME FULL RESPONSIBILITY AND ALL COSTS FOR REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS. ALL NEWLY GRADED GROUND SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER AS TO DRAIN PROPERLY AND BE FREE OF DEPRESSIONS WHICH CAUSE STANDING WATER.

12. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW WORK AND THE EXISTING WORK. PONDING AT JOINTS WILL NOT BE ACCEPTED.

13. EXCEPT FOR ITEMS OR MATERIALS INDICATED BY OWNER TO BE REUSED, SALVAGED, OR REINSTALLED, DEMOLISHED MATERIALS SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM THE SITE WITH FURTHER DISPOSITION AT THE CONTRACTOR'S OPTION.

14. FINAL CLEANING: USE CLEANING MATERIALS AND AGENTS RECOMMENDED BY MANUFACTURER OR FABRICATOR OF THE SURFACE TO BE CLEANED. DO NOT USE CLEANING AGENTS THAT ARE POTENTIALLY HAZARDOUS TO HEALTH OR PROPERTY OR THAT MIGHT DAMAGE FINISHED SURFACES. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLY WITH SAFETY STANDARDS FOR CLEANING. CONDUCT CLEANING AND WASTE-REMOVAL OPERATIONS TO COMPLY WITH LOCAL LAWS AND ORDINANCES AND FEDERAL AND LOCAL ENVIRONMENTAL AND ANTIPOLLUTION REGULATIONS. DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON OWNER'S PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL, OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE WASTE MATERIALS FROM PROJECT SITE AND DISPOSE OF LAWFULLY. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF FINAL ACCEPTANCE FOR ENTIRE PROJECT OR FOR A PORTION OF PROJECT:

14.1. CLEAN PROJECT SITE, YARD, AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIAL, LITTER, AND OTHER FOREIGN SUBSTANCES.

14.2. SWEEP PAVED AREAS CLEAN. REMOVE PETROCHEMICAL SPILLS, STAINS, AND OTHER FOREIGN DEPOSITS.

15. INSPECTION: SUBMIT A WRITTEN REQUEST FOR INSPECTION FOR SUBSTANTIAL COMPLETION. ON RECEIPT OF REQUEST, LANDSCAPE ARCHITECT WILL EITHER PROCEED WITH INSPECTION OR NOTIFY CONTRACTOR OF UNFULFILLED REQUIREMENTS. LANDSCAPE ARCHITECT WILL PREPARE THE CERTIFICATE OF SUBSTANTIAL COMPLETION AFTER INSPECTION OR WILL NOTIFY CONTRACTOR OF ITEMS, EITHER ON CONTRACTOR'S LIST OR ADDITIONAL ITEMS IDENTIFIED BY LANDSCAPE ARCHITECT, THAT MUST BE COMPLETED OR CORRECTED BEFORE CERTIFICATE WILL BE ISSUED. REQUEST REINSPECTION WHEN THE WORK IDENTIFIED IN PREVIOUS INSPECTIONS AS INCOMPLETE IS COMPLETED OR CORRECTED. RESULTS OF COMPLETED INSPECTION WILL FORM THE BASIS OF REQUIREMENTS FOR FINAL COMPLETION.

16. RECORD DRAWINGS: MAINTAIN AND SUBMIT ONE SET OF BLUE- OR BLACK-LINE OR PHOTOCOPIED PRINTS OF CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK RECORD PRINTS TO SHOW THE ACTUAL INSTALLATION WHERE INSTALLATION VARIES FROM THAT SHOWN ORIGINALLY. REQUIRE INDIVIDUAL OR ENTITY WHO OBTAINED RECORD DATA, WHETHER INDIVIDUAL OR ENTITY IS INSTALLER, SUBCONTRACTOR, OR SIMILAR ENTITY, TO PREPARE THE MARKED-UP RECORD PRINTS. MARK IMPORTANT ADDITIONAL INFORMATION THAT WAS EITHER SHOWN SCHEMATICALLY OR OMITTED FROM ORIGINAL DRAWINGS.

17. SITE REPLACEMENTS: EXISTING COBBLE PAVERS, BRICK PAVERS, LIGHT FIXTURES, BENCHES, AND TREE GRATES REMOVED SHALL BE SALVAGED AND STOCKPILED FOR REUSE AT A LOCATION TO BE COORDINATED WITH THE OWNER.

18. CONTRACTOR SHALL MATCH AS-BUILT PAVEMENT PROFILE AND SPECIFICATIONS FOR IN-KIND PAVEMENT INSTALLATIONS. REFER TO EXISTING AS-BUILT ESSEX STREET DRAWINGS.

19. STAKING: AFTER REMOVALS AND DEMOLITIONS ARE COMPLETE, STAKE AREAS OF NEW PAVING. LANDSCAPE ARCHITECT TO APPROVE LIMITS OF STAKING PRIOR TO PROCEEDING WITH CONSTRUCTION

20. PAVING: AREAS OF NEW BRICK PAVING TO BLEND WITH EXISTING BRICK PAVING. NEWLY BRICK PAVING TO MATCH THE EXISTING IN COLOR AND IN PROPORTIONS OF LIGHT AND DARK PAVERS. CONTRACTOR SHALL PREPARE A SAMPLE MOCKUP BLENDING NEW AND EXISTING BRICK PAVING FOR LANDSCAPE ARCHITECT APPROVAL. UPON APPROVAL, ALL INSTALLED BRICK PAVING SAMPLES SHALL MATCH THE MOCKUP.

21. STREET LIGHTS TO BE MOUNTED PER CITY STANDARDS

ESSEX STREET

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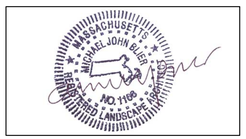
REVISIONS

No.	Date	Description

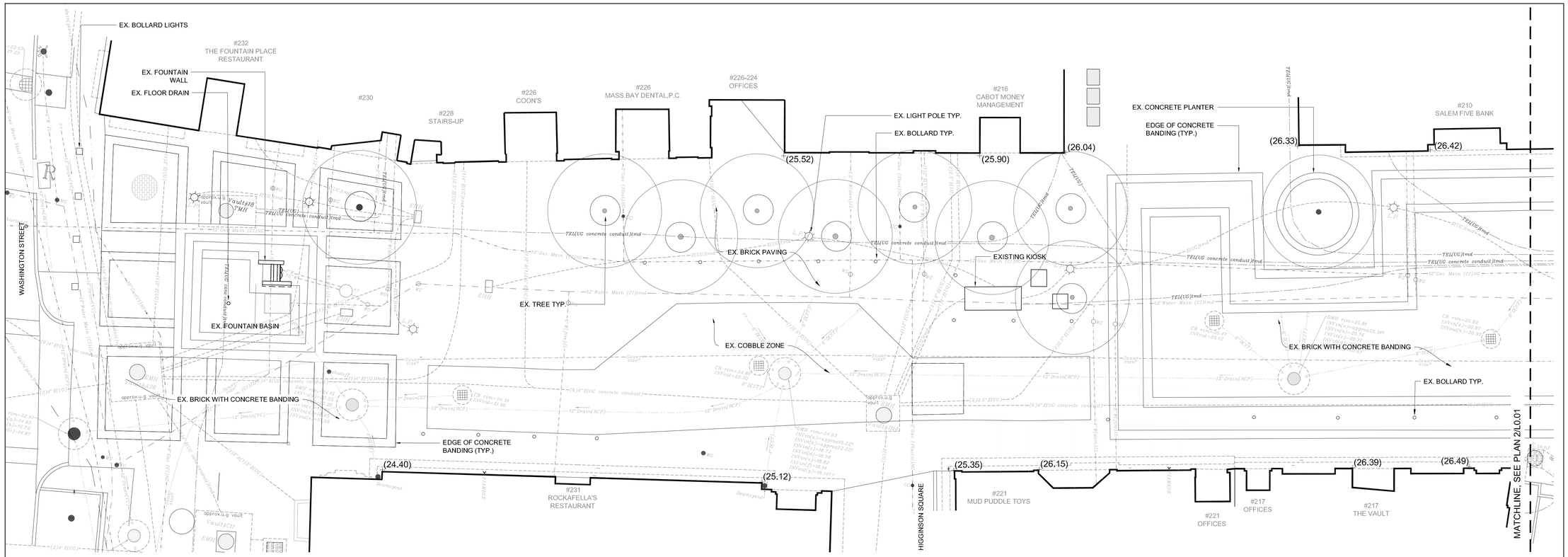
APRIL 17, 2013
100% CONSTRUCTION DOCUMENTS

DRAWN BY: JT
CHECKED BY: CM, RR, SW
LWSI PROJECT NUMBER
1202



SHEET INDEX,
GENERAL NOTES, KEY
PLAN

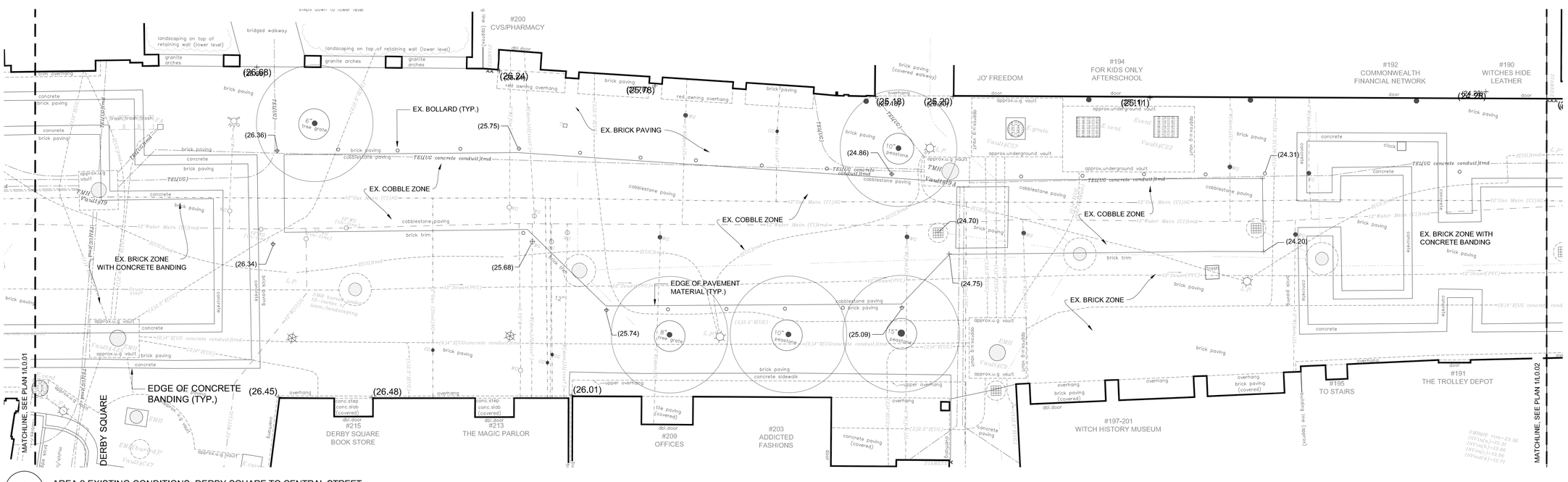
L0.00



1 AREA 1 EXISTING CONDITIONS: WASHINGTON STREET TO DERBY SQUARE

SCALE: 1/8" = 1'-0"

PLAN VIEW



2 AREA 2 EXISTING CONDITIONS: DERBY SQUARE TO CENTRAL STREET

SCALE: 1/8" = 1'-0"

PLAN VIEW

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DRAWN BY: JT

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LWSI PROJECT NUMBER
1202

4' 8'
0'

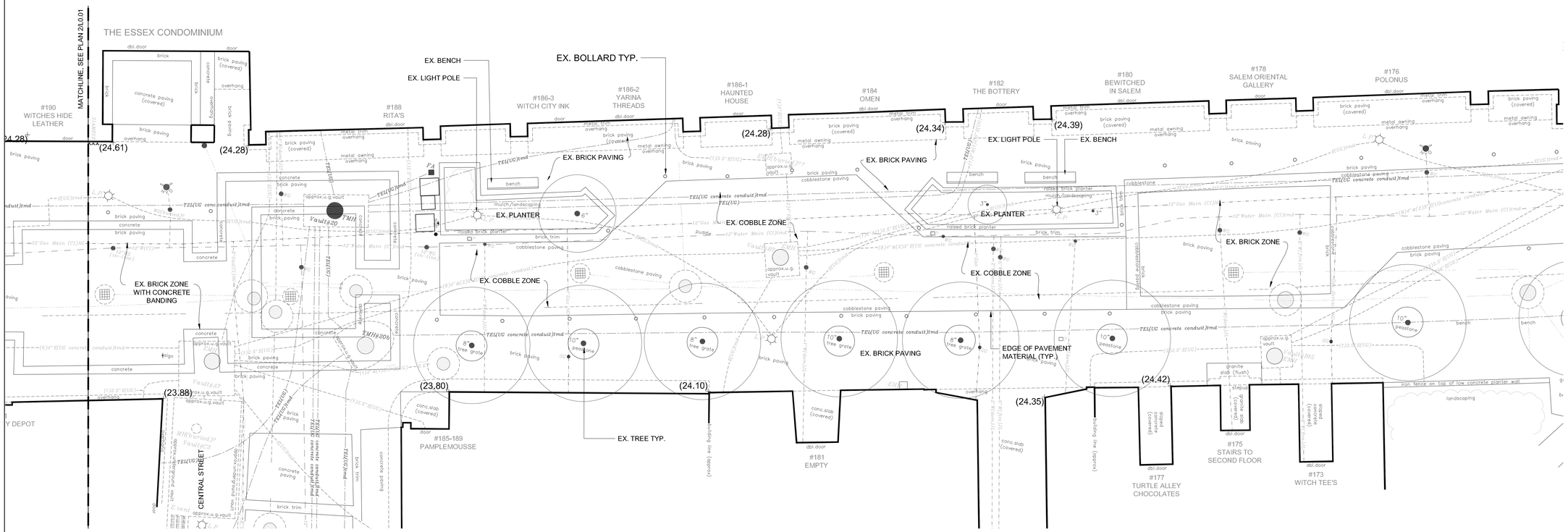
SCALE: 1/8" = 1'-0"

N

MASSACHUSETTS
MICHAEL JOHN RIER
No. 1169
REGISTERED LANDSCAPE ARCHITECT

EXISTING CONDITIONS PLAN

L0.01



1 AREA 3 EXISTING CONDITIONS: CENTRAL STREET TO MUSEUM SQUARE

SCALE: 1/8" = 1'-0"

PLAN VIEW

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LWSI PROJECT NUMBER
1202

4' 0' 8'

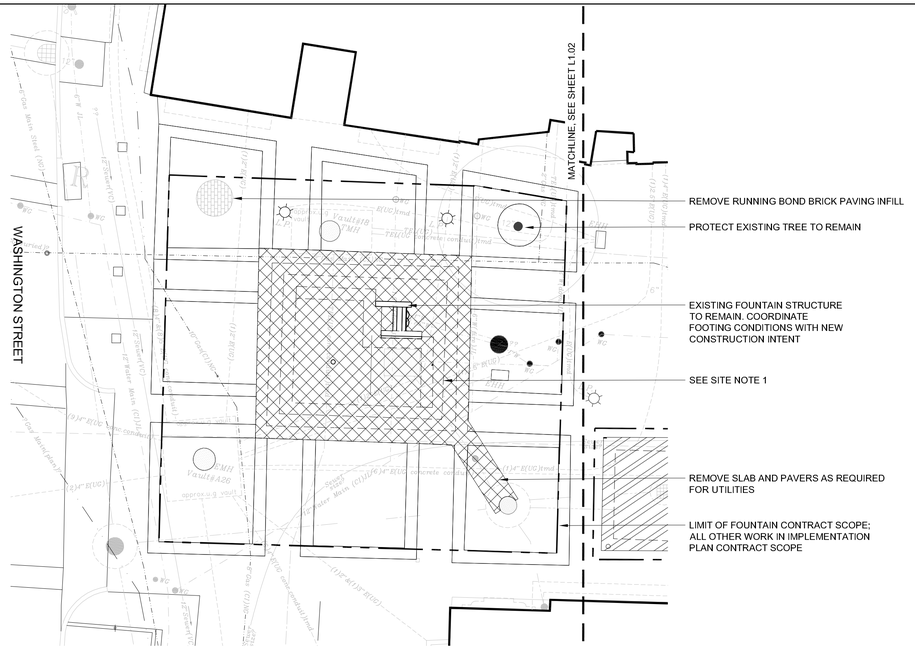
SCALE: 1/8" = 1'-0"

N

MASSACHUSETTS MICHAEL JOHN RUSSO NO. 1706 REGISTERED LANDSCAPE ARCHITECT

EXISTING CONDITIONS PLAN

L0.02



1 FOUNTAIN REMOVALS

SCALE: 1/8" = 1'-0"

PLAN VIEW

*ALL WORK ON SHEET L1.01 IS PART OF THE FOUNTAIN REPAIR SCOPE

SITE NOTES

1. REMOVE EXISTING CONCRETE STEPS AND BASIN. PROTECT FOUNTAIN WALL STRUCTURE, PLUMBING, AND EXISTING TREE. CAP FLOOR DRAIN IN FOUNTAIN BASIN. REMOVE CIRCULAR BRICK PAVING AREA WITH RUNNING BOND PATTERN. REMOVE PAVERS AND SLAB AS REQUIRED TO COMPLETE NEW UTILITY WORK.

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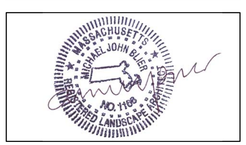
1202

8' 0' 4' 8'

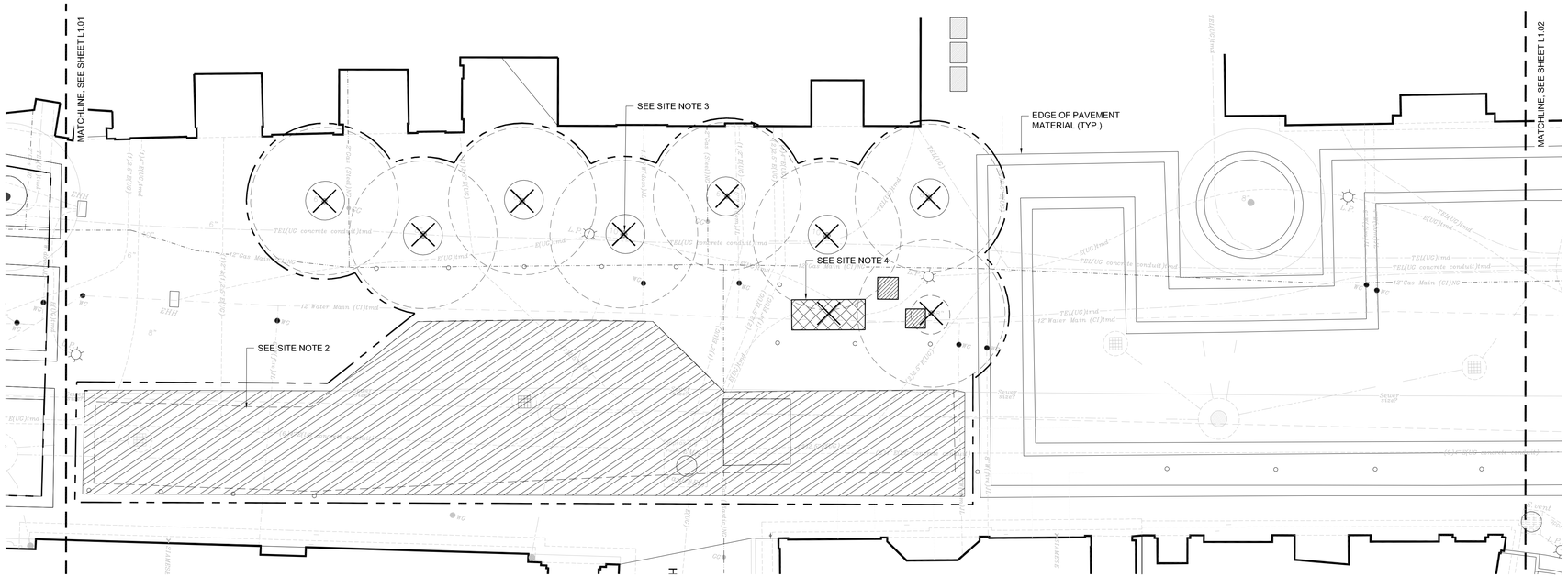
SCALE: 1/8" = 1'-0"

N



SITE REMOVALS PLAN

L1.01



1 AREA 1 REMOVALS: WASHINGTON STREET TO DERBY SQUARE

SCALE: 1/8" = 1'-0"

PLAN VIEW

*ALL WORK ON SHEET L1.02 IS PART OF THE PEDESTRIAN MALL CONTRACT SCOPE

SITE NOTES

1. REMOVE EXISTING CONCRETE STEPS AND BASIN. PROTECT FOUNTAIN WALL STRUCTURE, PLUMBING, AND EXISTING TREE. CAP FLOOR DRAIN IN FOUNTAIN BASIN. REMOVE CIRCULAR BRICK PAVING AREA WITH RUNNING BOND PATTERN. REMOVE PAVERS AND SLAB AS REQUIRED TO COMPLETE NEW UTILITY WORK.
2. REMOVE AND REUSE EXISTING COBBLES.
3. REMOVE AND DISCARD (8) EXISTING TREES. STOCKPILE EXISTING TREE GRATES FOR REUSE.
4. DEMOLISH AND DISCARD EXISTING KIOSK. RELOCATE ELECTRICAL SWITCHES AS INDICATED ON ELECTRICAL SHEETS.
5. REMOVE EXISTING COBBLES IN AREA 2 AND STOCKPILE FOR REUSE. PROTECT EXISTING BOLLARDS.
6. DEMOLISH AND DISCARD EXISTING BRICK PLANTER CURB, PLANTING SOIL, SHRUBS, AND TREES. REMOVE EXISTING COBBLES, (3) BENCHES, AND (2) LIGHT POLES; STOCKPILE FOR REUSE.

