CITY OF TORRANCE

CONSTRUCTION PLANS FOR CRENSHAW BOULEVARD REHABILITATION, I-120

(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND
PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION AND SUPPLEMENTS THERETO, AS WRITTEN AND PROMULGATED BY PUBLIC WORKS STANDARDS, INC., HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS, THE TORRANCE STANDARDS, AND TO THE SATISFACTION OF THE COMMUNITY DEVELOPMENT OR PUBLIC WORKS DIRECTOR.
2. 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.
3. 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.
4. OVERHEAD UTILITY LINE 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/UTILITY LINES, CALL SOUTHERN CALIFORNIA EDISON CO. AT 310-783-9339.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY BEFORE COMMENCING WORK. TRAFFIC CONTROL WITHIN PUBLIC STREET RIGHTS OF WAY SHALL BE IN CONFORMANCE WITH THE "CITY OF TORRANCE TRAFFIC CONTROL STANDARDS" AND "CA MUTCD" LATEST EDITION. THE CONTRACTOR SHALL PROVIDE A 24-HOUR TELEPHONE NUMBER FOR EMERGENCY REPAIRS TO TRAFFIC CONTROL AND PAVEMENT MARKINGS.
6. 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.
7. GRADE SHEETS PREPARED AND STAMPED BY A LICENSED ENGINEER OR SURVEYOR SHALL BE DELIVERED TO THE INSPECTOR 24 HRS PRIOR TO COMMENCEMENT OF WORK.
8. 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.
9. 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.
10. X" DIMENSION SHOWN ON SPPWC STANDARD 110 SHALL BE 3 FEET UNLESS OTHERWISE CALLED FOR ON THE PLAN OR IN THE SPECIFICATIONS.
11. 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.
12. FOR A NEW ASPHALT CONCRETE (AC) SECTION BETWEEN 3" AND 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.
13. DURING NON-CONSTRUCTION HOURS, ALL EXCAVATIONS MUST BE APPROPRIATELY SHORED AND 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 OR ENGINEER. PLATES SHALL BE TACK WELDED, PINNED AND/OR SECURED IN PLACE BY ANOTHER METHOD APPROVED BY THE INSPECTOR OR ENGINEER.
14. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT AT 310-781-6900 PRIOR TO TRIMMING, REMOVING OR RELOCATING ANY EXISTING STREET TREE.
15. UNLESS OTHERWISE SHOWN, ALL TRAFFIC SIGNS SHALL BE RELOCATED OR REMOVED BY THE CONTRACTOR.
16. 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 AT 310-781-6900 FOR TYPE(S), SIZE(S) AND LOCATION(S) OF TREES.
17. PLANTED AND IRRIGATED PARKWAY(S) (IF REQUIRED) SHALL HAVE MATERIALS AND PLANTS APPROVED BY THE STREETSCAPE MANAGER PRIOR TO INSTALLATION.
18. THE CONTRACTOR SHALL MAKE AVAILABLE FOR THE 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-BUILT DRAWINGS ARE SUBMITTED TO AND ACCEPTED BY THE COMMUNITY DEVELOPMENT OR PUBLIC WORKS DIRECTOR.

LEGEND / HATCH

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE

ABBREVIATIONS

AC	ASPHALT CONCRETE
BLVD	BOULEVARD
C&G	CURB AND GUTTER
CMB	CRUSHED MISCELLANEOUS BASE
CL	CENTERLINE
COT	CITY OF TORRANCE
DWY	DRIVEWAY
E	EAST
E'LY	EASTERLY
EX	EXISTING
EG	EXISTING GROUND
EP	EDGE OF PAVEMENT
GB	GRADE BREAK
GTR	GUTTER
GV	GAS VALVE
INT	INTERSECTION
LT	LEFT
MH	MANHOLE
N	NORTH
N.T.S.	NOT TO SCALE
PCC	PORTLAND CEMENT CONCRETE
PP	POWER POLE
PT	POINT
PVI	POINT OF VERTICAL INTERSECTION
RT	RIGHT
S	SOUTH
SD	STORM DRAIN
SCE	SOUTHERN CALIFORNIA EDISON
S'LY	SOUTHERLY
SS	SANITARY SEWER
ST	STREET
SPPWC	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
SW	SIDEWALK
TEL	TELEPHONE
TSC	TRAFFIC SIGNAL CONTROLLER
TSP	TRAFFIC SIGNAL PULL BOX
VAR	VARIES
W	WATER OR WEST
W'LY	WESTERLY
WV	WATER VALVE

*NOTE:

ALL OTHER ABBREVIATIONS ARE DEFINED IN SECTION 1-3.2 OF THE "GREENBOOK" STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

STANDARD PLANS

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (SPPWC)

(2012 EDITION & REVISIONS)

111-5	CURB RAMPS
112-2	CURB AND SIDEWALK JOINTS
113-2	SIDEWALK AND DRIVEWAY REPLACEMENT
120-2	CURB AND GUTTER - BARRIER
122-2	CROSS LONGITUDINAL GUTTERS
134-2	CONCRETE PAVEMENT JOINT DETAILS

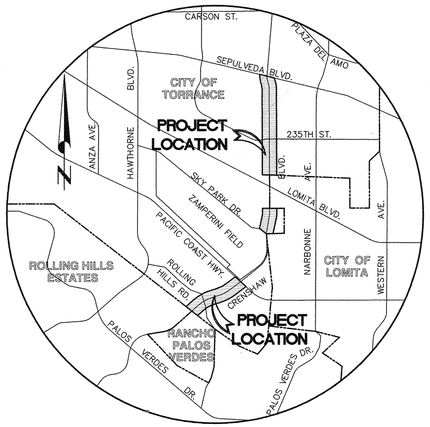
CITY OF TORRANCE

T103	TYPICAL SECTION COLLECTOR AND ARTERIAL STREET
T105	RADIUS DRIVEWAY WITH DEPRESSED SIDEWALK
T108	DRIVEWAY IN NARROW PARKWAY
T115	DOWELS AT EXPANSION JOINTS
T502	ROAD SIGN REPLACEMENT
T702	1" & 2" SERVICE CONNECTION TO MAIN LINE
T703	TYPICAL 3/4" OR 1" METER (NON-TRAFFIC AREA) INSTALLATION WITH 1" SERVICE LINE
T1004	ARTERIAL & COLLECTOR RIGHT LANE CLOSURE
T1005	ARTERIAL & COLLECTOR LEFT LANE CLOSURE
T1006	ARTERIAL & COLLECTOR CENTER LANE CLOSURE
T1007	LEFT TURN LANE CLOSURE
T1008	ARTERIAL MULTI-LANE CLOSURE

CALTRANS

(2010 EDITION & REVISIONS)

A20A	PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS
A20B	PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS
A20C	PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS
A20D	PAVEMENT MARKERS AND TRAFFIC LINE TYPICAL DETAILS
A24A	PAVEMENT MARKINGS ARROWS
A24D	PAVEMENT MARKINGS WORDS
A24E	PAVEMENT MARKINGS WORDS AND CROSSWALKS



VICINITY MAP

NTS
REFERENCE:THOMAS GUIDE
L.A. COUNTY
PAGE 793

UTILITY CONTACTS

COMPANY	CONTACT	PHONE NO.
T-MOBILE USA BMS COMMUNICATION	MS. TAMARA HENDERSON	(805) 526-1141
AT&T DISTRIBUTION SUBSTRUCTURES	MS. MEREDITH HUSTON	(310) 515-4370
GOLDEN STATE UTILITY FOR SUNESYS	MR. ROBERT SANTOS	(951) 278-0400 x117
TIME WARNER CABLE	MR. DAVID BELL	(310) 647-5167
SOUTHERN CALIFORNIA GAS	MR. MICHIKO ROBINSON	(310) 687-2023
SOUTHERN CALIFORNIA EDISON	MS. KIM GURULE	(714) 796-9932
VERIZON COMMUNICATIONS	MS. BELINDA RAFE	(310) 264-5140
CITY OF TORRANCE WATER & SEWER		(310) 781-6900
CITY OF TORRANCE FIRE DEPT		(310) 781-7000
CITY OF TORRANCE POLICE DEPT		(310) 328-3456
CITY OF TORRANCE TRANSIT		(310) 618-6266

SHEET INDEX

SHEET NO.	PLAN NO.	DESCRIPTION
01	ST-1048	TITLE SHEET
02	ST-1048	TYPICAL SECTIONS & CONSTRUCTION NOTES
03	ST-1048	CONSTRUCTION DETAILS
04 - 05	ST-1048	ROADWAY PLAN (SOUTHERLY CITY LIMIT TO PACIFIC COAST HIGHWAY)
06 - 10	ST-1048	ROADWAY PLAN (SKYPARK DRIVE TO SEPULVEDA BOULEVARD)
11 - 12	C74-84A	SIGNING & STRIPING PLAN (SOUTHERLY CITY LIMIT TO PACIFIC COAST HIGHWAY)
13 - 17	C69-35C	SIGNING & STRIPING PLAN (SKYPARK DRIVE TO SEPULVEDA BOULEVARD)
18 - 41	ST-1048	TRAFFIC CONTROL PLAN
42 - 44	TS92-247A, TL-171A, TL-191A	TRAFFIC SIGNAL PLAN
45 - 51	ST-1048	LANDSCAPE AND IRRIGATION PLANS
52 - 55	ST-1048	TEMPORARY DETOUR PLANS

BASIS OF BEARINGS AND DATUM STATEMENT

THE BEARING FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 5 NAD 83 (EPOCH 1991.35 ADJUSTMENT) AS DETERMINED LOCALLY ALONG THE CENTERLINE OF CRENSHAW BOULEVARD.

THE BASIS OF BEARING SHOWN HERON ARE BASED ON THE BEARING OF CONTROL POINTS NUMBER 11567 AND 103.

PT NUMBER: 11567 - SPIKE IN WELL AT CENTERLINE INTERSECTION OF PACIFIC COAST HIGHWAY AND CRENSHAW BOULEVARD. N=1746886.17 E=6460430.21
PT NUMBER: 103 - BRASS DISK IN WELL. N=1745375.05 E=6457900.67
C.F.=1.00005853

BENCHMARKS

ELEVATIONS AS SHOWN HEREON ARE IN TERMS OF THE NATIONAL GEODETIC VERTICAL DATUM OF 1988 ADJUSTED 1995 (NVD 88-1995 ADJ) BASED LOCALLY UPON THE FOLLOWING COUNTY OF LOS ANGELES BENCHMARK(S): 5795

DESCRIPTION: LEAD & SCREW IN NORTH CURB 300 MILLIMETERS EAST OF BCR AT NORTHEAST CORNER OF PACIFIC COAST HIGHWAY AND CRENSHAW BLVD. 23.2 METERS EAST & 12.2 METERS NORTH OF THE CENTERLINE INTERSECTION. ELEV: 141.473'

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

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND
PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TITLE SHEET

FEDERAL PROJECT NO. STPL-5249(030)

DESIGNED BY: WB
DRAWN BY: WB

PROJECT ENGINEER: Stephanie Comon
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN TINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

Craig Bilezerian 4/8/16
CRAIG BILEZERIAN, PE — DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 01 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.
SUPPLEMENTAL PLAN NO. C69-35C C74-84A
PLAN NO. **ST-1048**

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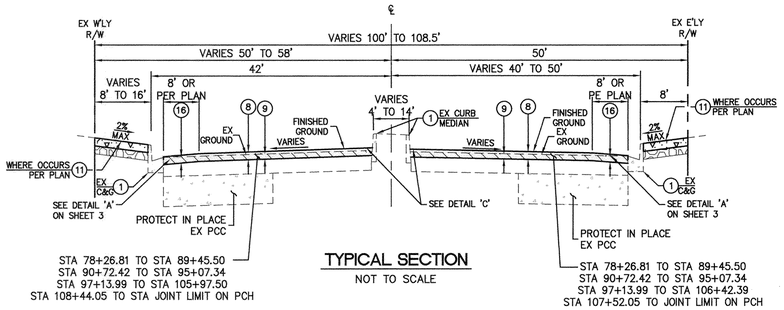
HATCH / LINE LEGEND

- PAVEMENT
- CRUSHED MISCELLANEOUS BASE
- LEVELING COURSE
- EXISTING CONCRETE
- NEW CONCRETE
- COLD MILL WITH VARIABLE DEPTH

CONSTRUCTION NOTES:

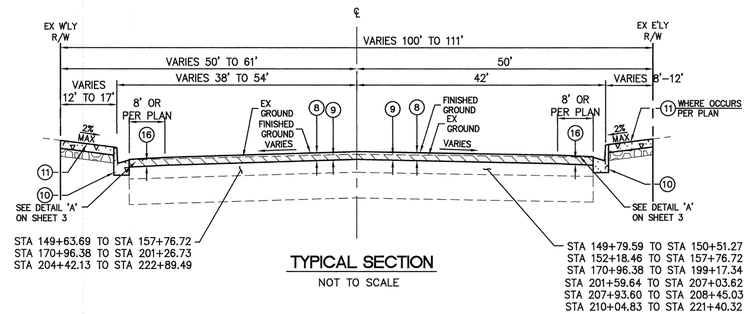
1. PROTECT IN PLACE (ITEM AS NOTED).
5. SAWCUT AND REMOVE (DEPTH PER PLANS) EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS.
7. CONSTRUCT 5" AC (B–PG 64–10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.

