

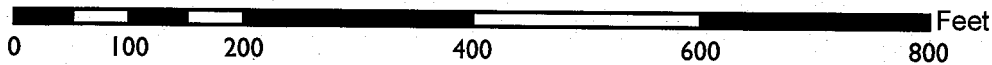
<b>Location:</b>	1026 12 <sup>th</sup> Street "Lowell Park" (APN: 004 -0013-016-02). (See map on reverse)
<b>Proposal:</b>	Lighting and electrical equipment upgrades to "Lowell Park". Improvements include new athletic field lights with pole heights of 30 and 70 feet.
<b>Applicant:</b>	Christine Reed - Office of Public Works – Project Delivery Division
<b>Owner:</b>	City of Oakland
<b>Planning Permits Required:</b>	Major Variance to allow Athletic Field Lights in a Neighborhood Park (NP) O.P.C. 17.148.020(A)(1). Regular Design Review for the construction a new facility.
<b>General Plan:</b>	Urban Park and Open Space
<b>Zoning:</b>	OS Open Space Zone (NP) / S-20 Historic Preservation District
<b>Environmental Determination:</b>	Exempt, Section 15301 of the State CEQA Guidelines: Minor Alterations to Existing Facilities; Section 15183 of the State CEQA Guidelines: Projects Consistent with a Community Plan, General Plan or Zoning
<b>Historic Status:</b>	Local Register
<b>City Council District:</b>	3
<b>Action to be Taken:</b>	Approve with conditions
<b>Finality of Decision:</b>	Appealable to City Council within 10 days
<b>For Further Information:</b>	Contact case planner <b>Jose M. Herrera-Preza</b> at <b>510-238-3808</b> or <b><a href="mailto:jherrera@oaklandca.gov">jherrera@oaklandca.gov</a></b>

**SUMMARY**

The proposed project is to upgrade existing athletic field lighting at a Lowell Park with new 30-, 70-foot tall replacement field lights. The proposal is part of the implementation of the "Ballfield Wiring and Hazard Mitigation Lighting" project funded by the Measure KK bond. The measure involves lighting upgrades to four City of Oakland Parks. The project is intended to expand the sports lighting system to include baseball, softball, football, and safe play illumination and reduce spill-light and glare into the neighborhoods. The upgrade will also reduce ongoing maintenance costs and improve energy efficiency.

The Parks and Recreation Advisory Committee (PRAC) recommended approval of the project during their October 10, 2018 public hearing. Planning staff recommends the Planning Commission approve the Major Variance for athletic field lighting within a OS (Neighborhood Park) Zone subject to the attached conditions.

# CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN18347  
Applicant: Office of Public Works – Project Delivery Division  
Address: 1026 12th Street “Lowell Park”  
Zone: OS (NP) / S-20

**PROJECT DESCRIPTION**

The "Ballfield Wiring and Hazard Mitigation Lighting" project would allow upgrades to existing athletic field lighting and associated electrical wiring improvements to the following four City of Oakland Parks:

Lowell Field, 1026 12<sup>th</sup> Street: baseball, softball, basketball  
Golden Gate Field, 1075 62<sup>nd</sup> Street: baseball, softball, soccer  
Tassafaronga Field, 1001 "E" street: softball  
Curt Flood Field, 3303 Laguna Way: baseball, softball, football, soccer

The improvements will meet the "safe play" illumination standards, reduce spill-light and glare into adjacent neighborhoods, reduce ongoing maintenance costs and improve energy efficiency. The proposed lighting equipment at Lowell Park consists of 30-foot tall light poles for basketball courts and 70-foot tall light poles for field sports. The lighting equipment will contain LED fixtures that will minimize light spillage, eliminate dark spots in the playing area, and reduce maintenance and energy demand. In addition, a new wireless remote-control system will allow City staff to remotely program the lights.

**PROPERTY DESCRIPTION**

Lowell Park is a mid-block neighborhood park bounded by 14<sup>th</sup> Street and 12<sup>th</sup> Street, in between Adeline and Market Streets in West Oakland. The park is approximately 7.18 acres and contains two existing softball/baseball diamonds and two basketball courts. The site is adjacent to the West Oakland Middle School to the south and bordered by residential properties to the north, east and west.

**GENERAL PLAN ANALYSIS**

The property is in the Urban Park and Open Space classification of the General Plan Land Use and Transportation Element (LUTE) and within the Recreation section of Open Space Conservation and Recreation (OSCAR). The intent of the areas is: "to identify, enhance and maintain land for parks and open space" and to ensure "no net loss" for urban parks and ensure management and future development of each park." The proposal to upgrade athletic field lights and associated electrical equipment conforms to this intent and to the following LUTE and OSCAR Policies:

**Policy OS – 2.1: Protection of Park Open Space**

Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.

**Policy REC – 4.1 Systematic Maintenance Provisions**

Provide for on-going, systematic maintenance of all parks and recreational facilities to prevent deterioration, ensure public safety, and permit continued public use and enjoyment.

**Policy REC – 4.2 Environmental Responsibility**

Encourage maintenance practices which conserve energy and water, promote recycling, and minimize harmful side effects on the environment. Ensure that any application of chemical pesticides and herbicides is managed to avoid pollution of ground and surface waters.

**Policy REC – 5.1: Increased Range of Activities**

Promote an increased range of activities within Oakland's parks as a means of introducing new users to the parks and improving safety through numbers.

The proposed upgrades will enhance the functionality and increase the usability of the fields to accommodate outdoor recreational activities at night.

**ZONING ANALYSIS**

The property is in the OS Open Space Zone (NP – Neighborhood Park). The intent of the OS (NP) Zone is: “to create, preserve, and enhance land for permanent open space to meet the active and passive recreational needs of the Oakland residents and to promote park uses which are compatible with surrounding land uses and the City’s natural environment.” The proposal to add new athletic field lights to a neighborhood park requires a Major Variance because Section 17.11.060 of the Planning Code – Special Provision for Permitted and Conditionally Permitted Activities in the OS Zone states that outdoor athletic field lighting is not permitted in a OS(NP) Zone.

**ENVIRONMENTAL DETERMINATION**

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 of the State CEQA Guidelines exempts projects involving minor alterations to existing facilities. The proposal to upgrade lighting at athletic fields in City parks meets this description. Section 15183 of the State CEQA Guidelines relates to Projects Consistent with a Community Plan, General Plan or Zoning. The project adheres to this section, as described above. The project is, therefore, not subject to further Environmental Review.

**KEY ISSUES AND IMPACTS**Major Variance

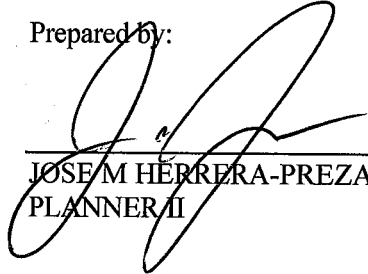
Staff recommends approval of the project, subject to Conditions of Approval, because the project meets the findings required to grant a Major Variance (see Findings, below). As previously mentioned, a Major Variance is required for Athletic Field Lighting within the OS(NP) Zone.

The existing lighting systems at Lowell Field was determined by City staff at Parks and Recreation to be hazardous due to theft of existing equipment and wiring, leaking of electrical current from damaged wires and equipment, and inadequate light levels to support night time activities. Parks and Recreation staff analyzed lower-height athletic field lighting but the analysis resulted in an unacceptable high spill-light and glare into adjacent neighborhoods. Therefore, the lights at a 30-foot height for basketball courts and a 70-foot height for field activities at Lowell Park allow the athletic areas to be more effectively lit with minimal spill onto adjacent properties. An analysis that simulated light impacts of the proposal determined the new lighting system will improve glare control and reduce spill-light compared to the existing conditions (Attachment B). Given these factors, staff recommends the Planning Commission grant the request, subject to the attached Conditions of Approval.

**RECOMMENDATIONS:**

- For approvals:
1. Affirm staff's environmental determination.
  2. Approve the Major Variance subject to the attached findings and conditions.

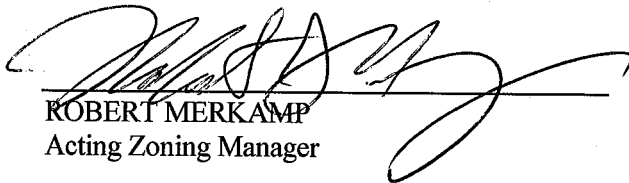
Prepared by:



---

JOSE M HERRERA-PREZA  
PLANNER II

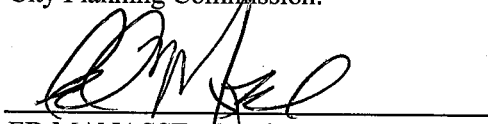
Reviewed by:



---

ROBERT MERKAMP  
Acting Zoning Manager

Approved for forwarding to the  
City Planning Commission:



---

ED MANASSE , Interim Deputy Director  
Bureau of Planning

**ATTACHMENTS:**

- A. Project Plans
- B. Musco Lighting: Diagram of Mounting Height and Spill Control

**FINDINGS FOR APPROVAL**

This proposal meets the required findings under Variance Criteria (OMC Sec. 17.148.050), under the Oakland Planning Code (Title 17) as set forth below and which are required to approve your application. Required findings are shown in bold type; reasons your proposal satisfies them are shown in normal type.

**Variance Criteria (O.P.C. 17.148.050)**

- 1. That strict compliance with the specified regulation would result in practical difficulty or unnecessary hardship inconsistent with the purposes of the zoning regulations, due to unique physical or topographic circumstances or conditions of design; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution improving livability, operational efficiency, or appearance.**

Strict compliance with the Open Space Zone (OPC 17.11.060) Lighting (Athletic Field) would result in practical difficulty in lighting of the neighborhood park. Strict application of the code would preclude replacement and upgrading of the park lighting, which is an essential function serving park activities. The new lighting system will increase operational efficiency by minimizing light-spill and glare into adjacent residences, eliminating dark areas in the play areas, and reducing energy demand and maintenance. The resulting lights will also meet current safety standards.

- 2. That strict compliance with the regulations would deprive the applicant of privileges enjoyed by owners of similarly zoned property; or, as an alternative in the case of a minor variance, that such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.**

The basic intent of the regulation is to reduce glare and light impacts on adjacent neighborhoods. Strict compliance with the applicable regulations would deprive the City of Oakland from replacing unsafe and inefficient lighting system with modern lighting systems designed to reduce light-spill and glare into adjacent residences while more efficiently lighting the park and field activities.

- 3. That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.**

The new lighting will improve the livability and appropriate development of abutting properties by reducing light spill.

- 4. That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the zoning regulations.**

Other parks have been granted variances for similar lighting proposals.

- 5. That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the regular design review criteria set forth in the design review procedure at Section 17.136.050**

See Design Review Findings below.

- 6. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

See Design Review Findings below.

**NONRESIDENTIAL DESIGN REVIEW CRITERIA (OMC 17.136.050(B))**

**1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;**

The project involves the replacement of athletic field lights with new taller more efficient general and field lights. The park is surrounded by a ring of mature trees that will serve as screening for the lights. In addition, the lighting design will minimize light-spill and glare onto the adjacent residences. Overall, the new lighting is improving the existing conditions at the City park and is, therefore, well-related to its surroundings.

**2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;**

The proposed new lighting and other scheduled improvements part of Measure KK will enhance private and public investments near and around Lowell Park.

**3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

The property is in the Urban Park and Open Space classification of the General Plan Land Use and Transportation Element (LUTE) and within the Recreation section of Open Space Conservation and Recreation (OSCAR) element. The intent of the areas is: "to identify, enhance and maintain land for parks and open space" and "to ensure "no net loss" for urban parks and ensure management and future development of each park." The proposal to upgrade athletic field lights and associated electrical equipment conforms to this intent and to the following LUTE and OSCAR Policies Objective as noted in the general plan section of this report.

**CONDITIONS OF APPROVAL**

**1. Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **August 22, 2018** and the approved plans, as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

**2. Effective Date, Expiration, Extensions and Extinguishment**

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten (10) calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period a complete building permit application has been filed with the Bureau of Building and diligently pursued towards completion, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

**3. Compliance with Other Requirements**

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City’s Bureau of Building, Fire Marshal, Department of Transportation, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

**4. Minor and Major Changes**

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.



**5. Compliance with Conditions of Approval**

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

**6. Signed Copy of the Approval/Conditions**

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

**7. Blight/Nuisances**

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within sixty (60) days of approval, unless an earlier date is specified elsewhere.

**8. Indemnification**

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

**9. Severability**

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

**10. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring**

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with Engineering Services and/or the Bureau of Building, if directed by the Director of Public Works, Building Official, Director of City Planning, Director of Transportation, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

**11. Public Improvements**

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement (“p-job”) permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, Engineering Services, Department of Transportation, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

**12. Regulatory Permits and Authorizations from Other Agencies**

**Requirement:** The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.

When Required: Prior to activity requiring permit/authorization from regulatory agency

Initial Approval: Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

**13. Trash and Blight Removal**

Requirement: The project applicant and his/her successors shall maintain the property free of blight, as defined in chapter 8.24 of the Oakland Municipal Code. For nonresidential and multi-family residential projects, the project applicant shall install and maintain trash receptacles near public entryways as needed to provide sufficient capacity for building users.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**14. Graffiti Control**

Requirement:

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
  - i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
  - ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
  - iii. Use of paint with anti-graffiti coating.
  - iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
  - v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
  - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
  - ii. Covering with new paint to match the color of the surrounding surface.
  - iii. Replacing with new surfacing (with City permits if required).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**15. Dust Controls – Construction Related**

Requirement: The project applicant shall implement all of the following applicable dust control measures during construction of the project:

- a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
- b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d. Limit vehicle speeds on unpaved roads to 15 miles per hour.
- e. All demolition activities (if any) shall be suspended when average wind speeds exceed 20 mph.
- f. All trucks and equipment, including tires, shall be washed off prior to leaving the site.
- g. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

**16. Criteria Air Pollutant Controls - Construction Related**

Requirement: The project applicant shall implement all of the following applicable basic control measures for criteria air pollutants during construction of the project as applicable:

- a. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
- b. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”).
- c. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment check documentation should be kept at the construction site and be available for review by the City and the Bay Area Air Quality District as needed.
- d. Portable equipment shall be powered by grid electricity if available. If electricity is not available, propane or natural gas generators shall be used if feasible. Diesel engines shall only be used if grid electricity is not available and propane or natural gas generators cannot meet the electrical demand.
- e. Low VOC (i.e., ROG) coatings shall be used that comply with BAAQMD Regulation 8, Rule 3: Architectural Coatings.

