

Case File No. 19-0022
National Sports Center

Blaine Planning Department / 10801 Town Square Dr NE / Blaine, MN 55449 / (763) 785-6180



NOTES: -r3: Re-aimed and used a head-box at some fixtures to reduce spill.
-r2: Added Spill scans
-Verify all pole locations.
-Tree trimming maybe required, verify



MY PROJECT

Name: National Sports Center Youth Soccer
Location: Blaine, MN

EQUIPMENT LAYOUT

INCLUDES:

- Soccer-A3
- Soccer-A4

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		
		SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	S1-S2 S5-S6	70'	-	70'	1500W MZ	8
2	S3-S4	80'	-	80'	1500W MZ	14
6	TOTALS					60

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	8.3	7.5	6.5	5.1	4.7	3.7

ENGINEERED DESIGN

By: Will Hartl
File # / Date: 188717-r3

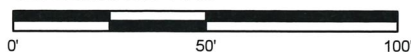
23-Apr-19

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EQUIPMENT LAYOUT



SCALE IN FEET 1 : 50



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
4	S1-S2	70'	-	70'	1500W MZ	8	8	0
2	S3-S4	80'	-	80'	1500W MZ	14	14	0
6	TOTALS					60	60	0



MY PROJECT	
Name:	National Sports Center Youth Soccer
Location:	Blaine, MN

GRID SUMMARY	
Name:	Total Area
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION	
SUMMARY	HORIZONTAL FOOTCANDLES
Scan Average:	Entire Grid 31.34
Maximum:	52
Minimum:	18
Avg / Min:	1.76
Max / Min:	2.92
UG (adjacent pts):	2.12
CU:	0.72
No. of Points:	204
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Design Usage Hours:	5,000 hours
Design Lumens:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	60
Avg KW:	93.84 (102.0 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA RP-6-15 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.



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

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By:	Will Hartl
File # / Date:	188717-r3
	23-Apr-19

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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
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4	S1-S2 S5-S6	70'	-	70'	1500W MZ	8	8	0
2	S3-S4	80'	-	80'	1500W MZ	14	14	0
6	TOTALS					60	60	0



MY PROJECT

Name: National Sports Center Youth Soccer
Location: Blaine, MN

GRID SUMMARY

Name: Spill
Spacing: 30.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
Entire Grid	
Scan Average:	0.4287
Maximum:	0.99
Minimum:	0.01
No. of Points:	36
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Design Usage Hours:	5,000 hours
Design Lumens:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	60
Avg KW:	93.84 (102.0 max)

