

APPLICATION FOR
URBAN DESIGN COMMISSION
REVIEW AND APPROVAL

AGENDA ITEM # _____
Project # _____
Legistar # _____

DATE SUBMITTED: <u>01/28/14</u>	Action Requested
UDC MEETING DATE: <u>02/05/14</u>	<input type="checkbox"/> Informational Presentation
	<input type="checkbox"/> Initial Approval and/or Recommendation
	<input checked="" type="checkbox"/> Final Approval and/or Recommendation

PLEASE PRINT!

PLEASE PRINT!

PROJECT ADDRESS: 201 S. INGERSOLL ST.

ALDERMANIC DISTRICT: 6

OWNER/DEVELOPER (Partners and/or Principals) ARCHITECT/DESIGNER/OR AGENT:
CITY OF MADISON PARKS DIVISION STRATTEC INC.

CONTACT PERSON: MIKE STURM

Address: 210 MARTIN LUTHER KING JR BLVD RM104
MADISON, WI

Phone: 267-4921

Fax: 267-1162

E-mail address: MSTURM@CITYOFMADISON.COM

TYPE OF PROJECT:

(See Section A for:)

- Planned Unit Development (PUD)
- General Development Plan (GDP)
- Specific Implementation Plan (SIP)
- Planned Community Development (PCD)
- General Development Plan (GDP)
- Specific Implementation Plan (SIP)
- Planned Residential Development (PRD)
- New Construction or Exterior Remodeling in an Urban Design District * (A public hearing is required as well as a fee)
- School, Public Building or Space (Fee may be required)
- New Construction or Addition to or Remodeling of a Retail, Hotel or Motel Building Exceeding 40,000 Sq. Ft.
- Planned Commercial Site

(See Section B for:)

- New Construction or Exterior Remodeling in C4 District (Fee required)

(See Section C for:)

- R.P.S.M. Parking Variance (Fee required)

(See Section D for:)

- Comprehensive Design Review* (Fee required)
- Street Graphics Variance* (Fee required)
- Other _____

*Public Hearing Required (Submission Deadline 3 Weeks in Advance of Meeting Date)

Where fees are required (as noted above) they apply with the first submittal for either initial or final approval of a project.

play
**MADISON
PARKS**

Kevin Briski
Madison Parks Superintendent

Madison Parks Division
www.cityofmadison.com/parks

Administrative Office
Planning and Development
Community & Recreation Services
210 ML King, Jr. Blvd. Rm. 104
P.O. Box 2987
Madison, WI 53701-2987
Phone: 608.266.4711
Fax: 608.267.1162
Textnet: 866.704.2315

Parks Operations Offices
Goodman Maintenance Facility
1402 Wingra Creek Pkwy.
West Parks, 608.266.9214
Summit, 608.288.6164
West Forestry, 608.266.4816
Construction, 608.266.6289
Conservation, 608.267.4918

Sycamore Maintenance Facility
4602 Sycamore Ave.
East Parks, 608.246.4508
East Forestry, 608.266.4816

Olbrich Botanical Gardens
3330 Atwood Ave., 608.246.4550

Warner Park Community
Recreation Center
1625 Northport Dr., 608.245.3690

Irwin A. & Robert D. Goodman Pool
325 Olin Ave., 608.264.9292

Golf Madison Parks
Supervisor, 608.838.3920
Glenway Golf Course
3747 Speedway Rd., 608.266.4737
Monona Golf Course
111 East Dean Ave., 608.266.4736
Odana Hills Golf Course
4635 Odana Rd., 608.266.4724
Yahara Hills Golf Course
6701 E. Broadway, 608.838.3126

State Street Mall/Concourse
Maintenance
120 S. Fairchild St., 608.266.6031

Forest Hill Cemetery
1 Speedway Rd., 608.266.4720



Madison

A Proud Division of
the City of Madison

January 28, 2014

Urban Design Commission
215 Martin Luther King Jr. Blvd., Suite LL 100
Madison, WI 53703

Re: Letter of Intent
Central Park Skatepark

Dear City of Madison Urban Design Commission:

Enclosed is the City of Madison Park Division's submittal for final approval of the proposed skatepark at Central Park, located at 201 S. Ingersoll Street. This project involves construction of a 20,000 square feet skatepark in Central Park.

Central Park Master Plan

In 2007 the Common Council established the Central Park Design and Implementation Task Force to determine the need and feasibility of a larger park space on the near east-side of Madison. Over a period of five years, the Task Force held forty open meetings, including six large and well-attended public meeting. At these meetings, the size, type, and location of the future skatepark were discussed with a variety of stakeholders including neighborhood representatives, community leaders, and neighboring property owners. In 2010 the Common Council approved the Central Park Master Plan, which identified the future skatepark's location at the eastern end of the park. In December of 2013 a public input meeting was held specifically for the skatepark. Over 2,400 meeting notices were sent to area residents and announcements were posted to the Parks Division website and Facebook page. At this meeting two concepts for the skatepark were presented and discussed. The proposed design incorporates information gathered during the meeting's discussion and from questionnaires completed by attendees.

Site Amenities

The proposed skatepark includes a variety of skating features to accommodate a wide range of skill levels. The design also provides opportunities for the two primary types of skateboarding, transition and street skating. The street skating portion of the skatepark is located at the skatepark's entry point and is comprised of elements generally found in an urban environment (benches, stairs, handrails, etc.). The transition area is located at the east end of the skatepark and includes curvilinear concrete forms and a recessed bowl. Seating areas are integrated into the design to provide a plaza-like experience for spectators.

Site Access

The skatepark is bordered to the north and south by railroad corridors, and to the west by the Central Park Great Lawn. Primary access to the skatepark is from the Few Street pedestrian crossing to the south and the Great Lawn to the west. Access from the east is limited due to the existing railroad lines. Construction of the Great Lawn was completed last fall with the Few Street pedestrian plaza scheduled for construction in 2014.

Existing Soil Conditions

Currently the site is a capped brownfield. The existing contaminated soils will be appropriately handled during construction. The design intent is to retain as much of the

contaminated material on-site as possible to reduce landfill impacts. The cap will be restored in compliance with DNR requirements.

Water Table Constraints

The depth to groundwater at the site is less than 5 ft in some locations, requiring the deeper skatepark features to be raised above the surrounding grade. Retaining walls are necessary on the east end of the skatepark to provide sufficient depth for the transition skate features. The retaining walls are poured-in-place concrete with vertical jointing to articulate the mass of the walls. The associated fall prevention fence will be 3.5 ft. high and have similar construction as the Central Park fence with black vertical posts and welded wire mesh panels.

Site Security

Due to the adjacent railroad lines, the skatepark is fenced along its perimeter for user safety. The fence style and height is consistent with the existing fence surrounding Central Park. The fence panels do not require top or bottom rails, providing a relatively transparent appearance from a distance.

Site Lighting

The skatepark will be lit by five, 50 ft. high light poles located around the perimeter of the park. Skateparks need to be lit to approximately 30 foot candles per square foot to provide a safe riding environment. This is the same light level that is provided at the City's outdoor tennis courts and the proposed lighting system will function in a similar manner. The latest technology in full cut-off, dark sky compliant fixtures will be used to minimize the lighting impact on the surrounding properties. The project may require a variance for the proposed lighting design.

Landscaping

The project proposes additional trees and lawn areas. Landscaping is minimized to reduce the amount of debris that could fall into the skatepark creating a hazard for skaters.

Project Schedule and Management

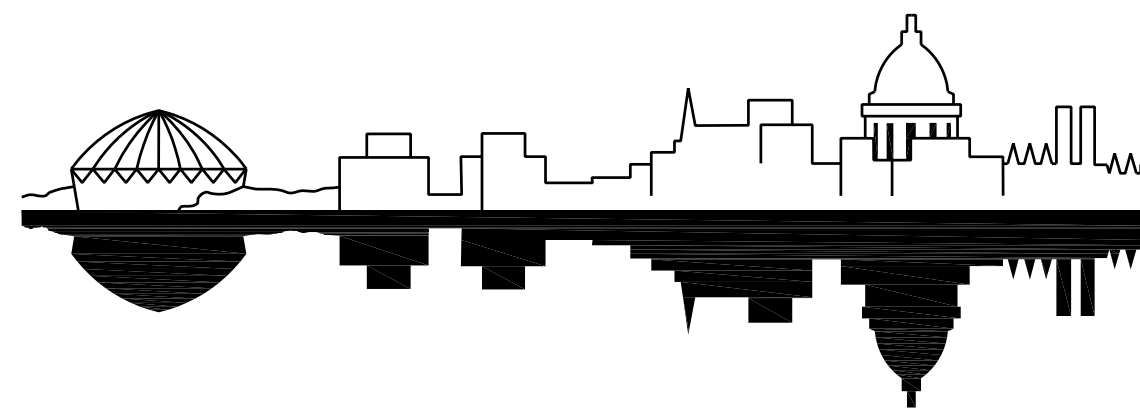
This facility is proposed to begin construction in the spring of 2014, and will open in late fall 2014. The hours of operation are being developed, with the skatepark being open no later than the park's regular hours of operation.

The design of the proposed skatepark has been a collaborative effort between the neighborhood, design consultant, and staff to provide a positive asset to the community that balances function, funding and aesthetics. The City appreciates the opportunity for the Urban Design Commission to provide input as part of this process.

Sincerely,



Kevin Briski
Parks Superintendent
City of Madison Parks Division



Madison, Wisconsin

CITY OF MADISON

URBAN DESIGN COMMISSION REVIEW

CENTRAL PARK - SKATE PARK

CITY OF MADISON, DANE COUNTY

PROJECT ADDRESS: 201 S. INGERSOLL ST., MADISON, WI
 CONTACT PERSONS: MIKE STURM - CITY OF MADISON PARKS
 PHONE (608) 267-4921
 KANTEN RUSSELL - STANTEC CONSULTING
 PHONE (858) 633-4233

PHASE 1A
 STATE PROJECT NO. 5995-01-97
 (FEDERALLY-FUNDED PROJECT)

