

CITY OF TORRANCE CONSTRUCTION PLANS FOR NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108

UTILITY CONTACT LIST:

COMPANY	PHONE NO.	CONTACT
CALIFORNIA WATER COMPANY	(310) 257-1460	DON ALVARADO
PACIFIC PIPELINE SYSTEM	(562) 728-2351	FRANK CARDEN
SBC/ PACBELL	(310) 515-3470	MARCELLA CORDOZA
TIME WARNER COMMUNICATIONS	(310) 629-8019	DWIGHT RICHARDSON
SOUTHERN CALIFORNIA GAS CO.	(310) 687-2011	PAUL BLOOD
SOUTHERN CALIFORNIA EDISON	(310) 783-9336	MICHAEL GLEN
AT&T LOCAL SERVICES	(714) 845-3522	MARIA GUZMAN
VERIZON (SANTA MONICA)	(310) 793-4159	DAN HAYES
CONOCO PHILLIPS	(310) 466-8187	LEO MARTINEZ
CHEVRON	(714) 228-1530	MIKE ROBERTS
EXXON MOBIL PIPELINE	(310) 212-1761	RUTH CRONIN-FRUITT
MCI NETWORK SERVICES, INC.	(972) 729-6016	JOHN BACHELDER
WEST BASIN MUNICIPAL WATER	(310) 660-6296	SHERWIN UMALI
CALIFORNIA WATER SERVICE CO.	(310) 679-2575	GEORGE COOK
SHELL PIPELINE CO., LP	(310) 816-2053	DAVE FELGER
TORRANCE MUNICIPAL WATER	(310) 781-6900	ALAN BERNDT
CALTRANS	(213) 897-3656	"PERMITS"
LA COUNTY FLOOD CONTROL DISTRICT	(626) 458-5100	"PERMITS"

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BASIS OF BEARINGS

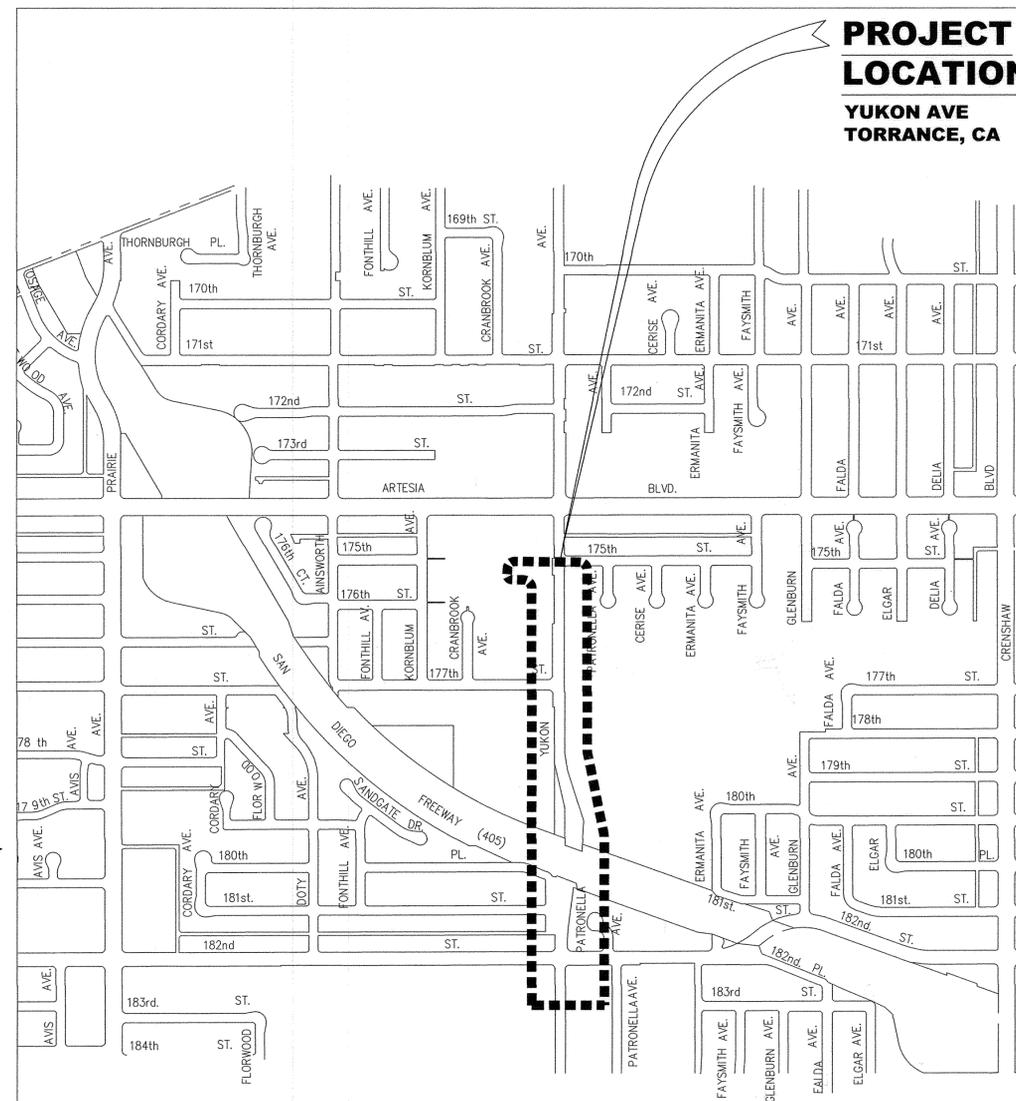
THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF YUKON AVENUE, BETWEEN FOUND MONUMENTS AT 177TH STREET AND 175TH STREET, BEING N0°09'11"E.

COORDINATE DATUM

COORDINATES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE V, 1983 NAD, 2007.0 EPOCH GPS ADJUSTMENT.

BENCHMARK

LOS ANGELES COUNTY BENCHMARK Y 6942
ELEV. 57,500 NAVD88
TORRANCE QUAD 1995
FOUND LEAD AND BENCH NAIL IN THE WEST CURB OF CRENSHAW BLVD., 2.0 FEET NORTH OF THE BEGIN CURB RETURN AT THE SOUTHWEST CORNER OF CRENSHAW BLVD. AND ARTESIA BLVD., 65 FEET SOUTH OF THE CENTERLINE OF ARTESIA BLVD. AND 38 FEET WEST OF THE CENTERLINE OF CRENSHAW BLVD.



LOCATION MAP

1" = 500'
THOMAS GUIDE PAGE 763, GRID F-1

STANDARD PLANS

STANDARD PLANS FOR PUBLIC CONSTRUCTION (SPPWC)
(2009 EDITION & REVISIONS)

110-2	DRIVEWAY APPROACHES
300-3	CURB OPENING CATCH BASIN
313-3	LOCAL DEPRESSIONS AT CATCH BASINS
321-2	MANHOLE PIPE-TO-PIPE (ONE OR BOTH MAIN LINE IDS 33" OR SMALLER)
380-4	CONCRETE COLLAR FOR RCP 12" THROUGH 72"

CITY OF TORRANCE

T 104	PAVEMENT COATING
T 116	TRENCH BACKFILL & PAVEMENT REPAIRS
T 204	BEDDING FOR SEWER PIPE
T 701	BEDDING FOR WATER PIPE
T 708	AIR & VACUUM RELEASE VALVE
T 713	CONCRETE THRUST BLOCK
T 723	D.I. CONNECTION TO MAIN

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.



Know what's below.
Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

PREPARED BY:



1561 E. ORANCETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
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REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

TITLE SHEET

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ

PROJECT ENGINEER:

E. Mastu

ENGINEERING MANAGER:

John Deeth

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY:

J. Bee

4/23/15

DATE

CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 1 OF 17

SCALE: AS SHOWN SPECIFICATION NO. B2016-03

SUPPLEMENTAL PLAN NO.

PLAN NO. **WP-308**

GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND SUPPLEMENTS THERETO, AS WRITING AND PROMULGATED BY PUBLIC WORKS STANDARDS, INC., HERINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS, THE TORRANCE STANDARDS, THE AMERICAN WATER WORKS ASSOCIATION STANDARDS LATEST EDITION, AND TO THE SATISFACTION OF THE COMMUNITY DEVELOPMENT OR PUBLIC WORKS DIRECTOR.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, VERIFY DEPTH AND PROTECT ALL STRUCTURES, INCLUDING SUBSTRUCTURES, SHOWN ON THE PLAN. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF REPAIRING OR REPLACING ANY OF SAID STRUCTURES DAMAGED BY HIM/HER DURING PROSECUTION OF THE WORK. ALL REPAIRS AND REPLACEMENTS SHALL BE DONE IN THE PRESENCE OF THE INSPECTOR. ALL LOCATIONS SHOWN ON THE PLAN FOR UTILITY LINES HAVE BEEN TAKEN FROM AVAILABLE RECORDS AND THEIR COMPLETENESS AND CORRECTNESS ARE IN NO WAY GUARANTEED.
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 AND ALL PUBLIC UTILITY COMPANIES AND OWNERS OF PRIVATE FACILITIES WITHIN THE AREA OF CONSTRUCTION AT LEAST 2 WORKING DAYS IN ADVANCE OF PERFORMING ANY WORK WITHIN SAID AREA.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY, CALTRANS AND THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT BEFORE COMMENCING WORK. TRAFFIC CONTROL WITHIN PUBLIC STREET RIGHTS OF WAY SHALL BE IN CONFORMANCE WITH THE CALIFORNIA MUTCD MANUAL OR CITY OF TORRANCE STANDARDS FOR TRAFFIC CONTROL. LATEST EDITION. THE CONTRACTOR SHALL PROVIDE A 24-HOUR TELEPHONE NUMBER FOR EMERGENCY REPAIRS TO TRAFFIC CONTROL AND PAVEMENT MARKINGS.
- OVERHEAD UTILITY LINES CAUTION: REVIEW APPROVED CONSTRUCTION PLAN. IF CONSTRUCTION REQUIRES WORKERS AND/OR EQUIPMENT TO BE WITHIN 6 FEET OR CRANES OR HOISTING DEVICES TO BE WITHIN 10 FEET OF OVERHEAD ELECTRIC LINES, CALL SOUTHERN CALIFORNIA EDISON AT 310-783-9336 AND THE 405 FREEWAY CALL CALTRANS AT 213-897-3656.
- PRIOR TO COMMENCEMENT OF WORK, ALL SURVEY MONUMENTS IN THE PROJECT AREA SHALL BE LOCATED AND TIED OUT. ALL CENTERLINE MONUMENTS OR TIES LOST OR DESTROYED BY THIS WORK SHALL BE REPLACED EITHER BY A LICENSED SURVEYOR OR A CIVIL ENGINEER REGISTERED PRIOR TO JANUARY 1, 1982 AND NEW TIE SHEETS PROVIDED. METHOD OF ESTABLISHMENT SHALL BE STATED ON THE TIE SHEET.
- GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR 24 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT 310-781-6900 PRIOR TO TRIMMING, REMOVING OR RELOCATING ANY EXISTING STREET TREES.
- UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS SHALL BE RELOCATED OR REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT 310-781-6900 AT LEAST 2 WORKING DAYS IN ADVANCE OF THE WORK.
- CONTRACTOR SHALL MAKE AVAILABLE FOR THE PUBLIC WORKS INSPECTOR'S REVIEW, ON A DAILY BASIS, AS-BUILT DRAWINGS FOR WORK PERFORMED UP TO AND INCLUDING THE PREVIOUS DAY'S ACTIVITIES. WORK SHALL NOT BE CONSIDERED AS COMPLETE UNTIL AS-BUILTS ARE SUBMITTED TO AND ACCEPTED BY THE COMMUNITY DEVELOPMENT OR PUBLIC WORKS DIRECTOR.

WATER NOTES

- THE CONTRACTOR SHALL DISINFECT WATER LINES UNDER THE DIRECTION OF THE CITY'S WATER QUALITY INSPECTOR. THE TORRANCE MUNICIPAL WATER DEPARTMENT SHALL COLLECT WATER SAMPLES FOR ANALYSIS SUBSEQUENT TO DISINFECTING OF THE PIPELINE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AT LEAST TWO WORKING DAYS IN ADVANCE OF A PROPOSED WATER MAIN OR SERVICE LINE SHUT DOWN. THE CONTRACTOR SHALL NOTIFY THE CUSTOMERS EFFECTED BY THE PROPOSED SHUT DOWN AT LEAST 24 HOURS IN ADVANCE. CUSTOMER NOTIFICATION SHALL CONSIST OF A DOOR HANGER SPECIFYING THE DATE(S) AND TIME(S) OF THE PROPOSED SHUT DOWN. NOTICE SHALL CONTAIN THE CONTRACTOR'S NAME AND TELEPHONE NUMBER. NOTICE SHALL BE APPROVED BY THE INSPECTOR PRIOR TO DISTRIBUTION.
- OPERATION OF VALVES ON ALL PUBLIC WATER LINES AND THE FIRST NEW VALVE DOWNSTREAM OF A PUBLIC WATER MAIN SHALL BE PERFORMED BY THE TORRANCE MUNICIPAL WATER DEPARTMENT UNLESS OTHERWISE SHOWN.
- ALL WATER LINES SHALL HAVE 42" COVER FROM PROPOSED FINISHED GRADE UNLESS OTHERWISE SHOWN ON THE PLAN.
- FOR PARALLEL CONSTRUCTION ALL WATER LINES SHALL BE INSTALLED WITH A TWO FOOT (MIN.) CLEARANCE FROM EXISTING UTILITY LINES (GAS, TELEPHONE, CABLE, POWER...). A MINIMUM OF 12" CLEARANCE SHALL BE PROVIDED WHEN CROSSING UTILITY LINES.
- NO PVC PIPE SHALL BE INSTALLED UPSTREAM OF THE INLET SIDE OF METERS OR DETECTOR CHECK VALVES.
- TRENCHES CUT INTO AN EXISTING ROADWAY WITHIN THE PUBLIC RIGHTS OF WAY SHALL BE BACKFILLED AND PAVED AS PER CITY OF TORRANCE STANDARD T116.
- TRENCH RESURFACING SHALL BE OF THE SAME TYPE AS THE EXISTING PAVEMENT, EXCEPT IF EXISTING PAVEMENT IS AC. OVER P.C.C. RESURFACING MAY BE FULL-DEPTH AC.
- PIPE BEDDING SHALL CONFORM TO TORRANCE STANDARD DRAWING T701.
- ALL FLANGE NUTS, BOLTS AND WASHERS SHALL BE 316 S.S. UNLESS OTHERWISE SHOWN.
- ALL BURIED PIPE, VALVES, FITTING, ETC. SHALL BE WRAPPED IN 8 MIL. POLYETHYLENE.
- CONTRACTOR SHALL VERIFY UTILITY CROSSING CLEARANCES PRIOR TO PIPE INSTALLATIONS.

STREET NOTES

- CRUSHED MISCELLANEOUS BASE (CMB) PER SECTION 200-2.4 OF THE STANDARD SPECIFICATIONS SHALL BE USED AS BASE MATERIAL UNDER SIDEWALK, CURBS, GUTTERS, CROSS GUTTERS, BUS PADS, DRIVEWAY APRONS AND PAVEMENT FOR ALL STREETS AND ALLEYS.
- BASE FOR A RESIDENTIAL DRIVEWAY MAY BE OMITTED ON SANDY SOILS AND SHALL BE 4" THICK ON OTHER SOILS. SANDY SOILS SHALL BE DETERMINED BY A MINIMUM SE OF 30 PER SAND EQUIVALENT TEST AS PER CALIFORNIA TEST 217 OR ASTM D2419 AS CALLED FOR IN SECTION 200-2 OF THE STANDARD SPECIFICATIONS.
- "X" DIMENSION SHOWN ON SPPWC STD. PLAN 110-2 SHALL BE 3 FEET UNLESS OTHERWISE CALLED ON THE PLAN OR IN THE SPECIFICATIONS.
- WHEN THERE IS MORE THAN ONE DRIVEWAY APRON ON THE SAME FRONTAGE OF A LOT. THE MINIMUM LENGTH OF FULL HEIGHT CURB BETWEEN THESE DRIVEWAYS SHALL BE 20 FEET.
- FOR A NEW ASPHALT CONCRETE (AC) SECTION BETWEEN 3" TO 4" THICK, THE CONTRACTOR SHALL CONSTRUCT ONE LIFT OF C2-AR4000 (C2-PG-64-10) OVER BASE. FOR A NEW AC SECTION 5" THICK, THE CONTRACTOR SHALL CONSTRUCT ONE 2" THICK LIFT OF C2-AR4000 (C2-PG-64-10) OVER ONE 3" THICK LIFT OF B-AR4000 (B-PG-64-10) OVER BASE. FOR A NEW AC SECTION THICKER THAN 5" AND PAVEMENT OVERLAYS REFER TO CONSTRUCTION NOTES AND/OR PLANS. THE MAXIMUM THICKNESS OF EACH LIFT SHALL BE 4". INSTALLATION OF THE FINAL COURSE SHALL NOT TAKE PLACE UNTIL ALL UNDERGROUND UTILITY TRENCHING HAS BEEN COMPLETED AND APPROVAL TO PROCEED HAS BEEN GRANTED BY THE PUBLIC WORKS INSPECTOR OR ENGINEER.
- DURING NON-CONSTRUCTION HOURS, ALL EXCAVATIONS MUST BE APPROPRIATELY SHORED, PLATED OR BACKFILLED EXCEPT BORE PITS WHICH SHALL BE SECURED WITH K-RAIL AND 6' HIGH CHAIN LINK FENCE PANELS SECURED IN PLACE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR. STEEL PLATES SHALL BE TACK WELDED, PINNED AND/OR SECURED IN PLACE BY ANOTHER METHOD APPROVED BY THE INSPECTOR.
- IF STREET TREES ARE REQUIRED IN THE PARKWAY, NEWLY INSTALLED TREES SHALL BE INSTALLED PER CITY OF TORRANCE STANDARD T401 AND TO THE SATISFACTION OF THE STREETScape MANAGER. CONTACT THE PUBLIC WORKS DEPARTMENT AR 310-781-6900 FOR TYPE(S), SIZE(S) AND LOCATION(S) OF TREES.
- PLANTED AND IRRIGATED PARKWAY(S) (IF REQUIRED) SHALL HAVE MATERIALS AND PLANTS APPROVED BY THE STREETScape MANAGER PRIOR TO INSTALLATION.

STORM DRAIN NOTES

- STORM DRAIN CONNECTIONS TO THE L.A. COUNTY STORM DRAIN SYSTEM REQUIRE A PERMIT FROM L.A. COUNTY (1-626-458-3129) BEFORE ISSUANCE OF A CITY PERMIT.
- IN CASE OF CONFLICT BETWEEN A CONNECTOR PIPE AND AN EXISTING UNDERGROUND LINE, THE CONNECTOR PIPE MAY BE REALIGNED OVER OR UNDER THE CONFLICTING LINE. CONNECTOR PIPE GRADES SHALL DRAIN POSITIVELY TOWARD THE MAIN LINE, AND WHERE GRADE BREAKS EXCEED FIVE DEGREES A CONCRETE COLLAR PER SPPWC STD. PLAN 380-4 SHALL BE CONSTRUCTED. APPROVAL FOR REALIGNMENT SHALL BE OBTAINED FROM THE COMMUNITY DEVELOPMENT/PUBLIC WORKS DIRECTOR PRIOR TO COMMENCEMENT OF WORK.
- MANHOLE AND CATCH BASIN COVERS SHALL BE CAST WITH THE WORDS "TORRANCE DRAIN" FOR CITY MAINTAINED LINES, "LACFCD" FOR LOS ANGELES COUNTY FLOOD CONTROL DISTRICT MAINTAINED LINES, AND "PRIVATE DRAIN" FOR PRIVATELY MAINTAINED LINES.