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

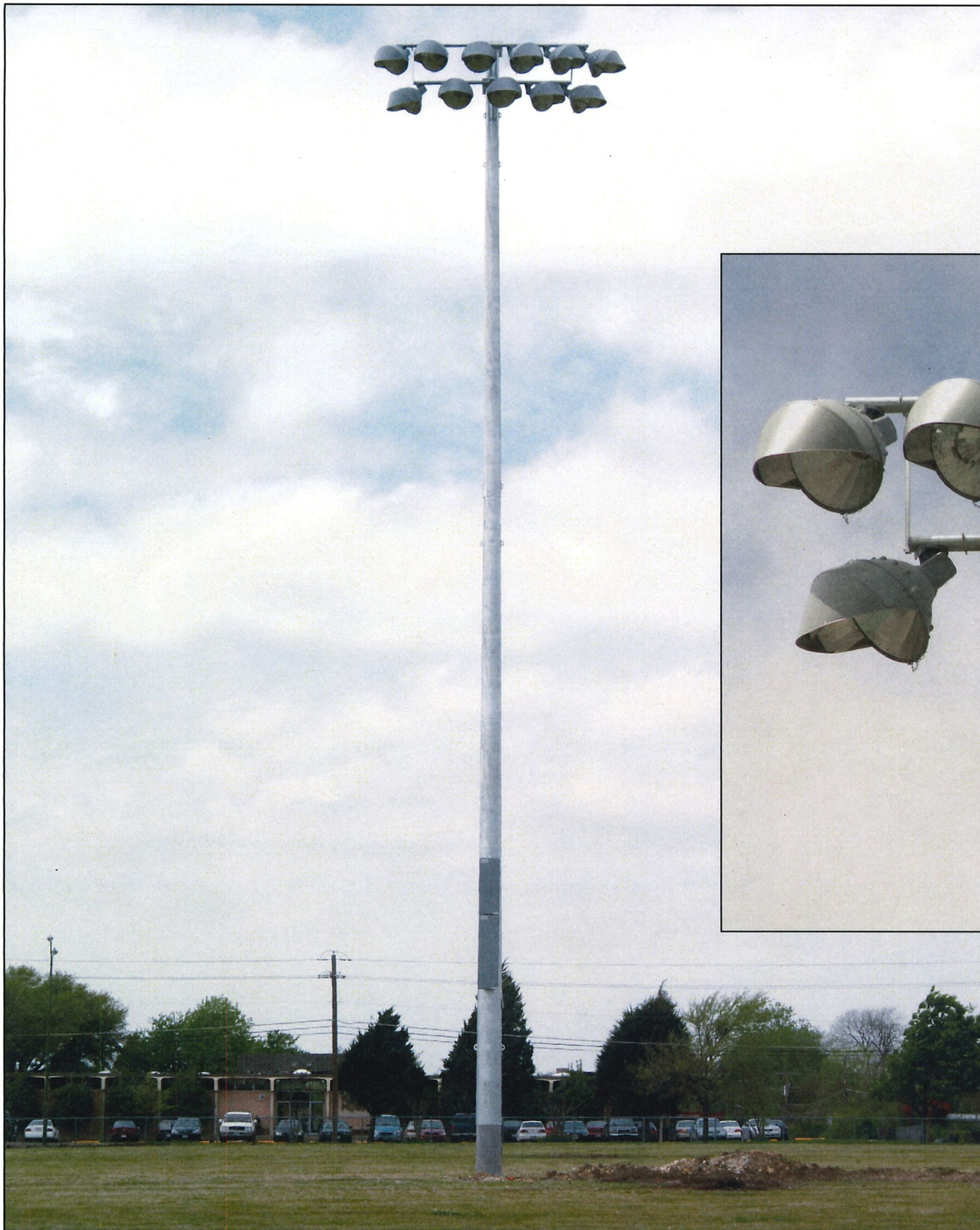
ENGINEERED DESIGN

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ILLUMINATION SUMMARY



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Light•Structure
GREEN™

Light-Structure Green™ Lighting System

For your
BUDGET,
for the
ENVIRONMENT.

