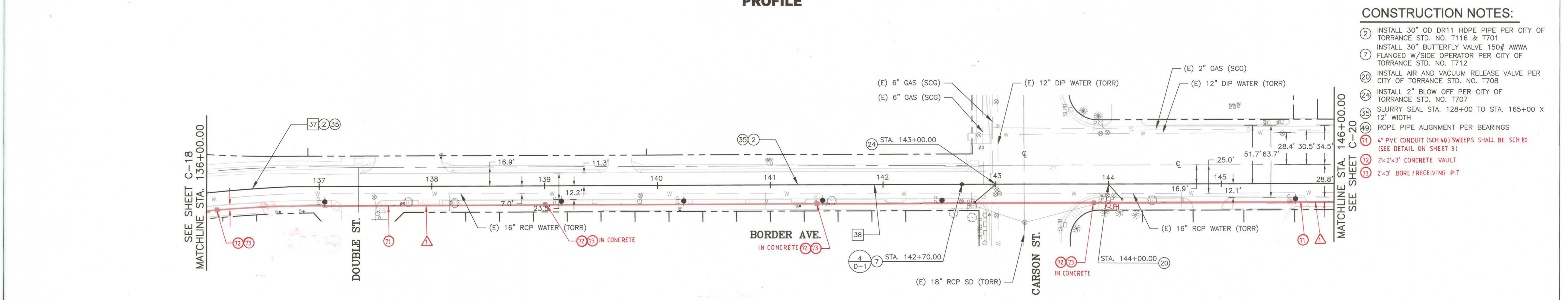


SCALE:
1" = 40' (HOR.)
1" = 4' (VER.)

PROFILE



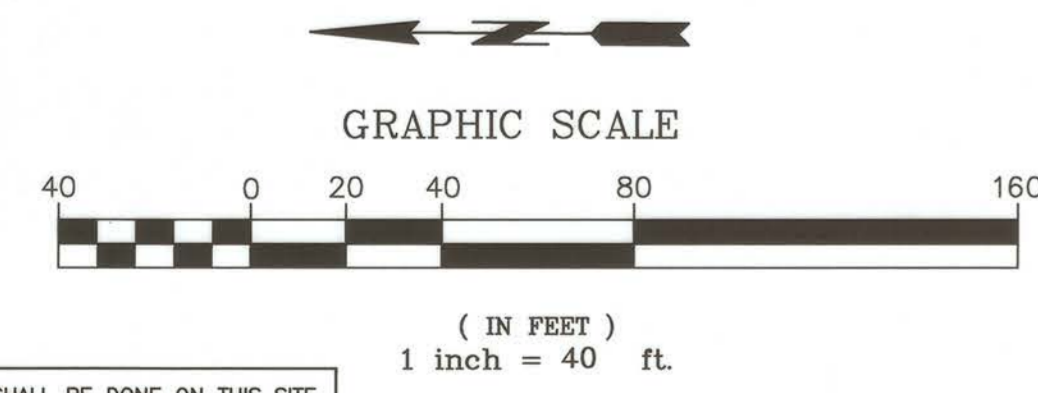
CONSTRUCTION NOTES:

- ② INSTALL 30" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ⑦ INSTALL 30" BUTTERFLY VALVE 150# AWWA FLANGED W/SIDE OPERATOR PER CITY OF TORRANCE STD. NO. T712
- ⑳ INSTALL AIR AND VACUUM RELEASE VALVE PER CITY OF TORRANCE STD. NO. T708
- ⑳ INSTALL 2" BLOW OFF PER CITY OF TORRANCE STD. NO. T707
- ⑳ SLURRY SEAL STA. 128+00 TO STA. 165+00 X 12' WIDTH
- ④⑨ ROPE PIPE ALIGNMENT PER BEARINGS
- ⑦① 4" PVC (CONDUIT (SCH 40) SWEEPS SHALL BE SCH 80 (SEE DETAIL ON SHEET 3)
- ⑦② 2x2x3' CONCRETE VAULT
- ⑦③ 2x3' BORE/RECEIVING PIT

NOTE
3 BORE TO PLACE 4" PVC (SCH 40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION

- NOTES:
1. DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 2. CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.

LINE/CURVE DATA TABLE						
NO.	BEARING	LENGTH	BC STA.	EC STA.	RADIUS	(TOTAL DISTANCE)
37	---	821.42'	128+51.78	136+73.20	1153.88'	(TOTAL DISTANCE)
38	S 00° 34' 42" E	2825.55'	---	---	---	(TOTAL DISTANCE)



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

811
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QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD, SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891-3994
FAX: (310) 891-3995

PREPARED UNDER THE SUPERVISION OF:

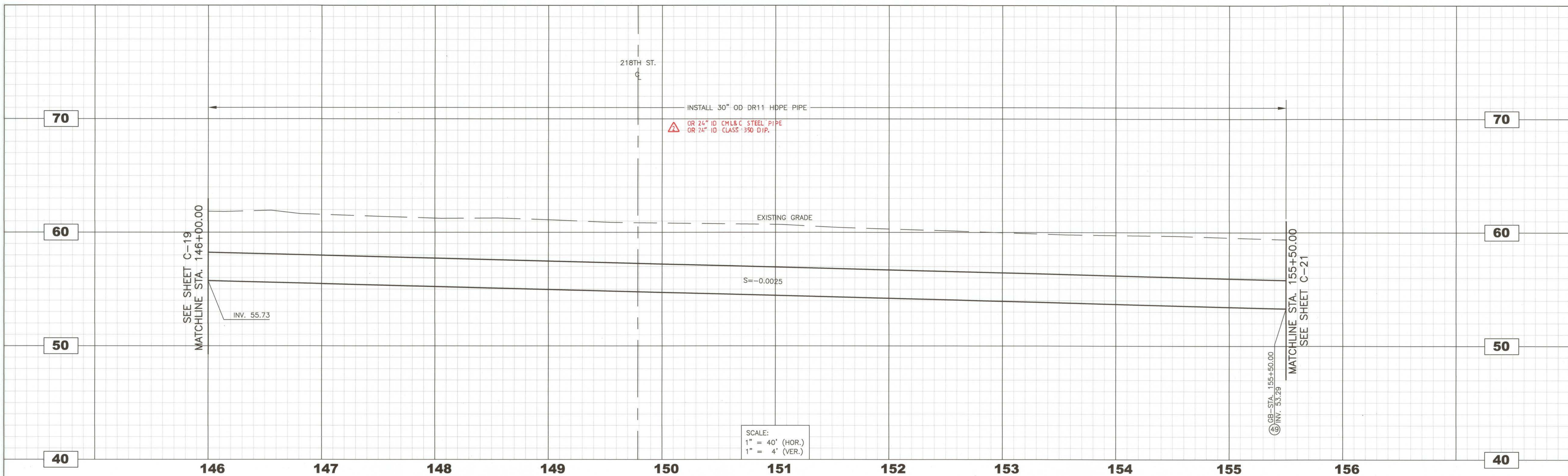
REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
02/26/2020	VP	JD	ADDED 4" PVC CONDUIT FOR FIBER OPTIC CABLE	
09/07/2021	VP	JD	CHANGED PIPE SIZE AND MATERIAL	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
STA. 136+00.00 TO 146+00.00
BORDER AVE. WATER TRANSMISSION MAIN

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER:
ENGINEERING MANAGER: JOHN C. DETTLE, P.E.

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339
DATE: 5/12/21

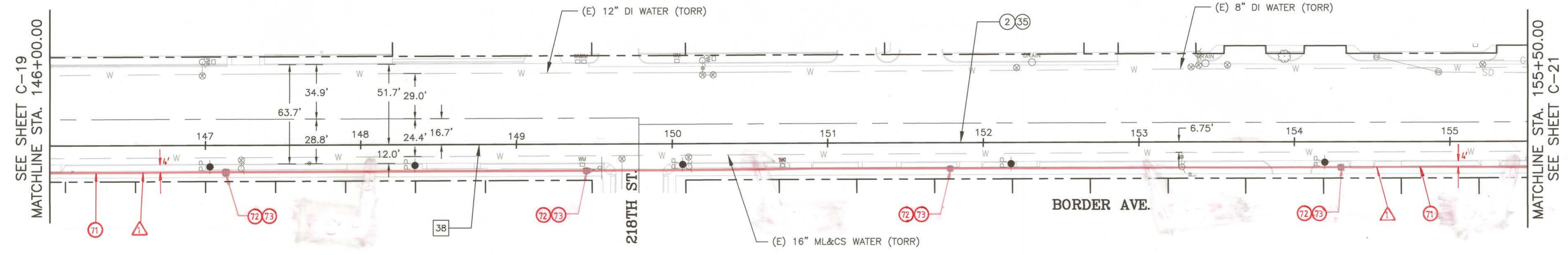
CITY OF TORRANCE PUBLIC WORKS DEPARTMENT
SHEET 21 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. C-19
DRAWING NO. **WP-307**



SCALE:
1" = 40' (HOR.)
1" = 4' (VER.)

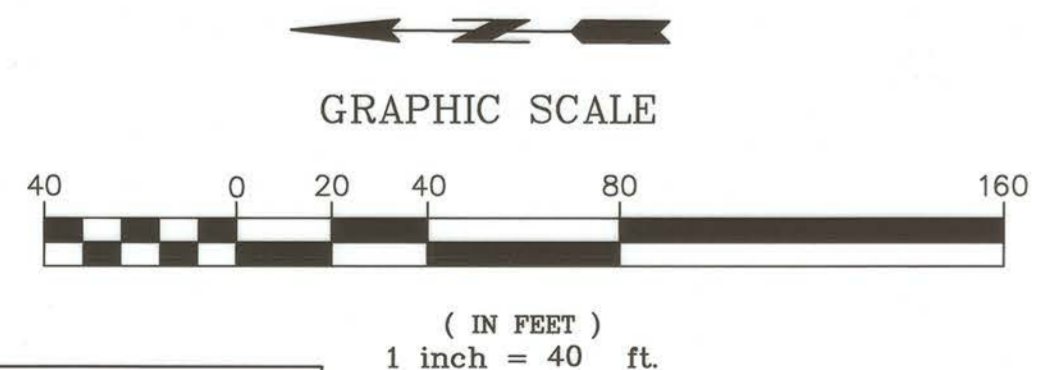
CONSTRUCTION NOTES:

- ② INSTALL 30" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ③⑤ SLURRY SEAL STA. 128+00 TO STA. 165+00 X 12' WIDTH
- ④⑨ ROPE PIPE ALIGNMENT PER BEARINGS
- ⑦① 4" PVC CONDUIT (SCH 40) SWEEPS SHALL BE SCH 80 (SEE DETAIL ON SHEET 3).
- ⑦② 2x2x3 CONCRETE VAULT
- ⑦③ 2x3' BORE/RECEIVING PIT

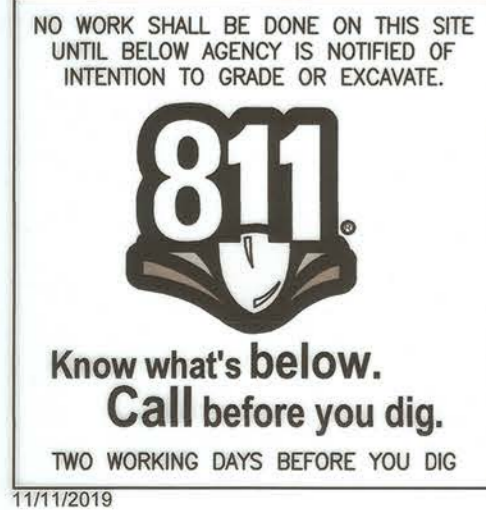


NOTE
3. BORE TO PLACE 4" PVC (SCH 40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION

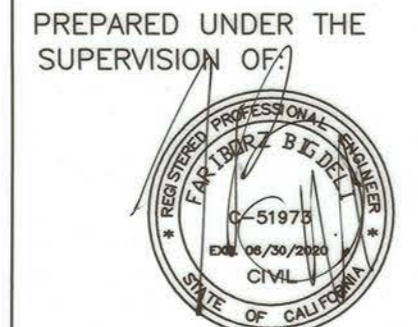
- NOTES:
1. DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 2. CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.



LINE/CURVE DATA TABLE				
NO.	BEARING	LENGTH	BC STA.	EC STA.
38	S 00° 34' 42" E	2825.55'	---	---
(TOTAL DISTANCE)				



QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD, SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891 - 3994
FAX: (310) 891 - 3995



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
03/02/2020	VP	JD	ADDED 4" PVC CONDUIT FOR FIBER OPTIC CABLE	
09/08/2021	VP	JD	CHANGED PIPE SIZE AND MATERIAL	

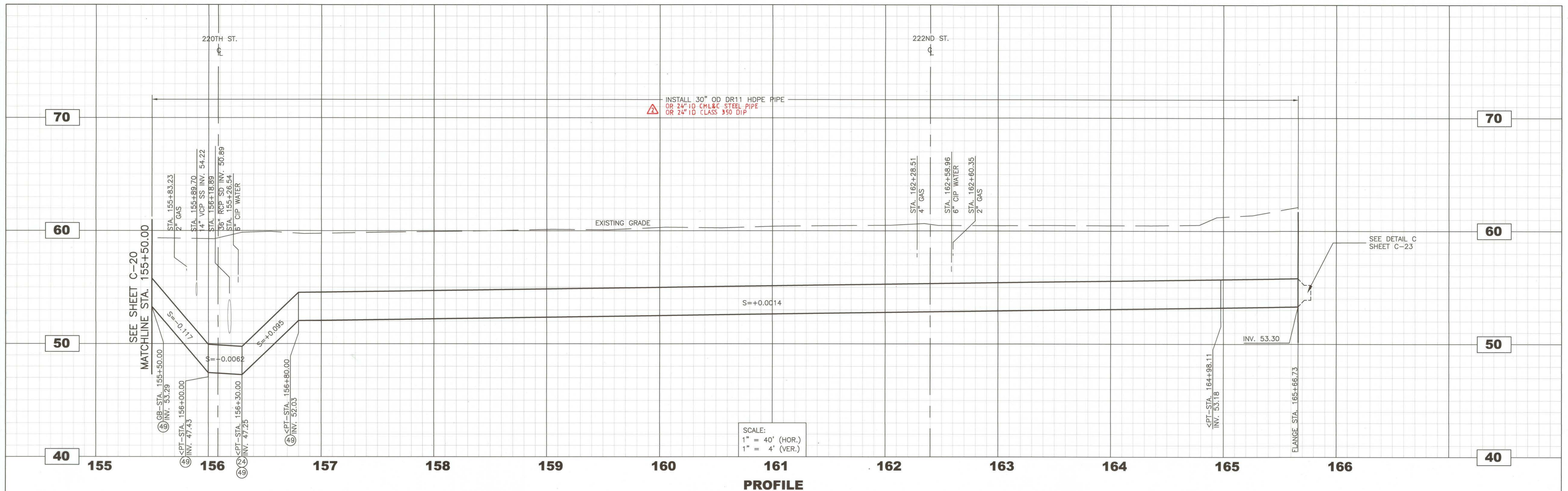
VAN NESS WATER WELLS
TRANSMISSION MAIN, I-145
STA. 146+00.00 TO 155+50.00
BORDER AVE. WATER TRANSMISSION MAIN

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: [Signature]
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. [Signature]

APPROVED BY: [Signature] 5/12/24
DATE
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

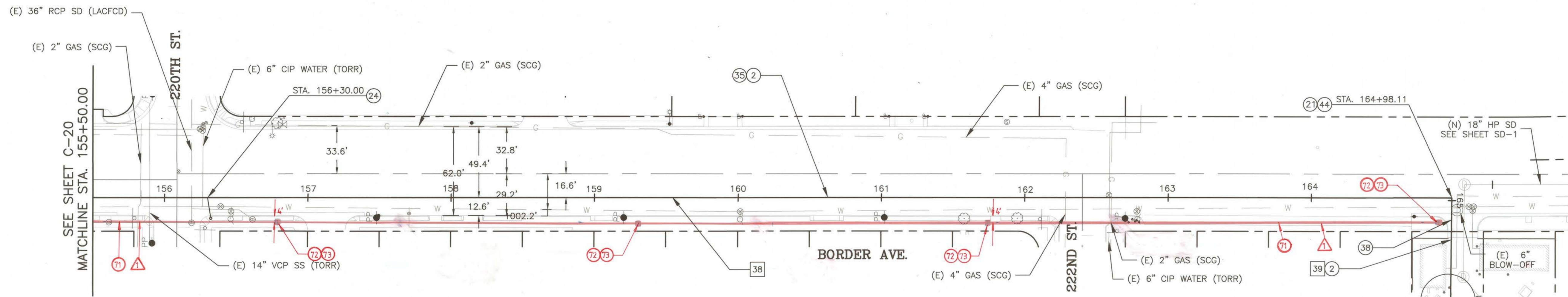
**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

SHEET 22 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. C-20
DRAWING NO. **WP-307**



SCALE:
 1" = 40' (HOR.)
 1" = 4' (VER.)

PROFILE

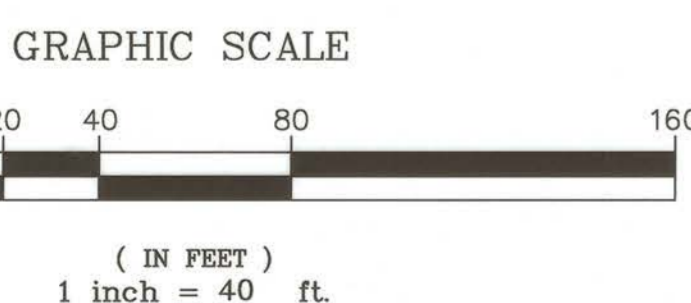


CONSTRUCTION NOTES:

- ② INSTALL 30" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ②1 INSTALL CONCRETE THRUST BLOCK PER CITY OF TORRANCE STD. NO. T713
- ②4 INSTALL 2" BLOW OFF PER CITY OF TORRANCE STD. NO. T707
- ③8 RECONSTRUCT DRIVEWAY APPROACH PER SPPWC STD. NO. 110-2
- ③5 SLURRY SEAL STA. 128+00 TO STA. 165+00 X 12' WIDTH
- ④4 INSTALL 30"-90" FUSED DR11 HDPE BEND
- ④9 ROPE PIPE ALIGNMENT PER BEARINGS
- ⑦1 4" PVC CONDUIT (SCH 40) SWEEPS SHALL BE SCH 80 (SEE DETAIL ON SHEET 3)
- ⑦2 2'x2'x3' CONCRETE VAULT
- ⑦3 2'x2' BORE/RECEIVING PIT

- NOTE
- 3. BORE TO PLACE 4" PVC (SCH 40) CONDUIT FOR FIBER OPTIC CABLE INSTALLATION.
 - 4. FLANGE ISOLATING GASKET KIT REQUIRED IN BETWEEN STEEL PIPE AND DLR

- NOTES:
- 1. DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 - 2. CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.



LINE/CURVE DATA TABLE					
NO.	BEARING	LENGTH	BC STA.	EC STA.	RADIUS
38	S 00° 34' 42" E	2825.55'	---	---	---
					(TOTAL DISTANCE)
39	N 89° 56' 32" W	70.63'	---	---	---
					(TOTAL DISTANCE)

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 2720 SEPULVEDA BLVD, SUITE 100
 TORRANCE, CA 90505
 PHONE: (310) 891 - 3994
 FAX: (310) 891 - 3995

PREPARED UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
03/04/2020	VP	JD	ADDED 4" PVC CONDUIT FOR FIBER OPTIC CABLE	
09/08/2021	VP	JD	CHANGED PIPE SIZE AND MATERIAL	

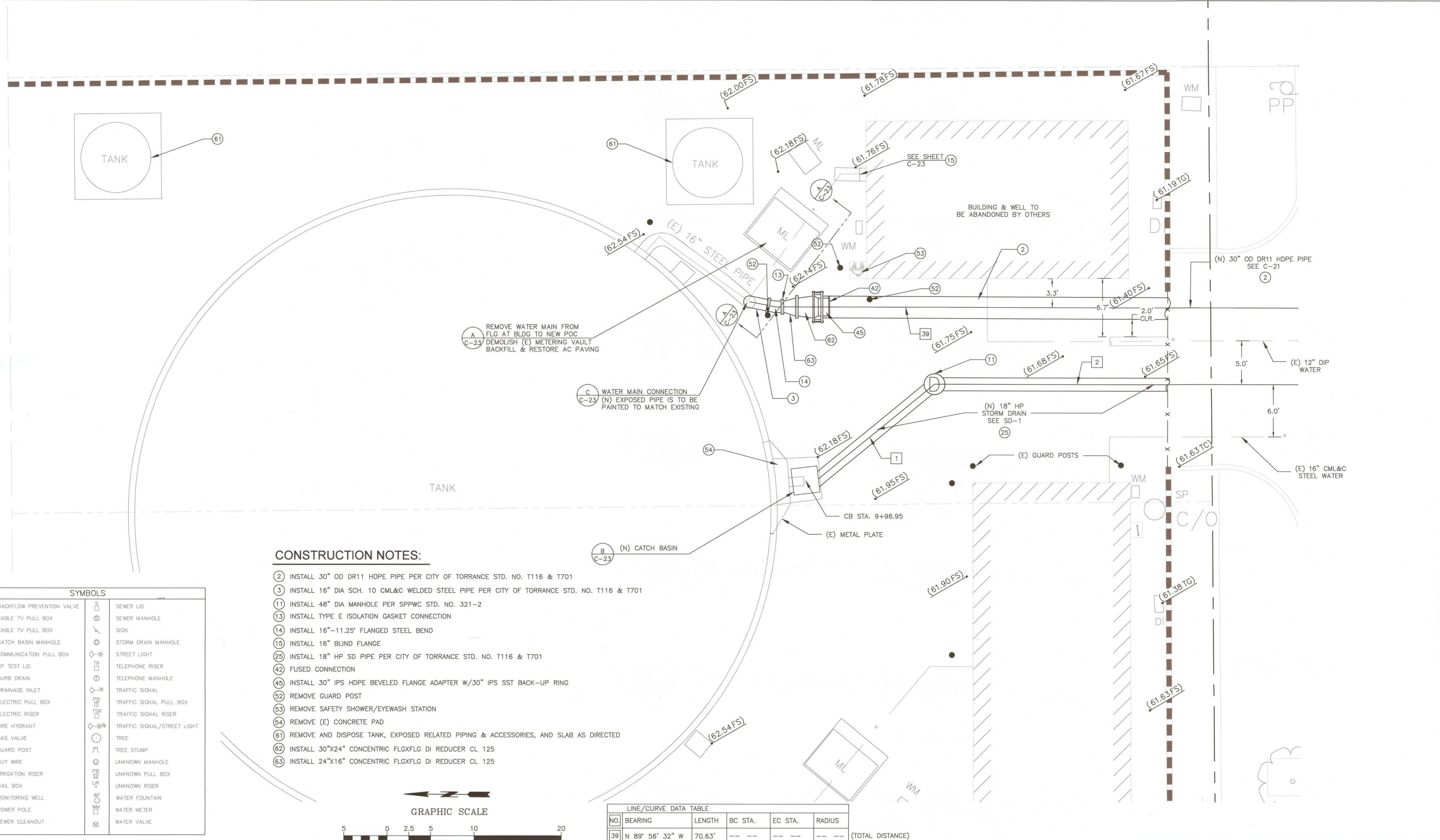
VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
 STA. 155+50.00 TO 165+66.73
 BORDER AVE. WATER TRANSMISSION MAIN

DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER: *[Signature]*
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

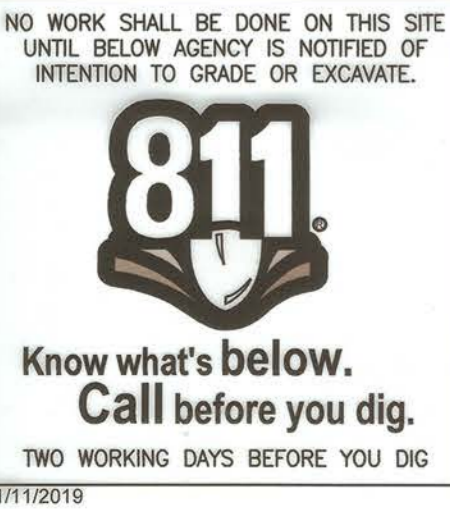
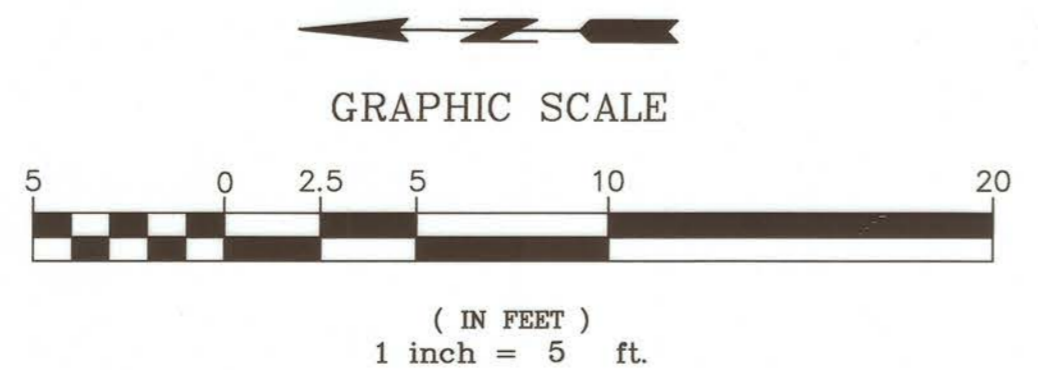
APPROVED BY: *[Signature]*
 CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339
 DATE: 5/12/21

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

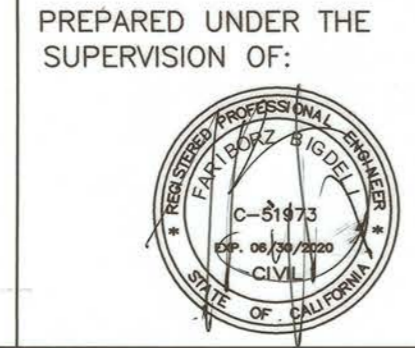
SHEET 23 OF 65
 SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. C-21
 DRAWING NO. **WP-307**



SYMBOLS			
BPV	BACKFLOW PREVENTION VALVE	S	SEWER LID
CB	CATCH BASIN MANHOLE	SM	SEWER MANHOLE
CP	CP TEST LID	SDM	STORM DRAIN MANHOLE
CD	CURB DRAIN	SL	STREET LIGHT
DI	DRAINAGE INLET	TR	TELEPHONE RISER
EP	ELECTRIC PULL BOX	TRM	TELEPHONE MANHOLE
ER	ELECTRIC RISER	TSR	TRAFFIC SIGNAL
EV	FIRE HYDRANT	TSRM	TRAFFIC SIGNAL MANHOLE
GV	GAS VALVE	TRSL	TRAFFIC SIGNAL RISER
GP	GUARD POST	TRSLM	TRAFFIC SIGNAL/STREET LIGHT
GW	GUY WIRE	T	TREE
IR	IRRIGATION RISER	TS	TREE STUMP
MB	MAIL BOX	UM	UNKNOWN MANHOLE
MP	MONITORING WELL	UMM	UNKNOWN MANHOLE MANHOLE
PP	POWER POLE	UMR	UNKNOWN RISER
C/O	SEWER CLEANOUT	WM	WATER FOUNTAIN
		WMT	WATER METER
		WV	WATER VALVE



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2720 SEPULVEDA BLVD, SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891 - 3994
FAX: (310) 891 - 3995



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
BORDER AVENUE RESERVOIR CONNECTIONS

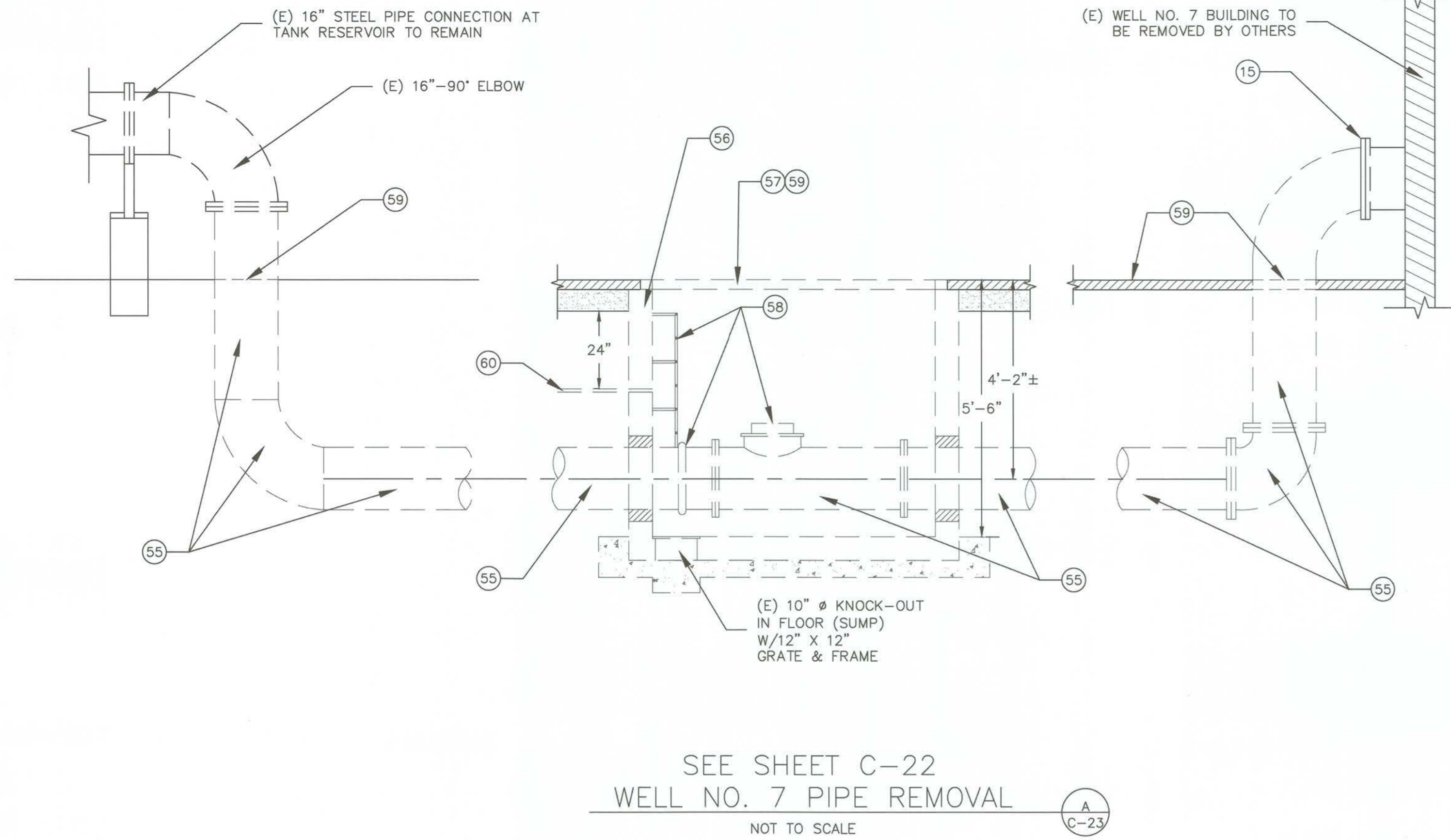
DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: [Signature]
ENGINEERING MANAGER: [Signature]
JOHN C. DETTLE, P.E.

