

Appendix C

Preliminary Drainage Study

PRELIMINARY DRAINAGE STUDY

Grand Avenue

GRAND AVENUE FROM ESCONDIDO BLVD TO JUNIPER STREET
ESCONDIDO, CA 92025

DECEMBER 2020

Prepared For:



CITY OF ESCONDIDO
201 N BROADWAY
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760-839-4880

Prepared By:

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This Drainage Report has been prepared by Kimley-Horn under the direct supervision of the following Registered Civil engineer. The undersigned attests to the technical data contained in this study, and to the qualifications of technical specialists providing engineering computations upon which the recommendations and conclusions are based.

_____	_____
Registered Civil Engineer	Date

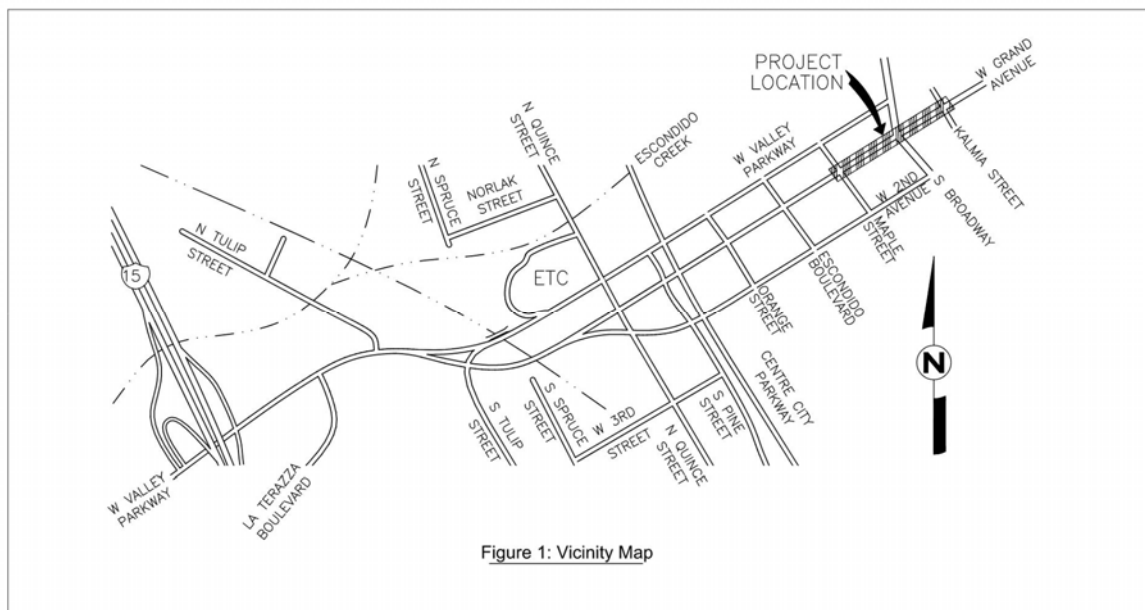
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Introduction

Project Overview

The City of Escondido is preparing the Grand Avenue Vision Project - Phase I (or “Project”). The Project is located in downtown Escondido on Grand Avenue between Maple Street and North Broadway (Refer to Figure 1 – Project Location Map). The Project aims to improve the economic vitality of Grand Avenue by creating a pedestrian-friendly and aesthetically appealing corridor. The complete corridor will include mini-roundabouts at three locations (Broadway, Maple, and Kalmia), streetscape improvements, public art features, narrowing of Grand Avenue to one lane in each direction and using the excess width to create wider, 20-foot sidewalks, and diagonal parking on one side of the street resulting in increased parking. The first phase focuses on one portion of the corridor (the north side of Grand Avenue between Maple and Broadway) and includes NCTD Breeze bus route realignments, sidewalk expansion, public art, and environmental and green street improvements. The first phase of the project is funded through SANDAG’s Smart Growth Incentive Program.



Existing Conditions

The project is located in the previously developed Downtown Escondido. The site generally slopes from east to west and is relatively flat. Onsite drainage is divided into 11 drainage areas, as shown in the Existing Conditions Exhibit in **Attachment 1**. Drainage areas 1-7 and 10-11 typically drain from east to west and then ultimately offsite. Drainage areas 8 and 9 also drain from east to west but flows are collected by existing public Type B-1 Curb inlets and subsequently storm drain infrastructure along Grand Avenue just east of Broadway.

Stormwater discharge will ultimately be transported through the Escondido Creek Watershed, to the San Elijo Lagoon, and ultimately to the Pacific Ocean.

The Rational Method was used to determine the existing peak flow. The City of Escondido Design Standards Figure 2 (April 2, 2014) states that a minimum 10-minute time of concentration be used as a conservative value. See **Table 1-1** below for the Existing Conditions Hydrology results.

Table 1-1: Existing Onsite Conditions Hydrology

Basin ID	Runoff Coefficient	Time of Concentration (min)	Area (acres)	Rainfall Intensity 50YR (in/hr)	Rainfall Intensity 100YR (in/hr)	50 Year (cfs)	100 Year (cfs)
1	0.92	10	1.10	3.1	3.4	3.15	3.44
2	0.92	10	1.16	3.1	3.4	3.34	3.65
3	0.93	10	0.21	3.1	3.4	0.61	0.66
4	0.94	10	0.15	3.1	3.4	0.43	0.47
5	0.92	10	0.06	3.1	3.4	0.19	0.20
6	0.75	10	0.01	3.1	3.4	0.02	0.03
7	0.95	10	0.18	3.1	3.4	0.52	0.57
8	0.93	10	1.02	3.1	3.4	2.94	3.22
9	0.93	10	1.85	3.1	3.4	5.33	5.83
10	0.95	10	0.04	3.1	3.4	0.13	0.15
11	0.92	10	0.10	3.1	3.4	0.29	0.32
Site Total			5.89			16.96	18.54

Existing hydrology calculations are shown in **Attachment 2**. Note that all elevations were estimated from a combination of readily available survey information and Google Earth.

Proposed Conditions

The onsite drainage system was designed in compliance with the City of Escondido Design Standards, dated April 2, 2014. An unmitigated hydrologic analysis was completed for the proposed project using the Rational Method for the 50-year and 100-year storm event. The Rational Method equation is defined below:

$Q_p = (C)(i)(A)$, where

Q_p = Peak Flow Rate (cfs)

C = Runoff Coefficient

i = Rainfall Intensity (in/hr)

A = Drainage Area (ac)

The rainfall intensity for the 50-year and 100-year storm events were calculated using Figure 1 of the City of Escondido Design Standards, with an assumed time of concentration of 10 minutes. The drainage areas are defined on the Proposed Conditions exhibit in **Attachment 1**. All drainage areas in the Proposed Condition

are expected to remain the same as the Existing Condition. Further, it is expected that run-off will follow the existing drainage patterns. See **Table 2-1** for Proposed Conditions Hydrology. Proposed hydrology calculations are provided in **Attachment 2**.

Part of the Grand Avenue Vision Project will include Offsite Bus Improvements, shown in **Attachment 1**. Drainage analysis was not provided for any of these offsite improvements. None of the offsite improvements propose to increase pervious area. Three of the offsite improvements propose to replace or increase impervious area. It is expected that the replacement or added impervious areas would not have a significant effect on existing drainage patterns since the replacement is in kind and the added areas will partially flow into the existing pervious parkway areas. The proposed bus improvements at Second Avenue and Broadway and at Valley Parkway and Juniper Street will have a decrease of 270 sf and 88 sf of pervious area, respectively. Since this is such a small amount of pervious area in relation to the greater drainage area, no significant negative effects are expected to the downstream infrastructure.

Table 2-1: Proposed Onsite Conditions Hydrology

Basin ID	Runoff Coefficient	Time of Concentration (min)	Area (acres)	Rainfall Intensity 50YR (in/hr)	Rainfall Intensity 100YR (in/hr)	50 Year (cfs)	100 Year (cfs)
1	0.94	10	1.10	3.1	3.4	3.19	3.49
2	0.93	10	1.16	3.1	3.4	3.38	3.70
3	0.93	10	0.21	3.1	3.4	0.61	0.66
4	0.92	10	0.15	3.1	3.4	0.42	0.46
5	0.92	10	0.06	3.1	3.4	0.19	0.20
6	0.75	10	0.01	3.1	3.4	0.02	0.03
7	0.94	10	0.18	3.1	3.4	0.51	0.56
8	0.93	10	1.02	3.1	3.4	2.97	3.25
9	0.94	10	1.85	3.1	3.4	5.40	5.90
10	0.95	10	0.04	3.1	3.4	0.13	0.15
11	0.92	10	0.10	3.1	3.4	0.29	0.32
Site Total			5.89			17.12	18.72

Drainage areas 1-7, and 10-11 will sheet flow to the gutter, then drain off site to downstream public storm drain infrastructure. The downstream systems were not analyzed since the potential increase in flow from these drainage areas is expected to be less than 1.5% in all cases as displayed in **Table 2-2**. In some cases, the expected peak flows may decrease. Since the Rational Method is a conservative estimate of flow, and the expected increase is small, there is no expected negative effect on the downstream infrastructure.

Table 2-2: Percent Change between Existing and Proposed Conditions

DMA	EXISTING Q50 (CFS)	PROPOSED Q50 (CFS)	% CHANGE	EXISTING Q100 (CFS)	PROPOSED Q100 (CFS)	% CHANGE
1	3.15	3.19	1.43%	3.44	3.49	1.43%
2	3.34	3.38	1.29%	3.65	3.70	1.29%
3	0.61	0.61	0.00%	0.66	0.66	0.00%
4	0.43	0.42	-2.61%	0.47	0.46	-2.61%
5	0.19	0.19	0.00%	0.20	0.20	0.00%
6	0.02	0.02	0.00%	0.03	0.03	0.00%
7	0.52	0.51	-1.35%	0.57	0.56	-1.35%
8	2.94	2.97	0.92%	3.22	3.25	0.92%
9	5.33	5.40	1.27%	5.83	5.90	1.27%
10	0.13	0.13	0.00%	0.15	0.15	0.00%
11	0.29	0.29	0.00%	0.32	0.32	0.00%

Inlet Design:

The existing type B-1 Curb inlets for DMAs 8 and 9 were assumed to have 10-foot throat lengths based on City of Escondido As-Built 1933 A and investigation from Google Street View. Drainage Areas 8 and 9 will likely need new inlets since the proposed design includes pop outs that will alter the flow lines for the drainage areas. The proposed inlets for DMA 8 and DMA 9 will need to match the existing interception rates of 2.97 CFS and 5.40 CFS respectively. Flowmaster calculations for the Type B-1 Curb Inlets are provided in **Attachment 4**.

Gutter Design:

6" Type G Curb and Gutter per SDRSD G-2 are proposed to match the existing curbs and aesthetic of the Downtown Escondido Area. The spread width was calculated for each DMA using Flowmaster and are provided in **Attachment 4**. In all cases, the spread width is less than 16 feet with a depth less than 5-inches from the flowline. Per the City of Escondido Design Manual if spread width is less than 16' and the depth of flow is less than 5-inches, no additional infrastructure is needed to get the flow out of the road. As a result, no additional sub-surface infrastructure is expected.

Water Quality:

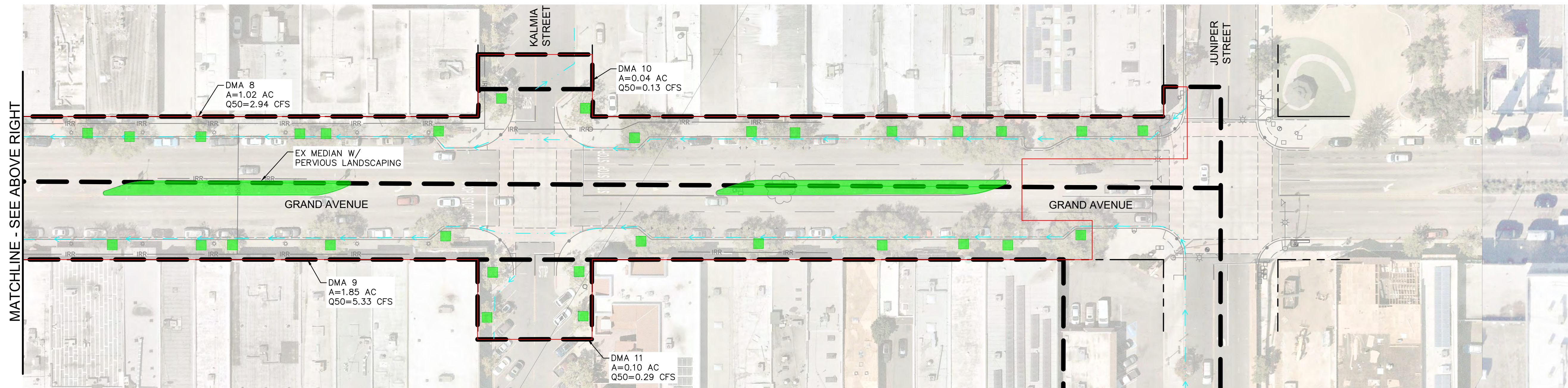
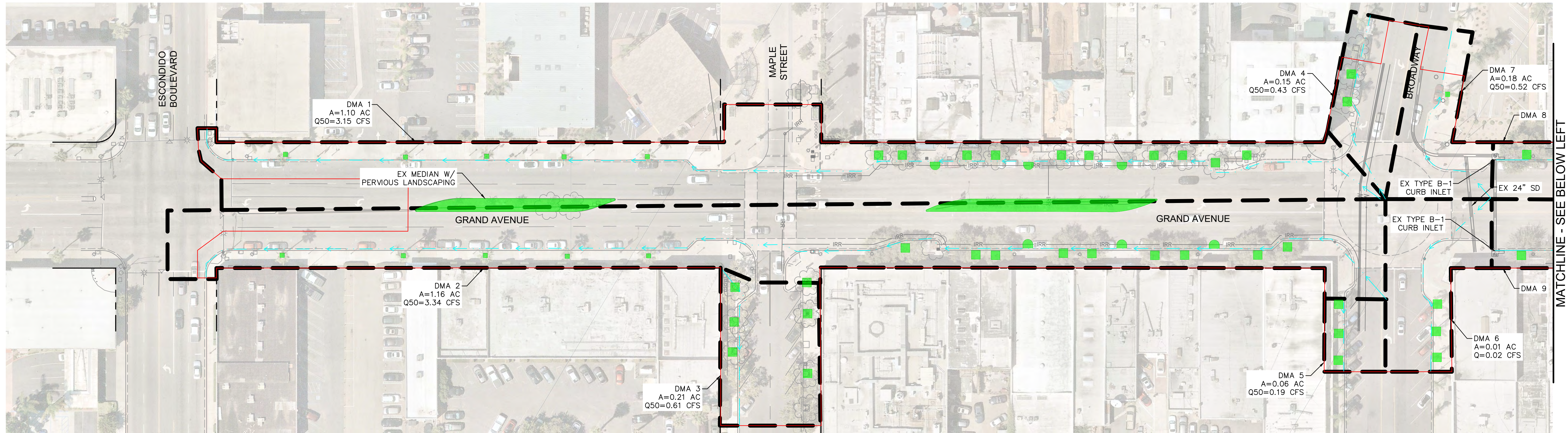
This project solely consists of widening existing sidewalks to increase the existing walkable and dining space and is considered Green Street Exempt. The exemption is explored more in depth in the Grand Avenue Vision Project - Green Streets Exemption Letter for Phase 1 provided in **Attachment 5**. As a result, all phases of this project will be expected to meet green streets exemptions per the current regulations and structural BMPs are not expected to be required. All applicable green street elements such as street trees and green gutters will be installed to the maximum extent practicable without reducing pedestrian and vehicle safety.

Attachments:

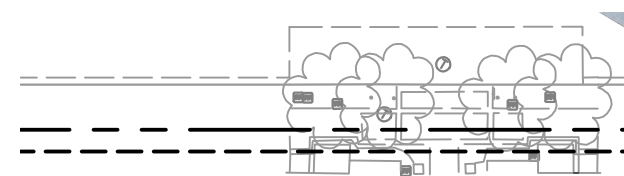
- 1) Drainage Area Maps
- 2) Existing Hydrology Calculations
- 3) Proposed Hydrology Calculations
- 4) FlowMaster Calculations
- 5) Green Streets Exemption Letter (Phase 1)

Attachment 1

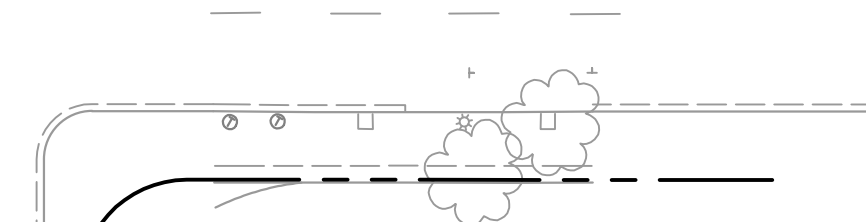
Drainage Area Maps



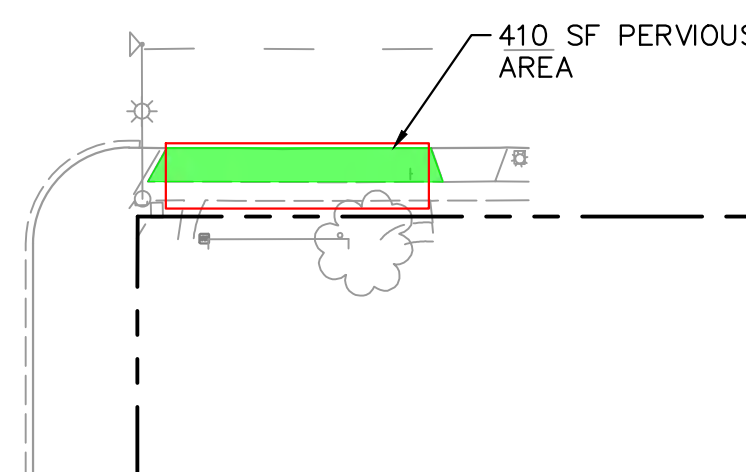
LEGEND	
LIMIT OF DISTURBANCE	---
EXISTING PERVIOUS AREA	■
EXISTING FLOW LINES	→
DMA AREA	---



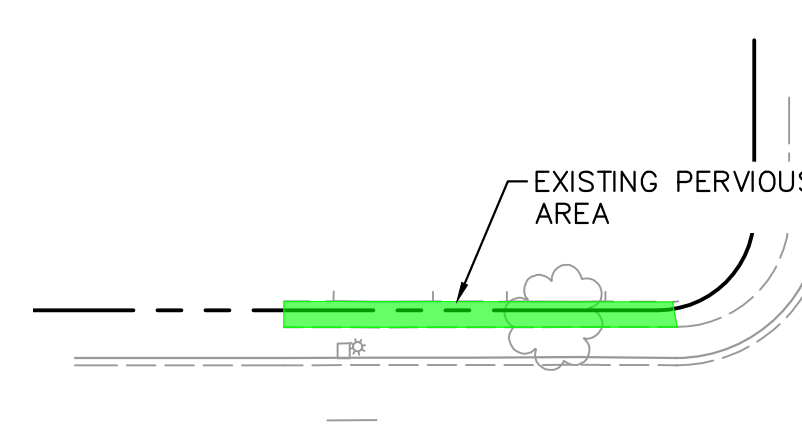
2ND AVENUE AND CENTRE CITY PARKWAY
OFF-SITE BUS IMPROVEMENT



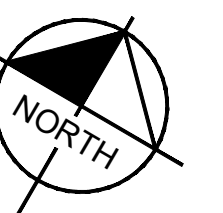
2ND AVENUE AND ESCONDIDO BOULEVARD
OFF-SITE BUS IMPROVEMENT

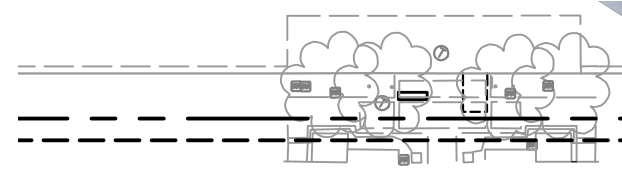
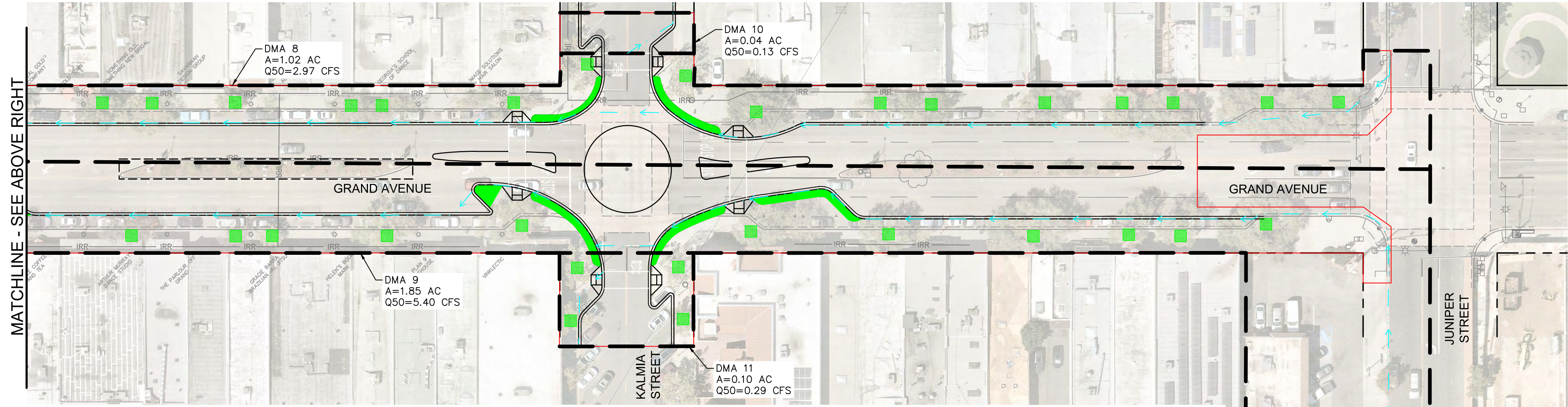
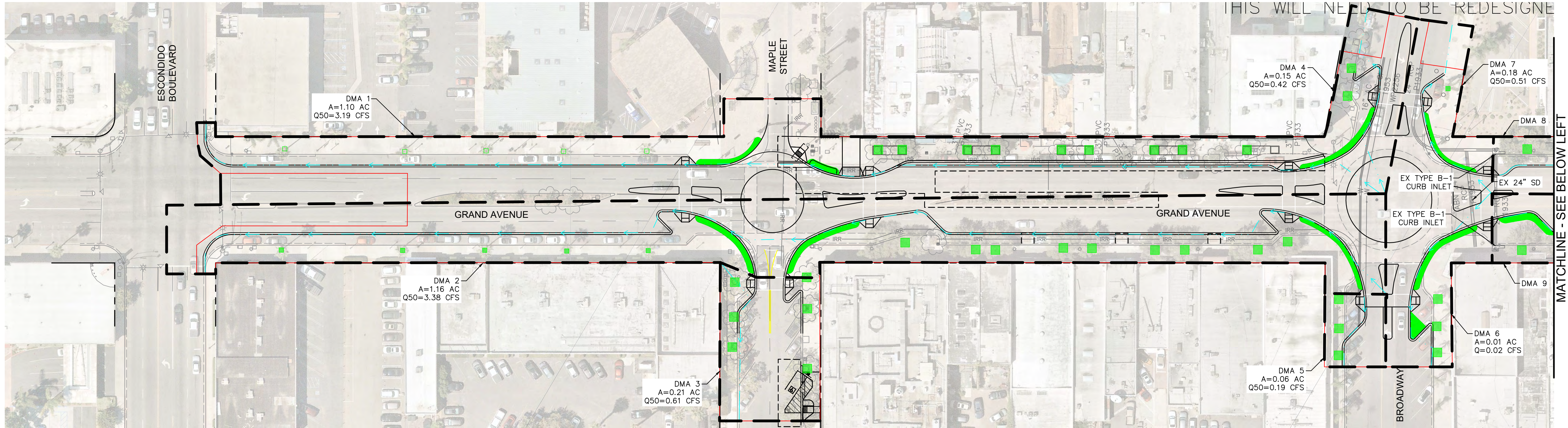


2ND AVENUE AND S BROADWAY
OFF-SITE BUS IMPROVEMENT

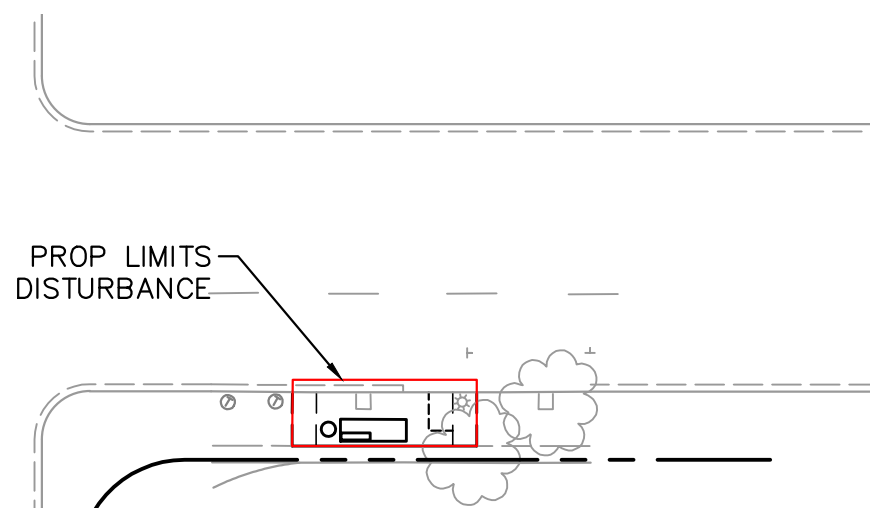


VALLEY PARKWAY AND JUNIPER STREET
OFF-SITE BUS IMPROVEMENT

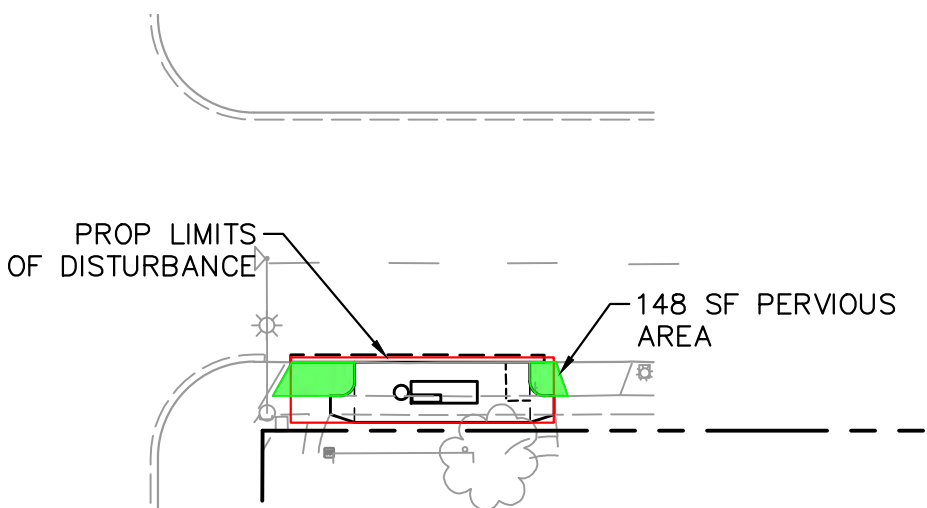




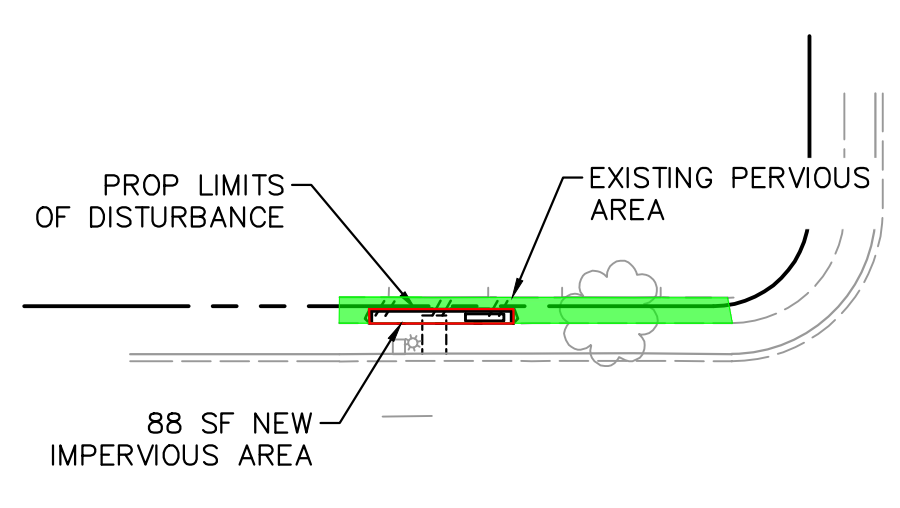
2ND AVENUE AND CENTRE CITY PARKWAY
OFF-SITE BUS IMPROVEMENT



2ND AVENUE AND ESCONDIDO BOULEVARD
OFF-SITE BUS IMPROVEMENT



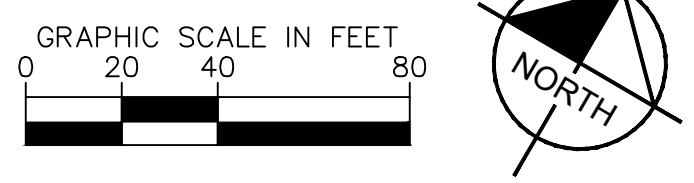
2ND AVENUE AND S BROADWAY
OFF-SITE BUS IMPROVEMENT



VALLEY PARKWAY AND JUNIPER STREET
OFF-SITE BUS IMPROVEMENT

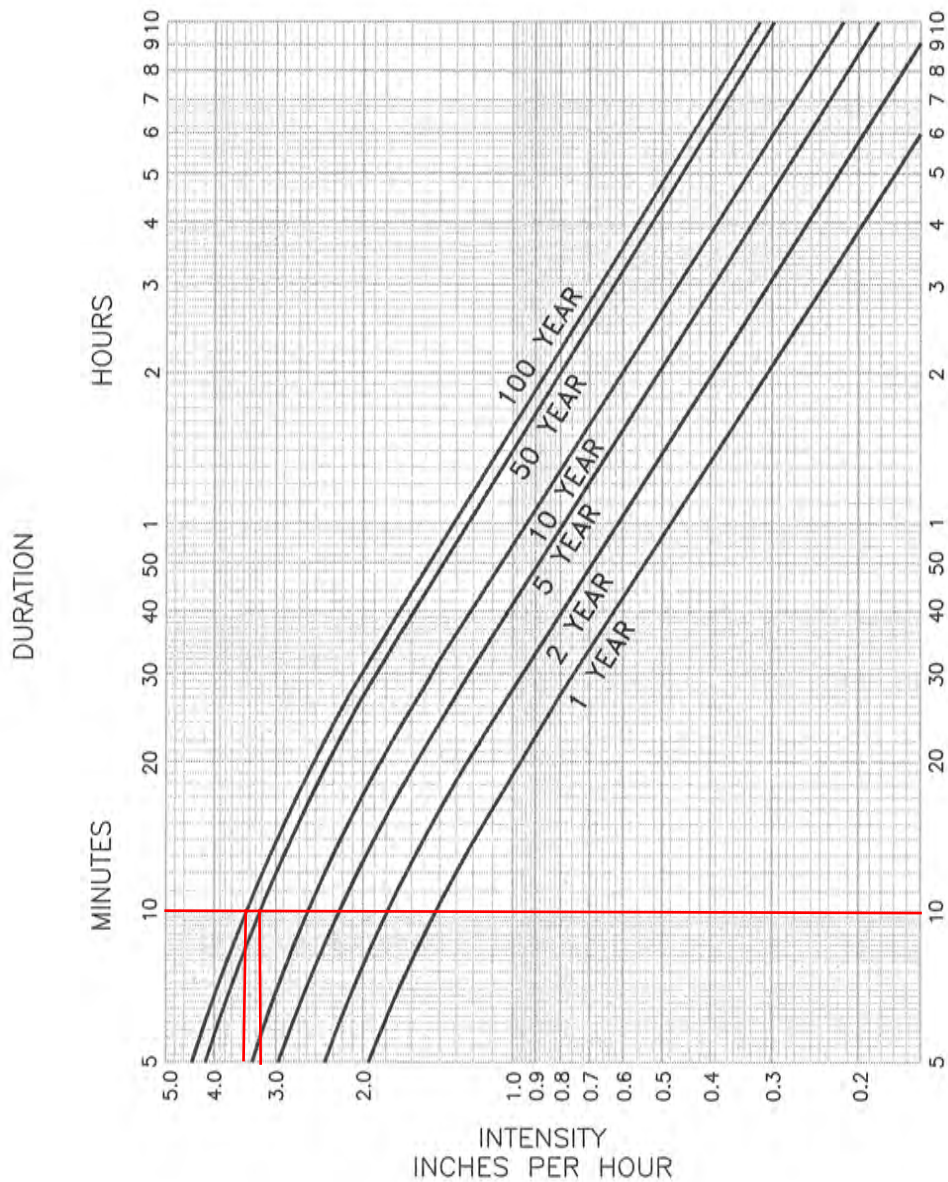
LEGEND	
LIMIT OF DISTURBANCE	—
PROPOSED PERVIOUS AREA	■
PROPOSED FLOW LINES	→
DMA AREA	---

NOTE: OFFSET IMPROVEMENTS WERE NOT ANALYZED. SEE REPORT FOR



Attachment 2

Existing Hydrology Calculations



ESCONDIDO RUNOFF COEFFICIENTS

PARKS, GOLF COURSES, CEMETERIES	0.25
UNDEVELOPED LAND, OPEN SPACE	0.35
RURAL - OVER 1/2 ACRE LOTS	0.45
SINGLE FAMILY	0.55
MOBILE HOME	0.65
MULTIPLE UNITS	0.70
COMMERCIAL	0.85
INDUSTRIAL	0.95

APPROVED: DATE: 04-02-2014

P. W. DIRECTOR/CITY ENGINEER

REVISED

APPROVED

CITY OF ESCONDIDO
DEPARTMENT OF PUBLIC WORKS

SCALE:

NOT TO SCALE

**RUN-OFF INTENSITY
DURATION CURVE**

FIGURE NO.

1

Table 1-1: EXISTING CONDITIONS RATIONAL METHOD

DMA	PERVIOUS (AC)	PERVIOUS C	IMPERVIOUS (AC)	IMPERVIOUS C	TOTAL AREA (AC)	COMPOSITE C	RAINFALL INTENSITY 50-YEAR (IN/HR)	Q50 (CFS)	RAINFALL INTENSITY 100-YEAR (IN/HR)	Q100 (CFS)
1	0.047	0.35	1.049	0.95	1.10	0.92	3.1	3.15	3.4	3.44
2	0.053	0.35	1.111	0.95	1.16	0.92	3.1	3.34	3.4	3.65
3	0.006	0.35	0.203	0.95	0.21	0.93	3.1	0.61	3.4	0.66
4	0.002	0.35	0.146	0.95	0.15	0.94	3.1	0.43	3.4	0.47
5	0.003	0.35	0.062	0.95	0.06	0.92	3.1	0.19	3.4	0.20
6	0.003	0.35	0.007	0.95	0.01	0.75	3.1	0.02	3.4	0.03
7	0.000	0.35	0.175	0.95	0.18	0.95	3.1	0.52	3.4	0.57
8	0.042	0.35	0.981	0.95	1.02	0.93	3.1	2.94	3.4	3.22
9	0.070	0.35	1.778	0.95	1.85	0.93	3.1	5.33	3.4	5.83
10	0.000	0.35	0.045	0.95	0.04	0.95	3.1	0.13	3.4	0.15
11	0.004	0.35	0.098	0.95	0.10	0.92	3.1	0.29	3.4	0.32

Total: 5.89

16.96

18.54

* NOTE: 50-YEAR AND 100-YEAR INTENSITY DERIVED FROM CITY OF ESCONDIDO DESIGN MANUAL FIGURE 1; ASSUMED MIN T_C OF 10 MIN PER FIGURE 2

Attachment 3

Proposed Hydrology Calculations

Table 2-1:PROPOSED CONDITIONS RATIONAL METHOD

DMA	PERVIOUS (AC)	PERVIOUS C	IMPERVIOUS (AC)	IMPERVIOUS C	TOTAL AREA (AC)	COMPOSITE C	RAINFALL INTENSITY 50-YEAR (IN/HR)	Q50 (CFS)	RAINFALL INTENSITY 100-YEAR (IN/HR)	Q100 (CFS)
1	0.023	0.35	1.07	0.95	1.10	0.94	3.1	3.19	3.4	3.49
2	0.030	0.35	1.13	0.95	1.16	0.93	3.1	3.38	3.4	3.70
3	0.006	0.35	0.20	0.95	0.21	0.93	3.1	0.61	3.4	0.66
4	0.008	0.35	0.14	0.95	0.15	0.92	3.1	0.42	3.4	0.46
5	0.003	0.35	0.06	0.95	0.06	0.92	3.1	0.19	3.4	0.20
6	0.003	0.35	0.01	0.95	0.01	0.75	3.1	0.02	3.4	0.03
7	0.004	0.35	0.17	0.95	0.18	0.94	3.1	0.51	3.4	0.56
8	0.028	0.35	1.00	0.95	1.02	0.93	3.1	2.97	3.4	3.25
9	0.033	0.35	1.81	0.95	1.85	0.94	3.1	5.40	3.4	5.90
10	0.000	0.35	0.04	0.95	0.04	0.95	3.1	0.13	3.4	0.15
11	0.004	0.35	0.10	0.95	0.10	0.92	3.1	0.29	3.4	0.32
Total:					5.89			17.12		18.72

* NOTE: 50-YEAR AND 100-YEAR INTENSITY DERIVED FROM CITY OF ESCONDIDO DESIGN MANUAL FIGURE 1; ASSUMED MIN T_C OF 10 MIN PER FIGURE 2

Table 2-2: PERCENT CHANGE BETWEEN EXISTING AND PROPOSED CONDITIONS

DMA	EXISTING Q50 (CFS)	PROPOSED Q50 (CFS)	% CHANGE	EXISTING Q100 (CFS)	PROPOSED Q100 (CFS)	% CHANGE
1	3.15	3.19	1.43%	3.44	3.49	1.43%
2	3.34	3.38	1.29%	3.65	3.70	1.29%
3	0.61	0.61	0.00%	0.66	0.66	0.00%
4	0.43	0.42	-2.61%	0.47	0.46	-2.61%
5	0.19	0.19	0.00%	0.20	0.20	0.00%
6	0.02	0.02	0.00%	0.03	0.03	0.00%
7	0.52	0.51	-1.35%	0.57	0.56	-1.35%
8	2.94	2.97	0.92%	3.22	3.25	0.92%
9	5.33	5.40	1.27%	5.83	5.90	1.27%
10	0.13	0.13	0.00%	0.15	0.15	0.00%
11	0.29	0.29	0.00%	0.32	0.32	0.00%

Attachment 4

Flowmaster Calculations

DMA 1 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.510 %
Discharge	3.20 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	12.2 ft
Flow Area	1.6 ft ²
Depth	4.1 in
Gutter Depression	1.2 in
Velocity	2.06 ft/s

DMA 2 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.510 %
Discharge	3.40 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	12.5 ft
Flow Area	1.6 ft ²
Depth	4.2 in
Gutter Depression	1.2 in
Velocity	2.08 ft/s

DMA 3 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	1.070 %
Discharge	0.60 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	4.8 ft
Flow Area	0.3 ft ²
Depth	2.3 in
Gutter Depression	1.2 in
Velocity	2.03 ft/s

DMA 4 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.640 %
Discharge	0.40 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	4.4 ft
Flow Area	0.3 ft ²
Depth	2.2 in
Gutter Depression	1.2 in
Velocity	1.54 ft/s

DMA 5 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	1.820 %
Discharge	0.20 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	1.4 ft
Flow Area	0.1 ft ²
Depth	1.5 in
Gutter Depression	1.2 in
Velocity	2.36 ft/s

DMA 6 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.600 %
Discharge	0.01 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	0.5 ft
Flow Area	0.0 ft ²
Depth	0.6 in
Gutter Depression	1.2 in
Velocity	0.73 ft/s

DMA 7 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.590 %
Discharge	0.50 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	5.1 ft
Flow Area	0.3 ft ²
Depth	2.4 in
Gutter Depression	1.2 in
Velocity	1.53 ft/s

DMA 8 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.560 %
Discharge	3.00 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	11.7 ft
Flow Area	1.4 ft ²
Depth	4.0 in
Gutter Depression	1.2 in
Velocity	2.10 ft/s

DMA 9 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	0.420 %
Discharge	5.40 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	15.6 ft
Flow Area	2.5 ft ²
Depth	4.9 in
Gutter Depression	1.2 in
Velocity	2.15 ft/s

DMA 10 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	2.000 %
Discharge	0.10 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	1.0 ft
Flow Area	0.0 ft ²
Depth	1.1 in
Gutter Depression	1.2 in
Velocity	2.05 ft/s

DMA 11 Q_50 Type G Gutter

Project Description	
Solve For	Spread
Input Data	
Channel Slope	4.550 %
Discharge	0.30 cfs
Gutter Width	1.3 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Results	
Spread	1.3 ft
Flow Area	0.1 ft ²
Depth	1.5 in
Gutter Depression	1.2 in
Velocity	3.68 ft/s

Type B-1 Curb Inlet DMA 8 10' Opening

Project Description	
Solve For	Efficiency
Input Data	
Discharge	3.00 cfs
Slope	0.560 %
Gutter Width	1.33 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Curb Opening Length	10.0 ft
Local Depression	10.0 in
Local Depression Width	16.0 in
Results	
Efficiency	100.00 %
Intercepted Flow	3.00 cfs
Bypass Flow	0.00 cfs
Spread	11.7 ft
Depth	4.0 in
Flow Area	1.4 ft ²
Gutter Depression	1.2 in
Total Depression	11.2 in
Velocity	2.10 ft/s
Equivalent Cross Slope	26.412 %
Length Factor	1.873
Total Interception Length	5.3 ft

Type B-1 Curb Inlet DMA 9 10' Opening

Project Description	
Solve For	Efficiency
Input Data	
Discharge	5.40 cfs
Slope	0.420 %
Gutter Width	1.33 ft
Gutter Cross Slope	9.375 %
Road Cross Slope	2.000 %
Roughness Coefficient	0.016
Curb Opening Length	10.0 ft
Local Depression	10.0 in
Local Depression Width	16.0 in
Results	
Efficiency	100.00 %
Intercepted Flow	5.40 cfs
Bypass Flow	0.00 cfs
Spread	15.6 ft
Depth	4.9 in
Flow Area	2.5 ft ²
Gutter Depression	1.2 in
Total Depression	11.2 in
Velocity	2.15 ft/s
Equivalent Cross Slope	19.983 %
Length Factor	1.349
Total Interception Length	7.4 ft

Attachment 5

Green Streets Exemption Letter

MEMORANDUM

To: Julie Procopio, P.E.
Director of Engineering Services/City Engineer
City of Escondido, CA

From: Mark Araujo, P.E.
Kimley-Horn and Associates, Inc.

Date: December 15, 2020

Subject: Grand Avenue Vision Project - Phase I Green Streets Exemption Memorandum

Dear Ms. Procopio,

The purpose of this memorandum is to address the water quality requirements for the Grand Avenue Vision Project - Phase I (or "Project"). The Project is located in downtown Escondido on Grand Avenue between Maple Street and North Broadway (Refer to Figure 1 – Project Location Map). The Project aims to improve the economic vitality of Grand Avenue by creating a pedestrian-friendly and aesthetically appealing corridor. The complete corridor will include mini-roundabouts at three locations (Broadway, Maple, and Kalmia), streetscape improvements, public art features, narrowing of Grand Avenue to one lane in each direction and using the excess width to create wider, 20-foot sidewalks, and diagonal parking on one side of the street resulting in increased parking. The first phase focuses on one portion of the corridor (the north side of Grand Avenue between Maple and Broadway) and includes NCTD Breeze bus route realignments, sidewalk expansion, public art, and environmental and green street improvements. The first phase of the project is funded through SANDAG's Smart Growth Incentive Program.

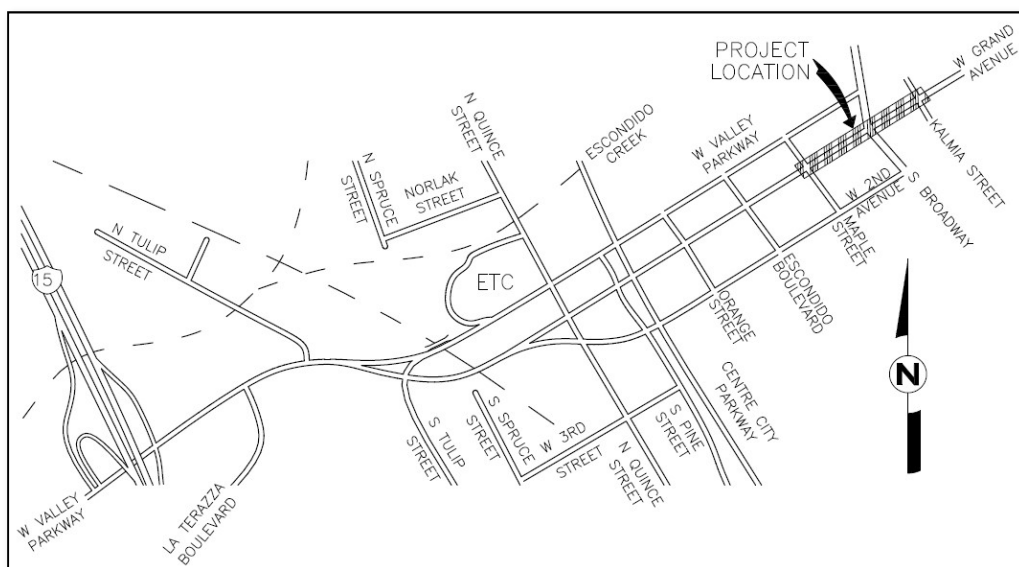


Figure 1 – Project Location Map

The Grand Avenue Vision Project - Phase I is designed in accordance with the City of Escondido Stormwater Design Manual (BMP Design Manual) February 2016 update. Based on Table 1-2 of the BMP Design Manual, permanent stormwater requirements do not apply, as the Project meets the condition of "retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets Guidance," and as listed in Table 1.1 below. Further, Grand Avenue's proposed improvements will be considered a Minor Project per the City of Escondido's Stormwater Development Projects - Minor Projects List (refer to attachment 1). Form F-1 of the PDP Project Applicability Checklist states that minor projects do not require any standard forms.

Table 1-1 Applicable Green Street BMPs

Type	Applicable? (Y/N)	Used ? (Y/N)	Summary of Justification
Infiltration Basin or Trench	N	N	The project corridor lacks the existing infrastructure to install an infiltration basin or trench with positive gravity or major utility relocations. Further, infiltration rates are less than 0.04 in/hr (Ninyo and Moore, March 2020). Including a factor of safety, the infiltration rates would be less than 0.01 in/hr, causing infiltration basins to be infeasible.
Biofiltration Curb Extensions/Storm Water Planters	N	N	The project corridor lacks the existing infrastructure to install biofiltration curb extensions or stormwater planters.
Vegetated Swales/Green Gutter	Y	Y	A Flow-Thru style green gutter will be installed to intercept first flush stormwater.
Proprietary Biotreatment	N	N	The project corridor lacks the existing infrastructure to install proprietary biotreatment.
Permeable Surface/Landscaped Areas	N	N	Permeable surfaces cannot be installed at this project site. Landscaped areas cannot be installed due to limited right-of-way.
Sidewalk Trees and Tree Boxes	N	N	Existing mature trees will be protected to the maximum extent practicable to maintain the existing canopy interception



In conclusion, the Grand Avenue Vision Project - Phase I is considered a Minor Project since it only redevelops an existing street and is designed with all applicable Green Streets Elements. No standard forms are needed for this project. While it is expected that the next phases of the Grand Avenue Vision Project will also qualify as a Green Streets Exemption, water quality requirements may change in the future before those phases are constructed. As a result, this letter will only apply to Phase I. Refer to attachments 2 and 3 of Grand Avenue Vision - Phase I for the limits and the proposed improvements.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

A handwritten signature in blue ink, appearing to read "Mark Araujo".

Mark Araujo, P.E.
RCE# 85614

Attachments:

- Attachment 1: City of Escondido Minor Projects List
- Attachment 2: Grand Avenue Vision – Phase I Limits of Improvements
- Attachment 3: Grand Avenue Vision Improvement Plans – Phase I



Attachment 1

City of Escondido Minor Projects List

STORM WATER AND DEVELOPMENT PROJECTS

What Type of Storm Water Best Management Practices (BMPs) Does my Project Need?		
MINOR	STANDARD	PRIORITY
<ul style="list-style-type: none"> • Construction BMPs 	<ul style="list-style-type: none"> • Construction BMPs • Site Design BMPs • Source Control BMPs 	<ul style="list-style-type: none"> • Construction BMPs • Site Design BMPs • Source Control BMPs • Structural BMPs

Minor Projects:
<p>Replacement of impervious surfaces that are part of a routine maintenance activity, such as:</p> <ul style="list-style-type: none"> • Replacing roof material on an existing building • Rebuilding a structure to original design after damage from earthquake, fire or similar disasters • Restoring pavement or other surface materials affected by trenches from utility work • Resurfacing existing roads and parking lots, including slurry, overlay and restriping • Routine replacement of damaged pavement, including full depth replacement, if the sole purpose is to repair the damage • New or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria: <ul style="list-style-type: none"> (i) Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR (ii) Designed and constructed to be hydraulically disconnected from paved streets or roads; OR (iii) Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets guidance • Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets guidance • Constructing new sidewalk, pedestrian ramps or bike lanes on existing roads (within existing street right-of-way) • Restoring a historic building to its original historic design

Repair or improvements to an existing building or structure that do not alter the size:

- Plumbing, electrical and HVAC work
- Interior alterations including major interior remodels and tenant build-out within an existing commercial building
- Exterior alterations that do not change the general dimensions and structural framing of the building (does not include building additions or projects where the existing building is demolished)

Additional categories include:

- Landscaping, including rock or gravel beds
- Retaining walls or curbs placed to support landscaping or sidewalks
- Fencing and screen walls
- Temporary or portable items such as containers and sheds
- Replacement of sidewalks
- Covers, such as a patio cover or trellis, over existing impervious surface

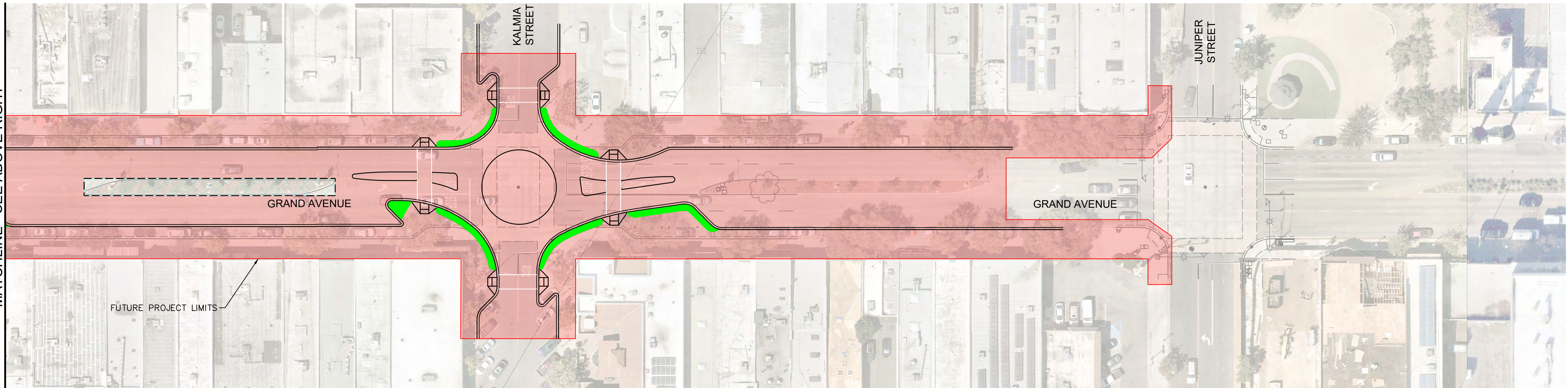
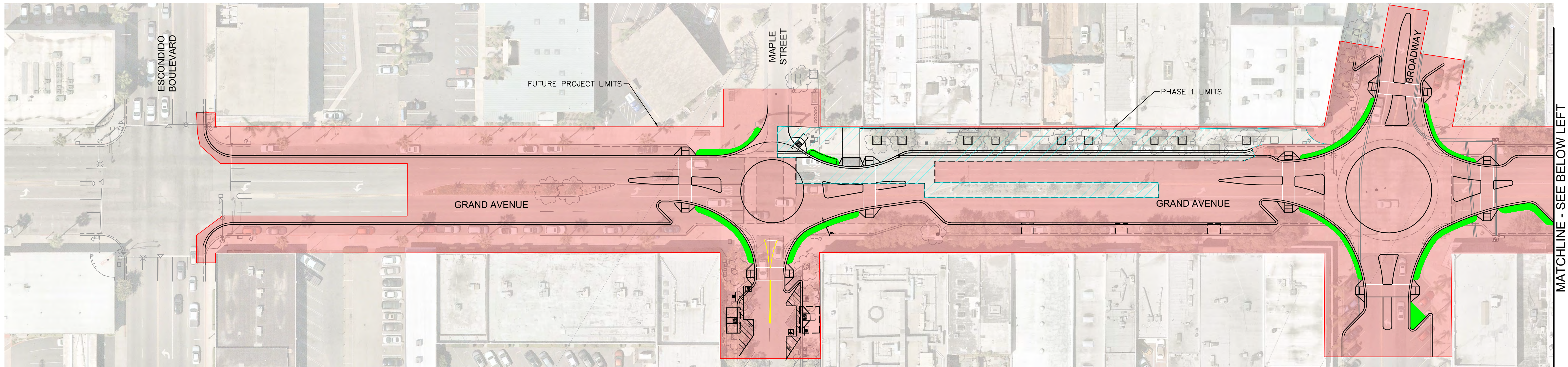
Other Types of Work:

- If your permitted project is any other type of work, it is either a **Standard** or a **Priority** Project.
- See the **Standard** or **Priority** project submittal checklists for more information.



Attachment 2

Grand Avenue Vision – Phase I Limits of Improvements

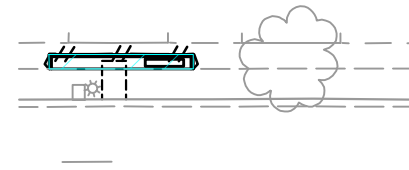
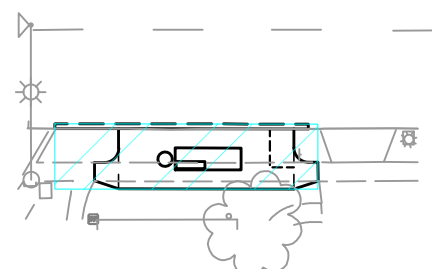
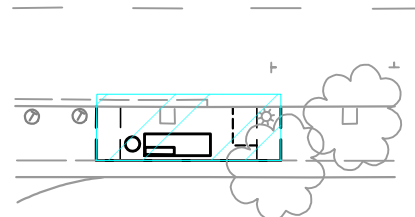
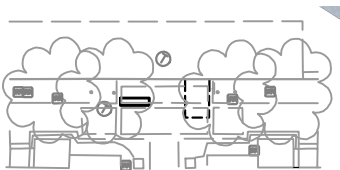


LEGEND

- LIMIT OF DISTURBANCE
- PROPOSED PERVIOUS AREA
- PROPOSED IMPERVIOUS AREA—PHASE 1
- PROPOSED IMPERVIOUS AREA—FUTURE PHASES

MATCHLINE - SEE ABOVE RIGHT

MATCHLINE - SEE BELOW LEFT

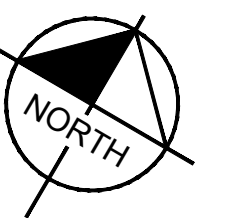


2ND AVE AND CENTRE CITY PARKWAY
OFF-SITE BUS IMPROVEMENT

2ND AVE AND ESCONDIDO BOULEVARD
OFF-SITE BUS IMPROVEMENT

2ND AVE AND S BROADWAY
OFF-SITE BUS IMPROVEMENT

VALLEY PARKWAY AND JUNIPER STREET
OFF-SITE BUS IMPROVEMENT





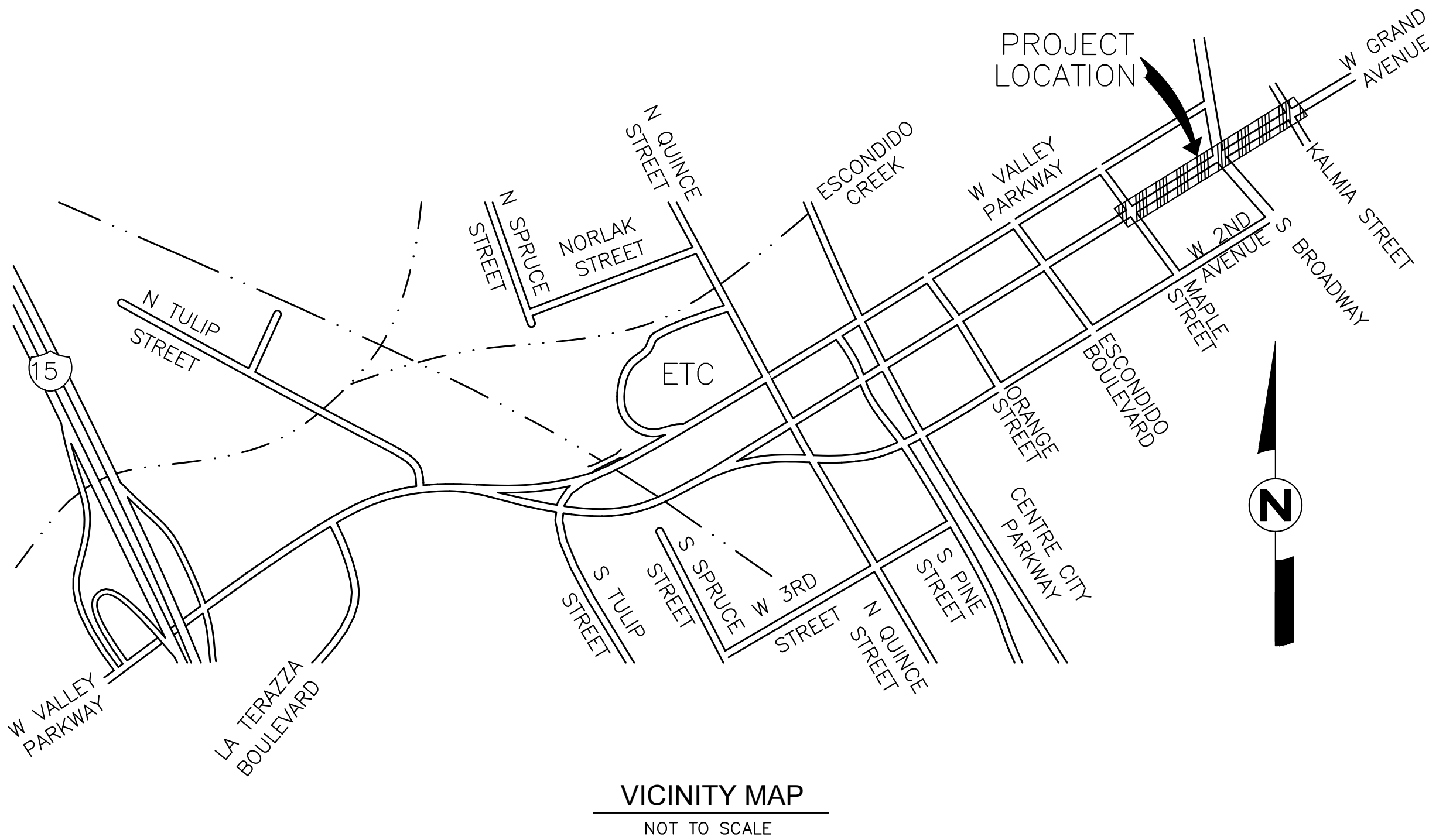
Attachment 3

Grand Avenue Vision Improvement Plans – Phase I

\\SND\p01\CA_SND\JND\MUM\09223015 - Grand Avenue Vision\Design\Plan Sheets - 2018\292015-GN.dwg
Plotted By: Clemente, Andrew Sheet Set: Rho Layout: TITLE SHEET August 24, 2020 05:46:56pm

CONSTRUCTION PLANS FOR GRAND AVENUE VISION PROJECT

PROJECT NO. ENG. XX-XXXX
DRAWING NO. XXX-XXXX



VICINITY MAP
NOT TO SCALE

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT. THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF ESCONDIDO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

MARK N. ARAUJO
R.C.E. 85614
EXP. DATE 09-30-22

OWNER / PERMITEE

CITY OF ESCONDIDO
201 N. BROADWAY
ESCONDIDO, CA 92025
TEL NO: 760-839-4651
FAX NO: 760-839-4597

DATE

BASIS OF COORDINATES: (NAD83)

THE BASIS OF COORDINATES FOR THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83) CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 (EPOCH 1991.35) BASED LOCALLY UPON THE FOLLOWING CONTROL POINTS PER RECORD OF SURVEY 14236.

STATION	NORTHING	EASTING	DESCRIPTION
1006	1988572.626	6307295.522	BRASS DISC LS 4639 IN WELL MONUMENT
1011	1989576.443	6319064.936	BRASS DISC EGCS 1992 1011 IN 2" PIPE

GRID BEARING BETWEEN STA 1006 AND STA 1011 = N 85°07'30" E.

VERTICAL CONTROL: (NGVD29)

ELEVATIONS SHOWN HEREON ARE IN TERMS OF THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) BASED LOCALLY UPON THE FOLLOWING BENCHMARK PER THE CITY OF ESCONDIDO.

BENCHMARK	ELEVATION	DESCRIPTION
485-A	653.87	CHISELED SQUARE ON TOP OF CURB INLET, ON THE SE CORNER OF GRAND AVENUE AND BROADWAY STREET, AT THE ELY

BEGINNING OF CURB RETURN

TOPOGRAPHY SOURCE

AGUIRRE AND ASSOCIATES, INC.
8265 COMMERCIAL STREET, STE 1
LA MESA, CA 91942

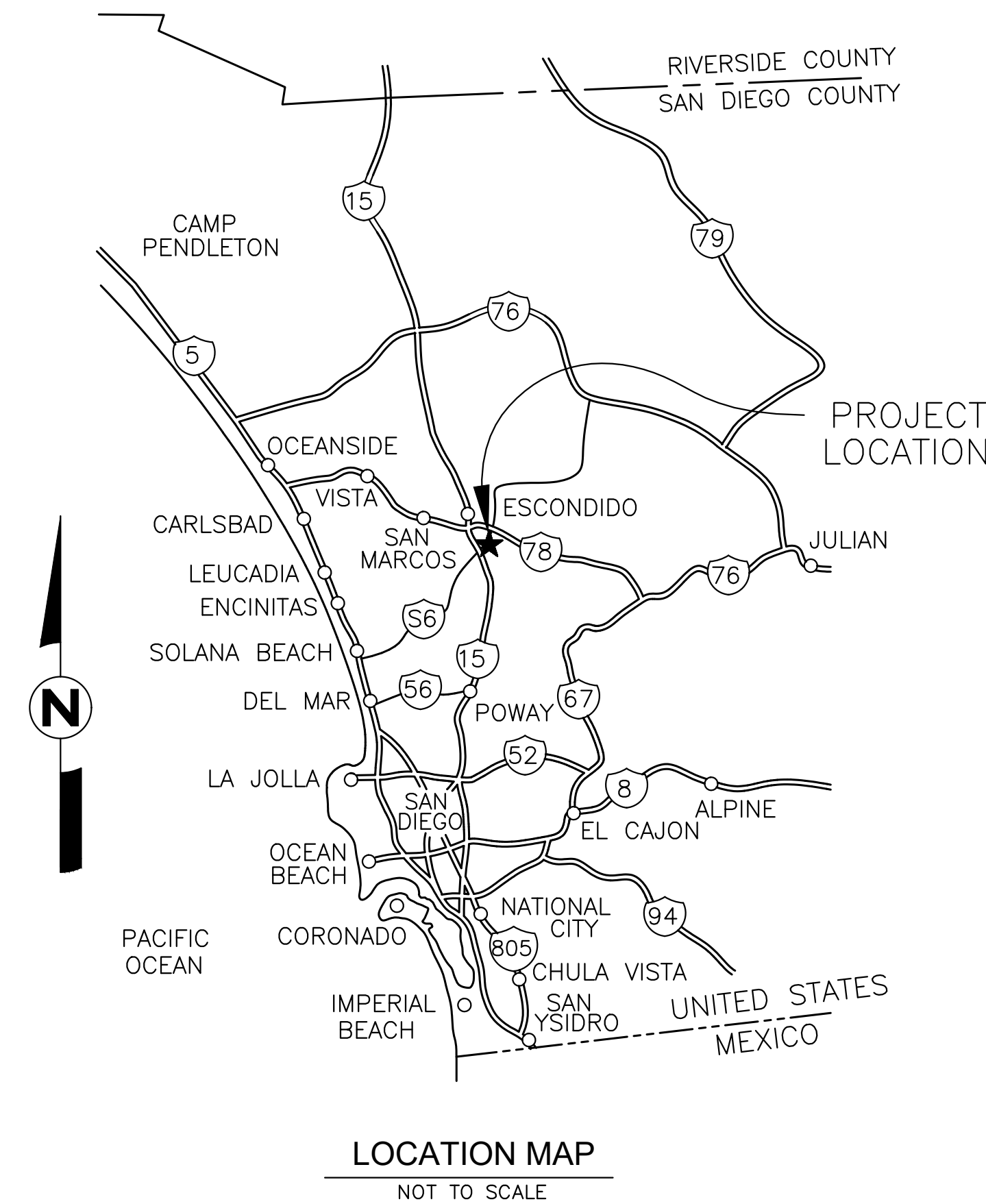
FIELD SURVEY ON 9/2019.

STANDARD SPECIFICATIONS

- STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, THE "GREENBOOK", LATEST EDITION, AND SAN DIEGO COUNTY SUPPLEMENTS.
- STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), LATEST EDITION.
- STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS, LATEST EDITION.

SHEET INDEX

1	TITLE SHEET
2	LEGEND, ABBREVIATIONS, AND GENERAL NOTES
3	DEMOLITION PLAN
4	IMPROVEMENT PLAN
5 - 6	HORIZONTAL VERTICAL CONTROL PLAN
7	CONSTRUCTION DETAILS
9 - 11	SIGNING AND STRIPING PLAN
12 - 14	URBAN DESIGN PLAN
15 - 18	IRRIGATION PLAN
19 - 21	TRAFFIC SIGNAL PLAN
22 - 24	ELECTRICAL PLAN



LOCATION MAP
NOT TO SCALE

WORK TO BE DONE

IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE IN ACCORDANCE WITH THE CURRENT CITY OF ESCONDIDO CITY STANDARDS AND SPECIFICATIONS, SAN DIEGO AREA REGIONAL STANDARDS AND SPECIFICATIONS AND SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS, CALTRANS MANUAL OF TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, WATER AGENCY'S STANDARDS, AND CALTRANS STANDARDS SPECIFICATIONS AND PLANS FOR THE BRIDGE.

- SIGNING AND MARKING IMPROVEMENTS ON TULIP STREET BETWEEN WEST VALLEY PARKWAY AND ESCONDIDO CREEK, ON WEST VALLEY PARKWAY BETWEEN TULIP STREET AND QUINCE STREET, AND ON QUINCE STREET BETWEEN WEST VALLEY PARKWAY AND 2ND STREET.
- PAVEMENT, STORM DRAIN, SIDEWALK, DRIVEWAY, CURB RAMP IMPROVEMENTS ON TULIP STREET ADJACENT TO THE ESCONDIDO CREEK AND PEDESTRIAN BRIDGE IMPROVEMENTS ON WEST VALLEY PARKWAY AT A TRIBUTARY TO ESCONDIDO CREEK.
- NEW TRAFFIC SIGNAL AT TULIP STREET ADJACENT TO THE ESCONDIDO CREEK.

STANDARD DRAWINGS

- SAN DIEGO REGIONAL STANDARD DRAWINGS (SDRSD), LATEST EDITION.
- CITY OF ESCONDIDO DESIGN STANDARDS AND STANDARD DRAWINGS, LATEST EDITION.
- STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), LATEST EDITION.
- STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, LATEST EDITION.



KIMLEY-HORN
MARK ARAUJO, P.E.
401 B STREET, STE. 600
SAN DIEGO, CA 92101
619.234.9411



CITY PROJECT NO.
ENG. XX-XXXX

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

REVIEWED BY CITY OF ESCONDIDO

DEPUTY DIRECTOR OF UTILITIES _____ DATE _____

REVIEWED BY CITY OF ESCONDIDO

ASSOCIATE TRAFFIC ENGINEER _____ DATE _____

60% SUBMITTAL
NOT FOR CONSTRUCTION

Kimley»Horn

CONSTRUCTION RECORD		REFERENCES	Date	By	REVISIONS		App'd	Date	BENCH MARK			SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.	
Contractor					△				SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal			MA	ME	MU			GRAND AVENUE VISION PROJECT		XXXX-XXX	
Inspector										Vertical		Filmed		Plans Prepared Under Supervision Of			MARK ARAUJO			TITLE SHEET		
Date Completed										Traffic						Date 5/15/2020						
																R.C.E. No. 85614						Sheet 1 of 24

GENERAL NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE "GREEN BOOK" STANDARD SPECIFICATIONS, 2018 EDITION, 2018 REGIONAL SUPPLEMENTS, SPECIAL PROVISIONS OF THE CITY OF ESCONDIDO'S DESIGN STANDARDS AND STANDARD DRAWINGS EFFECTIVE APRIL 2, 2014, SAN DIEGO REGIONAL STANDARD DRAWINGS, 2018 EDITION AND CALTRANS STANDARD SPECIFICATIONS AND SATDARDS PLANS, JULY 2018 EDITION, ALONG WITH ANY REGIONAL SUPPLEMENTAL AMENDMENTS THERETO.
2. ALL CONTRACTORS WORKING IN THE PUBLIC RIGHT OF WAY SHALL OBTAIN A SEPARATE ENCROACHMENT PERMIT FROM THE DIRECTOR OF ENGINEERING SERVICES. INSPECTION OF ALL WORK IS REQUIRED. CONTACT THE ENGINEERING FIELD OFFICE AT (760) 839-4664 TO ARRANGE FOR ENCROACHMENT PERMITS AND INSPECTION. TWENTY-FOUR HOUR ADVANCE NOTICE IS REQUIRED FOR INSPECTION. NO WORK SHALL BE PERFORMED IN THE PUBLIC RIGHT OF WAY ON SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE CITY ENGINEER.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
4. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE THEREFOR.
5. LOCATION AND ELEVATION OF ALL EXISTING IMPROVEMENTS WITHIN THE AREA OF WORK SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.

STREET NOTES

1. ALL STATIONING REFERS TO THE CENTERLINE OF THE STREET.
2. ALL CURB DATA REFERS TO THE FACE OF CURB.
3. STRUCTURAL SECTION TO BE DETERMINED AFTER ROUGH GRADING IS COMPLETED, ACCORDING TO FIGURE 3 OF THE ESCONDIDO DESIGN STANDARDS.
4. THE ADDRESS OF EACH LOT SHALL EITHER BE PAINTED ON THE CURB OR, WHERE CURBS ARE NOT AVAILABLE, POSTED IN SUCH MANNER THAT THE ADDRESS IS VISIBLE FROM THE STREET. IN BOTH CASES, THE ADDRESS SHALL BE PLACED IN A MANNER AND LOCATION APPROVED BY THE CITY ENGINEER.

UTILITY NOTES

1. ALL TEMPORARY PAVING PLACED BY ANY CONTRACTOR, SUBCONTRACTOR OR UTILITY COMPANY SHALL REMAIN IN THE PUBLIC RIGHT OF WAY FOR NOT MORE THAN 30 CALENDAR DAYS ON RESIDENTIAL STREETS AND 72 HOURS ON ARTERIALS, MAJOR ROADS, COLLECTORS AND LOCAL COLLECTORS, PRIOR TO PLACEMENT OF PERMANENT PAVEMENT. ALL TEMPORARY PAVING PLACED IN THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED CONTINUOUSLY IN ACCORDANCE WITH CITY OF ESCONDIDO STANDARD DRAWING NO. G-3--E.
2. ALL UNDERGROUND UTILITIES TO BE INSTALLED BEFORE CONSTRUCTION OF CURBS, GUTTERS, SIDEWALKS OR SURFACING OF STREETS.
3. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO CONTACT THE UTILITY COMPANIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS AND BEAR THE COST OF RELOCATIONS, IF NEEDED. SEE OWNER'S LETTER REGARDING UTILITY COORDINATION DATED _____.
4. PAVED ACCESS TO THE SITE SHALL BE MAINTAINED FOR THE USE OF HEAVY FIRE FIGHTING EQUIPMENT.
5. VERIFICATION OF A SAN DIEGO COUNTY EXPLOSIVE PERMIT AND A POLICY OF CERTIFICATE OF PUBLIC LIABILITY INSURANCE SHALL BE FILED WITH THE FIRE DEPARTMENT PRIOR TO ANY BLASTING WITHIN THE CITY OF ESCONDIDO.
6. A "W" SHALL BE STAMPED IN THE CURB FACE AT THE WATER SERVICE LOCATION AND "S" SHALL BE STAMPED IN THE CURB AT THE SEWER LATERAL LOCATION.

STORM WATER POLLUTION PREVENTION NOTES

1. BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IMPLEMENTED DURING ALL PHASES OF CONSTRUCTION IN CONFORMANCE WITH THE CITY OF ESCONDIDO'S MUNICIPAL CODE. ADDITIONALLY, SITES OVER AN ACRE SHALL ABIDE BY THE CONSTRUCTION GENERAL PERMIT (CGP). ALL BMPs SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE CASQA HANDBOOK. AT A MINIMUM PERIMETER CONTROL AND CONSTRUCTION ENTRANCES SHOULD BE IN PLACE PRIOR TO A GRADING PERMIT BEING ACTIVATED.
2. INSPECTION, MODIFICATION AND MAINTENANCE OF THE BMPs SHALL BE IMPLEMENTED AS NECESSARY. IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN THE BMPs, THE CITY MAY ISSUE EMERGENCY MAINTENANCE WORK TO BE COMPLETED TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY. THE COST (INCLUDING AN INITIAL MOBILIZATION AMOUNT) AND ANY FINES ASSESSED TO THE CITY SHALL BE CHARGED TO THE OWNER OF THE PROJECT.
3. NECESSARY MATERIALS TO IMPLEMENT THE REQUIRED BMPs SHALL BE AVAILABLE ON SITE TO FACILITATE RAPID DEPLOYMENT OR TO REPAIR ANY BMP FAILURES.
4. CITY STAFF SHALL BE ALERTED BY THE CONTRACTOR, PERMITTEE OR OWNER, AS NEEDED FOR EMERGENCY WORK DURING STORMS.
5. RUN-ON FLOW ONTO THE SITE SHALL BE PROPERLY MANAGED AND PLANNED FOR TO PREVENT FAILURE OF BMPs AND/OR ILLEGAL DISCHARGES FROM THE PROJECT SITE INTO THE STORM DRAIN.
6. STORM DRAIN INLET PROTECTION SHALL BE INSTALLED AT EVERY ONSITE STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. WHERE FEASIBLE DESILTING BASINS SHALL ALSO BE PROVIDED AT DRAINAGE OUTLETS FROM THE GRADED SITE.
7. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED ON SLOPES AND ANY EXPOSED SOIL USING THE FOLLOWING BMPs, FIBER BLANKETS, BONDED FIBER MATRIX; OR BY INSTALLING OR MAINTAINING EXISTING VEGETATION. THE CONTRACTOR SHALL IMMEDIATELY REPAIR AND STABILIZE ANY ERODED AREAS. INACTIVE SLOPES SHALL BE PROTECTED AND STABILIZED. ALL EXPOSED SOIL INCLUDING INACTIVE AND ACTIVE SLOPES SHALL BE PROTECTED PRIOR TO A RAIN EVENT.
8. ALL UNPAVED GRADED CHANNELS SHALL IMPLEMENT EROSION PREVENTION MEASURES SUCH AS, LINING AND INSTALLING VELOCITY CHECK DAMS AT REGULAR INTERVALS.
9. STREET SWEEPING VEHICLES WITH VACUUMS AND WATER TANKS SHALL BE USED TO KEEP PAVED STREETS FREE OF LOOSE SOIL AND/OR CONSTRUCTION DEBRIS.
10. CONTRACTORS SHALL HAVE WATER TRUCKS AND EQUIPMENT ON-SITE TO MINIMIZE AIRBORNE DUST CREATED FROM GRADING AND HAULING OPERATIONS OR EXCESSIVE WIND CONDITIONS. ADDITIONAL DUST CONTROL MEASURES SHALL BE IMPLEMENTED AD NEEDED.
11. STOCKPILES SHALL BE COVERED AT THE END OF EACH WORKING DAY AND PRIOR TO FORECAST RAIN. ASPHALT SHALL ADDITIONALLY BE PLACED ON A LAYER OF PLASTIC SHEET, OR EQUIVALENT.
12. ALL PORTABLE TOILETS SHALL HAVE SECONDARY CONTAINMENT AND NOT BE LOCATED NEAR STORM DRAIN (I.E., CATCH BASIN OR STREET).
13. VEHICLES SHALL HAVE DRIP PANS UNDERNEATH THEM AND ANY LEAKS OR SPILLS SHALL BE PROMPTLY REPAIRED AND REMOVED.
14. ALL DEBRIS SHALL BE PLACED IN DUMPSTERS WITH LIDS. THE LIDS SHALL BE CLOSED AT THE END OF EACH DAY AND ARE NOT TO BE OVERFILLED. ADDITIONAL TRASH PICK-UPS SHALL BE MADE AS NECESSARY.
15. LIQUID MATERIALS SHALL BE STORED IN CLOSED CONTAINERS IN SECONDARY CONTAINMENT AND UNDER COVER. SOLID MATERIALS SHALL BE STORED ON PALLETS AND BE COVERED PRIOR TO FORECAST RAIN.
16. A MATERIALS WASHOUT SHALL BE AVAILABLE ONSITE WHENEVER LIQUID MATERIALS ARE USED. THE WASHOUT SHALL FULLY CONTAIN WASH MATERIALS AND THE SURROUNDING AREA SHALL BE KEPT FREE OF SPILLS.
17. DISCHARGE OF POTABLE WATER (SUCH AS FROM POWER WASHING OR FILLING WATER TRUCKS) SHALL BE PREVENTED OR DIRECTED TO LANDSCAPE.
18. PERIMETER CONTROL IS REQUIRED ON ALL SITES.
19. ALL ACTIVE ENTRANCES SHALL PREVENT TRACKING BY INSTALLING STABILIZED CONSTRUCTION ENTRANCES.

REFERENCE DRAWINGS

CITY OF ESCONDIDO DWG NO. 1459
CITY OF ESCONDIDO DWG NO. CF-4034
CITY OF ESCONDIDO DWG NO. CF-4084
CITY OF ESCONDIDO DWG NO. CF-4092
CITY OF ESCONDIDO DWG NO. D-1091
CITY OF ESCONDIDO DWG NO. P-1933
CITY OF ESCONDIDO DWG NO. P10-0021
CITY OF ESCONDIDO DWG NO. P-2480
CITY OF ESCONDIDO DWG NO. ST-1299
CITY OF ESCONDIDO DWG NO. T-1250
CITY OF ESCONDIDO DWG NO. T-1258
CITY OF ESCONDIDO DWG NO. W-1058
CITY OF ESCONDIDO DWG NO. W-1436
CITY OF ESCONDIDO DWG NO. WP-2048
CITY OF ESCONDIDO DWG NO. WP-2256
CITY OF ESCONDIDO DWG NO. T-0898
CITY OF ESCONDIDO DWG NO. T-991
CITY OF ESCONDIDO DWG NO. T-1149
CITY OF ESCONDIDO DWG NO. T-1150
CITY OF ESCONDIDO DWG NO. T-1393

LEGEND

DESCRIPTION	STANDARD	SYMBOL
EXISTING WATER VALVE		
EXISTING WATER METER		
EXISTING FIRE HYDRANT		
EXISTING BACKFLOW PREVENTER		
EXISTING OVERHEAD LINE		
EXISTING ELECTRICAL LINE		
EXISTING GAS LINE		
EXISTING WATER LINE		
EXISTING SEWER LINE		
EXISTING STORM DRAIN LINE		
EXISTING TELEPHONE LINE		
EXISTING CABLE LINE		
EXISTING FENCE		
EXISTING SEWER MANHOLE		
EXISTING STORM DRAIN MANHOLE		
EXISTING STREET LIGHT		
EXISTING CONTOURS		
GRATE INLET		
PROPOSED CONTOURS		
DAYLIGHT LINE		
RIGHT-OF-WAY LINE		
SAWCUT	SEE DETAIL A ON SHEET 7	
PAVEMENT SECTION	SEE IMPROVEMENT PLAN	
CROSS GUTTER	SDRSD G-12	
CONCRETE SDWK, C&G, AND PED RAMPS	SDRSD G-7, G-9, G-10, G-11 SEE IMPROVEMENT PLAN	
CURB & GUTTER	SDRSD G-2 (TYPE G)	
CURB RAMP	SDRSD G-27, G-28, G-29, G-31, G-32	
SECTION AND DETAIL IDENTIFICATION		

ABBREVIATIONS

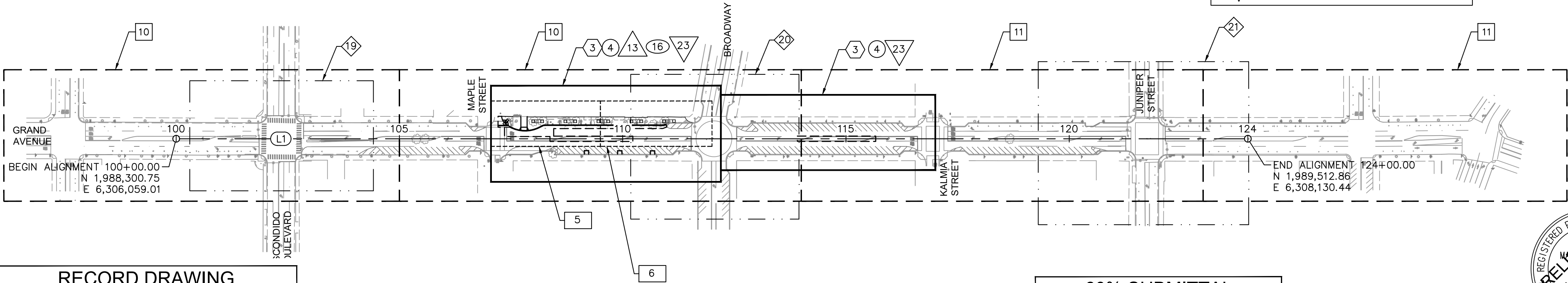
AC	ASPHALT CONCRETE	EM	ELECTRICAL METER	PT	POINT OF TANGENT
ALT	ALTERNATIVE	EPB	ELECTRICAL PULL BOX	PVI	POINT OF VERTICAL INTERSECTION
ARV	AIR RELEASE VALVE	EVL	ELECTRICAL VAULT		
BC	BEGINNING OF CURVE	EXIST, EX	EXISTING	PVMT	PAVEMENT
BD	BRIDGE DECK	FH	FIRE HYDRANT	PVT.	PRIVATE
BEG	BEGIN	FL	FLOW LINE	R	RADIUS
BOW	BACK OF WALK	FS	FINISHED SURFACE	RCP	REINFORCED CONCRETE
CB	CATCH BASIN	FT	FOOT		PIPE
C&G	CURB & GUTTER	GB	GRADE BREAK	RR	RAILROAD
CH	CHANNEL	GL	GUTTER LIP	RT	RIGHT
CI	CURB INLET	GP	GUTTER PAN	R/W	RIGHT OF WAY
CL	CENTERLINE	GV	GAS VALVE	RW	RETAINING WALL
CML&C	CONCRETE MORTAR LINED AND COATED	GW	GUY WIRE	SCO	SEWER CALLOUT
		HH	HANDHOLE	SDMH	STORM DRAIN MANHOLE
CP	CONCRETE	HW	HEADWALL	SDRSD	STANDARD DRAWING
CONC	CONCRETE	ICV	IRRIGATION CONTROL VALVE		SIDEWALK
DI	DRAINAGE INLET			SDWK	
DWS	DETECTABLE WARNING SURFACE	IRR	IRRIGATION	OR S/W	
DWY	DRIVEWAY	LF	LINEAR FOOT	SL	STREET LIGHT
EC	END OR CURVE	LS	LANDSCAPE	SLPB	STREET LIGHT PULL BOX
E	EASTING	LT	LEFT	SMH	SEWER MANHOLE
ELEC	ELECTRIC	ME	MATCH EXISTING	SNS	STREET NAME SIGN
ELEV	ELEVATION	MIN	MINIMUM	STR	STRUCTURE
		MAX	MAXIMUM	TC	TOP OF CURB
		MH	MANHOLE	TELE	TELEPHONE
		MOD	MODIFIED	TC	TOP OF GRATE
		N	NORTHING	TMH	TELEPHONE MANHOLE
		NEC	NATIONAL ELECTRICAL CODE	TS	TRAFFIC SIGNAL
				TS CAB	TRAFFIC SIGNAL CABINET
		PB	PULL BOX	TSPB	TRAFFIC SIGNAL PULLBOX
		PCC	POINT OF COMPOUND CURVE	TW	TOP OF WALL
		PCR	POINT OF CURB RETURN	TYP	TYPICAL
		PED	PEDESTAL	UB	UTILITY BOX
		PED RAMP	PEDESTRIAN RAMP	UPS	UNITED PARCEL SERVICE
		PL	PROPERTY LINE	VSCP	VITRIFIED CLAY SEWER
		POT	POINT ON TANGENT	PIPE	
		PP	POWER POLE	W.A.S.	SAN DIEGO WATER
		PRC	POINT OF REVERSE CURVE	WM	WATER METER
		PSI	POUNDS PER SQUARE INCH	WV	WATER VALVE
				XFMR	TRANSFORMER

KEY MAP LEGEND

- DEMOLITION PLAN
- IMPROVEMENT PLAN
- HORIZONTAL VERTICAL CONTROL PLAN
- SIGNING AND MARKING PLAN
- URBAN DESIGN PLAN
- IRRIGATION PLAN
- TRAFFIC SIGNAL MODIFICATION PLAN
- ELECTRICAL PLAN

GRAND AVENUE CONSTRUCTION CL

	LENGTH	LINE/CHORD DIRECTION	R	T
L1	2,400.00'	N59°39'56"E		



RECORD DRAWING

PRINT ENGINEER'S NAME	R.C.E. _____	DATE
-----------------------	--------------	------

KEY MAP
1" = 150'

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Kimley»Horn

KIMLEY-HORN
MARK ARAUJO, P.E.
401 B STREET, STE. 800
SAN DIEGO, CA 92101
619.234.9411

DIGALERT

CALL BEFORE YOU DIG

1-800-227-2600

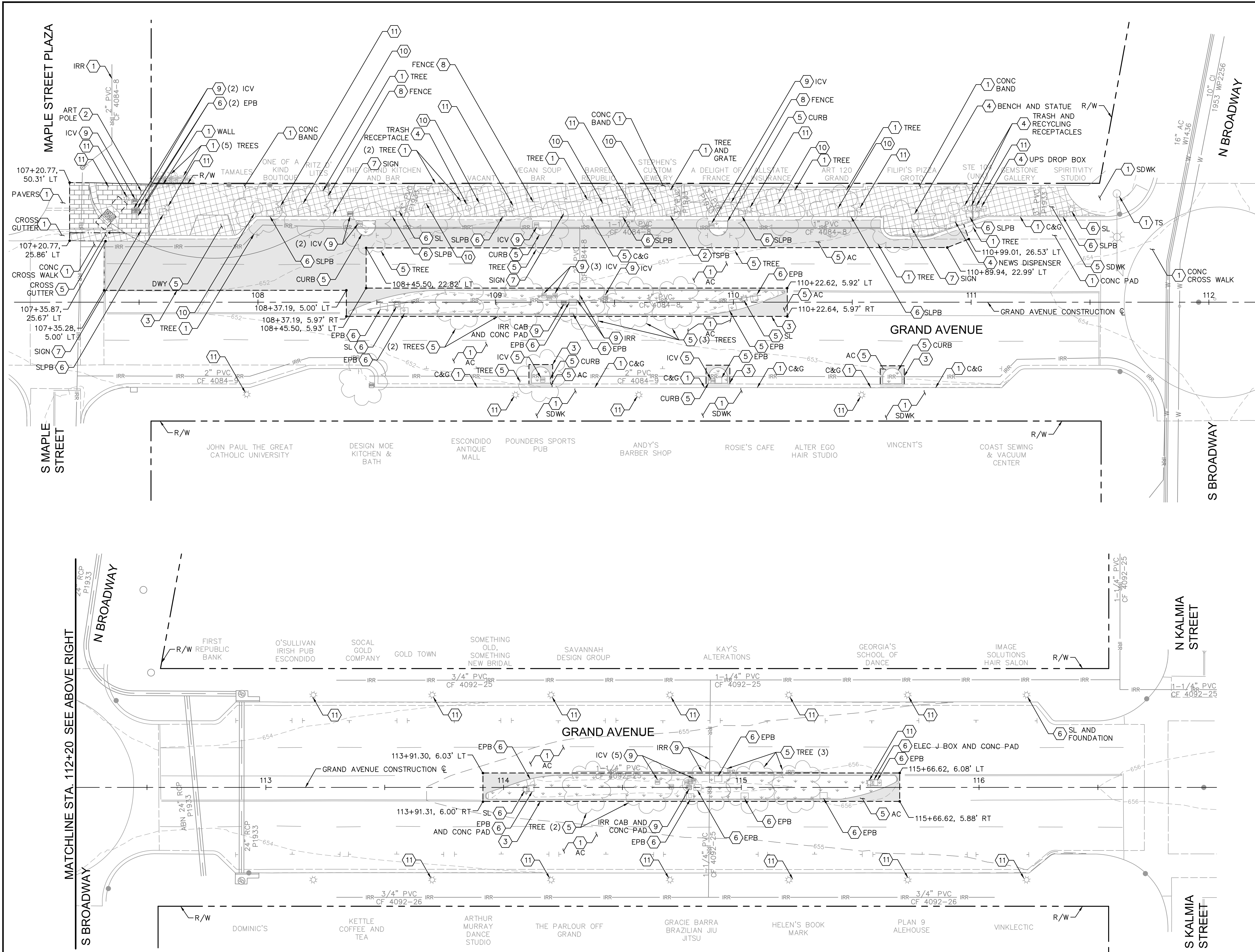
2 WORKING DAY
NOTICE REQUIRED



CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal	Filmed	MA	ME	MU			GRAND AVENUE VISION PROJECT	XXXX-XXX
Inspector _____								Vertical	Traffic	Plans Prepared Under Supervision Of	MARK ARAUJO	Date 5/15/2020	By _____	By _____	GENERAL NOTES	Sheet 2 of 24
Date Completed _____												R.C.E. No. 85614	Associate Engineer	Director of Engineering Services		

Plotted By: Clemente, Andrew Sheet Set: Rho Layout: DM-01 August 24, 2020 05:47:46pm \\SND\p01\CA_SND\1\SD\1\SD_MUM\092223015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-DW.dwg



LEGEND

- SAWCUT
- DAYLIGHT
- ASPHALT PAVEMENT, AC DIKES, AC BERMS, CONCRETE, AND BASE COURSE REMOVAL.
- CONCRETE REMOVAL (INCLUDES PAVERS, CURB & GUTTER, SIDEWALKS, DRIVEWAYS, CROSS GUTTERS AND OTHER CONCRETE SURFACING IN CONFLICT WITH THE PROPOSED IMPROVEMENTS).
- REMOVE VEGETATION, DEBRIS, AND OTHER MATERIAL IN CONFLICT WITH THE PROPOSED IMPROVEMENTS.
- REMOVE BRICK PAVERS.

GENERAL NOTES

- UNLESS OTHERWISE SHOWN ON PLANS, CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE PROJECT GRADING LIMITS AND REMOVE ALL IMPEDANCES FOR THE PROPOSED FACILITIES.
- THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY REMAINING UTILITY CONFLICTS PRIOR TO THE START OF ANY DEMOLITION WORK.
- PROPOSED TOP OF CURB IS SHOWN FOR REFERENCE PURPOSES ONLY.
- REFER TO SIGNING AND MARKING PLANS FOR DISPOSAL, RELOCATION, OR NEW INSTALLATION OF ALL PAVEMENT MARKING AND SIGNS.
- CONTRACTOR TO PROTECT IN PLACE EXISTING CONCRETE BAND AT BUILDING FACE.

DEMOLITION NOTES

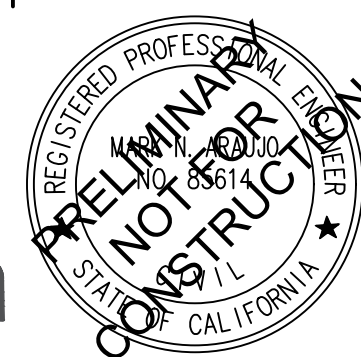
- PROTECT IN PLACE.
- ADJUST TO FINISHED GRADE.
- SAWCUT PER DETAIL A ON SHEET 7.
- REMOVE AND SALVAGE. CONTRACTOR TO COORDINATE ULTIMATE LOCATION WITH CITY ENGINEER.
- REMOVE AND DISPOSE.
- ELECTRICAL EQUIPMENT, SEE ELECTRICAL PLANS ON SHEETS 22 - 24 FOR ELECTRICAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, RELOCATIONS AND NEW INSTALLATIONS.
- SEE SIGN PLANS ON SHEETS 9 - 11. FOR TRAFFIC SIGN REMOVALS, RELOCATIONS AND NEW INSTALLATIONS.
- REMOVE EXISTING DECORATIVE FENCE AND INSTALL PROPOSED DECORATIVE FENCE PER THE URBAN DESIGN PLANS ON SHEET 12-14.
- IRRIGATION EQUIPMENT, SEE IRRIGATION PLANS ON SHEETS 15 - 18 FOR IRRIGATION EQUIPMENT REMOVALS, ADJUSTMENTS, RELOCATIONS AND NEW INSTALLATIONS.
- REMOVE AND SALVAGE TREE GRATE.
- STREET LIGHT AND FOUNDATION, SEE ELECTRICAL PLANS ON SHEETS 22 - 24 FOR ELECTRICAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, RELOCATIONS AND NEW INSTALLATIONS.

RECORD DRAWING

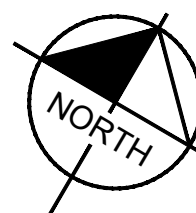
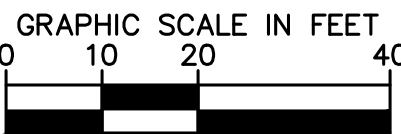
PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

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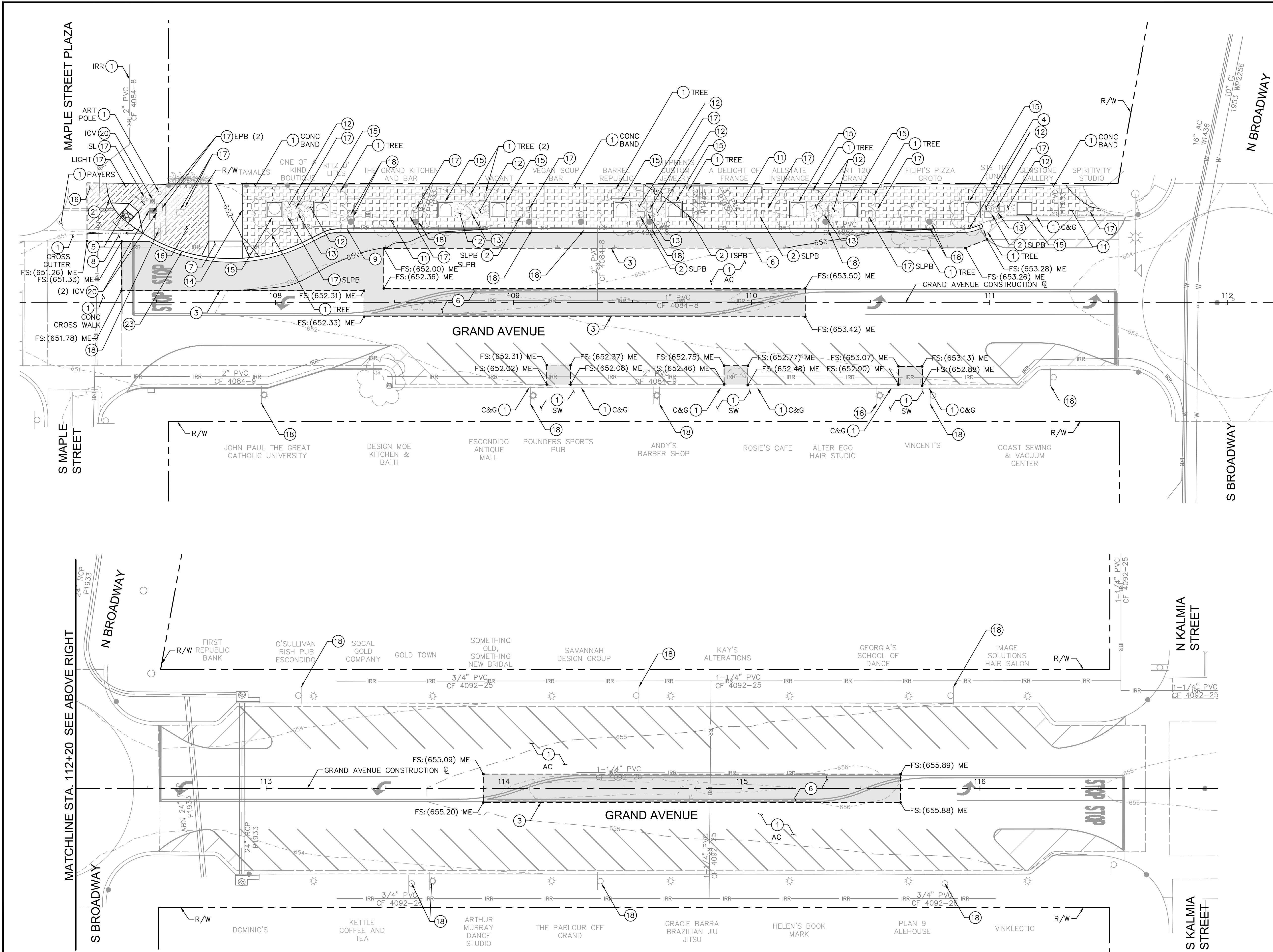
KIMLEY-HORN
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619.234.9411



CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal 1" = 20'	Filmed _____	MA	ME	XX	By _____	By _____	GRAND AVENUE VISION PROJECT DEMOLITION PLAN	XXXX-XXX
Inspector _____								Vertical _____	Traffic _____	Plans Prepared Under Supervision Of MARK ARAUJO			Associate Engineer	Director of Engineering Services		Sheet 3 of 24
Date Completed _____										Date 5/15/2020						
										R.C.E. No. 85614						

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LEGEND

---x---

INSTALL TYPICAL PAVEMENT SECTION – 4" AC OVER 8" CLASS II AGGREGATE BASE OVER 95% COMPACTED SUBGRADE PER SPECIFICATIONS.

DRIVEWAY, C&G, GUTTER, CURB RAMP, CROSS GUTTER.

MODULAR PAVERS (SEE URBAN DESIGN PLANS ON SHEETS 12 – 14)

STAMPED CONCRETE (PATTERN TO MATCH EXIST) PER CONSTRUCTION NOTES

- GENERAL NOTES
1. UNLESS OTHERWISE SHOWN ON PLANS, CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE PROJECT GRADING LIMITS AND REMOVE ALL IMPEDANCES FOR THE PROPOSED FACILITIES.

2. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND HORIZONTAL/VERTICAL LOCATION OF ALL UTILITIES WITHIN THE PROJECT AREA THAT MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY REMAINING UTILITY CONFLICTS PRIOR TO THE START OF ANY DEMOLITION WORK.

3. CONTRACTOR TO PROTECT IN PLACE EXISTING CONCRETE BAND AT BUILDING FACE.

- CONSTRUCTION NOTES
1. PROTECT IN PLACE.

2. ADJUST TO FINISHED GRADE.

3. SAWCUT PER DETAIL A ON SHEET 7.

4. CONSTRUCT CURB OR CURB AND GUTTER TRANSITION PER DETAIL B ON SHEET 7.

5. CONSTRUCT CURB RAMP TYPE B PER SDRSD G-27 AND PER STAKING DETAILS ON SHEET 5.

6. CONSTRUCT 4" AC OVER 8" CLASS II AGGREGATE BASE.

7. CONSTRUCT CONCRETE DRIVEWAY PER SDRSD G-14A.

8. CONSTRUCT CONCRETE CROSS GUTTER PER SDRSD G-12.

9. CONSTRUCT 6" TYPE G CURB AND GUTTER PER SDRSD G-02.

11. CONSTRUCT STANDARD GRAY CONCRETE SIDEWALK WITH STAMPED PATTERN (TYP) WITH CONCRETE TURNDOWN PER DETAIL J ON SHEET 7. PATTERN TO MATCH EXISTING (OR PRE-APPROVED EQUAL).

12. CONSTRUCT COLORED CONCRETE SIDEWALK WITH MEDIUM BROOM FINISH (TYP), COLOR: DAVIS COLORS 641 – FLAGSTONE BROWN (OR PRE-APPROVED EQUAL). SEE DETAIL C ON SHEET 7.

13. CONSTRUCT CONCRETE CONTROL JOINT (TYP), SEE DETAIL D ON SHEET 7.

14. CONSTRUCT CONCRETE EXPANSION JOINT (TYP), SEE DETAIL E ON SHEET 7.

15. CONSTRUCT CONCRETE HEADER AT TREE WELL (TYP), SEE DETAIL I ON SHEET 7.

16. INSTALL MODULAR PAVERS (TYP) TYPE, PATTERN AND COLOR TO MATCH EXISTING (OR PRE-APPROVED EQUAL). SEE DETAILS G AND H ON SHEET 7.

17. ELECTRICAL EQUIPMENT. SEE ELECTRICAL PLANS ON SHEETS 22 – 24 FOR ELECTRICAL AND STREET LIGHTING EQUIPMENT REMOVALS, ADJUSTMENTS, RELOCATIONS AND NEW INSTALLATIONS.

18. SEE SIGN PLANS ON SHEETS 9 – 11.

20. IRRIGATION EQUIPMENT, SEE IRRIGATION PLANS ON SHEETS 15 – 18.

21. CONSTRUCT 0" CURB PER SDRSD G-01, MODIFIED PER STAKING DETAILS ON SHEET 6.

23. CONSTRUCT 6" INTEGRAL COLORED TYPE G CURB AND GUTTER PER SDRSD G-02.

RECORD DRAWING

PRINT ENGINEER'S NAME

R.C.E. _____

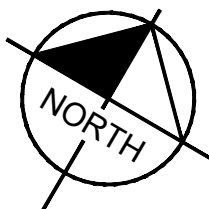
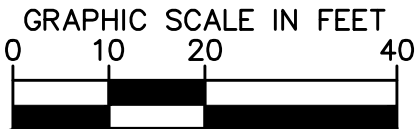
DATE

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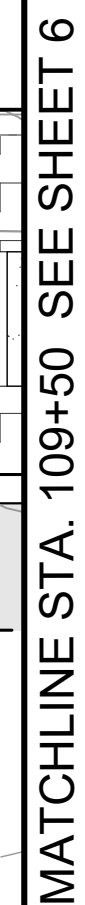
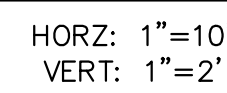


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CONSTRUCTION RECORD		REFERENCES		Date	By	REVISIONS		App'd	Date	BENCH MARK		SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.
Contractor										SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal 1" = 20'		MA	ME	MU			GRAND AVENUE VISION PROJECT IMPROVEMENT PLAN		XXXX-XXX
Inspector												Vertical	Filmed	Plans Prepared Under Supervision Of MARK ARAUJO Date: 5/15/2020 R.C.E. No. 85614			By: Associate Engineer	By: Director of Engineering Services			Sheet 4 of 24
Date Completed													Traffic								

▼	APPROXIMATE LOCATION OF PEDESTRIAN RAMP CENTERLINE
▽	APPROXIMATE LOCATION OF DRIVEWAY CENTERLINE




Plan view of a proposed drainage system. The catchment area is 4' x 18' and is paved with PCC. The catchment area is bounded by a 4' x 18' concrete curb. The catchment area is bounded by a 4' x 18' concrete curb. The catchment area is bounded by a 4' x 18' concrete curb.

HORZ: 1"=5'

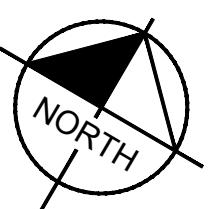
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GRAPHIC SCALE IN FEET



A horizontal scale bar with tick marks at 0, 5, 10, and 20 feet. The bar is divided into alternating black and white segments: black from 0 to 5, white from 5 to 10, black from 10 to 15, and white from 15 to 20.



ESCONDIDO
City of Choice

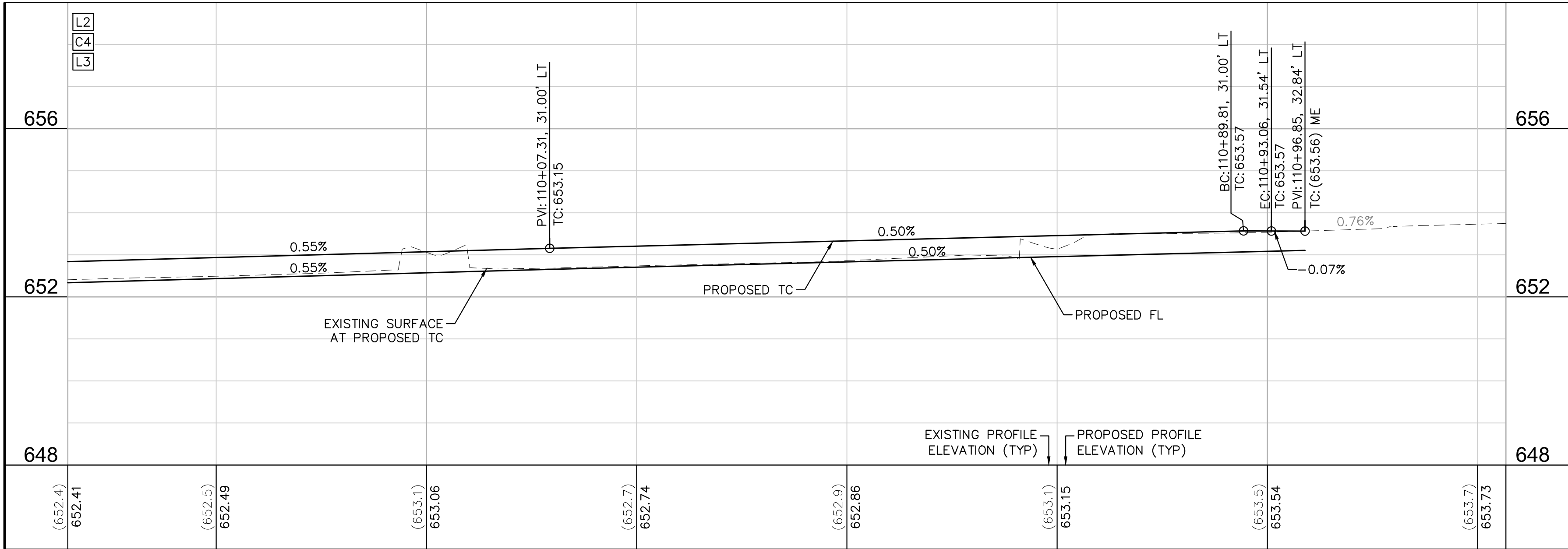
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CONSTRUCTION RECORD		REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK		SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.														
Contractor					<div>△</div>			SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal 1" = 10'	Filmed	Plans Prepared Under Supervision Of	SC	ME	MU	By	Associate Engineer	By	Director of Engineering Services	ARAUJO Date 5/15/2020 R.C.E. No. 85614	XXXX-XXX													
Inspector																																	
Date Completed																																	
																				Sheet 5 of 24													
GRAND AVENUE VISION PROJECT HORIZONTAL VERTICAL CONTROL PLAN																																	

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MATCHLINE STA. 109+50 SEE SHEET 5

MATCHLINE STA. 109+50 SEE SHEET 5



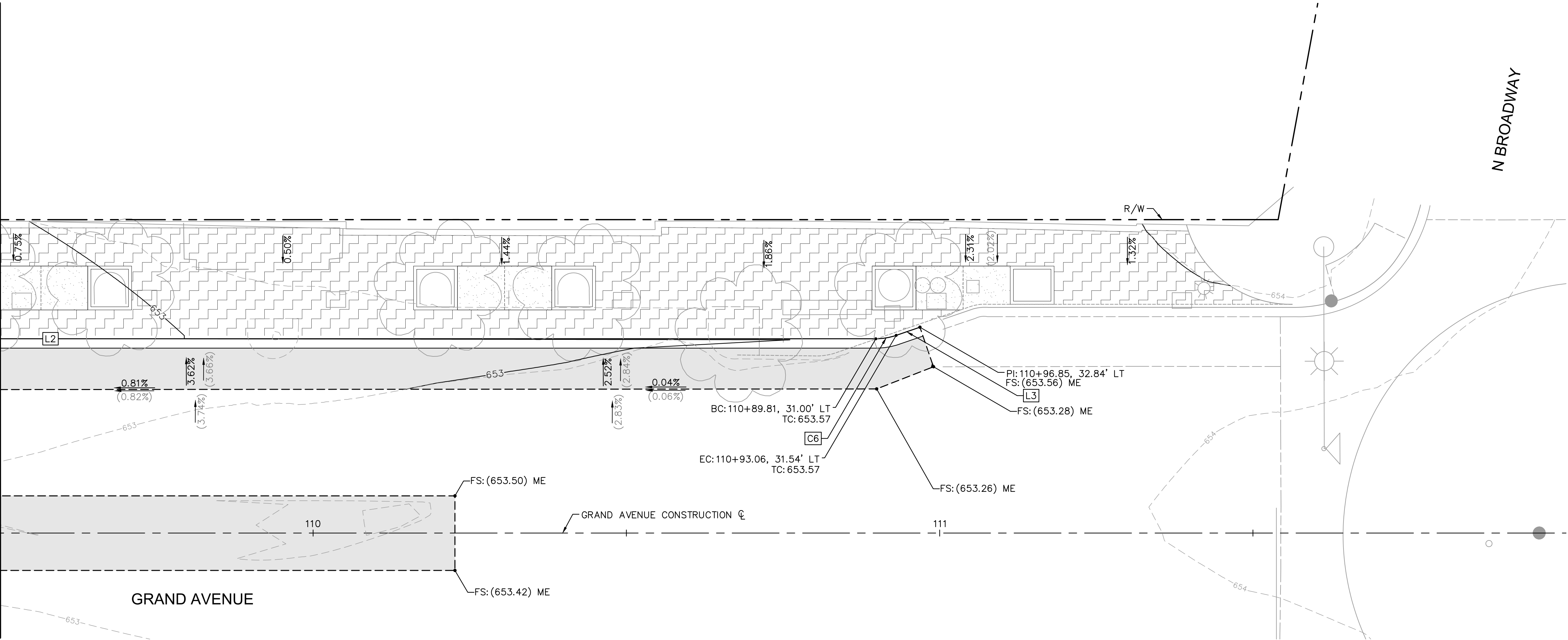
TOP OF CURB PROFILE - GRAND AVENUE

HORZ: 1"=10'
VERT: 1"=2'

PROFILE LEGEND

- ▼ APPROXIMATE LOCATION OF PEDESTRIAN RAMP CENTERLINE
- ▽ APPROXIMATE LOCATION OF DRIVEWAY CENTERLINE

CURB GEOMETRIC DATA						
	LENGTH	LINE/CHORD DIRECTION	R	T	DELTA	REMARKS
L2	263.44'	N59°39'56"E				6" C&G TYPE 'G'
C6	3.31'	N50°10'58"E	10.00'	1.67'	18°57'57"	6" C&G TYPE 'G'
L3	3.48'	N40°42'00"E				6" C&G TYPE 'G'



N BROADWAY

RECORD DRAWING

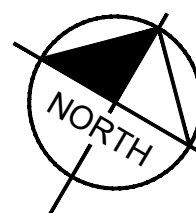
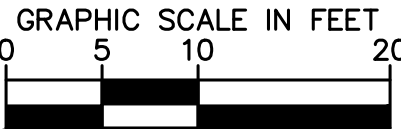
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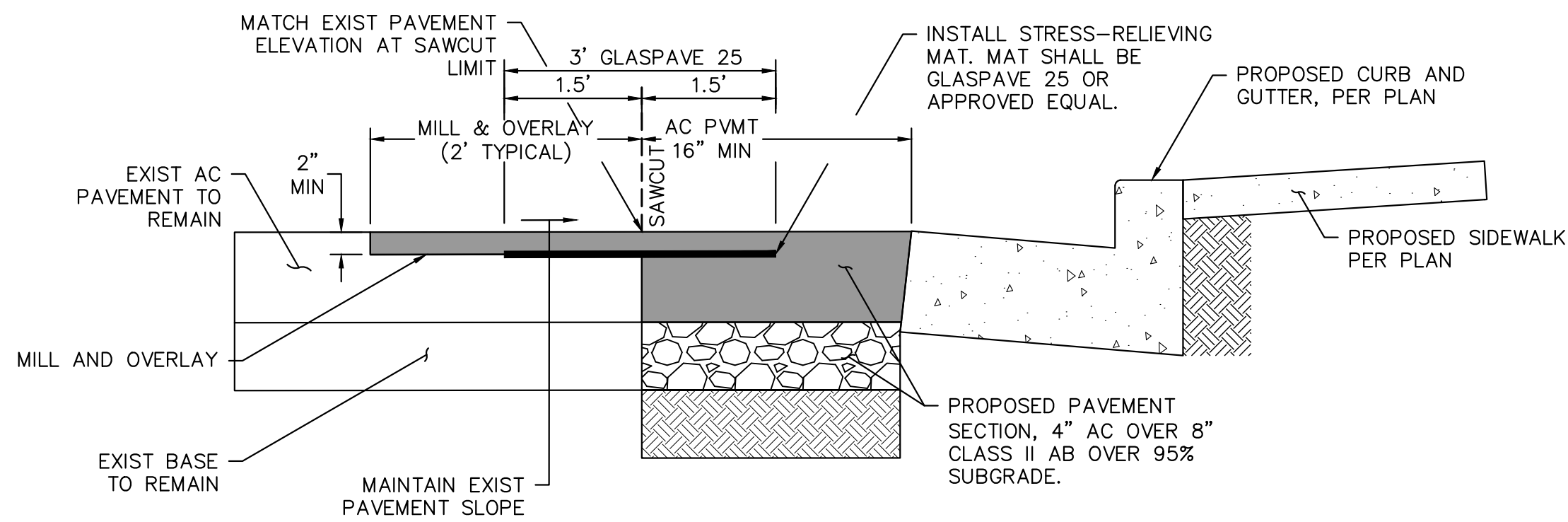
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SAN DIEGO, CA 92101
619.234.9411



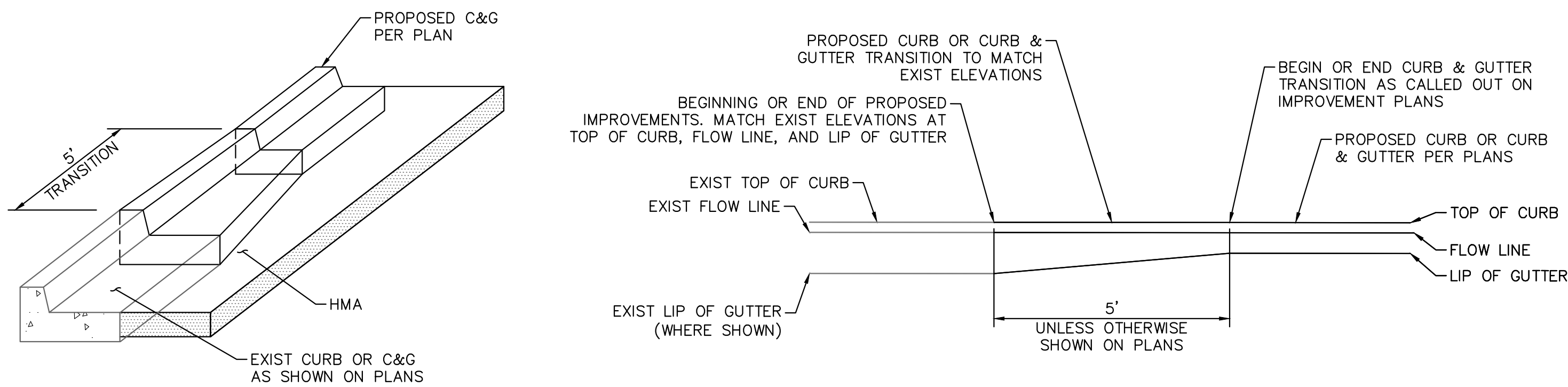
CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal 1" = 10'		SC	ME	MU			GRAND AVENUE VISION PROJECT HORIZONTAL VERTICAL CONTROL PLAN	XXXX-XXX
Inspector _____								Vertical		Plans Prepared Under Supervision Of	MARK ARAUJO	Date 5/15/2020	By Associate Engineer	By Director of Engineering Services		Sheet 6 of 24
Date Completed _____								Traffic				R.C.E. No. 85614				

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A ROADWAY SAWCUT DETAILS
NOT TO SCALE



B CURB AND GUTTER TRANSITION TO EXISTING
NOT TO SCALE

RECORD DRAWING		
PRINT ENGINEER'S NAME	R.C.E. _____	DATE _____

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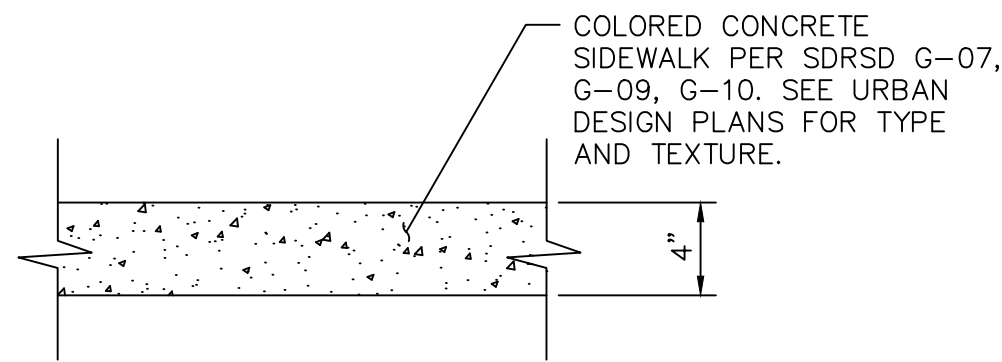
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619.234.9411



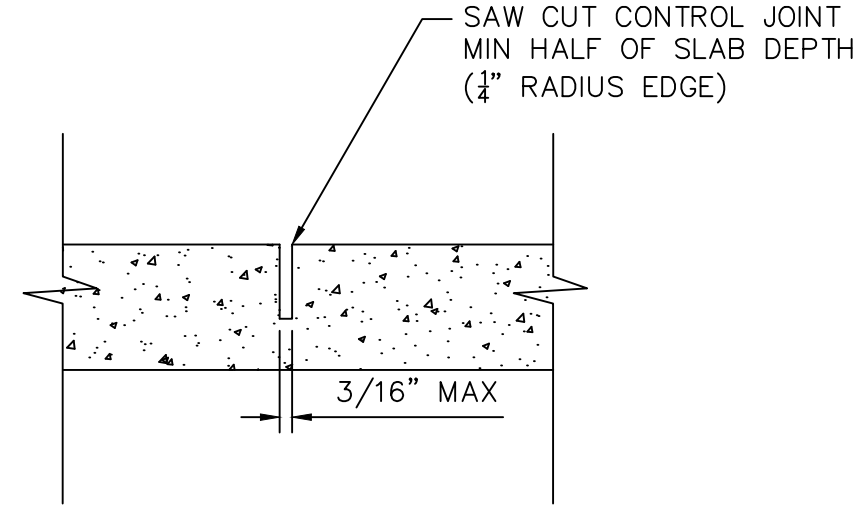
CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____				△			SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal		MA	ME	MU				
Inspector _____								N/A	Filmed _____	Plans Prepared Under Supervision Of MARK ARAUJO			By _____	By _____	GRAND AVENUE VISION PROJECT	XXXX-XXX
Date Completed _____								Vertical	Traffic _____	Date 5/15/2020			Associate Engineer	Director of Engineering Services	CONSTRUCTION DETAILS	Sheet 7 of 24
															R.C.E. No. 85614	

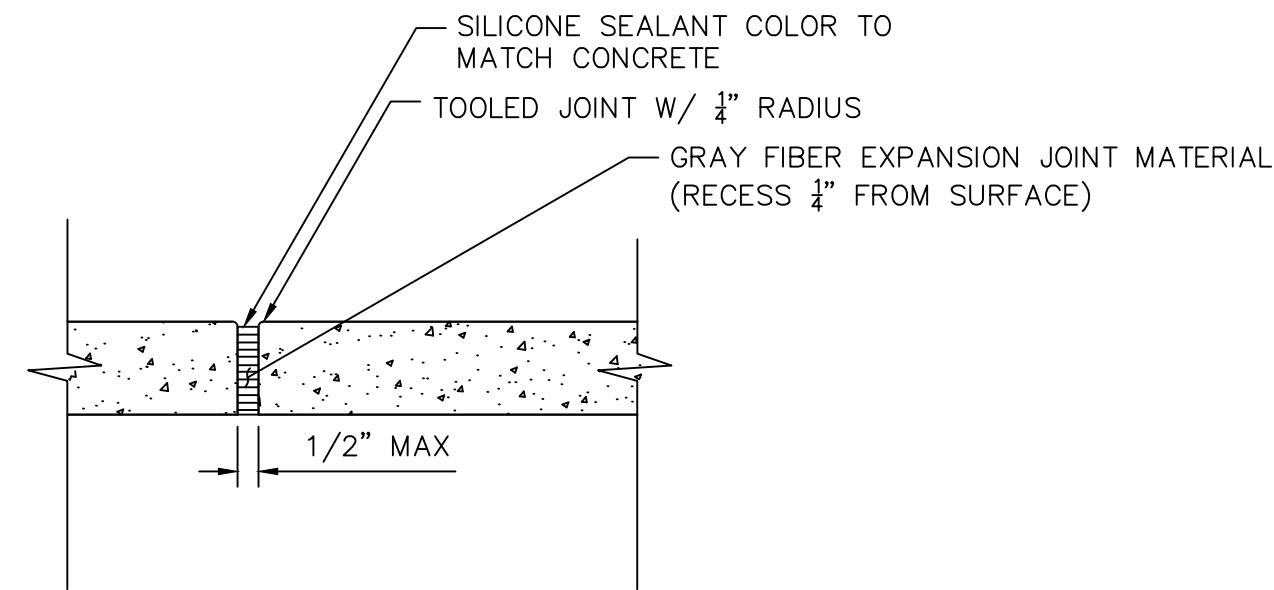
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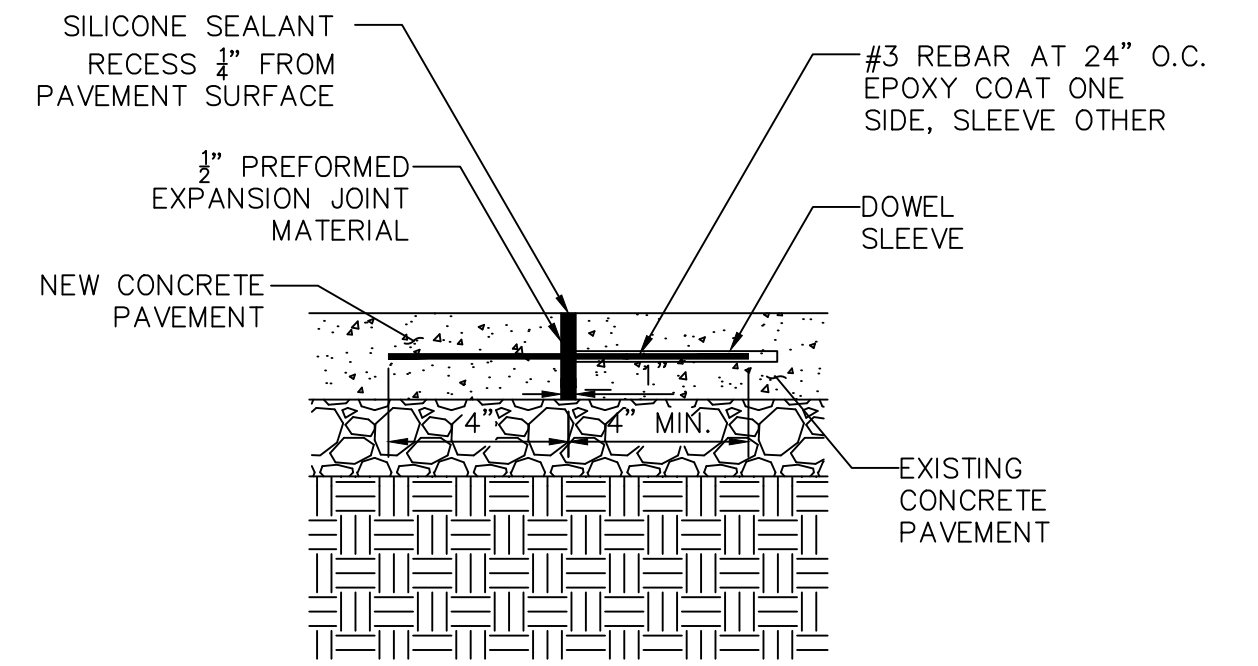
C **CONCRETE SIDEWALK**
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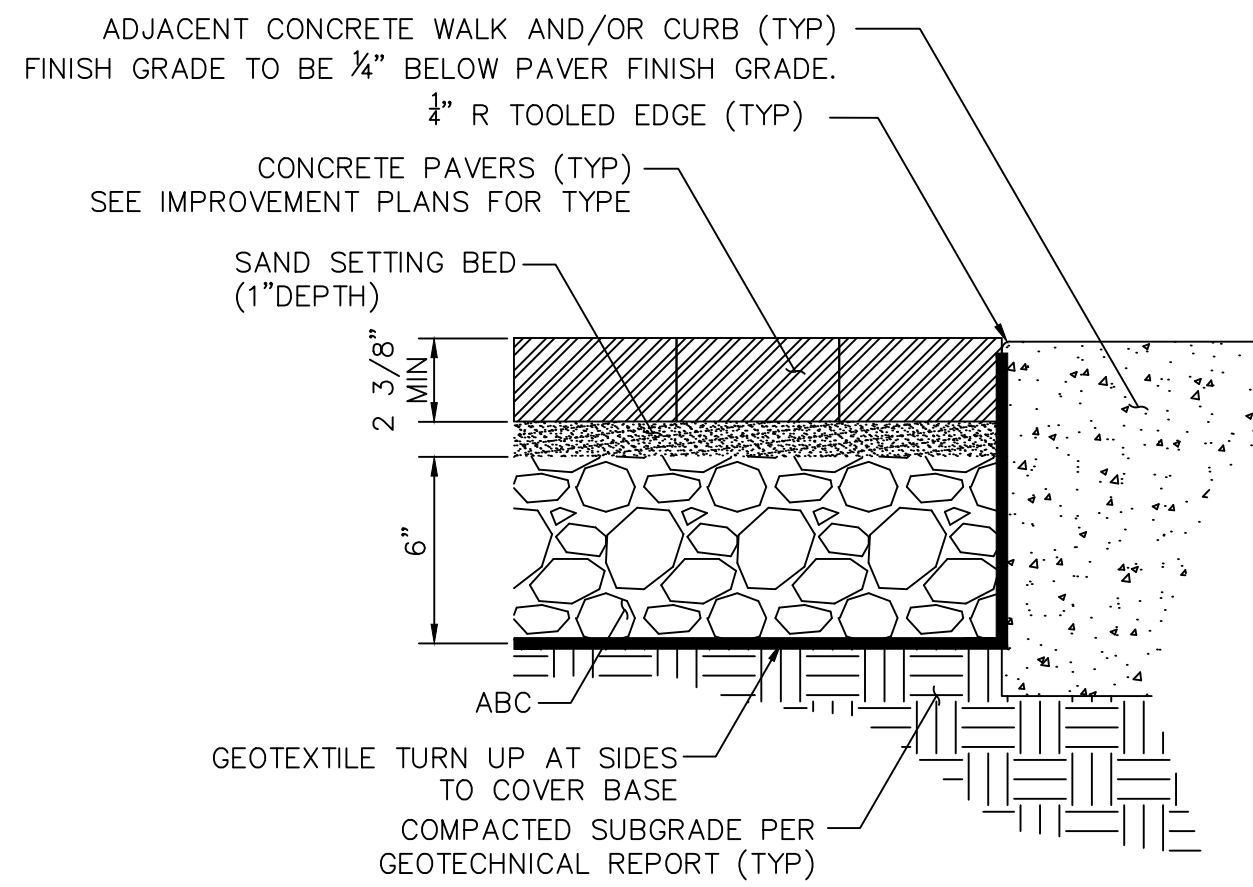
D **CONCRETE CONTROL JOINT**
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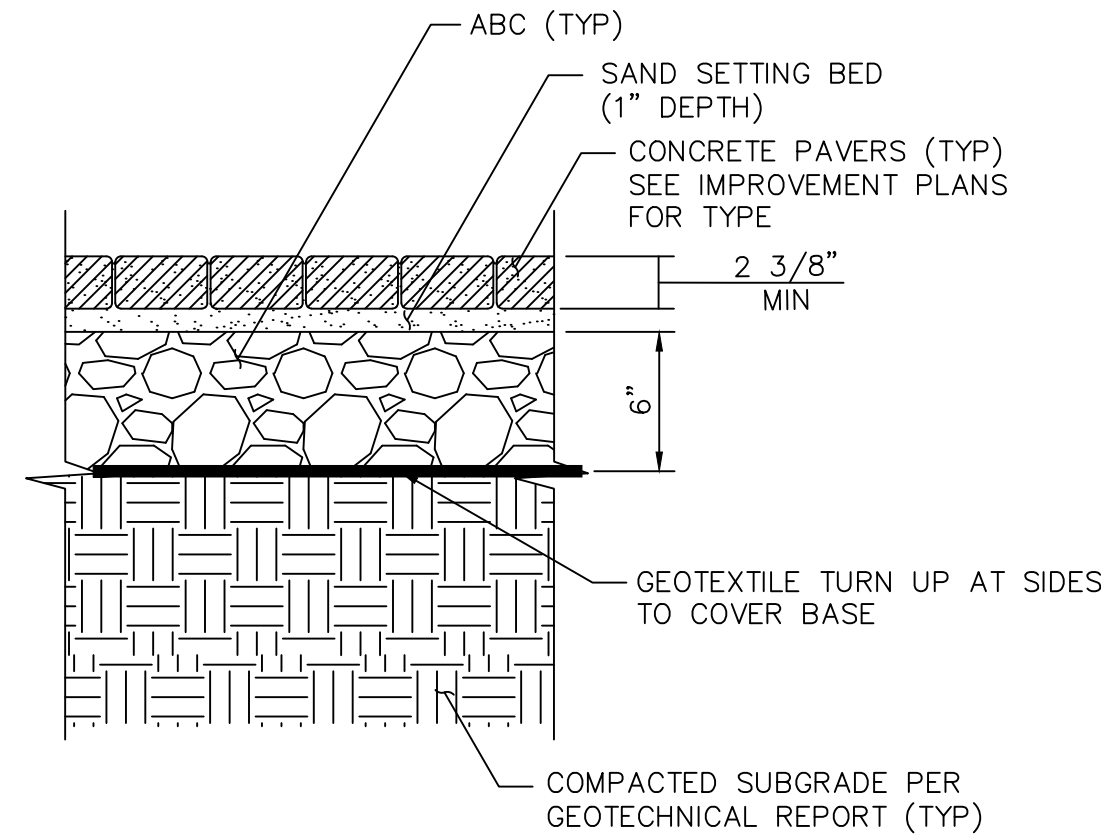
E **CONCRETE EXPANSION JOINT**
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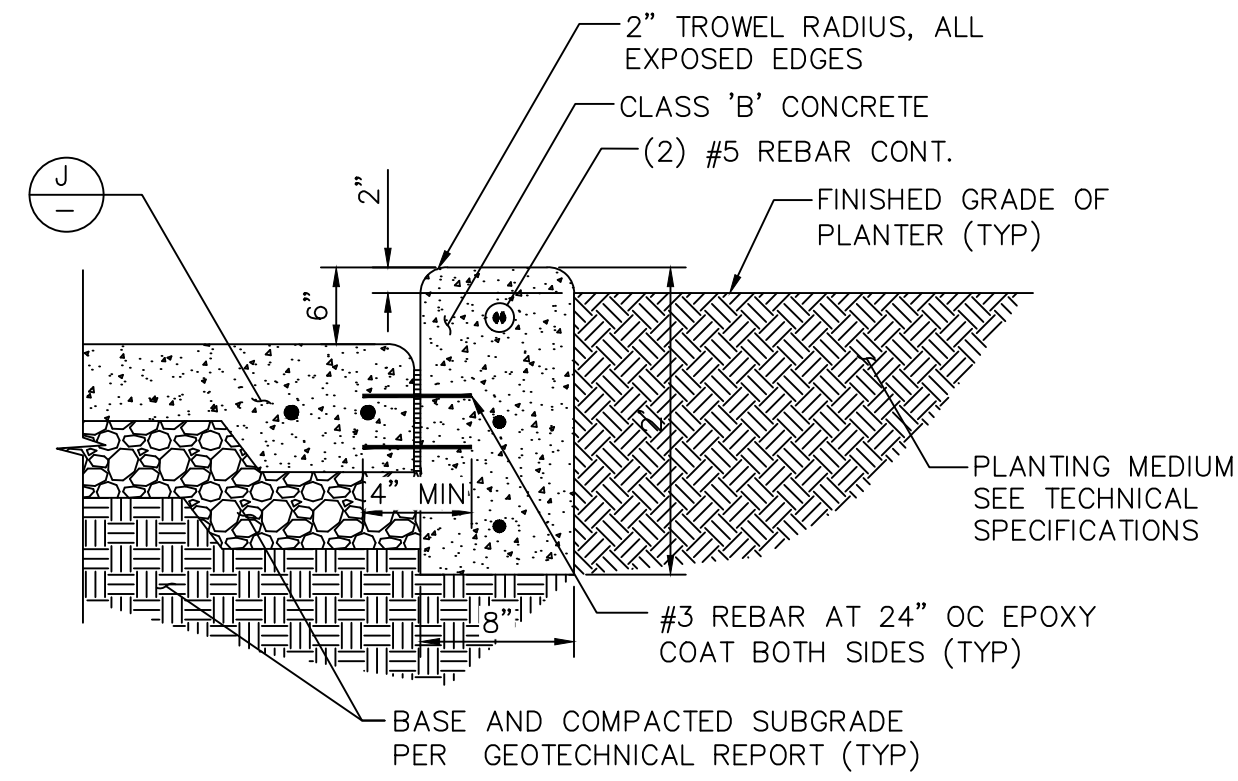
F **CONCRETE CONNECTION TO EXISTING PAVEMENT**
NOT TO SCALE



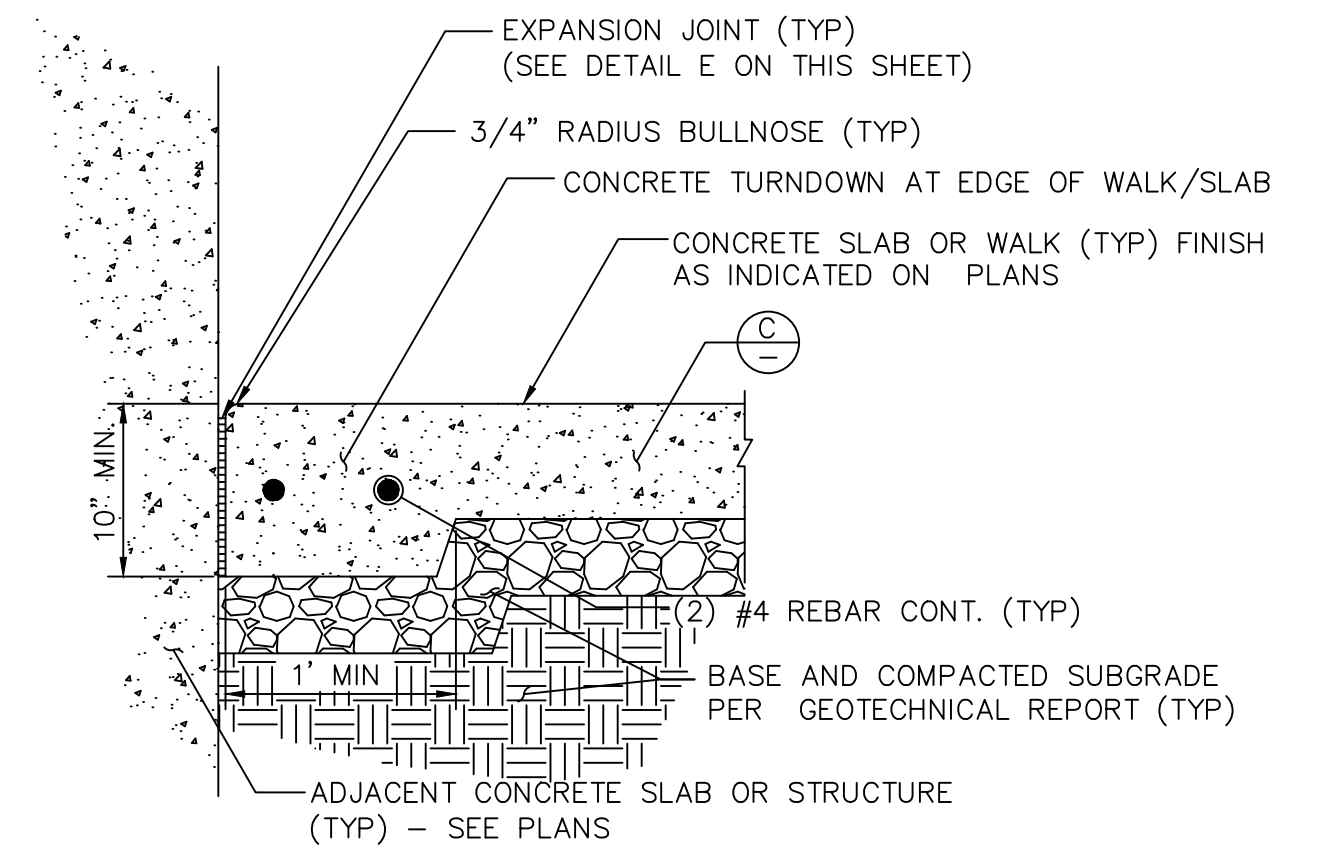
G **MODULAR PAVERS EDGE TREATMENT AT PAVEMENT**
NOT TO SCALE



H **MODULAR PAVERS**
NOT TO SCALE



I **HEADER AT TREE WELL**
NOT TO SCALE



J **CONCRETE TURNDOWN AT ADJACENT SLAB OR STRUCTURE**
NOT TO SCALE

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

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MICHAEL MADSEN, PLA
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619.234.9411



CITY PROJECT NO.