- f. All equipment to be used on the construction site shall comply with the requirements of Title 13, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”) and upon request by the City (and the Air District if specifically requested), the project applicant shall provide written documentation that fleet requirements have been met.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

### **17. Bird Collision Reduction Measures**

Requirement: The project applicant shall submit a Bird Collision Reduction Plan for City review and approval to reduce potential bird collisions to the maximum feasible extent. The Plan shall include all of the following mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent. The project applicant shall implement the approved Plan. Mandatory measures include all of the following:

- a. For large buildings subject to federal aviation safety regulations, install minimum intensity white strobelighting with three second flash instead of solid red or rotating lights.
- b. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
- c. Monopole structures or antennas shall not include guy wires.
- d. Avoid the use of mirrors in landscape design.
- e. Avoid placement of bird-friendly attractants (i.e., landscaped areas, vegetated roofs, water features) near glass unless shielded by architectural features taller than the attractant that incorporate bird friendly treatments no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule), as explained below.
- f. Apply bird-friendly glazing treatments to no less than 90 percent of all windows and glass between the ground and 60 feet above ground or to the height of existing adjacent landscape or the height of the proposed landscape. Examples of bird-friendly glazing treatments include the following:
  - i. Use opaque glass in window panes instead of reflective glass.
  - ii. Uniformly cover the interior or exterior of clear glass surface with patterns (e.g., dots, stripes, decals, images, abstract patterns). Patterns can be etched, fritted, or on films and shall have a density of no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).
  - iii. Install paned glass with fenestration patterns with vertical and horizontal mullions no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).
  - iv. Install external screens over non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
  - v. Install UV-pattern reflective glass, laminated glass with a patterned UV-reflective coating, or UV-absorbing and UV-reflecting film on the glass since most birds can see ultraviolet light, which is invisible to humans.

- vi. Install decorative grilles, screens, netting, or louvers, with openings no more than two inches horizontally, four inches vertically, or both (the “two-by-four” rule).
- vii. Install awnings, overhangs, sunshades, or light shelves directly adjacent to clear glass which is recessed on all sides.
- viii. Install opaque window film or window film with a pattern/design which also adheres to the “two-by-four” rule for coverage.
- g. Reduce light pollution. Examples include the following:
  - i. Extinguish night-time architectural illumination treatments during bird migration season (February 15 to May 15 and August 15 to November 30).
  - ii. Install time switch control devices or occupancy sensors on non-emergency interior lights that can be programmed to turn off during non-work hours and between 11:00 p.m. and sunrise.
  - iii. Reduce perimeter lighting whenever possible.
  - iv. Install full cut-off, shielded, or directional lighting to minimize light spillage, glare, or light trespass.
  - v. Do not use beams of lights during the spring (February 15 to May 15) or fall (August 15 to November 30) migration.
- h. Develop and implement a building operation and management manual that promotes bird safety. Example measures in the manual include the following:
  - i. Donation of discovered dead bird specimens to an authorized bird conservation organization or museums (e.g., UC Berkeley Museum of Vertebrate Zoology) to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
  - ii. Distribution of educational materials on bird-safe practices for the building occupants. Contact Golden Gate Audubon Society or American Bird Conservancy for materials.
  - iii. Asking employees to turn off task lighting at their work stations and draw office blinds, shades, curtains, or other window coverings at end of work day.
  - iv. Install interior blinds, shades, or other window coverings in windows above the ground floor visible from the exterior as part of the construction contract, lease agreement, or CC&Rs.
  - v. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

**18. Archaeological and Paleontological Resources – Discovery During Construction**

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological

resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

### **19. Human Remains – Discovery During Construction**

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**20. Construction-Related Permit(s)**

Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

**21. Hazardous Materials Related to Construction**

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

- a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
- b. Avoid overtopping construction equipment fuel gas tanks;
- c. During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d. Properly dispose of discarded containers of fuels and other chemicals;
- e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and
- f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**22. State Construction General Permit**

Requirement: The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project



applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.

When Required: Prior to approval of construction-related permit

Initial Approval: State Water Resources Control Board; evidence of compliance submitted to Bureau of Building

Monitoring/Inspection: State Water Resources Control Board

**23. Site Design Measures to Reduce Stormwater Runoff**

Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following:

- a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas;
- b. Utilize permeable paving in place of impervious paving where appropriate;
- c. Cluster structures;
- d. Direct roof runoff to vegetated areas;
- e. Preserve quality open space; and
- f. Establish vegetated buffer areas.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

**24. Source Control Measures to Limit Stormwater Pollution**

Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate source control measures to limit pollution in stormwater runoff. These measures may include, but are not limited to, the following:

- a. Stencil storm drain inlets “No Dumping – Drains to Bay;”
- b. Minimize the use of pesticides and fertilizers;
- c. Cover outdoor material storage areas, loading docks, repair/maintenance bays and fueling areas;
- d. Cover trash, food waste, and compactor enclosures; and
- e. Plumb the following discharges to the sanitary sewer system, subject to City approval:
  - i. Discharges from indoor floor mats, equipment, hood filter, wash racks, and, covered outdoor wash racks for restaurants;
  - ii. Dumpster drips from covered trash, food waste, and compactor enclosures;
  - iii. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories;
  - iv. Swimming pool water, if discharge to on-site vegetated areas is not feasible; and
  - v. Fire sprinkler test water, if discharge to on-site vegetated areas is not feasible.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

**25. Construction Days/Hours**

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
- c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**26. Construction Noise**

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

- a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
- b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on

the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

- c. Applicant shall use temporary power poles instead of generators where feasible.
- d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**27. Operational Noise**

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**28. Access to Parks and Open Space**

Requirement: The project applicant shall submit a plan for City review and approval to enhance bicycle and pedestrian access from the project site and adjacent areas to Lowell Park. Examples of enhancements may include, but are not limited to, new or improved bikeways, bike parking, traffic control devices, sidewalks, pathways, bulb-outs, and signage. The project sponsor shall install the approved enhancements during construction and prior to completion of the project.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning, Department of Transportation

Monitoring/Inspection: Department of Transportation

**29. Construction Activity in the Public Right-of-Way**

**a. Obstruction Permit Required**

Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets, sidewalks, bicycle facilities, and bus stops.

When Required: Prior to approval of construction-related permit

Initial Approval: Department of Transportation

Monitoring/Inspection: Department of Transportation

**b. Traffic Control Plan Required**

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, bus stops, or sidewalks, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian accommodations (or detours, if accommodations are not feasible), including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The Traffic Control Plan shall be in conformance with the City's Supplemental Design Guidance for Accommodating Pedestrians, Bicyclists, and Bus Facilities in Construction Zones. The project applicant shall implement the approved Plan during construction.

Initial Approval: Department of Transportation

Monitoring/Inspection: Department of Transportation

**c. Repair of City Streets**

Requirement: The project applicant shall repair any damage to the public right-of-way, including streets and sidewalks, caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Department of Transportation

**30. Construction and Demolition Waste Reduction and Recycling**

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at [www.greenhalosystems.com](http://www.greenhalosystems.com) or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

**Applicant Statement**

I have read and accept responsibility for the Conditions of Approval. I agree to abide by and conform to the Conditions of Approval, as well as to all provisions of the Oakland Planning Code and Oakland Municipal Code pertaining to the project.

\_\_\_\_\_  
Name of Project Applicant

\_\_\_\_\_  
Signature of Project Applicant

\_\_\_\_\_  
Date



**CITY OF OAKLAND  
Oakland Parks & Recreation**

**TO:** Mandolin Kadera-Redmond, Chair, Parks and Recreation Advisory Commission  
**FROM:** Christine Reed, Oakland Public Works - Project Delivery Division  
**DATE:** October 10, 2018  
**SUBJECT: REQUEST FOR THE PARKS AND RECREATION ADVISORY COMMISSION TO APPROVE DESIGN AND IMPLEMENTATION AND RECOMMEND APPROVAL OF A CONDITIONAL USE PERMIT FOR BALLFIELD LIGHTING IMPROVEMENTS AT CURT FLOOD FIELD AND MAJOR ZONING VARIANCES FOR BALLFIELD LIGHTING IMPROVEMENTS AT GOLDEN GATE, LOWELL AND TASSAFARONGA FIELDS.**

---

**SUMMARY**

Staff from the Oakland Public Works Department (OPW) and Oakland Parks, Recreation, and Youth Development Department (OPRYD) request approval of the design and implementation, and endorsement of a Conditional Use Permit for ballfield lighting improvements at Curt Flood Field and Major Zoning Variances for ballfield lighting improvements at Golden Gate, Lowell and Tassafaronga Fields. These four projects, funded by Measure KK Bond funds, include lighting upgrades and associated electrical wiring improvements for existing athletic ballfields. The improvements will upgrade the fields to meet safe play standards and improve energy efficiency.

**FISCAL IMPACT**

Staff anticipates no new or additional fiscal impact to OPRYD from the proposal. The estimated project cost is \$2,059,000. The project is currently funded by Measure KK Bond funds and Measure WW bond funds. Additional funding is currently being sought to fulfill anticipated construction costs. Staff anticipates that the project will have some increase to existing on-going maintenance of the Park. However, it is consistent with on-going maintenance requirements of sports lighting at all City-owned parks.

**PROJECT / PROGRAM DESCRIPTION**

The proposed Ballfield Wiring and Lighting Improvement Project would allow upgrades to existing athletic field lighting and associated electrical wiring improvements for four existing City-owned parks. Existing conditions at the four ballfields were determined by City staff to be hazardous due to theft of existing lighting equipment and wiring, possible leaking of electrical current from damaged wires and equipment, and inadequate light levels to support night time play. In general, the existing lighting conditions at the ballfields are inadequate for safe play for their current athletic uses. The existing lighting systems vary from 25 to over 35 years old. When the design consultants ran an analysis of the existing lower-height sports pole lighting, they determined that there was unacceptably high spill-light and disturbing levels of glare into neighborhoods.

The goals of the improvement projects are to restore softball lighting system functionality, expand the sports lighting system to include baseball, meet safe play illumination standards, reduce spill-light and glare into the neighborhoods, reduce on-going maintenance costs and improve energy efficiency. The new LED fixtures will control light spillage off the fields, eliminate dark spots on the fields, have longer lifespan and reduced energy demand. New wireless remote-control systems will allow City staff to program field light operation without need for visiting sites.

For current lighting to properly illuminate the fields, lights must be angled in a manner that causes glare and increased light pollution onto adjacent properties. Use of taller light poles than those now installed at Tassafaronga, Curt Flood and Lowell, will allow the fields to be more effectively lighted with minimal spill to adjacent properties (Attachment B). Results of a computer-predicted illumination study for the proposed lighting design have determined that the system will improve glare control and reduce spill light compared with existing conditions.

Ballfield address locations, existing athletic field types and community groups served:

Curt Flood Field, 3303 Laguna Way (Coolidge Ave & School Street) – baseball, softball, football & soccer

- Fremont High school – Varsity & Jr. Football and Baseball teams
- Oakland Girls' Softball teams
- Oakland Parks and Recreation Development Baseball Camps
- Oakland Parks and Recreation Adult Softball Leagues
- Oakland Dynamites Youth Football team
- Fruitvale Elementary school
- Oakland Babe Ruth Youth Baseball
- OPR Baseball League

Golden Gate Field, 1075 62<sup>nd</sup> Street – baseball, softball, soccer

- Oakland Girls' Softball teams
- Oakland Parks and Recreation Development Baseball Camps
- Oakland Parks and Recreation Adult Softball Leagues
- Oakland Babe Ruth Youth Baseball League
- Jack London Youth Soccer Club
- NOLL/SOLL Youth Baseball League

Lowell Field, 1206 12<sup>th</sup> Street – baseball, softball, basketball

- Oakland Parks and Recreation Adult Softball Leagues
- Oakland Babe Ruth Youth Baseball League
- Jack London Youth Soccer Club
- NOLL/SOLL Youth Baseball League
- Adult Soccer Leagues

Tassafaronga Field, 1001 E Street – softball

- Oakland Parks and Recreation Development Baseball Camps
- Oakland Parks and Recreation Flag Football League
- Oakland Babe Ruth Youth Baseball League
- Jack London Youth Soccer Club
- NOLL/SOLL Youth Baseball League

Curt Flood has a Zoning use classification of OS Open Space (AF – Athletic Field) that permits Sports Lighting. Its Conditional Use Permit (CUP) will allow for the addition of new sport light poles to provide for complete field coverage (softball, baseball and football).

The remaining three parks have Zoning use classification of OS Open Space (NP – Neighborhood Park). The OS zone is intended to meet the active and passive recreational needs of Oakland residents and to promote park uses which are compatible with surrounding land uses and the City's natural environment. Those parks each have multiple athletic fields, some with existing sports lighting (Lowell being the exception) and are heavily used. The addition of new sports lighting will greatly improve the availability of those fields to meet recreational needs and will therefore require a Major Variance.

