

# **WEST ROSEVILLE SPECIFIC PLAN EIR ADDENDUM - PARK SITE W-53**

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## **INTRODUCTION**

This Addendum to the West Roseville Specific Plan (WRSP) Final EIR (City of Roseville, January 9, 2004) was prepared to address proposed changes to the WRSP Park Site W-53 Conceptual Park Plan (City of Roseville, February 4, 2004). The proposed changes are the result of a series of public meetings and workshops held with neighborhood residents to determine the final park design. The environmental effects of the proposed changes are examined in this EIR Addendum.

### **Statutory Background**

Under CEQA, an Addendum to a certified EIR is needed if minor technical changes or modifications to the proposed project occur (CEQA Guidelines § 15164). An Addendum is appropriate only if these minor technical changes or modifications do not result in any new significant impacts or a substantial increase in the severity of previously identified significant impacts. The Addendum need not be circulated for public review (CEQA Guidelines § 15164 [c]); however, an addendum is to be considered along with the final EIR by the decision making body prior to making a decision on the project (CEQA Guidelines § 15164 [d]). Preparation of an Addendum to a final EIR requires a brief explanation of the decision not to prepare a Subsequent EIR supported by substantial evidence (CEQA Guidelines § 15164 [e]). This explanation is presented below in the FINDINGS section and is supported by the substantial evidence contained in the IMPACT ANALYSIS section.

### **Applicable Reports in Circulation**

This EIR Addendum is written as an addition to the WRSP final EIR dated January 9, 2004 (SCH# 200282057). The WRSP Final EIR, which incorporates by reference West Roseville Specific Plan, provides a description of Park Site W-53 and served as the basis for CEQA compliance for the original approval of the W-53 concept plan. The WRSP final EIR is available for public review at the City of Roseville Permit Center located at 311 Vernon Street, Roseville, CA 95678.

### **Scope of the Addendum**

In preparing this EIR Addendum, all of the potential impacts identified on the California Environmental Quality Act (CEQA) "Environmental Checklist Form" were considered. For most impact areas, a preliminary review indicated that the proposed project changes would not result in any new impacts not already identified in the WRSP Environmental Impact Report (EIR). This is because under the proposed revised master plan the entire park site would continue to be developed with recreational uses, would occupy the same footprint as the former master plan, result in substantially the same short term construction effects, and require a similar amount of resources for construction and ongoing operation and maintenance. As a result, proposed master plan implementation would not result in changes to the WRSP final EIR environmental analysis for the following issue areas:

- Agriculture and Forestry
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

Because the revised master plan redistributes and includes new recreational uses and facilities that were not considered in the original WRSP final EIR, project specific analysis was developed for the following issue areas:

- Aesthetics (light and glare)
- Water Quality
- Land Use Compatibility
- Noise
- Transportation, Traffic and Parking

## **PROJECT DESCRIPTION**

### **Location, Size and Type of Park**

Park Site W-53 is known as the Village Center School/Park, a joint use facility located in the West Roseville Specific Plan (WRSP). This 9 acre park site is situated within the Village Center portion of the WRSP off of Nettleton Drive and south of St John's Church and School which fronts Pleasant Grove Boulevard (See Figure 1: Location Map). The location, size and conceptual plan for the W-53 Park site were established early on in the WRSP planning process. As with all joint-use facilities, active park amenities are clustered to achieve cost efficiencies, avoid duplication and create an accessible and cohesive recreation area that benefits the School, the City and residents.

### **Original Village Center Park Conceptual Plan**

The original Conceptual Plan for the W-53 Village Center School/Park is contained in the WRSP (see Figure 2: Original Village Center Neighborhood Park Conceptual Plan). The specific plan vision for this park site was that it serves the recreational needs of the Village Center and adjacent residential area. According to the specific plan, park site W-53 was planned to include:

- 1 youth soccer field;
- 1 youth baseball field;
- 2 full courts for basketball;
- A children's play area;
- A group picnic area;
- informal picnic areas;
- a restroom; and,
- parking lot (25)

### **Modified Village Center Neighborhood Park Conceptual Plan**

Consistent with the public input process typically undertaken by the City's Parks and Recreation Department, the conceptual park plan was presented to neighborhood residents to obtain feedback on final park amenities and design. After considering feedback from a lengthy public input process that included several workshops, a write-in public comment period and 2 public hearings before the City's Parks and Recreation Commission, the original conceptual plan was modified.

The proposed modified master plan is presented in Figure 3: W-53 Master Plan. As shown, the final master plan retains the originally proposed picnic, hard court and children's play area uses while replacing the planned soccer and on-site parking uses with a second ball field and small dog park. The modified master plan also redistributes on-site amenities and adds sports lighting for the ball field and tennis uses.

The final revised master plan includes the following amenities:

- 2 lighted youth ball fields;
- 2 lighted tennis courts;
- An adult exercise area;
- Concrete ping pong table;

- Fenced off-leash dog park (separate small & large dog areas);
- Children's play area and swings (5-12 years);
- Covered picnic area with tables;
- Restrooms;
- 3 Half court basketball;
- A multi use turf area; and,
- A perimeter walkway.

