



**DEVELOPMENT SERVICES  
CURRENT PLANNING**

500 East Third Street, Suite 310 • Loveland, CO 80537  
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[www.cityofloveland.org](http://www.cityofloveland.org)

**PRELIMINARY FINDINGS AND DETERMINATIONS**  
**Type II Zoning Permit**  
**Foothills Solar Park and Substation**  
**Special Review #915**

**Posted: January 5, 2016**

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<b>TITLE:</b>	Foothills Solar Park and Substation, Special Review #915
<b>LOCATION:</b>	The site is located south of West 29th Street, north of West 22nd Street, and west of Mehaffey Park
<b>APPLICANT:</b>	City of Loveland Power Division Briana Reed-Harmel
<b>STAFF CONTACT:</b>	Kerri Burchett, Current Planning
<b>APPLICATION TYPE:</b>	Special Review #915
<b>STAFF RECOMMENDATION:</b>	Staff recommends that the Current Planning Manager preliminarily approve this special review allowing for the construction of a new substation and solar facility, subject to the conditions and corrections listed in Sections VIII and IX of this report.

## **I. ATTACHMENTS**

1. Vicinity Map
2. Special Review/Site Development Plan
3. Site Renderings
4. Neighborhood meeting notes

## **II. SITE DATA**

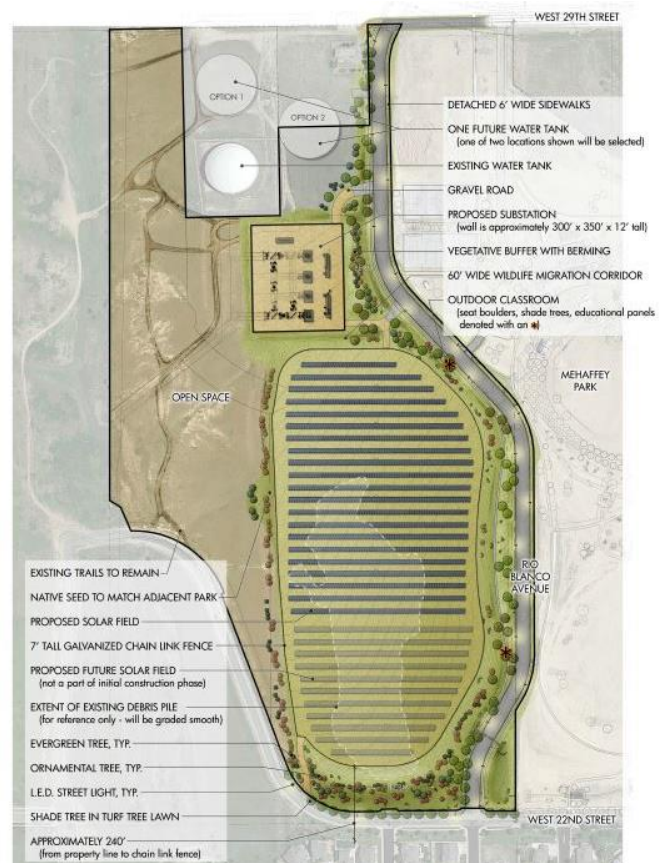
EXISTING USE ..... Vacant  
PROPOSED USE ..... Solar and Substation Utility  
EXISTING ZONING AREA (acres) ..... DR – Developing Resources (52.6 acres)

EXISTING ADJACENT ZONING & USE- North..... DR – Developing Resource – water tank  
EXISTING ADJACENT ZONING & USE - East ..... PP – Public Park – Mehaffey Park  
EXISTING ADJACENT ZONING & USE- South..... PUD – Meadowbrook Ridge, single family residential  
EXISTING ADJACENT ZONING & USE - West..... PUD - Hunters Run West – residential approved,  
currently vacant  
UTILITY SERVICE – WATER..... City of Loveland  
UTILITY SERVICE – SEWER ..... City of Loveland  
UTILITY SERVICE – ELECTRIC ..... City of Loveland

## **III. PROJECT DESCRIPTION**

The City Power Division is proposing to develop a 2.4 acre substation and a 19 acre solar facility on 52.6 acres of property located between West 22<sup>nd</sup> Street and West 29<sup>th</sup> Street, west of Mehaffey Park. The property is currently vacant and was recently rezoned to DR-Developing Resources. The facility would replace the City's Idylwilde hydroelectric facility that was significantly damaged during the 2013 flood.

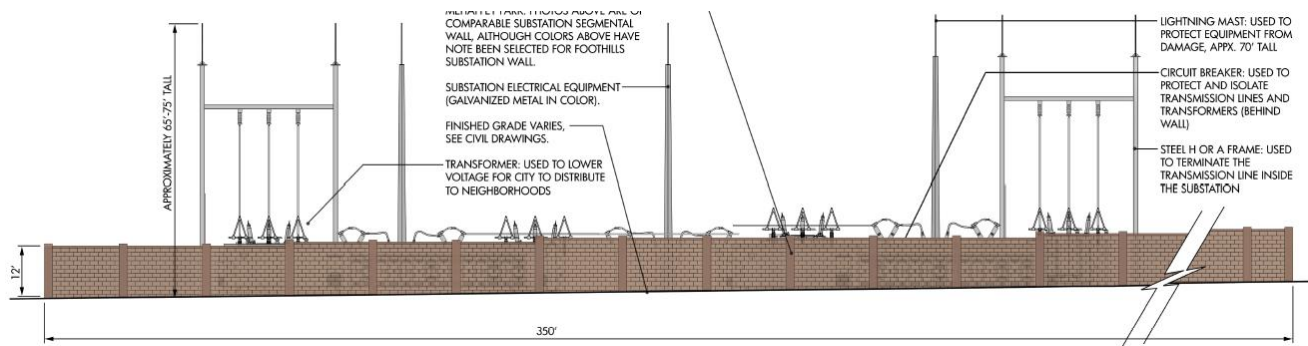
The special review plans, included as **Attachment 2** to this report, show the location of the substation near the existing water tank on W. 29<sup>th</sup> Street. The solar facility would be situated south of the substation. Two options for a new future water tank, located near the existing tank on 29<sup>th</sup> Street, are also shown, however the tank is not included in the special review proposal. The remaining property along the western portion of the site, which constitutes approximately 32% of the site, would remain as open space.



Development of the site would include the construction of Rio Blanco Avenue, a major collector road on the east side of the property. This road will serve as a north and south fairway between W. 22<sup>nd</sup> and W. 29<sup>th</sup> Streets. It will consist of two lanes, one going each direction with bike lanes, sidewalks and parallel parking available on each side of the road. Rio Blanco will also provide an entrance to Mehaffey Park as well as on-street parking for the park.

### Substation Facility

The location for the new substation was chosen by the Power Division based on the expected growth in the northwestern portion of the city. The facility would replace the need for significant upgrades to the West Substation, located north of the Big Thompson River on Namaqua Road, which was affected during the September 2013 flood. Development of the new substation would include the installation of typical substation utility materials and transmission lines. A 12 foot tall masonry wall would screen much of the lower equipment within the facility. Transmission lines inside of the wall would be a maximum of 75 feet tall, including lightning masts used to protect the equipment from damage.



In terms of the wall appearance around the substation, the adjacent Home Owner Associations were provided 3 design and landscaping options as part of the public outreach efforts from the Power Division including:

- Decorative art wall with low landscaping and no berms in front of the wall so that the art is a visible to the public;
- Stone veneer wall matching the Mehaffey Park stone with landscaping meeting the standards in the Municipal Code and no berms; and
- Standard masonry wall with berms, landscaping and screening exceeding the quantity and height standards in the Municipal Code.



The 3 HOA's (Meadowbrook Ridge, Hunter's Run, and Quail Run) voted in separate meetings on each option and resoundingly chose the option with additional landscaping and berms (94% vote). The special review plans include landscaping and berms clustered around the east elevation of the wall, facing Rio Blanco. The landscaping would consist of both coniferous plantings ranging in size from 6-8 feet in height, deciduous trees ranging in caliper from 2 to 3 inches, and deciduous shrubs ranging in size from 5 feet to 15 feet tall when mature. Due to utility conflicts with water and transmission lines, landscaping adjacent to the west of the wall

was not possible. Land directly west of the site will be preserved as open space, as shown in the special review, and will continue to be used for informal pedestrian trails.

### **Solar Facility**

Concern over the view of the solar facility and fencing has been voiced by a few neighbors in the Meadowbrook Ridge Subdivision during the rezoning process and at the special review neighborhood meeting. Knowing that fencing and screening were a key issue, the Power Division provided 3 options to the HOA's with different fencing materials and landscaping along W. 22<sup>nd</sup> Street including:

- 7 foot chain link fence with landscaping and berms greatly exceeding the Municipal Code standards;
- 7 foot black wrought iron fence on W. 22<sup>nd</sup> Street with landscaping meeting the Municipal Code standards and lower berms; and
- 7 foot grey wrought iron fence on W. 22<sup>nd</sup> Street with landscaping meeting the Municipal Code standards and lower berms.

Perspectives of the site for each option from view corridors on W. 22<sup>nd</sup> Street were provided and the HOAs selected the chain link fence with significant landscaping and higher berms, as shown in the rendering below (75% vote). After the neighborhood meeting, the Power Department continued to look into additional alternative fencing costs, however cost differences between chain link and higher quality fences were substantial. The special review plans incorporate the increased landscaping and higher berms with the chain link fencing as selected by the HOA's.





#### **IV. KEY ISSUES**

There are still concerns voiced from a few members of the neighborhood regarding the use of the property as a solar and substation facility, compatibility with the residential neighborhood, and the use of chain link fencing along W. 22<sup>nd</sup> Street. The city's development review staff has not identified key issues associated with this special review application in terms of compliance with the standards in the Municipal Code.

#### **V. BACKGROUND**

2001                The PUD General Development Plan for Meadowbrook Ridge was approved by City Council. The GDP permitted residential uses within the property.

April 2015        The City's Power Division purchased 52.6 acres of property (Development Areas D, F, and G) in the Meadowbrook Ridge PUD.

November 3, 2015 City Council approved the rezoning of the property from PUD to DR Developing Resources on second reading.

#### **VI. STAFF, APPLICANT, AND NEIGHBORHOOD INTERACTION**

**A. Notification:** A letter advertising the neighborhood meeting was sent out by the City Power Division on December 2, 2015 to all neighbors within the "Neighborhood" as defined in Section 18.40.010.C of the Loveland Municipal Code and those who attended the public hearings for the rezoning. Meeting notice signs were also posted on the property on December 2, 2015.

**B. Public Website:** A public website was created where citizens can access information regarding the Foothills Substation and Solar Facility projects. The website address is [www.cityofloveland.org/Foothills](http://www.cityofloveland.org/Foothills). This website is continually updated with new information as the project continues. The informational items included on this site are:

- Public meeting schedules
- Meadowbrook Ridge General Development Plan documents
- Foothills annexation and rezoning documents
- Foothills site Development Plan and Special Review documents
- Substation and solar facility documents
- Items from Loveland Utilities Commission meetings
- Items from City Council meetings
- Project timelines
- Frequently asked questions on the projects
- Neighborhood meeting notes

**C. Neighborhood Response:** A neighborhood meeting was held at 5:30 on December 17, 2015 in the Public Works Administration Building. Twenty four members of the neighborhood attended the meeting along with City staff and consultants. Questions from the neighborhood centered around landscaping (location, watering and screening), project timeline, questions on the renderings prepared by the consultant, fencing type and location, use of the property for utilities as opposed to a civic use next to the park, comprehensive plan designations, technical questions on the solar panels, reflectivity, noise, lighting, vandalism, and the appeal process. The Power Division representatives and their consultants addressed the questions. Generally, there were positive comments from the neighborhood about the screening of the facility and the public outreach efforts from the Power Division. There were members of the neighborhood that voiced concerns over the use of the property for utilities, the compatibility with the neighborhood, and the material of the fencing.

**D. Project Schedule**

1. Special Review #915 was filed with the Current Planning Division on August 6, 2015.
2. A neighborhood meeting for the rezoning of the property was held on September 10, 2015 in the Public Works Administration Building. 99 neighbors attended the meeting.
3. Meetings were held with the homeowner associations for Quail Run, Hunters Run and Meadowbrook Ridge to provide an overview of the proposed projects and for the City to receive feedback on the design elements from the HOAs. These meetings were held October 6, 7 and 12, 2015 and were attended by 63 neighbors in total.
4. The rezoning of the property was unanimously approved by City Council at a public hearing on October 20, 2015. Second reading was approved on November 3, 2015.
5. Meetings were held again with the homeowner associations for Quail Run, Hunters Run and Meadowbrook Ridge to present design options for the landscape, berming and fencing around the substation and solar project sites. Each attendee was asked to vote on their first and second choice option for both the solar and substation sites. These meetings were held December 3, 7 and 8, 2015 and were attended by 52 neighbors in total.
6. A neighborhood meeting for the special review was held on December 17, 2015. 24 neighbors attended.
7. The staff preliminary findings and determination was posted on January 5, 2016.
8. The public review period for the staff preliminary findings and determination is from January 6, 2016 to January 14, 2016.
9. The final findings and determination for the Special Review will be posted on January 18, 2016 and the appeal period will be from January 18, 2016 to January 28, 2016.

## **VII. FINDINGS AND ANALYSIS**

**Finding 1.** *That the proposed special review use meets the purposes set forth in Section 18.04.010 of the Loveland Municipal Code.*

The proposed development and construction of the solar and substation facility would meet the purposes set forth in Section 18.04.010 of the Loveland Municipal Code, would not create unsafe or unhealthy conditions and will generally promote the health and welfare of Loveland citizens in a utility sense. The development proposal would be consistent with the provision of current and future public infrastructure requirements and needs for the City as a whole.

**Finding 2.** *That the effects of the proposed special review use on the surrounding neighborhood and the public in general will be ameliorated.*

The effects of this use on the surrounding property owners will be lessened through the site layout, landscaping and screening of the project. The substation location was located near the existing water tank to lessen the impact on surrounding neighborhoods. Multiple outreach efforts to the adjacent Home Owners Associations (HOAs) have been undertaken by the Power Division to solicit feedback on the project. Options for both the substation wall design and fencing around the solar panels were presented to the three adjacent HOAs. Each person attending the meeting was given the opportunity to vote on their design preference, which shaped the end project design for the special review. Significant landscaping and berming is proposed to be clustered along W. 22<sup>nd</sup> Street and at the substation location. The view of these areas along the road will present a heavily landscaped edge. On Rio Blanco, between the substation and W. 22<sup>nd</sup> Street, the landscaping will be a combination of deciduous and evergreen trees meeting the City requirements and designed to present an edge similar to the approved landscape plan of Mehaffey Park. Meandering sidewalks will also be developed along Rio Blanco, mirroring Mehaffey Park. The development of Rio Blanco Avenue, new walkways and access to the park will provide for enhanced pedestrian vehicular connectivity for the area.

**Finding 3.** *That in assessing the potential affects of the proposed special review use, at a minimum, the following matters have been considered:*

**3a.** *Type, size, amount, and placement of landscaping;*

The landscape plan identifies bufferyards and screening proposed with the development. Landscaping quantities exceed the bufferyard standards along both Rio Blanco Avenue and W. 22<sup>nd</sup> Street, clustering additional plantings in areas identified by the neighborhood as needing more screening. Plant sizes meet or exceed the sizes required in the Municipal Code. The taller trees clustered along Rio Blanco Avenue in front of the substation wall and along W. 22<sup>nd</sup> Street are intended to provide additional screening on day one of the facility. After the neighborhood meeting, the Power Department proposed to increase the number of coniferous trees along Rio Blanco Avenue south of the substation to add more visual interest during winter months. The additional trees will be shown on the landscape plan with the final findings. The landscaping has been

designed to be water wise with plant species requiring less watering. The Power Division has indicated that a hydrozone plan will be submitted prior to construction of the facility.

**3b.** *Height, size, placement, and number of signs;*

Educational signs are proposed to be installed for the facility and will be similar in design and appearance to the educational signs installed at Mehaffey Park. The Power Department is looking into the possibility of using electronic educational kiosks powered by the solar field. No additional monument signs are proposed.

**3c.** *Use, location, number, height, size, architectural design, materials, and colors of buildings;*

Development of the substation will include utility equipment and transmission lines that have a maximum height of 75 feet. A 12 foot masonry wall would be constructed around the facility, screening much of the lower equipment. The colors of the masonry wall will be similar to colors used at Mehaffey Park. Screening and berming along Rio Blanco Avenue in front of the wall is proposed, as requested by the neighborhood, and will help soften the appearance of the wall along the roadway.

The solar panels will be a maximum height of 10 feet and will be designed to rotate with the sun. The solar portion of the facility will be surrounded by a 7 foot chain link fence on all sides. Along W. 22<sup>nd</sup> Street, tall berms and enhanced landscaping will be installed as requested by the neighborhood. The additional landscaping and berms will soften and in some instances completely screen the fence as viewed from Meadowbrook Ridge. Landscaping will also wrap around the western and eastern edges of the fence. Fencing in these locations will be visible, but will be softened by a variety of evergreens and deciduous trees.

**3d.** *Configuration and placement of vehicular and pedestrian access and circulation;*

Configuration and placement of vehicular and pedestrian access and circulation is compliant with City standards. A 20 foot gravel access road is proposed off of Rio Blanco Avenue to service the substation and solar facility. Detached sidewalks will be provided on Rio Blanco Avenue, mirroring the sidewalks installed with Mehaffey Park and along W. 22<sup>nd</sup> Street. Existing trails on the property will continue to be maintained by the Parks Department. Both Transportation and Fire Department staff have reviewed the special review plans and have indicated compliance with the City's Adequate Communities Facilities Ordinance.

**3e.** *Amount and configuration of parking;*



On-street parking will be available along Rio Blanco Avenue. A new entrance to Mehaffey Park will be installed from Rio Blanco Avenue with the project, at the location of the existing parking lot. Busses or vehicles visiting the site for educational purposes will be able to use either on-street parking or the parking lot for Mehaffey Park. No additional parking spaces are required.

**3f.** *Amount, placement, and intensity of lighting;*

The solar and substation facility is proposed to be non-illuminated with the exception of security lights on the substation that will be on a motion sensor. A photometric plan was not submitted as part of the special review application due to no permanent lights being proposed. Typical street lighting consisting of full cut-off cobra heads will be installed along Rio Blanco Avenue in compliance with the lighting regulations in the Municipal Code.

**3g.** *Hours of operation;*

Once constructed, the facility would operate continuously. Both the solar facility and the substation are unmanned facilities and will be accessed as needed in emergency and maintenance periods.

**3h.** *Emissions of noise, dust fumes, glare and other pollutants.*

City Power staff and consultants for the substation and solar facility have indicated that there will not be discernable noise from the facility. In terms of glare from the solar panels, consultants from Namaste, who are designing the solar facility, indicated at the neighborhood meeting that the solar panels will be much less reflective than a window on a residential house and will not cause excessive glare to the neighborhood;.

**Finding 4.** *Except as may be varied in accordance with this special review permit, the special review site plan conforms to the restrictions and regulations set forth in the Loveland Municipal Code for the zoning district in which the special review use is located.*

The proposed special review meets this finding. Through the special review, a 12 foot masonry wall would be approved to help screen and provide security for the substation. This wall height is greater than typical wall heights in the city, however it is required by electrical code and is desirable to help screen and provide security to the facility. A 12 foot masonry wall is customary with substation facilities. The proposed site, infrastructure and landscape standards comply with all normal applicable restrictions and regulations set forth in the site development performance standards and guidelines.

**Finding 5.** *The special review site plan meets the requirements set forth in the Section 16.41 – Adequate Community Services – of the Loveland Municipal code.*

**Transportation:** Staff believes that this finding can be met, due to the following:

- A Traffic Impact Worksheet has been submitted with the proposed special review application which demonstrates that the transportation system, incorporating typical expected improvements, can adequately serve the land uses proposed. All future development applications within this area are required to demonstrate compliance with the Larimer County Urban Area Street Standards (LCUASS) and the Adequate Community Facilities (ACF) Ordinance for transportation. Therefore, this proposed development will not negatively impact traffic in the area.

**Fire:** Staff believes that this finding can be met, based on the following facts:

- The development site will comply with the requirements in the ACF Ordinance for response distance requirements from the first due Engine Company.
- The development of the solar field and electrical substation will not negatively impact fire protection for the subject development or surrounding properties.

**Water/Wastewater:**

This development is situated within the City's current service area for both water and wastewater. The Department finds that the Development will be compliant to ACF for the following reasons:

- The proposed development will not negatively impact City water and wastewater facilities.
- The proposed public facilities and services are adequate and consistent with the City's utility planning and provides for efficient and cost-effective delivery of City water and wastewater service.

**Stormwater:** Staff believes that this finding can be met, due to the following:

- This project complies with the Adequate Community Services ordinance outlined in the Loveland Municipal Code, Section 16.41.140.

**Parks and Recreation:** Staff believes that this finding can be met, due to the following:

- Of the 52.6 acres being removed from the P.U.D., only 20.4 acres will be developed at this time, with 16.6 acres being noted to remain perpetually in an undeveloped state. This includes existing trails that will connect to Meadowbrook Ridge Natural Area, Mehaffey Park, and future residential developments to the north and west. The Parks and Recreation Department (Open Lands Division) will maintain these trails for use by the public. Open Lands anticipates improvements and maintenance to occur concurrently with the construction of Hunter's Run West residential development to the west of this site (or sooner). Because of the open space and trails proposed, the applicant will meet the intent of providing adequate community facilities.

**Building:** Staff believes that this finding can be met, due to the following:

- The proposed construction of the electrical substation and solar field will not negatively impact surrounding properties in regard to the adopted building codes. The proposed projects will be submitted and reviewed for building permits.

## **VIII. CONDITIONS OF APPROVAL**

### **Transportation**

1. All public improvements shall comply with the Larimer County Urban Area Street Standards (LCUASS).
2. The developer agrees to acquire and dedicate, at no cost to the City, any rights-of-way necessary for the required street improvements associated with this development.
3. Prior to the issuance of any building permits within the Foothills Solar and Substation development property, pursuant to the provisions in Section 16.40.010.B of the Loveland Municipal Code, the Developer shall design and construct the following public improvements unless already designed and constructed by others:
  - a) Rio Blanco Avenue shall be designed and constructed from 22nd Street to the east property boundary line to major collector street standards including full width pavement, curb & gutter and sidewalk on both sides as shown on the City approved Public Improvement Construction Plans for Foothills Solar and Substation, Vanguard-Famleco Seventeenth Subdivision.

## **IX. CORRECTIONS**

### **Water/Wastewater:**

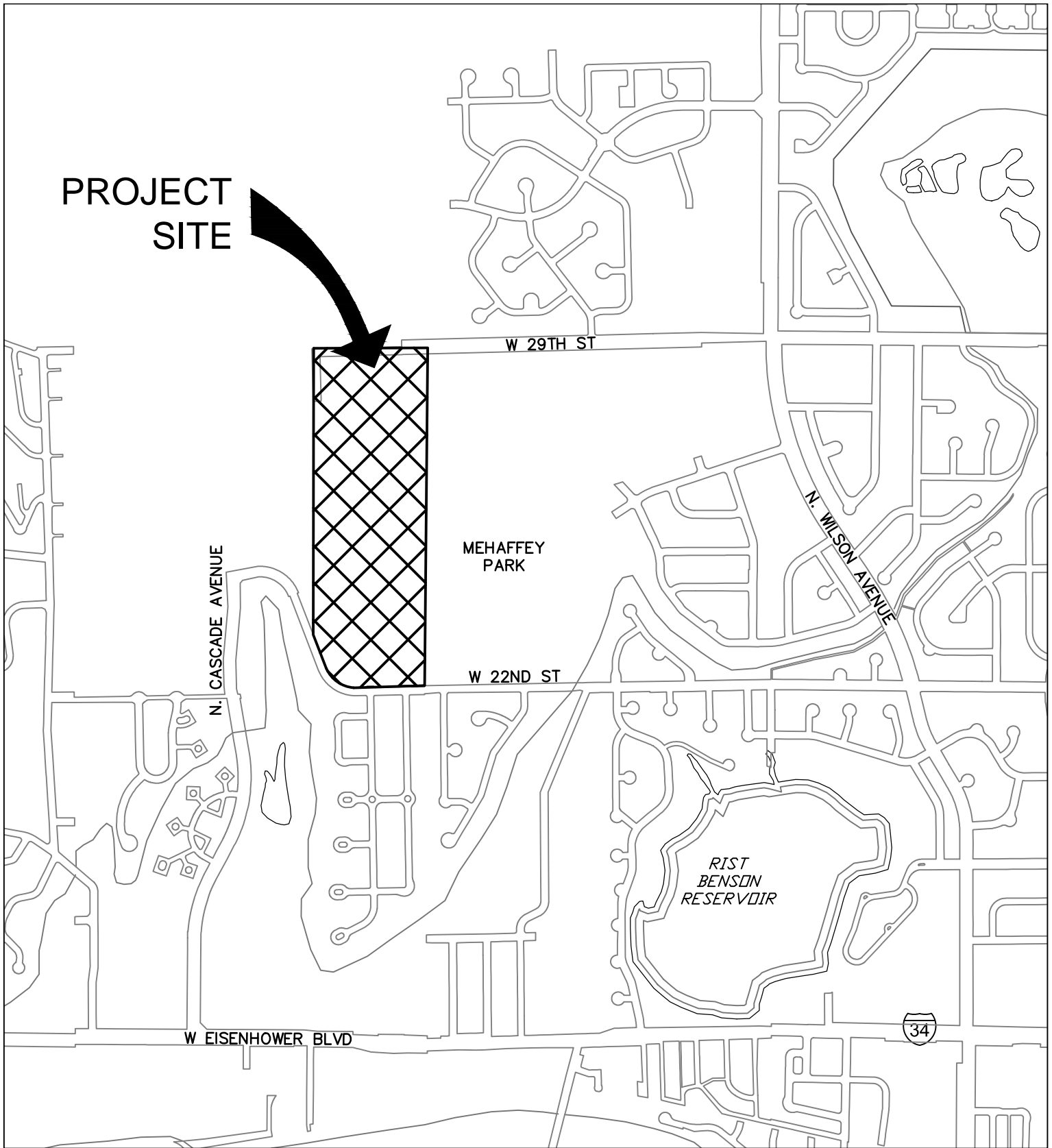
1. Sheet C200-The crossing is missing the insulation design as previously requested.
2. Landscape plan -- do not add trees (PI HE) directly east of the east side of the pump station building.
3. Landscape plan -- please add the Total Irrigated Area amount on the Landscape plan.

### **Stormwater**

1. Please upload the UD&FCD data sheet, along with the location and the surface area at design volume information, into the new state website database for the proposed water quality pond.

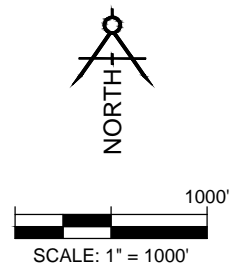
### **Parks and Recreation**

1. The sidewalk connections completed near Sta. 16+00 and Sta. 24+00 need to be revised per redline.



# FOOTHILLS SOLAR & SUBSTATION VICINITY MAP

JULY 31, 2015





SPECIAL REVIEW / SITE DEVELOPMENT PLANS FOR:

FOOTHILLS SOLAR PARK AND SUBSTATION

2601 - 2621 RIO BLANCO AVE

SPECIAL REVIEW #915

LEGAL DESCRIPTION

A PARCEL OF LAND BEING A PORTION OF TRACT C, VANGUARD-FAMLECO SECOND ADDITION TO THE CITY OF LOVELAND AS RECORDED MAY 5, 1982 AT BOOK 2166 PAGE 658 AS RECEPTION NO. 456846 OF THE RECORDS OF LARIMER COUNTY, SITUATE IN THE NORTHWEST QUARTER (NW1/4) OF SECTION NINE (9), TOWNSHIP FIVE NORTH (T.5N.), RANGE SIXTY-NINE WEST (R.69W.) OF THE SIXTH PRINCIPAL MERIDIAN (6TH P.M.), CITY OF LOVELAND, COUNTY OF LARIMER, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

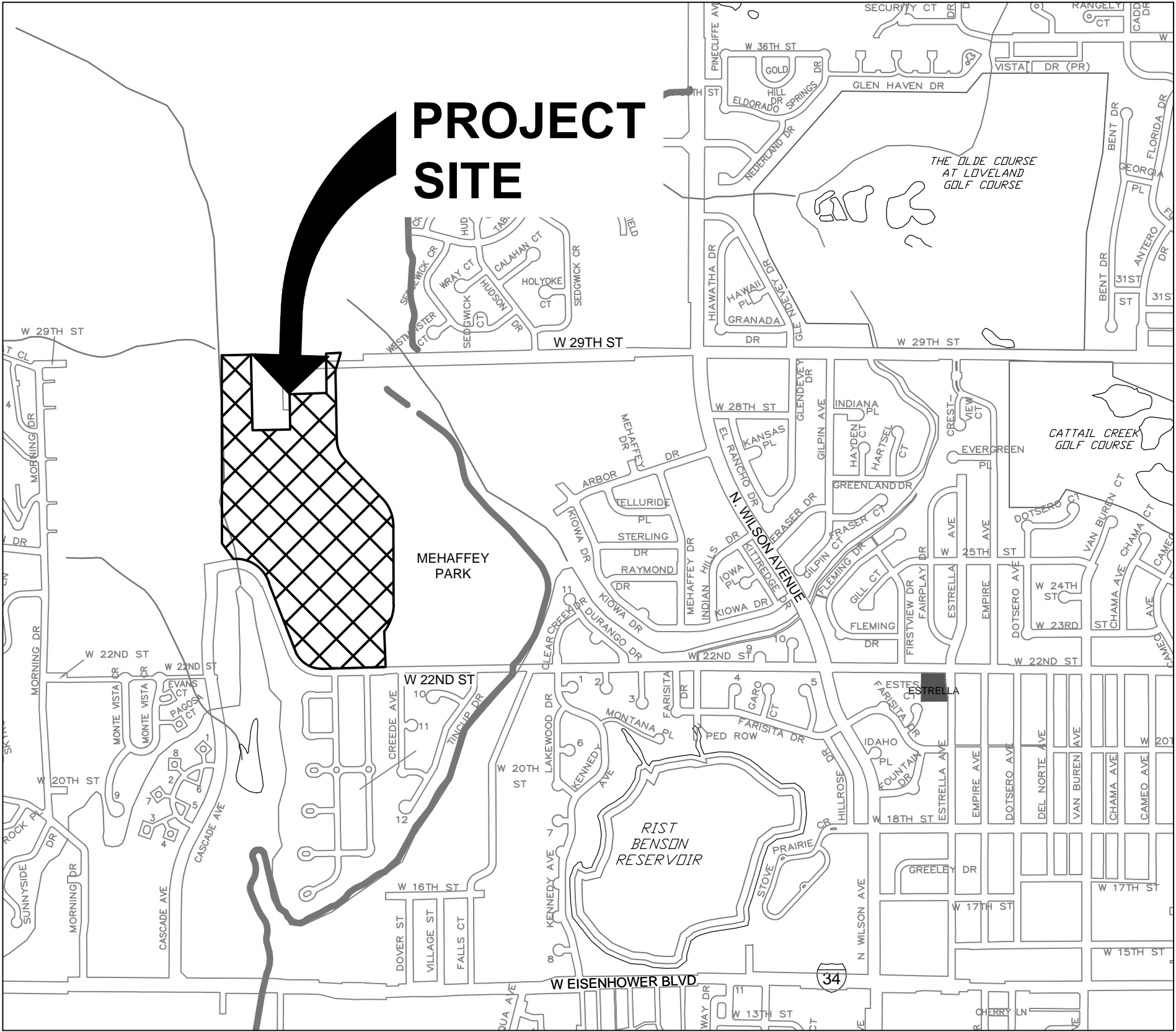
COMMENCING AT THE CENTER QUARTER CORNER OF SAID SECTION 9 AND ASSUMING THE EAST LINE OF THE NW1/4 OF SAID SECTION 9, AS MONUMENTED BY A #6 REBAR WITH A 2.5" ALUMINUM CAP STAMPED LS 34174 ON THE SOUTH END AND A #6 REBAR WITH A 2.5" ALUMINUM CAP STAMPED LS 36479 ON THE NORTH END, AS BEARING NORTH 00°10'56" WEST A DISTANCE OF 2619.00 FEET WITH ALL OTHER BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO;

THE LINEAL DIMENSIONS AS CONTAINED HEREIN ARE BASED UPON THE "U.S. SURVEY FOOT."

THENCE NORTH 00°10'56" WEST ALONG SAID EAST LINE OF THE NW1/4 A DISTANCE OF 30.00 FEET TO THE NORTHEAST CORNER OF THE VANGUARD-FAMLECO TWELFTH SUBDIVISION RECORDED OCTOBER 17, 2003 AS RECEPTION NO. 2003-0132285 OF THE RECORDS OF LARIMER COUNTY AND TO THE POINT OF BEGINNING;

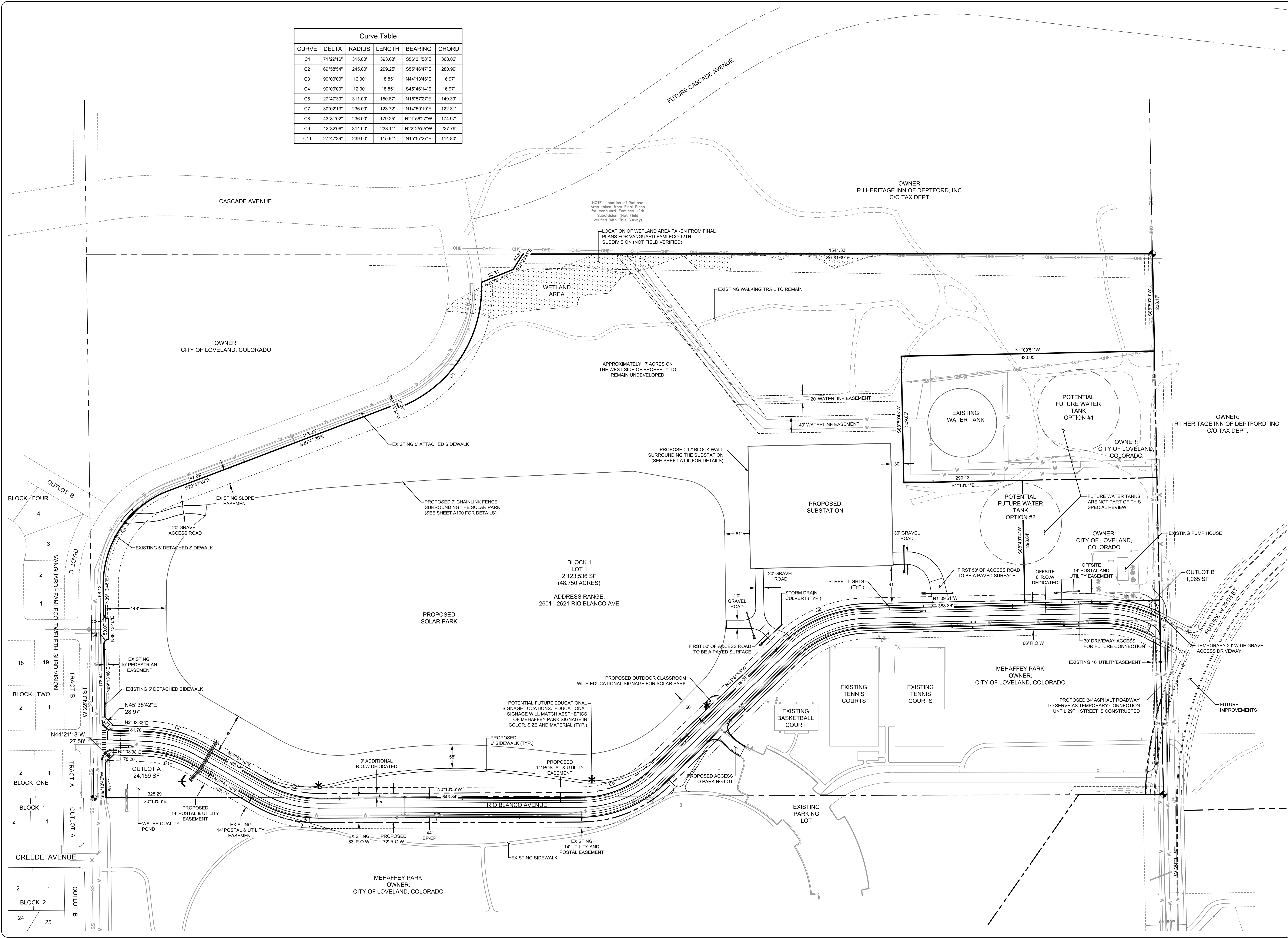
THENCE ALONG THE NORTH LINE OF SAID VANGUARD-FAMLECO TWELFTH SUBDIVISION THE FOLLOWING THIRTEEN (13) COURSES AND DISTANCES:  
THENCE SOUTH 89°13'46" WEST A DISTANCE OF 98.23 FEET TO A POINT OF CURVATURE (PC);  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHEAST A DISTANCE OF 18.85 FEET;  
SAID CURVE HAS A RADIUS OF 12.00 FEET, A DELTA OF 90°00'00", AND IS SUBTENDED BY A CHORD BEARING NORTH 45°46'14" WEST A DISTANCE OF 16.97 FEET;  
THENCE SOUTH 89°13'46" WEST A DISTANCE OF 66.00 FEET TO A NON-TANGENT PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHWEST A DISTANCE OF 18.85 FEET;  
SAID CURVE HAS A RADIUS OF 12.00 FEET, A DELTA OF 90°00'00", AND IS SUBTENDED BY A CHORD BEARING SOUTH 44°13'46" WEST A DISTANCE OF 16.97 FEET;  
THENCE SOUTH 89°13'46" WEST A DISTANCE OF 198.00 FEET TO A PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHEAST A DISTANCE OF 18.85 FEET;  
SAID CURVE HAS A RADIUS OF 12.00 FEET, A DELTA OF 90°00'00", AND IS SUBTENDED BY A CHORD BEARING NORTH 45°46'14" WEST A DISTANCE OF 16.97 FEET;  
THENCE SOUTH 89°13'46" WEST A DISTANCE OF 50.00 FEET TO A NON-TANGENT PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHWEST A DISTANCE OF 18.85 FEET;  
SAID CURVE HAS A RADIUS OF 12.00 FEET, A DELTA OF 90°00'00", AND IS SUBTENDED BY A CHORD BEARING SOUTH 44°13'46" WEST A DISTANCE OF 16.97 FEET;  
THENCE SOUTH 89°13'46" WEST A DISTANCE OF 68.13 FEET TO A PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHEAST A DISTANCE OF 299.25 FEET;  
SAID CURVE HAS A RADIUS OF 245.00 FEET, A DELTA OF 69°58'54", AND IS SUBTENDED BY A CHORD BEARING NORTH 55°46'47" WEST A DISTANCE OF 280.89 FEET;  
THENCE NORTH 20°47'20" WEST A DISTANCE OF 601.12 FEET;  
THENCE NORTH 69°12'40" EAST A DISTANCE OF 10.00 FEET TO A NON-TANGENT PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE SOUTHWEST A DISTANCE OF 393.03 FEET;  
SAID CURVE HAS A RADIUS OF 315.00 FEET, A DELTA OF 71°29'16", AND IS SUBTENDED BY A CHORD BEARING NORTH 56°31'58" WEST A DISTANCE OF 368.02 FEET;  
THENCE DEPARTING SAID NORTH LINE NORTH 22°02'09" WEST A DISTANCE OF 83.31 FEET;  
THENCE NORTH 57°29'45" WEST A DISTANCE OF 44.91 FEET TO THE WEST LINE OF THE EAST HALF OF THE NORTHWEST QUARTER (E1/2NW1/4) OF SAID SECTION 9;  
THENCE NORTH 00°01'39" WEST ALONG THE WEST LINE OF THE E1/2NW1/4 OF SAID SECTION 9 A DISTANCE OF 1541.33 FEET TO THE NORTHWEST CORNER OF SAID E1/2NW1/4;  
THENCE NORTH 88°02'09" EAST ALONG THE NORTH LINE OF SAID E1/2NW1/4 OF SAID SECTION 9 A DISTANCE OF 238.17 FEET TO THE NORTHWEST CORNER OF TRACT B, VANGUARD-FAMLECO SECOND ADDITION TO THE CITY OF LOVELAND;  
THENCE ALONG THE WEST, SOUTH AND EAST LINES OF SAID TRACT B AND TRACT D, VANGUARD-FAMLECO SECOND ADDITION TO THE CITY OF LOVELAND THE FOLLOWING FIVE (5) COURSES AND DISTANCES:  
THENCE SOUTH 01°09'51" EAST A DISTANCE OF 620.05 FEET;  
THENCE NORTH 88°50'43" EAST A DISTANCE OF 309.86 FEET;  
THENCE NORTH 01°10'01" WEST A DISTANCE OF 290.13 FEET;  
THENCE NORTH 88°49'04" EAST A DISTANCE OF 299.84 FEET;  
THENCE NORTH 01°09'51" WEST A DISTANCE OF 329.82 FEET TO THE NORTH LINE OF SAID SECTION 9;  
THENCE NORTH 88°50'29" EAST ALONG SAID NORTH LINE A DISTANCE OF 111.43 FEET TO THE NORTHWEST CORNER OF THE AMENDED PLAT OF PARCELS 1 AND 2, MEHAFFEY PARK FIRST ADDITION; TRACT B, VANGUARD-FAMLECO FIRST ADDITION AND A PORTION OF TRACT C, VANGUARD-FAMLECO SECOND ADDITION RECORDED AUGUST 22, 2013 AS RECEPTION NO. 2013-0064633 OF THE RECORDS OF LARIMER COUNTY;  
THENCE ALONG THE WEST LINE OF SAID AMENDED PLAT THE FOLLOWING SEVEN (7) COURSES AND DISTANCES:  
THENCE SOUTH 57°03'1" WEST A DISTANCE OF 35.50 FEET TO A PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE SOUTHEAST A DISTANCE OF 118.99 FEET;  
SAID CURVE HAS A RADIUS OF 242.00 FEET, A DELTA OF 28°10'23", AND IS SUBTENDED BY A CHORD BEARING SOUTH 12°55'20" WEST A DISTANCE OF 117.80 FEET;  
THENCE SOUTH 01°09'51" EAST A DISTANCE OF 572.61 FEET TO A PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE NORTHEAST A DISTANCE OF 179.66 FEET;  
THENCE SOUTH 57°03'1" WEST A DISTANCE OF 242.00 FEET, A DELTA OF 42°32'06", AND IS SUBTENDED BY A CHORD BEARING SOUTH 22°25'54" EAST A DISTANCE OF 175.56 FEET;  
THENCE SOUTH 43°41'58" EAST A DISTANCE OF 449.08 FEET TO A PC;  
THENCE ALONG THE ARC OF A CURVE CONCAVE TO THE SOUTHWEST A DISTANCE OF 33.41 FEET;  
SAID CURVE HAS A RADIUS OF 308.00 FEET, A DELTA OF 08°12'55", AND IS SUBTENDED BY A CHORD BEARING SOUTH 40°35'30" EAST A DISTANCE OF 33.38 FEET TO THE EAST LINE OF SAID NW1/4;  
THENCE SOUTH 00°10'56" EAST ALONG SAID EAST LINE A DISTANCE OF 1350.37 FEET TO THE POINT OF BEGINNING;

SAID PARCEL CONTAINS 52.60 ACRES (2,291,230 SQ. FT.) MORE OR LESS (+/-) AND IS SUBJECT TO ANY RIGHTS-OF-WAY OR OTHER EASEMENTS OF RECORD AS NOW EXISTING ON SAID DESCRIBED PARCEL OF LAND.





Curve Table					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C1	71°29'16"	315.00'	393.03'	S56°31'48"E	368.02'
C2	69°58'54"	245.00'	299.25'	S55°46'14"E	280.99'
C3	90°00'00"	12.00'	18.85'	N44°13'46"E	16.97'
C4	90°00'00"	12.00'	18.85'	S45°46'14"E	16.97'
C6	27°47'39"	111.00'	150.87'	N15°57'22"E	149.39'
C7	30°02'13"	236.00'	123.72'	N14°50'10"E	122.31'
C8	43°31'02"	236.00'	179.25'	N21°56'27"W	174.97'
C9	42°32'06"	314.00'	233.11'	N22°25'55"W	227.79'
C11	27°47'39"	139.00'	115.94'	N15°57'22"E	114.80'



Civil Engineering & Consulting

1501 Academy Ct.  
Ste. 203  
Fort Collins, CO 80524  
(970) 530-4044  
[www.unitedcivil.com](http://www.unitedcivil.com)


**CAUTION** The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

# S SOLAR PARK AND SUBSTATION SPECIAL REVIEW #915 SITE PLAN

12/11/2015

DATE SUBMITTED:

PREPARED FOR: LOVEI AND WATER & POWER

PRELIMINARY  
PLANS  
NOT FOR CONSTRUCTION

SHEET NUMBER  
**S100**  
2 OF 6 SHEETS  
SCALE  
VERTICAL: 1" = N/A  
HORIZONTAL: 1" = 100'  
JOB NUMBER  
**U15009**



Key	Botanical Name	Common Name	Size of Planting	Root	Spacing	Quantity	Hydrozone Designator
<b>DECIDUOUS CANOPY TREE</b>							
GL SK	<i>Quercus trincornis</i> inermis Skyline	Skyline Honeylocust	3' Cal	BB	See Plan	12	LOW
GL SH	<i>Quercus trincornis</i> inermis Shademaker	Shademaker Honeylocust	3' Cal	BB	See Plan	8	LOW
GL SH	<i>Gleditsia trincornis</i> inermis Skyline	Skyline Honeylocust	2' Cal	BB	See Plan	11	LOW
QU MA	<i>Quercus macrocarpa</i>	Burr Oak	2' Cal	BB	See Plan	12	LOW
CE OC	<i>Celtis occidentalis</i>	Hickberry	2' Cal	BB	See Plan	6	LOW
CA SP	<i>Catalpa speciosa</i>	Western Catalpa	2' Cal	BB	See Plan	12	LOW
QY ES	<i>Gymnocladus dioica</i> Espresso	Seedless Kentucky Coffee tree	2' Cal	BB	See Plan	17	LOW
AC NE	<i>Acer negundo</i> Sensation	Sensation Beech	2' Cal	BB	See Plan	17	LOW
<b>ORNAMENTAL TREES</b>							
AM LA	<i>Amelanchier lamarckii</i>	Lamarck Serviceberry	6' clump	BB	See Plan	9	LOW
AC TA	<i>Acer tataricum</i>	Tatarian Maple	10' clump	BB	See Plan	10	LOW
CR WK	<i>Crataegus viridis</i> Winter King	Winger King Hawthorn	2' Cal	BB	See Plan	14	LOW
<b>EVERGREEN TREES</b>							
PI ED	<i>Pinus edulis</i>	Pinion Pine	6'	BB	See Plan	25	VERY LOW
PI ED	<i>Pinus edulis</i>	Pinion Pine	6'	BB	See Plan	25	VERY LOW
PI NI	<i>Pinus nigra</i>	Australian Pine	6'	BB	See Plan	29	LOW
PI HE	<i>Pinus halepensis</i> (leucodermis)	Bosnian Pine	6'	BB	See Plan	21	LOW

[illegible]

Key	Botanical Name	Common Name	Size of Planting	Root	Spacing	Quantity	Hydrozone Designation
<b>DECIDUOUS SHRUBS</b>							
CH AL	<i>Chrysanthemum nauseosum obtusilobus</i>	Tall Blue Rabbitbrush	5 Gal.	Cont.	See Plan	24	VERY LOW
CH GR	<i>Chrysanthemum nauseosum grandifolius</i>	Tall Green Rabbitbrush	5 Gal.	Cont.	See Plan	31	VERY LOW
CO CO	<i>Cornus sericea cordataefolia</i>	Colorado Dogwood	5 Gal.	Cont.	See Plan	16	MEDIUM
CO YL	<i>Cornus alba 'Elsa's Yellow'</i>	Yellow Dogwood	5 Gal.	Cont.	See Plan	12	MEDIUM
RI CR	<i>Ribes odoratum 'Grandifol'</i>	Crandall Cane Currant	5 Gal.	Cont.	See Plan	11	LOW
RI CI	<i>Rhus glabra cismontana</i>	Rocky Mountain Sumac	5 Gal.	Cont.	See Plan	46	LOW
AC GL	<i>Acer glabrum</i>	Rocky Mountain Maple	5 Gal.	Cont.	See Plan	61	LOW
AM CA	<i>Amandorla canadensis</i>	Shadblow Serviceberry	5 Gal.	Cont.	See Plan	45	LOW
AR ME	<i>Aronia melanocarpa</i> ssp. <i>compacta</i>	Black Chokeberry	5 Gal.	Cont.	See Plan	12	LOW
AM CO	<i>Physocarpus opulifolius 'Copperline'</i>	Copperline Ninkhard	5 Gal.	Cont.	See Plan	10	LOW
AC BC	<i>Acer glabrum Balla Compact</i>	Dwarf Amur Maple	5 Gal.	Cont.	See Plan	17	LOW

2 PI ED  
5 AM CA  
3 PI ED  
3 AC GL

5 AM CA  
3 PI ED

2 AC GL  
3 AM CA  
4 PI ED

24  
32  
47  
32  
46  
33

PROPOSED SOLAR FIELD

POTENTIAL FUTURE EDUCATIONAL SIGNAGE LOCATIONS. EDUCATIONAL SIGNAGE WILL MATCH AESTHETICS OF MEHAFFEY PARK SIGNAGE IN COLOR, SIZE, AND MATERIAL.

TYPE 1 & TYPE 2 SEED, TYP.

TYPE 3 SEED, TYP.

2 RI CR  
4 CH AL  
3 AC GL  
TYPE 1 & TYPE 2 SEED, TYP.  
10 AC NE

EXISTING SIDEWALK  
PROPOSED SIDEWALK

PROPOSED 2" WATER METER FOR IRRIGATION

3 QU MA  
3 AR ME  
12 CH GR

PROPOSED UTILITY EASEMENT

WEST 22ND STREET BUFFER YARD:  
 EXISTING SINGLE FAMILY HOME AND PROPOSED UTILITIES USE. TYPE E BUFFER REQUIRES 5 CANOPY TREES, 6 UNDERSTORY TREES, 30 SHRUBS, AND 4 EVERGREENS/CONIFERS PER 100 LINEAR FEET. PROPOSED WIDTH OF LANDSCAPE BUFFER IS APPX. 158' REQUIRING A PLANT MULTIPLIER OF .5. BUFFER LENGTH IS APPX. 550':  

$$-550/100 = 5.5 \times (5 \text{ can.}, 6 \text{ unders.}, 30 \text{ shr.}, 4 \text{ everg.}) \times .5 = \begin{array}{l} 13.75 \text{ can.}, 16.5 \text{ unders.}, 82.5 \text{ shr.}, 11 \text{ everg.} \\ \underline{16 \text{ canopy}, 27 \text{ understory}, 98 \text{ shrubs}, 33 \text{ everg.}} \end{array}$$
 REQUIRED

RIO BLANCO AVENUE BUFFER YARD:  
EXISTING MEADOWS PARK AND PROPOSED UTILITIES USE. TYPE C BUFFER REQUIRES 3 CANOPY TREES, 2 FLOWERING/LARGE SHRUBS, 15 SHRUBS, AND 3 BERBERIS/COFFEES PER 100' LINEAR FEET. PROPOSED WIDTH OF LANDSCAPE BUFFER IS APPX. 100' REQUIRING A PLANT MULTIPLIER OF 5. BUFFER LENGTH IS APPX. 2780'.  
$$-2,780/100 = 28 \times (3 \text{ can., 2 flow., 15 shr., 3 ever.}) \times 5 = 42 \text{ can., 28 flowering, 210 shr., 42 ever. REQUIRED}$$
$$-2,780/100 = 28 \times (3 \text{ can., 2 flow., 15 shr., 3 ever.}) \times 5 = 42 \text{ can., 6 flowering, 123 shr., 50 ever. PROVIDED}$$

\*EVEN THOUGH THE CLOSEST NEIGHBORHOOD IS LOCATED APPROX. 1,100 FEET AWAY TO THE SOUTHWEST, 17 EVERGREEN TREES AND 46 LARGE SHRUBS HAVE BEEN PROVIDED ON THE WEST SIDE OF THE SOLAR FIELD.

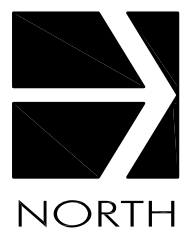
1. ADJACENT TO WEST 22ND STREET, GRASS AREAS IN TREE LAWN WILL BE ESTABLISHED USING SOD.

2. ALL OTHER GRASS AREAS WILL BE ESTABLISHED BY SEEDING. TYPE 1 SEED SHALL MATCH MEHAFAYE PARK NATIVE SEED. TYPE 2 SEED SHALL BE A MIXTURE OF 50% MEHAFAYE PARK NATIVE SEED AND DETENTION/WATER QUALITY AREAS. TYPE 3 SEED SHALL BE A LOW GROW NATIVE MIX.

3. TREES AND SHRUBS WILL BE IRRIGATED USING DRIP EMITTERS. GRASS AREAS WITHIN TREE LAWN ON DETENTION/WATER QUALITY AREAS SHALL BE IRRIGATED USING POP UP SPRAYS/ROTORS. WITH EXCEPTION OF AREA WITHIN SOLAR FIELD FENCE, OTHER GRASS AREAS WILL BE IRRIGATED USING EXTENDED SPACING SPRAYS/ROTORS EXTENDED SPACING SPRAYS/ROTORS SHALL BE SPACED AS COMPLETE AS TURF SOD, WILL ASSIST IN ESTABLISHMENT). COORDINATION & TALKING PANEL WITH SOLAR PANEL MANUFACTURERS, BUT WE ARE NOT SURE WE WILL BE ALLOWED TO IRRIGATE THE AREA WITHIN SOLAR FIELD FENCE. IF SO, WE WILL CONSIDER USING A WATER TRUCK (AND/OR PROVIDE) (2) SEEDINGS OF TYPE 3 SOD SPACED APPROXIMATELY 1 YEAR APART.

MATCHLINE - SEE SHEET L200

CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
811  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.



FOOTHILLS SOLAR PARK AND SUBSTATION  
LANDSCAPE PLAN; PLANT LIST, NOTES, BUFFERYARD TABLE

PREPARED FOR:	CITY OF LOVELAND	DATE SUBMITTED:	12/11/2015
---------------	------------------	-----------------	------------

**PRELIMINARY  
PLANS  
NOT FOR CONSTRUCTION**

SHEET NUMBER  
**L100**  
OF 6 SHEETS

JOB NUMBER  
U15009

Attachment 2

1603 Oakridge Drive  
Fort Collins, CO 80525  
(970) 223-7577

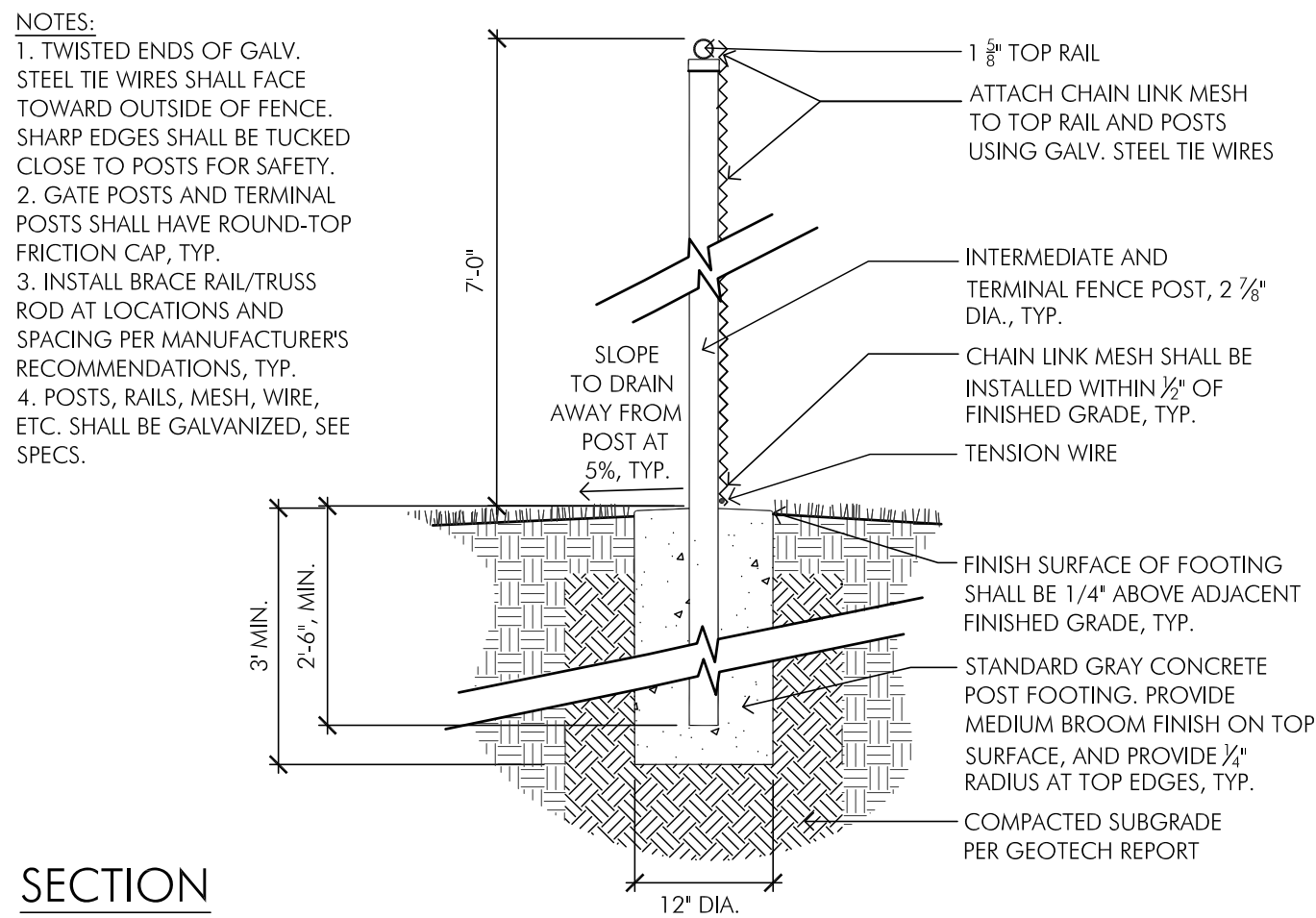
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

PREPARED FOR: CITY OF LOVELAND



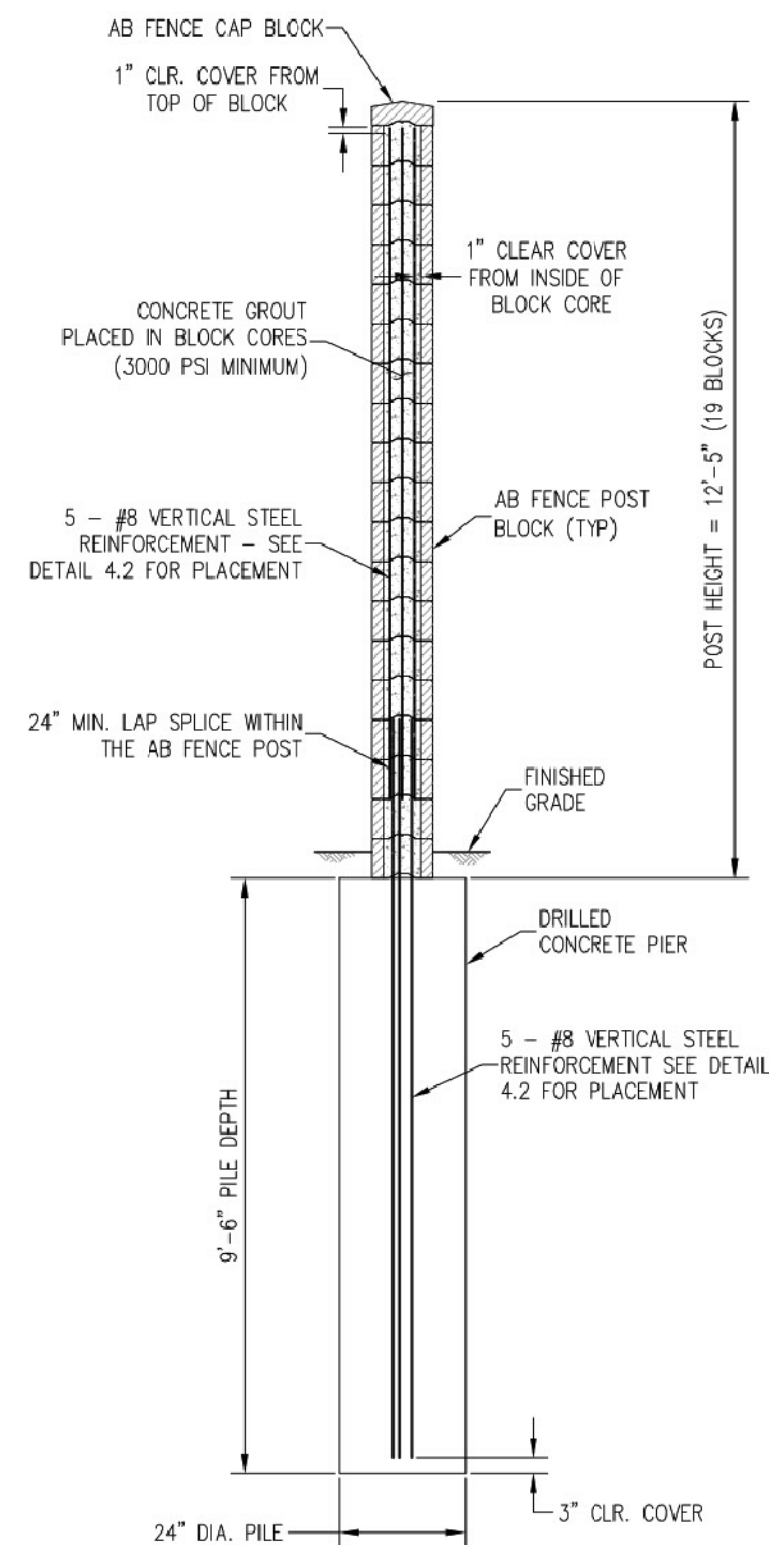




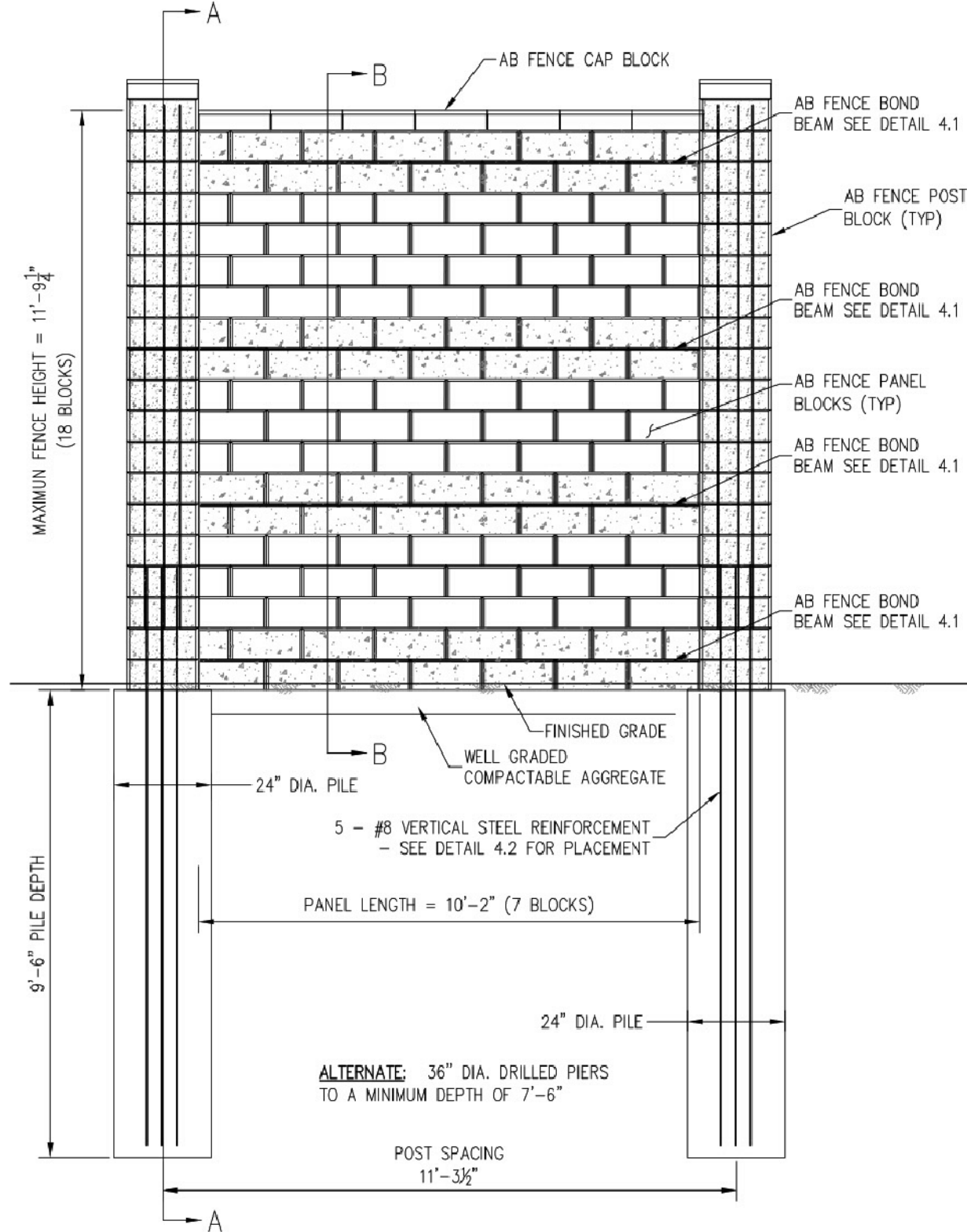


SECTION

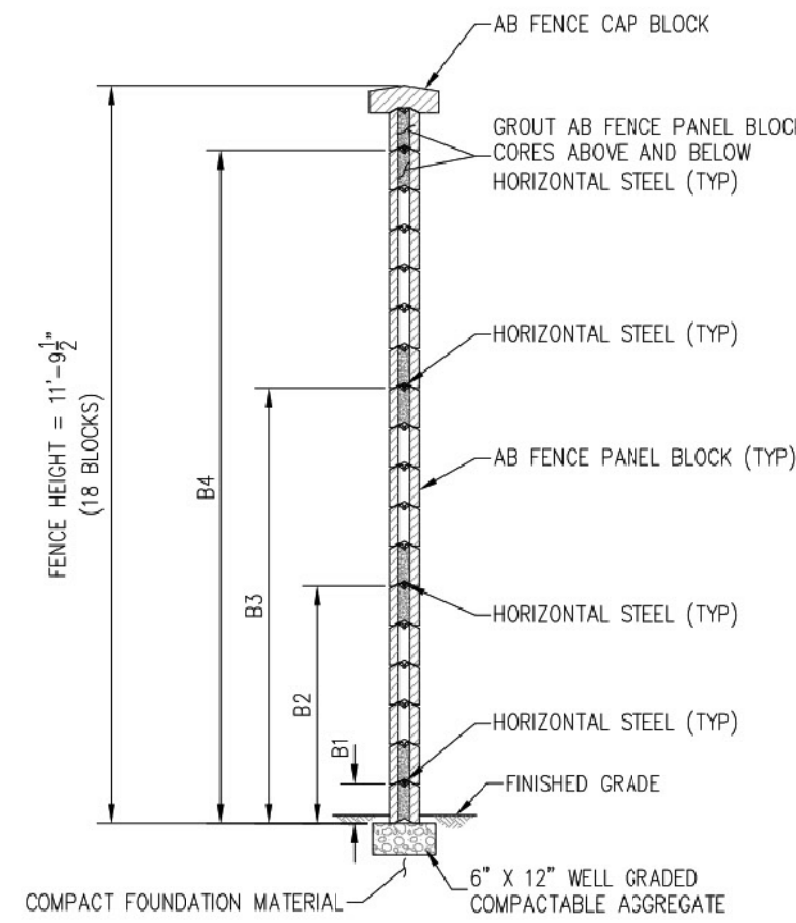
1 7' TALL CHAIN LINK FENCE (galvanized finish)  
SCALE: 3/4" = 1'-0"



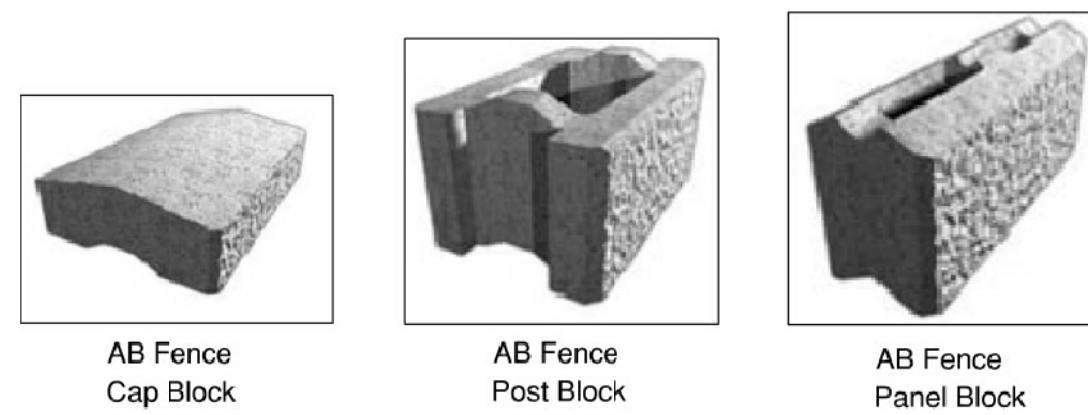
A  
3 AB FENCE POST SECTION



AB FENCE PANEL ELEVATION

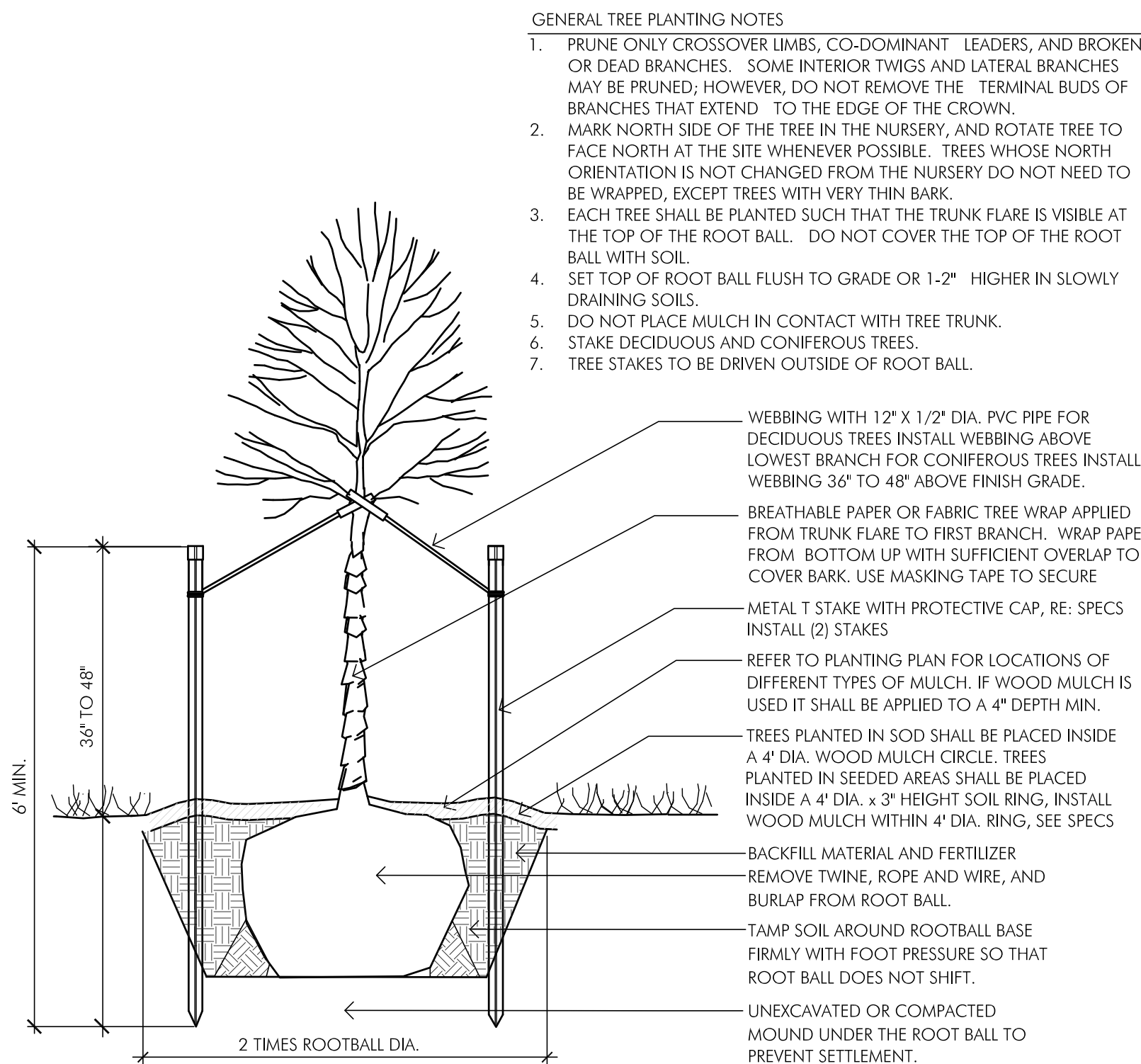


B  
3 AB FENCE PANEL SECTION

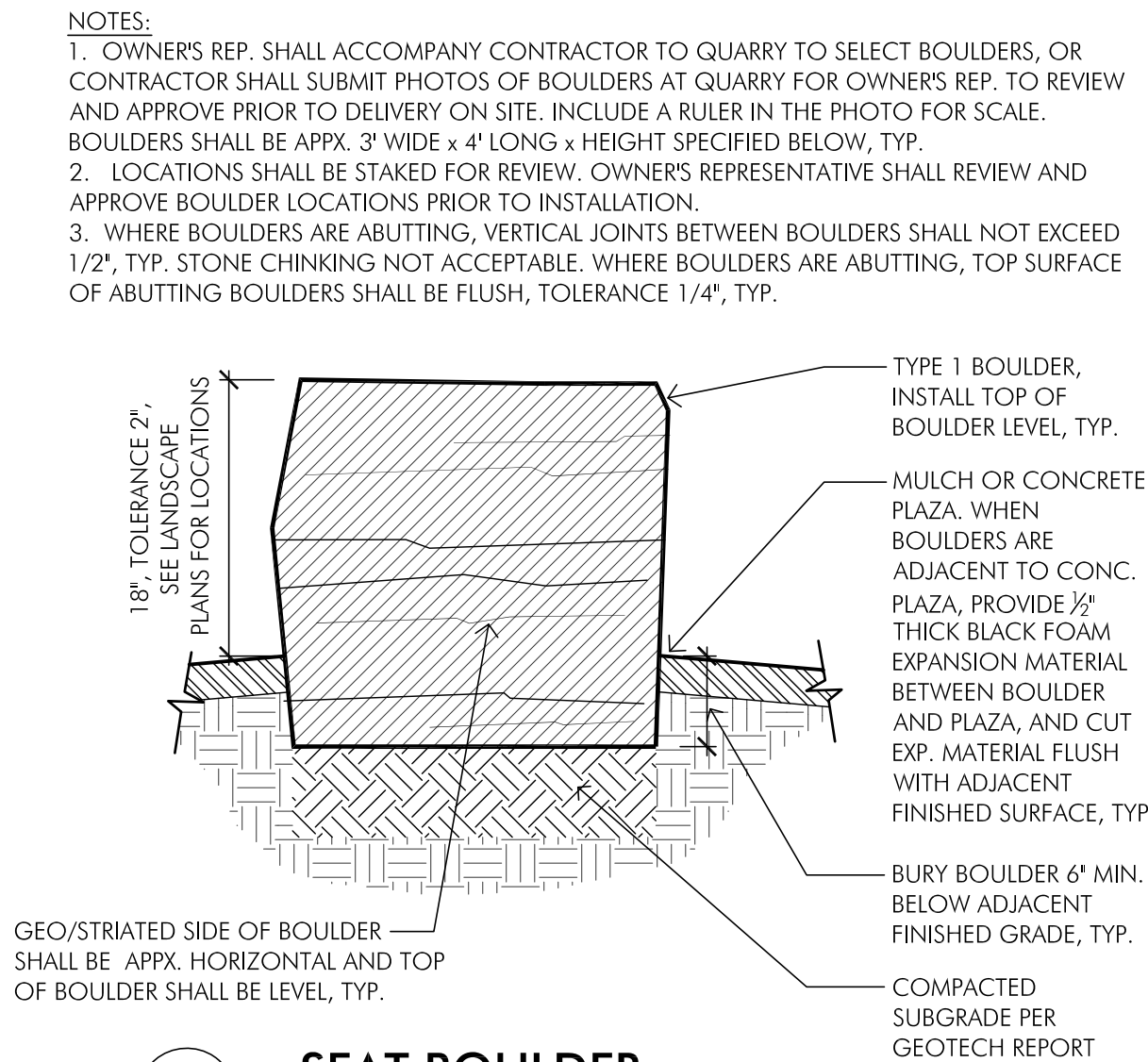


SECTIONS, ELEVATIONS, AND IMAGES ABOVE ARE REPRESENTATIVE OF TYPE OF WALL INTENDED TO BE INSTALLED AROUND SUBSTATION; IMAGES ABOVE TAKEN FROM PREVIOUS SUBSTATION PROJECT.

2 12' TALL BLOCK WALL  
SCALE: NOT TO SCALE



3 TREE PLANTING  
SCALE: N.T.S.



4 SEAT BOULDER  
SCALE: N.T.S.

CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
811  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.

SEE NOTES, SHEET L100



50' 25' 0 50' 100'  
SCALE: 1" = 50'

FOOTHILLS SOLAR PARK AND SUBSTATION  
LANDSCAPE, SITE DETAILS, HYDROZONE PLAN

PRELIMINARY  
PLANS  
NOT FOR CONSTRUCTION

SHEET NUMBER  
L300  
OF 6 SHEETS

JOB NUMBER  
U15009

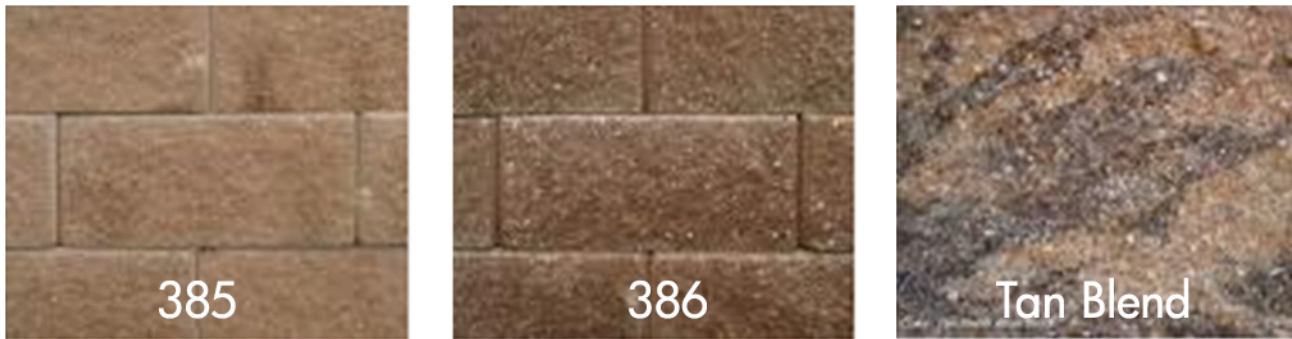
DATE SUBMITTED: 12/11/2015

PREPARED FOR: CITY OF LOVELAND





THE DESIGN INTENT OF THE SUBSTATION WALL IS TO COMPLEMENT THE COLOR OF THE MEHAFFEY PARK STONE (SHOWN IN THE TWO IMAGES ABOVE) USING COLORED CMU BLOCK. IN COLORADO, THE COLOR OPTIONS CURRENTLY AVAILABLE FROM THE WALL UNIT MANUFACTURER ARE SHOWN BELOW:



EDUCATIONAL SIGNAGE FOR FOOTHILLS SOLAR AND SUBSTATION PROJECT WILL MATCH SIGNAGE LOCATED IN ADJACENT MEHAFFEY PARK IN COLOR, FORM, AND STYLE (PICTURED ABOVE), ALTHOUGH CONTENT OF SIGNAGE WILL DIFFER.



TYPICAL SOLAR PANEL COLOR, MATERIALS, AND LAYOUT WITHIN THE SOLAR PARK SHOWN IN PHOTOS ABOVE. FINAL COLORS, MATERIALS, AND LAYOUT TO BE DETERMINED WHEN CITY AWARDS 'SOLAR PANEL PROJECT' TO SOLAR PANEL MANUFACTURER/INSTALLER.



SUBSTATION WALL MATERIAL SHALL BE BLOCK WALL COMPRISED OF INDIVIDUAL WALL UNITS. COLOR SHALL BE EARTH TONES TO BLEND IN WITH ADJACENT LANDSCAPE AND UNIFY WITH WALL COLORS USED AT MEHAFFEY PARK. PHOTOS ABOVE ARE OF COMPARABLE SUBSTATION SEGMENTAL WALL, ALTHOUGH COLORS ABOVE HAVE NOTE BEEN SELECTED FOR FOOTHILLS SUBSTATION WALL.

SUBSTATION ELECTRICAL EQUIPMENT (GALVANIZED METAL IN COLOR).

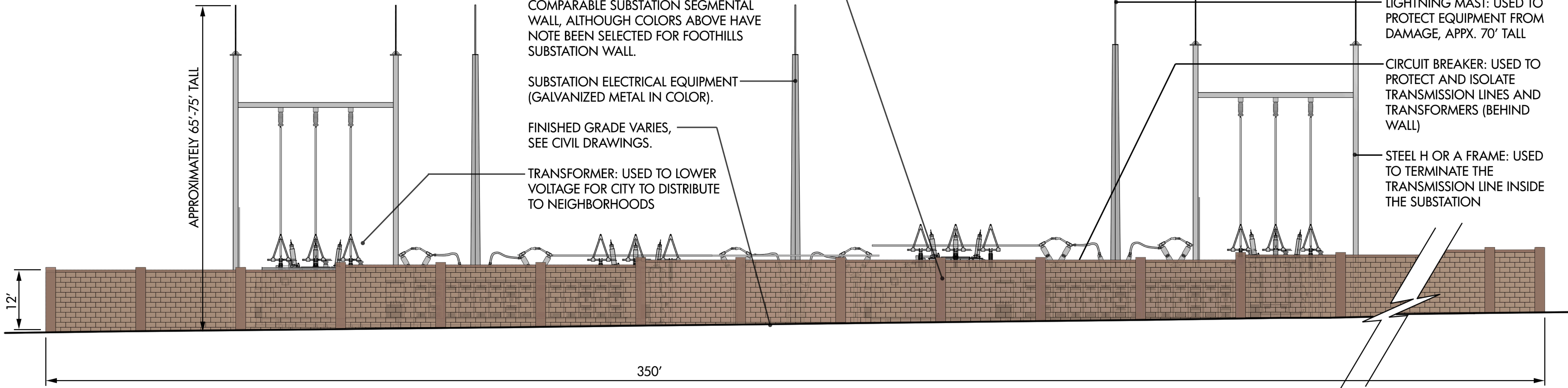
FINISHED GRADE VARIES, SEE CIVIL DRAWINGS.

TRANSFORMER: USED TO LOWER VOLTAGE FOR CITY TO DISTRIBUTE TO NEIGHBORHOODS

LIGHTNING MAST: USED TO PROTECT EQUIPMENT FROM DAMAGE, APPX. 70' TALL

CIRCUIT BREAKER: USED TO PROTECT AND ISOLATE TRANSMISSION LINES AND TRANSFORMERS (BEHIND WALL)

STEEL H OR A FRAME: USED TO TERMINATE THE TRANSMISSION LINE INSIDE THE SUBSTATION



# SUBSTATION ELEVATION LOOKING WEST

NOTE: BERM AND VEGETATIVE SCREENING INCLUDING DECIDUOUS SHADE TREES, ORNAMENTAL TREES, EVERGREEN TREES, AND SHRUBS NOT SHOWN FOR CLARITY. SEE LANDSCAPE DRAWINGS FOR SCREENING ADJACENT TO SUBSTATION.

- LIGHTING OF SOLAR FACILITY IS NOT ANTICIPATED AT THIS TIME, ALTHOUGH A SMALL GATE LIGHT MAY BE INCORPORATED.
- SOLAR FIELD LIGHTING WILL BE PROVIDED WITHIN SUBSTATION TO BE USED IF WORK IS PERFORMED AT NIGHT, WHICH SHOULD BE A RARE OCCURENCE. IF THE SECURITY SYSTEM IS ACTIVATED AS A RESULT OF TRESSPASSING, LIGHTING WILL COME ON.
- EXISTING TRANSMISSION LINE POLES ARE APPX. 110' TALL, AND A FEW NEW POLES WILL NEED TO BE ADDED BETWEEN THE SUBSTATION AND THE EXISTING TRANSMISSION LINE.

## FOOTHILLS SOLAR PARK AND SUBSTATION ARCHITECTURAL ELEVATION

PRELIMINARY  
PLANS  
NOT FOR CONSTRUCTION

SHEET NUMBER

OF 6 SHEETS

A100

JOB NUMBER  
U15009

bha  
1603 Oakridge Drive  
Fort Collins, CO 80525  
(970) 223-7577  
fax (970) 223-1827  
Landscape Architecture  
Urban Design  
Graphic Design

NO.	DATE	REVISIONS
1	10/09/2015	CITY RESUBMITTAL #1
2	10/09/2015	CITY RESUBMITTAL #2
3	10/09/2015	CITY RESUBMITTAL #3

CAUTION: This is a preliminary plan. It is not to be used for construction or for any other purpose without the approval of the designer. All changes to the plans must be in writing and must be approved by the designer.

DATE SUBMITTED: 10/09/2015  
PREPARED FOR: CITY OF LOVELAND



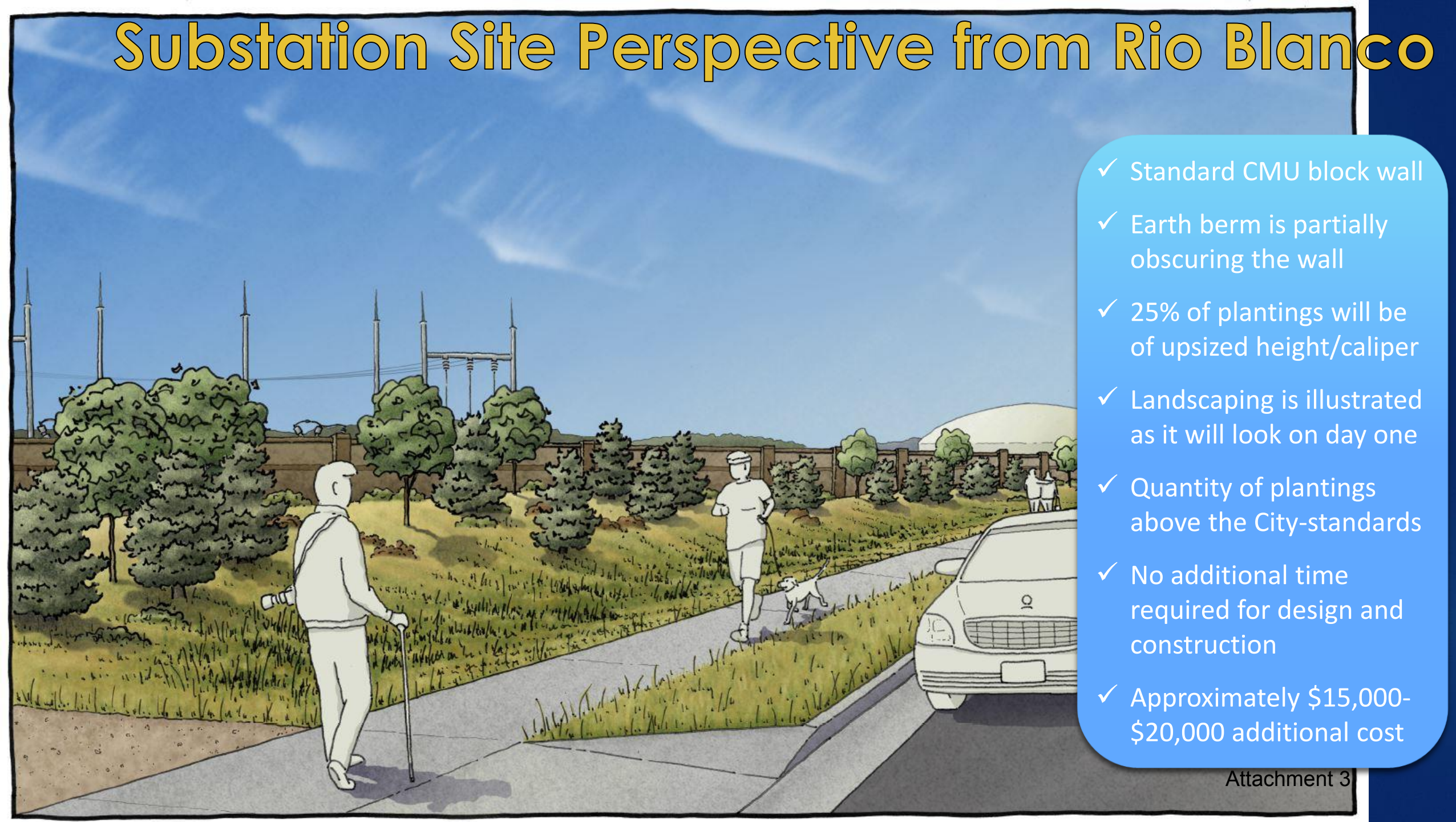
# Solar Perspective from W. 22<sup>nd</sup> Street and Rio Blanco

- ✓ 7 foot galvanized chain link fence
- ✓ Increased height of earth berm which is partially obscuring fence
- ✓ 25% of plantings will be of upsized height/caliper
- ✓ Landscaping is illustrated as it will look on day one
- ✓ Quantity of plantings above the City-standards
- ✓ No additional time required for design and construction
- ✓ Approximately \$20,000-\$30,000 additional cost





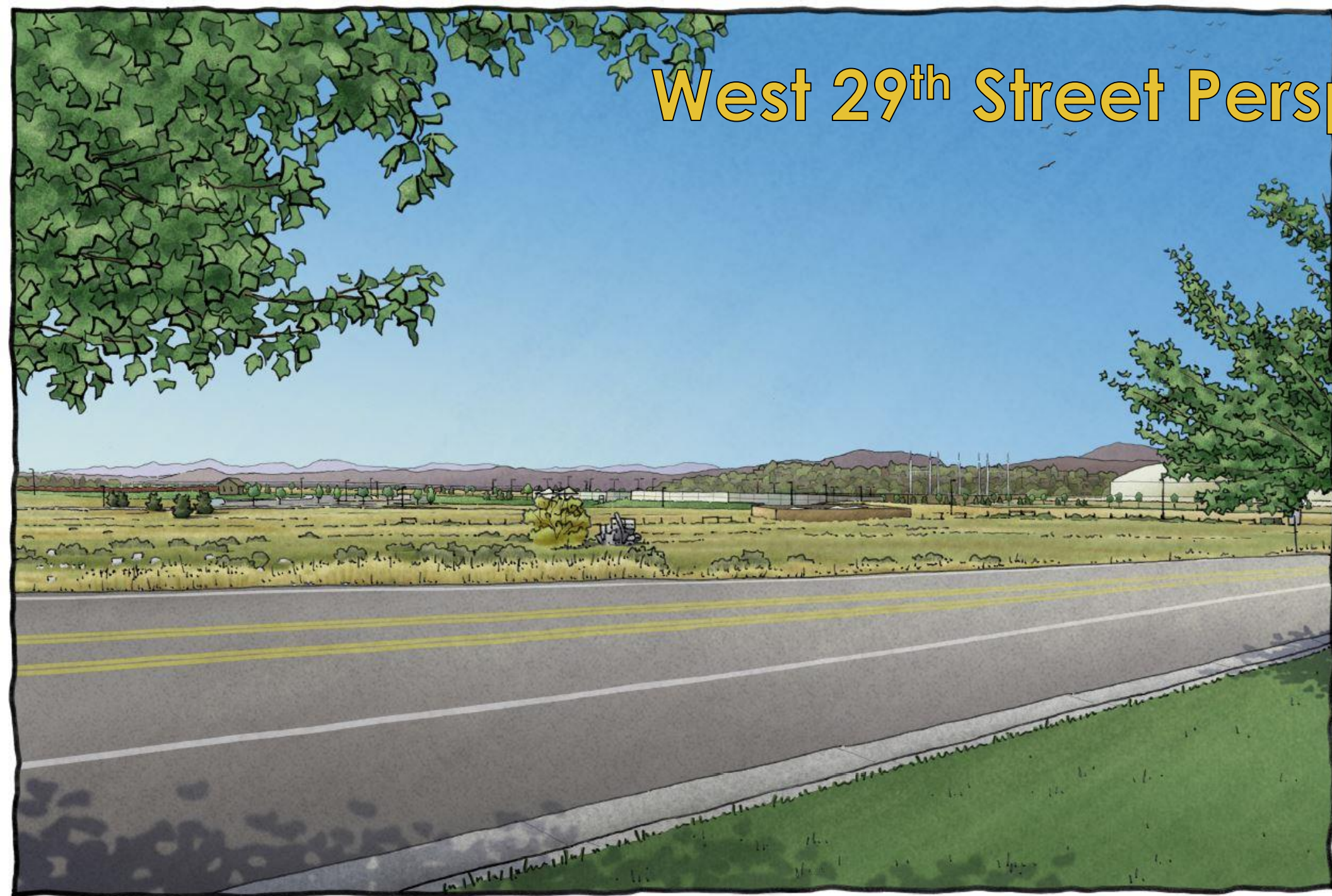
# Substation Site Perspective from Rio Blanco



- ✓ Standard CMU block wall
- ✓ Earth berm is partially obscuring the wall
- ✓ 25% of plantings will be of upsized height/caliper
- ✓ Landscaping is illustrated as it will look on day one
- ✓ Quantity of plantings above the City-standards
- ✓ No additional time required for design and construction
- ✓ Approximately \$15,000-\$20,000 additional cost



# West 29<sup>th</sup> Street Perspective

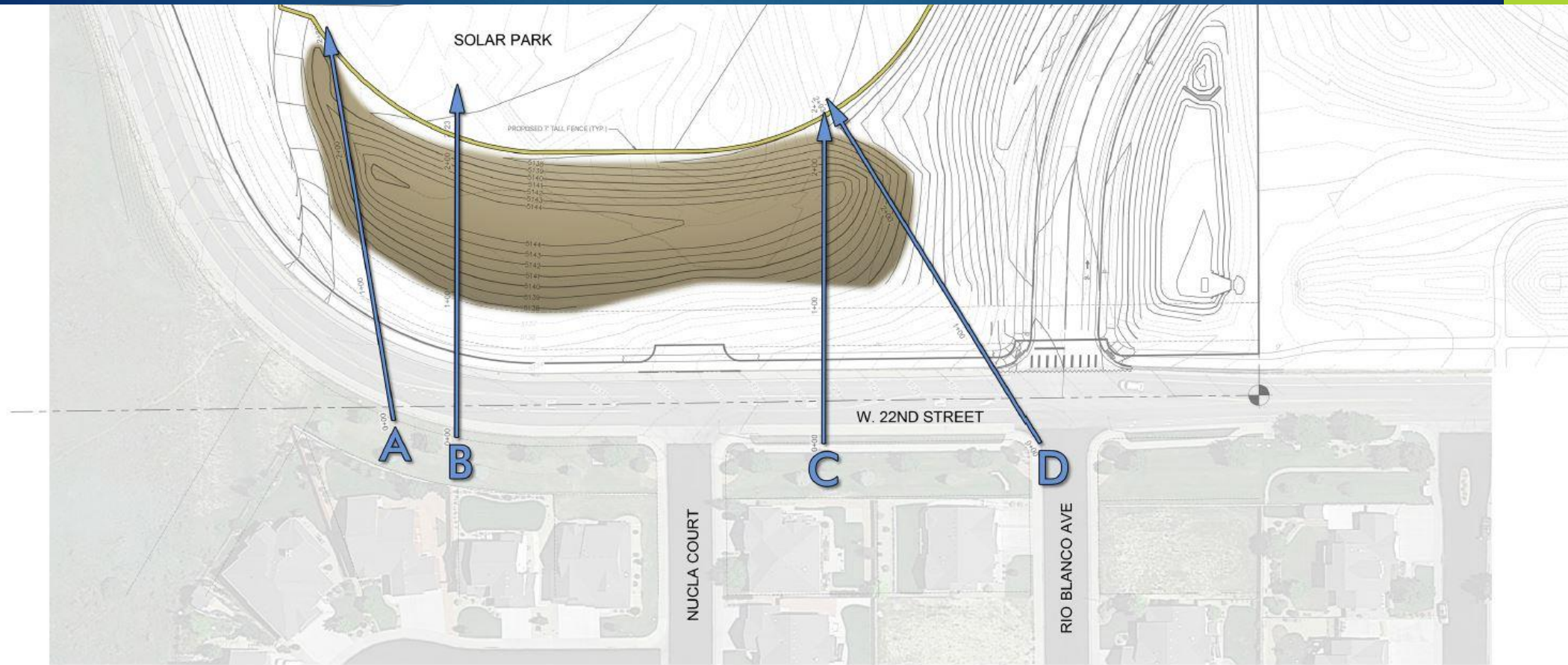




# Perspective from 22<sup>nd</sup> Street Southwest of Site

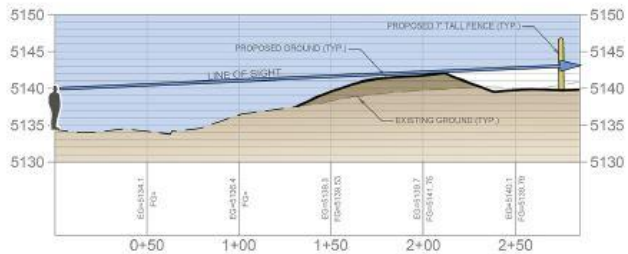






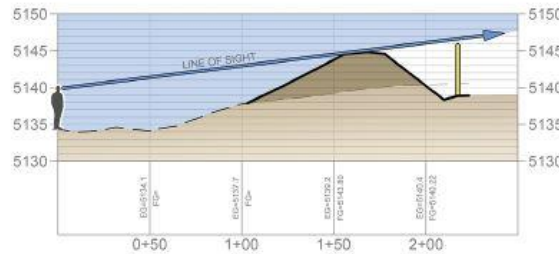
## Section A

(4:1 vertical exaggeration)



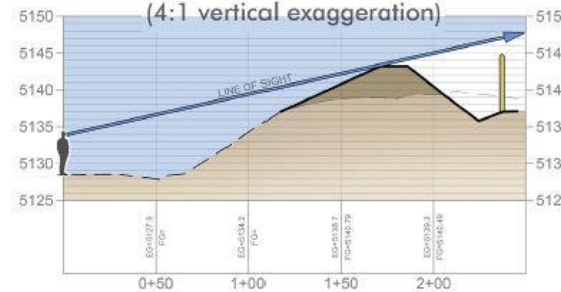
## Section B

(4:1 vertical exaggeration)



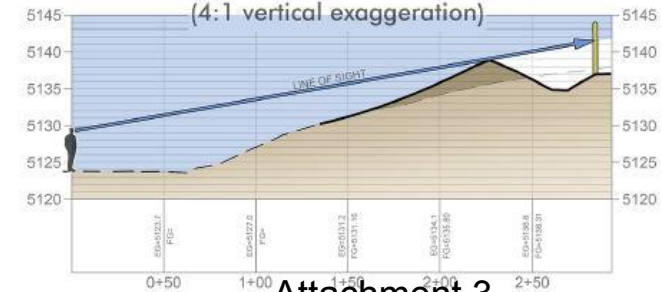
## Section C

(4:1 vertical exaggeration)

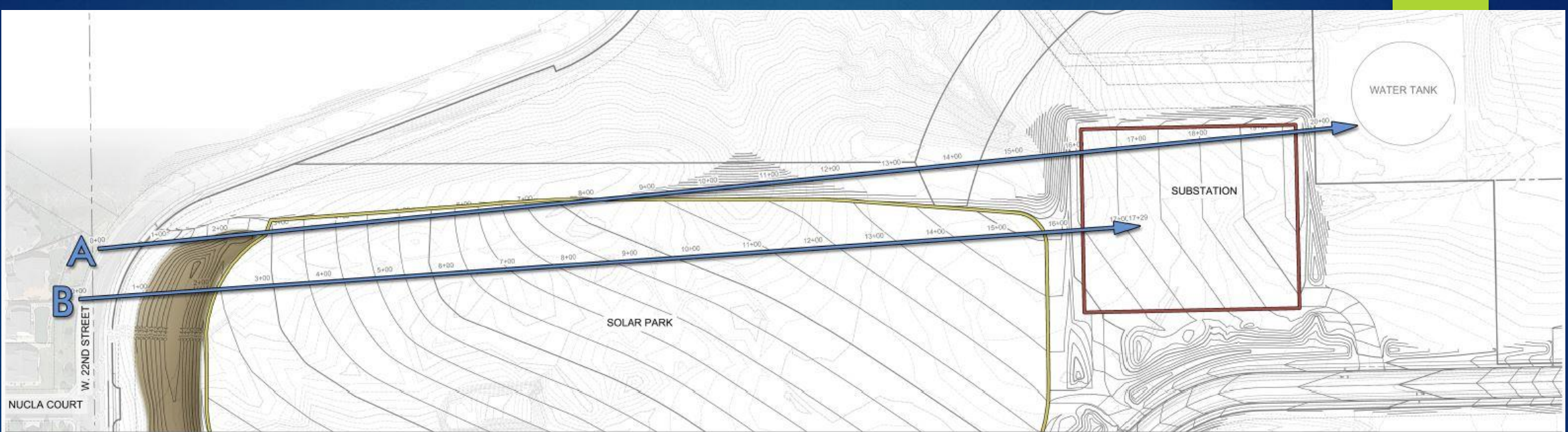


## Section D

(4:1 vertical exaggeration)

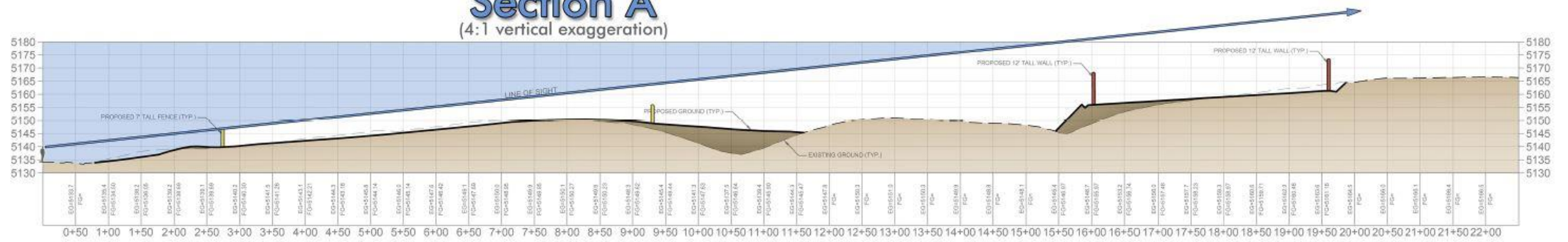






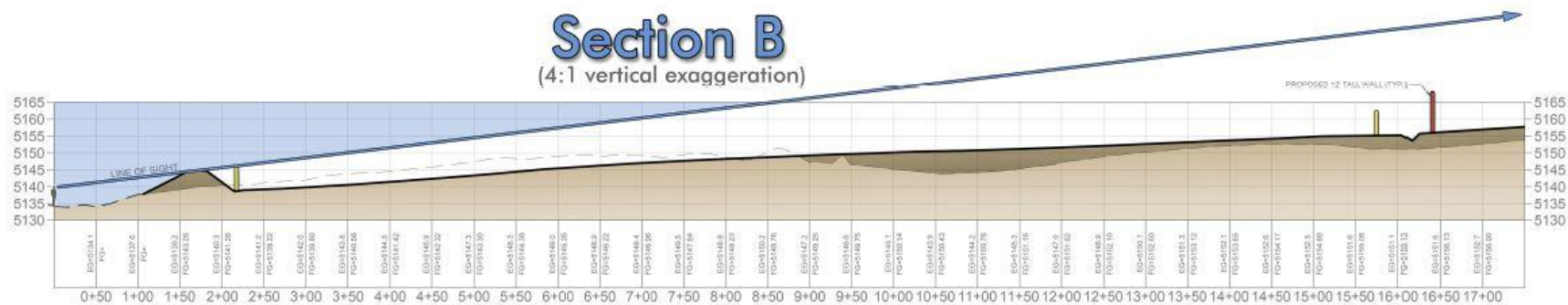
## Section A

(4:1 vertical exaggeration)



## Section B

(4:1 vertical exaggeration)



## Foothills Solar and Substation Neighborhood Meeting Notes

### December 17, 2015

1. Are there trees on the west of the substation
  - No. There is an existing utility easement for the water tank so it is a challenge to plant on that side of the substation.
2. Is there a fee for the appeal process?
  - The appeal fee to the Planning Commission of \$300 and a lesser fee to appeal to the Council. Anyone in attendance and who received the letter has a right to appeal. Planning Commission and Council can appeal this process. PC and Council did receive notice of this special review meeting.
3. How many PC or CC members does it take to appeal?
  - Two we believe.
4. How much water will be used to keep the landscaping alive?
  - Everything will have drip irrigation run to it. Most efficient way to irrigate. Planning to do an irrigation system directly adjacent to Rio Blanco and 22nd Street. This will be a permanent irrigation system which will help in drought periods.
5. How will an appeal affect the timeline for this process?
  - Some of our timelines take into account an appeal process
6. Why didn't you do visual line of site drawings from 29th Street
  - The difference we see is that 29th is more than 5 times farther away than 22nd Street
7. Still do not believe that the photo and rendering of the perspective from 29th is how it will really look.
  - The height of the water tank is 37 feet and the rendering for the substation wall is relative to that height.
8. Why don't you only fence the area of solar put in verses putting the chainlink fence
  - From our perspective it is more cost effective to put the fence in its permanent location from the beginning. We also believe this will prevent people from off-roading in the area where the future solar will be and ruining the native grasses that are planted.
9. Is there a possibility of doing wrought iron around the whole solar facility?
  - There is substantial cost difference between chainlink and wrought iron fencing. With the voting we performed that the citizens selected the chainlink and higher berm option.
10. As solar power has grown, communities have zones for solar. Why doesn't Loveland have a zone for solar?
  - We do not have that zone district and we do not believe the City is currently looking at that zone district for the future. We accomplish the zoning for utilities through this public process.
11. City bought the property before anyone could see what the plans were. There was no way then that CC was going to vote against it because the money was already spent.
12. I would rather have this than all the homes that were originally proposed for this site.
13. Originally I thought I would like the wrought iron fence but when I saw the renderings I realized I the berming and landscaping is a better option.
14. This this would be a great site for a Library or a Rec Center, don't like this plan
15. What is the durability of the solar panels
  - Solar panels were originally developed by NASA. These are silicone based materials covered in tempered glass. They are very durable. Namaste has thousands of modules that have sustained hail storms.

16. How many megawatts is the solar?
  - There is DC and AC current. This is a 2.2 MW AC current.
17. What's going through the lines along cascade
  - These are transmission lines. If you can image a reservoir verses a pipe size
18. We will not be installing additional transmission lines.
19. Will the power serve Drake?
  - We will still serve Drake but the solar generated energy will be distributed through our entire system.
20. What about reflectivity from the solar?
  - DIA has a very similar system. FAA regulations requires significant studies on reflectivity and there is not a high impact. These are much less reflective than a window.
21. What is the size of the panels?
  - Typical size is 3 feet by 5 feet depending on how many cells are in the module. Final height will be determined by the geotechnical report. Expecting the height to be 10 feet.
22. Is there an audible noise level from the solar?
  - No there is not
23. What about the lights that are on the substation along Taft? Will those be at this substation?
  - There will be LED downward facing streetlights along Rio Blanco. In the past substations have been designed for lights or lights are forgotten to be turned off. We will have controls in place in this substation to prevent lights running all night long. Probably won't be able to see these lights from Hunter's Run or Namaqua Hill. We will be able to light up the substation and have security lighting for when needed but those will not be on at all times.
24. Are there lightning rods on the substation?
  - Yes and they have to be a certain height to provide adequate protection to the equipment.
25. Since Mehaffey Park has been built there has been vandalism, especially to the landscaping.
  - We have been talking to the Director of Parks and Recreation. We are compiling a plan with the LPD to address vandalism and trespassing instances.