The anticipated project schedule is as follows:

Current Status	95% Construction Documentation and Permit Application
Spring-Summer 2019	Advertise and Bid Period
Fall 2019	Construction

### **BACKGROUND / LEGISLATIVE HISTORY**

The adopted Capital Improvement Program Budget for fiscal years 2017 – 2019 approved and allocated \$1,000,000 in Measure KK bond funding for the 'Ballfield Wiring and Hazard Mitigation Project' for four City-owned ballfields: Curt Flood, Golden Gate, Lowell and Tassafaronga Fields. This project was deemed one of the top priority CIP requests from Oakland Public Works Bureau of Facilities and Environment (OPW-BFE) for capital improvement due to life safety, hazard elimination and preventative maintenance concerns.

Several existing City athletic ballfields exist on park sites with the Zoning designation 'Open Space Neighborhood Park'. In 2011, the Planning Commission approved Major Variances for Owen Jones and Poplar Parks, allowing the improvement of athletic field lighting at neighborhood parks, with very similar circumstances to those being proposed with these current project proposals.

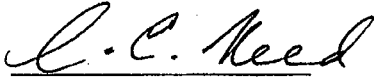
### **RECOMMENDATION**

Staff recommends that the Parks and Recreation Advisory Commission approval of the design and implementation of all four fields, and endorse and recommend approval of the proposed Conditional Use Permit for Curt Flood Field and Major Zoning Variances for Golden Gate, Lowell and Tassafaronga Fields Ballfield Lighting and Wiring Improvement Projects. The proposed projects

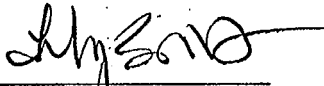


Tassafaronga Fields Ballfield Lighting and Wiring Improvement Projects. The proposed projects will improve the usability of existing athletic facilities to better serve the recreational needs of the surrounding area, improve safety, and reduce light spillage onto adjacent properties.

Respectfully submitted,



Prepared by: Christine Reed, RLA  
Capital Improvement Project Coordinator, OPW-PDD



Approved by:  
Lily Soo Hoo  
Supervisor, OPW-PDD

Attachments: Exhibit A – *Property Maps with Proposed Improvements*  
Exhibit B – *Diagram of Mounting Height and Spill Control*

**LEGEND**

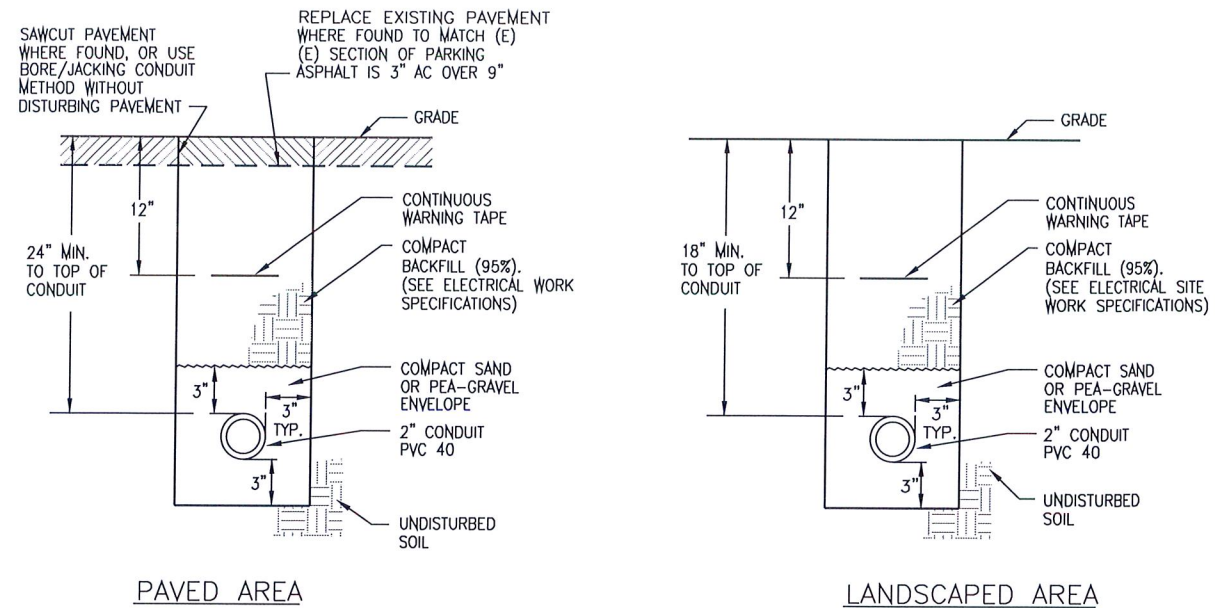
- CIRCUITING**
- HOMERUN CONDUIT AND CONDUCTORS TO PANEL 'A' CIRCUIT 1; SLASH MARKS INDICATE NUMBER OF CONDUCTORS, 2 #12 AWG + 1 #12 GND, UON
  - CONDUIT CONCEALED IN WALL OR CEILING
  - CONDUIT RUN UNDERGROUND
  - CONDUIT EXPOSED
  - CONDUIT UP
  - CONDUIT DOWN
  - CONDUIT CAPPED
  - CONDUIT CONTINUED
- PANELBOARDS AND RELATED EQUIPMENT**
- SWITCHBOARD OR MOTOR CONTROL CENTER AS INDICATED
  - PANELBOARD, SURFACE OR RECESSED
  - PLYWOOD TERMINAL BOARD, PRIME PAINTED, 3/4" THK
  - ELECTRICAL PULL BOX
  - CONTACTS, NORMALLY OPEN, NORMALLY CLOSED
  - CIRCUIT BREAKER
  - GROUND TO EARTH
  - CURRENT TRANSFORMER WITH UTILITY METER & SOCKET
  - TRANSFORMER, SINGLE OR THREE PHASE, SINGLE LINE
  - UNDERGROUND TERMINATION POINT
  - SWITCH
  - FUSE
  - METER
- OUTLETS**
- DUPLEX RECEPTACLE, +15" AFF UON
  - JUNCTION BOX, CEILING MOUNTED
- FIXTURES**
- SPORTS LIGHT POLE, POLE NO. A1
  - STREET LIGHT
  - AREA LIGHT
- TAGS**
- DETAIL TAG  
e.g., 1 IS THE DETAIL NUMBER  
E1 IS THE SHEET NUMBER
  - LIGHT FIXTURE TAG, FIXTURE TYPE F1
  - SHEET NOTE TAG NO.1
  - FEEDER TAG, SEE FEEDER SCHEDULE

**ABBREVIATIONS**

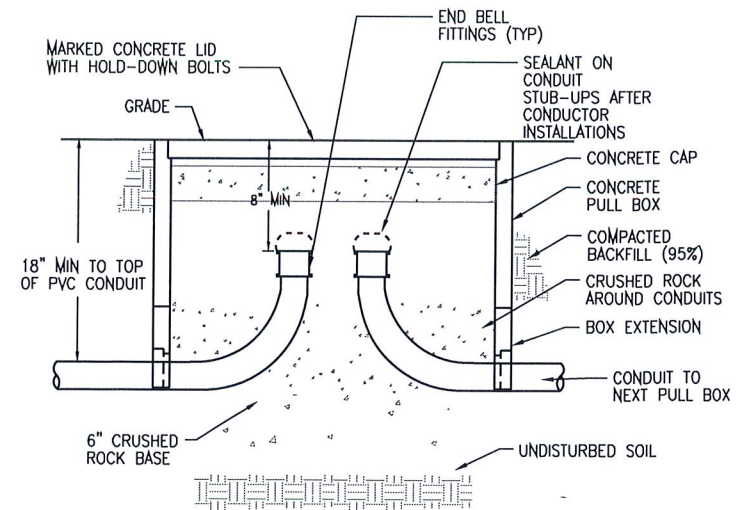
- A AMPERE
- AB ANCHOR BOLT
- AFG ABOVE FINISHED GRADE
- AWG AMERICAN WIRE GAUGE
- BP BY-PASS TEST SWITCH
- BRZ BRONZE PAINT
- C CONDUIT
- CB CIRCUIT BREAKER
- CKT CIRCUIT
- CIP CAST-IN-PLACE
- CLSM CONTROLLED LOW STRENGTH MATERIAL
- CO CONDUIT ONLY
- (E) EXISTING TO REMAIN
- EGC EQUIPMENT GROUNDING CONDUCTOR
- GEC GROUNDING ELECTRODE CONDUCTOR
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- GND GROUND
- HP HORSEPOWER
- JP JOINT POLE
- LED LIGHT EMITTING DIODE
- LTG LIGHTING
- MH METAL HALIDE
- MSB MAIN SWITCHBOARD
- MTD MOUNTED
- (N) NEW
- NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- PB PULL BOX
- PC PHOTOCONTROL
- PE PHOTOELECTRIC
- POC POINT OF CONNECTION
- PRI PRIMARY
- PVC POLYVINYLCHLORIDE
- (R) EXISTING TO BE REMOVED
- RECEPT RECEPTACLE
- (RL) RELOCATED EXISTING
- RMC RIGID METALL CONDUIT
- SCH SCHEDULE
- SEC SECONDARY
- SO SQUARE
- SLD SEE LANDSCAPE DRAWINGS
- SS STAINLESS STEEL
- SWBD SWITCHBOARD
- TEL TELEPHONE
- TS TIME SWITCH
- TYP TYPICAL
- UG UNDERGROUND ELECTRIC
- UON UNLESS OTHERWISE NOTED
- V VOLT
- W WATT
- WP WEATHERPROOF
- XFMR TRANSFORMER

**DRAWING INDEX**

- E1.1 ELECTRICAL LEGEND & DETAILS
- E1.2 SITE PLANS & LOCATION MAPS
- E1.3 SPORTS LIGHTING POLES FOUNDATION DETAILS
- E1.4 SPORTS LIGHTING POLES DETAILS
- E2.1 SINGLE LINE DIAGRAM -LOWELL PARK
- E2.2 ELECTRICAL PLAN -LOWELL PARK
- E3.1 SINGLE LINE DIAGRAM -CURT FLOOD FIELD
- E3.2 EXISTING ELECTRICAL PLAN -CURT FLOOD FIELD
- E3.3 NEW ELECTRICAL PLAN -CURT FLOOD FIELD
- E4.1 SINGLE LINE DIAGRAM -GOLDEN GATE PLAYGROUND
- E4.2 ELECTRICAL PLAN -GOLDEN GATE PLAYGROUND
- E5.1 EXISTING ELECTRICAL PLAN -TASSAFARONGA FIELD
- E5.2 NEW ELECTRICAL PLAN -TASSAFARONGA FIELD



**2 TRENCH DETAIL**  
SCALE: NONE



**1 PULL BOX DETAIL (CHRISTY N30, 13-1/4" X 24-1/4")**  
SCALE: NONE

95% CD SET



**CITY OF OAKLAND**

DEPARTMENT OF ENGINEERING AND CONSTRUCTION  
250 FRANK OGAWA PLAZA, OAKLAND CA, 94612  
(510) 238-3437 • FAX: (510) 238-7227

**BALLFIELD WIRING HAZARD  
MITIGATION AND LIGHTING  
PROJECT, CITY OF OAKLAND**

LANDSCAPE ARCHITECT

**Dillingham Associates**  
Landscape Architects

2927 Newbury Street  
Berkeley, California 94703  
tel 510.548.4700 fax 510.548.0265  
www.dillinghamlandarch.com



ZEIGER ENGINEERS, INC.  
ELECTRICAL CONSULTANTS

478 3RD STREET, OAKLAND, CA 94607  
TEL 510-452-9391 FAX 510-452-0661

CHECKED BY - OL

DESIGNED BY - RZ

DRAWN BY - AG

No.	DATE	BY	REFERENCE

**ELECTRICAL LEGEND &  
DETAILS**

**4 BALLFIELDS**

PROJECT NO.

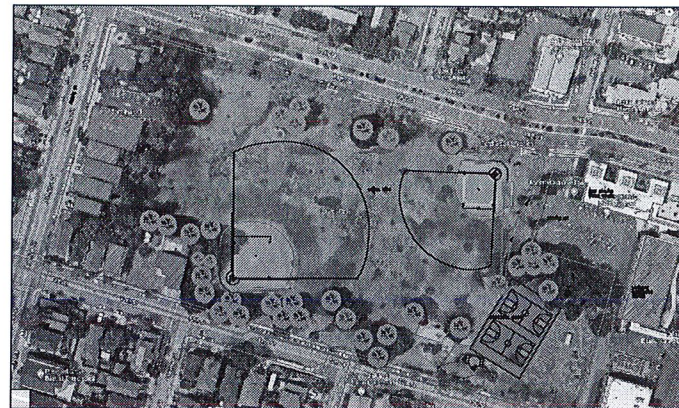
SCALE:  
HOR:  
VERT:  
DATE: 01/08/2018

SHEET NO.  
**E1.1**  
OF

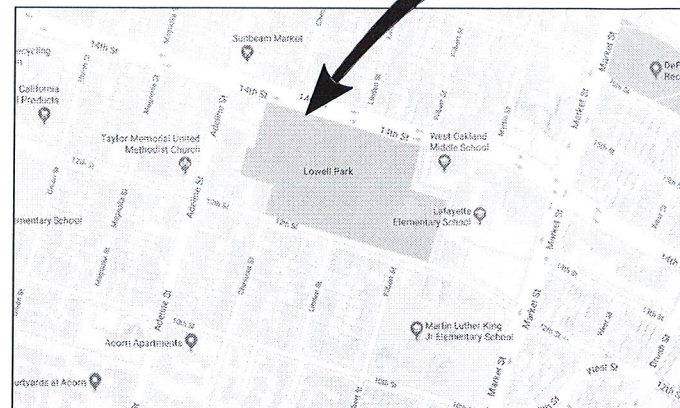
4330 07/10/18

LOWELL

DRAWING NAME: V:\5401 - Current\4330 - Oakland Ballfields\4330 e1.1-LEGEND & Details.dwg  
PLOT DATE: 08-14-18  
PLOTTED BY: CADstar



