

# THE CITY OF KALAMAZOO

# BRONSON PARK IMPROVEMENTS

# LINCOLN STATUE ELECTRICAL REVISIONS

KALAMAZOO, MICHIGAN  
BID REFERENCE 98854-005.0

OWNER/CLIENT:  
KALAMAZOO COUNTY (PROPERTY OWNER)  
CITY OF KALAMAZOO PARKS & RECREATION DEPT.  
(PROPERTY LEASEE AND CLIENT)

251 MILLS ROAD  
KALAMAZOO, MICHIGAN 49048  
269-337-8191 TELE  
269-552-6457 FAX

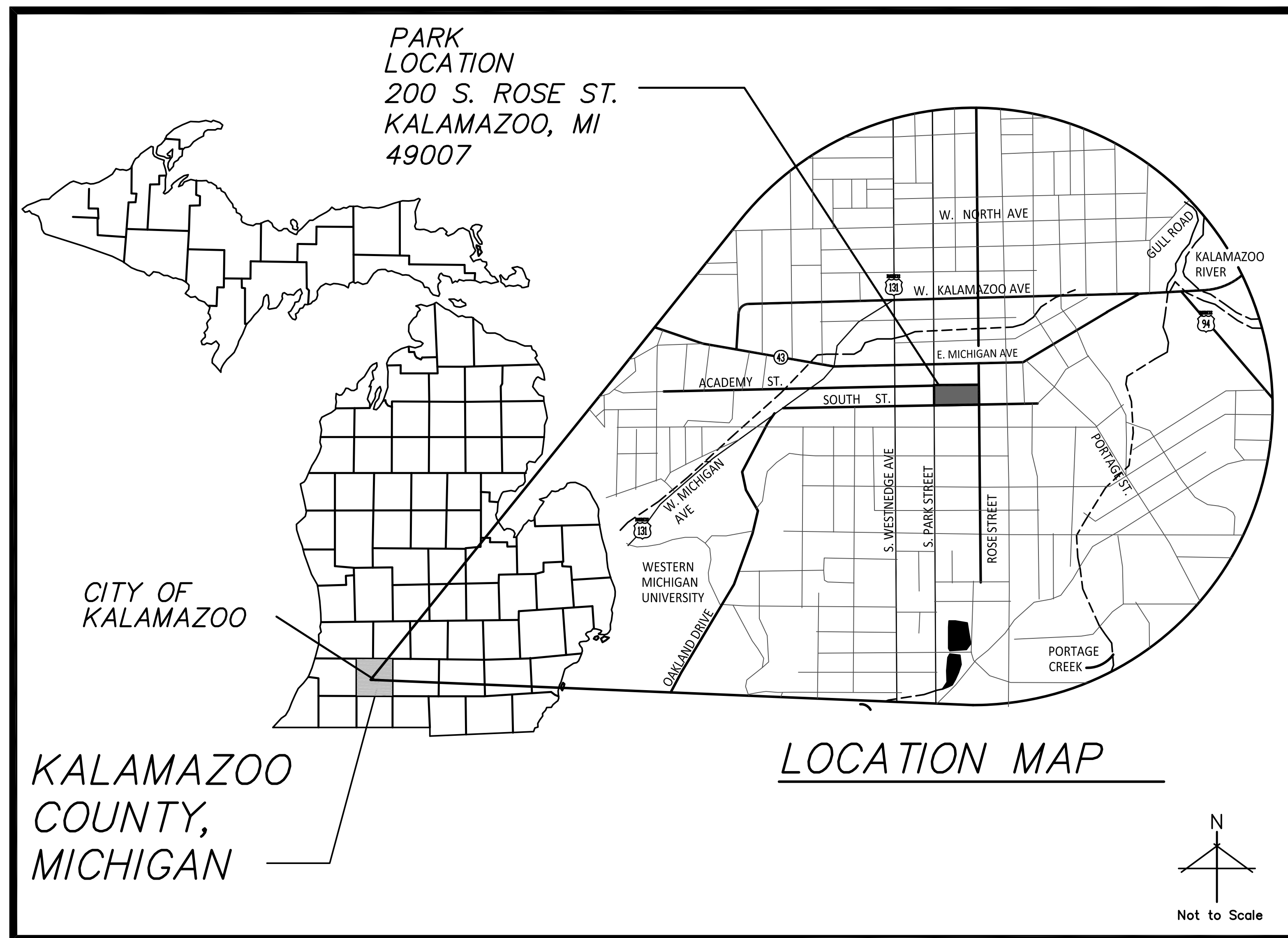
LANDSCAPE ARCHITECT:  
O'BOYLE COWELL BLALOCK  
& ASSOCIATES, INC.

350 EAST MICHIGAN AVENUE, SUITE #415  
KALAMAZOO, MICHIGAN 49007  
269-381-3357 TELE  
269-381-2944 FAX

ELECTRICAL ENGINEER:  
GEOTECH, INC.

4900 CASCADE ROAD SE  
GRAND RAPIDS, MI 49546  
616-949-3340 TELE

## LOCATION MAP



## SHEET INDEX

NO.	
C0.0	COVER SHEET
C0.1	EXISTING CONDITIONS
C0.2	REFERENCE LIGHTING PLAN
C0.3	REFERENCE UNDERGROUND UTILITY PLAN
C1.0	DEMOLITION PLAN
C2.0	REFERENCE AUDIO UNDERGROUND UTILITIES
IR1.0	REFERENCE IRRIGATION PLAN
IR1.1	REFERENCE IRRIGATION DETAILS
E1.1	ELECTRICAL PLAN

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Issued For:	Date
OWNER REVIEW	05-17-23
ISSUE FOR BID	09-18-23

Project:  
**Bronson Park Improvements - Lincoln Statue Electrical Revisions**

**Kalamazoo, Michigan**

Sheet Title

**Cover Sheet**

**NOTES:**

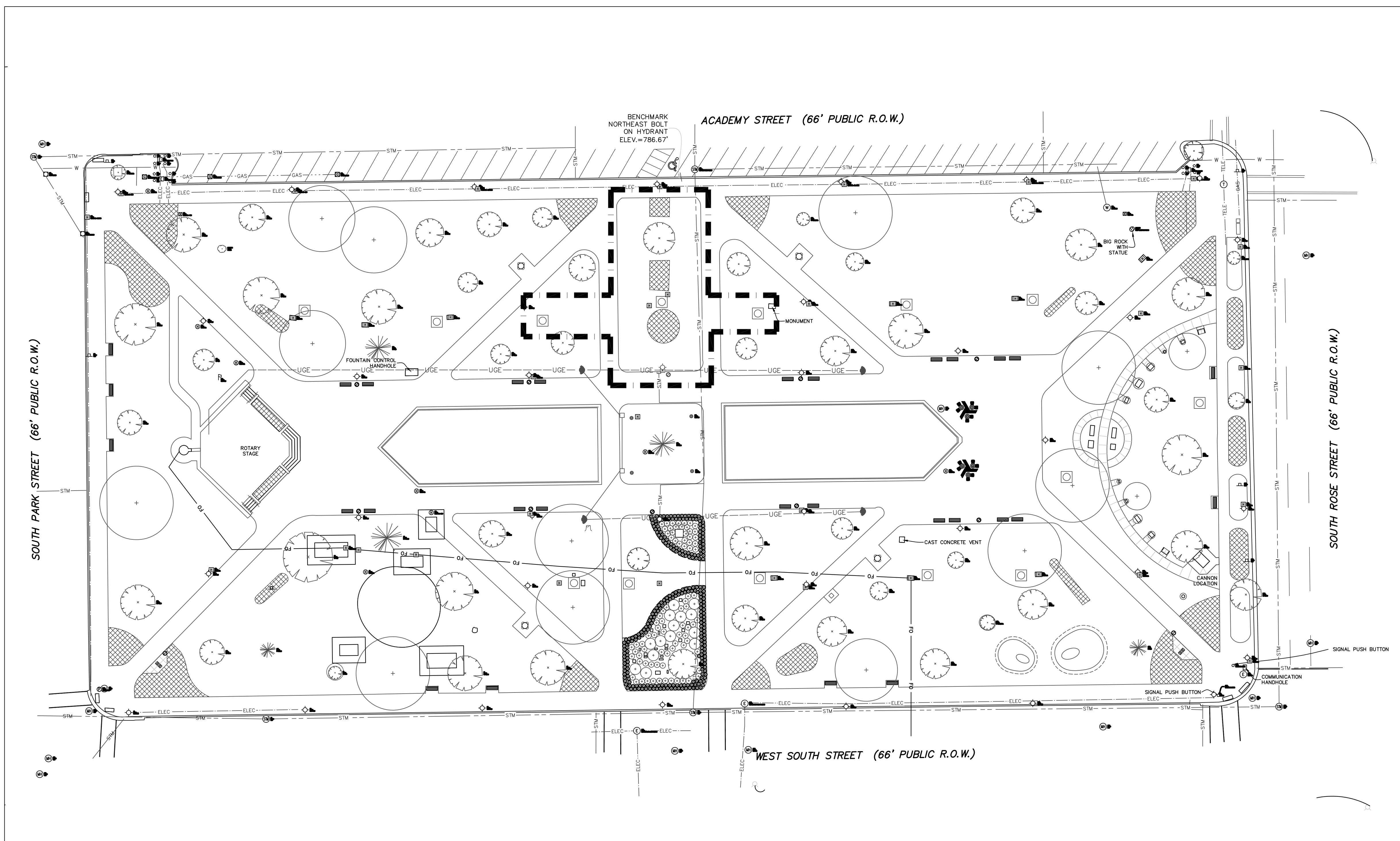
- 1) Except where otherwise indicated on the plans or in the proposal and supplemental specifications or special provisions contained herein, all materials and workmanship shall be in accordance with Michigan Department of Transportation Standard Specifications for Construction, 1996 Edition.
- 2) Call Miss Dig, 1-800-482-7171 three working days, excluding Saturday, Sunday and holidays, before starting your project.

**EXISTING CONDITIONS NOTES:**

1. The basis of bearing for this survey is the North American Datum of 1983 (NAD83)(2011) epoch 2010.0 with unit being the international foot.
2. Vertical Datum is based on GEOID12B adjustment of the North American Vertical Datum of 1988 (NAVD88) with the units being the international foot.
3. Survey of existing conditions provided by Prein & Newhof, Inc., 7123 Stadium Drive, Kalamazoo, Michigan 49009. Phone: 269-372-1158.
4. Verify locations of all below grade utilities prior to beginning work, 72 hours before you dig, call "MISSDIG" at 1-800-482-7171.
5. Protect all trees & existing features to remain as specified.
6. Refer to the Demolition Plan for exact limits of removal.

**EXISTING CONDITIONS LEGEND:**

- ⊙ BENCHMARK
- ⊙ BUSH/SHRUB
- ⊙ CATCH BASIN - RECTANGULAR FRAME
- ⊙ CATCH BASIN - ROUND FRAME
- ⊙ CLEANOUT
- ⊙ DECIDUOUS TREE
- ⊙ CONIFEROUS TREE
- ⊙ FLAG POLE
- ⊙ GUY ANCHOR
- ⊙ HANDHOLE
- ⊙ HYDRANT
- ⊙ LIGHT POLE
- ⊙ MARKER - GENERIC
- ⊙ MARKER - GAS
- ⊙ MANHOLE - GENERIC
- ⊙ MANHOLE - STORM
- ⊙ MANHOLE - ELECTRIC
- ⊙ MANHOLE - TELEPHONE
- ⊙ MANHOLE - WATER (VALVE VAULT)
- ⊙ POST
- ⊙ PARKING MEETING
- ⊙ SIGN
- ⊙ ELEC. EQUIP./TRANSFORMER
- ⊙ UTILITY POLE
- ⊙ VALVE & BOX
- ⊙ WATER WELL
- ⊙ GENERIC UTILITY PEDESTAL
- ⊙ CATV PEDESTAL
- ⊙ TELEPHONE PEDESTAL
- ⊙ YARD LIGHT
- ⊙ CONCRETE ELECTRICAL DOGHOUSE
- ▨ LANDSCAPE
- LIMIT OF WORK

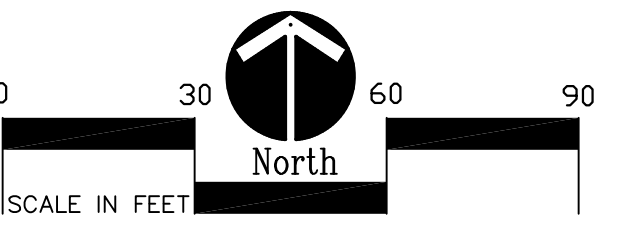


**1 Existing Conditions Plan**  
SCALE: 1"=30'-0"

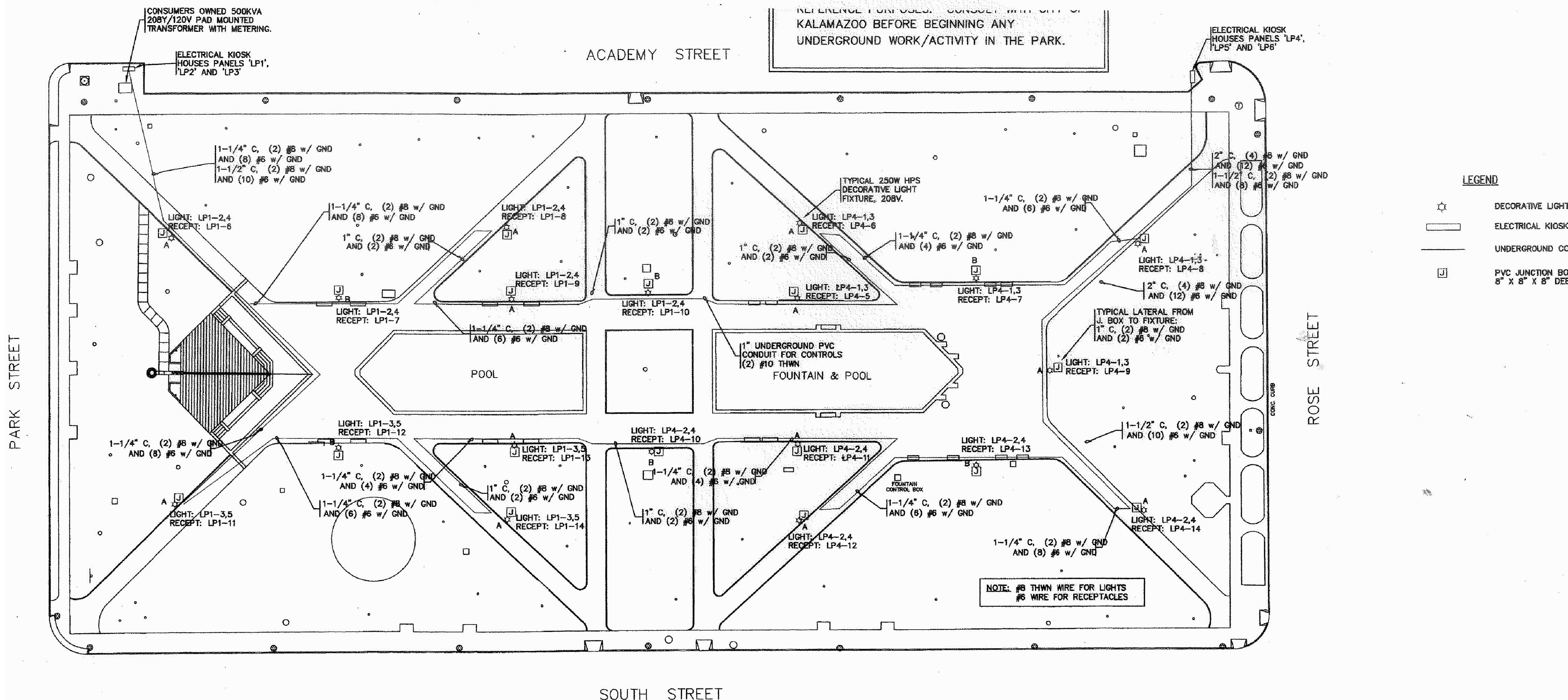
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**Bronson Park Improvements - Lincoln Statue Electrical Revisions**  
**Kalamazoo, Michigan**  
Sheet Title:  
**Existing Conditions Plan**











REFERENCE PURPOSES. CONSULT WITH CITY OF KALAMAZOO BEFORE BEGINNING ANY UNDERGROUND WORK/ACTIVITY IN THE PARK.