THRUST BLOCKS*

NOMINAL PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	HORIZONTAL BENDS																					
		DEAD ENDS AND TEES			CROSS			BENDS LESS THAN OR EQUAL TO ANGLE									ALL BENDS						
		A	B	C	A	B	C	11-1/4			22-1/2			45				90					
6"	200	2'-6"	1'-6"	6"	2'-0"	1'-0"	6"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	1'-0"	2'-0"	1'-0"	1'-0"	3'-0"	3'-0"	3'-6"	1'-6"	5'-0"	2'-0"	10"
8"	200	4'-6"	1'-6"	8"	2'-0"	1'-6"	8"	1'-6"	1'-0"	3'-0"	1'-0"	3'-0"	1'-6"	4'-0"	2'-0"	6'-0"	2'-6"	1'-0"	10"	10"	10"	10"	10"
10"	200	5'-6"	2'-0"	10"	2'-6"	2'-0"	10"	2'-0"	1'-0"	3'-0"	1'-6"	4'-0"	2'-0"	6'-0"	2'-6"	1'-0"	10"	10"	10"	10"	10"	10"	10"
12"	200	7'-6"	2'-0"	1'-0"	3'-6"	2'-0"	1'-0"	2'-0"	1'-6"	3'-0"	2'-0"	4'-6"	2'-6"	7'-0"	3'-0"	1'-0"	10"	10"	10"	10"	10"	10"	10"
16"	200	9'-0"	3'-0"	1'-4"	4'-6"	3'-0"	1'-4"	2'-8"	2'-0"	4'-0"	2'-8"	7'-0"	3'-0"	11'-0"	3'-6"	1'-4"	10"	10"	10"	10"	10"	10"	10"
18"	200	10'-0"	3'-6"	1'-6"	5'-0"	3'-6"	1'-6"	3'-2"	2'-2"	4'-2"	3'-2"	7'-6"	3'-6"	12'-0"	4'-0"	1'-6"	10"	10"	10"	10"	10"	10"	10"
24"	200	13'-6"	4'-6"	2'-0"	7'-0"	4'-6"	2'-0"	4'-0"	3'-0"	6'-0"	4'-0"	11'-6"	4'-0"	19'-0"	4'-6"	2'-0"	10"	10"	10"	10"	10"	10"	10"

NOMINAL PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	VERTICAL BENDS																					
		11-1/4			22-1/2			45									ALL BENDS						
		D	E	F	D	E	F	D	E	F	D	E	F	D	E	F							
6"	200	1'-6"	3'-0"	1'-0"	2'-0"	4'-0"	1'-0"	3'-0"	5'-6"	1'-0"	4'-0"	7'-0"	2'-0"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"
8"	200	2'-0"	4'-0"	1'-0"	2'-6"	5'-0"	1'-0"	3'-6"	7'-0"	2'-0"	5'-0"	10'-0"	3'-6"	10"	10"	10"	10"	10"	10"	10"	10"	10"	10"
10"	200	2'-0"	4'-6"	1'-0"	3'-0"	6'-0"	1'-6"	4'-0"	9'-0"	3'-0"	6'-0"	12'-0"	5'-0"	1'-0"	10"	10"	10"	10"	10"	10"	10"	10"	10"
12"	200	2'-6"	5'-0"	1'-0"	3'-6"	7'-0"	2'-0"	5'-0"	10'-0"	4'-0"	7'-0"	14'-0"	7'-0"	1'-0"	10"	10"	10"	10"	10"	10"	10"	10"	10"
16"	200	3'-0"	6'-6"	3'-0"	4'-0"	7'-0"	4'-0"	4'-6"	11'-0"	4'-6"	6'-0"	11'-6"	6'-0"	1'-4"	10"	10"	10"	10"	10"	10"	10"	10"	10"
18"	200	3'-0"	8'-0"	3'-0"	4'-6"	7'-0"	4'-6"	5'-0"	11'-6"	5'-0"	6'-0"	14'-6"	6'-0"	1'-6"	10"	10"	10"	10"	10"	10"	10"	10"	10"
24"	200	4'-0"	8'-0"	4'-0"	5'-6"	8'-6"	5'-6"	6'-6"	12'-0"	6'-6"	8'-0"	14'-6"	8'-0"	2'-0"	10"	10"	10"	10"	10"	10"	10"	10"	10"

* THRUST BLOCKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH CITY OF TORRANCE STD. T713 AND THESE TABLES

LEGEND

COM	COM	COM	COMMUNICATIONS
E	E	E	ELECTRICAL POWER
G	G	G	GAS (NATURAL)
CATV	CATV	CATV	CABLE TELEVISION
T	T	T	TELEPHONE
S	S	S	SEWER
SD	SD	SD	STORM DRAIN
W	W	W	WATER
BW	BW	BW	BLENDED WATER
RWW	RWW	RWW	RAW WELL WATER
---	---	---	LIMITS OF WORK
⊕	⊕	⊕	DETAIL BUBBLE (DETAIL 1, SHEET 5)
C.O.	C.O.	C.O.	CLEAN OUT
CATV	CATV	CATV	CABLE TV
CMLC	CMLC	CMLC	CEMENT MORTAR LINED & COATED
CONT.	CONT.	CONT.	CONTINUED
DIP	DIP	DIP	DUCTILE IRON PIPE
EL	EL	EL	ELEVATION
FF	FF	FF	FINISHED FLOOR
FG	FG	FG	FINISHED GRADE
FH	FH	FH	FIRE HYDRANT
FLG	FLG	FLG	FLANGED
FP	FP	FP	FLAG POLE
FS	FS	FS	FINISHED SURFACE
GL	GL	GL	GRADE LINE
GUY	GUY	GUY	GUY WIRE
HDPE	HDPE	HDPE	HIGH-DENSITY POLYETHYLENE
HP	HP	HP	HIGH POINT
INV	INV	INV	INVERT
LP	LP	LP	LIGHT POLE
MJ	MJ	MJ	MECHANICAL JOINT
NPS	NPS	NPS	NO PARKING SIGN
OH	OH	OH	OVER HEAD
PA	PA	PA	PLANTER AREA
PAD	PAD	PAD	BUILDING PAD
PP	PP	PP	POWER POLE
ROW	ROW	ROW	RIGHT OF WAY
SD	SD	SD	SANITARY SEWER
SS	SS	SS	STORM DRAIN
TC	TC	TC	TOP OF CURB
WW	WW	WW	WATER VALVE

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TWO WORKING DAYS BEFORE YOU DIG.



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

PREPARED BY:



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REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

NOTES

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: E. Haslin
ENGINEERING MANAGER: John Dettl

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

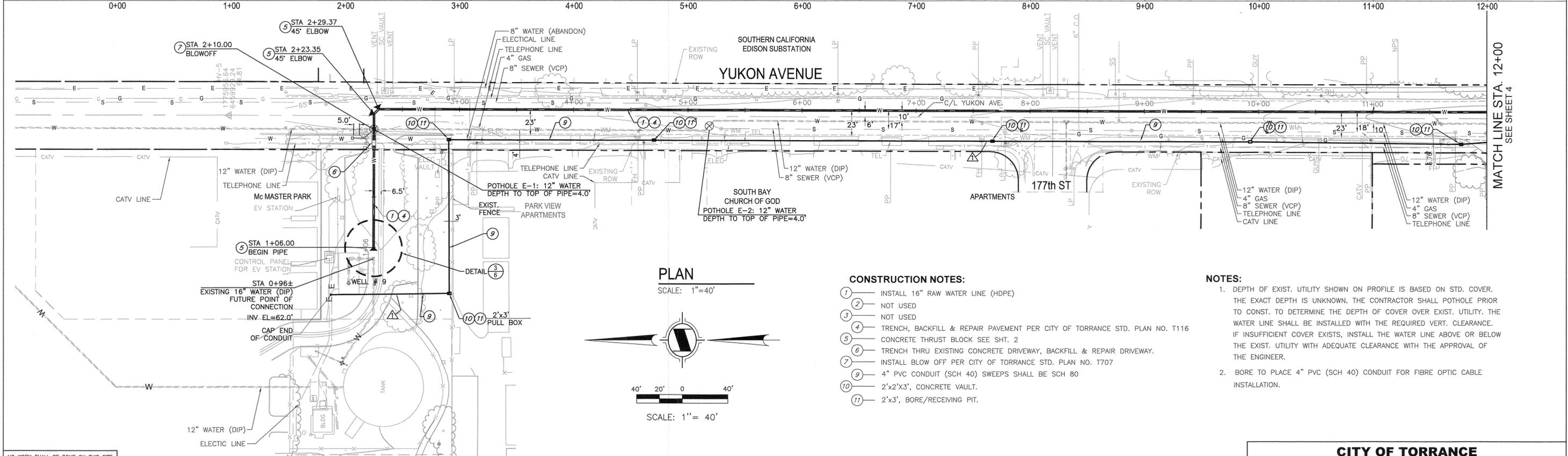
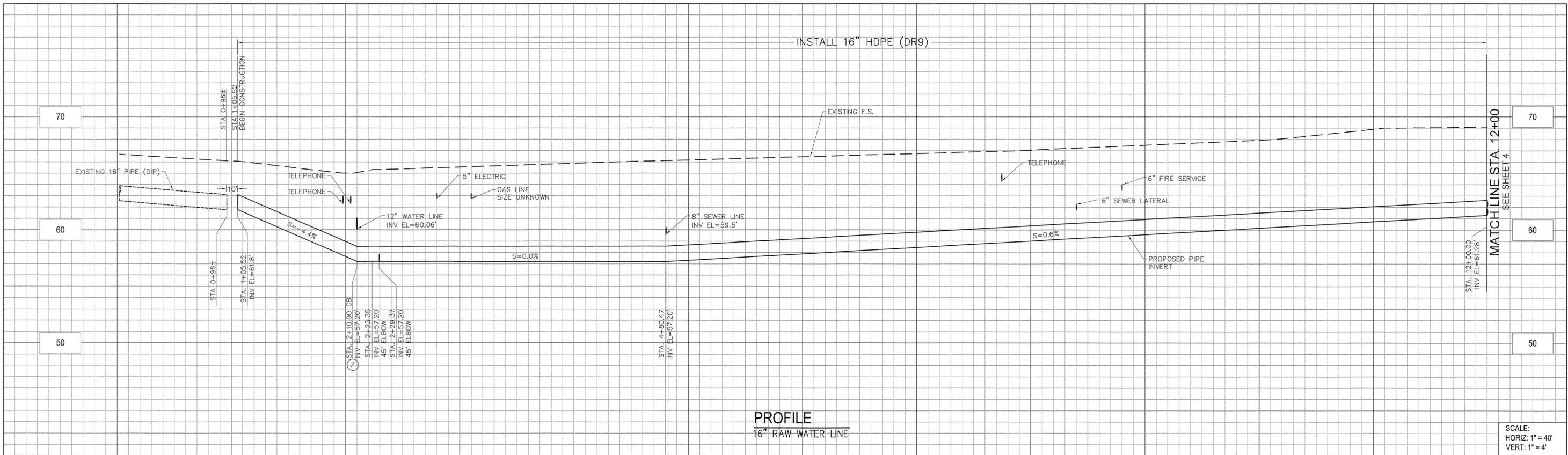
SHEET 2 OF 17

SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.

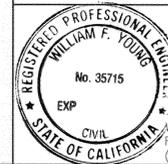
PLAN NO.

WP-308



- CONSTRUCTION NOTES:**
- ① INSTALL 16" RAW WATER LINE (HDPE)
 - ② NOT USED
 - ③ NOT USED
 - ④ TRENCH, BACKFILL & REPAIR PAVEMENT PER CITY OF TORRANCE STD. PLAN NO. T116
 - ⑤ CONCRETE THRUST BLOCK SEE SHT. 2
 - ⑥ TRENCH THRU EXISTING CONCRETE DRIVEWAY, BACKFILL & REPAIR DRIVEWAY.
 - ⑦ INSTALL BLOW OFF PER CITY OF TORRANCE STD. PLAN NO. T707
 - ⑧ 4" PVC CONDUIT (SCH 40) SWEEPS SHALL BE SCH 80
 - ⑩ 2'x2'x3', CONCRETE VAULT.
 - ⑪ 2'x3', BORE/RECEIVING PIT.

- NOTES:**
1. DEPTH OF EXIST. UTILITY SHOWN ON PROFILE IS BASED ON STD. COVER. THE EXACT DEPTH IS UNKNOWN. THE CONTRACTOR SHALL POTHOLE PRIOR TO CONST. TO DETERMINE THE DEPTH OF COVER OVER EXIST. UTILITY. THE WATER LINE SHALL BE INSTALLED WITH THE REQUIRED VERT. CLEARANCE. IF INSUFFICIENT COVER EXISTS, INSTALL THE WATER LINE ABOVE OR BELOW THE EXIST. UTILITY WITH ADEQUATE CLEARANCE WITH THE APPROVAL OF THE ENGINEER.
 2. BORE TO PLACE 4" PVC (SCH 40) CONDUIT FOR FIBRE OPTIC CABLE INSTALLATION.



PREPARED BY: **CWE**
 WILLIAM F. YOUNG, P.E. DATE: 09/30/2015
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 FULLERTON, CA 92831
 TEL (714) 526-7500
 www.cwecorp.com

REV	DATE	BY	CHECKED	DESCRIPTION
A	09/26/15	VP	EM	ADDED 4" CONDUIT FOR FIBRE OPTIC CABLE

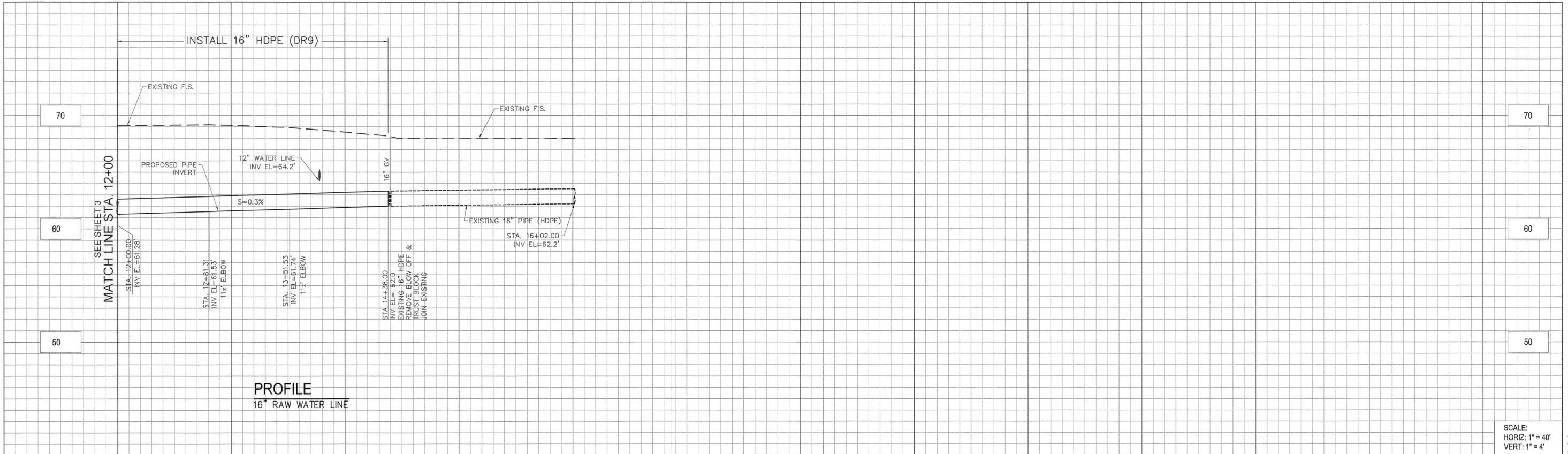
NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
 (ARTESIA BLVD TO 182ND STREET)
**RAW WATER LINE
 PLAN & PROFILE**

DESIGNED BY: D. GINS
 DRAWN BY: M. MENDEZ
 PROJECT ENGINEER: *E. Yarbou*
 ENGINEERING MANAGER: *John DeWitt*

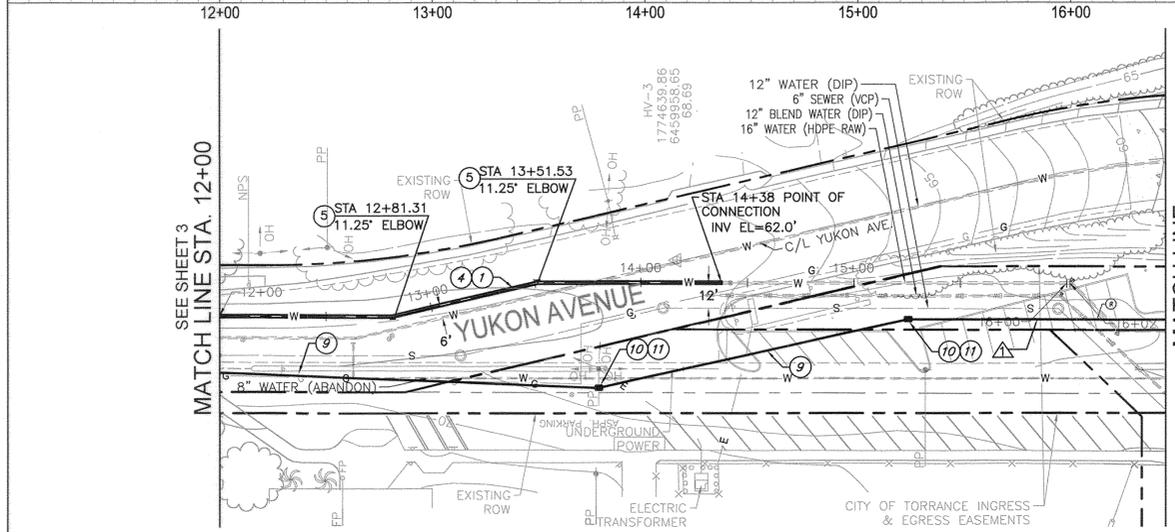
**CITY OF TORRANCE
 PUBLIC WORKS DEPARTMENT**

APPROVED BY: *J. B...* DATE: 10/22/15
 CRAIG BILEZERIAN, PE
 CITY ENGINEER
 R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 3 OF 17
 SCALE: AS SHOWN SPECIFICATION NO. SEE TITLE SHEET
 SUPPLEMENTAL PLAN NO.
 PLAN NO. **WP-308**



SCALE:
HORIZ. 1" = 40'
VERT. 1" = 4'



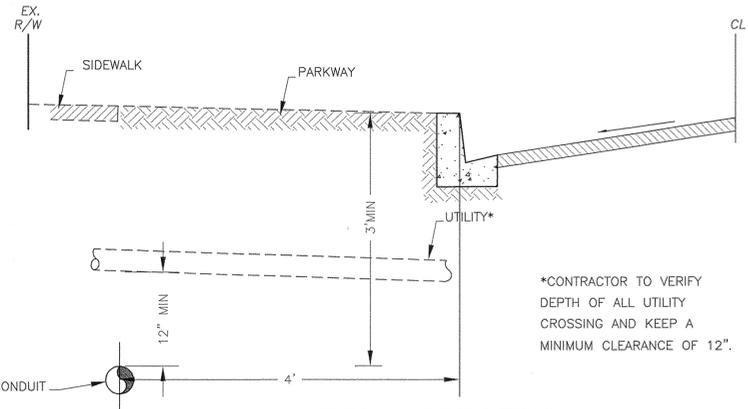
PLAN
SCALE: 1" = 40'

CONSTRUCTION NOTES:

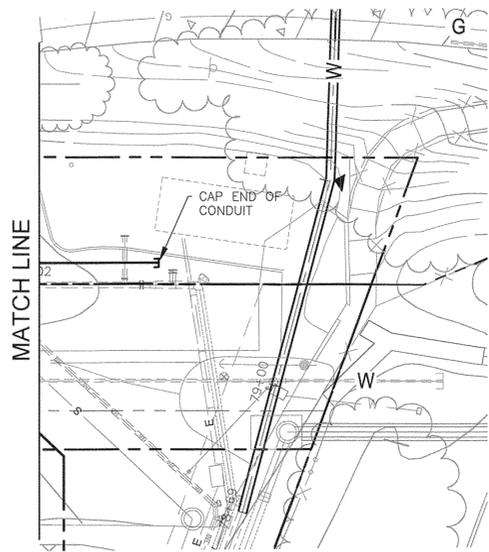
- ① INSTALL 16" RAW WATER LINE (HDPE)
- ④ TRENCH, BACKFILL & REPAIR PAVEMENT PER CITY OF TORRANCE STD. PLAN NO. T116
- ⑤ CONCRETE THRUST BLOCK SEE SHT. 2
- ⑨ 4" PVC CONDUIT (SCH 40) SWEEPS SHALL BE SCH 80
- ⑩ 2'x2'x3', CONCRETE VAULT.
- ⑪ 2'x3', BORE/RECEIVING PIT.