INDEX OF SHEETS

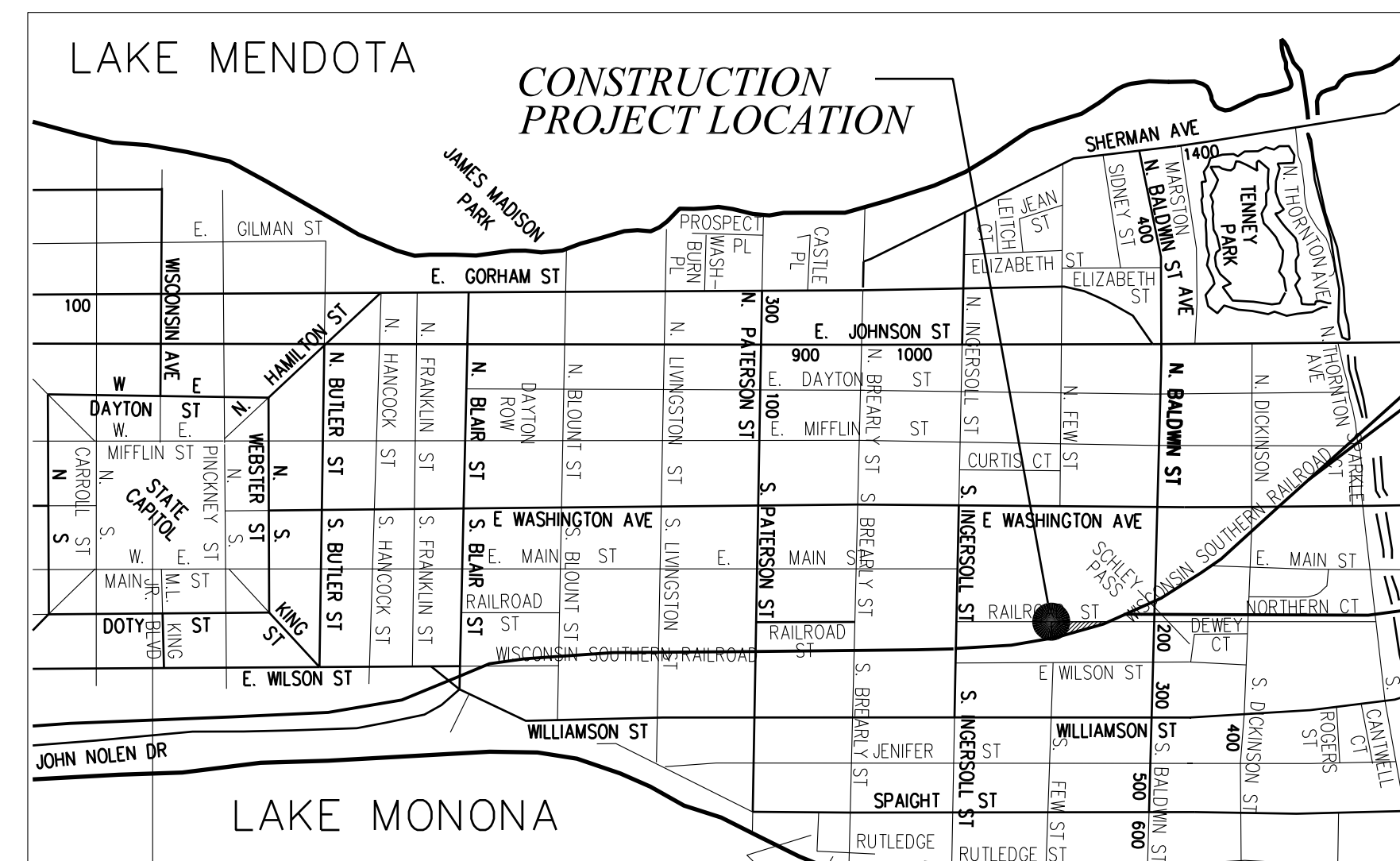
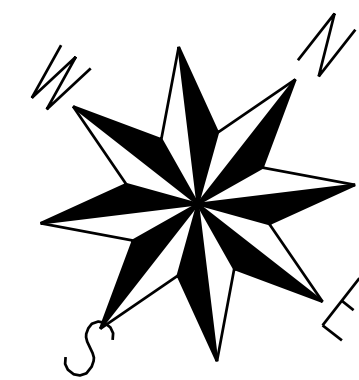
SHEET NO.	SHEET TITLE
SP - 0.0	SKATE PARK-COVER SHEET
C - 0.1	EXISTING SITE CONDITIONS
SP - 1.0	SKATE PARK-FEATURE PLAN
SP - 1.1	SKATE PARK-ARTISTIC RENDERING
SP - 1.2	SKATE PARK-LAYOUT PLAN
SP - 3.1	SKATE PARK-CONCEPTUAL GRADING AND DRAINAGE PLAN
SP - 4.1	SKATE PARK-SECTIONS/ PROFILES

APPENDIX:
 ILLUMINATION SUMMARIES, LIGHTING EQUIPMENT
 LAYOUT, BROCHURES AND CUT SHEETS

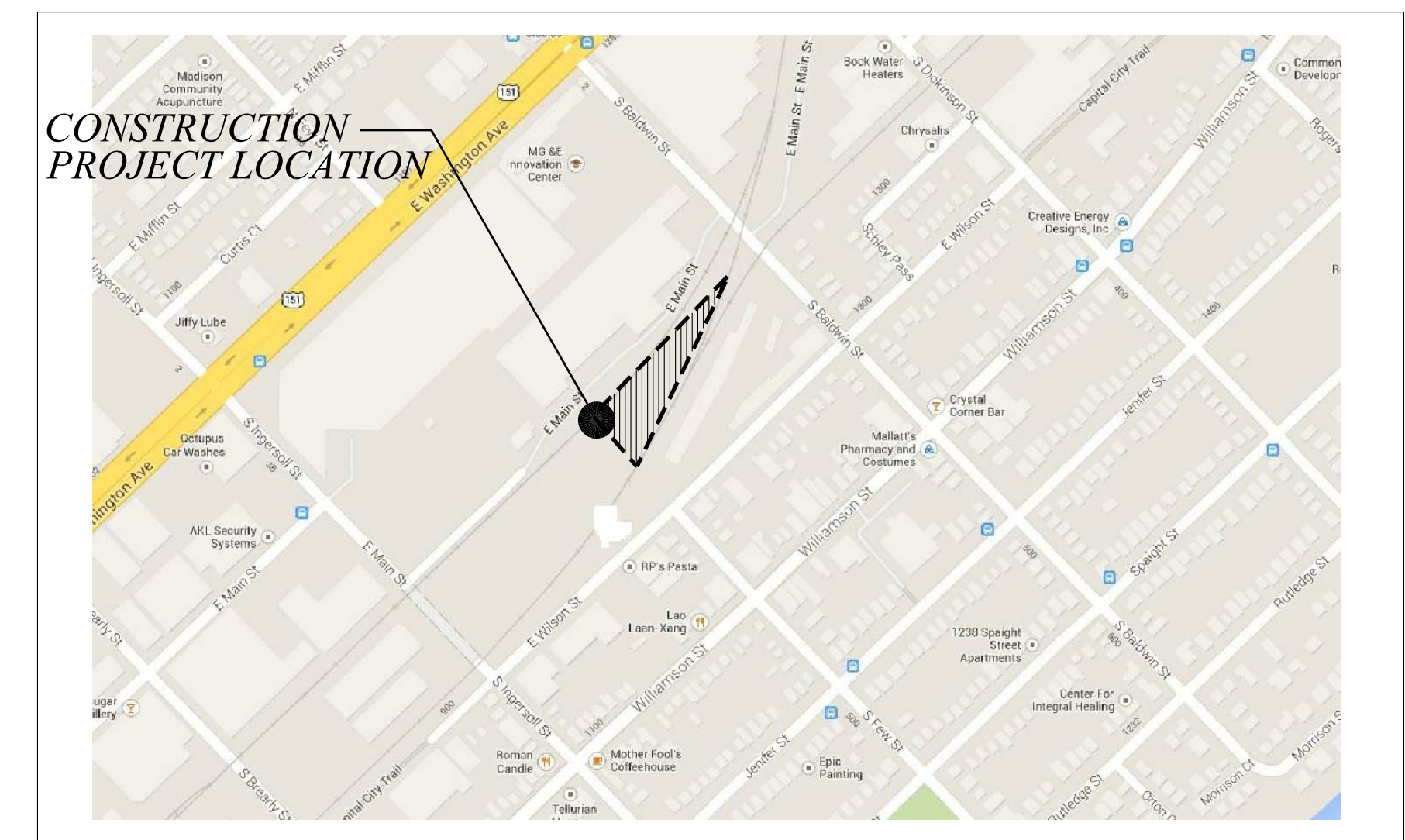
CONSULTANTS

LANDSCAPE ARCHITECT
 Stantec
 141 Portland Street
 Boston, MA 02114
 [t] 617.523.8103
 [f] 617.523.4333

CIVIL ENGINEER
 MSA Professional Services
 2901 International Lane Suite 300
 Madison, WI 53704
 [t] 608.424.7779



VICINITY MAP



LOCATION MAP

EXISTING CONDITIONS PLAN

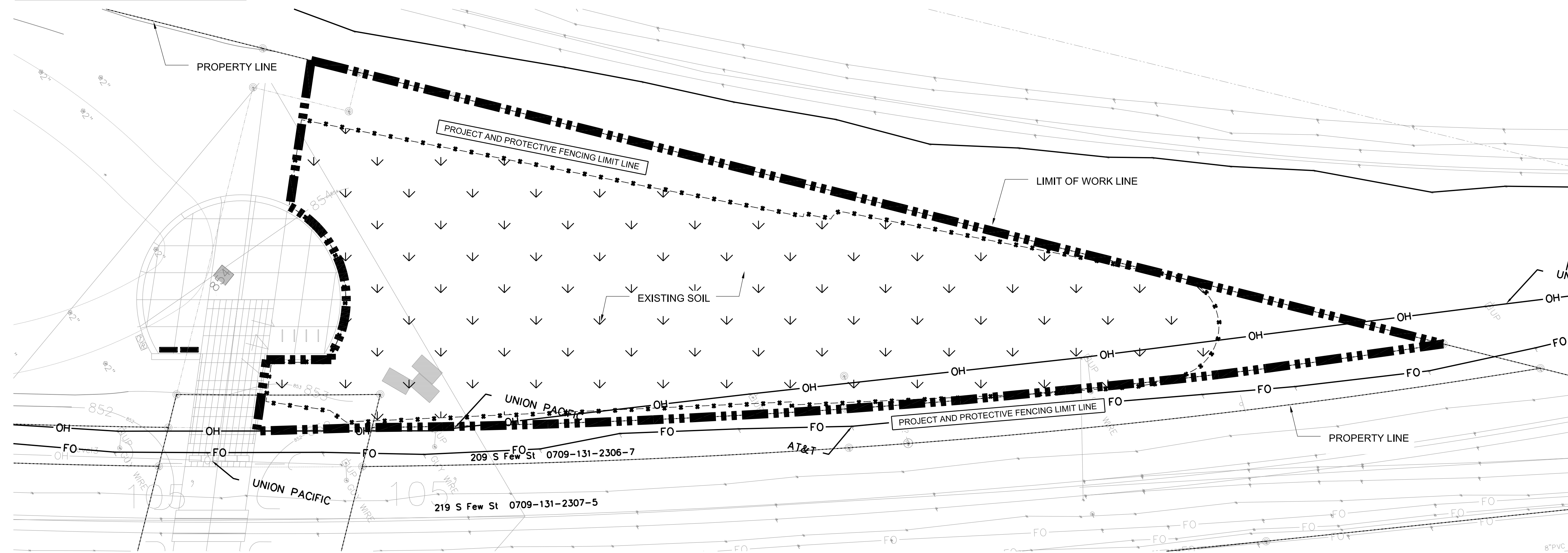
CENTRAL PARK - SKATE PARK
PROJECT NO. XXXX

EXISTING CONDITIONS

CENTRAL PARK-
SKATE PARK CITY OF MADISON

SHEET NO.
C-0.10

141 Portland St.
Boston, MA 02114
Tel. 617.523.8103
Fax. 617.523.4333
www.stantec.com



EXISTING CONDITIONS LEGEND

SYMBOL	DESCRIPTION
	EXISTING SOIL
	PROJECT LIMIT LINE/PROTECTIVE FENCING

GENERAL NOTES:

1. ALL MATERIAL "TO REMAIN" SHALL BE PROTECTED DURING CONSTRUCTION.
2. ALL MATERIAL "TO BE REMOVED" SHALL BE TAKEN FROM THE SITE AND DISPOSED OF PROPERLY.

SURVEY NOTES:

1. LOCATE ALL SURVEY MARKS, INCLUDING BENCH MARKS AND PROPERTY LINES IN ORDER THAT THE EXACT LINES OF CONSTRUCTION LIMITS AND GRADES MAY BE DETERMINED.
2. VERIFY ENTIRE LAYOUT PRIOR TO START OF CONSTRUCTION WITH OWNERS REPRESENTATIVE AND CITY OF MADISON.
3. LOCATE AND PROTECT CONTROL POINTS PRIOR TO STARTING SITE WORK AND PRESERVE ALL PERMANENT REFERENCE POINTS DURING CONSTRUCTION. REPLACE PROJECT CONTROL POINTS WHICH MAY BE LOST OR DESTROYED.