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

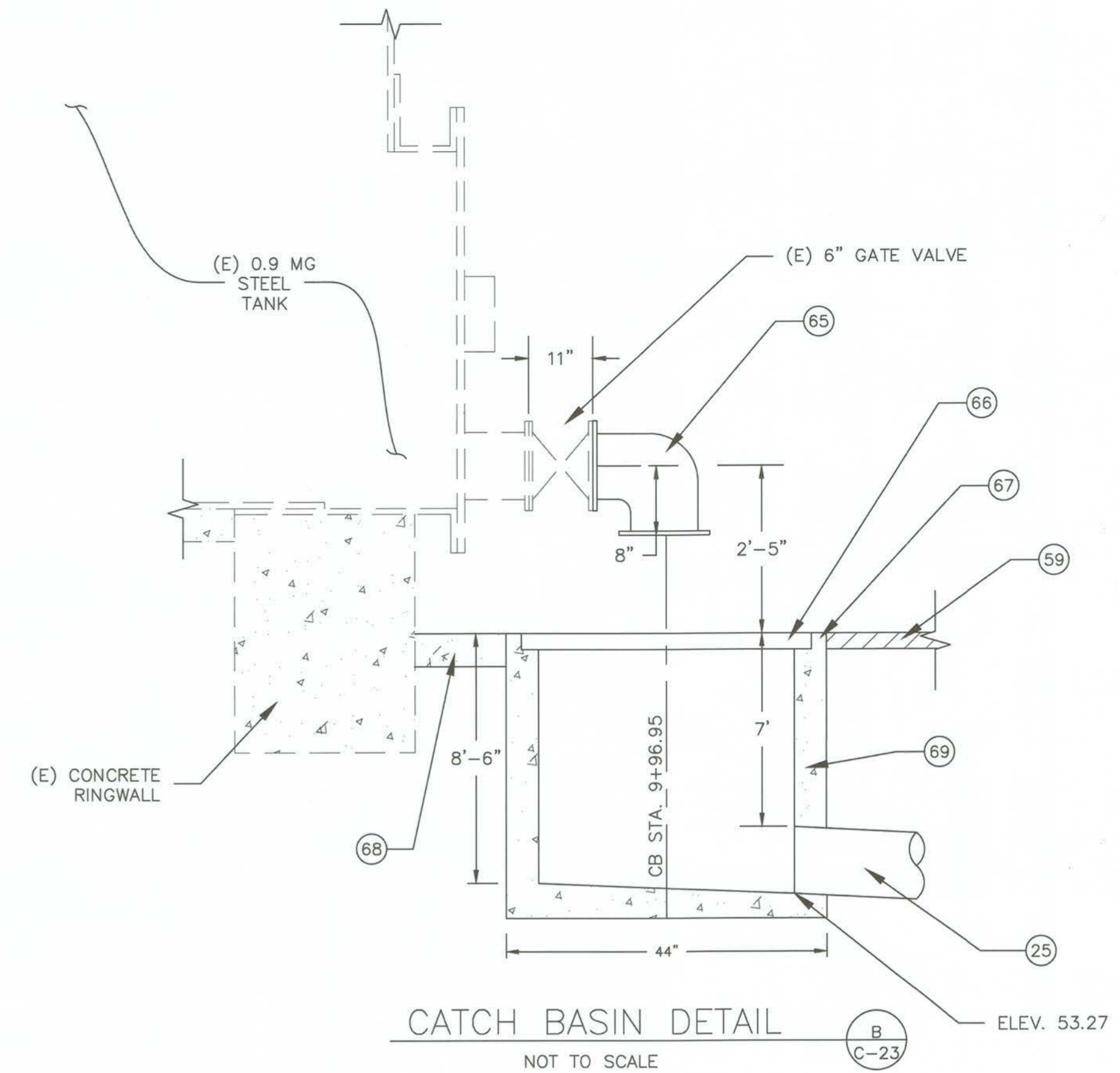
APPROVED BY: [Signature] DATE: 5/12/21

CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

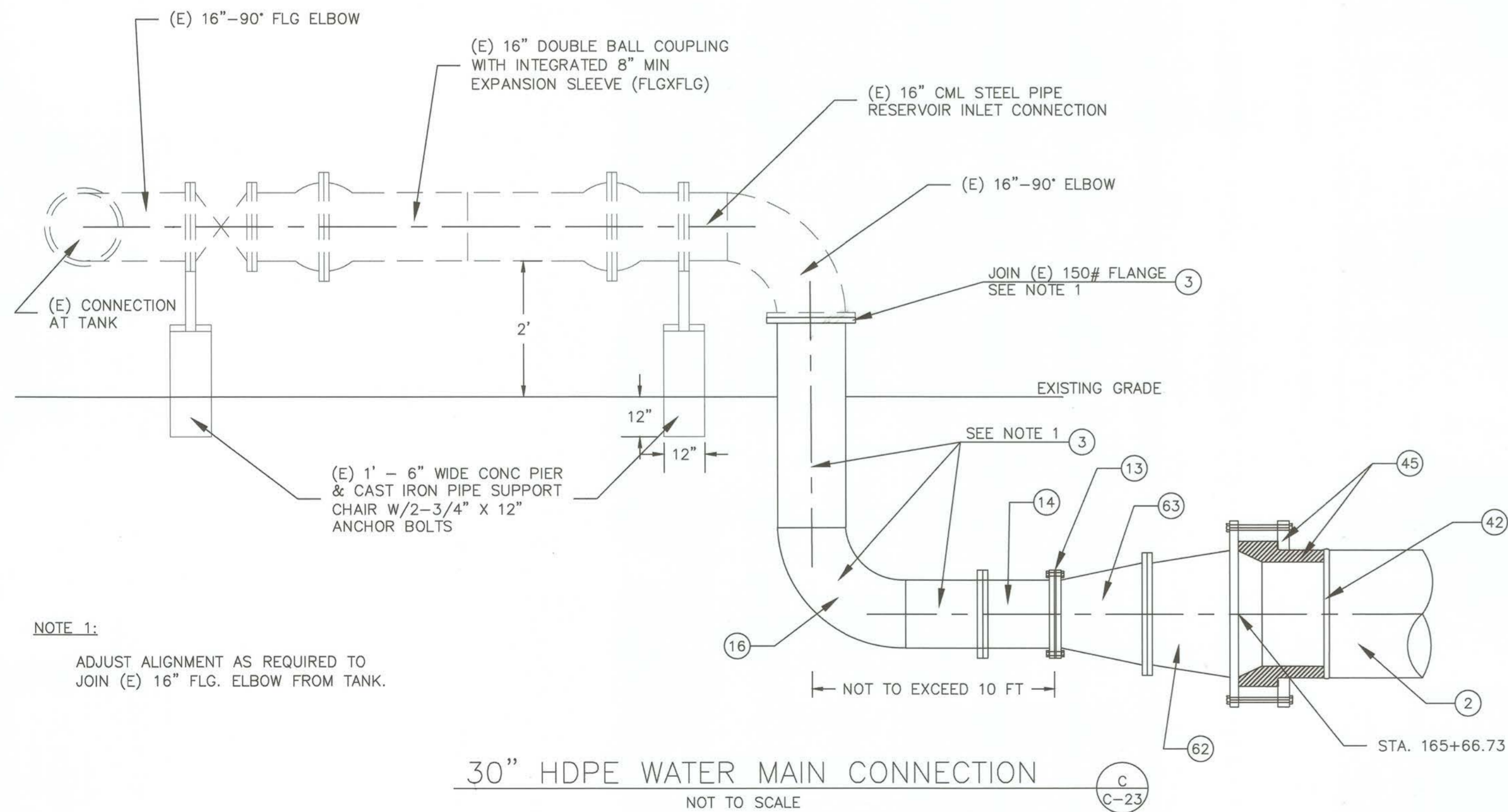
SHEET 24 OF 65
SCALE: VARIES
SPECIFICATION NO. C-22
DRAWING NO. **WP-307**



SEE SHEET C-22
WELL NO. 7 PIPE REMOVAL
NOT TO SCALE



CATCH BASIN DETAIL
NOT TO SCALE



30" HDPE WATER MAIN CONNECTION
NOT TO SCALE

CONSTRUCTION NOTES

- ② INSTALL 30" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ③ INSTALL 16" DIA SCH. 10 CML&C WELDED STEEL PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ⑬ INSTALL TYPE E ISOLATION GASKET CONNECTION
- ⑭ INSTALL 16"-11.25' FLANGED STEEL BEND
- ⑮ INSTALL 16" BLIND FLANGE
- ⑯ INSTALL 16"-90° BEND
- ⑳ INSTALL 18" HP SD PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ④② FUSED CONNECTION
- ④⑤ INSTALL 30" IPS DR11 HDPE BEVELED FLANGE ADAPTER W/30" IPS DI BACK-UP RING
- ⑤⑤ REMOVE (E) 16" CML&C STEEL PIPE
- ⑤⑥ REMOVE (E) VAULT
- ⑤⑦ REMOVE (E) GALV. STEEL ACCESS HATCH
- ⑤⑧ REMOVE (E) METER, SPOOL, & APPURTENANCES
- ⑤⑨ SAWCUT, REMOVE, AND REPLACE AREAS OF DAMAGED AC (MIN 6" AC OVER 8" CAB)
- ⑥① ABANDON (E) ELECTRICAL CONDUITS
- ⑥② INSTALL 30"x24" CONCENTRIC FLGXFLG DI REDUCER CL 125
- ⑥③ INSTALL 24"x16" CONCENTRIC FLGXFLG DI REDUCER CL 125
- ⑥⑤ INSTALL 6" DI 90° FLGXFLG BEND
- ⑥⑥ INSTALL GALVANIZED GRATE (PED) 1 1/2" X 12 GA STEEL (40 1/2" X 35 1/2")
- ⑥⑦ INSTALL 40 1/2" X 36" FRAME
- ⑥⑧ NEW 4" CONCRETE PAD
- ⑥⑨ INSTALL CATCH BASIN BROOKS 3636 CB W/EXTENSIONS

NOTE 1:
ADJUST ALIGNMENT AS REQUIRED TO
JOIN (E) 16" FLG. ELBOW FROM TANK.

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



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TORRANCE, CA 90505
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FAX: (310) 891 - 3995

PREPARED UNDER THE
SUPERVISION OF:



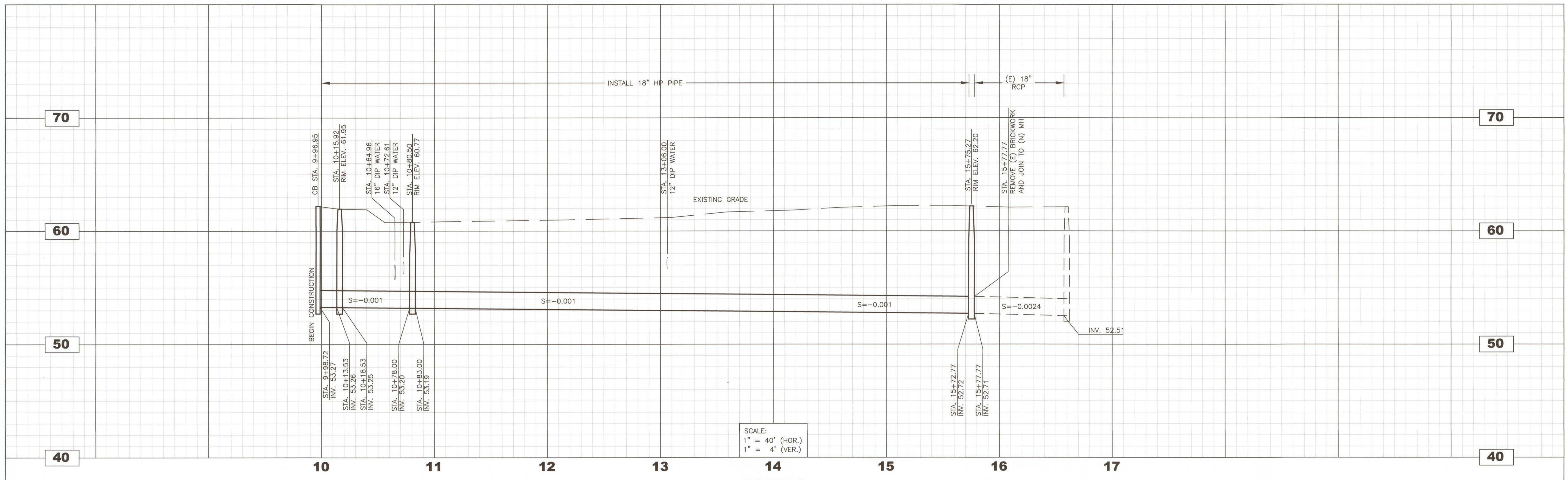
REVISIONS			
DATE	BY	CHECKED	DESCRIPTION

VAN NESS WATER WELLS
TRANSMISSION MAIN, I-145
BORDER AVENUE RESERVOIR CONNECTIONS

DESIGNED BY:
D. PREBLE
DRAWN BY:
L. CANTARERO
PROJECT ENGINEER:
Lokas
ENGINEERING MANAGER:
JOHN C. DETTLE, P.E. *John Dettle*

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

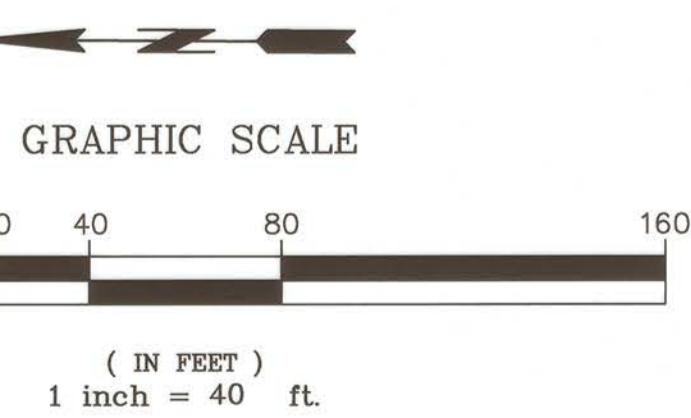
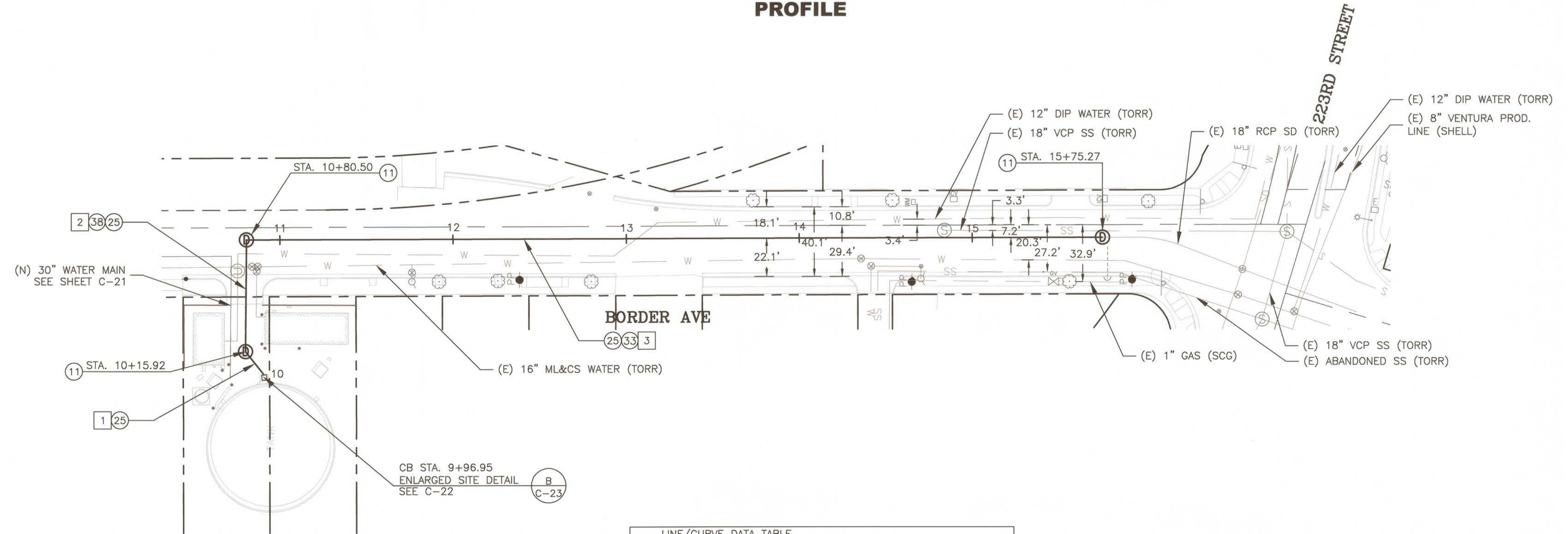
APPROVED BY: <i>J Bee</i> 5/12/21	SHEET 25 OF 65
CRAIG BILEZERIAN, P.E. CITY ENGINEER R.C.E. NO. 55339	SPECIFICATION NO.
DATE	SUPPLEMENTAL PLAN NO. C-23
DRAWING NO. WP-307	



SCALE:
 1" = 40' (HOR.)
 1" = 4' (VER.)

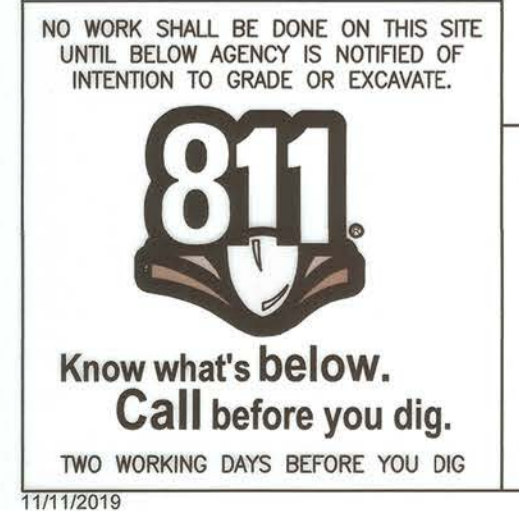
CONSTRUCTION NOTES:

- ① INSTALL 48" DIA MANHOLE PER SPPWC STD. NO. 321-2
- ② INSTALL 18" HP SD PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- ③ SLURRY SEAL STA. 10+80 TO STA. 16+00 X 12' WIDTH
- ④ RECONSTRUCT DRIVEWAY APPROACH PER SPPWC STD. NO. 110-2

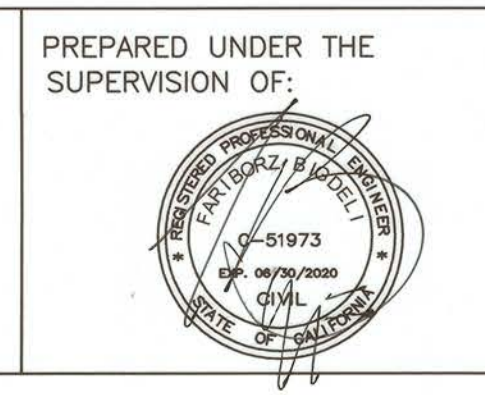


LINE/CURVE DATA TABLE					
NO.	BEARING	LENGTH	BC STA.	EC STA.	RADIUS
1	S 50° 45' 28" W	17.18'	---	---	---
2	N 89° 59' 57" E	64.58'	---	---	---
3	S 00° 33' 13" E	494.77'	---	---	---

- NOTES:**
- DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 - CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.



QUANTUM QUALITY CONSULTING, INC.
 2720 SEPULVEDA BLVD, SUITE 100
 TORRANCE, CA 90505
 PHONE: (310) 891 - 3994
 FAX: (310) 891 - 3995



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
 STA. 9+96.95 TO 15+75.27
 BORDER AVE. STORM DRAIN CONNECTION

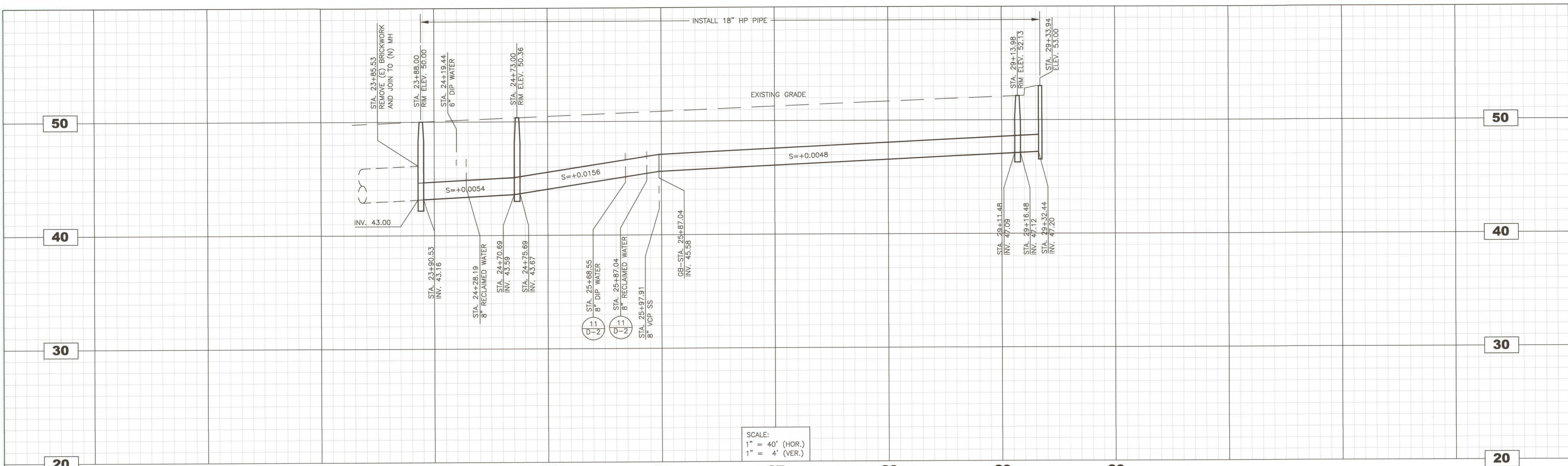
DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER: [Signature]
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E. [Signature]

**CITY OF TORRANCE
 PUBLIC WORKS DEPARTMENT**

APPROVED BY: [Signature] DATE: 5/12/21

CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339

SHEET 26 OF 65
 SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. SD-1
 DRAWING NO. **WP-307**

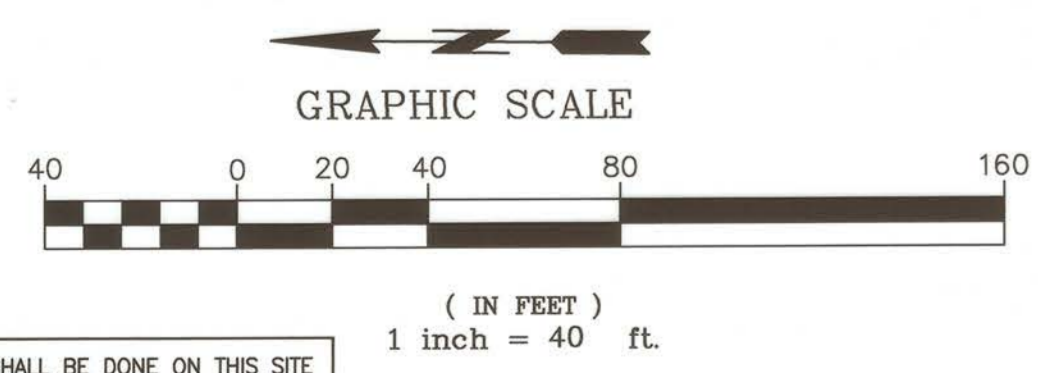
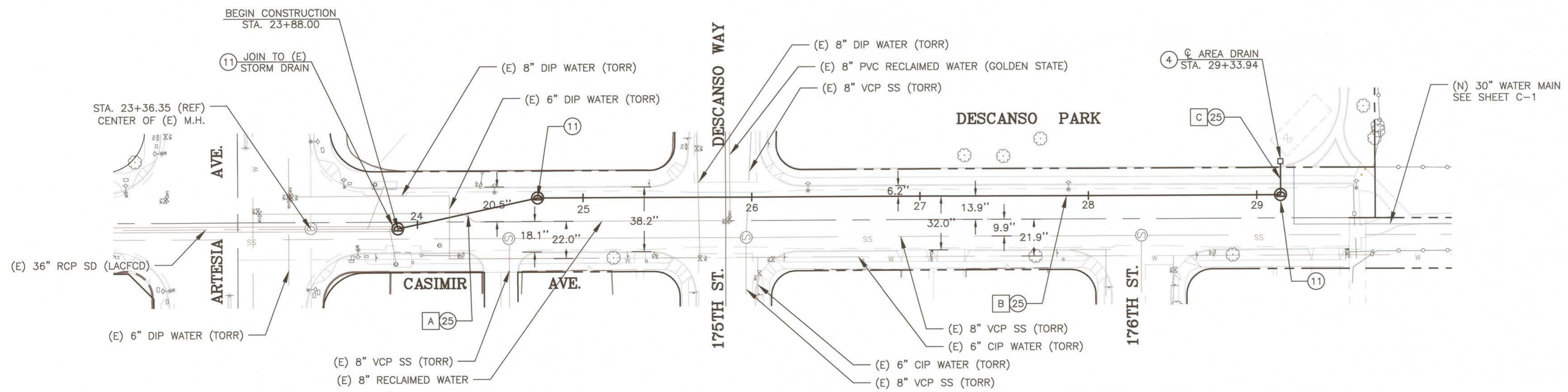


SCALE:
 1" = 40' (HOR.)
 1" = 4' (VER.)

PROFILE

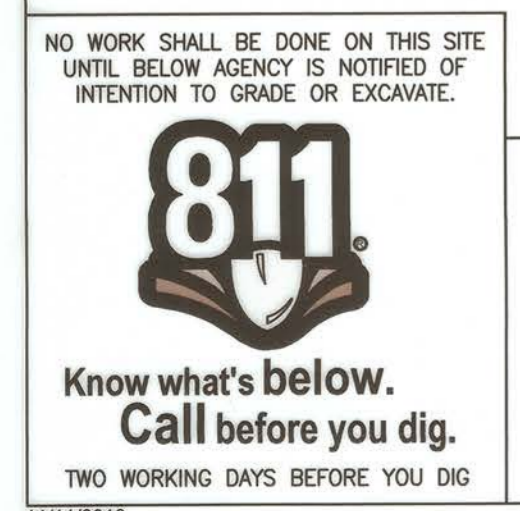
CONSTRUCTION NOTES:

- ④ INSTALL AREA DRAIN PER SPPWC STD. NO. 305-3 (W=3')
- ⑪ INSTALL 48" DIA MANHOLE PER SPPWC STD. NO. 321-2
- ⑲ INSTALL 18" HP SD PIPE PER CITY OF TORRANCE STD. NO. T116 & T701



LINE/CURVE DATA TABLE					
NO.	BEARING	LENGTH	BC STA.	EC STA.	RADIUS
A	S 12° 14' 54" E	85.00'	---	---	---
B	S 00° 00' 21" W	441.14'	---	---	---
C	E 00° 00' 00"	18.27'	---	---	---

- NOTES:**
1. DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 2. CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.



QUANTUM QUALITY CONSULTING, INC.
 2720 SEPULVEDA BLVD, SUITE 100
 TORRANCE, CA 90505
 PHONE: (310) 891 - 3994
 FAX: (310) 891 - 3995

PREPARED UNDER THE SUPERVISION OF:

REVISIONS			
DATE	BY	CHECKED	DESCRIPTION

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
 STA. 23+88.00 TO 29+32.44
 CASIMIR AVE. & DESCANSO PARK STORM DRAIN CONNECTION

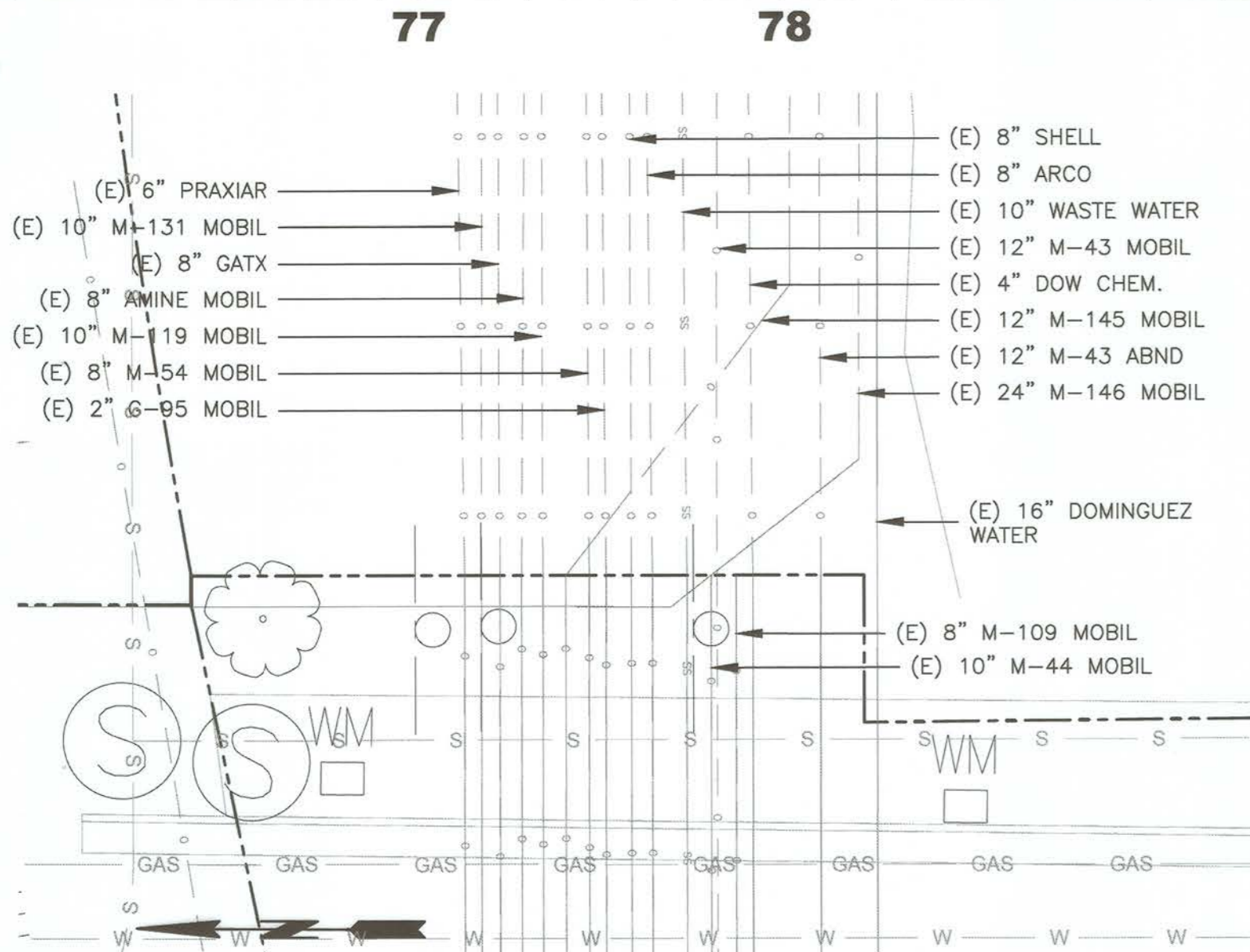
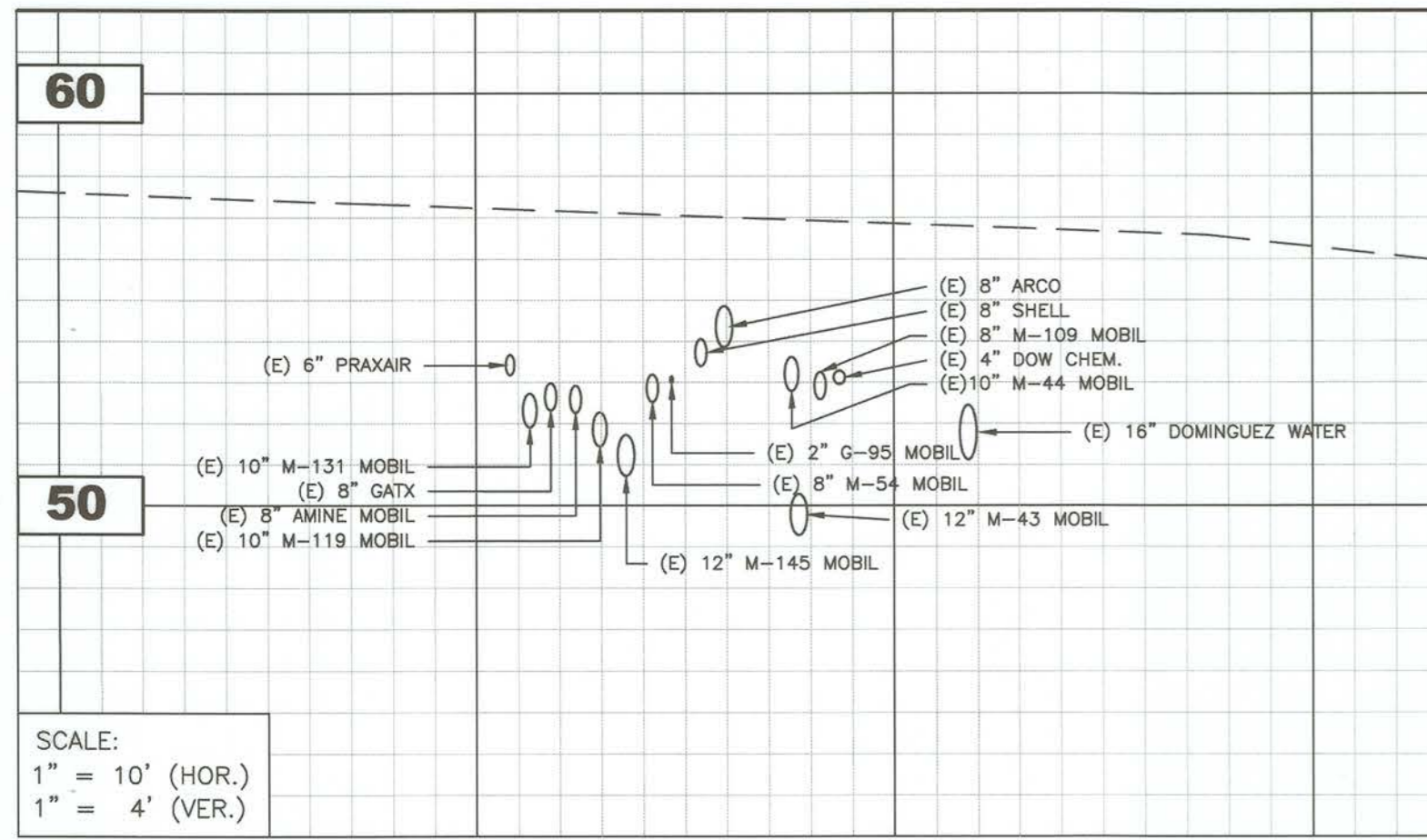
DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER: *[Signature]*
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

APPROVED BY: *[Signature]*
 CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339
 DATE: 5/12/21

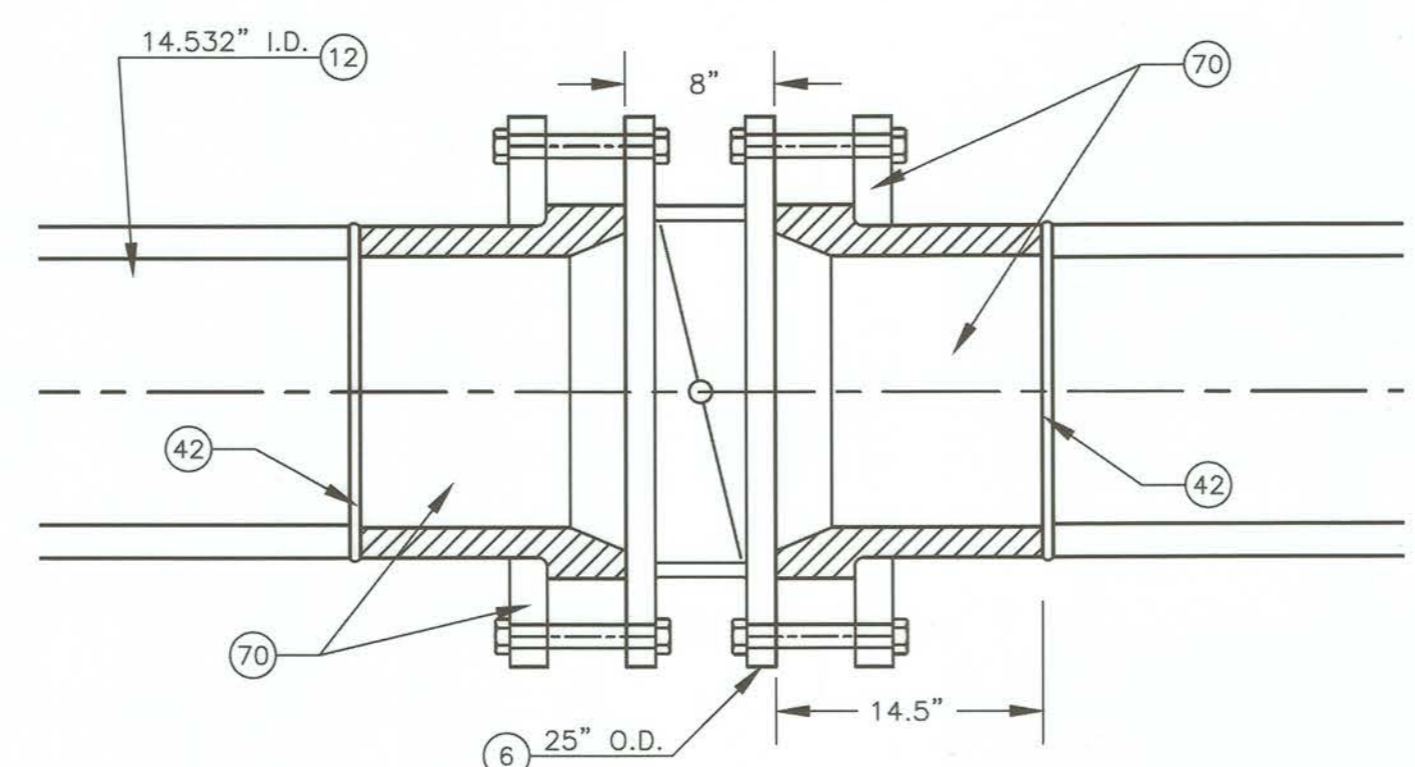
CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

SHEET **27** OF **65**

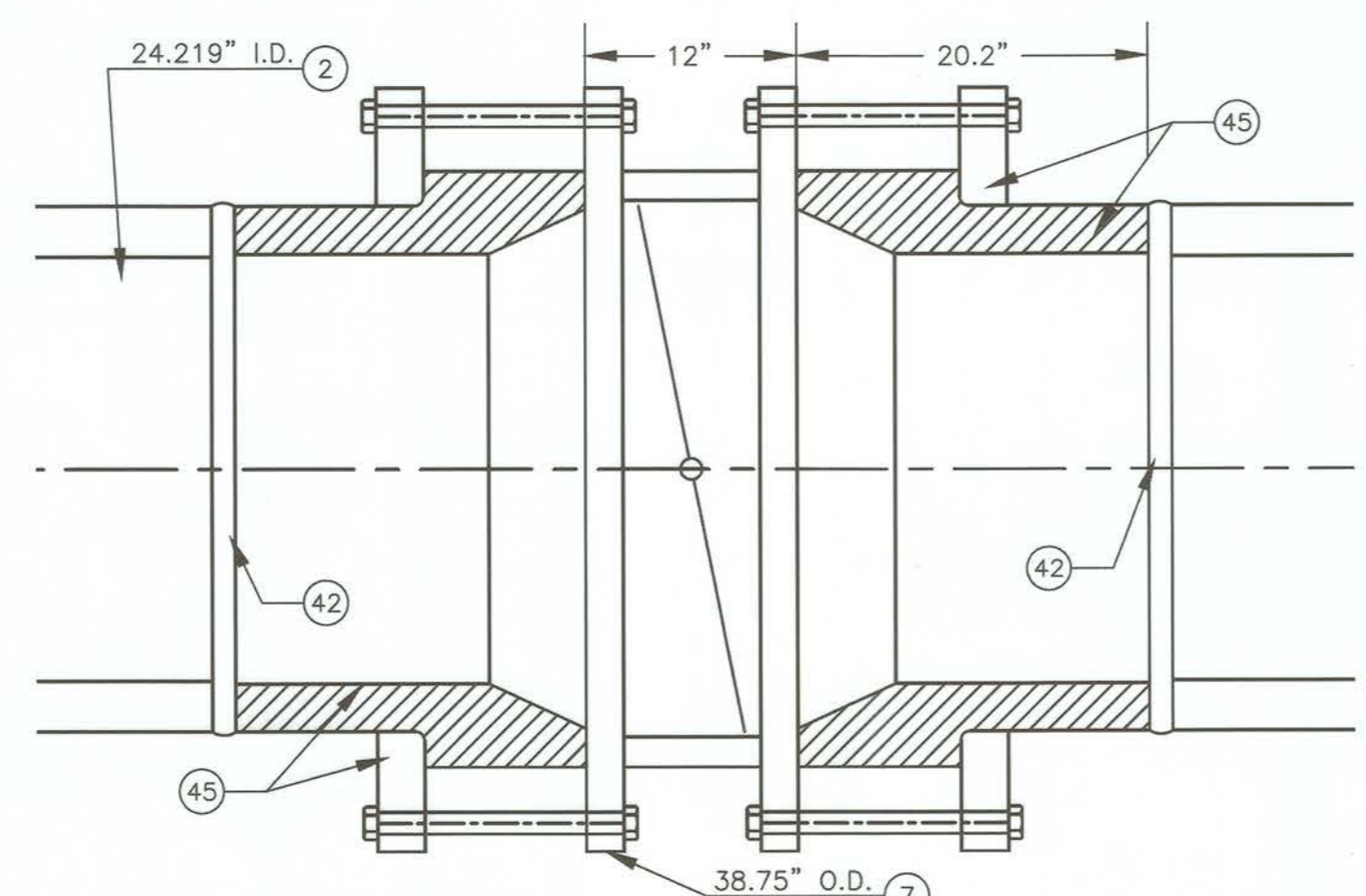
SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. SD-2
 DRAWING NO. **WP-307**



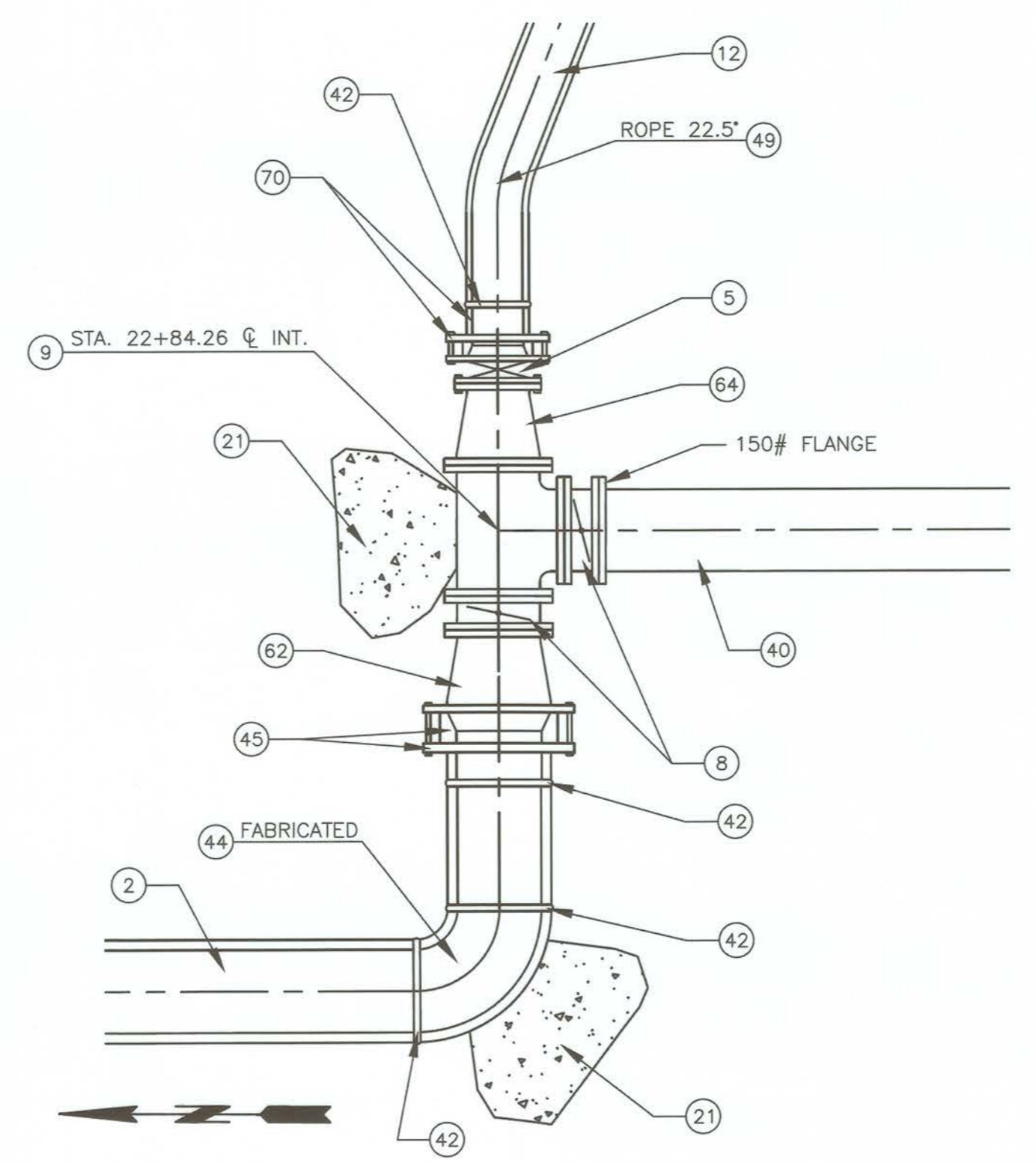
STA. 77+89 TO 78+18 UNDERGROUND UTILITIES
1"=10'-0" (1 D-1)



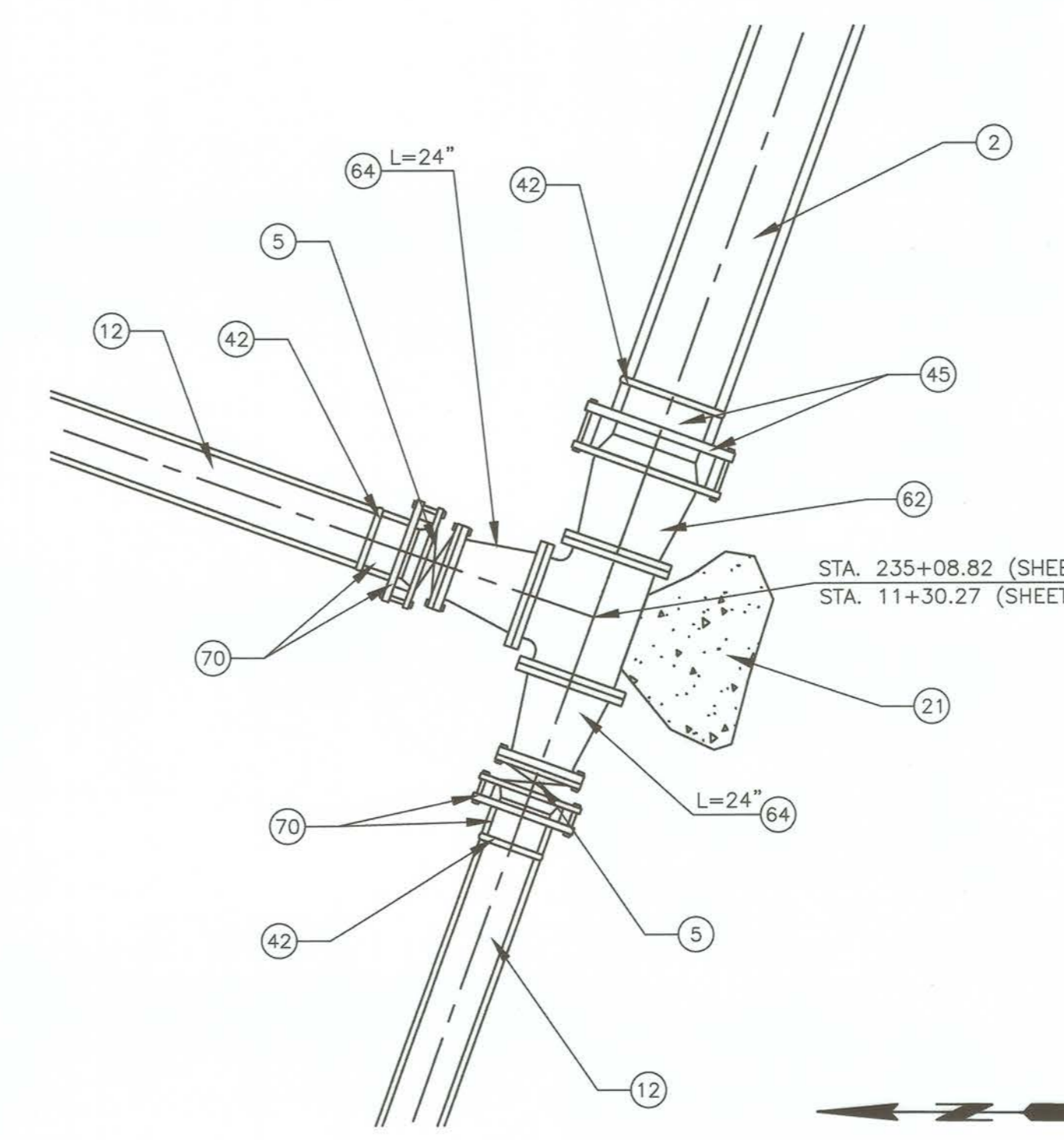
NOTE:
1. CONTRACTOR SHALL VERIFY THAT VALVE DISC CLEARS HDPE WHEN INSTALLED.
2. USE MANUFACTURER RECOMMENDED GASKET.
18" BFV IN LINE WITH 18" HDPE PIPE (2 D-1)
NOT TO SCALE



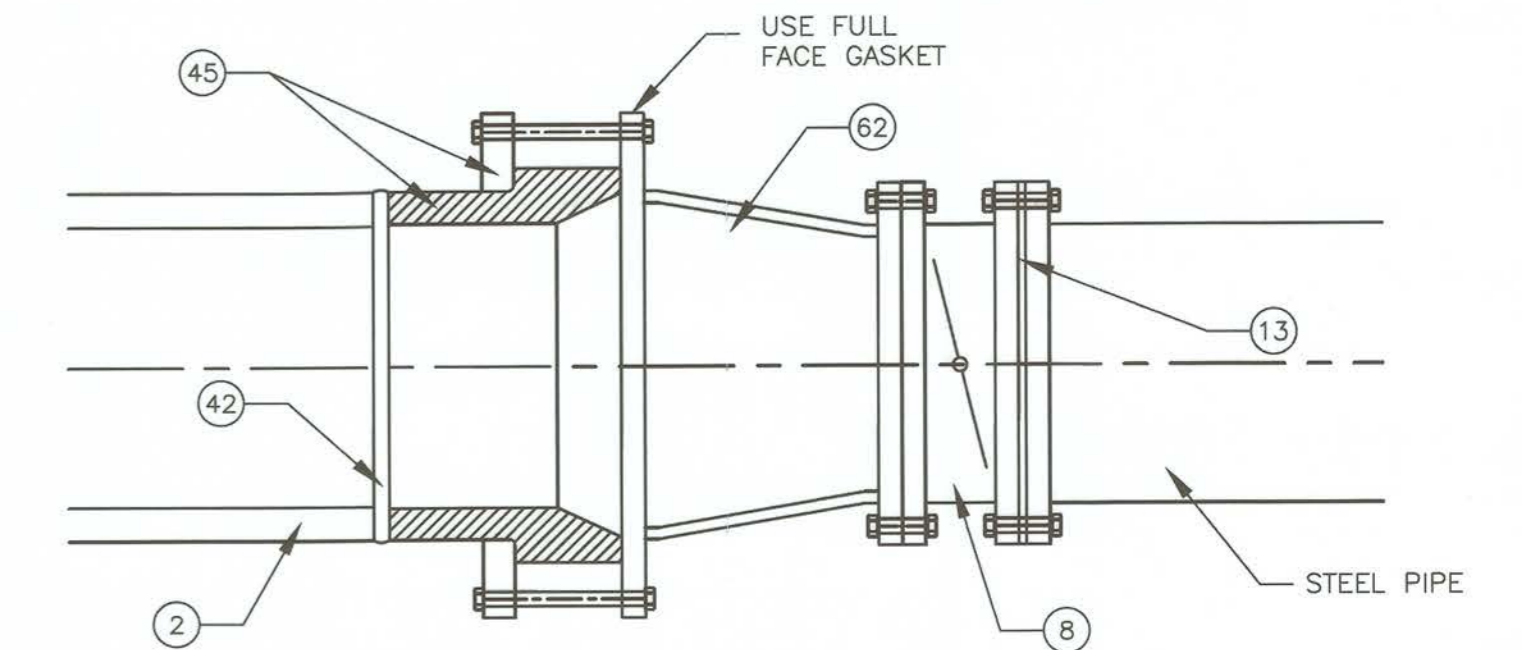
NOTE:
1. CONTRACTOR SHALL VERIFY THAT VALVE DISC CLEARS HDPE WHEN INSTALLED.
2. USE MANUFACTURER RECOMMENDED GASKET.
30" BFV IN LINE WITH 30" HDPE PIPE (4 D-1)
NOT TO SCALE



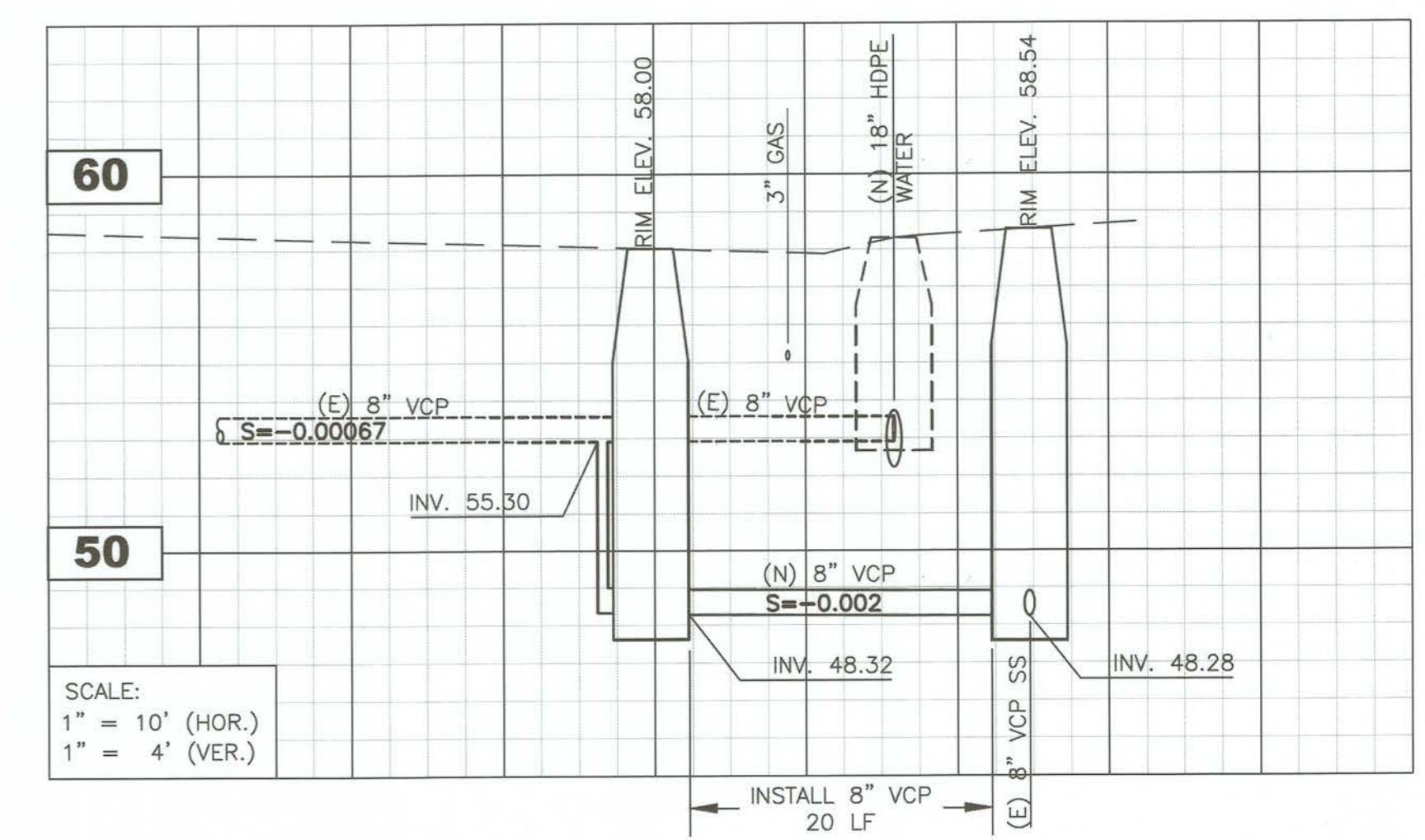
PIPE CONNECTION STA. 22+84.33 (3 D-1)
NOT TO SCALE
SEE SHEETS 8&9 OF 65



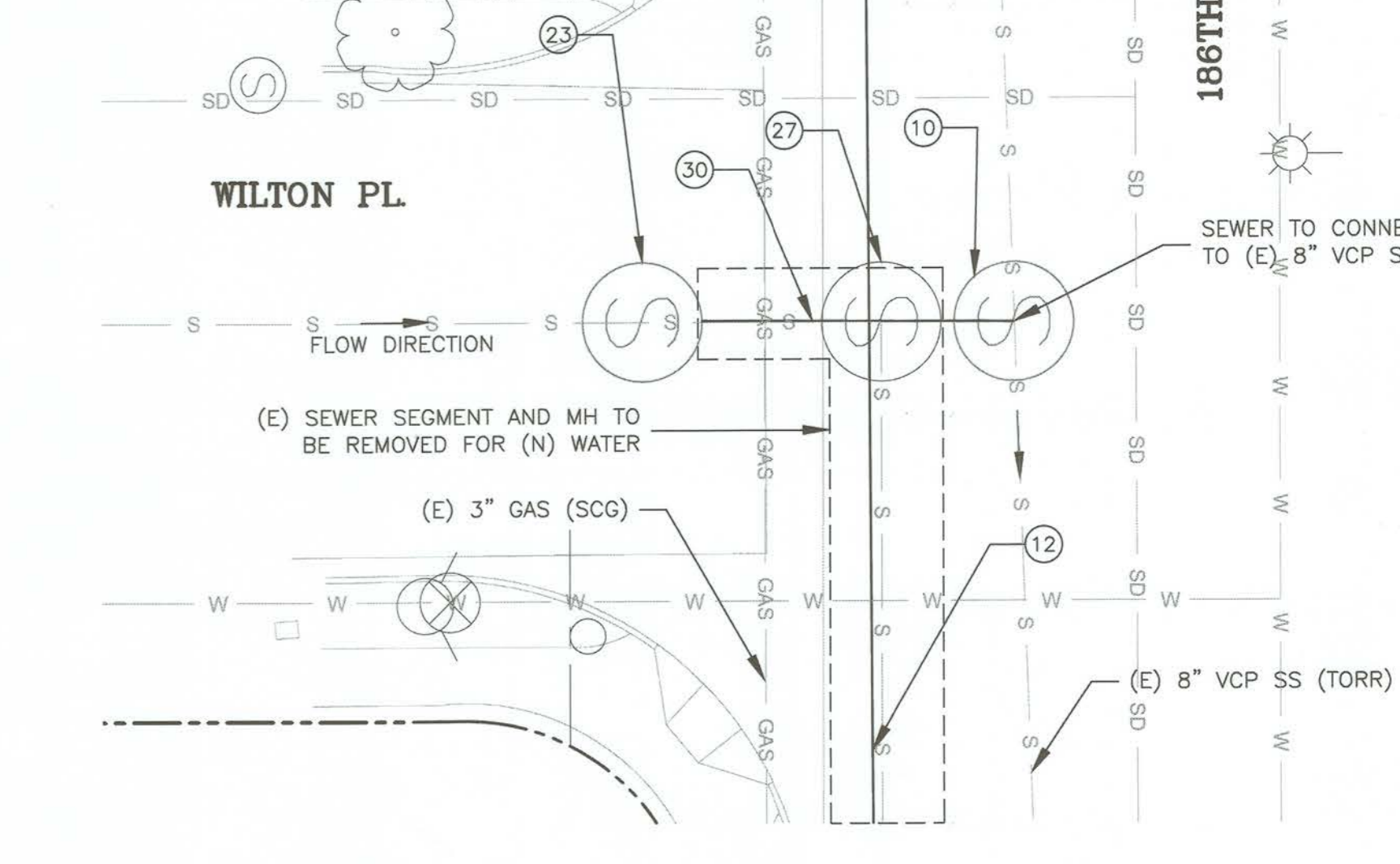
JUNCTION 185TH ST. AT PURCHE AVE. (8 D-1)
NOT TO SCALE
SEE SHEETS 6&7 OF 65



NOTE:
1. SOME LOCATIONS MAY NOT REQUIRE A BUTTERFLY VALVE.
JOIN 30" HDPE PIPE TO 24" STEEL PIPE (5 D-1)
NOT TO SCALE



SCALE:
1" = 10' (HOR.)
1" = 4' (VER.)
INSTALL 8" VCP 20 LF (E) 8" VCP SS

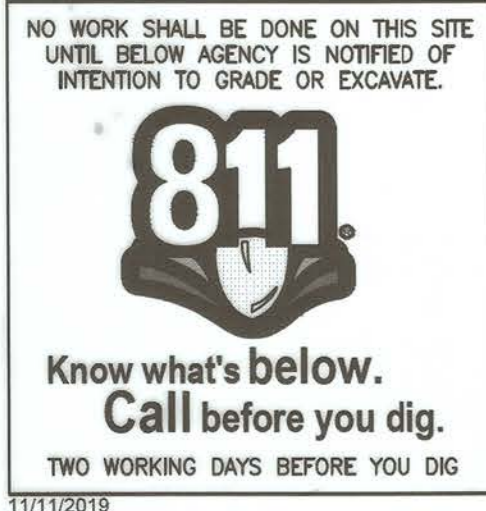


8" VCP SEWER ADJUSTMENT (7 D-1)
SCALE 1"=10'

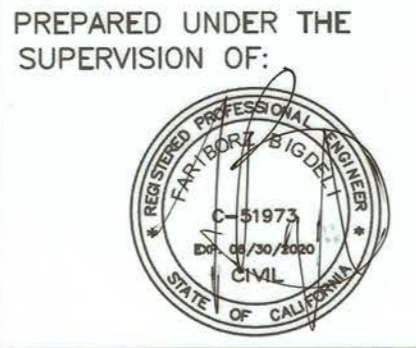
CONSTRUCTION NOTES:

- (2) INSTALL 30" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- (5) INSTALL 18" GATE VALVE 150# AWWA FLANGED PER CITY OF TORRANCE STD. NO. T712
- (6) INSTALL 18" BUTTERFLY VALVE 150# AWWA FLANGED W/SIDE OPERATOR PER CITY OF TORRANCE STD. NO. T712
- (7) INSTALL 30" BUTTERFLY VALVE 150# AWWA FLANGED W/SIDE OPERATOR PER CITY OF TORRANCE STD. NO. T712
- (8) INSTALL 24" BUTTERFLY VALVE 150# AWWA FLANGED W/SIDE OPERATOR PER CITY OF TORRANCE STD. NO. T712
- (9) INSTALL 24" DI FLANGED TEE
- (10) INSTALL MANHOLE PER SPPWC STD. NO. 200-3
- (12) INSTALL 18" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- (13) INSTALL TYPE E ISOLATION GASKET CONNECTION
- (20) INSTALL AIR AND VACUUM RELEASE VALVE PER CITY OF TORRANCE STD. NO. T708
- (21) INSTALL CONCRETE THRUST BLOCK PER CITY OF TORRANCE STD. NO. T713
- (23) INSTALL DROP MH PER SPPWC STD. NO. 202-2
- (27) REMOVE (E) MANHOLE
- (30) INSTALL 8" VCP SEWER PER CITY OF TORRANCE STD. NO. T116-2, T204, T206
- (40) INSTALL 24" DIA 0.375" WALL CML&C STD STEEL PIPE
- (42) FUSED CONNECTION
- (44) INSTALL 30"-90" FUSED DR11 HDPE BEND

- (45) INSTALL 30" IPS DR11 HDPE BEVELED FLANGE ADAPTER W/30" IPS SST BACK-UP RING
- (49) ROPE PIPE ALIGNMENT PER BEARINGS
- (62) INSTALL 30"x24" CONCENTRIC FLGXFLG DI REDUCER CL 125
- (64) INSTALL 24"x18" CONCENTRIC FLGXFLG DI REDUCER CL 125
- (70) INSTALL 18" IPS DR11 HDPE BEVELED FLANGE ADAPTER W/18" IPS SST BACK-UP RING



QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD. SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891-3994
FAX: (310) 891-3995



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

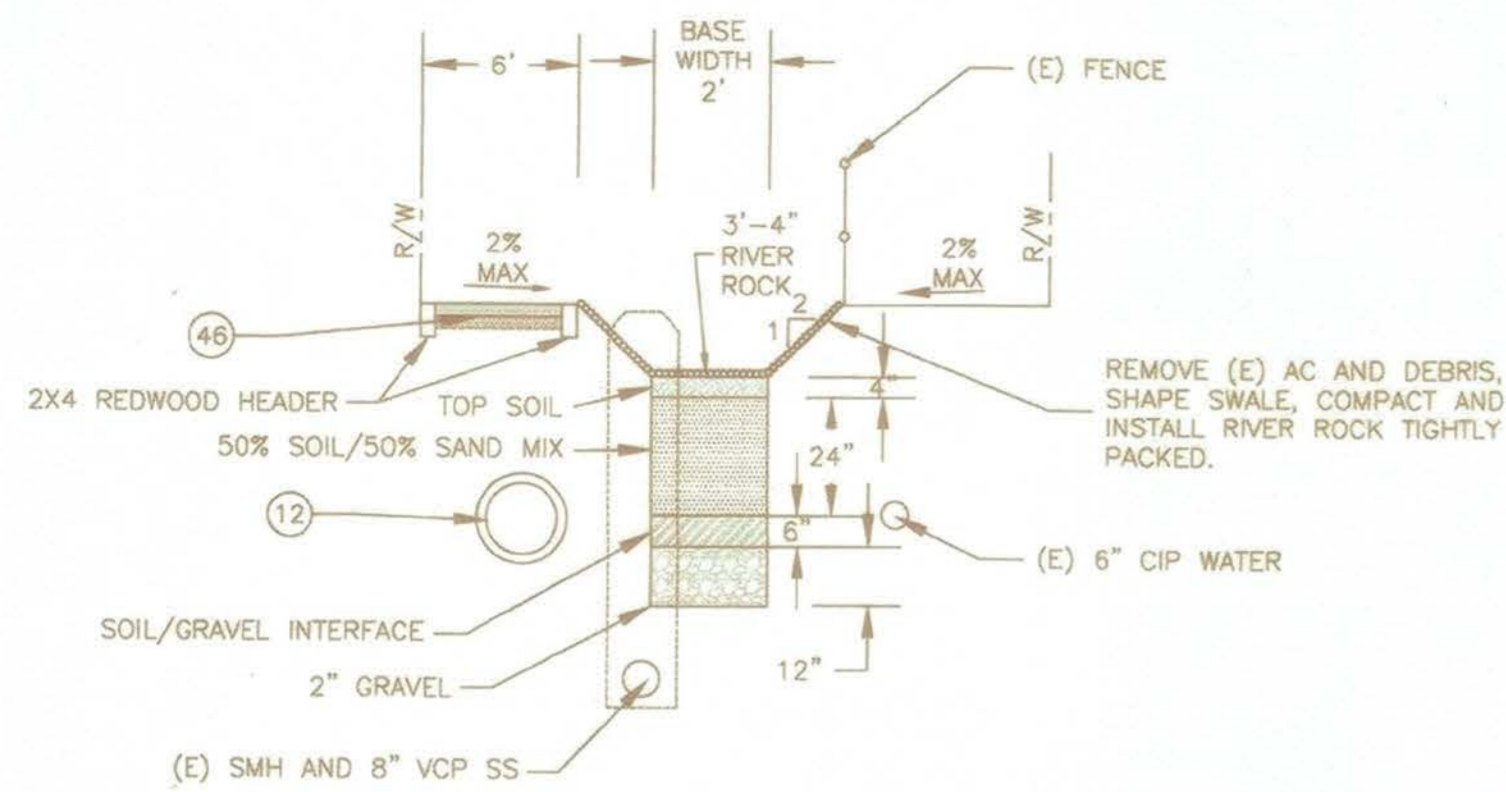
VAN NESS WATER WELLS
TRANSMISSION MAIN, I-145
DETAIL SHEET

DESIGNED BY:
D. PREBLE
DRAWN BY:
L. CANTARERO
PROJECT ENGINEER:
[Signature]
ENGINEERING MANAGER:
JOHN C. DETTLE, P.E. *[Signature]*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY:
[Signature] 5/12/21
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

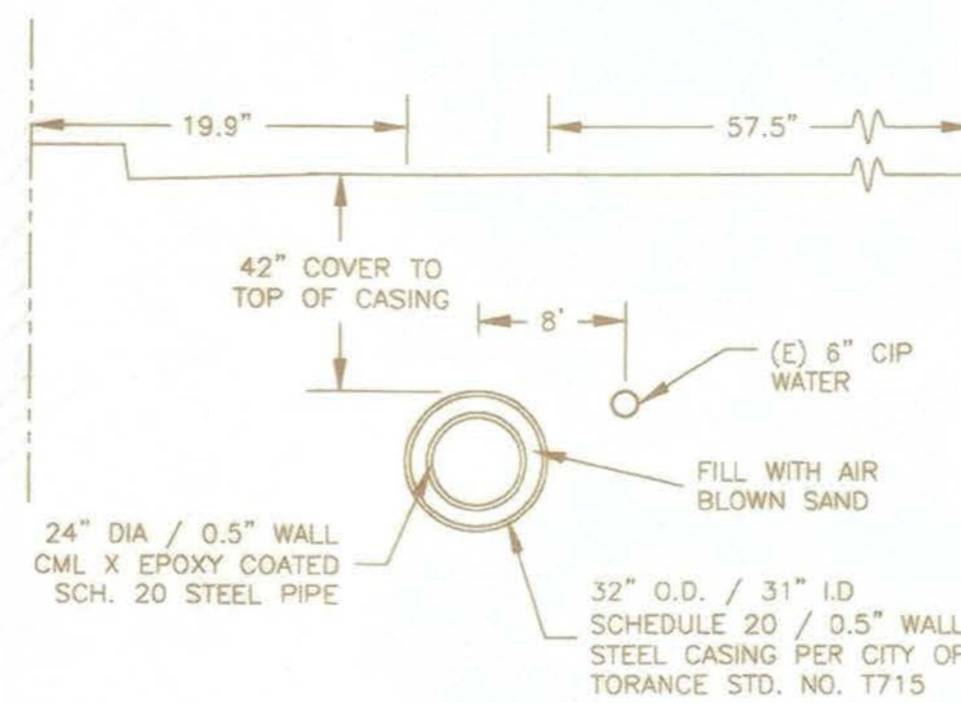
SHEET 28 OF 65
SCALE: VARIES
SPECIFICATION NO.
SUPPLEMENTAL PLAN NO. D-1
DRAWING NO. **WP-307**



BIO-SWALE AT SCE EASEMENT
NOT TO SCALE

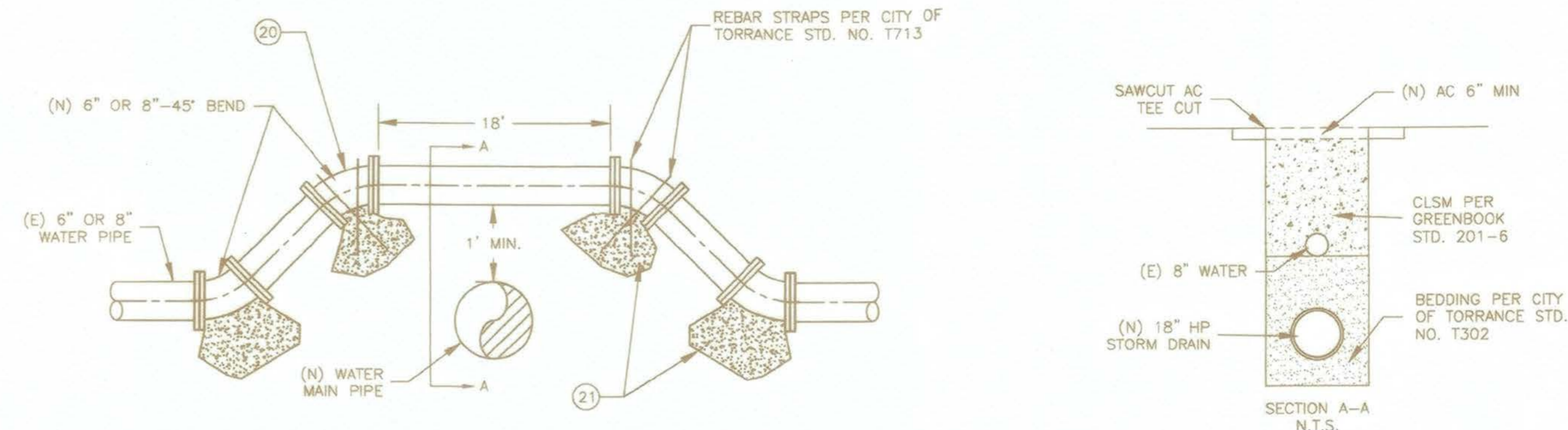
9
D-2

NOTE:
I405 FREEWAY UNDERCROSSING SHALL BE IN CONFORMANCE WITH CALTRANS ENCROACHMENT PERMITS MANUAL SEC 623



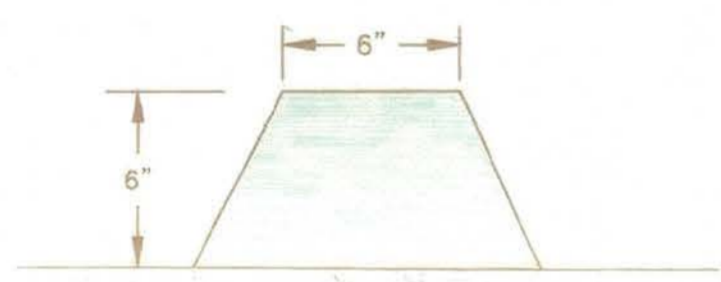
CROSS SECTION AT INTERSTATE 405
NOT TO SCALE

10
D-2



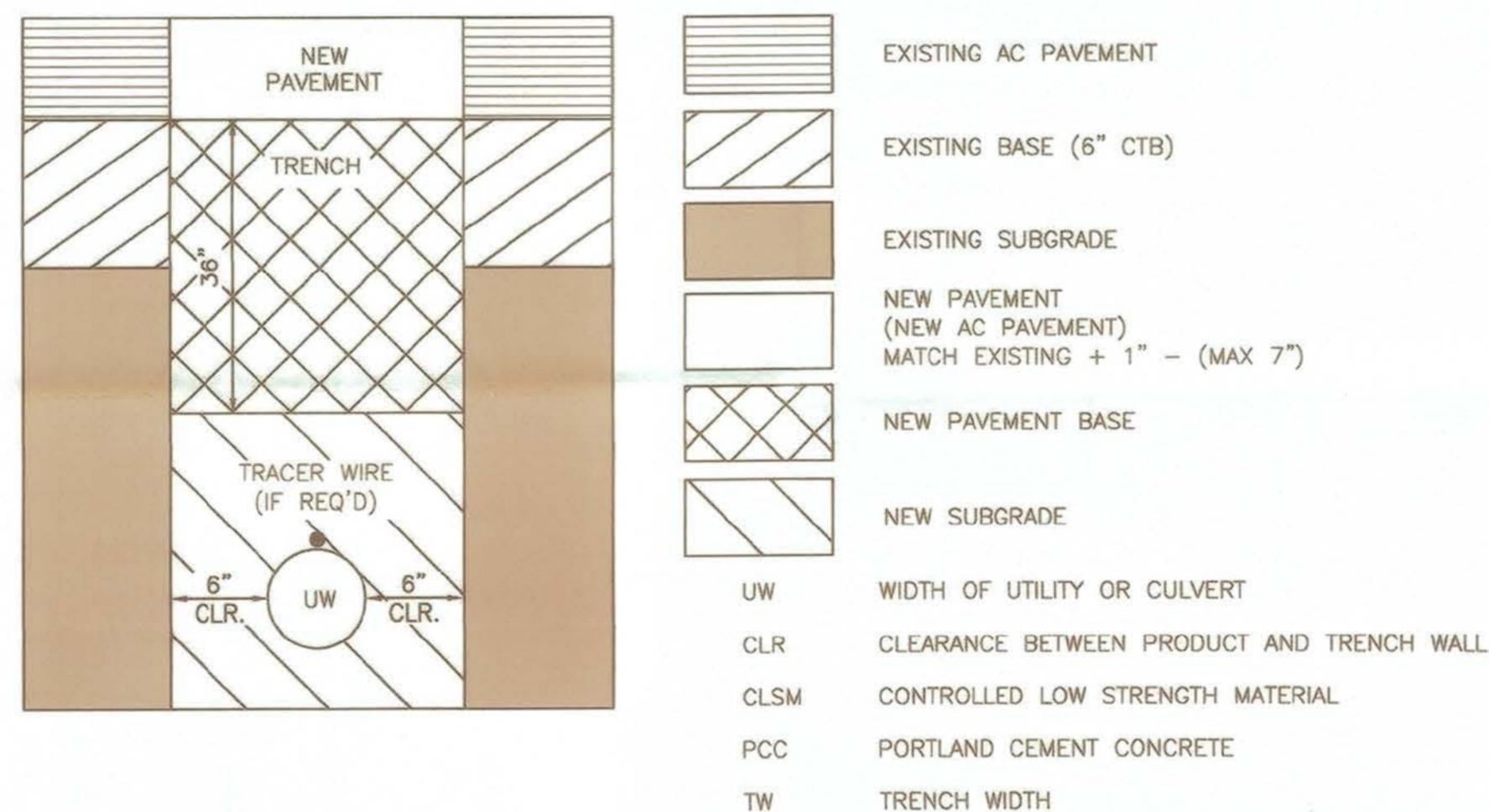
REMOVE AND RESTORE (E) WATER LINES
NOT TO SCALE
SEE SHEETS 9&27 OF 61

11
D-2



AC BERM DETAIL
NOT TO SCALE

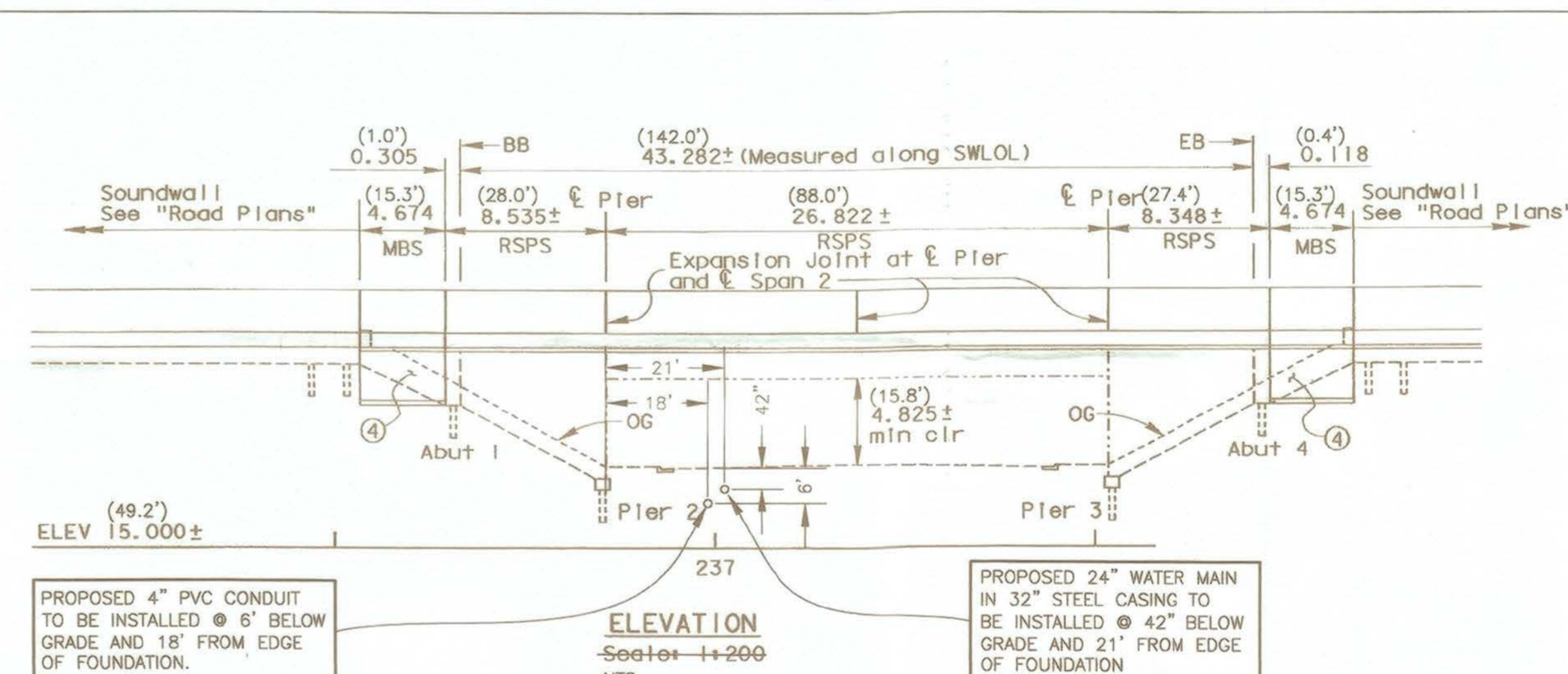
12
D-2



- STRUCTURE BACKFILL SHALL CONFORM TO SECTION 19 - 3.06 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
- SLURRY CEMENT BACKFILL SHALL CONFORM TO SECTION 19 - 3.062 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS.
- 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.
- WHEN CLSM IS UTILIZED THE MIX DESIGN AND TEST RESULTS SHALL BE SUBMITTED TO THE STATE'S REPRESENTATIVE.
- ALL WORK SHALL BE AS AUTHORIZED BY THE APPROVED ENCROACHMENT PERMIT PLANS, AND/OR AS DIRECTED BY THE STATE'S REPRESENTATIVE.
- WHEN THE UW IS > 6" THEN THE MINIMUM CLR SHALL BE 6"
- A TRACER WIRE SHALL BE PLACED ON TOP OF THE FACILITY, WHEN REQUIRED BY THE STATE'S REPRESENTATIVE.
- OTHER TRENCH RELATED DETAILS ARE SHOWN IN FIGURE 6.1, CHAPTER 6 OF THE ENCROACHMENT PERMITS MANUAL.
- 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.
- 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.