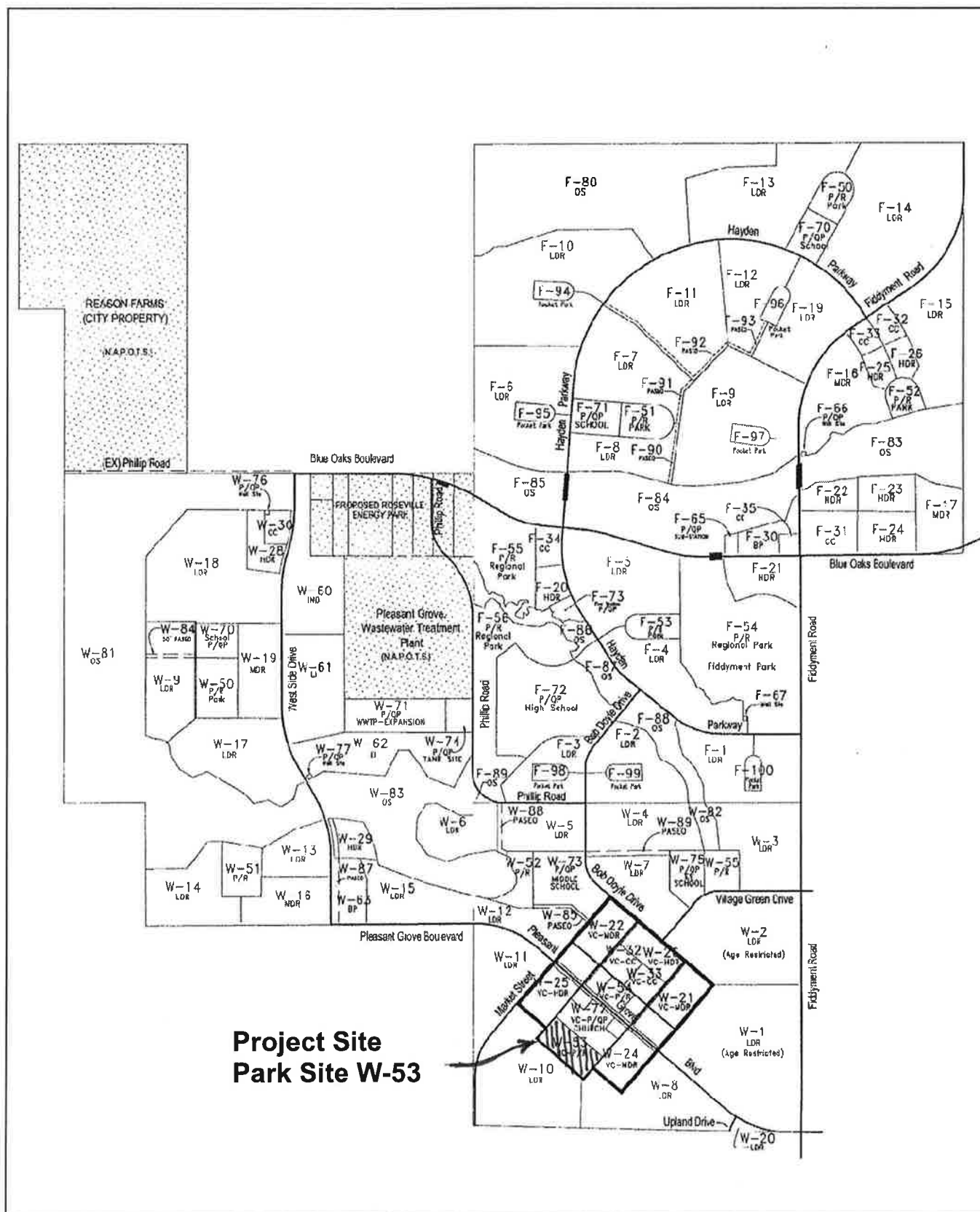
#### Parking

Off-site vehicle parking for up to 85 vehicles is proposed on Wharton Lane located along and adjacent the park's northern boundary (between the park site and St. John's School). Construction of this section of Wharton Lane is a school responsibility and would likely occur in phases as the school builds out. The school would also construct an adjacent parking lot which would be available for future joint use by the school and park site. However it is unknown when school construction will start. To ensure adequate parking, the City has reached a tentative agreement for a temporary right of entry with the school so that the City can improve the Wharton Lane area to accommodate parking on an interim basis until the adjacent school and parking lot are built. Temporary parking improvements would include rough grading and some type of soil solidifier surface designed to provide accessibility and durability while minimizing dust. The temporary parking area would be accessed from the west off Market Street with a "turn around" on the east end. The Wharton Lane segment between the project site and school would not be a through street and would only be used for parking and park access. These temporary improvements would remain in place until the school is able to finance the permanent roadway improvements. This could be one year, ten years or more. The temporary improvements would provide convenient access to the most active park amenities while minimizing impact to the surrounding residences.

The ultimate development plans for the school include an off-street parking lot which would be developed as a joint use facility to serve the long-term parking needs of both the school and park.

Whether Wharton Lane is utilized as a temporary parking area or later as a permanent road (with through vehicle access), the accommodation of 85 cars will be permanently available. Off street parking provided by the future school parking lot would be additive.

The proposed master plan revisions balance overall city needs and compliments the park designs in the other west area parks recently constructed. By doing so, once this project is complete the west area of Roseville will have a variety of park amenities available for formal and informal recreation use and the immediate recreational needs of this community would be met for several years to come.



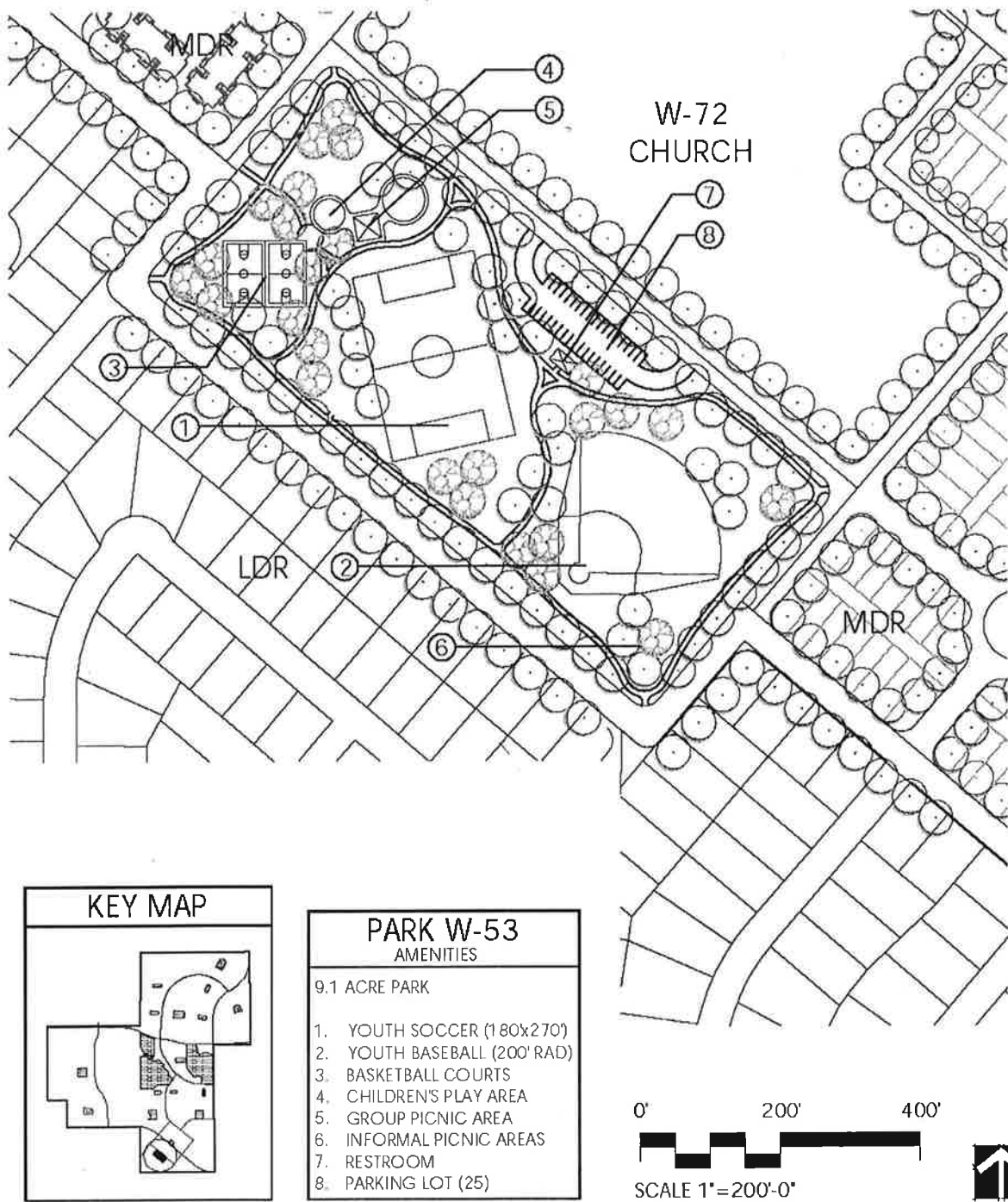


Figure 2: Original Village Center Neighborhood Park Conceptual Plan



Figure 3: W-53 Master Plan

## IMPACT ANALYSIS

Potential environmental issues associated with the revised WRSP Park Site W-53 Master Plan are examined below. The focus of this analysis is to determine if master plan revisions would result in any new or a substantial increase in the significance of environmental impacts previously disclosed in the 2004 WRSP final EIR.

- Aesthetics (light and glare):** Aesthetic considerations associated with the WRSP were addressed in WRSP final EIR Chapter 4.13 Aesthetics and Visual Resources. According to the EIR analysis, alteration of the visual character of the WRSP including the project site was found to be significant and unavoidable (Impact 4.13-1, page 4.13-31). Furthermore specific plan urban development, including recreational facilities, was found to result in significant and unavoidable light and glare impacts (Impact 4.13-2, page 4.13-35). For example, the final EIR states:

*“City parks typically do not use cut-off fixtures because athletic field lights are only used during games and are shut off after games. The lights do not remain on all night. Lighting of parks (athletic fields) could cause light and glare in adjacent residential neighborhoods during these hours. However, to ensure impacts associated with exterior building lights, park lights, and street lights would be reduced, MM 4.13-1(a) would ensure that such lighting would not use high-powered floodlights, and would not remain on past 11:00 P.M. Additionally MM 4.13-1(b) recommends siting of these light-producing uses to minimize impacts on adjacent sensitive uses and shielding of light fixture.”*

The WRSP final EIR concludes that:

*“Although proper site design and timing restrictions are likely to reduce lighting impacts to a large degree, if a level of lighting appropriate for competitive-level sporting events is necessary, it may not be feasible to significantly reduce the amount of light.”*

As such light and glare impacts resulting from sports facility lighting were considered potentially significant and unavoidable in the WRSP final EIR.

**Project Level Light Spill Analysis:** Light spillage refers to light measured in footcandles, which reaches and illuminates objects beyond the intended target. A footcandle (fc) of illumination is equivalent to the illumination produced by one candle at a distance of one foot striking a surface one square foot in area. There is neither adopted City standards or commonly accepted industry standards that prescribe acceptable limits on light spillage and glare. Historically, the City has used 2 fc, the illumination produced by two candles at a distance of one foot, as the maximum acceptable illumination level for light spillage into residential areas.