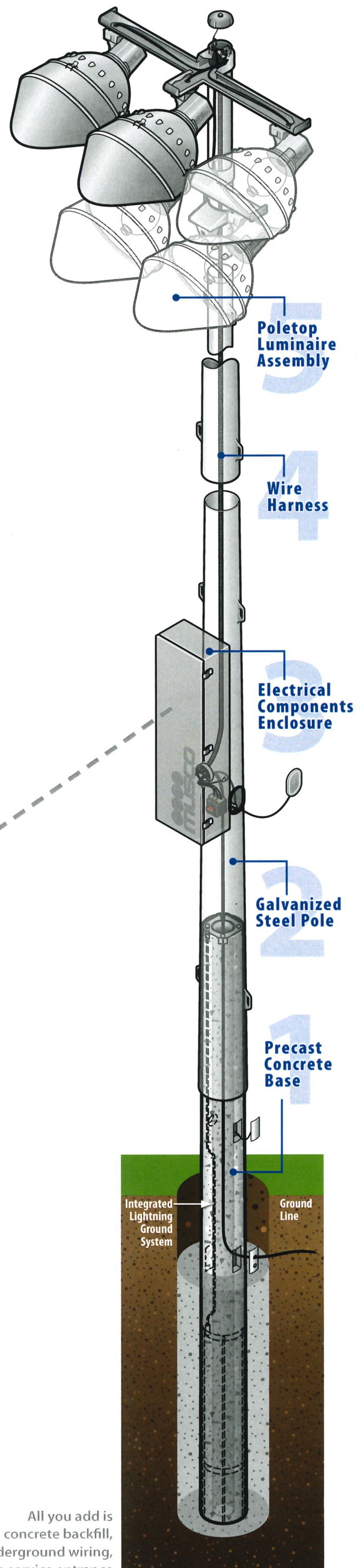
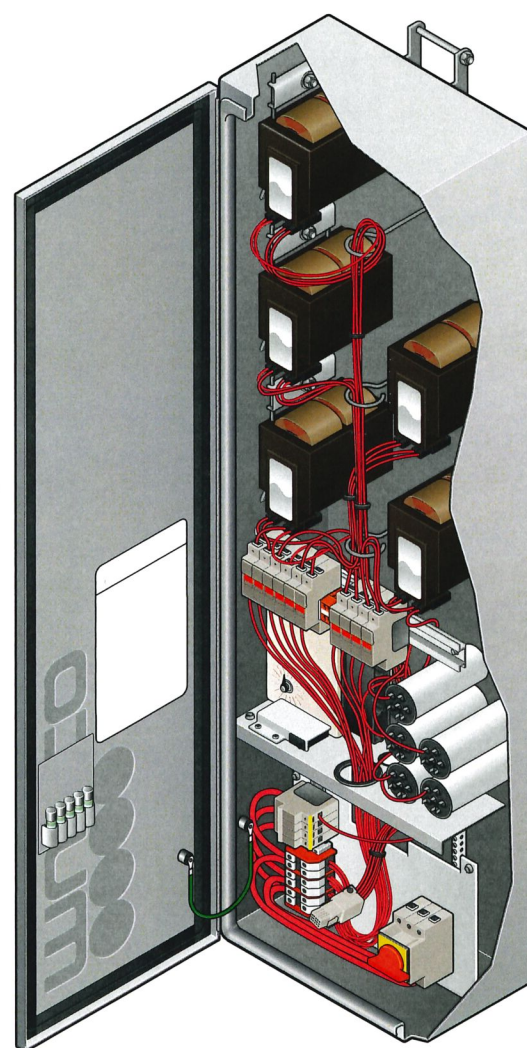
5 Easy Pieces™ Complete System from Foundation to Poletop

Factory wired, aimed, and tested

Fast, trouble-free installation

Comprehensive corrosion package

Integrated lightning ground system



Leading Technology

Cuts operating costs in half

Reduces spill light by 50%

Includes 100% of maintenance costs
for 25 years

Provides constant light levels

Includes system monitoring and
remote on/off control services with
24/7 support

All you add is
concrete backfill,
underground wiring,
and a service entrance



PERFORMANCE
DRIVEN DESIGN.
LHBcorp.com

701 Washington Ave. N, Ste 200 | Minneapolis, MN 55401 | 612.338.2029

CLIENT:

NATIONAL SPORTS
CENTER

1700 105TH AVE NE
BLAINE, MN 55449

THIS SQUARE APPEARS 1/2" x 1/2" ON
FULL SIZE SHEETS.

4	04/29/2019	CITY LIGHTING CUP APPLICATION
3	04/09/2019	WATERSHED RESUBMITTAL
2	04/03/2019	CITY REVIEW
1	03/27/2019	WATERSHED SUBMITTAL
NO	DATE	ISSUED FOR

NO DATE REVISION

PRELIMINARY
NOT FOR CONSTRUCTION
04-29-2019

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PROJECT NAME:

NSC A3-A4 ARTIFICIAL
TURF FIELD

DRAWING TITLE:

SITE AND GRADING PLAN

FILE: .1800531800 Drawings\180053 C201 Site and Grading Plan.dwg
DRAWN BY: MMW
CHECKED BY: JTC
PROJ. NO: 180053
DRAWING NO:

C201

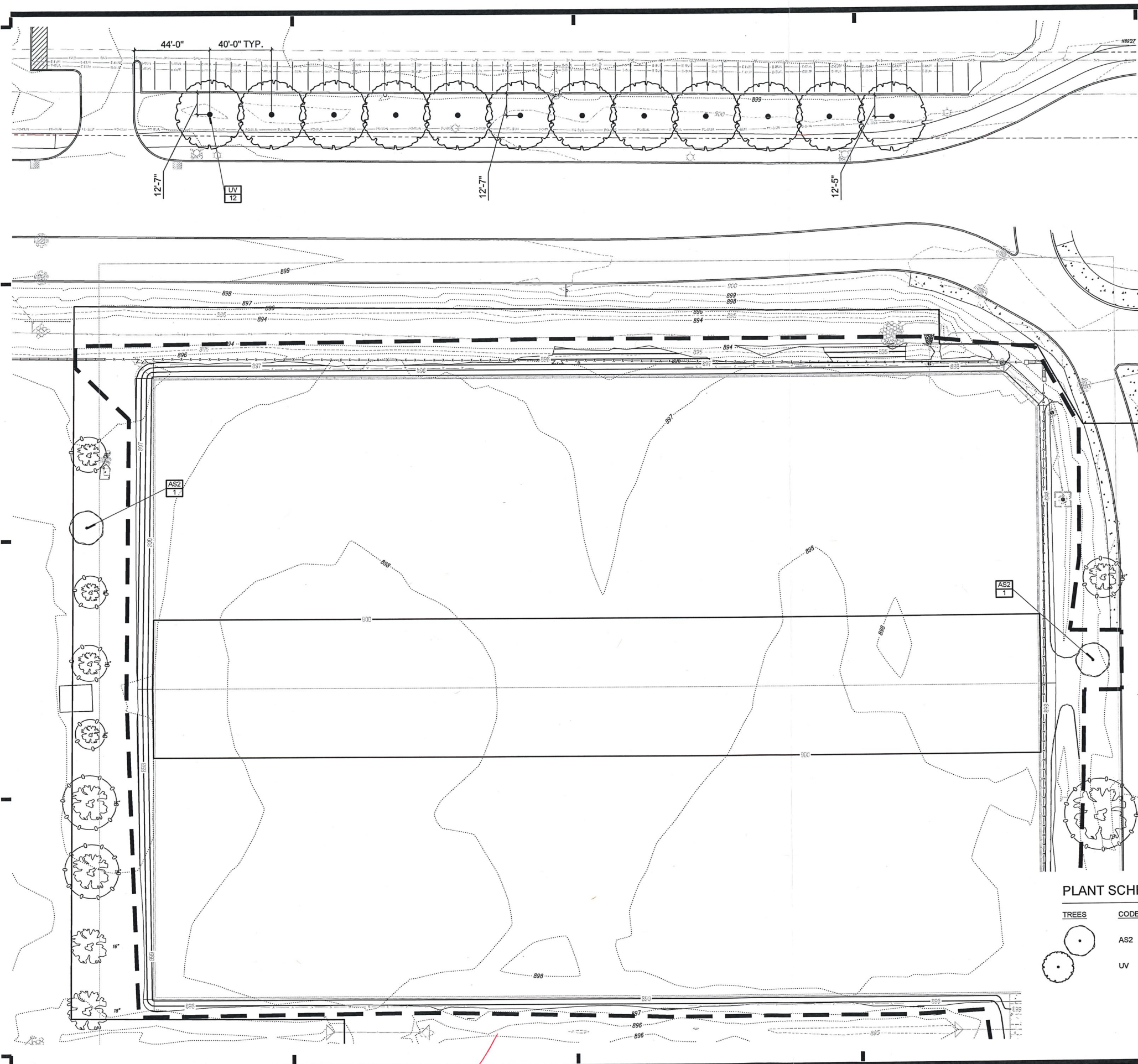
LEGEND

- CONSTRUCTION LIMITS
- CHAIN LINK FENCE
- CONCRETE CURB, SEE 1/C502
- CONCRETE WALK, SEE 5/C502
- ARTIFICIAL TURF FIELD, SEE 1/C502
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- SPOT ELEVATION
- FLOW ARROW
- INLET PROTECTION, SEE 4/C501