ENG. XX-XXXX

Drawing No.

ENGINEERING SERVICES

GRAND AVENUE VISION PROJECT
CONSTRUCTION DETAILS

XXXX-XXX

Sheet 8 of 24

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date
Contractor _____				△		
Inspector _____						
Date Completed _____						

BENCH MARK
SEE SHEET 1 FOR BASIS OF COORDINATES.

SCALE
Horizontal _____
N/A
Vertical _____
Traffic _____

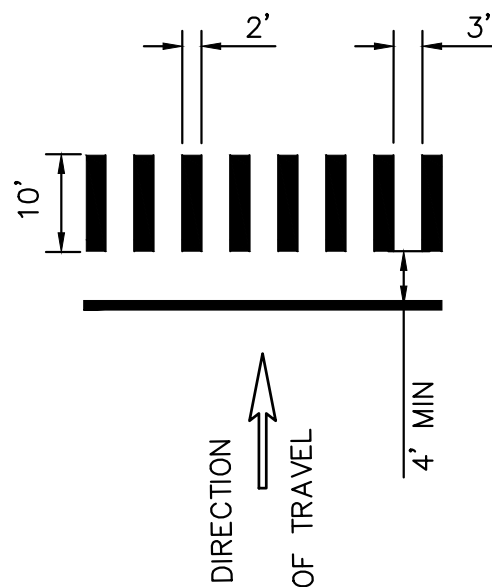
Office _____
Filmed _____

Designed By	Drawn By	Checked By
MA	ME	MU
Plans Prepared Under Supervision Of MARK ARAUJO		
Date 5/15/2020		
R.C.E. No. 85614		

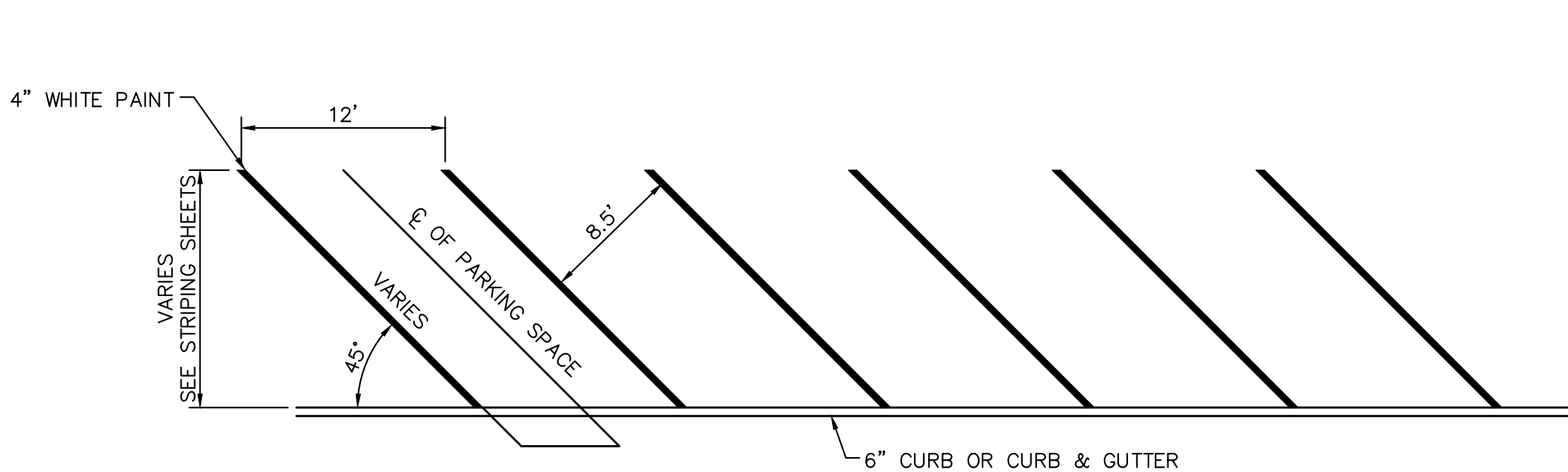
Submitted _____	Approved _____
By _____	By _____
Associate Engineer	Director of Engineering Services

SIGNING AND STRIPING NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL SIGNING AND STRIPING, INCLUDING RAISED PAVEMENT MARKERS.
2. SIGNING, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA-MUTCD LATEST EDITION), THE 2015 SAN DIEGO REGIONAL STANDARD DRAWINGS, CALTRANS STANDARD SPECIFICATIONS AND STANDARD PLANS (LATEST VERSION), THESE PLANS AND THE TECHNICAL PROVISIONS.
3. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER OR HIS/HER REPRESENTATIVE PRIOR TO INSTALLATION.
4. ANY DEVIATION FROM THIS SIGNING PLAN SHALL BE APPROVED BY THE ENGINEER OF WORK AND CITY ENGINEER PRIOR TO ANY CHANGES IN THE FIELD.
5. ALL SIGNING AND STRIPING SHALL BE REFLECTIVE PER CALTRANS SPECIFICATIONS. STRIPING SHALL BE REPAINED TWO WEEKS PRIOR TO INITIAL PAINTING. SIGNING SHALL USE 3M DIAMOND GRADE SHEET OR APPROVED EQUAL.
6. EXACT LOCATION OF SIGNS, STRIPING, AND LIMIT LINES SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
7. CONTRACTOR SHALL MODIFY EXISTING STRIPING AT TRANSITION AREA AND JOIN LOCATIONS TO ATTAIN INDICATED CONFIGURATIONS. CONTRACTOR SHALL REMOVE ALL CONFLICTING PAINTED LINES, MARKINGS, AND PAVEMENT LEGENDS BY WATERBLASTING UNLESS APPROVED BY ENGINEER. DEBRIS SHALL BE PROMPTLY REMOVED BY CONTRACTOR.
8. ALL PAVEMENT LEGENDS SHALL BE THE LATEST VERSION OF THE CALTRANS STANDARD PLANS A24A THOUGH A24E.
9. ALL SIGNING SHALL BE STANDARD SIZE SHOWN IN CALIFORNIA MUTCD UNLESS OTHERWISE NOTED.
10. EXISTING SIGNS REMOVED BY THE CONTRACTOR SHALL BE SALVAGED AND DELIVERED TO THE CITY YARD AT 475 N. SPRUCE STREET.
11. ALL SIGNS SHOWN ON THESE PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR EXCEPT THOSE SIGNS SPECIFICALLY SHOWN AS EXISTING TO BE RELOCATED OR REMAIN.
12. CONTRACTOR SHALL PROTECT-IN-PLACE ALL TRAFFIC SIGNS AND POLES SHOWN HEREON AND/OR ON THE STREET IMPROVEMENT PLANS. CONTRACTOR MAY BE REQUIRED TO PROVIDE TEMPORARY MOUNTINGS FOR THOSE EXISTING TRAFFIC SIGNS AND POSTS THEREFORE THAT ARE DEMMED NECESSARY FOR TRAFFIC SAFETY BY THE PUBLIC WORKS INSPECTOR. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF ANY SUCH SIGNS AND POSTS THEREFOR THAT ARE DAMAGED DURING ANY PHASE OF THIS PROJECT.
13. LANE WIDTH INDICATED ARE THE MINIMUM WIDTHS AT LOCATIONS INDICATED.
14. CONTRACTOR TO TRIM EXISTING VEGETATION OBSTRUCTING VISIBILITY OF EXISTING AND PROPOSED SIGNS.
15. BIKE LANES SHALL BE STRIPED WITH PAINT. THERMOPLASTIC SHALL BE USED FOR CONFLICT MARKINGS.
16. LIMIT LINES AND CROSSWALKS SHALL BE FIELD LOCATED. CROSSWALKS SHALL HAVE 10' INSIDE DIMENSION UNLESS OTHERWISE SPECIFIED.
17. FIRE HYDRANT PAVEMENT MARKERS SHALL CONFORM TO THE LATEST CALTRANS TRAFFIC MANUAL AND SAN DIEGO REGIONAL STANDARD DRAWING M-19.
18. ALL MEDIAN NOSES SHALL BE PAINTED YELLOW WITH HEAVY BEADING AND HAVE YELLOW 2-WAY RETROREFLECTIVE PAVEMENT MARKERS MOUNTED ON TOP OF CURB (HALF-CIRCLE).
19. SIGN POST SHALL BE SQUARE PREFORATED STEEL TUBING WITH BREAKAWAY BASE PER SAN DIEGO REGIONAL STANDARD DRAWING M-45.
20. WHEN A SIGN IS ATTACHED TO A STREET LIGHT POLE, IT SHALL BE MOUNTED WITH STAINLESS STEEL CLAMPS AND CAPSCREWS, SEE TECHNICAL PROVISIONS.
21. ALL CROSSWALKS, LIMIT LINES, STOP BARS, PAVEMENT ARROWS, PAVEMENT LEGENDS SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED. BIKE LEGENDS SHALL BE PAINT.

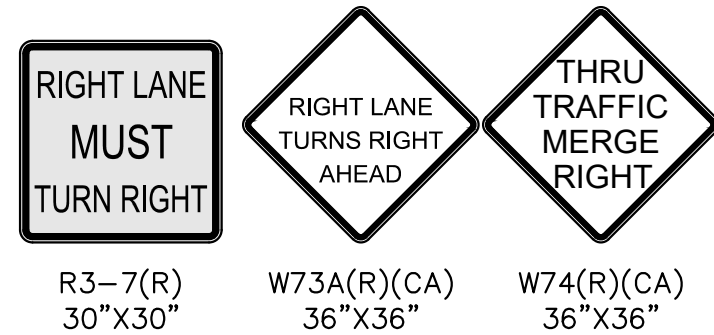


DETAIL "A"
TYPICAL CONTINENTAL CROSSWALK MARKINGS
NOT TO SCALE

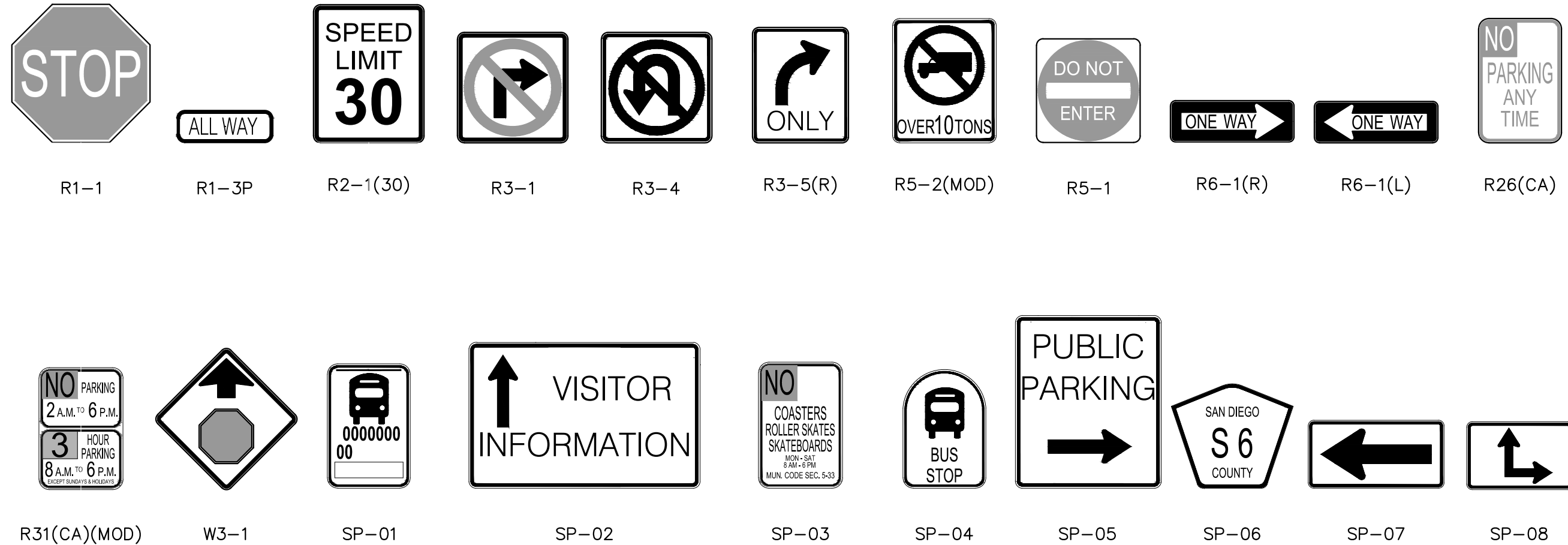


DETAIL "B"
ANGLE PARKING MARKING INSTALLING DETAIL
NOT TO SCALE

PROPOSED SIGN LEGEND



EXISTING SIGN LEGEND

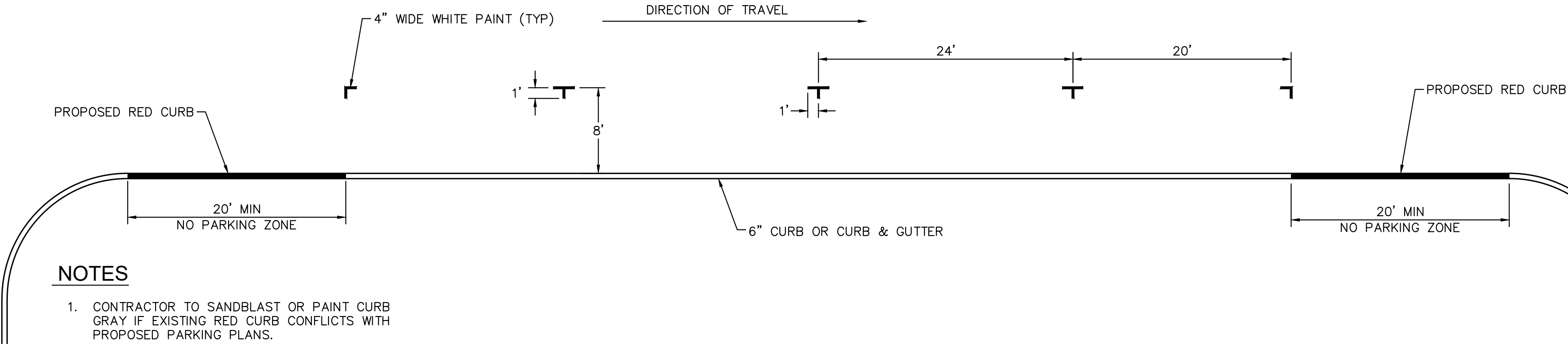


LEGEND

- (xx') EXISTING LANE WIDTH
- xx' NEW LANE WIDTH OR LENGTH OF NEW STRIPING
- (X) STRIPING DETAIL PER CALTRANS STANDARD PLANS
- (TS) TRAFFIC SIGNAL
- ↗ TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- NEW SIGN LOCATION
- EXISTING SIGN LOCATION
- STOP "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D

NOTES

1. CONTRACTOR TO SANDBLAST OR PAINT CURB GRAY IF EXISTING RED CURB CONFLICTS WITH PROPOSED PARKING PLANS.
2. RED CURB IS 20' ADJACENT TO PARALLEL PARKING UNLESS OTHERWISE SHOWN ON PLANS.



DETAIL "C"
PARALLEL PARKING MARKING INSTALLING DETAIL
NOT TO SCALE

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

60% SUBMITTAL
NOT FOR CONSTRUCTION

Kimley»Horn



KIMLEY-HORN
JOSIAH SHULTZ, P.E.
401 B STREET, STE. 600
SAN DIEGO, CA 92101
619.234.9411



CITY PROJECT NO.
ENG. XX-XXXX

ENGINEERING SERVICES

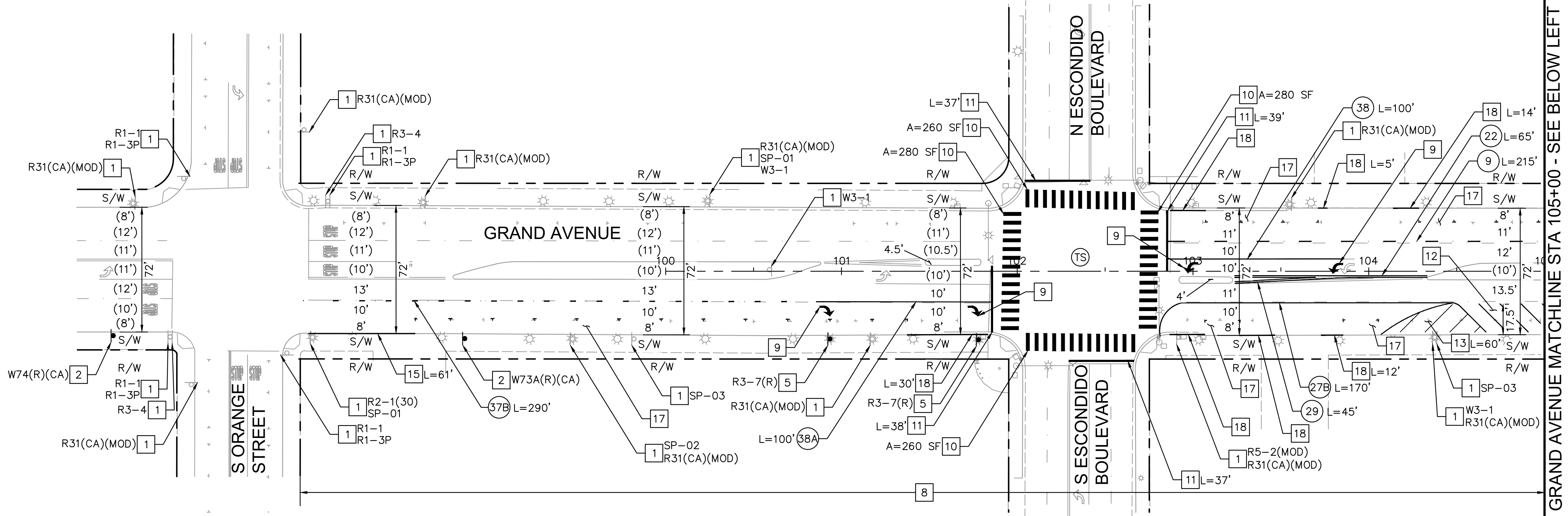
GRAND AVENUE VISION PROJECT
SIGN AND PAVEMENT MARKING NOTES AND DETAILS

Drawing No.

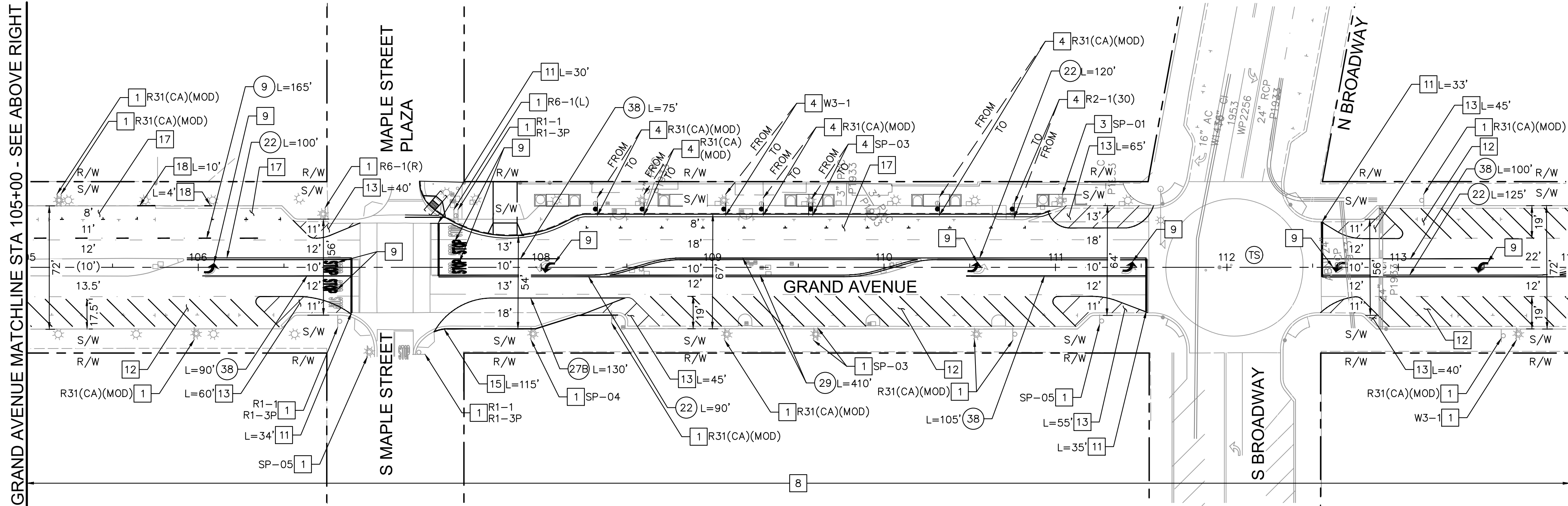
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Sheet 9 of 24

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GRAND AVENUE MATCHLINE STA 105+00 - SEE BELOW LEFT



GRAND AVENUE MATCHLINE STA 114+00 - SEE SHEET 12

- LEGEND**
- (xx') EXISTING LANE WIDTH
- xx' NEW LANE WIDTH OR LENGTH OF NEW STRIPING
- (X) STRIPING DETAIL PER CALTRANS STANDARD PLANS
- (TS) TRAFFIC SIGNAL
- TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
- NEW SIGN LOCATION
- EXISTING SIGN LOCATION
- STOP "STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D

- MARKING NOTES**
- EXISTING SIGN TO REMAIN.
 - FURNISH AND INSTALL NEW SIGN ON BREAK-AWAY POST PER SAN DIEGO REGIONAL STANDARD DRAWING M-45.
 - REMOVE AND SALVAGE EXISTING SIGN.
 - RELOCATE EXISTING SIGN TO NEW BREAK-AWAY POST PER SAN DIEGO REGIONAL STANDARD DRAWING M-45.
 - FURNISH AND INSTALL NEW SIGN ON EXISTING POST OR LUMINAIRE.
 - REMOVE CONFLICTING STRIPING OR PAVEMENT MARKING VIA SANDBLASTING.
 - FURNISH AND INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STANDARD PLAN. SEE LEGEND ON THIS SHEET.
 - FURNISH AND INSTALL WHITE THERMOPLASTIC CONTINENTAL CROSSWALK PER DETAIL "A" ON SHEET 9.
 - INSTALL 12" WHITE THERMOPLASTIC LIMIT LINE/CROSSWALK LINE PER CALTRANS REVISED STD. PLAN A24E. LIMIT LINE PERPENDICULAR TO TRAVEL WAY AND 4' MINIMUM BEHIND CROSSWALK. SEE DETAIL A, SHEET 12.
 - FURNISH AND INSTALL ANGLED PARKING STRIPING PER DETAIL "B" ON SHEET 9.
 - FURNISH AND INSTALL 4" WHITE STRIPE WITH 4" WHITE DIAGONAL PAINT AT 10' C-C SPACING AND ANGLED AT 45 DEGREES.
 - REPAINT RED CURB.
 - INSTALL 4" WHITE PARALLEL PARKING STRIPING PER DETAIL C ON SHEET 9.
 - INSTALL RED CURB PAINT PER DETAIL C ON SHEET 9.

- STRIPING DETAILS**
- INSTALL LANE LINE PATTERN (DETAIL 9) PER CALTRANS REVISED STANDARD PLAN RSP A20A.
 - INSTALL TWO-DIRECTIONAL NO PASSING PATTERN (DETAIL 22) PER CALTRANS REVISED STANDARD PLAN RSP A20A.
 - INSTALL RIGHT EDGE LINE PATTERN (DETAIL 27B) PER CALTRANS REVISED STANDARD PLAN RSP A20B.
 - INSTALL MEDIAN ISLAND PATTERN (DETAIL 29) PER CALTRANS REVISED STANDARD PLAN RSP A20B.
 - INSTALL LANE DROP AT INTERSECTION PATTERN (DETAIL 37B) PER CALTRANS REVISED STANDARD PLAN RSP A20C.
 - INSTALL WHITE CHANNELIZING LINE PATTERN (DETAIL 38) PER CALTRANS REVISED STANDARD PLAN RSP A20D.
 - INSTALL WHITE CHANNELIZING LINE PATTERN (DETAIL 38A) PER CALTRANS REVISED STANDARD PLAN RSP A20D.
 - INSTALL INTERSECTION LINE BIKE LANE PATTERN (DETAIL 39A) PER CALTRANS REVISED STANDARD PLAN RSP A20D.

RECORD DRAWING

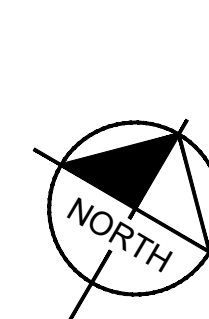
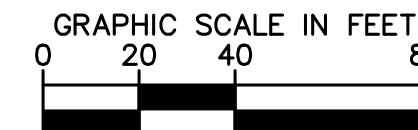
PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

60% SUBMITTAL
NOT FOR CONSTRUCTION

Kimley»Horn



KIMLEY-HORN
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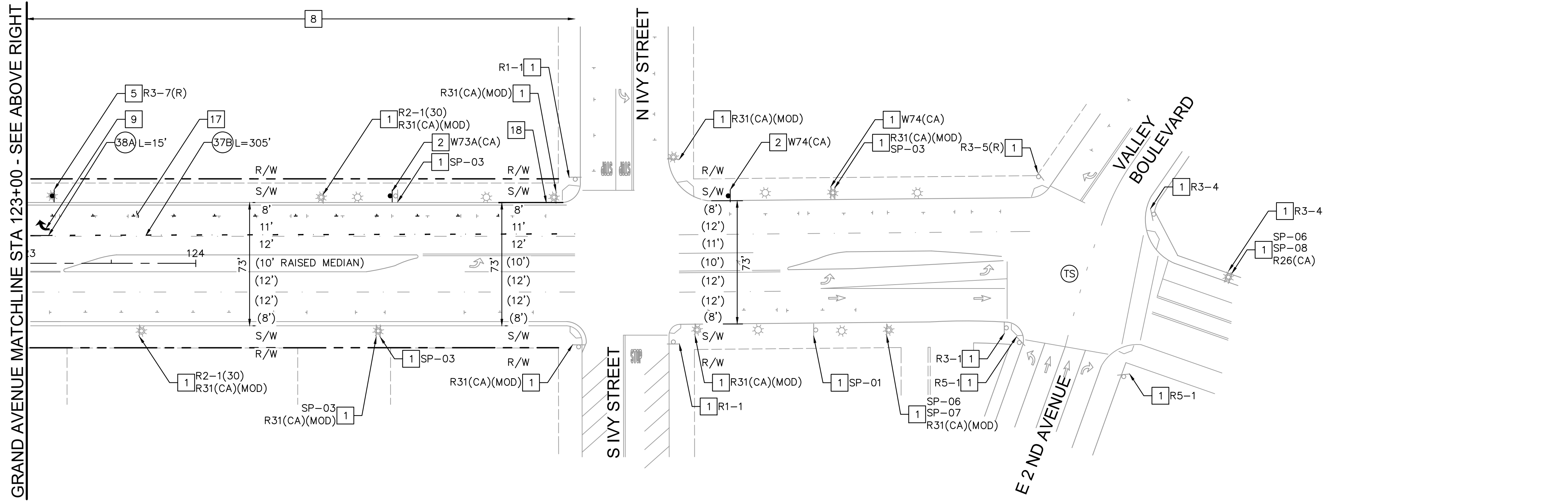
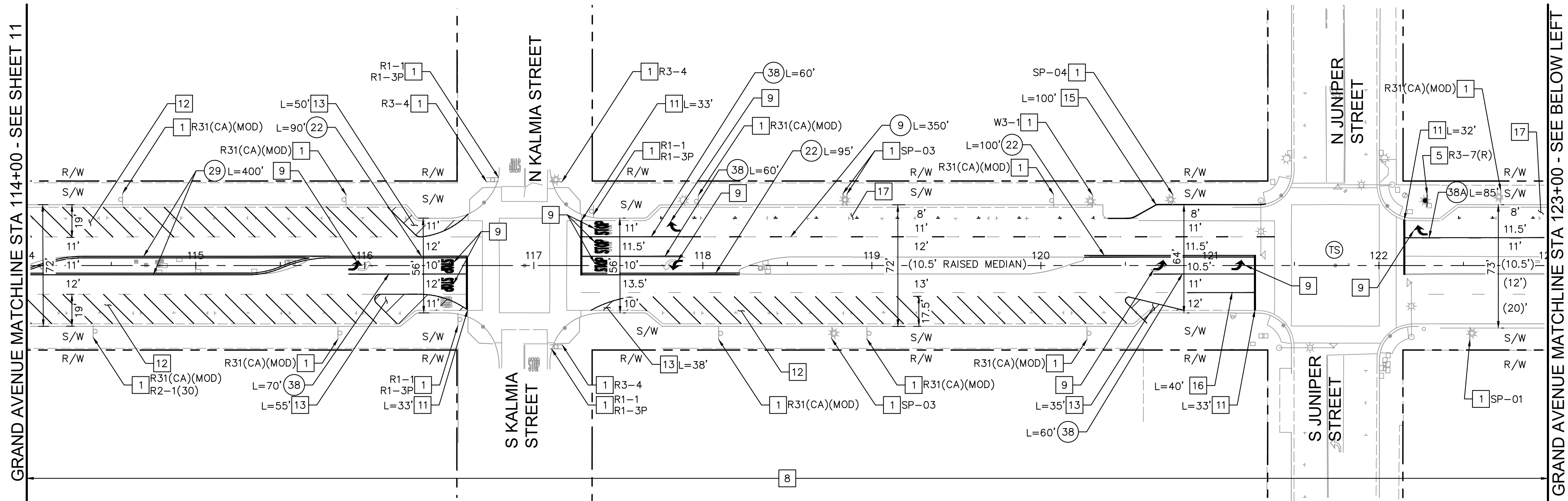


ESCONDIDO
City of Choice

CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal 1" = 40'		DA	DA	JS			GRAND AVENUE VISION PROJECT SIGNING AND STRIPING PLAN	XXXX-XXX
Inspector _____								Vertical		Plans Prepared Under Supervision Of			By _____ Associate Engineer	By _____ Director of Engineering Services		Sheet 10 of 24
Date Completed _____								Traffic		MARK ARAUJO Date: 5/15/2020 R.C.E. No. 85614						

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LEGEND	
(xx')	EXISTING LANE WIDTH
xx'	NEW LANE WIDTH OR LENGTH OF NEW STRIPING
(X)	STRIPING DETAIL PER CALTRANS STANDARD PLANS
(TS)	TRAFFIC SIGNAL
	TYPE IV ARROW PER CALTRANS STANDARD PLAN A24A
	NEW SIGN LOCATION
	EXISTING SIGN LOCATION
	"STOP" PAVEMENT MARKING PER CALTRANS STANDARD PLAN A24D

- MARKING NOTES**
- EXISTING SIGN TO REMAIN.
 - FURNISH AND INSTALL NEW SIGN ON BREAK-AWAY POST PER SAN DIEGO REGIONAL STANDARD DRAWING M-45.
 - FURNISH AND INSTALL NEW SIGN ON EXISTING POST OR LUMINAIRE.
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 - FURNISH AND INSTALL THERMOPLASTIC PAVEMENT MARKING PER CALTRANS STANDARD PLAN. SEE LEGEND ON THIS SHEET.
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 - FURNISH AND INSTALL ANGLED PARKING STRIPING PER DETAIL "B" ON SHEET 9.
 - FURNISH AND INSTALL 4" WHITE STRIPE WITH 4" WHITE DIAGONAL PAINT AT 10' C-C SPACING AND ANGLED AT 45 DEGREES.
 - REPAINT RED CURB.
 - FURNISH AND INSTALL 6" WHITE STRIPE.
 - INSTALL 4" WHITE PARALLEL PARKING STRIPING PER DETAIL C ON SHEET 9.
 - INSTALL RED CURB PAINT PER DETAIL C ON SHEET 9.

- STRIPING DETAILS**
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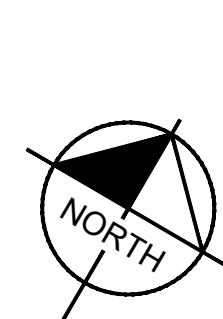
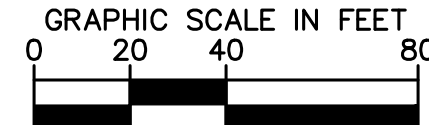
RECORD DRAWING		
PRINT ENGINEER'S NAME	R.C.E. _____	DATE _____

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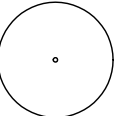
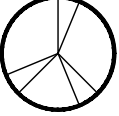

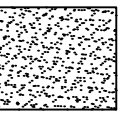


CITY PROJECT NO. ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
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Inspector _____								Vertical		Plans Prepared Under Supervision Of		MARK ARAUJO	By _____	By _____		Sheet11 of 24
Date Completed _____								Traffic		Date 5/15/2020		R.C.E. No. 85614	Associate Engineer	Director of Engineering Services		

Plotted By: Clemente, Andrew Sheet: Seti:Kha Layout:UD-01 August 24, 2020 05:54:10pm \\SND\p01\CA_SND\1\SND_MUN\095283015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-UD01.dwg

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	HEIGHT/SPREAD	CAL.	WUCOLS
	E7	9	EXISTING TREE / TO REMAIN SEE DEMOLITION PLANS FOR EXACT LOCATIONS, QUANTITIES, AND PROTECTION DETAILS	EXISTING			
	UL	1	ULMUS PARVIFOLIA / CHINESE LACEBARK ELM SEE DETAIL 1 AND 4 ON SHEET UD-03	36" BOX	12'-14' HT. X 6'-7" SPR.		LOW
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	SIZE
	HP	40	HESPERALOE PARVIFLORA 'PERPA' / BRAKE LIGHT RED YUCCA SPACING PER PLAN. SEE DETAIL 2 ON SHEET UD-03	5 GAL.	AS SHOWN		LOW
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	WUCOLS	
	R3	358 SF	ROCK MULCH / 3/4" DESERT GOLD TO BE LOCATED IN ALL PLANTING AREAS UNLESS OTHERWISE SHOWN. SEE DETAIL 3 ON SHEET UD-03	ROCK			

SITE FURNISHING SCHEDULE

SYMBOL	DESCRIPTION	TOTAL	REMARKS
	FURNISH AND INSTALL BENCH	9	SEE SPECIFICATIONS FOR TYPE
	FURNISH AND INSTALL TRASH RECEPTACLE	2	SEE SPECIFICATIONS FOR TYPE
	FURNISH AND INSTALL BIKE RACK	2	SEE SPECIFICATIONS FOR TYPE
	FURNISH AND INSTALL DECORATIVE FENCE	161 LNFT	SEE SPECIFICATIONS FOR TYPE

GENERAL NOTES:

1. THE WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND THE MOST CURRENT EDITION(S) OF THE CITY OF ESCONDIDO STANDARD DRAWINGS AND SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THE ABOVE STANDARDS, SPECIFICATIONS AND DRAWINGS, AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS WHICH MAY BE NECESSARY TO COMPLETELY AND ACCURATELY INTERPRET THESE PLANS.
3. ALL QUANTITIES LISTED IN THE URBAN DESIGN SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE CASE OF ANY DISCREPANCIES, PLANS SHALL OVER RIDE THE LANDSCAPE AND BID SCHEDULE QUANTITIES. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON THE PLANS AND BASE THEIR BID ACCORDINGLY.
4. RESPONSIBILITY FOR ESTABLISHING SUBGRADES IS NOT INCLUDED IN THIS WORK. INSPECT SUBGRADES PRIOR TO COMMENCING WORK TO CONFIRM SUBGRADE DEPTHS AND GRADES. ADVISE LANDSCAPE ARCHITECT OF DISCREPANCIES WITH DRAWINGS OR SPECIFICATIONS. ALL PLANTING AREAS SHALL BE LEFT FREE OF CONSTRUCTION DEBRIS AND/OR TOXIC MATERIAL AND SUBGRADED TO A LEVEL TO PERMIT LANDSCAPE CONSTRUCTION. TRENCHES OR OTHER FILLED EXCAVATIONS SHALL BE COMPACTED PRIOR TO LANDSCAPE INSTALLATION.
5. SITE GRADING NECESSITATED BY THE WORK AS IT PROGRESSES AND NOT SPECIFICALLY CALLED OUT ON THE PLANS WILL BE CONSIDERED INCIDENTAL WORK.
6. ALL LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.
7. PRIOR TO COMMENCEMENT OF ANY WORK, DETERMINE LOCATION OF ALL UNDERGROUND UTILITIES THROUGH '811' OR OTHER METHOD AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES CAUSED AS A RESULT OF HIS/HER WORK.
8. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY THE PRESENT LOCATION OF ANY AND ALL EXISTING OVERHEAD AND/OR UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THIS CONSTRUCTION, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT AND TO ADEQUATELY PROTECT AND MAINTAIN ANY SUCH UTILITIES.
9. EXCAVATE PITS, AS SHOWN ON DRAWINGS AND DETAILS. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION. TEST DRAINAGE OF SHRUB AND PLANT PITS BY FILLING WITH WATER TWICE IN SUCCESSION. CONDITIONS PERMITTING THE RETENTION OF WATER IN PLANTING PITS FOR MORE THAN TWENTY-FOUR (24) HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. SUBMIT IN WRITING A PROPOSAL FOR THE CORRECTION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH WORK.
10. IF ROCK, UNDERGROUND CONSTRUCTION, ADVERSE DRAINAGE CONDITIONS, OR OTHER OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF ANY PLANT MATERIAL, NOTIFY THE OWNER'S REPRESENTATIVE. NEW LOCATIONS MAY BE SELECTED BY THE OWNER'S REPRESENTATIVE, OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTION. PROCEED WITH WORK ONLY AFTER APPROVAL OF THE OWNER'S REPRESENTATIVE.
11. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY FROM AT LEAST FIVE SOURCES TO THE OWNER'S REPRESENTATIVE, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL FOR FINAL APPROVAL.
12. ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK STANDARDS UNLESS OTHERWISE NOTED.
13. LAY OUT INDIVIDUAL PLANT LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS, STAKE LOCATIONS AND OUTLINE AREAS AND SECURE THE OWNER'S REPRESENTATIVE'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS MAY BE DIRECTED.
14. ALL PLANT PITS SHALL BE AMENDED AS SPECIFIED, UNLESS A SITE SPECIFIC SOIL TEST INDICATES OTHERWISE. BACKFILL MIX SHALL BE PLACED IN 6" LIFTS AND TAMPED INTO PLACE AROUND THE PLANT. NO TRANSPLANTING SHALL BE DONE WHEN SOIL IS EXCESSIVELY WET. DO NOT COUNTERSINK AROUND CACTI OR SUCCULENTS. PROVIDE POSITIVE DRAINAGE AWAY FROM PLANT.
15. ALL PLANTS SHALL BE PLANTED A MINIMUM OF 5 FEET, ALL SHRUBS AND ACCENTS A MINIMUM OF 36", AND ALL GROUNDCOVERS 18" FROM EDGE OF CURBS, WALKS, WALLS, PADS, ETC., UNLESS DIRECTED OTHERWISE BY THE LANDSCAPE ARCHITECT.
16. ALL SHRUBS SHALL HAVE A FULL HEAD THAT COVERS THE CAN DIAMETER (CAN FULL) AND A MINIMUM OF THREE STEMS/BRANCHES.
17. FINISH GRADE OF MULCH SHALL BE 1/2" BELOW ALL CURBS, WALKS AND PAVING WITH SMOOTH EVEN LINES AT EDGES OF STRUCTURES.
18. FINISH LANDSCAPE GRADES SHALL SLOPE AT A 2% GRADE AWAY FROM CURBS, WALKS, AND WALLS.
19. ALL LANDSCAPE AREAS SHALL RECEIVE MULCH, AT A DEPTH AND TYPE, AS SHOWN ON THESE PLANS. APPLY PRE-EMERGENT HERBICIDE PRIOR TO AND AFTER MULCH INSTALLATION.
20. PROVIDE SAMPLES OF PROPOSED MULCH SHOWING COLOR, GRADATION SIZE RANGE AND TEXTURE INCLUDING PROPOSED SOURCE. PROVIDE 1/2 CUBIC FOOT SAMPLE OF EACH TYPE.
21. ANY ROCK MULCH SHALL NOT CONTAIN LUMPS OR BALLS OF CLAY, CALICHE, ORGANIC MATTER OR CALCAREOUS COATING. THE CONTRACTOR SHALL ENSURE THAT SUFFICIENT QUANTITY IS AVAILABLE FROM A SINGLE SOURCE TO COMPLETE THE PROJECT. THE OWNER'S REPRESENTATIVE SHALL APPROVE SAMPLES PRIOR TO ORDERING.
22. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEEPED CLEAN OF ALL DIRT AND DEBRIS ACCORDING TO PLANS.
23. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PERMITS REQUIRED.
24. ALL CONSTRUCTION ROADS AND COMPACTED AREAS DEVELOPED THROUGH CONSTRUCTION THAT ARE WITHIN THE LANDSCAPE AREAS SHALL BE SCARIFIED AND LOOSENED TO A DEPTH OF 12" PRIOR TO LANDSCAPE AND IRRIGATION WORK BEGINNING.
25. PRIOR TO PLACEMENT, CONTRACTOR TO VERIFY, IN THE FIELD, THAT NO PLANTS ARE PLACED DIRECTLY ABOVE UNDERGROUND UTILITY LINES, BOXES, VAULTS OR OTHER ASSOCIATED EQUIPMENT.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AB-1881 AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN. 
MICHAEL P. MADSEN, LLA 5798

LANDSCAPE ARCHITECT NOTES

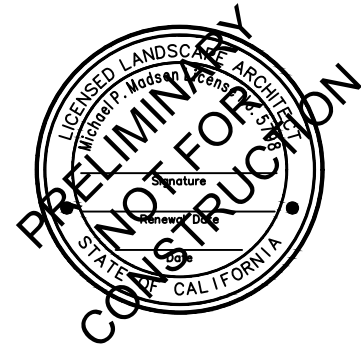
1. THE TERM "LANDSCAPE ARCHITECT" USED HEREIN SHALL MEAN THE LANDSCAPE ARCHITECT WHO HAS SIGNED AND SEALED THESE PLANS AND IS IN RESPONSIBLE CHARGE OF THE LANDSCAPE ARCHITECTURE DESIGN. THE TERM "CONTRACTOR" USED HEREIN SHALL MEAN ANY GENERAL CONTRACTOR OR SUBCONTRACTOR USING THESE PLANS. ANY AGENCY SIGNATURE OR APPROVAL ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES.
2. THE LANDSCAPE ARCHITECT WILL NOT PROVIDE, OBSERVE, COMMENT ON NOR ENFORCE ANY SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY MEASURES AND SHALL BE SOLELY RESPONSIBLE FOR SAME AND COMPLYING WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS. THE CONTRACTOR AGREES THAT SHE/H HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS AND SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE LANDSCAPE ARCHITECT SHALL HAVE NO RESPONSIBILITY FOR ANY OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, TECHNIQUES, EQUIPMENT CHOICE AND USAGE, SEQUENCE, SCHEDULE, SAFETY PROGRAMS, OR SAFETY PRACTICES, NOR SHALL THE LANDSCAPE ARCHITECT HAVE ANY AUTHORITY OR RESPONSIBILITY TO STOP OR DIRECT THE WORK OF ANY CONTRACTOR.
4. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE LANDSCAPE ARCHITECT AND OWNER, THEIR AGENTS AND EMPLOYEES, HARMLESS FROM ANY AND ALL CLAIMS, DEMANDS, JUDGMENTS, LOSS, DAMAGES, COSTS, EXPENSES, FEES OR LIABILITY WHATSOEVER, REAL OR ALLEGED, IN CONNECTION WITH, IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE LANDSCAPE ARCHITECT.
5. IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE LANDSCAPE ARCHITECT AND THE OWNER, AN INTERPRETATION BEFORE DOING ANY RELATED OR IMPACTED WORK.
6. THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PROTECT THE PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM CONTRACTOR OPERATIONS BY APPROPRIATE MEANS UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHOMEVER IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES AND SHALL COORDINATE WORK WITH UTILITY COMPANY REPRESENTATIVES.
8. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF READILY AVAILABLE RECORDS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE SOLE EXPENSE OF THE CONTRACTOR.
9. THE LOCATION, ELEVATIONS, SIZE, TYPE AND CONDITION OF EXISTING IMPROVEMENTS ADJACENT TO THE PROPOSED WORK INDICATED ON THESE PLANS SHALL BE CONFIRMED BY THE CONTRACTOR BY FIELD MEASUREMENTS AND OBSERVATIONS PRIOR TO CONSTRUCTION OF NEW WORK. THE CONTRACTOR WILL IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT IN WRITING IF ANY DISCREPANCIES OR CONFLICTING INFORMATION IS FOUND.
10. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES AS NEEDED, SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY DUE TO THE ACTUAL LOCATION, SIZE, TYPE, OR CONDITION OF EXISTING FACILITIES DIFFERING FROM WHAT IS SHOWN ON THESE PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE OWNER.
12. SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING IMMEDIATELY BEFORE PROCEEDING WITH THE WORK IN QUESTION.
13. ANYTHING MENTIONED IN THE SPECIFICATIONS, IF ANY, AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH.