SOUTHERLY CITY LIMIT TO PACIFIC COAST HIGHWAY

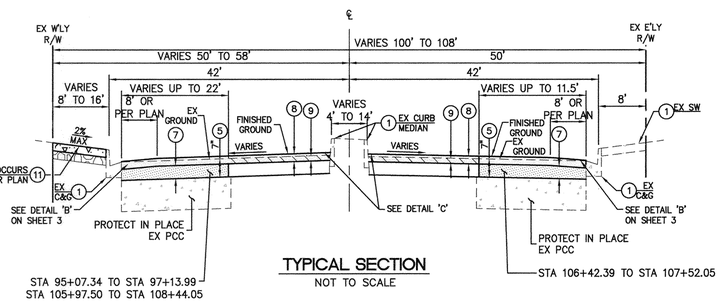


TYPICAL SECTION
NOT TO SCALE

SKYPARK DRIVE TO SEPULVEDA BOULEVARD



TYPICAL SECTION
NOT TO SCALE



TYPICAL SECTION
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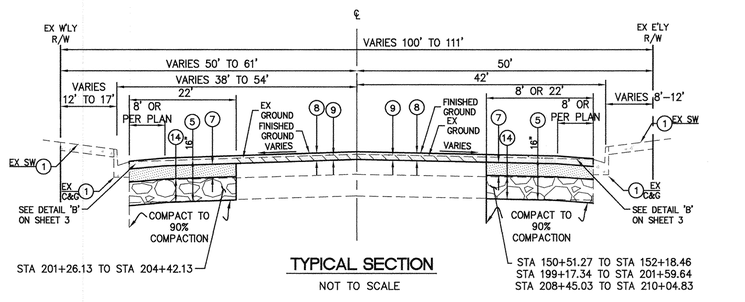
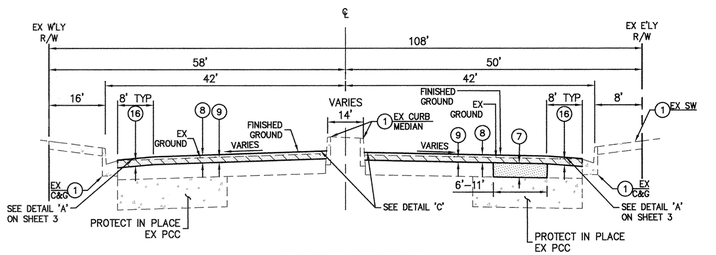
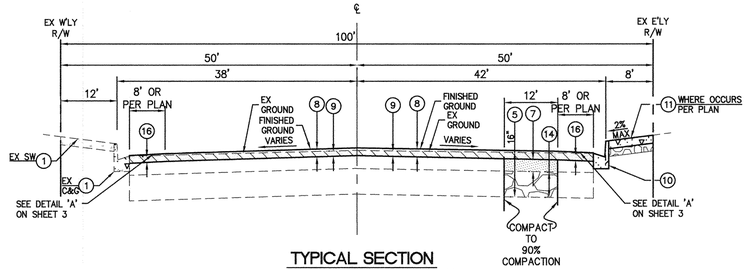


TYPICAL SECTION
NOT TO SCALE



TYPICAL SECTION
STA 89+45.50 TO STA 90+72.42
NOT TO SCALE



TYPICAL SECTION
STA 207+03.62 TO STA 207+93.60
NOT TO SCALE

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

REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TYPICAL SECTIONS AND CONSTRUCTION NOTES

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE — DATE 4/6/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	02	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO. **ST-1048**			

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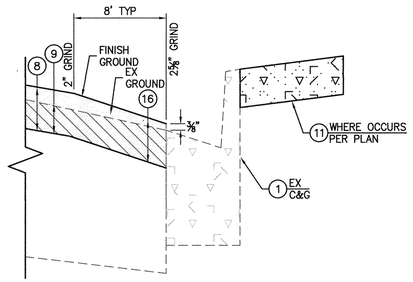

PAVEMENT IMPROVEMENT AT GUTTER

NOT TO SCALE

A
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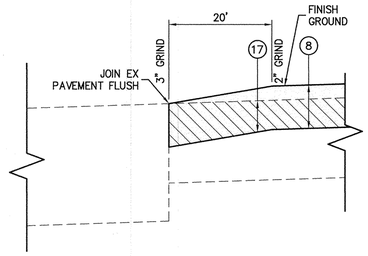

TRANSVERSE JOIN DETAIL (CRENSHAW BLVD)

NOT TO SCALE

C
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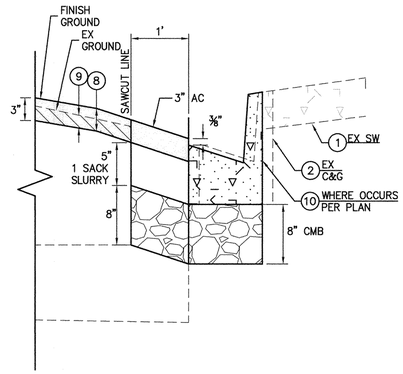


NEW SECTION AT PAVEMENT SAWCUT AND REPLACEMENT AREAS

NOT TO SCALE

REFER TO SPECIAL PROVISIONS SECTION 303-5.5.5

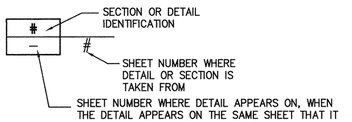
E
–

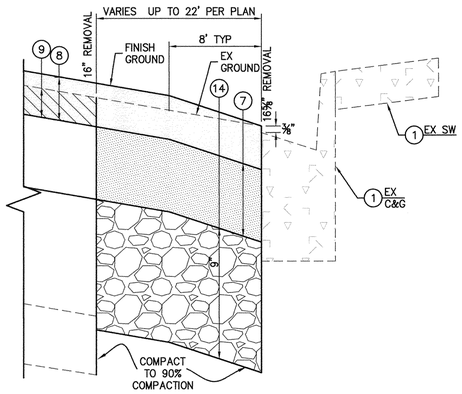
CONSTRUCTION NOTES

1. PROTECT IN PLACE (ITEM AS NOTED).
2. REMOVE EXISTING IMPROVEMENTS (ITEM AS NOTED).
7. CONSTRUCT 5" AC (B-PG 64-10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2-PG 64-10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2-8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120-2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CMB.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.

HATCH / LINE LEGEND

- PAVEMENT
- EXISTING CONCRETE
- CRUSHED MISCELLANEOUS BASE
- NEW CONCRETE
- LEVELING COURSE
- COLD MILL WITH VARIABLE DEPTH





FULL DEPTH PAVEMENT IMPROVEMENT AT GUTTER

NOT TO SCALE

B
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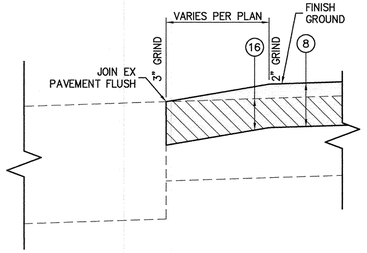

TRANSVERSE JOIN DETAIL (AT SIDE STREET)

NOT TO SCALE

D
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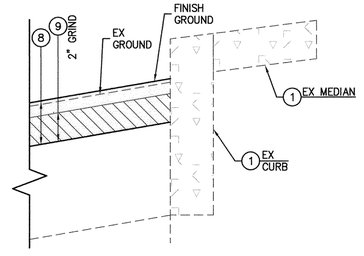

PAVEMENT IMPROVEMENT AT MEDIAN

NOT TO SCALE

F
–

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

REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

CONSTRUCTION DETAILS

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 03 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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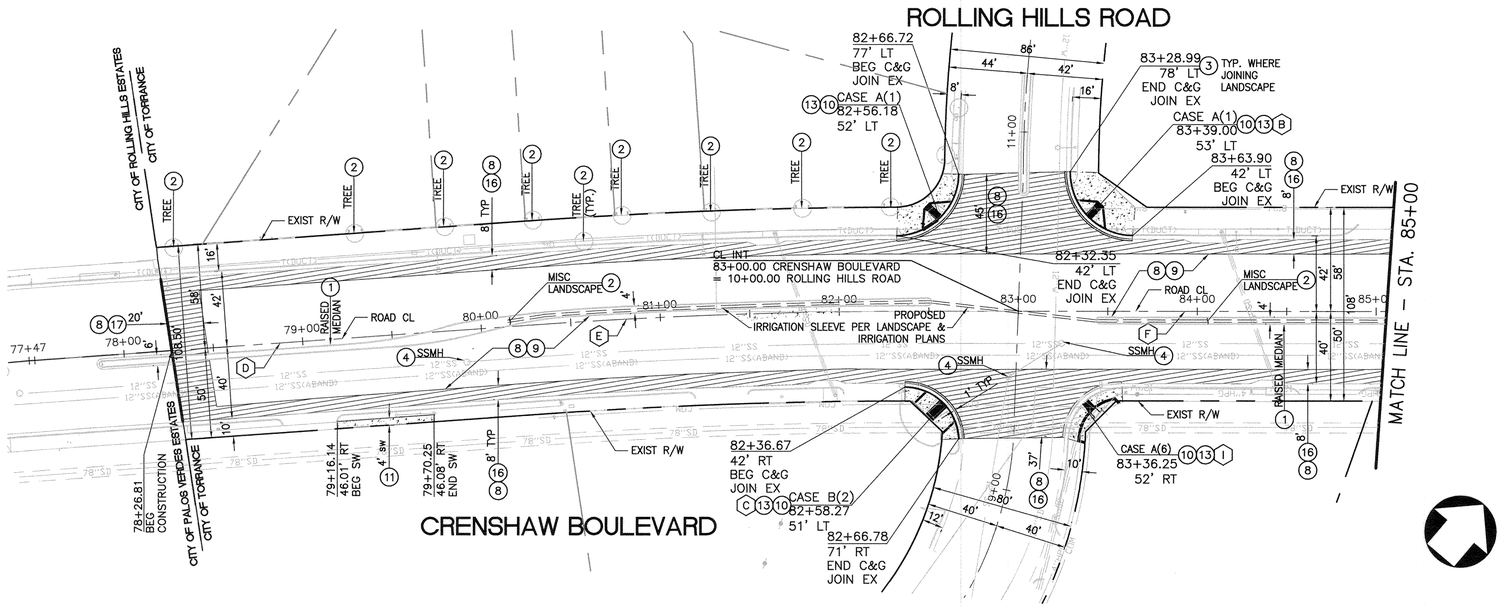

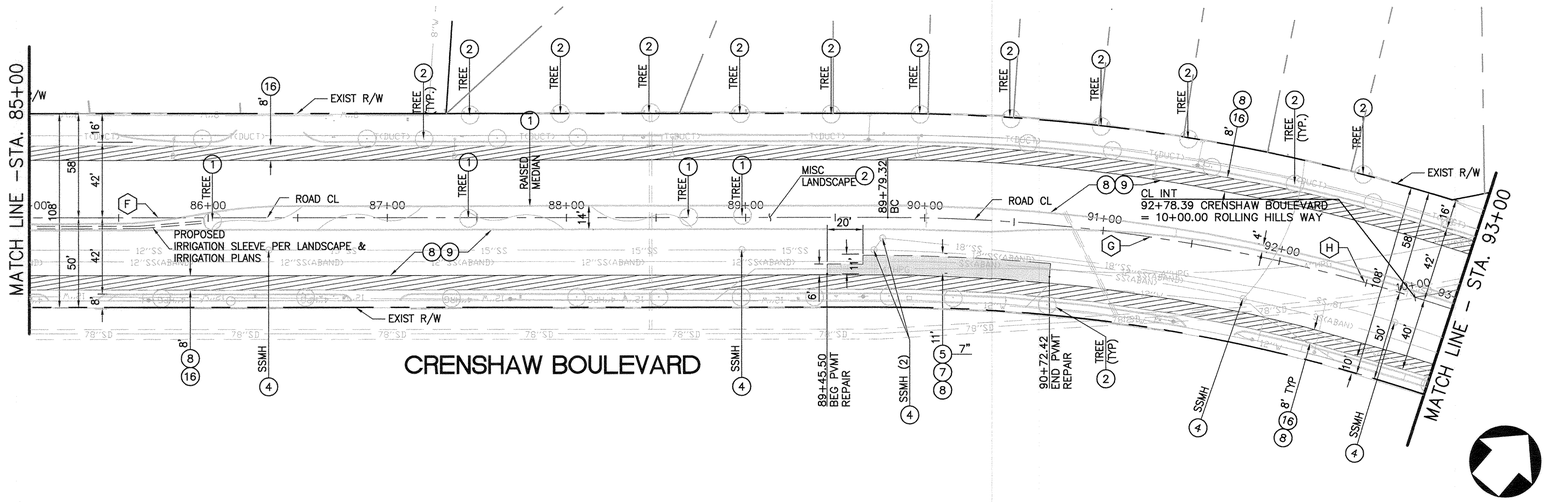

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
2. REMOVE EXISTING IMPROVEMENTS (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
5. SAWCUT AND REMOVE (DEPTH PER PLANS) EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS.
7. CONSTRUCT 5" AC (B–PG 64–10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.