LEGEND

- EXISTING LIGHT POLE
- EXISTING CATCH BASIN (ROUND)
- EXISTING CATCH BASIN (SQUARE)
- EXISTING UNDERGROUND ELECTRIC
- EXISTING BURIED STORM SEWER
- EXISTING 6" CHAIN LINK FENCE
- EXISTING BLEACHERS/GAZEBO
- EXISTING HYDRANT
- EXISTING WATER MAIN GATE VALVE
- CENTERLINE OF DITCH TOP OF ICE SHOTS

0 20' 40' 80'



- PLANTING NOTES:**
1. THIS DRAWING DOES NOT CONSTITUTE AN OFFICIAL SURVEY OF THE SITE. CONFIRM ALL LOCATIONS OF SURFACE AND SUB-SURFACE FEATURES BEFORE BEGINNING INSTALLATION. ADVISE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
 2. CONFIRM ALL QUANTITIES, SHAPES AND LOCATIONS OF TREES, AND ADJUST AS REQUIRED TO CONFORM TO THE SITE CONDITIONS. CONFIRM ANY ADJUSTMENTS WITH THE LANDSCAPE ARCHITECT.
 3. LOCATE ALL UTILITIES. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH NEW CONSTRUCTION.
 4. THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL SOD/TURF WHICH HAS BEEN REMOVED FOR NEW PLANTINGS. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
 5. ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HEELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
 6. THE PLAN TAKES PRECEDENCE OVER THE PLANT SCHEDULE IF DISCREPANCIES EXIST. ADVISE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

- IRRIGATION NOTES:**
7. PROVIDE AN IRRIGATION PLAN, TO BE APPROVED BY THE LANDSCAPE ARCHITECT. SEE SPEC 32 8000.
 8. ZONED IRRIGATION SERVICE SHALL BE PROVIDED FOR ALL NEW SOD, SHRUB AND PERENNIAL AREAS, AND TREES. PLANTINGS IN THE RIGHT-OF-WAY DO NOT REQUIRE IRRIGATION SERVICE.
 9. ADD ADDITIONAL IRRIGATION ZONES AS APPROPRIATE TO SERVE WATERING NEEDS OF DIFFERENT PLANT TYPES AND USE AREAS.
 10. ALL IRRIGATION SHALL BE APPROPRIATELY SIZED SPRAY HEADS. CARE SHALL BE TAKEN TO ENSURE BUILDING IS NOT WITHIN SPRAY PATH OF SPRAY HEADS. DRIP IRRIGATION WILL NOT BE ACCEPTED.
 11. IRRIGATION CONTROL SYSTEM TO BE LOCATED IN MECHANICAL ROOM IN HISTORICAL BUILDING.

CLIENT:
**NATIONAL SPORTS
CENTER**

1700 105TH AVE NE
BLAINE, MN 55449

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2	04/03/2019	CITY REVIEW
1	03/27/2019	WATERSHED SUBMITTAL
NO	DATE	ISSUED FOR
NO	DATE	REVISION

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04-09-2019**

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PROJECT NAME:
**NSC A3-A4 ARTIFICIAL
TURF FIELD**

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT
	AS2	2	Acer freemanii 'Sienna Glen' / Freeman Maple	2 1/2" CAL
	UV	12	Ulmus americana 'Valley Forge' / American Elm	2-1/2" CAL

DRAWING TITLE:
LANDSCAPE PLAN

FILE: ..180053600 Drawings\LA\180053_Landscape Plan_L101.dwg
DRAWN BY: WMB
CHECKED BY: LAM
PROJ. NO: 180053
DRAWING NO: