

Recording Requested By:

City of Fontana

Mail To:

City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
ATTN: Engineering Division

Record without fee subject to Gov't
Code 6103 and 27383

Project: Etiwanda Creek
Channel System No.: 1.700
Parcel No.: 135
Dept. Code: 11600

EASEMENT DEED

D.P. No.: 1.700 /
APN: 0228-091-42 (portion)
Date: October 4, 2022

The undersigned grantor(s) declare(s):

DOCUMENTARY TRANSFER TAX \$

- ☐ computed on full value of property conveyed, or
☐ computed on full value less liens and encumbrances remaining at the time of sale
☐ Unincorporated Area ☒ City: Fontana

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the **SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT**, a body corporate and politic, hereinafter referred to as "**Grantor**", does hereby **grant** to **CITY OF FONTANA, a municipal corporation**, hereinafter referred to as "**Grantee**", a **non-exclusive easement** (hereinafter "easement" or "grant") for street, highway, road and/or bridge purposes, including, without limitation, appurtenances such as culverts, slopes, embankments, curbs and sidewalks located on a certain portion ("**Easement Property**") of **Grantor's** real property ("**Fee Property**") situated in the County of San Bernardino, State of California and more particularly described in **Exhibit "A"**, Legal Description attached hereto and made a part hereof, and shown on **Exhibit "B"**, Plat, attached hereto and made a part hereof.

This easement is granted subject to all permits, agreements, licenses, leases, easements, reservations, restrictions, terms, conditions, covenants, encumbrances, liens and claims of title which may affect said **Easement Property**. The use of the word "grant" herein shall not imply any warranty on the part of the **Grantor** with respect to the **Easement Property**.

Mail Tax Statement As Directed Above

This easement is also subject to the following terms, conditions and restrictions:

1. This easement is subject to the **Grantor's** superior right to use the **Easement Property**, and **Grantor** reserves to itself and its successors and assigns a continuing right to use and make any improvements to the **Easement Property** for **Grantor's** use.
2. **Grantor** may grant further permits, agreements, licenses, leases, easements, reservations, restrictions, terms, conditions, covenants, encumbrances, liens, or other rights over the **Easement Property** (or portions thereof) for the benefit of other entities not parties to this grant, provided that such further grants do not materially and adversely interfere with **Grantee's** use of the **Easement Property**, as determined by **Grantor** in its sole discretion.
3. The **Easement Property** may be used solely for the uses listed above. Specific prohibition against exposing contaminated soils of the disposal site are set forth within the "Waste Management Plan" (hereinafter "Plan") incorporated herein and attached as Exhibit "C" hereto. Each and every requirement, limitation, and duty or obligation contained in said Plan is and shall be a mandatory requirement, limitation, and duty or obligation as though set forth here in full. **Grantee** shall not park vehicles within the **Easement Property** nor permit any portion of the **Easement Property** to be blocked off or obstructed in any manner. **Grantor** shall at all times have free and clear access over and across the **Easement Property**. In the event of a conflict between the Terms, Conditions, and Restrictions enumerated herein and the Waste Management Plan, the provisions of the Plan shall prevail.
4. **Grantee** shall at all times and at its sole cost and expense, maintain the **Easement Property** and all improvements constructed (or caused to be constructed) thereon, as permitted by this easement. The **Grantee** shall keep the **Easement Property** in good condition and repair and free of weeds and trash. **Grantee** shall promptly and diligently execute all duties such as mandatory monitoring and reporting activities, and maintenance and repair obligations. **Grantee** shall be responsible for any damage caused by the use of the **Easement Property** by **Grantee** and any permitted improvements thereon, and **Grantee** shall promptly repair all such damage to **Grantor's** and any responsible regulatory agencies' complete satisfaction at **Grantee's** sole cost and expense.
5. Prior to commencing the construction or replacement of **Grantee's** street, highway, road and/or bridge, and appurtenances pursuant to this grant, **Grantee** shall submit all plans for the excavation, construction, installation, removal, and replacement of such improvements to **Grantor** for **Grantor's** review and approval with **Grantor** to issue to **Grantee** a permit if such plans are approved by **Grantor** in **Grantor's** sole discretion. The existence of **Grantee's** street, highway, road and/or bridge and attendant easement does not give **Grantee** any rights to do further work of any type within the **Easement Property** without first obtaining additional permit(s) from **Grantor** pursuant to the above-stated requirements and conditions.
6. **Grantee** shall be responsible for securing and maintaining all necessary permits and approvals from other appropriate local, state and federal agencies for its use of the

Easement Property, and **Grantee** shall comply with all applicable laws and regulations concerning the construction of the street, highway, road and/or bridge and its use of **Easement Property**.

7. Any street, highway, road, bridge or culvert constructed by or on behalf of **Grantee** on the **Easement Property** shall be designed to not interfere with or impede **Grantor's** conveyance of storm water or **Grantor's** flood control improvements, if any, now existing or later installed on the **Easement Property** by **Grantor**. **Grantee's** construction of its street, highway, road and/or bridge shall be in accordance with the plan approved by **Grantor** in accordance with paragraph 5 and must further meet all applicable construction standards and applicable laws,

8. **Grantee** shall not change the existing grade, modify the topography, or impede or diminish the floodwater conveyance capacity of the **Easement Property or the Fee Property** without prior written consent of **Grantor** (in **Grantor's** sole discretion).

9. **Grantee** shall at all times, and at its sole cost and expense, maintain the **Easement Property** and its street, highway, road and/or bridge improvement project constructed (or caused to be constructed) by **Grantee** and/or its agents in good condition and repair, and free of trash, debris weeds and unauthorized uses. **Grantee** shall perform all necessary maintenance associated with the entire improvement project, such as bridge structure, box culverts and appurtenant structures including but not limited to wingwalls, curb and gutter, sidewalks and appurtenances thereto constructed within the **Easement Property** in conjunction with the street, highway, road and/or bridge project, and shall remove graffiti, and any unauthorized uses or encroachments within or on any part of the box culvert structure and its appurtenances, as well as performing all necessary weed abatement work within the **Easement Property**.

10. **Grantor** shall at all times have free and clear access through and over the **Easement Property** (except as temporarily approved by **Grantor** during periods of **Grantee's** construction and/or maintenance).

11. Any costs incurred by **Grantor** for **Grantor's** use of the **Easement Property**, including (but not limited to) any costs incurred by **Grantor** for the construction, reconstruction, maintenance, and use of any **Grantor** flood control improvements, if any, now existing or later installed on the **Easement Property** or the **Fee Property** attributable to the presence of **Grantee's** street, highway, road and/or bridge shall be borne by **Grantee**, at **Grantee's** sole cost. In the event that **Grantor** requires that **Grantee's** street, highway, road and/or bridge located on the **Easement Property** be relocated, modified, or protected due to **Grantor's** existing or future use of the **Easement Property** or the **Fee Property**, **Grantee** shall promptly relocate, modify, or protect **Grantee's** street, highway, road and/or bridge as directed by **Grantor** and **Grantee** shall bear, at its sole expense, all such relocation, modification and protection costs. **Grantee** shall pothole its facilities and provide such information to **Grantor** upon **Grantor's** request, or **Grantor** shall perform such potholing at **Grantee's** expense. Notwithstanding anything to the contrary in this paragraph, prior to relocation, modification or protection of **Grantee's** street, highway, road and/or bridge except in cases of emergency as determined by **Grantor** in its sole discretion

when no prior notice is required, **Grantor** shall provide **Grantee** with written notice and 2 years to complete any required relocation, modification or protection within the **Easement Property**.

12. **Grantor** shall not be required to contribute any part of the costs associated with **Grantee's** street, highway, road and/or bridge on the **Easement Property** and furthermore, if **Grantor** is included in an assessment district to pay such costs, **Grantee** shall promptly reimburse **Grantor** for any assessment therefore levied upon it upon **Grantor** demand.

13. **Grantee** agrees to indemnify, defend (with counsel reasonably approved by **Grantor**) and hold harmless the **Grantor, the County of San Bernardino**, and their authorized officers, employees, agents and volunteers (**Indemnitees**) from any and all claims, actions, losses, damages, and/or liability arising out of this grant of easement from any cause whatsoever, including the acts, errors or omissions of any person and for any costs or expenses incurred by **Grantor** on account of any claim except where such indemnification is prohibited by law. This indemnification provision shall apply regardless of the existence or degree of fault of **Indemnitees**. The **Grantee's** indemnification obligation applies to **Indemnitees'** "Active" as well as "passive" negligence but does not apply to the **Indemnitees'** "sole negligence" or "willful misconduct" within the meaning of Civil Code Section 2782.

14. **Grantee** agrees to comply with the following insurance requirements (for the purpose of this paragraph, **Grantor** shall be deemed to include the **County of San Bernardino**):

A. Additional Insured - All policies, except for the Workers' Compensation policy, shall contain endorsements naming the **Grantor** and its officers, employees, agents and volunteers as additional insureds with respect to liabilities arising out of this easement. The additional insured endorsements shall not limit the scope of coverage for the **Grantor** to vicarious liability but shall allow coverage for the **Grantor** to the full extent provided by the policy. Such additional insured coverage shall be at least as broad as Additional Insured (Form B) endorsement form ISO, CG 2010.11 85.

B. Waiver of Subrogation Rights - **Grantee** shall require the carriers of required coverages to waive all rights of subrogation against the **Grantor**, its officers, employees, agents, volunteers, contractors and subcontractors. All general or auto liability insurance coverage provided shall not prohibit **Grantee** and **Grantee's** employees or agents from waiving the right of subrogation prior to a loss or claim. **Grantee** hereby waives all rights of subrogation against the **Grantor**.

C. Policies Primary and Non-Contributory - All policies required herein are to be primary and noncontributory with any insurance or self-insurance programs carried or administered by the **Grantor**.

D. Severability of Interests - **Grantee** agrees to ensure that coverage provided to meet these requirements is applicable separately to each insured and there will be no cross-liability exclusions that preclude coverage for suits between **Grantee** and the **Grantor** or between the **Grantor** and any other insured or additional insured under

the policy.

E. Proof of Coverage - **Grantee** shall furnish Certificates of Insurance to **Grantor** evidencing the insurance coverage, including endorsements, as required, prior to **Grantee's** execution of this easement document, which certificates shall provide that such insurance shall not be terminated or expire without thirty (30) days written notice to **Grantor**, and **Grantee** shall maintain such insurance throughout the term of the easement. Within fifteen (15) days of the **Grantee's** acceptance of this easement, **Grantee** shall furnish a copy of the Declaration page for all applicable policies and will provide complete certified copies of the policies and endorsements immediately upon request.

F. Acceptability of Insurance Carrier - Unless otherwise approved by the San Bernardino County Department of Risk Management (hereinafter "Risk Management"), insurance shall be written by insurers authorized to do business in the State of California and with a minimum "Best" Insurance Guide rating of "A- VII".

G. Deductibles and Self-Insured Retention - Any and all deductibles or self-insured retentions in excess of \$10,000 shall be declared to and approved by Risk Management.

H. Failure to Procure Coverage - In the event that any policy of insurance required under this easement does not comply with the requirements, is not procured, or is canceled and not replaced, the **Grantor** has the right but not the obligation or duty to obtain insurance if it deems necessary and any premiums paid by the **Grantor** will be promptly reimbursed by **Grantee**.

I. Insurance Review - Insurance requirements are subject to periodic review by the **Grantor**. **Grantor's** Director of Risk Management or designee is authorized, but not required, to increase, reduce, waive or suspend any insurance requirements whenever Risk Management determines that any of the required insurance is not available, is unreasonably priced, or needed, or not needed, to protect the interests of the **Grantor**. In addition, if Risk Management determines that heretofore unreasonably priced or unavailable types of insurance coverage or coverage limits become reasonably priced or available, the Director of Risk Management or designee is authorized, but not required, to change the above insurance requirements to require additional types of insurance coverage or higher coverage limits, provided that any such change is reasonable in light of past claims against the **Grantor**, inflation, or any other item reasonably related to the **Grantor's** risk. Any failure, actual or alleged, on the part of the **Grantor** to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of the **Grantor**.

J. **Grantee** agrees to provide insurance set forth in accordance with the requirements herein. If **Grantee** uses existing coverage to comply with these requirements and that coverage does not meet the specified requirements, **Grantee** agrees to amend, supplement or endorse the existing coverage to do so. The type(s) of insurance required is determined by the scope of this easement.

K. Without in any way affecting the indemnity herein provided and in addition thereto, **Grantee** shall secure and maintain throughout the duration of the easement the following types of insurance with limits as shown:

(1) Workers' Compensation/Employers Liability - A program of Workers' Compensation insurance or a state-approved, self-insurance program in an amount and form to meet all applicable requirements of the Labor Code of the State of California, including Employer's Liability with \$250,000 limits covering all persons including volunteers providing services on behalf of **Grantee** and all risks to such persons under this easement.

If **Grantee** has no employees, it may certify or warrant to the **Grantor** that it does not currently have any employees or individuals who are defined as "employees" under the Labor Code and the requirement for Workers' Compensation coverage will be waived by the **Grantor's** Director of Risk Management.

With respect to **Grantees** that are non-profit corporations organized under California or Federal law, volunteers for such entities are required to be covered by Workers' Compensation insurance.

(2) Commercial/General Liability Insurance - **Grantee** shall carry General Liability Insurance covering all operations performed by or on behalf of **Grantee** providing coverage for bodily injury and property damage with a combined single limit of not less than one million dollars (\$1,000,000), per occurrence. The policy coverage shall include:

- (a) Premises operations and mobile equipment.
- (b) Products and completed operations.
- (c) Broad form property damage (including completed operations).
- (d) Explosion, collapse and underground hazards.
- (e) Personal injury
- (f) Contractual liability.
- (g) \$2,000,000 general aggregate limit.

(3) Automobile Liability Insurance – Primary insurance coverage shall be written on ISO Business Auto coverage form for all owned, hired and non-owned automobiles or symbol 1 (any auto). The policy shall have a combined single limit of not less than one million dollars (\$1,000,000) for bodily injury and property damage, per occurrence. If **Grantee** is transporting one or more non- employee passengers in **Grantee's** use of the **Easement Property**, the automobile liability policy shall have a combined single limit of two million dollars (\$2,000,000) for bodily injury and property damage per occurrence. If **Grantee** owns no autos, a non-owned auto endorsement to the General Liability policy described above is acceptable.

(4) Umbrella Liability Insurance - An umbrella (over primary) or excess policy may

be used to comply with limits or other primary coverage requirements. When used, the umbrella policy shall apply to bodily injury/property damage, personal injury/advertising injury and shall include a "dropdown" provision providing primary coverage for any liability not covered by the primary policy. The coverage shall also apply to automobile liability.

(5) Environmental Liability Insurance with a combined single limit of not less than five million (\$5,000,000) per claim or occurrence. The required additional insured endorsement shall protect **Grantor** without any restrictions.

If insurance coverage is provided on a "claims made" policy, the "retroactive date" shall be shown and must be before the date the easement was signed by **Grantor**. The claims made insurance shall be maintained or "tail" coverage provided throughout the duration of the easement and for a minimum of five (5) years after termination of this easement.

(6) Subcontractor Insurance Requirements. **Grantee** agrees to require all parties, including (but not limited to) subcontractors, architects, or others it hires or contracts with related to the excavation, construction, installation, replacement, maintenance and repair, removal, use, or any other work performed by or on behalf of **Grantee** for the street, highway, road and/or bridge at the **Easement Property** to provide insurance covering the contracted operation with the same policies and provisions required of **Grantee** in this easement and with builder's risk property insurance, providing all risk, including theft coverage for all property and materials to be used for or related to the street, highway, road and/or bridge and said insurance policies shall not have any coinsurance penalty. All policies required under this provision shall include waiver of subrogation rights against **Grantor** and shall name **Grantor** as an additional insured. **Grantee** agrees to monitor and review all such coverage and assumes all responsibility ensuring that such coverage is provided as required herein.

15. In the event of **Grantee's** default of the terms, conditions and/or restrictions set forth herein, **Grantor** shall give written notice to **Grantee** of the same. Except in the case of the emergency as determined by **Grantor** in its sole discretion, **Grantee** shall have thirty (30) calendar days from the date of the **Grantor's** notice to cure the default. If **Grantee**, within thirty (30) calendar days from the date of the **Grantor's** notice to cure the default (except in the case of an emergency as determined by **Grantor** in its sole discretion), commences the elimination of such default and continuously and diligently proceeds in good faith to eliminate such default, then the period for correction shall be extended for such length of time as is reasonably necessary to complete such correction. In the event **Grantee** fails to cure the default within the time prescribed herein, **Grantor** has the right but not the obligation to cure said default at the sole expense of **Grantee**, or **Grantee's** successors and assigns, and without liability to **Grantor** for loss thereof. **Grantee** and **Grantee's** successors and assigns agree to pay **Grantor** on demand all expenses incurred by **Grantor** in curing such default of **Grantee**. In addition, **Grantor** may pursue all other remedies available to it at law or in equity and such remedies shall be cumulative.

16. The easement, as well as the terms, conditions and restrictions, created hereby shall constitute covenants running with the land and shall be binding upon and shall

benefit all successors and assigns of **Grantor** and **Grantee** respectively.

17. This easement shall be governed by the laws of the State of California.

18. This grant may only be amended by a writing executed by both **Grantor** and **Grantee** and recorded in the Official Records of the County of San Bernardino.

19. If any legal action is instituted to enforce any party's rights hereunder, each party shall bear its own costs and attorneys' fees, regardless of who is the prevailing party. This paragraph shall not apply to those costs and attorneys' fees directly arising from a third-party legal action against a party hereto and payable under paragraph 14.

20. If a court of competent jurisdiction declares any provision of this easement invalid, illegal, or otherwise unenforceable, the remaining provisions shall continue in full force and effect, unless the purpose of this easement is frustrated.

IN WITNESS WHEREOF **Grantor** and **Grantee** have executed this Easement Deed for street, highway, road and/or bridge purposes on the day and year written below and have agreed to be bound by the terms and provisions hereof.

GRANTOR:

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

By: _____

Name: _____

Title: Chairman, Board of Supervisors

Date: _____

ACCEPTANCE OF TERMS AND CONDITIONS

This is to certify that the interest in real property conveyed by the Easement Deed for street, highway, road and/or bridge purposes by the SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT to the CITY OF FONTANA, is accepted by the undersigned officer on behalf of Grantee and Grantee agrees to be bound by the terms and provisions hereof.

GRANTEE:

By: _____

Name: Matthew C. Ballantyne

Title: City Manager

Date: _____

CALIFORNIA ALL- PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of the document.

State of California }
County of San Bernardino }

On _____ before me, _____, Notary Public,
DATE NAME, TITLE OF OFFICER

personally appeared _____

NAME(S) OF SIGNER(S)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

SIGNATURE OF NOTARY PUBLIC

CITY OF FONTANA ACCEPTANCE CERTIFICATE

This is to certify that the interest in real property conveyed by the Grant Deed or Easement Deed dated _____ from the **San Bernardino County Flood Control District**, a body corporate and politic, to the City of Fontana, California, a Municipal Corporation, is hereby accepted by the undersigned officer pursuant to authority conferred by Resolution No. 91-152 of the City Council adopted on July 16, 1991; and the grantee consents to the recordation thereof by its duly authorized officer.

Gia Lam Kim, P.E.
City Engineer
City of Fontana



City Index No. 6219
APN: 0228-091-42

Exhibit “A”

Legal Description of **Easement Property**

EXHIBIT "A"

APN: 0228-091-42

LEGAL DESCRIPTION:

THAT PORTION OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 34, TOWNSHIP 1 NORTH, RANGE 6 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF FONTANA, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, SAID PORTION ALSO BEING WITHIN THAT PARCEL OF LAND, DESCRIBED AS PARCEL 1 IN DEED TO THE SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, RECORDED JUNE 30, 1941, IN BOOK 1482, PAGE 444, OFFICIAL RECORDS OF SAID COUNTY, SAID PORTION BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THAT PARCEL DESCRIBED IN GRANT DEED TO SC VICTORIA, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, PER DOCUMENT NO. 2019-0262364 OF OFFICIAL RECORDS, RECORDED AUGUST 01, 2019, RECORDS OF SAID COUNTY, SAID POINT OF BEGINNING ALSO BEING ON THE SOUTH LINE VICTORIA STREET PER GRANT TO THE STATE OF CALIFORNIA, RECORDED JUNE 14, 1990, AS INSTRUMENT NO. 90-234201 OFFICIAL RECORDS OF SAID COUNTY, SAID SOUTH LINE BEING 33.00 FEET SOUTH OF, AND PARALLEL WITH, THE CENTERLINE OF SAID VICTORIA STREET;

THENCE SOUTH 22°14'49" WEST ALONG THE WESTERLY LINE OF SAID GRANT TO SC VICTORIA, LLC, 20.56 FEET;

THENCE NORTH 89°59'00" WEST PARALLEL WITH AFORESAID SOUTH LINE OF VICTORIA STREET, 156.45 FEET;

THENCE NORTH 00°01'00" EAST, 19.00 FEET TO SAID SOUTH LINE OF VICTORIA STREET;

THENCE SOUTH 89°59'00" EAST ALONG SAID SOUTH LINE, 155.47 FEET TO THE BEGINNING OF A CURVE, CONCAVE NORTHERLY AND HAVING A RADIUS OF 1,333.00 FEET;

THENCE EASTERLY ALONG SAID CURVE, 8.76 FEET THROUGH A CENTRAL ANGLE OF 00°22'36" TO THE **POINT OF BEGINNING**.

CONTAINING APPROXIMATELY 3,046 S.F., 0.070 ACRES

SEE **EXHIBIT "B"**, PLAT AS LOCATION AID.

PREPARED BY:



MARK WARE, P.L.S. 5820

DATE 11-22-22



Exhibit “B”

Plat of **Easement Property**

EXHIBIT "B"

NOTE: THIS PLAT IS SOLELY AN AID IN LOCATING THE
PARCEL DESCRIBED IN EXHIBIT 'A'. IT IS NOT A PART
OF THE WRITTEN LEGAL DESCRIPTION.

VICTORIA STREET

S. LINE OF PARCEL DESCRIBED
IN DOC. NO. 1990-0234201 O.R.,
REC'D 06/14/90

$D=20^{\circ}10'16''$
 $R=1300.00'$
 $L=457.67'$

$D=00^{\circ}22'36''$
 $R=1333.00'$
 $L=8.76'$

$S89^{\circ}59'00''E$ 155.47'

P.O.B.

NW COR. OF PARCEL
DESCRIBED IN DOC. NO.
2019-0262364 O.R.,
REC'D 08/01/19

$N89^{\circ}59'00''W$ 156.45'

$N00^{\circ}01'00''E$ 19.00'

$S22^{\circ}14'49''W$ 20.56'
W'LY LINE OF DOC. NO.
2019-0262364 O.R.