HATCH / LINE LEGEND

CONSTRUCT PCC

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- EXISTING SANITARY SEWER
- SS — SO CAL GAS
- HPG — OIL PIPELINE
- OIL — SAWCUT LINE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	88°15'49"	35.00'	53.92'	33.96'
B	91°02'10"	35.00'	55.61'	35.64'
C	87°46'11"	30.00'	45.96'	28.85'
D	N50°04'36"E	–	281.12'	–
E	04°05'50"	2995.97'	214.25'	107.17'
F	N54°10'02"E	–	737.09'	–
G	17°56'05"	998.61'	312.59'	157.58'
H	N72°12'31"E	–	141.11'	–
I	88°22'29"	30.00'	46.27'	29.16'

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

ROADWAY PLAN
SOUTHERLY CITY LIMIT TO STA 93+00

FEDERAL PROJECT NO. STPL-5249 (030)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 04 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. **ST-1048**

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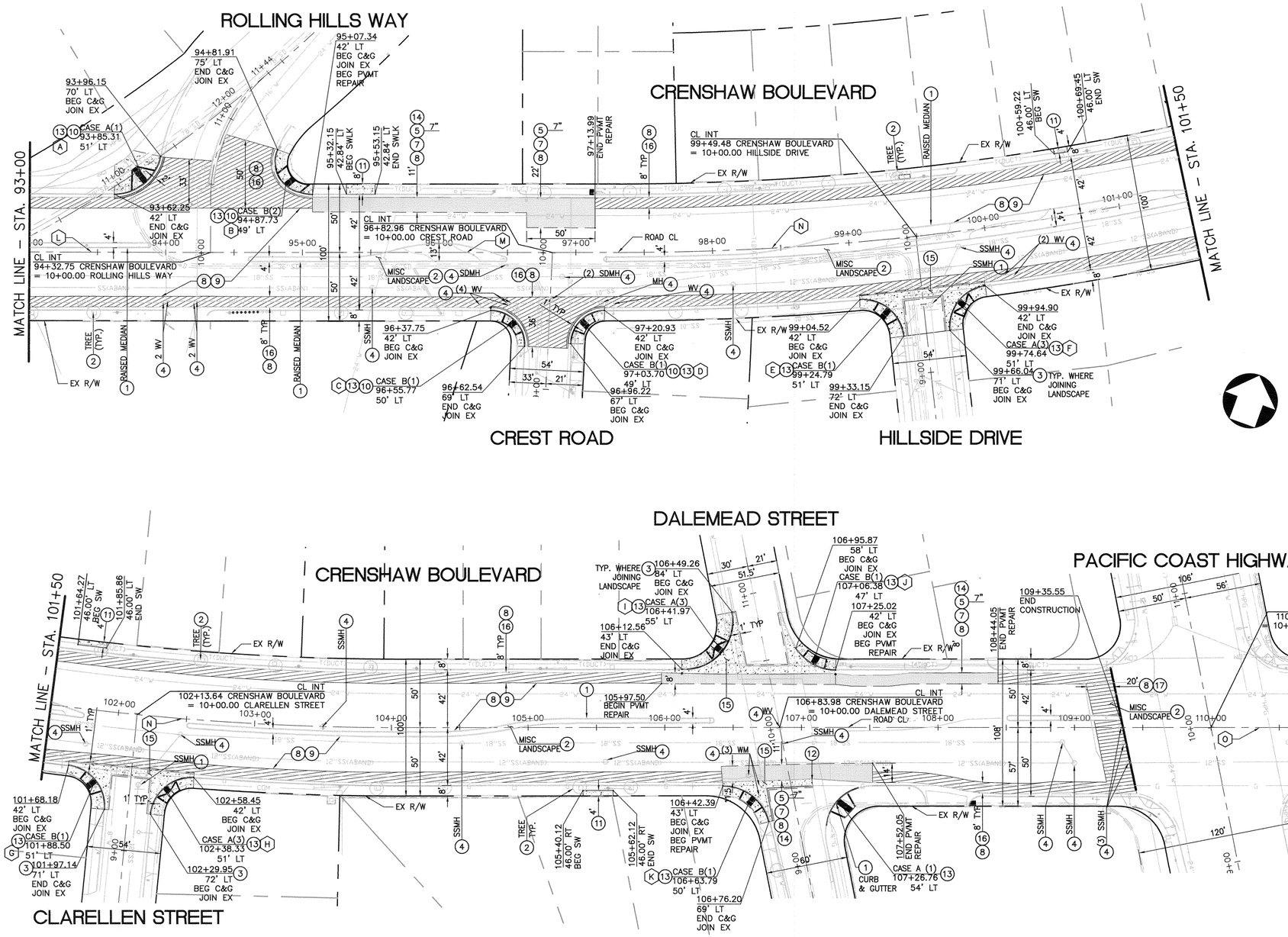

Note: For reduced sized prints, original scale is in inches

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
2. REMOVE EXISTING IMPROVEMENTS (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
5. SAWCUT AND REMOVE (DEPTH PER PLANS) EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS.
7. CONSTRUCT 5" AC (B–PG 64–10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
12. CONSTRUCT AND JOIN PCC WITH DOWEL BAR PER SPPWC STD PLAN 134–2.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
15. REMOVE EXISTING AND CONSTRUCT CROSS GUTTER PER SPPWC STD PLAN 122–2 ON 8" CMB AND 1' WIDE ADJACENT PAVEMENT SECTION WITH A 3" THICK SECTION OF AC PAVEMENT (C2–PG 70–10) ON A 5"–6" THICK SECTION OF 1–SACK CEMENT AND SAND SLURRY MIX (100–E–100) ON AN 8" THICK SECTION OF CMB, MATCH ADJOINING AC PAVEMENT
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	77°39'34"	35.00'	47.44'	28.17'
B	103°52'45"	22.50'	40.49'	28.78'
C	92°35'40"	25.00'	40.40'	26.16'
D	87°38'28"	25.00'	38.24'	23.99'
E	88°12'46"	30.00'	46.19'	29.08'
F	87°46'06"	30.00'	45.96'	28.85'
G	87°56'05"	30.00'	46.04'	28.94'
H	87°37'04"	30.00'	45.88'	28.78'
I	101°24'06"	35.00'	61.94'	42.76'
J	56°40'24"	35.00'	34.62'	18.87'
K	75°22'38"	35.00'	46.05'	27.04'
L	N72°12'31"E	–	141.11'	–
M	N72°03'15"E	–	296.28'	–
N	19°30'25"	2000'	680.92'	343.79'
O	N52°35'25"E	–	742.69'	–

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

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TWO WORKING DAYS BEFORE YOU DIG

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI, No. 64286, 06/30/2017, REGISTERED PROFESSIONAL ENGINEER, CIVIL, STATE OF CALIFORNIA

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

ROADWAY PLAN
STA 93+00 TO PACIFIC COAST HIGHWAY

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER: STEPHANIE COMON, PE

ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 05 OF 55

SCALE: AS SHOWN

SPECIFICATION NO.: SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.:

PLAN NO. **ST-1048**

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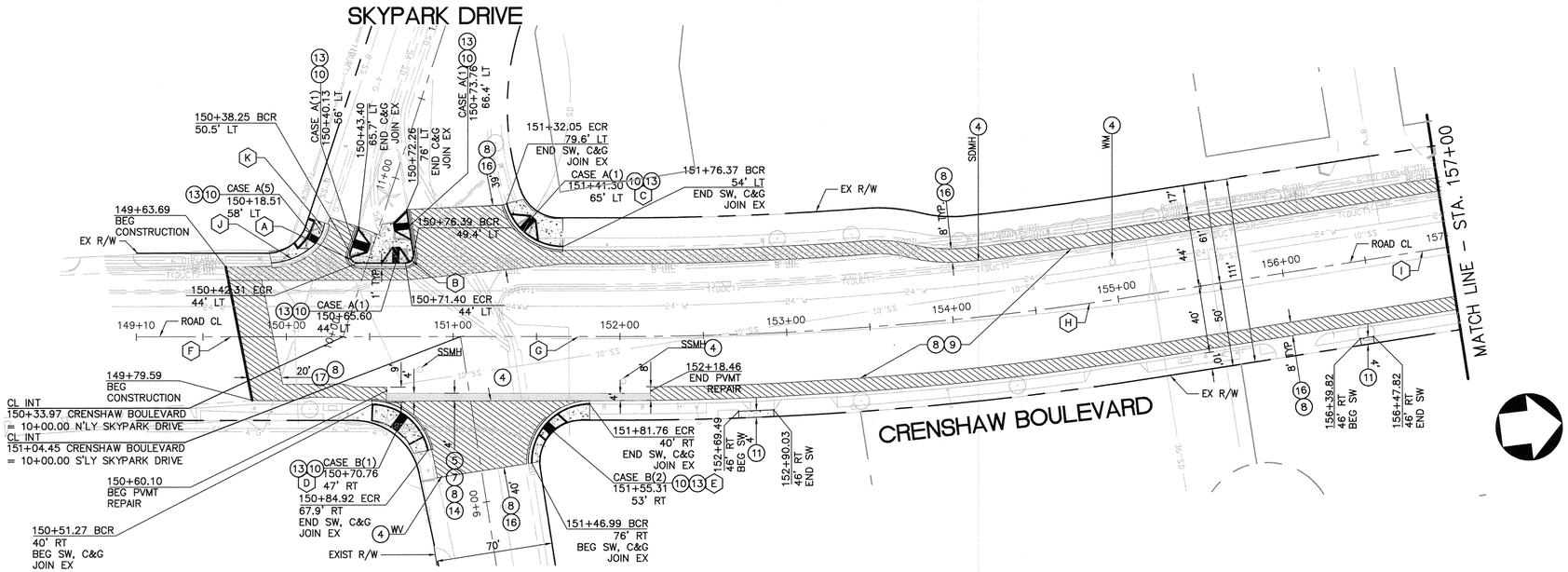

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
4. ADJUST TO GRADE (ITEM AS NOTED).
7. CONSTRUCT 5" AC (B–PG 64–10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE
- CITY BOUNDARY

LINE / CURVE TABLE

(#)	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	108°35'39"	5.00'	9.48'	6.96'
B	98°51'12"	5.00'	8.63'	5.84'
C	74°34'37"	35.00'	45.56'	26.65'
D	76°43'22"	35.04'	46.92'	27.74'
E	98°31'14"	35.00'	60.18'	40.63'
F	N09°15'18"E	–	194.45'	–
G	N09°15'18"E	–	194.45'	–
H	08°53'50"	2000'	310.57'	155.60'
I	N0°21'28"	–	1193.89'	–
J	41°49'52"	40.00'	29.20'	15.30'
K	31°37'59"	25.00'	13.80'	7.08'

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883
ARIEF NAFTALI
PE 64286, EXP 06/30/17
01/25/16 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
ROADWAY PLAN
SKY PARK DRIVE TO STA 165+50

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16 DATE

SHEET 06 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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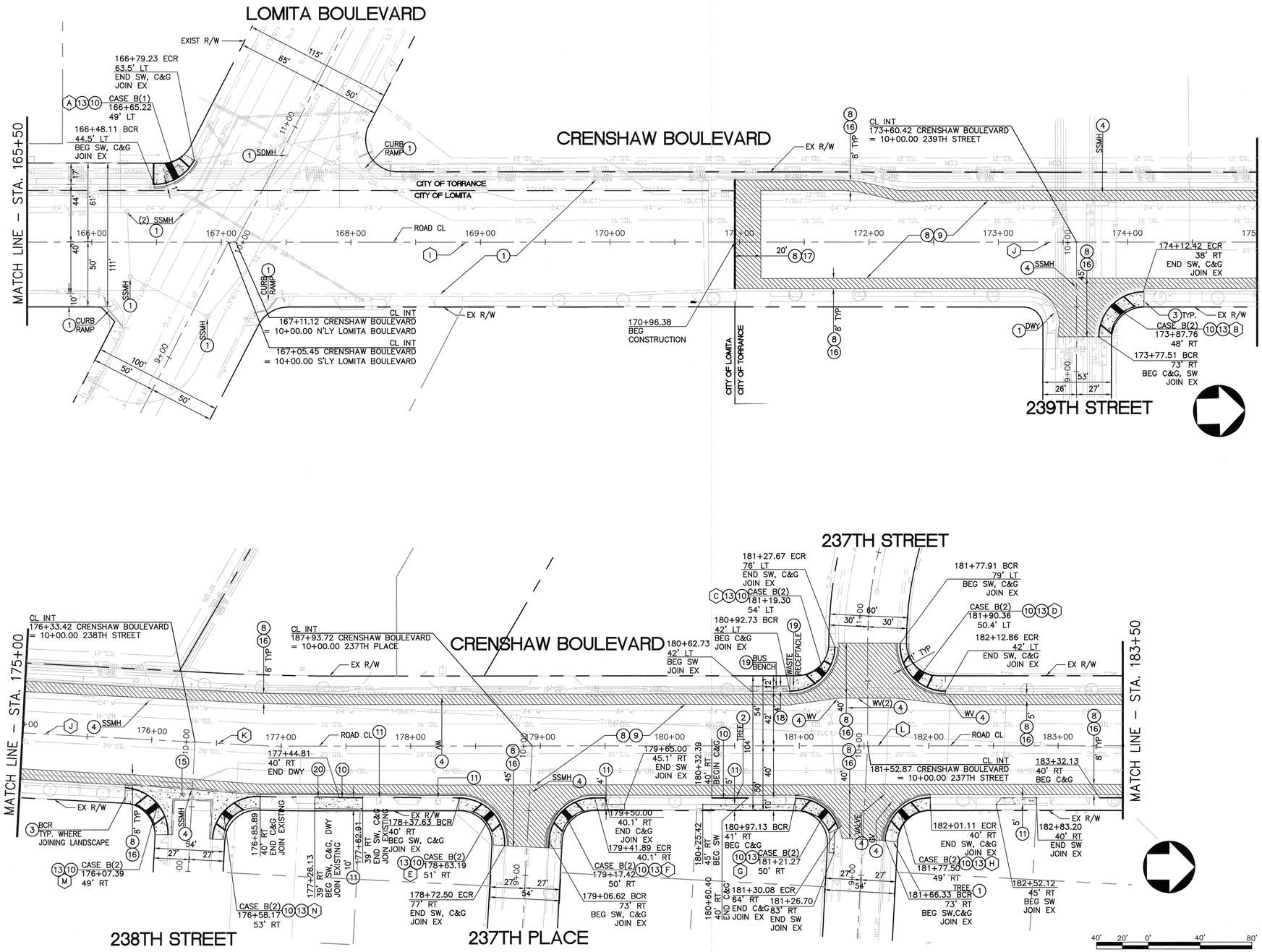

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
15. REMOVE EXISTING AND CONSTRUCT CROSS GUTTER PER SPPWC STD PLAN 122–2 ON 8" CMB AND 1' WIDE ADJACENT PAVEMENT SECTION WITH A 3" THICK SECTION OF AC PAVEMENT (C2–PG 70–10) ON A 5"–6" THICK SECTION OF 1–SACK CEMENT AND SAND SLURRY MIX (100–E–100) ON AN 8" THICK SECTION OF CMB, MATCH ADJOINING AC PAVEMENT
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.
18. REMOVE EXISTING SOD/SIDEWALK AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB. RECONFIGURE IRRIGATION SYSTEM AS NEEDED.
19. REMOVE AND REINSTALL/RELOCATE (ITEM AS NOTED).
20. REMOVE EXISTING AND CONSTRUCT DRIVEWAY PER CITY OF TORRANCE STANDARD PLAN DRIVEWAY IN NARROW PARKWAY, T108.