SITE PLAN



LOCATION MAP

1 LOWELL PARK

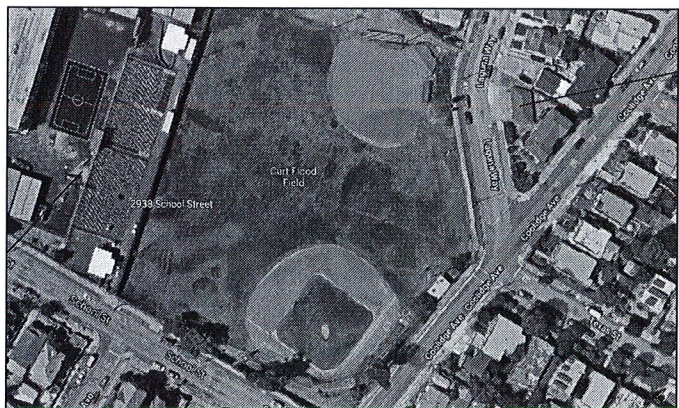


SITE PLAN



LOCATION MAP

2 GOLDEN GATE PLAYGROUND



SITE PLAN

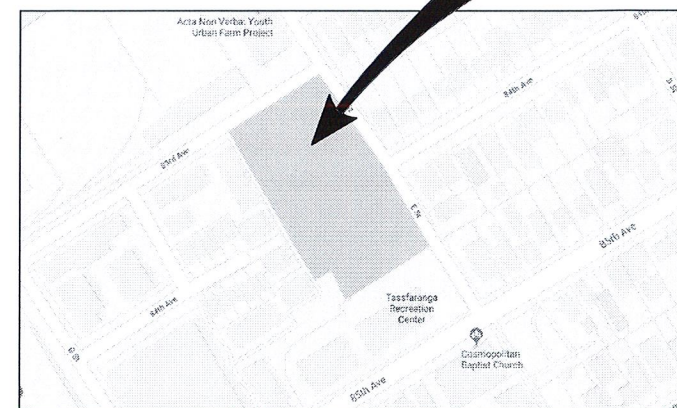


LOCATION MAP

3 CURT FLOOD FIELD



SITE PLAN



LOCATION MAP

4 TASSAFARONGA PARK



95% CD SET



CITY OF OAKLAND

DEPARTMENT OF ENGINEERING AND CONSTRUCTION  
250 FRANK OGAWA PLAZA, OAKLAND, CA, 94612  
(510) 238-3437 \* FAX (510) 238-7227

BALLFIELD WIRING HAZARD  
MITIGATION AND LIGHTING  
PROJECT, CITY OF OAKLAND

LANDSCAPE  
ARCHITECT

Dillingham Associates  
Landscape Architects

2927 Newbury Street  
Berkeley, California 94703  
tel 510.548.4700 fax 510.548.0265  
www.dillinghamlandarch.com



ZEIGER ENGINEERS, INC.  
ELECTRICAL CONSULTANTS

478 3RD STREET, OAKLAND, CA 94607  
TEL 510-452-9391 FAX 510-452-0661

CHECKED BY - OL  
DESIGNED BY - RZ  
DRAWN BY - AG

No.	DATE	BY	REFERENCE

SITE PLANS & LOCATION  
MAPS

4 BALLFIELDS

PROJECT NO.

SCALE:  
HOR:  
VERT:  
DATE: 01/08/2018

SHEET NO.  
E1.2  
OF

**GENERAL NOTES:**

**APPLICABLE BUILDING CODE**

All construction and workmanship shall conform to the 2013 California Building Code, California Code of Regulations - Title 24, Parts 1 & 2

This pole and foundation standard has been designed for lateral loads on the completed structure as follows:

- Wind Design Data:**
- Vult = 110 MPH (Exposure C); Vasd = 85 MPH (Exposure C)
  - Risk Category = II
  - See Pole Foundation Schedule for maximum pole wind forces.

- Seismic Design Data:**
- Ia = 1.0
  - Risk Category = II
  - Ss = 2.412
  - Si = 1.159
  - Site Class = D
  - Sms = 1.37
  - Sa = 1.83
  - Seismic Design Category = E
  - Basic Seismic-Force-Resisting System = Non-Building Structure, not similar to buildings
  - R = 1.5
  - Q = 1.5
  - Cs = 0.618 (STRENGTH LEVEL)
  - Analysis Procedure = Equivalent Lateral Force Procedure
  - See Pole Foundation Schedule for maximum pole seismic forces.

**GENERAL CONSTRUCTION**

These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the Registered Design Professional (RDP) in Responsible Charge.

Contractor must check all dimensions, clearances and job conditions before starting work. The RDP in Responsible Charge shall be notified immediately of any discrepancies or possible deficiencies.

The drawings and specifications represent the finished structure. All bracing, temporary supports, shoring, etc., is the sole responsibility of the Contractor. Observation visits to the job site by the RDP in Responsible Charge do not include inspection of construction procedures. The Contractor is solely responsible for all construction methods and for safety conditions at the worksite. These visits by RDP in Responsible Charge shall not be construed as continuous and detailed inspections.

Design, material, equipment, and products other than those described below or indicated on the drawings may be considered for use provided prior approval is obtained from the School District, the RDP in Responsible Charge, and DSA.

All changes to the approved plans after a contract for construction has been awarded, affecting structural, access or life-safety portions of the project, shall be made by means of construction change documents (CCD) approved by DSA, as required by Section 4-338, Part 1, Title 24, CCR. All CCD shall be prepared and signed by the RDP in general Responsible Charge.

Substitutions shall be considered as a CCD and shall be approved by DSA prior to fabrication or use.

A Class 1 or Class 2 Project Inspector employed by the School District (Owner) and approved by DSA shall provide continuous inspection of the work, the duties of the Inspector are defined in Section 4-342, Part 1, Title 24, CCR.

All Tests And Inspections shall be performed by an independent lab employed by the School District and approved by DSA.

Reference pole location on the Architectural, Structural, and/or Electrical drawings for actual pole placement and site location.

**LIGHT POLE FOUNDATIONS**

Reference geotechnical report prepared by CLEARY CONSULTANTS, INC. Dated 02/10/2016; Project No. 1276.2E.

Allowable Vertical Skin Friction - 250 PSF (NEGLECT TOP 10'-0").

Allowable Lateral Bearing Capacity: 100 PCF (NEGLECT TOP 5'-0").

A representative of CLEARY CONSULTANTS should be available at the time of the foundation installation to verify the soil design parameters and to provide assistance if any problems arise in foundation installation.

The Contractor must familiarize himself with the complete geotechnical report, and borings and contact the above firm to understand the soil conditions and the possibility of ground water pumping and excavation stabilization or bracing during the foundation installation and placement of concrete.

Soil formations that will require special design considerations or excavation procedures may exist. Pole foundations may need to be reanalyzed according to the soil conditions that exist.

If any discrepancies or inconsistencies arise, notify the RDP in Responsible Charge of such discrepancies.

All concrete must bear on and against firm undisturbed soil as determined by the Geotechnical Engineer.

Place plywood collar around perimeter at the top of foundation excavation to prevent soil from entering.

All excavations must be free of loose soil, and debris prior to foundation installation and placement of concrete. Casing or drilling slurry may be required if caving occurs. Review and approval of the Geotechnical Engineer and DSA is required.

All excavations must be free of water or concrete shall be placed by the Tremie Method in accordance with ACI standard 338. Concrete placed by the Tremie Method shall have a minimum ultimate strength of 1,000 PSI greater than required under "Concrete (C.I.P.)" and a maximum slump of 8".

**CONCRETE (CAST-IN-PLACE)**

Concrete shall attain a minimum ultimate compressive strength at 28 day test of 3,000 psi.

Concrete shall attain a minimum strength of 2,500 psi prior to steel pole erection.

Use Type II/V Portland cement or as directed by the Geotechnical Engineer.

Portland Cement ASTM C-150.

Aggregate ASTM C-33. 1" maximum aggregate size.

Mix in conformance with ASTM C-94, ACI 318 Sections 5.1 through 5.4.

Place concrete immediately after completion of excavation and inspection by the Geotechnical Engineer and the DSA inspector. Under no circumstances shall piers be allowed to remain open for more than 12 hours without the approval of the Geotechnical Engineer. Excavations shall be covered and protected until filled with concrete.

Concrete shall be placed in one continuous operation (no construction joint) with special equipment to assure a maximum freefall of 5 ft and to prevent concrete from striking the sides of the excavation. Freefall of concrete is unacceptable through water or drilling slurry.

Vibrate concrete full depth, except for concrete with slump greater than 6", then vibrate only upper 10'-0". Concrete placed under water shall have a slump of 6"-8".

**STEEL POLE**

Steel pole sections conform to the California Code of Regulations T.24, Part 2, Chapter 22A.

All steel conforms to referenced ASTM specifications. (See Pole Data Table for each pole type).

All weldment conforms with AWS D1.1 specification for GMAW fillet utilizing E70S-X filler metal or SAW fillet utilizing F7XX-EXXX or FBXX-EXXX filler metal. GMAW procedure conforms to AWS A5.18. SAW procedure conforms to AWS A5.23.

Longitudinal seam welds for pole sections shall have 60% minimum penetration; Except longitudinal seam welds on the female section of telescopic field splices shall be full penetration groove welds for a length equal to the minimum splice length plus 6 inches. See drawing number MD1 for seam weld details.

Pole sections hot dipped galvanized to ASTM A123 latest standards.

All miscellaneous structural steel items conform to AISC 360-10.

Steel pole sections shall be assembled in the field by attaching two 1.5 ton "come alongs" to jacking ears, using full effort on each simultaneously, to ensure minimum overlaps as indicated on the "MS" sheet(s) and detail G/MD1.

**PRECAST BASE**

The precast concrete base conforms to California Code of Regulations, T.24, part 2, Chapter 19A and to Building Code Requirements for Reinforced Concrete, ACI 318-11.

See detail "A" on "MS" sheet(s) for material strengths and specifications.

**TESTING AND INSPECTION**

Testing and inspection in accordance with Title 24, Part 2.

**EXCAVATIONS & FOUNDATIONS:**  
Inspection of cast-in-place deep foundations - 1705A.8 & Table 1705A.8

**CONCRETE MATERIALS:** 1903A.1  
Portland cement - 1913A.1  
Concrete aggregates - 1903A.6  
Reinforcing bars - 1913A.2 & DSA IR 17-10  
Prestressing steel and anchorages - 1913A.3

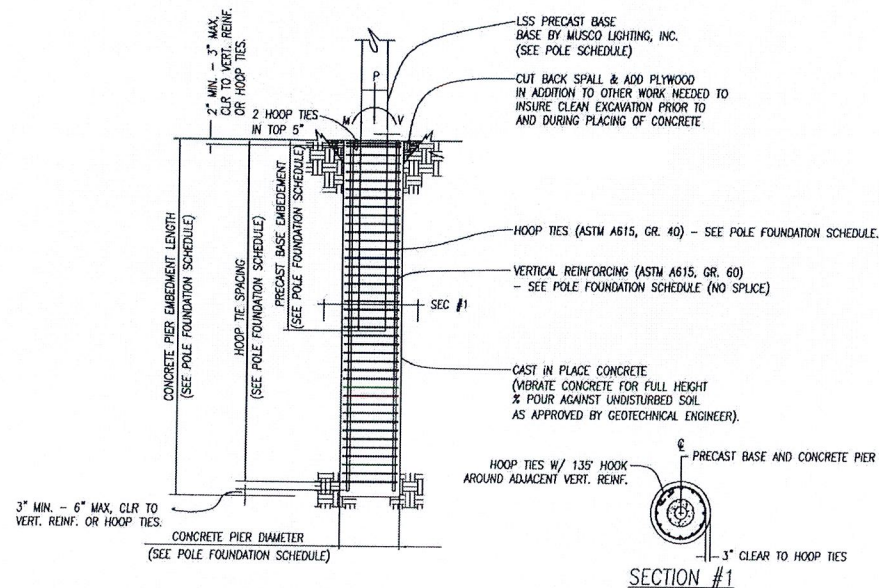
**CONCRETE QUALITY:**  
Proportions of concrete - Reference ACI 318 Section 5.2 Through 5.5  
Strength tests of concrete - 1905A.1.2 and ACI 318 Section 5.6

**CONCRETE INSPECTION:** 1705A.3 & Table 1705A.3  
Job site - Reference ACI 318 Section 5.7  
Batch plant - 1705A.3.2  
Waiver of batch plant - 1705A.3.3  
Prestressed concrete - 1704A.2.5, 1705A.3.4

**STEEL MATERIALS:**  
Structural steel - 2203A.1 & 2205A.1  
Cold formed steel - 2210A.1  
Identification - 2203A.1

**STEEL QUALITY:**  
Tests of structural steel & cold formed steel - 2203A.1  
Non-destructive weld tests - 1705A.2.2.5 & DSA IR 17-2

**STRUCTURAL STEEL INSPECTIONS:** Table 1705A.2.1  
Shop fabrication inspection - 1704A2.5  
Welding - 1705A.2.2.5 and DSA IR 17-3 & AWS D1.1  
(NOTE: ALL WELDING SHALL BE CONTINUOUSLY INSPECTED BY AN AWS CW CERTIFIED INSPECTOR APPROVED BY DSA)



**A REINFORCED FOUNDATION DETAIL**  
N.T.S. DSA-A2-CASFND\_A

POLE TYPE-# OF FIXTURES (MAX) (LSS = LIGHT STRUCTURE)	MARK (SEE POLE ORIENTATION PLAN)	WIND OR SEISMIC (Seismic force includes overstrength factor=1.5)	ASD LEVEL FORCES (MAX)			C.I.P DEEP FOUNDATION			PRECAST BASE EMBEDMENT FEET
			MOMENT (M) FT-LBS*	SHEAR (V) LBS	VERTICAL (P) LBS**	DIAMETER INCHES	EMBEDMENT FEET (SEE NOTE BELOW)	VERTICAL REINFORCING (ASTM A615, GR 60)	
		SEISMIC							
		WIND						12-#7	#4 @ 10" O.C. FULL DEPTH

\*Moment (M) computed below grade at Shear (V) = 0.  
\*\*Vertical (P) load includes steel pole, light fixtures, and attachments. Vertical (P) load for seismic also includes weight of precast base above groundline. Reference Detail "A" on MS Sheet(s) for precast base weight.  
Note: Final Embedment to be determined in the field by the Geotechnical Engineer of Record.