NOTES:

1. DEPTH OF EXIST. UTILITY SHOWN ON PROFILE IS BASED ON STD. COVER. THE EXACT DEPTH IS UNKNOWN. THE CONTRACTOR SHALL POTHOLE PRIOR TO CONST. TO DETERMINE THE DEPTH OF COVER OVER EXIST. UTILITY. THE WATER LINE SHALL BE INSTALLED WITH THE REQUIRED VERT. CLEARANCE. IF INSUFFICIENT COVER EXISTS, INSTALL THE WATER LINE ABOVE OR BELOW THE EXIST. UTILITY WITH ADEQUATE CLEARANCE WITH THE APPROVAL OF THE ENGINEER.
2. BORE TO PLACE 4" PVC (SCH 40) CONDUIT FOR FIBRE OPTIC CABLE INSTALLATION.



TYPICAL PIPE DETAIL



DETAIL SEE SHEET 5
SCALE: 1" = 20'

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Know what's below.
Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

PREPARED BY:
William F. Young
WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

CWE
1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION
△	09/26/15	VP	EM	ADDED 4" CONDUIT FOR FIBRE OPTIC CABLE

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

**RAW WATER LINE
PLAN & PROFILE CONT.**

DESIGNED BY:
D. GINS

PROJECT ENGINEER:
E. Mendez

ENGINEERING MANAGER:
John DeRoth

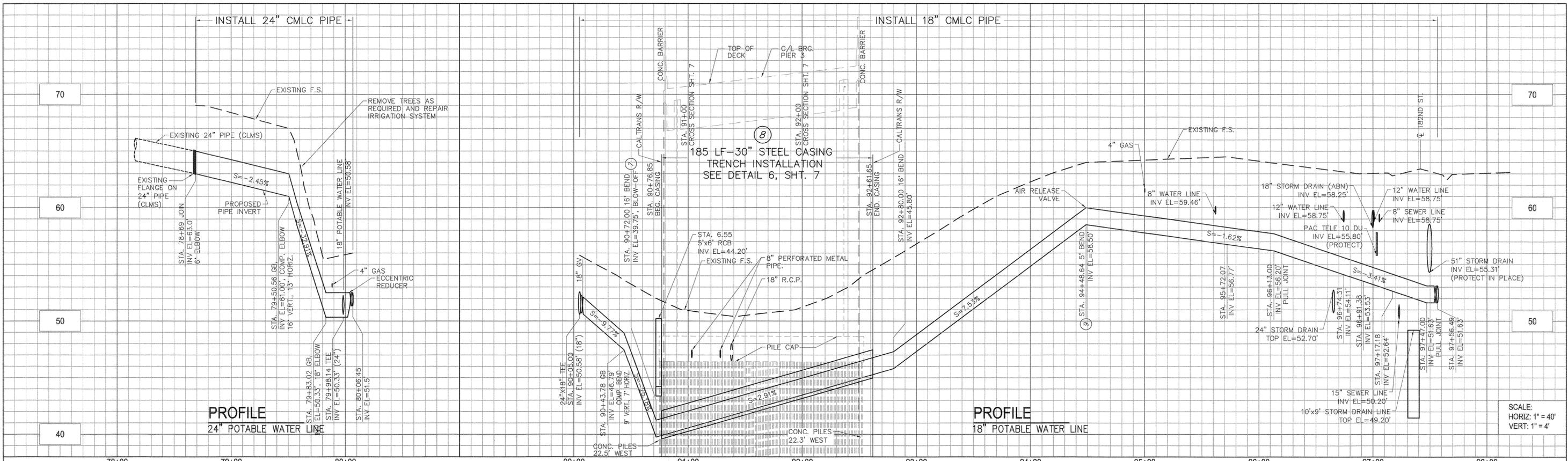
DRAWN BY:
M. MENDEZ

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

APPROVED BY:
Craig Bilezerian
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

DATE: 1/6/2016

SHEET 4 OF 17
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**



PROFILE
24" POTABLE WATER LINE

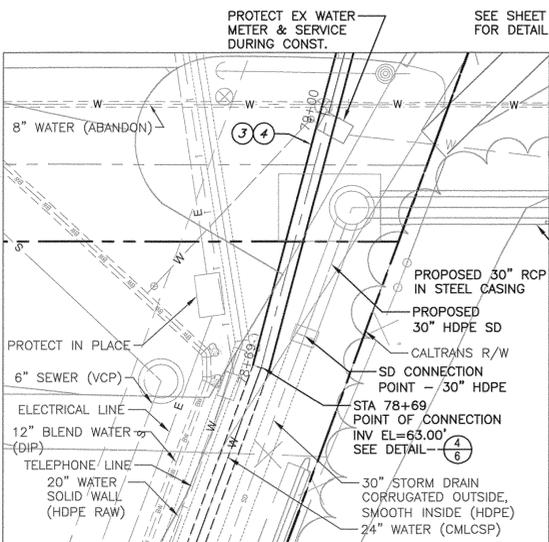
PROFILE
18" POTABLE WATER LINE

SCALE:
HORIZ: 1" = 40'
VERT: 1" = 4'

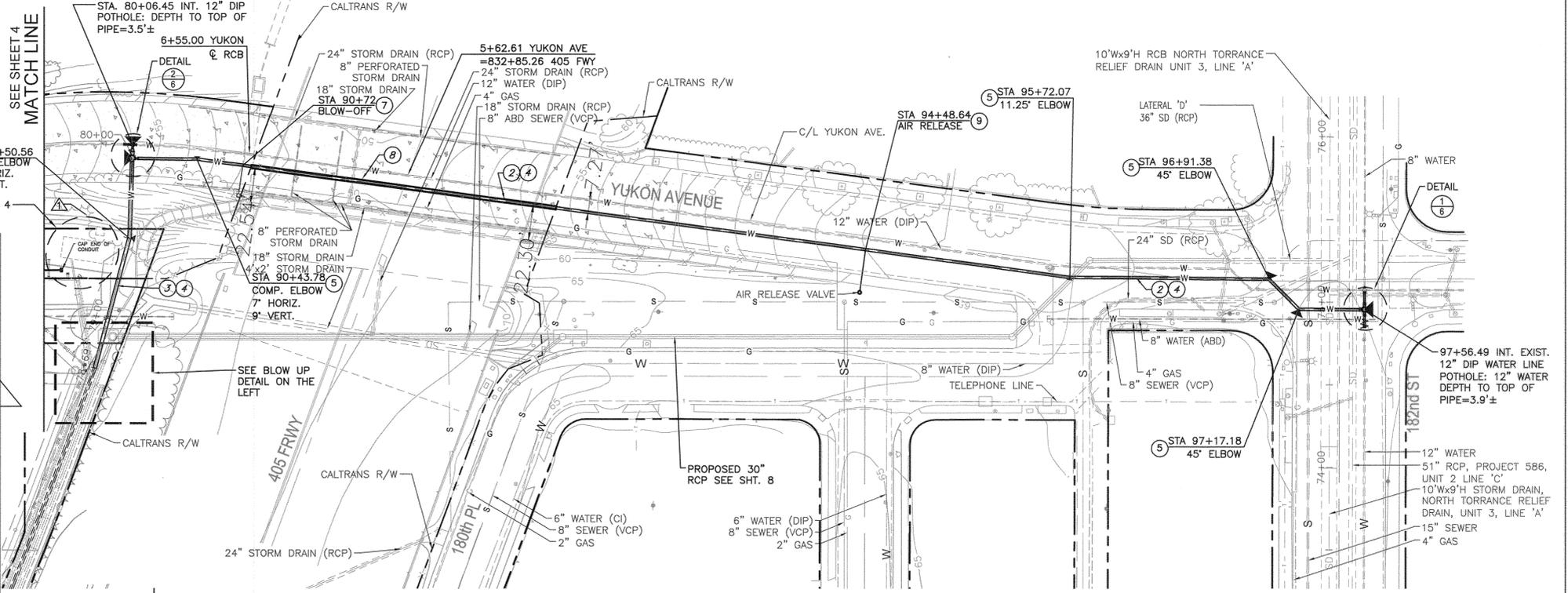
- CONSTRUCTION NOTES:**
- ② INSTALL 18" POTABLE WATER LINE (CMLC)
 - ③ INSTALL 24" POTABLE WATER LINE (CMLC)
 - ④ TRENCH, BACKFILL & REPAIR PAVEMENT PER CALTRANS ENCROACHMENT PERMIT TRENCH DETAIL TR-0153 (DETAIL 6, SHT 7)
 - ⑤ CONSTRUCT CONCRETE THRUST BLOCK PER CITY OF TORRANCE STD. PLAN NO. T713
 - ⑦ INSTALL BLOW OFF PER CITY OF TORRANCE STD. PLAN NO. T707
 - ⑧ FURNISH AND INSTALL 30" STEEL CASING (1/2 WALL) PER CITY STD. T715
 - ⑨ INSTALL AIR & VACUUM RELEASE VALVE PER CITY OF TORRANCE STD. PLAN NO. T708

NOTES:

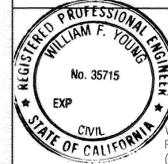
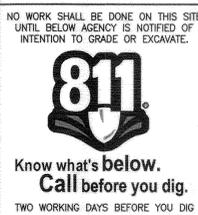
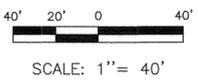
1. DEPTH OF EXIST. UTILITY SHOWN ON PROFILE IS BASED ON STD. COVER. THE EXACT DEPTH IS UNKNOWN. THE CONTRACTOR SHALL POT-HOLE PRIOR TO CONST. TO DETERMINE THE DEPTH OF COVER OVER EXIST. UTILITY. THE WATER LINE SHALL BE INSTALLED WITH THE REQUIRED VERT. CLEARANCE. IF INSUFFICIENT COVER EXISTS, INSTALL THE WATER LINE ABOVE OR BELOW THE EXIST. UTILITY WITH ADEQUATE CLEARANCE WITH THE APPROVAL OF THE ENGINEER.



PLAN
SCALE: 1" = 10'



PLAN
SCALE: 1" = 40'



PREPARED BY: **CWE**
WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)
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SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
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REV	DATE	BY	CHECKED	DESCRIPTION
1	09/26/15	VP	EM	ADDED 4" CONDUIT FOR FIBRE OPTIC CABLE

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

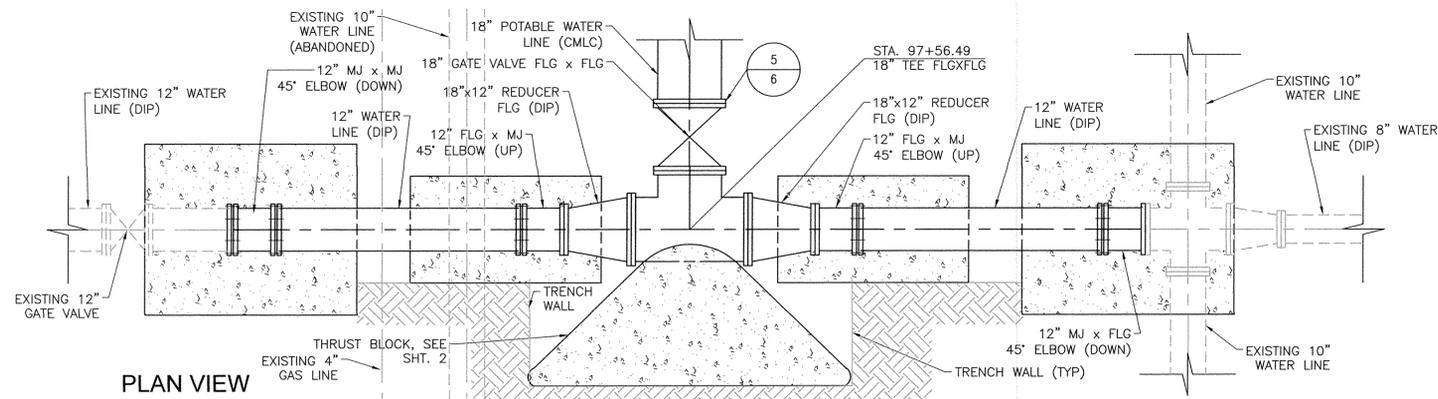
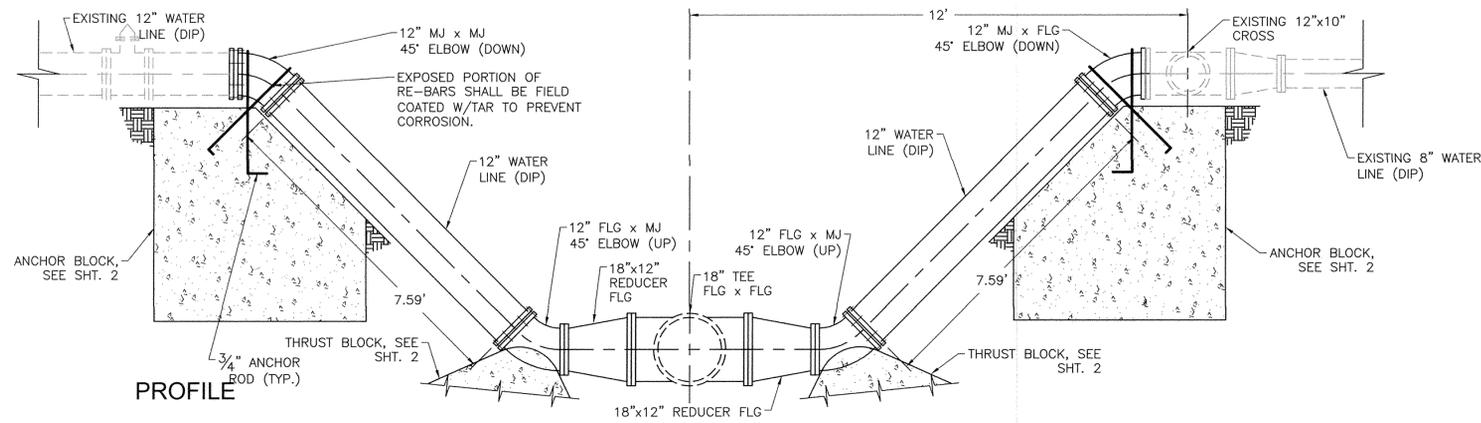
**POTABLE WATER LINE
PLAN & PROFILE CONT.**

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: E. HANSEN
ENGINEERING MANAGER: John Pettit

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

APPROVED BY: *S. Bee* 1/6/2016
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 5 OF 17
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

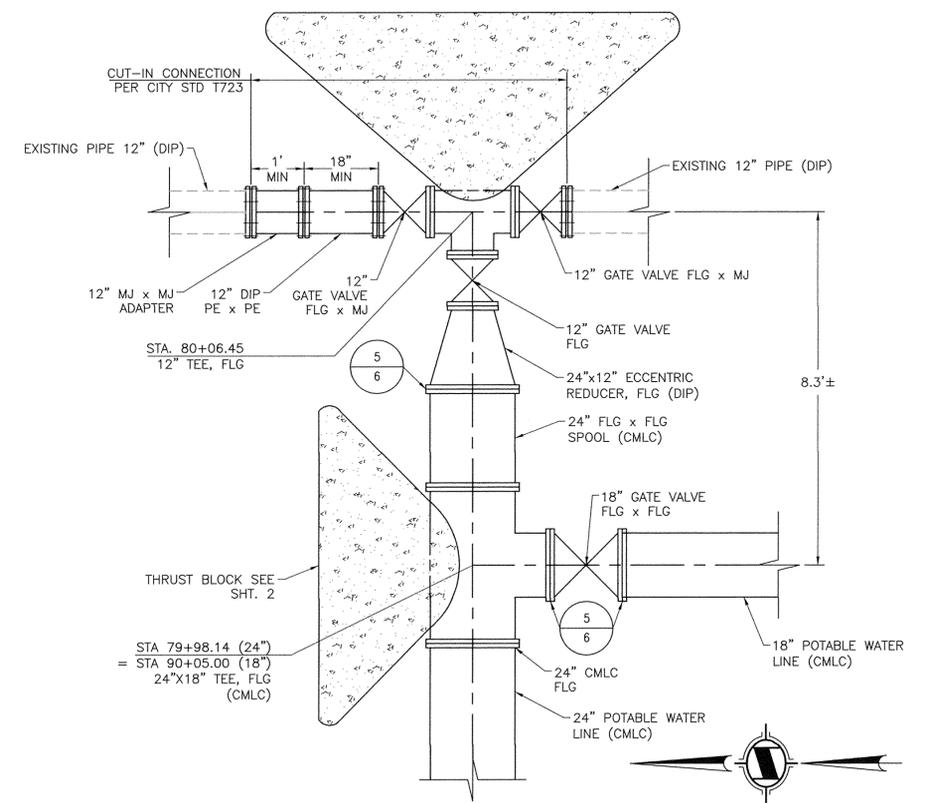


STA. 97+56.49 CONNECTION DETAIL

SCALE: 1"=2'

1

6

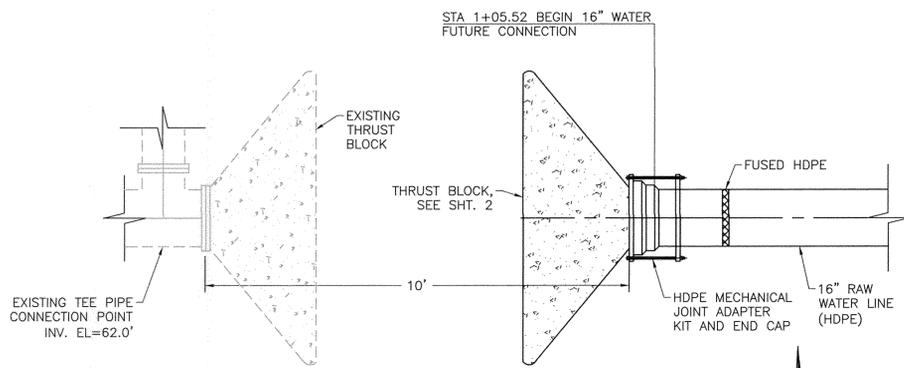


STA. 79+98.46 CONNECTION DETAIL

SCALE: 1"=2'

2

6

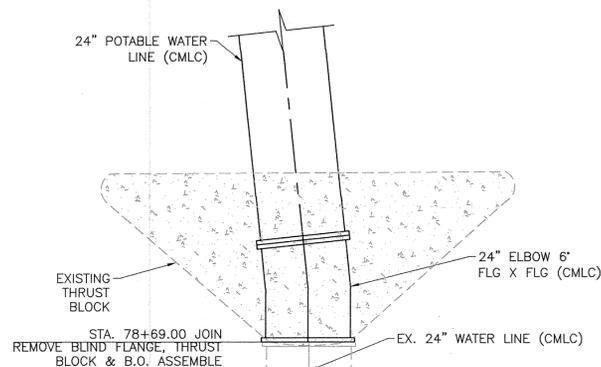


STA. 1+05.52 CONNECTION DETAIL

SCALE: 1"=2'

3

6

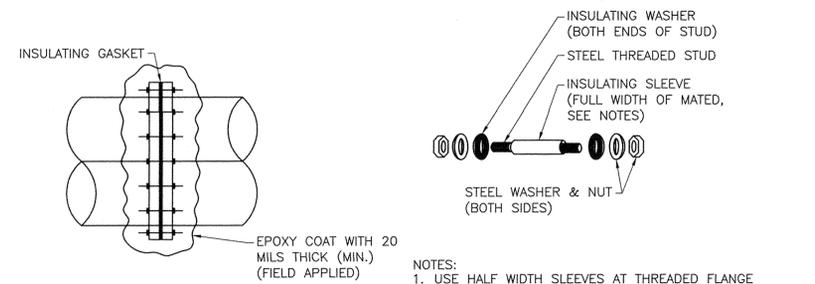


STA. 78+69.00 CONNECTION DETAIL

SCALE: 1"=2'

4

6



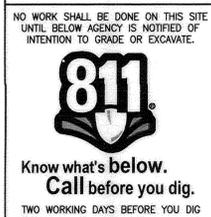
INSULATING FLANGE KIT

N.T.S.