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE
- CITY BOUNDARY

LINE / CURVE TABLE

(#)	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	62°46'55"	35.00'	38.36'	21.36'
B	90°03'07"	35.00'	54.98'	30.01'
C	88°34'46"	34.92'	53.99'	34.06'
D	93°04'43"	35.00'	56.86'	36.93'
E	92°56'25"	35.00'	56.77'	36.84'
F	86°56'30"	35.00'	53.11'	33.18'
G	75°02'47"	33.00'	43.22'	25.34'
H	86°34'21"	35.00'	52.88'	32.97'
I	N0°21'28"E	–	1193.89'	–
J	N00°18'52"E	–	654.93'	–
K	N00°20'52"E	–	333.95'	–
L	N02°41'40"E	–	754.60	–
M	89°6'25"	35.00'	54.43'	34.46'
N	88°56'00"	35.00'	54.33'	34.35'

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17
01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

ROADWAY PLAN
LOMITA BOULEVARD TO STA 183+50

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET	07	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

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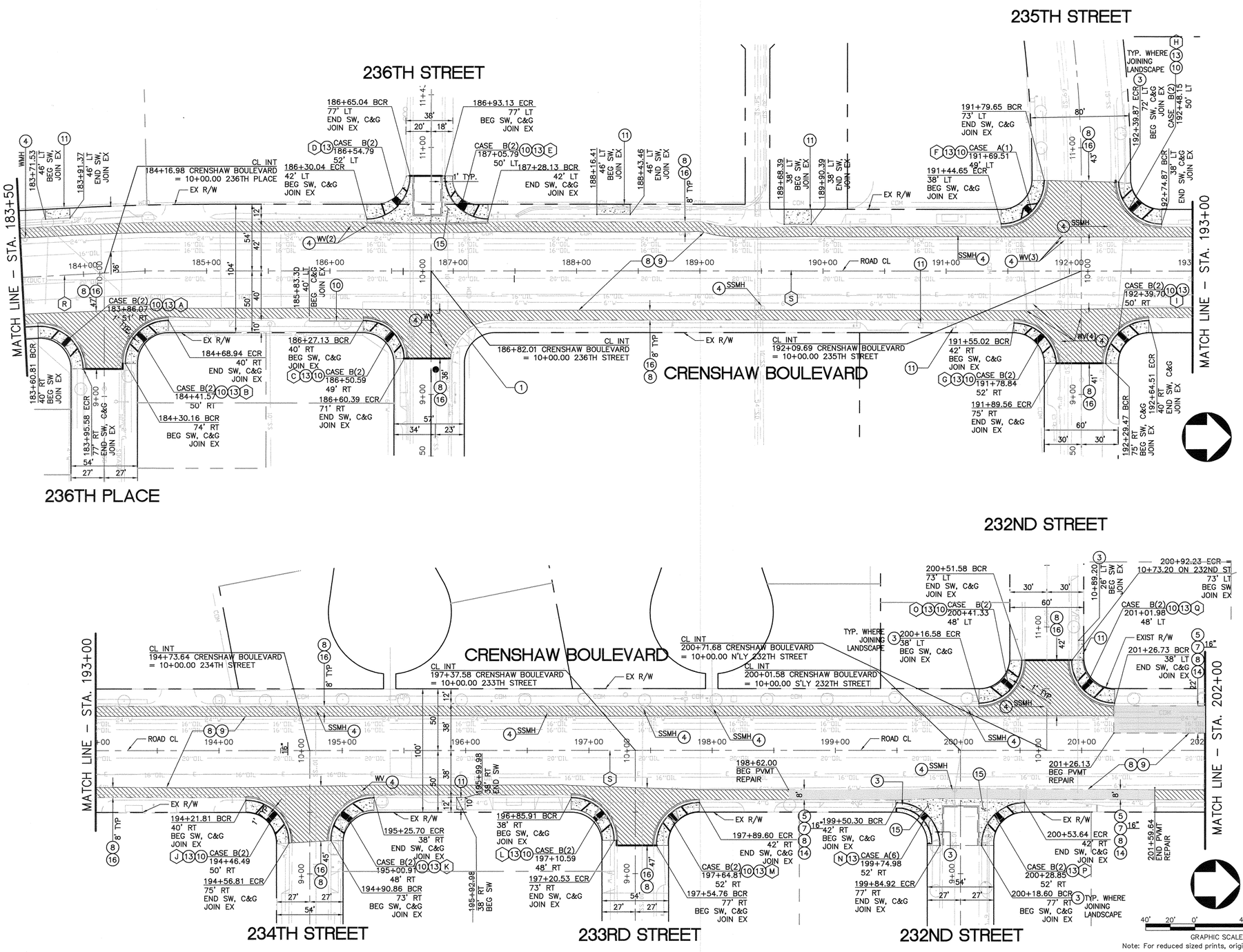

Note: For reduced sized prints, original scale is in inches

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
5. SAWCUT AND REMOVE (DEPTH PER PLANS) EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS.
7. CONSTRUCT 5" AC (B-PG 64-10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2-PG 64-10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2-8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120-2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112-2 AND 113-2 ON 4" CMB.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111-5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
15. REMOVE EXISTING AND CONSTRUCT CROSS GUTTER PER SPPWC STD PLAN 122-2 ON 8" CMB AND 1' WIDE ADJACENT PAVEMENT SECTION WITH A 3" THICK SECTION OF AC PAVEMENT (C2-PG 70-10) ON A 5"-6" THICK SECTION OF 1-SACK CEMENT AND SAND SLURRY MIX (100-E-100) ON AN 8" THICK SECTION OF CMB, MATCH ADJOINING AC PAVEMENT
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
23. CONSTRUCT TREE WELL PER CITY OF TORRANCE STD PLAN T401 TREE PLANTING.

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	92°22'26"	35.00'	56.43'	36.48'
B	90°36'37"	34.73'	54.92'	35.10'
C	87°45'47"	32.00'	49.02'	30.77'
D	90°00'00"	35.00'	54.98'	35.00'
E	90°00'00"	35.00'	54.98'	35.00'
F	90°30'17"	35.00'	55.29'	35.31'
G	85°12'56"	35.14'	52.26'	32.32'
H	88°59'57"	34.82'	54.08'	34.21'
I	89°59'15"	35.00'	54.97'	34.99'
J	89°41'14"	35.00'	54.79'	34.81'
K	89°58'26"	35.00'	54.96'	34.98'
L	90°00'00"	35.00'	54.98'	35.00'
M	90°00'00"	35.00'	54.98'	35.00'
N	90°00'00"	35.00'	54.98'	35.00'
O	90°00'00"	35.00'	54.98'	35.00'
P	90°00'00"	35.00'	54.98'	35.00'
Q	90°00'00"	35.00'	54.98'	35.00'
R	N02°41'40"	–	754.60'	–
S	N00°20'17"E	–	2080.38'	–

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

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

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

ROADWAY PLAN
STA 183+50 TO STA 202+00

DESIGNED BY: WB | DRAWN BY: WB

PROJECT ENGINEER: Stephanie Comon
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE — 4/8/16 DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 08 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. **ST-1048**

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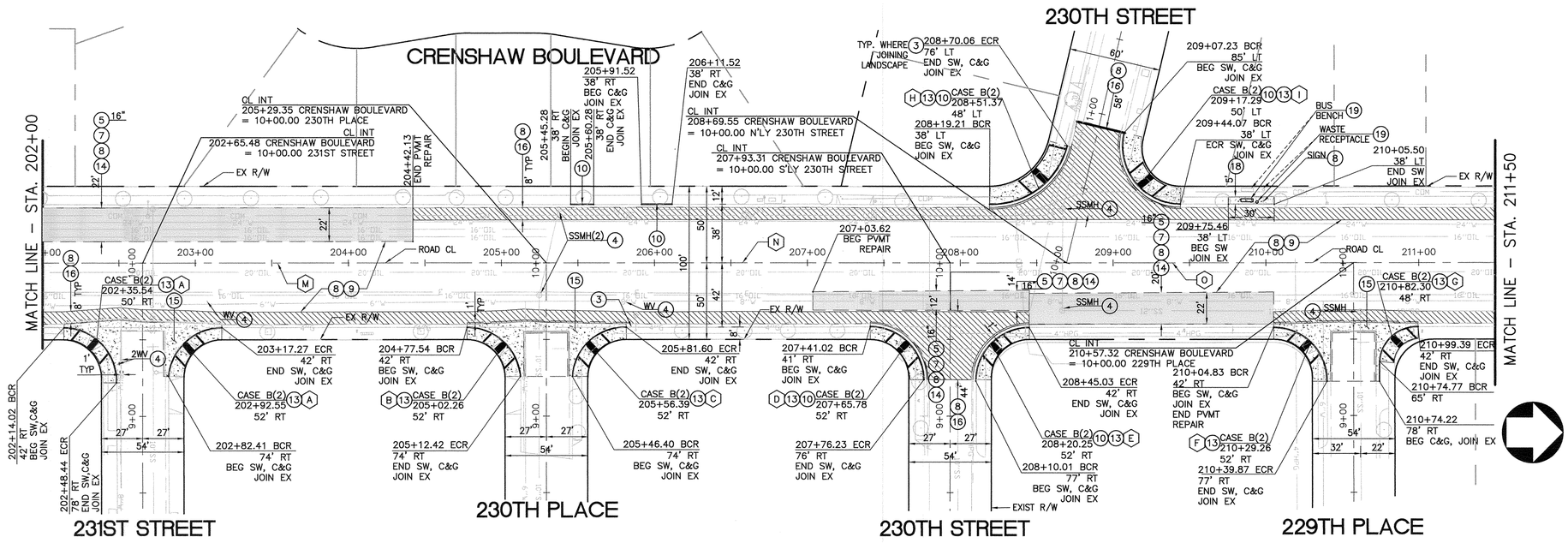

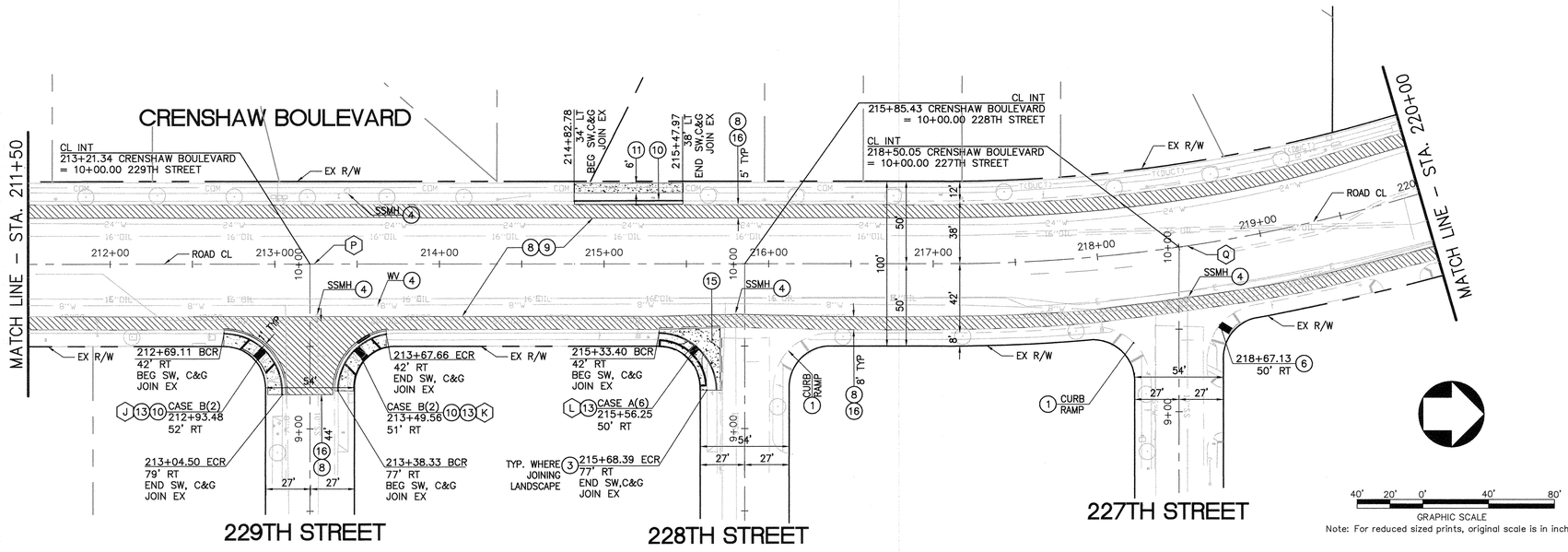

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
5. SAWCUT AND REMOVE (DEPTH PER PLANS) EXISTING PAVEMENT SECTION AND UNCLASSIFIED MATERIALS.
6. INSTALL DETECTABLE WARNING SURFACE PER SPPWC STD PLAN 111–5.
7. CONSTRUCT 5" AC (B–PG 64–10) BASE COURSE IN TWO LIFTS (LOWER LIFT = 3")
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
11. REMOVE EXISTING AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
14. CONSTRUCT 9" CRUSHED MISCELLANEOUS BASE (CMB).
15. REMOVE EXISTING AND CONSTRUCT CROSS GUTTER PER SPPWC STD PLAN 122–2 ON 8" CMB AND 1' WIDE ADJACENT PAVEMENT SECTION WITH A 3" THICK SECTION OF AC PAVEMENT (C2–PG 70–10) ON A 5"–6" THICK SECTION OF 1–SACK CEMENT AND SAND SLURRY MIX (100–E–100) ON AN 8" THICK SECTION OF CMB, MATCH ADJOINING AC PAVEMENT
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
18. REMOVE EXISTING SOD/SIDEWALK AND CONSTRUCT 3.5" THICK PCC SIDEWALK PER SPPWC STD PLAN 112–2 AND 113–2 ON 4" CMB. RECONFIGURE IRRIGATION SYSTEM AS NEEDED.
19. REMOVE AND REINSTALL/RELOCATE (ITEM AS NOTED).