**LEGEND**

-  DECORATIVE LIGHT
-  ELECTRICAL KIOSK
-  UNDERGROUND COND
-  PVC JUNCTION BOX, 8" X 8" X 8" DEEP

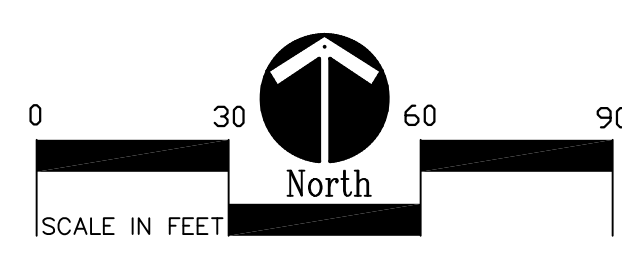
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Issued For:	Date
OWNER REVIEW	01-24-22
ISSUED FOR BID	02-23-22

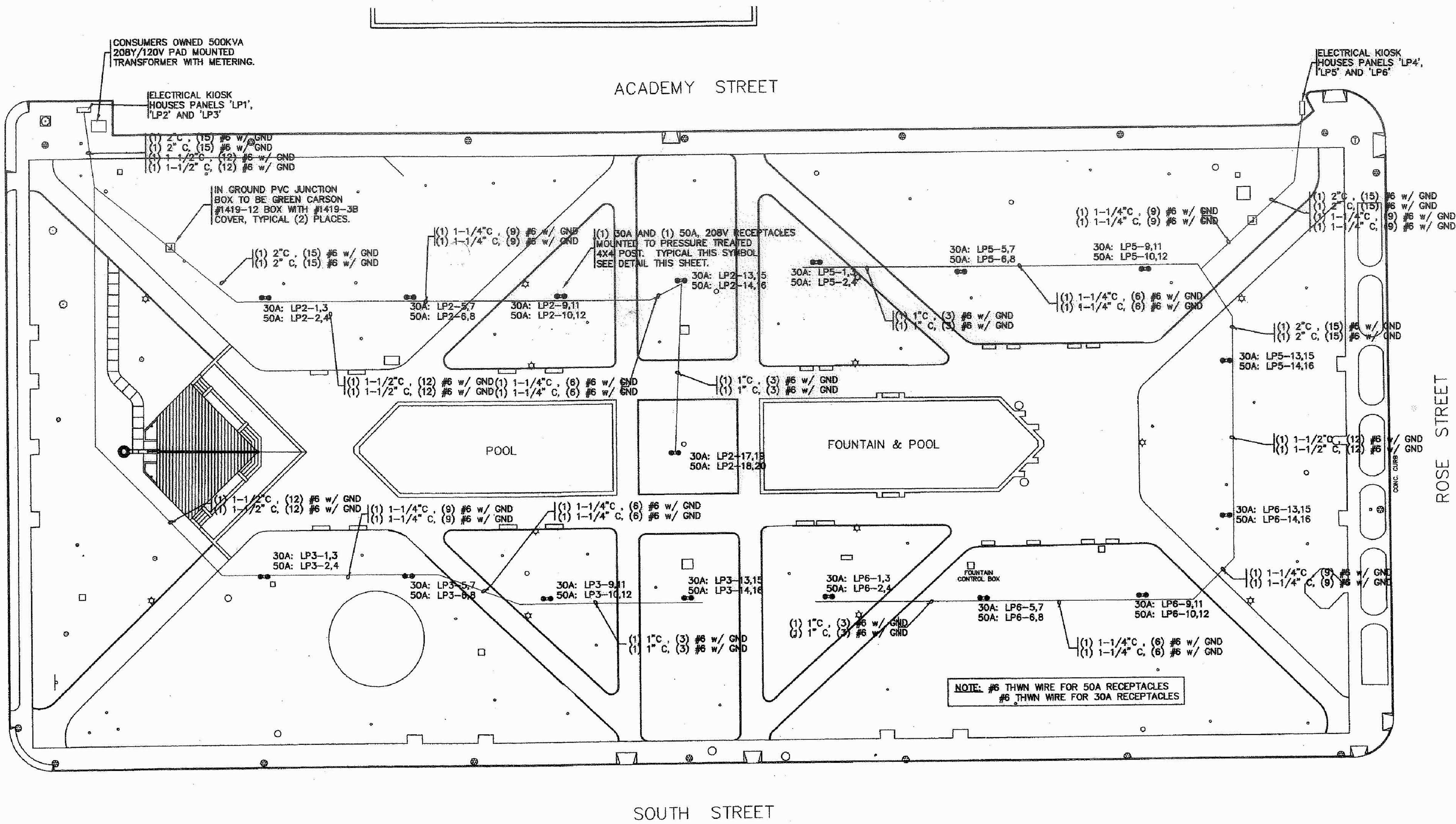
Project:  
**Bronson Park - Audio Upgrade**

**Kalamazoo, Michigan**  
Sheet Title  
**Reference Lighting Plan**

**BRONSON PARK LIGHTING PLAN**  
**FOR REFERENCE ONLY**







**LEGEND**

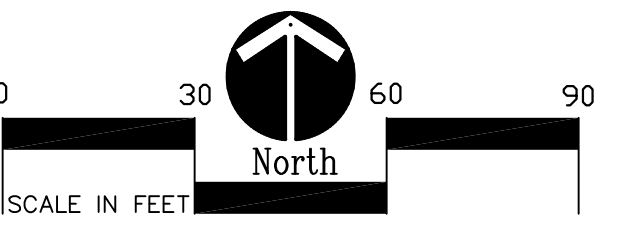
- POWER KIOSK
- IN GROUND PVC POWER BOX
- UNDERGROUND CONDUIT
- IN GROUND PVC JUNCTION BOX

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Project:  
**Bronson Park - Audio Upgrade**