VIEW FROM PROPOSED SKATE PLAZA LOOKING NORTH EAST



VIEW FROM PROPOSED SKATE PLAZA LOOKING SOUTH WEST



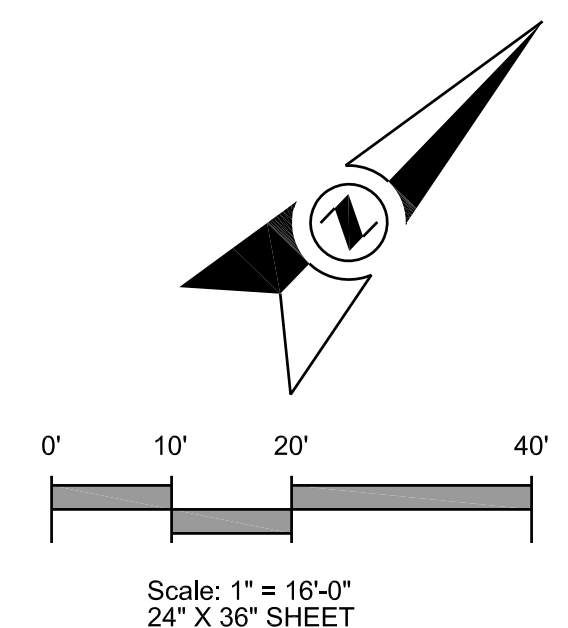
VIEW FROM PROPOSED SKATE PLAZA LOOKING SOUTH



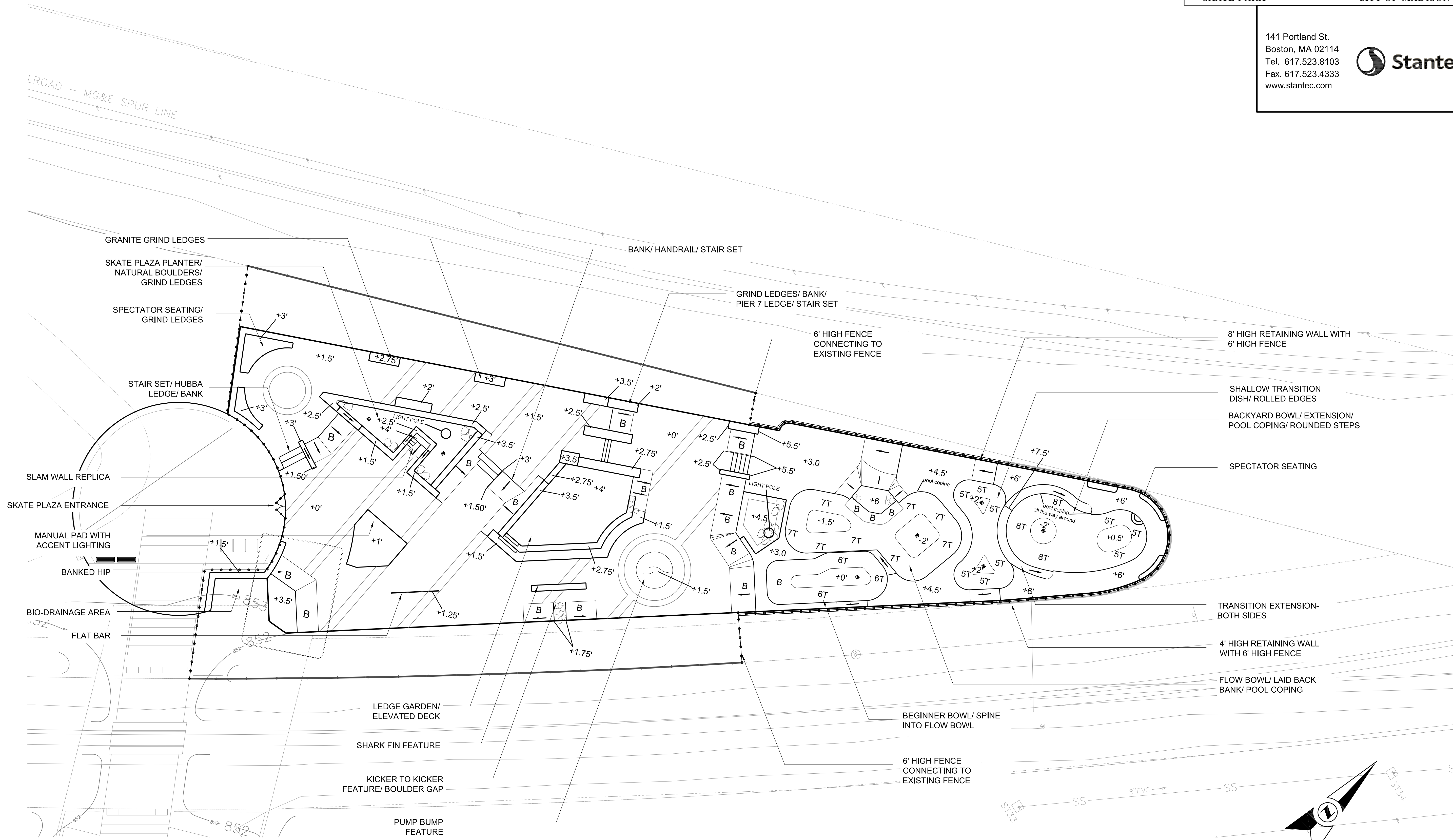
VIEW FROM PROPOSED SKATE PLAZA LOOKING NORTH



VIEW FROM PROPOSED SKATE PLAZA LOOKING WEST

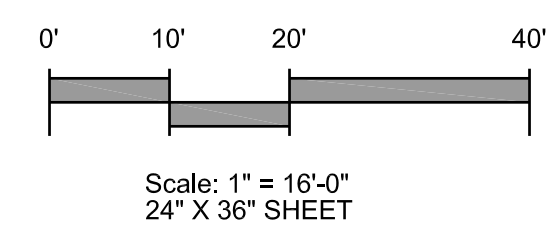


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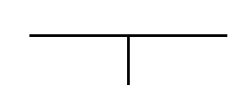


PLOT SCALE: -----
PLOT NAME: -----
REV. DATE: -----

ORIGINATOR: CITY_OF_MADISON_STREETS_DIVISION




Scale: 1" = 16'-0"
24" X 36" SHEET



CENTRAL PARK - SKATE PARK PROJECT NO. XXXX	SHEET NO. SP-1.1
SKATE PARK - ARTISTIC RENDERING	
CENTRAL PARK- SKATE PARK	CITY OF MADISON

141 Portland St.
Boston, MA 02114
Tel. 617.523.8103
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www.stantec.com





PLOT SCALE: -----

PLOT NAME: -----

REV. DATE: -----

ORIGINATOR: CITY_OF_MADISON_STREETS_DIVISION

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GRADING LEGEND

SYMBOL	DESCRIPTION
	DRAIN INLET
	DIRECTION OF FLOW
E.G.	EXISTING GRADE
F.G.	FINISH GRADE
F.L.	FLOWLINE
I.E.	INVERT ELEVATION
R.E.	RIM ELEVATION
	FINISH GRADE CONTOUR
	B.G. - BREAK IN GRADE
	F.L. - FLOWLINE OF SWALE
	RETAINING WALL
	TURNDOWN WALL
	THICKENED EDGE

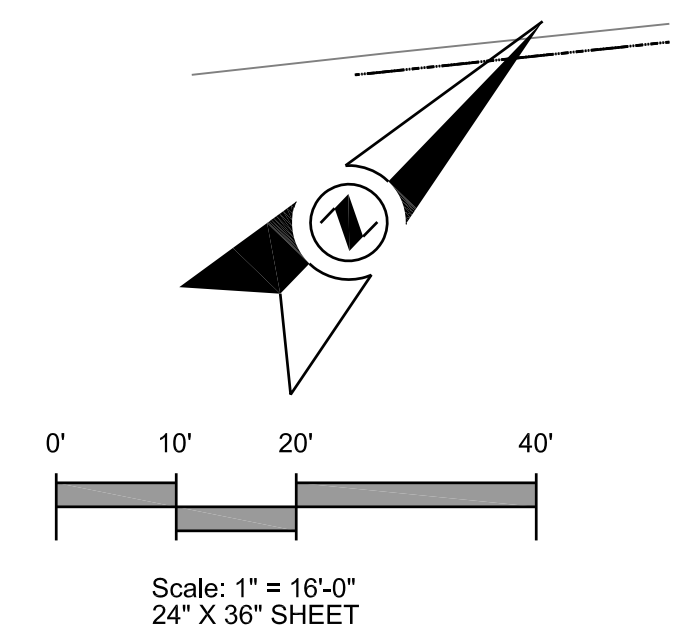
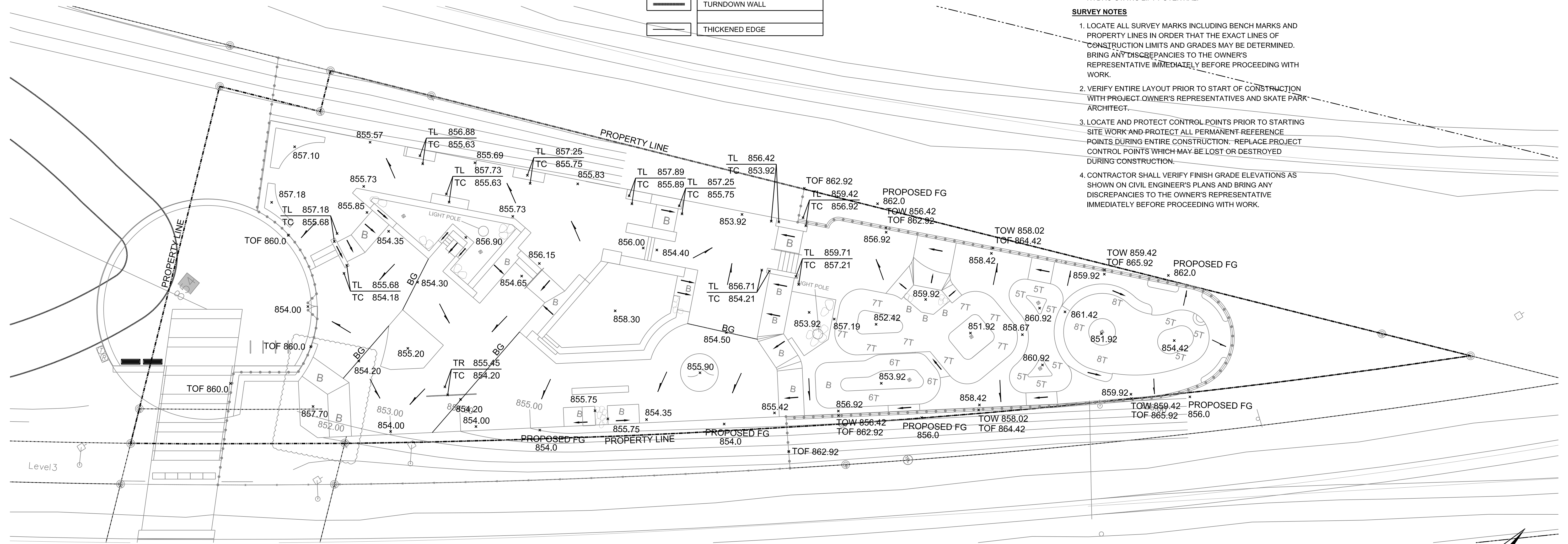
- TOW** TOP OF RETAINING WALL ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- BW** BOTTOM OF WALL ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- TR** TOP OF RAIL ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- BR** BOTTOM OF RAIL ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- TC** TOP OF CONCRETE ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- TL** TOP OF LEDGE ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.
- (T)** RADIUS OF WALL. REFER TO SECTION SHEETS FOR PROFILE VIEW.
- (B)** BANK-EMBANKMENT WALL WITH SLOPE AND RADII AT BASE. REFER TO SECTION SHEETS FOR PROFILE VIEW.
- TOF** TOP OF FENCE ELEVATION BASED ON A +000.00 ELEVATION AT ADJACENT SITE GRADE.