POR. APN 0228-091-42

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

ETIWANDA
CHANNEL

SAN SEVAINE
CHANNEL

SCALE:
1"=60'

APPROXIMATE AREA:

3,046 S.F.
0.070 ACRES



City Index No. 6219
APN 0228-091-42

Exhibit “C”

Waste Management Plan

**WASTE MANAGEMENT PLAN
TRI POINTE HOMES TRACT 20229
ETIWANDA DISPOSAL SITE
FONTANA, CALIFORNIA
March 2022**

Prepared For:

County of San Bernardino
Flood Control District
825 East Third Street, Room 140
San Bernardino, CA, 92415-0835

County of San Bernardino
Solid Waste Management District
222 W. Hospitality Lane, 2nd floor
San Bernardino, CA, 92415

Prepared By:

Allard Engineering 16866 Seville Avenue
Fontana, CA 92335
(909) 356-1815



CONTENTS

INTRODUCTION

1. PROJECT DESCRIPTION

1.1 Regulatory Requirements

2. RESPONSIBLE PARTIES FOR MAINTENANCE

2.1 Maintenance Responsibilities

2.2 Inspection Responsibilities and Frequencies

3. WASTE MANAGEMENT PLAN

3.1 Introduction

3.2 Waste Preparedness Plan

3.3 Waste Types

3.4 Segregation and Stockpiling

3.5 Waste Management

3.6 On-Site Reconsolidation

3.7 Material Stockpile Characterization

3.8 On-Site Reconsolidation Activities

3.9 Inspections

3.10 Documentation

3.11 Updating the WMP

4. EXHIBITS

Post Closure Land Use Maintenance Checklist

Incident Location Map

Ninyo & Moore Landfill Mapping

Allard Engineering Bridge Plans

5. APPENDIX

HASP – Health and Safety Plan

INTRODUCTION

APN:0228-91-41 (Tract 20229) is a Residential Subdivision within the Westgate Specific Plan located south of Victoria Avenue and east of the 1-15 freeway in the City of Fontana. The site lies west of and adjacent to APN: 0228-091-42. Tract 20229 in addition to other developments are served by Victoria Avenue, an existing City of Fontana roadway, a portion of which lies within APN 0228-091-42 which is the location of the Etiwanda Disposal Site 36-CR-0021. The Etiwanda Disposal Site is owned by the San Bernardino County Flood Control District (to be referred to as The District or District property). This project proposes to construct a Pedestrian Bridge over the Etiwanda/San Sevaine creeks adjacent to and south of the existing vehicular bridge.

The Pedestrian Bridge will be constructed under a Permit through the District. An Easement / Right of Way is proposed to be granted by the District to the City of Fontana for the bridge encroachment / construction through District Property. The Bridge is adjacent to and south of the existing Victoria Avenue Bridge over the Etiwanda/San Sevaine Channel on the north eastern line of the Disposal Site. The alignment is away from any Mapped Dumping Areas.

This report is an update of the Sewer Excavation Management Plan prepared earlier. The bridge although in City R/W does fall in the same APN of the disposal site and therefore should be included.

This Waste Management Plan pertains solely to land being purchased by Tri Pointe Homes for Bridge construction, and maintenance. Regardless of the fact that this disposal site was pre-regulation our objective is to comply with section 21190 of title 27 CCR requirements where feasible and/or practical.

1. PROJECT DESCRIPTION (27 CCR 21190 (a-c))

The District property was recently discovered to contain an old disposal site. The Site is named the Etiwanda Disposal Site 36-CR-0021. The Disposal Site and extent of waste has been mapped by Ninyo & Moore. This mapping is included in this Waste Management Plan (See page 17). Recently, the District placed a fill of clean dirt of various depths over the dumping areas within the disposal site. This disposal site was pre-January 1st, 1988 (pre-regulation) but our goals are always to comply with those regulations wherever practical or feasible.

Bridge construction will not occur within any known or mapped areas of waste. It will occur within existing Victoria Avenue and under channel walls. The bridge is not in the vicinity of the cover that was placed two years ago. This plan is prepared in the unlikely event something is encountered. We did not encounter anything during the sewer excavation earlier.

Allard Engineering has prepared plans to build a Pedestrian Bridge through the northeastern corner of the Etiwanda Disposal Site 36-CR-0021, The Bridge completely avoids the mapped waste footprint of the Site. The Bridge will be constructed on the north eastern corner of the 16-acre District property and is

about 300 feet, to the east of the outline of any known dumping activity. The Plan is included in this report.

Landfill monitoring probes may fall within the vicinity of the access easement. If they are found within the influence of any construction or staging, they will not be disturbed without permission.

The purpose of this Plan is to assure that the Bridge construction and easement be consistent with current ideas and not preclude any future closure plans. After meetings with the San Bernardino County Flood Control District, Department of Public Health – San Bernardino County LEA, and CalRecycle, it was determined that the distance from the disposal area was an ideal way to assure this. The Plan and Conditions for the ongoing Maintenance are attached to this report and will only apply to the dedicated ingress and egress access easement that Tri Point is purchasing. Our objective is to comply with the goals of section 21190 of Title 27 CCR where feasible and/or practical.

1.1 Regulatory Requirements

This maintenance plan for our pre-regulation's disposal site has been developed to comply with and meet the goals of Title 27 CCR 21190 regulations where feasible and/or practical.

- **CEQA:** Review for compliance with the California Environmental Quality Act (CEQA) was conducted. It was determined that the activities are not considered a " project " as defined in section 15378 of CEQA Guidelines and no further environmental analysis is necessary.
- **Project Layout:** (27 CCR 21190 (a-c)) Building a Bridge and Graded access easement adjacent to existing Flood Control Channel. Quarterly logbooks will be kept for monitoring physical and environmental changes. Pre and post storm reports will also describe if there is any erosion control or drainage issues that need to be addressed.

1.2

Environmental Monitoring and Control Systems: (27 CCR 21190 (a), (d)) this proposed easement may from time to time have soil gas probes. that will not be disturbed pre or post construction.

- **Structures:** (27 CCR 21190 (c-g)) No structures other than the Bridge Widening will be built on proposed access easement roadway.
- **Pilings:** (27 CCR 21190 (e) (6-7)) Any posts, e.g., fence, fire lane signs, monument signs will be placed in no less than 6 inches of clean fill dirt above existing disposal site.
- **Modification or Replacement of low permeability layer:** (27 CCR 21190 (d)) This Site is not required to have a low permeability layer. Allard Engineering has drawn plans which avoids any refuse areas.

- **Land Use on Final Cover:** (27 CCR 21190 (a-c)) Land use plan was reviewed by Solid Waste Management Division (SWMD) and the Local Enforcement Agency (LEA). Notice of potential settling was discussed. The location of the Bridge away from buried waste assures suitability in maintaining the original integrity of the access easement.
- **Waste and Final Cover:** The waste and final cover are currently undisturbed and shall remain that way. If they get disturbed or if any disturbance is noticed, notify LEA, SWMD and correct the situation ASAP.
- **Construction Equipment:** Special care shall be exercised to assure that construction equipment does not disturb any existing gas probes during construction or ongoing maintenance. Probes will be clearly identified on the plans and adequately marked for all to see.
- **Equipment Storage:** Equipment storage area shall be approved by the District. The storage area shall not be placed in a location that would disturb any Disposal Area, destroy drainage, or create ponding.
- **Time Frame/Site Security during Construction:** Contractor is expected to provide a schedule prior to start of construction. Schedule will address site security during construction. The public will not have access to any construction activity. Construction is expected to occur over a 3 – 6-month period.

2. RESPONSIBLE PARTIES FOR MAINTENANCE

2.1 Responsibilities

Upon completion of the road, Tri Pointe Homes will ensure that the access easement be kept and maintained to its original integrity (See Proposed Plans & Specifications prepared by Allard Engineering. Tri Point Homes will complete inspections every 3 months to be always kept in a logbook within the Construction Trailer available for review. Tri Pointe Homes will also perform inspections before and after all storms to check for possible storm damage. Tri Pointe will use Post Closure checklist form provided below (See Post Closure Land Use Maintenance Checklist/Incident Report page 13). Any notated incidents will be repaired within 30 days. In the case of a mitigation spanning over 30 days, Tri Pointe will provide proper time schedule and incident report to the LEA, CalRecycle and the SWMD.

After completion of the Development and acceptance by the City of Fontana, maintenance responsibilities for the Bridge, access road, and access easement will be assigned to the City of Fontana. The City will then be responsible for all inspections and maintenance activities related to their impacts to the disposal site.

- A SWPP (Storm Water Prevention Plan) along with BMP (Best Management Practices) will be in place during grading and construction to minimize any water runoff pre- and post-construction.

2.2 Inspection Responsibilities and Frequencies

- The access easement will be monitored every 3 months and any repairs to fencing or erosion due to rains will be made quickly and will return to original condition as per the improvement. (See Proposed construction Plan and Allard Engineering Bridge Plans pages). Any repairs that will take more than 30 days, the site owner will contact LEA and SWMD, and provide a schedule for repairs.
- Area to be kept clean and clear of trash and debris.
- Area to be completely accessible to County Staff for inspections.
- Tri Pointe Homes understands that an easement access roadway on a disposal site may be subject to differential settlement and if it occurs, it will be our responsibility to fix.
- Access to the site will be at a location designated by the District. Access will not occur through any mapped disposal areas.
- Equipment Storage during maintenance shall be approved by the District and not in a location that would disturb and Disposal Area, destroy drainage, or create ponding
- If a repair or maintenance is due to an emergency that could affect waste, LEA and the District shall be notified ASAP.
- Pre and post storm inspections will be performed on the same checklist provided below. (Please see Post Closure Land Use Plan Checklist and Incident Location Map)
- This Post Closure Land Use Plan is specifically written for only the access easement location being purchased by Tri Pointe Homes.

General phone numbers and addresses for parties involved:

Solid Waste Management Division
222 W. Hospitality Lane, Second Floor
San Bernardino, CA 92415-0017
Phone: (909) 386-8701 M-F 8am-5pm
Contact:
Chief Engineer
Superintendent of Operations

Local Enforcement Agency
County of San Bernardino
Div. of Environmental Health Services
385 N Arrowhead Ave, 2nd Floor
San Bernardino, CA 92415-0160
Phone: (800) 442-2283

City of Fontana
Public Works
8353 Sierra Avenue
Fontana CA 92335

Tri Pointe Homes
5 Peters Canyon Road
Suite 100
Irvine, CA 92606
Office: 949-478-8657

3. WASTE MANAGEMENT PLAN

3.1 Introduction

The purpose of the Waste Management Plan (WMP) is to discuss the procedures for the unlikely event that waste is encountered during excavation or construction of the Bridge. The excavation is occurring several hundred feet from the Mapped Refuse.

3.2 Preparedness Plan

If Waste is encountered during any facet of the work including excavation, construction, or cover operation, the contractor shall ensure that the materials are excavated and segregated on an impermeable material (pavement, visqueen, etc.) and covered to prevent migration of the stockpiled material prior to characterization and disposal. If the contractor has someone on staff that can monitor for landfill debris or sooty or otherwise stained soils that person should do the monitoring. If the contractor does not have personnel who can identify landfill debris or impacted soil, then the contractor should hire an environmental consultant to monitor for impacted soil and debris during excavation.

3.3 Waste Types

Based on available background data and observations from trenching activities performed by Ninyo Moore, the following types of wastes may be encountered during Project activities:

- Burned wastes
- Non-hazardous wastes/debris (i.e., metal cabling, wood, etc.).

3.4 Segregation and Stockpiling

Should potentially contaminated or hazardous materials be encountered during Project activities, the Contractor will secure the services of an appropriately licensed environmental consultant experienced with waste characterization with segregation prior to continuing further excavation activities in that area. The Contractor shall coordinate with the a hired experienced engineer/geologist to identify and segregate into temporary stockpiles, the following types of materials, which may be encountered during the course of the Project:

- **Burned Wastes** – the residual wastes that result from the burning and/or partial burning of wastes. Burned wastes are typically characterized by darkly colored soils (black, brown- black and red) usually containing broken and/or melted/fused glass and other glass debris (bottle, containers), metal debris, and fused glass and metal debris, and may also contain ash.
- **Non-hazardous Debris/Recyclable Material** – generally consists of metal cabling, wood, concrete, asphalt, and brick.
- **“Clean” Soil** – Soil that is not suspected to be contaminated based on visual and/or field screening indicators. This material is considered suitable for on-

site re-use as backfill. Analytical testing to evaluate the soil for potential off-site reuse or disposal options may be required.

The Contractor will excavate, load, and transport the excavated materials to pre-determined location (see page 15), on-site stockpile staging areas. The staging area and the stockpiles will be managed by the Contractor in accordance with this document, the Contractor's Storm Water Pollution Prevention Plan (SWPPP), and Best Management Practices. The SWPPP when prepared will contain provisions for stockpiling of soils. The stockpiles shall be constructed and managed to minimize the threat of release of materials or contaminants from the stockpile. The stockpiling shall be performed in accordance with current SAM Manual guidelines and RWQCB regulations regarding the management of temporarily stockpiled materials. Contaminated substance, hazardous substance, and/or hazardous wastes shall not be stockpiled for more than 90 days from the date of starting the stockpile.

In general, the stockpiled materials will be:

- placed onto a visqueen surface, or on a 8-mil or thicker high density polyethylene (HDPE) liner,
- moistened to minimize dust emissions during stockpiling, as necessary,
- securely covered with an 8-mil or thicker HDPE liner to minimize vapor emissions and prevent runoff from rain,
- configured in such a manner that surface water runoff from the stockpile does not carry stockpile material and/or leachate beyond the stockpile perimeter berm, and
- physically labeled in such a way as the type of wastes can be easily identified.

3.5 Waste Management

It is expected that all materials can be reconsolidated at a pre-approved location within the disposal site.

3.6 On-Site Reconsolidation

As approved by LEA, materials may be reconsolidated at a pre-approved location within the Disposal Site. The following sections describe the policies and procedures to guide the Project team in characterizing materials into appropriate categories for on-site reconsolidation. Stockpile sampling, analytical testing, and air monitoring shall be the responsibility of the Contractor and will be conducted in general accordance with the Department of Toxic Substances Control (DTSC) Protocol for Burn Dump Site Investigation and Characterization and SAM Manual. Prior to reconsolidation, a brief letter or technical memorandum (document) will be prepared indicating the proposed location of the on-site reconsolidation and the analytical results of the materials planned to be reconsolidated. This document will be submitted to the LEA for their approval. Sampling will be done on site by the contractors environmental consultant. Sampling reports expected to be submitted within a week.

3.7 Material Stockpile Characterization

Discrete samples shall be collected to characterize each of the material stockpiles designated for on-site reconsolidation. A minimum of four samples for each waste type is required for on-site reconsolidation. Samples shall be collected at random locations / depths from each stockpile into laboratory-supplied containers.

3.8 On-Site Reconsolidation Activities

The reconsolidation area shall be at a location within the Site (See Page 15). Final location to be chosen based on consultation with SWMD. The reconsolidation area will be pre-approved by the LEA. A minimum of a 1-foot thick layer of soil separating the existing material and the relocated material shall be established.

The material will be transported to the approved reconsolidation location by the Contractor. The material will be loaded and transported in such a manner as to minimize the potential for spillage and creation of dust during transport. The Contractor will use dozers or equivalent for compaction of reconsolidated material.

Reconsolidated material will be covered at the end of each working day with a minimum of 6 inches of compacted clean soil. Removal and loading of material will not be conducted when wind speed is consistently greater than 15 mph or when wind gusts exceed 25 mph, unless directed by the LEA or other regulatory agencies.

The final cover in the reconsolidation area will consist of a 3-foot thick minimum cover that will be graded in a manner to provide the appropriate drainage. Post-closure activities will be performed in general accordance with California Code of Regulations, Title 27, state minimum standards, as applicable.

3.9 Inspections

As applicable, the Contractor will conduct inspections of the stockpiled materials. The inspection results will be recorded on a daily inspection form and signed daily by the Site Superintendent. The following waste management inspection activities will be performed: formal inspections of accumulation areas will be conducted and documented weekly, in accordance with 40 CFR 264 Subpart I and Title 22 CCR Section 66264;

Material accumulation areas will be informally inspected on a daily basis; and

Material stockpiles will be inspected daily to ensure liners are in-place, the stockpiles are adequately covered, and the covers are sufficiently secured.

3.10 Documentation

Documentation requirements will apply to all materials managed during the Project. The Contractor will be responsible for recording waste generation activities in a daily log. The following information will be recorded in the log:

description of waste generating activities,

locations of waste generation (including depth, if applicable),

types and volumes of wastes generated,

date and time wastes were generated,

an estimate of the volume of material in each stockpile,

- a plot plan identifying the stockpile locations and types of materials,
- for on-site reconsolidation, a plot plan indicating waste placement location and volume of reconsolidated materials, and
- an accounting of the materials transported and disposed offsite, including the name and location of the disposal facility, manifest/bill of lading number, date transported from the site, date received at disposal facility, waste type, and weight tickets.

Following completion of waste disposal / reconsolidation activities, the Contractor will submit a report summarizing compliance with the Waste Management Plan. The report will include documentation regarding the volumes and types of wastes generated and disposition during implementation of the Project. This report will be submitted within 30 days of completion of the project to LEA.

3.11 UPDATING THE WASTE MANAGEMENT PLAN

As necessary, the WMP will be updated as changes in remedial site activities or changes in applicable regulations occur.

LANDFILL OBSERVATIONS/CLOSED SITE MAINTENANCE CHECKLIST

Date of inspection: _____ Name: _____ Site: Etiwanda Disposal Site

A. PERIMETER STATION

Map Symbols									
Liquid/Seepage	LS	None	☐	Staining	☐	Flowing	☐	Ponding	☐
Odors	O	None	☐	Present	☐				
Erosion	E	None	☐	Rilling(l)	☐	Rivuleted Slopes (2)	☐	Scour (3)	☐
Illegal Dumping	ID	None	☐	Present	☐	Weight	☐		
Fence Repair	FR	None	☐	Present	☐	Location		see map on reverse	
Erosion/BMP	E	None	☐		☐	Location		see map on reverse	

B. Landfill Surfaces

Odors	O	None	☐	Staining	☐	Location	see map on reverse
Exposed Refuse	ER	None	☐	Present	☐		see map on reverse
Erosion/BMP Repair	E	None	☐	Present	☐	Rivuleted Slopes (2)	Scour (3) ☐
Differential Settlement	DS	None	☐	Rilling	☐	Location	see map on reverse
Vegetation Clean Up drainage system	V	None	☐	Present	☐	Location	see map on reverse
Repair/Clean Up	DR	None	☐	Present	☐	Location	see map on reverse
Cover Integrity	CI	None	☐	Issue e	☐	Location	see map on reverse
Grading	G	None	☐	Insufficient	☐	Location	see map on reverse
Slope	S	None	☐	Insufficient	☐	Location	see map on reverse
Roads/Benches	RD	None	☐	Issue	☐	Location	see map on reverse

Note Locations on Map Using Symbols

General Comments: _____

Action to Be Taken: _____

Dimensions of Erosion: - - - - -

(1) Rolling is minor erosion that can be repaired by track -walking the impacted area without placement of additional cover.

(2) Rivulet Slopes are moderate erosions that can be repaired by addition of clean fill in conjunction with track-walking.

(3) Scour is major erosion that may extend to the depth of refuse and requires substantial efforts to repair; including, but not limited to addition of clean cover and extended use of heavy machinery.

Date of Inspection: _____

Name: _____

Stratham Homes

CITY INDEX NO. 6219



LEGEND

NINYO & MOORE, 2016

TRENCH, WASTES NOT OBSERVED

TRENCH WITH BURNED WASTES

TRENCH WITH WASTE DEBRIS

WASTE EXTENT, QUERIED WHERE APPROXIMATE

LEIGHTON & ASSOCIATES, 2014

TEST PIT, WITH WASTES (ASSUMED BURNED WASTES BASED ON INTERPRETING TEST PIT LOGS), PRIMARILY GLASS AND METAL DEBRIS (LEIGHTON, DECEMBER 2014)

TEST PIT, PRIMARILY CONCRETE, GLASS & METAL DEBRIS (LEIGHTON, DECEMBER 2014)

TEST PIT, WASTES NOT OBSERVED (LEIGHTON, DECEMBER 2014)

TEST PIT / TRENCH ID

DEPTH OF WASTES

WASTE THICKNESS

SITE BOUNDARY

GEOPHYSICAL SURVEY SOUTHWEST GEOPHYSICS INC. EM-31 IN-PHASE DATA (2014)

GEOPHYSICAL ANOMALIES, SPECTRUM GEOPHYSICS, 2016

IN-PHASE

QUADRATURE

QUADRATURE & IN-PHASE

SOURCES: TEST PIT LOCATION MAP, LEIGHTON, DATED DECEMBER, 2014; GOOGLE EARTH, 2016

CITY INDEX NO. 6219



Ninyo & Moore		SITE MAP WITH GEOPHYSICAL OVERLAYS AND ESTIMATED EXTENT OF WASTES	FIGURE 4
PROJECT NO.	DATE		
209590001	12/16	ETIWANDA WASTE DISPOSAL SITE FONTANA, CALIFORNIA	

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY OF FONTANA STANDARD PLANS, THE CONTRACT PROVISIONS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREEN BOOK"). ALL REFERENCE SPECIFICATIONS AND STANDARDS SHALL BE THE LATEST EDITION UNLESS OTHERWISE NOTED.
- WHEN A TECHNICAL CONFLICT IS FOUND TO EXIST IN THE CONTRACT DOCUMENTS THAT CAN NOT BE RESOLVED BY REFERENCE TO PRECEDENCE PROVISIONS IN THE "GREEN BOOK", THE CONTRACTOR SHALL IMMEDIATELY REPORT SAID CONFLICT TO THE CITY ENGINEER FOR RESOLUTION.
- ALL MATERIALS AND METHODS ARE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
- CONSTRUCTION PERMITS SHALL BE OBTAINED FROM THE CITY OF FONTANA COMMUNITY DEVELOPMENT DEPARTMENT, ENGINEERING DIVISION PRIOR TO THE START OF ANY WORK. INSPECTION COORDINATION SHALL BE REQUESTED AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY WORK IN PUBLIC RIGHT-OF-WAY WITHIN THE CITY LIMITS. CALL (909) 350-7610.
- THE CONTRACTOR SHALL CONFORM TO ALL TRAFFIC CONTROL POLICIES, METHODS AND PROCEDURES DESCRIBED IN THE STATE OF CALIFORNIA MANUAL OF TRAFFIC CONTROLS, LATEST NON-METRIC EDITION UNLESS OTHERWISE DIRECTED BY THE CITY TRAFFIC ENGINEER.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN BARRICADES, DELINEATORS OR OTHER TRAFFIC CONTROL DEVICES AT ALL TIMES.
- THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM EXCAVATION OR TRENCH WORK FOR TRENCHES 5 FEET OR GREATER IN DEPTH FROM THE CALIFORNIA STATE DIVISION OF INDUSTRIAL SAFETY.
- THE WALLS AND FACES OF ALL EXCAVATIONS GREATER THAN FIVE (5) FEET IN DEPTH SHALL BE GUARDED BY SHORING, SLOPING OF THE GROUND OR OTHER APPROVED MEANS PURSUANT TO THE REQUIREMENTS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. TRENCHES LESS THAN FIVE (5) FEET SHALL ALSO BE GUARDED WHEN THE POTENTIAL FOR GROUND MOVEMENT.
- NO MATERIAL OR EQUIPMENT SHALL BE STORED IN THE PUBLIC RIGHT-OF-WAY WITHOUT OBTAINING A SEPARATE PERMIT FOR THAT PURPOSE.
- THE LOCATIONS OF UTILITIES SHOWN HAVE BEEN DETERMINED FROM AVAILABLE INFORMATION. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE, IN THE FIELD, THE TRUE LOCATION AND ELEVATION OF ANY EXISTING UTILITIES, AND TO EXERCISE PROPER PRECAUTION TO AVOID DAMAGE THEREOF. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT 1-800-227-2600 TWO WORKING DAYS BEFORE EXCAVATION.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH ALL UTILITY COMPANIES INCLUDING, BUT NOT LIMITED TO, GAS, TELEPHONE, ELECTRIC, CABLE TELEVISION, LANDSCAPING, LANDSCAPE IRRIGATION, DOMESTIC WATER, RECLAIMED WATER, SEWER, STORM DRAIN, FLOOD CONTROL, AND CALTRANS. ALL UTILITY COMPANIES SHALL BE GIVEN TWO WORKING DAYS NOTICE PRIOR TO WORK AROUND THEIR FACILITIES.
- THE CONTRACTOR SHALL NOT OPERATE ANY FIRE HYDRANT OR WATER MAIN VALVES WITHOUT APPROPRIATE AGENCY AUTHORIZATION. CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE WATER COMPANY FOR VALVE OPERATION AND WATER REQUIREMENTS.
- CURVE DATA REFERS TO THE FACE OF CURB.
- STATIONING REFERS TO THE CENTERLINE OF STREETS EXCEPT WHERE OTHERWISE NOTED.
- ADEQUATE CONSTRUCTION CONTROL STAKES SHALL BE SET BY THE ENGINEER TO ENABLE THE CONTRACTOR TO CONSTRUCT THE WORK TO THE PLAN GRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF BENCHMARKS AND CONSTRUCTION CONTROL STAKING DURING CONSTRUCTION.
- THE CONTRACTOR SHALL NOT DISTURB EXISTING SURVEY MONUMENTS, MONUMENT TIES OR BENCHMARKS WITHOUT PRIOR NOTIFICATION TO THE CITY ENGINEER.
- REMOVAL AND REPLACEMENT OF EXISTING SURVEY CONTROL, INCLUDING SURVEY MONUMENTS, MONUMENT TIES AND BENCHMARKS, SHALL BE DONE BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR. SURVEY MONUMENTS THAT WILL BE DESTROYED AS A RESULT OF THIS CONSTRUCTION SHALL BE REPLACED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE WEEK PRIOR TO CONSTRUCTION SO THAT TIES TO MONUMENTS CAN BE ESTABLISHED FOR LATER REPLACEMENT OF THE MONUMENT.
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR LOCAL RESIDENTS AND BUSINESSES AT ALL TIMES. A MINIMUM 12 FOOT LANE SHALL BE MAINTAINED AT ALL TIMES IN THE CONSTRUCTION AREA FOR RESIDENTS AND EMERGENCY VEHICLES.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN EFFECTIVE MEANS OF DUST CONTROL, INCLUDING ADEQUATE WATERING, AT ALL TIMES.
- ALL GRADING OPERATIONS SHALL BE DISCONTINUED WHEN SUSTAINED WIND VELOCITIES EXCEED 25 MILES PER HOUR.
- THE CONTRACTOR SHALL NOT CAUSE ANY EXCAVATED MATERIAL, MUD, SILT OR DEBRIS TO BE DEPOSITED ONTO PUBLIC OR PRIVATE PROPERTY ADJACENT TO THE RIGHT-OF-WAY DURING CONSTRUCTION WITHOUT PRIOR WRITTEN APPROVAL.
- NO TRENCH BACKFILL SHALL TAKE PLACE WITHOUT PRIOR APPROVAL OF THE CITY INSPECTOR.
- A GEOTECHNICAL ENGINEER SHALL CERTIFY ALL BACKFILL COMPACTION. FAILURE TO OBTAIN THE REQUIRED DENSITY SHALL REQUIRE RE-WORKING OF THAT PORTION OF THE WORK UNTIL THE SPECIFIED DENSITY IS OBTAINED.
- CARE SHOULD BE TAKEN TO PREVENT GRADES, DITCHES, AND SWALES FROM UNDERMINING STREET IMPROVEMENTS. UPON INSPECTION OF THE SITE, THE CITY ENGINEER MAY REQUIRE TEMPORARY NON-ERODABLE SWALES ENTERING OR LEAVING IMPROVEMENTS.
- THE FINAL LOCATION AND WIDTH OF DRIVEWAY APPROACH APRONS SHALL BE APPROVED AT THE TIME OF CONSTRUCTION AND SHALL CONFORM TO THE CITY OF FONTANA STANDARD DETAILS.
- ALL EXPOSED CONCRETE SURFACES SHALL CONFORM IN GRADE, COLOR AND FINISH TO MATCH EXISTING CONCRETE.
- THE SEWER CONTRACTOR SHALL STAMP AN "S" IN THE FACE OF THE CURB AT THE LOCATION OF THE SEWER LATERAL.

- NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAVE BEEN PLACED, INSPECTED AND APPROVED.
- ALL UNDERGROUND UTILITIES SHALL BE INSTALLED, TESTED AND APPROVED PRIOR TO PAVING OF STREETS.
- APPROVED SOIL STERILANT IS REQUIRED UNDER ALL NEW ASPHALT PAVEMENT PRIOR TO PLACEMENT.
- PAVEMENT STRUCTURAL SECTIONS SHOWN ARE MINIMUM AND SUBJECT TO REVISION AND APPROVAL OF THE CITY ENGINEER AS DETERMINED BY SOILS TESTS TAKEN AFTER COMPLETION OF ROUGH GRADING.
- ACTUAL THICKNESS OF A.C. PAVEMENT AND/OR BASE COURSE MATERIAL FOR STRUCTURAL STREET SECTIONS SHALL BE RECOMMENDED BY A GEOTECHNICAL REPORT AND SUBMITTED TO THE CITY OF FONTANA FOR APPROVAL UPON COMPLETION OF ROUGH GRADING.
- ALL MANHOLES, CLEANOUT FRAMES, COVERS AND VALVE BOXES SHALL BE RAISED TO FINISHED GRADE BY THE PAVING CONTRACTOR UPON COMPLETION OF PAVING.
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL RESTORE ALL SIGNING, STRIPING, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
- CONTRACTOR SHALL RELOCATE AND/OR REPLACE LANDSCAPING, SPRINKLERS AND SIDEWALKS AFFECTED BY THE CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER.
- AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER OF RECORD, WHO SHALL PROVIDE RECORD DRAWINGS TO THE CITY ENGINEER.

CITY OF FONTANA, UTILITY NOTIFICATION LIST

CITY OF FONTANA 8353 SIERRA AVE FONTANA, CA 92335 (909) 350-6632	AT&T 22311 BROOKHURST ST SUITE 203 HUNTINGTON BEACH, CA 92646 (714) 963-7964
SO. CALIF. GAS COMPANY 1981 W. LUGONIA AVE REDLANDS, CA 92374 (909) 335-7967 EMERGENCIES: (800) 427-2200	SPRINT 2582 DUPONT DR IRVINE, CA 92612 (800) 659-9698
SO. CALIF. EDISON COMPANY 300 N. PEPPER AVE RIALTO, CA 92376 (909) 820-1509 - UNDERGROUND (909) 875-5100 - TRANSMISSION (213) 637-1233 - PIPELINES (909) 367-6505 - DISTRIBUTION	TIME WARNER CABLE 1500 AUTO CENTER DR ONTARIO, CA 91761 (909) 975-3439
CUCAMONGA VALLEY WATER DISTRICT PHONE: (909) 987-2591	SUNESYS, LLC 1325 PICO ST #106 CORONA, CA 92681 (951) 278-0400
FRONTIER COMMUNICATIONS PHONE: (877) 908-1288	UNDERGROUND SERVICE ALERT (800) 422-4133
REFUSE BURTEC DISPOSAL PHONE: (909) 987-3717	TIME WARNER/ADELPHIA PHONE: (888) 892-2253
	CHARTER COMMUNICATION (866) 499-8080
	SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT (909) 387-7910

SOILS ENGINEER

LEIGHTON AND ASSOCIATES INC.
10532 ACACIA STREET SUITE B-6
RANCHO CUCAMONGA CA. 91730-5455
(909) 484-2205

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT ON RECORD OR NOT SHOWN ON THESE PLANS.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, HE WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

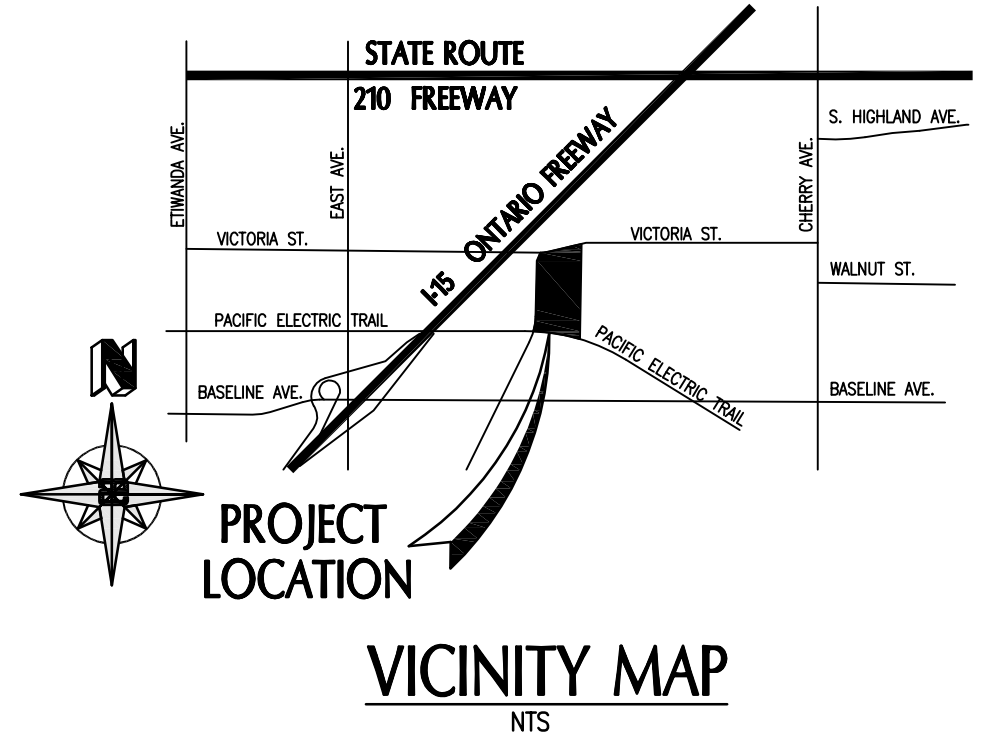
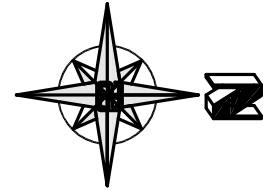
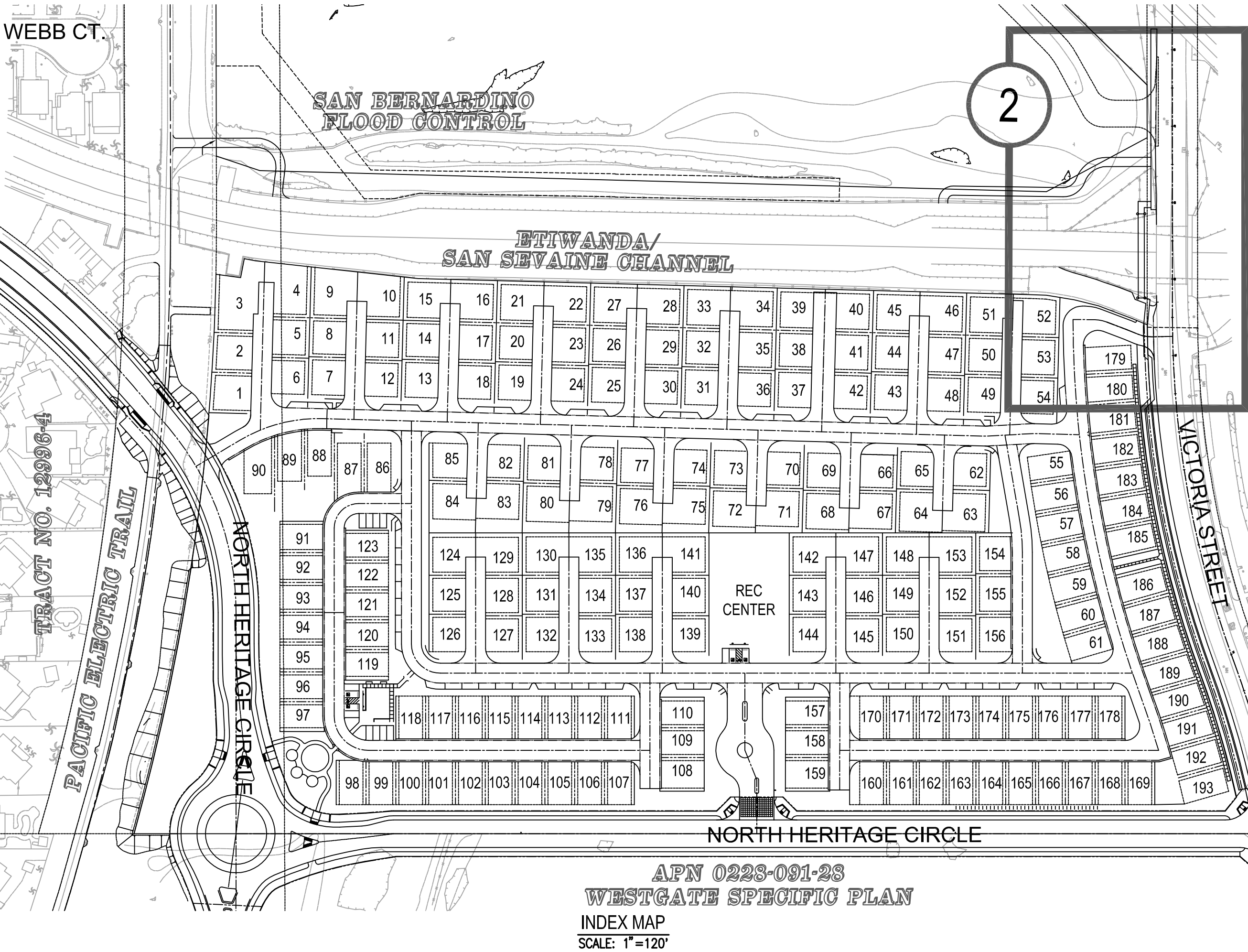
UNAUTHORIZED CHANGES AND USES:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CONSTRUCTION STAKING NOTICE

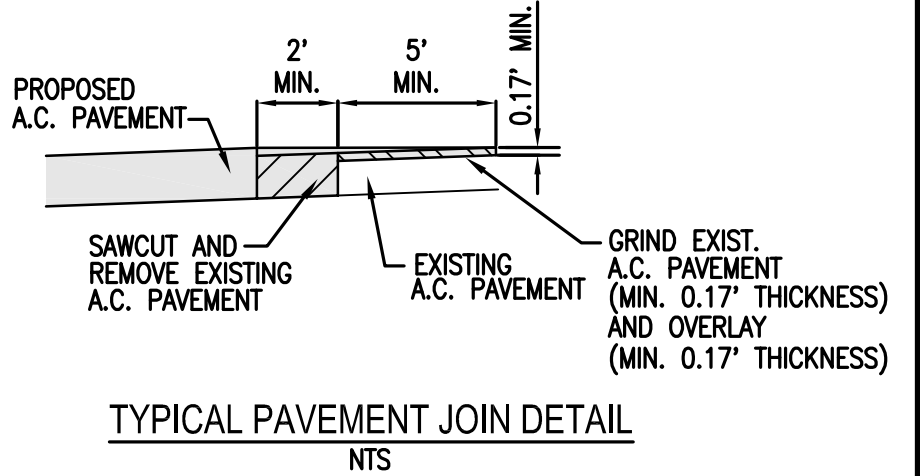
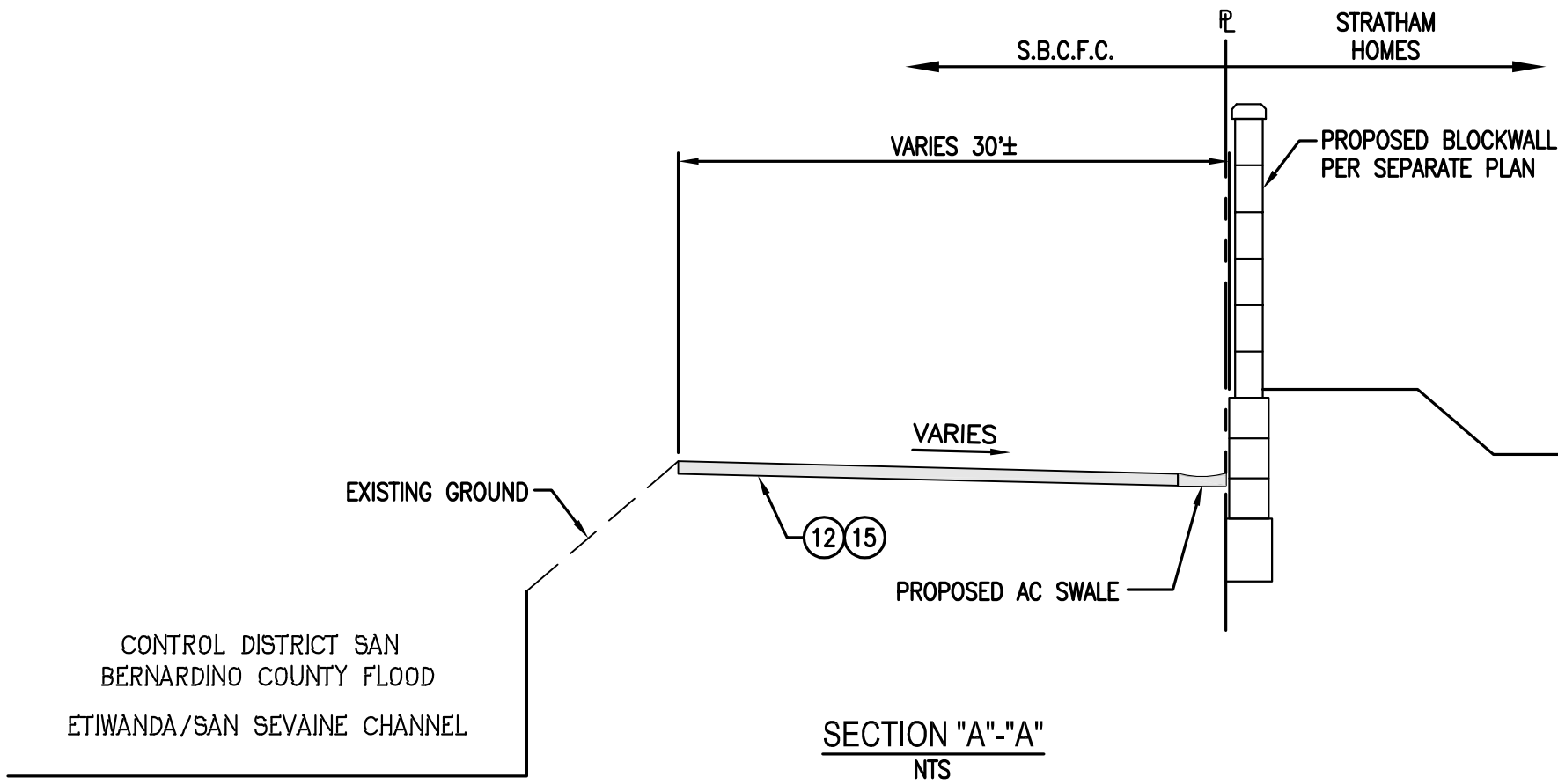
THESE IMPROVEMENT PLANS HAVE BEEN PREPARED WITH THE INTENT THAT THE FIRM OF ALLARD ENGINEERING WILL BE PERFORMING THE CONSTRUCTION STAKING FOR THE COMPLETE PROJECT. IF, HOWEVER ANOTHER ENGINEERING AND/OR SURVEYING FIRM SHOULD BE EMPLOYED TO USE THESE PLANS FOR THE PURPOSE OF CONSTRUCTION STAKING, NOTICE IS HEREBY GIVEN THAT THE FIRM OF ALLARD ENGINEERING INCORPORATED WILL NOT ASSUME ANY RESPONSIBILITY FOR ERRORS OR OMISSIONS, IF ANY, WHICH MIGHT OCCUR AND WHICH COULD HAVE BEEN AVOIDED, CORRECTED OR MITIGATED IF ALLARD ENGINEERING COMPANY HAD PERFORMED THE STAKING WORK.

CITY OF FONTANA
PEDESTRIAN BRIDGE IMPROVEMENT PLANS
TENTATIVE TRACT MAP NO. 20229



THE QUANTITIES SHOWN HEREON ARE ESTIMATES ONLY. THE CONTRACTORS SHALL PREPARE THEIR OWN QUANTITIES AND BID A COMPLETE JOB.