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

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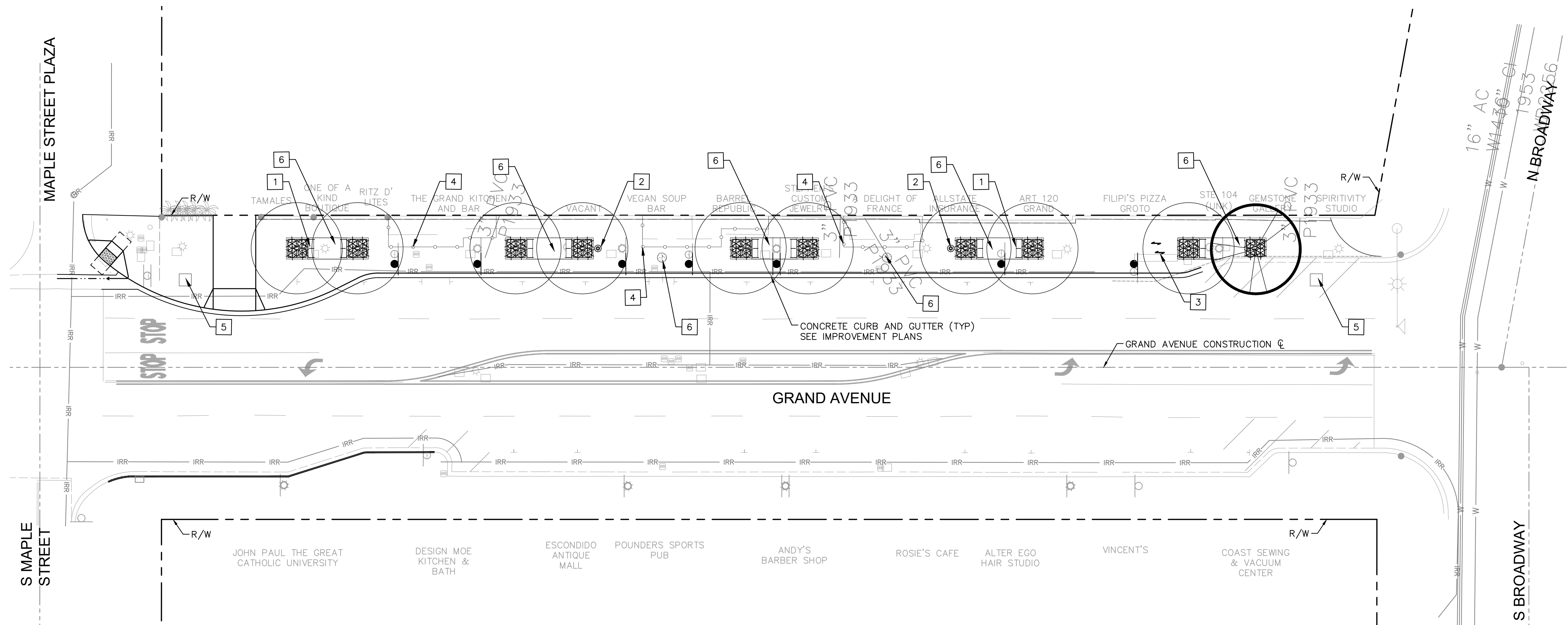


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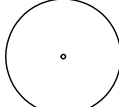


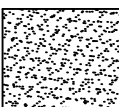


CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK	SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES	Drawing No.
Contractor _____				△			SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal	Filmed	RK	EB	MM				
Inspector _____								Vertical		Plans Prepared Under Supervision Of MARK ARAUJO Date: 5/15/2020 R.C.E. No. 85614			By _____ Associate Engineer	By _____ Director of Engineering Services	GRAND AVENUE VISION PROJECT URBAN DESIGN NOTES & SCHEDULES	UD-01 Sheet 12 of 24
Date Completed _____									Traffic							



PLANT SCHEDULE

<p><u>TREES</u></p>   <p><u>SHRUBS</u></p>  <p><u>GROUND COVERS</u></p> 	<p><u>BOTANICAL / COMMON NAME</u></p> <p>EXISTING TREE / TO REMAIN SEE DEMOLITION PLANS FOR EXACT LOCATIONS, QUANTITIES, AND PROTECTION DETAILS</p> <p>ULMUS PARVIFOLIA / CHINESE LACEBARK ELM SEE DETAIL 1 AND 4 ON SHEET UD-03</p> <p><u>BOTANICAL / COMMON NAME</u></p> <p>HESPERALOE PARVIFLORA 'PERPA' / BRAKE LIGHT RED YUCCA SPACING PER PLAN. SEE DETAIL 2 ON SHEET UD-03</p> <p><u>BOTANICAL / COMMON NAME</u></p> <p>ROCK MULCH / 3/4" DESERT GOLD TO BE LOCATED IN ALL PLANTING AREAS UNLESS OTHERWISE SHOWN. SEE DETAIL 3 ON SHEET UD-03</p>
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HARDSCAPE NOTES

- 1 FURNISH AND INSTALL BENCH (TYP)
SEE SPECIFICATIONS FOR TYPE
- 2 FURNISH AND INSTALL TRASH RECEPTACLE (TYP)
SEE SPECIFICATIONS FOR TYPE
- 3 FURNISH AND INSTALL BIKE RACK (TYP)
SEE SPECIFICATIONS FOR TYPE
- 4 FURNISH AND INSTALL DECORATIVE FENCE (TYP)
SEE SPECIFICATIONS FOR TYPE
- 5 FUTURE GATEWAY FEATURE (TYP)
BY OTHERS, NOT IN CONTRACT
- 6 FUTURE PUBLIC ART LOCATION (TYP)
BY OTHERS, NOT IN CONTRACT

RECORD DRAWING

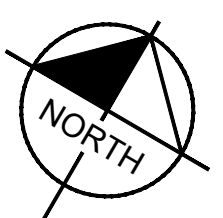
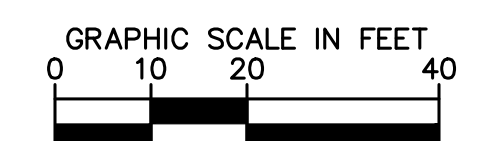
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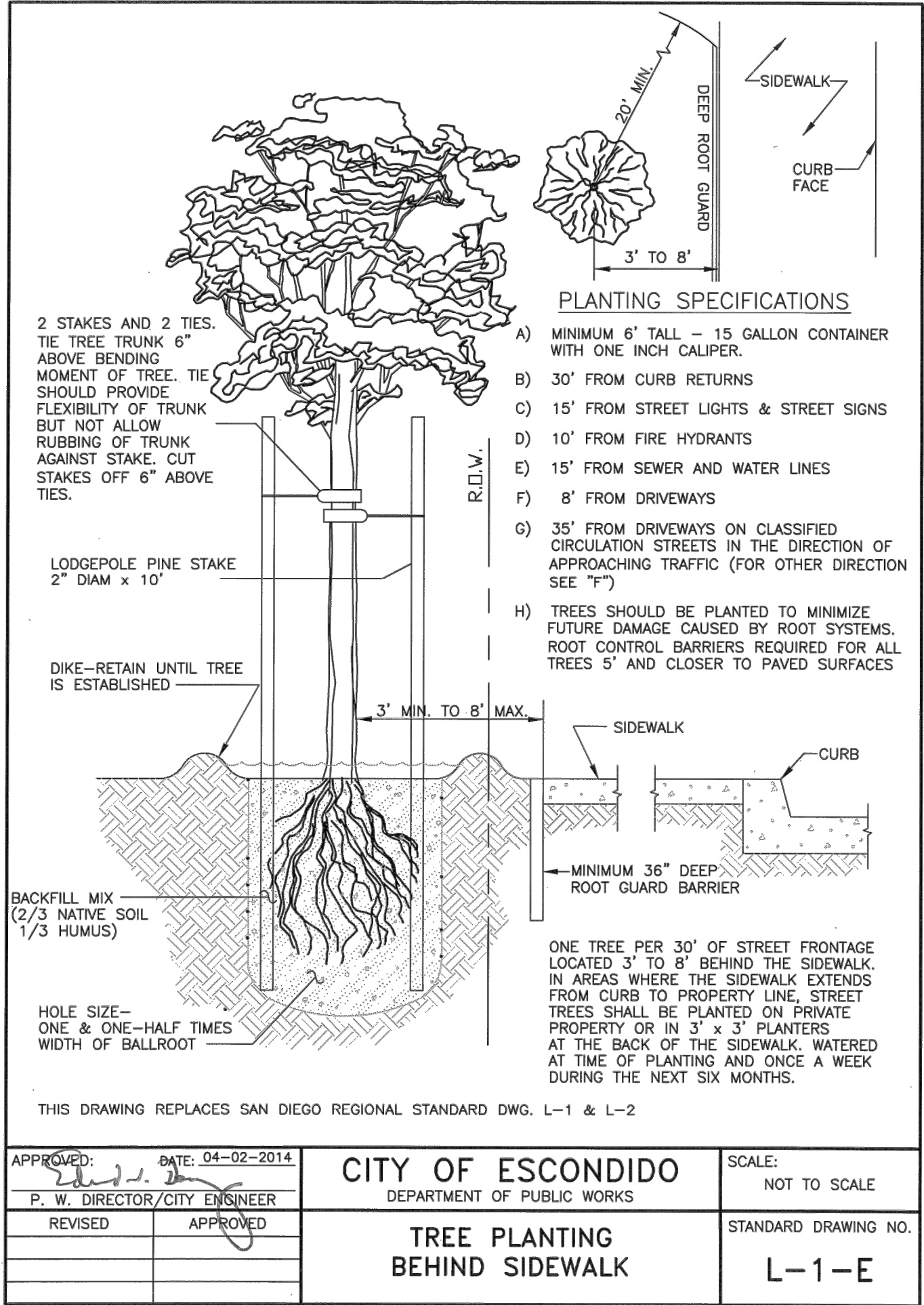


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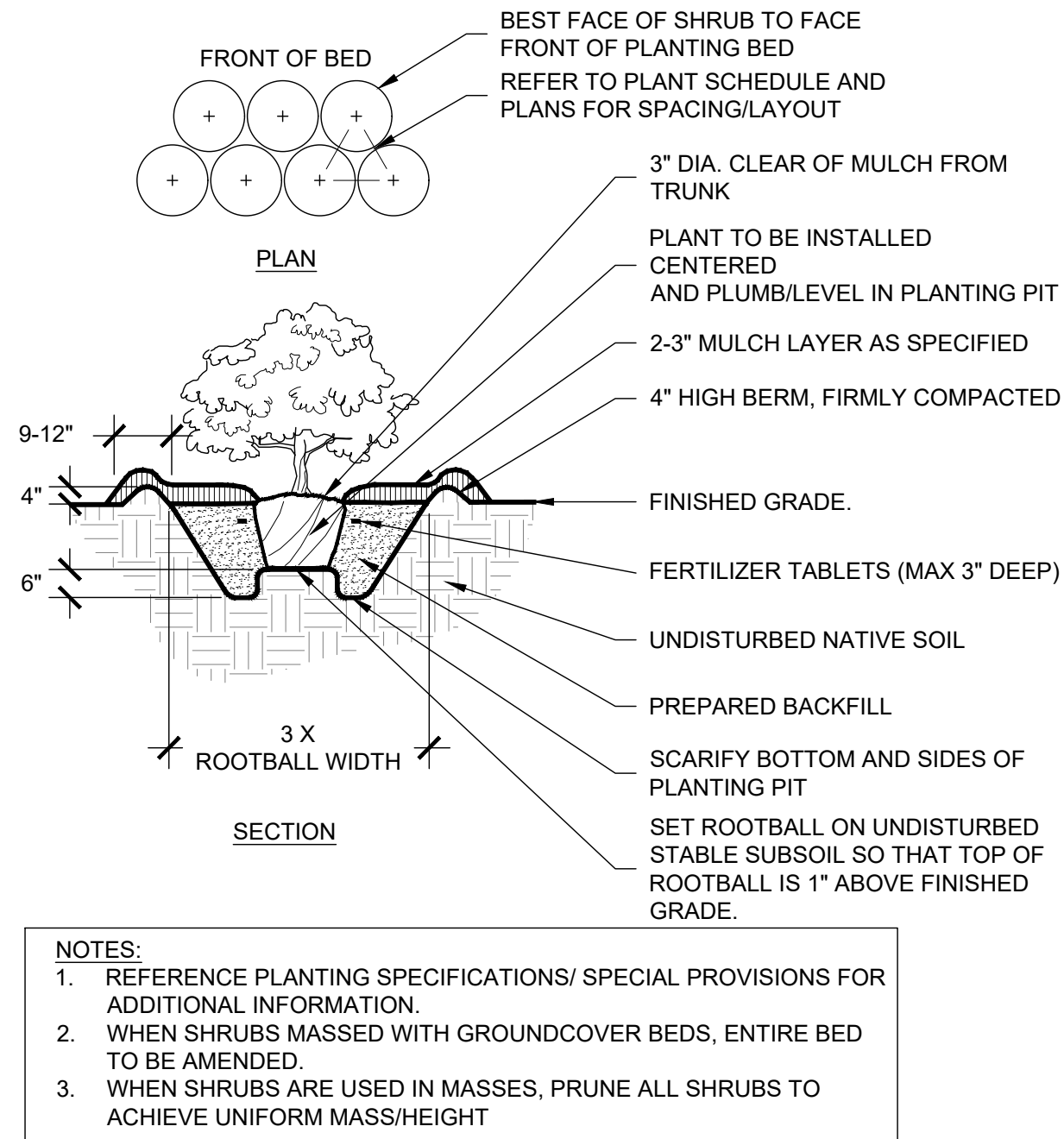
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Contractor						△				SEE SHEET 1 FOR BASIS OF COORDINATES.				Horizontal		Filmed	RK		EB		MM		By		By		GRAND AVENUE VISION PROJECT				UD-02	
Inspector														Vertical		Traffic	Plans Prepared Under Supervision Of		MARK ARAUJO		Date 5/15/2020		Associate Engineer		Director of Engineering Services		URBAN DESIGN PLAN				Sheet 13 of 24	
Date Completed																					R.C.E. No. 85614											

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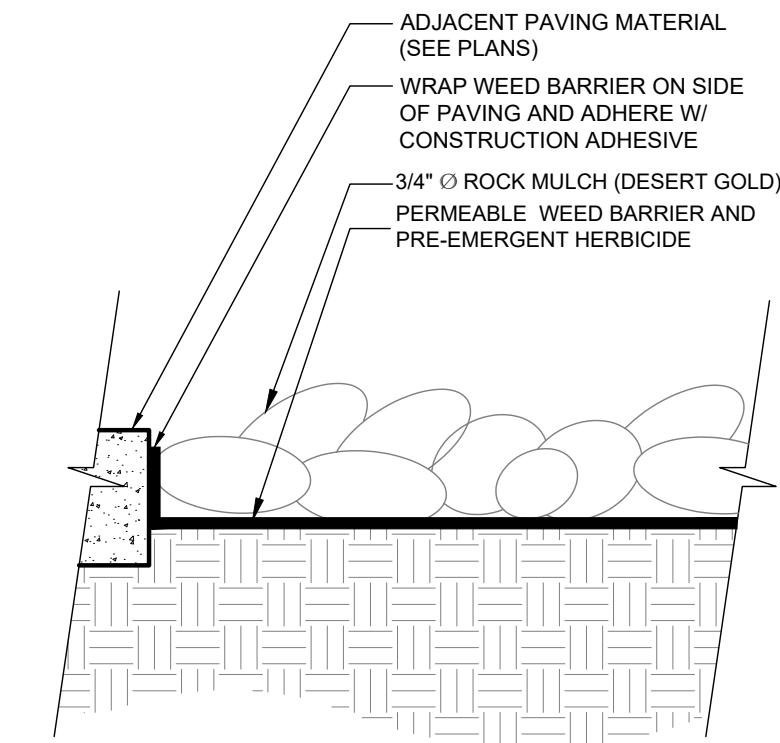
1 36" AND LARGER BOX TREE PLANTING

NTS



2 TYPICAL SHRUB PLANTING

NTS



3 ROCK MULCH

NTS

NOTES:

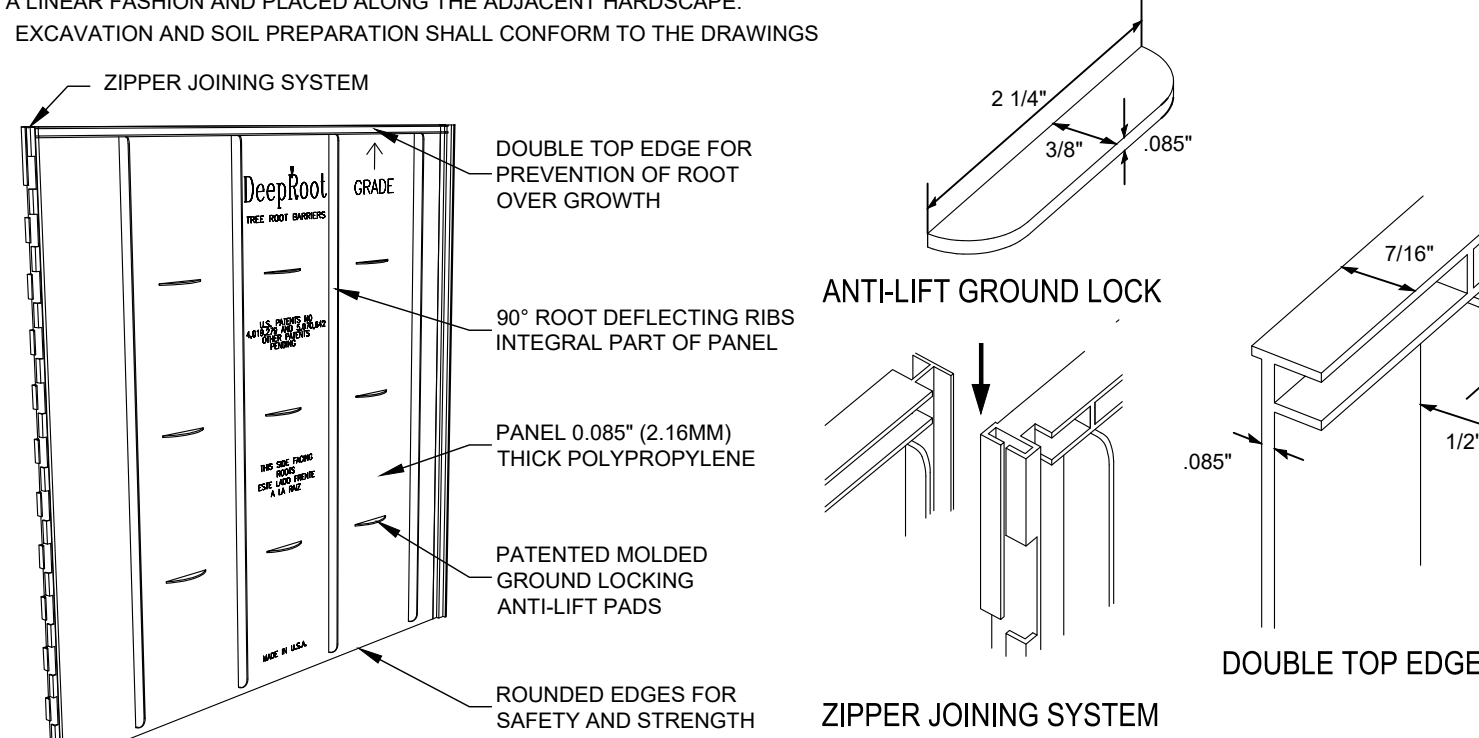
SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING ADJACENT PAVING / HARDSCAPE ELEMENTS. ASSEMBLED IN 2' LONG MODULES OR FOR LINEAR APPLICATIONS DIRECTLY BESIDE AN ADJACENT HARDSCAPE AREA TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

MATERIALS:

- THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 24-2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 530 WASHINGTON STREET, SAN FRANCISCO, CA 94111 (800-458-7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 24" DEEP, MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS, RECYCLABLE.

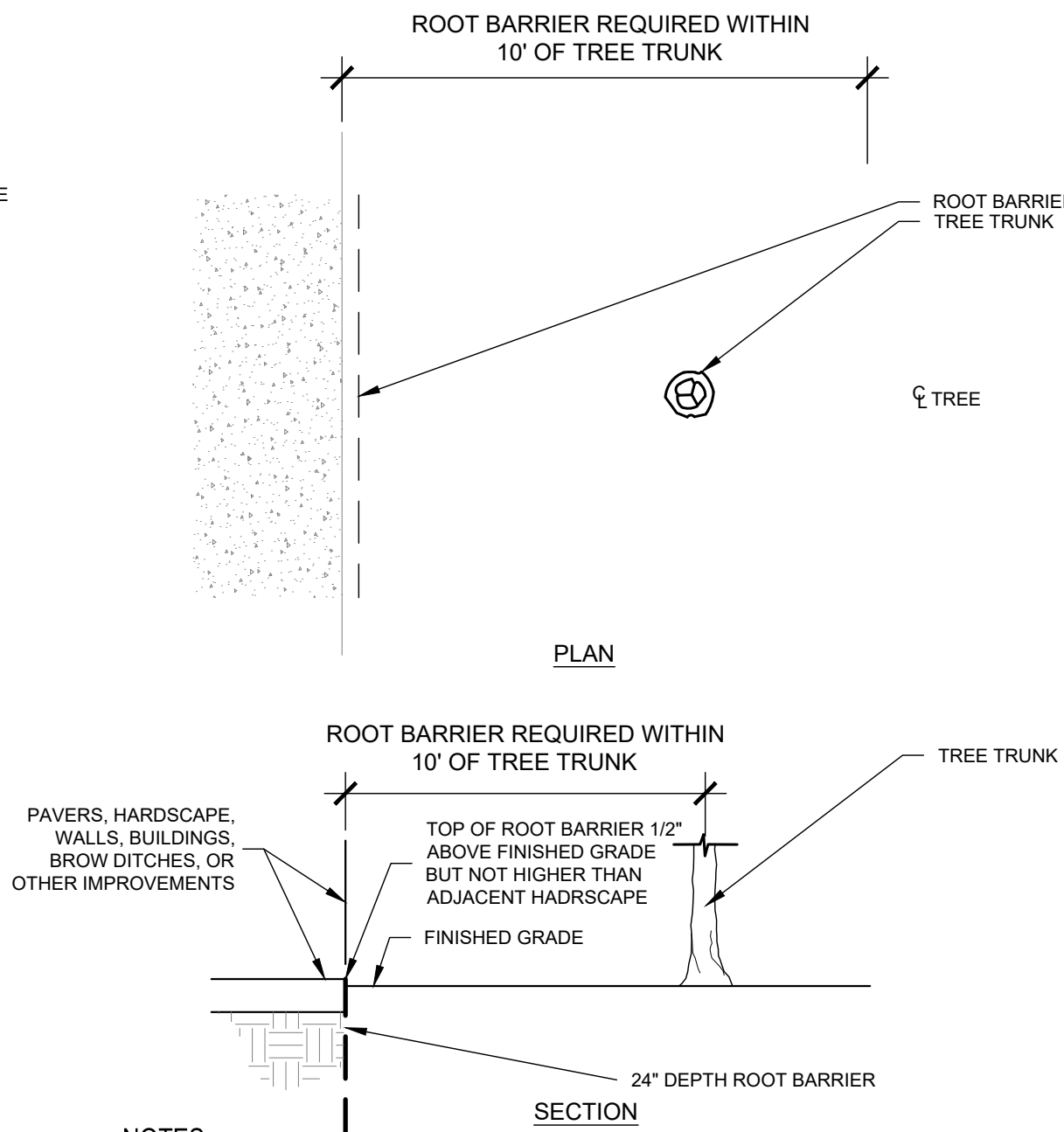
CONSTRUCTION AND INSTALLATION:

- THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE NUMBER OF PANELS AND IN THE MANNER SHOWN ON THE DRAWINGS. THE VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE CONNECTED EITHER TO FORM A CIRCLE AROUND THE ROOT BALL OR BE JOINED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE.
- EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS



4 ROOT CONTROL BARRIER

NTS



NOTES:

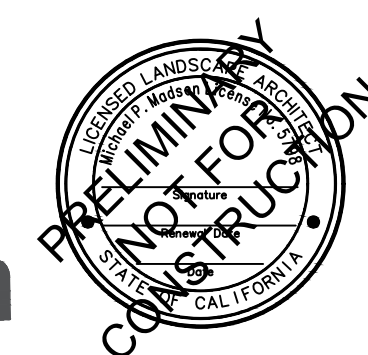
- ROOT BARRIER SHALL BE INSTALLED ADJACENT TO THE IMPROVEMENT AND NOT AROUND THE ROOTBALL.
- ROOT BARRIER REQUIRED WHEN TREE TRUNK IS WITHIN 10' OF HARDSCAPE, WALLS, BUILDINGS, BROW DITCHES, OR OTHER IMPROVEMENTS

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. DATE

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Kimley»Horn



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MICHAEL MADSEN, PLA
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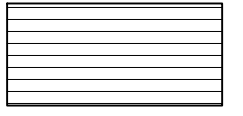




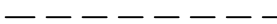
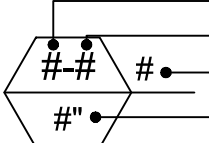


CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD		REFERENCES		Date	By	REVISIONS		App'd	Date	BENCH MARK		SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.
Contractor										SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal	Filmed	RK	EB	MM	Plans Prepared Under Supervision Of MARK ARAUJO		Grand Avenue Vision Project		UD-03
Inspector												Vertical	Traffic				By Associate Engineer		URBAN DESIGN DETAILS		Sheet 14 of 24
Date Completed																	By Director of Engineering Services				

Plotted By: Clemente, Andrew Sheet Set: Khs Layout: IRO1 August 24, 2020 05:57:06pm \\SND\p01\CA_SND1\SND\MUNI\095293015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-IR.dwg

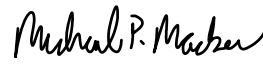
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER /MODEL/DESCRIPTION	QTY	PS
	HUNTER PROS-PRS30-06-CV-MSBN* MULTI-STREAM BUBBLER, 6" POP-UP, FACTORY INSTALLED DRAIN CHECK VALVE, 50=0.5GPM	20	30
	HUNTER ICZ-101-25 DRIPI CONTROL ZONE KIT. 1" ICV GLOBE VALVE WITH 1" HY100 FILTER SYSTEM. PRESSURE REGULATION: 25PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.	1	
	NETAFIM TL050MFV-1* AUTOMATIC FLUSH VALVE, 1/2" MALE PIPE THREAD. INSTALL AT LOWEST ELEVATION OF DRIPLINE ZONE.	1	
	NETAFIM TLAVRV* AIR/VACUUM RELIEF VALVE, 1/2" MALE PIPE THREAD. INSTALL AT HIGHEST ELEVATION OF DRIPLINE ZONE.	1	
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-06-12* SUBSURFACE TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.6 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.	360.0 S.F.	
	HUNTER ICV-G* 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.	1	
	HAYWARD SHUT OFF VALVE* TB SERIES TRUE UNION BALL VALVES, SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION. SIZE RANGE - 1/4" - 2" DIA.	1	
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	759.2 L.F.	
	IRRIGATION MAINLINE: PVC SCHEDULE 40	256.4 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40	301.0 L.F.	
	Valve Callout Valve Number Controller Letter Valve Flow Valve Size		

IRRIGATION NOTES

1. THE SYSTEM HAS BEEN DESIGNED TO PROVIDE 100% COVERAGE. ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS SHALL BE IN ACCORDANCE WITH THESE STANDARDS. QUANTITIES IN SCHEDULE ARE ESTIMATED. PLAN SHALL TAKE PRECEDENCE.
2. ALL IRRIGATION LINES AND VALVES ARE SHOWN DIAGRAMMATICALLY. ALL LINES AND VALVES TO BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE.
3. CONTRACTOR TO FIELD LOCATE ALL PROPOSED IRRIGATION WATER MAIN LINE LOCATIONS. CONTACT LANDSCAPE ARCHITECT PRIOR TO START OF WORK IF DISCREPANCIES BETWEEN THIS PLAN AND EXISTING CONDITIONS ARE FOUND.
4. LOCATE ALL VALVES INSIDE LANDSCAPE AREAS, ALLOWING ACCESS FOR MAINTENANCE PURPOSES, BUT HIDING THEM FROM PUBLIC VIEW WHENEVER POSSIBLE.
5. ALL PRESSURE MAINLINES UNDER ASPHALT PAVEMENT SHALL BE PLACED WITHIN SLEEVES AS NOTED. WHERE ELECTRIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
6. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
7. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR, WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF EACH SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES SHALL BE SIZED TWO PIPE SIZES GREATER THAN PIPE IT CARRIES.
8. ALL DRIPI ZONES SHALL BE INSTALLED WITH A SELF-FLUSHING DISC FILTER, OR APPROVED EQUAL
9. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION.
10. VERIFY CONTROLLER AND RAIN SENSOR LOCATION AND MAINLINE POINT OF CONNECTION AT PROJECT SITE WITH OWNER.
11. ELECTRIC SERVICE TO CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
12. ALL 24 VAC WIRING SHALL BE OF DIRECT BURIAL COPPER WIRE AS FOLLOWS:
 - CONTROL WIRES - #14
 - COMMON WIRES - #12
13. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON THE SITE.
14. COORDINATE WITH PLANTING PLAN FOR PLANTER BED LOCATIONS AND TREE LOCATIONS.
15. CONTRACTOR SHALL COORDINATE WITH DEVELOPER FOR OPERATING PARAMETERS OF MASTER SYSTEM. THIS DESIGN REQUIRES 33.74 PSI TO OPERATE. IF THE MASTER SYSTEM CANNOT PROVIDE THESE PARAMETERS, CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE DESIGN BY ADDING CONTROL VALVES, A BOOSTER PUMP, PRESSURE REDUCING VALVE, OR OTHER EQUIPMENT, AS NECESSARY. CONTRACTOR SHALL SUBMIT DESIGN REVISIONS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO SUBMITTING BID.
16. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
17. A LAMINATED DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
18. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE SIGNER OF THE LANDSCAPE PLANS, THE SIGNER OF THE IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
19. AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

I HAVE COMPLIED WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN PLAN.



MICHAEL P. MADSEN, LLA 5798

MAINTENANCE:

1. LOW-FLOW BUBBLER ZONES WILL BE DRAINED IN COLD WEATHER SITUATIONS USING THE MANUAL FLUSH VALVES.
2. FILTER CLEANING AND REPLACEMENT ON A REGULAR BASIS.
3. CHECKING FOR LEAKS AT EACH VALVE AND INSPECTION OF EACH ZONE ON A MONTHLY BASIS.
4. HAVE THE CONTRACTOR WALK EACH SECTION OF LOW-FLOW BUBBLERS TO CHECK FOR CLOGGING OR PROBLEMS.
5. IF AN ON-SITE WEATHER STATION IS SPECIFIED, IT NEEDS TO BE CALIBRATED REGULARLY TO PROVIDE ACCURATE DATA. BECAUSE OF THE COST OF MAINTAINING AN ON-SITE WEATHER STATION, IT IS RECOMMENDED TO USE A CONTROL SYSTEM WHICH UTILIZES A NETWORK OF ET DATA THAT CAN ASSURE ACCURACY TO WITHIN ON KILOMETER OF THE SITE.

IRRIGATION MAINTENANCE SCHEDULE:

THE IRRIGATION MAINTENANCE SCHEDULE TASKS LISTED BELOW ARE INTENDED A S MINIMUM STANDARDS AND MORE FREQUENT ATTENTION MAY BE REQUIRED DEPENDING ON THE PARTICULAR SITE CONDITIONS. MAINTENANCE SHALL BE DONE TO ENSURE WATER EFFICIENCY. REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR APPROVED EQUIVALENTS.

FREQUENCY - QUARTERLY

TASK - CONTROLLER CABINET : OPEN CABINET AND CLEAN OUT DEBRIS AND REPLACE BATTERY AS NECESSARY.CHECK WIRING AND REPAIR AS NEEDED AND CHECK CLOCK AND RESET IF NECESSARY.

FREQUENCY - MONTHLY

TASK - IRRIGATION SCHEDULE: ADJUST SCHEDULE FOR SEASONAL VARIATIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE AMOUNT OF WATER NEEDED TO MAINTAIN PLANT HEALTH. ADJUST AS NECESSARY.

FREQUENCY - QUARTERLY

TASK - POC: VISUALLY INSPECT COMPONENTS FOR LEAKS, PRESSURE SETTINGS, SETTLEMENT OR OTHER DAMAGE AFFECTING THE OPERATION OF A COMPONENT. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY

TASK - REMOTE CONTROL VALVES : ISOLATION VALVES AND QUICK COUPLER VALVES: VISUALLY INSPECT FOR LEAKS, SETTLEMENTS, WIRE CONNECTIONS AND PRESSURE SETTINGS. REPAIR AS NEEDED.

FREQUENCY - QUARTERLY

TASK - MAINLINE AND LATERALS: VISUALLY INSPECT FOR LEAKS OR SETTLEMENTS OF TRENCH.

FREQUENCY - WEEKLY

TASK - FILTERS AND STRAINERS - VISUALLY CHECK FOR ANY BROKEN MALIGNED OR CLOGGED HEADS, HEADS WITH INCORRECT ARC, INADEQUATE COVERAGE OR OVERSPRAY AND LOW HEAD DRAINAGE. REPAIR AS NEEDED.

FREQUENCY - MONTHLY

TASK - FILTERS AND STRAINERS: VISUALLY CHECK FOR LEAKS, BROKEN FITTINGS. CLEAN AND FLUSH SCREENS.

STATE OF CALIFORNIA ESTIMATED WATER USE

TOTAL WATER USE IS CALCULATED BY SUMMING THE AMOUNT OF WATER ESTIMATED FOR EACH HYDROZONE. WATER USE FOR EACH HYDROZONE IS ESTIMATED WITH THE FOLLOWING FORMULA:

EWU (HYDROZONE) = ESTIMATED WATER USE (GAL / YEAR)
ETO = REFERENCE EVAPOTRANSPIRATION (INCHES / YEAR)
PF = PLANT ETO ADJUSTMENT FACTOR
HA = HYDROZONE AREA (S.F.)
.62 = CONVERSION FACTOR
IE = IRRIGATION EFFICIENCY
SLA = SPECIAL LANDSCAPE AREA (S.F.)

EWU (HYDROZONE) = (ETO * PF * HA * .62) / (IE)

HYDROZONE A (DRIP)

ETO	PF	HA	IE	CONVERSION FACTOR	EWU GAL/YEAR
54.2	.2	360	.81	.62	2987

HYDROZONE B (LOW WATER BUBBLER)

ETO	PF	HA	IE	CONVERSION FACTOR	EWU GAL/YEAR
54.2	.2	330	.81	.62	2738

ESTIMATED TOTAL WATER USE (ETWU)

5725

MAWA (MAXIMUM APPLIED WATER ALLOWANCE)

ETO	ET ADJUSTMENT FACTOR	TOTAL HA	CONVERSION FACTOR	MAWA
54.2	.45	690	.62	10434

ESTIMATED ANNUAL WATER USE (% OF MAWA)

55

VALVE SCHEDULE

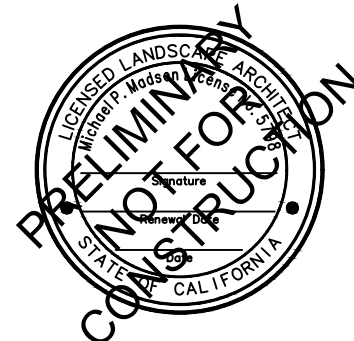
NUMBER	MODEL	SIZE	TYPE	GPM	PSI
1	HUNTER ICV-G*	1"	BUBBLER	10.00	33.74
2	HUNTER ICZ-101-25	1"	AREA FOR DRIPLINE	3.60	30.12

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

60% SUBMITTAL
NOT FOR CONSTRUCTION

Kimley»Horn



KIMLEY-HORN
MICHAEL MADSEN, PLA
401 B STREET, STE. 600
SAN DIEGO, CA 92101
619.234.9411



CITY PROJECT NO.

ENG. XX-XXXX

ENGINEERING SERVICES

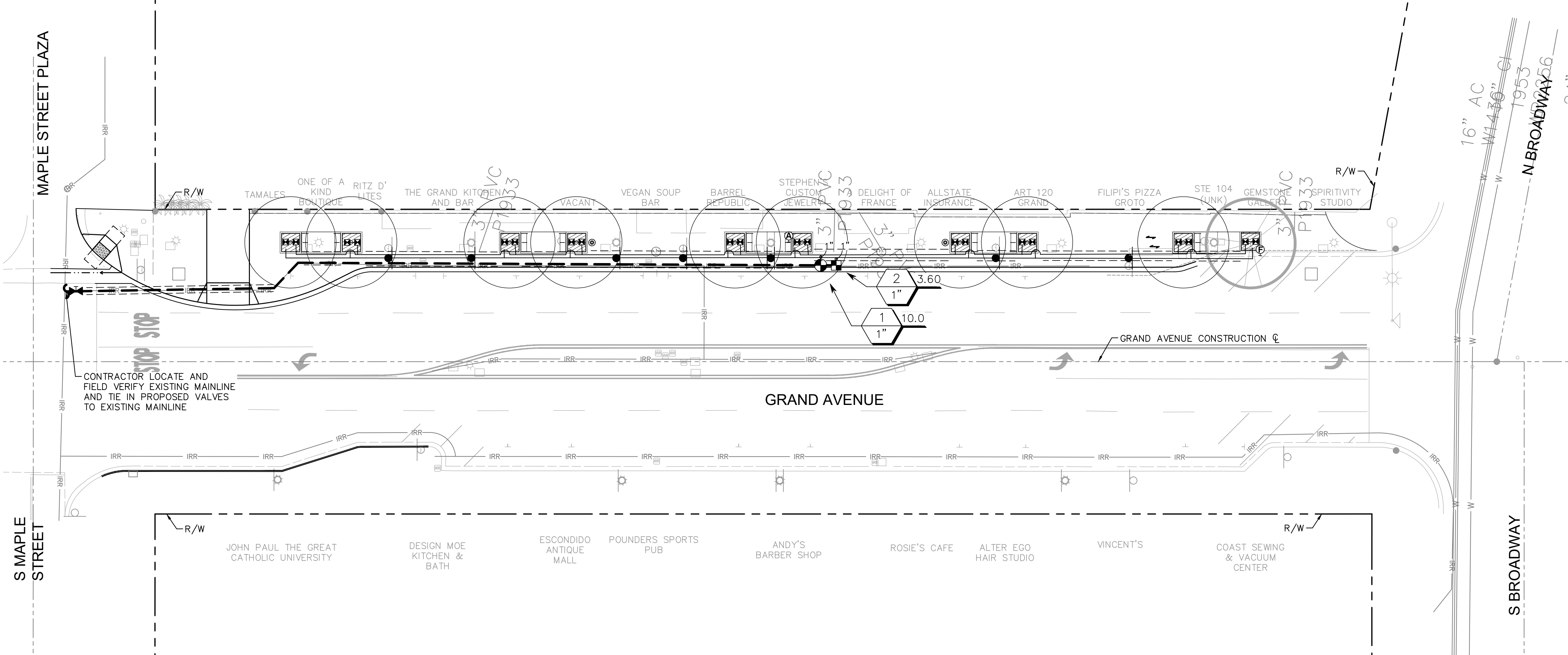
Drawing No.