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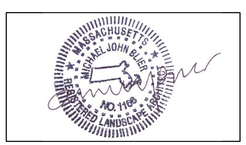
CHECKED BY: CM, RR, SW

LWSI PROJECT NUMBER
1202

8' 4' 0' 8'

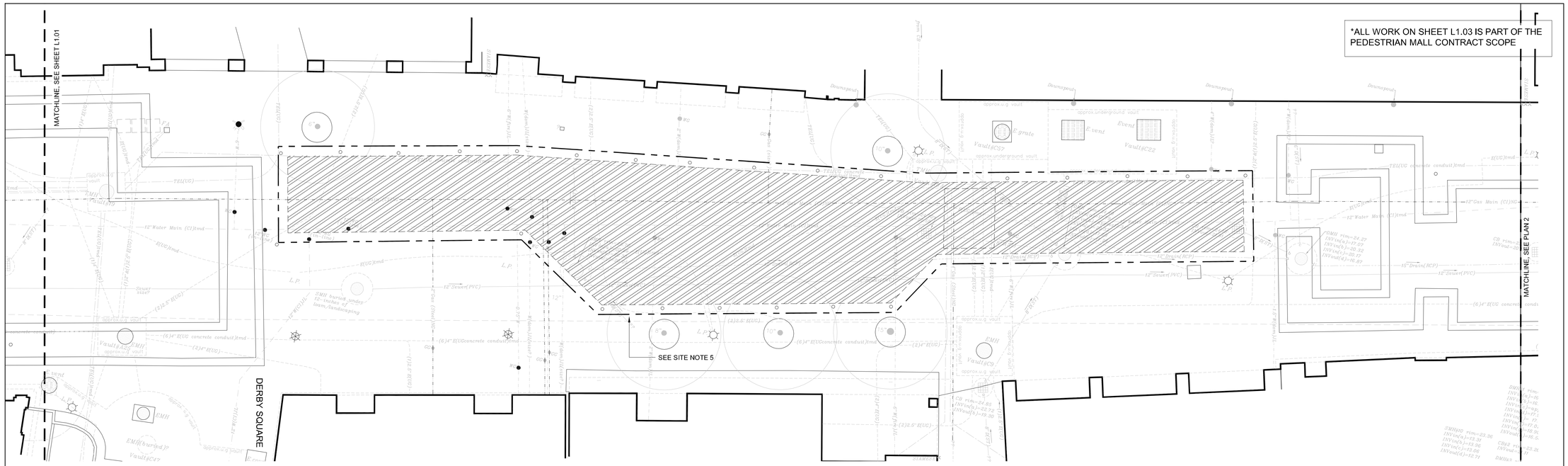
SCALE: 1/8" = 1'-0"

N



SITE REMOVALS PLAN

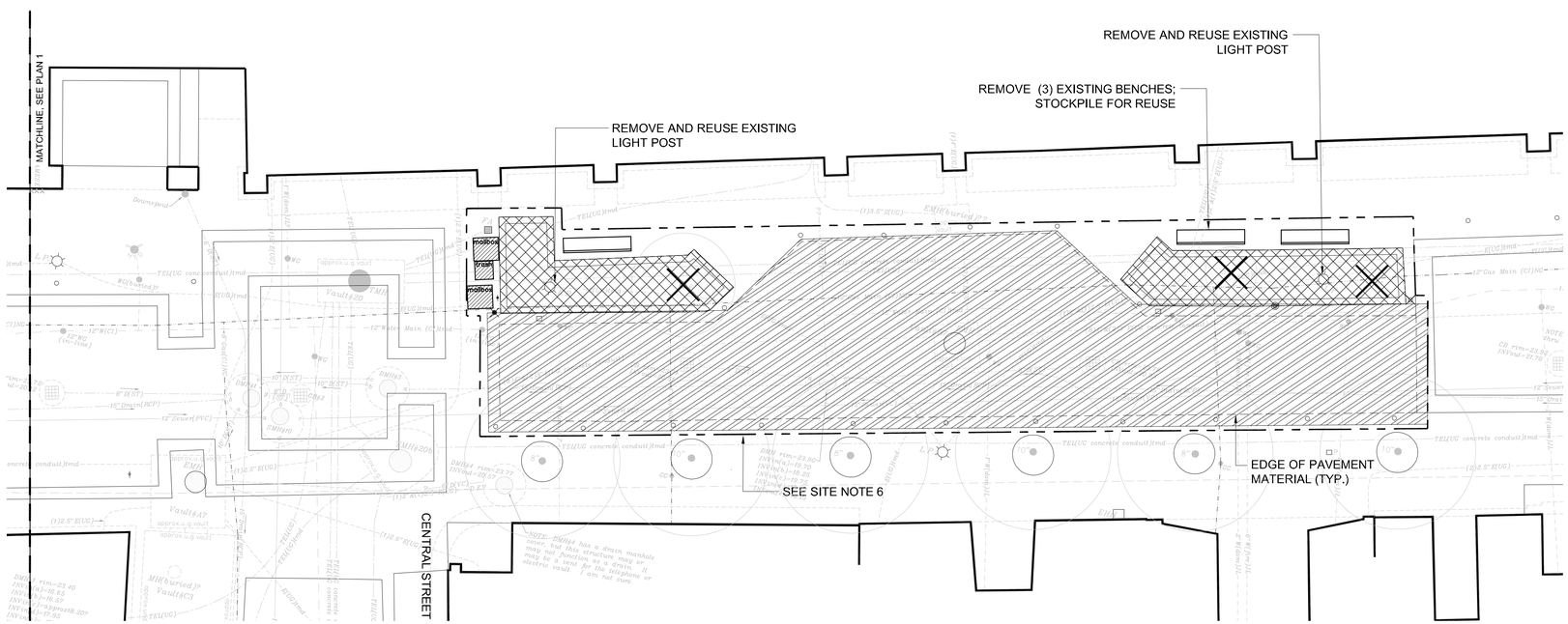
L1.02



1 AREA 2 REMOVALS: DERBY SQUARE TO CENTRAL STREET

SCALE: 1/8" = 1'-0"

PLAN VIEW



2 AREA 3 REMOVALS: CENTRAL STREET TO MUSEUM SQUARE

SCALE: 1/8" = 1'-0"

PLAN VIEW

SITE NOTES

1. REMOVE EXISTING CONCRETE STEPS AND BASIN. PROTECT FOUNTAIN WALL STRUCTURE, PLUMBING, AND EXISTING TREE. CAP FLOOR DRAIN IN FOUNTAIN BASIN. REMOVE CIRCULAR BRICK PAVING AREA WITH RUNNING BOND PATTERN. REMOVE PAVERS AND SLAB AS REQUIRED TO COMPLETE NEW UTILITY WORK.
2. REMOVE AND REUSE EXISTING COBBLES.
3. REMOVE AND DISCARD (8) EXISTING TREES. STOCKPILE EXISTING TREE GRATES FOR REUSE.
4. DEMOLISH AND DISCARD EXISTING KIOSK. RELOCATE ELECTRICAL SWITCHES AS INDICATED ON ELECTRICAL SHEETS.
5. REMOVE EXISTING COBBLES IN AREA 2 AND STOCKPILE FOR REUSE. PROTECT EXISTING BOLLARDS.
6. DEMOLISH AND DISCARD EXISTING BRICK PLANTER CURB, PLANTING SOIL, SHRUBS, AND TREES. REMOVE EXISTING COBBLES, (3) BENCHES, AND (2) LIGHT POLES; STOCKPILE FOR REUSE.

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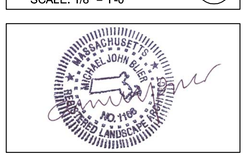
LWSI PROJECT NUMBER 1202

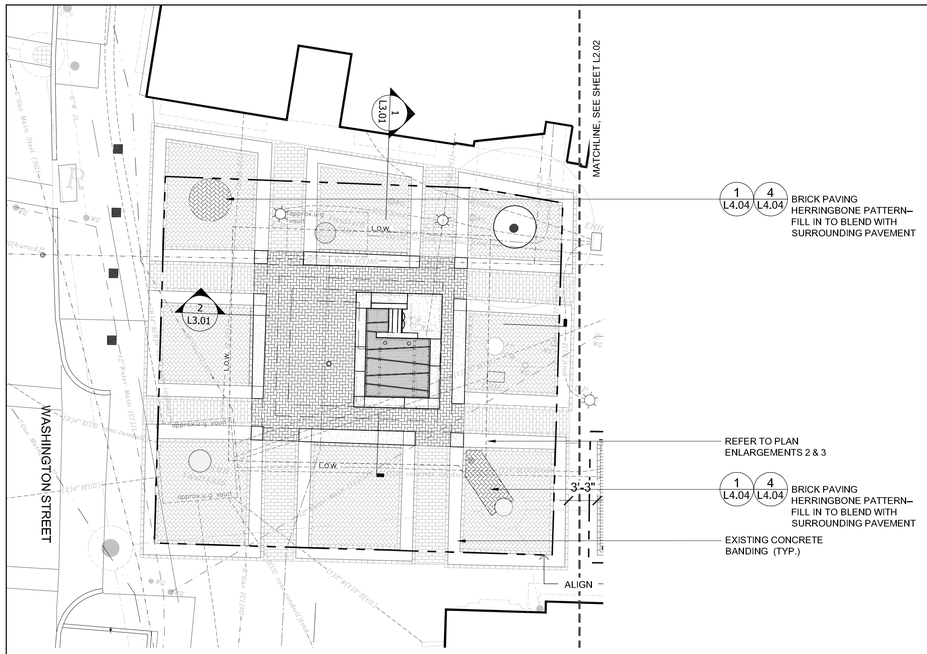
8' 4' 0' 8'
SCALE: 1/8" = 1'-0"



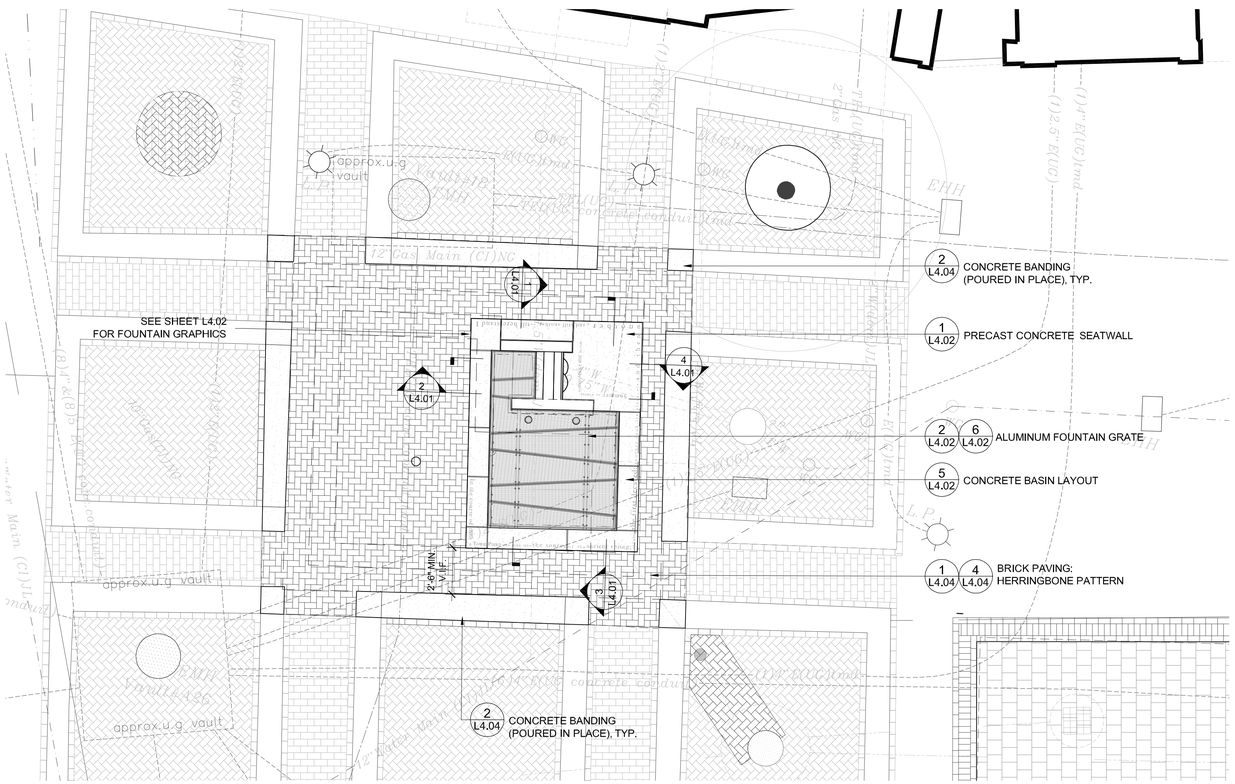
SITE REMOVALS PLAN

L1.03

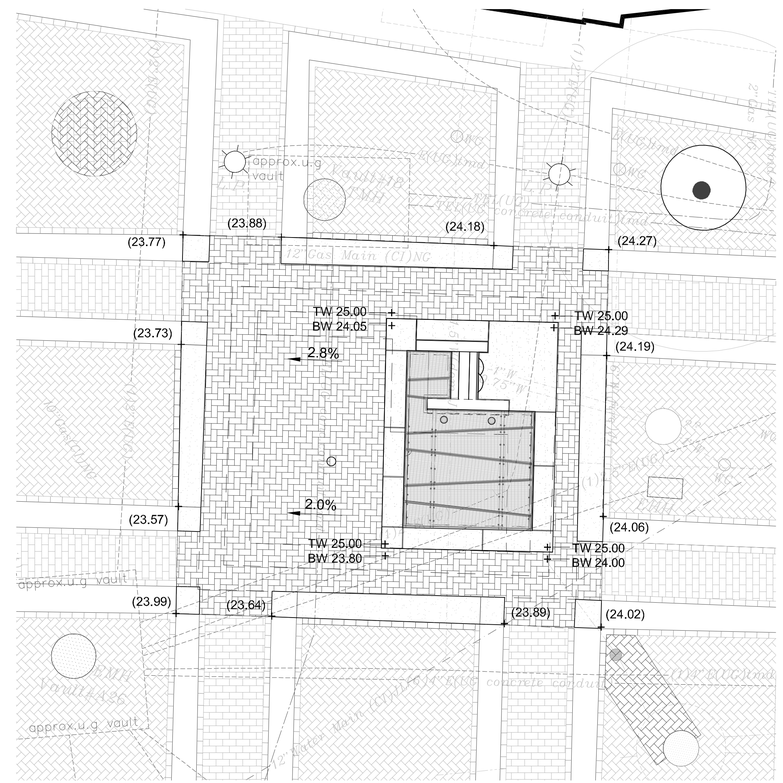
*ALL WORK ON SHEET L2.01 IS PART OF THE FOUNTAIN REPAIR SCOPE



1 WASHINGTON GATEWAY
SCALE: 1/8" = 1'-0"
PLAN VIEW



2 MATERIALS PLAN ENLARGEMENT - WASHINGTON GATEWAY
SCALE: 1/4" = 1'-0"



3 GRADING PLAN ENLARGEMENT - WASHINGTON GATEWAY
SCALE: 1/4" = 1'-0"

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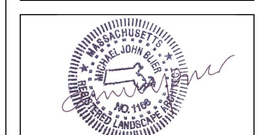
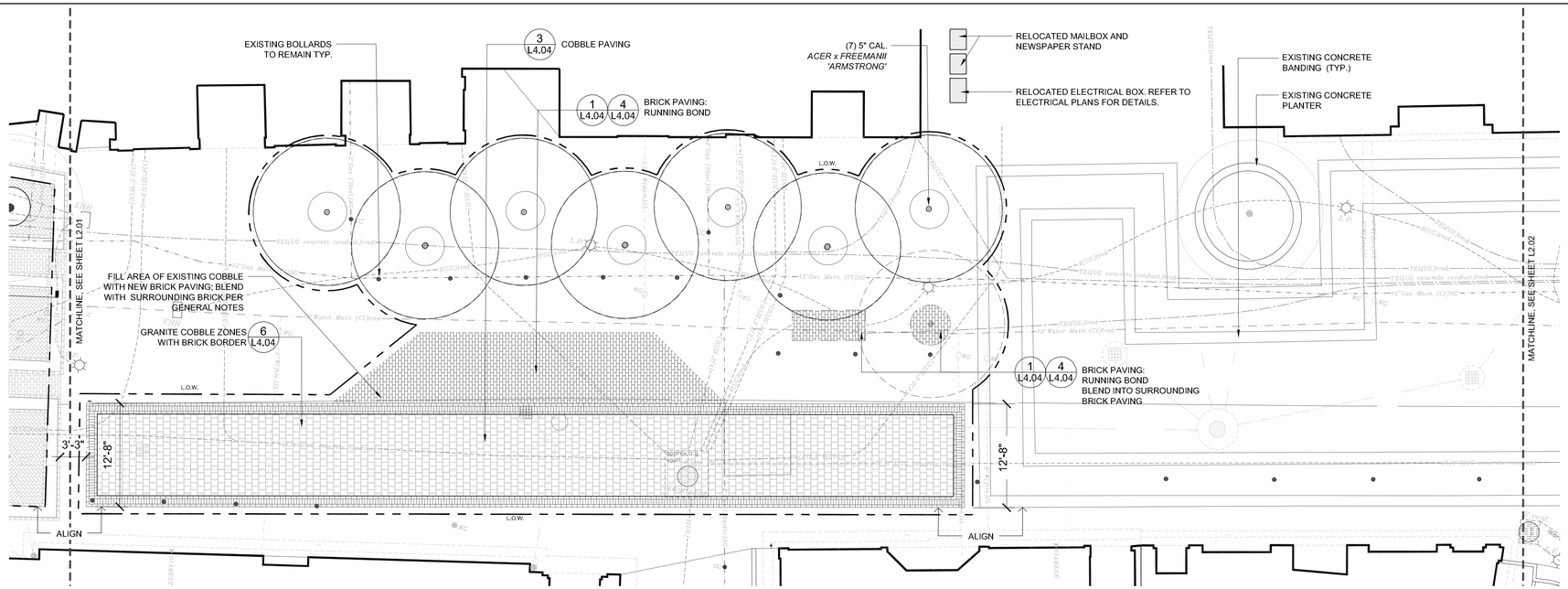
1202

N



MATERIALS AND GRADING

L2.01



1 AREA 1 LAYOUT PLAN: WASHINGTON STREET TO DERBY SQUARE

SCALE: 1/8" = 1'-0"

8' 0' 4' 8'

PLAN VIEW

*ALL WORK ON SHEET L2.02 IS PART OF THE PEDESTRIAN MALL CONTRACT SCOPE

*ALL WORK ON SHEET L2.02 IS PART OF THE IMPLEMENTATION PLAN CONTRACT SCOPE

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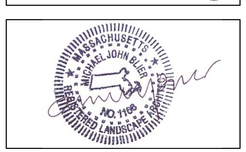
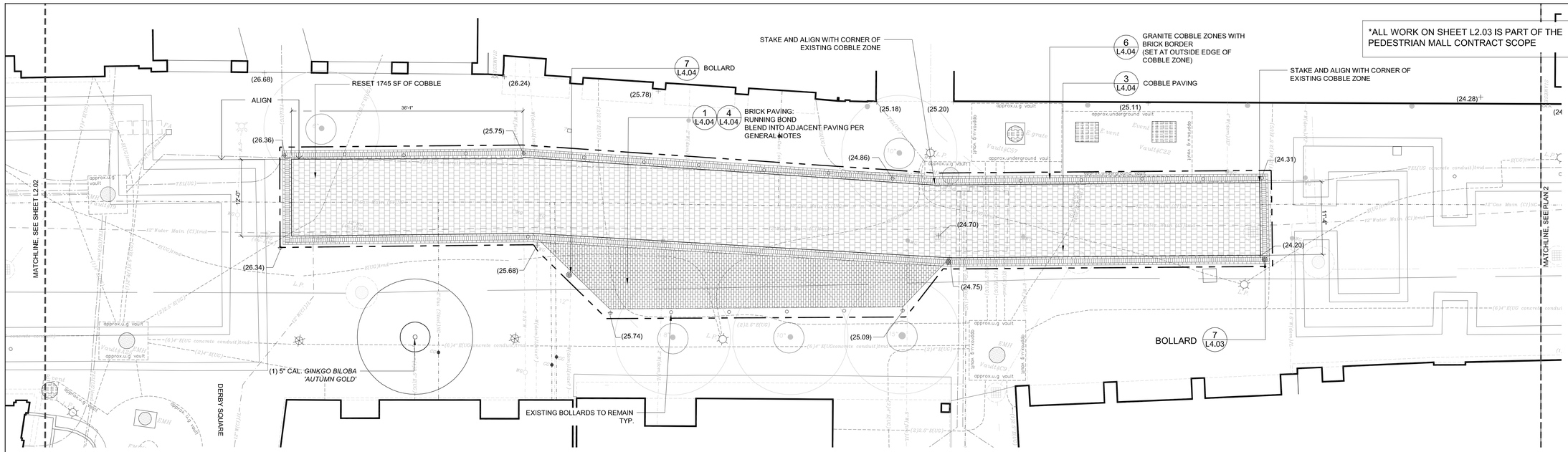


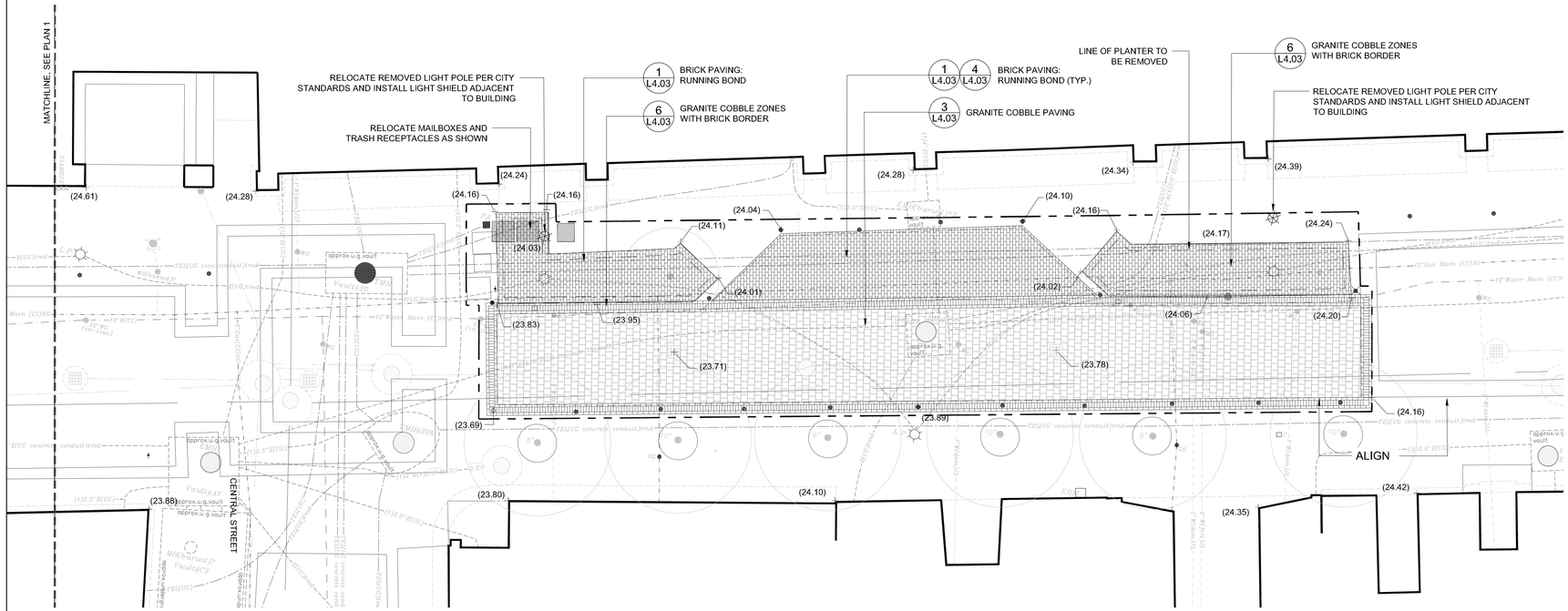
MATERIALS AND GRADING

L2.02



1 AREA 2 MATERIALS AND GRADING PLAN: DERBY SQUARE TO CENTRAL STREET

SCALE: 1/8" = 1'-0"



2 AREA 3 MATERIALS AND GRADING PLAN: CENTRAL STREET TO MUSEUM SQUARE

SCALE: 1/8" = 1'-0"

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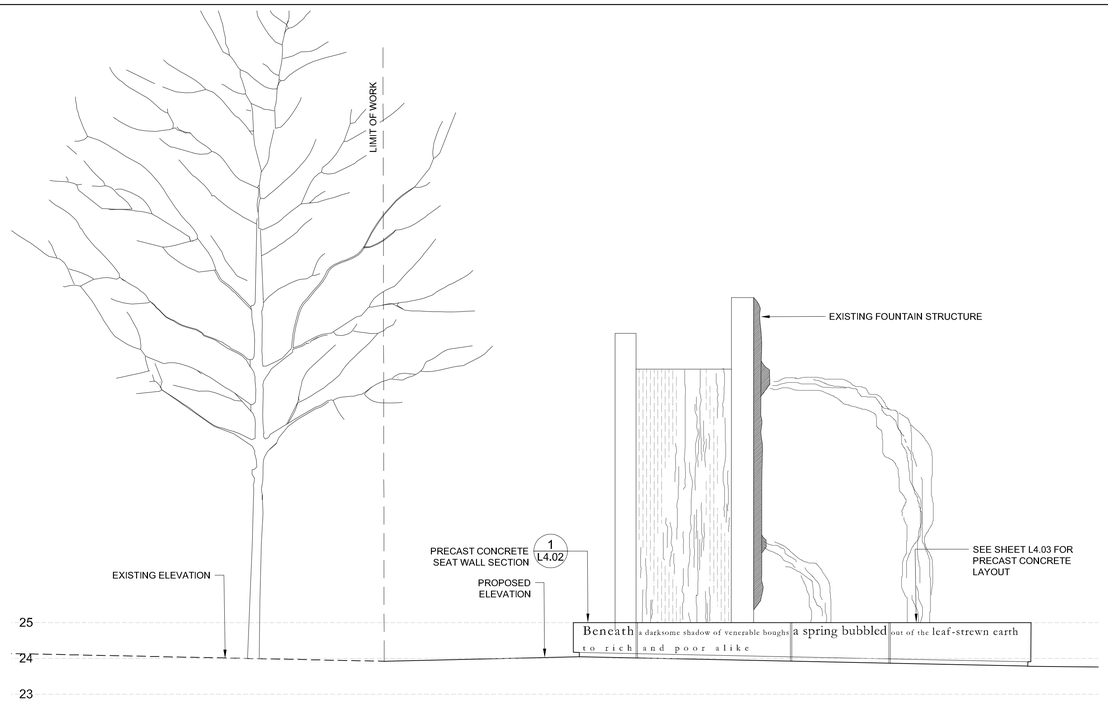
MASSACHUSETTS MICHAEL JOHN RUSSO NO. 1706 REGISTERED LANDSCAPE ARCHITECT

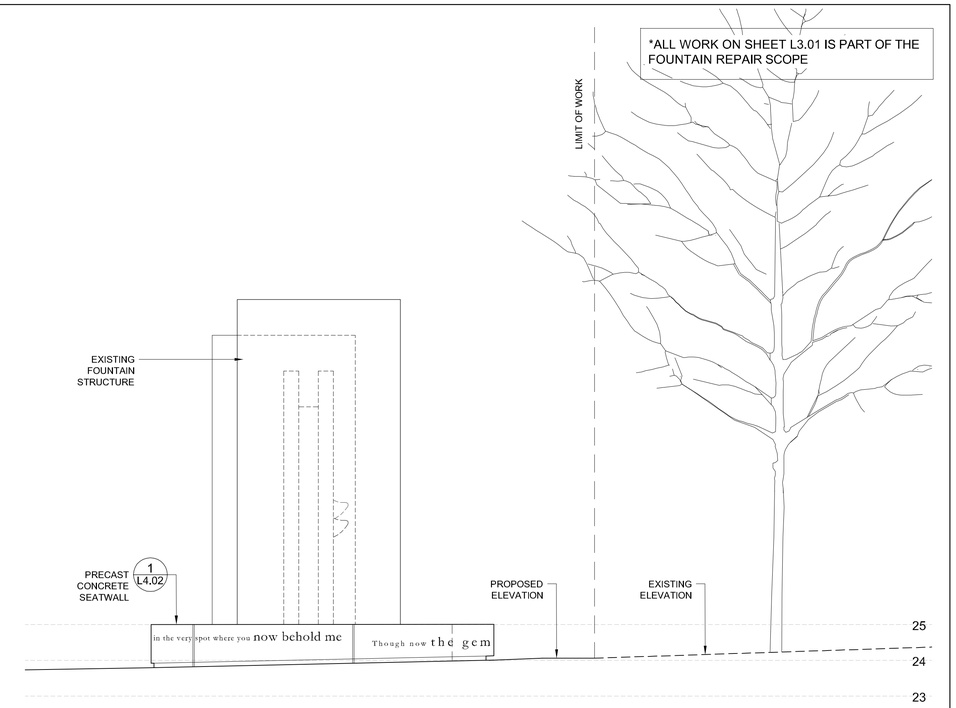
MATERIALS AND GRADING

L2.03



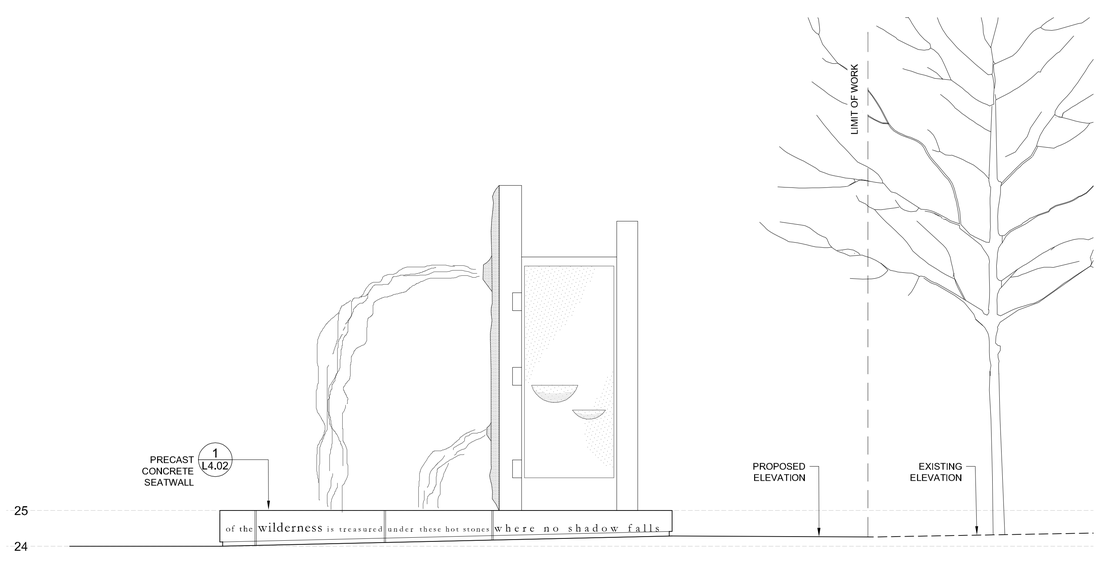
1 SECTION - ELEVATION: FACING EAST

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



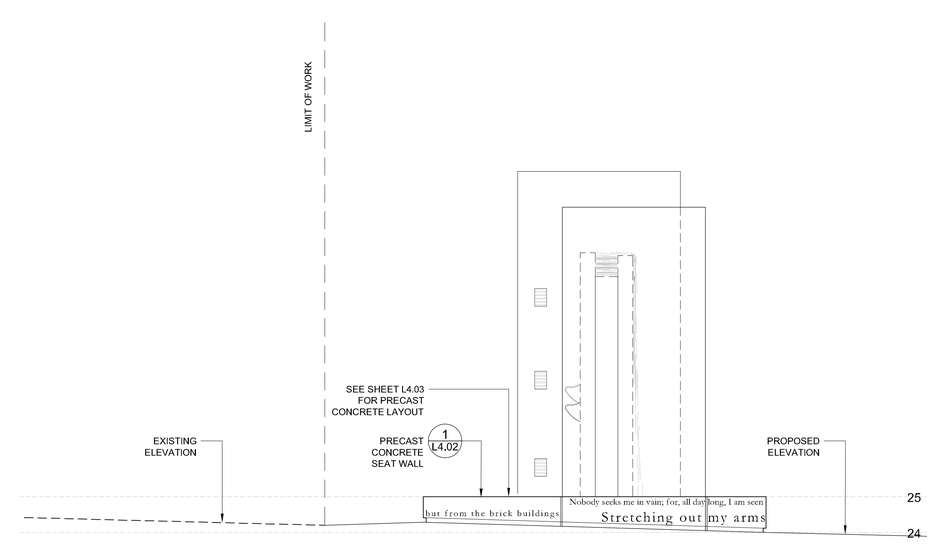
2 SECTION - ELEVATION: FACING NORTH

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



3 SECTION - ELEVATION: FACING WEST

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



4 SECTION - ELEVATION: FACING SOUTH

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

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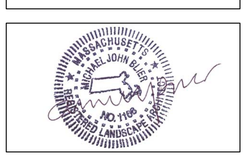
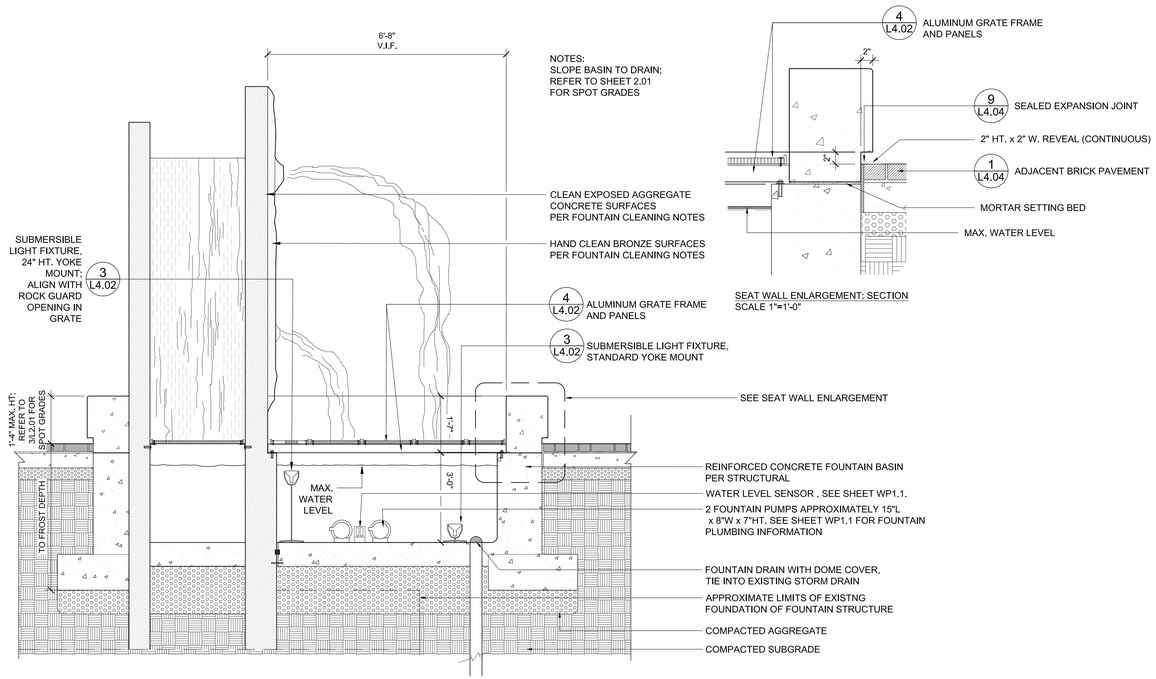


SITE SECTIONS

L3.01

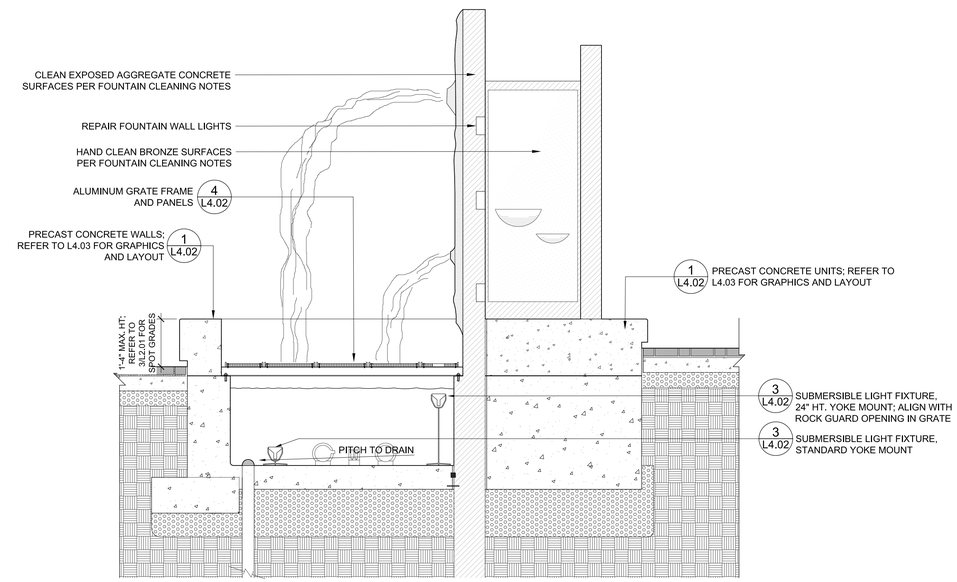


SEAT WALL ENLARGEMENT: SECTION
SCALE 1"=1'-0"

1 FOUNTAIN SECTION (FACING WEST)

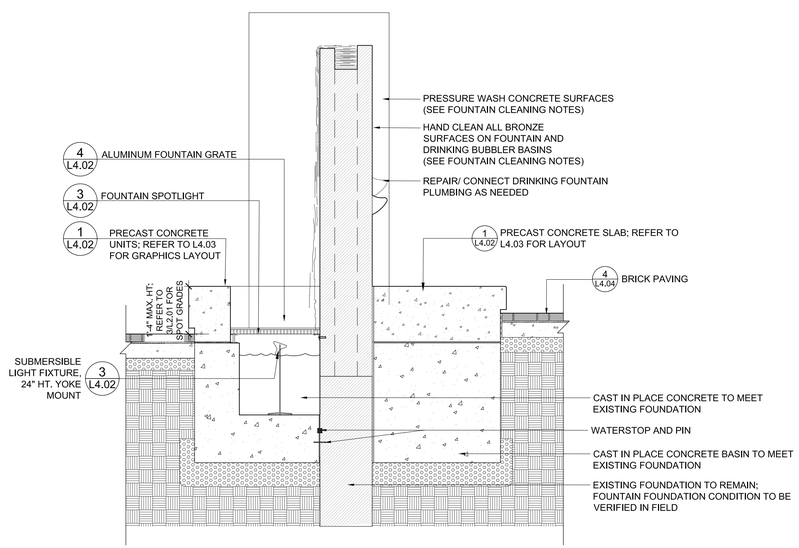
SCALE: 1/2" = 1' - 0"

*ALL WORK ON SHEET L4.01 IS PART OF THE FOUNTAIN REPAIR SCOPE



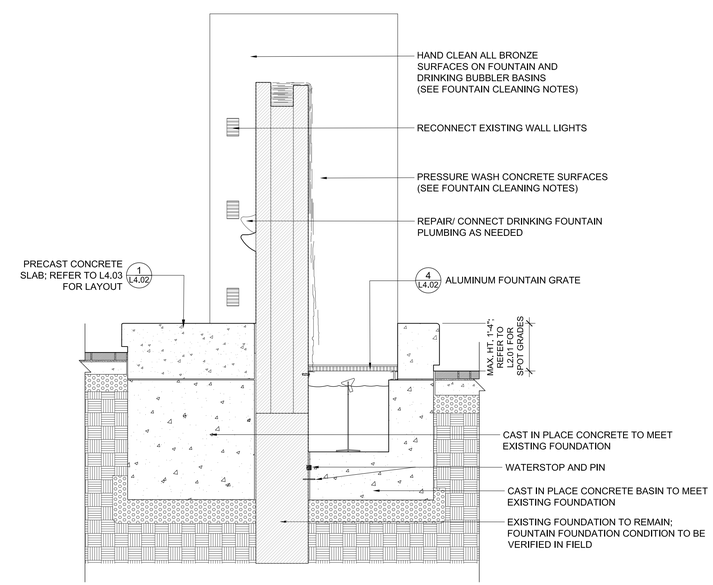
2 FOUNTAIN SECTION (FACING EAST)

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



3 FOUNTAIN SECTION (FACING NORTH)

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



4 FOUNTAIN SECTION (FACING SOUTH)

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

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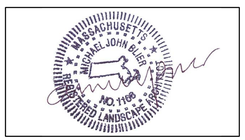
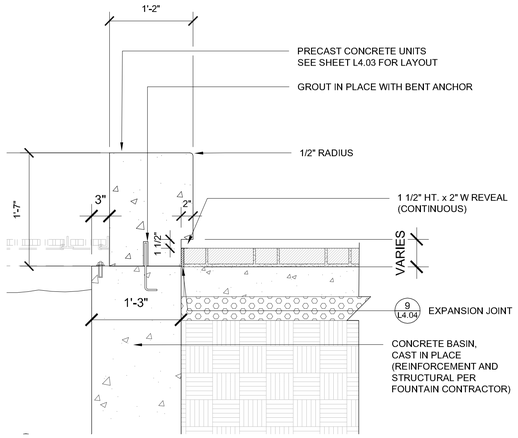


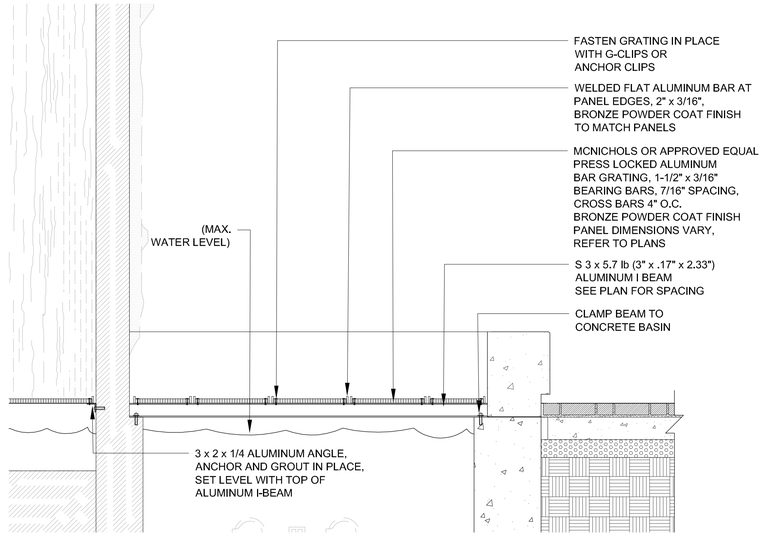
FOUNTAIN SECTIONS

L4.01



1 PRECAST CONCRETE: SECTION

SCALE: 1" = 1' - 0"



2 ALUMINUM GRATE: SECTION

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

WD4800 LED BASE OR YOKE MOUNT

LINE OR LOW VOLTAGE FOUNTAIN FIXTURE

DESCRIPTION

The WD4800 Series yoke or base mounted fixture is ideal for use in underwater applications that are prone to being dry or could possibly be dry a lot of the time. Designed for a 9 watt LED board. The lamp housing is stainless steel. A clear tempered borosilicate lens is standard.

FEATURES & SPECIFICATIONS

FIXTURE HOUSING, DOOR & ROCK GUARD: Stainless steel construction with cast bronze doors and rock guard. Yoke and base are sand cast bronze.

LED ARRAY: 9 Watt LED

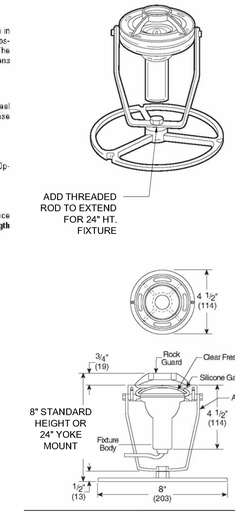
LENS: 3 1/8" diameter tempered borosilicate, clear standard. *Optional: Convex Spread Lens (CLS) or frosted lens (CLF)

GASKET: Single piece U-shaped molded silicone.

CORD: Minimum of 10' of #16-3ST submersible cord. Cord entrance shall be brass water tight seal and epoxy encapsulated. **Cord length must be specified.**

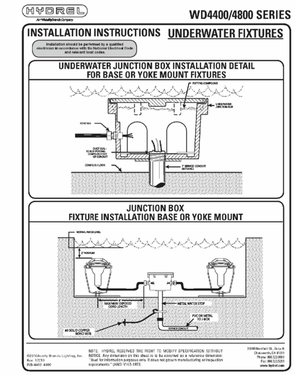
FASTENERS: Stainless steel.

LISTING: CSA



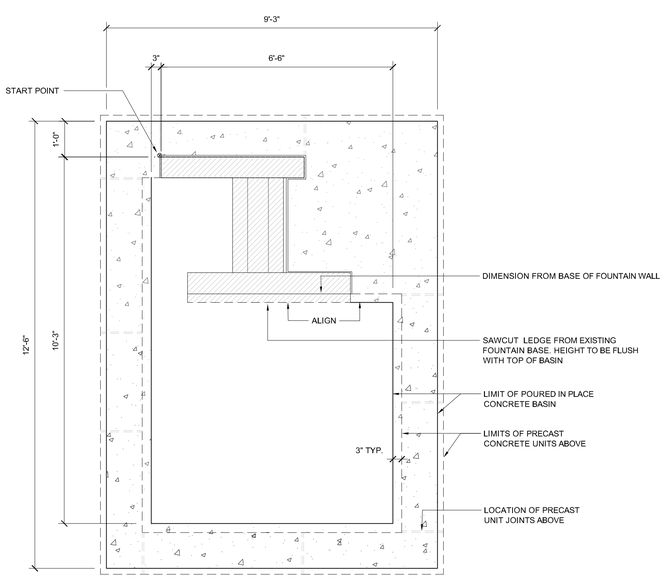
HYDREL WD4800 LED WET/ DRY LIGHT

*ALL WORK ON SHEET L4.02 IS PART OF THE FOUNTAIN REPAIR SCOPE



3 SUBMERSIBLE LIGHT FIXTURES

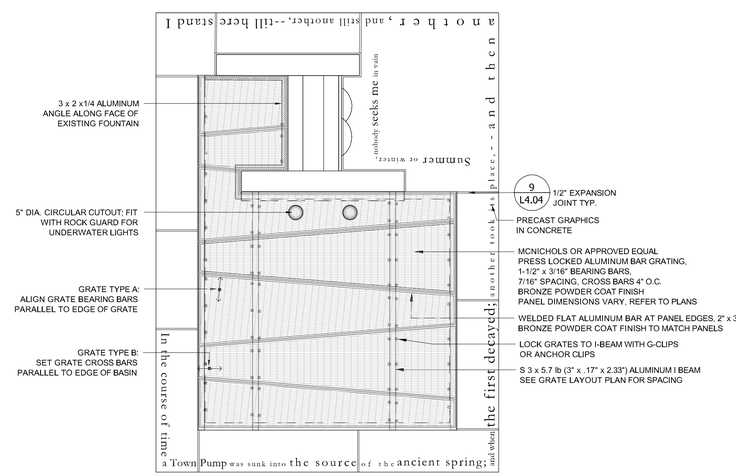
NTS



NOTES:
1. VERIFY ALL DIMENSIONS IN FIELD.

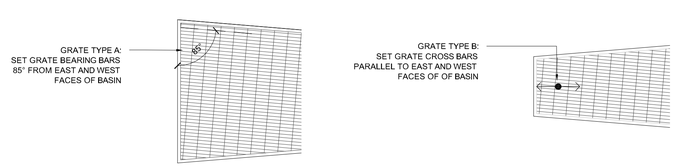
5 CONCRETE BASIN LAYOUT: PLAN

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



GRATE MATERIALS PLAN

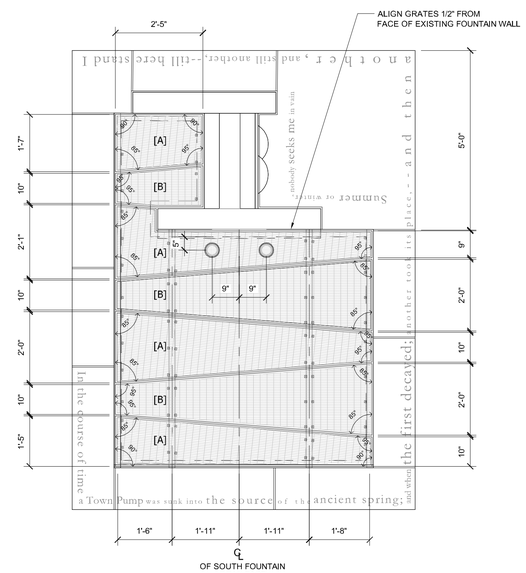
SCALE: 1/2" = 1' - 0"



GRATE TYPES: ENLARGMENT PLANS

SCALE: 1" = 1' - 0"

6 ALUMINUM GRATE: PLAN



NOTES:
1. 1/2" SPACING BETWEEN GRATES TYP.
2. 1/2" SPACING BETWEEN GRATE AND PRECAST CONCRETE FACE TYP.
3. ALL GRATE COMPONENTS TO BE POWDER COATED BRONZE FINISH, COLOR TO BE APPROVED BY OWNER
4. CONTRACTOR TO VERIFY IN FIELD THAT ALL PANELS FIT WITHIN BASIN.

GRATE LAYOUT PLAN

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

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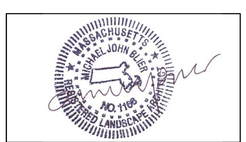
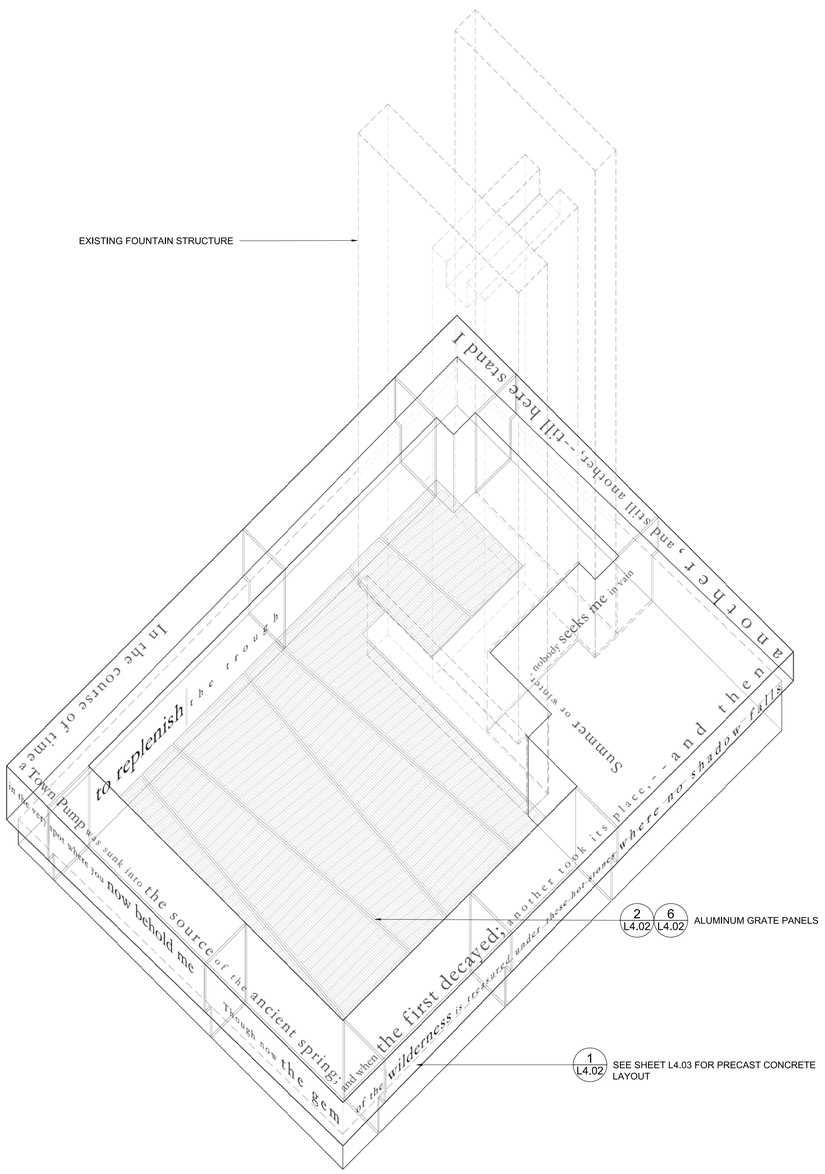


FOUNTAIN DETAILS

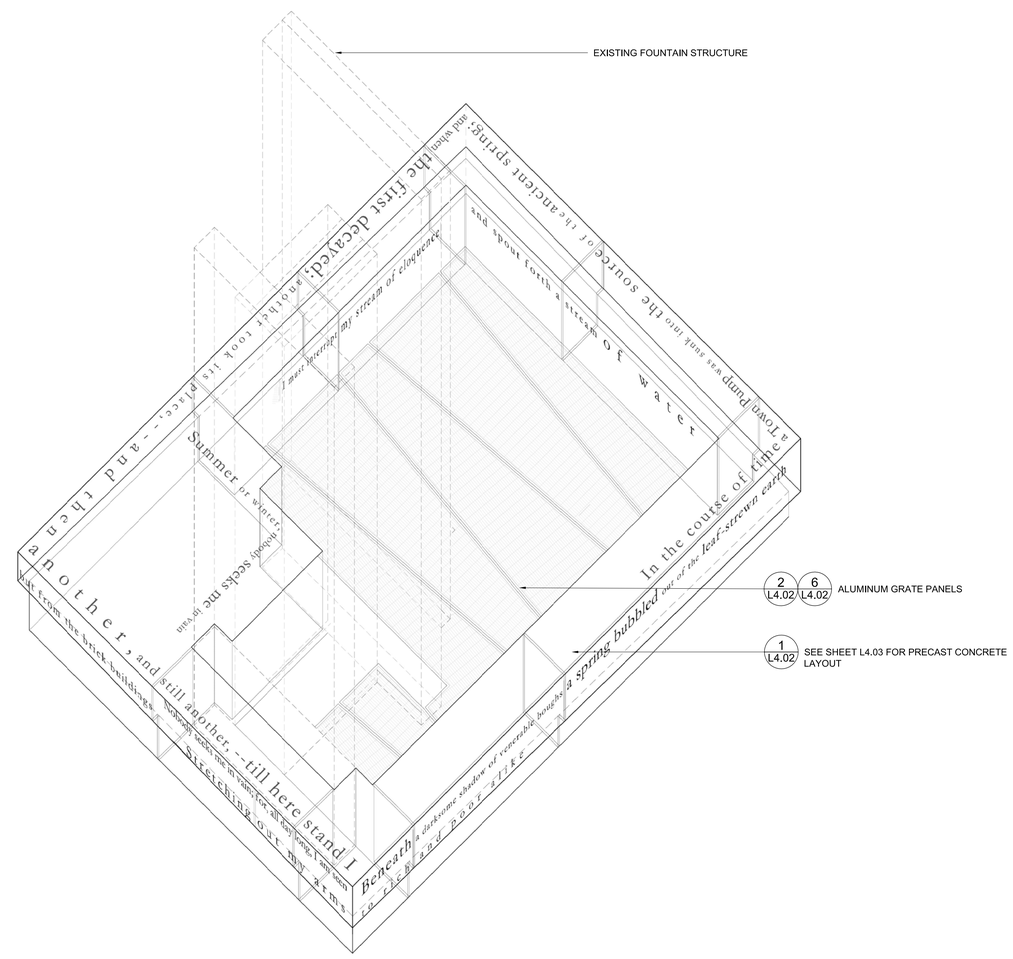
L4.02

*ALL WORK ON SHEET L4.02B IS PART OF THE FOUNTAIN REPAIR SCOPE



1 PRECAST CONCRETE SEAT WALL: ILLUSTRATIVE AXONOMETRIC

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



2 PRECAST CONCRETE SEAT WALL: ILLUSTRATIVE AXONOMETRIC

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

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REVISIONS

No.	Date	Description

APRIL 17, 2013
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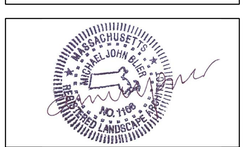
DRAWN BY: JT

CHECKED BY: CM, RR, SW

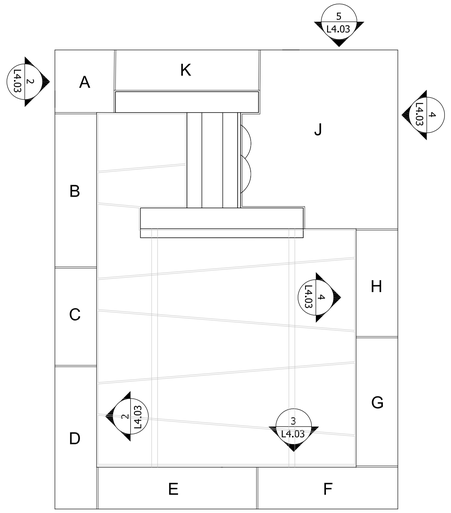
LWSI PROJECT NUMBER
1202



PRECAST CONCRETE DETAILS

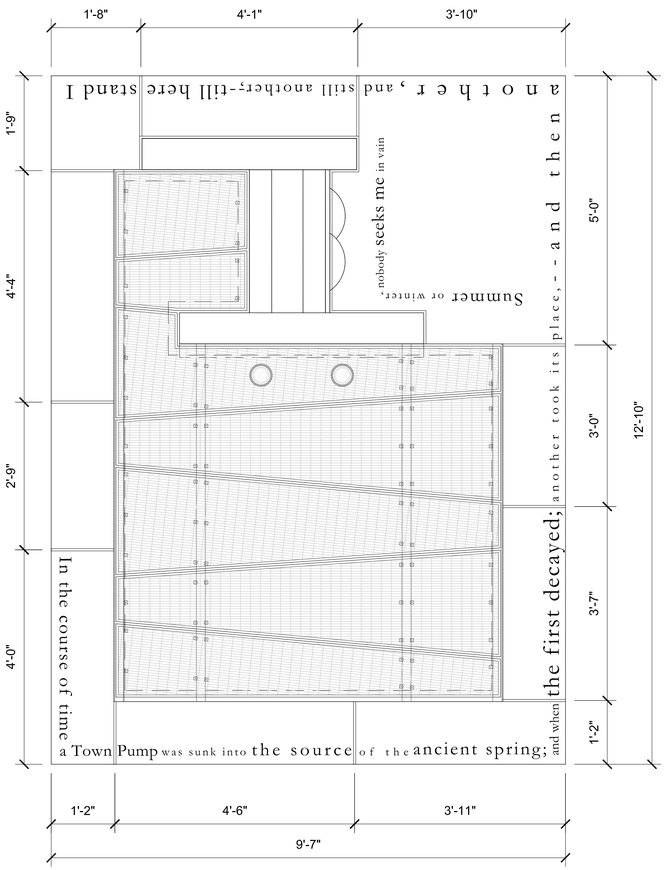
L4.02B

*ALL WORK ON SHEET L4.03 IS PART OF THE FOUNTAIN REPAIR SCOPE



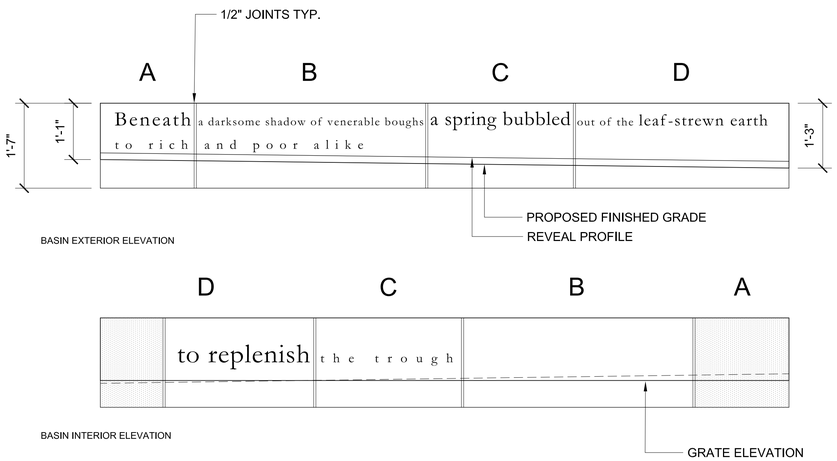
PRECAST CONCRETE SEAT WALL: KEY

SCALE 3/8"=1'-0"



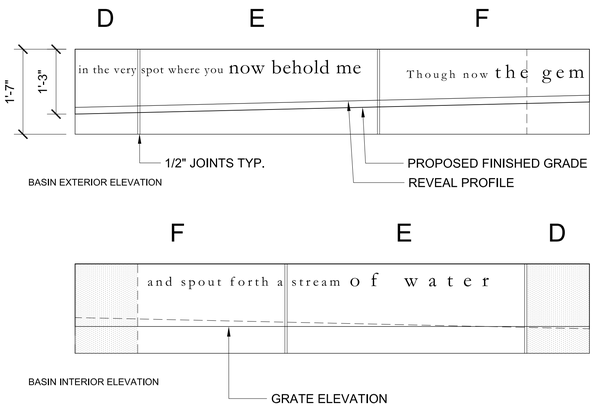
1 PRECAST CONCRETE SEAT WALL: PLAN

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



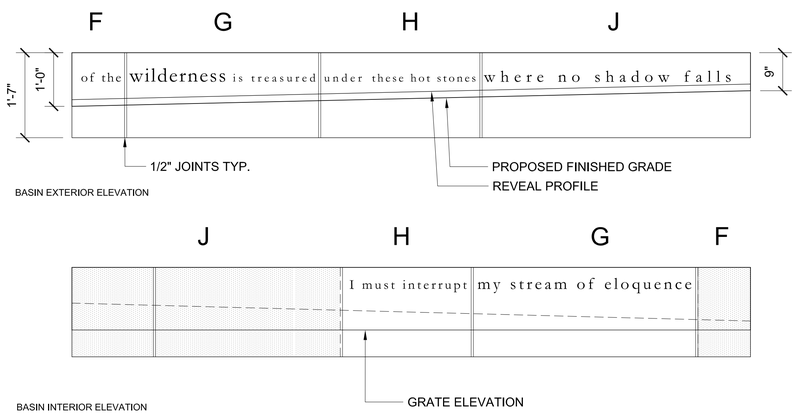
2 PRECAST CONCRETE SEAT WALL: ELEVATION

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



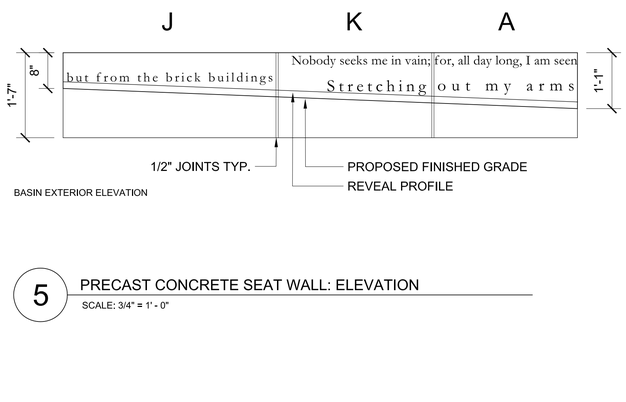
3 PRECAST CONCRETE SEAT WALL: ELEVATION

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



4 PRECAST CONCRETE SEAT WALL: ELEVATION

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



5 PRECAST CONCRETE SEAT WALL: ELEVATION

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

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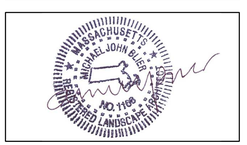
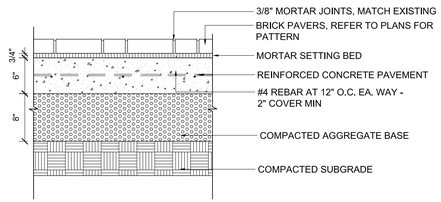


PRECAST CONCRETE DETAILS

L4.03

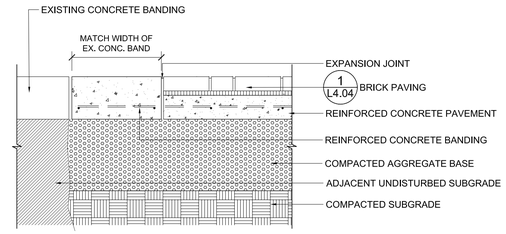
*WORK ON SHEET L4.04 IS PART OF BOTH THE FOUNTAIN REPAIR SCOPE AND PEDESTRIAN MALL SCOPE.



NOTE:
BRICK COLOR, TEXTURE, AND SIZE TO MATCH EXISTING ADJACENT BRICK. PAVING JOINTS TO MATCH EXISTING IN DIAMETER, MATERIAL AND COLOR.

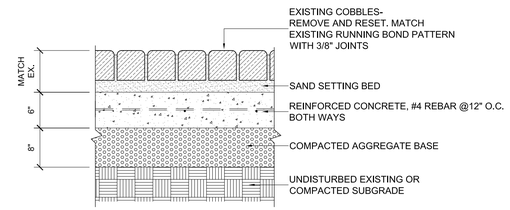
1 BRICK PAVERS ON CONCRETE

SCALE: 1" = 1' - 0"



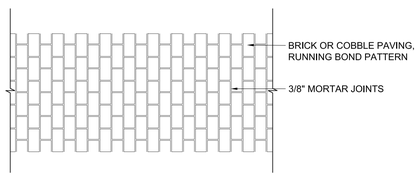
2 CONCRETE BANDING

SCALE: 1" = 1' - 0"

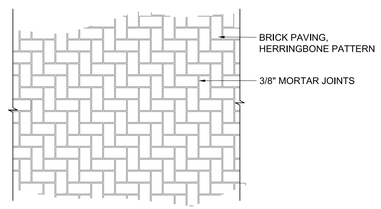


3 GRANITE COBBLE (VEHICULAR)

SCALE: 1" = 1' - 0"



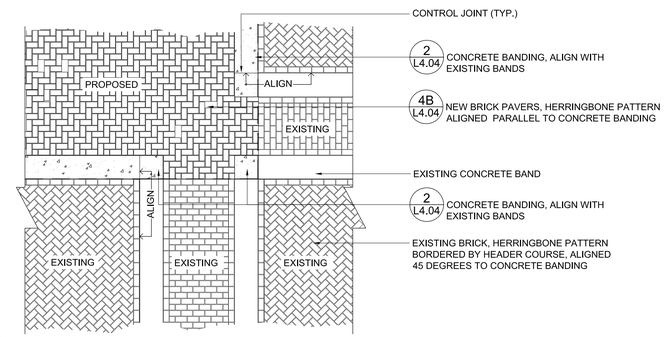
A RUNNING BOND (TYP.)



B HERRINGBONE (TYP.)

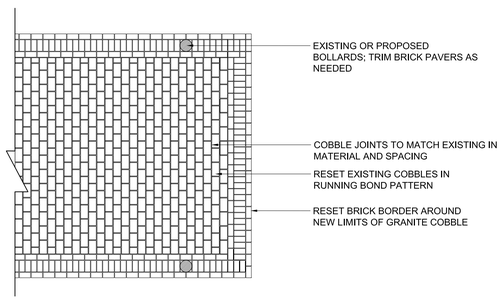
4 BRICK PAVERS: PATTERNS

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



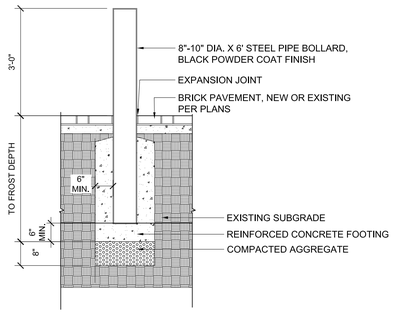
5 BRICK PAVERS: WASHINGTON GATEWAY

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



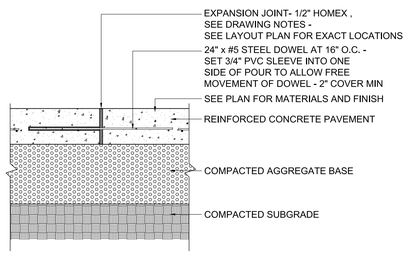
6 GRANITE COBBLE ZONES WITH BRICK BORDER

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



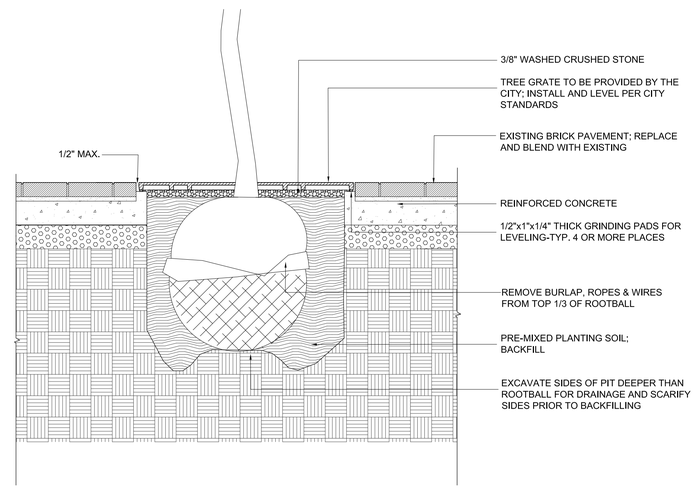
7 STEEL PIPE BOLLARD

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



9 EXPANSION JOINT

SCALE: 1" = 1' - 0"



8 TREE GRATE

SCALE: 1" = 1' - 0"

TREE SCHEDULE

QUANTITY	NAME	CAL.	NOTES
7	Acer x freemanii 'Armstrong' FREEMAN MAPLE	4" min.	B&B, SEE 1/L2.02 FOR LAYOUT
1	Ginkgo biloba 'Autumn Gold' AUTUMN GOLD GINKGO	5"	B&B, SEE 1/L2.03 FOR LAYOUT

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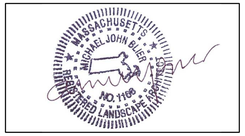

PAVING DETAILS & TREE SCHEDULE

L4.04

POWER DISTRIBUTION EQUIPMENT LEGEND

N22A	120/208V,3Ø,4W SURFACE MOUNTED PANEL. "N22A" INDICATES PANEL DESIGNATION
C	CONTACTOR, RATING AND TYPE AS NOTED ON DRAWINGS
CP	CONTROL PANEL
TC	TIME CLOCK/SWITCH, RATING AND TYPE AS NOTED ON DRAWINGS
	MAGNETIC MOTOR STARTER
J	JUNCTION BOX, 4 11/16" SQUARE (UNLESS OTHERWISE NOTED)
PB	PULL BOX, SIZED AS REQUIRED PER THE NATIONAL ELECTRIC CODE
S	MOTOR ("NUMBER" INDICATES HORSE POWER - 5 HORSEPOWER)
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT TURNING UP / DOWN
	FLEXIBLE POWER CONNECTION TO EQUIPMENT AS NOTED
N22A-2	HOME RUN, 3/4"C. WITH 2#12 AND 1#12 GND. CONNECTED TO A 20A-1P CIRCUIT BREAKER. "N22A" REPRESENTS PANEL NAME AND "2" INDICATES CIRCUIT NUMBER IN PANEL. WHEN MULTIPLE CIRCUITS ARE SHOWN, HASH MARKS INDICATE NUMBER OF PHASE AND NEUTRAL CONDUCTORS (GROUND CONDUCTOR IS NOT INDICATED IN HASH MARKS).
N22A-2,4	
N22A-2,4,6 30A-3P+	HOME RUN, 3/4"C. WITH 4#10 AND 1#10 GND. CONNECTED TO A 30A-3P CIRCUIT BREAKER-REFER TO THE BRANCH CIRCUIT SCHEDULE FOR CONDUCTOR SIZES AND QUANTITIES. . "N22A" REPRESENTS PANEL NAME AND "2,4,6" INDICATES CIRCUIT NUMBERS IN PANEL.
UM	UTILITY COMPANY METER SOCKET, SIZE AND CONFIGURATION AS INDICATED. COORDINATE WITH UTILITY COMPANY FOR TERMINAL/JAW QUANTITIES AND BY-PASS LEVER REQUIREMENTS.
HH	HAND HOLE, SIZED AS REQUIRED PER THE NATIONAL ELECTRIC CODE

POWER DEVICES LEGEND

	DUPLEX RECEPTACLE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER

DEMOLITION GENERAL NOTES

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FULL EXTENT OF THE SCOPE OF DEMOLITION. DISCONNECT AND MAKE SAFE ALL ELECTRICAL EQUIPMENT IDENTIFIED FOR REMOVAL ON THE ARCHITECTURAL, HVAC, PLUMBING AND FIRE PROTECTION PLANS. THE ELECTRICAL SCOPE MAY EXTEND BEYOND THE AREA DEFINED BY THE ARCHITECTURAL DEMOLITION LIMITS TO FULLY COMPLY WITH THE VARIOUS REQUIREMENTS DEFINED BY THESE NOTES.
2. THE ELECTRICAL DEMOLITION PLANS INDICATE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL COMPONENTS AND ITEMS TO BE REMOVED OR RETAINED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF THEIR BID TO BECOME FAMILIAR WITH THE ACTUAL WORKING CONDITIONS AND EXTENT OF WORK. DEVICES AND EQUIPMENT LOCATED ON WALLS AND/OR CEILINGS DESIGNATED TO BE REMOVED SHALL BE DISCONNECTED AND MADE SAFE. THE ELECTRICAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND ARCHITECT OF ANY UNANTICIPATED OR HIDDEN CONDITIONS ENCOUNTERED DURING DEMOLITION.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL SYSTEMS OR BUILDING COMPONENTS DAMAGED DURING EXECUTION OF THE WORK. DAMAGE SHALL INCLUDE, BUT NOT BE LIMITED TO, THE DESTRUCTION OR DISPOSAL OF ITEMS INTENDED TO REMAIN OR BE SALVAGED.
4. THE ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE AND LABEL ALL EXISTING BRANCH CIRCUITS AND FEEDERS WITHIN OR ASSOCIATED WITH THE DEMOLITION SCOPE, PRIOR TO DE-ENERGIZING AND DISCONNECTION. ALL CIRCUITS WITHIN PANELBOARDS, LOAD CENTERS, MOTOR CONTROL CENTERS, AND SWITCHBOARDS IDENTIFIED FOR REMOVAL, SHALL BE TRACED AND FIELD LABELED TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION SCOPE LIMIT IS AFFECTED.
5. IN ANY AREA REQUIRING THE PERFORMANCE OF ANY TRADE'S WORK, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ANY OR ALL ELECTRICAL ITEMS IN PATH OF WORK, REINSTALLING AND RECONNECTING SAME AS REQUIRED, IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED AFTER COMPLETION OF OTHER TRADES WORK IN THAT AREA.
6. THE ELECTRICAL CONTRACTOR SHALL IDENTIFY ALL BRANCH CIRCUITS, FEEDERS AND SYSTEM COMPONENTS WHICH ARE TO REMAIN WITHIN THE AREA OF DEMOLITION SCOPE. THERE SHALL BE NO INTERRUPTION OF SERVICE TO ANY AREA OUTSIDE THE SCOPE LIMITS WITHOUT WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE. EXISTING EQUIPMENT TO REMAIN SHALL BE LEFT IN A CODE COMPLIANT CONDITION.
7. THE ELECTRICAL CONTRACTOR SHALL TAKE INVENTORY OF ELECTRICAL ITEMS THAT ARE REMOVED AND PROVIDE A LIST TO THE OWNER FOR THEIR SELECTION OF ITEMS TO BE RETAINED. ALL ITEMS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
8. IN ALL EXISTING OR NEW AREAS SPECIFIED OR SHOWN TO BE PAINTED, THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ELECTRICAL ITEMS AS REQUIRED, INCLUDING BUT NOT LIMITED TO, LIGHTING FIXTURES, DEVICE PLATES, DEVICES, ETC THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORING THE REMOVED DEVICES IN A SAFE AND SECURE PLACE THE ELECTRICAL CONTRACTOR SHALL REINSTALL THE SAME DEVICES AFTER COMPLETION OF PAINTING. ANY ITEM NOT REMOVED AND PAINTED OVER SHALL BE SUITABLY CLEANED OR REPLACED WITH A NEW ITEM BY THE ELECTRICAL CONTRACTOR.
9. THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS WITHIN THE AREA OF DEMOLITION SCOPE TO THEIR POINT OF ORIGIN. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SHALL BE DE-ENERGIZED, TRIPPED TO THE "OFF" POSITION AND RELABELLED AS "SPARE". NEW TYPED UPDATED CIRCUIT DIRECTORIES SHALL ALSO BE PROVIDED.
10. THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURAL COMPONENTS (WALLS, CEILINGS, PARTITIONS, ETC). CONTRACTOR SHALL TEMPORARILY SUPPORT ITEMS AND SHALL PROVIDE PERMANENT SUPPORTS WHEN FINALIZED STRUCTURES ARE IN PLACE.
11. ALL EXISTING ELECTRICAL EQUIPMENT THAT ARE TO BE RELOCATED SHALL BE STORED IN A SAFE MANNER UNTIL SUCH TIME AS TO BE REINSTALLED. ANY DAMAGE INCURRED TO EQUIPMENT SHALL BE RECTIFIED BY THE ELECTRICAL CONTRACTOR.
12. ALL REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF UNLESS IDENTIFIED FOR REUSE. THE OWNER'S REPRESENTATIVE SHALL INSPECT ALL RETAINED ITEMS, PRIOR TO PLACEMENT IN THE IDENTIFIED STORAGE LOCATION BY THE ELECTRICAL CONTRACTOR.
13. THE WORK ON THIS PROJECT MAY BE PERFORMED IN PHASES. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND SCHEDULE HIS WORK AND ALLOW SUFFICIENT TIME AND COSTS TO ACCOMMODATE THE PHASING OF WORK. ANY ADDITIONAL COSTS INCURRED DUE TO LACK OF PROPER COORDINATION AND COMMUNICATION BY THE ELECTRICAL CONTRACTOR, WITH THE GENERAL CONTRACTOR, OTHER TRADES OR OWNER'S REPRESENTATIVE, SHALL BE ABSORBED BY THE ELECTRICAL CONTRACTOR WITHOUT ANY COSTS TO THE OWNER. COORDINATE PHASING REQUIREMENTS WITH THE ARCHITECT AND THE OWNER.
14. ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS, INCLUDING BUT NOT LIMITED TO, TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC SHALL BE INCLUDED IN THIS CONTRACT.
15. REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGNOFFS PRIOR TO APPLICATION FOR FINAL PAYMENT.
16. ALL BALLASTS IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLASTS MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCB's. PROVIDE WRITTEN REPRESENTATION TO THE OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE. WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLASTS SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE, WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION. A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PREPARED FOR ALL DISPOSALS AND RETURNED WITH ALL APPLICABLE SIGNOFFS, PRIOR TO APPLICATION FOR FINAL PAYMENT. ALL HANDLING SHALL CONFORM TO EPA REQUIREMENTS PROVIDE BREAKOUT COST FOR THIS SCOPE.