GRADING & DRAINAGE SHEET NOTE MASTER

- FINAL HEIGHT AND SHAPE OF EXCAVATION TO BE VERIFIED BY SKATE PARK ARCHITECT IN THE FIELD.
- ALL SPOT ELEVATIONS ARE FOR TOP OF FINISH WORK UNLESS OTHERWISE NOTED.
- MINIMUM SLOPE FOR ALL CONCRETE FINISH WORK SHALL BE 1%. WATER MUST DRAIN TOWARDS DIRECTION OF FLOW ARROWS AND FOLLOW OVERALL DESIGN INTENT.
- ALL AREAS DISTURBED BY GRADING OPERATIONS TO BE FINE GRADED.
- VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO COMMENCING WORK.
- REFER TO SECTIONS AND PROFILES FOR HEIGHT, RADII AND PROFILES.
- ALL FINE GRADING OF EARTHWORK SHALL BE INSPECTED WITH TEMPLATES CUT TO THE SPECIFIED RADII/ ANGLE. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL TEMPLATES/ SCREEDS TO BE USED FOR EARTHWORK TOLERANCES FOR APPROVAL BY SKATE PARK ARCHITECT.
- CONTRACTOR TO PROTECT ALL EXCAVATIONS FROM SOIL EROSION AND WATER SATURATION AT ALL TIMES USING APPROPRIATE CONSTRUCTION METHODS. AND LOSS OF SOIL PROFILE DURING CONSTRUCTION SHALL BE REPLACED WITH APPROPRIATE SOIL COMPOSITION AND COMPACTION METHODS TO MATCH LOSS SOIL.
- THE DRAINS IN THE SKATE PARK HAVE PERFORATIONS IN THE PORTION BELOW THE CONCRETE DECK TO AVOID ANY HYDRO-STATIC LIFT POTENTIAL.

SURVEY NOTES

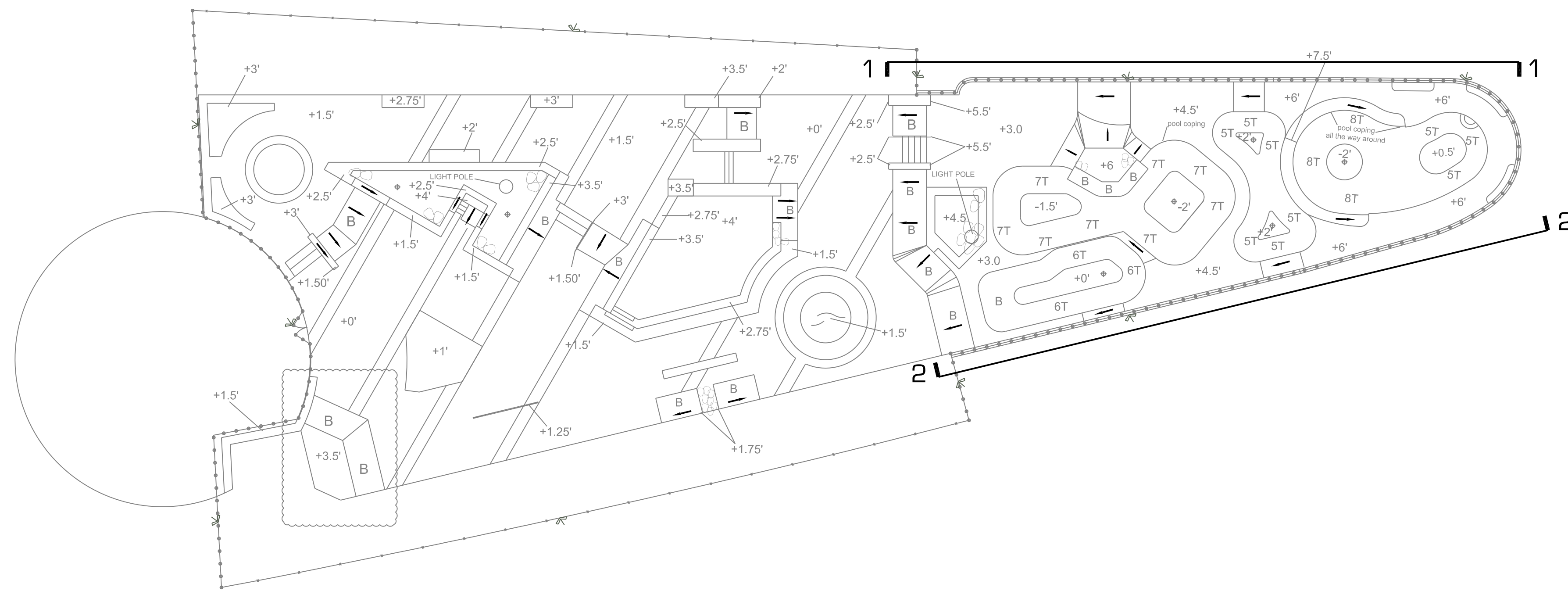
- LOCATE ALL SURVEY MARKS INCLUDING BENCH MARKS AND PROPERTY LINES IN ORDER THAT THE EXACT LINES OF CONSTRUCTION LIMITS AND GRADES MAY BE DETERMINED. BRING ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY BEFORE PROCEEDING WITH WORK.
- VERIFY ENTIRE LAYOUT PRIOR TO START OF CONSTRUCTION WITH PROJECT OWNER'S REPRESENTATIVES AND SKATE PARK ARCHITECT.
- LOCATE AND PROTECT CONTROL POINTS PRIOR TO STARTING SITE WORK AND PROTECT ALL PERMANENT REFERENCE POINTS DURING ENTIRE CONSTRUCTION. REPLACE PROJECT CONTROL POINTS WHICH MAY BE LOST OR DESTROYED DURING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY FINISH GRADE ELEVATIONS AS SHOWN ON CIVIL ENGINEER'S PLANS AND BRING ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY BEFORE PROCEEDING WITH WORK.



PLOT SCALE: -----
PLOT NAME: -----
REV. DATE: -----

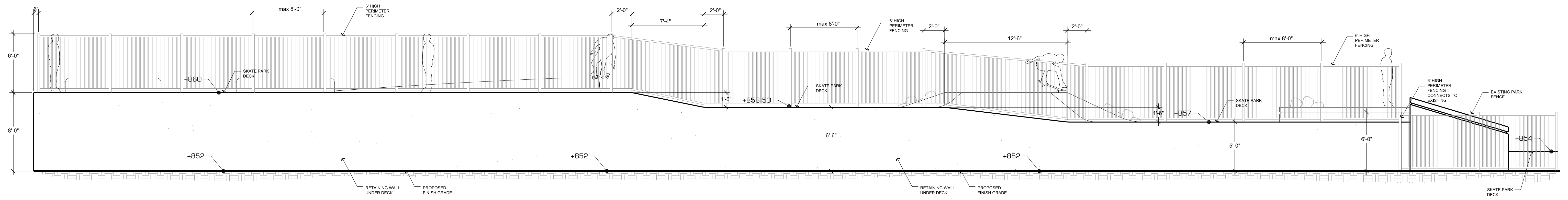
ORIGINATOR: CITY_OF_MADISON_STREETS_DIVISION

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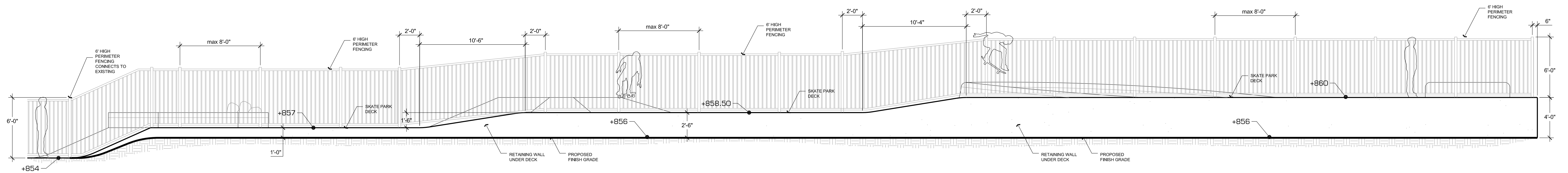
KEY MAP

0' 10' 20' SCALE
1" = 20'-0"



1 SECTION/ ELEVATION

0' 2'-6" 5' SCALE
1" = 5'-0"



2 SECTION/ ELEVATION

0' 2'-6" 5' SCALE
1" = 5'-0"

PLOT SCALE: -----

PLOT NAME: -----

REV. DATE: -----

ORIGINATOR: CITY_OF_MADISON_STREETS_DIVISION

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P1-P2	50'	-	50'	1000W MZ	4	4	0
1	P3	50'	-	50'	1000W MZ	3	3	0
2	P4-P5	50'	-	50'	1000W MZ	2	2	0
5	TOTALS					15	15	0



MY PROJECT

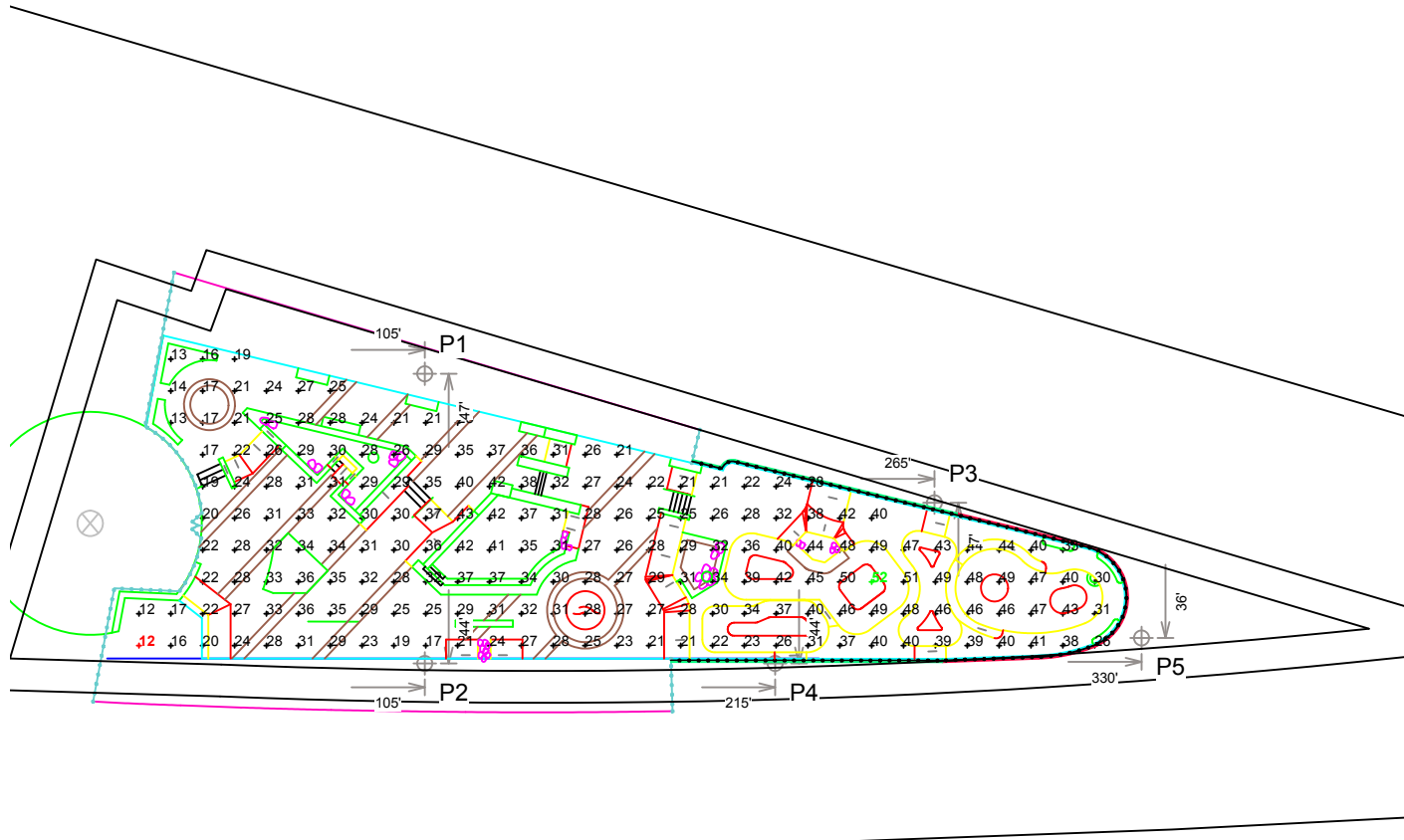
Name: **Madison Skate Park**
 Location: Madison,WI