CONSTRUCTION NOTES	QUANTITIES
① - CONSTRUCT COMMERCIAL DRIVEWAY PER CITY STD. PLAN NO. 1002	257 SF
② - CONSTRUCT 4" PCC SIDEWALK PER CITY STD. PLAN NO. 1006	445 SF
③ - INSTALL SIGN VEHICLES PROHIBITED PER ATTACHED BRIDGE PLANS	2 EA
④ - REMOVE EXISTING CHAIN LINK FENCE	50 LF
⑤ - PROPOSED RAILING PER ATTACHED BRIDGE PLANS	85 LF
⑥ - CONSTRUCT BALLADS	2 EA
⑦ - CONSTRUCT BRIDGE, PER ATTACHED BRIDGE PLANS	1 EA
⑧ - CONSTRUCT A.C. PAVEMENT MATCH EXISTING	2,975 SF
⑨ - CONSTRUCT 6" CHAIN LINK FENCE PER S.B.C.F.C.D. BOUNDARY FENCING SPECIAL DRAWING I & II	30 LF
⑩ - JOIN EXISTING FENCE	4 EA
⑪ - CONSTRUCT CONCRETE RETAINING WALL PER ATTACHED BRIDGE PLANS	55 LF
⑫ - REMOVE EXISTING A.C. PAVEMENT AS NECESSARY	2,975 SF
⑬ - GRIND EXISTING A.C. PAVEMENT AND OVERLAY PER DETAIL ON SHEET 1	1,500 SF
⑭ - CONSTRUCT 6" PCC CURB ONLY PER CITY STD. PLAN NO. 1000	65 LF



LEGEND:

- PROPOSED AC PAVEMENT
- GRIND EXISTING AC AND OVERLAY
- SAWCUT AND REMOVE EXISTING AC PAVEMENT
- BRIDGE PAVEMENT

SHEET INDEX

SHEET 1	TITLE SHEET
SHEET 2	PLAN & PROFILE
SHEET 3-6	BRIDGE ABUTMENTS SPEC.'S AND DETAILS
SHEET 7-11	BRIDGE SPEC.'S AND DETAILS

BASIS OF BEARINGS:

LINE BETWEEN CITY OF FONTANA GPS CONTROL POINTS 20348 AND 21245.
BEING: N 44°58'51" E

BENCHMARK:

CITY OF FONTANA GPS CONTROL POINT NO. 20348, BRASS CAP AT THE SW COR. OF SECTION 33, IN THE MEDIAN OF BASELINE AVE.
ELEVATION : 1280.464

Prepared For:

STRATHAM HOMES, INC.

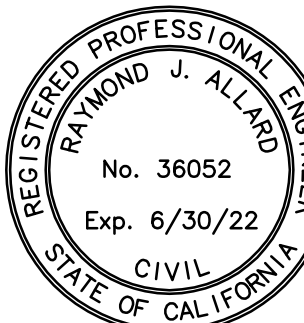
2201 DUPONT DRIVE, SUITE 300
IRVINE, CA 92612
PHONE:(949)833-1554

Prepared By:

ALLARD ENGINEERING

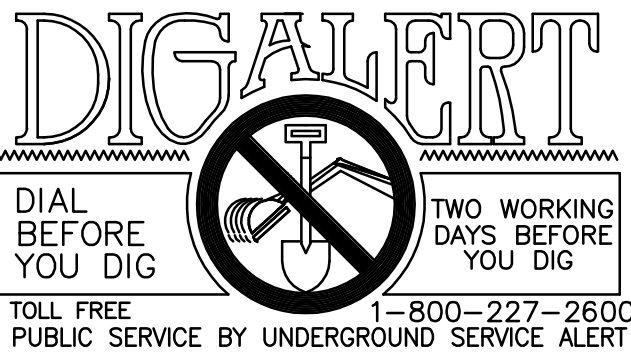
Civil Engineering - Land Surveying - Land Planning
16886 Seville Avenue
Fontana, California 92335
(909) 358-1815 Fax (909) 365-1795

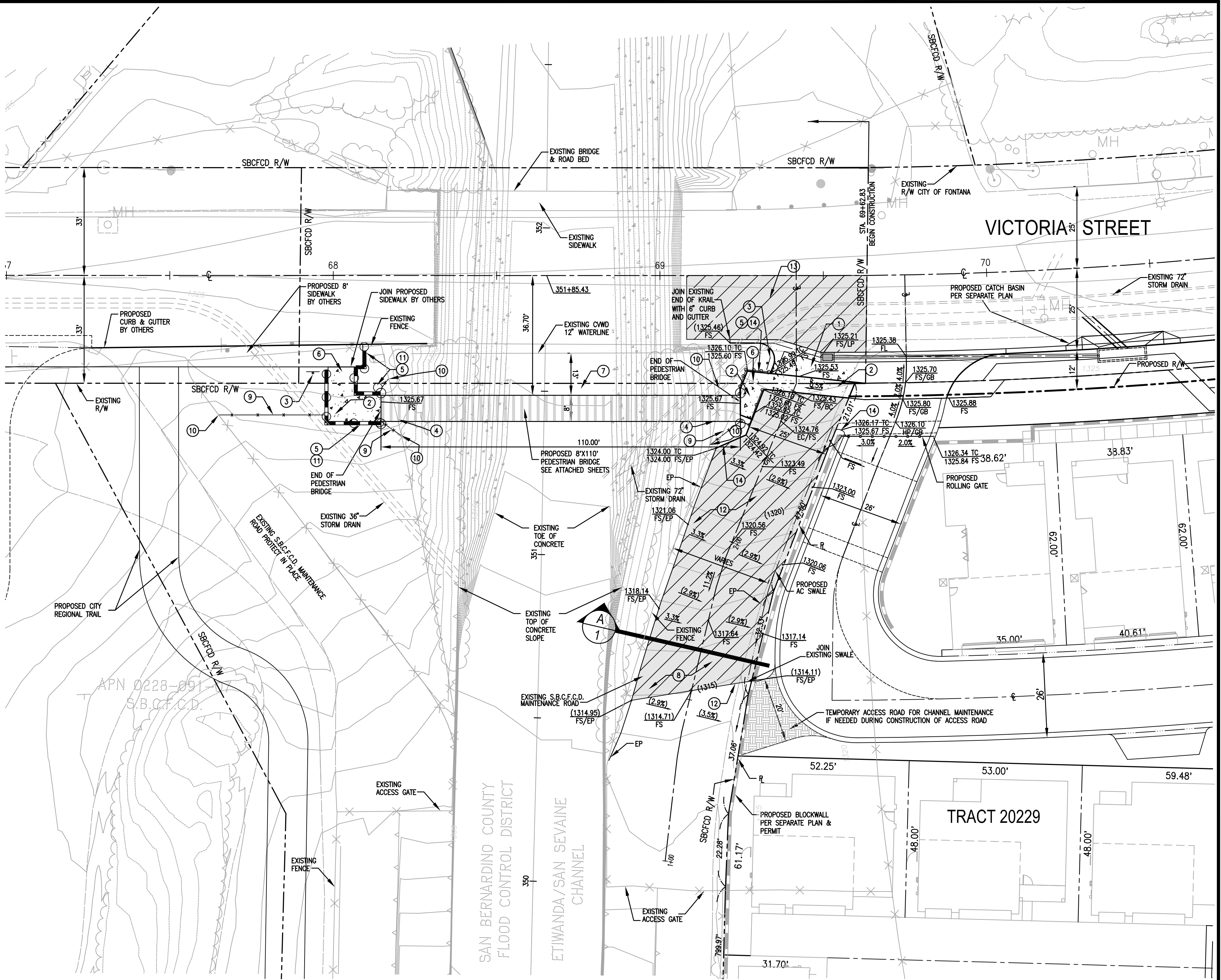
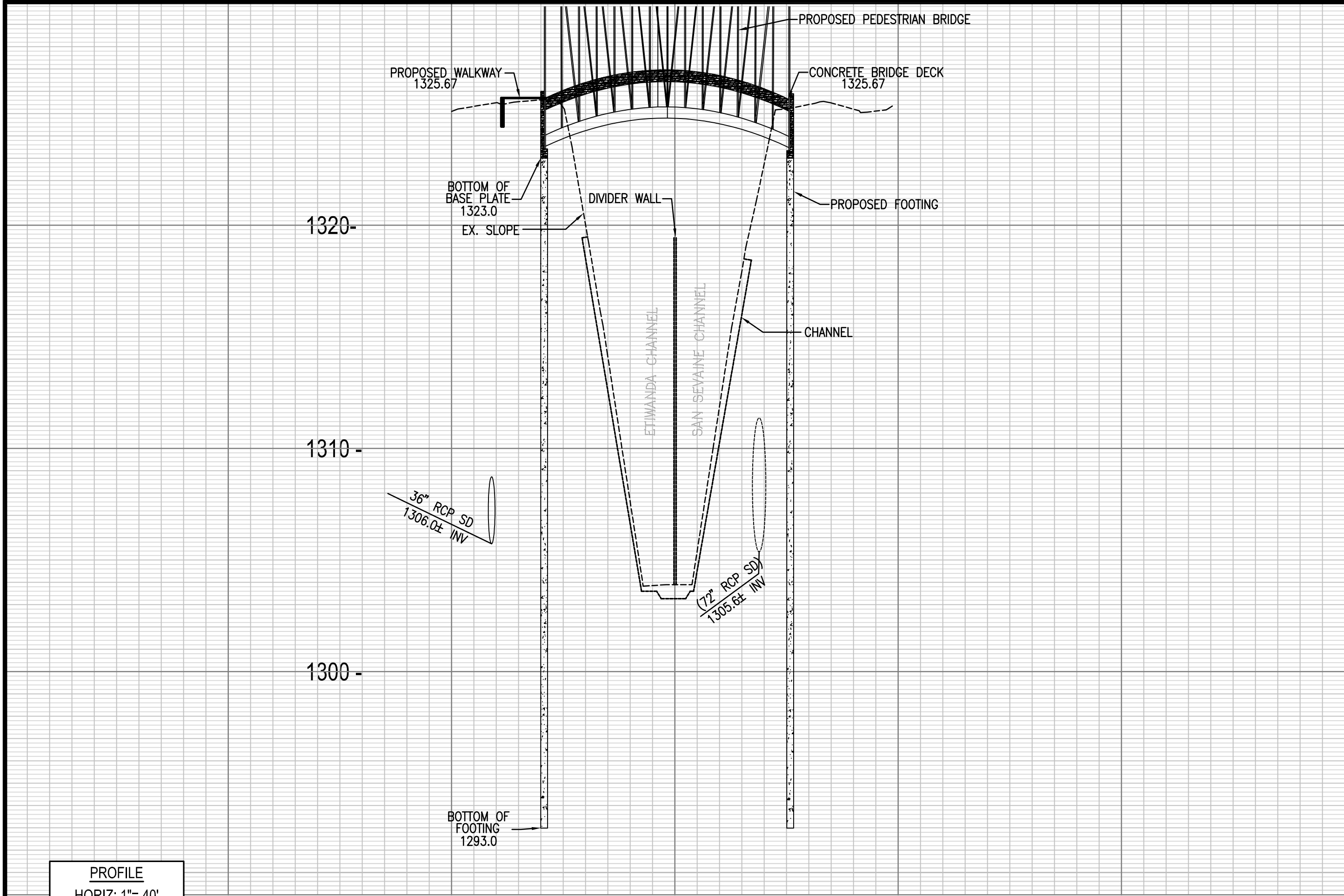
Raymond J. Allard
Raymond J. Allard, R.C.E. 36052
(expires 6/30/2022)



CITY OF FONTANA, CALIFORNIA
PEDESTRIAN BRIDGE IMPROVEMENT PLANS

DRAWN BY: CV	TRACT 20229	SCALE: AS NOTED
DESIGNED BY: RC	7010 NORTH HERITAGE CIRCLE	DATE: January, 2021
CHECKED BY: RJA	TITLE SHEET	DRAWING NO.: 1
APPROVED BY: CITY ENGINEER	DATE: R.C.E. 51152	2

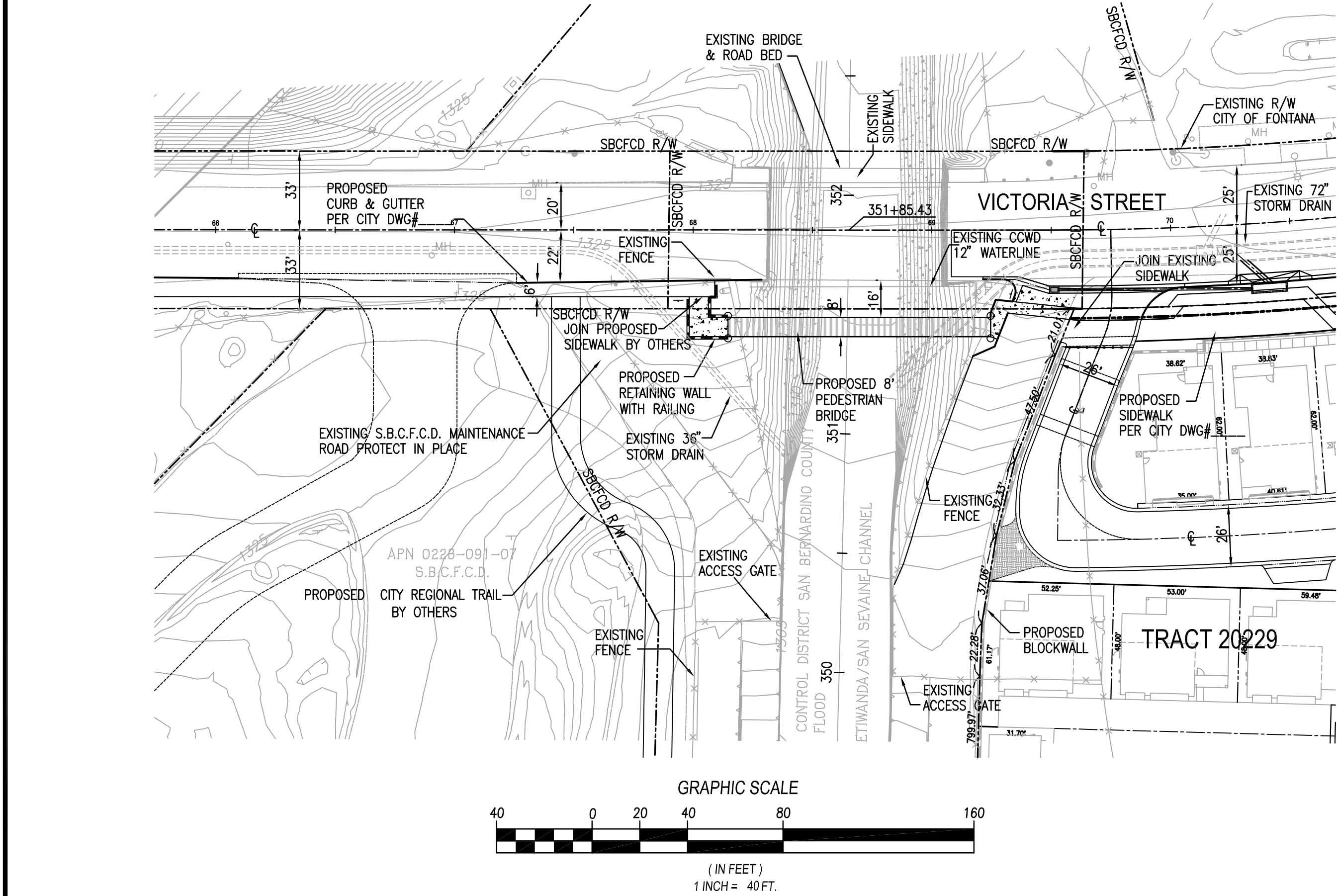
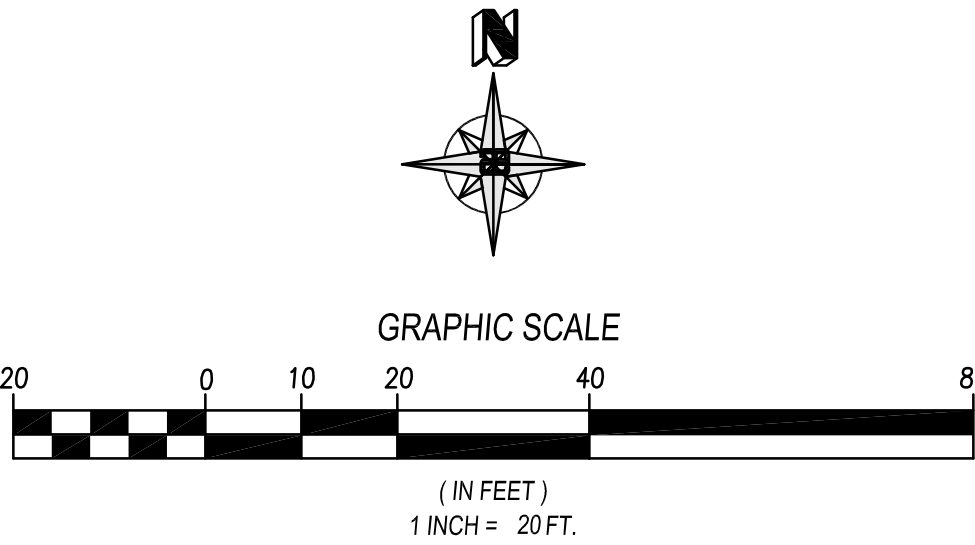




- NOTE:
- EXISTING CHAINLINK FENCING AND GATES TO BE REMOVED ON THE SOUTH SIDE OF VICTORIA STREET DURING CONSTRUCTION OF THE NEW SIDEWALK.
 - REPLACE IN KIND THE EXISTING CHAINLINK FENCE AND GATES ON THE SOUTH SIDE OF VICTORIA STREET BEHIND THE PROPOSED SIDEWALK.
 - INSTALL BALLADS AT THE DIRECTION OF PUBLIC WORKS INSPECTOR.

- LEGEND:
- PROPOSED AC PAVEMENT
 - GRIND EXISTING AC AND OVERLAY
 - SAWCUT AND REMOVE EXISTING AC PAVEMENT
 - BRIDGE PAVEMENT

- CONSTRUCTION NOTES
- CONSTRUCT COMMERCIAL DRIVEWAY PER CITY STD. PLAN NO. 1002
 - CONSTRUCT 4" PCC SIDEWALK PER CITY STD. PLAN NO. 1006
 - INSTALL SIGN VEHICLES PROHIBITED PER ATTACHED BRIDGE PLANS
 - REMOVE EXISTING CHAIN LINK FENCE
 - PROPOSED RAILING PER ATTACHED BRIDGE PLANS
 - CONSTRUCT BALLADS
 - CONSTRUCT BRIDGE, PER ATTACHED BRIDGE PLANS
 - CONSTRUCT A.C. PAVEMENT MATCH EXISTING
 - CONSTRUCT 6" CHAIN LINK FENCE PER S.B.C.F.C.D. BOUNDARY FENCING SPECIAL DRAWING I & II
 - JOIN EXISTING FENCE
 - CONSTRUCT CONCRETE RETAINING WALL PER ATTACHED BRIDGE PLANS
 - REMOVE EXISTING A.C. PAVEMENT AS NECESSARY
 - GRIND EXISTING A.C. PAVEMENT AND OVERLAY PER DETAIL ON SHEET 1
 - CONSTRUCT 6" PCC CURB ONLY PER CITY STD. PLAN NO. 1000



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REV.	REVISION DESCRIPTION	ENGR.	DATE	CITY	DATE

SHOULD CONSTRUCTION OF REQUIRED IMPROVEMENTS NOT COMMENCE WITHIN TWO YEARS OF THE DATE OF APPROVAL SHOWN HEREON AND CARRIED FORTH IN A DILIGENT MANNER, THE CITY ENGINEER MAY REQUIRE REVISIONS TO THE PLANS TO BRING THEM INTO CONFORMANCE WITH CONDITIONS AND STANDARDS IN EFFECT

Prepared For:
STRATHAM HOMES, INC.

2201 DUPONT DRIVE, SUITE 300
IRVINE, CA 92612
PHONE:(949)833-1554

BASIS OF BEARINGS:
LINE BETWEEN CITY OF FONTANA GPS CONTROL POINTS 20348 AND 21245.
BEING: N 44°58'51" E

BENCHMARK:
CITY OF FONTANA GPS CONTROL POINT NO. 20348, BRASS CAP AT THE SW COR. OF SECTION 33, IN THE MEDIAN OF BASELINE AVE.
ELEVATION : 1280.464

Prepared By:
ALLARD ENGINEERING
Civil Engineering - Land Surveying - Land Planning
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(909) 356-1815 Fax (909) 365-1795
Raymond J. Allard
Raymond J. Allard, R.C.E. 36052
(expires 6/30/2022)

CITY OF FONTANA, CALIFORNIA
PEDESTRIAN BRIDGE IMPROVEMENT PLANS

TRACT 20229

DRAWN BY: CV
DESIGNED BY: RC
CHECKED BY: RJA
APPROVED BY: _____
CITY ENGINEER
DATE: _____
R.C.E. 51152

SCALE: AS NOTED
DATE: January, 2021
DRAWING NO.: 2

PLOT DATE: January 18, 2021 delord

GENERAL STRUCTURAL NOTES

A. GENERAL

1. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPETENCE NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
2. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, LAGGING, SHORING, BRACING, FORMWORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS NOTED HEREIN IS NOT EXCEEDED.
3. DESIGN OF ITEMS NOT PART OF THE PRIMARY STRUCTURAL SYSTEM (SUCH AS STAIRS, RAILINGS, NON-STRUCTURAL WALLS) AND PREFABRICATED STRUCTURAL ITEMS (SUCH AS FLOOR, ROOF, TRUSSES) SHALL BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS. REFER TO SUBMITTALS SECTION FOR ITEMS THAT MUST BE SUBMITTED FOR REVIEW AND FOR SUBMITTAL REQUIREMENTS.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH ARCH'L DRAWINGS AND RESOLVE ANY DISCREPANCIES WITH THE ARCHITECT PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCH'L, MECH, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
5. TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.
6. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
7. STANDARDS AND CODE REFERENCES NOTED IN THESE CONSTRUCTION DOCUMENTS REFER TO THE EDITIONS ADOPTED BY THE BUILDING CODE SPECIFIED IN THE BASIS FOR DESIGN. REFERENCES NOT SPECIFICALLY ADOPTED BY SAID BUILDING CODE REFER TO THE LATEST EDITION.
8. ALL INSPECTIONS REQUIRED BY THE BUILDING CODES, JURISDICTION, OR THESE PLANS SHALL BE PROVIDED BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING DEPARTMENT. SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN INSPECTION.