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE
- COM — TIME WARNER

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	84°51'27"	35.00'	51.84'	31.99'
B	85°13'26"	35.00'	52.06'	32.20'
C	88°35'05"	34.15'	52.80'	33.32'
D	89°30'12"	35.00'	54.67'	34.70'
E	88°35'39"	35.00'	54.12'	34.15'
F	91°53'50"	34.50'	55.33'	35.66'
G	87°43'14"	24.50'	37.51'	23.54'
H	77°44'21"	50.67'	68.76'	40.84'
I	103°06'58"	38.00'	68.39'	47.87'
J	92°29'34"	35.50'	57.31'	37.08'
K	80°35'15"	35.00'	49.23'	29.68'
L	89°36'35"	35.00'	54.74'	34.76'
M	N00°20'17"E	–	2080.38'	–
N	N00°23'37"E	–	263.96'	–
O	N00°18'25"E	–	528.03'	–
P	N00°29'45"E	–	385.85'	–
Q	16°12'10"	1000'	282.79'	142.35'

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

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

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PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS

REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

ROADWAY PLAN
STA 202+00 TO STA 220+00

DESIGNED BY: WB
DRAWN BY: WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 09 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. **ST-1048**

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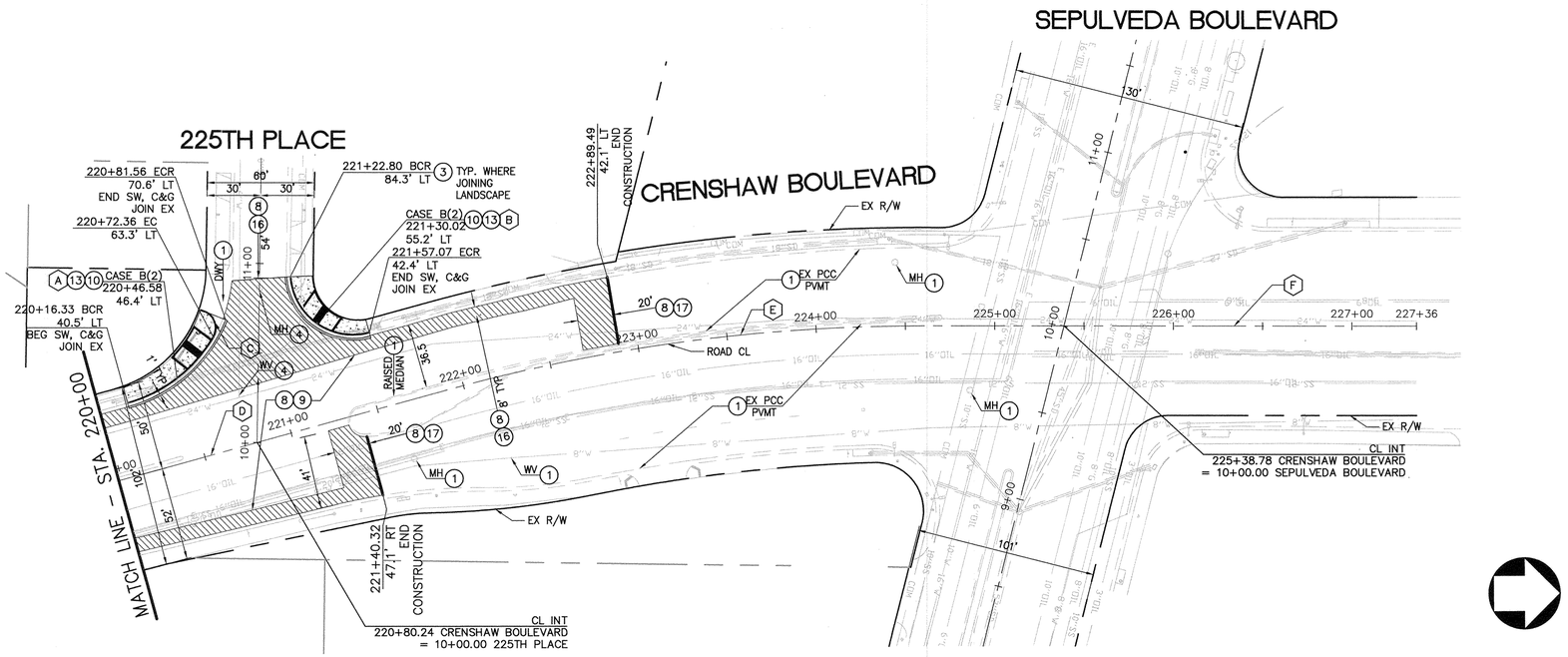

CONSTRUCTION NOTES:

1. PROTECT IN PLACE (ITEM AS NOTED).
3. REGRADE AND RESTORE LANDSCAPED AREA TO MATCH EXISTING.
4. ADJUST TO GRADE (ITEM AS NOTED).
8. CONSTRUCT 3" AC (C2–PG 64–10) OVERLAY IN TWO LIFTS (1.5" EACH).
9. COLD MILL ASPHALT CONCRETE PAVEMENT 2".
10. REMOVE EXISTING AND CONSTRUCT TYPE A2–8 CURB AND GUTTER ON 8" CMB PER SPPWC STD PLAN 120–2 AND CITY OF TORRANCE STD PLAN T115, AND DETAIL E, SHEET 03 WIDTH TO MATCH EXISTING.
13. REMOVE EXISTING AND CONSTRUCT 3.5" THICK CURB RAMP PER SPPWC STD PLAN 111–5 ON 4" CMB WITH DETECTABLE WARNING SURFACE. CASE AND TYPE PER PLAN. ADJUST TO GRADE SURFACE UTILITY FEATURES.
16. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL A OR D, SHEET 03.
17. COLDMILL EXISTING ASPHALT CONCRETE PAVEMENT AT VARIABLE DEPTH PER DETAIL C, SHEET 03.

HATCH / LINE LEGEND

- COLD MILL WITH VARIABLE DEPTH
- FULL DEPTH PAVEMENT
- G — EXISTING GAS
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER
- T — AT&T
- COM — TIME WARNER
- CONSTRUCT PCC
- SS — EXISTING SANITARY SEWER
- HPG — SO CAL GAS
- OIL — OIL PIPELINE
- SAWCUT LINE

LINE / CURVE TABLE

#	DELTA/BRG	RADIUS	LENGTH	TANGENT
A	44°25'01"	60.00'	62.02'	32.66'
B	101°18'49"	35.00'	61.89'	42.70'
C	98°12'48"	10.00'	17.14'	11.55'
D	N15°52'25"E	–	199.35'	–
E	15°27'05"	1000'	269.68'	135.66'
F	N00°25'20"W	–	277.22'	–

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTH IS UNKNOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL TAKE CARE DURING EXCAVATION AND PROTECT IN PLACE ALL UTILITIES ENCOUNTERED. DAMAGED UTILITY FACILITIES SHALL BE REPAIRED AT NO ADDITIONAL COST.
2. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC1 WORKS CONSTRUCTION 2012 EDITION, UNLESS OTHERWISE NOTED IN THE SPECIAL PROVISIONS.
3. PROTECT IN PLACE ALL UTILITY SURFACE FEATURES UNLESS OTHERWISE NOTED ON PLANS.
4. PROTECT IN PLACE ALL TREES UNLESS OTHERWISE NOTED ON PLANS.
5. PROTECT IN PLACE ALL CURB RAMPS, DRIVEWAYS, CURB AND GUTTER, AND SIDEWALK UNLESS OTHERWISE NOTED ON PLANS.
6. ALL UTILITIES AND OTHER FEATURES BEHIND BACK OF CURB SHALL BE PROTECTED IN PLACE, UNLESS OTHERWISE NOTED ON THIS SHEET.
7. EXISTING OVERHEAD UTILITY LINES NOT SHOWN.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in 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. Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
ROADWAY PLAN
STA 220+00 TO SEPULVEDA BOULEVARD

DESIGNED BY: WB | DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 10 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. **ST-1048**

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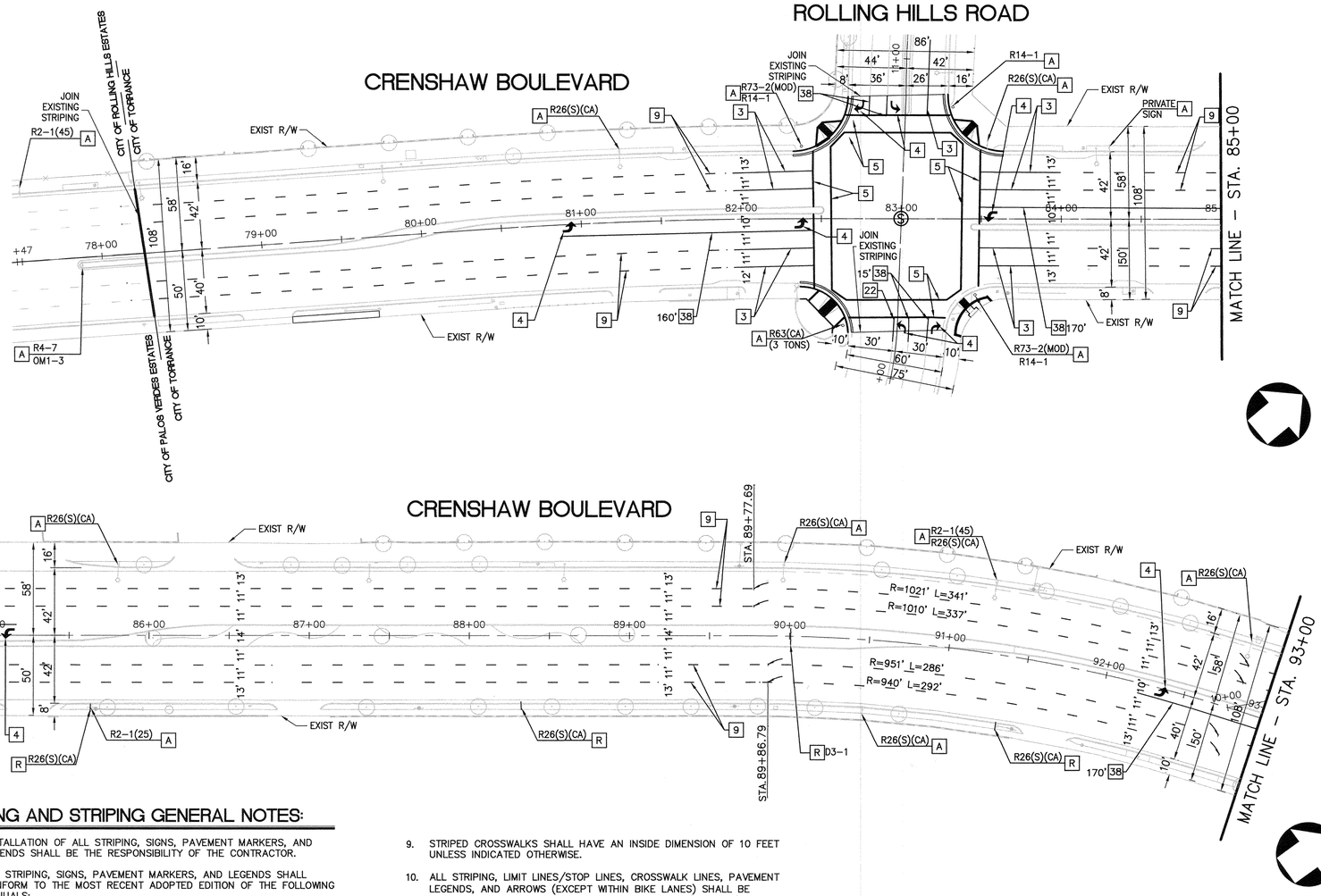


SIGNING AND STRIPING NOTES:

- [3] INSTALL 50 L.F. 4" SOLID WHITE LANE LINE WITH TYPE "G" RPM'S AT EACH END OF LINE, UNLESS OTHERWISE SHOWN
- [4] INSTALL TYPE IV PAVEMENT ARROW (L OR R) PER CALTRANS STD PLAN A24A.
- [5] INSTALL 12" WHITE CROSSWALK (10' CLEAR) OR LIMIT LINE PER CALTRANS STD PLAN A24E.
- [9] INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 9.
- [22] INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DETAIL 22.
- [38] INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38. LINE LENGTH AS SHOWN.
- [A] PROTECT IN PLACE EXISTING SIGN AND POST
- [R] REMOVE EXISTING SIGN(S) AND REPLACE IN-KIND ON EXISTING POLE

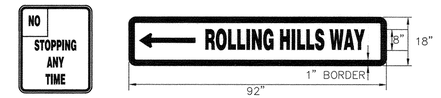
LEGEND:

EXISTING	PROPOSED	
		TYPE IV (L or R) PAVEMENT ARROW
		TYPE VII (L or R) PAVEMENT ARROW
		TRAFFIC STRIPE OR MARKING
	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
	Ⓢ	SIGNALIZED INTERSECTION
	XX'	LANE WIDTH FROM CENTER OF STRIP TO CENTER OF STRIPE OR TO FACE OF CURB

SIGNING AND STRIPING GENERAL NOTES:

1. INSTALLATION OF ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS:
   CALIFORNIA MUTCD, LATEST EDTION
   CALTRANS STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION
3. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PREFORATED STEEL TUBING WITH BREAKAWAY BASE.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW, WITH GLASS BEADS PER SPECIFICATIONS.
7. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
8. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN. ALL SIGNS SHALL BE MADE OF 3M DIAMOND GRADE CUBED, WITH PROTECTIVE OVERLAY FILM AND MATCHED COMPONENTS SYSTEM WARRANTY, (12 YEARS) ON 0.080 ALUMINUM WITH "TORRANCE" ON BORDER.
9. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
10. ALL STRIPING, LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE THERMOPLASTIC. CURB MARKINGS SHALL BE PAINT (2 COATS).
11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS FOR EACH CONSTRUCTION PHASE SHALL BE INSTALLED AT THE COMPLETION OF EACH CONSTRUCTION PHASE AND WHEN DIRECTED BY THE ENGINEER.
12. ALL TYPE IV PAVEMENT ARROWS AT THE CROSSWALK SHALL BE CENTERED BETWEEN THE FIRST AND SECOND LOOP DETECTORS.
13. INSTALLATION OF PERMANENT SIGNING AND STRIPING SHALL BE DONE ONLY AFTER APPROVAL BY THE ENGINEER OF THE STRIPING CAT-TRACKS. CONTACT THE ENGINEER AT (310) 618-3079 TO SCHEDULE AN INSPECTION AT LEAST 24 HOURS BEFORE COMPLETING LAYOUTS. THE ENGINEER OR DESIGNEE MUST APPROVE ANY CHANGES DUE TO PLAN DISCREPANCIES OR REVISIONS.
14. STRIPING SHALL BEGIN AND TERMINATE AT THE CENTER CORNER DELTA, AT THE LIMIT LINES, OR THE BACK OF THE CROSSWALK.
15. CONTRACTOR SHALL INSTALL A TYPE D BLUE REFLECTIVE MARKER AT EACH FIRE HYDRANT LOCATION WITHIN THE PROJECT LIMITS. THE REFLECTOR SHALL BE 6" FROM THE CENTERLINE STRIPE, OR APPROXIMATE CENTER OF THE PAVEMENT WHERE THERE IS NO CENTERLINE STRIPE, ON THE SIDE NEAREST THE FIRE HYDRANT (PER MUTCD 2003, CA SUPPLEMENT FIG 3B-102). MARKER LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

NEW TRAFFIC SIGNS ON THIS SHEET



GRAPHIC SCALE
40' 20' 0' 40' 80'
Note: For reduced sized prints, original scale is in 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. Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

SIGNING AND STRIPING PLAN
SOUTHERLY CITY LIMIT TO STA 93+00

FEDERAL PROJECT NO. STPL-5249(030)

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER: Stephanie Comon
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

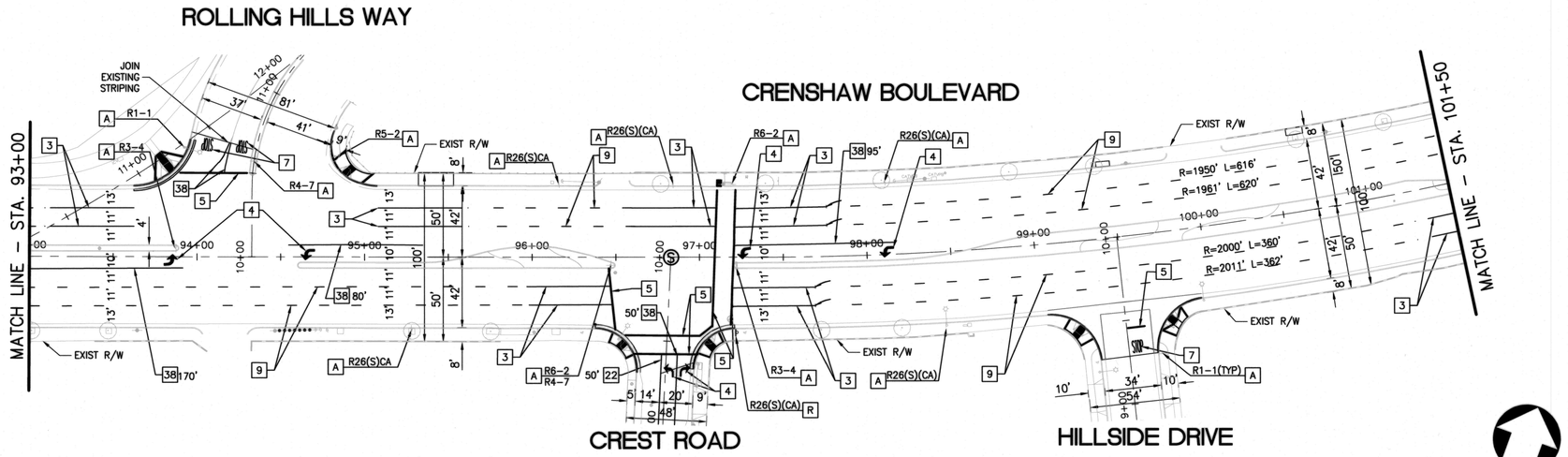
APPROVED BY:

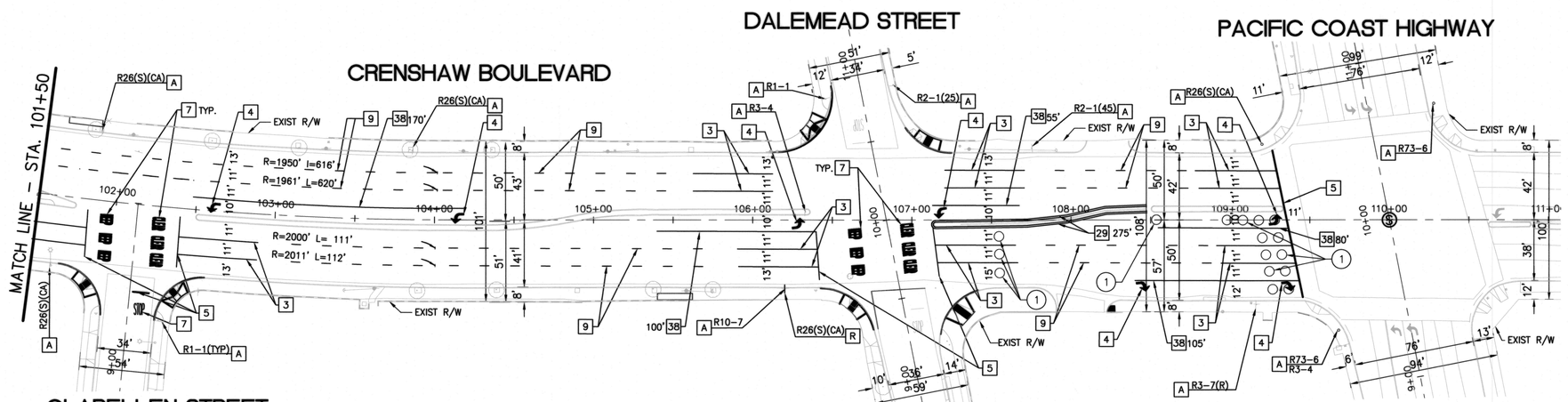
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

4/8/16
DATE

SHEET 11 OF 55
SCALE: AS SHOWN
SPECIFICATON NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.: ST-1048
PLAN NO.: C74-84A

M:\2TOR050500\TRANSP\SHEETS\SS-01.dwg





CONSTRUCTION NOTE

(1) INSTALL CALTRANS TYPE "E" DETECTOR LOOPS AND SAWCUT TO EXISTING PULL BOX AS INDICATED PER CALTRANS STANDARD PLAN ES-5B.

SIGNING AND STRIPING NOTES:

- [3] INSTALL 50 L.F. 4" SOLID WHITE LANE LINE WITH TYPE "G" RPM'S AT EACH END OF LINE, UNLESS OTHERWISE SHOWN
- [4] INSTALL TYPE IV PAVEMENT ARROW (L OR R) PER CALTRANS STD PLAN A24A.
- [5] INSTALL 12" WHITE CROSSWALK (10' CLEAR) OR LIMIT LINE PER CALTRANS STD PLAN A24E.
- [7] INSTALL PAVEMENT MARKING PER CALTRANS STD PLAN A24A–A24E.
- [9] INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 9.
- [22] INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DETAIL 22.
- [29] INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DETAIL 29 AS SHOWN.
- [38] INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38. LINE LENGTH AS SHOWN.
- [A] PROTECT IN PLACE EXISTING SIGN AND POST
- [R] REMOVE EXISTING SIGN(S) AND REPLACE IN-KIND ON EXISTING POLE

LEGEND:

EXISTING	PROPOSED	
		TYPE IV (L or R) PAVEMENT ARROW
		TYPE VII (L or R) PAVEMENT ARROW
		TRAFFIC STRIPE OR MARKING
	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
Ⓢ		SIGNALIZED INTERSECTION
XX'		LANE WIDTH FROM CENTER OF STRIP TO CENTER OF STRIPE OR TO FACE OF CURB

NEW TRAFFIC SIGNS ON THIS SHEET

R26(S)(CA)

SIGNING AND STRIPING GENERAL NOTES:

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   CALTRANS STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION
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4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PREFORATED STEEL TUBING WITH BREAKAWAY BASE.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW, WITH GLASS BEADS PER SPECIFICATIONS.
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11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS FOR EACH CONSTRUCTION PHASE SHALL BE INSTALLED AT THE COMPLETION OF EACH CONSTRUCTION PHASE AND WHEN DIRECTED BY THE ENGINEER.
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15. CONTRACTOR SHALL INSTALL A TYPE D BLUE REFLECTIVE MARKER AT EACH FIRE HYDRANT LOCATION WITHIN THE PROJECT LIMITS. THE REFLECTOR SHALL BE 6" FROM THE CENTERLINE STRIPE, OR APPROXIMATE CENTER OF THE PAVEMENT WHERE THERE IS NO CENTERLINE STRIPE, ON THE SIDE NEAREST THE FIRE HYDRANT (PER MUTCD 2003, CA SUPPLEMENT FIG 3B-102). MARKER LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

40' 20' 0' 40' 80'
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TWO WORKING DAYS BEFORE YOU DIG

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

SIGNING AND STRIPING PLAN
STA 93+00 TO PACIFIC COAST HIGHWAY

DESIGNED BY: SC | DRAWN BY: DB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

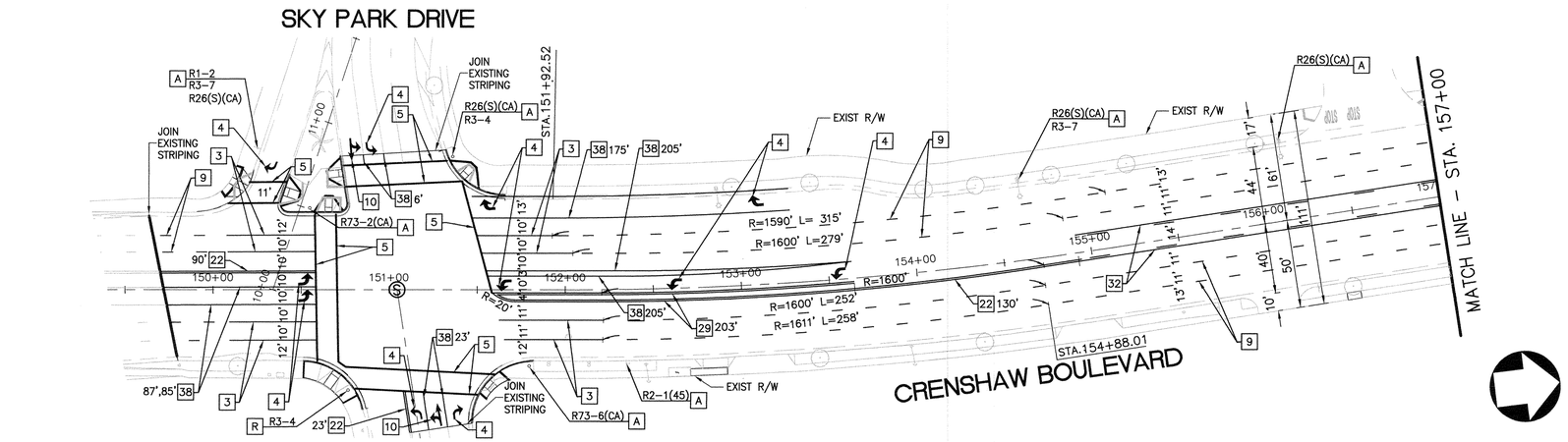
REGISTERED PROFESSIONAL ENGINEER CRAIG BILEZERIAN No. 55339 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA

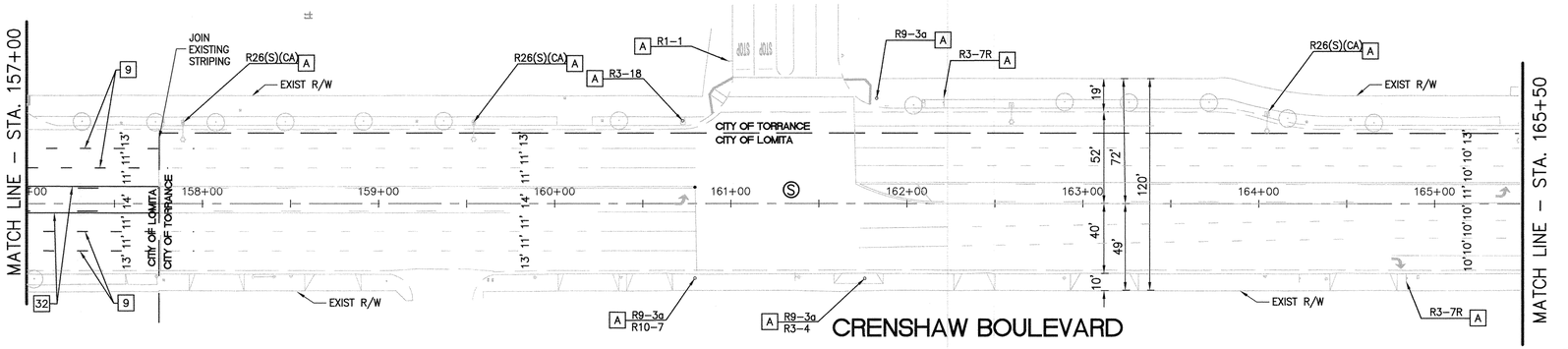
APPROVED BY: 6/15/2016 DATE
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

SHEET 12 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. **ST-1048**
PLAN NO. C74-84A

\\Pwfs\sndata\ENG\CIP_Crenshaw Blvd Rehabilitation, I-120\Design\Final Plans\CAD Files\SS-02(COT).dwg