CONSTRUCTION NOTES:

- INSTALL 18" OD DR11 HDPE PIPE PER CITY OF TORRANCE STD. NO. T116 & T701
- INSTALL AIR AND VACUUM RELEASE VALVE PER CITY OF TORRANCE STD. NO. T708
- INSTALL CONCRETE THRUST BLOCK PER CITY OF TORRANCE STD. NO. T713
- INSTALL 32" OD 0.5" WALL STEEL CASING PER CITY OF TORRANCE STD. NO. T715
- INSTALL 18" HP SD PIPE PER CITY OF TORRANCE STD. NO. T7116 & T701
- INSTALL 24" DIA 0.5" WALL CML X EPOXY COATED XHY STEEL PIPE
- REMOVE ALL (E) AC & RECONSTRUCT 6' WIDE AC PATHWAY 4" AC OVER 4" CMB ON 90% COMPACTED SUBGRADE WITHIN SCE R/W INCLUDING 2"x4" STAKED REDWOOD HEADERS
- REMOVE (E) AC & DEBRIS AND CONSTRUCT BIO-SWALE W/RIVERROCK
- CONSTRUCT 6" AC BEAM AT BIO-SWALE OUTSIDE OF SCE R/W
- RAISE MH FRAME & COVER TO MATCH LOWER EDGE OF WALK



CROSS SECTION AT INTERSTATE 405
NOT TO SCALE

10
D-2

CALTRANS ENCROACHMENT PERMIT TRENCH DETAIL (TR-0153)

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



Know what's below.
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TWO WORKING DAYS BEFORE YOU DIG

QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD. SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891 - 3994
FAX: (310) 891 - 3995

PREPARED UNDER THE SUPERVISION OF:



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145

DETAIL SHEET

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: [Signature]
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. [Signature]

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] 5/25/21
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339
SHEET 29 OF 65
SCALE: VARIES
SPECIFICATION NO.
SUPPLEMENTAL PLAN NO. D-2
DRAWING NO. WP-307

TRAFFIC CONTROL GENERAL NOTES:

- ALL TRAFFIC CONTROL, SIGNING, AND STRIPING WORK FOR CONSTRUCTION SHALL CONFORM TO 2010 CALTRANS STANDARD PLANS AND SPECIFICATIONS, AND 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 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 TIME WORK SHALL BE APPROVED IN ADVANCE BY THE ENGINEER.
- STREET CLOSURES SHALL BE APPROVED BY THE ENGINEER AND CALTRANS WHENEVER APPLICABLE. DETOUR PLANS SHALL BE SUBMITTED AND APPROVED BY THE CITY AND CALTRANS WHENEVER APPLICABLE. RESIDENTS /BUSINESSES SHALL BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
- PRESSURE SENSITIVE DETOUR GRADE TRAFFIC MARKING TABLE 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, 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.
- ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME WORKING HOURS AND WITH WARNING LIGHTS AT NIGHT.
- ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE, UNLESS NOTED OTHERWISE.
- DELINEATORS (MINIMUM 36" HEIGHT) AND CONES (28" HEIGHT) SHALL BE PORTABLE, RETRO-REFLECTORIZED WITH WHITE SLEEVES, WITH WEIGHTED BASES OR BALLAST RINGS. DELINEATORS AND CONES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
- TYPE II BARRICADES MAY BE USED IN ADDITION TO THE PORTABLE DELINEATORS AND TRAFFIC CONES, AT THE DISCRETION OF THE CONTRACTOR, WHEN THEY ARE INTENDED TO PROVIDE ADDITIONAL EMPHASIS IN AREAS WHERE WORKERS ARE PRESENT.
- USE AND PLACEMENT OF FLASHING ARROW BOARD(S) AND CHANGEABLE MESSAGE SIGN(S) SHALL BE AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN, ON A 24-HOUR BASIS, ALL SIGNS, DELINEATORS, CONES, BARRICADES, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC.
- THE CONTRACTOR SHALL UTILIZE FLAGGERS DURING WORK HOURS AS DEEMED NECESSARY BY THE ENGINEER.
- THE CONTRACTOR SHALL HAVE ALL SIGNS, DELINEATORS, CONES, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION AND BEFORE ATTEMPTING TO SWITCH TO A SUBSEQUENT PHASE DURING WORK HOURS.
- CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ADJUTING BUSINESSES AND PROPERTY OWNERS.
- CONSTRUCTION TRUCK TRAFFIC MERGING INTO TRAFFIC LANES SHALL BE DONE BY USE OF FLAGGER AND APPROPRIATE SIGNAGE AS DIRECTED BY THE 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 REFLECTORIZED PER CALTRANS SPECIFICATIONS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL BE REQUIRED TO REPLACE STRIPPING AND MARKINGS IN KIND AFTER THE COMPLETION OF EACH PHASE OF THE CONSTRUCTION.
- ALL TRENCH EXCAVATION WITHIN THIS AREA SHALL BE COVERED WITH STEEL PLATES DURING NON-WORKING HOURS.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 4:1 SLOPE AT THE EDGE OF EXCAVATIONS NEAR TRAFFIC DURING NON-CONSTRUCTION HOURS UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL INSTALL W8-24 ("STEEL PLATE AHEAD") SIGNS AFTER HOURS AND IN ADVANCE OF STEEL PLATE BRIDGING.
- UNEVEN PAVEMENT SIGN(S) SHALL BE PLACED WHERE UNEVENNESS IN PAVEMENT DUE TO CONSTRUCTION OPERATIONS OCCUR.
- NO THREE CONSECUTIVE CROSS STREETS SHALL BE CLOSED FOR CONSTRUCTION SIMULTANEOUSLY.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF EIGHT PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) TO BE IN USE FOR THE DURATION OF WATER MAIN REPLACEMENT WORK. USE PLACEMENT AND FLASHING MESSAGE TEXT SHALL BE AS DIRECTED BY THE ENGINEER. PAYMENT IS INCLUDED IN THE UNIT PRICE FOR PCMS.
- SINGLE LANE CLOSURE SHALL CONFORM TO CITY OF TORRANCE STANDARD PLANS.
- TRAFFIC SIGNALS (EXISTING, NEW OR TEMPORARY) SHALL BE IN OPERATION AT ALL TIMES AT SIGNALIZED INTERSECTIONS.
- TEMPORARY "NO PARKING --- TOW AWAY" SIGNS SHALL BE POSTED WITHIN AFFECTED CONSTRUCTION AREAS A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
- THE CONTRACTOR SHALL PROVIDE FOR 24 HOURS ACCESS TO ALL ADJACENT PROPERTIES. THIS SHALL INCLUDE BUT NOT LIMITED TO DRIVEWAYS, EXCEPT AS INDICATED 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 ADJUTING PROPERTY OWNERS/OPERATORS.
- 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.

- ALL PRIVATE DRIVEWAYS AND SIDE STREETS SHALL BE KEPT OPEN AT ALL TIMES EXCEPT WHEN CONSTRUCTION TAKES PLACE DIRECTLY IN FRONT OF DRIVEWAY/ SIDE STREETS. ALL OPEN EXCAVATIONS ON PUBLIC STREETS SHALL BE BACK-FILLED OR STEEL-PLATED (ANTI-SKID PLATES) FOR TRAFFIC TO THE SATISFACTION OF CITY ENGINEER. TRAFFIC AND ROADWAYS SHALL BE RESTORED TO NORMAL CONDITIONS DURING NON-WORKING HOURS.
- THE FOLLOWING AGENCIES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY DETOUR AND/OR CONSTRUCTION ACTIVITIES.
 CITY OF TORRANCE (310)781-6900
 POLICE DEPARTMENT (GIVE LOCATION AND DURATION) (310)618-5557
 FIRE DEPARTMENT (310)781-7042

34. ALL TRAFFIC CONTROL DEVICES SHALL BE RETROREFLECTORIZED. WORKERS SHALL WEAR ANSI APPROVED RETROREFLECTIVE APPAREL. CONES AND BARRELS SHALL BE EQUIPPED WITH A REFLECTIVE COLLAR. WHEN BARRICADES ARE USED, USE FLASHING LIGHTS.

LEGEND:

- TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- TEMPORARY SIGN (AS NOTED ON PLAN)
- EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- DIRECTION OF TRAVEL
- FLASHING ARROW BOARD SIGN (FAS)
- FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

WATER MAIN CONSTRUCTION WORK AREA

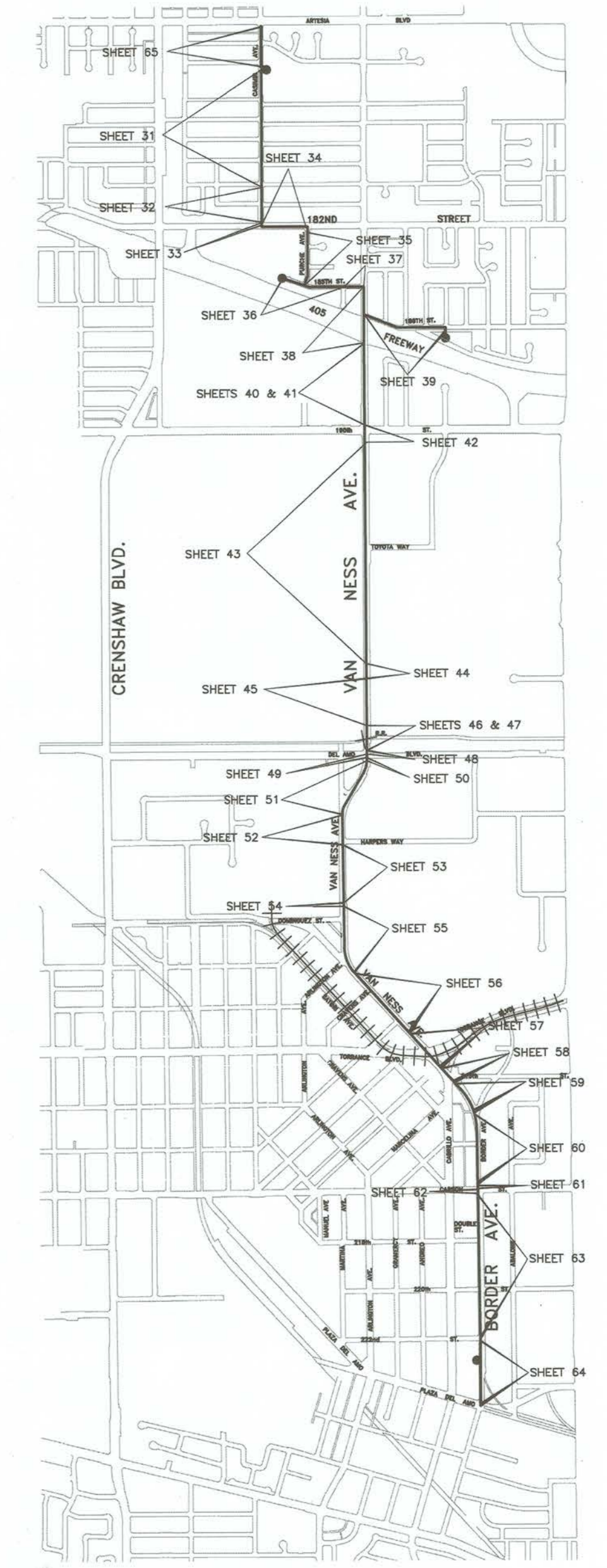
EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY

CONSTRUCTION SIGN LEGEND:

SHEET INDEX (TRAFFIC CONTROL)

SHEET NO.	DESCRIPTION
30	T-1 TITLE SHEET, GENERAL NOTES, VICINITY MAP, SHEET INDEX
31	T-2 WATER MAIN CASIMIR AVE. FROM STA. 201+00 TO STA. 215+84
32	T-3 WATER MAIN CASIMIR AVE. FROM STA. 215+84 TO STA. 221+00
33	T-4 WATER MAIN CASIMIR AVE. FROM STA. 221+00 TO STA. 221+51.80
34	T-5 WATER MAIN 182ND ST. FROM STA. 221+51.80 TO STA. 227+80
35	T-6 WATER MAIN PURCHE AVE. FROM STA. 227+80 TO STA. 234+94
36	T-7 WATER MAIN 185TH ST.
37	T-8 WATER MAIN 185TH ST. AND VAN NESS AVE.
38	T-9 WATER MAIN VAN NESS AVE. FROM STA. 18+79 TO STA. 25+92
39	T-10 WATER MAIN 186TH ST.
40	T-11 WATER MAIN VAN NESS AVE. AND 190TH ST. FROM STA. 25+92 TO STA. 36+81.7
41	T-12 WATER MAIN VAN NESS AVE. AND 190TH ST. FROM STA. 25+92 TO STA. 36+81.7 DETOUR PLAN
42	T-13 WATER MAIN VAN NESS AVE. AND 190TH ST. FROM STA. 36+81.7 TO STA. 38+45.5
43	T-14 WATER MAIN VAN NESS AVE. FROM STA. 38+45.5 TO STA. 67+42
44	T-15 WATER MAIN VAN NESS AVE. FROM STA. 67+42 TO STA. 69+67.8
45	T-16 WATER MAIN VAN NESS AVE. FROM STA. 69+67.8 TO STA. 75+57.7
46	T-17 WATER MAIN VAN NESS AVE. FROM STA. 75+57.7 TO STA. 78+50
47	T-18 WATER MAIN VAN NESS AVE. FROM STA. 75+57.7 TO STA. 78+50 DETOUR PLAN
48	T-19 WATER MAIN VAN NESS AVE. FROM STA. 78+50 TO STA. 79+42
49	T-20 WATER MAIN VAN NESS AVE. FROM STA. 79+42 TO STA. 79+86
50	T-21 WATER MAIN VAN NESS AVE. FROM STA. 79+86 TO STA. 80+39
51	T-22 WATER MAIN VAN NESS AVE. FROM STA. 80+39 TO STA. 87+30
52	T-23 WATER MAIN VAN NESS AVE. FROM STA. 87+30 TO STA. 92+05
53	T-24 WATER MAIN VAN NESS AVE. FROM STA. 92+05 TO STA. 99+92
54	T-25 WATER MAIN VAN NESS AVE. FROM STA. 99+92 TO STA. 100+32
55	T-26 WATER MAIN VAN NESS AVE. FROM STA. 100+32 TO STA. 109+50
56	T-27 WATER MAIN VAN NESS AVE. FROM STA. 109+50 TO STA. 119+10
57	T-28 WATER MAIN VAN NESS AVE. FROM STA. 119+10 TO STA. 125+21
58	T-29 WATER MAIN 213TH ST. AND BORDER AVE. FROM STA. 125+21 TO STA. 127+82
59	T-30 WATER MAIN BORDER AVE. FROM STA. 127+82 TO STA. 132+73
60	T-31 WATER MAIN BORDER AVE. AND CARSON ST. FROM STA. 132+73 TO STA. 142+67
61	T-32 WATER MAIN BORDER AVE. AND CARSON ST. FROM STA. 142+67 TO STA. 143+12
62	T-33 WATER MAIN BORDER AVE. FROM STA. 143+12 TO STA. 143+84
63	T-34 WATER MAIN BORDER AVE. FROM STA. 143+84 TO STA. 162+60
64	T-35 WATER MAIN BORDER AVE. FROM STA. 162+60 TO END STORM DRAIN BORDER AVE. FROM STA. 10+00 TO END
65	T-36 STORM DRAIN CASIMIR AVE. FROM STA. 23+88 TO 29+32.44

TRAFFIC CONTROL LOCATION: SCALE 1" = 1500'



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

811
Know what's below.
Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD. SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891-3994
FAX: (310) 891-3995

PREPARED UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
09/09/2021	VP	JD	ADDED NOTE	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145 TRAFFIC CONTROL PLAN

DESIGNED BY: D. PREBLE, P.E.
DRAWN BY: L. CANTARERO
PROJECT ENGINEER:
ENGINEERING MANAGER:

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

SHEET 30 OF 65
SCALE: T-1
SUPPLEMENTAL PLAN NO. T-1
DRAWING NO. **WP-307**

TRAFFIC CONTROL LEGEND

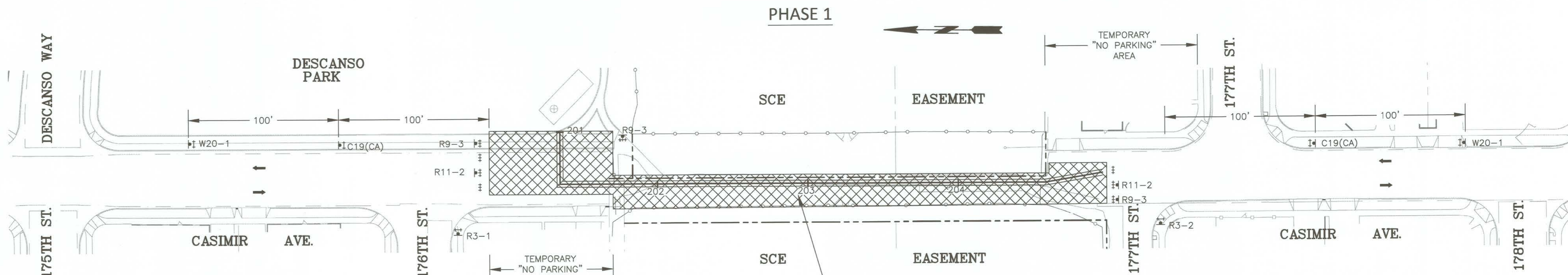
- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
- ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- 🚧 FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

- WATER MAIN CONSTRUCTION WORK AREA
- EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY

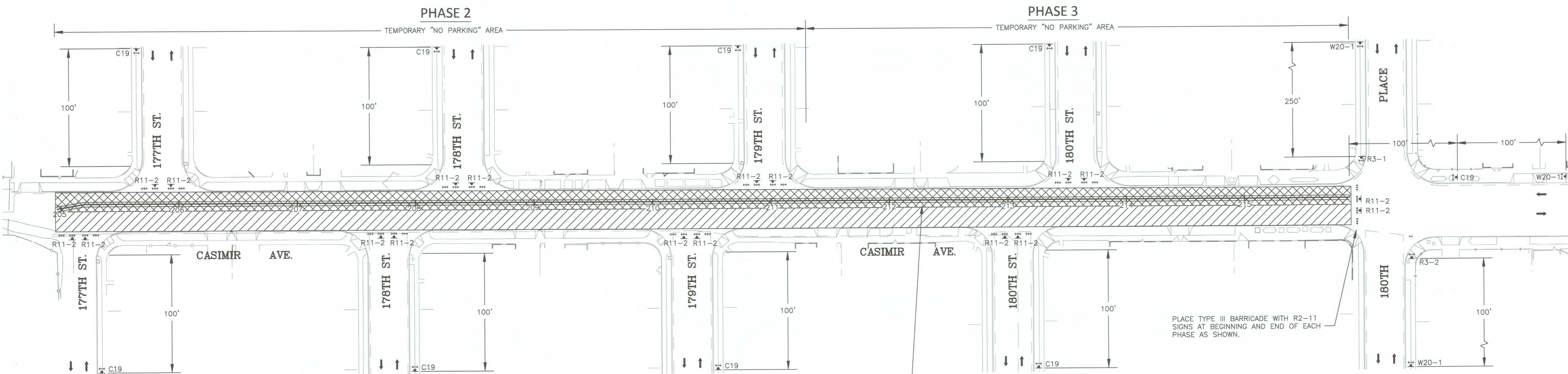
TRAFFIC CONTROL SIGNS



- NOTES**
1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
 2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
 3. COVER EXISTING SIGNS DURING CONSTRUCTION.
 4. PROVIDE ACCESS TO LOCAL TRAFFIC.
 5. WORK HOURS 8:30AM TO 4:30PM, MONDAY-FRIDAY

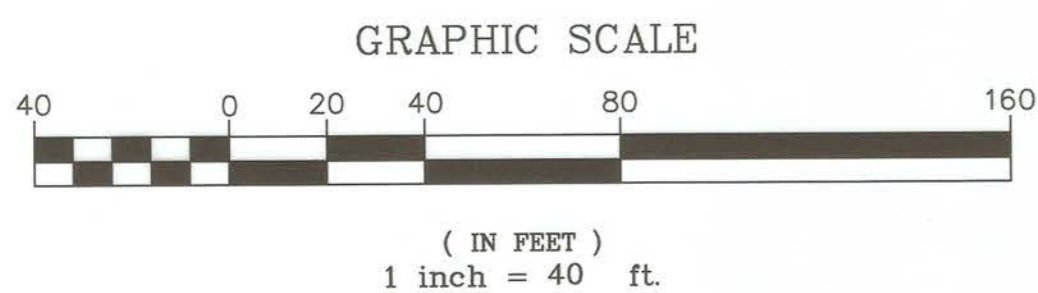


NO PUBLIC ACCESS 8:30AM-4:30PM.
TRENCH TO BE PLATED BETWEEN THE HOURS OF 4:30PM AND 8:30AM.



PLACE TYPE III BARRICADE WITH R2-11 SIGNS AT BEGINNING AND END OF EACH PHASE AS SHOWN.

NO PUBLIC ACCESS 8:30AM-4:30PM.
TRENCH TO BE PLATED BETWEEN THE HOURS OF 4:30PM AND 8:30AM.



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

811
Know what's below.
Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

QC QUANTUM QUALITY CONSULTING, INC.
2720 SEPULVEDA BLVD. SUITE 100
TORRANCE, CA 90505
PHONE: (310) 891 - 3994
FAX: (310) 891 - 3995



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
TRAFFIC CONTROL PLAN
WATER MAIN-CASIMIR AVE.
FROM STA. 201+00 TO STA. 215+84
PHASES 1, 2 AND 3

DESIGNED BY: D. PREBLE, P.E.
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: *[Signature]*
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*


APPROVED BY: *[Signature]* 5/12/21
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

SHEET 31 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. T-2
DRAWING NO. **WP-307**

TRAFFIC CONTROL LEGEND

- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- △ TEMPORARY SIGN (AS NOTED ON PLAN)
- △ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- ← DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- ⚡ FLAGGER
- ▬ PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

 WATER MAIN CONSTRUCTION WORK AREA

 EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY

PORTABLE CHANGEABLE MESSAGE SIGN

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

(A) 182ND ST. EASTBOUND & WESTBOUND

SCREEN 1				SCREEN 2			
C	A	S	I	U	S	E	
A	V	E	N	A	L	T.	
C	L	O	S	R	O	U	T
E				E			

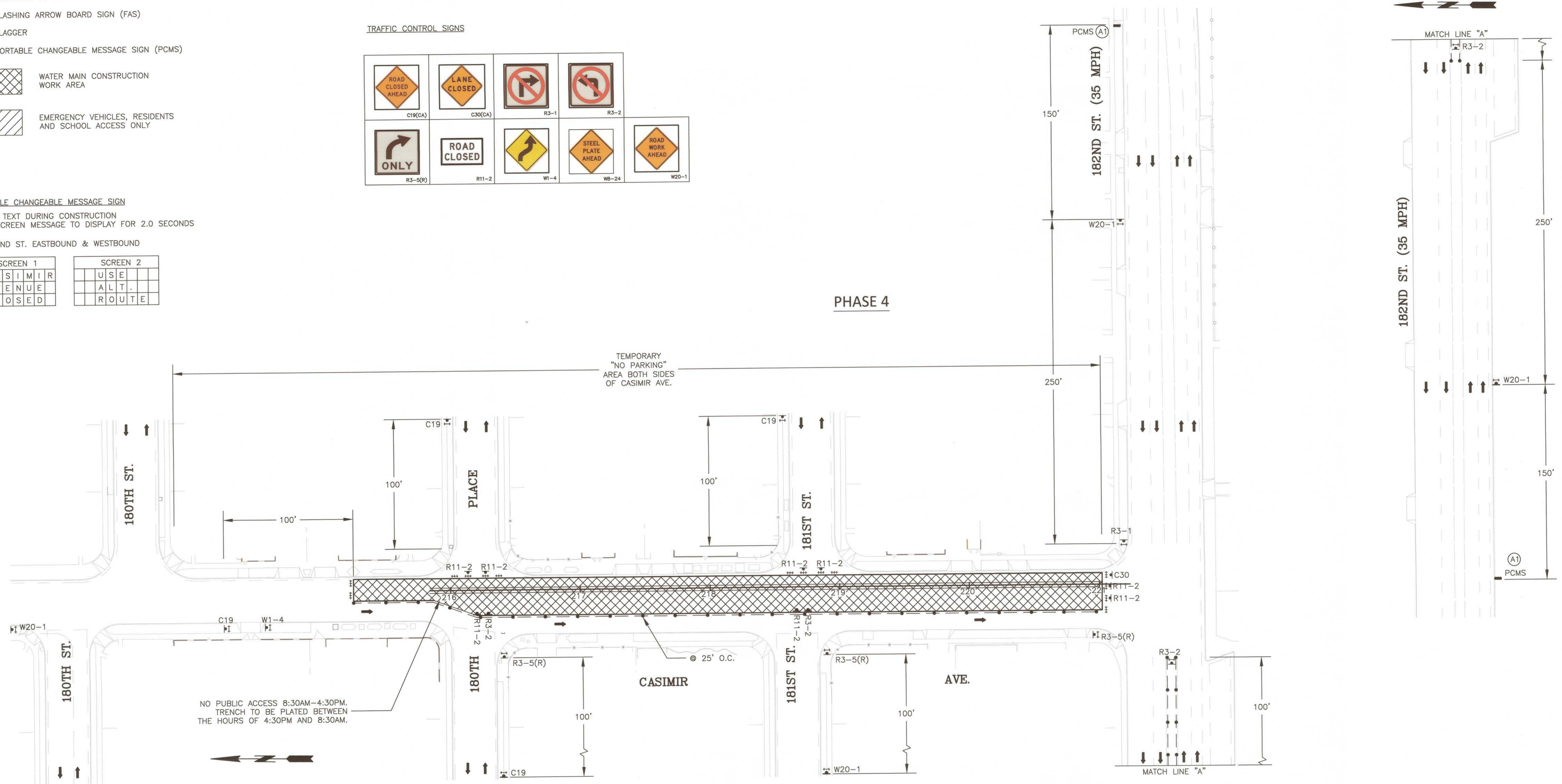
NOTES

1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
3. COVER EXISTING SIGNS DURING CONSTRUCTION.
4. PROVIDE ACCESS TO LOCAL TRAFFIC
5. WORK HOURS 8:30AM TO 4:30PM, MONDAY-FRIDAY

TRAFFIC CONTROL SIGNS



PHASE 4



GRAPHIC SCALE



(IN FEET)
1 inch = 40 ft.