GRAND AVENUE VISION PROJECT
IRRIGATION NOTES & SCHEDULES

IR-01

Sheet15of 24

Plotted By: Clemente, Andrew Sheet Sati:Kha Layout:IR02 August 24, 2020 05:57:20pm \\SND\p01\CA_SND1\SND\MUNI\095293015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-IR.dwg



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER PROS-PRS30-06-CV-MSBN* MULTI-STREAM BUBBLER, 6" POP-UP, FACTORY INSTALLED DRAIN CHECK VALVE, 50=0.5GPM	20
	HUNTER ICZ-101-25 DRIP CONTROL ZONE KIT. 1" ICV GLOBE VALVE WITH 1" HY100 FILTER SYSTEM. PRESSURE REGULATION: 25PSI. FLOW RANGE: 2 GPM TO 20 GPM. 150 MESH STAINLESS STEEL SCREEN.	1
	NETAFIM TLO50MFV-1* AUTOMATIC FLUSH VALVE, 1/2" MALE PIPE THREAD. INSTALL AT LOWEST ELEVATION OF DRIPLINE ZONE.	1
	NETAFIM TLAVRV* AIR/VACUUM RELIEF VALVE, 1/2" MALE PIPE THREAD. INSTALL AT HIGHEST ELEVATION OF DRIPLINE ZONE.	1
	AREA TO RECEIVE DRIPLINE NETAFIM TLCV-06-12" SUBSURFACE TECHLINE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH CHECK VALVE. 0.6 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. 17MM.	360.0 S.F.
	HUNTER ICV-G* 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.	1
	HAYWARD SHUT OFF VALVE* TB SERIES TRUE UNION BALL VALVES, SAME SIZE AS MAINLINE PIPE DIAMETER AT VALVE LOCATION. SIZE RANGE - 1/4" - 2" DIA.	1
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	759.2 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40	256.4 L.F.
	PIPE SLEEVE: PVC SCHEDULE 40	301.0 L.F.
	Valve Callout Valve Number Controller Letter Valve Flow Valve Size	

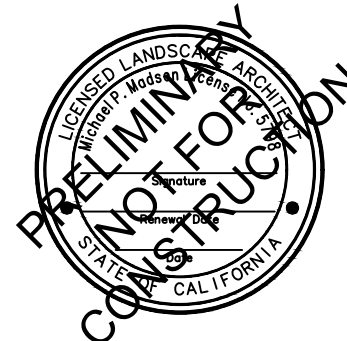
NOTE TO CONTRACTOR:
CONTRACTOR TO COORDINATE WITH CITY REPRESENTATIVE TO LOCATE EXISTING IRRIGATION CONTROLLER AND WEATHER SENSOR TO TIE IN PROPOSED DRIP AND BUBBLER ZONES

RECORD DRAWING

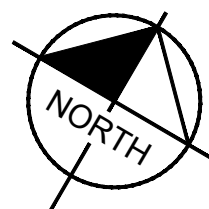
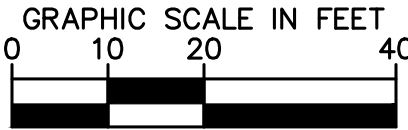
PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

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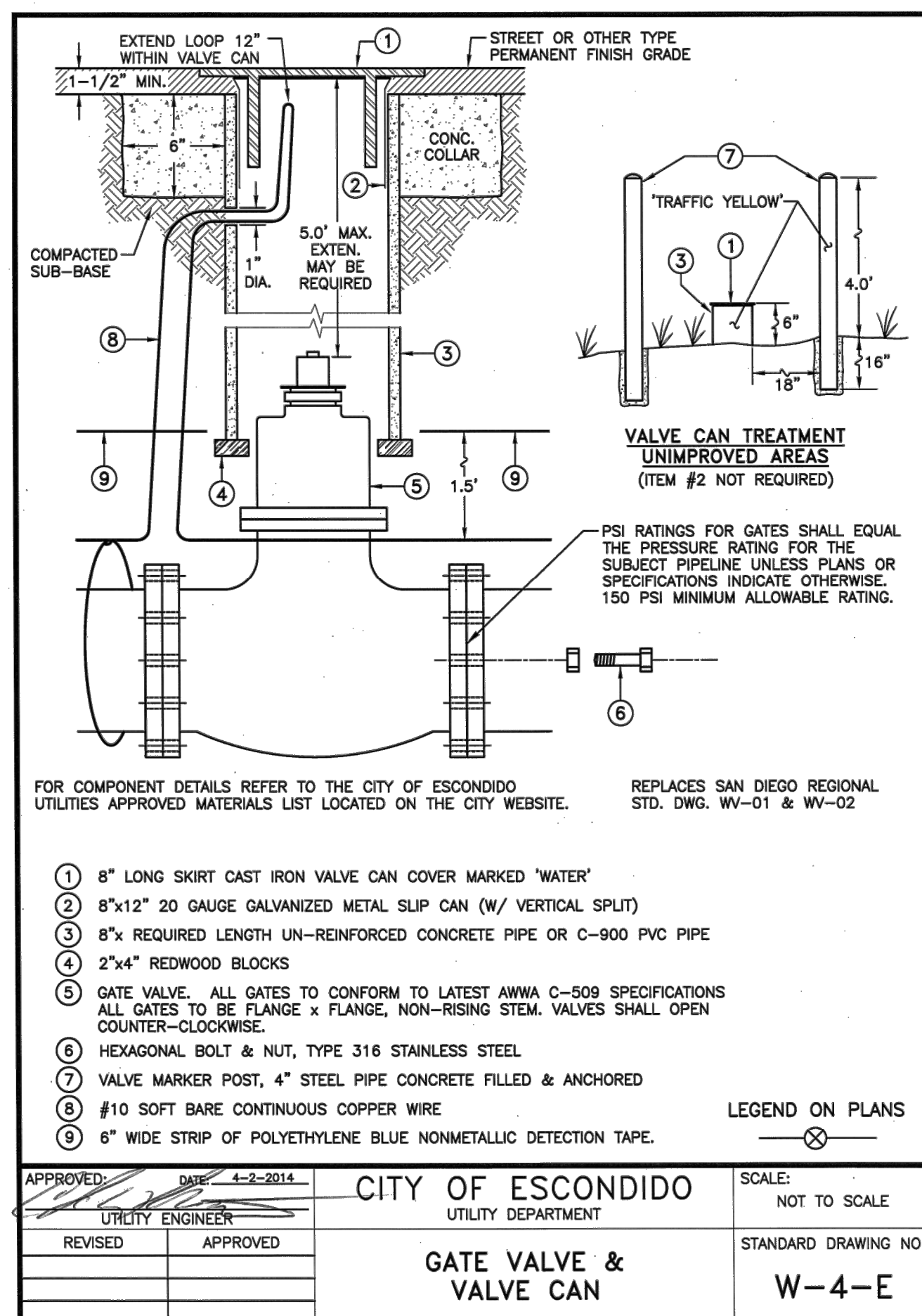


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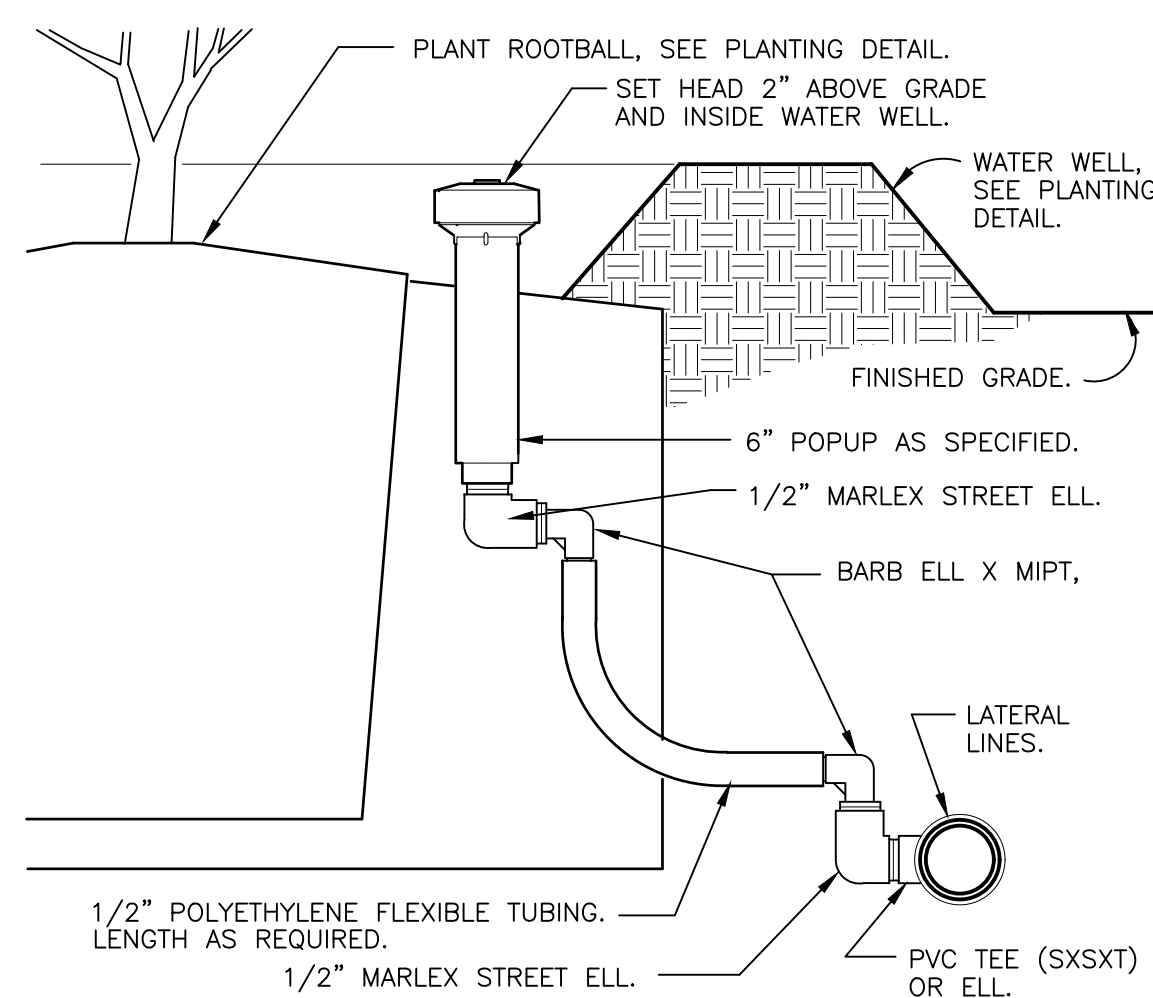


CITY PROJECT NO.
ENG. XX-XXXX

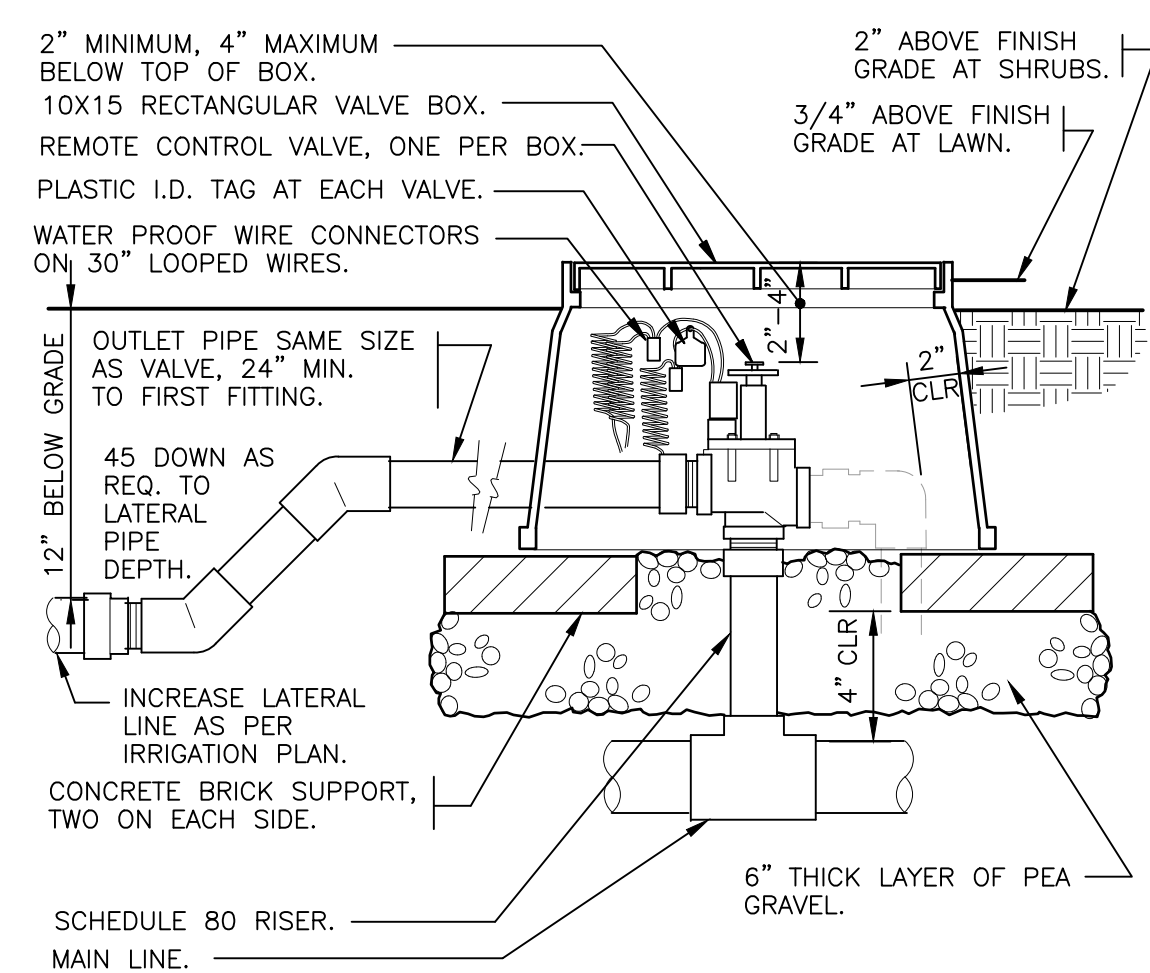
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Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.	Horizontal 1" = 20'	Filmed	RK	EB	MM			GRAND AVENUE VISION PROJECT	IR-02
Inspector _____								Vertical	Traffic	Plans Prepared Under Supervision Of	MARK ARAUJO	Date: 5/15/2020	By _____	By _____	IRRIGATION PLAN	Sheet 16 of 24
Date Completed _____												R.C.E. No. 85614	Associate Engineer	Director of Engineering Services		



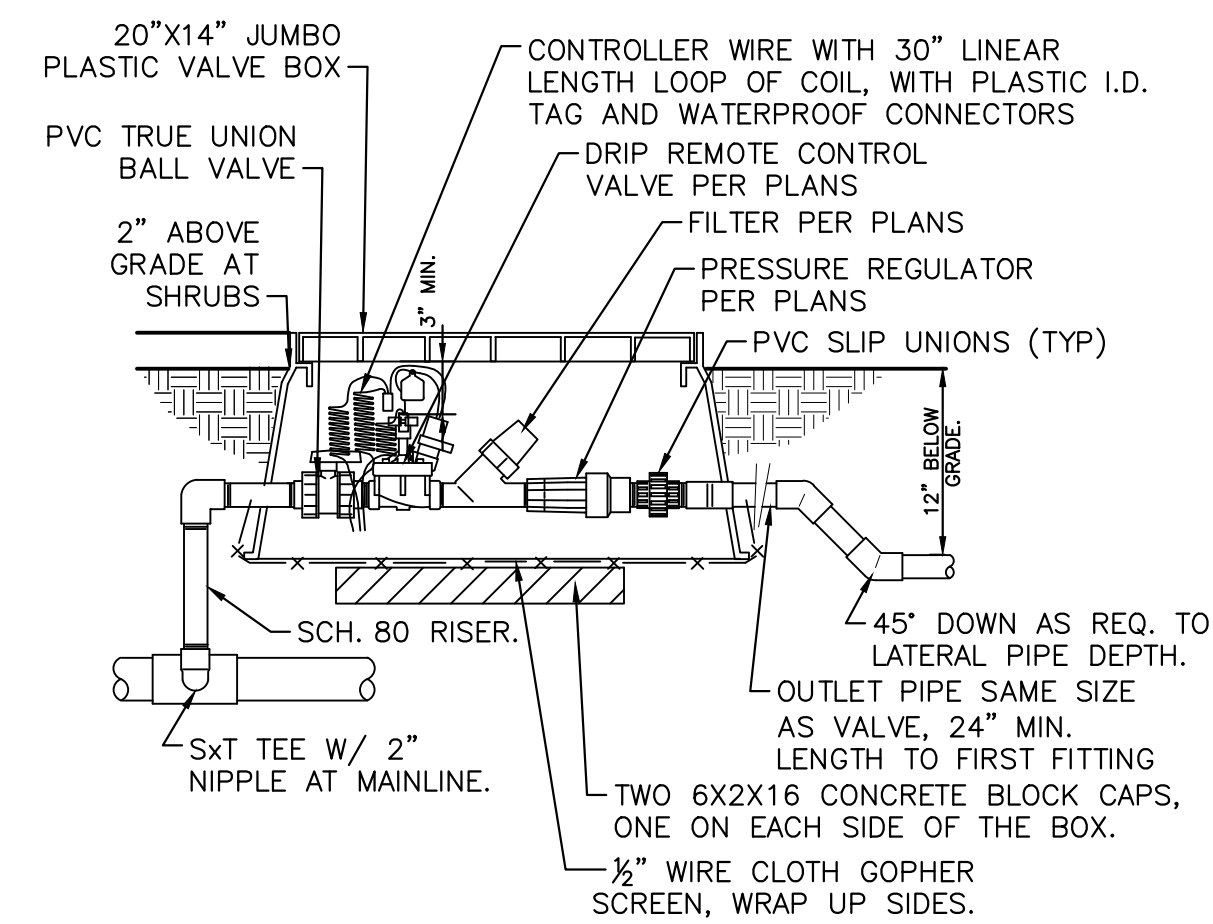
 GATE VALVE



POPUP BUBBLER AT PLANT PIT

$$3'' = 1'-0''$$


 ELECTRIC REMOTE CONTROL VALVE

$$1 \frac{1}{2}'' = 1'-0''$$


DRIP REMOTE CONTROL VALVE

32 8406.13-01

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PRINT ENGINEER'S NAME _____	R.C.E. _____	DATE _____

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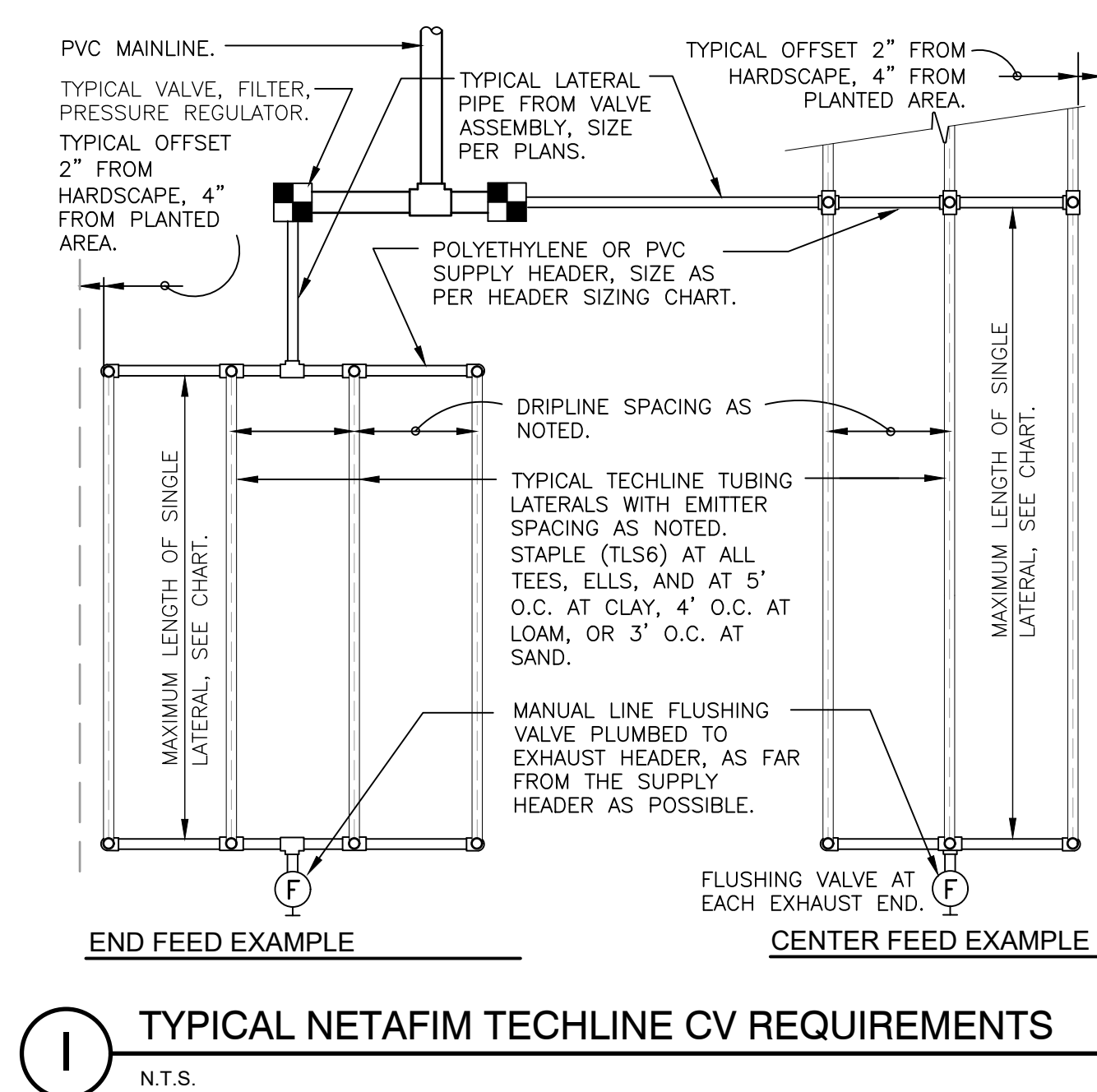
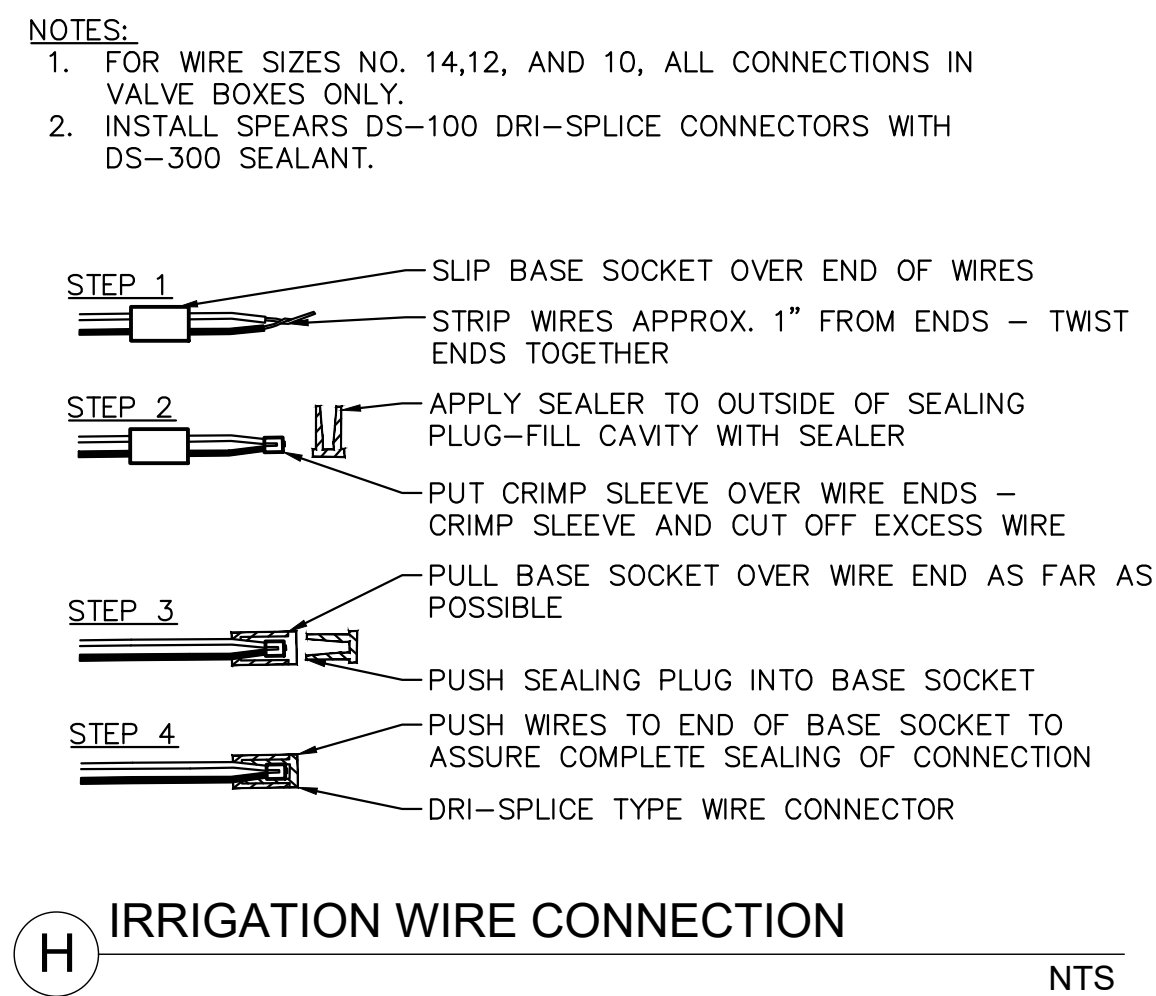
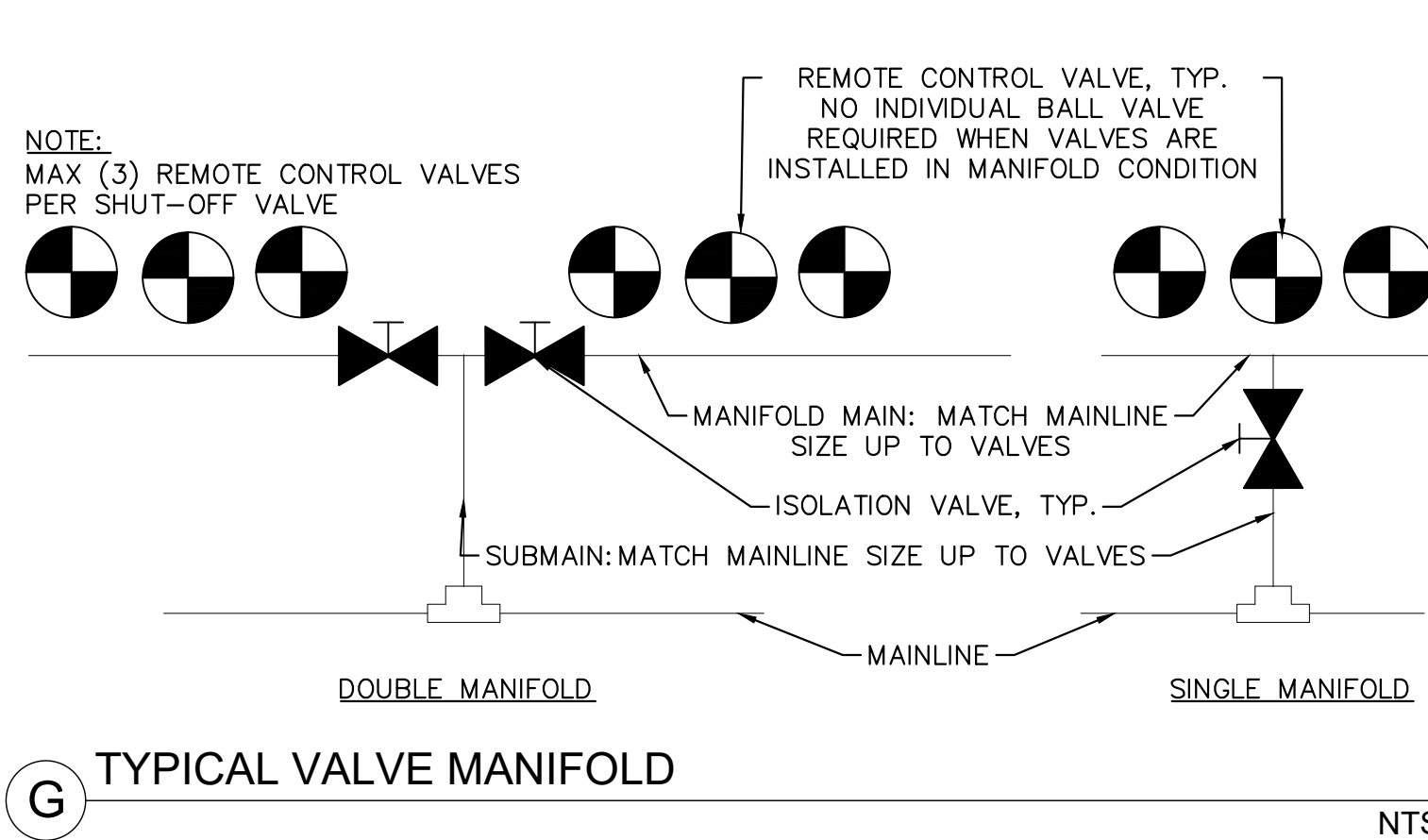
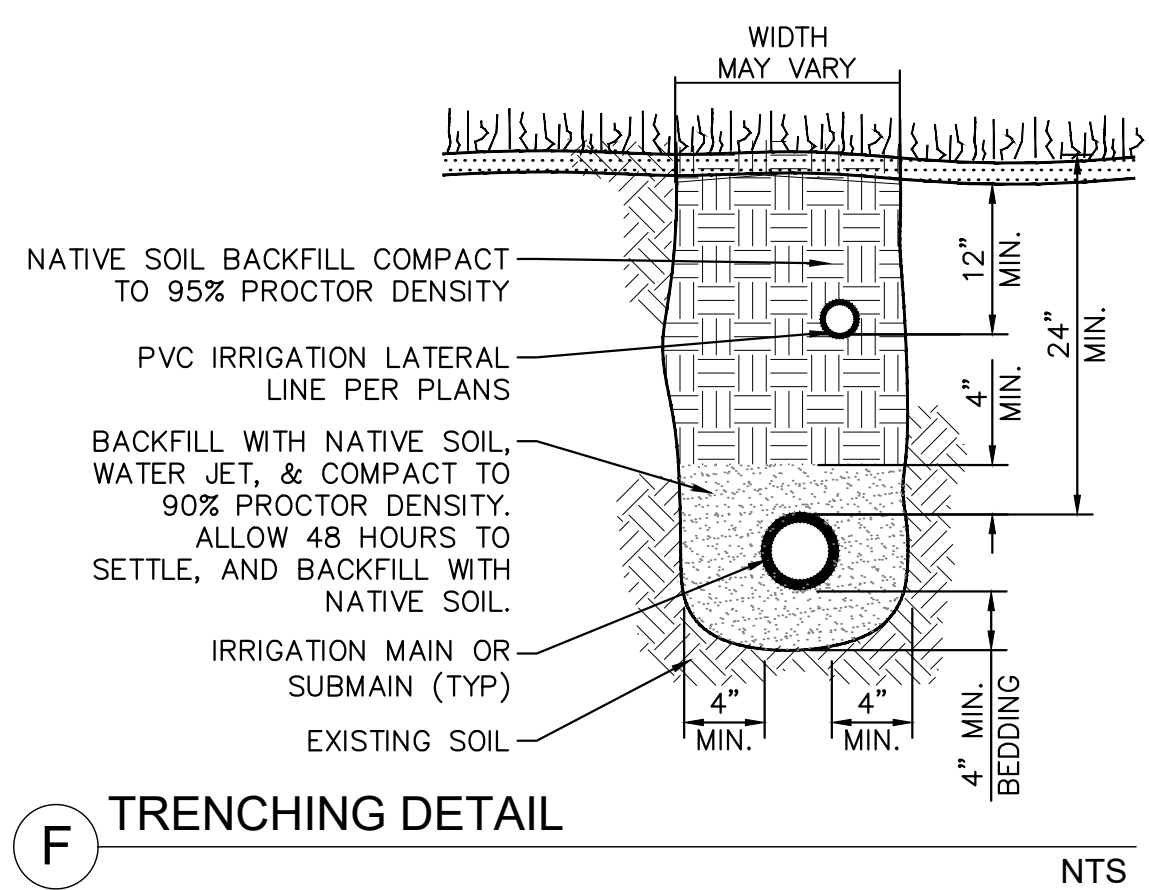
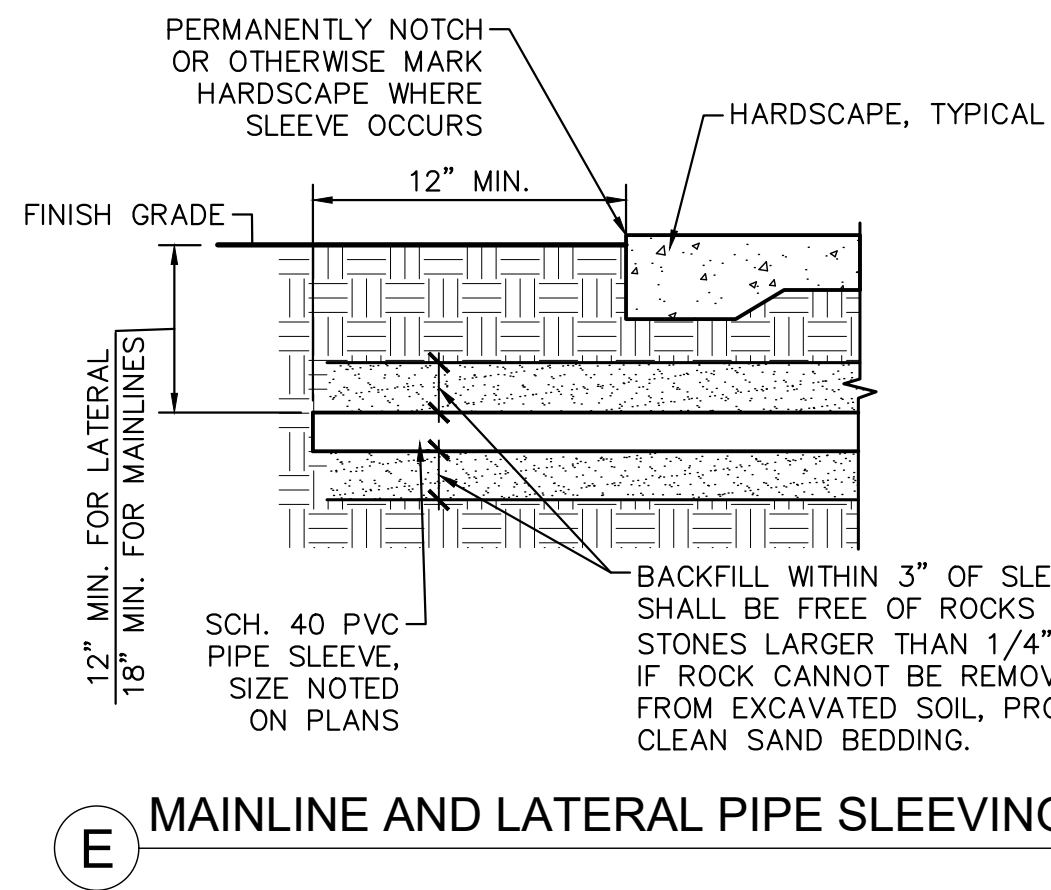
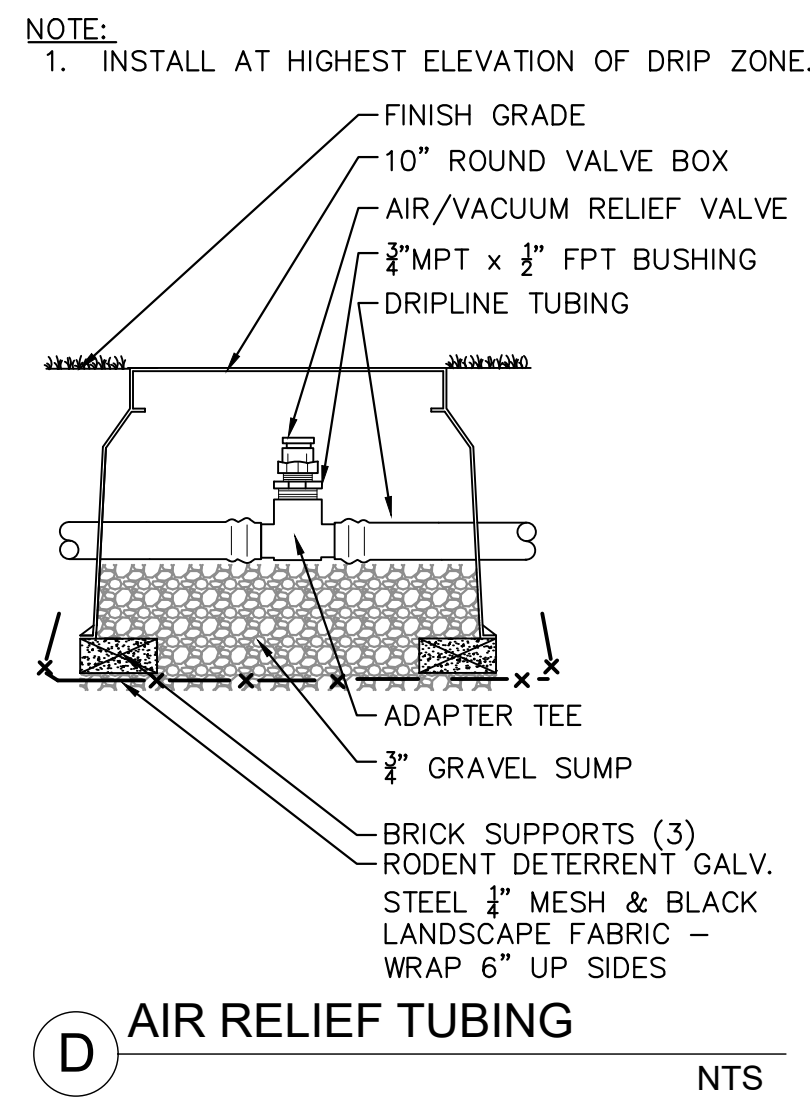
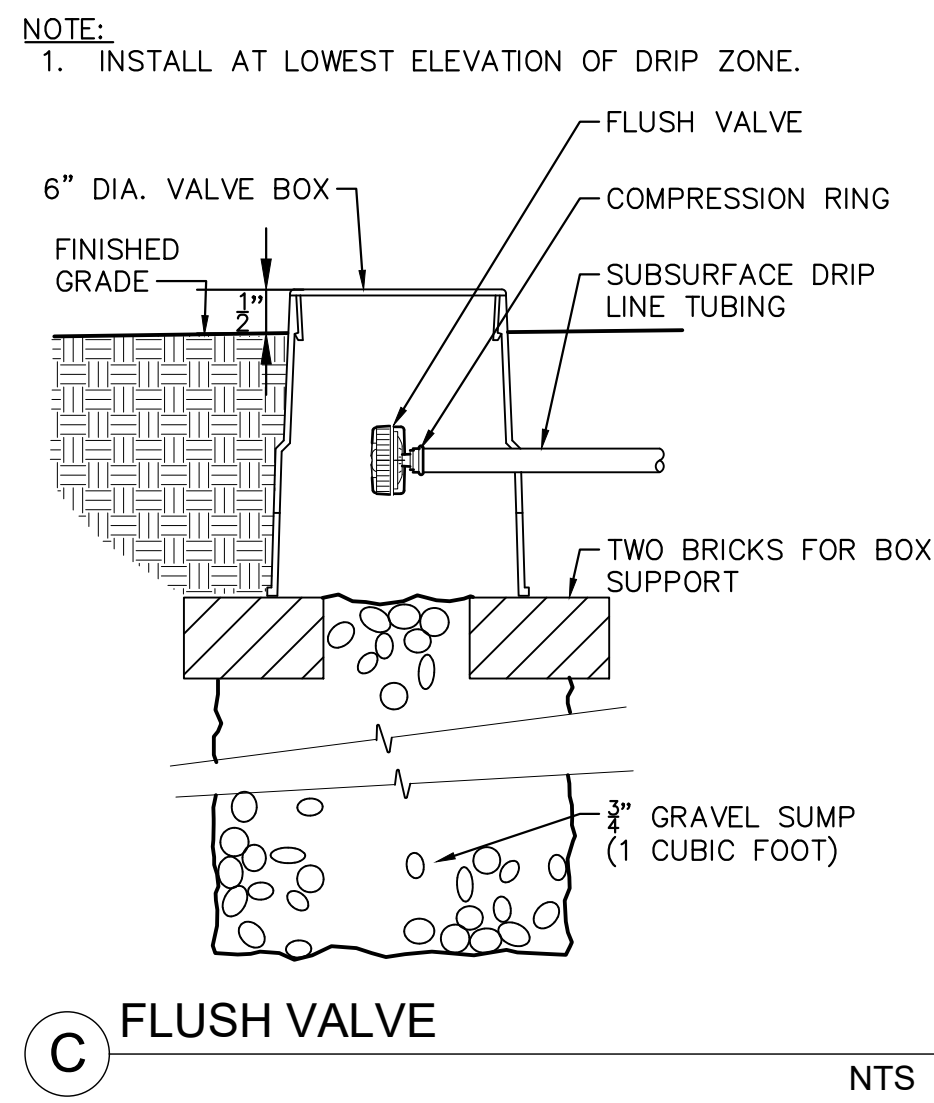
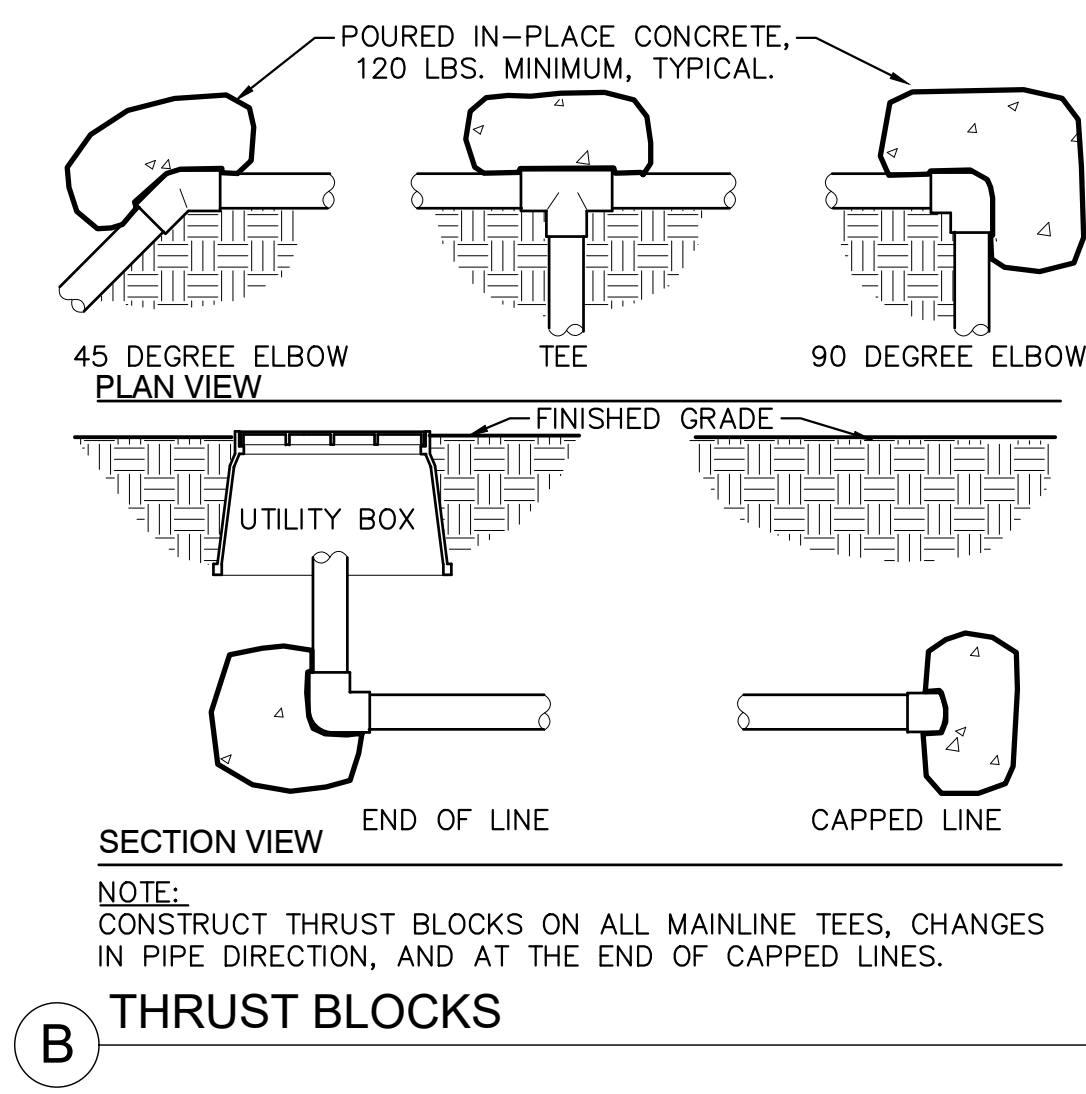
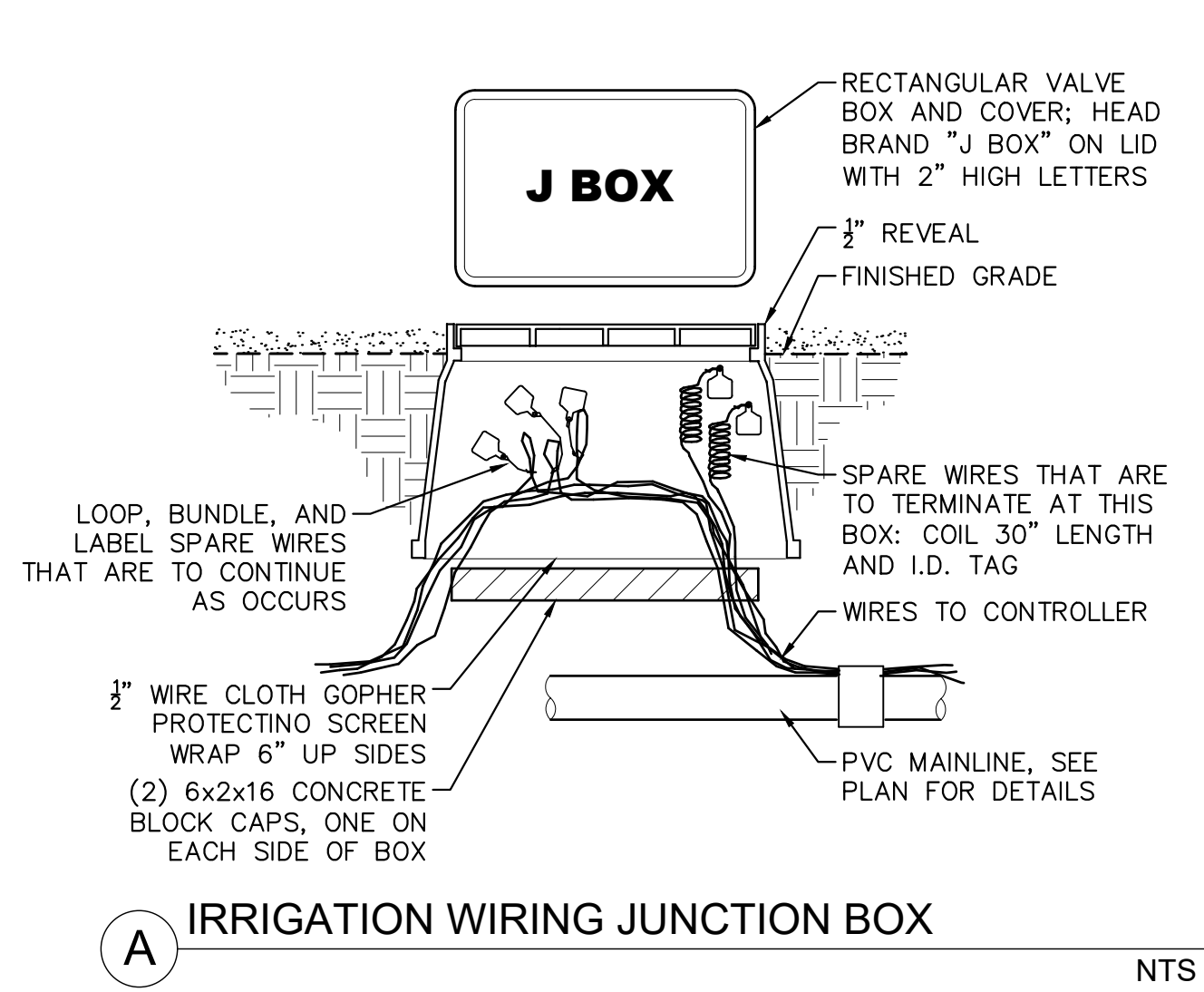
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CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD		REFERENCES		Date	By	REVISIONS		App'd	Date	BENCH MARK		SCALE		Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.	
Contractor						△				SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal		Filmed		RK	EB	MM			GRAND AVENUE VISION PROJECT		IR-03
Inspector												Vertical		Traffic		Plans Prepared Under Supervision Of			MARK ARAUJO	By	IRRIGATION DETAILS		Sheet 17 of 24
Date Completed																Date. 5/15/2020			Associate Engineer	By			
																R.C.E. No. 85614			Director of Engineering Services				