GRID SUMMARY

Name: **Skate Park**
 Spacing: 10.0' x 10.0'
 Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Guaranteed Average:	30
Scan Average:	31.08
Maximum:	52
Minimum:	12
Avg / Min:	2.70
Guaranteed Max / Min:	5
Max / Min:	4.51
UG (adjacent pts):	1.48
CV:	0.29
No. of Points:	194
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	12,000 hours
Avg Lumens / Lamp:	88,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	15
Avg KW:	16.8 (19.5 max)



Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

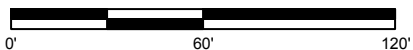
ENGINEERED DESIGN

By: **Eric Svenby**
 File # / Date: 166923C 20-Jan-14

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SCALE IN FEET 1 : 60



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P1-P2	50'	-	50'	1000W MZ	4	4	0
1	P3	50'	-	50'	1000W MZ	3	3	0
2	P4-P5	50'	-	50'	1000W MZ	2	2	0
5	TOTALS					15	15	0



MY PROJECT

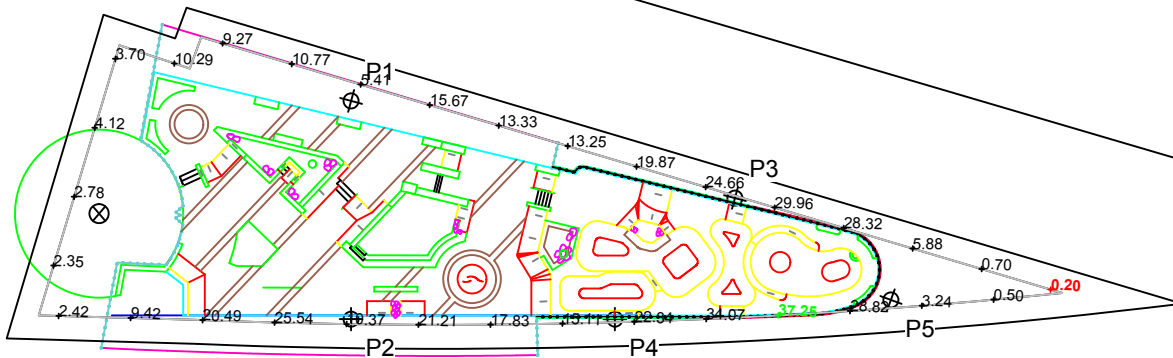
Name: **Madison Skate Park**
 Location: Madison, WI

GRID SUMMARY

Name: **Spill @ PL**
 Spacing: 30.0'
 Height: 4.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	14.0358
Maximum:	37.25
Minimum:	0.20
No. of Points:	32
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	12,000 hours
Avg Lumens / Lamp:	88,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	15
Avg KW:	16.8 (19.5 max)



Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

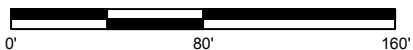
By: **Eric Svenby**
 File # / Date: 166923C

20-Jan-14

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SCALE IN FEET 1 : 80



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P1-P2	50'	-	50'	1000W MZ	4	4	0
1	P3	50'	-	50'	1000W MZ	3	3	0
2	P4-P5	50'	-	50'	1000W MZ	2	2	0
5	TOTALS					15	15	0



MY PROJECT

Name: **Madison Skate Park**
 Location: Madison, WI

GRID SUMMARY

Name: **Spill @ +10' From PL**
 Spacing: 30.0'
 Height: 4.0' above grade

CONSTANT ILLUMINATION

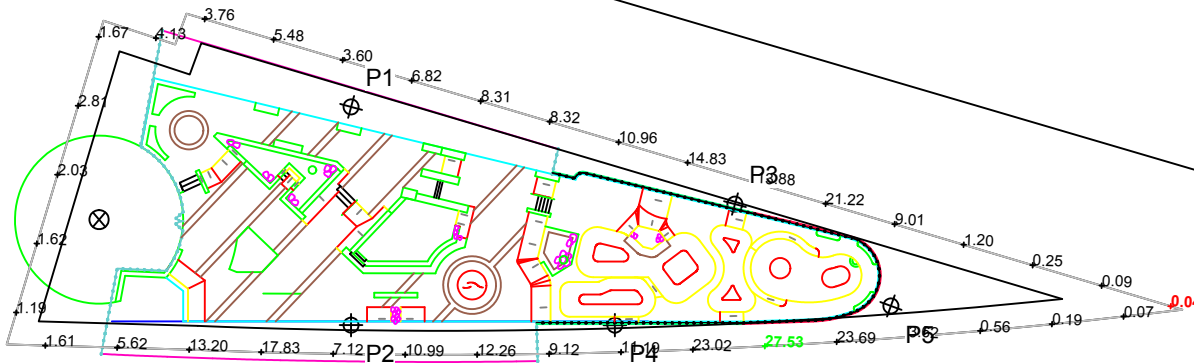
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	7.8065
Maximum:	27.53
Minimum:	0.04
No. of Points:	37
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	12,000 hours
Avg Lumens / Lamp:	88,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	15
Avg KW:	16.8 (19.5 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

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Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.



ENGINEERED DESIGN

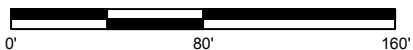
By: **Eric Svenby**
 File # / Date: 166923C

20-Jan-14

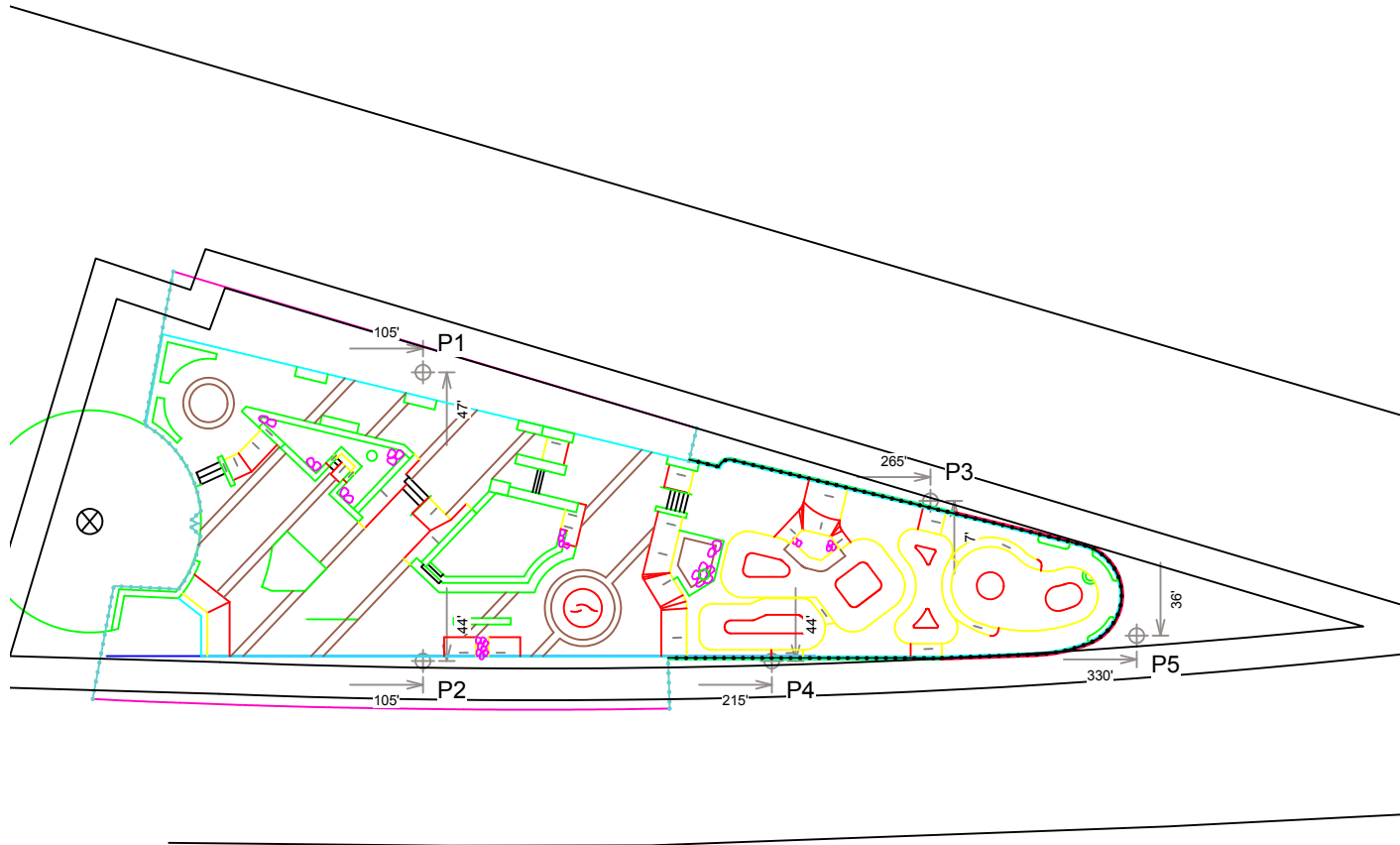
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SCALE IN FEET 1 : 80



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



MY PROJECT

Name: **Madison Skate Park**
 Location: **Madison,WI**

EQUIPMENT LAYOUT

INCLUDES:
 - Skate Park

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole		Luminaires		QTY / POLE
		SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	
2	P1-P2	50'	-	50'	1000W MZ	4
1	P3	50'	-	50'	1000W MZ	3
2	P4-P5	50'	-	50'	1000W MZ	2
5	TOTALS					15

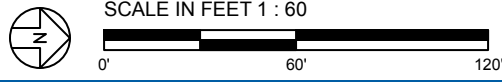
SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1000 watt MZ	6.5	6.4	5.8	4.9	4.0	3.6	2.9

ENGINEERED DESIGN

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Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