5

6

- NOTES:
 1. USE HALF WIDTH SLEEVES AT THREADED FLANGE BOLTS. (I.E. AT BFV BONNET)
 2. INSULATING MATERIALS:
 GASKET - TYPE "E" NEOPRENE FACED PHENOLIC
 SLEEVE - PHENOLIC
 WASHER - PHENOLIC



WILLIAM F. YOUNG, P.E.
 R.C.E. NO. 35715
 DATE
 (EXP. 09/30/2015)

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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
 (ARTESIA BLVD TO 182ND STREET)

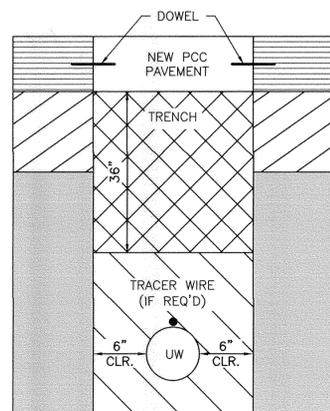
WATER PLAN DETAILS

DESIGNED BY: D. GINS
 DRAWN BY: M. MENDEZ
 PROJECT ENGINEER: E. Yankov
 ENGINEERING MANAGER: John Dietz

APPROVED BY: J. Bee
 CRAIG BILEZERIAN, PE
 CITY ENGINEER
 R.C.E. NO. 55339 (EXP. 12/31/2016)
 DATE: 4/23/15

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT
 SHEET 6 OF 17
 SCALE: AS SHOWN
 SPECIFICATION NO. SEE TITLE SHEET
 SUPPLEMENTAL PLAN NO.
 PLAN NO. **WP-308**

C:\cweec\projects\14091\06 Tasks\10 Design\70 Utilities\14091-C-006.dwg



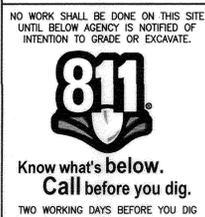
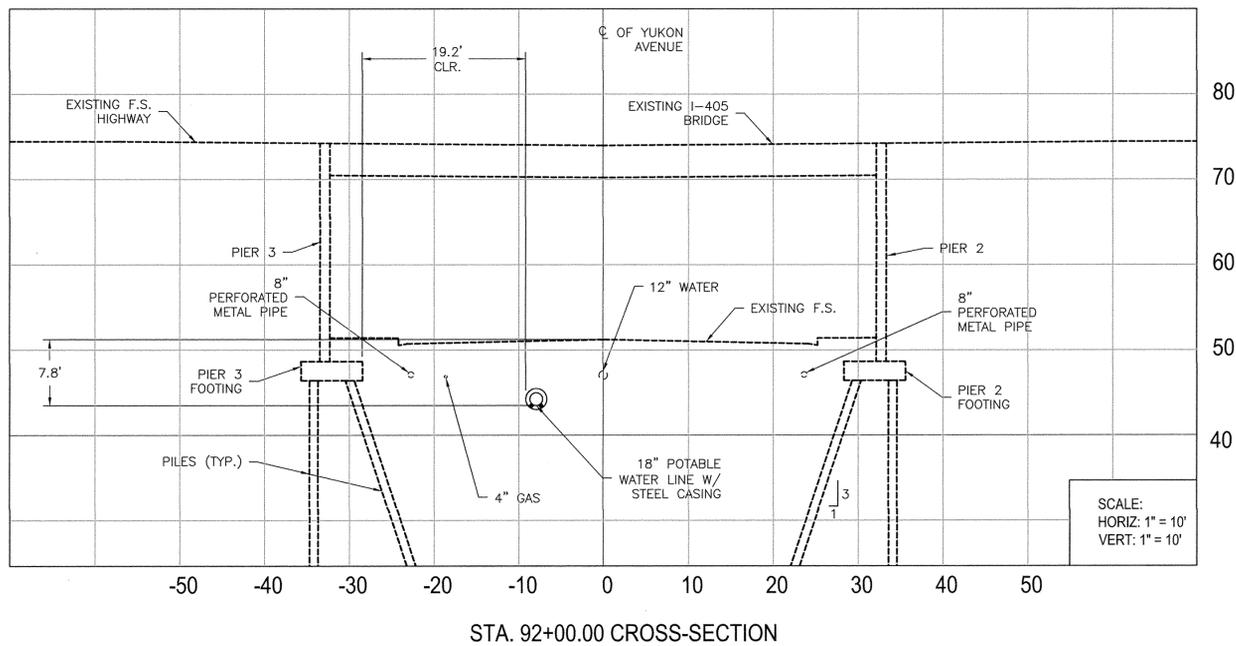
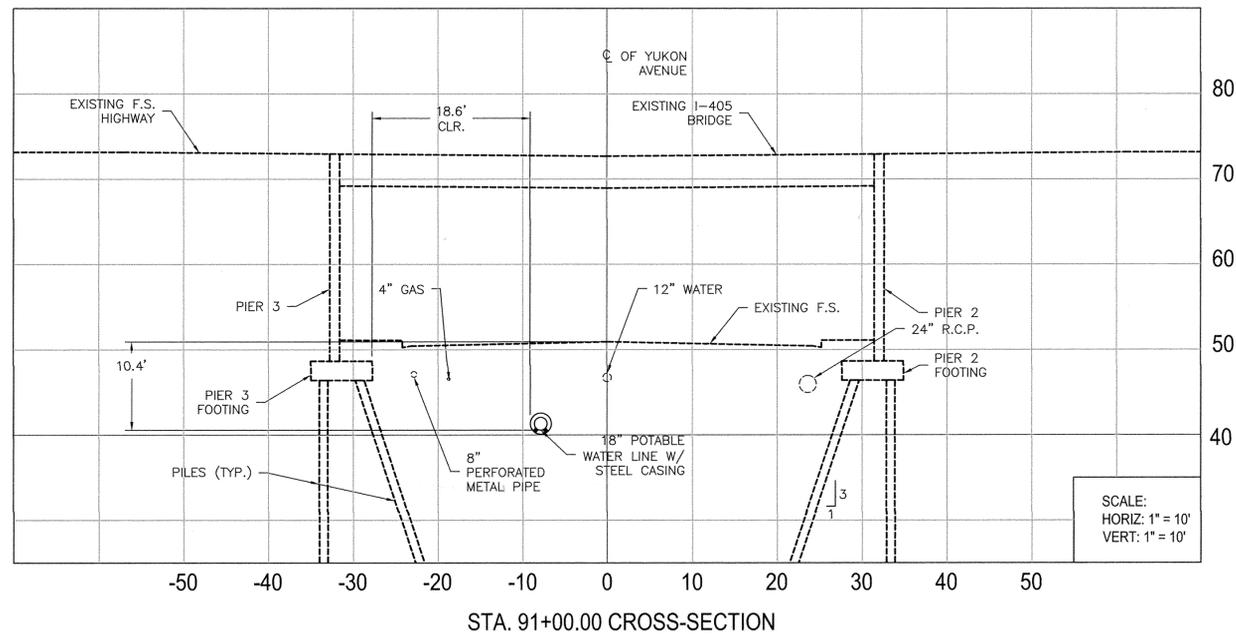
- EXISTING PAVEMENT (EXISTING 8" PCC PAVEMENT)
 - EXISTING BASE (6" CTB)
 - EXISTING SUBGRADE
 - NEW PAVEMENT (NEW PCC PAVEMENT) MATCH EXISTING + 1" - (MAX 7")
 - NEW PAVEMENT BASE
 - NEW SUBGRADE
- UW WIDTH OF UTILITY OR CULVERT
 CLR CLEARANCE BETWEEN PRODUCT AND TRENCH WALL
 CLSM CONTROLLED LOW STRENGTH MATERIAL
 PCC PORTLAND CEMENT CONCRETE
 TW TRENCH WIDTH

1. STRUCTURE BACKFILL SHALL CONFORM TO SECTION 19 - 3.06 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
2. SLURRY CEMENT BACKFILL SHALL CONFORM TO SECTION 19 - 3.062 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
3. PCC SHALL CONFORM TO SECTION 40 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
4. ALL METHODS OF COMPACTION SHALL BE BY MECHANICAL MEANS. PONDING, JETTING OR FLOODING SHALL NOT BE ALLOWED. AGGREGATE BASE SHALL CONFORM TO SECTION 26 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
5. WHEN CLSM IS UTILIZED THE MIX DESIGN AND TEST RESULTS SHALL BE SUBMITTED TO THE STATE'S REPRESENTATIVE.
6. ALL WORK SHALL BE AS AUTHORIZED BY THE APPROVED ENCROACHMENT PERMIT PLANS, AND/OR AS DIRECTED BY THE STATE'S REPRESENTATIVE.
7. WHEN THE UW IS > 6" THEN THE MINIMUM CLR SHALL BE 6"
8. DOWEL INTO EXISTING PCC PAVEMENT AT 24" O.C., #4 DEFORMED BAR, 6" EMBEDMENT CENTERED IN EXISTING SLAB. DOWEL SHALL BE EPOXIED IN EXISTING SLAB AND CAST IN NEW SLAB.
9. A TRACER WIRE SHALL BE PLACED ON TOP OF THE FACILITY, WHEN REQUIRED BY THE STATE'S REPRESENTATIVE.
10. OTHER TRENCH RELATED DETAILS ARE SHOWN IN FIGURE 6.1, CHAPTER 6 OF THE ENCROACHMENT PERMITS MANUAL.
11. NEW PAVEMENT BASE SHALL CONSIST OF EITHER CL II AGGREGATE BASE, 2-SACK SLURRY CEMENT, OR CLSM. WHEN TW IS < 24," CL II AGGREGATE BASE IS NOT RECOMMENDED FOR BACKFILL.
12. NEW SUBGRADE SHALL CONSIST OF EITHER CL II AGGREGATE BASE, 2-SACK SLURRY CEMENT, OR CLSM. WHEN TW IS < 24," CL II AGGREGATE BASE IS NOT RECOMMENDED FOR BACKFILL.

CALTRANS ENCROACHMENT PERMIT TRENCH DETAIL (TR-0153)

6

7



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

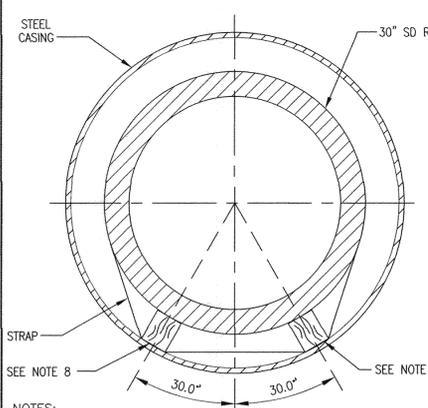
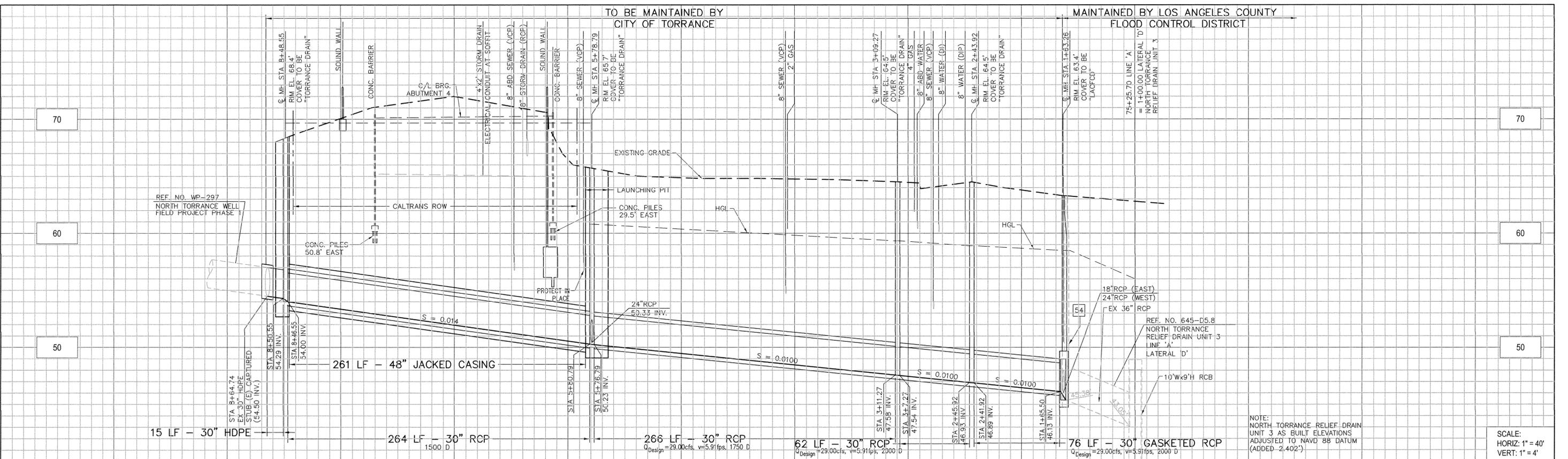
NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)
WATER PLAN DETAILS & CROSS-SECTIONS
CALTRANS RIGHT OF WAY

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: *E. Nakhli*
ENGINEERING MANAGER: *John Dettha*

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

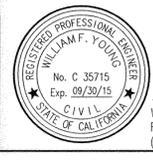
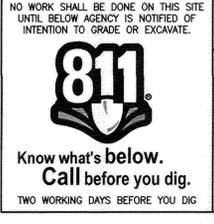
APPROVED BY: *S. B...* DATE: 4/23/15
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 7 OF 17
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**



- NOTES:**
- CASING SHALL BE INSTALLED BY THE TRENCH, BORE, JACK AND/OR TUNNEL METHOD. IF CASING INSTALLED BY TRENCH METHOD IT SHALL BE INSTALLED PER CITY OF TORRANCE STD. PLAN NO. T701.
 - REDWOOD SKIDS SHALL BE PROVIDED AS PER DETAIL ABOVE.
 - SIZE = 48"; THICKNESS = 3/4".
 - ALL CASING SECTIONS TO BE JOINED BY FULL CIRCUMFERENTIAL WELD.
 - CASING TO BE FILLED TO TOP OF BELL OF STORM DRAIN PIPE WITH AIR BLOWN SAND OR SLURRY MIX.
 - ENDS OF CASING SHALL BE SEALED WITH CEMENT SLURRY MIX 100-E-100.
 - STRAPS TO BE STAINLESS STEEL.
 - UNFINISHED REDWOOD SKIDS 2' LONG BEVELED BOTH ENDS. FOUR SKIDS PER LENGTH OF PIPE TO BE STRAPPED IN PLACED 1' FROM EACH END OF PIPE. NOTCH SKID TO SEAT STRAP. TWO STRAPS PER SET OF SKIDS.

STEEL CASING PIPE 38
NOT TO SCALE 8



PREPARED BY:
W.F. Young 4/26/15
WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

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FULLERTON, CA 92831
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www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

STORM DRAIN PLAN AND PROFILE

DESIGNED BY: **D. GINS**
DRAWN BY: **M. MENDEZ**

PROJECT ENGINEER:
E. Manlin

ENGINEERING MANAGER:
John Pettit

APPROVED BY:
J. Be... 4/23/15
CRAIG BEZIERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

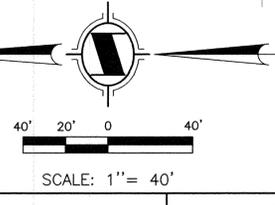
SHEET **8** OF **17**

SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET

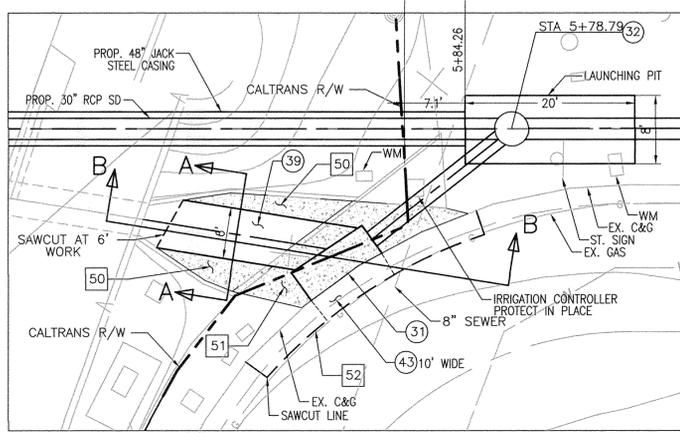
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

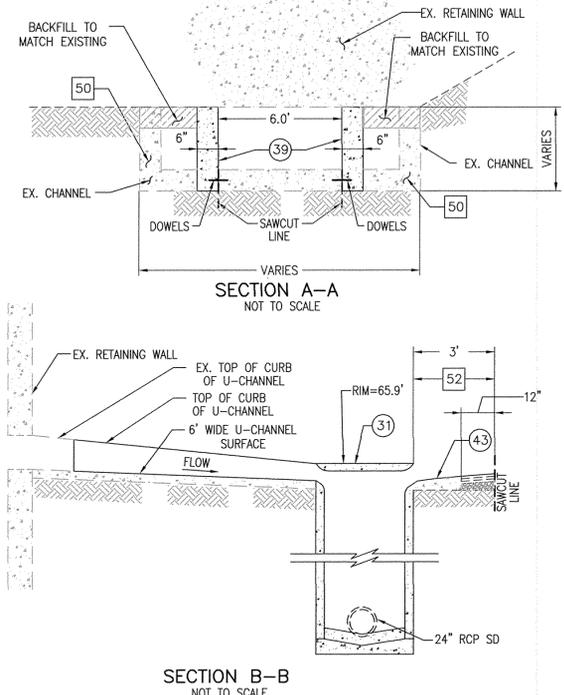
- CONSTRUCTION NOTES:**
- CONSTRUCT MODIFIED CATCH BASIN PER SPPWC STD PLAN 300-3 WITH V1=12.5', H=4" AND W=10'. SEE DETAIL ON SHEET 9.
 - CONSTRUCT MANHOLE PER SPPWC STD PLAN 321-2. SUPPORT EXISTING UTILITY POLE DURING PIPE LINE CONSTRUCTION. REMOVE AND REPLACE EXISTING AC PAVEMENT AND SURFACE IMPROVEMENTS, TRENCH BACKFILL PER CITY OF TORRANCE STD. PLAN NO. T116.
 - INSTALL HDPE COUPLER TO CONNECT TO EXISTING 30" STORM DRAIN (HDPE).
 - CONSTRUCT MANHOLE PER SPPWC STD PLAN 322-2. FURNISH AND INSTALL 30" STORM DRAIN (RCP). PIPE BEDDING PER TORRANCE STD NO. T302.
 - FURNISH AND INSTALL 48" JACKED STEEL CASING 3/4" THICK AND INSTALL 30" STORM DRAIN (RCP) PER DETAIL 38 HEREON.
 - CONSTRUCT TRANSITION TO 6' WIDE OPEN CHANNEL TO BACK OF CATCH BASIN.
 - CONSTRUCT 24" STORM DRAIN (RCP). PIPE BEDDING PER CITY OF TORRANCE STD PLAN NO. T302.
 - CONSTRUCT 30" GASKETED STORM DRAIN (RCP). PIPE BEDDING PER TORRANCE STD NO. T302.
 - FURNISH AND INSTALL 30" STORM DRAIN (HDPE). PIPE BEDDING PER TORRANCE STD NO. T302.
 - CONSTRUCT LOCAL DEPRESSION PER SPPWC STD PLAN 313-3 CASE A WITH H=4".
 - CONSTRUCT HANDICAP ACCESS RAMP PER SPPWC STD PLAN 111-4 CASE B TYPE 2 WITH TRUNCATED DOME.
- DEMOLITION NOTES:**
- SAWCUT EXISTING AND REMOVE EXISTING CURB AND GUTTER
 - SAWCUT EXISTING AND REMOVE EXISTING PCC PAVEMENT
 - DEMOLISH EXISTING STORM DRAIN MANHOLE.