SIGNING AND STRIPING NOTES:

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- [5] INSTALL 12" WHITE CROSSWALK (10' CLEAR) OR LIMIT LINE PER CALTRANS STD PLAN A24E.
- [9] INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 9.
- [10] INSTALL TYPE VII PAVEMENT ARROW (L OR R) PER CALTRANS STD PLAN A24A.
- [22] INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DETAIL 22.
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- [38] INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38. LINE LENGTH AS SHOWN.
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- [R] REMOVE EXISTING SIGN(S) AND REPLACE IN-KIND ON EXISTING POLE

LEGEND:

EXISTING	PROPOSED	
		TYPE IV (L or R) PAVEMENT ARROW
		TYPE VII (L or R) PAVEMENT ARROW
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	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
	Ⓢ	SIGNALIZED INTERSECTION
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SIGNING AND STRIPING GENERAL NOTES (CONT):

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NEW TRAFFIC SIGNS ON THIS SHEET

R3-4

GRAPHIC SCALE
40' 20' 0' 40' 80'
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PLANS PREPARED BY:

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

SIGNING AND STRIPING PLAN
SKYPARK DRIVE TO STA 165+50

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER: Stephanie Connon
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
4/8/16
CRAIG BILEZERIAN, PE DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 13 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. **ST-1048**
PLAN NO. C69-35C

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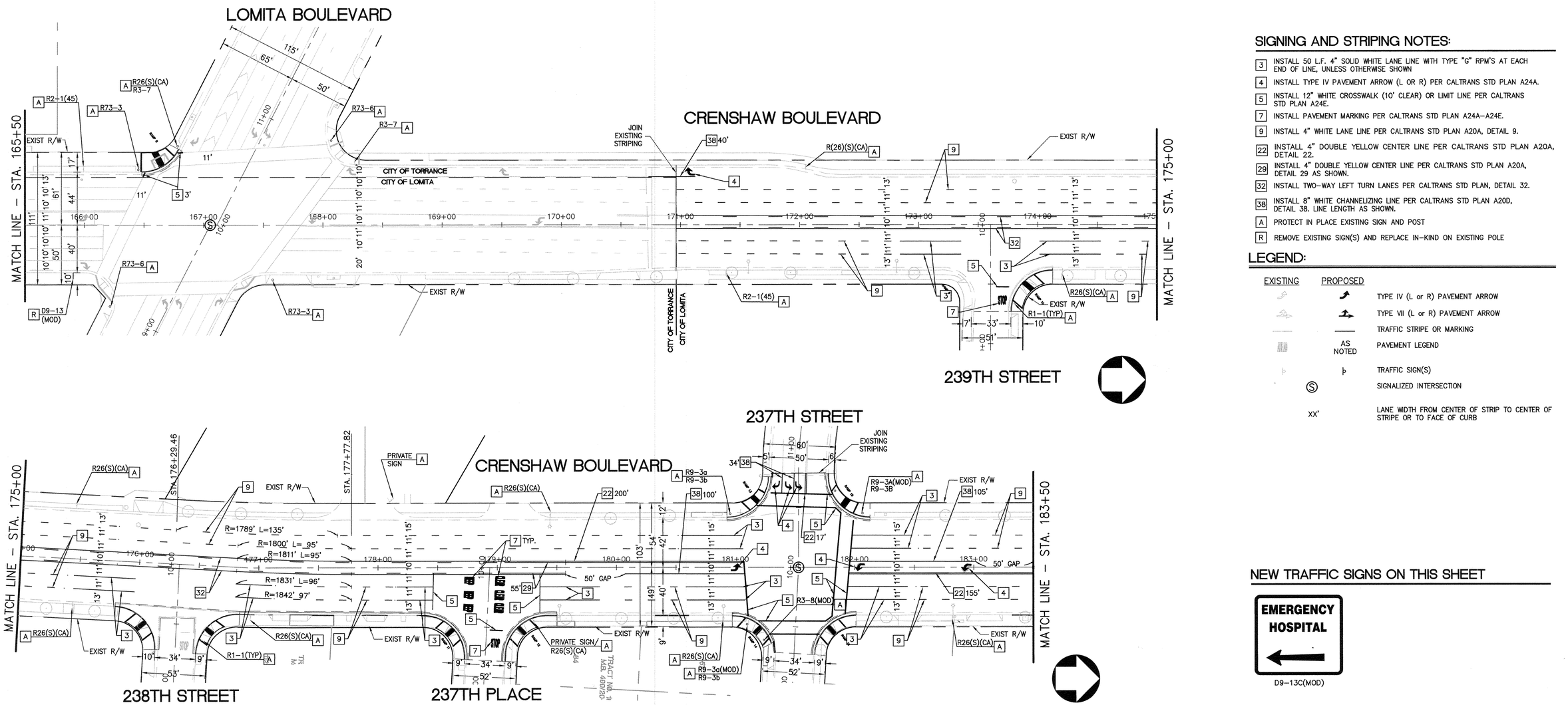

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LEGEND:

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	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
Ⓢ		SIGNALIZED INTERSECTION
XX'		LANE WIDTH FROM CENTER OF STRIP TO CENTER OF STRIPE OR TO FACE OF CURB

NEW TRAFFIC SIGNS ON THIS SHEET

D9–13C(MOD)

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PLANS PREPARED BY:

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

SIGNING AND STRIPING PLAN
STA 165+50 TO STA 183+50

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER:
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/6/16
DATE

SHEET 14 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. **ST-1048**
PLAN NO. C69-35C

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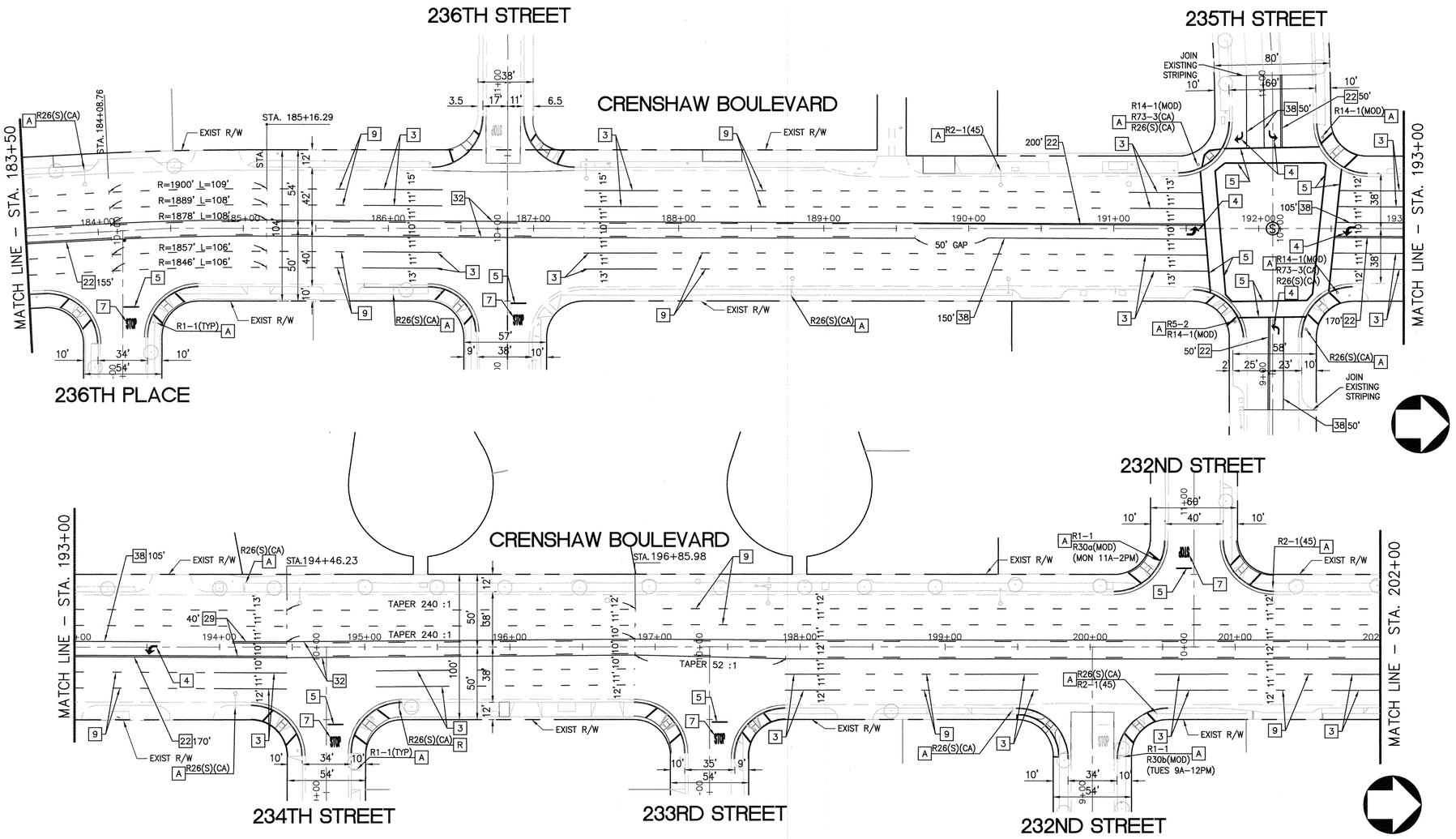

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NEW TRAFFIC SIGNS ON THIS SHEET

R26(S)(CA)

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11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS FOR EACH CONSTRUCTION PHASE SHALL BE INSTALLED AT THE COMPLETION OF EACH CONSTRUCTION PHASE AND WHEN DIRECTED BY THE ENGINEER.
12. ALL TYPE IV PAVEMENT ARROWS AT THE CROSSWALK SHALL BE CENTERED BETWEEN THE FIRST AND SECOND LOOP DETECTORS.
13. INSTALLATION OF PERMANENT SIGNING AND STRIPING SHALL BE DONE ONLY AFTER APPROVAL BY THE ENGINEER OF THE STRIPING CAT–TRACKS. CONTACT THE ENGINEER AT (310) 618–3079 TO SCHEDULE AN INSPECTION AT LEAST 24 HOURS BEFORE COMPLETING LAYOUTS. THE ENGINEER OR DESIGNEE MUST APPROVE ANY CHANGES DUE TO PLAN DISCREPANCIES OR REVISIONS.
14. STRIPING SHALL BEGIN AND TERMINATE AT THE CENTER CORNER DELTA, AT THE LIMIT LINES, OR THE BACK OF THE CROSSWALK.
15. CONTRACTOR SHALL INSTALL A TYPE D BLUE REFLECTIVE MARKER AT EACH FIRE HYDRANT LOCATION WITHIN THE PROJECT LIMITS. THE REFLECTOR SHALL BE 6" FROM THE CENTERLINE STRIPE, OR APPROXIMATE CENTER OF THE PAVEMENT WHERE THERE IS NO CENTERLINE STRIPE, ON THE SIDE NEAREST THE FIRE HYDRANT (PER MUTCD 2003, CA SUPPLEMENT FIG 3B–102). MARKER LOCATION SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATION.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in 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. Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

SIGNING AND STRIPING PLAN
STA 183+50 TO STA 202+00

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER:
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET 15 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. **ST-1048**
PLAN NO. C69-35C

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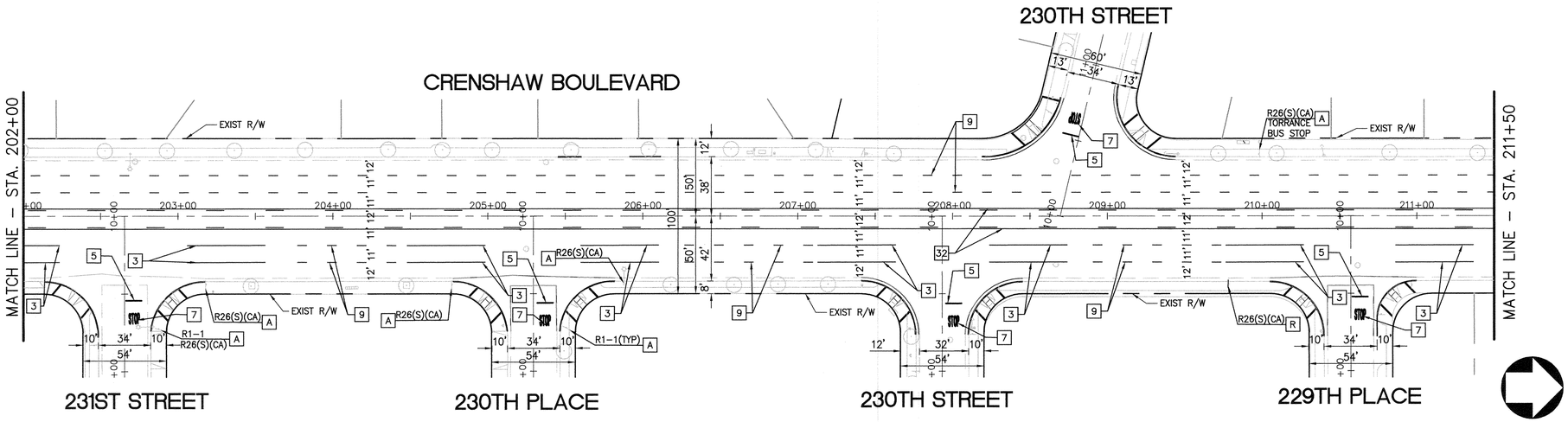