The proposed master plan includes sports lighting for the ball fields and tennis courts. To estimate the project level potential for light spillage from these facilities a light analysis was conducted for the City by Musco Lighting. The results of this analysis are shown in Appendix A. According to the Illumination Summary Exhibit the maximum



vertical footcandle light spillage that can be expected at a distance of 150 from the outer edge of the ball fields and/or tennis courts is 0.85 footcandles. For comparison purposes, typical city street lighting generates between 0.5 and 1.5 footcandles. Consequently based on project level modeling, while significant light spillage is not predicted, some amount of light spill should be expected, however the impact is considered less than significant. **Regardless, the addition of sport lighting consistent with the revised master plan would not result in any new WRSP final EIR significant impacts or a substantial increase in the severity of previously identified significant impacts.**

- **Water Quality:** Water quality considerations associated with the WRSP were addressed in WRSP final EIR Chapter 4.12 Hydrology, Water Quality and Groundwater. According to the EIR analysis, changes in surface water or groundwater quality resulting from urban stormwater runoff are considered less than significant with implementation of applicable policies and regulations (Impact 4.12-5, final EIR page 4.12-43). According to the EIR analysis, it is anticipated that runoff from the project area would be typical of urban runoff water quality. Activities that could increase the types or quantities of non-naturally occurring pollutants in runoff due to development include motor vehicle operations, residential maintenance, littering, careless material storage and handling, domestic animal and wildlife wastes, and pavement wear. Pollutants typically associated with urban uses, such as those that could be developed within the specific plan, include oil and grease, coliform bacteria, petroleum hydrocarbons (gas and diesel fuels), nitrogen, phosphorus, and heavy metals such as lead, copper and zinc. Pesticides, herbicides and other landscape maintenance products typically used in residential developments or formally landscaped areas could also be present.

The proposed park master plan calls for significant development of turf areas, formal landscaping and a small dog park. As a result, the above underlined pollutants have a high potential to be generated on Park Site W-53. These pollutants would be collected via the park's on-site stormwater system, carried through underground pipes and discharged to local receiving waters via stormwater outfalls. Consistent with current and anticipated National Pollutant Discharge Elimination System (NPDES) Phase 2 stormwater requirements, a variety of water quality Best Management Practices (BMPs) have been identified for the WRSP to treat the above identified urban pollutants. These BMPs are included in the WRSP Master Drainage Study and provide guidelines for implementation at the project level. The guidelines are based on BMPs currently being implemented in Roseville, Placer County, and the City/County of Sacramento. These water quality treatment features include detention basins (to allow settling), grassy swales and vegetated channels to remove pollutants by filtration, and oil/water grit separators. In addition, the City has prepared a Storm Water Management Plan (SWMP) under the Phase 2 program that would also be applicable to the park development project.

According to the WRSP final EIR, the specific BMPs that could be used at the project level either individually or in combination would be refined at the tentative map or construction drawing stage. Compliance with all applicable regulations would ensure BMPs are developed specifically for the types of land use they serve, and are implemented and monitored for effectiveness in reducing pollutants so that Basin Plan Objectives and water quality standards are not violated. Because park development would be subject to these standards which require BMPs be tailored to the proposed

land use (such as large turf areas or the proposed dog park), potential water quality impacts of the revised master plan, and in particular the dog park use, would be reduced to a less than significant level. **Therefore, the proposed master plan revisions would not result in changes to the original WRSP final EIR water quality analysis or impact conclusions.**

- **Land Use:** The compatibility of neighborhood parks with residential uses was examined in the WRSP final EIR (final EIR page 4.1-31). According to the EIR analysis, the placement of residential uses adjacent to neighborhood parks and elementary schools is considered compatible because elementary schools and neighborhood parks generally do not include activities or uses that would be considered a nuisance or hazard to residents. The proposed master plan, which includes the newly added ball field, tennis courts, dog park and sports lighting (for ball fields and tennis courts) includes recreational uses that have been successfully accommodated in neighborhood parks at other locations in the City.

For example, lighted ball fields are located in Royer and Saugstad parks, lighted tennis courts are included at Woodbridge and Hughes Parks, and a lighted basketball court is located in Lincoln Estates Park. Use of these facilities occurs without significant compatibility issues. In addition, small dog parks can be found in Saugstad (0.7 acres) and Hughes (0.5 acres) Parks and the WRSP identifies a future dog park in Fiddymont Park. Consequently the dog park use was considered by the WRSP EIR. The City also operates larger dog parks, like Marco Dog Park and Bear Dog Park in Mahany Park. These are much larger dog parks, on the order of 1.5 to 2 acres, and include more equipment and facilities generating a regional draw and greater number of users. The proposed dog park would be approximately 0.7 acres in size with minimal amenities. As such, based on past experience it is expected the proposed dog park will primarily serve the neighborhood and operations would be compatible with the adjacent residential areas.

Finally, the master plan has been designed to maximize buffer distance between single family residential uses and the most active recreational use areas. As discussed elsewhere in this Addendum, the proposed park master plan uses are expected to be consistent with the City's noise ordinance and light and glare impacts are expected to be less than significant based on project level modeling. Furthermore screening vegetation would be planted around the dog park which is strategically located in the park's northeast quadrant near the planned temporary parking area and adjacent medium density residential properties where there is likely to be higher demand. The park master plan also provides ample parking and at locations that will minimize disruption in adjacent neighborhoods. **Therefore, the proposed master plan revisions are considered compatible with adjacent existing and planned uses and would not result in changes to the original WRSP final EIR land use compatibility analysis or impact conclusions.**

- **Noise:** Noise issues associated with WRSP neighborhood parks are evaluated in WRSP final EIR Chapter 4.5 Noise. According to the EIR analysis of short term construction noise (final EIR page 4.5-20), construction noise associated with park development would be subject to provisions of the City's Noise Ordinance (Section 9.24.030) which restricts noise generating construction activities to day light hours and

requires sound muffling devices be installed on construction equipment. The final EIR finds that compliance with the Noise Ordinance would ensure that short term construction impacts are less than significant. To further reduce noise levels near residences, WRSP final EIR mitigation measure 5.4-1 recommends that equipment warm up areas, water tanks, and equipment storage areas be located in an area as far away from existing residences as is feasible. Under the revised master plan the park location remains unchanged and park development would require substantially the same construction techniques and resulting noise generation. **Therefore proposed master plan revisions would not result in changes to the original WRSP final EIR analysis of construction noise.**

Noise from normal operation of most park amenities such as the adult exercise area, concrete ping pong table, children's play area and swings, covered picnic area, restrooms, tennis courts, basketball courts, fenced dog park and perimeter walkway may be noticeable at off-site locations at times but noise generation from these uses would not occur at volumes or frequencies that would cause conflict with the City's noise standards. Noise generated by these uses would be typical of residential neighborhoods and would include vocalization, children playing, balls bouncing and occasional dog barking. The most noticeable park noise would be crowd noise that occurs during organized sporting events on the turf area and at the youth ball fields.

Crowd and participant noise associated with outdoor play areas is addressed in the WRSP final EIR on page 4.5-26 and 27. WRSP final EIR Table 3-4 Performance Standards for Non-Transportation Noise Sources (as measured at the property line of noise sensitive uses) provides the City of Roseville General Plan Noise Element performance noise standards that would apply to the residential areas surrounding the park. According to this table (reprinted below), the maximum allowable noise level as measured at the property line of adjacent noise sensitive uses is 70dB<sub>max</sub> or 50L<sub>eq</sub> (average) during daytime hours (between 7 a.m. and 10 p.m.). According to the Parks Department, the ball fields would not be operated past 10 p.m. and consequently only the daytime standards apply.

<b>Table 3-4</b> <b>Performance Standards for Non-Transportation Noise Sources</b> <b>(As Measured at the Property Line of Noise-Sensitive Uses)</b>		
Noise Level	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L <sub>eq</sub>	50	45
Maximum Level dB	70	65
Each of the noise levels specified above should be lowered by five dB for simple tone noises, noise consisting primarily of speech or music or recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These are exterior noise standards. No standards have been adopted for interior noise.		
Source: Roseville General Plan, Noise Element, Table IX-3.		