WIRING METHODS

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

SERVICE FEEDERS	UNDERGROUND: XHHW-2 CONDUCTORS IN PVC SCHEDULE 40 ENCASED IN CONCRETE OR RIGID METAL CONDUIT ENCASED IN CONCRETE. ABOVE GRADE: XHHW-2 CONDUCTORS IN RIGID METAL CONDUIT (OR EMT IF ALLOWED BY ELECTRIC UTILITY COMPANY STANDARDS)
NORMAL SYSTEM FEEDERS	XHHW/XHHW-2 CONDUCTORS IN EMT
NORMAL BRANCH CIRCUITS	THHN/THWN/XHHW/XHHW-2 CONDUCTORS IN EMT OR MC CABLE
LOW VOLTAGE SYSTEM (TELEPHONE, DATA, AND CATV) WIRING	TYPE CMR, CM, MPR AND MP CABLES
EMERGENCY SYSTEM FEEDERS	MI CABLE
EMERGENCY SYSTEM BRANCH CIRCUITS	THHN/THWN/XHHW/XHHW-2 CONDUCTORS IN EMT

ELECTRICAL DRAWING LIST

DRAWING No	DESCRIPTION
E0.01	ELECTRICAL LEGEND, GENERAL NOTES AND DETAILS
ED1.01	ELECTRICAL DEMOLITION PLAN
E1.01A	ELECTRICAL NEW WORK PLAN
E1.01B	ELECTRICAL NEW WORK PLAN
E2.01	ELECTRICAL SCHEDULES AND DETAILS

PROJECT GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH LABOR, MATERIALS, TOOLS AND OTHER EQUIPMENT REQUIRED TO INSTALL THE WORK SHOWN AND SPECIFIED. THE CONTRACTOR SHALL FURNISH AND INSTALL ITEMS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM. MATERIALS SHALL BE NEW AND SHALL BEAR THE REGISTERED UL MARK. WORK SHALL CONFORM WITH THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 70 (NEC), THE NATIONAL ELECTRICAL CODE (NEC), AND APPLICABLE FEDERAL, STATE AND LOCAL CODES. CONTRACTOR SHALL SECURE PERMITS AND PAY THE FEES REQUIRED TO CARRY OUT HIS WORK. THE CONTRACTOR SHALL FURNISH COPIES OF CERTIFICATES AND PERMITS TO THE ARCHITECT.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE INTENT OF THE DESIGN AND SHALL BE CONSIDERED AS DIAGRAMMATIC ONLY, EXACT LOCATIONS FOR OUTLETS AND EQUIPMENT SHALL BE DETERMINED AT THE SITE. AS WORK PROGRESSES DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE. FINAL WORK SHALL BE DOCUMENTED ON AS BUILT RECORD DRAWINGS.
3. PIPING, CONDUITS AND EQUIPMENT OF ALL TRADES SHALL BE PROPERLY COORDINATED AND SET TO MAINTAIN THE CLEARANCES REQUIRED BY APPLICABLE FEDERAL, STATE AND LOCAL CODES.
4. CONDUIT RUNS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION DEFLECTION TYPE FITTINGS, AS REQUIRED VERIFY EXISTING JOINTS BY FIELD MEASUREMENTS.
5. OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R TYPE, UNLESS OTHERWISE NOTED.
6. RACEWAYS AND CABLE SHALL BE RUN CONCEALED IN FINISHED SPACES UNLESS OTHERWISE NOTED.
7. SERVICE EQUIPMENT, LOADCENTERS, PANELBOARDS, MOTOR CONTROL CENTERS AND SWITCHBOARDS SHALL BE PROVIDED WITH DEDICATED WORK SPACE. THE HEIGHT OF THE WORK SPACE SHALL EXTEND FROM THE FLOOR TO A HEIGHT OF 6'-6" OR TO THE HEIGHT OF THE EQUIPMENT, WHICHEVER IS GREATER. THE WIDTH OF THE WORKING SPACE SHALL BE THE WIDTH OF THE ELECTRICAL EQUIPMENT OR 30", WHICHEVER IS GREATER, IN ALL CASES, WORK SPACE SHALL ALLOW AT LEAST A 90 DEGREE OPENING OF EQUIPMENT DOORS OR HINGED PANELS.
8. ALL LOADCENTERS, PANELBOARDS, MOTOR CONTROL CENTERS AND SWITCHBOARDS SHALL BE LOCATED IN DEDICATED SPACES AND PROTECTED FROM DAMAGE. THE DEDICATED ELECTRICAL SPACE SHALL BE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6'-6" ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH SUCH SPACE.
9. WIRING DEVICES SHALL BE MOUNTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE ACCESSIBILITY CODE.
10. PANELBOARD SHALL BE MOUNTED SO THAT THE DISTANCE FROM THE TOP CIRCUIT BREAKER OPERATING HANDLE TO THE FLOOR SHALL NOT EXCEED 6'-8".
11. ALL RECEPTACLES INSTALLED IN UNFINISHED AREAS SHALL BE GFI TYPE, MOUNTED 4'-0" ABOVE FINISHED FLOOR.
12. EXIT SIGNS AND EMERGENCY BATTERY UNITS AND LIGHTING FIXTURES DESIGNATED AS NIGHT LIGHTS SHALL BE UNSWITCHED.
13. ALL BRANCH CIRCUITS, (LIGHTING AND POWER) SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. COMMON OR SHARING OF NEUTRALS WILL NOT BE ALLOWED. NO MORE THAN (3) CIRCUITS (SIX CURRENT CARRYING CONDUCTORS) SHALL BE RUN IN A SINGLE CONDUIT.
14. RECEPTACLES, SWITCHES, LIGHTING FIXTURES, SMOKE DETECTORS, ETC INDICATE QUANTITY, EXACT LOCATIONS OF DEVICES SHALL BE DETERMINED IN THE FIELD AND COORDINATED WITH ARCHITECTURAL DRAWINGS.
15. THIS IS A STANDARD SYMBOL LIST. ALL DEVICE SYMBOLS AND ABBREVIATIONS MAY NOT NECESSARILY APPEAR ON THE FLOOR PLANS OR DETAIL SHEET. ONLY THOSE SYMBOLS INDICATED ON THE FLOORS PLANS ARE USED AND OTHERS SHOULD BE DISREGARDED.
16. MOUNTING HEIGHTS SHALL BE AS INDICATED ON ARCHITECTURAL DRAWINGS. THE MOUNTING HEIGHT DETAIL SHALL BE USED AS A GUIDE IN THE ABSENCE OF THE ARCHITECTURAL DRAWINGS.
17. CONTRACTOR SHALL VERIFY ALL DOORS SWINGS BEFORE INSTALLING SWITCH BOXES.
18. FOR EXACT LOCATION OF LIGHTING FIXTURES, SEE REFLECTED CEILING PLAN DRAWINGS. FOR MOUNTING HEIGHT OF UNDERCABINET LIGHTING FIXTURES AND OTHER TASK LIGHTING, REFER TO ARCHITECTURAL ELEVATION DRAWINGS.
19. ELECTRICAL CONTRACTOR IS TO COORDINATE THE EXACT LOCATION OF LIGHTING FIXTURES IN MECHANICAL AND STORAGE AREAS WITH OTHER TRADES.
20. FOR EXACT LOCATION OF MECHANICAL EQUIPMENT, (AC UNITS, FANS, PUMPS, ETC) REFER TO RESPECTIVE TRADES DRAWINGS.
21. CURRENT CARRYING MATERIAL USED SHALL BE COPPER, INCLUDING PANELBOARD BUS MATERIALS AND TRANSFORMER WINDINGS.
22. FURNISH GROUNDING/ BONDING BUSHINGS ONTO ALL CONDUIT ENTERING/ LEAVING BOXES.
23. ALL GROUND CONDUCTORS SHALL BE GREEN, ISOLATED GROUND CONDUCTORS SHALL BE GREEN/ YELLOW STRIPED, AND NEUTRAL CONDUCTORS SHALL BE WHITE.
24. UNLESS NOTED OTHERWISE, ALL DATA AND TELEPHONE CABLING SHALL BE BY OTHERS. ELECTRICAL DRAWINGS INDICATE RACEWAY AND BACKBOX SYSTEMS ONLY AND INDICATE TEL-DATA OUTLET CONFIGURATIONS FOR REFERENCE ONLY.
25. MODIFICATIONS TO THE EXISTING FIRE ALARM SYSTEM SHALL BE COORDINATED WITH THE FIRM WHO HOLDS THE EXISTING SYSTEM MAINTENANCE CONTRACT. THE FIRM WHO HOLDS THE EXISTING SYSTEM MAINTENANCE CONTRACT SHALL MAKE ALL FINAL CONNECTIONS, AND PERFORM ALL PROGRAMMING AND TESTING. ALL COSTS ASSOCIATED WITH FINAL CONNECTIONS, PROGRAMMING AND TESTING SHALL BE INCLUDED UNDER THIS CONTRACT AND SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
26. THE ELECTRICAL CONTRACTOR SHALL CARRY ALL COSTS ASSOCIATED WITH DISABLING THE CONNECTIONS TO THE EXISTING MUNICIPAL LOOP DURING FINAL CONNECTIONS AND TESTING AND SHALL CARRY COSTS FOR RECONNECTION OF LOOP.
27. WHERE PANELS ARE INDICATED TO BE RELOCATED, THE ELECTRICAL CONTRACTOR SHALL TRACE OUT EACH CIRCUIT TO DETERMINE WHAT CIRCUITS FEED AREAS OUTSIDE THE SCOPE OF WORK. CIRCUITS WHICH MUST BE MAINTAINED SHALL BE REROUTED TO THE NEW PANEL LOCATION, BY PROVIDING AN ADEQUIATELY SIZED PULL BOX AND SPLICING AND EXTENDING THE CONDUCTORS.
28. WHEN AVAILABLE FROM THE MANUFACTURER, ALL FIRE ALARM STROBES SHALL BE FIELD ADJUSTABLE AND THE POWER SUPPLY SHALL BE SIZED BASED ON ALL THE STROBES' HIGHEST SETTING.
29. WHERE EXISTING BRANCH CIRCUITS ARE REUSED TO FEED NEW CIRCUITS FED FROM GFCI OR AFCI CIRCUIT BREAKERS OR WHICH FEED NEW GFCI RECEPTACLES, THE CONTRACTOR SHALL FIELD VERIFY IF EACH CIRCUIT CONTAINS A DEDICATED NEUTRAL WHICH IS REQUIRED FOR PROPER OPERATION OF GFCI AND AFCI CIRCUIT BREAKERS AND RECEPTACLES. IF A DEDICATED NEUTRAL IS NOT PRESENT, CONTRACTOR SHALL INFORM ARCHITECT AND ENGINEER IN WRITING VIA RFI.

DRAWING NOTES AND DESIGNATIONS

1 / E0.0	DETAIL IDENTIFIER "1" INDICATES DETAIL NUMBER "E0.0" INDICATES SHEET NUMBER
1	DRAWING REVISION MARKER
	DRAWING REVISION CLOUD

MECHANICAL EQUIPMENT IDENTIFIER LEGEND

EF 1	MECHANICAL EQUIPMENT TAG "EF" INDICATES EQUIPMENT TYPE (EXHAUST FAN) "1" INDICATES EQUIPMENT NUMBER

NOTES:
1. REFER TO MECHANICAL AND PLUMBING PLANS AND SCHEDULES FOR ACTUAL EQUIPMENT NAME AND ASSOCIATED DESCRIPTION.

LINE TYPE LEGEND

	EXISTING DEVICE, EQUIPMENT OR WIRING TO BE REMOVED
	EXISTING DEVICE, EQUIPMENT OR WIRING TO REMAIN
	NEW DEVICE, EQUIPMENT OR WIRING

EXISTING CONDITIONS DESIGNATIONS

X	EXISTING DEVICE SHALL BE REMOVED INCLUDING ALL ASSOCIATED RACEWAYS AND CIRCUITRY BACK TO ITS SOURCE
XM	EXISTING DEVICE SHALL REMAIN AND SHALL BE MAINTAINED
XR	EXISTING DEVICE SHALL BE RELOCATED
XL	NEW LOCATION OF EXISTING TO BE RELOCATED DEVICE

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No.	Date	Description

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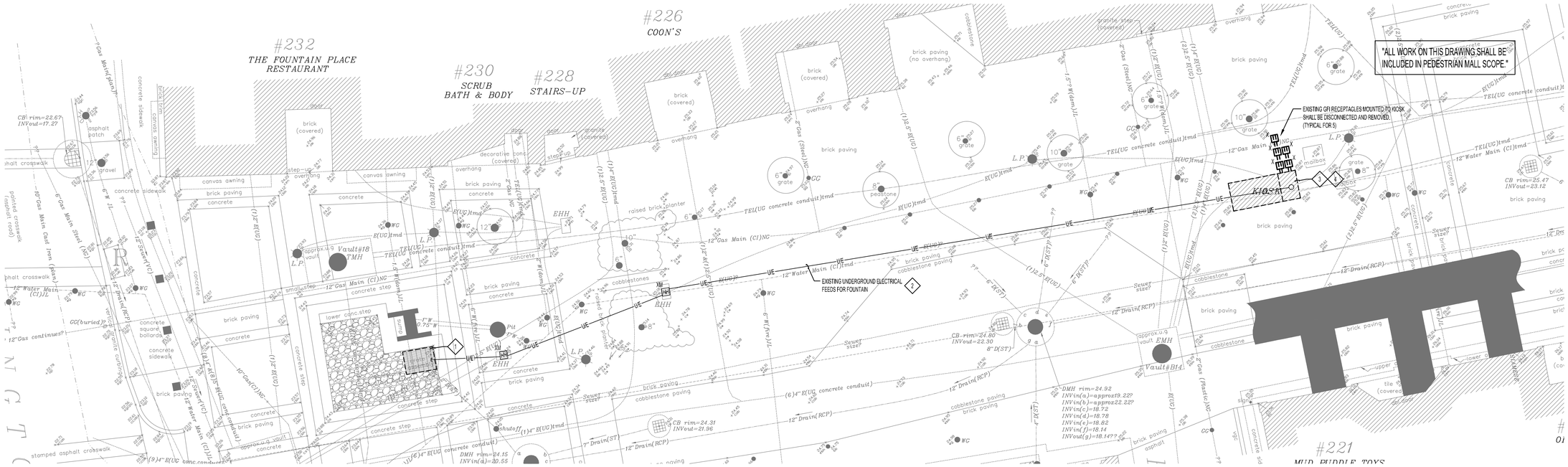
CHECKED BY: MDT
LWSI PROJECT NUMBER 1202

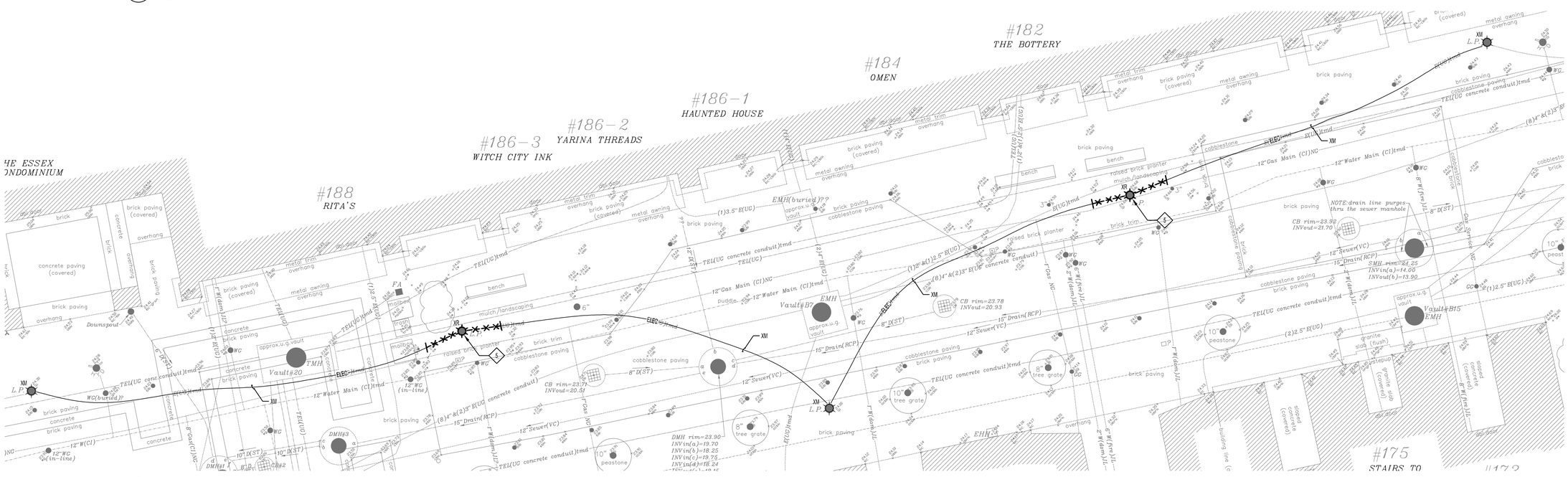
ELECTRICAL LEGEND AND GENERAL NOTES

E0.01



1 ELECTRICAL DEMOLITION PLAN: AREA 1

SCALE: 1/8" = 1'-0"



2 ELECTRICAL DEMOLITION PLAN: AREA 3

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES:

1. REFER TO GENERAL DEMOLITION NOTES ON DRAWING E0.01 FOR ADDITIONAL REQUIREMENTS.
2. WORK MAY BE REQUIRED OUTSIDE OF THE PROJECT'S AREA OF RENOVATION. CONTRACTOR SHALL NOT ASSUME THAT AREA OF RENOVATION IS CONSIDERED THE SCOPE OF WORK AREA.

TAGGED NOTES:

1. EXISTING ELECTRICAL CONNECTIONS TO EXISTING FOUNTAIN PUMPS, LIGHTING AND AUTOFILL SHALL BE DISCONNECTED AND REMOVED.
2. EXISTING ELECTRICAL CONDUITS FOR FOUNTAIN SHALL REMAIN. EXISTING WIRING SERVING THE FOUNTAIN PUMPS, LIGHTING AND AUTOFILL SHALL BE DISCONNECTED AND REMOVED IN THEIR ENTIRETY, BACK TO THE SOURCE.
3. EXISTING BRANCH CIRCUITS SERVING EQUIPMENT AND DEVICES THAT ARE TO REMAIN SHALL BE MAINTAINED. EXTENDED TO NEW PANEL AND CONNECTED TO NEW PANEL. PROVIDE HANDHOLES, UNDERGROUND CONDUIT, TRENCHING AND BACKFILL AND CONDUCTORS AS REQUIRED.
4. DISCONNECT AND REMOVE EXISTING ELECTRICAL PANEL, METER, TIMECLOCKS, STARTER, CONTACTOR, ETC. WITHIN KIOSK, FOR REMOVAL OF THE KIOSK BY OTHERS. ALL EXISTING WIRING SHALL BE MAINTAINED AND EXTENDED TO THE NEW LOCATION OF THE ELECTRICAL EQUIPMENT. PROVIDE UNDERGROUND HANDHOLD TO INTERCEPT EXISTING WIRING. REFER TO NEW WORK PLAN E1.01A FOR MORE INFORMATION.
5. EXISTING LIGHT POLE SHALL BE RELOCATED, DISCONNECT AND REMOVE POLE AND LIGHT FIXTURE AND STORE FOR RE-INSTALLATION. MAINTAIN EXISTING CIRCUITRY AND EXTEND TO NEW LOCATION AS REQUIRED.