B. BASIS FOR DESIGN

1. BUILDING CODE: 2019 EDITION OF THE CALIFORNIA BUILDING CODE AND 2009 AASHTO
2. BRIDGE LOADS: DEAD LOAD: LIVE LOAD: PER BRIDGE DRAWINGS 30 PSF
3. WIND LOADS: 129 MPH BASIC WIND SPEED EXPOSURE C COMPONENT AND CLADDING INTERNAL PRESSURE WIND PRESSURE PER ASCE7-16 COEFFICIENT (GCP1) = 0.18
4. SEISMIC LOADS: SITE CLASS D SEISMIC DESIGN CATEGORY D R = 125 S0 = 1211 S1 = 0.600 S0S = 1201 SD1 = 0.680
5. SNOW LOADS: NONE
6. RISK CATEGORY: RISK CATEGORY II SEISMIC IMPORTANCE FACTOR = 1.0
7. RAIN INTENSITY: 1.12"/HR (BASED ON 100-YR RAIN CYCLE)

C. FOUNDATION

1. FOUNDATIONS DESIGNED PER RECOMMENDATIONS BY LEIGHTON AND ASSOCIATES, INC., REPORT NO. 10215-009, DATED 08/24/2020. SITE PREPARATION, GRADING, TESTS, INSPECTIONS, FIELD OBSERVATIONS OR APPROVAL FROM THE GEOTECHNICAL ENGINEER RECOMMENDED BY THE GEOTECHNICAL REPORT AND ANY ADDENDA SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF FOUNDATIONS.
2. STRUCTURE TO BE FOUNDED ON DRILLED, CAST-IN- PLACE CONCRETE FRICTION PILES WITH A SKIN FRICTION UNIT OF 125 PSF/FT.
3. FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
4. TRENCHES AND EXCAVATIONS UNDER OR ADJACENT TO FOUNDATIONS SHALL BE PROPERLY BACKFILLED AND COMPACTED.
5. REFER TO GEOTECHNICAL REPORT FOR ON-SITE SOIL CORROSION POTENTIAL ON METAL CONSTRUCTION MATERIALS. CONSULT A QUALIFIED CORROSION ENGINEER FOR RECOMMENDATIONS FOR MITIGATING CORROSIVE EFFECTS, IF NECESSARY.

D. CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318 AND ACI 301, EXCEPT AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.
2. DUE TO SEVERE/VERY SEVERE SULFATE CONTENT OF THE ON-SITE SOILS, MIN. 28 DAY COMPRESSIVE STRENGTH, F'c, SHALL BE 4500 PSI AND MAX. WATER/CEMENT RATIO SHALL BE 0.45 FOR ALL CONCRETE IN CONTACT WITH SOIL.
3. CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY, STAMPED BY AN APPROPRIATELY LICENSED SPECIALTY ENGINEER, AND APPROVED BY THE ENGINEER OF RECORD. MIX DESIGNS SHALL INCLUDE THE PROJECT NAME AND INDICATE THEIR USE WITHIN THE STRUCTURE. MIX DESIGNS SHALL BE PROPORTIONED TO MINIMIZE SHRINKAGE AND HAVE PROVEN SHRINKAGE CHARACTERISTICS OF 0.05% OR LESS BASED ON TESTING PER ASTM C157.
4. IF USED, EARLY STRENGTH CONCRETE SHALL BE PROPORTIONED TO DEVELOP THE 28 DAY COMPRESSIVE STRENGTH AT THE AGE REQUIRED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT TEST DATA FOR REVIEW BY THE STRUCTURAL ENGINEER TO SUBSTANTIATE THE CONCRETE STRENGTH AT THE REQUIRED AGE.
5. ALL CONCRETE SHALL BE NORMAL WEIGHT OF 145 POUNDS PER CUBIC FOOT USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33 UNO. WHERE LIGHTWEIGHT CONCRETE IS SPECIFIED, CONCRETE SHALL BE 110 POUNDS PER CUBIC FOOT USING AGGREGATES CONFORMING TO ASTM C330. THE AGGREGATE IN THE CONCRETE SHALL BE WELL GRADED. THE NOMINAL MAXIMUM SIZE OF THE COARSE AGGREGATE SHALL BE 1 1/2" FOR SLABS ON GRADE (1 1/2" MIX) AND 3/4" OR LESS FOR ALL OTHER CONCRETE UNO.
6. MAX. SLUMP SHALL BE 5 INCHES (EXCEPTION: WHERE ADMIXTURES/PLASTICIZERS HAVE BEEN INCLUDED IN MIX DESIGN TO IMPROVE WORKABILITY, SLUMP LIMIT SHALL BE BASED ON ADMIXTURE MFR'S RECOMMENDATIONS). MIX WATER SHALL BE CLEAN AND POTABLE.

D. CONCRETE (CONT'D.)

7. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH EARTH. TYPE II CEMENT MAY BE USED ELSEWHERE. THIS OR SIMILAR LOCALITIES. THEY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
8. FLY ASH MAY BE USED IN CONCRETE, SUBJECT TO APPROVAL BY THE ARCHITECT, PROVIDED THE FOLLOWING CONDITIONS ARE MET:
- 8.1. FLY ASH SHALL COMPLY WITH ASTM C618.
- 8.2. CEMENT CONTENT SHALL BE REDUCED A MINIMUM OF 15 PERCENT UP TO A MAXIMUM OF 25 PERCENT WHEN COMPARED TO AN EQUIVALENT CONCRETE MIX DESIGN WITHOUT FLY ASH. FLY ASH CONTENT SHALL NOT COMPRISE MORE THAN 35 PERCENT OF THE TOTAL CEMENTITIOUS CONTENT. THE WATER-CEMENT RATIO SHALL BE CALCULATED BASED ON THE TOTAL CEMENTITIOUS MATERIAL IN THE MIX.
- 8.3. CLASS F FLY ASH SHALL BE USED IN SULFATE RESISTANT CONCRETE WITH F'c EQUAL TO OR GREATER THAN 4000 PSI. CLASS C FLY ASH MAY BE USED ELSEWHERE.
9. WATER SOLUBLE CHLORIDE ION CONCENTRATIONS IN CONCRETE SHALL BE LIMITED PER ACI 318, SECTION 19.3.21, EXPOSURE CLASS 'C1'.
10. TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94.
11. CONCRETE MIXING, PLACEMENT AND QUALITY SHALL BE PER ACI 318. SYSTEMATICALLY MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS OR SIMILAR ELEMENTS. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO CAUSE SEGREGATION OF AGGREGATES. UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FEET.
12. BEAMS, GIRDERS, DROP PANELS & CAPITALS, ETC. SHALL BE PLACED MONOLITHICALLY AS PART OF AN ELEVATED SLAB SYSTEM UNO. ELEVATED SLAB SYSTEMS SHALL NOT BE CAST OVER SUPPORTING COLUMNS AND WALLS SOONER THAN 3 DAYS AFTER COMPLETION OF COLUMN/WALL CONCRETE PLACEMENT.
13. PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH DUE TO COLD OR HOT WEATHER IN ACCORDANCE WITH ACI 305 AND 306. CONTRACTOR SHALL TAKE SPECIAL CURING PRECAUTIONS TO MINIMIZE SHRINKAGE CRACKING OF CONCRETE SLABS.
14. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCEMENT, DOUELS, BOLTS, ANCHORS, SLEEVES, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS.
15. MECH. ELECT. AND PLUMBING PENETRATIONS / EMBEDDED CONDUITS SHALL COMPLY WITH THE FOLLOWING:
- 15.1. ELECTRICAL CONDUITS MAY BE EMBEDDED IN STRUCTURAL CONCRETE ONLY AS NOTED IN TYPICAL DETAILS FOR WALLS AND CAST-IN-PLACE ELEVATED SLABS (EMBEDDED CONDUITS IN CONCRETE OVER STEEL DECK ARE NOT PERMITTED) OR WHERE SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER. PIPING SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNO. EMBEDDED ITEMS SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
- 15.2. REFER TO TYPICAL DETAILS FOR ACCEPTABLE CONDUIT, PIPING, AND DUCT PENETRATIONS THRU SLABS AND WALLS. DO NOT CUT ANY REINF. THAT MAY INTERFERE WITH PERMITTED PENETRATIONS. OPENINGS SHALL NOT BE CORED WITHOUT PRIOR WRITTEN APPROVAL OF ENGINEER THRU THE ARCHITECT. PENETRATIONS THRU BEAMS AND COLUMNS ARE PERMITTED ONLY WHERE SPECIFICALLY DETAILED.
- 15.3. CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING SIZES AND DIMENSIONED LOCATIONS OF ALL PENETRATIONS AND EMBEDDED CONDUITS IN WALLS AND ELEVATED SLABS. SHOP DRAWING MUST BE APPROVED BY ENGINEER PRIOR TO CONCRETE PLACEMENT. PENETRATIONS AND EMBEDDED CONDUITS NOT SHOWN ON APPROVED SHOP DRAWING WILL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER.
16. FORMWORK, SHORING, AND RESHORING SHALL BE DESIGNED PER ACI 347 RECOMMENDATIONS BY AN APPROPRIATELY LICENSED SPECIALTY ENGINEER EXPERIENCED IN THIS TYPE OF WORK AND SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW. FOR MULTISTORY CONSTRUCTION, SHORING/RESHORING DESIGN SHALL DEMONSTRATE THAT SHORES/RESHOES WILL BE PROVIDED FOR A SUFFICIENT NUMBER OF FLOORS TO DISTRIBUTE IMPOSED CONSTRUCTION LOADS TO SEVERAL SLAB LEVELS WITHOUT CAUSING EXCESSIVE STRESSES AND SLAB DEFLECTIONS. FOR PURPOSES OF SHORING/RESHORING CALCULATIONS, MAGNITUDES OF REDUCED LIVE LOADS SHALL BE TAKEN TO BE 60% OF VALUES INDICATED IN BASIS FOR DESIGN UNO.
17. FORMWORK PLACEMENT AT ELEVATED BEAMS AND SLABS SHALL PROVIDE THE CAMBERS SPECIFIED ON THESE DRAWINGS. FORMWORK SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
18. CONSTRUCTION JOINTS OR FOUR JOINTS IN STRUCTURAL ELEMENTS (BEAMS, COLUMNS, ELEVATED SLABS, ETC.) NOT SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS REQUIRE PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING PROPOSED JOINTS TO ENGINEER FOR APPROVAL.
19. CONSTRUCTION JOINT SURFACES SHALL BE CLEANED AND LAITANCE REMOVED. HORIZONTAL JOINT SURFACES SHALL BE ROUGHENED TO 1/4" AMPLITUDE. THOROUGHLY UET ALL JOINT SURFACES AND REMOVE STANDING WATER IMMEDIATELY PRIOR TO NEW CONCRETE PLACEMENT.
20. CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 318, SECTION 16.5.3.2, UNLESS ALTERNATE METHODS HAVE BEEN APPROVED BY THE ARCHITECT AND ENGINEER. WHERE CURING COMPOUNDS HAVE BEEN APPROVED FOR SLAB CURING, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPATIBILITY OF COMPOUNDS WITH ANTICIPATED FLOOR FINISH (e.g., RESILIENT TILE) PRIOR TO CURING COMPOUND APPLICATION.
21. GROUT BENEATH COLUMN BASES OR BEARING PLATES SHALL BE 5000 PSI (MIN) NON-SHRINK FLOWABLE GROUT. INSTALL GROUT BENEATH BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT BENEATH BASE PLATES AFTER COLUMN HAS BEEN PLUMBED. FRAMING (NOT INCLUDING CONCRETE OVER STEEL DECK OR CONCRETE TOPPING AS OCCURS) MAY BE INSTALLED ONE LEVEL ABOVE BASE PLATE PRIOR TO PLACING GROUT BENEATH BASE PLATES. GROUT SHALL BE PLACED BENEATH BASE PLATES PRIOR TO INSTALLATION OF ANY FRAMING TWO OR MORE LEVELS ABOVE BASE PLATE. GROUT DEPTH SHALL BE 1 1/2" TYPICAL, OR SHALL BE SUFFICIENT TO ALLOW GROUT OR DRYPACK TO BE PLACED BENEATH PLATE WITHOUT VOIDS.

- 15.1. ELECTRICAL CONDUITS MAY BE EMBEDDED IN STRUCTURAL CONCRETE ONLY AS NOTED IN TYPICAL DETAILS FOR WALLS AND CAST-IN-PLACE ELEVATED SLABS (EMBEDDED CONDUITS IN CONCRETE OVER STEEL DECK ARE NOT PERMITTED) OR WHERE SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER. PIPING SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNO. EMBEDDED ITEMS SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
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- 15.1. ELECTRICAL CONDUITS MAY BE EMBEDDED IN STRUCTURAL CONCRETE ONLY AS NOTED IN TYPICAL DETAILS FOR WALLS AND CAST-IN-PLACE ELEVATED SLABS (EMBEDDED CONDUITS IN CONCRETE OVER STEEL DECK ARE NOT PERMITTED) OR WHERE SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER. PIPING SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNO. EMBEDDED ITEMS SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.
- 15.2. REFER TO TYPICAL DETAILS FOR ACCEPTABLE CONDUIT, PIPING, AND DUCT PENETRATIONS THRU SLABS AND WALLS. DO NOT CUT ANY REINF. THAT MAY INTERFERE WITH PERMITTED PENETRATIONS. OPENINGS SHALL NOT BE CORED WITHOUT PRIOR WRITTEN APPROVAL OF ENGINEER THRU THE ARCHITECT. PENETRATIONS THRU BEAMS AND COLUMNS ARE PERMITTED ONLY WHERE SPECIFICALLY DETAILED.
- 15.3. CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING SIZES AND DIMENSIONED LOCATIONS OF ALL PENETRATIONS AND EMBEDDED CONDUITS IN WALLS AND ELEVATED SLABS. SHOP DRAWING MUST BE APPROVED BY ENGINEER PRIOR TO CONCRETE PLACEMENT. PENETRATIONS AND EMBEDDED CONDUITS NOT SHOWN ON APPROVED SHOP DRAWING WILL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ENGINEER.
16. FORMWORK, SHORING, AND RESHORING SHALL BE DESIGNED PER ACI 347 RECOMMENDATIONS BY AN APPROPRIATELY LICENSED SPECIALTY ENGINEER EXPERIENCED IN THIS TYPE OF WORK AND SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW. FOR MULTISTORY CONSTRUCTION, SHORING/RESHORING DESIGN SHALL DEMONSTRATE THAT SHORES/RESHOES WILL BE PROVIDED FOR A SUFFICIENT NUMBER OF FLOORS TO DISTRIBUTE IMPOSED CONSTRUCTION LOADS TO SEVERAL SLAB LEVELS WITHOUT CAUSING EXCESSIVE STRESSES AND SLAB DEFLECTIONS. FOR PURPOSES OF SHORING/RESHORING CALCULATIONS, MAGNITUDES OF REDUCED LIVE LOADS SHALL BE TAKEN TO BE 60% OF VALUES INDICATED IN BASIS FOR DESIGN UNO.

17. FORMWORK PLACEMENT AT ELEVATED BEAMS AND SLABS SHALL PROVIDE THE CAMBERS SPECIFIED ON THESE DRAWINGS. FORMWORK SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
18. CONSTRUCTION JOINTS OR FOUR JOINTS IN STRUCTURAL ELEMENTS (BEAMS, COLUMNS, ELEVATED SLABS, ETC.) NOT SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS REQUIRE PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING PROPOSED JOINTS TO ENGINEER FOR APPROVAL.
19. CONSTRUCTION JOINT SURFACES SHALL BE CLEANED AND LAITANCE REMOVED. HORIZONTAL JOINT SURFACES SHALL BE ROUGHENED TO 1/4" AMPLITUDE. THOROUGHLY UET ALL JOINT SURFACES AND REMOVE STANDING WATER IMMEDIATELY PRIOR TO NEW CONCRETE PLACEMENT.
20. CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 318, SECTION 16.5.3.2, UNLESS ALTERNATE METHODS HAVE BEEN APPROVED BY THE ARCHITECT AND ENGINEER. WHERE CURING COMPOUNDS HAVE BEEN APPROVED FOR SLAB CURING, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPATIBILITY OF COMPOUNDS WITH ANTICIPATED FLOOR FINISH (e.g., RESILIENT TILE) PRIOR TO CURING COMPOUND APPLICATION.
21. GROUT BENEATH COLUMN BASES OR BEARING PLATES SHALL BE 5000 PSI (MIN) NON-SHRINK FLOWABLE GROUT. INSTALL GROUT BENEATH BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT BENEATH BASE PLATES AFTER COLUMN HAS BEEN PLUMBED. FRAMING (NOT INCLUDING CONCRETE OVER STEEL DECK OR CONCRETE TOPPING AS OCCURS) MAY BE INSTALLED ONE LEVEL ABOVE BASE PLATE PRIOR TO PLACING GROUT BENEATH BASE PLATES. GROUT SHALL BE PLACED BENEATH BASE PLATES PRIOR TO INSTALLATION OF ANY FRAMING TWO OR MORE LEVELS ABOVE BASE PLATE. GROUT DEPTH SHALL BE 1 1/2" TYPICAL, OR SHALL BE SUFFICIENT TO ALLOW GROUT OR DRYPACK TO BE PLACED BENEATH PLATE WITHOUT VOIDS.

17. FORMWORK PLACEMENT AT ELEVATED BEAMS AND SLABS SHALL PROVIDE THE CAMBERS SPECIFIED ON THESE DRAWINGS. FORMWORK SHALL BE CLEAN AND FREE FROM LOOSE DEBRIS, STANDING WATER OR UNCOMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.
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E. REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH CURRENTLY ADOPTED ACI 318 AND CRSI'S MANUAL OF STANDARD PRACTICE.
2. REINFORCNG STEEL SHALL CONFORM TO ASTM A615 OR ASTM A706 (A706 REQUIRED FOR ALL REINFORCING TO BE WELDED) AND SHALL BE GRADE 60 (Fy = 60 KSI) DEFORMED BARS UNO. REINFORCING IN SLABS ON GRADE MAY BE GRADE 40 (Fy = 40 KSI) DEFORMED BARS FOR ALL BARS 4" AND SMALLER UNO, ON PLANS OR DETAILS.
3. WELDED WIRE FABRIC FLAT SHEETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A1064. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SUCH THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES.
4. RECTANGULAR PLATE DOUELS AND SMOOTH ROUND DOUELS USED AT CONTROL AND CONSTRUCTION JOINTS IN SLABS ON GRADE SHALL CONFORM TO ASTM A36. REFER TO TYPICAL CONTROL JOINTS IN SLAB ON GRADE DETAIL FOR SIZE, PLACEMENT, SPACING, ETC. RECTANGULAR PLATE DOUELS SHALL BE BY FNA CONSTRUCTION TECHNOLOGIES (800-942-0214) OR OTHER MFR. APPROVED BY ENGINEER. INSTALL ALL PLATE DOUEL BASKET ASSEMBLIES PER MFR'S RECOMMENDATIONS.

E. REINFORCING STEEL (CONT'D.)

5. ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS 'CLEAR' OR 'CUR' ARE TO CENTER OF STEEL. CLEAR COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS NOTED BELOW UNO, ON PLANS OR DETAILS. CLEAR COVER FOR PRESTRESSED CONCRETE AND FOR PRECAST CONCRETE MANUFACTURED UNDER PLANT CONTROL CONDITIONS SHALL BE PER ACI 318, SECTIONS 20.6.1.3.2 AND 20.6.1.3.3, RESPECTIVELY.
- EXPOSURE CONDITION: COVER:
- CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- EXPOSED TO EARTH OR WEATHER (INCLUDING SLABS ON GRADE) NO. 5 AND SMALLER 1 1/2" NO. 6 AND LARGER 2"
- NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND STRUCTURAL SLABS, WALLS, JOISTS NO. 11 AND SMALLER 1 1/2" NO. 14 AND LARGER 1 1/2"
- BEAMS, COLUMNS (PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS) 1 1/2"
6. LAP SPLICES OF REINFORCING STEEL SHALL CONFORM TO TYPICAL REBAR LAP SCHEDULE UNO, NO TACK WELDING OF REINFORCING BARS ALLOWED. LATEST ACI CODE AND DETAILING MANUAL APPLY. AT WALLS AND FOOTINGS PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZ BARS AT ALL CORNERS AND INTERSECTIONS UNO. VERT. WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. SPLICE TOP BARS AT CENTER LINE OF SPAN AND BOTTOM BARS AT THE SUPPORT IN SPANDRELS, BEAMS, GRADE BEAMS, ETC., UNO, ON PLANS OR DETAILS.

7. MECHANICAL SPLICE COUPLERS SHALL HAVE CURRENT ICC APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE SPLICED BAR'S YIELD STRENGTH.
8. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE UN-BENT AND RE-BENT. FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
9. WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS. SEE WELDING SECTION OF G.S.N. FOR ADDITIONAL REQUIREMENTS.
10. REINFORCING BAR SPACINGS SHOWN ON PLANS ARE MAX. ON CENTER DIMENSIONS. DOUEL ALL VERT. REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. MIN. CLEAR SPACING BETWEEN PARALLEL REINFORCEMENT SHALL BE THE LARGER OF 1-1/2 TIMES NOMINAL BAR DIA. OR 1-1/3 TIMES MAX. AGGREGATE SIZE OR 1-1/2". CLEAR SPACING LIMITATION APPLIES ALSO TO CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS.
11. SHEAR REINFORCEMENT AT SLAB TO COLUMN CONNECTIONS, AS SHOWN ON THE PLANS AND DETAILS, SHALL BE STUDRAILS AS MANUFACTURED BY DECON PER ICC ESR-2494.
12. MIN. REINFORCING AT EDGES OF CONCRETE WALL OPENINGS SHALL BE (2) #5 BARS. EXTEND THE GREATER OF THE DEVELOPMENT LENGTH OF THE BAR PER TYPICAL REBAR LAP SCHEDULE OR 24" MIN. FAST EDGES OF OPENING UNO. HOOK ENDS AT INTERFERENCE WITH EXTENSION.