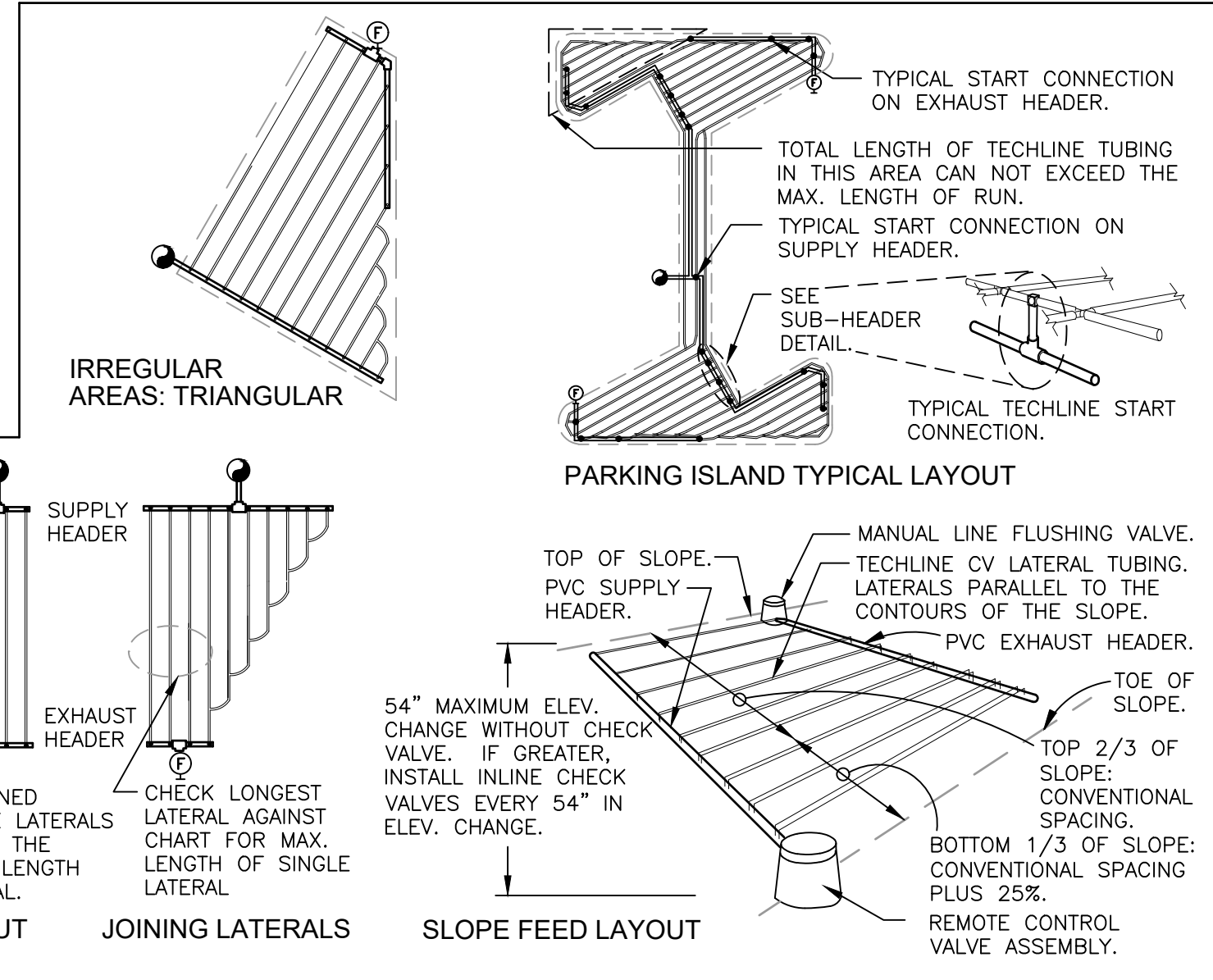
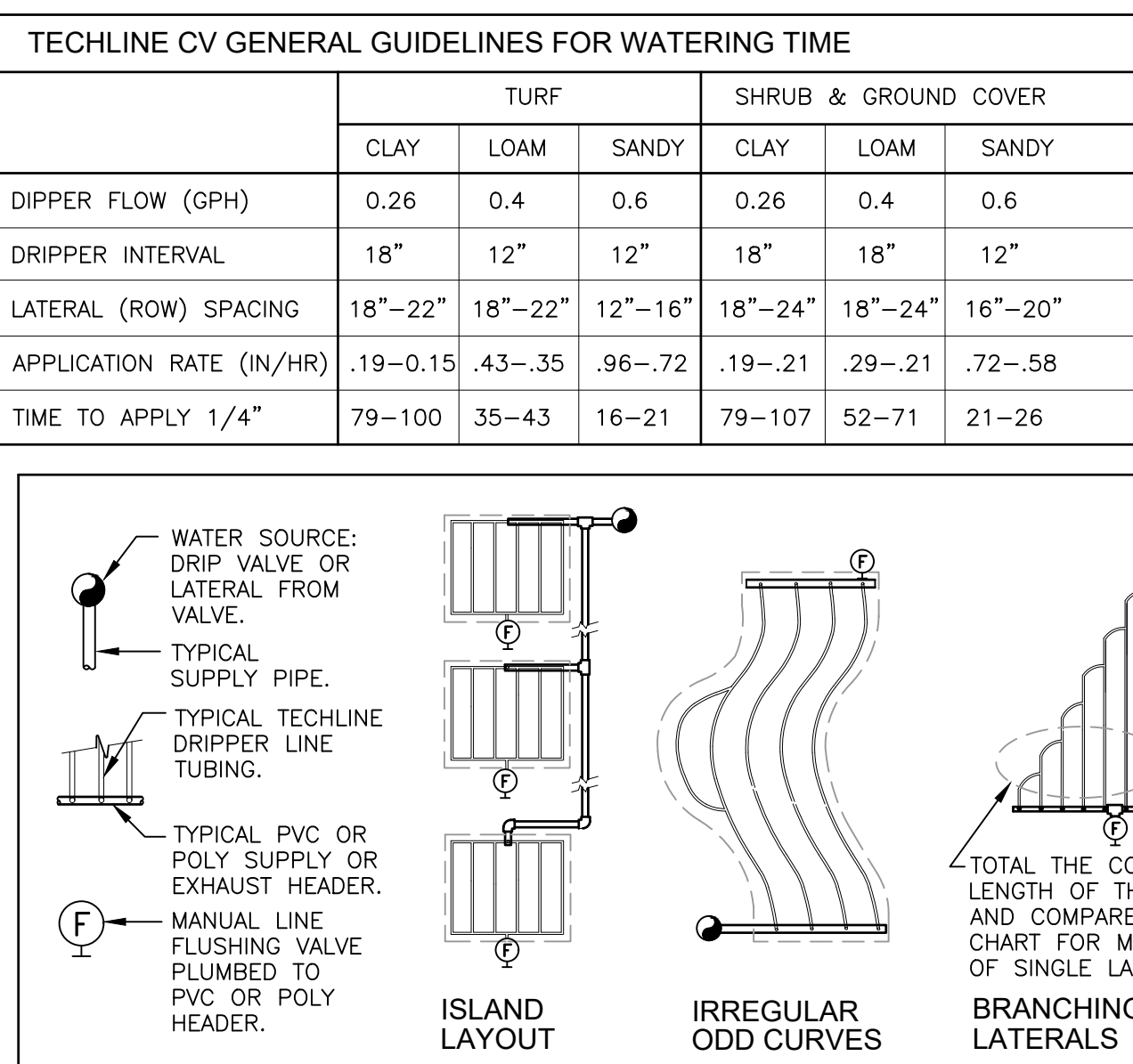
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TECHLINE CV MAXIMUM LENGTH OF SINGLE LATERAL (FEET)												
DRIPPER SPACING			12"				18"				24"	
DRIPPER FLOW RATE (GPH)			0.26	0.4	0.6	0.9	0.26	0.4	0.6	0.9	0.6	0.9
	INLET PRESSURE (PSI)	15	127	109	86	65	177	151	120	91	152	116
		25	427	325	256	194	604	459	361	274	458	348
		35	539	409	322	244	763	579	456	346	580	440
		45	618	469	369	280	877	664	523	397	666	506

TECHLINE FLOW PER 100 FEET									
DRIPPER SPACING	0.26 GPH DRIPPER		0.4 GPH DRIPPER		0.6 GPH DRIPPER		0.9 GPH DRIPPER		
	GPH	GPM	GPH	GPM	GPH	GPM	GPH	GPM	
12"	26.40	0.44	40.00	0.67	61.00	1.02	92.00	1.53	
18"	17.58	0.29	26.67	0.44	41.00	0.68	61.00	1.02	
24"	N/A	N/A	N/A	N/A	31.00	0.51	46.00	0.77	

SUPPLY AND EXHAUST HEADER SIZING CHART (UNLESS NOTED ON PLANS)									
STEP 1:	ADD LENGTH OF ALL TECHLINE LATERAL TUBING CONNECTED TO THE HEADER.								
STEP 2:	DIVIDE THIS TOTAL LENGTH BY 100 TO INDICATE THE LENGTH IN UNITS OF 100.								
STEP 3:	LOCATE THE GPM THAT APPLIES FOR EACH UNIT OF 100 FEET LENGTH ON THE CHART "TECHLINE FLOW PER 100 FEET". MULTIPLY THIS GPM NUMBER TIMES THE UNITS OF 100 FEET FOR THE TOTAL GPM AT THIS HEADER.								
STEP 4:	SIZE THE HEADER WITH THE FOLLOWING:								
	1 TO 6 GPM: 3/4" HEADER.				6 TO 10 GPM: 1" HEADER.				
	10 TO 20 GPM: 1 1/4" HEADER.				20 TO 30 GPM: 1 1/2" HEADER.				



RECORD DRAWING

PRINT ENGINEER'S NAME _____ R.C.E. _____ DATE _____

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Kimley»Horn

KIMLEY-HORN
MICHAEL MADSEN, PLA
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619.234.9411

ESCONDIDO
City of Choice

CITY PROJECT NO. _____
ENG. XX-XXXX

CONSTRUCTION RECORD		REFERENCES		Date	By	REVISIONS		App'd	Date	BENCH MARK		SCALE	Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.
Contractor										SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal	Filmed	RK	EB	MM			GRAND AVENUE VISION PROJECT IRRIGATION DETAILS		IR-04
Inspector												Vertical	Traffic	Plans Prepared Under Supervision Of MARK ARAUJO Date 5/15/2020 R.C.E. No. 85614			By Associate Engineer	By Director of Engineering Services			Sheet18 of 24
Date Completed																					

Plotted By: Clemente, Andrew Sheet Set: Rho Layout: T501 August 24, 2020 05:58:51pm \\SND\p01\CA_SND1\SND_MUNI\09293015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-T5.dwg

POLE SCHEDULE													
POLE DATA			SIGNAL	LUMINAIRE		VEH SIG MTG		PED SIG	PEDESTRIAN		POLE LOC.		REMARKS
No.	TYPE	Ht.	M.A.	M.A.	TYPE	MAST	POLE	MTG	ø	QUAD	STATION	OFFSET	
(A)	EXISTING	30'	20'	12'	8	MAS	SV-2-T	SP-2-T	ø6 SE NE	— — —	EX.	EX.	5 7
(B)	23-4-80	30'	25'	15'	80 L.E.D.	MAS	SV-2-T	SP-2-T	ø2 SE NE	— — —	EX.	EX.	5 7
(C)	EXISTING	30'	20'	12'	8	MAS	SV-2-T	SP-2-T	ø2 NW SW	— — —	EX.	EX.	5 7
(D)	23-4-80	30'	25'	15'	80 L.E.D.	MAS	SV-2-T	SP-1-T	ø4 NE NW	— — —	EX.	EX.	5 7
(E)	1-B	7'	—	—	—	—	—	TP-1-T	ø6 SE SW	— — —	EX.	EX.	5

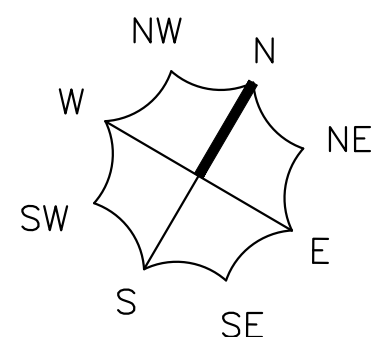
BOLD INDICATES NEW EQUIPMENT.

POLES (A), (B), (C), (D) AND (E) ALL ATTACHED EQUIPMENT ARE EXISTING AND SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.

CONDUCTOR TABLE															
AWG SIZE OR CABLE TYPE		P HASE	POLE OR CIRCUIT	CONDUIT SIZE & RUN											
				EX 3"	EX 2-3"	EX 3-3"	EX 3-3"	EX 3-3"	EX 3-3"	EX 3-3"	EX 3-3"				
CONDUCTORS	3	CONDUCTORS	POLE - A	-	3	1	3	1	-	-	-				
			POLE - B	-	3	1	3	1	-	-	-				
			POLE - C	-	3	1	3	1	-	-	-				
			POLE - D	-	3	1	3	1	-	-	-				
			POLE - E	-	3	1	3	1	-	-	-				
	12														
TOTAL CABLES			3 CONDUCTOR/12 CONDUCTOR	5	2	14	5	14	5	6	2	6	2	3	1
NO 6															
NO 8															
NO 10															
NO 14															
EV-DLC															
EV-DLC															
SIC (6PR#22) + GROUND															
COAX (VIDEO DETECTION)															
VIDEO POWER															
TOTAL CONDUCTORS / CABLES															

BOLD INDICATES NEW EQUIPMENT. INSTALL ALL NEW WIRE/CABLE AS INDICATED.

POLE QUADRANT REFERENCE

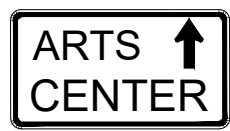


SIGN LEGEND

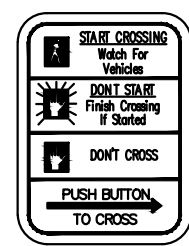
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R3-4
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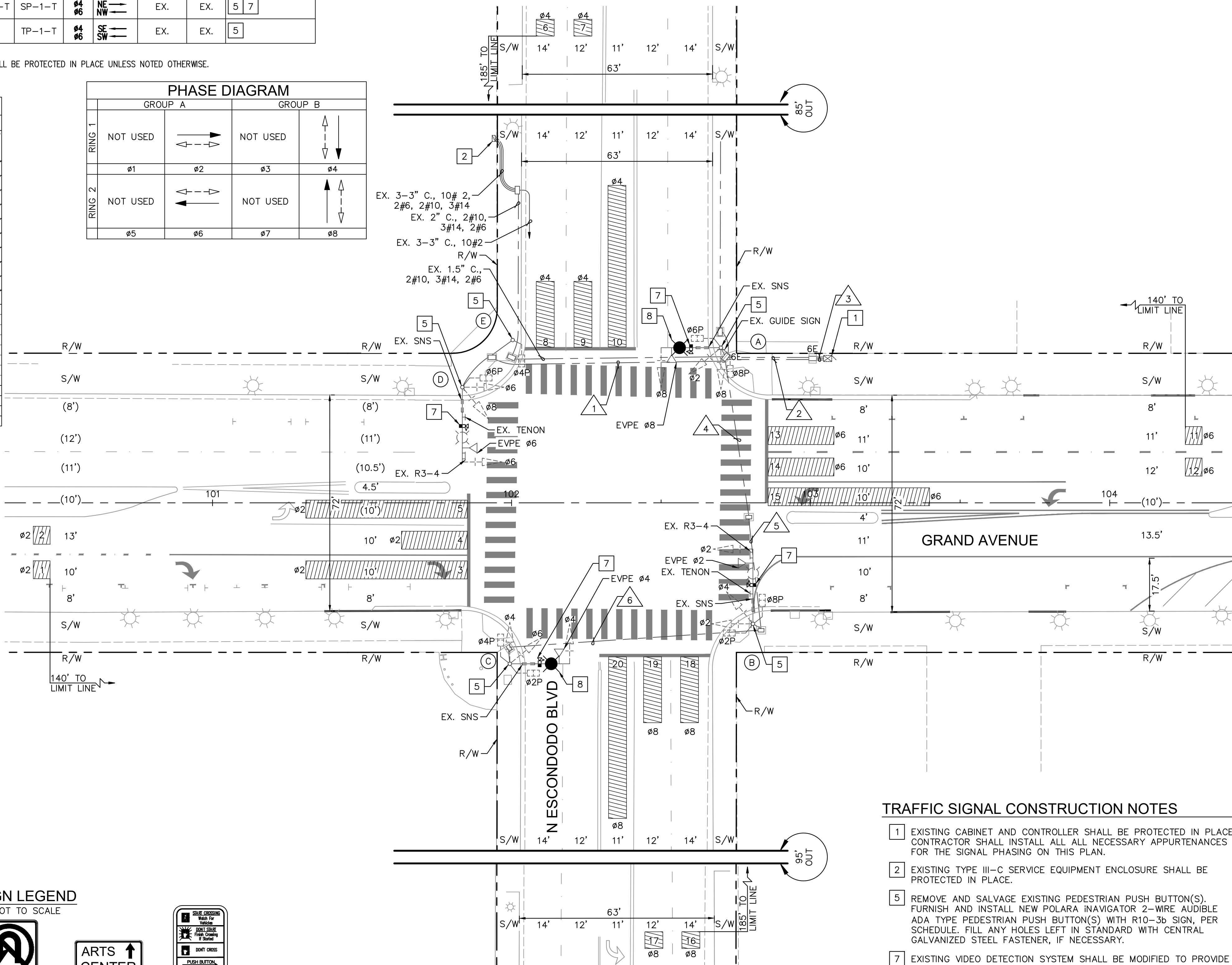


GUIDE SIGN
((EXISTING))



R10-36(L/R)
5\"/>

PHASE DIAGRAM			
GROUP A		GROUP B	
RING 1	NOT USED	NOT USED	NOT USED
RING 2	NOT USED	NOT USED	NOT USED



TRAFFIC SIGNAL CONSTRUCTION NOTES

- EXISTING CABINET AND CONTROLLER SHALL BE PROTECTED IN PLACE. CONTRACTOR SHALL INSTALL ALL ALL NECESSARY APPURTENANCES FOR THE SIGNAL PHASING ON THIS PLAN.
- EXISTING TYPE III-C SERVICE EQUIPMENT ENCLOSURE SHALL BE PROTECTED IN PLACE.
- REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON(S). FURNISH AND INSTALL NEW POLARA NAVIGATOR 2-WIRE AUDIBLE ADA TYPE PEDESTRIAN PUSH BUTTON(S) WITH R10-36 SIGN, PER SCHEDULE. FILL ANY HOLES LEFT IN STANDARD WITH CENTRAL GALVANIZED STEEL FASTENER, IF NECESSARY.
- EXISTING VIDEO DETECTION SYSTEM SHALL BE MODIFIED TO PROVIDE VEHICLE/BICYCLE DETECTION FOR ALL APPROACHES AS SHOWN ON PLANS.
- REPLACE EXISTING LUMINAIRE WITH NEW 80W L.E.D.

TRAFFIC SIGNAL GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, CALTRANS STANDARD SPECIFICATIONS, ALL SUBSEQUENT AMENDMENTS THERETO ISSUED PRIOR TO BID DATE, THESE PLANS, AND THE CITY OF ESCONDIDO TECHNICAL PROVISIONS FOR THE CONSTRUCTION OF TRAFFIC SIGNALS AND SAFETY LIGHTING, ROADWAY MARKINGS AND SIGNING.
- SHOWN LOCATIONS OF NEW DETECTORS, POLES, CABINETS, CONDUITS, AND PULL BOXES ARE APPROXIMATE. ACTUAL LOCATIONS WILL BE DETERMINED OR APPROVED IN THE FIELD BY THE ENGINEER-IN-CHARGE. CONTRACTOR SHALL OBTAIN CITY OF ESCONDIDO APPROVAL FOR LOCATIONS PRIOR TO FINAL PLACEMENT.
- THE SHOWN LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECTING THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR. HAND-DIG FOUNDATION UNTIL CLEAR OF SUBSTRUCTURES, IF REQUIRED TO PROTECT UTILITIES. PRIOR TO CONSTRUCTION PHONE DIG ALERT 1-800-422-4135. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY U.S.A. AND ALL UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW SIGNS, PROTECT IN PLACE, SALVAGE, OR RELOCATE EXISTING SIGNS TO BE MOUNTED ON TRAFFIC SIGNAL STANDARD PER PLAN AND SHALL PERFORM ALL SIGN-RELATED WORK SPECIFIED ON THE IMPROVEMENT PLANS. CONTRACTOR SHALL PERFORM ALL STRIPING AND MARKING WORK, INCLUDING REMOVAL, AND SHALL FURNISH AND INSTALL ALL RAISED PAVEMENT MARKERS PER THE SIGNING AND STRIPING PLAN.
- ALL PULL BOXES SHALL BE NO. 5, AND ALL CONDUIT SHALL BE 2-INCH SCH 40, UNLESS SHOWN OTHERWISE. PULL BOX SHALL HAVE CONCRETE COVERS WITH "TRAFFIC SIGNAL" STAMPED ON IT. PULL BOXES SHALL BE AT 200' SPACING MAX. UNLESS SHOWN OTHERWISE, ALL PULL BOXES SHALL BE PLACED BEHIND THE SIDEWALK OR RAMP.
- COORDINATE SERVICE DETAILS & SCHEDULING WITH UTILITY PROVIDERS WELL IN ADVANCE OF NEED.
- DETECTOR LOOPS WILL BE LAID OUT BY CONTRACTOR AND APPROVED BY ENGINEER-IN-CHARGE PRIOR TO SAW-CUTTING. ANY AND ALL UTILITY COVERS (MANHOLE LIDS, VALVE COVERS, VAULTS, ETC.) SHALL BE RAISED TO FINISH GRADE PRIOR TO LOOP DETECTOR MARK-OUT. DETECTOR LOOPS SHALL NOT BE CUT PRIOR TO ALL FINISH PAVING/PAVEMENT REPAIR PER SIGNING AND STRIPING PLANS.
- ALL VEHICLE INDICATORS SHALL BE 12 INCH WITH BACK PLATES AND GLASS LENSES. ALL VEHICLE SIGNAL SECTION HOUSING, VISORS, AND BACK PLATES SHALL BE METAL. ALL VEHICLE AND PED INDICATIONS SHALL BE L.E.D. PEDESTRIAN SIGNALS SHALL BE SIDE BY SIDE GELCORE COUNTDOWN, L.E.D. TYPE, PER CITY SPECIFICATIONS.
- PRIOR TO STRIPING CONTRACTOR SHALL CAT TRACK, AND SHALL MODIFY BASED ON CITY ENGINEERS COMMENTS. ALL TEMPORARY STRIPING OR PERMANENT STRIPING SHALL BE DONE IMMEDIATELY UPON REMOVAL OF OLD (EXISTING) STRIPING AND OPENING THE ROAD TO THE PUBLIC.
- CONTRACTOR SHALL REMOVE ALL EXISTING CONFLICTING STRIPING AND PAVEMENT MARKERS AND SALVAGE ALL EXISTING SIGNS, AND WET SANDBLAST ALL CONFLICTING EXISTING STRIPING AND PAVEMENT MARKINGS. SURFACE SHALL BE FREE FROM ALL REMOVAL RESIDUE PRIOR TO NEW STRIPING. ALL SANDBLASTED AREAS SHALL BE RE-PAVED BY APPLYING SEAL COAT OR OTHER APPROVED METHODS IN ORDER TO RESTORE THE PAVEMENT'S EXISTING CONDITION. ALL REMOVED AND SALVAGED SIGNS TO BE DELIVERED TO CITY YARD.
- CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS FOR DURATION OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND THE CITY REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORKING ON THIS PROJECT.
- SERVICE EQUIPMENT ENCLOSURE SHALL BE SEPARATED FROM THE CONTROLLER BY A MINIMUM OF 10 FEET AND SEPARATED FROM ALL UTILITY POLES BY A MINIMUM OF 10 FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- TYPE II PHOTOELECTRIC CONTROL CONTRACTOR AND TEST SWITCH ASSEMBLY SHALL BE INSTALLED ON SIGNAL POLE CLOSEST TO THE TRAFFIC SIGNAL CONTROLLER. PHOTOELECTRIC CONTROL CONTRACTOR SHALL BE 30 AMP MERCURY FOR LUMINAIRES.
- EACH NEW CONDUCTOR IN EACH NEW PULL BOX SHALL BE IDENTIFIED AS DETAILED IN THE CONDUCTOR SCHEDULE WITH A PERMANENT MARK IN PULL BOXES AND NEAR THE END OF EACH CONDUCTOR WHERE CONDUCTORS ARE TERMINATED. PERMANENT IDENTIFICATION MARKS SHALL BE EMBOSSED ALUMINUM FOIL TYPE WITH PRESSURE SENSITIVE OIL RESISTANCE BACKING.
- ALL SPARES SHALL TERMINATE AT THE SIGNAL TERMINAL COMPARTMENTS AND IN THE CONTROLLER CABINET. SPARES SHALL BE TAPED ON ONE END AND SHALL BE CONTINUOUS.
- ALL RUNS SHALL HAVE A MINIMUM OF THREE (3) #14 SPARES IN SIGNAL CONDUCTOR CABLE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT, CONDUCTORS AND CABLES AS NEEDED TO PROVIDE THE INTENDED SIGNAL OPERATION, INCLUDING LOOP DETECTOR EQUIPMENT, CABLES, EVP, AND SIGNAL LIGHTING SERVICE WIRES NOTED ON THE PLANS.
- TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. NO ROAD CLOSURE SHALL BE PERMITTED UNLESS APPROVED BY CITY.
- SIGNAL SHUTDOWN SHALL BE LIMITED TO THE HOURS BETWEEN 9:00AM AND 4:00PM MONDAY THROUGH THURSDAY, EXCEPT HOLIDAYS. CONTRACTOR SHALL CONTACT THE CITY AND COORDINATE FOR TURN ON AND OFF.
- ALL NEW CONDUIT TRENCHES UNDER STREET PAVEMENT SHALL BE RESURFACED PER CITY OF ESCONDIDO STANDARD DRAWING #6-2-E. DEPTH AND BACK FILL SHALL BE PER THE AGENCY APPROVED TECHNICAL PROVISIONS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING IRRIGATION FACILITIES OR PRIVATE PROPERTY CAUSED BY THIS WORK.
- ANCHOR BOLTS AND NUT COVERS SHALL BE PROVIDED AT ALL BASE PLATES.
- CONTRACTOR TO TRIM EXISTING VEGETATION OBSTRUCTING VISIBILITY OF EXISTING SIGNS, PROPOSED SIGNS, TRAFFIC SIGNAL INDICATIONS AND ATTACHED EQUIPMENT.
- ALL TRAFFIC EQUIPMENT TO BE PLACED OUTSIDE OF CURB CUTS AND DRIVEWAYS.
- ALL LUMINAIRE LENSES SHALL BE GLASS OR POLYCARBONATE.

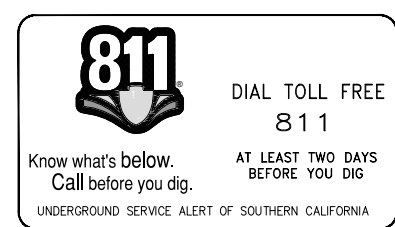
RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. DATE

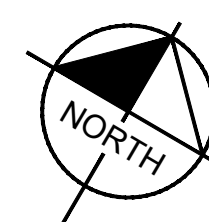
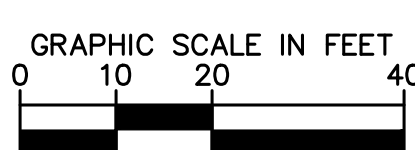
REVIEWED BY CITY OF ESCONDIDO

ASSOCIATE TRAFFIC ENGINEER DATE

60% SUBMITTAL
NOT FOR CONSTRUCTION



KIMLEY-HORN
JOSIAH SHULTZ, P.E.
401 B STREET, STE. 600
SAN DIEGO, CA 92101
619.234.9411



CITY PROJECT NO.
ENG. XX-XXXX

ENGINEERING SERVICES
GRAND AVENUE VISION PROJECT
TRAFFIC SIGNAL PLAN

Drawing No.
XXXX-XXX
Sheet 19 of 24

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK
Contractor							SEE SHEET 1 FOR BASIS OF COORDINATES.
Inspector							
Date Completed							

SCALE	Office	Designed By	Drawn By	Checked By
Horizontal 1" = 20'	Filmed	DA	DA	JS
Vertical	Traffic	Plans Prepared Under Supervision Of MARK ARAUJO		
		Date: 5/15/2020		
		R.C.E. No. 85614		

Submitted	Approved
By: Associate Engineer	By: Director of Engineering Services

Plotted By: Clemente, Andrew Sheet Set: Rho Layout: T502 August 24, 2020 05:59:00pm \\SND\p01\CA_SND1\SND_MUNI\095293015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-T5.dwg

POLE SCHEDULE										
POLE DATA		SIGNAL	LUMINAIRE		VEH SIG MTG		PED SIG MTG	PEDESTRIAN QUAD	POLE LOC.	
No.	TYPE		M.A.	TYPE	MAST	POLE			STATION	OFFSET
(A)	24-4-70	30'	20'	15'	L.E.D	MAS	SV-2-TB	SP-2-T	EX.	EX.
(B)	24-4-70	30'	20'	15'	L.E.D	MAS	SV-2-TB	SP-2-T	EX.	EX.
(C)	19-4-70	30'	20'	15'	L.E.D	MAS	SV-2-TB	SP-2-T	EX.	EX.
(D)	26-4-70	30'	30'	15'	L.E.D	MAS	SV-2-TB	SP-2-T	EX.	EX.

BOLD INDICATES NEW EQUIPMENT.
POLES (A), (B), (C), AND (D) AND ALL ATTACHED EQUIPMENT ARE EXISTING AND SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.

PHASE DIAGRAM			
GROUP A		GROUP B	
RING 1	NOT USED	NOT USED	↑ ↓
	← →	← →	↑ ↓
RING 2	NOT USED	NOT USED	↑ ↓
	← →	← →	↑ ↓

LEGEND

- AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
SC SPLICE NEW TO EXISTING CONDUCTORS.

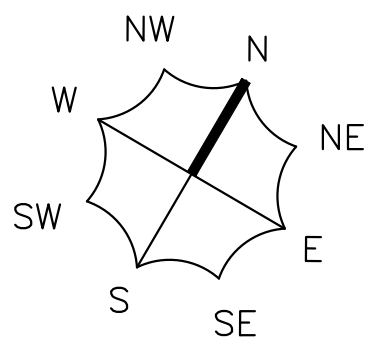
TRAFFIC SIGNAL GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE 2018 CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS, CALTRANS STANDARD SPECIFICATIONS, ALL SUBSEQUENT AMENDMENTS THERETO ISSUED PRIOR TO BID DATE, THESE PLANS, AND THE CITY OF ESCONDIDO TECHNICAL PROVISIONS FOR THE CONSTRUCTION OF TRAFFIC SIGNALS AND SAFETY LIGHTING, ROADWAY MARKINGS AND SIGNING.
- SHOWN LOCATIONS OF NEW DETECTORS, POLES, CABINETS, CONDUITS, AND PULL BOXES ARE APPROXIMATE. ACTUAL LOCATIONS WILL BE DETERMINED OR APPROVED IN THE FIELD BY THE ENGINEER-IN-CHARGE. CONTRACTOR SHALL OBTAIN CITY OF ESCONDIDO APPROVAL FOR LOCATIONS PRIOR TO FINAL PLACEMENT.
- THE SHOWN LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECTING THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR. HAND-DIG FOUNDATION UNTIL CLEAR OF SUBSTRUCTURES, IF REQUIRED TO PROTECT UTILITIES. PRIOR TO CONSTRUCTION PHONE DIG ALERT 1-800-422-4135. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY U.S.A. AND ALL UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW SIGNS, PROTECT IN PLACE, SALVAGE, OR RELOCATE EXISTING SIGNS TO BE MOUNTED ON TRAFFIC SIGNAL STANDARD PER PLAN AND SHALL PERFORM ALL SIGN-RELATED WORK SPECIFIED ON THE IMPROVEMENT PLANS. CONTRACTOR SHALL PERFORM ALL STRIPING AND MARKING WORK, INCLUDING REMOVAL, AND SHALL FURNISH AND INSTALL ALL RAISED PAVEMENT MARKERS PER THE SIGNING AND STRIPING PLAN.
- ALL PULL BOXES SHALL BE NO. 5, AND ALL CONDUIT SHALL BE 2-INCH SCH 40, UNLESS SHOWN OTHERWISE. PULL BOX SHALL HAVE CONCRETE COVERS WITH "TRAFFIC SIGNAL" STAMPED ON IT. PULL BOXES SHALL BE AT 200' SPACING MAX. UNLESS SHOWN OTHERWISE, ALL PULL BOXES SHALL BE PLACED BEHIND THE SIDEWALK OR RAMP.
- COORDINATE SERVICE DETAILS & SCHEDULING WITH UTILITY PROVIDERS WELL IN ADVANCE OF NEED.
- DETECTOR LOOPS WILL BE LAID OUT BY CONTRACTOR AND APPROVED BY ENGINEER-IN-CHARGE PRIOR TO SAW-CUTTING. ANY AND ALL UTILITY COVERS (MANHOLE LIDS, VALVE COVERS, VAULTS, ETC.) SHALL BE RAISED TO FINISH GRADE PRIOR TO LOOP DETECTOR MARK-OUT. DETECTOR LOOPS SHALL NOT BE CUT PRIOR TO ALL FINISH PAVING/PAVEMENT REPAIR PER SIGNING AND STRIPING PLANS.
- ALL VEHICLE INDICATORS SHALL BE 12 INCH WITH BACK PLATES AND GLASS LENSES. ALL VEHICLE SIGNAL SECTION HOUSING, VISORS, AND BACK PLATES SHALL BE METAL. ALL VEHICLE AND PED INDICATIONS SHALL BE L.E.D. PEDESTRIAN SIGNALS SHALL BE SIDE BY SIDE GELCORE COUNTDOWN, L.E.D. TYPE, PER CITY SPECIFICATIONS.
- PRIOR TO STRIPING CONTRACTOR SHALL CAT TRACK, AND SHALL MODIFY BASED ON CITY ENGINEERS COMMENTS. ALL TEMPORARY STRIPING OR PERMANENT STRIPING SHALL BE DONE IMMEDIATELY UPON REMOVAL OF OLD (EXISTING) STRIPING AND OPENING THE ROAD TO THE PUBLIC.
- CONTRACTOR SHALL REMOVE ALL EXISTING CONFLICTING STRIPING AND PAVEMENT MARKERS AND SALVAGE ALL EXISTING SIGNS, AND WET SANDBLAST ALL CONFLICTING EXISTING STRIPING AND PAVEMENT MARKINGS. SURFACE SHALL BE FREE FROM ALL REMOVAL RESIDUE PRIOR TO NEW STRIPING. ALL SANDBLASTED AREAS SHALL BE RE-PAVED BY APPLYING SEAL COAT OR OTHER APPROVED METHODS IN ORDER TO RESTORE THE PAVEMENT'S EXISTING CONDITION. ALL REMOVED AND SALVAGED SIGNS TO BE DELIVERED TO CITY YARD.
- CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS FOR DURATION OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER AND THE CITY REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORKING ON THIS PROJECT.
- SERVICE EQUIPMENT ENCLOSURE SHALL BE SEPARATED FROM THE CONTROLLER BY A MINIMUM OF 10 FEET AND SEPARATED FROM ALL UTILITY POLES BY A MINIMUM OF 10 FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- TYPE II PHOTOELECTRIC CONTROL CONTRACTOR AND TEST SWITCH ASSEMBLY SHALL BE INSTALLED ON SIGNAL POLE CLOSEST TO THE TRAFFIC SIGNAL CONTROLLER. PHOTOELECTRIC CONTROL CONTRACTOR SHALL BE 30 AMP MERCURY FOR LUMINAIRES.
- EACH NEW CONDUCTOR IN EACH NEW PULL BOX SHALL BE IDENTIFIED AS DETAILED IN THE CONDUCTOR SCHEDULE WITH A PERMANENT MARK IN PULL BOXES AND NEAR THE END OF EACH CONDUCTOR WHERE CONDUCTORS ARE TERMINATED. PERMANENT IDENTIFICATION MARKS SHALL BE EMBOSSED ALUMINUM FOIL TYPE WITH PRESSURE SENSITIVE OIL RESISTANCE BACKING.
- ALL SPARES SHALL TERMINATE AT THE SIGNAL TERMINAL COMPARTMENTS AND IN THE CONTROLLER CABINET. SPARES SHALL BE TAPED ON ONE END AND SHALL BE CONTINUOUS.
- ALL RUNS SHALL HAVE A MINIMUM OF THREE (3) #14 SPARES IN SIGNAL CONDUCTOR CABLE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL FURNISH AND INSTALL EQUIPMENT, CONDUCTORS AND CABLES AS NEEDED TO PROVIDE THE INTENDED SIGNAL OPERATION, INCLUDING LOOP DETECTOR EQUIPMENT, CABLES, EVP, AND SIGNAL LIGHTING SERVICE WIRES NOTED ON THE PLANS.
- TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. NO ROAD CLOSURE SHALL BE PERMITTED UNLESS APPROVED BY CITY.
- SIGNAL SHUTDOWN SHALL BE LIMITED TO THE HOURS BETWEEN 9:00AM AND 4:00PM MONDAY THROUGH THURSDAY, EXCEPT HOLIDAYS. CONTRACTOR SHALL CONTACT THE CITY AND COORDINATE FOR TURN ON AND OFF.
- ALL NEW CONDUIT TRENCHES UNDER STREET PAVEMENT SHALL BE RESURFACED PER CITY OF ESCONDIDO STANDARD DRAWING #6-2-E. DEPTH AND BACK FILL SHALL BE PER THE AGENCY APPROVED TECHNICAL PROVISIONS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING IRRIGATION FACILITIES OR PRIVATE PROPERTY CAUSED BY THIS WORK.
- ANCHOR BOLTS AND NUT COVERS SHALL BE PROVIDED AT ALL BASE PLATES.
- CONTRACTOR TO TRIM EXISTING VEGETATION OBSTRUCTING VISIBILITY OF EXISTING SIGNS, PROPOSED SIGNS, TRAFFIC SIGNAL INDICATIONS AND ATTACHED EQUIPMENT.
- ALL TRAFFIC EQUIPMENT TO BE PLACED OUTSIDE OF CURB CUTS AND DRIVEWAYS.
- ALL LUMINAIRE LENSES SHALL BE GLASS OR POLYCARBONATE.