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



Know what's below.
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TWO WORKING DAYS BEFORE YOU DIG

PREPARED UNDER THE SUPERVISION OF:



REVISIONS

DATE	BY	CHECKED	DESCRIPTION

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
WATER MAIN-CASIMIR AVE.
FROM STA. 215+84 TO STA. 221+00.00
PHASE 4

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: *[Signature]*
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* 5/12/21
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

SHEET 32 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. T-3
DRAWING NO. **WP-307**

TRAFFIC CONTROL LEGEND

- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
- ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- ← DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- 🚧 FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

WATER MAIN CONSTRUCTION WORK AREA

EMERGENCY VEHICLES, RESIDENTS AND SCHOOL ACCESS ONLY

PORTABLE CHANGEABLE MESSAGE SIGN

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

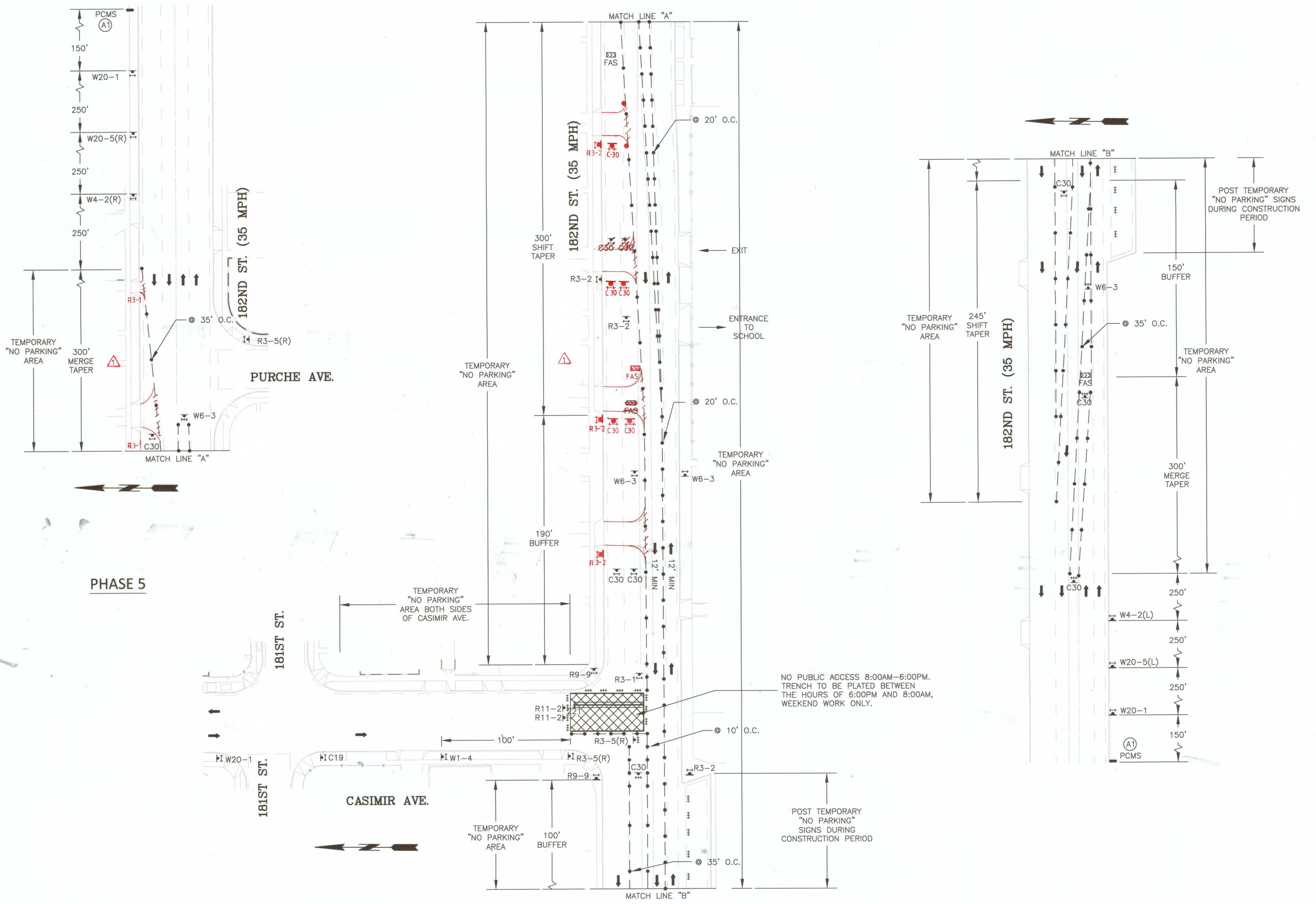
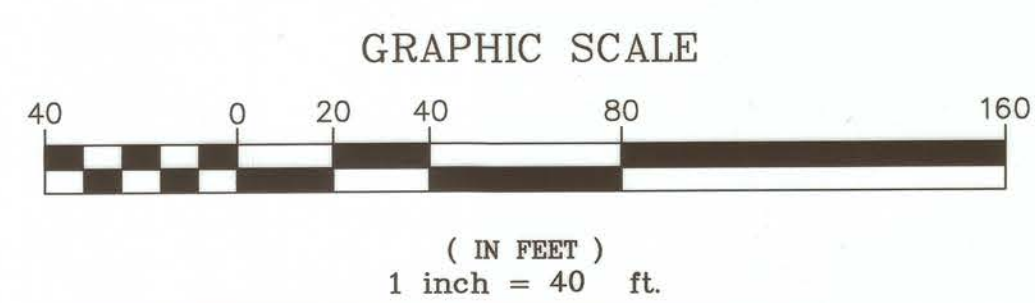
(A1) 182ND ST. EASTBOUND & WESTBOUND

SCREEN 1	SCREEN 2
CASIMIR	USE
AVENUE	ALT.
CLOSED	ROUTE

- NOTES**
1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
 2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
 3. COVER EXISTING SIGNS DURING CONSTRUCTION.
 4. PROVIDE ACCESS TO LOCAL TRAFFIC
 5. PHASE 5 WORK HOURS 8:00AM TO 6:00PM, WEEKEND ONLY

TRAFFIC CONTROL SIGNS

C19(CA)	C30(CA)	R3-1	R3-2	R3-5(R)
R9-9	R11-2	W1-4	W4-2(L)	W4-2(R)
W6-3	W8-24	W20-1	W20-5(L)	W20-5(R)



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

811

Know what's below.
Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

PREPARED UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
09/09/2021	VP	JD	ADDED TRAFFIC SIGNS	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145

WATER MAIN—CASIMIR AVE.
FROM STA. 221+00.00 TO STA. 221+51.80

PHASE 5

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO

PROJECT ENGINEER:

ENGINEERING MANAGER: JOHN C. DETTLE, P.E.

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: 5/12/21

CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

SHEET 33 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. T-4
DRAWING NO. **WP-307**

TRAFFIC CONTROL LEGEND

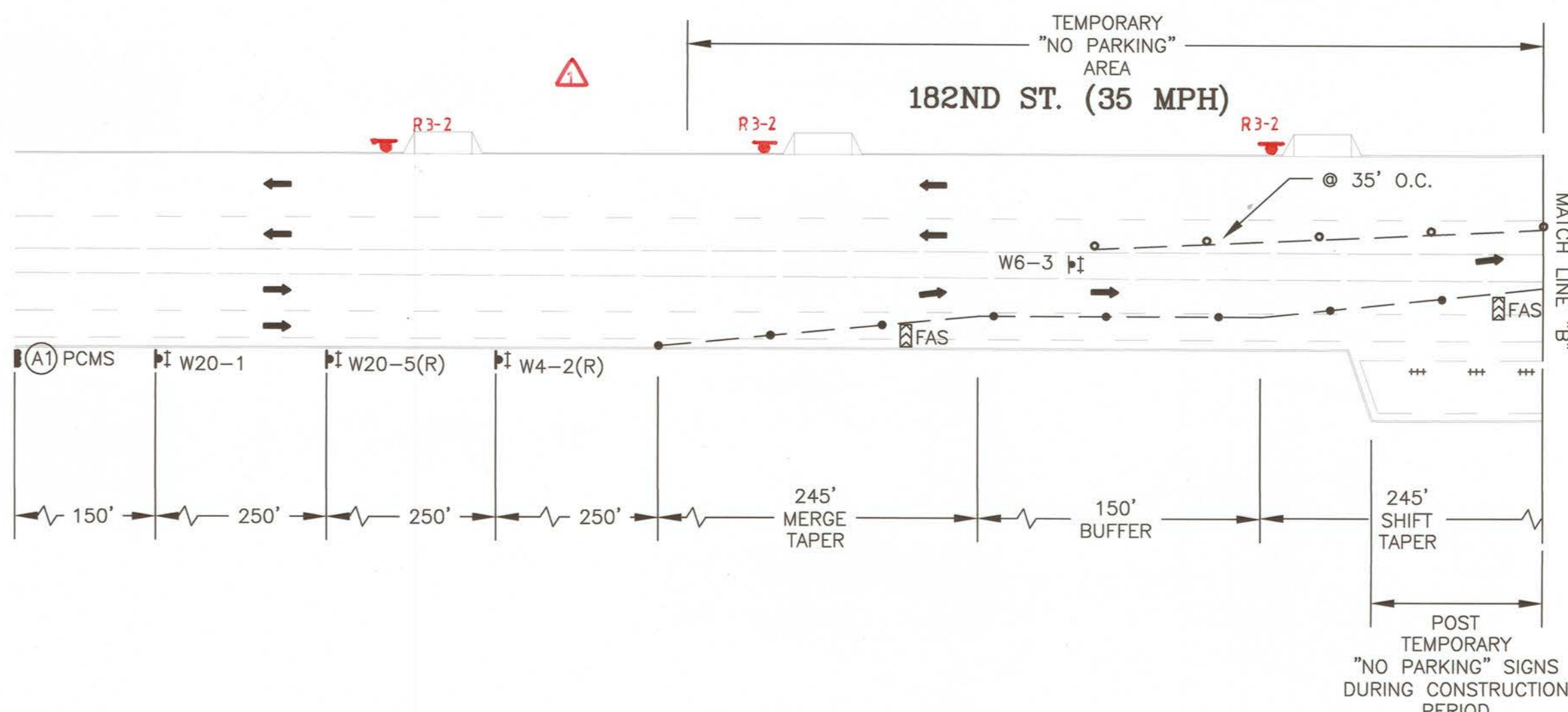
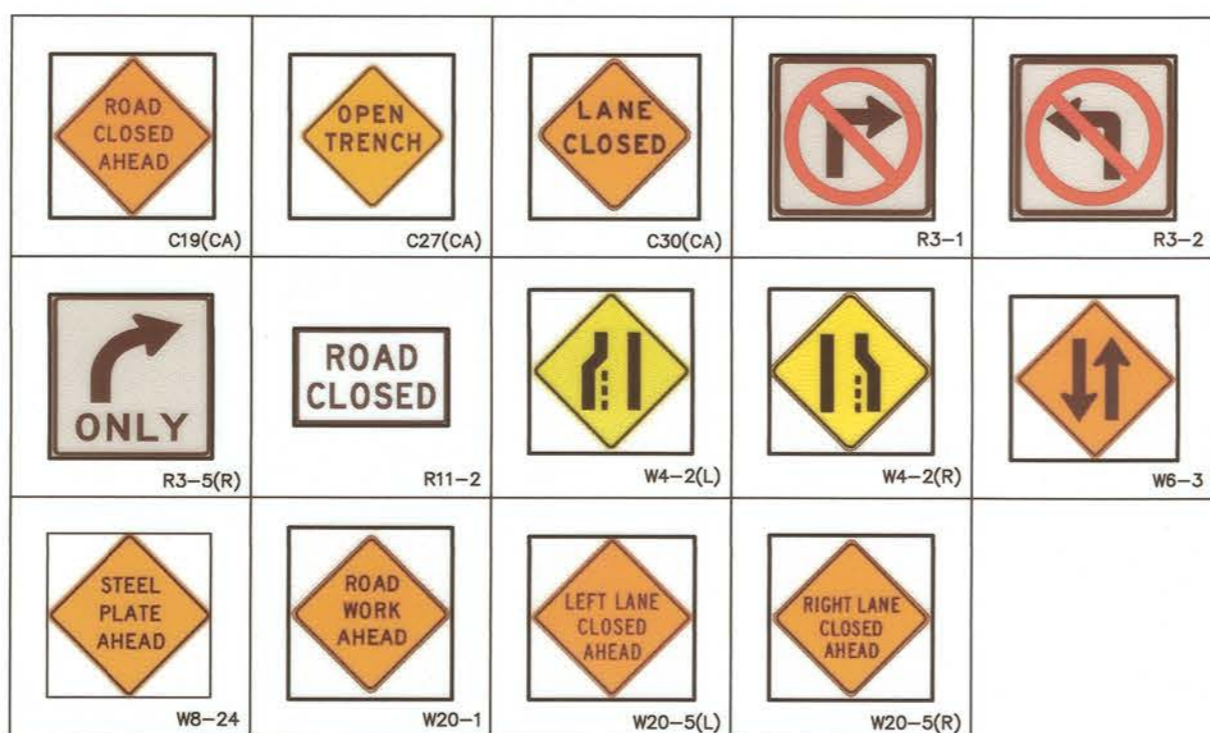
- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
- ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- 40" TRAFFIC BARRELS
- ← DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- 👤 FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

WATER MAIN CONSTRUCTION WORK AREA

NOTES

1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
3. COVER EXISTING SIGNS DURING CONSTRUCTION.
4. PROVIDE ACCESS TO LOCAL TRAFFIC
5. PHASE 6 WORK HOURS 8:00AM TO 6:00PM, WEEKEND ONLY
6. TORRANCE ADULT SCHOOL HOURS 8:00AM TO 9:00PM, MONDAY-THURSDAY 8:00AM TO 4:30PM, FRIDAY SUMMER HOURS 8:00AM-4:30PM, MONDAY-FRIDAY
7. PRO BARBER COLLEGE HOURS 9:00AM TO 7:00PM, MONDAY-FRIDAY
8. NORTH TORRANCE LITTLE LEAGUE GAMES ARE ON WEEKENDS. CONTACT PHONE NUMBER (310) 329-9126 FOR INFORMATION.
9. TRAFFIC CONTROL MAY REMAIN IN PLACE 8:00AM SATURDAY TO 6:00PM SUNDAY

TRAFFIC CONTROL SIGNS:

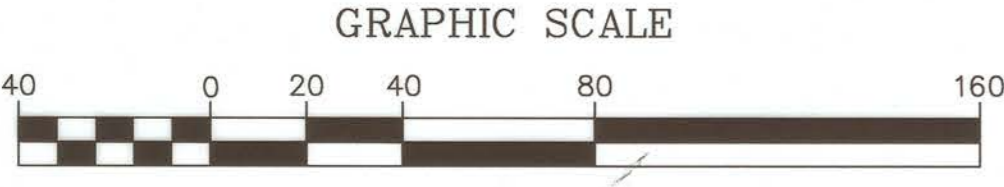
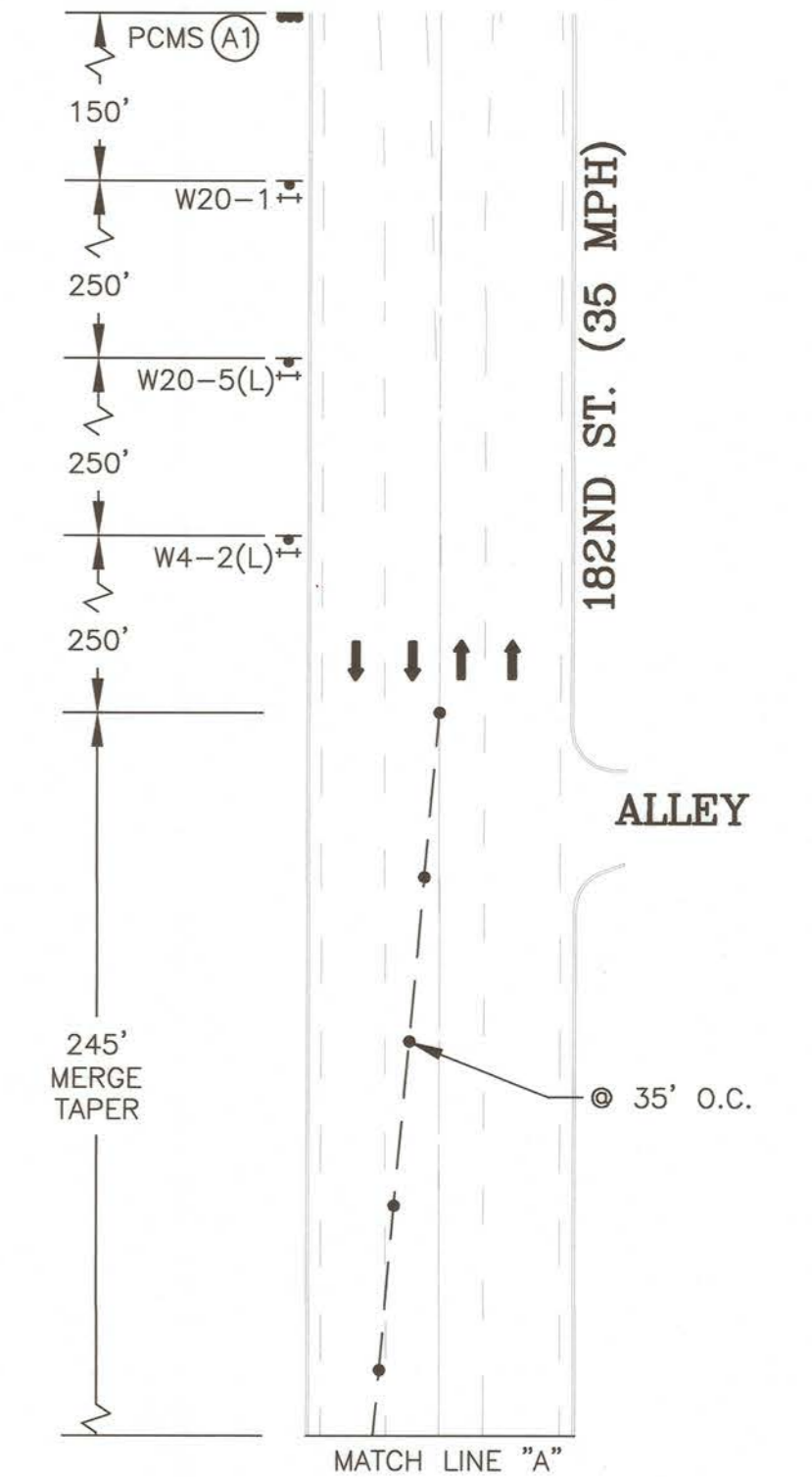
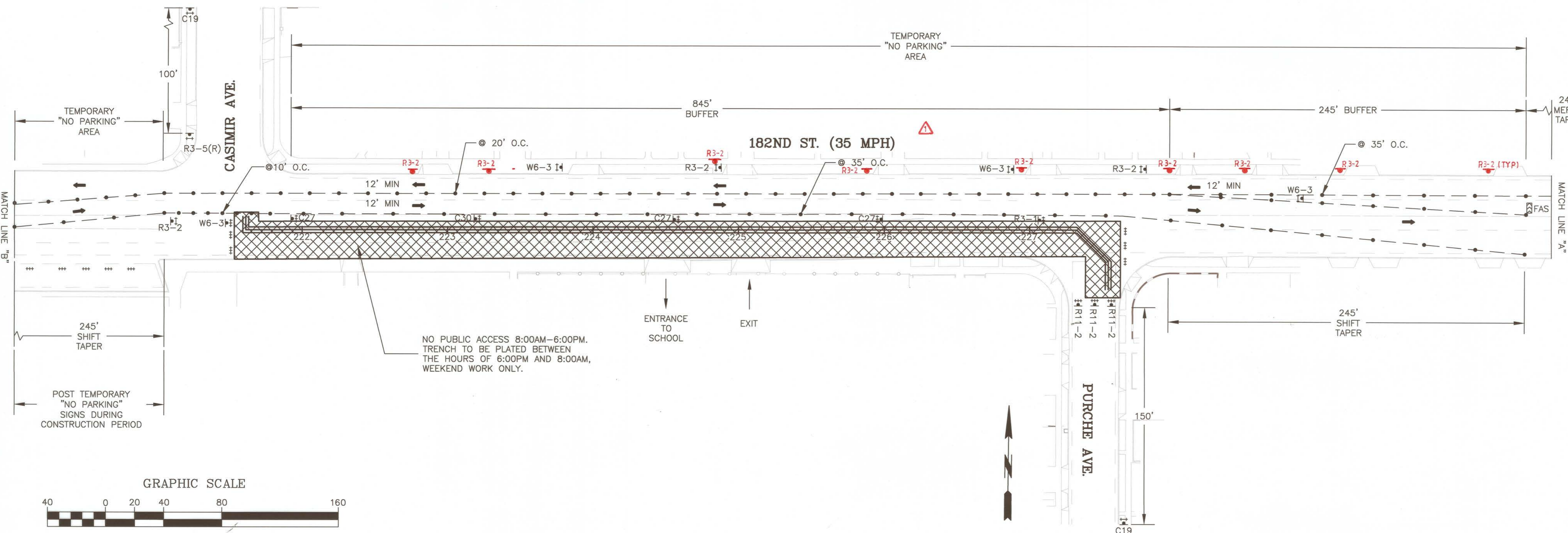


PORTABLE CHANGEABLE MESSAGE SIGN
MODIFY TEXT DURING CONSTRUCTION
EACH SCREEN MESSAGE TO DISPLAY FOR 2.0 SECONDS

▲182ND ST. EASTBOUND & WESTBOUND

SCREEN 1				SCREEN 2			
P	U	R	C	U	S	E	
A	V	E	N	A	L	T.	
C	L	O	S	R	O	U	T
E	D			E			

PHASE 6

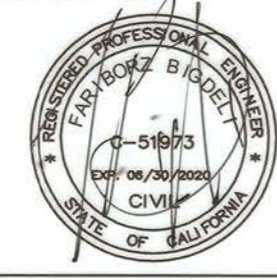


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Know what's below. Call before you dig. TWO WORKING DAYS BEFORE YOU DIG

PREPARED UNDER THE SUPERVISION OF:



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
09/09/2021	VP	JD	ADDED NOTE AND TRAFFIC SIGN	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
WATER MAIN-182ND ST.
FROM STA. 221+51.80 TO STA. 227+80.00
PHASE 6

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: [Signature]
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. [Signature]

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 5/12/21
CRAIG BILEZERIAN, P.E. CITY ENGINEER R.C.E. NO. 55339

SHEET 34 OF 65
SCALE: 1" = 40'
SUPPLEMENTAL PLAN NO. T-5
DRAWING NO. **WP-307**

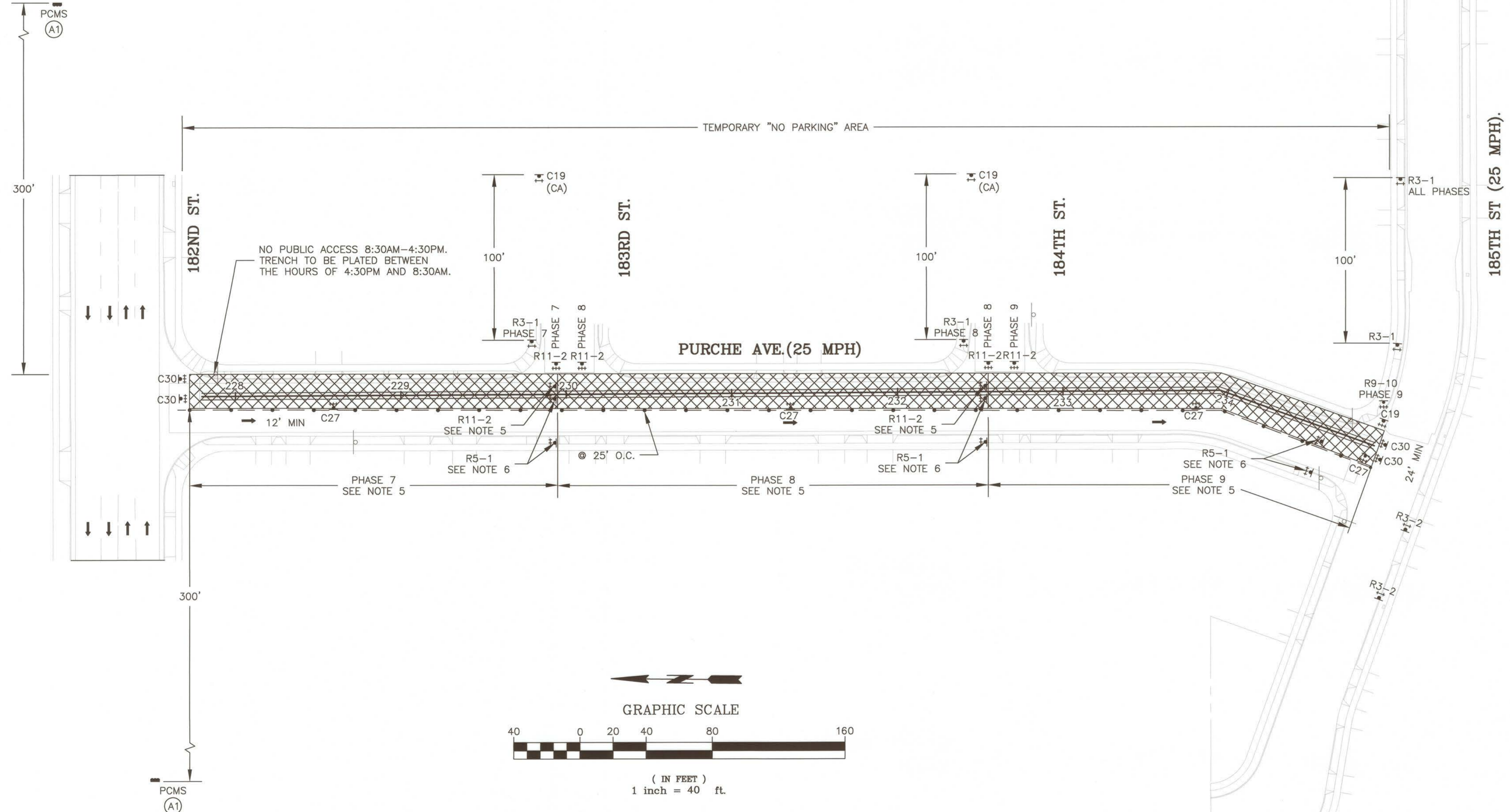
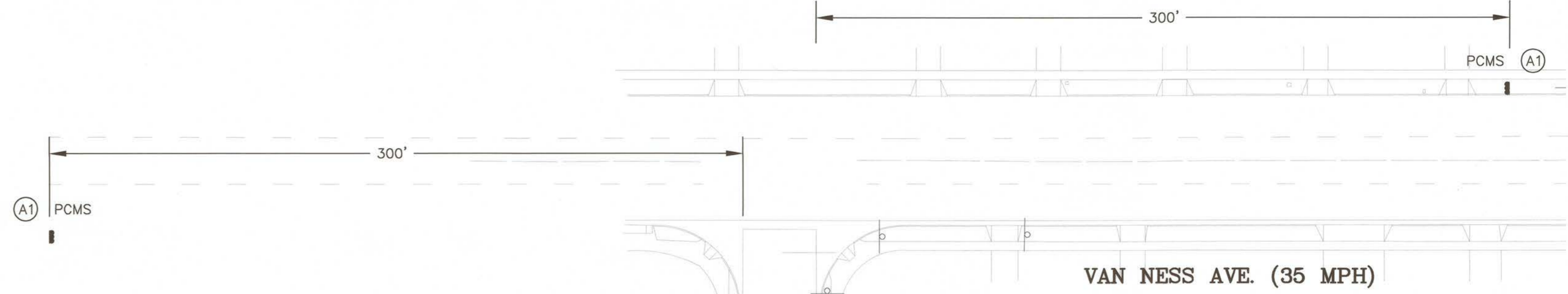
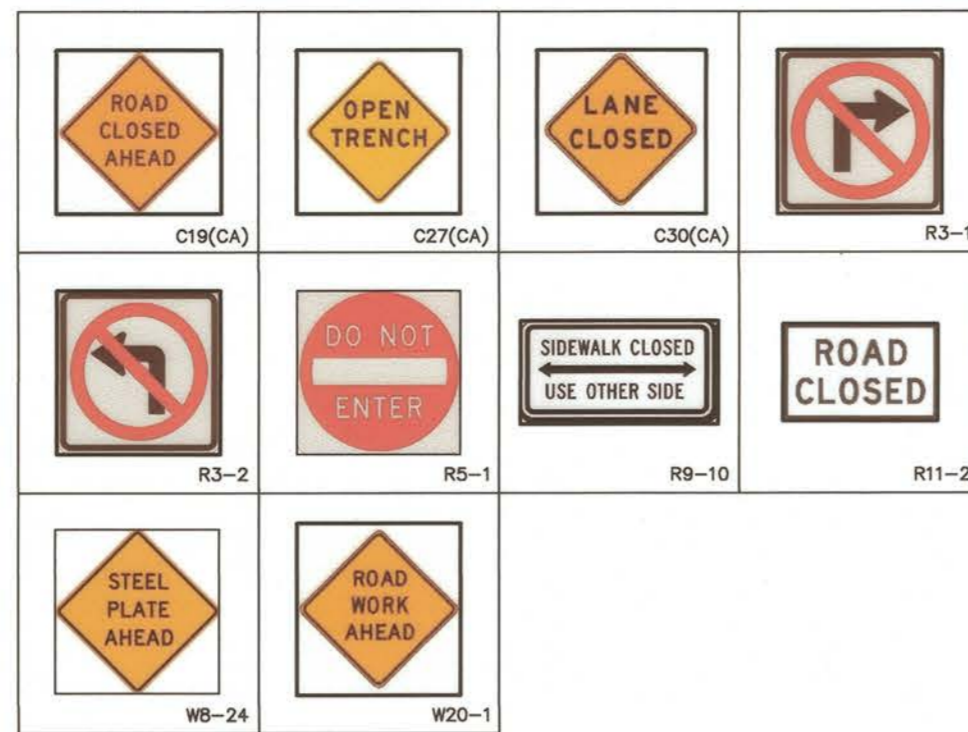
PHASES 7,8,9