**95% CD SET**

**CITY OF OAKLAND**  
DEPARTMENT OF ENGINEERING AND CONSTRUCTION  
250 FRANK OGAWA PLAZA, OAKLAND CA, 94612  
(510) 238-3437 • FAX (510) 238-7227

**BALLFIELD WIRING HAZARD MITIGATION AND LIGHTING PROJECT, CITY OF OAKLAND**

LANDSCAPE ARCHITECT

**Dillingham Associates**  
Landscape Architects

2927 Newbury Street  
Berkeley, California 94703  
tel 510.548.4700 fax 510.548.0265  
www.dillinghamlandarch.com



**ZEIGER ENGINEERS, INC.**  
ELECTRICAL CONSULTANTS

478 9RD STREET, OAKLAND, CA 94607  
TEL 510-452-9391 FAX 510-452-0661

CHECKED BY - OL  
DESIGNED BY - RZ  
DRAWN BY - AG

No.	DATE	BY	REFERENCE

**SPORTS LIGHTING POLES FOUNDATION DETAILS**

**4 BALLFIELDS**

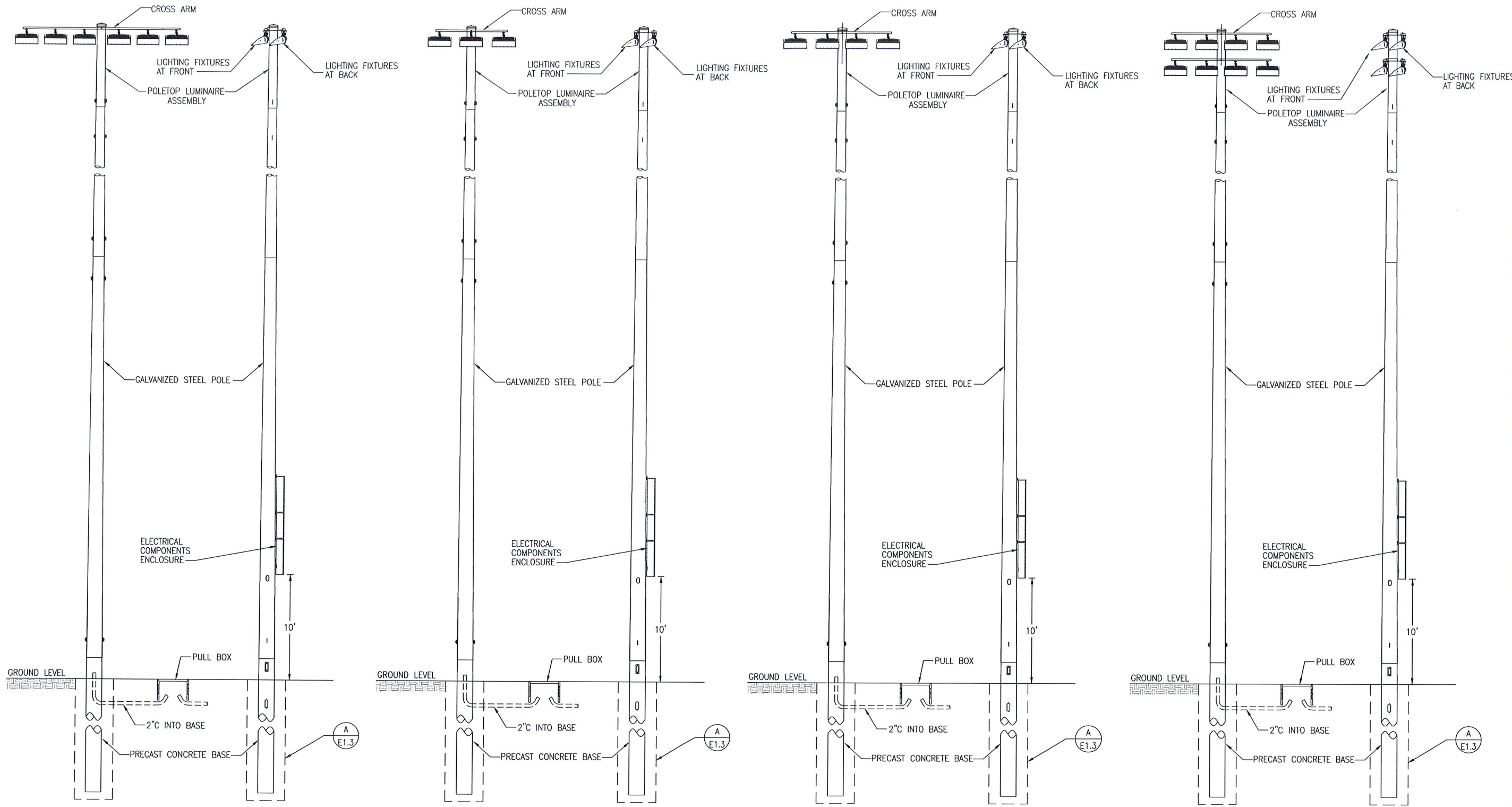
**PROJECT NO.**

**SCALE:**  
HOR: VERT:

**SHEET NO.**  
**E1.8**

DATE: 01/08/2018

DRAWING NAME: V:\84301 - Current\4330 - Oakland Ballfields\4330.dwg 08/14/18 PLOT DATE: 08/14/18 PLOTTED BY: CADuser



1 POLE DETAIL 1  
SCALE: NONE

2 POLE DETAIL 2  
SCALE: NONE

3 POLE DETAIL 3  
SCALE: NONE

4 POLE DETAIL 4  
SCALE: NONE

95% CD SET



BALLFIELD WIRING HAZARD  
MITIGATION AND LIGHTING  
PROJECT, CITY OF OAKLAND

LANDSCAPE ARCHITECT  
**Dillingham Associates**  
Landscape Architects  
2927 Newbury Street  
Berkeley, California 94703  
tel 510.548.4700 fax 510.548.0265  
www.dillinghamlandarch.com



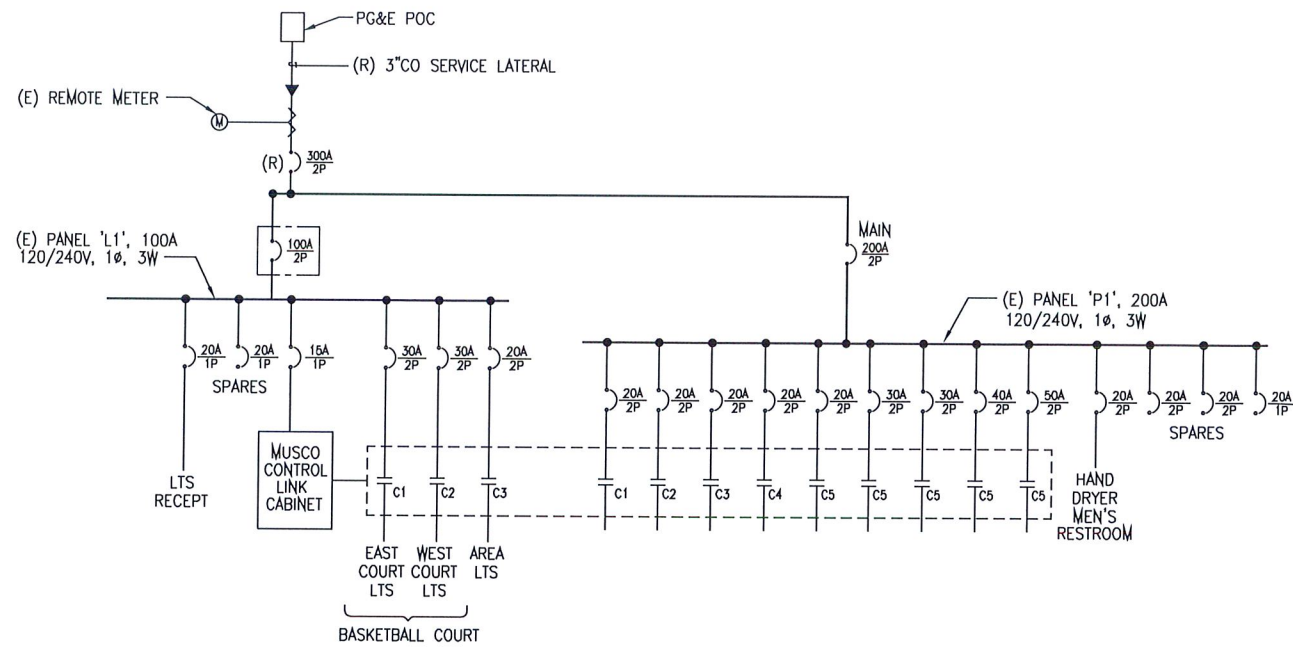
ZEIGER ENGINEERS, INC.  
ELECTRICAL CONSULTANTS  
478 3RD STREET, OAKLAND, CA 94607  
TEL 510-452-9391 FAX 510-452-0661  
CHECKED BY - OL  
DESIGNED BY - RZ  
DRAWN BY - AG

No.	DATE	BY	REFERENCE

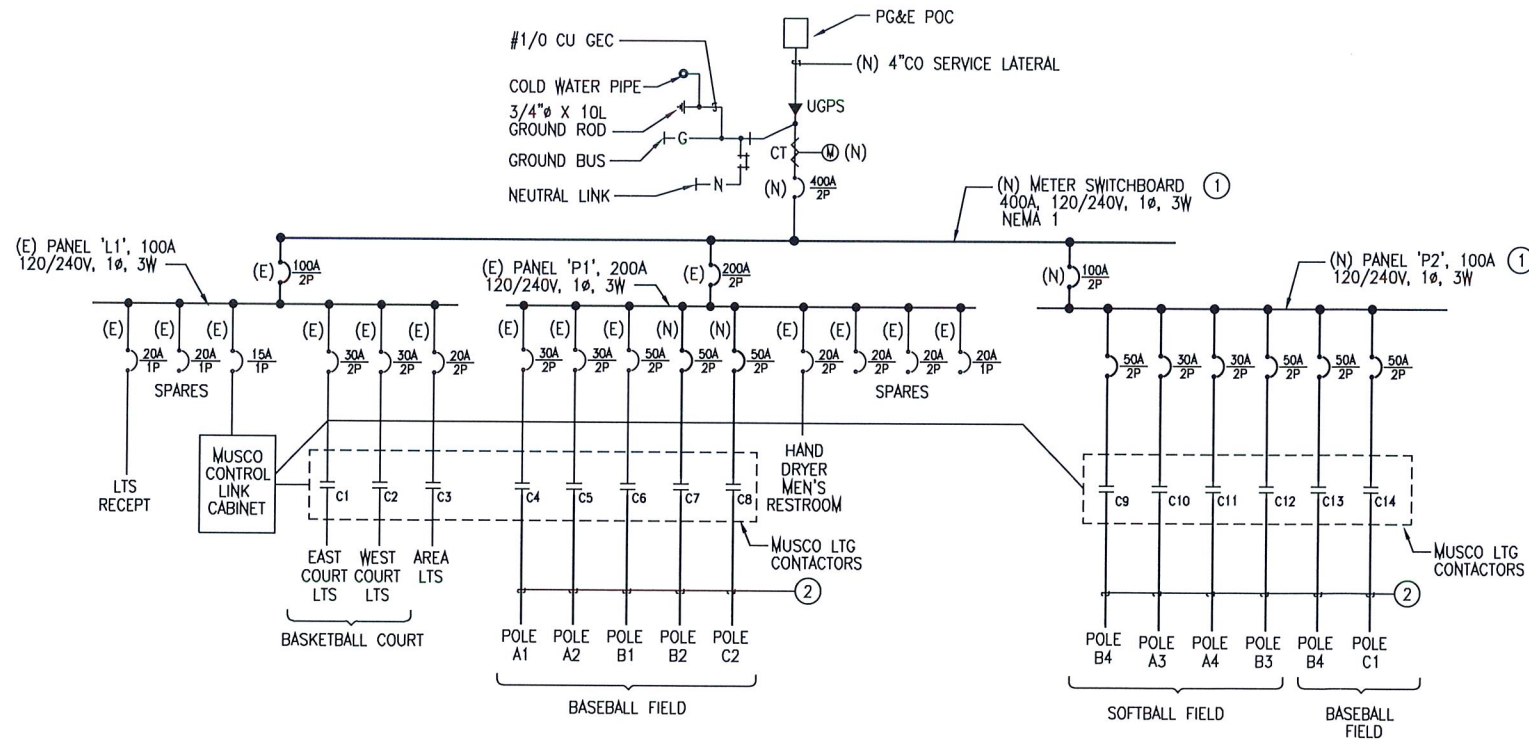
SPORTS LIGHTING POLES  
DETAIL

PROJECT NO.  
SCALE:  
HOR:  
VERT:  
DATE: 01/08/2018  
SHEET NO.  
E1.4  
OF

DRAWING NAME: V:\84201 - Current\34330 - Oakland Ballfields\4330.rvt 4 CURT FLOOD FIELD POLE DETAILS - recover.dwg  
PLOT DATE: 07/10/18  
PLOT BY: C:\user