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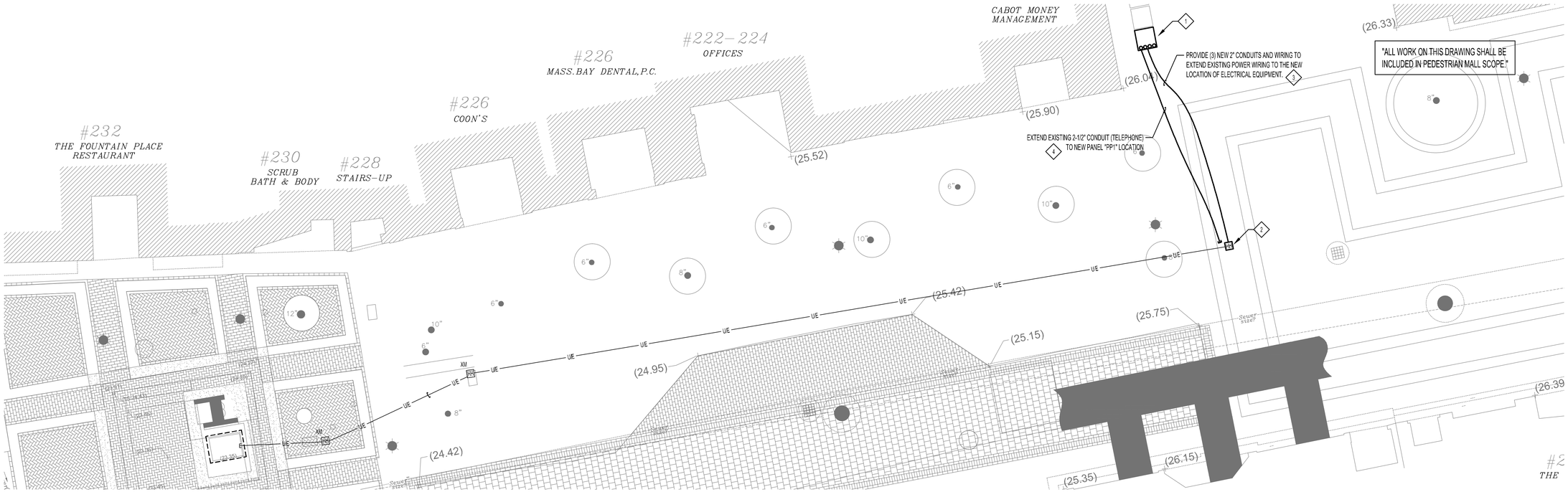
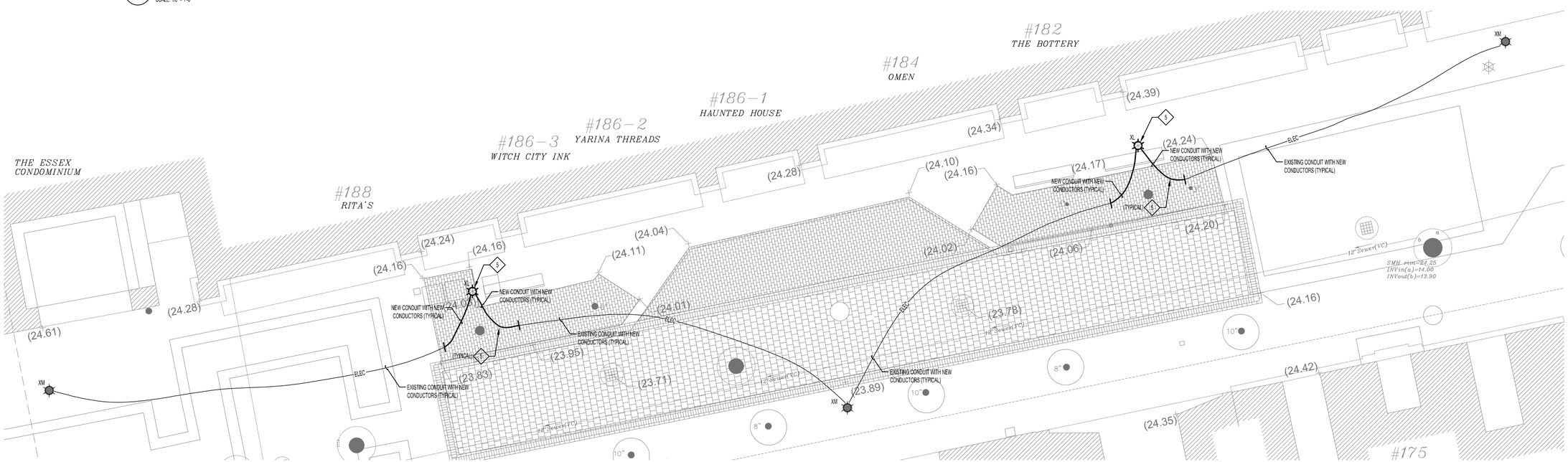
ELECTRICAL DEMOLITION PLAN

ED1.01



1 ELECTRICAL NEW WORK PLAN: AREA 1

SCALE: 1/8" = 1'-0"



2 ELECTRICAL NEW WORK PLAN: AREA 3

SCALE: 1/8" = 1'-0"

NEW WORK NOTES:

1. REFER TO DRAWING E0.01 FOR LEGEND & GENERAL NOTES.
2. BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED AND INSTALLED FOR A MAXIMUM VOLTAGE DROP OF 3%. CONTRACTOR SHALL PROVIDE #10AWG CONDUCTORS FOR ALL 120 VOLT CIRCUITS GREAT THAN 60 FEET IN LENGTH AND #10AWG CONDUCTORS FOR ALL 277 VOLT CIRCUITS GREATER THAN 140 FEET IN LENGTH. CONTRACTOR SHALL PROVIDE #8AWG CONDUCTORS FOR ALL 120 VOLT CIRCUITS GREATER THAN 100 FEET, BUT LESS THAN 160 FEET IN LENGTH AND #8AWG CONDUCTORS FOR ALL 277 VOLT CIRCUITS GREATER THAN 225 FEET, BUT LESS THAN 350 FEET IN LENGTH. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND OPTIONS.

TAGGED NOTES:

1. CUSTOM BUILT GRADE MOUNTED NEMA 3R 2-DOOR CABINET TO HOUSE NEW PANEL "PP1", FOUNTAIN CONTROL PANEL "CPPA", TELEPHONE SERVICE, ETC. PROVIDE CONCRETE BASE ON GRADE TO MOUNT CABINET.
2. APPROXIMATE LOCATION OF NEW UNDERGROUND HANDHOLE. PROVIDE NEW HANDHOLD TO INTERCEPT EXISTING ELECTRICAL FEEDER AND CIRCUITS AND EXTEND TO THE NEW LOCATION OF THE ELECTRICAL PANEL AND EQUIPMENT, AS SHOWN. NEW HANDHOLE SHALL BE EQUAL TO QUAZITE TYPE "PG" STYLE.
3. PROVIDE NEW WIRING FROM HANDHOLE TO THE NEW ELECTRICAL EQUIPMENT, TO EXTEND EXISTING PANELBOARD FEEDER AND CIRCUITS TO THE NEW LOCATION SHOWN.
4. INTERCEPT EXISTING 2-1/2" UNDERGROUND CONDUIT (TELEPHONE SERVICE) AND EXTEND IN CABINET.
5. INSTALL EXISTING SITE LIGHT POLE IN NEW LOCATION AS SHOWN. PROVIDE NEW CONCRETE BASE - SEE DETAIL #4 ON DRAWING E2.01. EXTEND EXISTING UNDERGROUND CONDUIT TO NEW POLE BASE AND PROVIDE NEW WIRING FOR EXISTING POLES AS REQUIRED.

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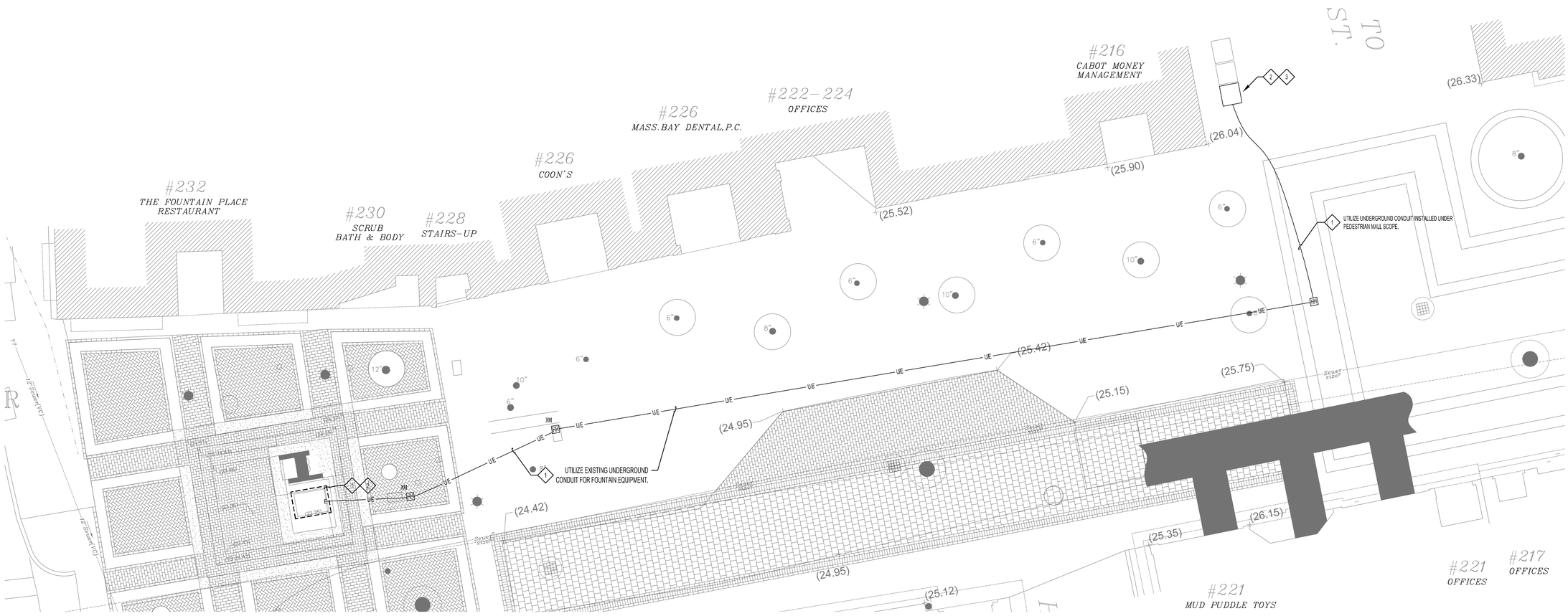
ELECTRICAL NEW WORK PLAN

E1.01A

"ALL WORK ON THIS DRAWING SHALL BE INCLUDED IN PEDESTRIAN MALL SCOPE."



1 ELECTRICAL NEW WORK PLAN: AREA 1

SCALE 1/8" = 1'-0"

NEW WORK NOTES:

1. REFER TO DRAWING E0.01 FOR LEGEND & GENERAL NOTES.

TAGGED NOTES:

1. NEW FOUNTAIN WITH PUMPS AND LIGHT FIXTURES. PROVIDE NEW WIRING FROM NEW PANEL "PP1" CONTROL PANEL. PROVIDE THE FOLLOWING CIRCUITS IN EXISTING CONDUITS:
   1. 3#10 & 1#10G (DISPLAY PUMP DP-1) - PP1-1,3 (25A-2P)
   2. 3#10 & 1#10G (DISPLAY PUMP DP-2) - PP1-5,7 (25A-2P)
   3. 2#10 & 1#10G (LIGHT FIXTURES) - PP1-9 (20A-1P)
   4. 2#14 (MAKE-UP VALVE MUV-1)
   5. 3#14 (WATER LEVEL SENSOR WLS-1)
   6. 4#14 (ANEMOMETER)
   7. 4#10 & 4#14 (SPARE CONDUCTORS)
2. REFER TO FOUNTAIN ELECTRIC DRAWING WE1.1 FOR ADDITIONAL INFORMATION.
3. LOCATION OF ELECTRICAL PANELBOARD "PP1" AND NEW FOUNTAIN CONTROL PANEL "CPPA". REFER TO DRAWING WE1.1 FOR ADDITIONAL INFORMATION.

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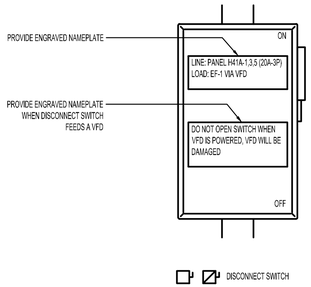
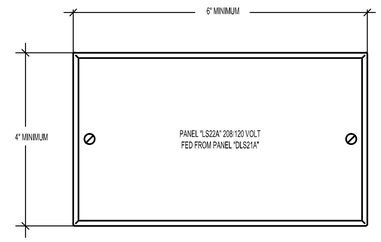
ELECTRICAL NEW WORK PLAN

E1.01B



2 TYPICAL DISCONNECT SWITCH LABELING DETAIL NTS



NOTES:

1. NAMEPLATES SHALL HAVE WHITE LETTERS ON BLACK BACKGROUND.
2. NAMEPLATES SHALL BE FASTENED BY MACHINE SCREWS. ADHESIVES WILL NOT BE ALLOWED.
3. NAMEPLATES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL CENTERS, STARTERS, JUNCTION BOXES, PULL BOXES, DISCONNECT SWITCHES, TRANSFORMERS, CABINETS, ETC.

1 TYPICAL ENGRAVED NAMEPLATE DETAIL NTS

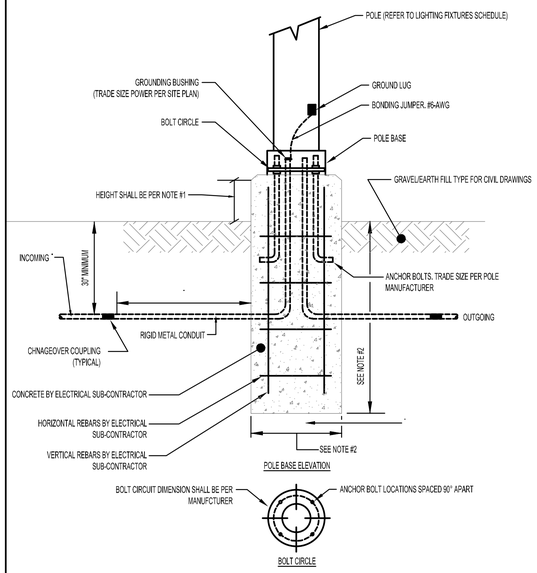
NEW PANEL "PP1" SCHEDULE

VOLTS	208/120V	MAINS	225A
PHASE	3Ø	BUSSING	225A
WIRE	4W	FEED	125A MCB
A.I.C.	42K	MOUNTING	SURFACE

CIRCUIT	SERVICE DESCRIPTION	BREAKER	POLES	A	B	C	POLES	BREAKER	SERVICE DESCRIPTION	CIRCUIT
1	DISPLAY PUMP DP-1 (PROVIDE GFI CIRCUIT BREAKER)	25A	2P				1P	30A	EXISTING LOAD	2
3							1P	30A	EXISTING LOAD	4
5	DISPLAY PUMP DP-2 (PROVIDE GFI CIRCUIT BREAKER)	25A	2P				1P	30A	EXISTING LOAD	6
7							1P	30A	EXISTING LOAD	8
9	FOUNTAIN LIGHTS	20A	1P				1P	20A	EXISTING LOAD	10
11	FOUNTAIN CONTROL SECTOR CPA	20A	1P				1P	20A	EXISTING LOAD	12
13	FOUNTAIN TIME SWITCH	20A	1P				1P	20A	EXISTING LOAD	14
15	SPARE	20A	1P				1P	20A	EXISTING LOAD	16
17	SPARE	20A	1P				1P	20A	EXISTING LOAD	18
19	SPARE	20A	1P				1P	20A	EXISTING LOAD	20
21	SPARE	20A	1P				1P	20A	EXISTING LOAD	22
23	SPARE	20A	1P				1P	20A	EXISTING LOAD	24
25	SPACE	-A-	1P				1P	20A	SPARE	26
27	SPACE	-A-	1P				1P	20A	SPARE	28
29	SPACE	-A-	1P				1P	20A	SPARE	30
31	SPACE	-A-	1P				1P	20A	SPARE	32
33	SPACE	-A-	1P				1P	-A-	SPACE	34
35	SPACE	-A-	1P				1P	-A-	SPACE	36
37	SPACE	-A-	1P				1P	-A-	SPACE	38
39	SPACE	-A-	1P				1P	-A-	SPACE	40
41	SPACE	-A-	1P				1P	-A-	SPACE	42

NOTES:

1. PROVIDE SE RATED PANEL.



NOTES:

1. HEIGHT SHALL BE 3" ABOVE GRADE WHEN LOCATED ON PLANTED/LANSCAPE AREA, HEIGHT SHALL BE LEVEL WITH THE ADJACENT PAVEMENT WHEN LOCATED ON PAVED AREAS
2. POLE BASE DIMENSIONS AND REBAR QUANTITIES AND SIZES SHALL BE DETERMINED BY LICENSED STRUCTURAL ENGINEER
3. REFER TO SITE PLAN CONDUIT LEGEND FOR CONDUIT TRADE SIZE.

4 TYPICAL SITE LIGHTING POLE DETAIL NTS

NOTES:

1. SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS IN OTHER THAN DWELLING OCCUPANCIES AND LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED SHALL BE RIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. PROVIDE LABEL ON ALL ELECTRICAL EQUIPMENT AS REQUIRED.
2. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
3. THE INFORMATION ON THE LABEL SHOWN IS AN EXAMPLE ONLY. PROVIDE SPECIFIC INFORMATION FOR EACH PIECE OF EQUIPMENT PER ARC FLASH STUDY AS INDICATED IN SPECIFICATIONS.

WARNING

ARC FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED

1.2 CAL/CM^2	INCIDENT ENERGY AT 18 INCHES
12 INCHES	ARC FLASH BOUNDARY
CATEGORY 1	HAZARD/RISK CATEGORY, PER NFPA 70E
480 VAC	SHOCK HAZARD WHEN COVER IS REMOVED
00	GLOVE CLASS
42 INCHES	LIMITED APPROACH
12 INCHES	RESTRICTED APPROACH
1 INCHES	PROHIBITED APPROACH

LOCATION: PANEL PP1

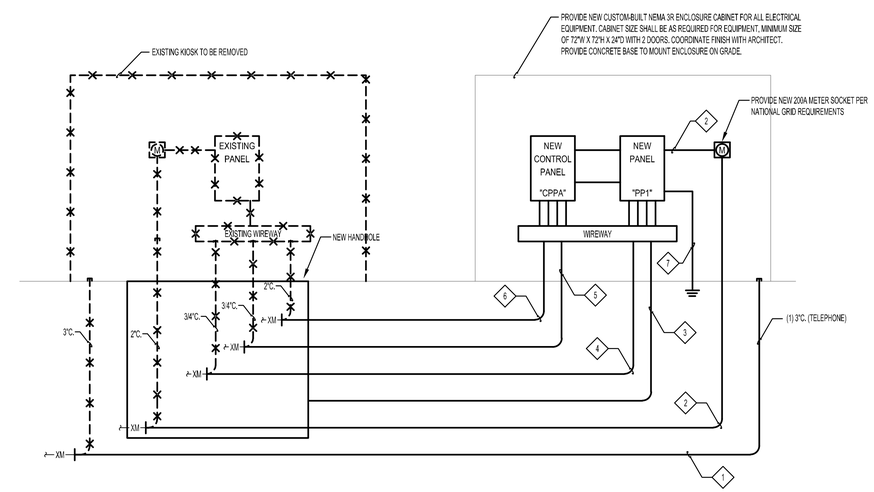
CHANGES IN EQUIPMENT SETTINGS OR SYSTEM CONFIGURATION MAY INVALIDATE THE CALCULATED VALUES AND PPE REQUIREMENTS SHOWN ON THIS LABEL. REFER TO LATEST ARC FLASH HAZARD ANALYSIS TO VERIFY SYSTEM DATA AND FOR ADDITIONAL INFORMATION.

ARC FLASH STUDY COMPANY	STUDY FILE#	DATE OF STUDY

3 ARC FLASH LABEL TYPICAL DETAIL NTS

RISER TAGGED NOTES:

1. EXTEND EXISTING 3" CONDUIT FOR TELEPHONE SERVICE.
2. EXTEND EXISTING 2" CONDUIT FOR ELECTRIC SERVICE. REMOVE EXISTING SERVICE FEEDERS AND PROVIDE 4#1/0 FROM NATIONAL GRID SERVICE POINT TO NEW PANEL "PP1" (ESTIMATED AT 100'-0"). COORDINATE WORK WITH NATIONAL GRID.
3. (2) 2" CONDUITS FOR NEW FOUNTAIN CIRCUITS FROM NEW HANDHOLE TO NEW WIREWAY/PANEL "PP1".
4. (1) 3/4" CONDUIT FOR RELOCATED CIRCUITS FROM NEW HANDHOLE TO NEW WIREWAY/PANEL "PP1".
5. (1) 3/4" CONDUIT FOR RELOCATED CIRCUITS FROM NEW HANDHOLE TO NEW WIREWAY/PANEL "PP1".
6. (1) 2" CONDUIT FOR RELOCATED CIRCUITS FROM NEW HANDHOLE TO NEW WIREWAY/PANEL "PP1".
7. PROVIDE 1#6 AND 10'-0" GROUND ROD FOR SERVICE GROUND.



1 PARTIAL POWER RISER DIAGRAM

SCALE: NONE

ESSEX STREET

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REVISIONS

No.	Date	Description

APRIL 17, 2013

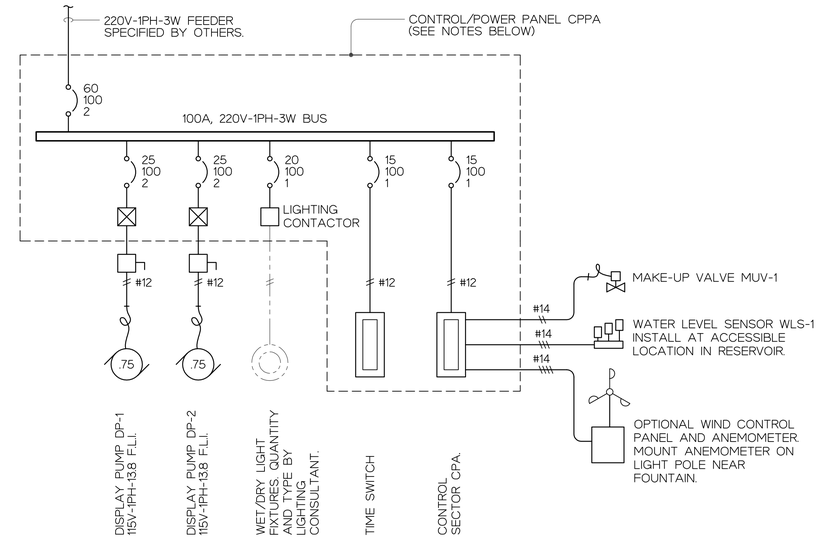
DRAWN BY: MPE
CHECKED BY: MDT
LWSI PROJECT NUMBER 1202

ELECTRICAL SCHEDULES AND DETAILS

E2.01

GENERAL NOTES

1. VERIFY THE EXACT LOCATION OF THE WATER DISPLAY WITH THE ARCHITECTURAL OR LANDSCAPE DRAWINGS.
2. ELECTRICAL INSTALLATION SHALL MEET ALL NEC REQUIREMENTS, BOTH IN GENERAL, AND FOR FOUNTAINS AND SWIMMING POOLS (NEC 680).
3. LAYOUT RUNS TO SUIT FIELD CONDITIONS AND THE REQUIREMENTS OF OTHER TRADES. VERIFY THE EXACT LOCATIONS OF ALL MOTORS, DEVICES, PIPING AND OTHER EQUIPMENT PRIOR TO DETERMINING OUTLET LOCATIONS. DETERMINE THE EXACT LOCATION OF MECHANICAL POOL HARDWARE TO AVOID CONFLICTS WITH UNDERWATER LIGHTING FIXTURES AND JUNCTION BOXES.
4. CONDUIT SHALL NOT BE ROUTED THROUGH ANY WATERPROOF MEMBRANE UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
5. CORE DRILLING FOR CONDUIT PENETRATIONS THROUGH POOL WALLS SHALL BE ACCOMPLISHED ONLY AT LOCATIONS AND IN A MANNER APPROVED BY THE ARCHITECT.
6. MINIMUM CONDUIT SIZE SHALL BE 3/4" TRADE SIZE UNLESS OTHERWISE INDICATED ON THESE DRAWINGS.
7. CONDUIT RUNS CONTAINING CONDUCTORS FOR WATER LEVEL SENSING FLOATS SHALL NOT CARRY ANY OTHER CONDUCTORS.
8. CONDUIT RUNS AND ENCLOSURES (EXCEPT CIRCUIT BREAKER AND CONTROL PANELBOARDS) CONTAINING CIRCUITS PROTECTED BY GFCI TYPE CIRCUIT BREAKERS SHALL NOT CARRY NON-GFCI PROTECTED CIRCUITS.
9. CONDUCTOR SIZES ARE INDICATED AT CROSSMARK SYMBOLS.
10. GROUNDING CONDUCTORS ARE NOT SHOWN BY CONDUIT AND WIRING SYMBOLS. INSTALL AND CONNECT A CODE SIZE INSULATED OR BARE COPPER GROUNDING CONDUCTOR IN ALL CONDUIT RUNS. PERMANENTLY GROUND AND BOND ELECTRICAL CABINETS, MOTORS, CONDUITS, AND METAL IN AND AROUND POOL.
11. IDENTIFY EVERY BRANCH CIRCUIT AND CONTROL CONDUCTOR AT BOTH ENDS BY CIRCUIT NUMBER OR CONTROL WIRE NUMBER WITH THE SPECIFIED WIRE MARKERS.
12. POT ALL UNDERWATER JUNCTION BOXES WITH RE-ENTERABLE ENCAPSULANT. SEAL ALL CONDUIT ENTRIES IN UNDERWATER JUNCTION BOXES WITH SUITABLE, CHLORINE RESISTANT WATERPROOF CAULKING COMPOUND. ALL CONDUCTORS EXITING THE RESERVOIRS SHALL BE VIA UNDERWATER JUNCTION BOX.
13. STAINLESS STEEL CONDUIT SHALL BE USED FOR ALL PENETRATIONS THROUGH THE POOL SLAB. PROVIDE A WATERSTOP OR FLASHING FLANGE AS APPROPRIATE FOR EACH AND EVERY PENETRATION.
14. ALL METALLIC FASTENERS, INSERTS, BRACKETS, SUPPORTS, ETC. IN THE POOLS (WHETHER SUBMERGED OR NOT) SHALL BE STAINLESS STEEL, BRONZE, OR COPPER AS INDICATED. PLATED, UNPLATED, OR PAINTED FERROUS PARTS ARE NOT PERMITTED IN ANY SUBMERGED ELECTRICAL APPLICATION FOR THIS WORK.
15. LINE-OF-SITE DISCONNECTS SHALL BE PROVIDED FOR THE FOUNTAIN SUBMERSIBLE PUMPS, PER NEC REQUIREMENTS.



SINGLE LINE DIAGRAM 1

SYMBOLS

- UNDERWATER UPLIGHT FIXTURE.
- SOLENOID ACTUATED DIAPHRAGM VALVE.
- JUNCTION BOX, SUBMERSIBLE.
- 60 100 2P — CIRCUIT BREAKER: 60 AMP TRIP ELEMENT, 100 AMP FRAME, 2 POLE.
- 1 — MOTOR STARTER OR POWER RELAY
- DISCONNECT SWITCH.
- 5 — MOTOR. NUMBER INDICATES HORSEPOWER.
- CONDUIT RUN CONCEALED IN SLAB OR UNDERGROUND.
- CONDUIT RUN EXPOSED.
- CROSSMARKS ON ANY CONDUIT INDICATE THE NUMBER OF WIRES CONTAINED.
- DIRECT TRANSITION FROM RIGID OR EMT CONDUIT TO FLEXIBLE CONDUIT.
- LIQUID TIGHT FLEXIBLE CONDUIT.
- SUBMERSIBLE CORD.

CONTROL/POWER PANEL CPPA

FOUNTAIN CONTROL/POWER PANEL TO BE FULLY ENGINEERED, UL 508 LISTED, GASKETED AND WEATHERPROOF, AND TO MINIMALLY INCLUDE:

1. MOTOR STARTERS OR HORSEPOWER RELATED POWER RELAYS FOR BOTH PUMPS. OFF/AUTO/TEST FUNCTIONALITY. ALL CONTROL RELAYS TO BE SOCKET MOUNTED.
2. GFCI CIRCUIT BREAKERS (PER NEC) FOR SUBMERSIBLE PUMPS AND UNDERWATER LIGHTING AS REQUIRED.
3. LOGIC FOR FILL AND AUTOMATIC WATER MAKE-UP, AND LOW-WATER LOCKOUT.
4. LIGHTING CONTACTOR FOR WATERFALL AND SPOUT UNDERWATER LIGHTS.
5. PROGRAMMABLE TIME SWITCH - INDEPENDENT CHANNELS FOR PUMPS AND LIGHTING. LIGHTING CHANNEL TO HAVE ASTRONOMICAL CAPABILITIES (ADJUSTS "ON" TIME FOR CHANGING SUNSET TIMES THROUGHOUT THE YEAR).
6. CONTROL FUNCTIONS:
   - 6.1. MANUAL FILL FROM EMPTY. START/STOP CONTROL OF FUNCTION BY OPERATOR TO BE AVAILABLE. PROVIDE PILOT LIGHT INDICATING WHEN FUNCTION IS ON.
   - 6.2. AUTOMATIC WATER MAKE-UP. FOR DAY-T0-DAY ADDITION. USE UPPER AND MIDDLE FLOAT (IF REQUIRED FOR DEADBAND). BE SURE WATER SUPPLY VALVE (MUV-1) WILL NOT CHATTER DUE TO WAVE ACTION. PROVIDE PILOT LIGHT INDICATING WHEN FUNCTION IS ON.
   - 6.3. LOW WATER LOCKOUT. USE LOWEST LEVEL SENSOR (FLOAT). LOCKS OUT LIGHTING AS WELL AS PUMP. PROVIDE RED PILOT LIGHT INDICATING .
   - 6.4. PUMP CONTROL:
     - 6.4.1. PROVIDE HAND/OFF/AUTO FUNCTIONALITY.
     - 6.4.2. HAND POSITION: PUMP OPERATES CONTINUOUSLY UNLESS LOW-WATER LOCKOUT IS IN EFFECT
     - 6.4.3. AUTO POSITION: PUMP OPERATES CONTINUOUSLY IF TIME SWITCH CONTACT IS CLOSED, LOW-WATER LOCKOUT IS NOT IN EFFECT, AND OPTIONAL WIND CONTROL INTERLOCK IS NOT ENGAGED.
     - 6.4.4. WIND CONTROL INTERLOCK: PROVIDE TERMINALS SO THAT IF OPTIONAL WIND CONTROLLER IS INSTALLED, DISPLAY PUMPS WILL BE LOCKED OUT FOR THE DURATION OF THE WIND CONTROL CYCLE, AS DETERMINED BY THE INSTALLED WIND CONTROLLER.
   - 6.5 LIGHTING CONTROL: PROVIDE HAND/OFF/AUTO FUNCTIONALITY, SIMILAR TO PUMPS. HAND BYPASSES TIME SWITCH INTERLOCK BUT NOT LOW-WATER LOCKOUT. AUTO POSITION ALLOWS TIME SWITCH CONTROL OF HOURS OF OPERATION, BUT LOW-WATER LOCKOUT IS STILL IN FORCE. ASCERTAIN IF LIGHTING (BY OTHERS) REQUIRES LOW-VOLTAGE TRANSFORMER. IF SO, PROVIDE SUITABLE LIGHTING TRANSFORMER(S).

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WATER FEATURE ELECTRICAL SYSTEM

Date:	3/20/2013
Drawn by:	TL
Checked by:	RK
Scale:	NONE

Drawing No.:

WE1.1

SPECIFIED WORK

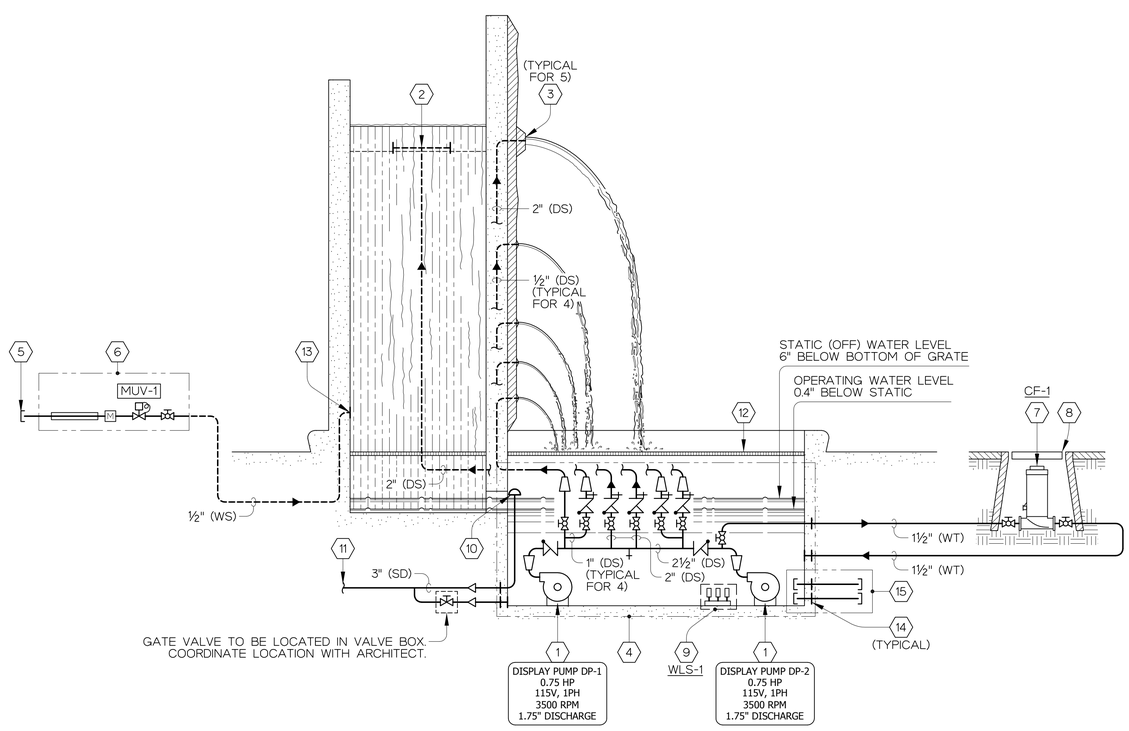
1. DISPLAY PUMP. BARNES SFU71 OR EQUIVALENT.
2. EXISTING SUPPLY FITTING.
3. EXISTING FILL SPOUT.
4. CONCRETE RESERVOIR SUMP. 40 SQ.FT SURFACE AREA. SEE LANDSCAPE ARCHITECT'S DRAWINGS FOR EXACT DIMENSIONS.
5. WATER SUPPLY PIPING STUB. SUPPLY PIPING TO BE ROUTED TO STUB UNDER CIVIL ENGINEER'S WORK.
6. WATER SUPPLY ASSEMBLY WITH BACKFLOW PREVENTER (IF REQUIRED) AND NEW SOLENOID VALVE. BACKFLOW PREVENTER REQUIREMENTS AND LOCATION TO BE COORDINATED WITH LANDSCAPE ARCHITECT. POSSIBLY IN EXISTING LOCATION.
7. CHLORINE FEEDER. HAYWARD CL100 OR EQUIVALENT.
8. UTILITY BOX CONSTRUCTION, LID, AND LOCATION TO BE COORDINATED WITH LANDSCAPE ARCHITECT.
9. FLOAT SWITCH TYPE WATER LEVEL SENSOR. PROVIDED UNDER FOUNTAIN ELECTRICAL WORK.
10. OVERFLOW STANDPIPE. SET 1" ABOVE STATIC WATER LEVEL.
11. OVERFLOW AND DRAIN PIPING. USE EXISTING PIPING AND VALVE OUTSIDE OF RESERVOIR, ROUTED TO STORM DRAIN.
12. GRATE AND SUPPORT SYSTEM. COORDINATE WITH LANDSCAPE ARCHITECT FOR GRATE TYPE, LOADING REQUIREMENTS, ETC.
13. EXISTING FILL SPOUT.
14. STAINLESS STEEL WATER STOP. EMBEDDED IN CONCRETE.
15. TWO 2" TYPE 304 STAINLESS STEEL PIPES WITH EMBEDDED WATER STOP FOR POSSIBLE FUTURE USE. BURIED IN GRADE OUTSIDE OF THE SUMP.

GENERAL NOTES

1. ALL PIPE MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO BEST FOUNTAIN STANDARDS AND PRACTICES. NEW EXPOSED PIPING TO BE TYPE 304 STAINLESS STEEL, OR MATCH EXISTING PIPING. PAINT TO MATCH EXISTING FINISH. UNDERGROUND PIPE CAN TRANSITION TO SCHEDULE 40 PVC WITH SCHEDULE 80 FITTINGS.
2. WHERE FERROUS AND NON-FERROUS METALLIC PIPING IS JOINED, PROVIDE DIELECTRIC FITTINGS.
3. PROVIDE WATERSTOP, FLASHING FLANGE OR SLEEVE AS APPROPRIATE, AT EACH FLOOR OR WALL PENETRATION UNDER THIS WORK.
4. PIPING IN PARALLEL OR CROSSING SHALL HAVE 3" MINIMUM CLEARANCE TO OTHER PIPING.
5. PROVIDE UNIONS AND/OR FLANGES AS SHOWN, AND AS REQUIRED TO FACILITATE REMOVAL OF ALL VALVES AND EQUIPMENT.
6. THE GRATE SHALL BE PROVIDED BY THE CONTRACTOR. THE GRATE SHALL BE INSTALLED IN SEGMENTS TO ALLOW FOR EASY ACCESS TO THE EQUIPMENT LOCATED IN THE SUMP PIT. COORDINATE GRATE REQUIREMENTS WITH THE ARCHITECT. SECURE WITH VANDAL-PROOF BOLTS.
7. BALL VALVES LOCATED IN THE SUMP PIT SHALL BE BRONZE WITH STAINLESS STEEL TRIM OR EQUIVALENT TO TOLERATE SUSTAINED SUBMERGENCE IN TREATED WATER WITHOUT DEGRADING.
8. THE OVERFLOW STANDPIPE SHALL BE SET TO A HEIGHT OF 1" ABOVE THE STATIC WATER LEVEL. THE STATIC WATER LEVEL SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SETTING THE OVERFLOW HEIGHT.
9. EXISTING PIPING AND EQUIPMENT SHALL BE REUSED WHEN APPROPRIATE AND AT CITY'S DISCRETION.
10. LOCATE OVERFLOW PIPE AND LEVEL FLOATS (WLS-1) IN ACCESSIBLE, NON-TURBULENT REGION OF RESERVOIR. COORDINATE LOCATION AND ACCESSIBILITY WITH ARCHITECT.

SYMBOLS

- OVERFLOW FITTING, STANDPIPE.
- SUBMERSIBLE FOUNTAIN PUMP.
- GATE VALVE, PLAN AND ELEVATION.
- BALL VALVE, PLAN AND ELEVATION.
- DIAPHRAGM VALVE, SOLENOID ACTUATED, HYDRAULICALLY OPERATED, PLAN AND ELEVATION. MUV = MAKE-UP VALVE.
- HOSE BIBB.
- SILENT CHECK VALVE.
- BACKFLOW PREVENTER, REDUCED PRESSURE TYPE.
- M — WATER METER.
- CONCENTRIC REDUCER.
- 2" (DS) — PIPING RUN. DS = DISPLAY SUPPLY. SD = STORM DRAIN. WS = WATER SUPPLY. WT = WATER TREATMENT.
- CAPPED PIPE.
- TERMINATED OPEN PIPE
- NORMAL DIRECTION OF FLOW.
- DIRECTION OF DRAINAGE FLOW.
- EXISTING PIPING.



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#173-231 ESSEX STREET
SALEM, MASSACHUSETTS

WATER FEATURE PLUMBING NOTES, SYMBOLS AND SCHEMATIC DIAGRAM

Date:	3/20/2013
Drawn by:	GV
Checked by:	RK
Scale:	NONE

Drawing No.:

WP1.1