Kalamazoo, Michigan  
Sheet Title **Reference Underground Utility Plan**



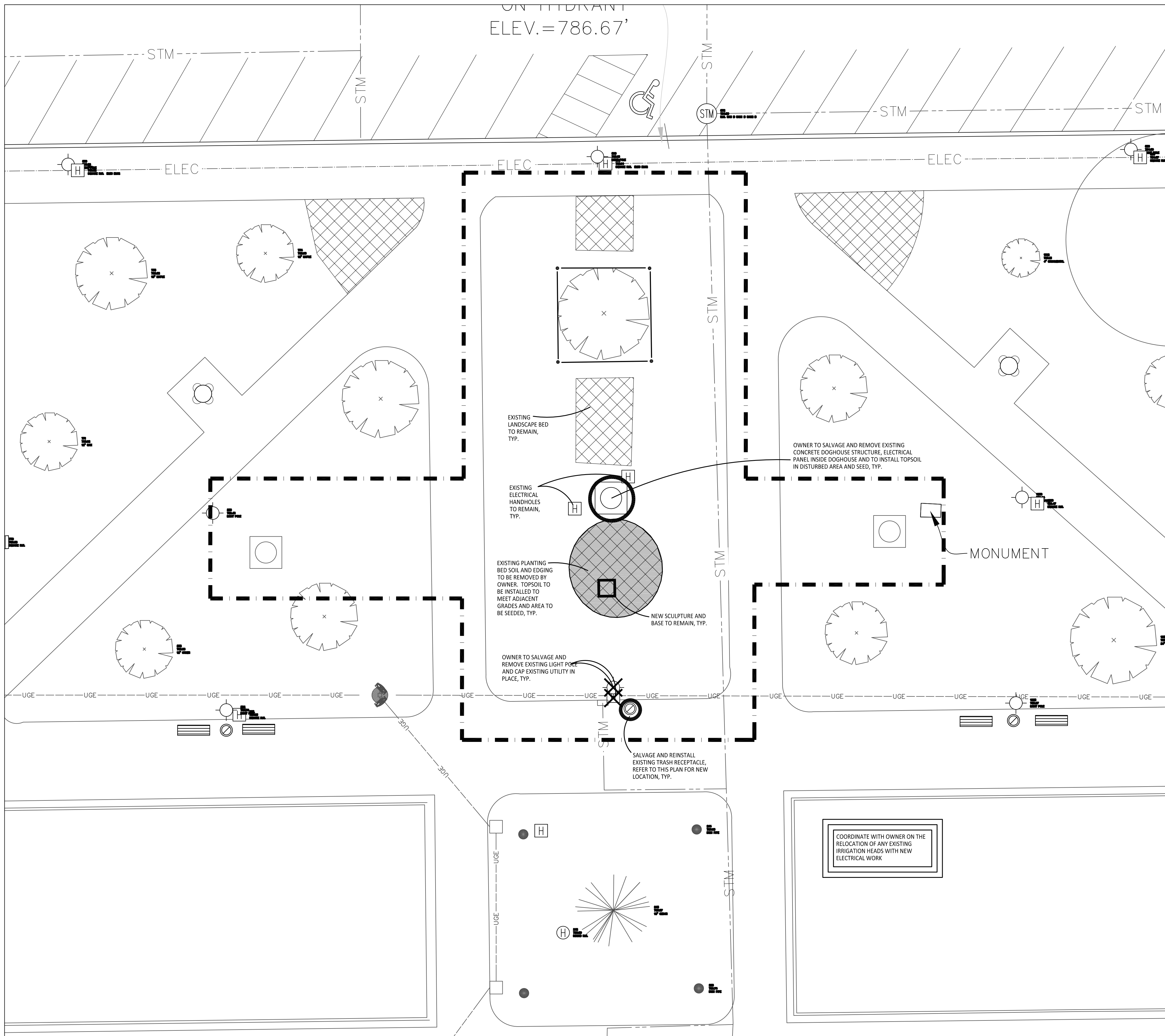
Job No. \_\_\_\_\_ Sheet No. \_\_\_\_\_

**BRONSON PARK UNDERGROUND 208V PLAN**

**FOR REFERENCE ONLY**

STAINLESS STEEL  
120A GFCI RECEPTACLE



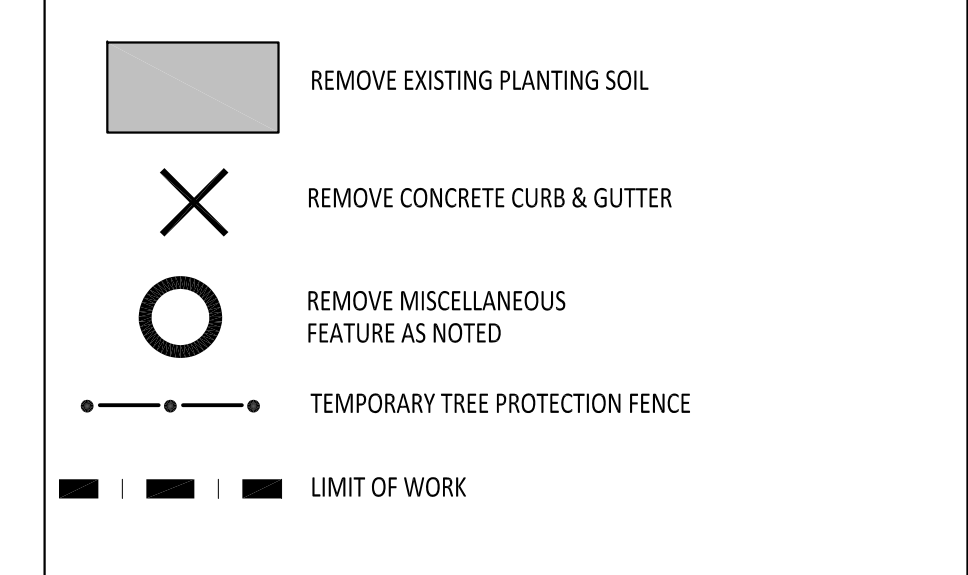


**1 Demolition Plan**  
SCALE: 1"=10'-0"

**DEMOLITION NOTES:**

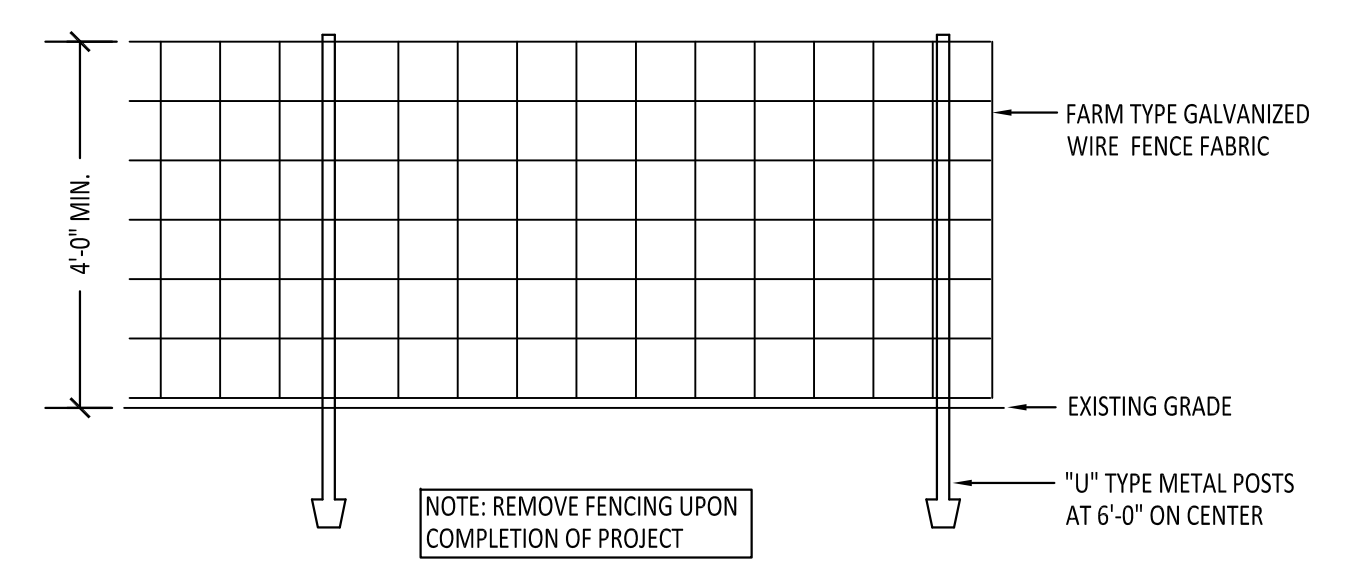
1. SURVEY OF EXISTING CONDITIONS PROVIDED BY PREIN & NEWHOF INC. 7123 STADIUM DRIVE, KALAMAZOO MI, 49009 Ph: 269-372-1158
2. VERIFY LOCATIONS OF ALL BELOW GRADE UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171.
3. PROTECT ALL TREES & EXISTING FEATURES TO REMAIN AS SPECIFIED.
4. REFER TO LAYOUT PLAN FOR LIMITS OF WORK.
5. DISCREPANCIES BETWEEN SITE AND PLANS SHOULD BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
6. ALL AREAS OF TREE CLEARING SHALL BE STAKED FOR ARCHITECT'S APPROVAL PRIOR TO CLEARING.
7. ALL TOPSOIL AND EXCESS FILL MATERIAL SHALL BE STOCKPILED ON SITE SEPARATELY FOR LATER RE-USE. LOCATE STOCKPILES IN AREAS AS DIRECTED BY CONSTRUCTION MANAGER AND PROTECT FROM EFFECTS OF EROSION.
8. THE MATCH-E-BE-NASH-SHE-WISH BAND OF POTTAWATOMI INDIANS WILL PERFORM A BLESSING CEREMONY ON THE SITE PRIOR TO ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION SCHEDULE WITH OWNER AND LANDSCAPE ARCHITECT PRIOR TO START OF CONSTRUCTION.
9. NO CONSTRUCTION SHALL OCCUR DURING THE WEEKEND OF JUNE 4, 2022. EXACT CLOSURE DATES TO BE COORDINATED WITH THE CITY OF KALAMAZOO. ALL CONSTRUCTION WORK MUST BE STOPPED WITH NO EXPOSED UTILITY TRENCHES, HOLES, OR OTHER TRIPPING HAZARDS FOR PEDESTRIANS. THE MOUND MUST BE SECURED WITH ORANGE SNOWFENCING AND SIGNAGE SECURED TO THE FENCING. CITY OF KALAMAZOO TO PROVIDE SIGNAGE.

**DEMOLITION LEGEND:**



**TREE PROTECTION NOTES:**

- PROVIDE AND MAINTAIN TEMPORARY TREE PROTECTION FENCING IN ALL LOCATIONS MARKED WITH TREE FENCING SYMBOLS. TREE FENCING SHALL BE PROVIDED AND IN PLACE PRIOR TO ANY WORK ON SITE (INCLUDING TOPSOIL STRIPPING OPERATIONS). REFER TO THE FOLLOWING NOTES AND THE SPECIFICATIONS FOR TREE PROTECTION REQUIREMENTS.
1. NO CONSTRUCTION OPERATIONS, EQUIPMENT, MATERIALS OR TOPSOIL SHALL BE ALLOWED WITHIN THE TREE PROTECTION AREAS.
  2. EXISTING GROUND COVER AND TOPSOIL SHALL NOT BE REMOVED FROM TREE PROTECTION AREAS DURING EARTHWORK PHASE.
  3. VEHICULAR TRAFFIC, PARKING, EQUIPMENT OR MATERIAL STORAGE MAY NOT OCCUR WITHIN THE TREE PROTECTION AREAS AT ANY TIME.
  4. NO EXCAVATION SHALL BE MADE WITHIN THE TREE PROTECTION AREAS EXCEPT AS NOTED OTHERWISE.



**2 Tree Protection Fencing**  
NOT TO SCALE



350 East Michigan Avenue Suite #415  
Kalamazoo Michigan 49007  
Phone (269) 381-3357  
Fax (269) 381-2944

Landscape Architecture  
Urban Planning  
Parks & Recreation  
Campus & Institutional Planning  
Camp Planning & Design

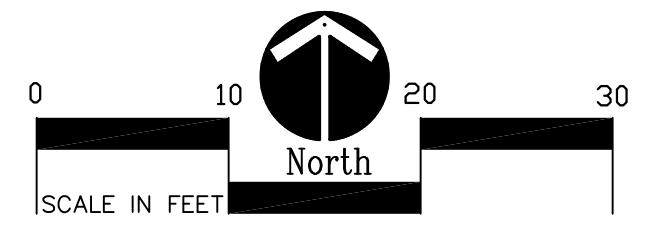
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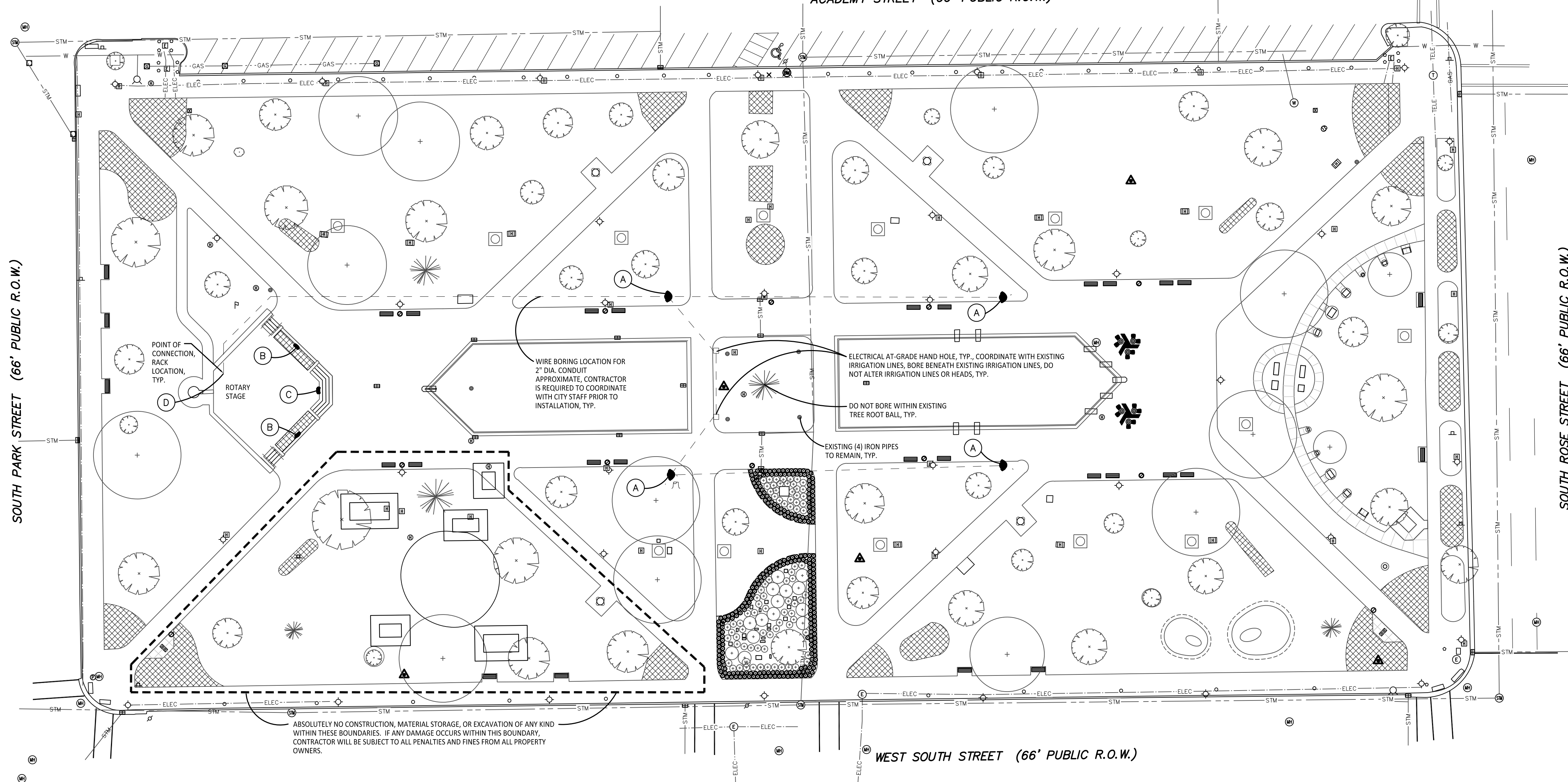
**Demolition Plan**



Job No. **52241** Sheet No. **C1.0**  
Bid Ref # **198854-005.0**



ACADEMY STREET (66' PUBLIC R.O.W.)



1 Overall Layout Plan  
Scale: 1"=30'-0"

LAYOUT NOTES:

1. SURVEY OF EXISTING CONDITIONS PROVIDED BY: PREIN & NEWHOF INC. 7123 STADIUM DRIVE, KALAMAZOO MI. 49009 Ph: 269-372-1158
2. NOT ALL UNDERGROUND UTILITIES MAY BE SHOWN ON PLAN. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. VERIFY LOCATIONS OF ALL BELOW GRADE UTILITIES PRIOR TO BEGINNING WORK. 72 HOURS BEFORE YOU DIG CALL "MISS DIG" AT 1-800-482-7171. CONTRACTOR WILL BE PROVIDED WITH AS-BUILT ELECTRICAL, COMMUNICATION, AND IRRIGATION PLANS AND WILL BE REQUIRED TO COORDINATE PROPOSED UTILITY LOCATIONS WITH CITY PARK STAFF AND CITY ELECTRICIAN PRIOR TO ANY INSTALLATION, TYP. ANY REQUIRED REPAIR OR REPLACEMENT WORK CAUSED BY CONSTRUCTION WILL BE AT CONTRACTOR'S EXPENSE.
3. PROTECT ALL TREES AND EXISTING FEATURES TO REMAIN AS SPECIFIED.
4. REPAIR AND RESTORE ALL DISTURBED AREAS AND ANY DAMAGED AREAS OUTSIDE OF LIMIT OF WORK LINE TO ORIGINAL CONDITION. THIS INCLUDES FINE GRADING, TOPSOILING, AND SEEDING DISTURBED OR DAMAGED AREAS.
5. PAVEMENT DIMENSIONS AND RADII ARE TO EDGE OF PAVEMENT OR BACK OF CURB.
6. DISCREPANCIES BETWEEN SITE AND PLANS SHOULD BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
7. SITE LAYOUT POINTS SHOULD BE ESTABLISHED AND PROTECTED FOR FUTURE SITE WORK.
8. BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND MICHIGAN BARRIER-FREE CODE REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - 1:50 (2%) MAXIMUM CROSS-SLOPE ON ACCESSIBLE ROUTE.
  - NO CHANGES IN LEVEL GREATER THAN 1/2" ALONG ACCESSIBLE ROUTE.
  - 1:20 (5%) MAXIMUM LONGITUDINAL SLOPE ON ACCESSIBLE ROUTE (EXCEPT WHERE RAMP ARE PROVIDED).
9. CONTRACTOR RESPONSIBLE FOR RESTORING ALL AREAS OF CONSTRUCTION DISTURBANCE. TOPSOIL, FINE GRADE, AND SEED ALL TURF AREAS DISTURBED.

PROPOSED FEATURES LEGEND:

SYMBOL	DESCRIPTION	DETAIL
---	BORED WIRE CONNECTION PATH	
KEY	DESCRIPTION	DETAIL
(A)	ALUMINUM SPEAKER POLE W/ (2) SPEAKERS	3/C2.0
(B)	DANLEY OS80 SPEAKER, ROOF MOUNTED	REFER TO SPECS.
(C)	DANLEY OS12CX SPEAKER, ROOF MOUNTED	REFER TO SPECS.
(D)	INTERIOR RACK EQUIPMENT	REFER TO SPECS.

FOR REFERENCE ONLY



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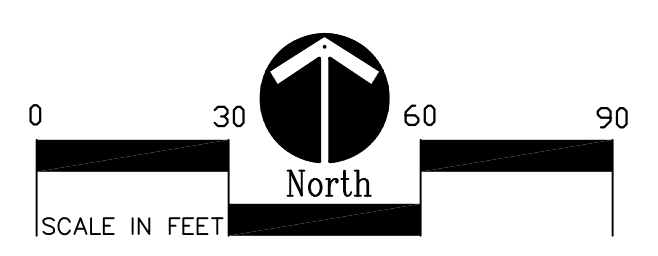
Landscape Architecture  
Urban Planning  
Parks & Recreation  
Campus & Institutional Planning  
Camp Planning & Design