① (E) SINGLE LINE DIAGRAM



② (N) SINGLE LINE DIAGRAM

SHEET NOTES:

- ① KAIC RATING FOR METER EQUIPMENT AND PANELS SHALL BE CONFIRMED WITH UTILITY COMPANY PRIOR TO PURCHASE
- ② REFER TO ELECTRICAL SITE PLAN SHEET E2.2 & FEEDER SCHEDULE FOR CONDUIT & WIRE INFORMATION

LOWELL PARK					
FIELD	POLE ID	LED LUMINAIRES			REMARKS
		MOUNTING HEIGHT	QUANTITY PER POLE	LOAD, WATTS PER FIXT	
BASEBALL FIELD	A1	70'	3	1150	3450
	A2	70'	3	1150	3450
	B1	70'	4	1150	4600
	B2	70'	4	1150	4600
	C1	70'	5	1150	5750
	C2	70'	4	1150	4600
	B4	70'	4	1150	4600
SOFTBALL FIELD	A3	60'	3	1150	3450
	A4	60'	3	1150	3450
	B3	70'	4	1150	4600
	B4	70'	4	1150	4600
BASKETBALL COURT	F1	30'	2	594	1188
	F1	30'	2	594	1188
	F2		2	594	1188
AREA LTS					
RESTROOM BLDG					
TOTAL:					51902

WITH POWER FACTOR 51902 X 1.25 = 64878 W  
 MIN LOAD: 58938 : 240 = 270 A

95% CD SET



BALLFIELD WIRING HAZARD MITIGATION AND LIGHTING PROJECT, CITY OF OAKLAND

LANDSCAPE ARCHITECT  
**Dillingham Associates**  
 Landscape Architects  
 2927 Newbury Street  
 Berkeley, California 94703  
 tel 510.548.4700 fax 510.548.0265  
 www.dillinghamlandarch.com



ZEIGER ENGINEERS, INC.  
 ELECTRICAL CONSULTANTS  
 478 3RD STREET, OAKLAND, CA 94607  
 TEL 510-452-9391 FAX 510-452-0661  
 CHECKED BY - OL  
 DESIGNED BY - RZ  
 DRAWN BY - AG

No.	DATE	BY	REFERENCE

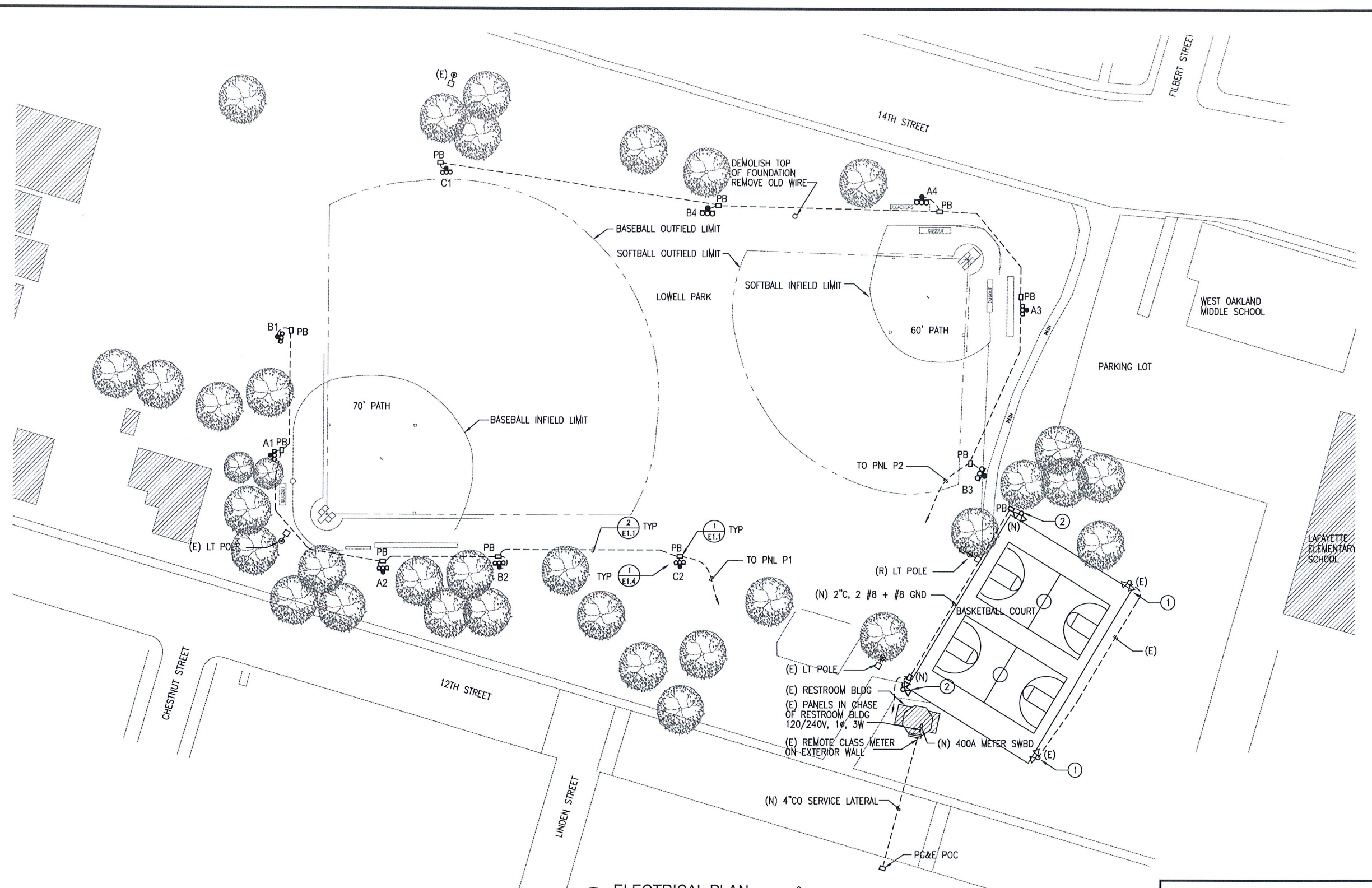
SINGLE LINE DIAGRAM  
 LOWELL PARK  
 1180 14TH STREET  
 OAKLAND, CA 94607

PROJECT NO.	
SCALE: HOR: VERT:	SHEET NO. E2.1
DATE: 01/08/2018	OF

DRAWING NAME: V:\94001 - Current\94330 - Oakland Ballfields\4330-02-1-LOWELL PARK-81.Dwg  
 PLOT DATE: 08-14-18  
 PLOTTED BY: C:\User

**SHEET NOTES:**

- ① REMOVE OLD LUMINAIRES, REPLACE WITH (N) LED LUMINAIRES BY NLS LIGHTING VUE SERIES 594W
- ② NEW 30' POLE WITH LED LUMINAIRES BY NLS LIGHTING VUE SERIES 594W, CONCRETE FOUNDATION



**1 ELECTRICAL PLAN**  
SCALE: 1"=40'-0"

**95% CD SET**

**CITY OF OAKLAND**  
DEPARTMENT OF ENGINEERING AND CONSTRUCTION  
250 FRANK OGAWA PLAZA, OAKLAND CA, 94612  
(510) 238-3457 • FAX (510) 238-7227

**BALLFIELD WIRING HAZARD  
MITIGATION AND LIGHTING  
PROJECT, CITY OF OAKLAND**

LANDSCAPE ARCHITECT  
**Dillingham Associates**  
Landscape Architects  
2927 Newbury Street  
Berkeley, California 94703  
tel 510.548.4700 fax 510.548.0265  
www.dillinghamlandarch.com



**ZEIGER ENGINEERS, INC.**  
ELECTRICAL CONSULTANTS  
478 3RD STREET, OAKLAND, CA 94607  
TEL 510-452-9391 FAX 510-452-0661  
CHECKED BY - OL  
DESIGNED BY - RZ  
DRAWN BY - AG

No.	DATE	BY	REFERENCE

**ELECTRICAL PLAN**  
**LOWELL PARK**  
1180 14TH STREET  
OAKLAND, CA 94607

PROJECT NO.	
SCALE: HOR: VERT:	SHEET NO. E2.2 OF
DATE: 01/08/2018	

1180.PAR  
 4/30/18  
 4330 [07/10/18]

# Lowell Park Softball And Basketball

Oakland, CA

## Lighting System

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	70'	15'	1	TLC-BT-575	0.58 kW	A
		70'	3	TLC-LED-600	1.74 kW	A
A3-A4	60'	15'	1	TLC-BT-575	0.58 kW	B
		60'	3	TLC-LED-600	1.74 kW	B
B1-B2	70'	15'	1	TLC-BT-575	0.58 kW	A
		70'	4	TLC-LED-1150	4.60 kW	A
B3	70'	15'	1	TLC-BT-575	0.58 kW	B
		70'	3	TLC-LED-1150	3.45 kW	B
B4	70'	15'	1	TLC-BT-575	0.58 kW	B
		70'	4	TLC-LED-1150	4.60 kW	B
C1	70'	15'	2	TLC-BT-575	1.15 kW	A
		70'	4	TLC-LED-1150	4.60 kW	A
C2	70'	15'	2	TLC-BT-575	1.15 kW	A
		70'	3	TLC-LED-1150	3.45 kW	A
<b>10</b>			<b>46</b>		<b>39.16 kW</b>	

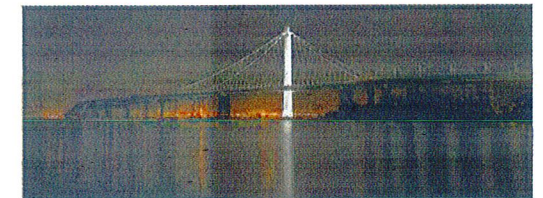
Circuit	Description	Load	Fixture Qty
A	Baseball	25.33 kW	29
B	Softball	13.83 kW	17

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-600	LED 5700K - 75 CRI	580W	65,600	>81,000	>81,000	>81,000	12
TLC-LED-1150	LED 5700K - 75 CRI	1150W	121,000	>81,000	>81,000	>81,000	22
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	12

## Light Level Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Baseball (Infield)	Horizontal Illuminance	35.1	24.9	42.6	1.71	1.41	A	29
Baseball (Outfield)	Horizontal Illuminance	21.5	12.9	30.9	2.39	1.67	A	29
Softball (Infield)	Horizontal Illuminance	30.5	25.6	35.9	1.40	1.19	B	17
Softball (Outfield)	Horizontal Illuminance	23.1	13.2	31.9	2.42	1.75	B	17
Spill - 150'	Horizontal Illuminance	0	0	0.01	168602.20		A,B	46
Spill - 150'	Max Candela (by Fixture)	825	0.67	4371	6496.64	1226.49	A,B	46
Spill - 150'	Max Vertical Illuminance Metric	0.01	0	0.05	18055.03		A,B	46

## From Hometown to Professional



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.



EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15'	TLC-BT-575	1	1	0
				70'	TLC-LED-600	3	3	0
2	B1-B2	70'	-	15'	TLC-BT-575	1	1	0
				70'	TLC-LED-1150	4	4	0
1	C1	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	4	4	0
1	C2	70'	-	15'	TLC-BT-575	2	2	0
				70'	TLC-LED-1150	3	3	0
6	TOTALS					29	29	0

Lowell Park Softball And Basketball  
Oakland, CA

GRID SUMMARY

Name: Baseball  
 Size: 240'/300'/240' - basepath 70'  
 Spacing: 25.0' x 25.0'  
 Height: 3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

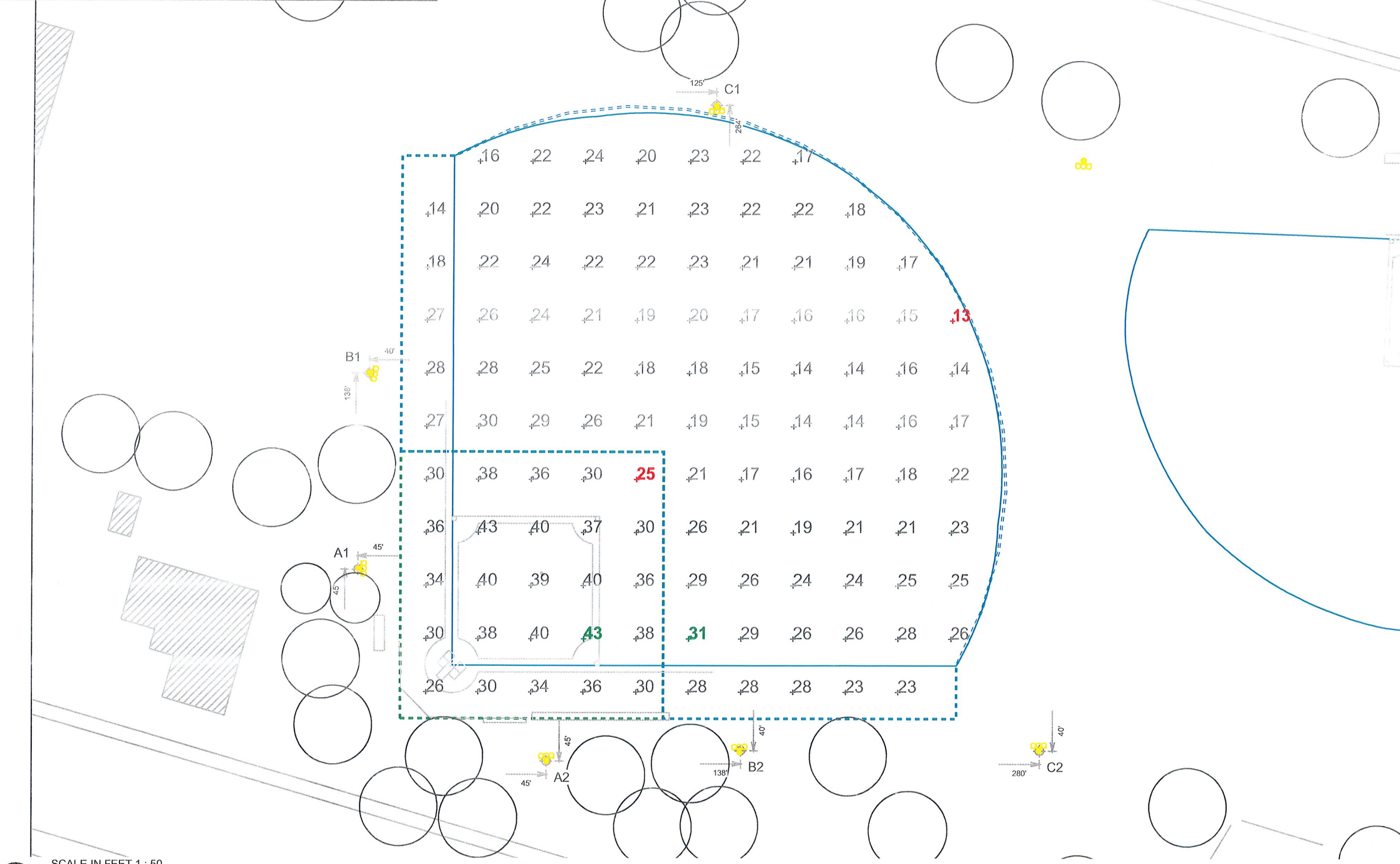
	Infield	Outfield
Guaranteed Average:	30	20
Scan Average:	35.1	21.5
Maximum:	42.6	30.9
Minimum:	24.9	12.9
Avg / Min:	1.41	1.66
Guaranteed Max / Min:	2	2.5
Max / Min:	1.71	2.39
UG (adjacent pts):	1.28	1.47
CU:	0.67	
No. of Points:	25	88

LUMINAIRE INFORMATION

Color / CRI: 5700K - 75 CRI  
 Luminaire Output: 65,600 / 121,000 / 52,000 lumens  
 No. of Luminaires: 29  
 Total Load: 25.33 kW

Luminaire Type	Lumen Maintenance		
	L90 hrs	L80 hrs	L70 hrs
TLC-LED-600	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per LM-21-13. See Luminaire datasheet for details.

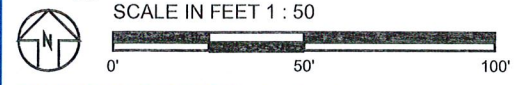


Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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 driver and structures located within 3 feet (1m) of design locations.



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



**EQUIPMENT LIST FOR AREAS SHOWN**

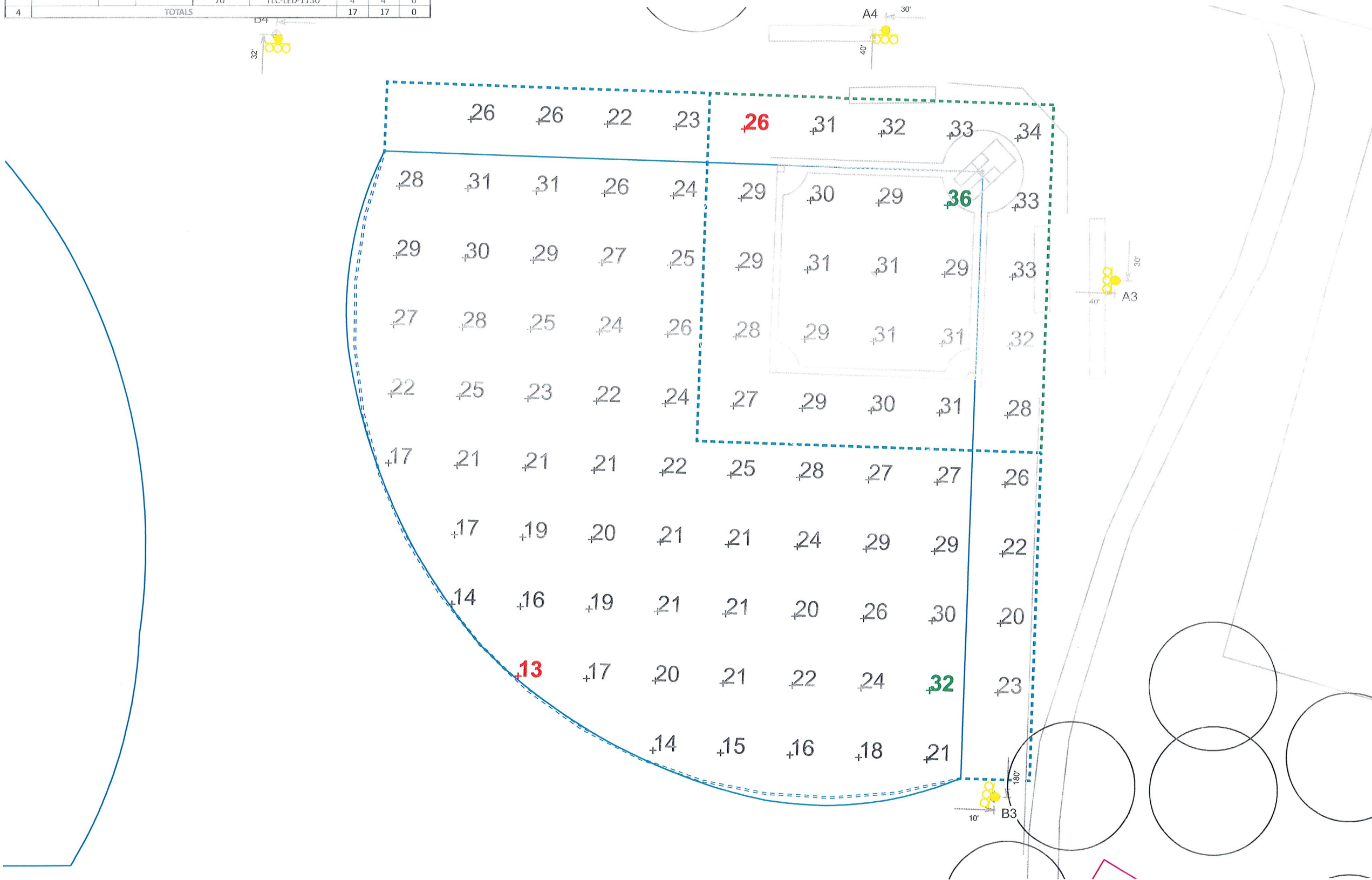
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A3-A4	60'	-	15'	TLC-BT-575	1	1	0
				60'	TLC-LED-600	3	3	0
1	B3	70'	-	15'	TLC-BT-575	1	1	0
				70'	TLC-LED-1150	3	3	0
1	B4	70'	-	15'	TLC-BT-575	1	1	0
				70'	TLC-LED-1150	4	4	0
4	TOTALS					17	17	0

**Lowell Park Softball And Basketball**  
Oakland, CA

GRID SUMMARY	
Name:	Softball
Size:	175'/200'/175' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
MAINTAINED HORIZONTAL FOOTCANDLES			
	Infield	Outfield	
Guaranteed Average:	30	20	
Scan Average:	30.5	23.1	
Maximum:	35.9	31.9	
Minimum:	25.6	13.2	
Avg / Min:	1.19	1.76	
Guaranteed Max / Min:	2	2.5	
Max / Min:	1.40	2.42	
UG (adjacent pts):	1.26	1.53	
CU:	0.64		
No. of Points:	25	65	
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	65,600 / 121,000 / 52,000 lumens		
No. of Luminaires:	17		
Total Load:	13.83 kW		
Lumen Maintenance			
Luminaire Type	190 hrs	180 hrs	L70 hrs
TLC-LED-600	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.



**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**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 driver and structures located within 3 feet (1m) of design locations.



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



# Lowell Park Softball And Basketball Oakland, CA

GRID SUMMARY	
Name:	Spill - 150'
Spacing:	30.0'
Height:	3.0' above grade

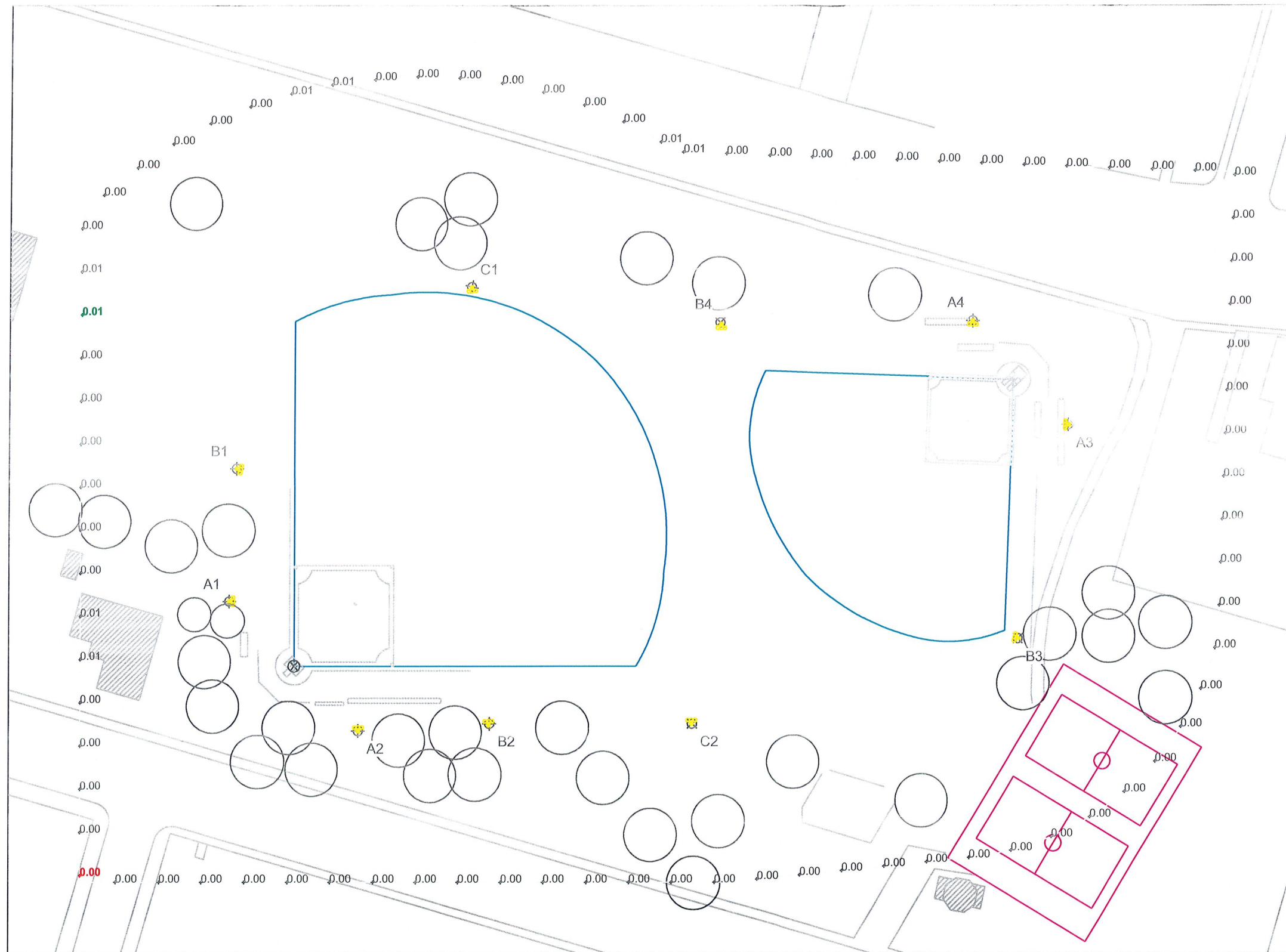
ILLUMINATION SUMMARY			
MAINTAINED HORIZONTAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.002		
Maximum:	0.012		
Minimum:	0.000		
No. of Points:	84		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	65,600 / 121,000 / 52,000 lumens		
No. of Luminaires:	46		
Total Load:	39.16 kW		
Lumen Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-600	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
Reported per TM-21-11. See luminaire datasheet for details.			

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**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 driver and structures located within 3 feet (1m) of design locations.