F. STRUCTURAL STEEL BOLTS, ANCHORS, HEADED STUDS

1. STRUCTURAL STEEL BOLTS, ANCHORS, ETC. SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES UNO:
- | COMPONENT: | STANDARD: | Fy: |
|--------------------------|--|-----------------------|
| BOLTS | ASTM F315, GRADE A325 OR GRADE A490 WHERE NOTED | --- |
| NUTS | ASTM A563 | --- |
| WASHERS | ASTM F436 | --- |
| ANCHOR RODS | ASTM F1554, GRADE 36 OR GRADE 55 WHERE NOTED OR GRADE 105 WHERE NOTED | 36 KSI 55 KSI 105 KSI |
| WASHERS (AT ANCHOR RODS) | ASTM A36 OR ASTM F844 (US6 STANDARD) F844 WASHERS PERMITTED ONLY FOR 3/4" DIA. RODS AT 1 1/16" MAX. DIA. PUNCHED HOLES IN BASE PLATE WHERE NO WELD REQ'D BETWEEN WASHER AND BASE PLATE | 36 KSI --- |

4. THE STEEL DETAILER SHALL COORDINATE ALL FIELD-INSTALLED ERECTION BOLTS AT STEEL JOIST BEARING LOCATIONS WITH THE STEEL JOIST SUPPLIER.
5. ALL ANCHOR RODS AT STEEL COLUMN BASE PLATES SHALL BE RODS WITH THREADS BOTH ENDS WITH HEAVY HEX NUT FULLY THREADED ONTO EMBEDDED END. TACK WELD NUT TO ROD OR SPOIL THREADS TO PREVENT NUT FROM BACKING OFF. ANCHOR RODS SHALL NOT BE REPAIRED, REPLACED OR FIELD-MODIFIED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.
6. WHERE A SPECIFIC EXPANSION ANCHOR, SCREW ANCHOR, OR EPOXY PRODUCT IS SPECIFIED ON PLANS OR DETAILS, ONLY THE SPECIFIED PRODUCT SHALL BE USED AND NO SUBSTITUTIONS ARE ALLOWED. WHERE AN EXPANSION ANCHOR, SCREW ANCHOR, OR EPOXY PRODUCT IS SPECIFIED ON PLANS OR DETAILS BUT A SPECIFIC PRODUCT IS NOT STATED, ANY OF THE RESPECTIVE PRODUCTS LISTED BELOW ARE ACCEPTABLE. THE USE OF PRODUCTS NOT INCLUDED BELOW IS NOT ALLOWED. ALL PRODUCTS SHALL BE INSTALLED WITH SPECIAL INSPECTION.

- 6.1. EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI KWIK BOLT TZ (ICC ESR-1917), SIMPSON STRONG-BOLT 2 (ICC ESR-3031) OR DEWALT FASTER-STUD+ SD2 (ICC ESR-2502) UNO. EXPANSION ANCHORS IN MASONRY SHALL BE SIMPSON STRONG-BOLT 2 (ASTM A95-0240), HILTI KWIK BOLT 3 (ICC ESR-1589) OR DEWALT FASTER-STUD+ SD1 (ICC ESR-2866). EXPANSION ANCHORS SHALL BE INSTALLED WITH SPECIAL INSPECTION.
- 6.2. EPOXY ANCHORS IN CONCRETE (ALL-THREAD, REBAR, ETC.) SHALL USE HILTI HIT-RE 300 V3 (ICC ESR-3814), SIMPSON SET-3G (ICC ESR-4091) OR DEWALT FASTER-STUD+ (ICC ESR-3258) UNO. ALL EPOXY ANCHORS IN MASONRY (ALL-THREAD, REBAR, ETC.) SHALL USE SIMPSON SET-XF (ASTM E8-0265), HILTI HIT-HI 210 (ICC ESR-4143) OR DEWALT AC100+ GOLD (ICC ESR-3200) UNO. EPOXY ANCHORS SHALL BE INSTALLED WITH SPECIAL INSPECTION.

F. SPECIAL INSPECTION

1. IN ADDITION TO STANDARD INSPECTIONS BY THE BUILDING OFFICIAL, REQUIRED PER CBC SECTION 110, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTIONS DURING CONSTRUCTION FOR THE TYPES OF WORK LISTED IN THIS SECTION.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE SPECIAL INSPECTOR AT LEAST 24 HOURS NOTICE PRIOR TO PERFORMING ANY WORK REQUIRING SPECIAL INSPECTION.

F. SPECIAL INSPECTION (CONT'D.)

4. THE SPECIAL INSPECTOR SHALL INSPECT THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED CONTRACT DRAWINGS AND SPEC'S. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPEC'S AND THE APPLICABLE CODE PROVISIONS.
5. INSPECTORS SHALL INSPECT FROM AN APPROVED SET OF CONTRACT DRAWINGS. SHOP DRAWINGS SHALL NOT BE USED IN LIEU OF THE APPROVED CONTRACT DRAWINGS FOR INSPECTION PURPOSES.
6. TYPES OF WORK TO BE INSPECTED BY THE SPECIAL INSPECTOR ARE AS FOLLOWS:
- 6.1. EPOXY ANCHORS IN CONCRETE - INSPECTION OF EPOXY ANCHORS IN CONCRETE SHALL BE PERIODIC UNO. INSTALLATIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL TRAINED (BY MANUFACTURER) TO INSTALL ADHESIVE ANCHORS AND THEY SHALL FOLLOW THE MANUFACTURER'S PRINTED INSTRUCTION INSTRUCTIONS (MPII). AT THE TIME OF INSTALLATION, THE CONCRETE SHALL HAVE ACHIEVED A MINIMUM AGE OF 28 DAYS, BE DRY, AND BE BETWEEN 60 DEGREES F AND 104 DEGREES F. THE HOLES SHALL BE DRILLED WITH A HAMMER DRILL TO THE DIMENSIONS LISTED IN THE MPII AND SHALL BE CLEANED USING THE BLOW-BRUSH-BLOW TECHNIQUE REQUIRED IN THE MPII. WHERE ANCHORS ARE INSTALLED INTO LIGHTWEIGHT CONCRETE, IT IS ASSUMED THAT THE CONCRETE IS CLASSIFIED AS ALL-LIGHTWEIGHT CONCRETE AS DEFINED IN ACI 318. ANY ADHESIVE ANCHORS INSTALLED HORIZONTALLY (EXCEPT FOR ANCHORS IN A SLAB-ON-GRADE) OR UPWARDLY INCLINED SHALL BE INSTALLED BY PERSONNEL WITH THE ACI(CRSI) ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT AND SHALL BE INSTALLED WITH CONTINUOUS SPECIAL INSPECTION.

- 6.2. CONCRETE CONSTRUCTION PER CBC SECTION 1105.3 AND TABLE 1105.3, EXCEPTION: SPECIAL INSPECTIONS SHALL NOT BE REQ'D FOR:
1. ISOLATED SPREAD OR CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS (3) STORIES OR LESS IN HEIGHT UNO. STRUCTURAL DESIGN IS BASED ON A 28 DAY DESIGN COMPRESSIVE STRENGTH, F'c, OF NO GREATER THAN 2500 PSI.
2. FOOT-TENSIONED SLABS ON GRADE WHERE EFFECTIVE PRESTRESS IN THE CONCRETE IS LESS THAN 150 PSI.

CONCRETE CONSTRUCTION SPECIAL INSPECTIONS			
	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1.	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X
2.	REINFORCING BAR WELDING:		
A.	VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X
B.	INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	X
C.	INSPECT ALL OTHER WELDS	X	-
3.	INSPECT ANCHORS CAST IN CONCRETE	-	X
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:		
A.	ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-
B.	MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4-A.	-	X
5.	VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7.	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9.	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
10.	INSPECTION OF FORM WORK FOR SHAPE, LOCATION, AND DIMENSION OF THE CONCRETE MEMBER BEING FORMED.	-	X

- 6.3. STEEL CONSTRUCTION AND WELDING PER CBC SECTION 1105.2.

STEEL CONSTRUCTION SPECIAL INSPECTIONS			
INSPECTION OF HIGH-STRENGTH BOLTING			
INSPECTION TASKS PRIOR TO BOLTING		CONTINUOUS	PERIODIC
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		X	-
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		-	X
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH & THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		-	X
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		-	X
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		-	X
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL, OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED		-	X
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		-	X
INSPECTION TASKS DURING BOLTING		CONTINUOUS	PERIODIC
FASTENERS ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		-	X
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		-	X
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		-	X
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		-	X
INSPECTION TASKS AFTER BOLTING		CONTINUOUS	PERIODIC
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS		X	-

F. SPECIAL INSPECTION (CONT'D.)

9. STRUCTURAL STEEL PER CBC SECTIONS 1705.12.1.
10. EACH CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF THE SEISMIC LOAD RESISTING SYSTEM OR COMPONENTS THEREOF SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT IN ACCORDANCE WITH CBC SECTION 1704.4.
11. STRUCTURAL OBSERVATIONS PER CBC SECTION 17045.1 ARE REQUIRED FOR THE SEISMIC LOAD RESISTING SYSTEM. STRUCTURAL OBSERVATION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, AND BUILDING OFFICIAL ON NOT LESS THAN A MONTHLY BASIS. STRUCTURAL OBSERVATIONS DO NOT INCLUDE OR TAKE THE PLACE OF SPECIAL INSPECTION.

G. STRUCTURAL OBSERVATIONS

1. OBSERVATION SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER (OR AN APPOINTED REPRESENTATIVE) AT EACH OF THE FOLLOWING STAGES. A LETTER REPORTING THE FINDINGS OF THE OBSERVATIONS SHALL BE PROVIDED TO THE CITY OF FONTANA.
11. PRIOR TO FOUNDATION POUR TO OBSERVE STRUCTURAL HARDWARE LOCATIONS

H. SUBMITTALS

1. SHOP DRAWINGS OR REPORTS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION OR CONSTRUCTION (AS APPLICABLE) UNO.
- LAYOUT DUGS, FOR PENETRATIONS, EMBEDDED CONDUITS AT WALL/ELEVATED SLABS REINFORCING STEEL.
2. CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMITTING. CONTRACTOR'S REVIEW SHALL CHECK FOR COMPLETENESS/COMPLIANCE WITH CONTRACT DOCUMENTS.
3. SHOP DRAWINGS ARE REVIEWED BY ENGINEER ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE CONTRACT DRAWINGS OR SPECIFICATIONS. CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS AND/OR SPECIFICATIONS WILL NOT BE ACCEPTED VIA SHOP DRAWING REVIEW. ALL SUCH MODIFICATIONS SHALL BE SUBMITTED SEPARATELY FOR ENGINEER'S REVIEW.
4. PREFABRICATED COMPONENTS, SPECIALTY ITEMS, OR DESIGN-BUILD ELEMENTS NOTED ON THE STRUCTURAL DRAWINGS, BUT WHICH REQUIRE THE MFR. OR SUPPLIER TO PROVIDE THE DESIGN, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW AS A DEFERRED SUBMITTAL. DEFERRED SUBMITTALS REQ'D. BY THE STRUCTURAL ENGINEER OF RECORD SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- CONCRETE FORMWORK, SHORING, AND RESHORING
CONCRETE MIX DESIGNS
5. DEFERRED SUBMITTALS SHALL INCLUDE CALCULATIONS AND DRAWINGS PREPARED AND STAMPED BY AN APPROPRIATELY LICENSED ENGINEER (SPECIALTY ENGINEER) SHOWING LOCATION AND MAGNITUDE OF LOADS, CONFIGURATION AND SIZE OF MEMBERS, AND COMPATIBILITY OF SUBMITTAL ITEM WITH THE PRIMARY STRUCTURAL SYSTEM.
6. THE PURPOSE OF THE STRUCTURAL ENGINEER'S REVIEW OF DEFERRED SUBMITTALS SHALL BE LIMITED TO DETERMINING THAT THE DRAWINGS AND CALCULATIONS HAVE BEEN PROPERLY SEALED, THAT THE LOAD CRITERIA IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE REFERENCED BUILDING CODE, THAT CONNECTIONS TO THE PRIMARY STRUCTURE ARE COMPATIBLE WITH THE PRIMARY DESIGN, AND THAT THE PRIMARY STRUCTURE IS CAPABLE OF SUPPORTING THE IMPOSED LOADS.
7. THE STRUCTURAL ENGINEER WILL RELY UPON THE SPECIALTY ENGINEER'S SEAL AS CERTIFICATION THAT THE ITEMS DESIGNED BY THE SPECIALTY ENGINEER COMPLY WITH THE CRITERIA SET FORTH IN THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF DESIGNS PROVIDED BY OTHERS.
8. FOR ALL SUBMITTALS, ANY CORRECTIONS NOTED WILL BE MARKED ON ONE (1) COPY SET ONLY AND RETURNED. ADDITIONAL COPIES OF ANY SUBMITTAL WILL BE RETURNED UNMARKED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPRODUCING ENGINEER'S CORRECTIONS ON ADDITIONAL COPIES REQ'D. ONE COPY SET MAY BE RETAINED FOR THE ENGINEER'S RECORDS. ALLOW FIVE (5) TO TEN (10) WORKING DAYS FOR THE ENGINEER'S REVIEW.
9. REFER TO APPLICABLE G.S.N. SECTIONS FOR FURTHER REQUIREMENTS SPECIFIC TO INDIVIDUAL SUBMITTALS.



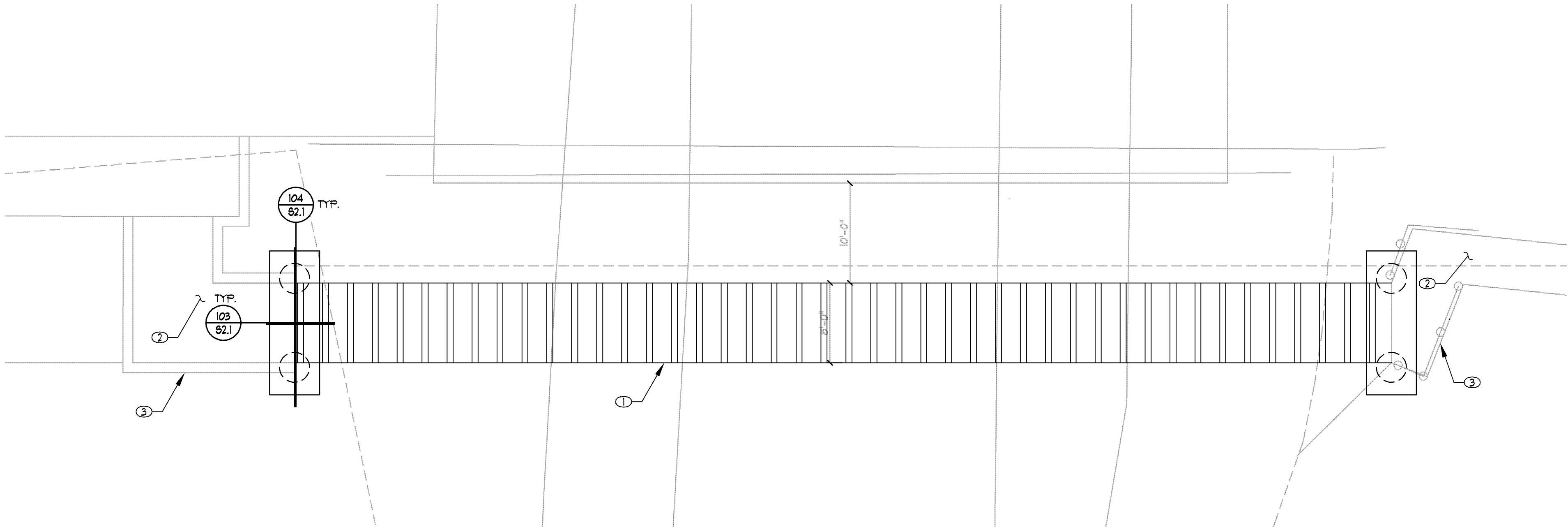
VICTORIA PEDESTRIAN BRIDGE
Fontana, CA

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NUMBER	DATE	DESCRIPTION
2	11/17/2020	PLAN CHECK

DATE: November 17, 2020
DESIGN BY: AK
PROJECT MGR: AK
PROJECT NO: 200247

GENERAL
STRUCTURAL
NOTES (CONT'D.)



BRIDGE RETAINING WALL FOUNDATION PLAN

SCALE: 1/8"=1'-0"

FOUNDATION PLAN NOTES

- A. VERIFY ALL DIMENSIONS, ELEVATIONS, SLOPES, ETC., w/ CIVIL PRIOR TO CONSTRUCTION. RESOLVE DISCREPANCIES WITH CIVIL ENGINEER.
- B. GRADE BEAMS SHALL BE EMBEDDED 18 INCHES MIN. BELOW EXTERIOR PAD GRADE. EXTERIOR PAD GRADE IS DEFINED AS LOWEST ADJACENT COMPACTED SUBGRADE (PAD GRADE BEFORE LANDSCAPING) OR NATURAL GRADE. CONTRACTOR SHALL COORDINATE FOOTING EMBEDMENT WITH CIVIL GRADING PLANS TO ENSURE THAT MINIMUM EMBEDMENT SPECIFIED ABOVE IS MAINTAINED.
- C. FINISHED FLOOR ELEVATION VAIRES. SEE CIVIL DUGS.

FOUNDATION PLAN KEYNOTES

- ① PROPOSED PEDESTRIAN BRIDGE BY OTHERS
- ② PROPOSED SIDEWALK BY OTHERS
- ③ RAILING AND/OR OTHER RETAINING WALL BY OTHERS



VICTORIA PEDESTRIAN BRIDGE Fontana, CA

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DESCRIPTION
PLAN CHECK

NUMBER
2

DATE
11.17.2020

DESIGN BY: AK
PROJECT MGR: AK
PROJECT NO: 200247

FOUNDATION PLAN

S11/200247-P

CITY INDEX NO. 6219

S1.1

- ③ LAP SPLICE LENGTH PER SCHEDULE

215	165	196	151	182	140	170	131	160	123	152	117
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



- E2. FOR LIGHTWEIGHT CONCRETE, MULTIPLY TABULATED VALUES BY 1.3
E3. FOR EPOXY COATED REBAR, MULTIPLY TABULATED VALUES BY 1.5

SCH02-05 08022

NO SCALE



106

06-200247

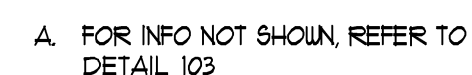


104-200247



ABUTMENT DETAIL

103-200245



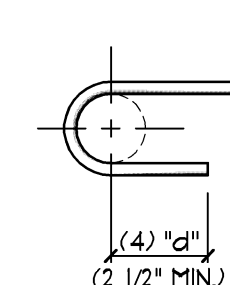
101

101.202247

NO SCALE



③ MINIMUM FINISHED BEND DIA. FOR ALL REINFORCING EXCEPT STIRRUPS AND TIES (6) "d" UP TO #8 BAR, (8) "d" FOR #9 THRU #11, (12) "d" FOR #14 AND #18.



ALL OTHER REINFORCING

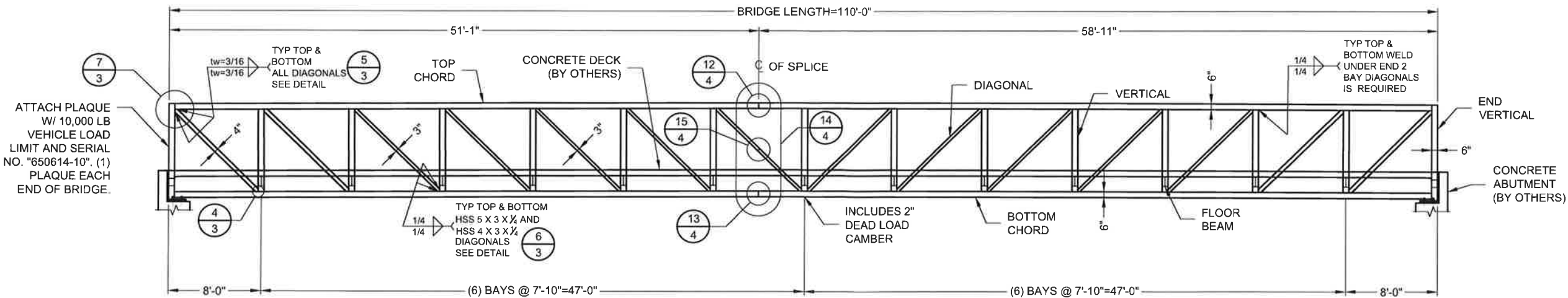
- C. REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS SPECIFICALLY NOTED ON PLANS OR DETAILS

102

07 200247

NO SCALE

I:\AD CONTECH-CPI\COM\ROOT\MERLIN\PROJECT\ACTIVE\650614-10-CONTINENTAL PEDESTRIAN\DRAWINGS\FABRICATION\650614-10 DWG.DWG 11/11/2020 1:26 AM



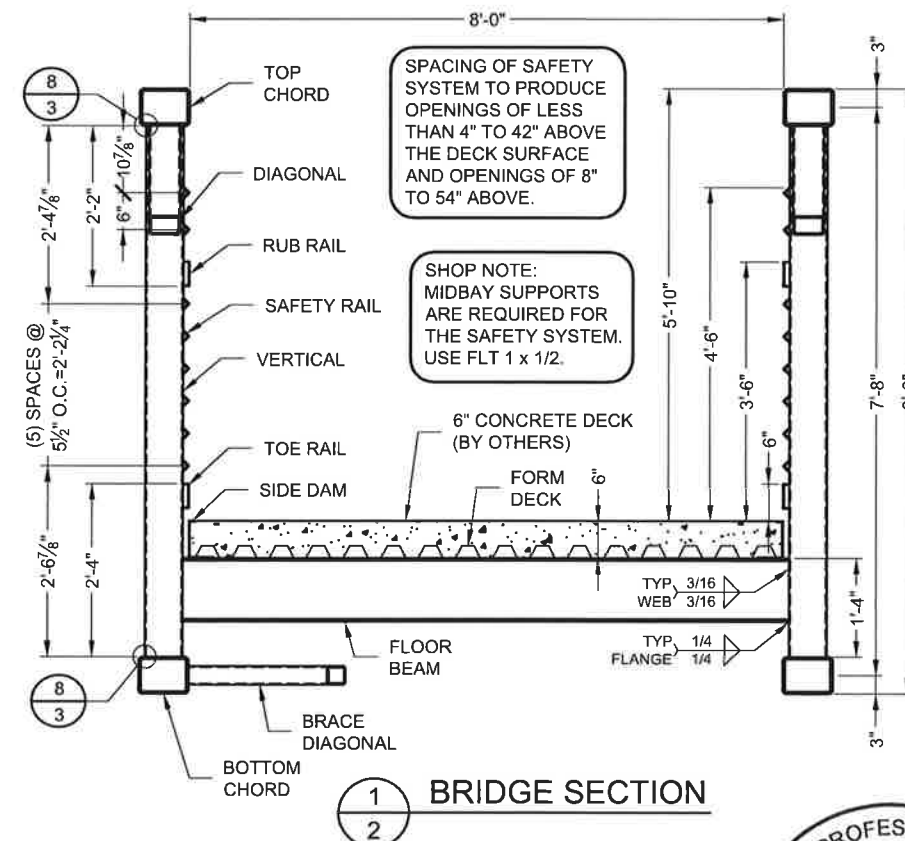
GENERAL NOTES

- DESIGN STRESSES ARE IN ACCORDANCE WITH "STANDARD SPECIFICATION FOR HIGHWAY BRIDGES" & "GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES" BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), 2009.
- BRIDGE MEMBERS ARE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, ENHANCED ATMOSPHERIC CORROSION RESISTANT ASTM A847 COLD-FORMED WELDED SQUARE AND RECTANGULAR TUBING, AND ASTM A588, ASTM A606, OR ASTM A242 PLATE AND STRUCTURAL SHAPES ($F_y=50,000$ PSI).
- CONCRETE DECK: GALVANIZED FORM DECK SUPPLIED BY CONTECH. CONCRETE, REINFORCING, AND EXPANSION MATERIAL SUPPLIED BY OTHERS. SEE CONCRETE DECK SHEET.
- THE GAS METAL ARC WELDING PROCESS OR FLUX CORED ARC WELDING PROCESS WILL BE USED. WELDING TO BE IN ACCORDANCE WITH AWS D1.1.
- ALL TOP AND BOTTOM CHORD SHOP SPLICES TO BE COMPLETE PENETRATION TYPE WELDS. WELD BETWEEN TOP CHORD AND END VERTICAL SHALL BE AS DETAILED.
- UNLESS OTHERWISE NOTED, WELDED CONNECTIONS SHALL BE FILLET WELDS (OR HAVE THE EFFECTIVE THROAT OF A FILLET WELD) OF A SIZE EQUAL TO THE THICKNESS OF THE LIGHTEST GAGE MEMBER IN THE CONNECTION. WELDS SHALL BE APPLIED AS FOLLOWS:
 - BOTH ENDS OF VERTICALS, DIAGONALS, AND FLOOR BEAMS SHALL BE WELDED ALL AROUND.
 - BRACE DIAGONALS WILL BE WELDED ALL AROUND.
 - MISCELLANEOUS NON-STRUCTURAL MEMBERS WILL BE STITCH WELDED TO THEIR SUPPORTING MEMBERS.
- BRIDGE DESIGN WAS ONLY BASED ON COMBINATIONS OF THE FOLLOWING LOADS WHICH WILL PRODUCE MAXIMUM CRITICAL MEMBER STRESSES.
 - 90 PSF UNIFORM LIVE LOADING ON THE FULL DECK AREA OR ONE 10,000 LB VEHICLE LOAD. THE LOAD SHALL BE DISTRIBUTED AS A FOUR-WHEEL VEHICLE WITH 80% OF THE LOAD ON THE REAR WHEELS. THE WHEEL TRACK WIDTH OF THE VEHICLE SHALL BE 6'-0" AND THE WHEEL BASE SHALL BE 10'-0". THE VEHICLE SHALL BE POSITIONED SO AS TO PRODUCE THE MAXIMUM STRESSES IN EACH MEMBER, INCLUDING DECKING.
 - WIND LOADING PER LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS, 1ST EDITION, 2014 SECTION 3.8.
 - DESIGN SPEED: 129 MPH
 - EXPOSURE CATEGORY: C
 - 20 PSF UPWARD FORCE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANSVERSE BRIDGE WIDTH (AASHTO 3.15.3).
 - SEISMIC LOADING IN ACCORDANCE WITH AASHTO. $A_g=0.766g$
- CLEANING: ALL EXPOSED SURFACES OF STEEL SHALL BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACES PREPARATION SPECIFICATIONS NO. 7 BRUSH-OFF BLAST CLEANING. SSPC-SP7-LATEST EDITION. EXPOSED SURFACES IS DEFINED AS THOSE VISIBLE FROM THE DECK AND FROM THE OUTSIDE OF THE STRUCTURE. FLOOR BEAMS, BRACE DIAGONALS, AND THE INSIDE AND BOTTOM OF DECK SUPPORT WILL NOT BE BLAST CLEANED.
- MINIMUM MATERIAL THICKNESS OF 1/4" ON ALL STRUCTURAL MEMBERS.

BRIDGE ELEVATION

SCHEDULE OF MEMBERS	
TOP CHORD	HSS 8 x 6 x 1/4
BOTTOM CHORD	HSS 8 x 6 x 1/4
VERTICAL	HSS 6 x 6 x 1/4
END VERTICAL	HSS 8 x 6 x 1/4
DIAGONAL	HSS 4 x 3 x 1/4 ①
BRACE DIAGONAL	HSS 3 x 3 x 1/4
FLOOR BEAM	W 10 x 26
END FLOOR BEAM	HSS 8 x 6 x 1/4 (STACKED)
TOE RAIL	C 4 x 1 x 10 GA (R.F.)
RUB RAIL	C 4 x 1 x 10 GA (R.F.)
SIDE DAM	C 6 x 4 x 1 x 10 GA (R.F.)
SAFETY RAIL	L 1 1/4 x 1 1/4 x 1/8
DECK SUPPORT	L 3 x 3 x 1/4

- ① USE HSS 6 x 4 x 1/4 FOR END 2 BAYS.
USE HSS 5 x 3 x 1/4 FOR 3RD AND 4TH BAY.
DOUBLE MITER ALL DIAGONALS.



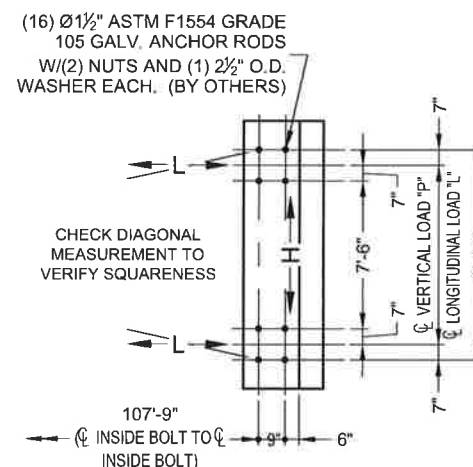
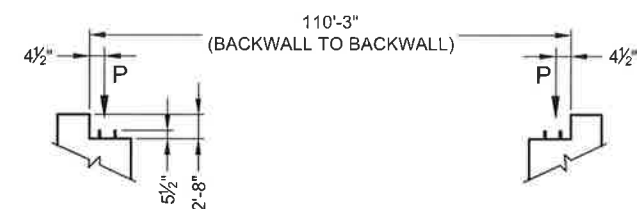
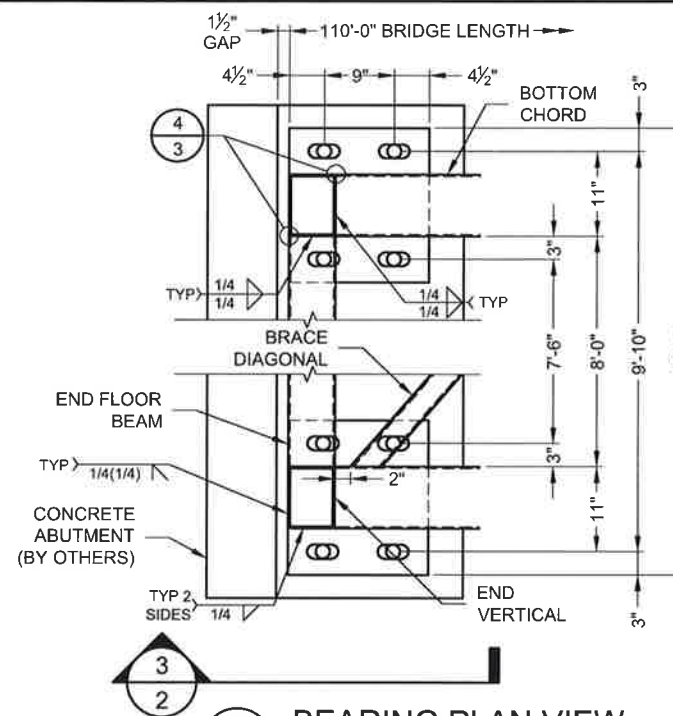
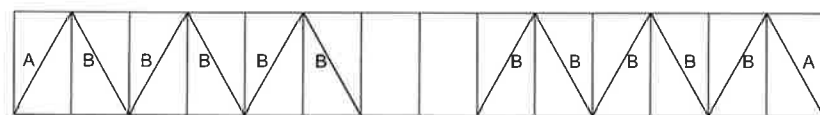
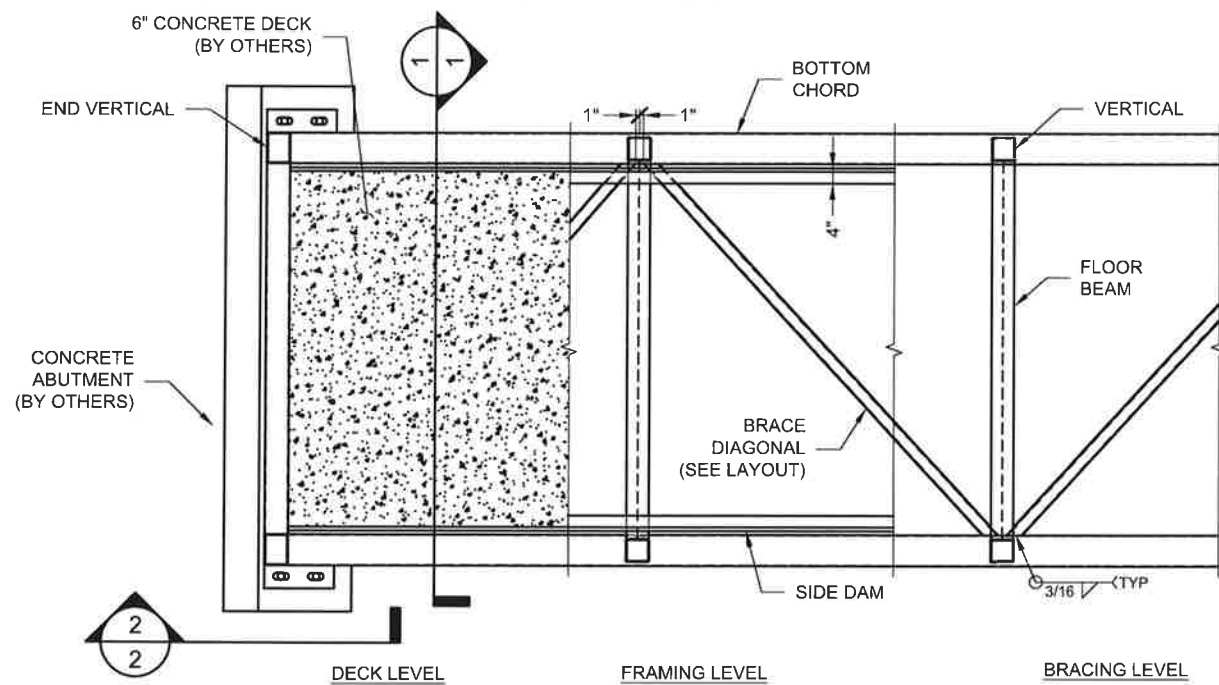
BRIDGE SECTION

CONTECH
CONTRACT
DRAWING

CITY INDEX NO. 6219



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		INITIAL SUBMITTAL	BY
		11/11/2020	KRL
		DATE	REVISION DESCRIPTION
		MARK	
110'-0" X 8'-0"			
VICTORIA PEDESTRIAN BRIDGE			
PEDESTRIAN BRIDGE			
FONTANA, CA			
CONTECH ENGINEERED SOLUTIONS LLC		CONTINENTAL BRIDGE	
www.conteches.com		800-328-2007 320-345-9126 320-566-3146 FAX	
831 Sibley Highway 28 North, Alexandria, MN 55308			
DATE: 6/18/2020			
DESIGNED: MJH		DRAWN: KRL	
CHECKED: MJH		APPROVED: MJH	
PROJECT No.: 650614		SEQUENCE No.: 010	
SHEET: 1		OF 5	



SEISMIC NOTE:

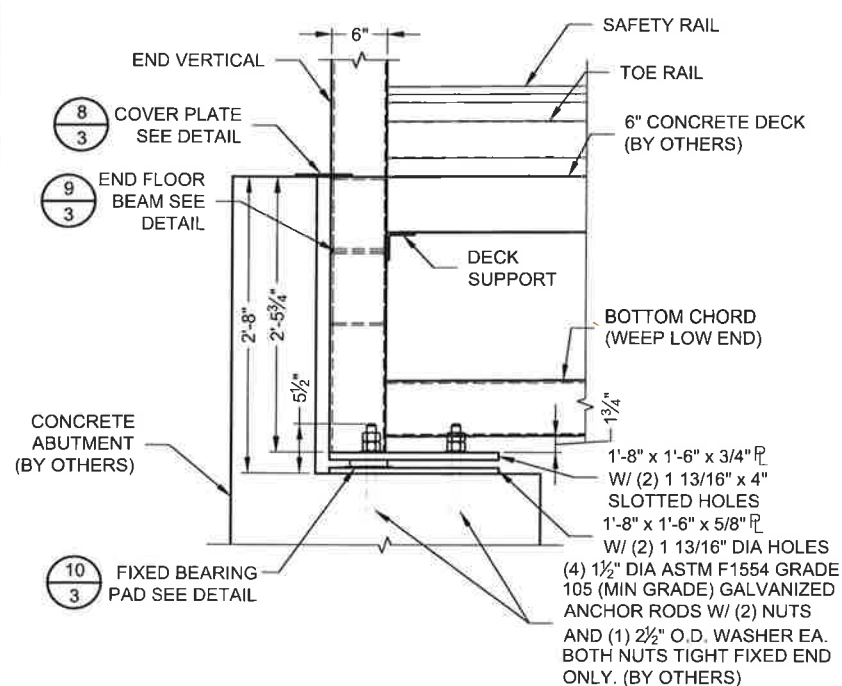
THE SEISMIC REACTIONS HAVE BEEN CALCULATED BASED ON A DESIGN SPECTRAL ACCELERATION OF 0.766 (As) X THE BRIDGE DEAD LOAD ACTING BOTH HORIZONTALLY AND LONGITUDINALLY. IT SHALL BE THE RESPONSIBILITY OF THE FOUNDATION ENGINEER TO DETERMINE THE FORCES FOR FOUNDATION DESIGN, VERIFICATION OF THE ANCHOR BOLT SIZES, AND ANCHOR BOLT EMBEDMENTS IN THE FOUNDATION. THESE FORCES ARE DETERMINED BASED ON LOCAL SITE CONDITIONS, THE FOUNDATION SYSTEM USED, AND THE TOTAL BRIDGE DEAD LOAD. IT IS ASSUMED THAT THE ENTIRE LONGITUDINAL SEISMIC LOAD IS CARRIED AT THE FIXED END OF THE BRIDGE ONLY.

COMBINE REACTIONS AS PER LOCAL OR
GOVERNING BUILDING CODES AS REQUIRED

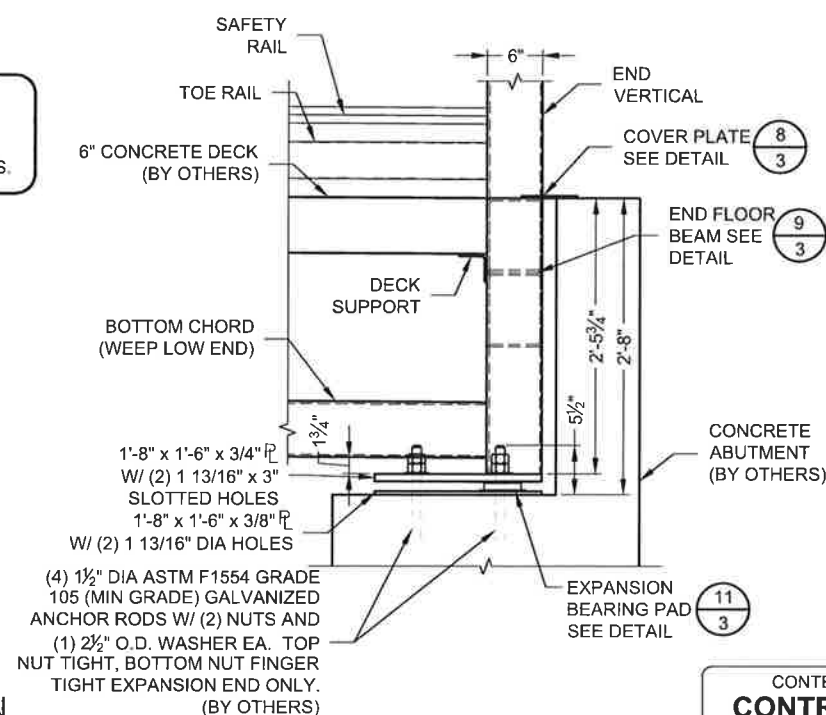
BRIDGE REACTIONS		+ DOWNWARD LOAD -UPWARD LOAD			
		P (LBS)	H (LBS)	L ₁ (LBS)	L ₂ (LBS)
DEAD LOAD	②	21,200			
UNIFORM LIVE LOAD		19,800			
VEHICLE LOAD		5,000			
WIND UPLIFT 20 PSF	WINDWARD LEEWARD	-7,700 -2,570			
WIND		±10,600	22,460		
THERMAL	②			1,120	
SEISMIC	②	±8,400	32,480		32,480

"P" - VERTICAL LOAD EACH BASE PLATE (4 PER BRIDGE)
 "H" - HORIZONTAL LOAD EACH FOOTING (2 PER BRIDGE)
 "L_T" - LONGITUDINAL THERMAL LOAD EACH BASE PLATE (4 PER BRIDGE)
 "L_S" - LONGITUDINAL SEISMIC LOAD EACH FIXED BASE PLATE (2 PER BRIDGE)

- ① BRIDGE LIFTING WEIGHT: 29,800 LBS
 ② FINAL BRIDGE WEIGHT: 84,800 LBS
 ① DOES NOT INCLUDE WEIGHT OF CONCRETE DECK.
 ② INCLUDES WEIGHT OF CONCRETE DECK.



CONTRACTOR/OWNER NOTE:
ANCHOR RODS, NUTS AND
WASHERS ARE NOT PROVIDED BY
CONTECH ENGINEERED SOLUTIONS.



CITY INDEX NO. 6219

CONTECH
CONTRACT
DRAWING



110'-0" X 8'-0"
VICTORIA PEDESTRIAN BRIDGE
PEDESTRIAN BRIDGE
FONTANA, CA

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www.ContechES.com
8301 State Highway 29 North, Alexandria, MN 55008
600-328-2047 320-345-6176 320-566-3148 / FAX

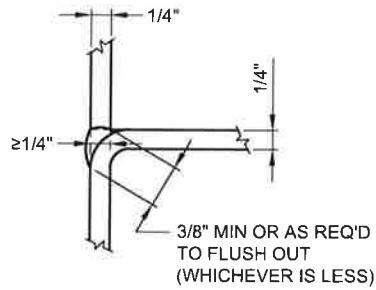
**CONTINENTAL
BRIDGE**

**CONTINENTAL
BRIDGE**

DATE: 6/18/2020	
DESIGNED: MJH	DRAWN: KRL
CHECKED: MJH	APPROVED: MJH
PROJECT No.: 650614	SEQUENCE N 010
SHEET:	

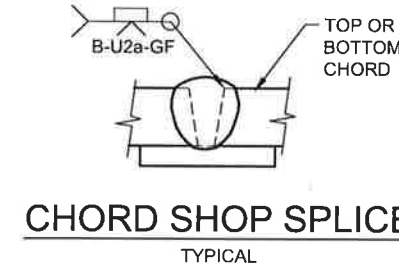
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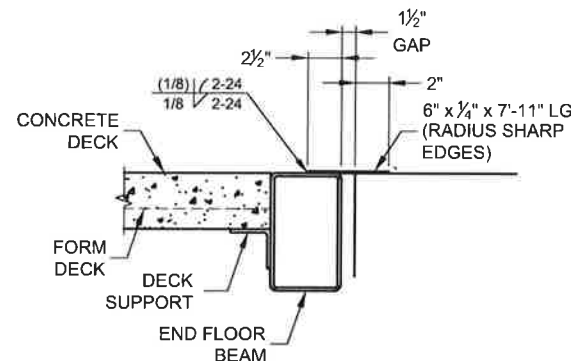


4 WELD DETAIL
1,2,3

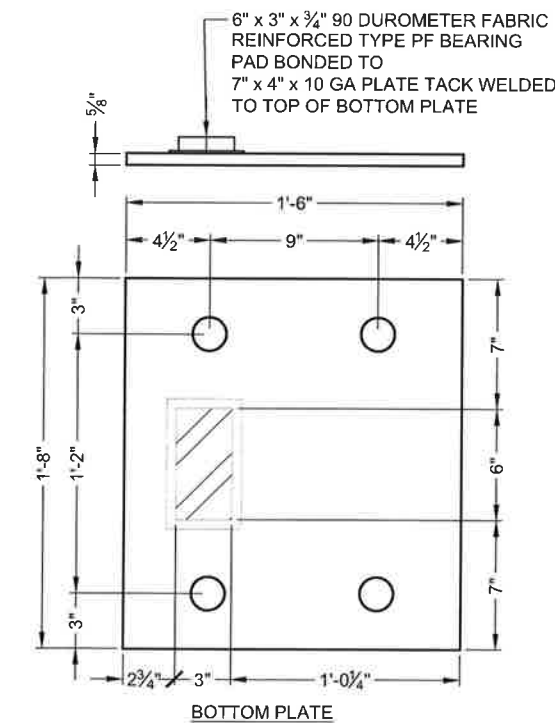
WELD DETAIL
1,2,3



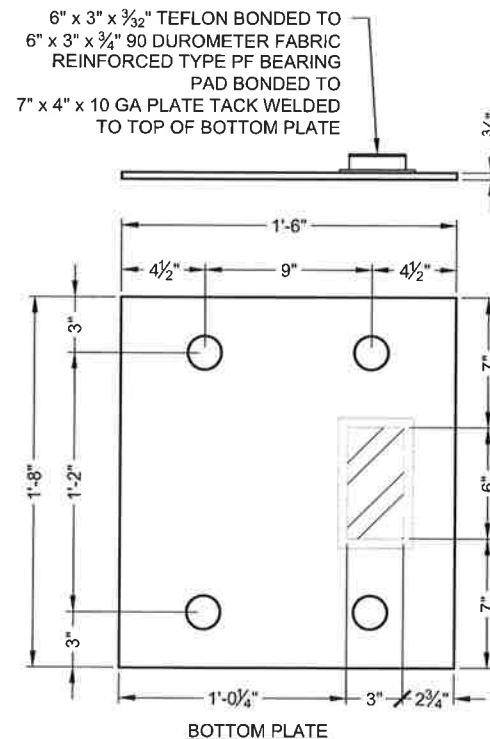
CHORD SHOP SPLICE
TYPICAL



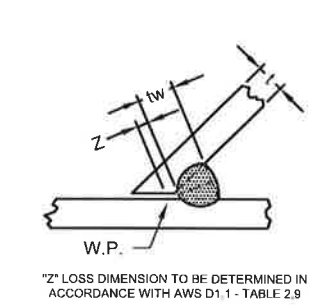
8 COVER PLATE DETAIL
2 TYP BOTH ENDS



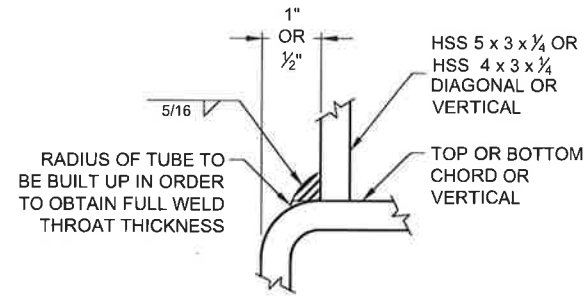
10 FIXED BEARING PAD DETAILS
2 (1) AS SHOWN (1) OPPOSITE