CONDUCTOR TABLE												
AWG SIZE OR CABLE TYPE	POLE OR CIRCUIT	CONDUIT SIZE & RUN										
		EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"	EX 2"
#14	Ø2	1	2	3	4	5	6	7	8	9		
	Ø4	-	6	6	6	3	-	-	-	-	-	-
	Ø6	-	6	6	3	3	-	3	-	-	-	-
	Ø8	-	6	6	-	-	-	3	-	-	-	-
	Ø2 PED	-	4	4	4	2	-	-	-	-	-	-
	Ø4 PED	-	4	4	-	-	2	4	-	-	-	-
	Ø6 PED	-	4	4	-	-	2	-	-	-	-	-
	Ø8 PED	-	4	4	2	-	-	-	-	-	-	-
	Ø2 PPB	-	2	2	2	1	-	-	-	-	-	-
	Ø4 PPB	-	2	2	-	-	1	2	-	-	-	-
DLC TYPE B	Ø6 PPB	-	2	2	-	-	-	1	-	-	-	-
	Ø8 PPB	-	2	2	1	-	-	-	-	-	-	-
	PPB COMMON	-	2	2	1	1	1	1	-	-	-	-
	TYPE II P.E.C. UNIT	-	-	3	-	-	-	-	-	-	3	-
	SPARES	-	8	8	3	3	3	3	3	3	-	-
#10	TOTAL	-	82	85	37	19	7	25	-	-	3	-
	Ø2 DETECTOR	-	3	-	-	-	-	-	-	-	-	-
	Ø4 DETECTOR	-	2	-	-	-	-	-	-	-	-	-
	Ø6 DETECTOR	-	3	-	-	-	-	-	-	-	-	-
	Ø8 DETECTOR	-	2	-	-	-	-	-	-	-	-	-
#6	TOTAL	-	10	-	-	-	-	-	-	-	-	-
	EVPE CABLE (3M OPTICOM)	-	4	4	1	-	1	2	-	-	-	-
	MEDIAN LIGHTING CIRCUIT	-	-	-	-	-	-	-	-	-	-	-
	LUMINAIRE	-	-	2	2	2	-	2	-	2	-	-
	SIGNAL COMMON	-	2	1	1	1	1	1	-	-	-	-
#6	TOTAL	-	-	3	3	3	1	3	-	2	-	-
	SIGNAL SERVICE	-	2	-	-	-	-	-	-	-	-	-
	TELEPHONE SERVICE	-	1	-	-	-	-	-	-	-	-	-
#6	PULL ROPE	-	3	2	-	1	-	1	-	-	-	-

BOLD INDICATES NEW EQUIPMENT. INSTALL ALL NEW WIRE/CABLE AS INDICATED.

POLE QUADRANT REFERENCE



SIGN LEGEND

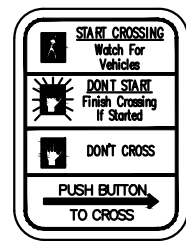
NOT TO SCALE



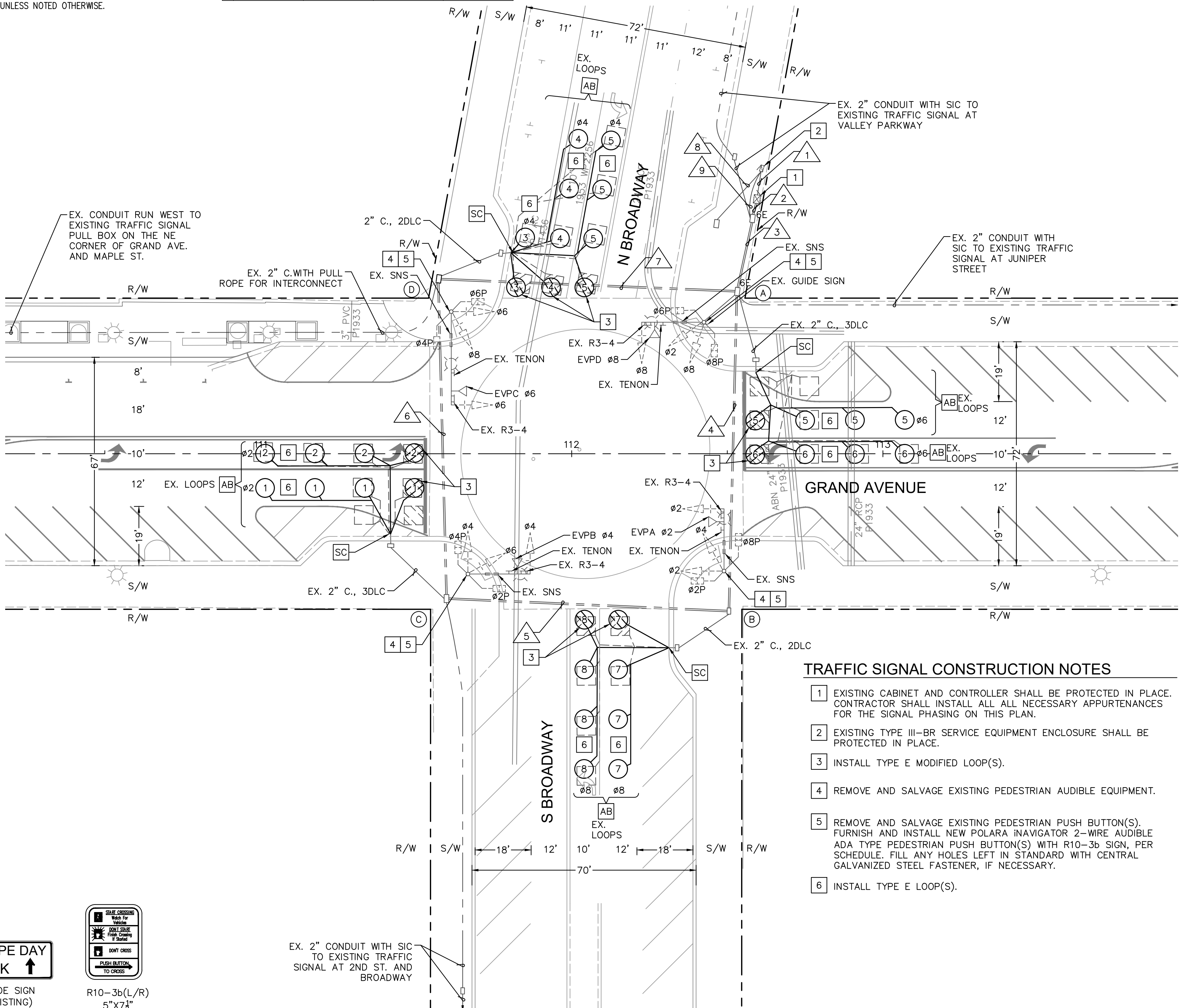
R3-4 (EXISTING)



GUIDE SIGN (EXISTING)



R10-3b(L/R) 5'x7 1/2'



TRAFFIC SIGNAL CONSTRUCTION NOTES

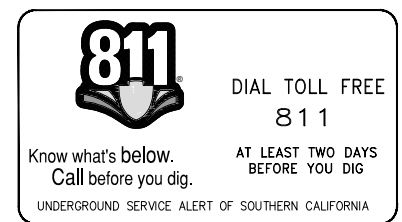
- EXISTING CABINET AND CONTROLLER SHALL BE PROTECTED IN PLACE. CONTRACTOR SHALL INSTALL ALL ALL NECESSARY APPURTENANCES FOR THE SIGNAL PHASING ON THIS PLAN.
- EXISTING TYPE III-BR SERVICE EQUIPMENT ENCLOSURE SHALL BE PROTECTED IN PLACE.
- INSTALL TYPE E MODIFIED LOOP(S).
- REMOVE AND SALVAGE EXISTING PEDESTRIAN AUDIBLE EQUIPMENT.
- REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON(S). FURNISH AND INSTALL NEW POLARA INAVIGATOR 2-WIRE AUDIBLE ADA TYPE PEDESTRIAN PUSH BUTTON(S) WITH R10-3b SIGN, PER SCHEDULE. FILL ANY HOLES LEFT IN STANDARD WITH CENTRAL GALVANIZED STEEL FASTENER, IF NECESSARY.
- INSTALL TYPE E LOOP(S).

RECORD DRAWING		
PRINT ENGINEER'S NAME	R.C.E. _____	DATE _____

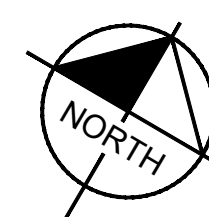
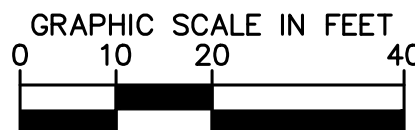
REVIEWED BY CITY OF ESCONDIDO		
ASSOCIATE TRAFFIC ENGINEER	DATE _____	

60% SUBMITTAL
NOT FOR CONSTRUCTION

Kimley»Horn



KIMLEY-HORN
JOSIAH SHULTZ, P.E.
401 B STREET, STE. 600
SAN DIEGO, CA 92101
619.234.9411



CITY PROJECT NO.
ENG. XX-XXXX

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK
Contractor _____							SEE SHEET 1 FOR BASIS OF COORDINATES.
Inspector _____							
Date Completed _____							

SCALE	Office	Designed By	Drawn By	Checked By
Horizontal 1" = 20'	Filmed _____	DA	DA	JS
Vertical	Traffic _____	Plans Prepared Under Supervision Of MARK ARAUJO		
		Date: 5/15/2020		
		R.C.E. No. 85614		

Submitted _____	Approved _____
By: Associate Engineer	By: Director of Engineering Services

ENGINEERING SERVICES		Drawing No.
GRAND AVENUE VISION PROJECT TRAFFIC SIGNAL PLAN		XXXX-XXX
		Sheet 20 of 24

Plotted By: Clemente, Andrew Sheet Set: Rho Layout: T503 August 24, 2020 05:59:07pm \\SND\p01\CA_SND\1\SND_MUNI\095293015 - Grand Avenue Vision\Design\Plan Sheets - 2018\293015-13.dwg

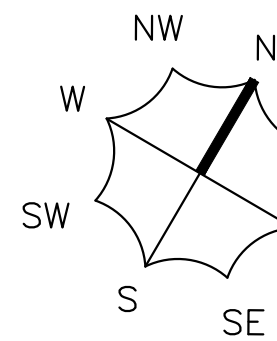
POLE SCHEDULE											
POLE DATA			SIGNAL	LUMINAIRE		VEH SIG MTG		PED SIG	PEDESTRIAN	POLE LOC.	
No.	TYPE	Ht.	M.A.	M.A.	TYPE	MAST	POLE	MTG	Ø	QUAD	STATION
(A)	29-5-70	30'	30'	15'	L.E.D.	2-MAS	SV-2-TA	SP-2-T	Ø2	NW	EX.
(B)	29-5-70	30'	25'	15'	L.E.D.	2-MAS	SV-2-TA	SP-2-T	Ø4	NE	EX.
(C)	29-5-70	30'	30'	15'	L.E.D.	2-MAS	SV-2-TA	SP-2-T	Ø6	NW	EX.
(D)	29-5-70	30'	25'	15'	L.E.D.	2-MAS	SV-2-TA	SP-2-T	Ø8	SE	EX.

BOLD INDICATES NEW EQUIPMENT.
POLES (A), (B), (C), AND (D) AND ALL ATTACHED EQUIPMENT ARE EXISTING AND SHALL BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.

CONDUCTOR TABLE											
AWG SIZE OR CABLE TYPE	P H A S E	POLE OR CIRCUIT	CONDUIT SIZE & RUN								
			2"	3-3.5"	2.5"	2-3"	2.5"	3"	2.5"	2.5"	2"
3 <											

BOLD INDICATES NEW EQUIPMENT. INSTALL ALL NEW WIRE/CABLE AS INDICATED.

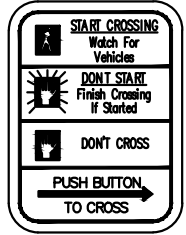
POLE QUADRANT REFERENCE



SIGN LEGEND



R3-4 (EXISTING)



R10-3b(L/R) 5"x7 1/2"

PHASE DIAGRAM			
GROUP A		GROUP B	
RING 1	NOT USED	NOT USED	NOT USED
	Ø1	Ø2	Ø3
RING 2	NOT USED	NOT USED	NOT USED
	Ø5	Ø6	Ø7

LEGEND

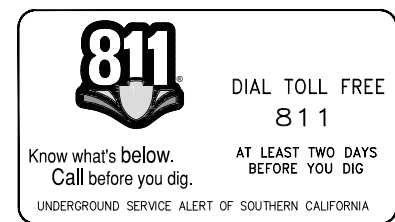
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TRAFFIC SIGNAL GENERAL NOTES

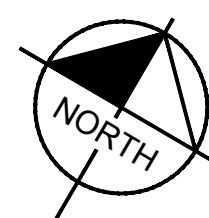
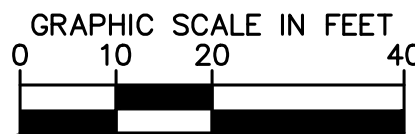
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- TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. NO ROAD CLOSURE SHALL BE PERMITTED UNLESS APPROVED BY CITY.
- SIGNAL SHUTDOWN SHALL BE LIMITED TO THE HOURS BETWEEN 9:00AM AND 4:00PM MONDAY THROUGH THURSDAY, EXCEPT HOLIDAYS. CONTRACTOR SHALL CONTACT THE CITY AND COORDINATE FOR TURN ON AND OFF.
- ALL NEW CONDUIT TRENCHES UNDER STREET PAVEMENT SHALL BE RESURFACED PER CITY OF ESCONDIDO STANDARD DRAWING 80-2-E. DEPTH AND BACK FILL SHALL BE PER THE AGENCY APPROVED TECHNICAL PROVISIONS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING IRRIGATION FACILITIES OR PRIVATE PROPERTY CAUSED BY THIS WORK.
- ANCHOR BOLTS AND NUT COVERS SHALL BE PROVIDED AT ALL BASE PLATES.
- CONTRACTOR TO TRIM EXISTING VEGETATION OBSTRUCTING VISIBILITY OF EXISTING SIGNS, PROPOSED SIGNS, TRAFFIC SIGNAL INDICATIONS AND ATTACHED EQUIPMENT.
- ALL TRAFFIC EQUIPMENT TO BE PLACED OUTSIDE OF CURB CUTS AND DRIVEWAYS.
- ALL LUMINAIRE LENSES SHALL BE GLASS OR POLYCARBONATE.

TRAFFIC SIGNAL CONSTRUCTION NOTES

- EXISTING CABINET AND CONTROLLER SHALL BE PROTECTED IN PLACE. CONTRACTOR SHALL INSTALL ALL ALL NECESSARY APPURTENANCES FOR THE SIGNAL PHASING ON THIS PLAN.
- EXISTING TYPE III-BR SERVICE EQUIPMENT ENCLOSURE SHALL BE PROTECTED IN PLACE.
- INSTALL TYPE E MODIFIED LOOP(S).
- REMOVE AND SALVAGE EXISTING PEDESTRIAN AUDIBLE EQUIPMENT.
- REMOVE AND SALVAGE EXISTING PEDESTRIAN PUSH BUTTON(S). FURNISH AND INSTALL NEW POLARA INAVIGATOR 2-WIRE AUDIBLE ADA TYPE PEDESTRIAN PUSH BUTTON(S) WITH R10-3b SIGN, PER SCHEDULE. FILL ANY HOLES LEFT IN STANDARD WITH CENTRAL GALVANIZED STEEL FASTENER, IF NECESSARY.
- INSTALL TYPE E LOOP(S).



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CITY PROJECT NO.
ENG. XX-XXXX

RECORD DRAWING

PRINT ENGINEER'S NAME R.C.E. DATE

REVIEWED BY CITY OF ESCONDIDO

ASSOCIATE TRAFFIC ENGINEER DATE

CONSTRUCTION RECORD	REFERENCES	Date	By	REVISIONS	App'd	Date	BENCH MARK
Contractor							SEE SHEET 1 FOR BASIS OF COORDINATES.
Inspector							
Date Completed							

SCALE	Office	Designed By	Drawn By	Checked By
Horizontal 1" = 20'	Filmed	DA	DA	JS
Vertical	Traffic	Plans Prepared Under Supervision Of MARK ARAUJO Date 5/15/2020 R.C.E. No. 85614		

Submitted	Approved
By Associate Engineer	By Director of Engineering Services

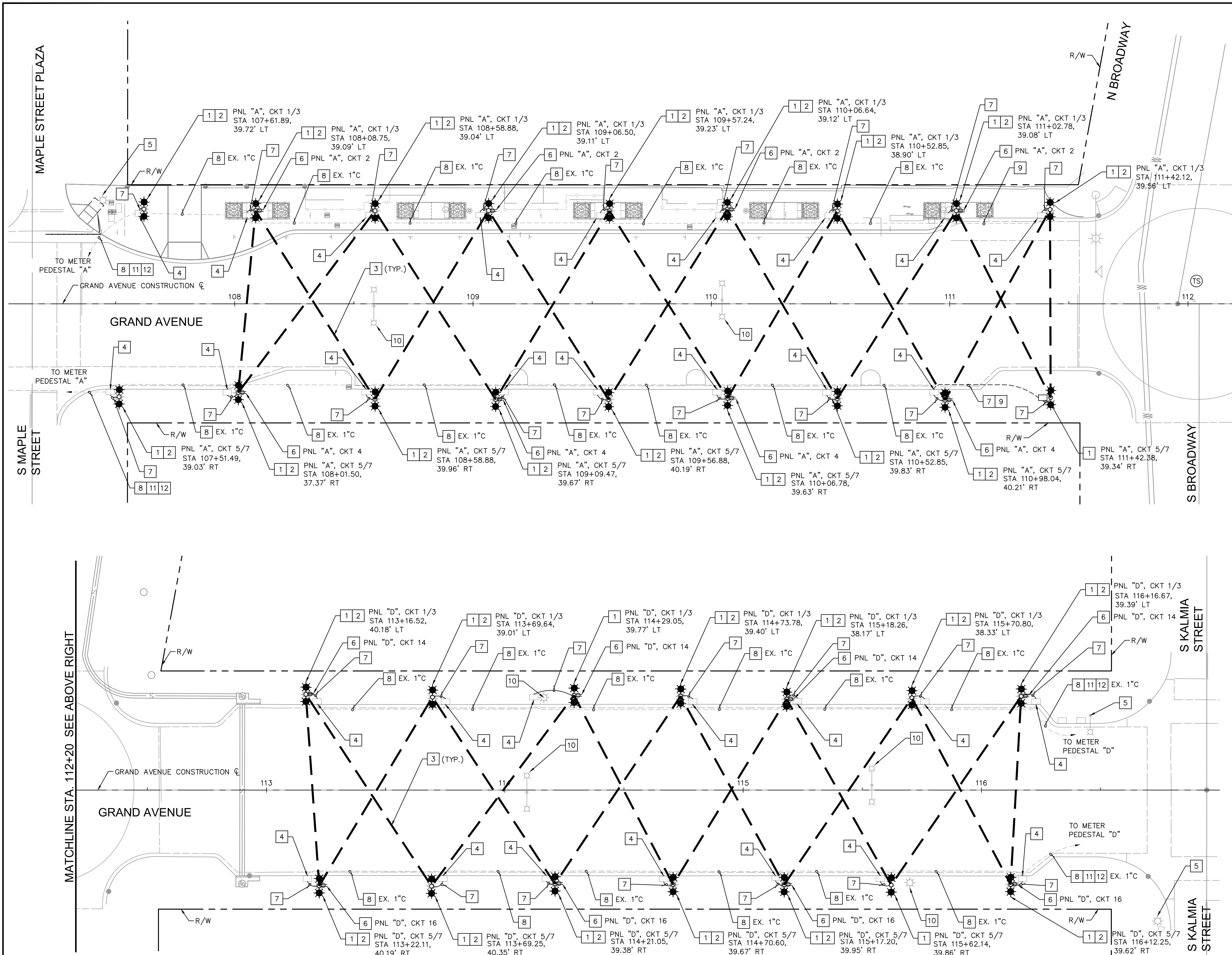
ENGINEERING SERVICES
GRAND AVENUE VISION PROJECT
TRAFFIC SIGNAL PLAN

Drawing No.
XXXX-XXX
Sheet 21 of 24

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LEGEND:

- EXISTING STREET LIGHT
- EXISTING PEDESTRIAN SCALE LIGHT
- PROPOSED DUAL LUMINAIRE LED LIGHT
- PROPOSED NO. 3.5 PULL BOX
- EXISTING PULL BOX
- EXISTING SERVICE ENCLOSURE
- PROPOSED ELECTRICAL CONDUIT
- EXISTING ELECTRICAL CONDUIT
- PROPOSED FESTOON LIGHTING
- TRAFFIC SIGNAL
- PROPOSED RECEPTACLE MOUNTED ON POLE

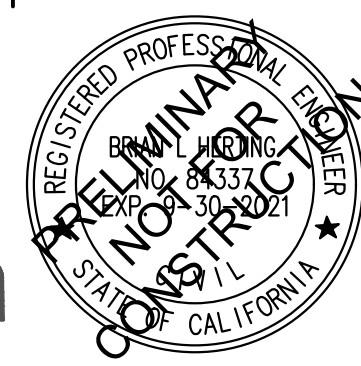
- ELECTRICAL NOTES**
- FURNISH AND INSTALL LIGHT POLE WITH 90W DUAL LED LUMINAIRES PER DETAIL C.
 - REMOVE AND SALVAGE EXISTING LIGHT POLE, LUMINAIRE, AND FOUNDATION.
 - FURNISH AND INSTALL LED FESTOON LIGHTING STRING WITH SOCKET SPACING OF 3'. ATTACH FESTOON LIGHTING TO HOOK PER ELECTRICAL DETAILS. FESTOON LIGHTING TO CONNECT TO RECEPTACLE FOR POWER.
 - INSTALL CONDUIT INTO EXISTING PULL BOX.
 - EXISTING LIGHT TO REMAIN, PROTECT IN PLACE.
 - FURNISH AND INSTALL RECEPTACLE ON STREET LIGHTING POLE PER DETAIL C.
 - FURNISH AND INSTALL SCHEDULE 80" PVC CONDUIT.
 - INSTALL 4#8 AWG CONDUCTORS, 1#8 AWG GROUND IN CONDUIT.
 - INSTALL 2#8 AWG CONDUCTORS, 1#8 AWG GROUND IN CONDUIT.
 - REMOVE AND SALVAGE EXISTING LIGHT POLE AND LUMINAIRE. REMOVE FOUNDATION TO 1' BELOW GRADE AND ABANDON REMAINDER OF FOUNDATION IN PLACE.
 - TERMINATE CONDUCTORS IN METERED PEDESTAL PER SERVICE PANEL DETAILS.
 - FURNISH AND INSTALL FESTOON LIGHTING CONTROL IN EXISTING SERVICE PANEL.

RECORD DRAWING

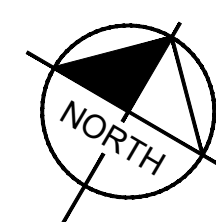
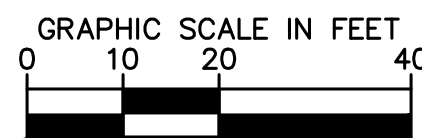
PRINT ENGINEER'S NAME R.C.E. _____ DATE _____

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CONSTRUCTION RECORD		REFERENCES		Date	By	REVISIONS		App'd	Date	BENCH MARK		SCALE		Office	Designed By	Drawn By	Checked By	Submitted	Approved	ENGINEERING SERVICES		Drawing No.
Contractor										SEE SHEET 1 FOR BASIS OF COORDINATES.		Horizontal			MB	KM	BH			GRAND AVENUE VISION PROJECT		XXXX-XXX
Inspector												1" = 20'			Plans Prepared Under Supervision Of		MARK ARAUJO	By	Associate Engineer	LIGHTING PLAN		Sheet22 of 24
Date Completed												Vertical		Traffic				By	Director of Engineering Services			

1. ALL EQUIPMENT, MATERIALS AND WORK SHOWN ARE NEW UNLESS SPECIFICALLY NOTED AS EXISTING OR OTHERWISE ON SHEETS.
2. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE WORKING ELECTRICAL SYSTEM.
3. ALL ELECTRICAL WORK, MATERIALS, EQUIPMENT, AND INCIDENTALS INCLUDING CONDUIT, WIRING, CONNECTIONS, AND TESTING SHALL BE IN FULL ACCORDANCE WITH CITY OF ESCONDIDO STANDARDS AND THE LATEST EDITIONS OF THE FOLLOWING: NATIONAL ELECTRICAL CODE, CAN TITLE 24 PART 3; BASIC ELECTRICAL REGULATIONS, CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT (CAL/OSHA) FOR LOW VOLTAGE ELECTRICAL ORIGINALLY, ALL APPLICABLE LOCAL LAWS, REGULATIONS, AND/OR ORDINANCES, AND CAL/OSHA CONSTRUCTION SAFETY ORDERS.
4. OBTAIN WRITTEN APPROVAL FROM THE CITY ENGINEER OF ALL SHOP DRAWINGS AND MANUFACTURERS DATA FOR PANEL BOARDS, TRANSFORMERS, WIRING DEVICES, ETC. BEFORE RELEASING ORDERED MATERIALS. SUBMITTAL DATA SHALL INDICATE THAT THE CONTRACTOR HAS REVIEWED THE INFORMATION THEREIN AND THAT THE PROPOSED EQUIPMENT WILL MEET THE PHYSICAL CONSTRAINTS AT THE JOB SITE. ANY SUBSTITUTIONS SHALL BE OF THE EQUIVALENT OR BETTER QUALITY THAN THE SPECIFIED COMPONENTS.
5. THE USE OF SERIES RATING OF UPSTREAM OR DOWNSTREAM CIRCUIT BREAKERS OR FUSES IS PROHIBITED. ONLY FULLY RATED SYSTEM COMPONENTS WILL BE ACCEPTED.
6. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 80. ALL ELBOWS AND EXPOSED RISERS SHALL BE RIGID STEEL CONDUIT.
7. VERIFY EXACT LOCATION OF ALL RECEPTACLES, LIGHT FIXTURES, AND PULL BOXES PRIOR TO ROUGH-IN.
8. PULL ROPES: PROVIDE 1/4" DIA NYLON PULL ROPE IN EACH CONDUIT.
9. ALL MULTIPLE POLE CIRCUITS SHALL BE PROVIDED WITH HANDLE TIES AS REQUIRED BY NEC.
10. CONDUIT/ CONDUCTOR RUNS SHOWN ARE DIAGRAMMATICAL ONLY. THE BEST FINAL CONDUIT ROUTING SHALL BE AS DETERMINED BY THE ELECTRICAL CONTRACTOR AT THE TIME OF CONSTRUCTION.
11. PRIOR TO PURCHASE OF ANY PANEL, PROTECTIVE DEVICES, SWITCH, CONDUIT, WIRE, ETC., TO FEED ANY PIECE OF EQUIPMENT, VERIFY THE VOLTAGE, PHASE, AND LOAD OF THAT ITEM IN THE FIELD WITH THE CITY ENGINEER AND EQUIPMENT MANUFACTURER (IF APPLICABLE) SUCH THAT THE PROPER SIZE & RATING OF THE MATERIALS ARE PURCHASED. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO COMPLY.
12. VERIFY THE EXACT LOCATION AND ELEVATION OF ALL ELECTRICAL EQUIPMENT PRIOR TO ROUGH-IN. FINAL CONNECTIONS OF EQUIPMENT SHALL BE PER MANUFACTURERS APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
13. ALL PANEL BOARDS, SWITCHES, AND SWITCHBOARD CIRCUIT BREAKERS SHALL HAVE ENGRAVED NAMEPLATES.
14. PROVIDE ALL PANEL BOARDS WITH TYPED DIRECTORIES INSTALLED UNDER A CLEAR PLASTIC COVER. SUBMIT DIRECTORY INFORMATION TO THE CITY OF ESCONDIDO FOR APPROVAL PRIOR TO FINALIZATION.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTORE ALL PROPERTY, LANDSCAPING, PAVING, AND DRIVEWAYS THAT ARE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION.
16. THE PLANS SHOW THE GENERAL PATH AND LOCATION OF CONDUIT AND PULL BOXES IN RELATION TO MAJOR PHYSICAL FEATURES. THE CONTRACTOR SHALL NOTE THAT ELEMENTS OF THE PLANS ARE NOT TO BE CHANGED DURING CONSTRUCTION. THESE CHANGES MAY RESULT IN CHANGES TO CONDUIT LENGTHS ALONG WITH MINOR QUANTITY CHANGES.
17. CONTRACTOR SHALL STATE ALL PROPOSED STREET LIGHT LOCATIONS AND OBTAIN APPROVAL FROM THE CITY ENGINEER PRIOR TO ANY INSTALLATION ACTIVITIES.
18. HOLES, CAVITIES, TRENCHES, AND DEPRESSIONS RESULTING FROM THE REMOVAL OF STRUCTURES OR OBSTRUCTIONS, EXCEPT IN AREAS TO BE EXCAVATED, SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% BUT NOT MORE DENSITY AS DETERMINED BY ASTM D698, D-2922, AND D-3017. SURPLUS EXCAVATION MATERIALS SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR.
19. ALL CONDUCTORS SHALL BE IDENTIFIED AT PULL BOXES, LOAD CENTERS AND FIXTURES. ALL WIRING DEVICES SHALL HAVE A TAG ON THE BACK OF THE COVER PLATE IDENTIFYING THE PANEL AND CIRCUIT NUMBER FROM WHICH THEY ARE FED.
20. ELECTRICAL SYSTEM SHALL BE GROUNDING AND BONDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. PROVIDE GROUND WIRE FOR EACH PIECE OF EQUIPMENT AND FOR EACH BRANCH CIRCUIT.
21. ALL PROPOSED PULL BOXES SHALL BE NO. 3 UNLESS OTHERWISE NOTED IN PLANS.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING ELECTRICAL CONNECTIONS.
23. ELECTROLIERS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH CITY STANDARD PLANS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
24. ALL LIGHTING SHALL BE BULB CLAMP TO 8" X 1/2" COPPER CLAD GROUND ROD DRIVEN BENEATH NEAREST PULL BOX. #6 BARE COPPER LEAD FROM THE GROUND ROD IN PULL BOX TO LANDING LUG IN LIGHT POLE. HAND HOLE IS REQUIRED.
25. INSTALLATION OF EQUIPMENT, COMPONENTS, AND WIRING FOR ELECTRICAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE EQUIPMENT MANUFACTURER.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY, STORAGE, AND HANDLING OF ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL ACCEPTANCE. ANY DAMAGED MATERIAL OR EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
27. ALL EQUIPMENT SHALL BE "UL" LISTED. LABEL OR LISTING OF UNDERWRITER'S LABORATORIES, INC. WILL BE ACCEPTED AS EVIDENCE THAT MATERIALS OR EQUIPMENT CONFORMS TO APPLICABLE STANDARDS OF THAT AGENCY.
28. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL ENERGIZE AND OPERATE THE ENTIRE LIGHTING SYSTEM, SUBJECT TO SUBSIST FOR TWO (2) CONSECUTIVE DAYS WITHOUT INTERRUPTION OF LIGHT, IF FAILURE OF ANY EQUIPMENT OR MATERIAL SHOULD FAIL, IT SHALL BE REPLACED IMMEDIATELY AND RETESTED.
29. ELECTRICAL CONTRACTOR SHALL GUARANTEE THE ELECTRICAL WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
30. PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.
31. ALL STREET LIGHTS SHALL BE BALANCE GROUND LIGHT SOURCES NO GREATER THAN 4000 K. CORRELATED COLOR TEMPERATURE (CCT) EXCEPT FOR AREAS WITHIN A 35 MILE RADIUS OF MT. PALOMAR OBSERVATORY, WHICH ARE DESIGNATED FOR A MAXIMUM OF 3000 CCT PER COUNCIL RESOLUTION 306251.
32. STREET LIGHTING SHALL BE EQUIPPED WITH ADAPTIVE CONTROL NODES WHEREVER POSSIBLE.
33. NATIONAL ELECTRICAL CODE (NEC) WIRE COLOR CODING SHALL BE USED FOR ALL ELECTRICAL WIRING.
34. THE CONTRACTOR INSTALLING THE STREET LIGHTING DISTRIBUTION SYSTEM SHALL NOTIFY THE CITY FIELD ENGINEER A MINIMUM OF THREE (3) DAYS PRIOR TO STARTING WORK. ALSO, A PRE-CONSTRUCTION MEETING WILL BE REQUIRED WITH THE CITY ELECTRICAL INSPECTOR (RE) TO REVIEW THE LIGHTING REQUIREMENTS.
35. PRIVATE STREET LIGHTS SHOWN ON THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. PROPOSED PRIVATE STREET LIGHTS SHALL BE PERMITTED AND INSPECTED UNDER A SEPARATE ELECTRICAL PERMIT.
36. CONTRACTOR SHALL MAINTAIN EXISTING ELECTRICAL LIGHTING CIRCUITS TO LIGHTS WITHIN AND ADJACENT TO PROJECT LIMITS AFTER EXISTING LIGHT POLES AND FOUNDATIONS ARE REMOVED.

BOLD = REMOVE EXISTING CIRCUIT BREAKER AND INSTALL NEW AS DENOTED

1. ALL CONNECTED LOAD INFORMATION IS UNKNOWN. CONTRACTOR SHALL CALCULATE THE UNKNOWN LOAD VALUES BASED ON THE MAXIMUM DEMAND CONTINUOUSLY RECORDED OVER A MINIMUM 72-HOUR PERIOD. MAXIMUM DEMAND SHALL BE RECORDED USING AN AMMETER OR POWER METER CONNECTED TO THE MAIN DISCONNECT OR THE FEEDER DISCONNECT OF THE HIGHEST LOADED PHE. SHALL BE BASED ON MAXIMUM LOADING AT THE START OF THE RECORDING. THE RECORDING SHALL REFLECT THE MAXIMUM DEMAND OF THE FEEDER OR SERVICE BEING TAKEN WHEN BUILDING OR SPACE IS OCCUPIED. RECORDING SHALL INCLUDE MEASUREMENT OR CALCULATION OF THE LARGEST EQUIPMENT LOAD(S) THAT MAY BE PERIODIC IN NATURE DUE TO SEASONAL OR SIMILAR CONDITIONS.

2. THE CONTRACTOR SHALL SUBMIT CALCULATIONS AND A COMPLETED LOAD SUMMARY TABLE FOR EXISTING PANEL "A" TO THE CITY OF ESCONCIDO FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT PROCEED WITH ANY MODIFICATIONS AND/OR ADDITIONS UNTIL WRITTEN APPROVAL IS RENDERED FROM THE CITY OF ESCONCIDO.

NTS

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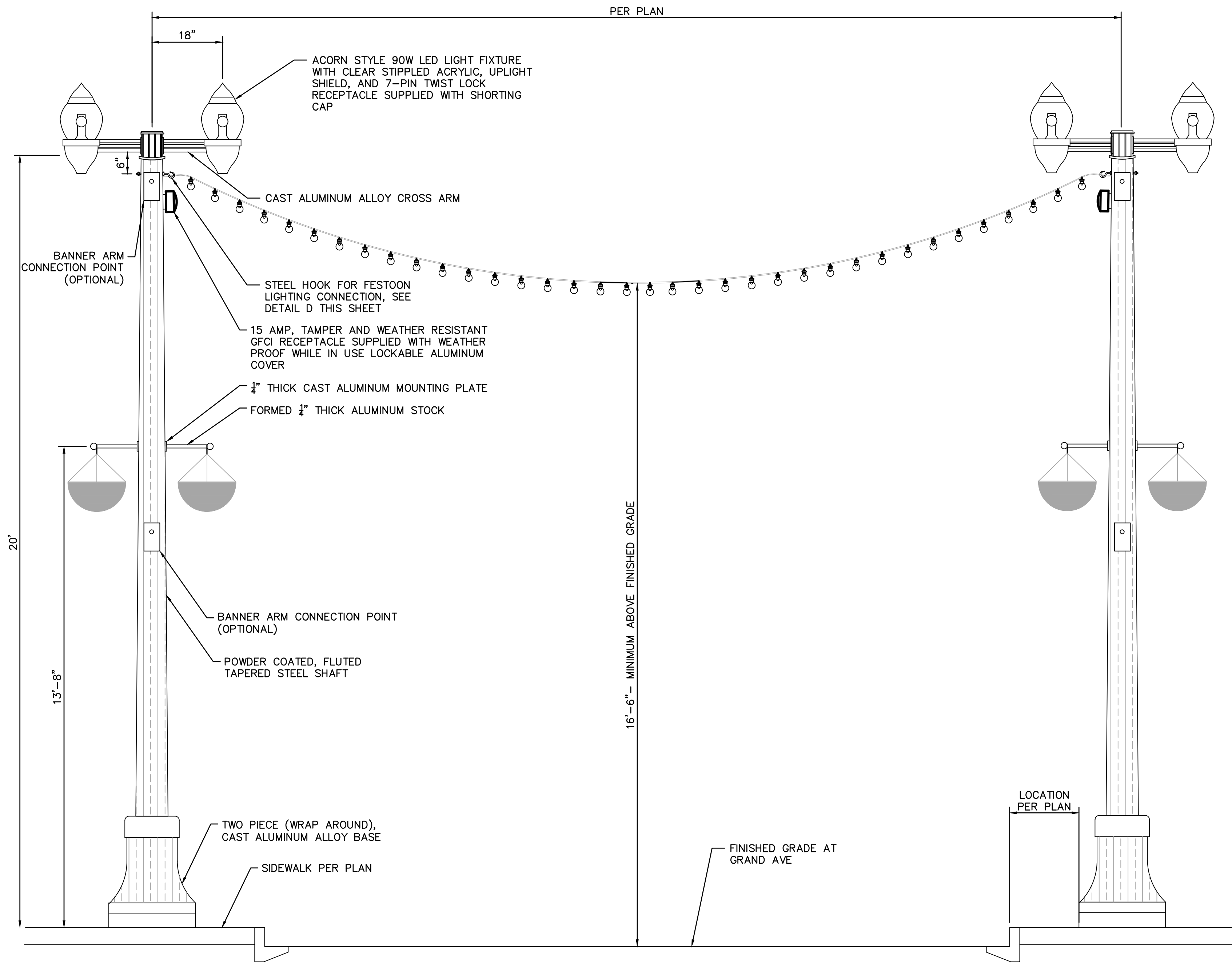
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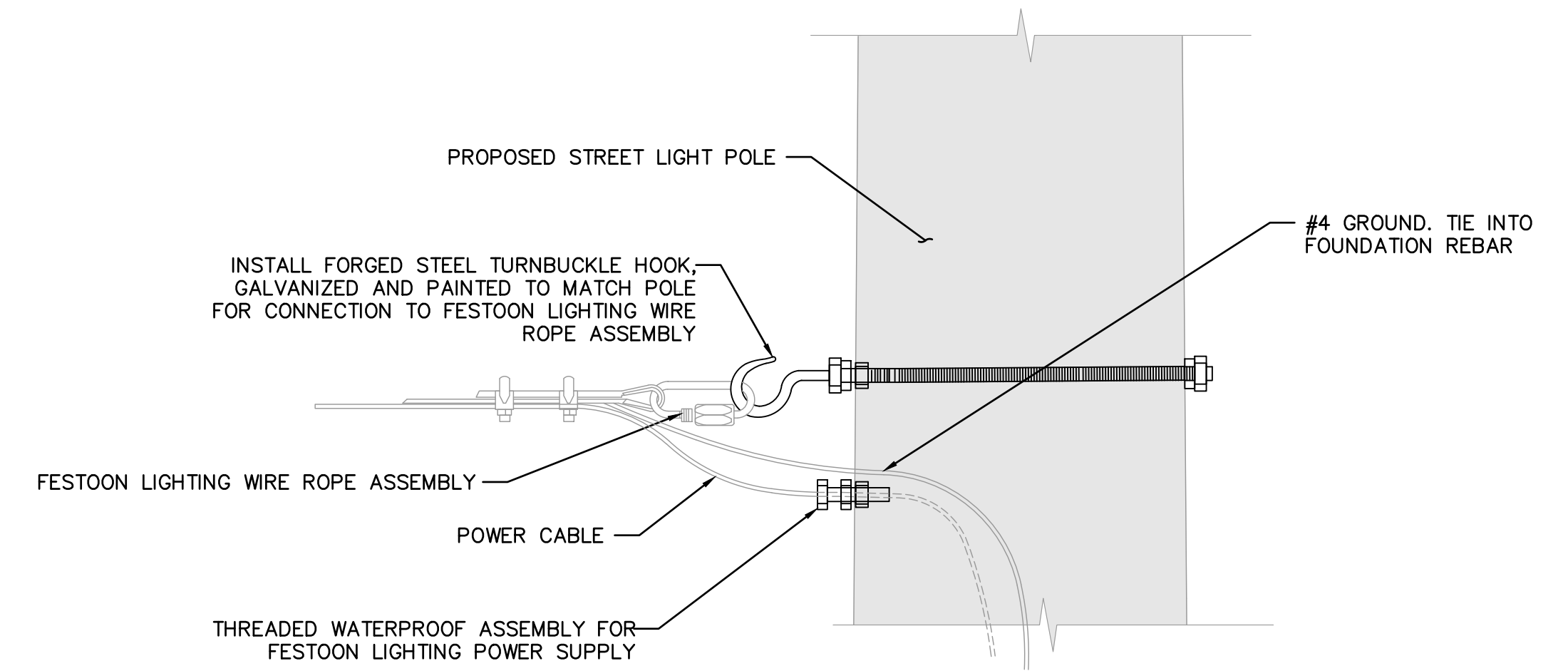
CITY PROJECT NO.
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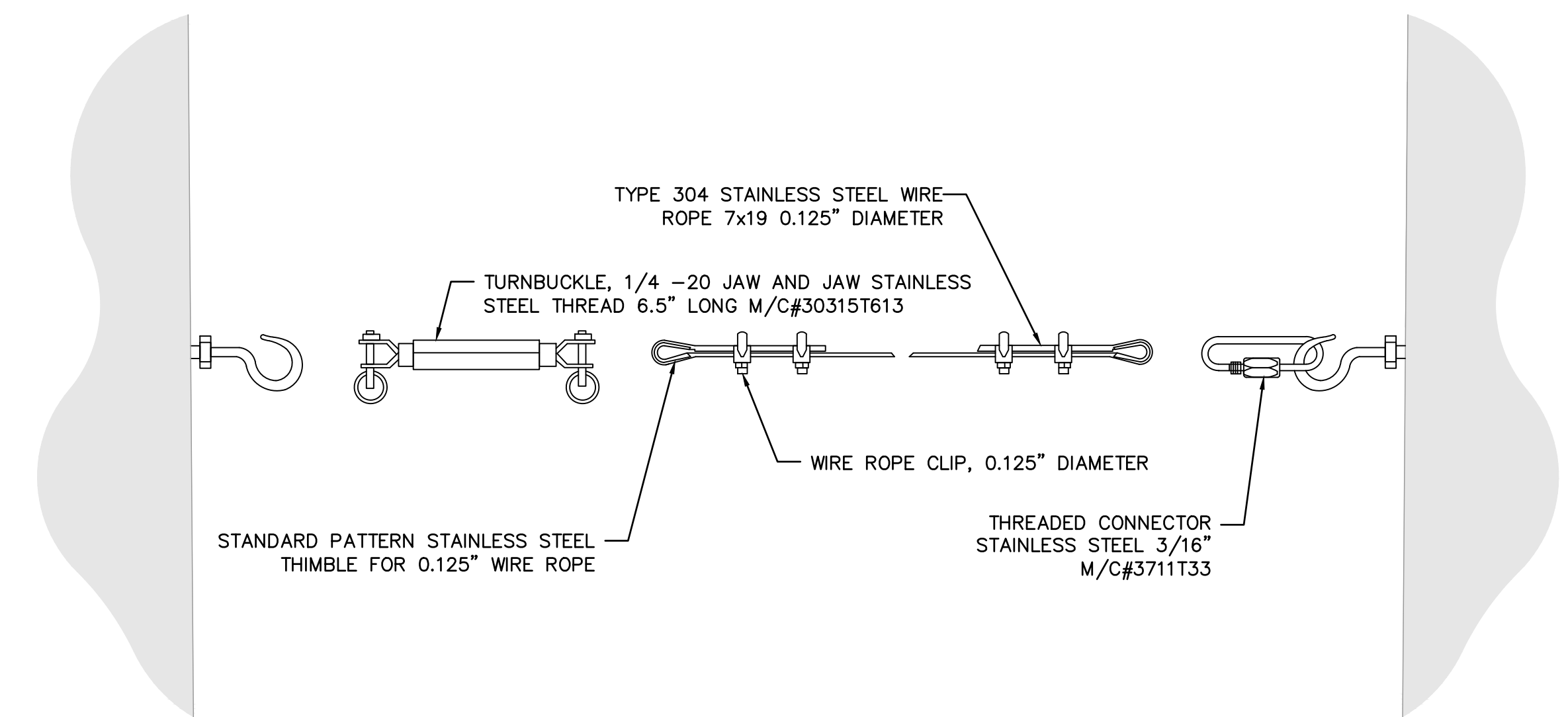
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C STREET LIGHTING POLE WITH FESTOON LIGHTING DETAIL
NTS



D FESTOON LIGHTING CONNECTION SUPPORT TO POLE DETAIL
NTS



E FESTOON LIGHTING WIRE ROPE ASSEMBLY DETAIL
NTS

RECORD DRAWING		
PRINT ENGINEER'S NAME	R.C.E. _____	DATE _____

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											R.C.E. No. 85614							