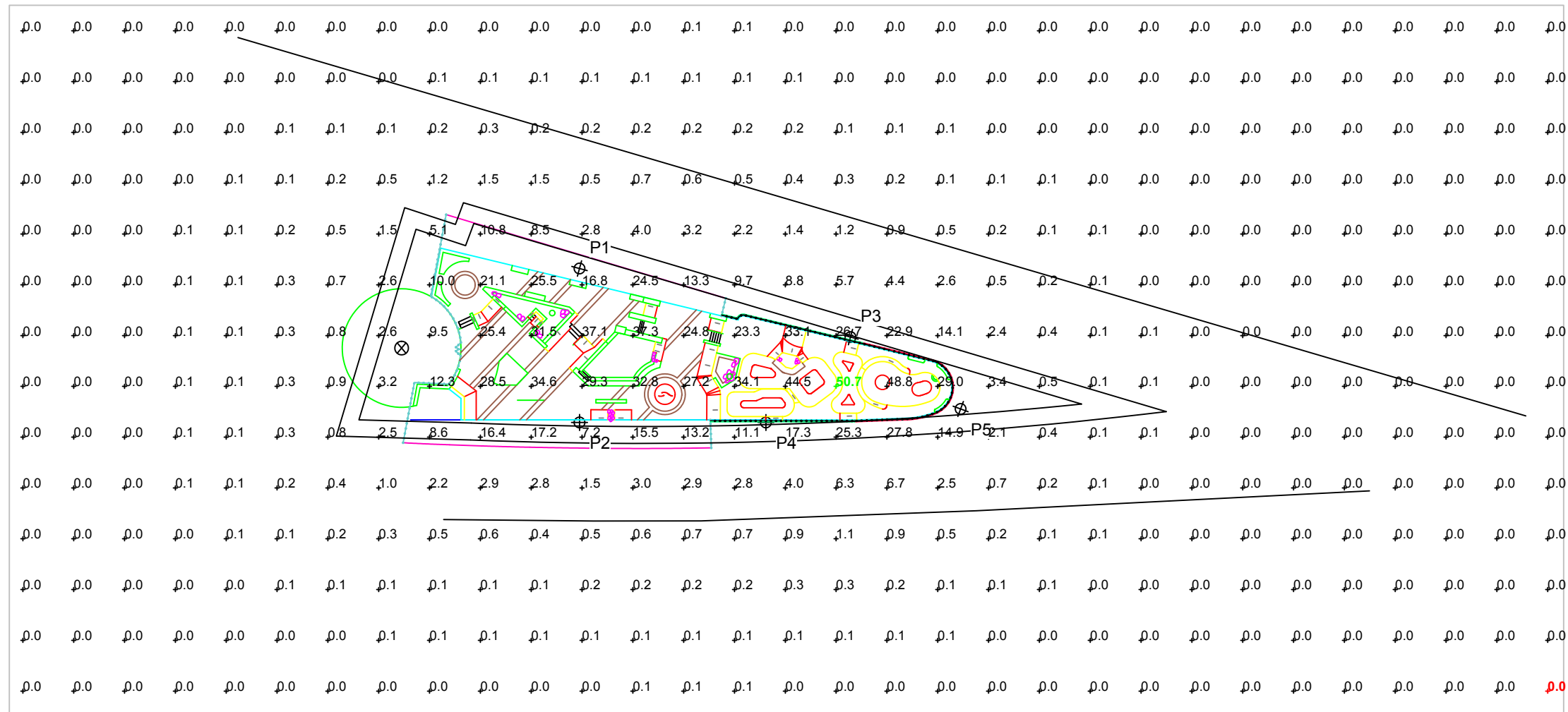
EQUIPMENT LIST FOR AREAS SHOWN							
Pole			Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	OTHER GRIDS
2	P1-P2	50'	-	50'	1000W MZ	4	4
1	P3	50'	-	50'	1000W MZ	3	3
2	P4-P5	50'	-	50'	1000W MZ	2	2
5	TOTALS					15	15



MY PROJECT	
Name:	Madison Skate Park
Location:	Madison, WI

GRID SUMMARY	
Name:	Blanket Grid
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	2.56
Maximum:	51
Minimum:	0
Avg / Min:	1739.44
Max / Min:	34412.72
UG (adjacent pts):	8.93
CV:	2.98
No. of Points:	434
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	12,000 hours
Avg Lumens / Lamp:	88,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	15
Avg KW:	16.8 (19.5 max)

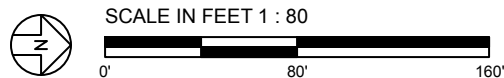


Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

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By:	Eric Svenby	
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Galvanized Steel Pole



Overview

The galvanized steel pole is designed to slip-fit together with the precast concrete base and the poletop luminaire assembly.

Features

- Slip-fit connection allows pole assembly with come-alongs
- Built-in hardware for attaching electrical components enclosure
- Wire access from inside the pole (no exposed wiring or conduit)
- Shipped in sections for easier handling
- Labeled with pole identification for location on field

Technical Specifications

Pole dimensions vary. For measurements refer to project specific pole configuration drawing.

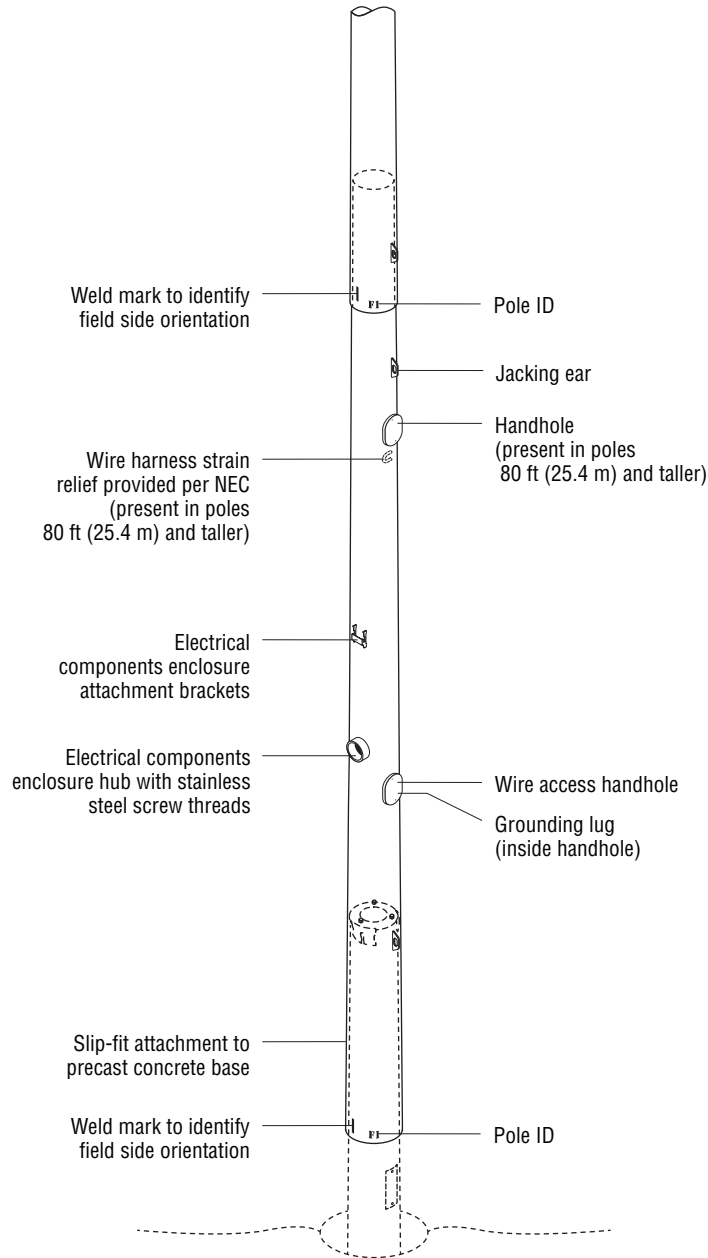
Construction

- Pole designs comply with all major building codes
- High strength, low alloy, tapered, round steel pole
- Hot-dip galvanized inside and outside after fabrication to ASTM-A123 standards
- Built to AASHTO stress standards
- Grounding lug
- Pole shipped in sections
- Stainless steel fasteners passivated and coated
- Material certifications are available

Quality Assurance Tests (periodic sampling)

- Bending stress
- Minimum galvanizing thickness
- Straightness measurement

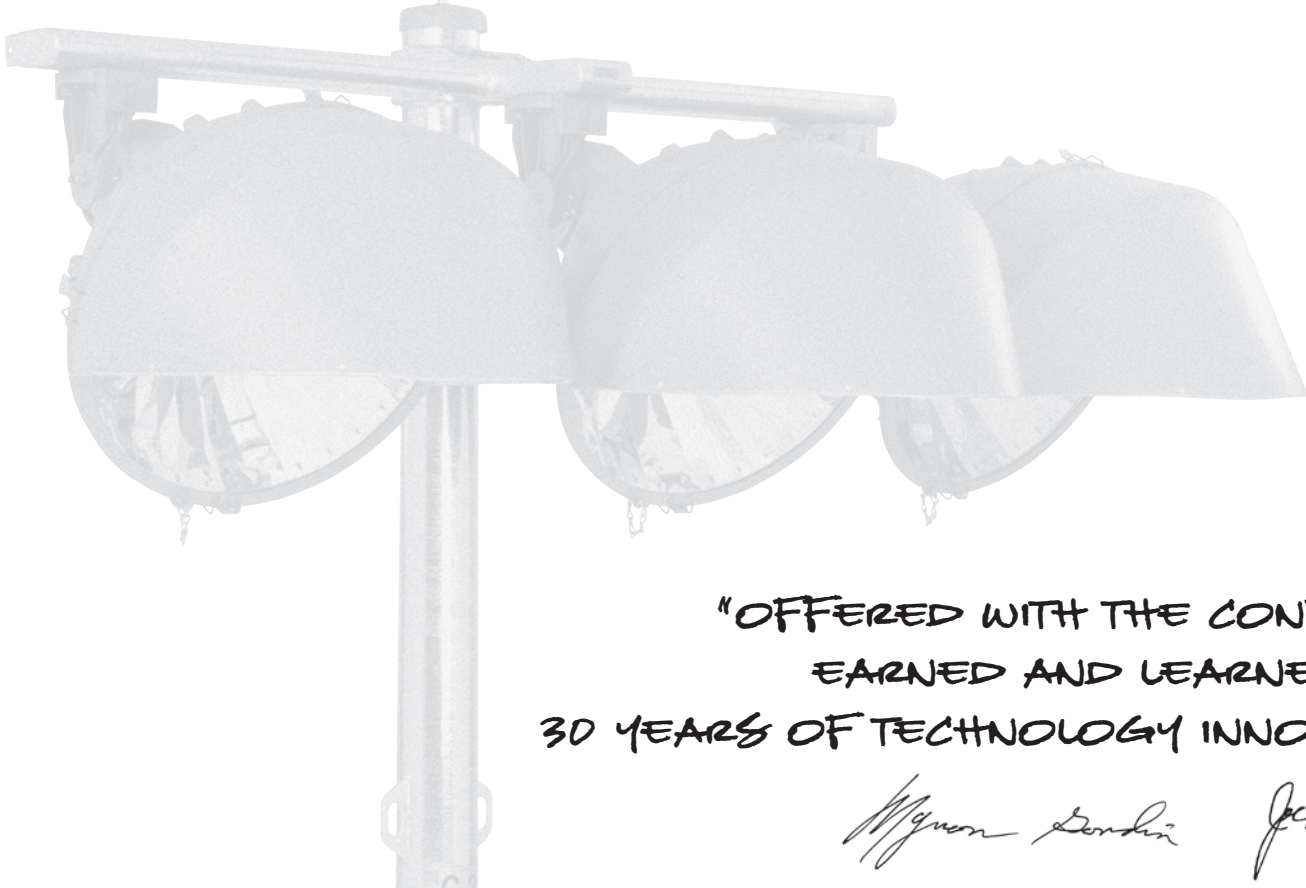
Galvanized Steel Pole





Light•Structure GREEN™

***For your budget,
for the environment.***



"OFFERED WITH THE CONFIDENCE
EARNED AND LEARNED FROM
30 YEARS OF TECHNOLOGY INNOVATION."