In addition, the City of Roseville has a Noise Ordinance which sets the standards for implementing the General Plan Noise Element. Related to the standards shown above, the Noise Ordinance (Municipal Code section 9.24.100 regarding "Sound limits for sensitive receptors") states that it is unlawful to exceed 3 dBA above the sound level standards shown in Table 3-4. Therefore a violation of the Noise Ordinance would

occur if park generated noise would exceed 53Leq or 73dB<sub>max</sub> at the residential property line between the hours of 7 a.m. and 10 p.m.

According to the WRSP final EIR, crowd noise associated with sporting events (100 people shouting) as measured approximately 100 feet from the center of the fields was 60Leq (average) and 70 dB<sub>max</sub>. The nearest residence to the youth ball fields is located over 300 feet from the center of the ball fields at the corner of Village Park and Amington Drive. Noise from a stationary source (such as a sports field/bleachers) is reduced by approximately 6 dBA for every doubling of distance. **Based on this attenuation factor, crowd noise at the nearest residence is predicted to be 48leq and 58 dB<sub>max</sub>. These noise levels would comply with applicable City General Plan and Noise Ordinance standards. As such impacts would be considered less than significant and planned uses and would not result changes to the original WRSP final EIR noise analysis or impact conclusions.**

- **Transportation, Circulation and Parking:** The traffic and circulation impacts of the WRSP, including the proposed park site, are evaluated in WRSP final EIR chapter 4.3, Traffic and Circulation (final EIR page 4.3-51). According to the EIR analysis, with or without implementation of recommended mitigation measures, more than 70% of the City's signalized intersections would operate at LOS C or better under 2020 plus WRSP conditions. However since no feasible improvements were found to mitigate significant impacts on levels of service at three intersections, the WRSP final EIR found traffic impacts to be significant and unavoidable. It should be noted that none of the intersections that would be degraded are located near Park Site W-53 or even within the WRSP.

Traffic and Circulation: The circulation pattern, existing and planned streets and available and planned parking in the park's immediate vicinity are shown in Figure 4: Circulation Pattern and Parking Areas. The streets immediately adjacent the park include Nettleton Drive on the south, Amington Drive on the west and Branston Drive on the east. These streets can be accessed from Pleasant Grove Boulevard via Kirkhill Drive and Chapel Hill Lane on the east and Market Street and Village Park Drive on the west. As shown in Figure 4, Wharton Lane is planned but doesn't currently exist along the northern park boundary. Under the proposed master plan this section of Wharton Lane would be temporarily improved to enhance access to the north side of the park and for use as a parking area. Also as shown in Figure 4, a short section of Amington Drive near the park's northwestern boundary and a section of Branston Drive north of Chapel Hill Lane are yet to be constructed. The existing and planned street improvements have been reviewed by the City's Public Works Department and are considered adequate to serve the traffic and circulation needs of park users. **As such traffic and circulation impact of the revised master plan are considered less than significant and would cause no change to the WRSP final EIR traffic and circulation impact analysis and conclusions.**

Parking: The proposed master plan does not include on-site parking. However on-street parking is currently available on existing streets that surround the park. In addition new on street parking will become available on Wharton Lane which will be temporarily improved as part of park construction to enhance parking availability and access to amenities on the park's north side. Considering only the park side of existing adjacent streets (i.e., not considering potential parking on the opposite side) and both

sides of the temporarily improved and extended Wharton Lane, the future parking supply surrounding the park would be 151 spaces as follows:

- 66 Existing Spaces: Amington Drive (11 spaces); Nettleton Drive (44 spaces); Branston Drive (11 spaces).
- 85 Proposed Spaces: Along the temporarily improved Wharton Drive.

As a neighborhood school/park, it is expected that the majority of park users would walk or bike to the park reducing parking demand. The master plan design includes significant pedestrian amenities to encourage park users to walk or ride their bicycle. However the park also includes 2 lighted youth ball fields which are expected to generate significant parking demand during peak use. The dog park, while relatively small, and the balance of park amenities, are also expected to generate some parking demand.

To determine the adequacy of planned parking, a peak demand parking analysis was conducted. Peak parking demand would occur during average use of the dog park and other "east side" park amenities while both youth ball fields are being fully utilized. Under this scenario, it is assumed that 5-10 users would occupy the dog park and 15-20 users would occupy the balance of "east side" park amenities resulting in a total of 20-30 "east side" park users. Assuming 2.54 persons per car, the "east side" park amenities are expected to generate a parking demand of 8-12 spaces. With regard to the youth ball fields, assuming 12-15 players and coaches and 10-12 spectators per team and two games occurring simultaneously (for a total of 4 teams), the ball fields could draw approximately 88-108 persons. Assuming 2.54 persons per car the ball fields would create a parking demand of 22-43 spaces. The demand of ball field parking would be highest when two games are in progress and teams arrive early for two games that follow. This scenario could double the required parking, or increase demand to 44-86 spaces. Total parking demand for the entire park therefore would be 52-98 spaces.

As discussed above, a total of 151 parking spaces would be available surrounding the park on the park side of adjacent streets and along the temporarily improved Wharton Lane. Consequently the planned parking supply would be adequate for the park. Not only would there be adequate supply but most parking would be conveniently located along Wharton Lane away from adjacent existing and planned residential areas and where the park uses with the highest parking demands are located. It should be noted that the parking analysis is considered worst case because it assumes that all park users would drive which is not typical of neighborhood parks and consequently the actual parking demand is expected to be lower. **Because adequate parking will be provided under the revised master plan, there would be no change to the WRSP final EIR analysis and conclusions related to parking.**

## FINDINGS

The following findings are provided in accordance with CEQA Section 15164 (e) concerning the decision not to prepare a subsequent EIR pursuant to Section 15162.

(1) None of the following conditions calling for preparation of a subsequent EIR have occurred:

- (a) Subsequent changes are proposed in a project which will require important revisions of the previous EIR...due to the involvement of new significant environmental impacts not considered in a previous EIR...on the project;
  - (b) Substantial changes occur with respect to the circumstances under which the project is undertaken...which will require important revisions in the previous EIR due to the involvement of new significant environmental impacts not covered in a previous EIR...,or,
  - (c) New information of substantial importance to the project becomes available and (a) the information was not known and could not have been known at the time the previous EIR was certified as complete...and (b) the new information shows any of the following:
    - The project will have one or more significant effects not discussed previously in the EIR;
    - Significant effects previously examined will be substantially more severe than shown in the EIR;
    - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project; or
    - Mitigation measures or alternatives which were not previously considered in the EIR would substantially lessen one or more significant effects on the environment.
- (2) Only minor technical changes or additions are necessary to make the EIR under consideration adequate under CEQA; and,
- (3) The changes to the EIR made by the addendum do not raise important new issues about the significant effects on the environment.

This addendum to the final 2004 WRSP final EIR finds that modification of the proposed Park Site W-53 Master Plan will not result in any new significant environmental effects or result in the substantial increase of any previously identified impacts in the WRSP final EIR.

## REFERENCES

City of Roseville Planning Department, January 9, 2004. West Roseville Specific Plan Final EIR.



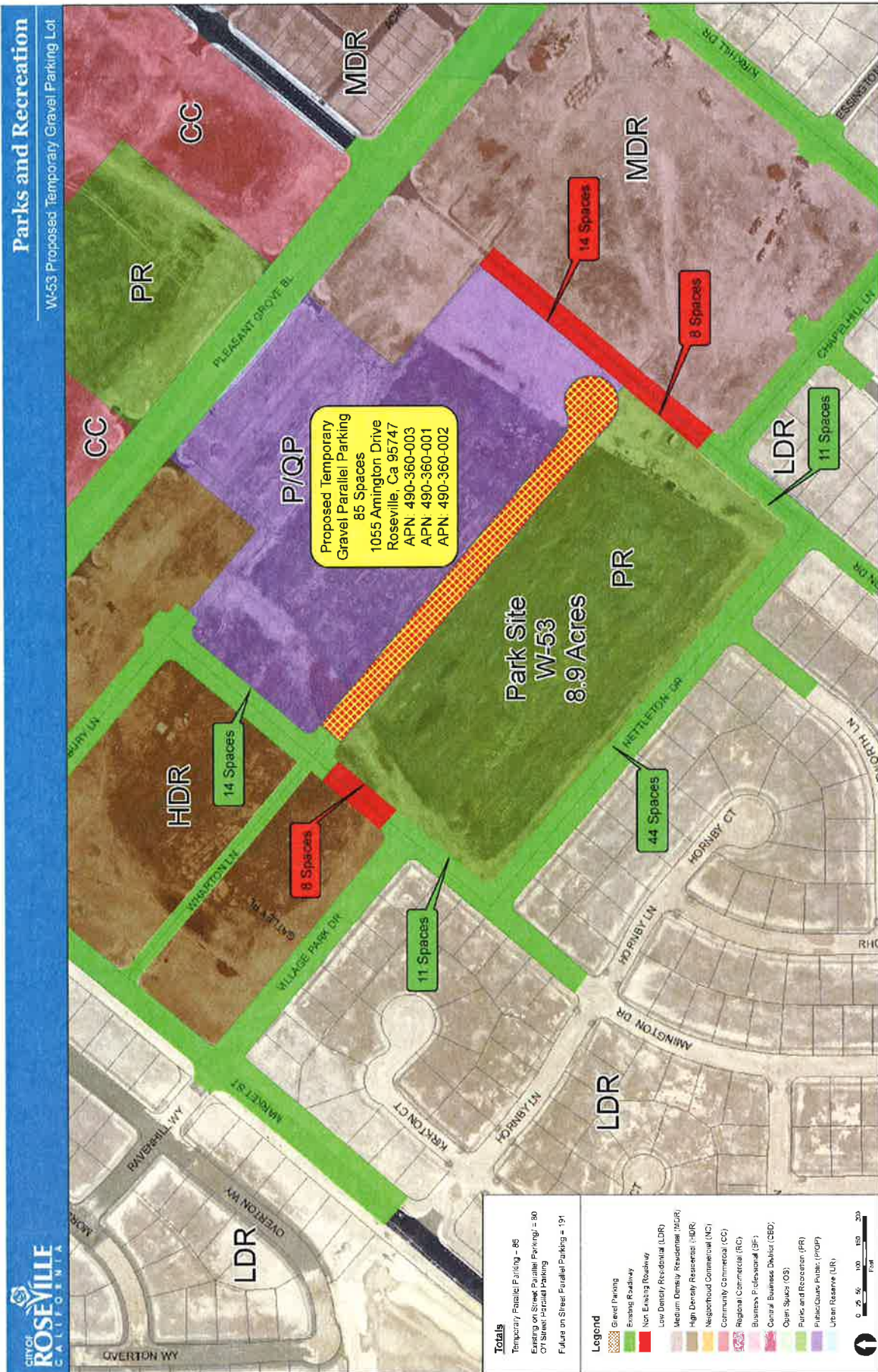


Figure 4: Circulation Pattern and Parking Areas

## **APPENDIX A: Light Scan Analysis**





# Control System Summary

## Project Specific Notes:

Project #: 14429861  
Project Name: W-53 Park  
Date: 05/23/11  
Project Engineer: Eric Svenby  
Sales Representative: Bob Crookham  
Control System Type: Control and Monitoring  
Communication Type: Digital Cellular  
Scan: 29861  
Distribution Panel Location or ID:  
Total # of Distribution Panel Locations for Project: 1  
Design Voltage/Hertz/Phase: 480/60/3  
Control Voltage: 120

## Equipment Listing

DESCRIPTION	APPROXIMATE SIZE	
1. Control and Monitoring Cabinet	24 X 72	
	QTY	SIZE
Total Contactors	12	30 AMP
Total Off/On/Auto Switches:	3	

## Materials Checklist

### Contractor/Customer Supplied:

- ☐ A single control circuit must be supplied per distribution panel location.
  - If the control voltage is NOT available, a control transformer is required.
- ☐ Electrical distribution panel to provide overcurrent protection for lighting circuits
  - Thermal/Magnetic circuit breaker sized per full load amps on Circuit Summary by Zone chart
- ☐ Wiring:
  - Dedicated control power circuit
  - Power circuit to and from lighting contactors
  - Monitoring circuit from surge protection device to Control and Monitoring cabinet 1
  - Harnesses for cabinets at remote locations
  - Means of grounding, including lightning ground protection
- ☐ Electrical conduit wireway system
  - Entrance hubs rated NEMA 4: must be die-cast zinc, PVC, or copper-free die-cast aluminum
- ☐ Mounting hardware for cabinets
- ☐ Control circuit lock-on device to prevent unauthorized power interruption to control power
- ☐ Anti-corrosion compound to apply to ends of wire, if necessary

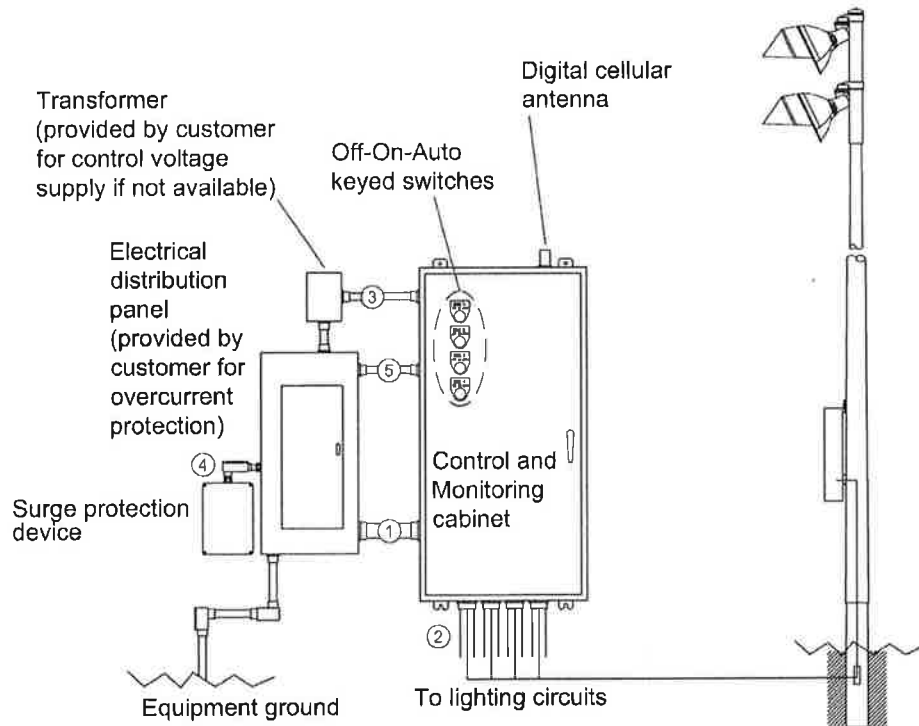
Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.  
Note: Activation may take up to 1 1/2 hours

## IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's ballast enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are UL 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor of 0.9.

**NOTE:** Refer to Installation Instructions for more details on equipment information and the installation requirements

## Control•Link. Control and Monitoring System - Digital Cellular



WIRE	DESCRIPTION	# OF WIRES	TYP. WIRE SIZE (AWG)	MAX. WIRE LENGTH (FT)	WIRE FROM MUSCO	NOTES
1	LINE POWER & GROUND TO CONTACTORS	NOTE A	NOTE B	27	NO	A-E
2	LOAD POWER TO LIGHTING CIRCUITS	NOTE A	NOTE B	N/A	NO	A-D
3	CONTROL POWER (DEDICATED, 20A)	3	12	N/A	NO	C, D
4	SURGE PROTECTION DEVICE TO DISTRIBUTION PANEL	--	--	N/A	YES	D
5	SURGE PROTECTION DEVICE MONITORING	2	14	N/A	NO	C, D

R60-25-00\_C

- Notes:
- A. Voltage and phasing per the notes on cover page
  - B. Calculate per load and voltage drop
  - C. All conduit diameters per code.
  - D. Refer to Control and Monitoring System Installation Instructions for more details on equipment information and the installation requirements.
  - E. Contact Musco if maximum wire length from circuit breaker to contactor exceeds value shown in chart.

**IMPORTANT:** Control (3) and monitoring (5) wiring must be in separate conduits from line and load power wiring (1,2).



# Control System Summary

W-53 Park / 14429861 - 29861  
- Page 3 of 4

© 1999,2011 Musco Sports Lighting,LLC  
Form: T-5030-1

## SWITCHING SCHEDULE

Field Type	Zones	Zone Description
Baseball-Softball	1	Softball #1
Baseball-Softball	2	Softball #2
Tennis	3	Tennis Courts

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 3025.0
	SEALED: 397.0

BALLAST SPECIFICATIONS	VOLTAGE: 480v THREE PHASE						
.90 Minimum Power Factor							
Single Phase Voltage (Also applicable to each single phase of a 3 phase system)	208	240	277	347	380	415	480
1500 Watt Metal Halide Lamp Operating line amperage per fixture, max draw	8.6	7.5	6.5	5.1	4.7	4.2	3.7
1000 Watt Metal Halide Lamp Operating line amperage per fixture, max draw	6.5	5.8	4.9	4.0	3.6	3.2	2.9

## CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
A1	Softball #1	3	7.4	30	C1	1
A2	Softball #1	3	7.4	30	C2	1
B1	Softball #1	5	14.8	30	C3	1
B2	Softball #1	5	14.8	30	C4	1
A1	Softball #2	3	7.4	30	C5	2
A3	Softball #2	3	7.4	30	C6	2
B3	Softball #2	5	14.8	30	C7	2
B4	Softball #2	5	14.8	30	C8	2
T1	Tennis Courts	2	7.4	30	C9	3
T2	Tennis Courts	2	7.4	30	C10	3
T3	Tennis Courts	2	7.4	30	C11	3
T4	Tennis Courts	2	7.4	30	C12	3



# Control System Summary

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- Page 4 of 4

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Form: T-5030-1

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole A1	7.4		
1	1	C2	Pole A2	7.4		
1	1	C3	Pole B1	14.8		
1	1	C4	Pole B2	14.8		
1	1	C5	Pole A1	7.4		
1	1	C6	Pole A3	7.4		
1	1	C7	Pole B3	14.8		
1	1	C8	Pole B4	14.8		
1	1	C9	Pole T1	7.4		
1	1	C10	Pole T2	7.4		
1	1	C11	Pole T3	7.4		
1	1	C12	Pole T4	7.4		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Softball #1	A1	C1
			A2	C2
			B1	C3
			B2	C4
Zone 2	2	Softball #2	A1	C5
			A3	C6
			B3	C7
			B4	C8
Zone 3	3	Tennis Courts	T1	C9
			T2	C10
			T3	C11
			T4	C12



# GUARANTEED PERFORMANCE

## ILLUMINATION SUMMARY

### Softball #1

W-53 Park  
Roseville, CA

### Softball #1

- Size: 200'x200' - basepath 60'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	73
Average:	50.4	30.2
Maximum:	61	39
Minimum:	33	17
Avg/Min:	1.53	1.74
Max/Min:	1.86	2.26
UG (Adjacent Pts):	1.40	1.54
CV:	0.16	0.17
Average Lamp Tilt Factor:		1.000
Number of Luminaires:		16
Avg KW over 5,000:		25.02
Max KW:		27.2

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

**Field Measurements:** Averages shall be +/- 10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.

By: Eric Svenby

Date: 23-May-11

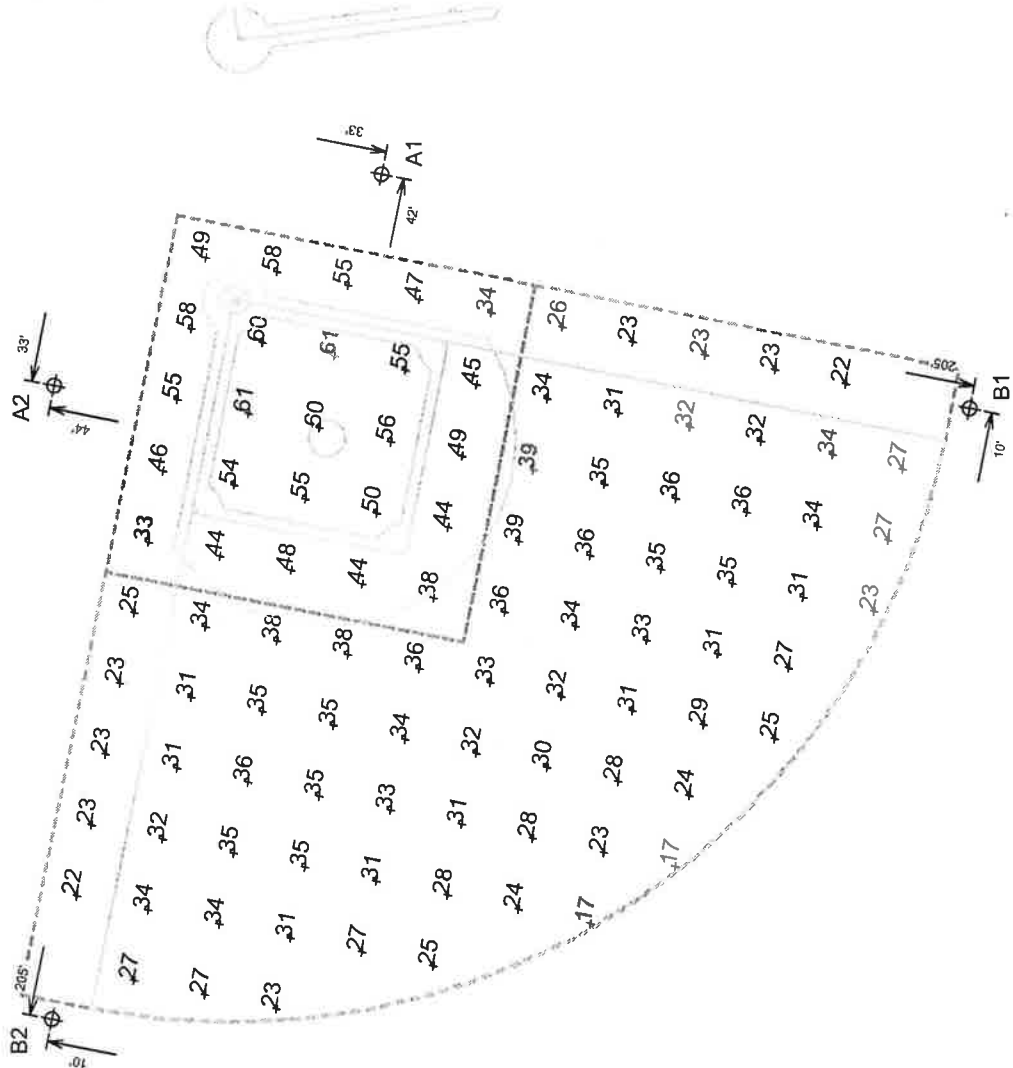
File #: 29861

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EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	60'	1500W MZ	3/3*	3	3
1	A2	60'	-	60'	1500W MZ	3	3	0
2	B1-B2	70'	-	70'	1500W MZ	5	5	0
4	TOTALS			←		19	16	3

This structure utilizes a back-to-back mounting configuration

\* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 50





**MUSCO**  
GREEN GENERATION LIGHTING™

**GUARANTEED PERFORMANCE**

**ILLUMINATION SUMMARY**

**Softball #2**

W-53 Park  
Roseville, CA

**Softball #2**

- Size: 200'/200'/200' - basepath 60'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

**HORIZONTAL ILLUMINATION**

**CONSTANT FOOTCANDLES**

No. of Target Points:	25	73
Average:	50.4	30.2
Maximum:	61	40
Minimum:	33	18
Avg/Min:	1.51	1.65
Max/Min:	1.81	2.20
UG (Adjacent Pts):	1.35	1.56
CV:	0.15	0.18
Average Lamp Tilt Factor:		1.000
Number of Luminaires:		16
Avg KW over 5,000:		25.02
Max KW:		27.2

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

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.

By: Eric Svenby

File #: 29861

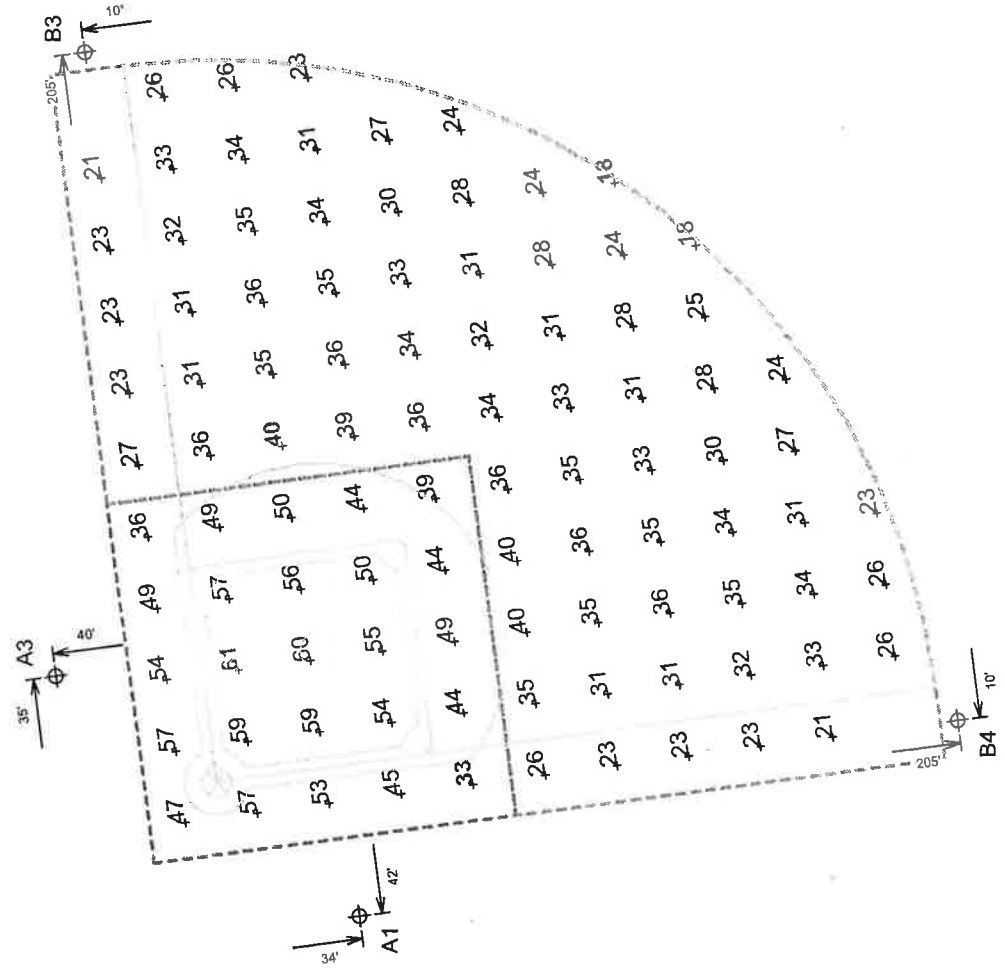
Date: 23-May-11

Pole location(s) ± dimensions are relative to 0.0 reference point(s)

**EQUIPMENT LIST FOR AREAS SHOWN**

Pole		Luminaires			
QTY	LOCATION	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	THIS GRID OTHER GRIDS
1	A1	60'	60'	1500W MZ	3 3
1	A3	60'	60'	1500W MZ	3 3 0
2	B3-B4	70'	70'	1500W MZ	5 5 0
4	TOTALS				19 16 3

\* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 50



EQUIPMENT LIST FOR AREAS SHOWN						
Pole		Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	THIS GRID GROSS
4	T1-T4	40'		40'	1500W MZ	2
4	TOTALS					8



## GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

#### Tennis Courts

W-53 Park  
Roseville, CA

#### Tennis 2

- Size: 2 Court - 24' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

Entire Grid

No. of Target Points: 15

Average: 50.1

Maximum: 62

Minimum: 45

Avg/Min: 1.12

Max/Min: 1.39

UG (Adjacent Pts): 1.31

CV: 0.11

Average Lamp Tilt Factor: 1.000

Number of Luminaires: 8

Avg KW over 5,000: 12.51

Max KW: 13.6

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

**Field Measurements:** Averages shall be +/- 10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.

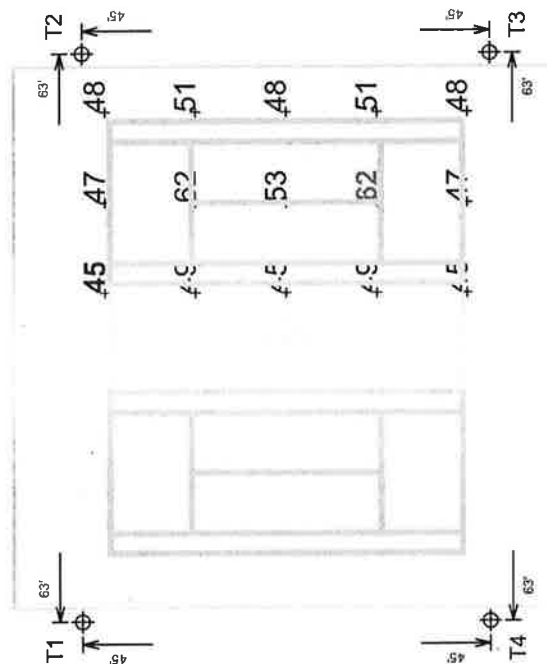
By: Eric Svenby

Date: 23-May-11

File #: 29861

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SCALE IN FEET 1 : 40



EQUIPMENT LIST FOR AREAS SHOWN					
Pole		Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	TYPE
4	T1-T4	40'	-	40'	1500W MZ
4	TOTALS				
					8 8 0



## GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

#### Tennis Courts

W-53 Park  
Roseville, CA

#### Tennis 1

- Size: 2 Court - 24' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

Entire Grid

No. of Target Points: 15

Average: 50.0

Maximum: 62

Minimum: 45

Avg/Min: 1.12

Max/Min: 1.38

UG (Adjacent Pts): 1.31

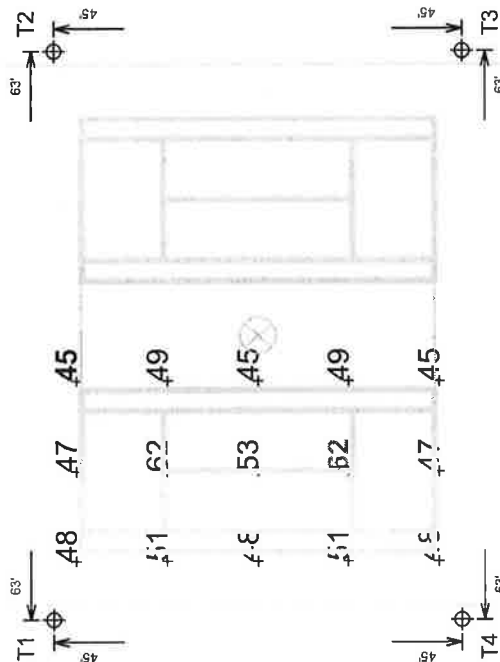
CV: 0.11

Average Lamp Tilt Factor: 1.000

Number of Luminaires: 8

Avg KW over 5,000: 12.51

Max KW: 13.6



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

**Field Measurements:** Averages shall be +/- 10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.

By: Eric Svenby

File #: 29861

Date: 23-May-11

Pole location(s) dimensions are relative to 0.0 reference point(s)

SCALE IN FEET 1 : 40







GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

150' Spill  
W-53 Park  
Roseville, CA

150' Spill  
Grid Spacing = 30.0'  
Values given at 3.0' above grade

Luminaire Type: Green Generation  
Rated Lamp Life: 5,000 hours  
Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION  
HORIZONTAL FOOTCANDLES

No. of Target Points: 89

Average: 0.15  
Maximum: 0.20  
Minimum: 0.03

Average Lamp Tilt Factor:  
Number of Luminaires:  
Avg KW over 5,000:  
Max KW:

1,000  
40  
82.56  
88.0

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

Field Measurements: Averages shall be +/- 10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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

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

By: Eric Svenby

Date: 23-May-11

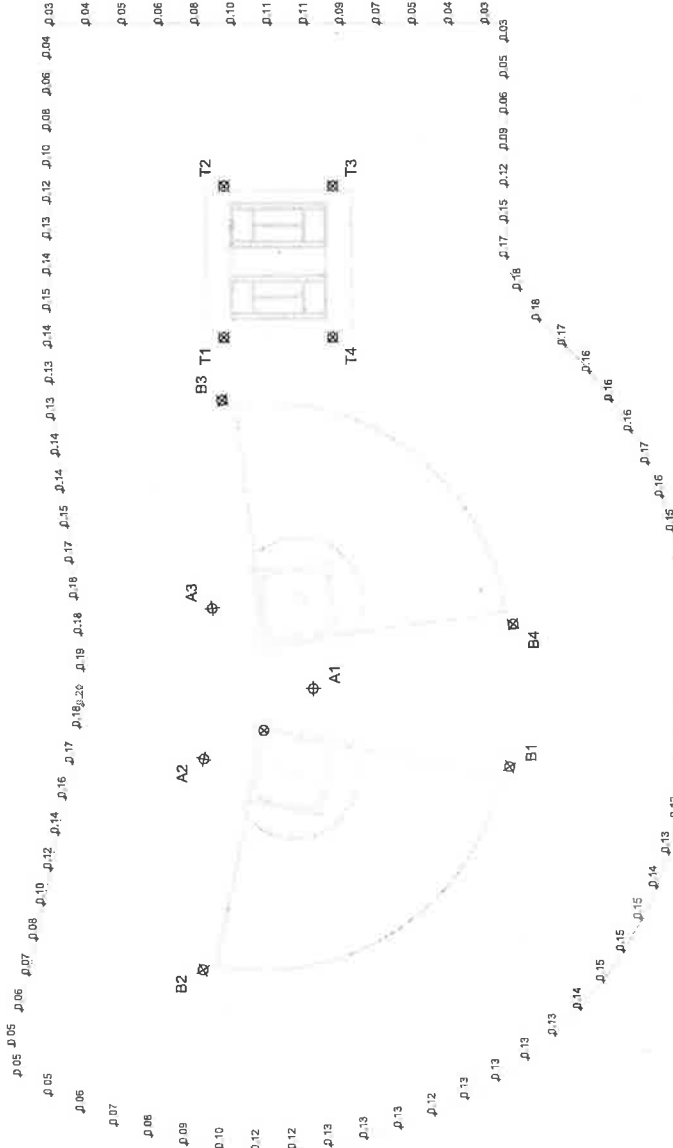
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Pole location(s) & dimensions are relative to 0.0 reference point(s) ☺  
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EQUIPMENT LIST FOR AREAS SHOWN									
Pole		MOUNTING		LUMINAIRES		OTHER			
QTY	LOCATION	SIZE	BLANK	60"	70"	80"	90"	100"	110"
1	A1	60"	-	1500W MZ	3	3	0	0	0
2	A2-A3	60"	-	1500W MZ	3	3	0	0	0
4	B1-B4	70"	-	1500W MZ	5	5	0	0	0
4	T1-T4	40"	-	1500W MZ	2	2	0	0	0
TOTALS					40	40	0	0	0

\* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1"=100'



ILLUMINATION SUMMARY	
<b>150' Spill</b>	
W-53 Park	
Roseville, CA	
<b>150' Spill</b>	
• Grid Spacing = 30.0'	
• Values given at 3.0' above grade	
• Luminaire Type: Green Generation	
• Rated Lamp Life: 5,000 hours	
• Avg Lumens/Lamp: 134,000	
CONSTANT ILLUMINATION	
MAX VERTICAL FOOTCANDLES	
No. of Target Points: 89	Entire Grid
Average: 0.55	
Maximum: 0.91	
Minimum: 0.28	
Average Lamp Tilt Factor: 1.000	
Number of Luminaires: 40	
Avg KW over 5,000: 62.56	
Max KW: 66.0	

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

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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 the side of the ballast and structures located within 3 feet (1m) of design locations.

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File #: 29861  
Date: 23-May-11  
Pole location(s) & dimensions are relative to 0.0 reference points) ☒  
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EQUIPMENT LIST FOR AREAS SHOWN									
Pole		Luminaire		Luminaire		Luminaire		Luminaire	
QTY	LOCATION	SIZE	SALES	QTY	TYPE	QTY	TYPE	QTY	TYPE
1	A1	60"	1500W M2	3	3"	6	6"	0	0"
2	A2-A3	60"	1500W M2	3	3"	3	3"	0	0"
4	B1-B4	70"	1500W M2	5	5"	5	5"	0	0"
4	T1-T4	40"	1500W M2	2	2"	2	2"	0	0"
11	TOTALS			40		40		0	

\* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1: 100





**MUSCO**  
GREEN GENERATION LIGHTING

**GUARANTEED PERFORMANCE**

**EQUIPMENT LAYOUT**

**W-53 Park**  
Roseville, CA

**INCLUDES:**

- Softball #1
- Softball #2
- Tennis Courts

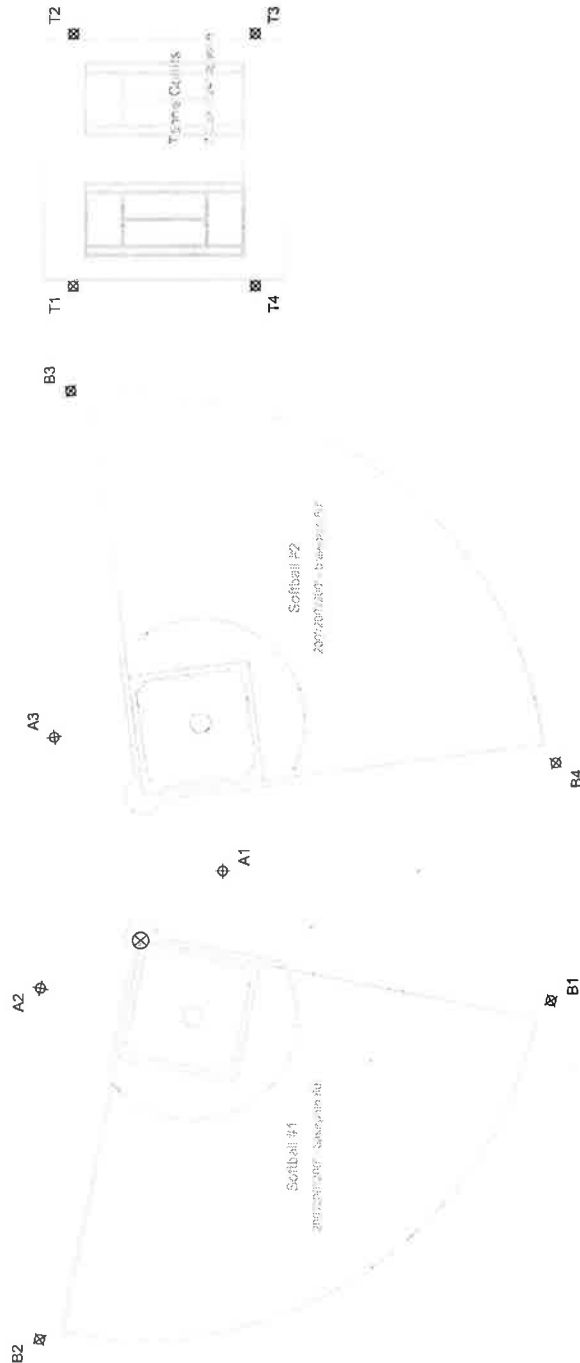
Electrical System Requirements: Refer to Ampereage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 5% 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	SIZE	Pole		Mounting		Luminaires		QTY
			HEIGHT	BASE	TYPE	WATTAGE	WATTAGE	WATTAGE	
1	A1	60'	60'	-	60'	1500W MZ	1500W MZ	1500W MZ	3
2	A2-A3	60'	-	-	60'	1500W MZ	1500W MZ	1500W MZ	3
4	B1-B4	70'	-	-	70'	1500W MZ	1500W MZ	1500W MZ	5
4	T1-T4	40'	-	-	40'	1500W MZ	1500W MZ	1500W MZ	2
11	TOTALS								40

\* This structure utilizes a back-to-back mounting configuration

SINGLE LUMINAIRE AMPERAGE DRAW CHART									
Ballast Specifications		Line Ampage Per Luminaire							
Voltage		150	200	240	277	307	346	415	480
Single Phase Voltage		15.0	16.6	17.7	18.5	19.5	20.5	21.5	22.5
1500 watt MZ		15.0	16.6	17.7	18.5	19.5	20.5	21.5	22.5



SCALE IN FEET 1" = 60'



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## **APPENDIX A: Light Scan Analysis**