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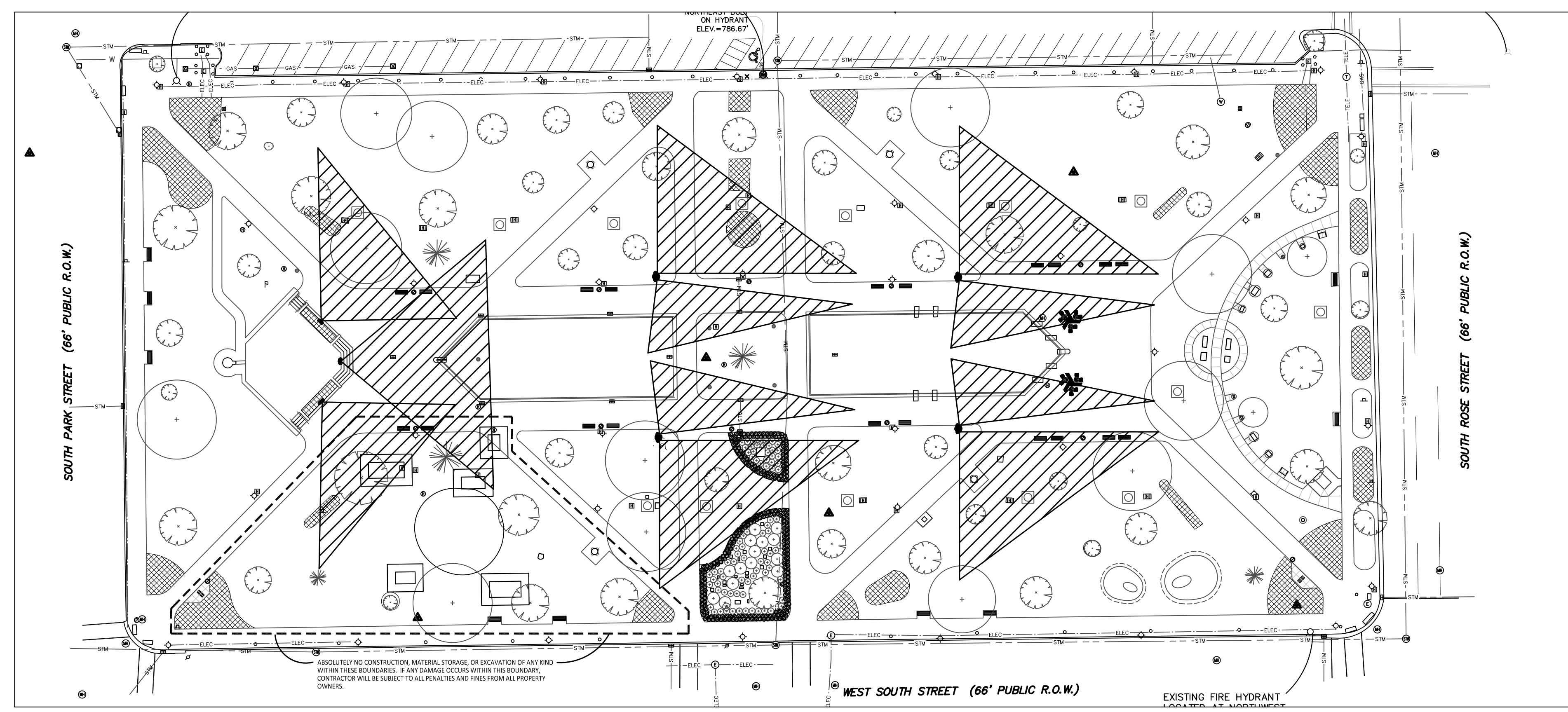
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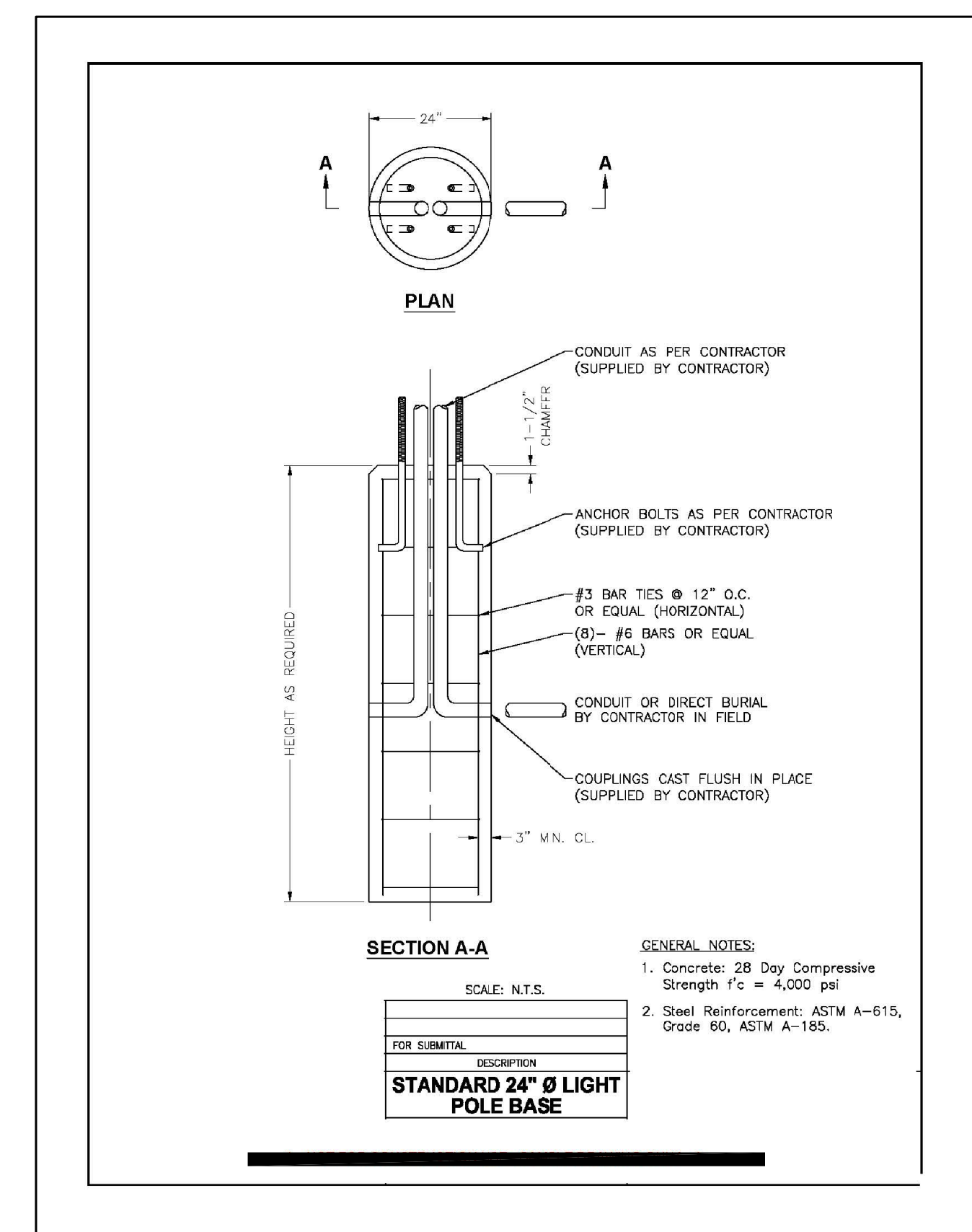
Kalamazoo, Michigan  
Sheet Title  
**Overall Site Layout Plan**



Job No. \_\_\_\_\_ Sheet No. \_\_\_\_\_  
**51407-3 C2.0**



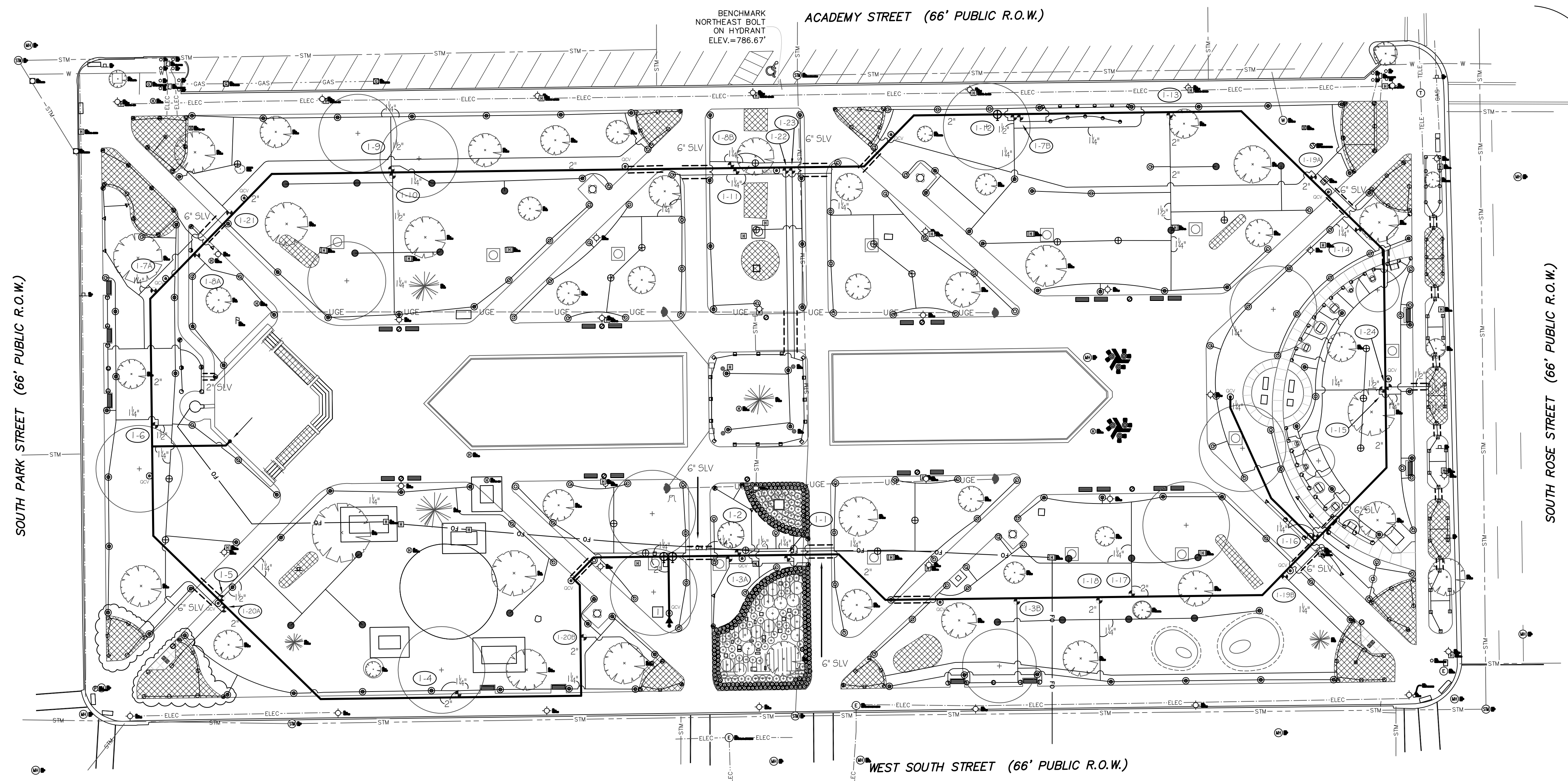
2 Speaker Coverage Plan  
Scale: 1"=40'-0"



3 Reference Concrete Footing Detail  
Not to Scale



**EXISTING IRRIGATION PLAN SHOWN FOR REFERENCE ONLY**



**LEGEND**

●●●●●●	570Z-12P	8"-MFR SERIES	TORO FIXED SPRAY POP-UP (12")
■	570Z-12P	10"-MFR SERIES	TORO FIXED SPRAY POP-UP (12")
●●●●●●	570Z-12P	12"-MFR SERIES	TORO FIXED SPRAY POP-UP (12")
●●●●●●	570Z-12P	15"-MFR SERIES	TORO FIXED SPRAY POP-UP (12")
●	570Z-12P	TVAN-12 NOZZLE	TORO FIXED SPRAY POP-UP (12")
●	570Z-12P	TVAN-15 NOZZLE	TORO FIXED SPRAY POP-UP (12")
●●●	570Z-4P	45T-MFR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	8"-MFR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	10"-MFR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	12"-MFR SERIES	TORO FIXED SPRAY POP-UP (4")
▼▼▼▼▼	570Z-4P	15"-MFR SERIES	TORO FIXED SPRAY POP-UP (4")
●	570Z-4P	TVAN-12 NOZZLE	TORO FIXED SPRAY POP-UP (4")
●	570Z-4P	TVAN-15 NOZZLE	TORO FIXED SPRAY POP-UP (4")
⊙	T5PCK (P/C)	#1.5 LOW ANGLE NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	T5PCK (F/C)	#3.0 LOW ANGLE NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	T5PCK (P/C)	#3.0 NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	T5PCK (F/C)	#6.0 NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	474-00		TORO 1" QUICK COUPLER VALVE W/ (1) KEY AND HOSE SWIVEL
⚡	EZF-26-04		TORO 1" ELECTRIC VALVE
⚡	252-26-06		TORO 1-1/2" ELECTRIC VALVE
□	CCM24 & CC-FED	24 STATION	TORO CUSTOM COMMAND CONTROLLER W/TWRS RAIN SWITCH
—			PVC 160# PIPE (ALL PIPE 1-1/2" AND LARGER)
—			100# POLYETHYLENE PIPE (PE-3408 NSF APPROVED) (ALL PIPE DOWNSTREAM OF VALVE 1-1/4" AND SMALLER)
NOT SHOWN			#14 UL APPROVED 24V RED CONTROL WIRE WITH A #14 UL APPROVED WHITE COMMON WIRE
●			POINT OF CONNECTION (P.O.C.)
▶			765-2 WITH A GS-1 & EP-1
⊕			206 SERIES
			FEBCO 2" PRESSURE VACUUM BREAKER & GUARDSHACK ENCLOSURE WITH PAD
			REDWHITE LINE 2" ISOLATION VALVE

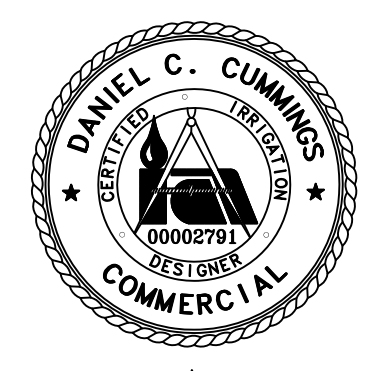
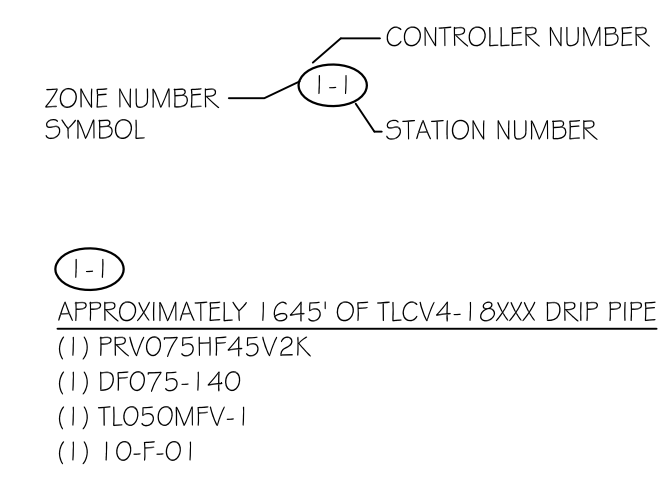
---	TLCV4-18XXX	NETAFIM .4 GPH CV DRIP PIPE
---	TLCVXXX	NETAFIM CV BLANK TUBING (AS SUPPLY & EXHAUST HEADERS)
NOT SHOWN	PRV075HF45V2K	NETAFIM 3/4" PRESSURE REGULATOR
NOT SHOWN	DF075-140	NETAFIM 3/4" FILTER
NOT SHOWN	TLO50MPV-1	NETAFIM LINE-FLUSHING VALVE
NOT SHOWN	10-F-01	NETAFIM OPERATION FLAG

**GENERAL NOTES:**

- COORDINATE THIS WORK WITH ALL OTHER TRADES.
- ALL PLUMBING AND ELECTRICAL SHALL BE INSTALLED ACCORDING TO STATE AND LOCAL CODES.
- ALL SLEEVES SHALL BE BORED UNDER EXISTING WALKS, 4" PVC 160# (UNLESS OTHERWISE SPECIFIED). SLEEVE INSTALLATION SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
- ALL PIPE NOT SIZED DOWNSTREAM OF VALVE IS 1".
- IRRIGATION CONTRACTOR'S POINT OF CONNECTION SHALL BE ON 2" SERVICE LINE STUBBED AT THE LOCATION SHOWN ON THE PLAN.
- 115V POWER INTO CONTROLLER SHALL BE SUPPLIED BY ELECTRICAL CONTRACTOR.
- CONTROLLER AND RAINSWITCH SHALL BE MOUNTED AT LOCATION SHOWN ON PLAN (VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE).
- IRRIGATION CONTRACTOR SHALL ADJUST THE FLOW CONTROL FEATURE ON ALL ELECTRIC VALVES PER THE MANUFACTURER'S RECOMMENDATIONS TO MAXIMIZE THE VALVES PERFORMANCE AND LONGEVITY.
- IF SITE PRESSURE IS NOT ADEQUATE, A BOOSTER PUMP AND RELATED EQUIPMENT MAY BE REQUIRED AT ADDITIONAL COST TO OWNER.
- IRRIGATION PIPE AND EQUIPMENT SHOWN IN PAVED AREAS IS FOR CLARITY ONLY AND SHALL BE INSTALLED WITHIN THE TURF & LANDSCAPE AREAS.
- PIPE ROUTING IS DIAGRAMMATIC. ALL EQUIPMENT AND PIPE ARE TO BE FIELD ADJUSTED TO TAKE INTO CONSIDERATION ANY OBSTRUCTIONS AND ALL LANDSCAPE.

WATER REQUIREMENTS: 47 GPM @ 49 PSI AT THE P.O.C.

ZONE NUMBER	VALVE SIZE	GPM	ZONE TYPE
1-1	1"	8	LANDSCAPE DRIP
1-2	1-1/2"	47	TURF ROTORS
1-3A	1"	9	TURF SPRAYS
1-3B	1"	3	TURF SPRAYS
1-4	1-1/2"	43	TURF ROTORS
1-5	1-1/2"	37	TURF ROTORS
1-6	1-1/2"	45	TURF ROTORS
1-7A	1"	18	TURF SPRAYS
1-7B	1"	6	TURF SPRAY
1-8	1"	11	TURF ROTORS
1-8	1-1/2"	28	TURF ROTORS
1-9	1-1/2"	40	TURF ROTORS
1-10	1-1/2"	38	TURF ROTORS
1-11	1-1/2"	38	TURF ROTORS
1-12	1-1/2"	33	TURF ROTORS
1-13	1-1/2"	45	TURF ROTORS
1-14	1"	27	TURF ROTORS
1-15	1-1/2"	39	TURF ROTORS
1-16	1"	21	TURF SPRAYS
1-17	1-1/2"	43	TURF ROTORS
1-18	1-1/2"	42	TURF ROTORS
1-19A	1"	17	LANDSCAPE SPRAYS
1-19B	1"	17	LANDSCAPE SPRAYS
1-20A	1"	13	LANDSCAPE SPRAYS
1-20B	1"	5	LANDSCAPE SPRAYS
1-21	1"	23	LANDSCAPE SPRAYS
1-22	1"	11	TURF ROTORS
1-23	1"	11	TURF SPRAYS
1-24	1"	27	LANDSCAPE SPRAYS



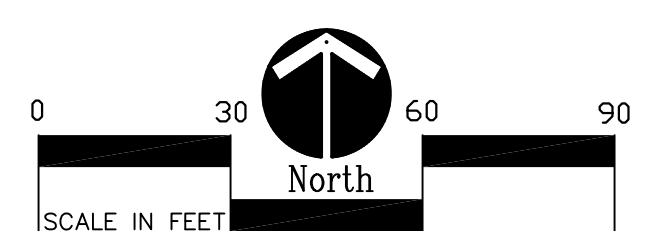
THIS DESIGN IS BASED ON INFORMATION PROVIDED BY THE ARCHITECT AND/OR OWNER WHO ASSUMES FULL RESPONSIBILITY FOR ITS CORRECTNESS.



Spartan Distributors

487 W. Division St.  
Sparta, MI 49345  
Ph: 616.887.7301  
Fax: 616.887.6288

Design By: CUMMINGS, C.I.D.  
Plan #: 18-090C  
Date: 1-21-19 PRELIMINARY  
1-24-19 DCC  
10-8-19 DCC  
10-29-19 DCC



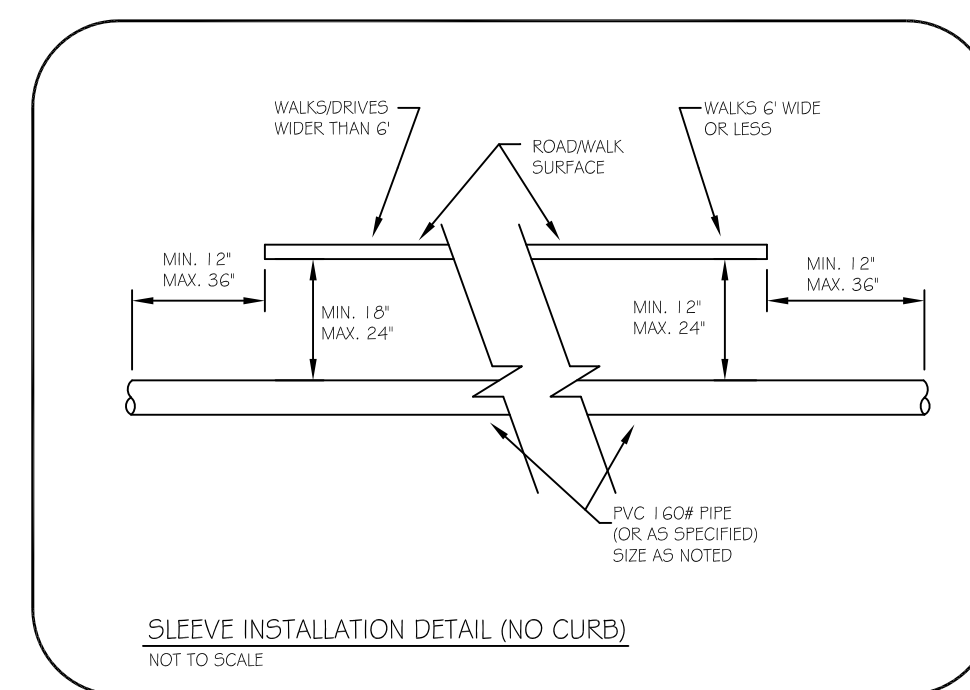
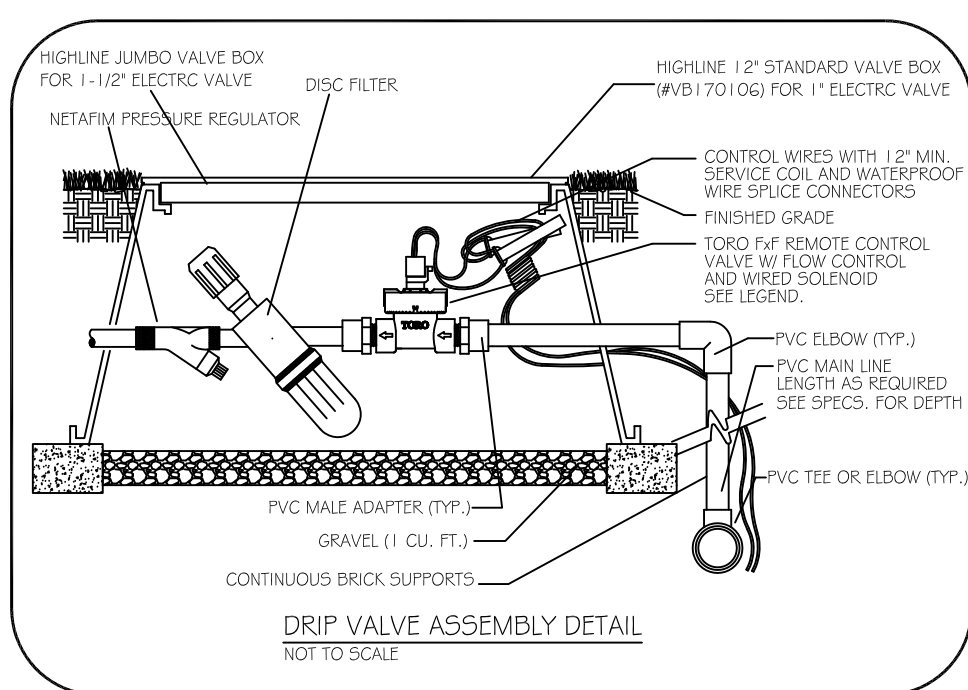
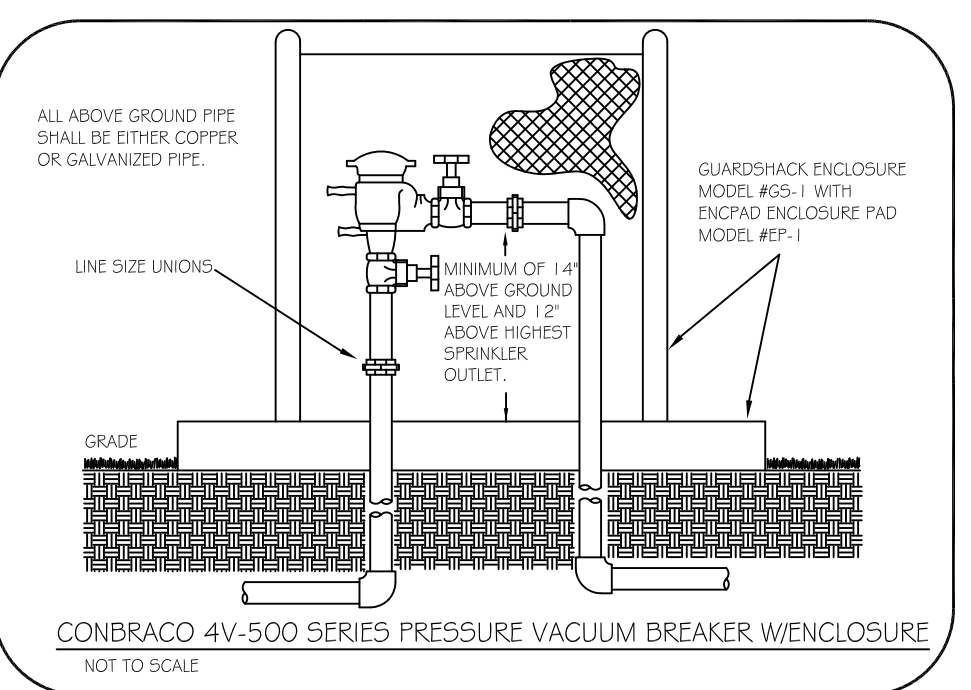
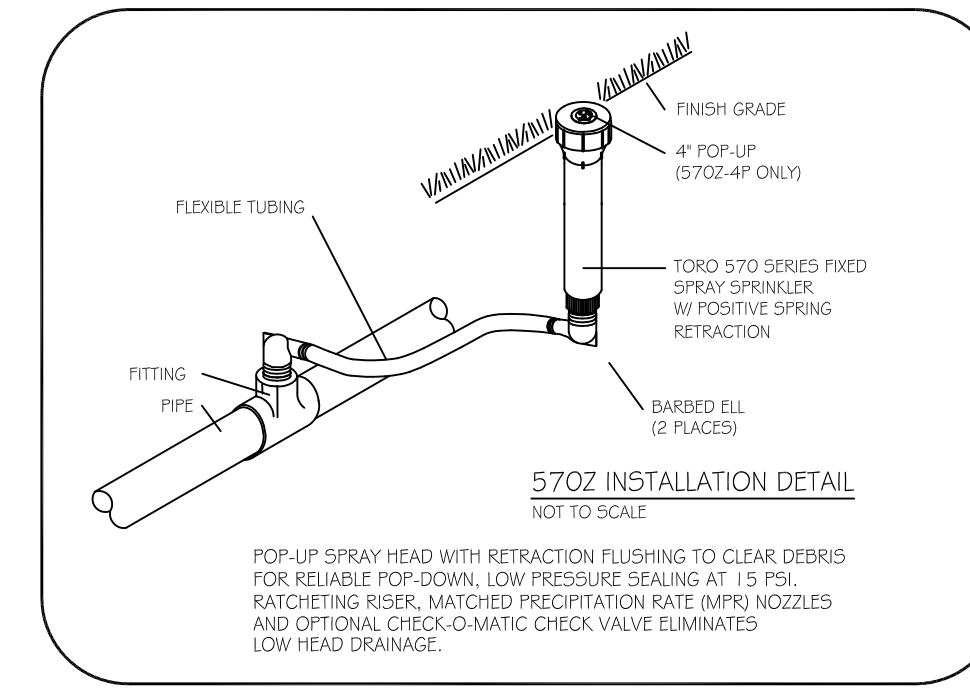
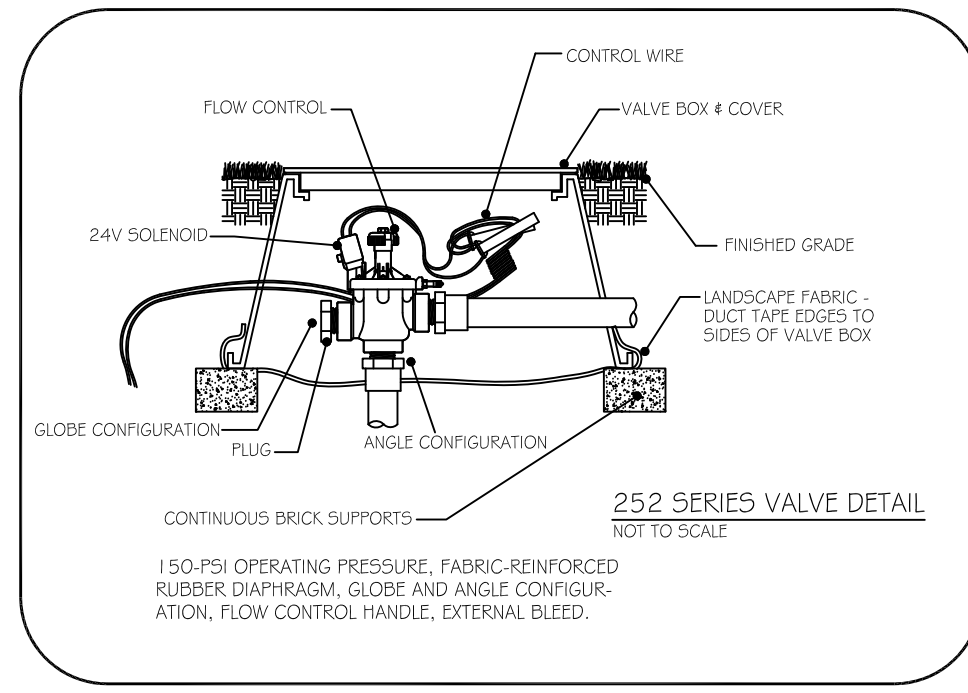
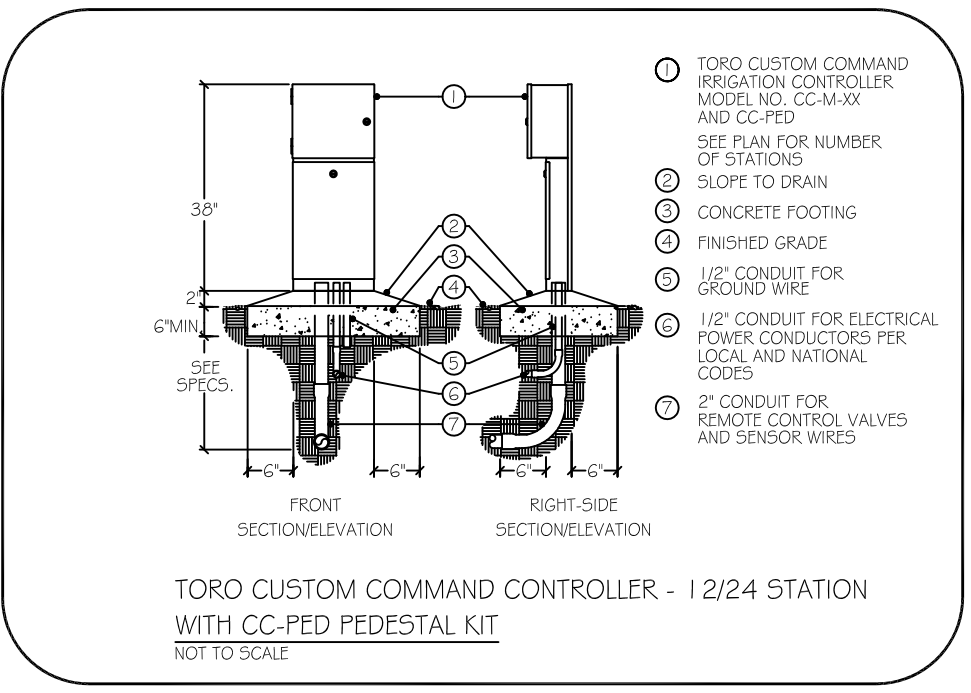
Job No. 52241  
Sheet No. IR1.0  
Bid Ref# 198854-005.0

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Issued For:	Date
OWNER REVIEW	05-17-23
ISSUE FOR BID	09-18-23

Project:  
**Bronson Park Improvements - Lincoln Statue Electrical Revisions**  
Kalamazoo, Michigan  
Sheet Title:  
**Existing Irrigation Plan**





**EXISTING IRRIGATION DETAILS SHOWN FOR REFERENCE ONLY**

**LEGEND**

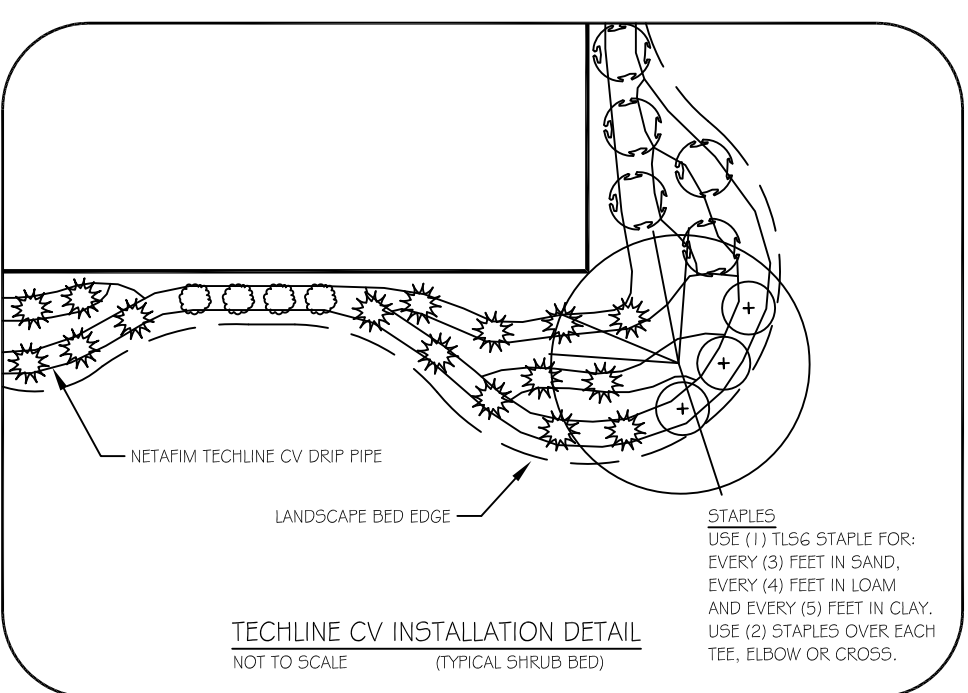
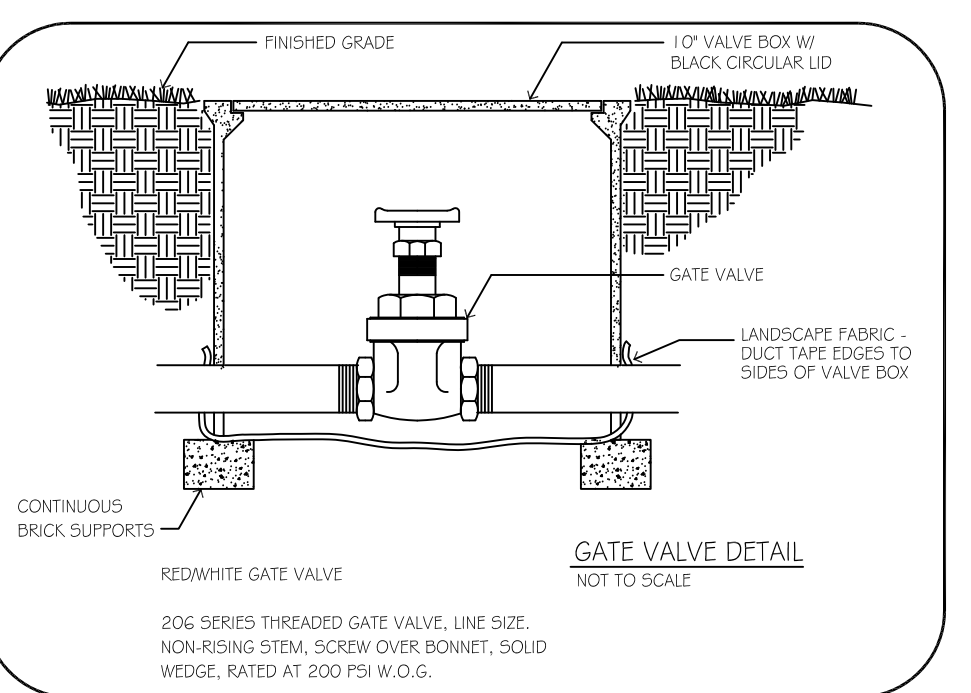
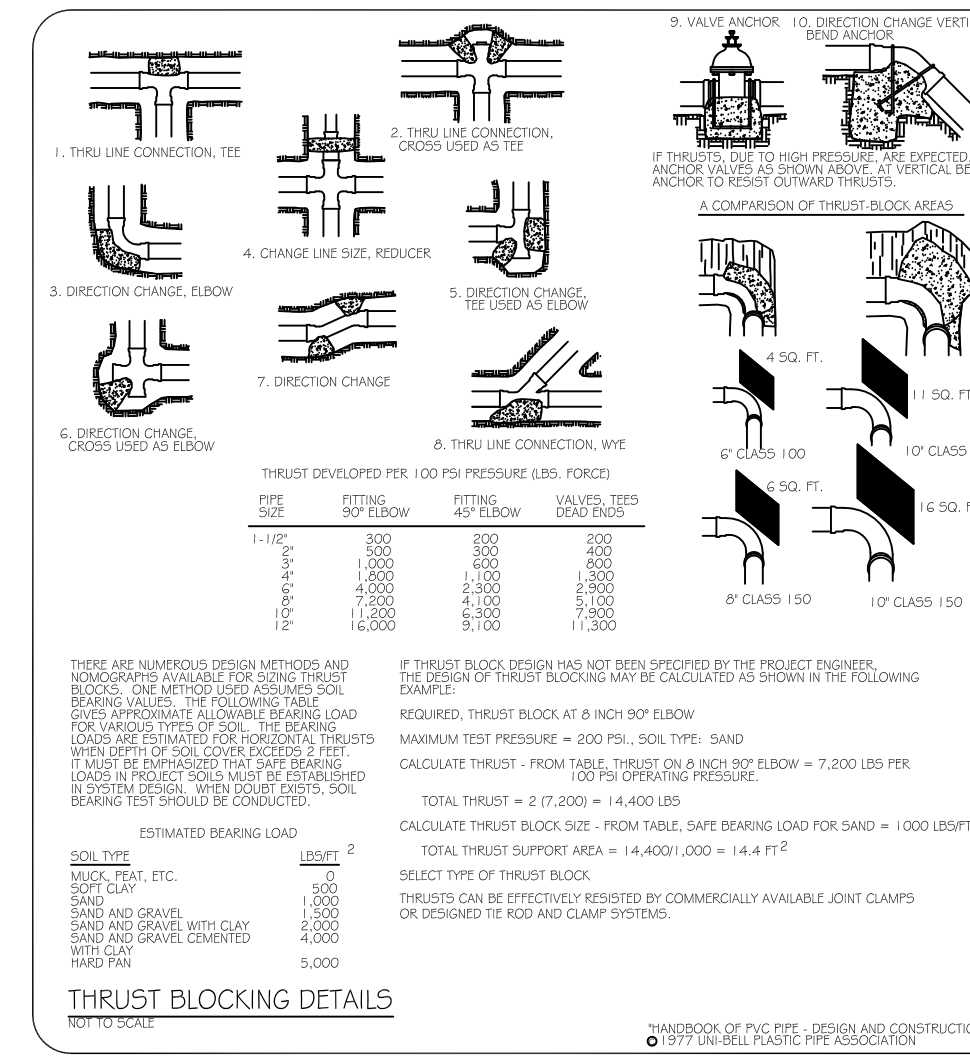
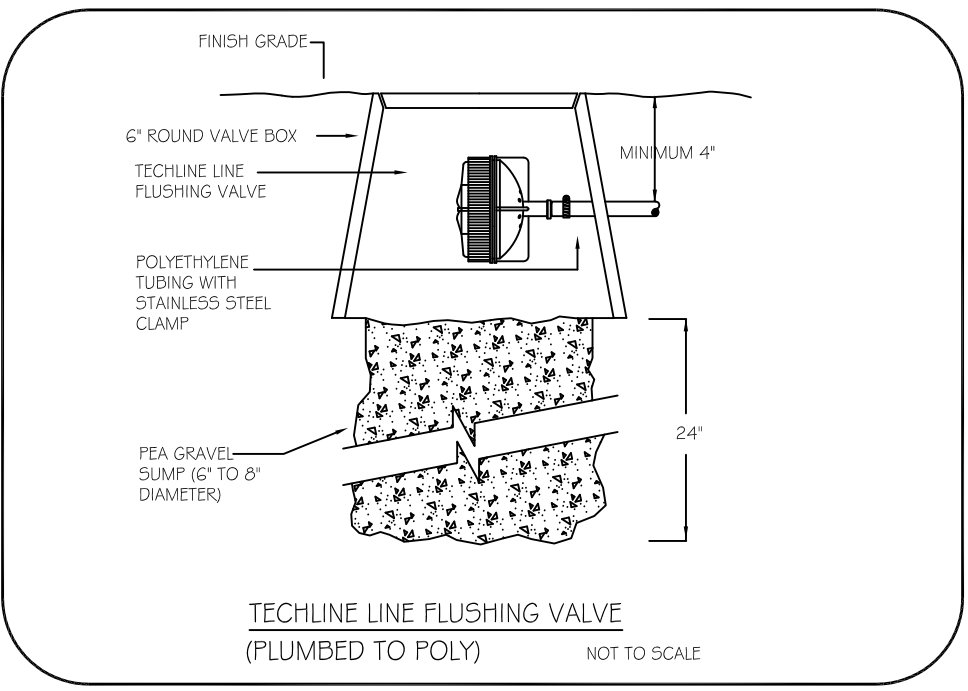
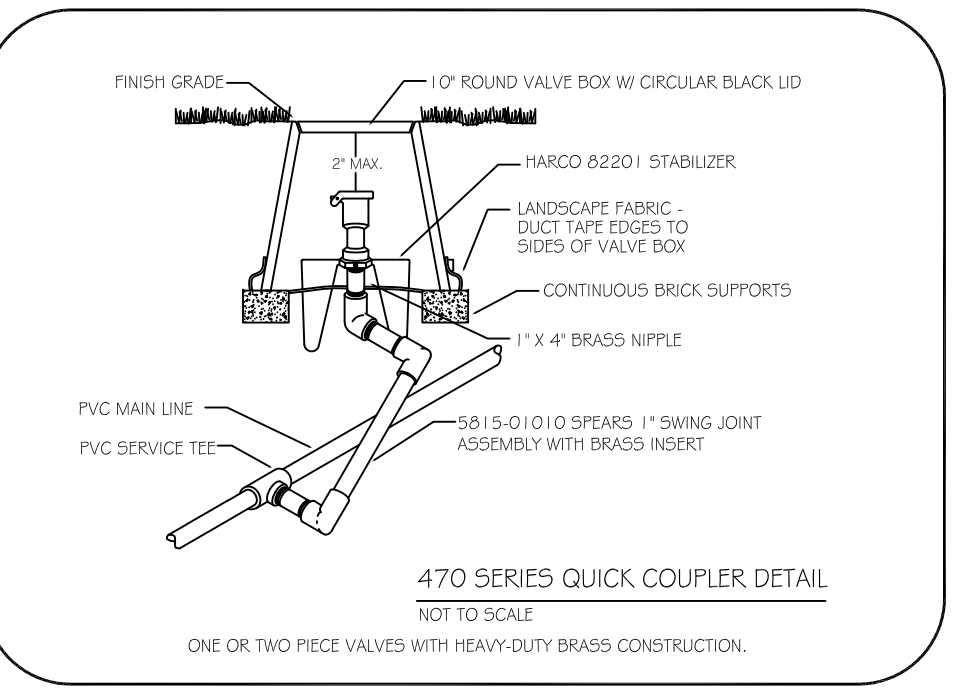
●●●●●●	570Z-12P	8'-MPR SERIES	TORO FIXED SPRAY POP-UP (12")
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●●●●●●	570Z-12P	12'-MPR SERIES	TORO FIXED SPRAY POP-UP (12")
●●●●●●	570Z-12P	15'-MPR SERIES	TORO FIXED SPRAY POP-UP (12")
●	570Z-12P	TVAN-12 NOZZLE	TORO FIXED SPRAY POP-UP (12")
●	570Z-12P	TVAN-15 NOZZLE	TORO FIXED SPRAY POP-UP (12")
●●●●●●	570Z-4P	45'-MPR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	8'-MPR SERIES	TORO FIXED SPRAY POP-UP (4")
■●●●●■	570Z-4P	10'-MPR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	12'-MPR SERIES	TORO FIXED SPRAY POP-UP (4")
●●●●●●	570Z-4P	15'-MPR SERIES	TORO FIXED SPRAY POP-UP (4")
●	570Z-4P	TVAN-12 NOZZLE	TORO FIXED SPRAY POP-UP (4")
●	570Z-4P	TVAN-15 NOZZLE	TORO FIXED SPRAY POP-UP (4")
⊙	T5PCK (P/C)	#1.5 LOW ANGLE NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	T5PCK (P/C)	#3.0 LOW ANGLE NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	T5PCK (P/C)	#3.0 NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
●	T5PCK (P/C)	#6.0 NOZZLE	TORO GEAR DRIVEN ROTARY POP-UP
⊙	474-00		TORO 1" QUICK COUPLER VALVE W/1" KEY AND HOSE SWIVEL
⚡	EZF-26-04		TORO 1" ELECTRIC VALVE
⚡	252-26-06		TORO 1-1/2" ELECTRIC VALVE
□	CCM24 # CC-PED	24 STATION	TORO CUSTOM COMMAND CONTROLLER W/TWRS RAIN SWITCH