ENGINEERED DESIGN By: D.Alexander • File #162016E • 20-Aug-18

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

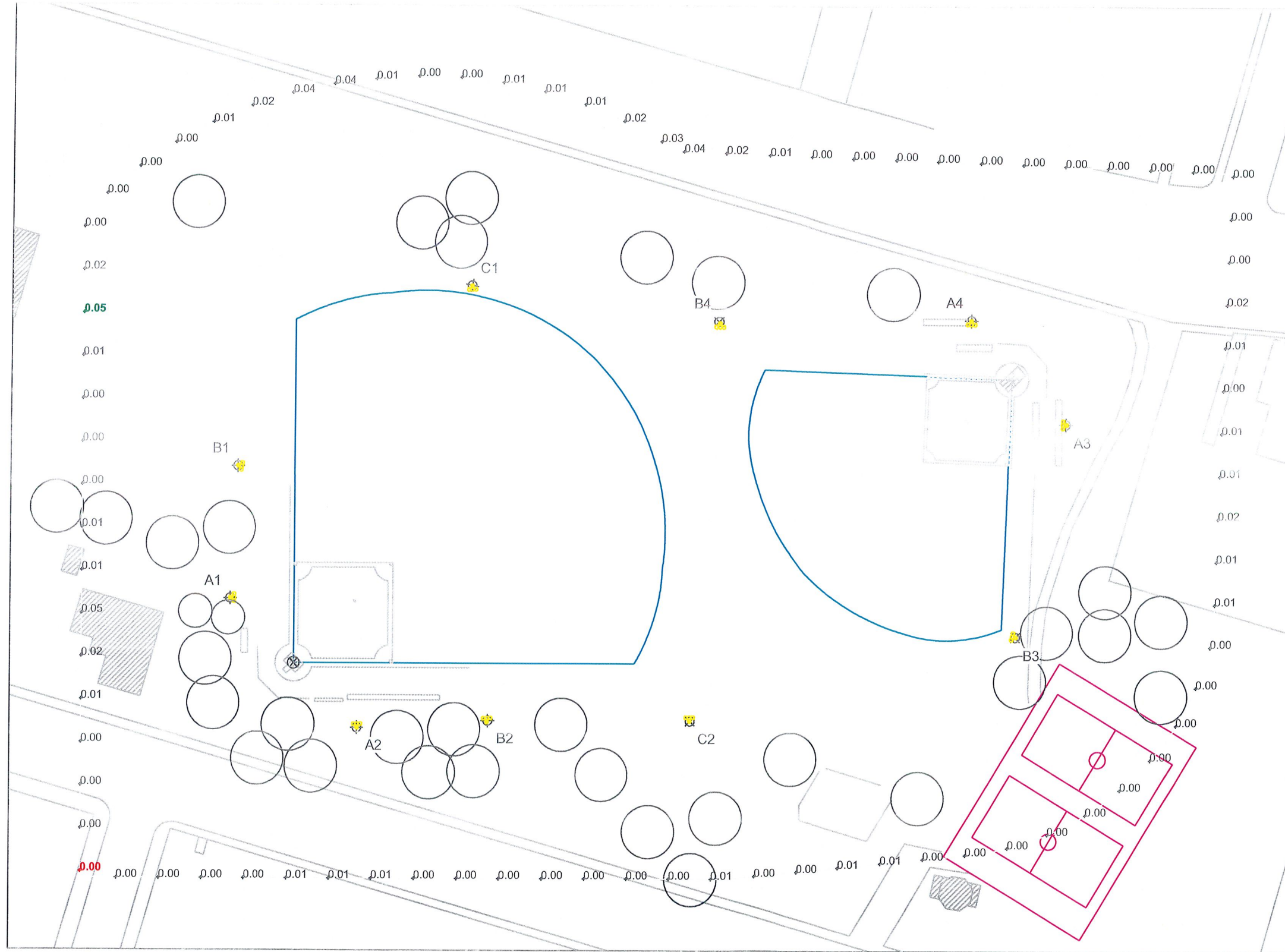


**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.

## ILLUMINATION SUMMARY

**Lowell Park Softball And Basketball  
Oakland, CA**



GRID SUMMARY	
Name:	Spill - 150'
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY			
MAINTAINED MAX VERTICAL FOOTCANDLES			
Entire Grid			
Scan Average:	0.008		
Maximum:	0.050		
Minimum:	0.000		
No. of Points:	84		
LUMINAIRE INFORMATION			
Color / CRI:	5700K - 75 CRI		
Luminaire Output:	65,600 / 121,000 / 52,000 lumens		
No. of Luminaires:	46		
Total Load:	39.16 kW		
	Lumen Maintenance		
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-600	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

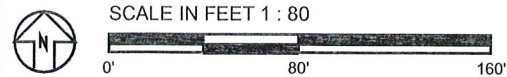
Reported per TM-21-11. See luminaire datasheet for details.

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**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 driver and structures located within 3 feet (1m) of design locations.



ENGINEERED DESIGN By: D.Alexander • File #162016E • 20-Aug-18

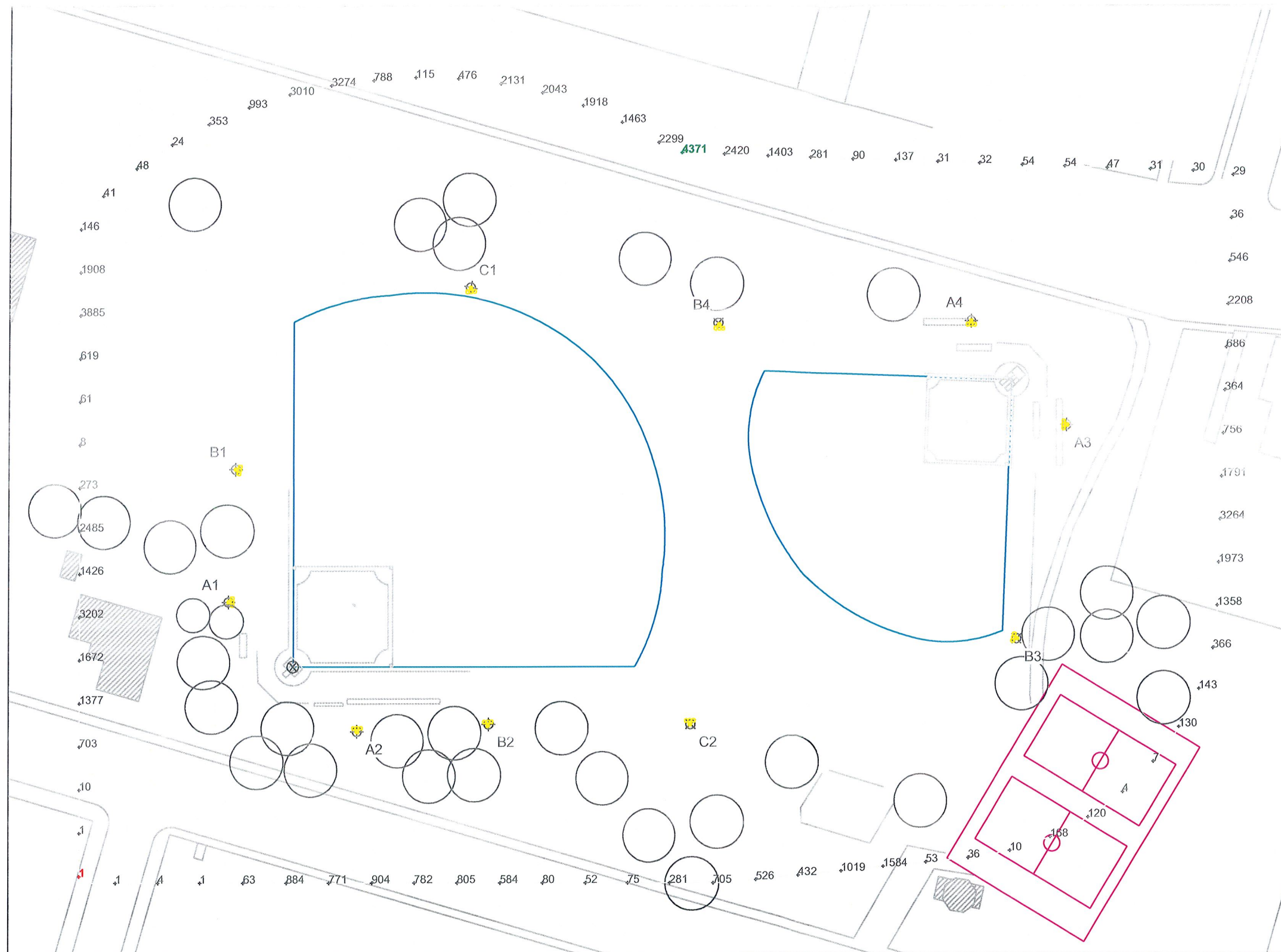
Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.

**ILLUMINATION SUMMARY**

# Lowell Park Softball And Basketball Oakland, CA



GRID SUMMARY	
Name:	Spill - 150'
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED CANDELA (PER FIXTURE)	
Entire Grid	
Scan Average:	825.425
Maximum:	4370.658
Minimum:	0.673
No. of Points:	84

LUMINAIRE INFORMATION	
Color / CRI:	5700K - 75 CRI
Luminaire Output:	65,600 / 121,000 / 52,000 lumens
No. of Luminaires:	46
Total Load:	39.16 kW

Luminaire Type	Lumen Maintenance		
	L90 hrs	L80 hrs	L70 hrs
TLC-LED-600	>81,000	>81,000	>81,000
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

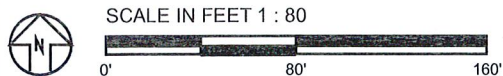
Reported per TM-21-11. See luminaire datasheet for details.

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**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 driver and structures located within 3 feet (1m) of design locations.



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



**We Make It Happen.**

**Lowell Park Softball And Basketball**  
Oakland, CA

**EQUIPMENT LAYOUT**

**INCLUDES:**

- Baseball
- Softball

**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 driver and structures located within 3 feet (1m) of design locations.

**EQUIPMENT LIST FOR AREAS SHOWN**

QTY	LOCATION	Pole		Luminaires		
		CLASS	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY/POLE
2	A1-A2	LSS70A	-	15'	TLC-BT-575	1
				70'	TLC-LED-600	3
2	A3-A4	LSS60AA	-	15'	TLC-BT-575	1
				60'	TLC-LED-600	3
3	B1-B2, B4	LSS70B	-	15'	TLC-BT-575	1
				70'	TLC-LED-1150	4
1	B3	LSS70A	-	15'	TLC-BT-575	1
				70'	TLC-LED-1150	3
1	C1	LSS70B	-	15'	TLC-BT-575	2
				70'	TLC-LED-1150	4
1	C2	LSS70A	-	15'	TLC-BT-575	2
				70'	TLC-LED-1150	3
10	TOTALS					46

**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							
TLC-LED-600	3.4	3.2	3.0	2.6	2.0	1.9	1.5
TLC-LED-1150	6.8	6.5	5.9	5.1	4.1	3.7	3.0
TLC-BT-575	3.2	3.0	2.8	2.4	1.9	1.7	1.4



ENGINEERED DESIGN By: D.Alexander • File #162016E • 20-Aug-18

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



Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.

**Lowell Park Softball And Basketball**  
Oakland, CA

**ENVIRONMENTAL GLARE IMPACT**

**Summary**

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

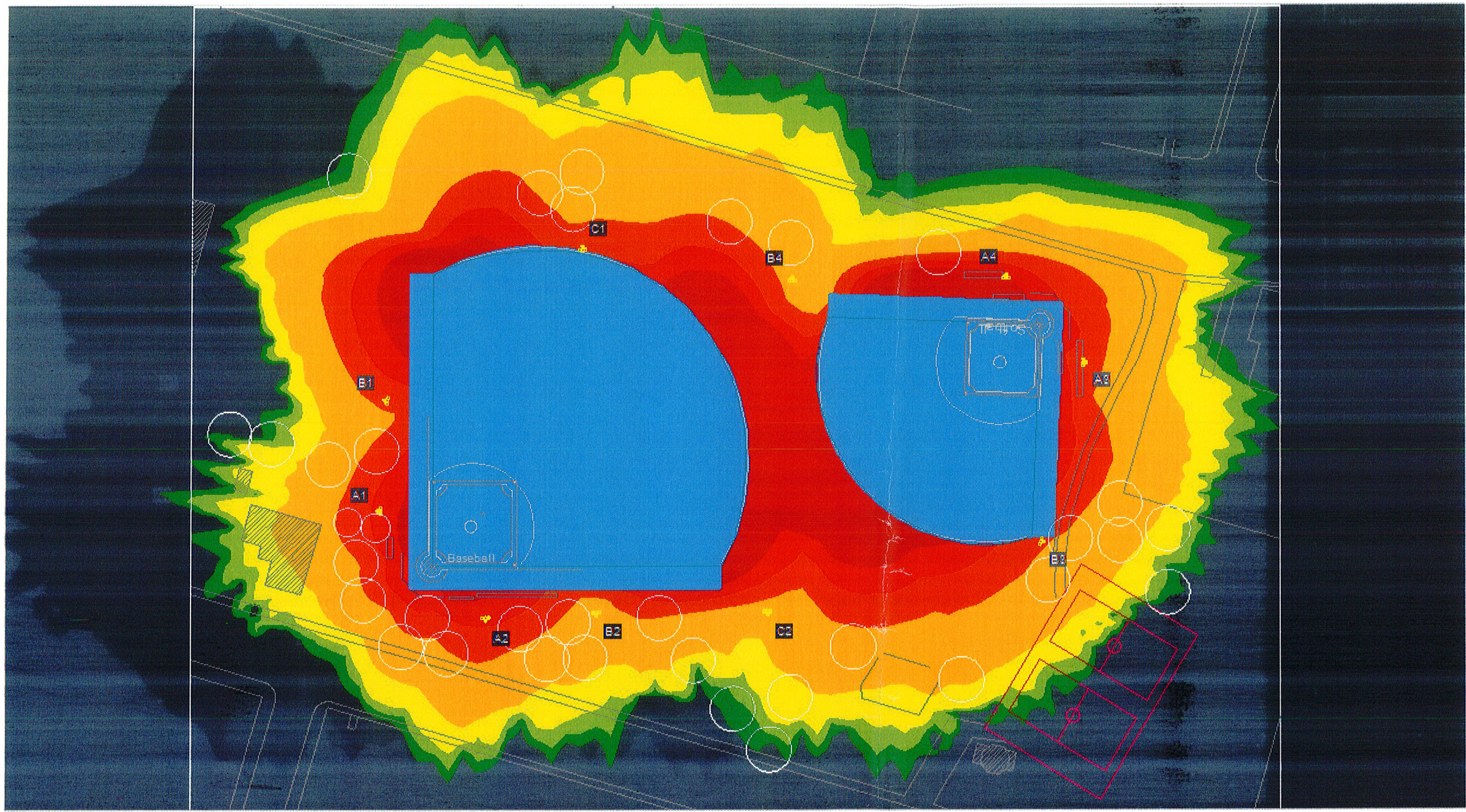
**GLARE**

**Candela Levels**

**High Glare: 150,000 or more candela**  
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

**Significant Glare: 25,000 to 75,000 candela**  
Equivalent to high beam headlights of a car.

**Minimal to No Glare: 500 or less candela**  
Equivalent to 100W incandescent light bulb.



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2018 Musco Sports Lighting, LLC.