Myron Gordon *John Rooker*



Musco's Light-Structure GREEN™

Musco's Green friendly system will reduce by half or more, the cost of operating and maintaining your ballfield lighting system.

For Your Budget

Innovative photometric improvements of the luminaire result in substantially more efficient light control.

Musco's evolution of fundamental lamp principles creates a new operating system — Smart Lamp™.

Savings

25 Year Life Cycle Cost Savings

Prior Technology Fixture Quantity	52
Light-Structure Green™ Fixture Quantity	32
1. Energy — photometric improvement	\$23,080
2. Group Relamp	\$16,250
3. Lamp Maintenance	\$3,750
4. Energy — controls	\$5,770
5. Labor — controls	\$10,000

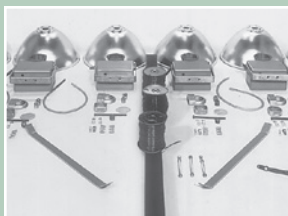
Total Projected Savings \$58,850

- | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------|
| 1. 300 hours per year, 9¢ per kilowatt hour | 4. 25% savings by switching on and off 20 minutes closer to actual usage time. |
| 2. \$125 per luminaire for relamp labor and materials. | 5. 15 minutes labor for turning on and off at \$8 labor rate — 2,500 operations. |
| 3. Average of 7.5 repairs at \$500 each. | |

Musco's journey to the Green Generation — 30 years of "good old fashioned" new technology

1976

Existing technology



1977

Factory assembled and wired light cluster — SportsCluster®. Predictable results, easier installation.



1981

Glare control research



1982

Temporary lighting service and rolling lab — Mobile Lighting System



1987

Easier maintenance — remote ballasts



... for a More Energy Conscious Generation.

Amazing new technology . . . big cost benefits.

And best of all, it does wonderful things for the adjoining environment. It puts much less light on nearby properties. It protects the beauty of the dark night skies.

For The Environment

Spill and glare control features are now a standard part of every luminaire at no extra cost.

This green generation luminaire system cuts spill by half or more, even when compared to Musco's prior industry-leading technology.

Less Spill		
360' x 225' Soccer Field		
30fc Average Maintained	30fc Constant Illumination	
Light-Structure with Total Light Control™ photometric option	Fixture Type	Light-Structure Green™
1500W MZ	Lamp Type	1500W MZ
Vertical Illumination		
0.50 fc	Average	0.15 fc
0.74 fc	Maximum	0.26 fc
52	# of Luminaires	32

Now 25 years of unprecedented, trouble-free operation

Musco's *Constant 25*™ product assurance and warranty program guarantees:

- Constant light levels and group lamp replacements at the end of rated lamp life
- Reduced energy consumption
- Monitoring, maintenance, and remote on/off control services
- System structural integrity

1989

Glare control with efficiency — SportsCluster-2®



1991

Complete lighting and electrical system from foundation-to-poletop, Light-Structure System™



1997

Facility management services — 10 Club Service® and Control-Link®



2005

Energy, environment . . . today's prices — Light-Structure Green™



Light-Structure Green™ System — still Five Easy Pieces™ plus:

Improved Luminaire Efficiency

- 1. Reflector system:** More than 2000 photometric patterns provide optimal energy efficiency and minimal spill light for each project.
- 2. Visor System:** Several visor choices provide energy efficient light on the field and minimal spill light. The aerodynamics reduce wind load on the poles.
- 3. Side Shift Beam Control:** Beams can be adjusted within the luminaire horizontally as well as vertically. We can now custom fit the light to the corners.

Smart Lamp™ Operating System

- 1. Lamp:** 30 years of lamp experience has taught Musco how to operate the lamp with less energy and extend its life with a system of timed power adjustments.
- 2. Geared tilt adjustment:** With a geared leveling mechanism, the lamp arc tube operates in the energy advantageous horizontal position.

Increased Durability, Assured Results

- 1. Die-Cast aluminum reflector housing:** Provides a rugged foundation for building and maintaining a sophisticated photometric unit.
- 2. Gasketing:** Improved material and gasket system design virtually eliminate “outgassing” and other contamination of the reflectors and lens.
- 3. Factory Assembled Luminaires:** The luminaire ships totally assembled: avoids contaminants, saves time, improves aiming accuracy.
- 4. Attaching Mechanism:** The factory assembled luminaire connects electrically and structurally to the crossarm with one simple attachment.
- 5. Factory Aiming:** Musco’s well established service of factory aiming is even better with Light-Structure Green™. . . field, changes can still be done.

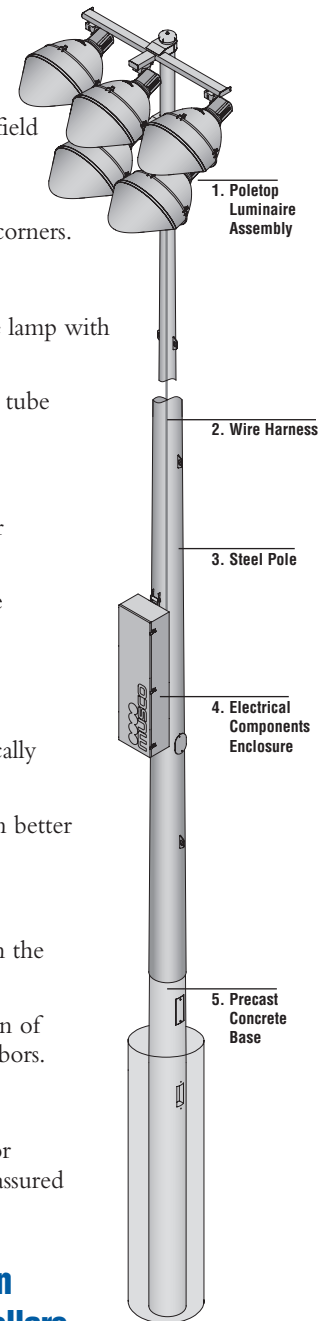
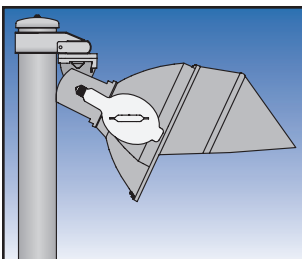
Solid control and flexible management

- 1. Controls and monitoring:** This system, in one simple cabinet, included in the base price, saves energy and gives you a solid, flexible management tool.
- 2. Control Link Central™:** Real people at Musco, 24/7, support the operation of your lights . . . from office, field or home . . . benefits field users and neighbors.

Ultimate guarantee

With **Green Generation Lighting**, Musco’s Constant 25™ guarantees it all for 25 years, plus free relamping at the end of the lamps’ rated life. All of this is assured by Musco’s field service department and their technicians.

Light-Structure Green™ is the result of more than a dozen inventions and innovations from more than 10 million dollars of research and capital investment by Musco.



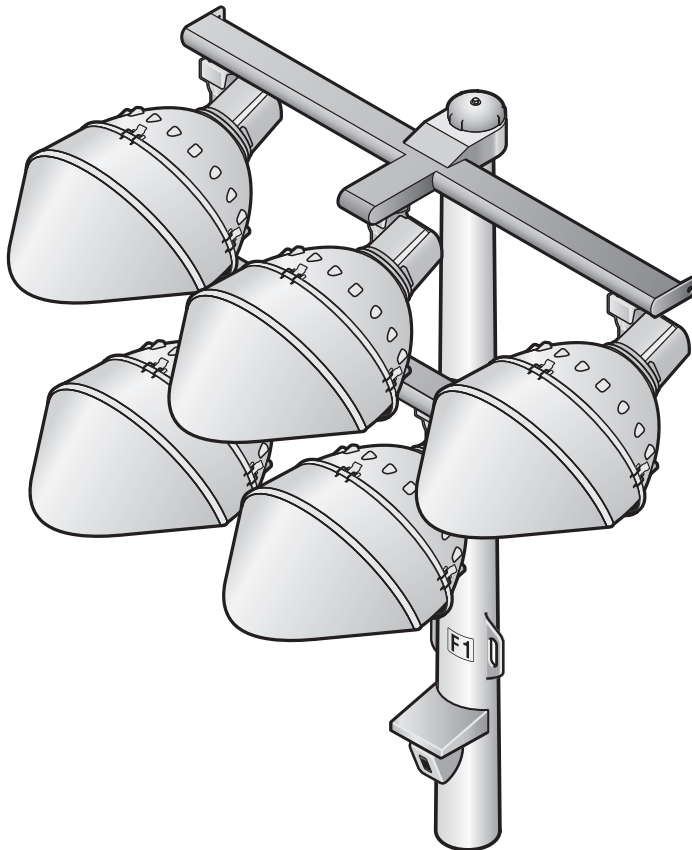
We Make It Happen.®

800/825-6030

www.musco.com

e-mail: lighting@musco.com

Poletop Luminaire Assembly



Overview

The factory-aimed poletop luminaire assembly is the upper section of the pole and slip-fits together with the galvanized steel pole.

Features

- Luminaire mounts and connects in a single step
- Slip-fit connection allows assembly with come-alongs
- D-shaped crossarm reduces wind loading
- Each luminaire is factory-built, tested, and ships as a unit
- Luminaires are factory-aimed to two-tenths degree of accuracy
- All luminaires are factory-wired to a quick-connect harness for easy installation
- Labels identify pole and luminaire location
- No exposed wiring or conduit
- Factory-set pole alignment beam allows easy field alignment