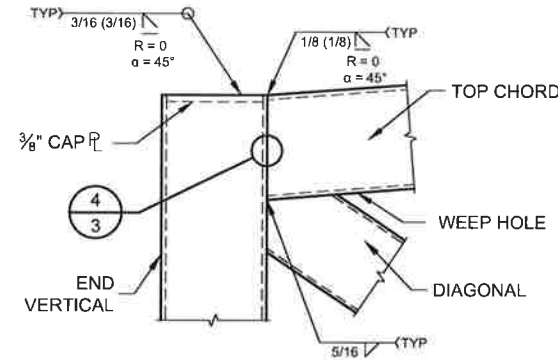
11 EXP. BEARING PAD DETAILS
2 (1) AS SHOWN (1) OPPOSITE



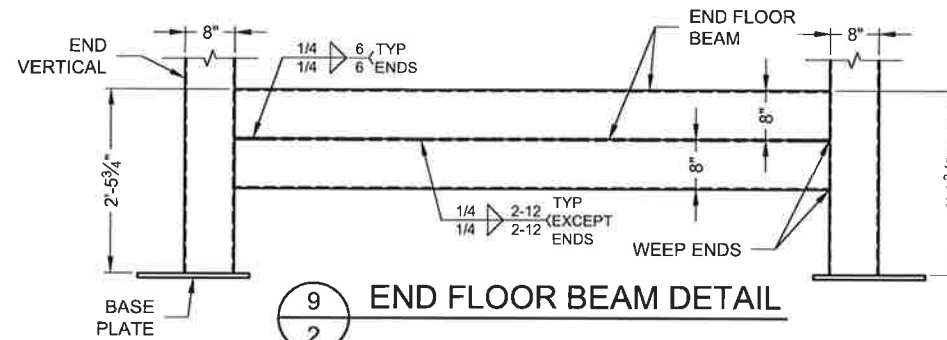
5 WELD DETAIL
1



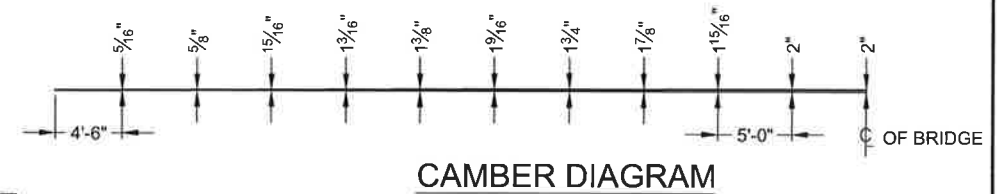
6 WELD DETAIL
1



7 WELD DETAIL
1



9 END FLOOR BEAM DETAIL
2



CAMBER DIAGRAM

QUALITY ASSURANCE NOTES

1. ALL WELDS TO BE VISUALLY INSPECTED.

BEARING PAD SPECIFICATIONS
PREFORMED FABRIC REINFORCED
ELASTOMERIC TYPE PF

PHYSICAL PROPERTIES:
-ELASTOMER DUROMETER: 60±5 (SHORE A)
- FINISHED PAD DUROMETER: 90±5 (SHORE A)
-COMPRESSIVE STRENGTH: 18,000 PSI MAX
-MAXIMUM DESIGN PRESSURE: 2,000 PSI
-AASHTO GRADE

GUIDE SPECIFICATIONS:
-MEETS DESIGN REQUIREMENTS OF AASHTO
LRFD 2017
-COMPLIES WITH MIL-C882-E MILITARY
SPECIFICATION AND P.C.I.

CONTECH
CONTRACT
DRAWING



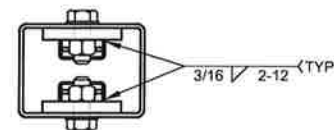
110'-0" X 8'-0"
VICTORIA PEDESTRIAN BRIDGE
PEDESTRIAN BRIDGE
FONTANA, CA

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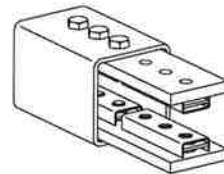
REVISION DESCRIPTION	DATE	MARK	INITIAL SUBMITTAL	BY
	11/11/2020		KRL	

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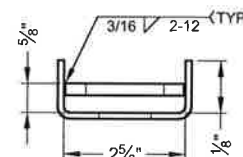
DATE:	6/18/2020
DESIGNED:	MJH
CHECKED:	MJH
PROJECT No.:	650614
SHEET:	3 OF 5
DRAWN:	KRL
APPROVED:	MJH
SEQUENCE No.:	010

MATERIAL (PER SPLICE)

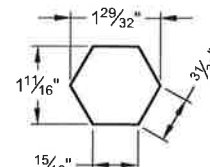
- (16) Ø1" x 2 3/4" LONG ASTM A325 T3 BOLTS, DH3 A563 NUTS, & T3 WASHERS
- (2) 5" x 3/4" x 2'-2" ASTM A588 PLATES
- (4) 2 9/16" x 1/4" x 1'-0" ASTM A588 PLATES W/ HEX HOLES
- (4) 10 GA. x 1'-0" LONG ASTM A606 ROLLED FORMED CAPTURE PLATES



CHORD SPLICE ISOMETRIC
FOR REFERENCE ONLY, NTS

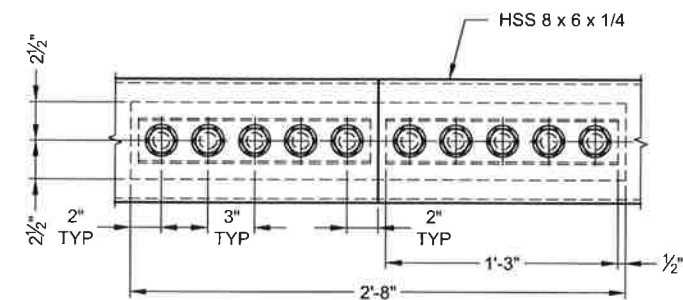


ROLL FORMED
CAPTURE PLATE DETAIL

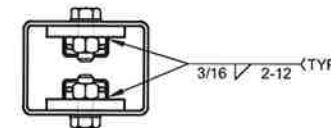


HEX HOLE DETAIL

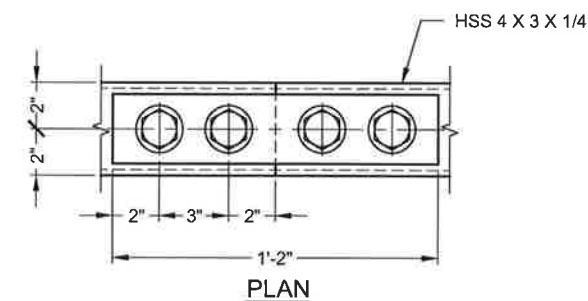
ALL SPLICE BOLTS & NUTS TO BE
ROTATIONAL CAPACITY TESTED FROM
THE MANUFACTURER & TIGHTENED IN
ACCORDANCE WITH THE RCSC
TURN-OF-NUT PROCEDURE.

MATERIAL (PER SPLICE)

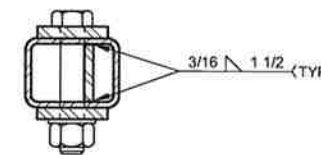
- (20) Ø1" x 2 3/4" LONG ASTM A325 T3 BOLTS, DH3 A563 NUTS, & T3 WASHERS
- (2) 5" x 3/4" x 2'-8" ASTM A588 PLATES
- (4) 2 9/16" x 1/4" x 1'-3" ASTM A588 PLATES W/ HEX HOLES
- (4) 10 GA. x 1'-3" LONG ASTM A606 ROLLED FORMED CAPTURE PLATES



1



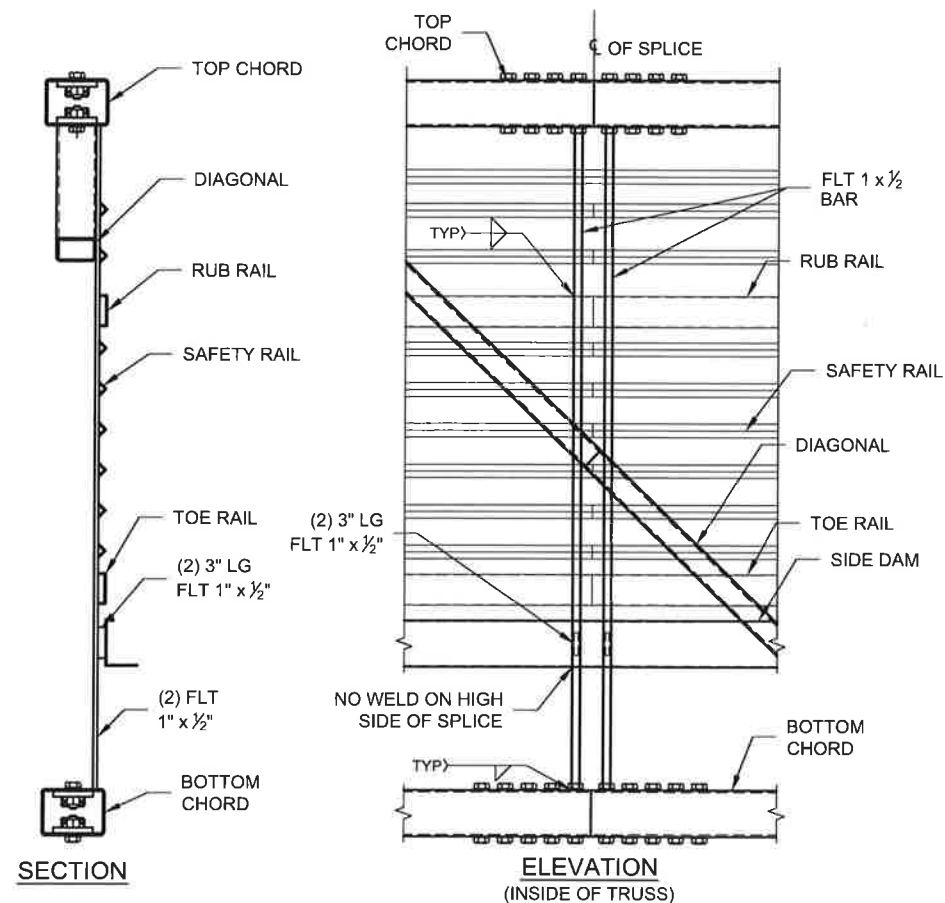
PLAN



1

- MATERIAL (PER SPLICE)

- (4) Ø1" x 5 1/2" LONG ASTM A325 T3 BOLTS, DH3 A563 NUTS, & T3 WASHERS
- (2) 3" x 1/2" x 1'-2" ASTM A588 PLATES
- (2) 2 7/16" x 3/8" x 7" ASTM A588 PLATES

 $\frac{1}{2}$

CITY INDEX NO. 6219

CONTECH
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DRAWING



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[illegible]

110'-0" X 8'-0"
VICTORIA PEDESTRIAN BRIDGE
PEDESTRIAN BRIDGE
FONTANA, CA

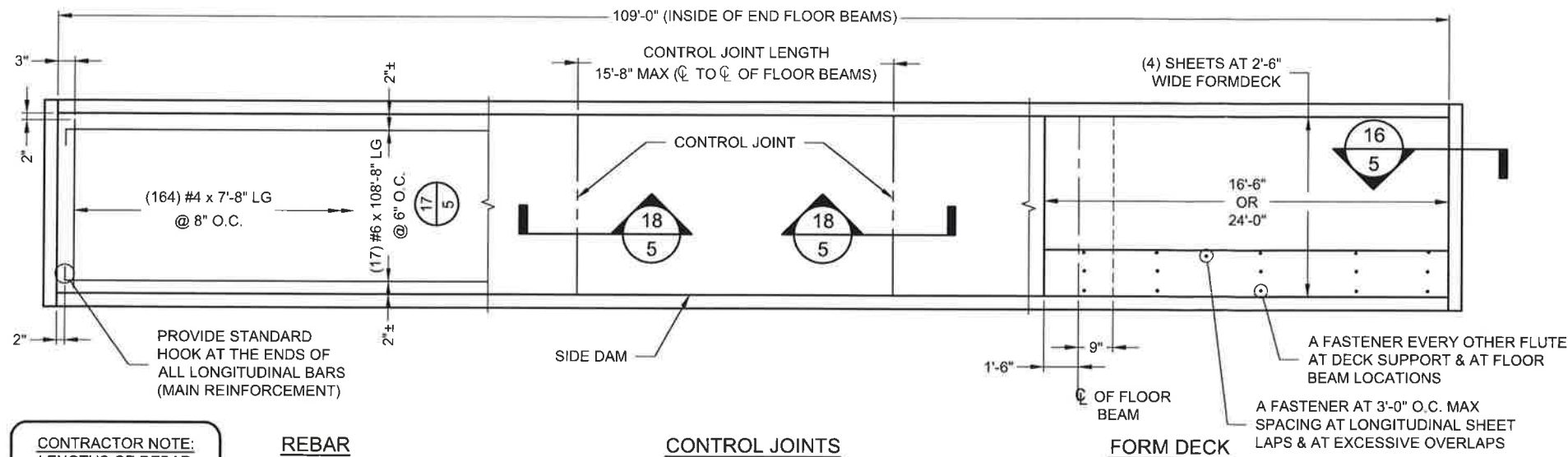


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8301 State Highway 29 North, Alexandria, MN 56308



DATE: 6/18/2020	
DESIGNED: MJH	DRAWN: KRL
CHECKED: MJH	APPROVED: MJH
PROJECT No.: 650614	SEQUENCE No.: 010
SHEET:	

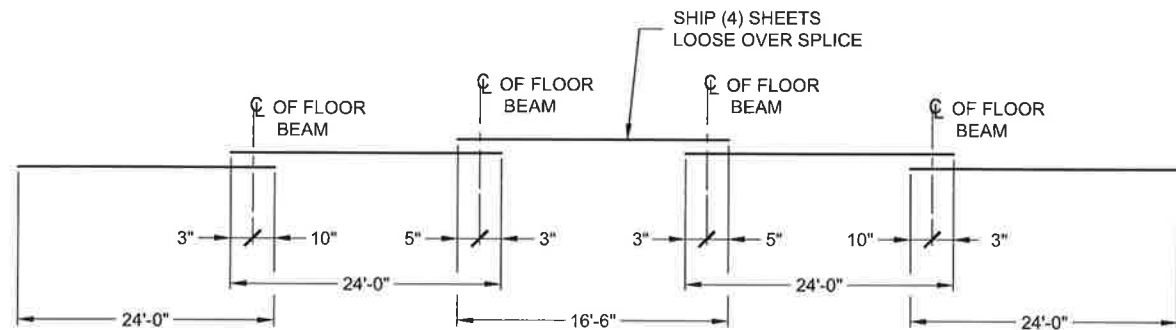
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CONTRACTOR NOTE:
LENGTHS OF REBAR
DO NOT INCLUDE
HOOK LENGTHS

REBAR

CONTROL JOINTS
DECK SLAB LAYOUT



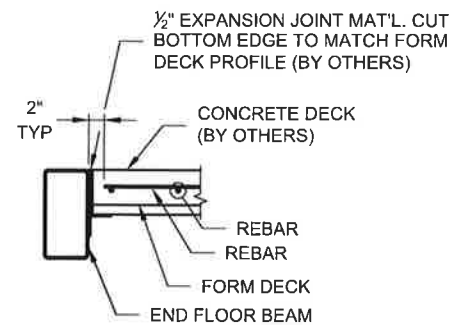
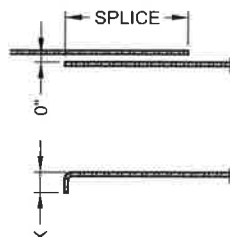
FORMDECK LAYOUT

NOTE:
IF SPLICE IS REQUIRED IN LONGITUDINAL
REBARS, LAP SPLICE LENGTH WILL BE AS
SHOWN. STAGGER SPliced REBAR EVERY
OTHER LONGITUDINAL BAR AND LOCATE AT
1/3 DISTANCE BETWEEN FLOOR BEAMS.

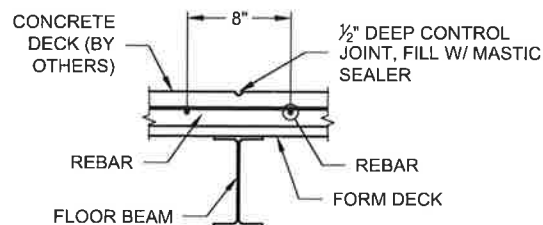
LENGTH (INCHES)		
BAR SIZE	HOOK X	SPLICE
#3	6"	19"
#4	8"	25"
#5	9"	31"
#6	10"	37"

THE TABLES SHOWN ARE FOR $f_c = 4,000$
PSI (MINIMUM) AND $f_y = 60,000$ PSI

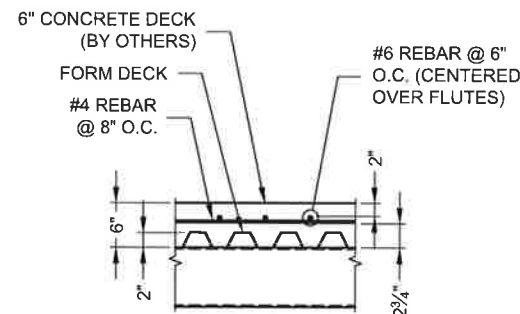
STANDARD SPLICE AND HOOK LENGTH DETAILS
NORMAL WEIGHT CONCRETE (150 PCF)



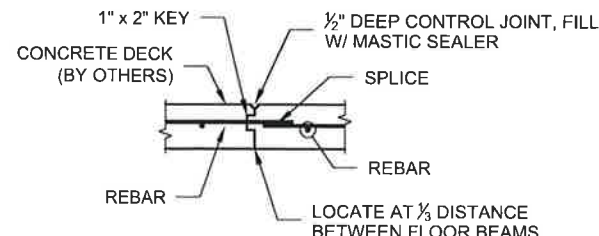
16
5
EXPANSION JOINT



18
5
CONTROL JOINT



17
5
TYP SLAB REINFORCEMENT DETAIL
 $f_c = 4,000$ PSI (MINIMUM 28 DAY STRENGTH)
GRADE 60 REINFORCING ($f_y = 60,000$ PSI)



CONSTRUCTION JOINT DETAIL
(AS REQUIRED)

DECK & CONCRETE NOTES

- GALVANIZED FORM DECK SHALL BE CANAM STEEL DECK UF2X-20 GAGE. FORM DECK WILL BE SHOP ATTACHED TO FLOOR BEAMS WITH #12-24 X 1 1/4" SELF-DRILLING FASTENERS WITH 1" O.D. WASHERS OR 1" X 3/16" POWER ACTUATED FASTENERS.
- BAR REINFORCEMENT SHALL BE GRADE 60 MINIMUM AND CONFORM TO THE REQUIREMENTS OF ASTM A 615.
- CONCRETE DECK AND REINFORCING TO BE AS SHOWN ON DRAWINGS AND TO BE FURNISHED AND INSTALLED BY OTHERS. THE COMPRESSIVE STRENGTH OF THE CONCRETE (f_c) MUST BE A MINIMUM OF 4,000 PSI (28 DAY STRENGTH). BRIDGE IS DESIGNED FOR REGULAR WEIGHT (150 PCF) CONCRETE WITH A MAXIMUM AGGREGATE SIZE OF 3/4". INSTALL BRIDGE PRIOR TO POURING CONCRETE.
- CONCRETE COVER OF 2" ABOVE LONGITUDINAL REINFORCEMENT SHALL BE STRICTLY MAINTAINED.
- CONCRETE DESIGN, QUALITY, MIXING, AND PLACING SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318 AND SPECIFICATIONS FOR STRUCTURAL CONCRETE ACI 301.
- COMPRESSION TEST SPECIMENS SHALL BE TAKEN DURING CONSTRUCTION TO INSURE COMPLIANCE WITH CONCRETE STRENGTH REQUIREMENTS. EVALUATION AND ACCEPTANCE OF THE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318. ALL CONCRETE WHICH FAILS TO MEET THE ACI REQUIREMENTS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE COST OF THE CONTRACTOR.
- THE CONTRACTOR MUST EXERCISE CARE TO CONTROL TRAFFIC AND STORAGE OF MATERIALS ON THE FORM DECK BEFORE POURING THE SLAB. SPANS MUST BE PLANKED OR OTHERWISE PROTECTED AGAINST DAMAGE FROM WORKERS WALKING ON THE MATERIAL, CONSTRUCTION TRAFFIC AND CONCRETE PLACING EQUIPMENT.

THESE SPECIFICATIONS SHALL BE THE MINIMUM REQUIREMENTS FOR THE BRIDGE DECK SLAB. MORE STRINGENT REQUIREMENTS SPECIFIED BY LOCAL GOVERNING BODIES MAY BE APPLICABLE.

CAUTION:

WE ARE PROVIDING STAY-IN-PLACE FORM DECKING TO ACCEPT A CONCRETE DECK ON THIS STRUCTURE IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR THE CONTRACT DOCUMENTS. BE AWARE THAT MOST PEDESTRIAN BRIDGE LIABILITY CLAIMS ARE STATISTICALLY SLIP AND FALL CLAIMS. IT IS THE OWNER'S AND/OR THE CONCRETE INSTALLER'S RESPONSIBILITY TO PROVIDE A NON-SKID FINISH ON THE CONCRETE DECK. WE RECOMMEND, AS A MINIMUM, A ROUGHENED BROOM FINISH BE USED ON ALL DECK SURFACES.

CONTECH
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DATE:	6/18/2020
DESIGNED:	MJH
DRAWN:	KRL
CHECKED:	MJH
APPROVED:	MJH
PROJECT No.:	650614
SEQUENCE No.:	010
SHEET:	5 OF 5

110'-0" X 8'-0"
VICTORIA PEDESTRIAN BRIDGE
PEDESTRIAN BRIDGE
FONTANA, CA

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CONTINENTAL
BRIDGE