\\cwecc\projects\14091\06 Tasks\01 Design\80 Storm Drain\14091-C-008.dwg



PLAN VIEW
SCALE: 1" = 10'



SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE

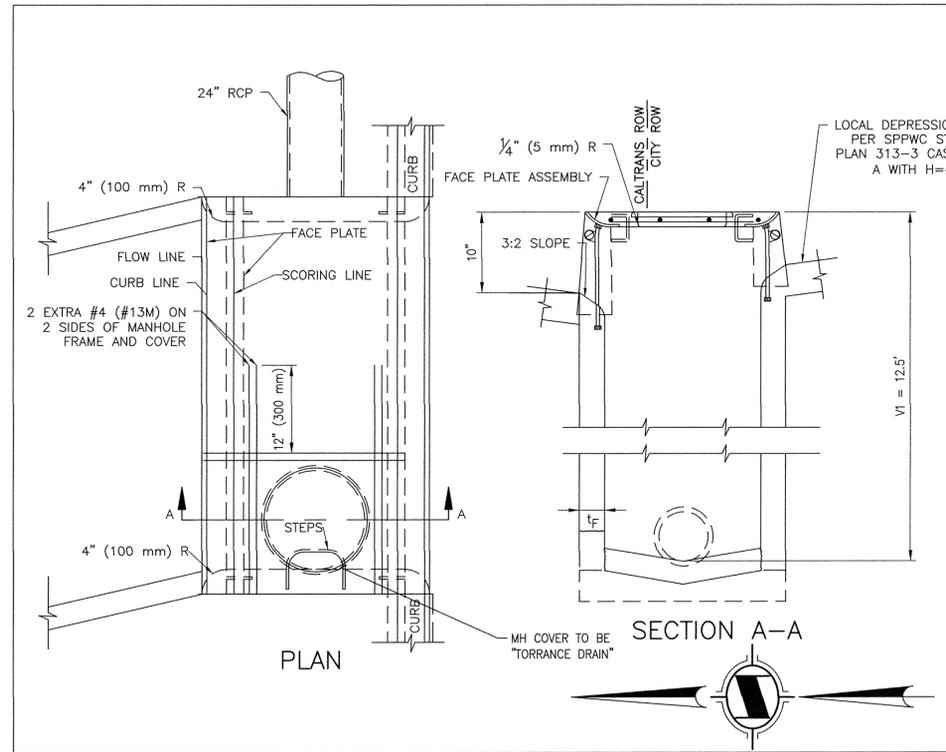
- DEMOLITION NOTES:**
- 50 SAWCUT AND REMOVE EXISTING PCC CHANNEL
 - 51 SAWCUT AND REMOVE EXISTING BOX CULVERT AND ALL APPURTENANCES
 - 52 SAWCUT EXISTING AND REMOVE EXISTING CURB AND GUTTER

- CONSTRUCTION NOTES:**
- 31 CONSTRUCT MODIFIED CATCH BASIN PER SPPWC STD PLAN 300-3 WITH V1=12.5', H=4" AND W=10'. SEE DETAIL ON SHEET 9.
 - 32 CONSTRUCT MANHOLE PER SPPWC STD PLAN 321-2. SUPPORT EXISTING UTILITY POLE DURING PIPE LINE CONSTRUCTION.
 - 33 INSTALL HDPE COUPLER TO CONNECT TO EXISTING 30" STORM DRAIN (HDPE).
 - 34 CONSTRUCT TRANSITION TO 6" WIDE OPEN CHANNEL TO BACK OF CATCH BASIN.
 - 35 CONSTRUCT LOCAL DEPRESSION PER SPPWC STD PLAN 313-3 CASE A WITH H=4".

6" WIDE U-CHANNEL DETAIL - DETAIL "B"

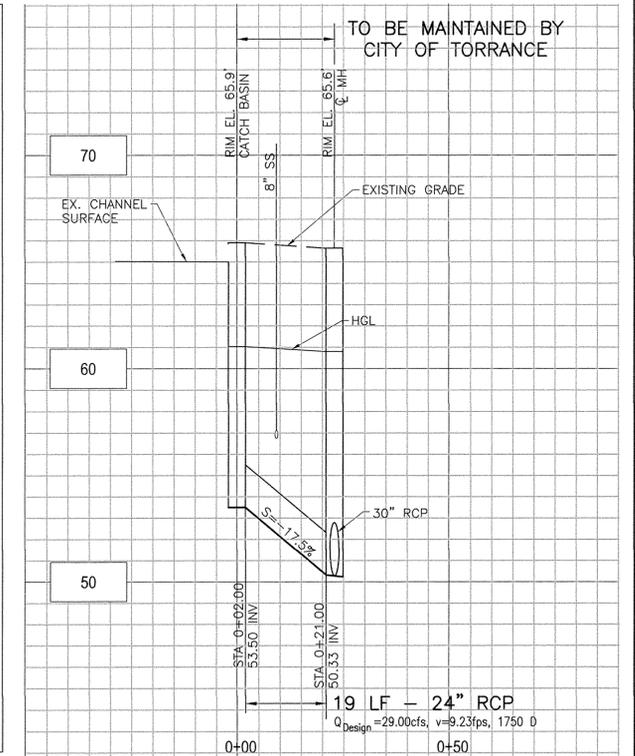
NOT TO SCALE

B
9



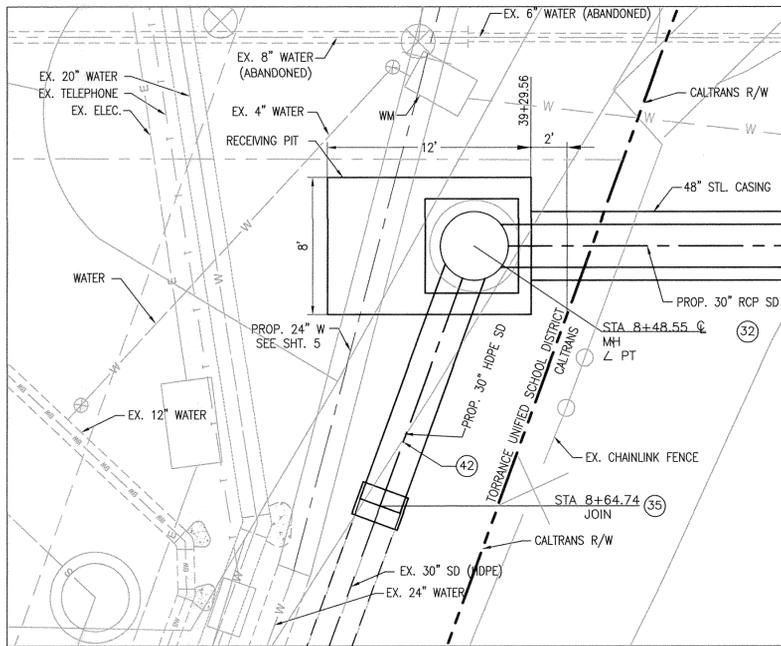
MODIFIED CATCH BASIN DETAIL

NOT TO SCALE



24" RCP STORM DRAIN

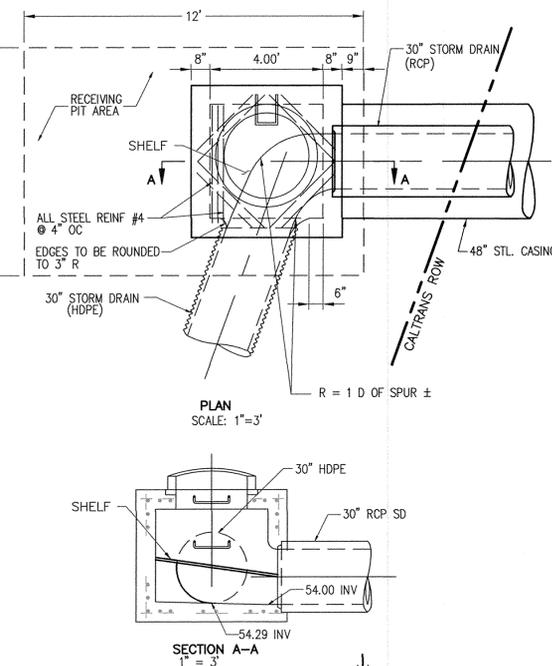
SCALE: HORIZ: 1"=20'; VERT: 1"=4'



PLAN VIEW
SCALE: 1" = 5'

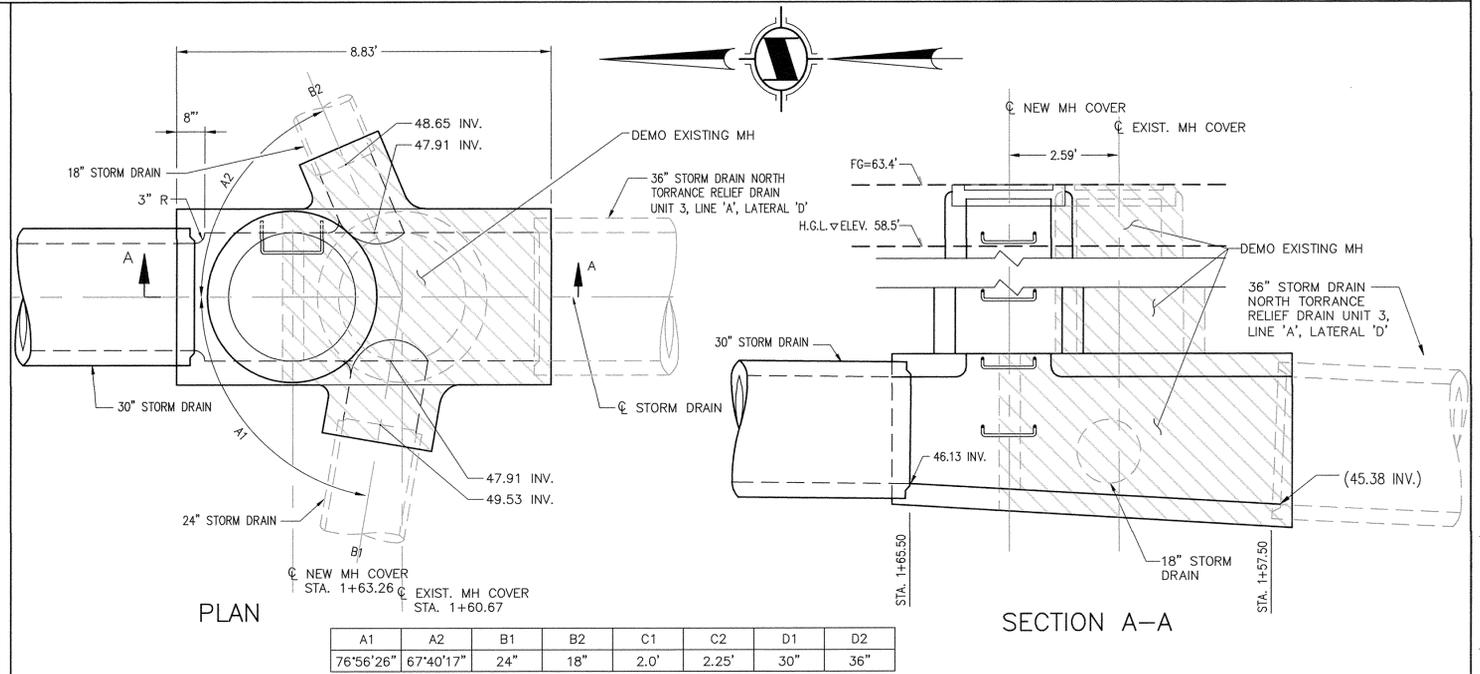
RECEIVING PIT AREA - DETAIL "A"

SCALE: AS SHOWN



SECTION A-A

A
9



PLAN

A1	A2	B1	B2	C1	C2	D1	D2
76'56"26"	67'40"17"	24"	18"	2.0'	2.25'	30"	36"

CONNECTION MANHOLE DETAIL

1" = 2'

36
9



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

STORM DRAIN PLAN DETAILS

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: *E. Harlin*
ENGINEERING MANAGER: *John DeWitt*

APPROVED BY: *J. Be...* 4/23/15
CRAIG BILZETTERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 9 OF 17
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

C:\cwe\projects\14091\06 Tasks\01 Design\80 Storm Drain\14091-C-009.dwg

TRAFFIC CONTROL GENERAL NOTES

- ALL TRAFFIC CONTROL WORK FOR CONSTRUCTION SHALL CONFORM TO PART 6, "TEMPORARY TRAFFIC CONTROL" OF THE 2014 CALIFORNIA MUTCD, AND THE 2010 CALTRANS STANDARD PLANS AND SPECIFICATION. SIGNING AND STRIPING SHALL CONFORM TO LATEST CALIFORNIA MUTCD, STANDARD PLANS AND STANDARD SPECIFICATIONS. SIGNS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
- EXACT LOCATION OF ALL TRAFFIC CONTROL DEVICES SHALL BE AS DIRECTED BY ENGINEER BASED ON CONSTRUCTION CONDITIONS. ADDITIONAL WARNING OR CONSTRUCTION SIGNS MAY BE REQUIRED BY THE ENGINEER.
- ALL NIGHT WORK SHALL BE APPROVED IN ADVANCED BY THE ENGINEER.
- STREET CLOSURES SHALL BE APPROVED BY THE ENGINEER WHEREVER APPLICABLE. DETOUR PLANS SHALL BE SUBMITTED AND APPROVED BY THE CITY WHEREVER APPLICABLE. RESIDENTS/BUSINESSES SHALL BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
- PRESSURE SENSITIVE DETOUR GRADE TRAFFIC MARKING TAPE AND/OR TEMPORARY FLEXIBLE RAISED PAVEMENT MARKERS MAY BE REQUIRED TO SUPPLEMENT THE CHANNELIZING DEVICES, DRUMS, REFLECTORIZED SIGNS, PAINT, AND BARRICADES AS DIRECTED BY THE ENGINEER.
- ALL CONFLICTING STRIPES, PAVEMENT MARKINGS, RAISED PAVEMENT MARKERS AND LEGENDS SHALL BE COMPLETELY REMOVED BY WET SANDBLASTING OR GRINDING PRIOR TO ANY CHANGE IN THE TRAFFIC PATTERN. NO CONFLICTING STRIPES, PAVEMENT MARKINGS OR LEGENDS SHALL BE BLACKED OUT WITH PAINT.
- ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES.
- ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE, UNLESS NOTED OTHERWISE. ALL W20-1, W20-5, AND W4-2 SIGNS SHALL BE MINIMUM 30" x 30".
- TYPE II BARRICADES MAY BE USED IN ADDITION TO DELINEATORS, AT THE DISCRETION OF THE CONTRACTOR, WHEN THEY ARE INTENDED TO PROVIDED ADDITIONAL EMPHASIS IN AREAS WHERE WORKERS ARE PRESENT.
- USE AND PLACEMENT OF FLASHING ARROW BOARD(S) AND CHANGEABLE MESSAGE SIGN(S) SHALL BE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN, ON A 24-HOUR BASIS, ALL SIGNS, DRUMS, BARRICADES, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC.
- THE CONTRACTOR SHALL UTILIZE FLAGGERS DURING WORK HOURS AS DEEMED NECESSARY BE THE ENGINEER.
- THE CONTRACTOR SHALL HAVE ALL SIGNS, DRUMS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION AND BEFORE ATTEMPTING TO SWITCH TO A SUBSEQUENT STAGE DURING WORK HOURS.
- CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING BUSINESSES AND PROPERTY OWNERS.
- CONSTRUCTION TRUCK TRAFFIC MERGING INTO TRAFFIC LANES SHALL BE DONE BY USE A FLAGGER AND APPROPRIATE SIGNAGE AS DIRECTED BY ENGINEER.
- FLASHING ARROW SIGNS (FAS) AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONFORM TO THE SPECIAL PROVISIONS AND BE EITHER SOLAR OR BATTERY OPERATED. GASOLINE AND DIESEL POWERED FAS AND PCMS ARE PROHIBITED.
- ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND REFLECTORIZED PER CALTRANS SPECIFICATION UNLESS OTHERWISE.
- ALL WORK IN EACH PHASE SHALL BE COMPLETE BEFORE WORK IN ANOTHER PHASE MAY BEGIN.
- TRAFFIC SIGNALS (EXISTING, NEW OR TEMPORARY) SHALL BE OPERATIONAL AT ALL TIMES AT SIGNALIZED INTERSECTIONS.
- ALL CONFLICTING SIGNAL HEADS SHALL BE COVERED DURING LONG TERM CLOSURE WHEN DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) TO BE IN USE FOR THE DURATION OF THE PROJECT. USE, PLACEMENT, AND FLASHING MESSAGE TEXT SHALL BE AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. PAYMENT IS INCLUDED IN THE UNIT PRICE FOR "PORTABLE CHANGEABLE MESSAGE SIGNS".
- TEMPORARY "NO PARKING -- TOW AWAY" SIGNS SHALL BE POSTED WITHIN AFFECTED CONSTRUCTION AREAS A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE FOR 24 HOUR ACCESS TO ALL ADJACENT PROPERTIES. THIS SHALL INCLUDE BUT NOT BE LIMITED TO DRIVEWAYS AND WALKWAYS, EXCEPT AS INDICATE ON THESE PLANS AND IN THE SPECIFICATIONS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING PROPERTY OWNERS/OPERATIONS.
- ALL PROPERTIES THAT HAVE ACCESS ADJACENT TO THE WORK AREA SHALL BE NOTIFIED OF ACCESS RESTRICTIONS (IN WRITING 48 HOURS MINIMUM BEFORE START OF WORK). THE NOTIFICATION SHALL DESCRIBE THE ACCESS LIMITATIONS, DATES OF LIMITATION, AND GIVE THE APPROXIMATE DATE AND TIME OF ACCESS RESTORATION. NO ACCESS SHALL BE LIMITED DURING NON-WORKING HOURS EXCEPT AS APPROVED BY THE ENGINEER. NO WORK IS PERMITTED ON SUNDAYS OR HOLIDAYS UNLESS APPROVED BY THE CITY.
- FLASHING YELLOW BEACONS, TYPE "B", SHALL BE USED ON ALL W20-1 SIGNS, AND ALL TYPE III BARRICADES GUARDING THE WORK AREA OVERNIGHT.
- UNEVEN PAVEMENT SIGN(S) (W8-11) SHALL BE PLACED WHERE UNEVENNESS IN PAVEMENT DUE TO CONSTRUCTION OPERATIONS OCCUR.
- THE CONTRACTOR SHALL PROVIDE FOR SAFE PEDESTRIAN ACCESS AT ALL TIMES. TEMPORARY PEDESTRIAN ACCESS SHALL BE 5' MINIMUM WIDTH. ANY AND ALL PEDESTRIAN DETOUR ROUTES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE DETOUR ROUTE IS ESTABLISHED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF TRAFFIC SIGNAL LOOP-SENSORS AND SIGNAL AND INTERCONNECT CONDUITS. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPLACE DAMAGED CITY FACILITY AT NO COST TO THE CITY.
- THE FOLLOWING AGENCIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY DETOUR AND/OR CONSTRUCTION ACTIVITIES.

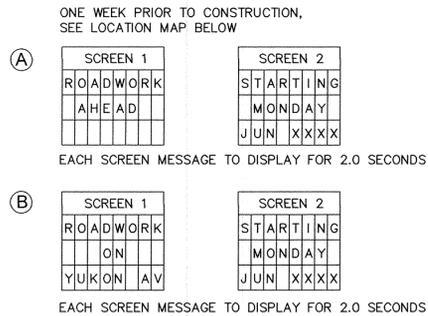
CITY OF TORRANCE	(310) 781-6900
POLICE (GIVE LOCATION AND DURATION)	(310) 618-5557
FIRE DEPARTMENT	(310) 781-7042

TRAFFIC CONTROL PLAN SHEET INDEX

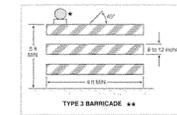
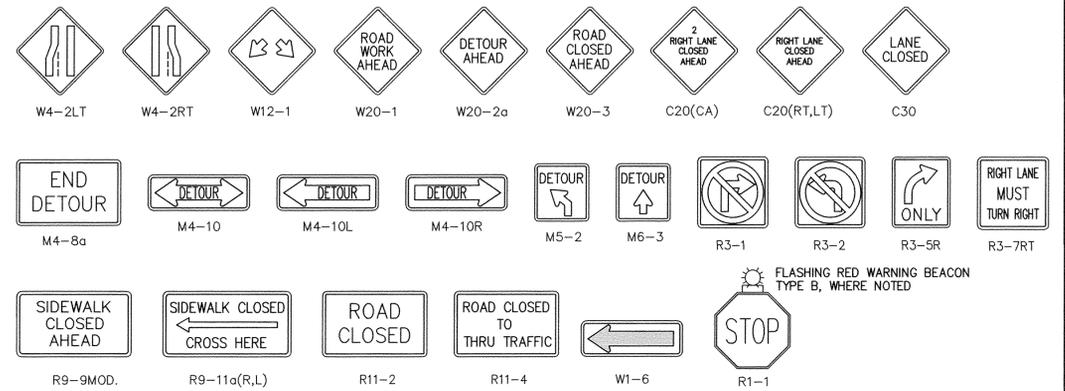
PHASE	WORK	SHEET
	TRAFFIC CONTROL PLAN - TITLE SHEET	10
1	INSTALL 16" RAW WATER ON YUKON AVENUE	11
2	INSTALL 16" RAW WATER ON YUKON AVENUE	12
3	INSTALL 18" WATER MAIN AND 16" RAW WATER ON YUKON AVENUE	13
4	INSTALL 18" WATER MAIN AND 30" STORM DRAIN AT 182nd STREET AND YUKON AVENUE	14
4	INSTALL 18" WATER MAIN AND 30" STORM DRAIN AT 182nd STREET AND YUKON AVENUE	15
5	INSTALL 18" WATER MAIN AT 182nd STREET AND YUKON AVENUE	16
5	INSTALL 18" WATER MAIN AT 182nd STREET AND YUKON AVENUE	17

PORTABLE CHANGEABLE MESSAGE SIGNS:

- CONTRACTOR SHALL BE PROGRAM EACH SCREEN OF ALL PORTABLE CHANGEABLE MESSAGE SIGNS TO FLASH AS DIRECTED BELOW UNLESS OTHERWISE NOTED.



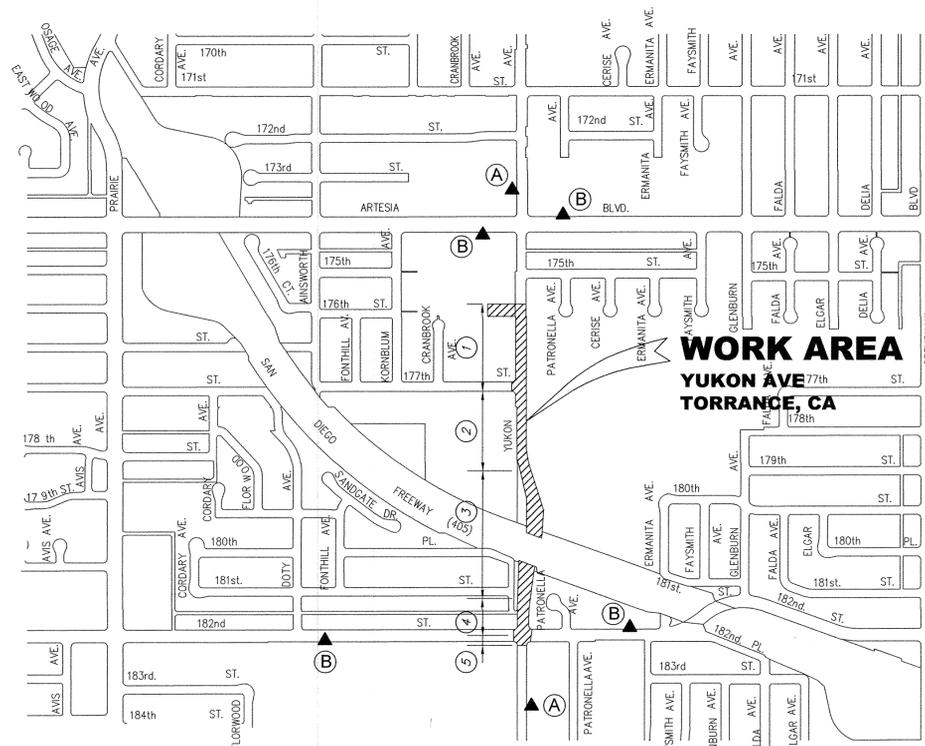
TRAFFIC SIGN LEGEND:



- WARNING LIGHTS
- RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.

TRAFFIC CONTROL LEGEND:

- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- SIGN ON TRAFFIC BARRICADE TYPE II OR III
- TRAFFIC BARRICADE TYPE III
- TYPE A ARROW BOARD
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- TRAFFIC DIRECTION
- FLAG MAN WITH 2-WAY RADIO
- WORK AREA
- EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY
- EXISTING PAVEMENT MARKER
- PHASE OF WORK
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) WITH THE MESSAGE ONE WEEK PRIOR TO CONSTRUCTION



LOCATION MAP

NO SCALE

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Know what's below. Call before you dig. TWO WORKING DAYS BEFORE YOU DIG

PREPARED BY: **WFE**
 WILLIAM F. YOUNG, P.E. DATE: 4/20/15
 R.C.E. NO. 35715 (EXP. 09/30/2015)

1561 E. ORANGETHORPE AVE. SUITE 240 FULLERTON, CA 92831 TEL (714) 526-7500 www.cwecorp.com

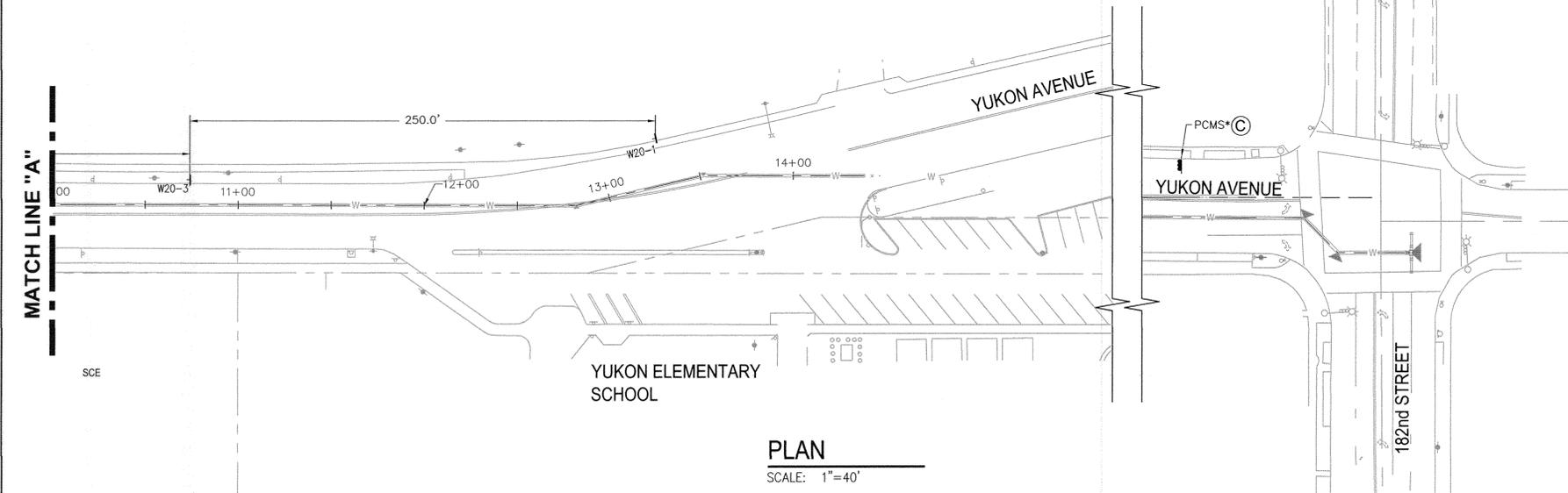
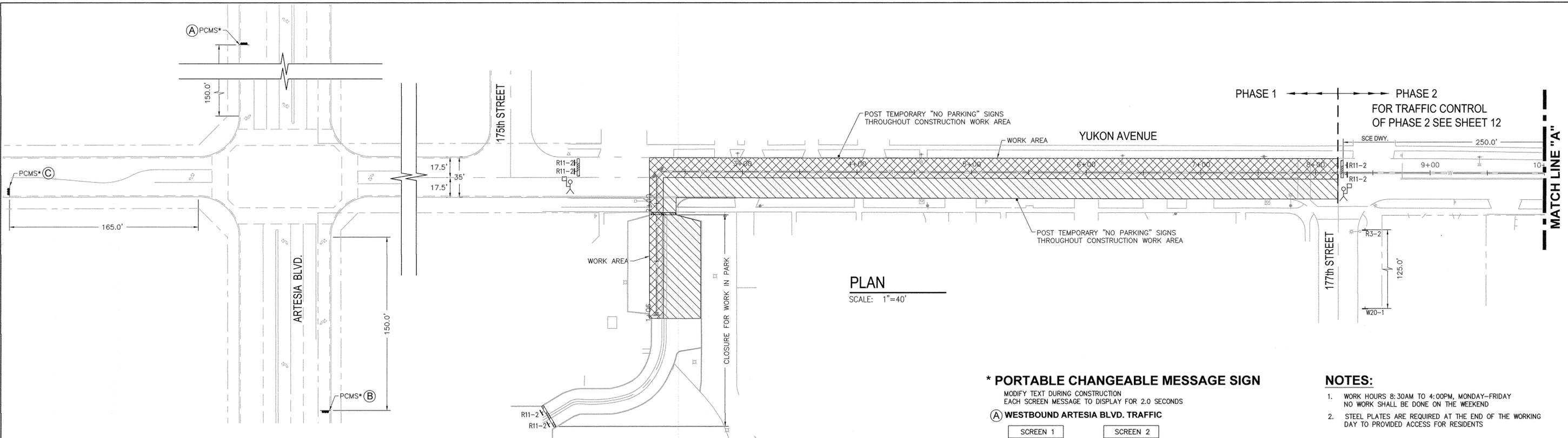
REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108 (ARTESIA BLVD TO 182ND STREET)

TRAFFIC CONTROL PLANS TITLE SHEET AND GENERAL NOTES

DESIGNED BY: D. GINS
 DRAWN BY: M. MENDEZ
 PROJECT ENGINEER: E. Martin
 ENGINEERING MANAGER: John DeMa

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT	
APPROVED BY: <i>S Bee</i> 4/23/15 CRAIG BILEZERIAN, PE CITY ENGINEER R.C.E. NO. 55339 (EXP. 12/31/2016)	DATE: 4/23/15
SHEET 10 OF 17	SPECIFICATION NO. SEE TITLE SHEET
PLAN NO. WP-308	



*** PORTABLE CHANGEABLE MESSAGE SIGN**

MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

(A) WESTBOUND ARTESIA BLVD. TRAFFIC

SCREEN 1	SCREEN 2
YUKON	USE
AVE	PRAIRIE
CLOSED	AVE

(B) EASTBOUND ARTESIA BLVD. TRAFFIC

SCREEN 1	SCREEN 2
YUKON	USE
AVE	CRENSHAW
CLOSED	BLVD

**(C) SOUTHBOUND YUKON AVE.,
NORTHBOUND YUKON AVE. TRAFFIC**

SCREEN 1	SCREEN 2
YUKON	LOCAL
AVE	TRAFFIC
CLOSED	ONLY

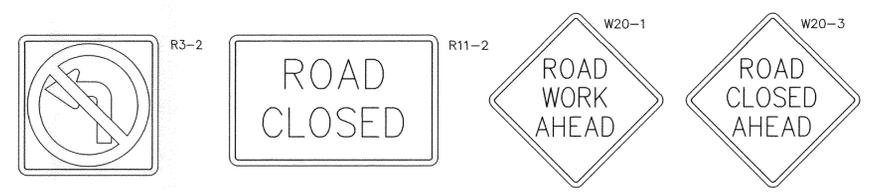
NOTES:

1. WORK HOURS 8:30AM TO 4:00PM, MONDAY-FRIDAY
NO WORK SHALL BE DONE ON THE WEEKEND
2. STEEL PLATES ARE REQUIRED AT THE END OF THE WORKING DAY TO PROVIDED ACCESS FOR RESIDENTS

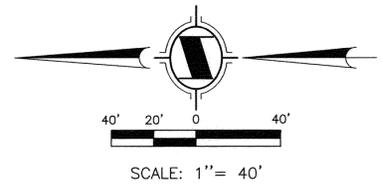
TRAFFIC CONTROL LEGEND:

- SIGN ON TRAFFIC BARRICADE TYPE II OR III
- TRAFFIC BARRICADE TYPE III
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- FLAG MAN WITH 2-WAY RADIO
- WORK AREA
- EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY

TRAFFIC SIGN LEGEND:



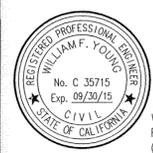
* WARNING LIGHTS
** RAIL STRIPE WIDTHS SHALL BE 6 INCHES,
EXCEPT THAT 4-INCH WIDE STRIPES MAY BE
USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.



NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

811

Know what's below.
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WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

PREPARED BY: **CWE**

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

**TRAFFIC CONTROL PLAN
YUKON AVENUE
PHASE 1**

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ

PROJECT ENGINEER:
E. Martin

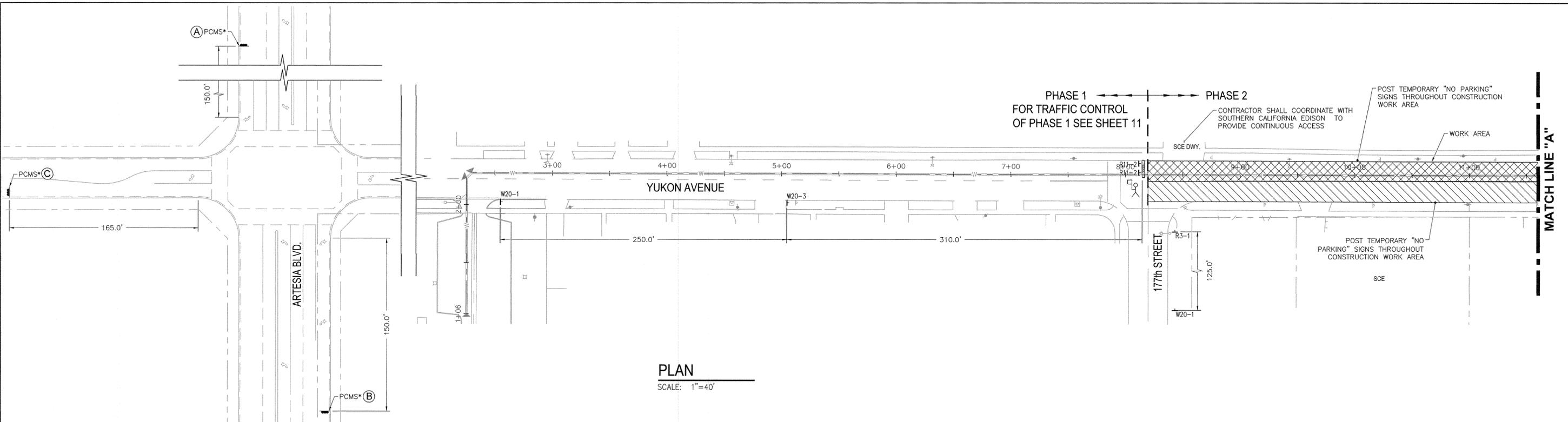
ENGINEERING MANAGER:
John Bell

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

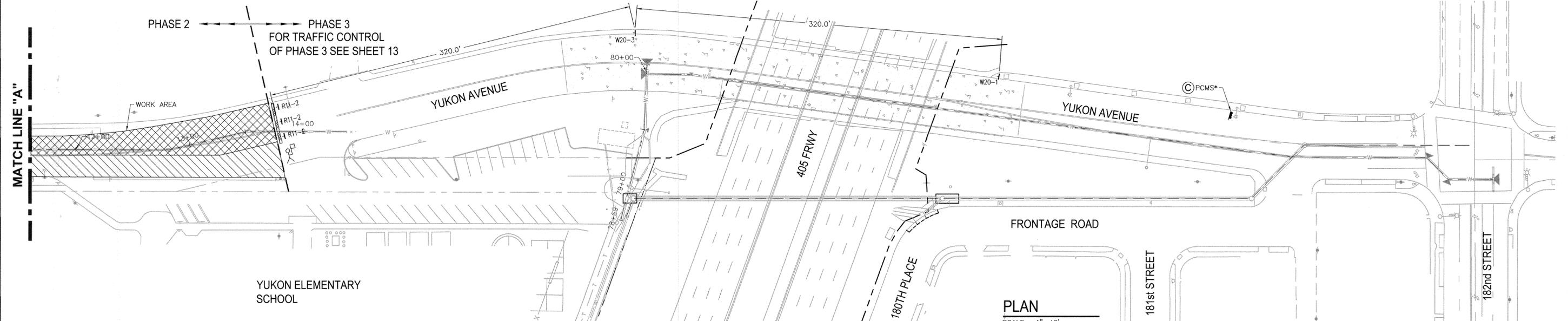
APPROVED BY: *J. Ben* DATE: 4/23/15

CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 11 OF 17
SCALE: AS SHOWN SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

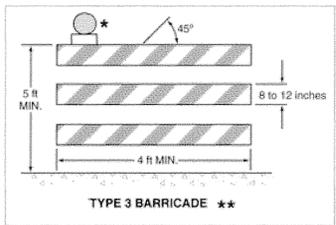
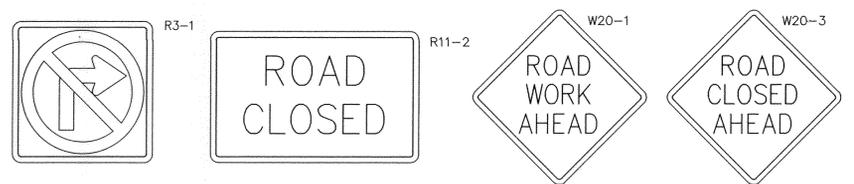


PLAN
SCALE: 1"=40'



PLAN
SCALE: 1"=40'

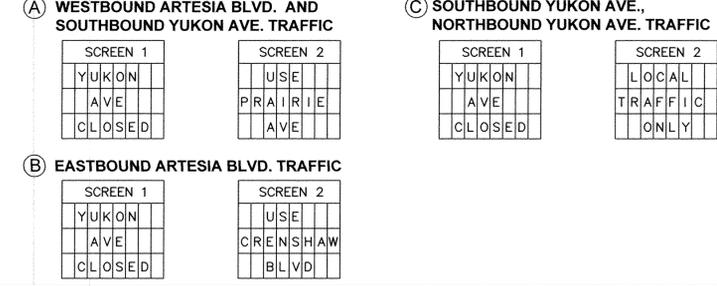
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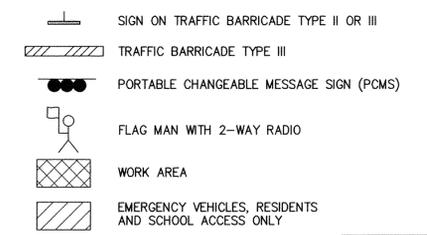
* WARNING LIGHTS
** RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.

*** PORTABLE CHANGEABLE MESSAGE SIGN**

MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

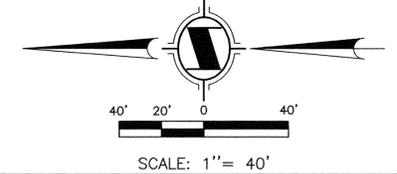


TRAFFIC CONTROL LEGEND:



NOTES:

1. WORK HOURS 8:30AM TO 4:00PM, MONDAY-FRIDAY
NO WORK SHALL BE DONE ON THE WEEKEND
2. STEEL PLATES ARE REQUIRED AT THE END OF THE WORKING DAY TO PROVIDED ACCESS FOR RESIDENTS



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PREPARED BY: **CWE**

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www.cwecorp.com

DATE: 4/23/15
WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

**TRAFFIC CONTROL PLAN
YUKON AVENUE
PHASE 2**

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ

PROJECT ENGINEER: *E. Yost*

ENGINEERING MANAGER: *John Dettlo*

APPROVED BY: *S. Bar*

CRAIG BILZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

DATE: 4/23/15

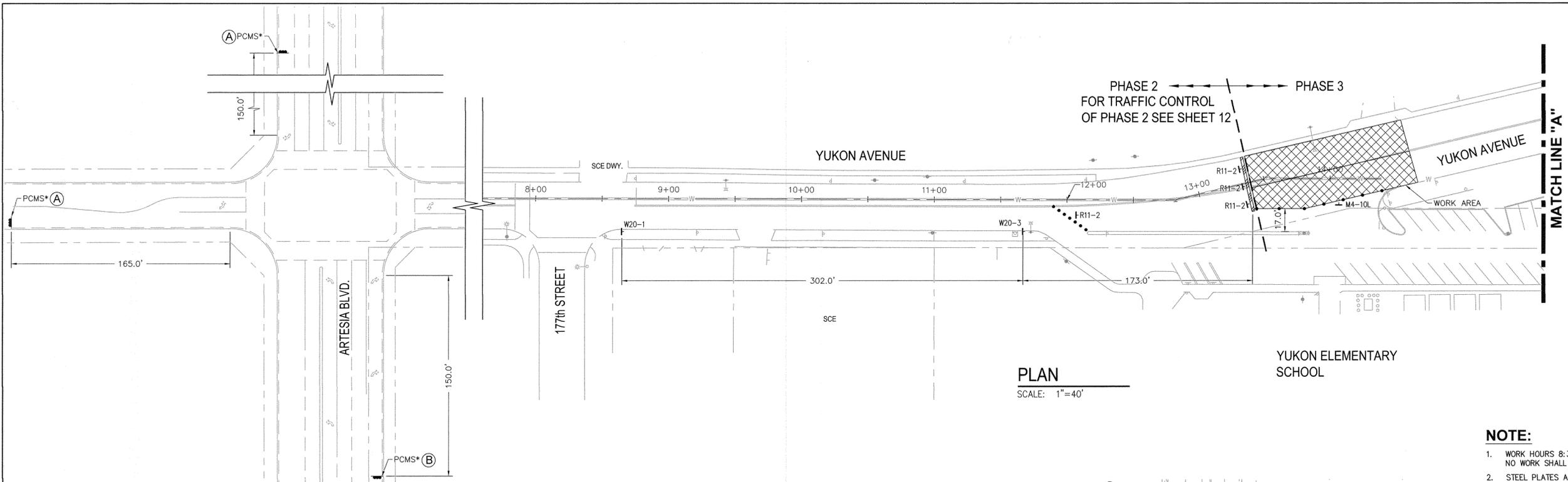
**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

SHEET 12 OF 17

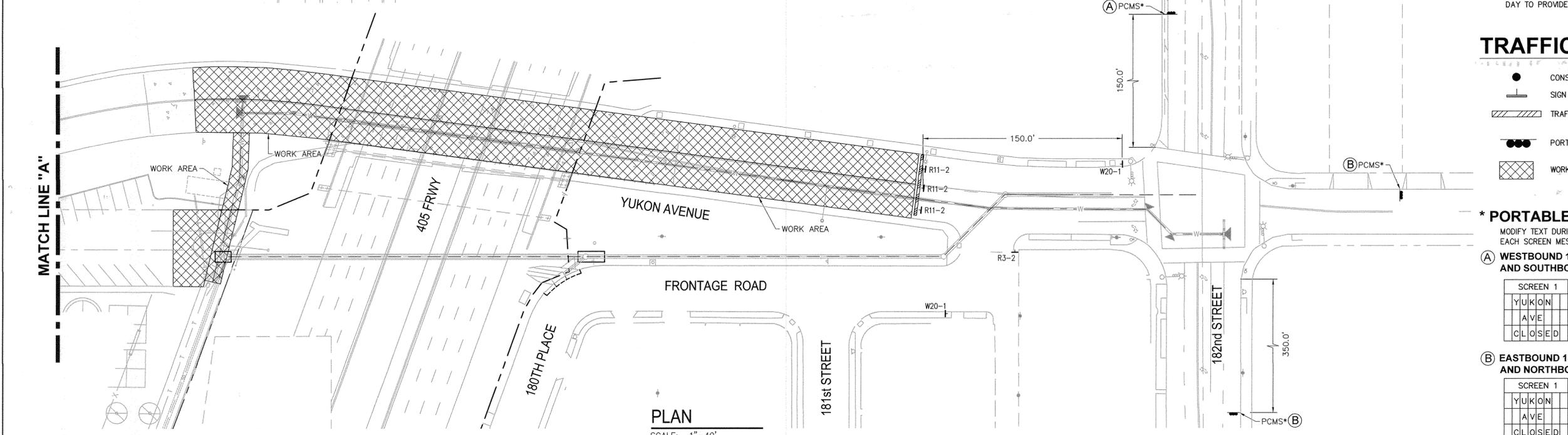
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.

PLAN NO. **WP-308**



PLAN
SCALE: 1"=40'



PLAN
SCALE: 1"=40'

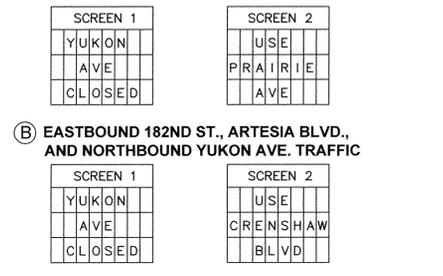
- NOTE:**
1. WORK HOURS 8:30AM TO 4:00PM, MONDAY-FRIDAY
NO WORK SHALL BE DONE ON THE WEEKEND
 2. STEEL PLATES ARE REQUIRED AT THE END OF THE WORKING DAY TO PROVIDED ACCESS FOR RESIDENTS

TRAFFIC CONTROL LEGEND:

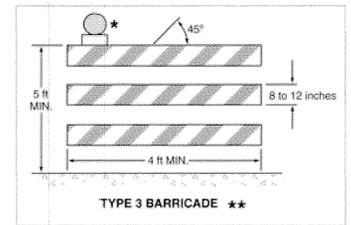
- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- SIGN ON TRAFFIC BARRICADE TYPE II OR III
- ▨ TRAFFIC BARRICADE TYPE III
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- ▨ WORK AREA

*** PORTABLE CHANGEABLE MESSAGE SIGN**

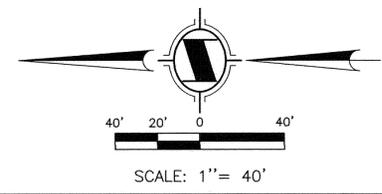
MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS



TRAFFIC SIGN LEGEND:

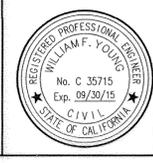


* WARNING LIGHTS
** RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.



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TWO WORKING DAYS BEFORE YOU DIG



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

PREPARED BY: **CWE**
1561 E. ORANGETHORPE AVE. SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

**TRAFFIC CONTROL PLAN
YUKON AVENUE
PHASE 3**

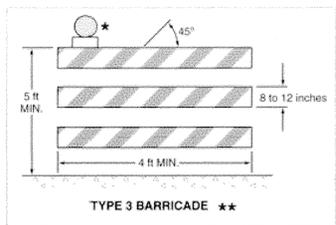
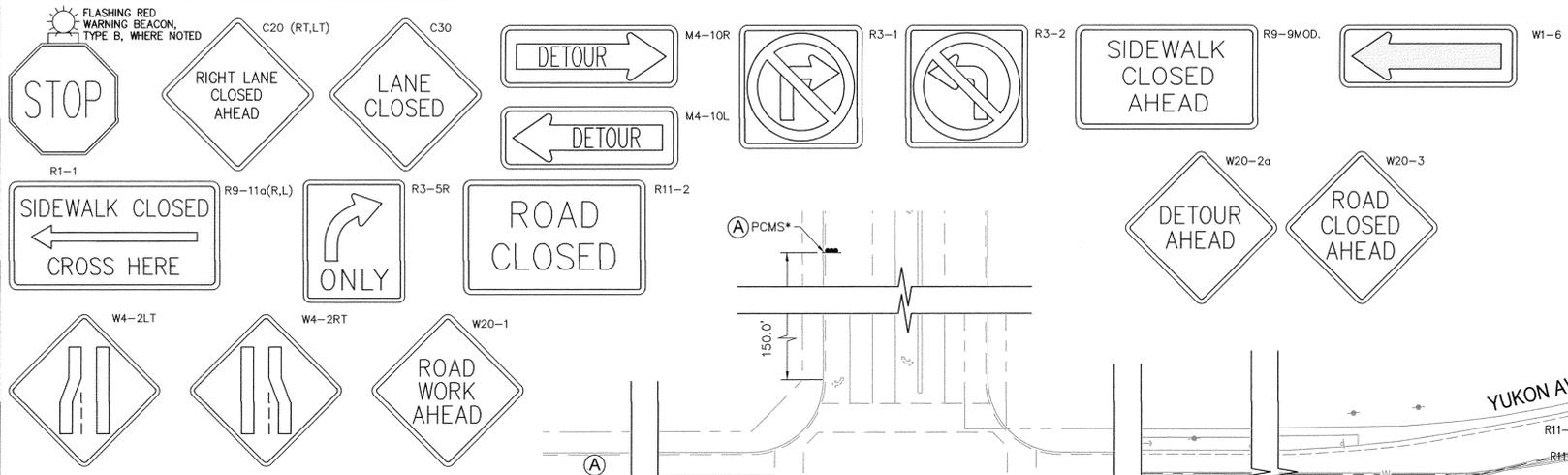
DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: *E. Martin*
ENGINEERING MANAGER: *John Smith*

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

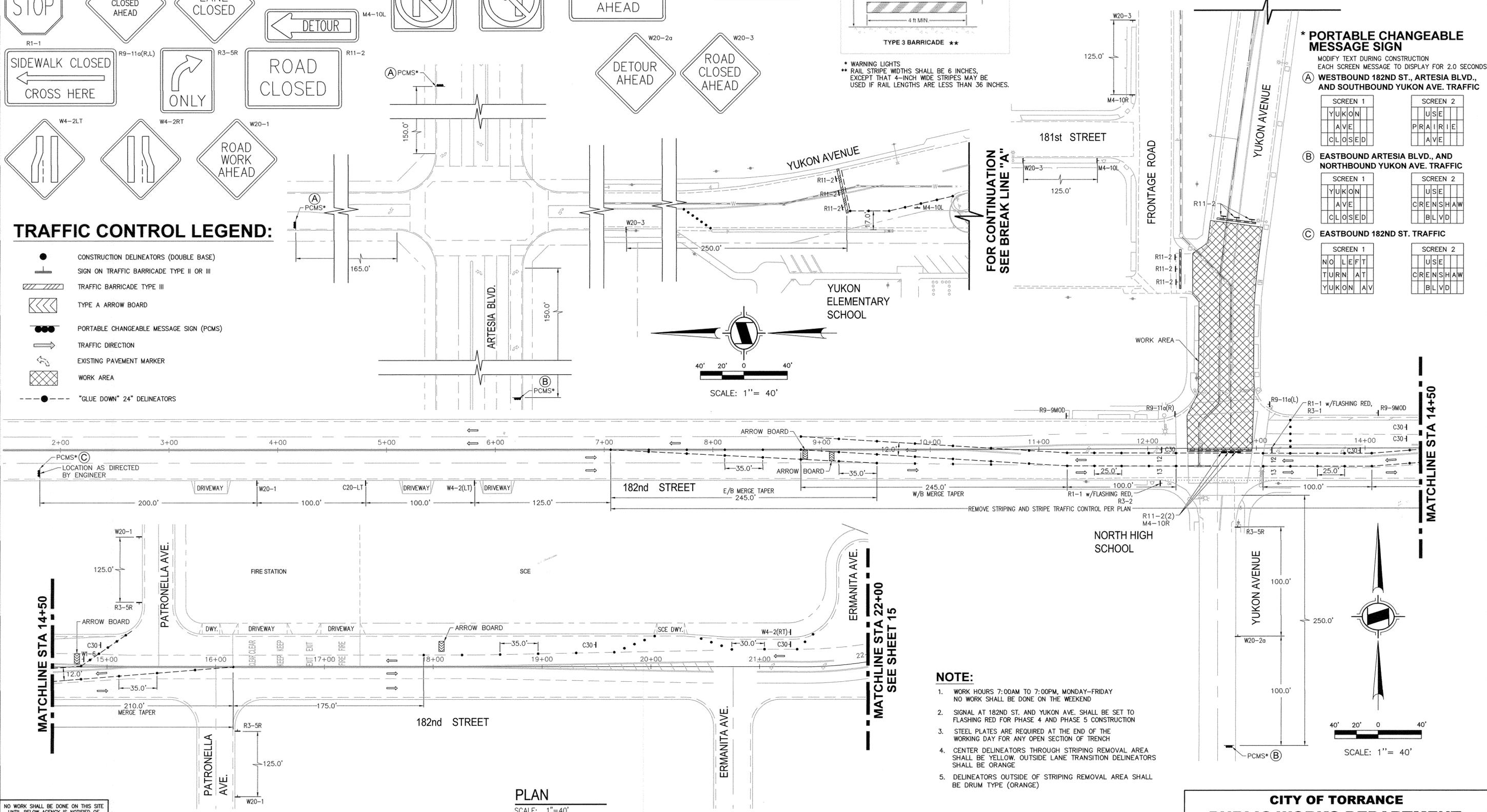
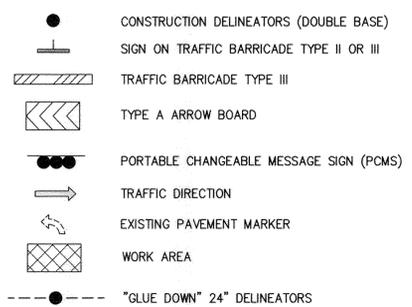
APPROVED BY: *S. B...* DATE: 4/23/15
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 13 OF 17
SCALE: AS SHOWN SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

TRAFFIC SIGN LEGEND:



TRAFFIC CONTROL LEGEND:



FOR CONTINUATION
SEE BREAK LINE "A"

FOR CONTINUATION
SEE BREAK LINE "A"

MATCHLINE STA 14+50

MATCHLINE STA 22+00
SEE SHEET 15

*** PORTABLE CHANGEABLE MESSAGE SIGN**

MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

(A) WESTBOUND 182ND ST., ARTESIA BLVD., AND SOUTHBOUND YUKON AVE. TRAFFIC

SCREEN 1	SCREEN 2
YUKON AVE CLOSED	USE PRAIRIE AVE

(B) EASTBOUND ARTESIA BLVD., AND NORTHBOUND YUKON AVE. TRAFFIC

SCREEN 1	SCREEN 2
YUKON AVE CLOSED	USE CRENSHAW BLVD

(C) EASTBOUND 182ND ST. TRAFFIC

SCREEN 1	SCREEN 2
NO LEFT TURN AT YUKON AV	USE CRENSHAW BLVD

NOTE:

1. WORK HOURS 7:00AM TO 7:00PM, MONDAY-FRIDAY
NO WORK SHALL BE DONE ON THE WEEKEND
2. SIGNAL AT 182ND ST. AND YUKON AVE. SHALL BE SET TO FLASHING RED FOR PHASE 4 AND PHASE 5 CONSTRUCTION
3. STEEL PLATES ARE REQUIRED AT THE END OF THE WORKING DAY FOR ANY OPEN SECTION OF TRENCH
4. CENTER DELINEATORS THROUGH STRIPING REMOVAL AREA SHALL BE YELLOW. OUTSIDE LANE TRANSITION DELINEATORS SHALL BE ORANGE
5. DELINEATORS OUTSIDE OF STRIPING REMOVAL AREA SHALL BE DRUM TYPE (ORANGE)

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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PREPARED BY: **CWE**
WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

1561 E. ORANGETHORPE AVE., SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
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NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

**TRAFFIC CONTROL PLAN
YUKON AVENUE AND 182ND STREET
PHASE 4**

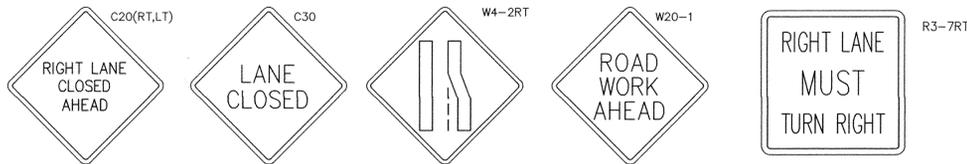
DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: *E. Martin*
ENGINEERING MANAGER: *John Veltz*

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

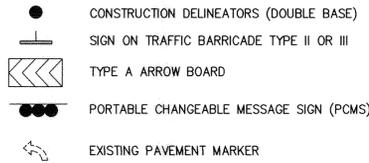
APPROVED BY: *J. Ben* 4/23/15
CRAIG BILEZIERAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 14 OF 17
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

TRAFFIC SIGN LEGEND:

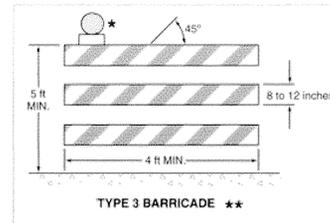


TRAFFIC CONTROL LEGEND:



NOTE:

1. WORK HOURS 7:00AM TO 7:00PM, MONDAY-FRIDAY. NO WORK SHALL BE DONE ON THE WEEKEND.
2. SIGNAL AT 182ND ST. AND YUKON AVE. SHALL BE SET TO FLASHING RED FOR PHASE 4 AND PHASE 5 CONSTRUCTION.
3. STEEL PLATES ARE REQUIRED AT THE END OF THE WORKING DAY FOR ANY OPEN SECTION OF TRENCH.
4. CENTER DELINEATORS THROUGH STRIPING REMOVAL AREA SHALL BE YELLOW. OUTSIDE LANE TRANSITION DELINEATORS SHALL BE ORANGE.
5. DELINEATORS OUTSIDE OF STRIPING REMOVAL AREA SHALL BE DRUM TYPE (ORANGE).