Technical Specifications

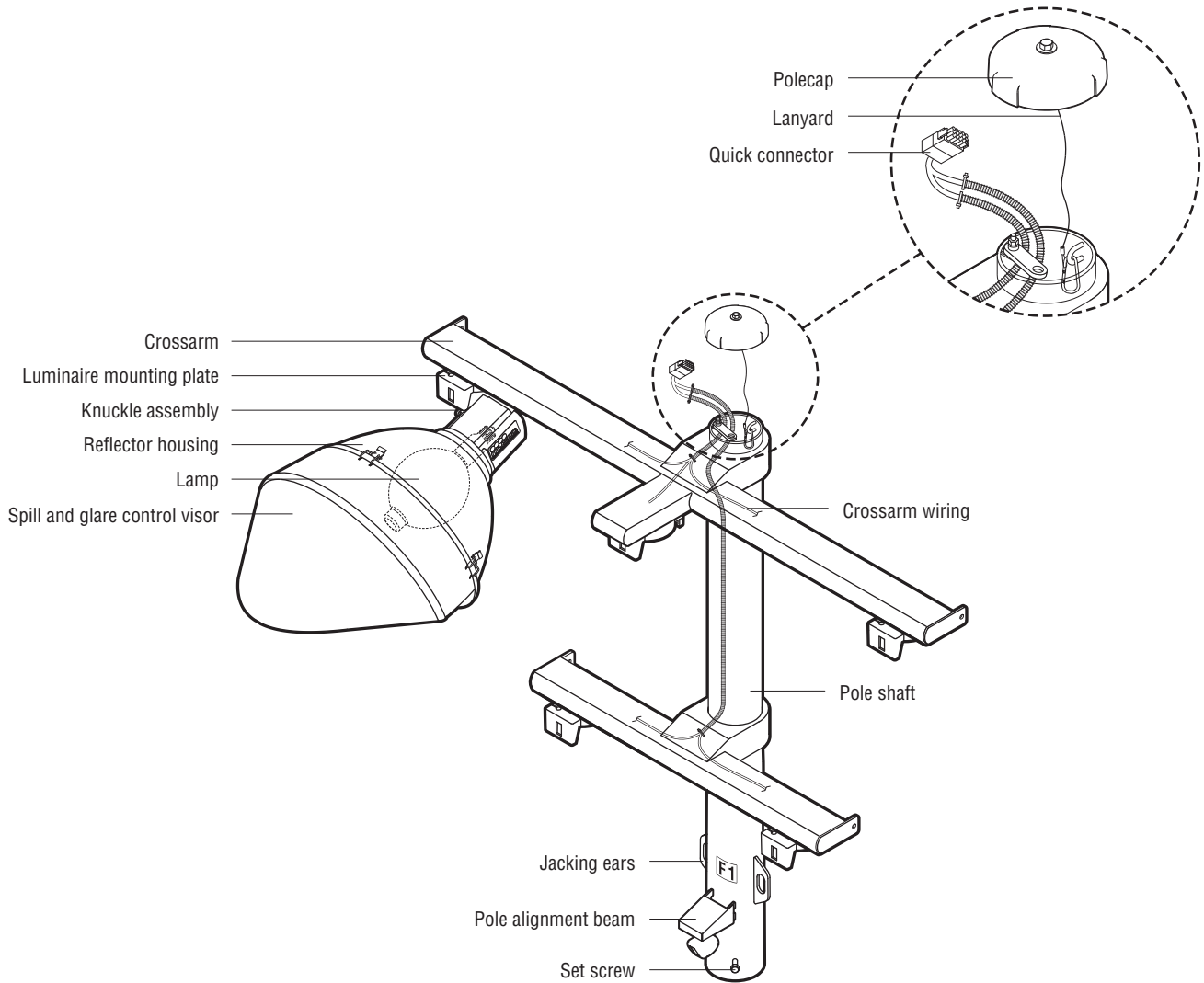
Construction

- Crossarms hot-dip galvanized after fabrication to ASTM-A123 standards
- All aluminum components powder-coated or anodized to mil-A-8625F
- Luminaire and knuckle powder-coated die-cast aluminum
- All stainless steel fasteners passivated and coated
- Crossarms constructed of 1/8 inch wall thickness D-shaped steel tubing
- Polecap attached with stainless steel lanyard and securing bolt

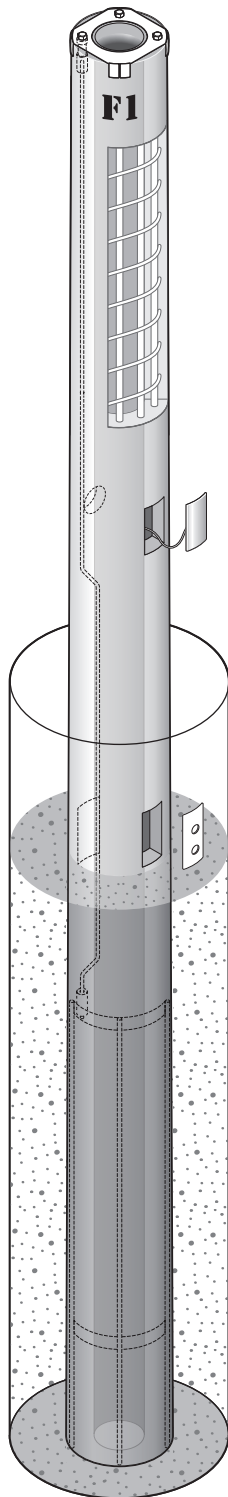
Quality Assurance Tests

- Reflector photometric test
- Lamp lumen output
- Galvanizing thickness
- High potential dielectric withstand
- Electrical continuity

Poletop Luminaire Assembly



Precast Concrete Base



Overview

The precast concrete base is set directly into the ground and backfilled with concrete. The base includes an integrated lightning ground system.

Features

Base

- Set pole on base in 24 hours
- Tapered upper section for slip-fit steel pole
- Access holes for wire entry
- Epoxy coated ends prevent water intrusion
- Lifting hole accepts load-rated steel rod provided by Musco

Integrated Lightning Ground System

- Complies with NFPA 780 and UL 96A standards when installed per Musco installation instructions
- UL Listed, Class II Lightning Protection, file number E337467
- Tested up to 100 kA by independent laboratory
- Steel pole interfaces with integrated grounding system by means of the pole grounding connector
- 2/0 AWG grounding electrode conductor
- Concrete-encased grounding electrode, 20 feet (6.1 m) total length, ½ inch (12.7 mm) diameter

Technical Specifications

Base dimensions vary. For measurements refer to project specific foundation and pole assembly drawing.

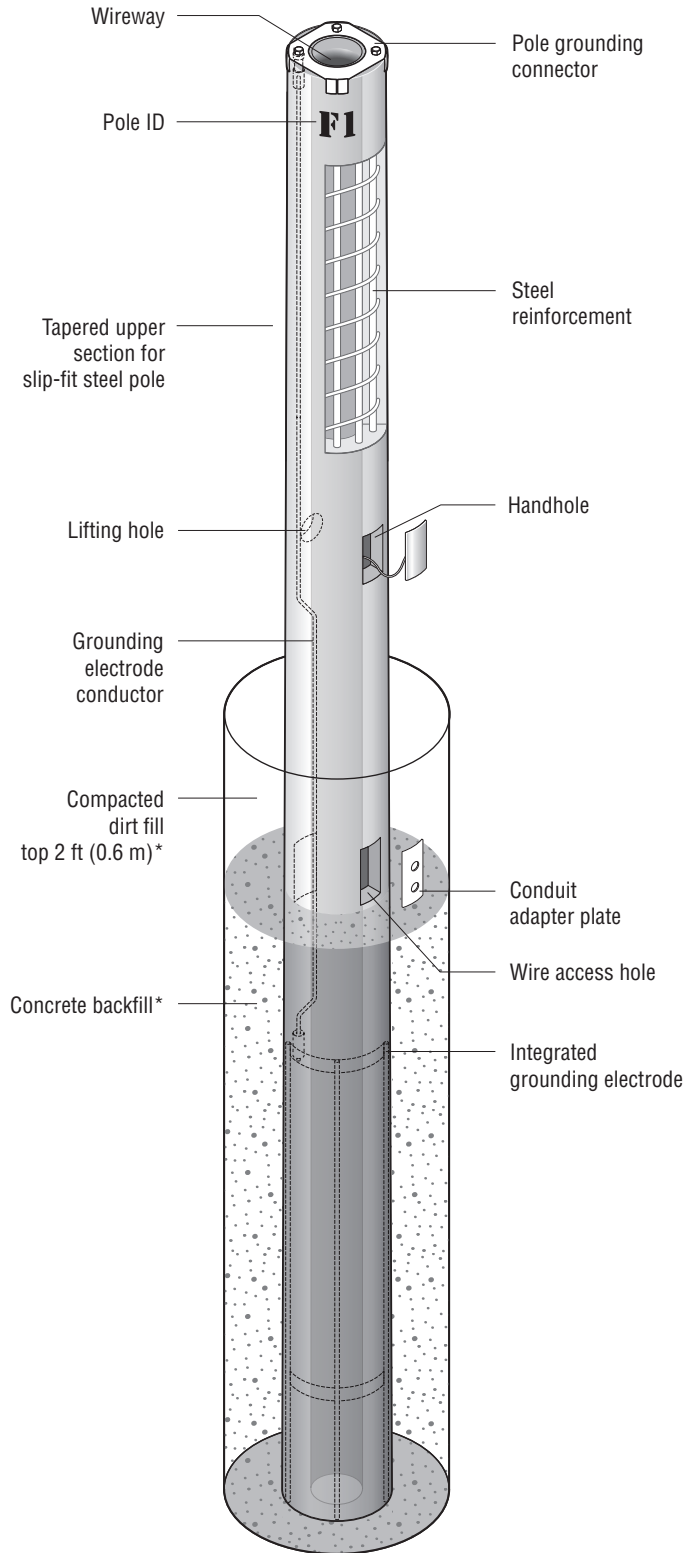
Construction

- Spun concrete construction
- Prestressed vertical strands and steel coil spiral for radial reinforcement throughout base
- Minimum design strength is 9500 lb/in² (65.5 MPa) at 28 days

Quality Assurance Tests

- 28-day compressive strength
- Bending moment capacity
- Grounding system continuity

Precast Concrete Base

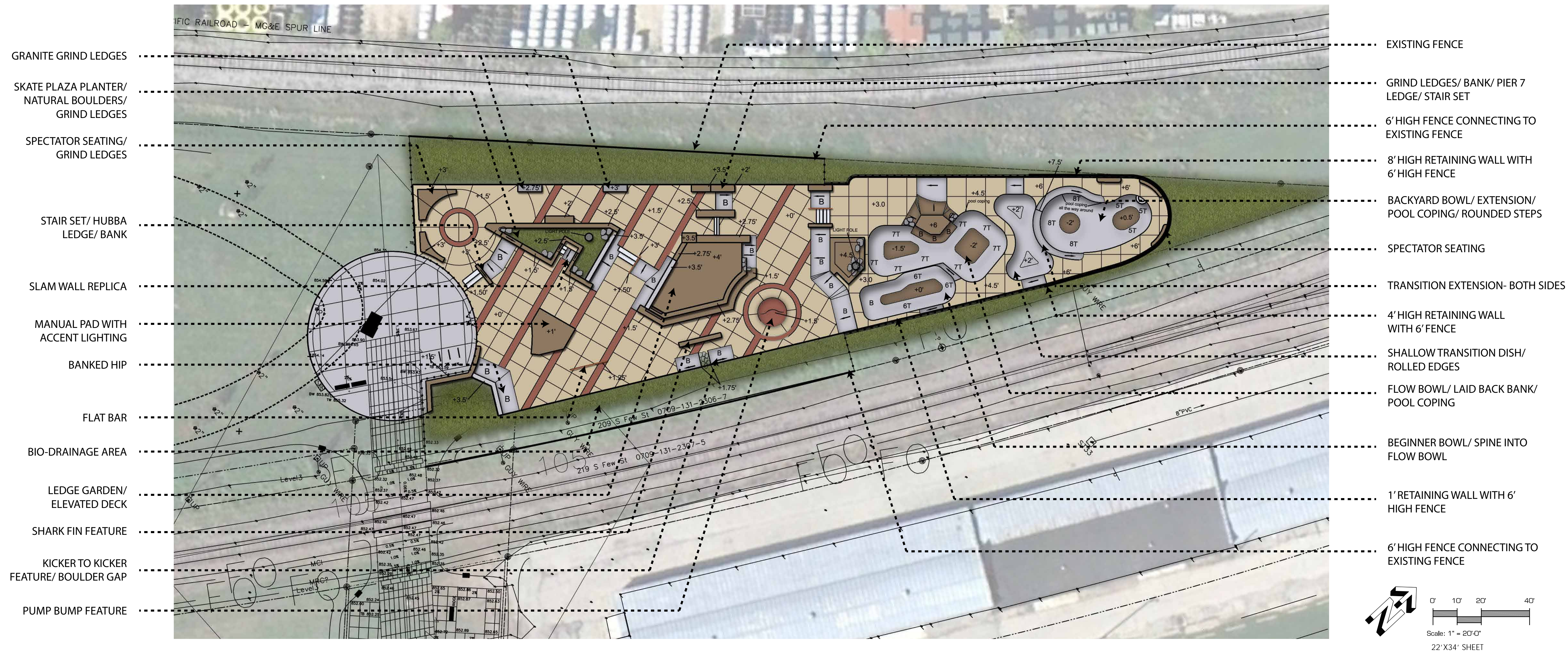


*Standard pier foundation shown. Foundation and/or backfill may vary per alternate foundation design.

MADISON CENTRAL PARK SKATE PLAZA

CITY OF MADISON, WI

PLAN VIEW RENDER



EXISTING CONDITIONS



9179 Aero Drive | San Diego CA 92123-2411
 141 Portland Street | Boston, MA 02114
 (ph) 858.633.4233 | (cell) 760.815.9335