— PVC 160# PIPE (ALL PIPE 1-1/2" AND LARGER)  
— 100# POLYETHYLENE PIPE (PE-3408 NSF APPROVED) (ALL PIPE DOWNSTREAM OF VALVE 1-1/4" AND SMALLER)  
NOT SHOWN #14 UL APPROVED 24V RED CONTROL WIRE WITH A #14 UL APPROVED WHITE COMMON WIRE

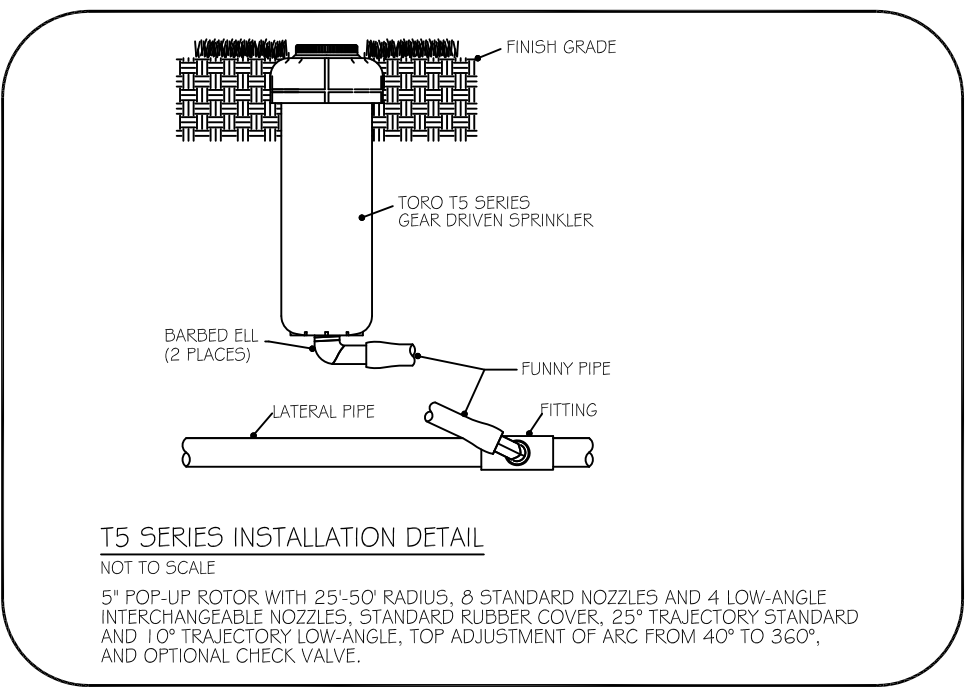
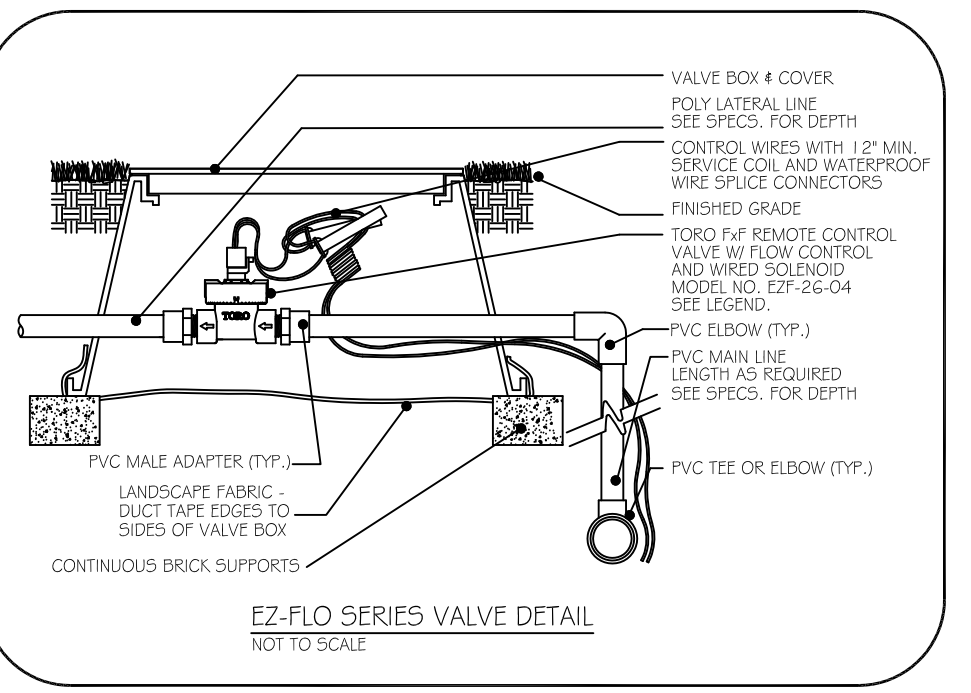
●	POINT OF CONNECTION (P.O.C.)	
▶	765-2 WITH A GS-1 # EP-1	FEBCO 2" PRESSURE VACUUM BREAKER & GUARDSHACK ENCLOSURE WITH PAD
⊕	206 SERIES	RED/WHITE LINE 2" ISOLATION VALVE
—	TLCV4-18XXX	NETAFIM .4 GPH CV DRIP PIPE
—	TLCVXXX	NETAFIM CV BLANK TUBING (AS SUPPLY # EXHAUST HEADERS)
NOT SHOWN	PRV075HF45V2K	NETAFIM 3/4" PRESSURE REGULATOR
NOT SHOWN	DF075-140	NETAFIM 3/4" FILTER
NOT SHOWN	TLO50MFV-1	NETAFIM LINE-FLUSHING VALVE
NOT SHOWN	10-F-01	NETAFIM OPERATION FLAG

**GENERAL NOTES:**

- COORDINATE THIS WORK WITH ALL OTHER TRADES.
  - ALL PLUMBING AND ELECTRICAL SHALL BE INSTALLED ACCORDING TO STATE AND LOCAL CODES.
  - ALL SLEEVES SHALL BE BORED UNDER EXISTING WALKS, 4" PVC 160# (UNLESS OTHERWISE SPECIFIED). SLEEVE INSTALLATION SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
  - ALL PIPE NOT SIZED DOWNSTREAM OF VALVE IS 1".
  - IRRIGATION CONTRACTOR'S POINT OF CONNECTION SHALL BE ON 2" SERVICE LINE STUBBED AT THE LOCATION SHOWN ON THE PLAN.
  - 115V POWER INTO CONTROLLER SHALL BE SUPPLIED BY ELECTRICAL CONTRACTOR.
  - CONTROLLER AND RAINSWITCH SHALL BE MOUNTED AT LOCATION SHOWN ON PLAN (VERIFY EXACT LOCATION WITH OWNERS REPRESENTATIVE).
  - IRRIGATION CONTRACTOR SHALL ADJUST THE FLOW CONTROL FEATURE ON ALL ELECTRIC VALVES PER THE MANUFACTURER'S RECOMMENDATIONS TO MAXIMIZE THE VALVES PERFORMANCE AND LONGEVITY.
  - IF SITE PRESSURE IS NOT ADEQUATE, A BOOSTER PUMP AND RELATED EQUIPMENT MAY BE REQUIRED AT ADDITIONAL COST TO OWNER.
  - IRRIGATION PIPE AND EQUIPMENT SHOWN IN PAVED AREAS IS FOR CLARITY ONLY AND SHALL BE INSTALLED WITHIN THE TURF & LANDSCAPE AREAS.
  - PIPE ROUTING IS DIAGRAMMATIC. ALL EQUIPMENT AND PIPE ARE TO BE FIELD ADJUSTED TO TAKE INTO CONSIDERATION ANY OBSTRUCTIONS AND ALL LANDSCAPE.
- WATER REQUIREMENTS: 47 GPM @ 49 PSI AT THE P.O.C.



ZONE NUMBER	VALVE SIZE	GPM	ZONE TYPE
1-1	1"	8	LANDSCAPE DRIP
1-2	1-1/2"	47	TURF ROTORS
1-3A	1"	9	TURF SPRAYS
1-3B	1"	3	TURF SPRAYS
1-4	1-1/2"	43	TURF ROTORS
1-5	1-1/2"	37	TURF ROTORS
1-6	1-1/2"	45	TURF ROTORS
1-7A	1"	18	TURF SPRAYS
1-7B	1"	6	TURF SPRAY
1-8	1"	11	TURF ROTORS
1-8	1-1/2"	28	TURF ROTORS
1-9	1-1/2"	40	TURF ROTORS
1-10	1-1/2"	38	TURF ROTORS
1-11	1-1/2"	38	TURF ROTORS
1-12	1-1/2"	33	TURF ROTORS
1-13	1-1/2"	45	TURF ROTORS
1-14	1"	27	TURF ROTORS
1-15	1-1/2"	39	TURF ROTORS
1-16	1"	21	TURF ROTORS
1-17	1-1/2"	43	TURF ROTORS
1-18	1-1/2"	42	TURF ROTORS
1-19A	1"	17	LANDSCAPE SPRAYS
1-19B	1"	17	LANDSCAPE SPRAYS
1-20A	1"	13	LANDSCAPE SPRAYS
1-20B	1"	5	LANDSCAPE SPRAYS
1-21	1"	23	LANDSCAPE SPRAYS
1-22	1"	11	TURF ROTORS
1-23	1"	11	TURF SPRAYS
1-24	1"	27	LANDSCAPE SPRAYS



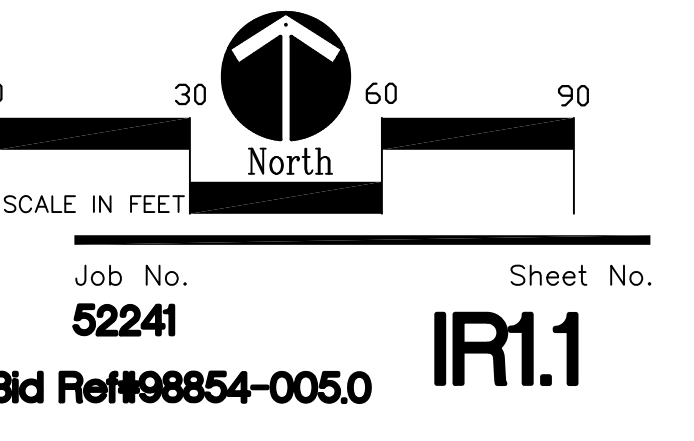
487 W. Division St.  
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Design By: CUMMINGS, C.I.D.  
Plan #: 18-090C  
Date: 1-21-19 PRELIMINARY  
1-24-19 DCC  
10-8-19 DCC  
10-29-19 DCC

Revisions:

1050 Opdyke Road  
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Project:  
**Bronson Park Improvements - Lincoln Statue Electrical Revisions**  
Kalamazoo, Michigan

Sheet Title  
**Overall Irrigation Plan**



**GENERAL DEMOLITION NOTES:**

- CONSTRUCTION ACTIVITIES SHALL BE MADE WITHOUT REMOVAL OR DISTURBANCE OF HARD SURFACES.
- LOCATE EXISTING UNDERGROUND UTILITIES BEFORE DIGGING.

**GENERAL CONSTRUCTION NOTES:**

- CONSTRUCTION ACTIVITIES SHALL BE MADE WITHOUT REMOVAL OR DISTURBANCE OF HARD SURFACES.
- LOCATE EXISTING UNDERGROUND UTILITIES BEFORE DIGGING AND AVOID DAMAGING THEM DURING CONSTRUCTION.
- INSTALL UNDERGROUND CONDUITS BY DIRECTIONAL BORING AND PATCH DISTURBED AREAS TO MATCH EXISTING.
- UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC AND BURIED AT 24" BELOW FINISHED GRADE.
- INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS.
- COORDINATE WITH THE OWNER THE LOCATION OF THE OUTDOOR GROUND BOXES.

**KEYED ELECTRICAL DEMOLITION NOTES:**

- REMOVE WITH ASSOCIATED ELECTRICAL BACK TO SOURCE. RESTORE DISTURBED GROUND AREA TO MATCH EXISTING CONDITIONS.

**KEYED CONSTRUCTION NOTES:**

- OUTDOOR GROUND BOX WITH QUADPLEX RECEPTACLE (2 CIRCUITS) - LEGRAND XB814C520BK/XB814CL615BK/LOCK NUT TOOL #KBLNT. INSTALL FLUSH WITH FINISHED GRADE
- 3 #10, 1" C.
- 5 #10, 1" C.
- BORE UNDER PATHWAY.
- CONNECT NEW SCHEDULE 40 PVC CONDUIT TO EXISTING HANDHOLE.
- REFER TO LOW PROFILE POLE FOUNDATION DETAIL.