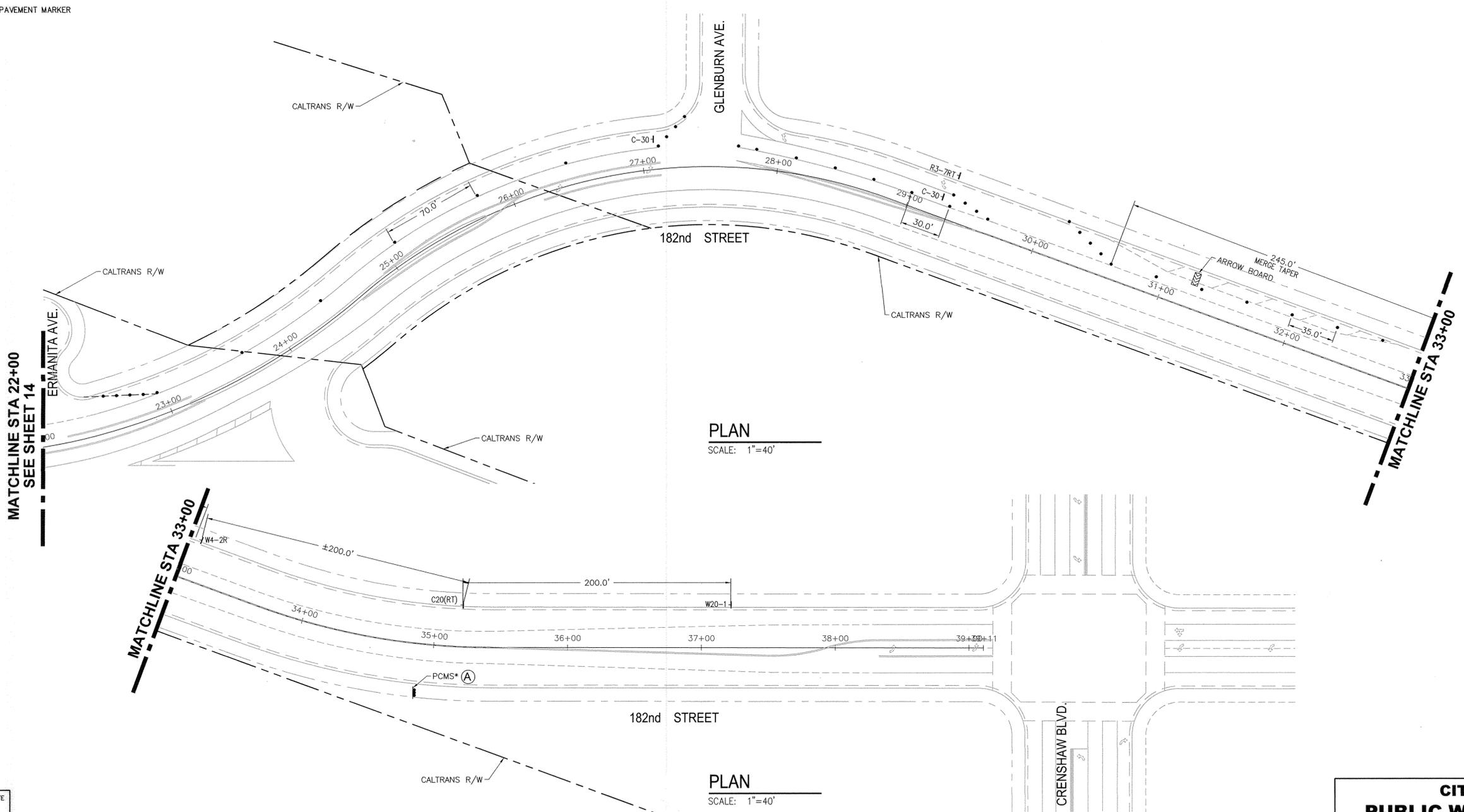
* WARNING LIGHTS
 ** RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.

*** PORTABLE CHANGEABLE MESSAGE SIGN**

MODIFY TEXT DURING CONSTRUCTION
 EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

(A) WESTBOUND 182ND ST. TRAFFIC

SCREEN 1			SCREEN 2		
N	O	R	I	G	H
T	U	R	N	A	T
Y	U	K	O	N	A



NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Know what's below.
 Call before you dig.
 TWO WORKING DAYS BEFORE YOU DIG



PREPARED BY:
William F. Young
 DATE: 4/29/15
 WILLIAM F. YOUNG, P.E.
 R.C.E. NO. 35715
 (EXP. 09/30/2015)

1561 E. ORANGETHORPE AVE.
 SUITE 240
 FULLERTON, CA 92831
 TEL (714) 526-7500
 www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

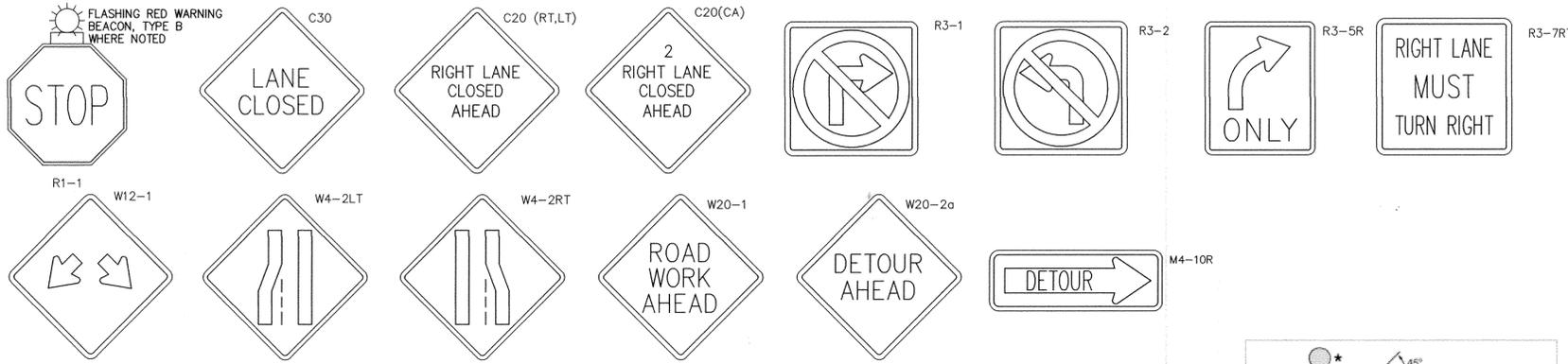
NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
 (ARTESIA BLVD TO 182ND STREET)
TRAFFIC CONTROL PLAN
YUKON AVENUE AND 182ND STREET
PHASE 4

DESIGNED BY: D. GINS
 DRAWN BY: M. MENDEZ
 PROJECT ENGINEER:
 ENGINEERING MANAGER:

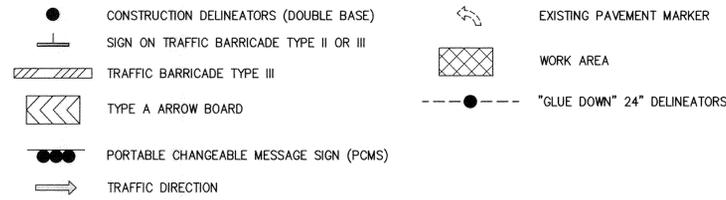
APPROVED BY:
 DATE: 4/29/15
 CRAIG BILEZERIAN, PE
 CITY ENGINEER
 R.C.E. NO. 55339 (EXP. 12/31/2016)

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT
 SHEET 15 OF 17
 SCALE: AS SHOWN
 SPECIFICATION NO. SEE TITLE SHEET
 SUPPLEMENTAL PLAN NO.
 PLAN NO. **WP-308**

TRAFFIC SIGN LEGEND:

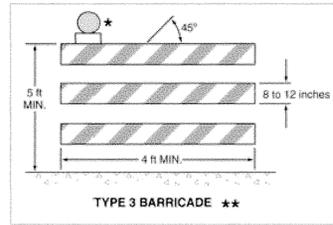


TRAFFIC CONTROL LEGEND:



NOTE:

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* WARNING LIGHTS
** RAIL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT THAT 4-INCH WIDE STRIPES MAY BE USED IF RAIL LENGTHS ARE LESS THAN 36 INCHES.

*** PORTABLE CHANGEABLE MESSAGE SIGN**

MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

(A) EASTBOUND 182ND ST. TRAFFIC

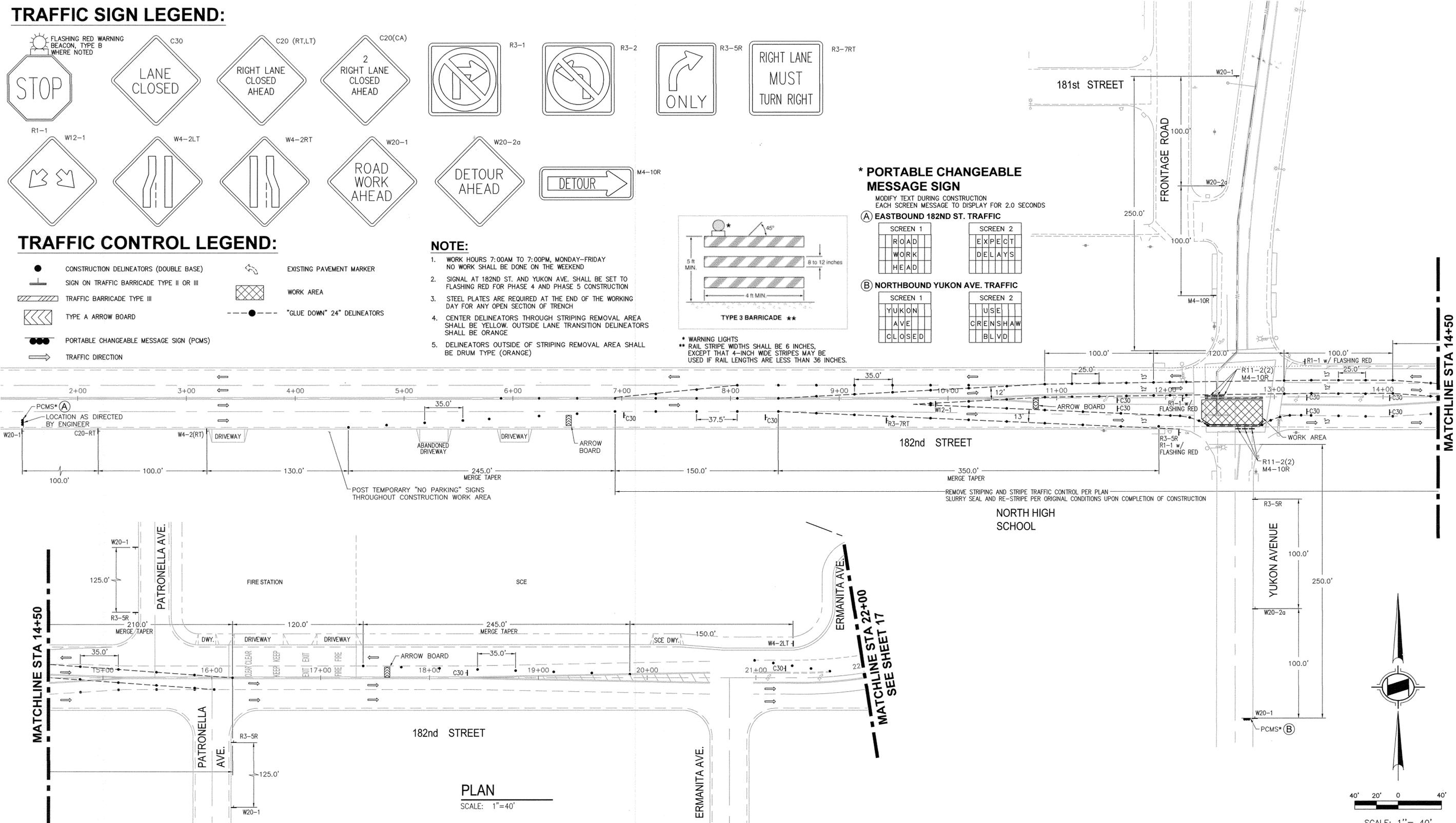
SCREEN 1	ROAD
WORK	HEAD

SCREEN 2	EXPECT
DELAYS	

(B) NORTHBOUND YUKON AVE. TRAFFIC

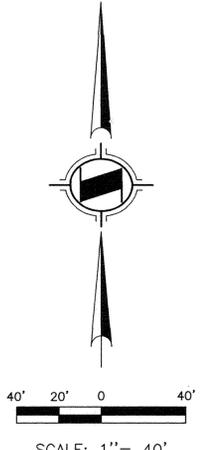
SCREEN 1	YUKON
AVE	CLOSED

SCREEN 2	USE
CRENSHAW	BLVD



PLAN

SCALE: 1"=40'



NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Know what's below.
Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG



PREPARED BY: **CWE**
WILLIAM F. YOUNG, P.E.
DATE: 4/23/15
R.C.E. NO. 35715 (EXP. 09/30/2015)

1561 E. ORANGETHORPE AVE.
SUITE 240
FULLERTON, CA 92831
TEL (714) 526-7500
www.cwecorp.com

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)

TRAFFIC CONTROL PLAN
YUKON AVENUE AND 182ND STREET
PHASE 5

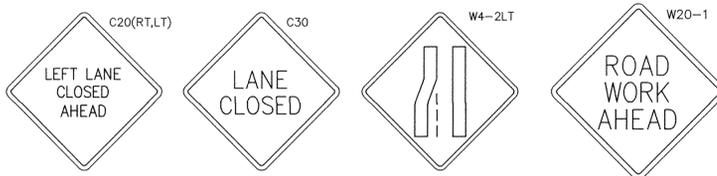
DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: E. Martin
ENGINEERING MANAGER: John Veltch

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 4/23/15
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

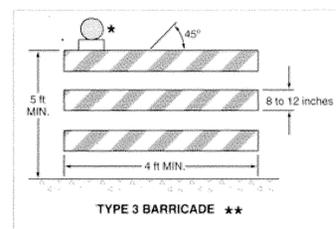
SHEET 16 OF 17
SCALE: AS SHOWN SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **WP-308**

TRAFFIC SIGN LEGEND:



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*** PORTABLE CHANGEABLE MESSAGE SIGN**

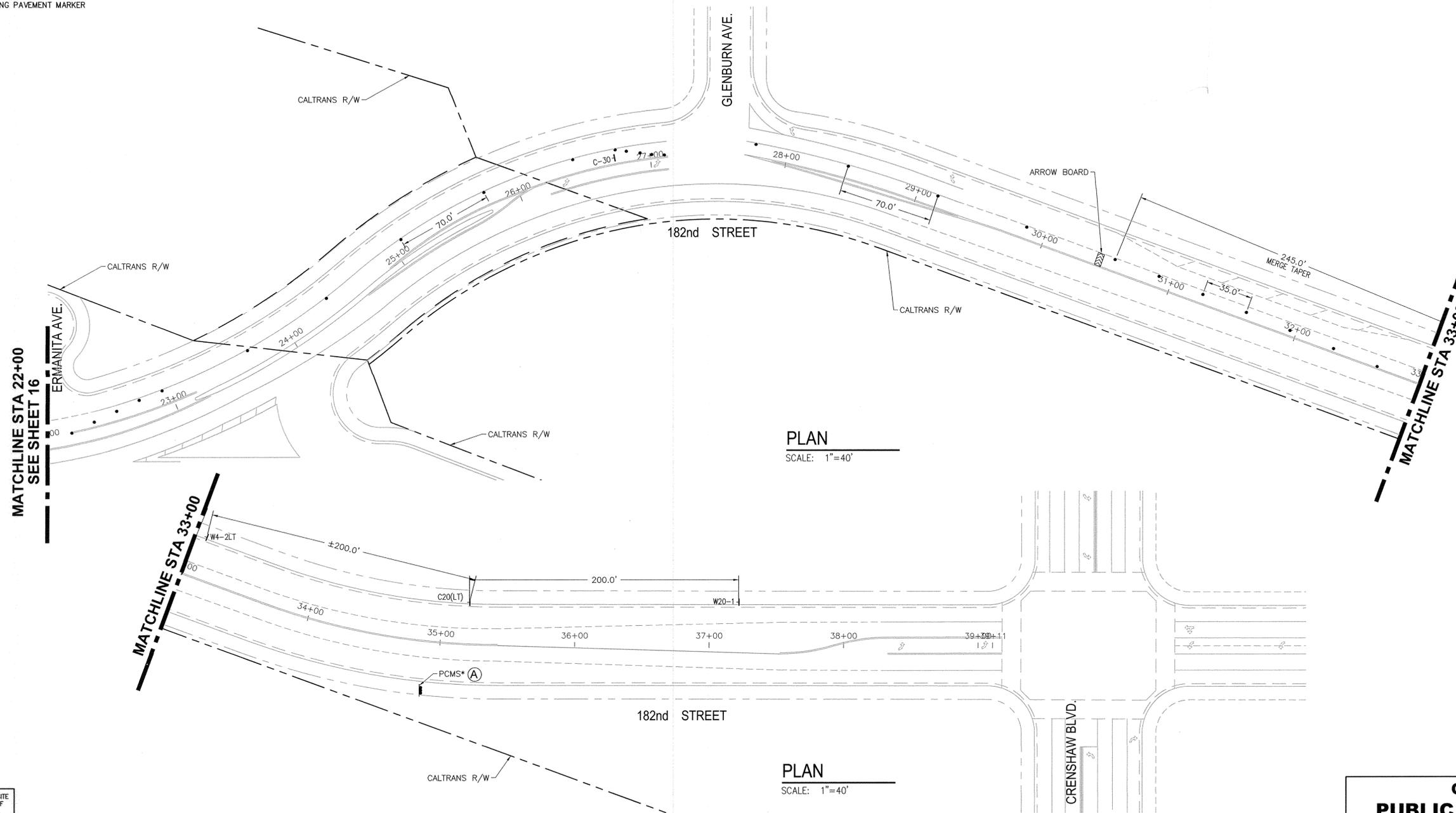
MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

(A) WESTBOUND 182ND ST. TRAFFIC

SCREEN 1		SCREEN 2	
N	L	U	
T	A	P	
Y	A	P	
	V	A	

TRAFFIC CONTROL LEGEND:

- CONSTRUCTION DELINEATORS (DOUBLE BASE)
- SIGN ON TRAFFIC BARRICADE TYPE II OR III
- ◀▶▶▶ TYPE A ARROW BOARD
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- ⤵ EXISTING PAVEMENT MARKER



NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.



WILLIAM F. YOUNG, P.E.
R.C.E. NO. 35715
(EXP. 09/30/2015)

PREPARED BY: **CWE**
1561 E. ORANGETHORPE AVE.
SUITE 240
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TEL (714) 526-7500
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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

NORTH TORRANCE WELL FIELD PROJECT, PHASE II, I-108
(ARTESIA BLVD TO 182ND STREET)
TRAFFIC CONTROL PLAN
YUKON AVENUE AND 182ND STREET
PHASE 5

DESIGNED BY: D. GINS
DRAWN BY: M. MENDEZ
PROJECT ENGINEER: *E. Martin*
ENGINEERING MANAGER: *John Veltz*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT	
APPROVED BY: <i>S. Bee</i>	SHEET 17 OF 17
CRAIG BILZERIEN, PE CITY ENGINEER R.C.E. NO. 55339 (EXP. 12/31/2016)	DATE: 4/23/15
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	PLAN NO. WP-308