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

(A1) VAN NESS AVE. NORTHBOUND & SOUTHBOUND

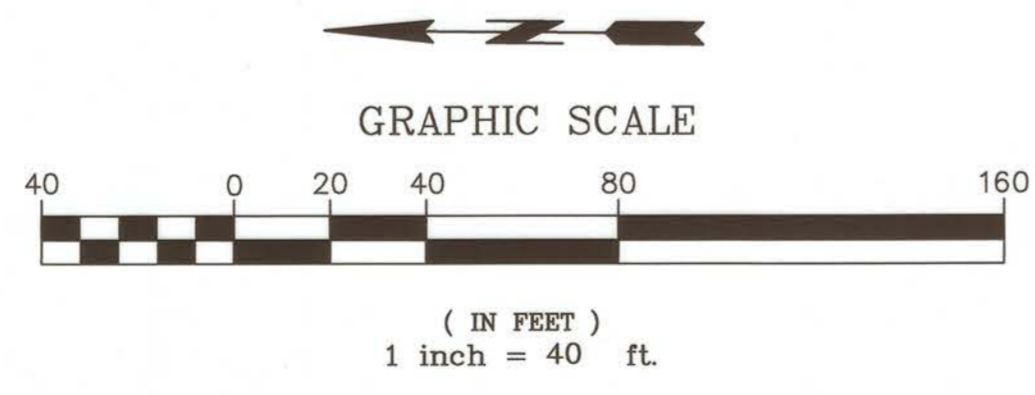
SCREEN 1				SCREEN 2			
P	U	R	C	L	O	C	A
A	V	E	N	T	R	A	F
C	L	O	S	E	D	O	N

TRAFFIC CONTROL SIGNS



- TRAFFIC CONTROL LEGEND**
- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
 - ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
 - 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
 - ← DIRECTION OF TRAVEL
 - ⚡ FLASHING ARROW BOARD SIGN (FAS)
 - 👤 FLAGGER
 - PCMS PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
 - ▨ WATER MAIN CONSTRUCTION WORK AREA

- NOTES**
1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
 2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
 3. COVER EXISTING SIGNS DURING CONSTRUCTION.
 4. PROVIDE ACCESS TO LOCAL TRAFFIC
 5. PLACE ONE TYPE III BARRICADE WITH R11-2 SIGNS AT BEGINNING AND END OF EACH PHASE
 6. PLACE "DO NOT ENTER" SIGNS AT BEGINNING OF EACH PHASE
 7. WORK HOURS 8:30AM TO 4:30PM, MONDAY-FRIDAY



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 UNDER THE SUPERVISION OF:

REVISIONS			
DATE	BY	CHECKED	DESCRIPTION

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
 WATER MAIN—PURCHE AVE.
 FROM STA. STA. 227+80.00 TO STA. 234+94.00
 PHASES 7, 8 AND 9

DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER: *[Signature]*
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 5/12/21
 CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339

SHEET 35 OF 65
 SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. T-6
 DRAWING NO. **WP-307**

TRAFFIC CONTROL SIGNS

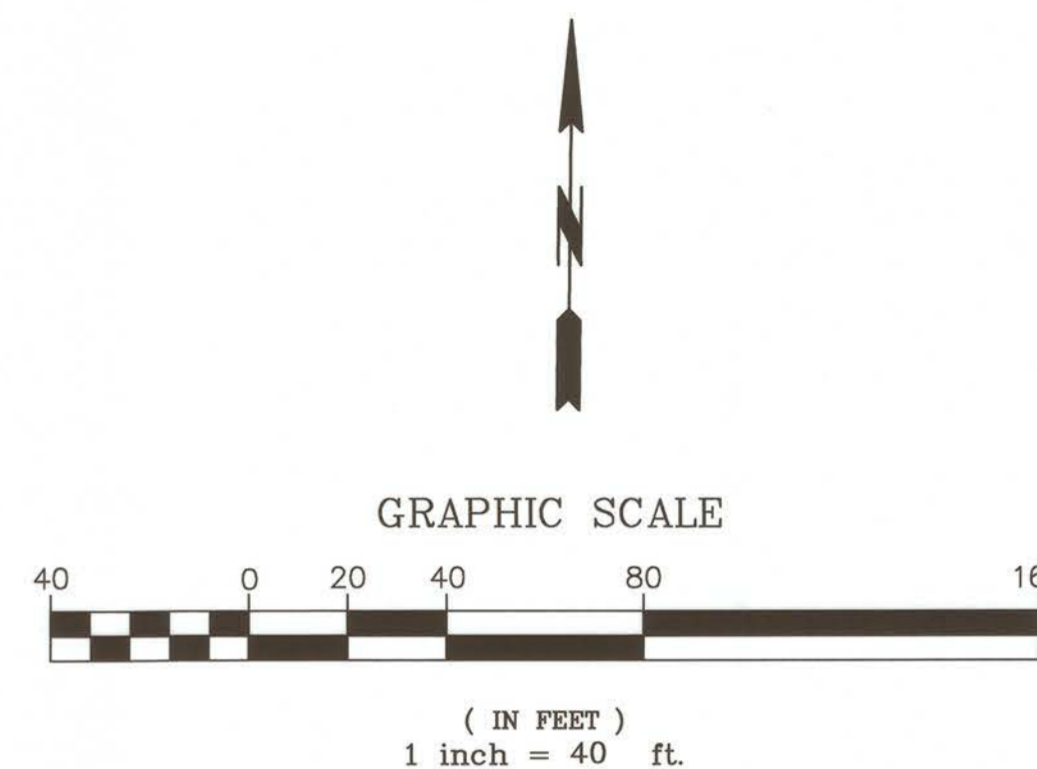


TRAFFIC CONTROL LEGEND

- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
- ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- ↑ DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- 👤 FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- ▨ WATER MAIN CONSTRUCTION WORK AREA

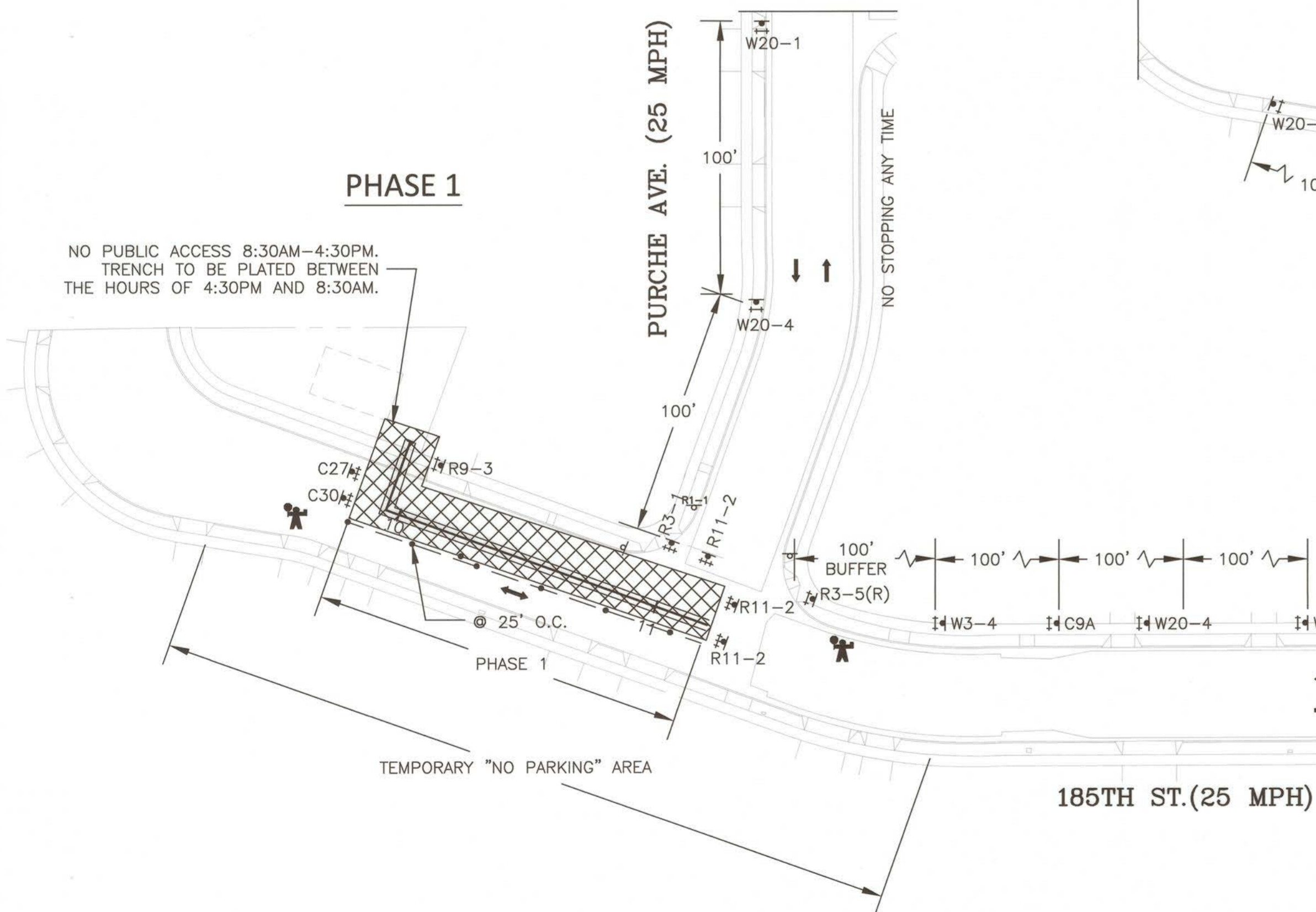
NOTES

1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
3. COVER EXISTING SIGNS DURING CONSTRUCTION.
4. PROVIDE ACCESS TO LOCAL TRAFFIC
5. WORK HOURS 8:30AM TO 4:30PM, MONDAY-FRIDAY

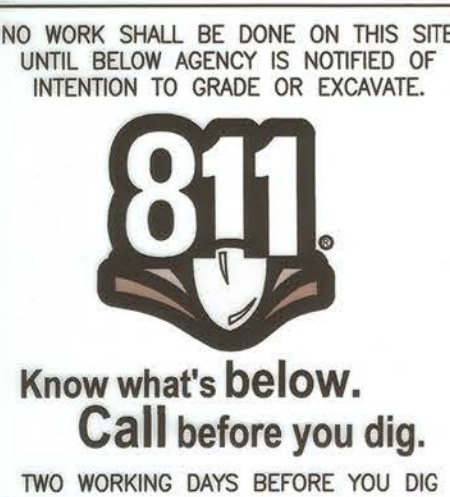
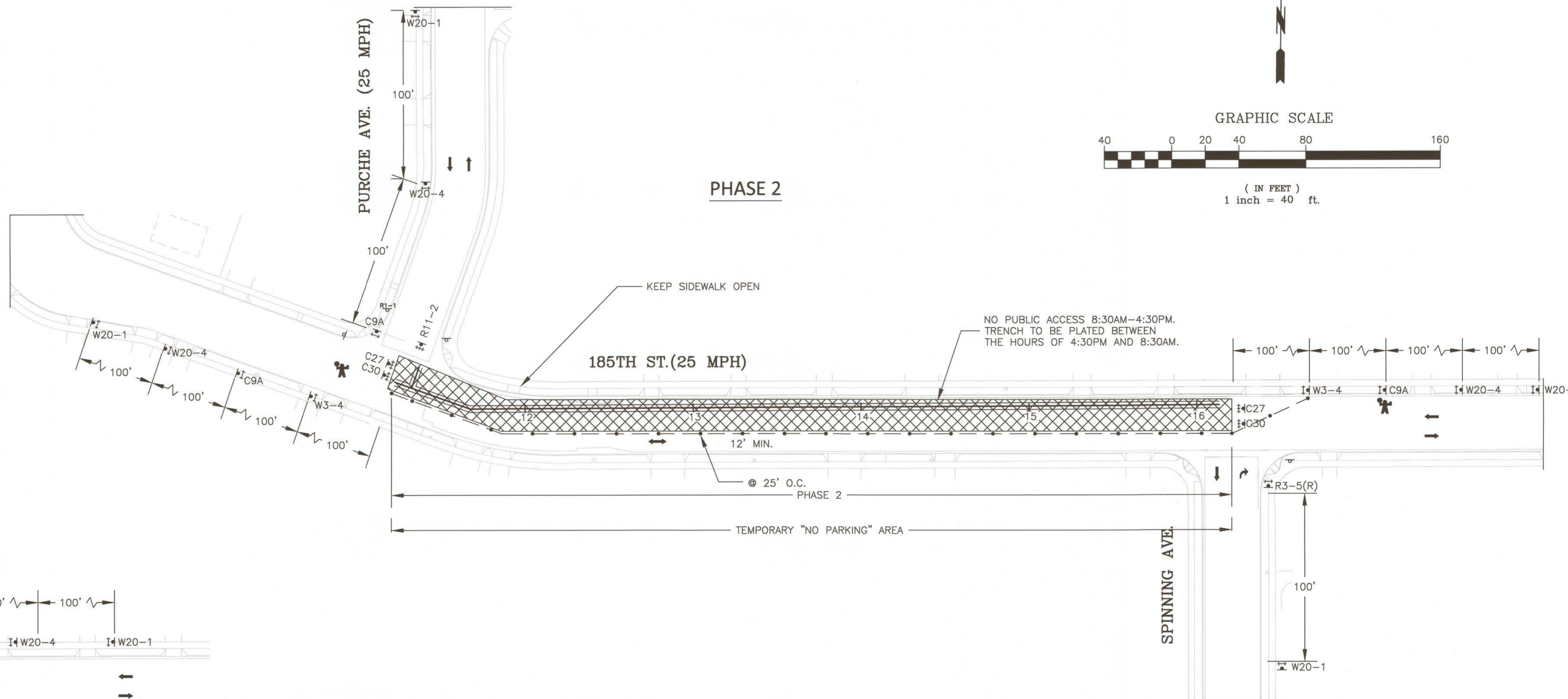


PHASE 1

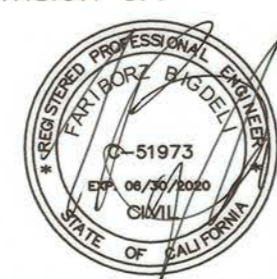
NO PUBLIC ACCESS 8:30AM-4:30PM. TRENCH TO BE PLATED BETWEEN THE HOURS OF 4:30PM AND 8:30AM.



PHASE 2



PREPARED UNDER THE SUPERVISION OF:



REVISIONS

DATE	BY	CHECKED	DESCRIPTION

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145

WATER MAIN-185TH ST.

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO

PROJECT ENGINEER: *[Signature]*

ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 5/2/21

CRAIG BILEZERIAN, P.E. CITY ENGINEER R.C.E. NO. 55339

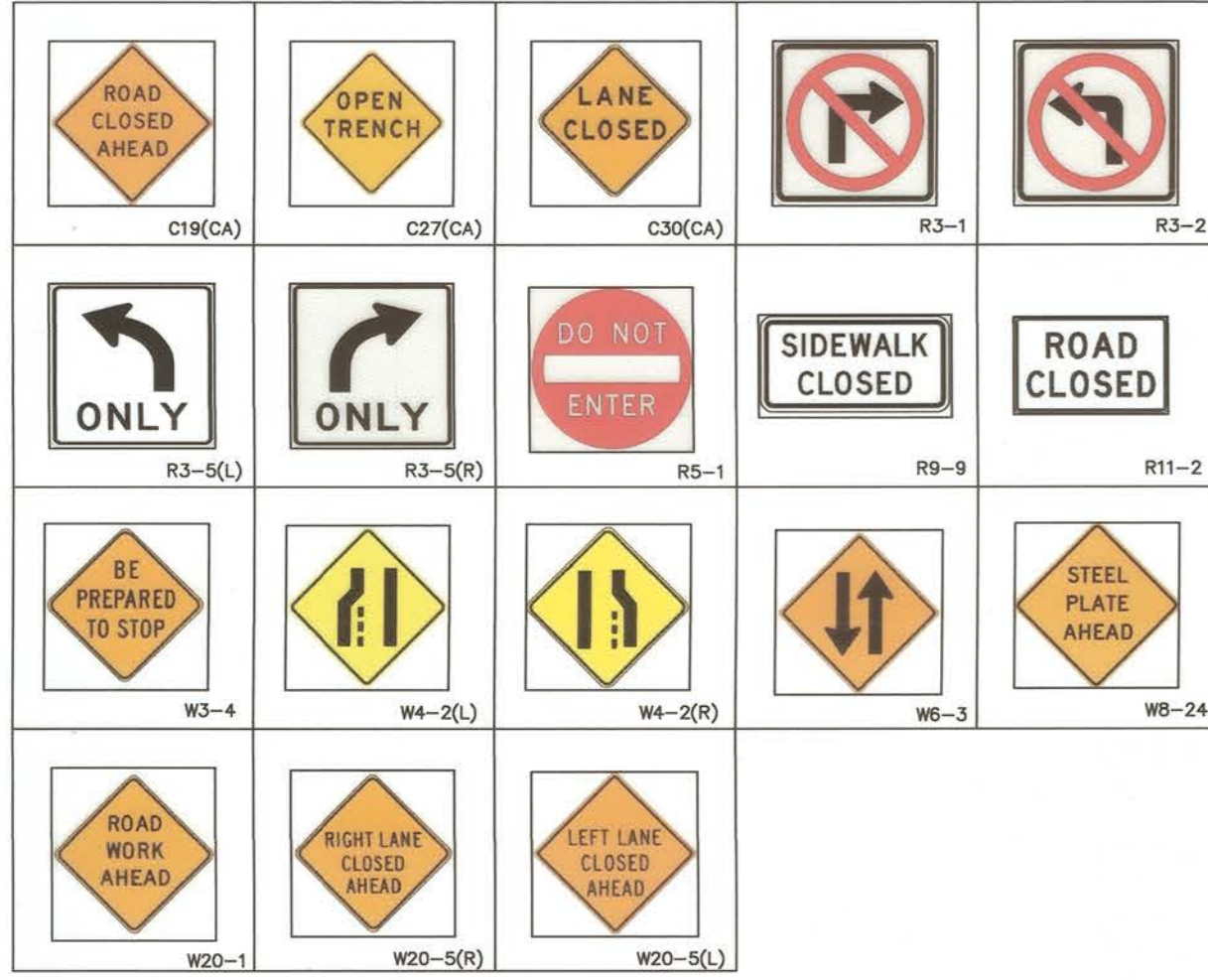
SHEET 36 OF 65

SCALE: 1" = 40' SPECIFICATION NO.

SUPPLEMENTAL PLAN NO. T-7

DRAWING NO. WP-307

TRAFFIC CONTROL SIGNS

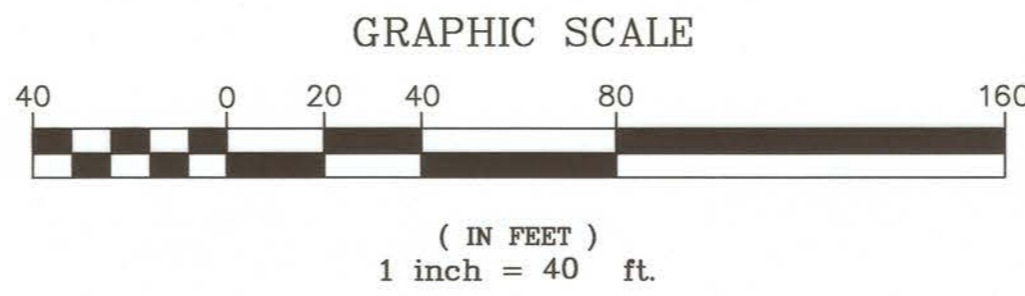


TRAFFIC CONTROL LEGEND

- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
- ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- ← DIRECTION OF TRAVEL
- ⚡ FLASHING ARROW BOARD SIGN (FAS)
- 🚧 FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- ▨ WATER MAIN CONSTRUCTION WORK AREA

NOTES

1. REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
2. COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
3. COVER EXISTING SIGNS DURING CONSTRUCTION.
4. PROVIDE ACCESS TO LOCAL TRAFFIC
5. WORK HOURS 8:30AM TO 4:30PM FOR RESIDENTIAL
6. WORK HOURS 8:30AM TO 3:30PM FOR ARTERIAL



PORTABLE CHANGEABLE MESSAGE SIGN

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

(A1) VAN NESS AVE. SOUTHBOUND

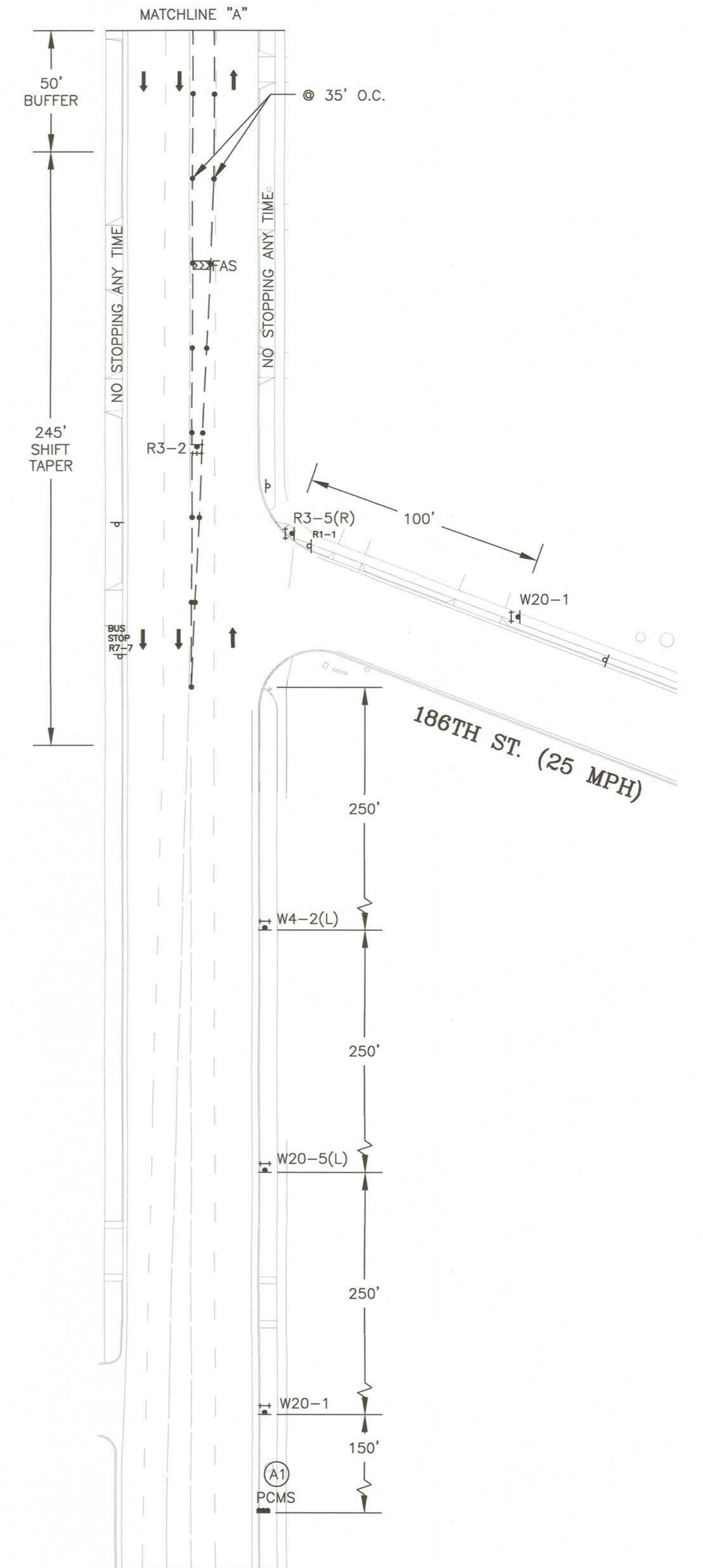
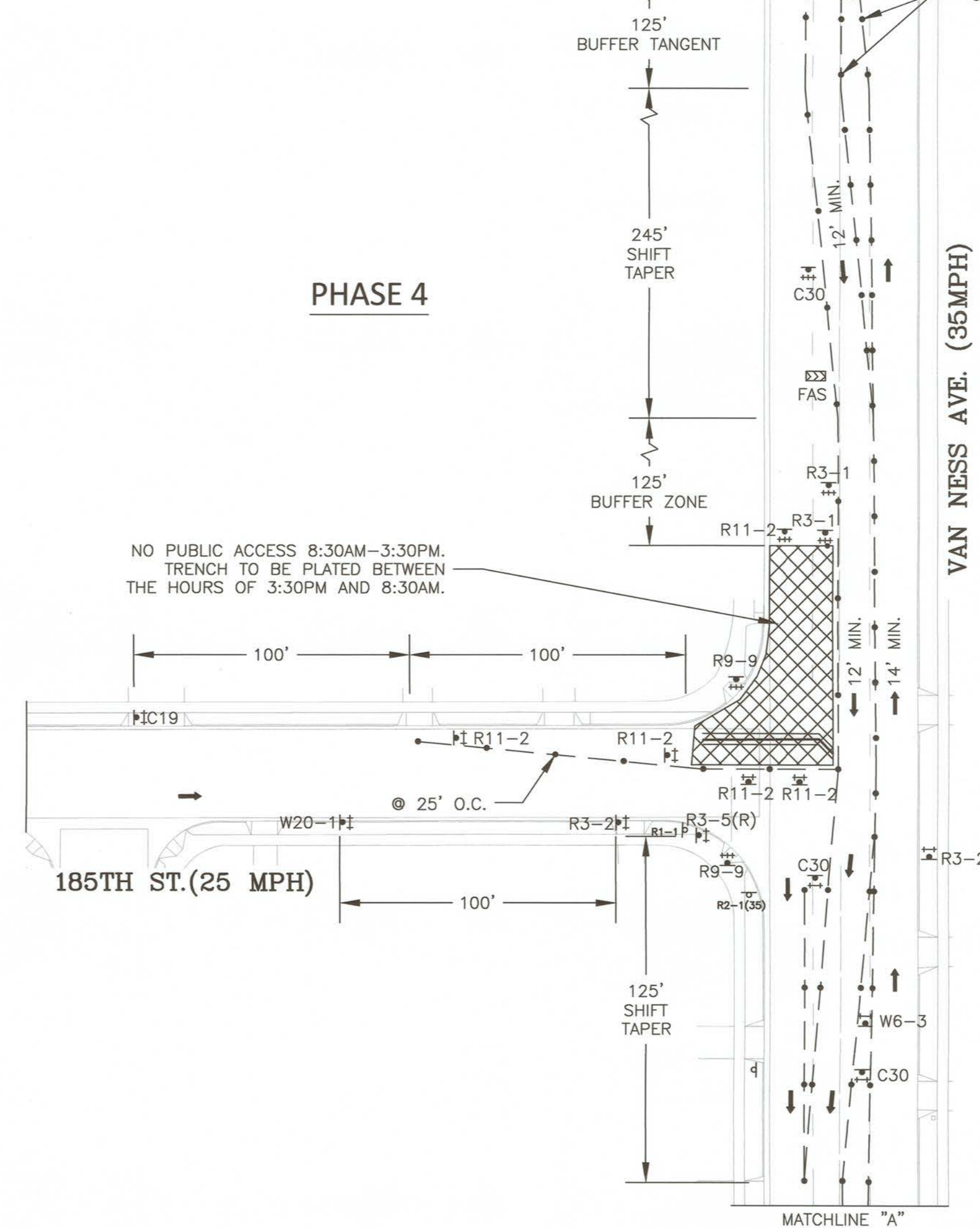
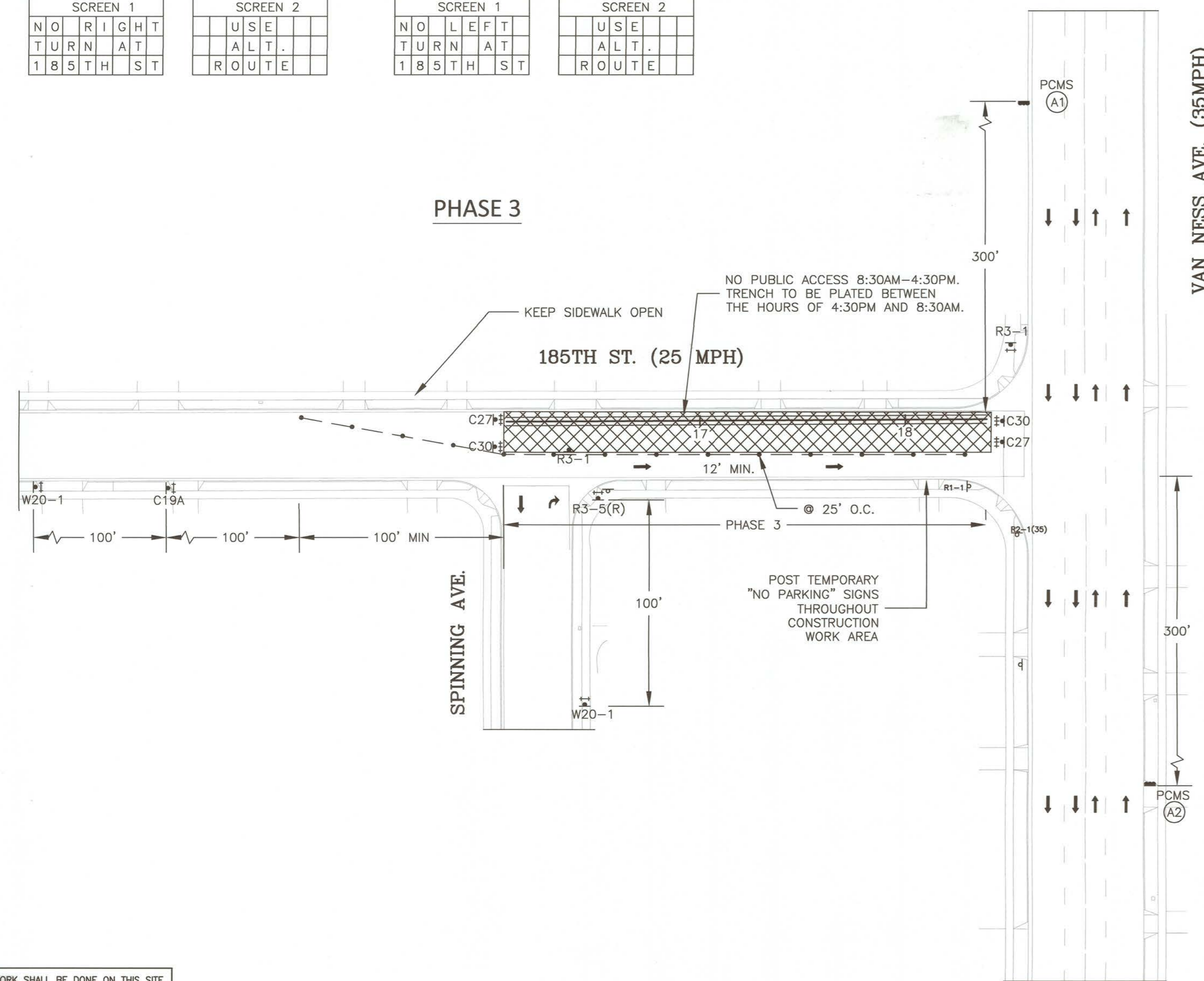
N	O	R	I	G	H	T
T	U	R	N	A	T	
1	8	5	T	H	S	T