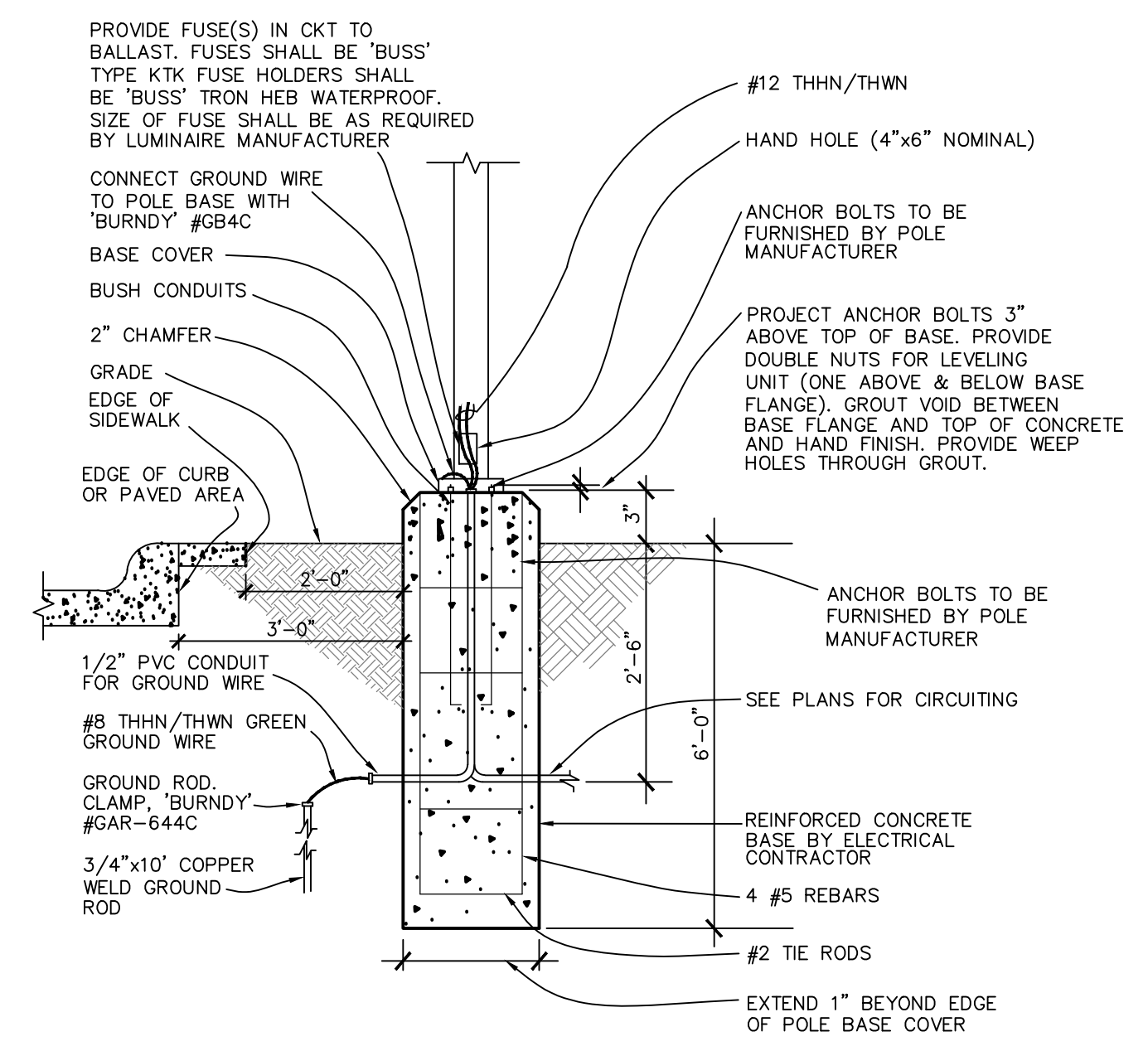
**ELECTRICAL SPECIFICATIONS**

- UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ATTEMPT TO CONNECT NEW ELECTRICAL DEVICES OR CIRCUITS TO AN EXISTING ENERGIZED POWER DISTRIBUTION SWITCHGEAR OR PANELBOARD.
- ELECTRICAL WORK SHALL CONFORM TO THE APPLICABLE NATIONAL ELECTRIC CODE, STATE AND LOCAL CODES. ELECTRICAL MATERIALS SHALL BE UL LISTED AND APPROVED FOR THE PURPOSE. ELECTRICAL CONTRACTORS SHALL OBTAIN AND PAY FOR REQUIRED PERMITS AND CERTIFICATES OF INSPECTION FOR THE WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SPECIFIED HEREIN.
- WORK SHALL BE PERFORMED BY LICENSED ELECTRICIANS.
- ALL WIRING SHALL BE COPPER, RATED AT 600V OR AS INDICATED IN THE CONSTRUCTION DOCUMENTS, AS SUITED FOR THE APPLICATION TYPE THW, THHN, OR THWN. WIRING SIZE SHALL BE AS INDICATED HEREIN AS NOTED IN THE CONSTRUCTION DOCUMENTS.
- 20A CIRCUITS SHALL BE #10 AWG MINIMUM, TYPE THW, THHN, OR THWN.
- WIRING SHALL BE INSTALLED IN CONDUITS. USE PVC SCHEDULE 40 FOR BURIED UNDERGROUND CONDUITS. SEAL CONDUITS AT BOTH ENDS.
- FOR NEW ELECTRICAL DEVICES SUCH AS CIRCUIT BREAKERS AND DISCONNECT SWITCHES, PROVIDE BLACK LAMINATED PLASTIC NAMEPLATE WITH WHITE LETTERS, INDICATING POWER SOURCE AND LOAD SERVED. ATTACH NAMEPLATE TO THE DEVICE WITH SHEET METAL SCREWS.
- PROVIDE TYPEWRITTEN DIRECTORIES FOR PANEL.
- ELECTRICAL CONTRACTOR SHALL LEAVE ENTIRE ELECTRICAL SYSTEM IN PROPER WORKING ORDER, AND SHALL EXTEND TO OWNER ANY GUARANTEE EXTENDED BY MANUFACTURER OR EQUIPMENT AND DEVICES INSTALLED AND FURNISHED BY CONTRACTOR. GUARANTEE PERIOD SHALL BE EXTENDED BY CONTRACTOR FOR ONE YEAR AS OF THE DATE OF SUBSTANTIAL COMPLETION. GUARANTEE SHALL COVER LABOR AND MATERIALS NECESSARY TO CORRECT DEFECTS IN MATERIALS OR WORKMANSHIP DURING GUARANTEE PERIOD.
- SUBMIT SHOP DRAWINGS, BEFORE COMMENCING INSTALLATION WORK, FOR REVIEW OF THE FOLLOWING ITEMS:
  - CIRCUIT BREAKERS
- REMOVE CONSTRUCTION DEBRIS ON A DAILY BASIS.
- ON COMPLETION OF WORK, PROVIDE TWO SETS OF 'AS BUILT' DRAWINGS TO THE OWNER.

PANEL COMPUTATION/RECORD SHEET													
CKT #	LOAD - VOLT AMPERES				DESCRIPTION				PANEL ID: PNL-EV3 (EXISTING)				
	LTG	MTR	RCPT	OTHER	P	T	P	T	LTG	MTR	RCPT	OTHER	
1					1	20	A	1	20				
2					1	20	B	2	30	EXISTING 30A TWIST LOCK RECEPTACLE			
3					1	20	A	1	20				
5					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 1)			
7					1	20	B	2	30	EXISTING 30A STRAIGHT BLADE RECEPTACLE			
9					1	20	A	1	20				
11					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 2)			
13					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 1)			
15					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 2)			
17					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 2)			
19					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 3)			
21					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 3)			
23					1	20	B	1	20				
SUBTOTALS													
CONNECTED													
MTR													
RCPT													
OTHER													
TOTAL													

PANEL COMPUTATION/RECORD SHEET													
CKT #	LOAD - VOLT AMPERES				DESCRIPTION				PANEL ID: PNL-EV5 (EXISTING)				
	LTG	MTR	RCPT	OTHER	P	T	P	T	LTG	MTR	RCPT	OTHER	
1					1	20	A	1	20				
3					1	20	B	2	30	EXISTING 30A TWIST LOCK RECEPTACLE			
5					1	20	A	1	20				
7					1	20	B	2	30	EXISTING 30A STRAIGHT BLADE RECEPTACLE			
9					1	20	A	1	20				
11					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 4)			
13					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 4)			
15					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 5)			
17					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 5)			
19					1	20	B	1	200F	20A DUPLEX RECEPTACLE (BOX 6)			
21					1	20	A	1	200F	20A DUPLEX RECEPTACLE (BOX 6)			
23					1	20	B	1	20				
SUBTOTALS													
CONNECTED													
MTR													
RCPT													
OTHER													
TOTAL													

LIGHTING FIXTURE SCHEDULE			
MARK	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS
SA	LED LUMINAIRE POST TOP MOUNTED ON 14 FT POLE	SPRING CITY ALLIANCE LED-EVA-4, 10 COLOR TEMP. CANS-Y811-PPP-CU W/ POLE #P9169H-24-14-42-7N3-500-00-LED	LED 1



**LOW PROFILE POLE BASE DETAIL**  
NOT TO SCALE



350 East Michigan Avenue Suite #415  
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Phone (269) 381-3357  
Fax (269) 381-2944

Landscape Architecture  
Urban Planning  
Parks & Recreation  
Campus & Institutional Planning  
Camp Planning & Design

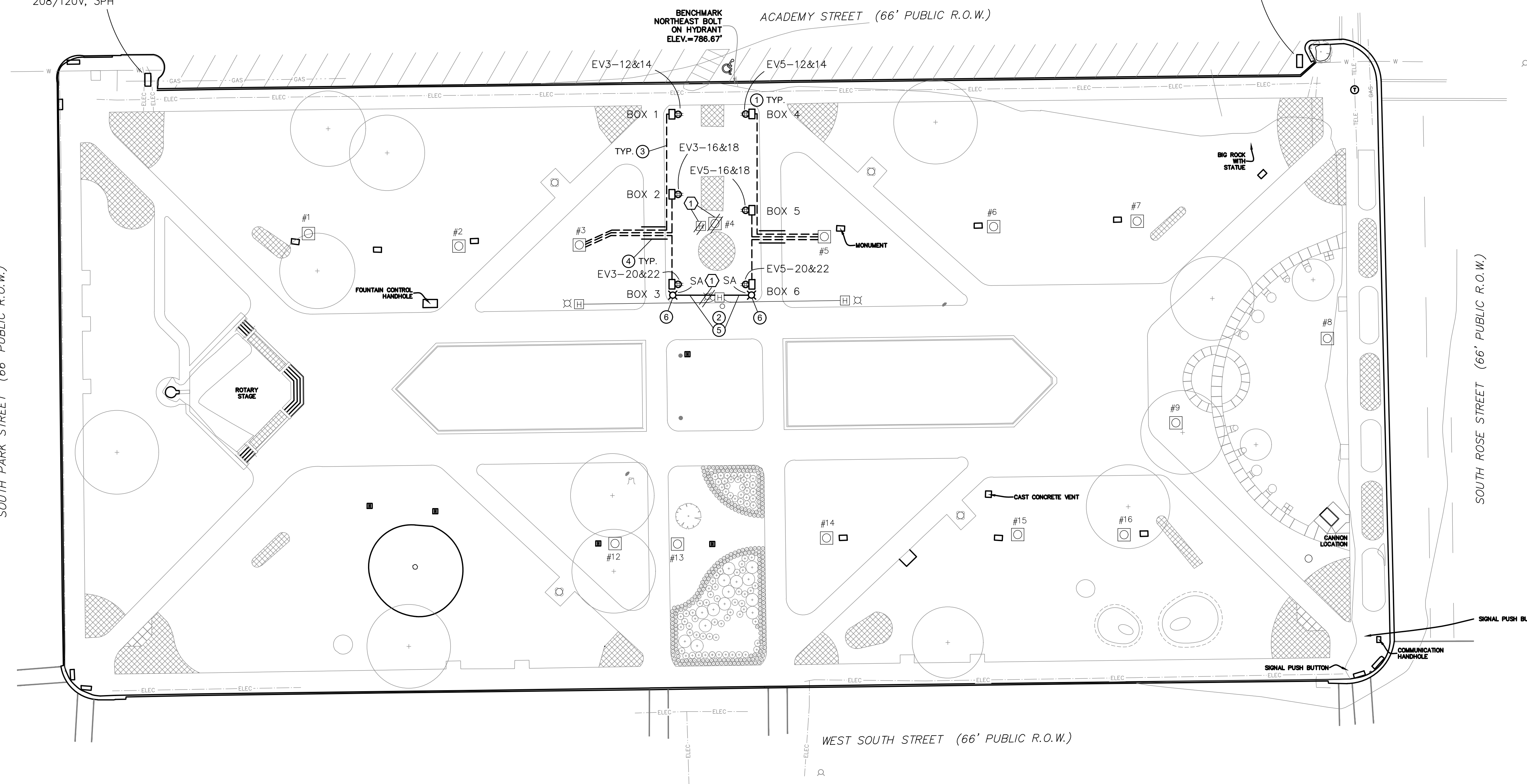
W.O. 453-023



4900 Cascade Road, S.E., Grand Rapids, Michigan 49546  
616.949.3340 www.geotech-inc.com

EXISTING ELECTRICAL KIOSK HOUSES WITH LP-1,2,3, 208/120V, 3PH

EXISTING ELECTRICAL KIOSK HOUSES WITH LP-4,5,6, 208/120V, 3PH



**SYMBOL LEGEND**

- DEMOLITION
- EXISTING
- NEW
- NEW UNDERGROUND
- ELECTRICAL HANDHOLE (BELOW GRADE)
- ELECTRICAL VAULT (ABOVE GRADE)
- OUTDOOR GROUND BOX

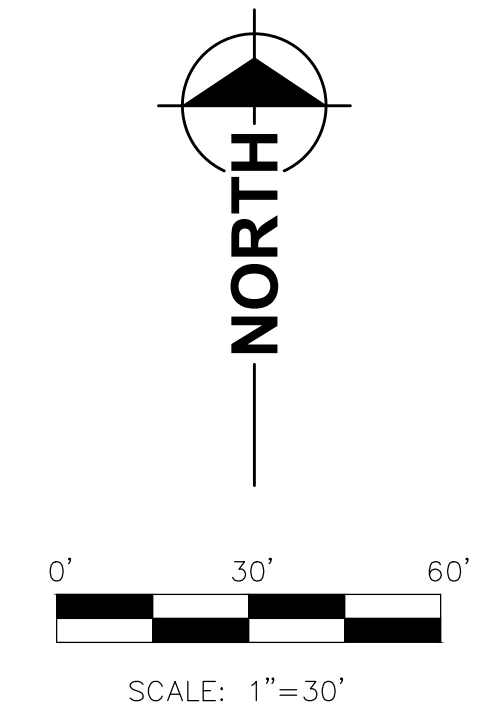
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Project:  
**Bronson Park Improvements - Lincoln Statue Electrical Revisions**  
Kalamazoo, Michigan

Sheet Title

**SITE ELECTRICAL PLAN**



**ELECTRICAL PLAN**

Job No. 52241  
Bid Ref#98854-005.0

Sheet No. **E1.1**