	U	S	E			
	A	L	T.			
	R	O	U	T	E	

(A2) VAN NESS AVE. NORTHBOUND

N	O	L	E	F	T	
T	U	R	N	A	T	
1	8	5	T	H	S	T

	U	S	E			
	A	L	T.			
	R	O	U	T	E	



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 UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

VAN NESS WATER WELLS
TRANSMISSION MAIN, I-145
WATER MAIN-185TH ST. AND VAN NESS AVE.

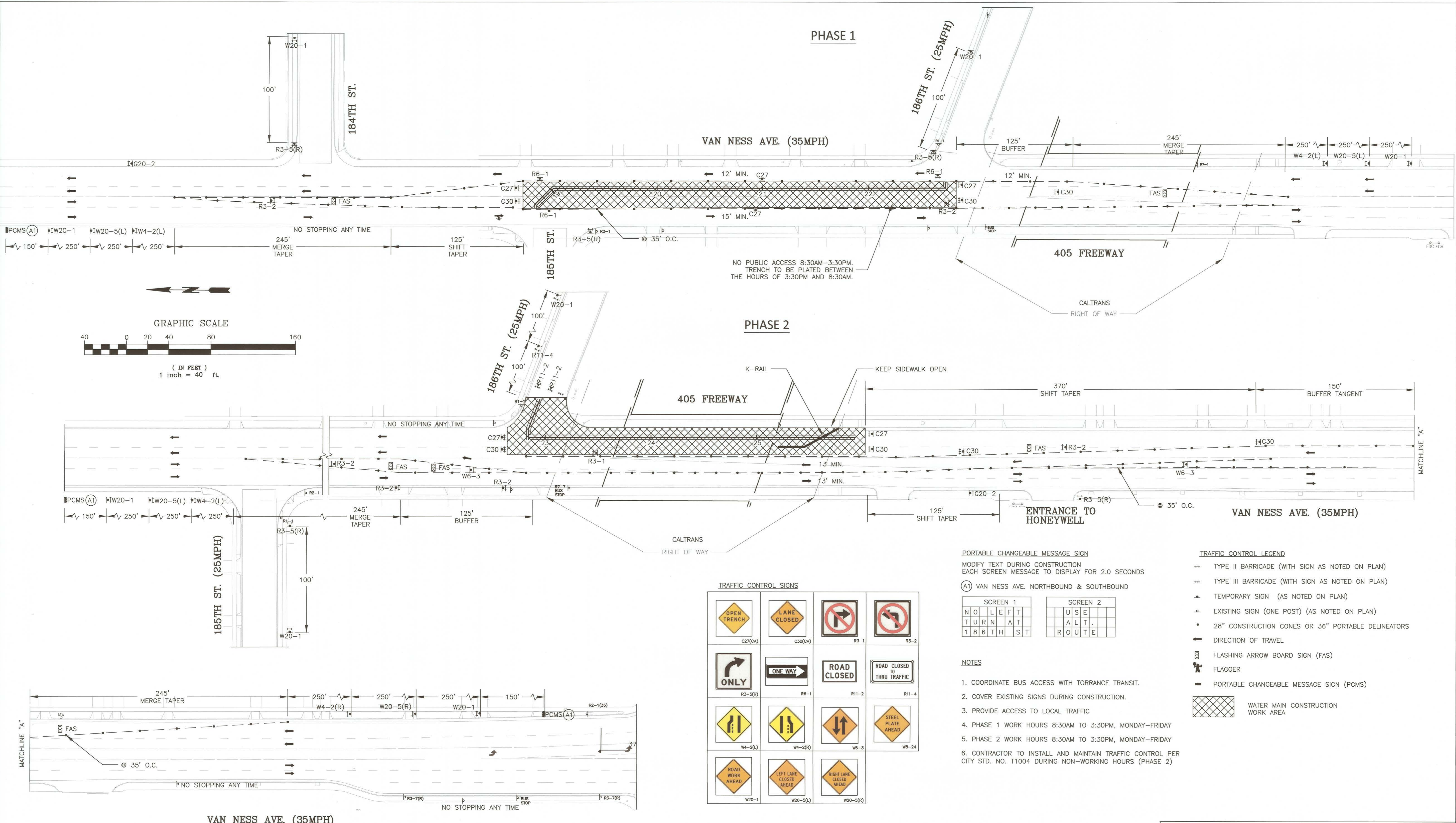
DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: *[Signature]*
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

**CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT**

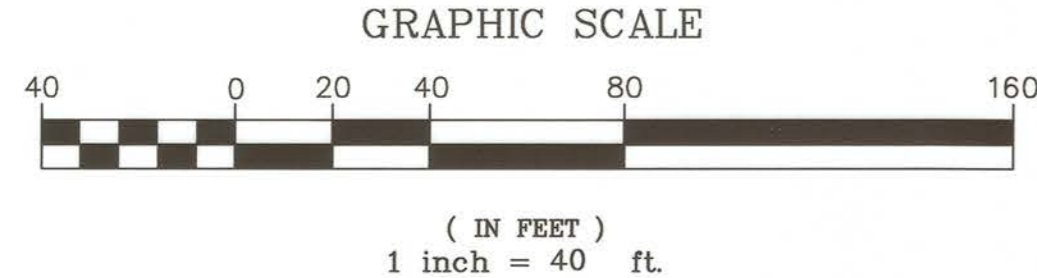
APPROVED BY: *[Signature]* DATE: 5/12/21

CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

SHEET 37 OF 65
SCALE: 1" = 40'
SPECIFICATION NO. T-8
DRAWING NO. **WP-307**



NO PUBLIC ACCESS 8:30AM-3:30PM.
TRENCH TO BE PLATED BETWEEN
THE HOURS OF 3:30PM AND 8:30AM.



TRAFFIC CONTROL SIGNS

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

(A1) VAN NESS AVE. NORTHBOUND & SOUTHBOUND

SCREEN 1				SCREEN 2			
N	O	L	E	U	S	E	
T	U	R	N	A	L	T.	
1	8	6	T	R	O	U	T
			S				E

- NOTES**
- COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
 - COVER EXISTING SIGNS DURING CONSTRUCTION.
 - PROVIDE ACCESS TO LOCAL TRAFFIC
 - PHASE 1 WORK HOURS 8:30AM TO 3:30PM, MONDAY-FRIDAY
 - PHASE 2 WORK HOURS 8:30AM TO 3:30PM, MONDAY-FRIDAY
 - CONTRACTOR TO INSTALL AND MAINTAIN TRAFFIC CONTROL PER CITY STD. NO. T1004 DURING NON-WORKING HOURS (PHASE 2)

- TRAFFIC CONTROL LEGEND**
- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
 - ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
 - 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
 - DIRECTION OF TRAVEL
 - ⚡ FLASHING ARROW BOARD SIGN (FAS)
 - 🚧 FLAGGER
 - PCMS PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
 - ▨ WATER MAIN CONSTRUCTION WORK AREA

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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TWO WORKING DAYS BEFORE YOU DIG

PREPARED UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	

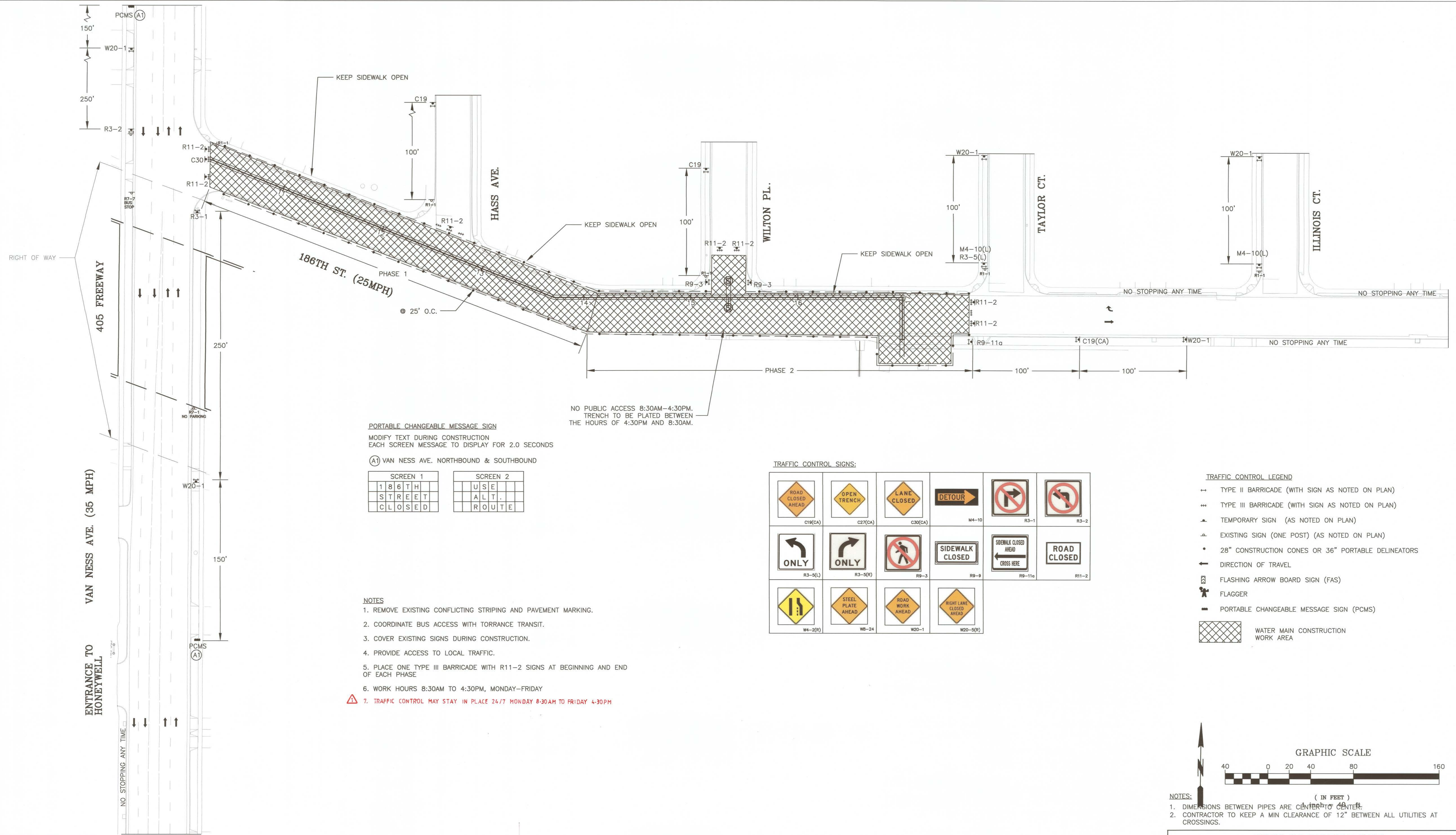
VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
WATER MAIN-VAN NESS AVE.
FROM STA. 18+79 TO STA. 25+92

DESIGNED BY: D. PREBLE
DRAWN BY: L. CANTARERO
PROJECT ENGINEER: *[Signature]*
ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

CITY OF TORRANCE PUBLIC WORKS DEPARTMENT

APPROVED BY: *[Signature]* DATE: 5/12/21
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339

SHEET 38 OF 65
SCALE: 1" = 40'
SPECIFICATION NO. T-9
DRAWING NO. **WP-307**



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

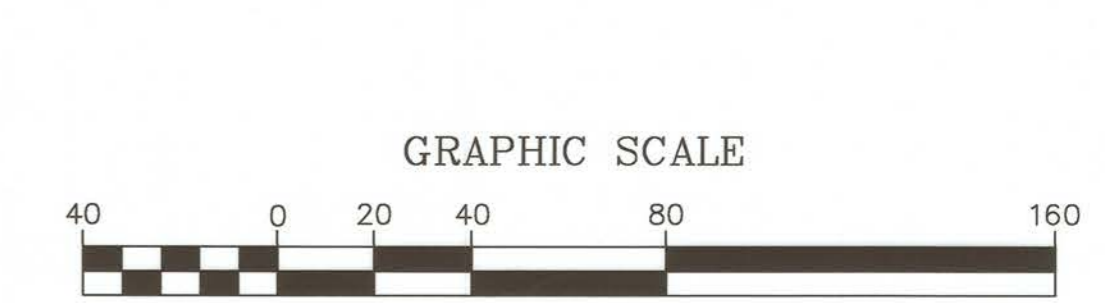
(A) VAN NESS AVE. NORTHBOUND & SOUTHBOUND

SCREEN 1	SCREEN 2
1 8 6 T H	U S E
S T R E E T	A L T .
C L O S E D	R O U T E

- NOTES**
- REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
 - COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
 - COVER EXISTING SIGNS DURING CONSTRUCTION.
 - PROVIDE ACCESS TO LOCAL TRAFFIC.
 - PLACE ONE TYPE III BARRICADE WITH R11-2 SIGNS AT BEGINNING AND END OF EACH PHASE
 - WORK HOURS 8:30AM TO 4:30PM, MONDAY-FRIDAY
 - TRAFFIC CONTROL MAY STAY IN PLACE 24/7 MONDAY 8:30AM TO FRIDAY 4:30PM

TRAFFIC CONTROL SIGNS:

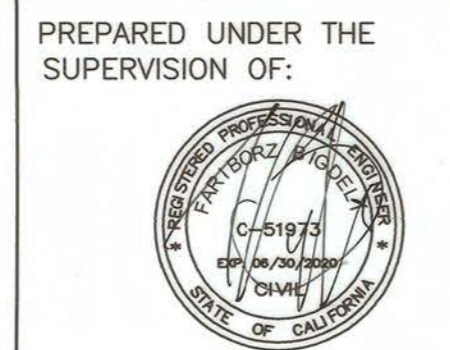
- TRAFFIC CONTROL LEGEND**
- ⇄ TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ⇄⇄ TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
 - ▲ TEMPORARY SIGN (AS NOTED ON PLAN)
 - ▲ EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
 - 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
 - DIRECTION OF TRAVEL
 - ⚡ FLASHING ARROW BOARD SIGN (FAS)
 - 🚧 FLAGGER
 - PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
 - ▨ WATER MAIN CONSTRUCTION WORK AREA



- NOTES:**
- DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 - CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.

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

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TWO WORKING DAYS BEFORE YOU DIG



REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
09/09/2021	VP	JD	ADDED NOTE	

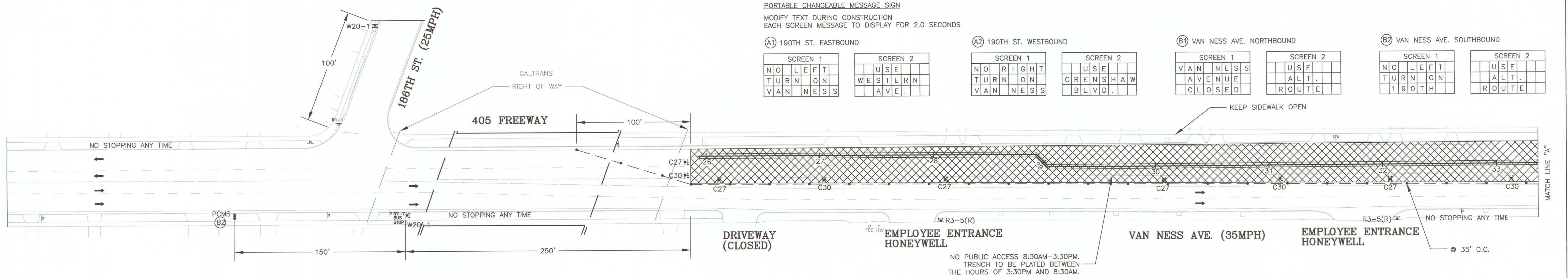
VAN NESS WATER WELLS
 TRANSMISSION MAIN, I-145
 WATER MAIN-186TH ST.
 PHASE 1 AND 2

DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER: *[Signature]*
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E. *[Signature]*

**CITY OF TORRANCE
 PUBLIC WORKS DEPARTMENT**

APPROVED BY: *[Signature]* 5/12/21
 CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339

SHEET 39 OF 65
 SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. T-10
 DRAWING NO. **WP-307**



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

A1 190TH ST. EASTBOUND		A2 190TH ST. WESTBOUND		B1 VAN NESS AVE. NORTHBOUND		B2 VAN NESS AVE. SOUTHBOUND	
SCREEN 1	SCREEN 2	SCREEN 1	SCREEN 2	SCREEN 1	SCREEN 2	SCREEN 1	SCREEN 2
N O L E F T	U S E	N O R I G H T	U S E	V A N N E S S	U S E	N O L E F T	U S E
T U R N O N	W E S T E R N	T U R N O N	C R E N S H A W	A V E N U E	A L T .	T U R N O N	A L T .
V A N N E S S	A V E .	V A N N E S S	B L V D .	C L O S E D	R O U T E	1 9 0 T H	R O U T E

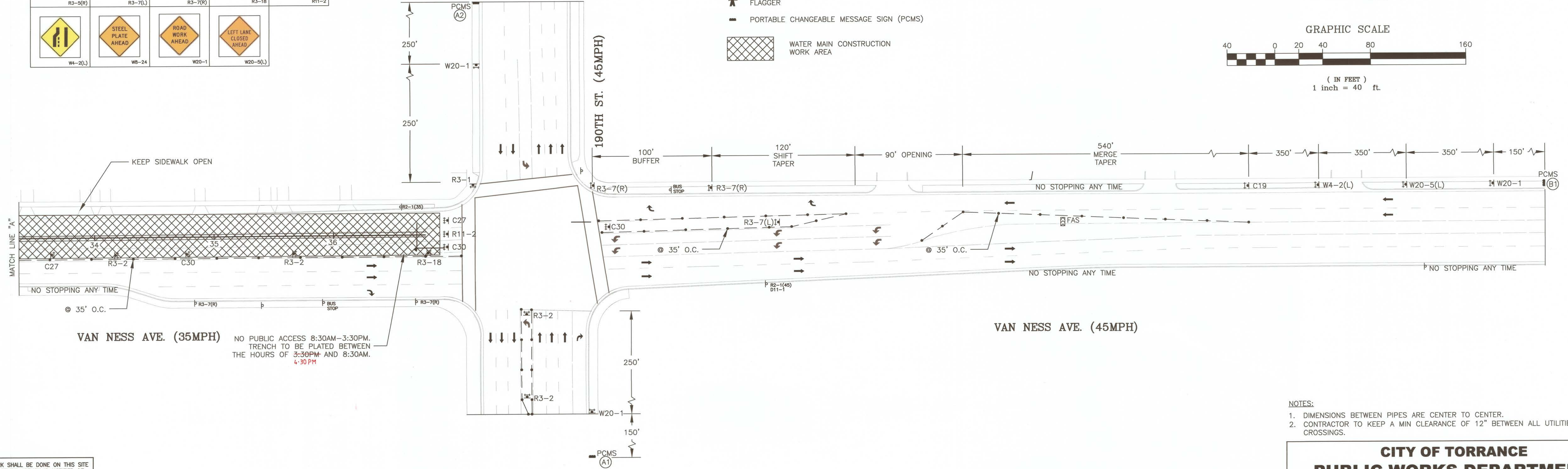
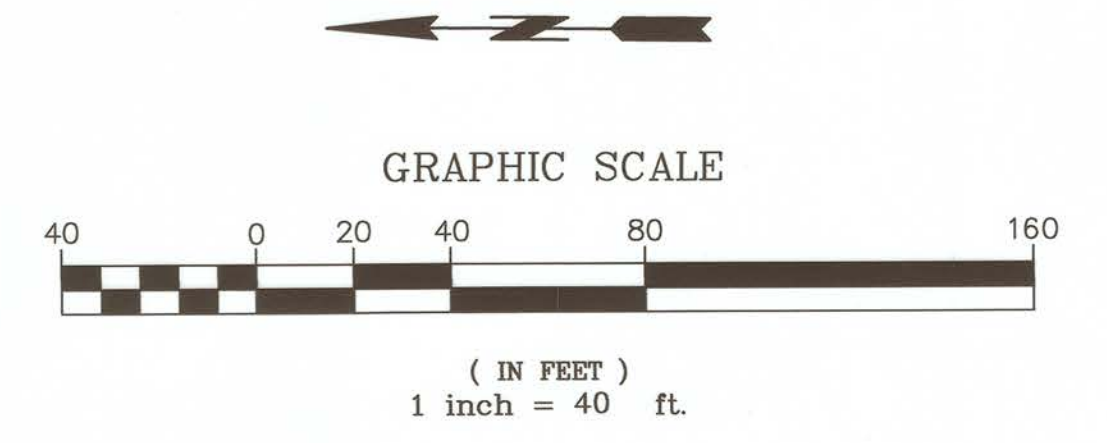
TRAFFIC CONTROL SIGNS

TRAFFIC CONTROL LEGEND

- TYPE II BARRICADE (WITH SIGN AS NOTED ON PLAN)
- TYPE III BARRICADE (WITH SIGN AS NOTED ON PLAN)
- TEMPORARY SIGN (AS NOTED ON PLAN)
- EXISTING SIGN (ONE POST) (AS NOTED ON PLAN)
- 28" CONSTRUCTION CONES OR 36" PORTABLE DELINEATORS
- DIRECTION OF TRAVEL
- FLASHING ARROW BOARD SIGN (FAS)
- FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- WATER MAIN CONSTRUCTION WORK AREA

NOTES

- REMOVE EXISTING CONFLICTING STRIPING AND PAVEMENT MARKING.
- COORDINATE BUS ACCESS WITH TORRANCE TRANSIT.
- COVER EXISTING SIGNS DURING CONSTRUCTION.
- PROVIDE ACCESS TO LOCAL TRAFFIC AND DRIVEWAYS
- WORK HOURS 8:30AM TO 4:30PM MONDAY-FRIDAY



- NOTES:
- DIMENSIONS BETWEEN PIPES ARE CENTER TO CENTER.
 - CONTRACTOR TO KEEP A MIN CLEARANCE OF 12" BETWEEN ALL UTILITIES AT CROSSINGS.

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PREPARED UNDER THE SUPERVISION OF:

REVISIONS				
DATE	BY	CHECKED	DESCRIPTION	
09/09/2021	VP	JD	CHANGED WORK HOURS AND NOTE	

VAN NESS WATER WELLS TRANSMISSION MAIN, I-145
 WATER MAIN-VAN NESS AVE. AND 190TH ST.
 FROM STA. 25+92 TO STA. 36+81.7

DESIGNED BY: D. PREBLE
 DRAWN BY: L. CANTARERO
 PROJECT ENGINEER:
 ENGINEERING MANAGER: JOHN C. DETTLE, P.E.

CITY OF TORRANCE
 PUBLIC WORKS DEPARTMENT

APPROVED BY: DATE: 5/12/21
 CRAIG BILEZERIAN, P.E.
 CITY ENGINEER
 R.C.E. NO. 55339

SHEET 40 OF 65
 SCALE: 1" = 40'
 SUPPLEMENTAL PLAN NO. T-11
 DRAWING NO. WP-307