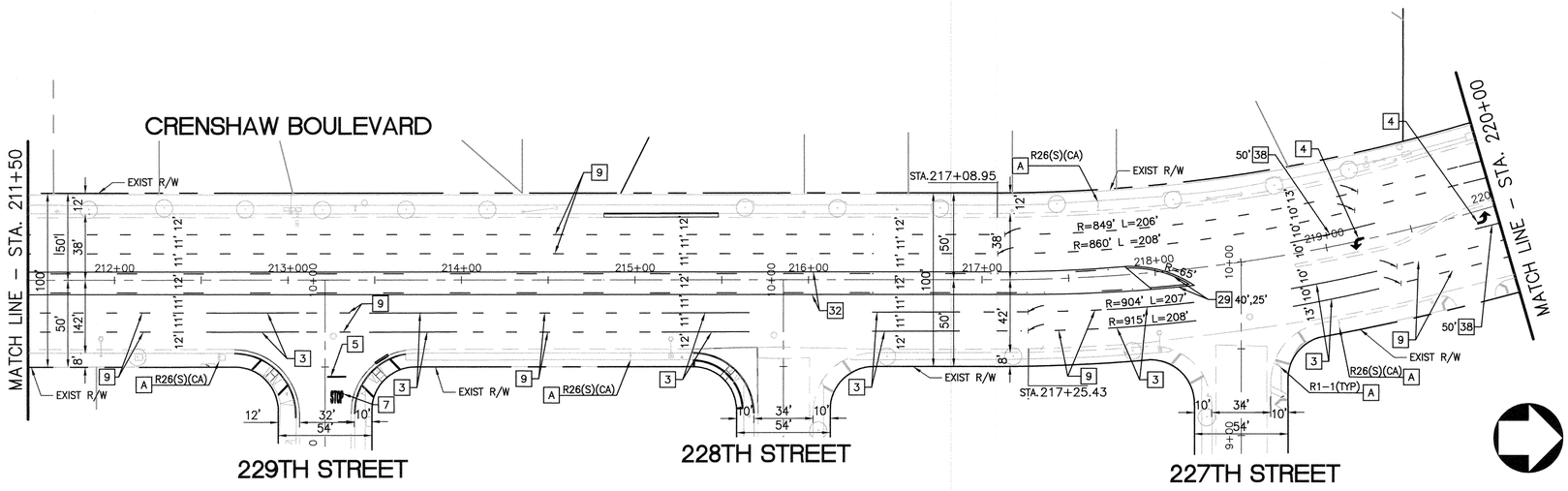

SIGNING AND STRIPING NOTES:

- [3] INSTALL 50 L.F. 4" SOLID WHITE LANE LINE WITH TYPE "G" RPM'S AT EACH END OF LINE, UNLESS OTHERWISE SHOWN
- [4] INSTALL TYPE IV PAVEMENT ARROW (L OR R) PER CALTRANS STD PLAN A24A.
- [5] INSTALL 12" WHITE CROSSWALK (10' CLEAR) OR LIMIT LINE PER CALTRANS STD PLAN A24E.
- [7] INSTALL PAVEMENT MARKING PER CALTRANS STD PLAN A24A–A24E.
- [9] INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 9.
- [29] INSTALL 4" DOUBLE YELLOW CENTER LINE PER CALTRANS STD PLAN A20A, DETAIL 29 AS SHOWN.
- [32] INSTALL TWO–WAY LEFT TURN LANES PER CALTRANS STD PLAN, DETAIL 32.
- [38] INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38. LINE LENGTH AS SHOWN.
- [A] PROTECT IN PLACE EXISTING SIGN AND POST
- [R] REMOVE EXISTING SIGN(S) AND REPLACE IN–KIND ON EXISTING POLE

LEGEND:

EXISTING	PROPOSED	
		TYPE IV (L or R) PAVEMENT ARROW
		TYPE VII (L or R) PAVEMENT ARROW
		TRAFFIC STRIPE OR MARKING
	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
	Ⓢ	SIGNALIZED INTERSECTION
	XX'	LANE WIDTH FROM CENTER OF STRIP TO CENTER OF STRIPE OR TO FACE OF CURB

NEW TRAFFIC SIGNS ON THIS SHEET

R26(S)(CA)

SIGNING AND STRIPING GENERAL NOTES:

1. INSTALLATION OF ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS SHALL CONFORM TO THE MOST RECENT ADOPTED EDITION OF THE FOLLOWING MANUALS:
   CALIFORNIA MUTCD, LATEST EDITION
   CALTRANS STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION
3. ALL STRIPING, SIGNS, PAVEMENT MARKERS, AND LEGENDS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PREFORATED STEEL TUBING WITH BREAKAWAY BASE.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW, WITH GLASS BEADS PER SPECIFICATIONS.
7. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY CHANGES BEING MADE IN THE FIELD.
8. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN. ALL SIGNS SHALL BE MADE OF 3M DIAMOND GRADE CUBED, WITH PROTECTIVE OVERLAY FILM AND MATCHED COMPONENTS SYSTEM WARRANTY, (12 YEARS) ON 0.080 ALUMINUM WITH "TORRANCE" ON BORDER.
9. STRIPED CROSSWALKS SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
10. ALL STRIPING, LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE THERMOPLASTIC. CURB MARKINGS SHALL BE PAINT (2 COATS).
11. THE FINAL THERMOPLASTIC STRIPING AND PAVEMENT MARKINGS FOR EACH CONSTRUCTION PHASE SHALL BE INSTALLED AT THE COMPLETION OF EACH CONSTRUCTION PHASE AND WHEN DIRECTED BY THE ENGINEER.
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40' 20' 0' 40' 80'
GRAPHIC SCALE
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PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883
ARIEF NAFTALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
SIGNING AND STRIPING PLAN
STA 202+00 TO STA 220+00

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER: Stephanie Cannon
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16 DATE

SHEET 16 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. ST-1048
PLAN NO. C69-35C

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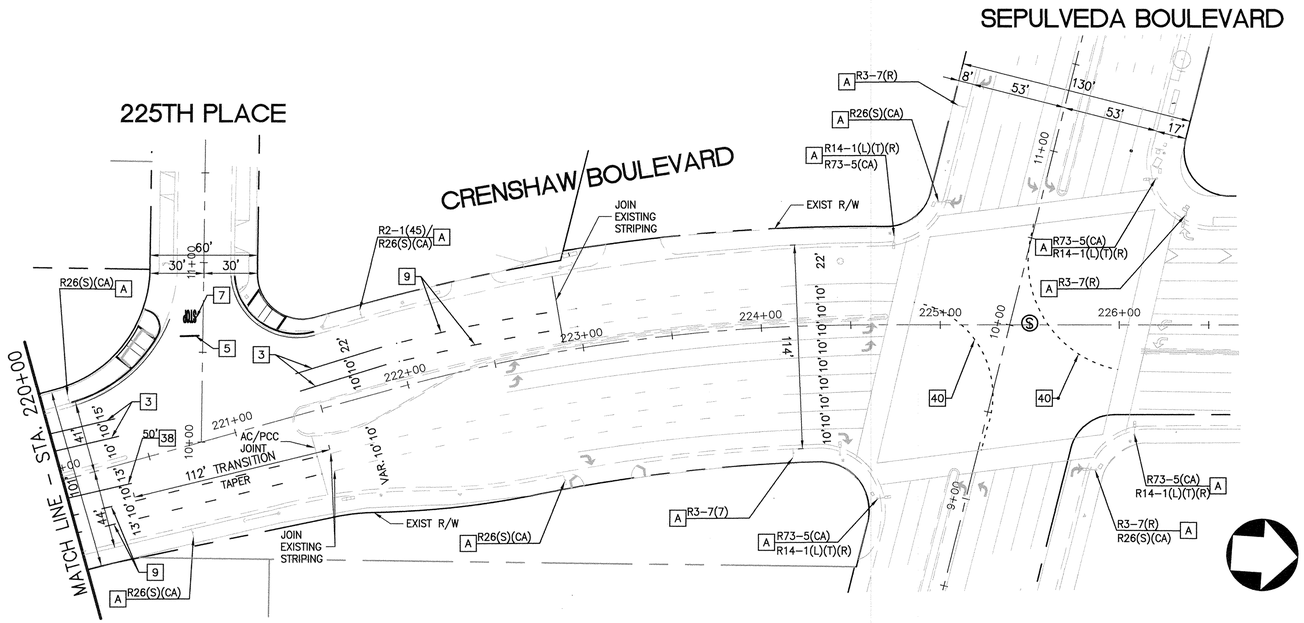

SIGNING AND STRIPING NOTES:

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- [7] INSTALL PAVEMENT MARKING PER CALTRANS STD PLAN A24A–A24E.
- [9] INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 9.
- [38] INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38. LINE LENGTH AS SHOWN.
- [40] INSTALL 4" WHITE LANE LINE EXTENSIONS THROUGH INTERSECTION PER CALTRANS STD PLAN A20D, DETAIL 40.
- [A] PROTECT IN PLACE EXISTING SIGN AND POST

LEGEND:

EXISTING	PROPOSED	
		TYPE IV (L or R) PAVEMENT ARROW
		TYPE VII (L or R) PAVEMENT ARROW
		TRAFFIC STRIPE OR MARKING
	AS NOTED	PAVEMENT LEGEND
		TRAFFIC SIGN(S)
Ⓢ		SIGNALIZED INTERSECTION
	XX'	LANE WIDTH FROM CENTER OF STRIP TO CENTER OF STRIPE OR TO FACE OF CURB

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4. CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS AND LEGENDS BY WET SANDBLASTING AND/OR GRINDING. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883
ARIEF NAFTALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION PLAN
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
SIGNING AND STRIPING PLAN
STA 220+00 TO SEPULVEDA BOULEVARD

DESIGNED BY: KN DRAWN BY: HC
PROJECT ENGINEER:
ENGINEERING MANAGER:

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT
APPROVED BY:
CRAIG BILEZERIAN, PE DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 17 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. ST-1048
PLAN NO. C69-35C

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TRAFFIC CONTROL GENERAL NOTES

1. ALL TRAFFIC CONTROL WORK FOR CONSTRUCTION SHALL CONFORM TO PART 6, "TEMPORARY TRAFFIC CONTROL," OF THE 2014 CALIFORNIA MUTCD, CALTRANS STANDARD PLANS AND SPECIFICATIONS DATED 2010. SIGNING AND STRIPING SHALL CONFORM TO THE 2014 CALIFORNIA MUTCD, STANDARD PLANS AND STANDARD SPECIFICATIONS. SIGNS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
2. 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.
3. ALL NIGHT TIME WORK SHALL BE APPROVED IN ADVANCE BY THE ENGINEER, UNLESS OTHERWISE ALLOWED IN THE SPECIFICATIONS.
4. STREET CLOSURES SHALL BE APPROVED BY THE ENGINEER WHENEVER APPLICABLE. DETOUR PLANS SHALL BE SUBMITTED AND APPROVED BY THE CITY WHENEVER APPLICABLE. RESIDENTS/BUSINESSES SHALL BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
5. 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.
6. 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, IN COMPLIANCE WITH ALL APPLICABLE STORM WATER REGULATIONS. NO CONFLICTING STRIPES, PAVEMENT MARKINGS OR LEGENDS SHALL BE BLACKED OUT WITH PAINT.
7. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH HIGH LEVEL WARNING FLAGS FOR DAYTIME CLOSURES.
8. ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE, UNLESS NOTED OTHERWISE. ALL W20-1, C20(CA), AND W4-2 SIGNS SHALL BE MINIMUM 30" x 30".
9. NOT USED.
10. ALL DRUMS SHALL BE 36" MINIMUM HEIGHT, PORTABLE, WITH REFLECTORIZED 4"-6" WHITE AND ORANGE STRIPES, WITH WEIGHTED BASES OR BALLAST RINGS. DRUMS SHALL BE MADE OF A FLEXIBLE MATERIAL, 18"-24" IN DIAMETER AND 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. DRUMS FOR NIGHTTIME USE SHALL BE PROVIDED WITH FLASHING WARNING LIGHTS.
11. TYPE II BARRICADES MAY BE USED IN ADDITION TO THE DRUMS, AT THE DISCRETION OF THE CONTRACTOR, WHEN THEY ARE INTENDED TO PROVIDE ADDITIONAL EMPHASIS IN AREAS WHERE WORKERS ARE PRESENT.
12. USE AND PLACEMENT OF FLASHING ARROW BOARD(S) AND CHANGEABLE MESSAGE SIGN(S) SHALL BE AS DIRECTED BY THE ENGINEER.
13. THE CONTRACTOR SHALL MAINTAIN, ON A 24-HOUR BASIS, ALL SIGNS, DRUMS, BARRICADES, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC.
14. THE CONTRACTOR SHALL UTILIZE FLAGGERS DURING WORK HOURS AS DEEMED NECESSARY BY THE ENGINEER.
15. THE CONTRACTOR SHALL HAVE ALL SIGNS, DRUMS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION AND BEFORE ATTEMPTING TO SWITCH TO A SUBSEQUENT PHASE OR STAGE.
16. THE CONTRACTOR SHALL PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS (P.C.M.S.) TO BE IN USE FOR THE ENTIRE DURATION OF WORK. USE, PLACEMENT AND FLASHING MESSAGE TEXT SHALL BE AS DIRECTED BY THE ENGINEER. PAYMENT IS INCLUDED IN THE UNIT PRICE FOR "PORTABLE CHANGEABLE MESSAGE SIGNS". REFER TO SPECIAL PROVISIONS FOR THE NUMBER OF PORTABLE CHANGEABLE MESSAGE SIGNS (P.C.M.S.).
17. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO ABUTTING BUSINESSES AND PROPERTY OWNERS.
18. CONSTRUCTION TRUCK TRAFFIC MERGING INTO TRAFFIC LANES SHALL BE DONE BY USE OF FLAGGER AND APPROPRIATE SIGNAGE AS DIRECTED BY ENGINEER.
19. FLASHING ARROW SIGNS (F.A.S.) AND PORTABLE CHANGEABLE MESSAGE SIGNS (P.C.M.S.) SHALL CONFORM TO THE SPECIAL PROVISIONS AND BE EITHER SOLAR OR BATTERY OPERATED. GASOLINE AND DIESEL POWERED F.A.S. AND P.C.M.S. ARE PROHIBITED.
20. NO TWO CONSECUTIVE CROSS STREETS SHALL BE SIMULTANEOUSLY CLOSED FOR CONSTRUCTION.
21. ALL WORK IN EACH STAGE SHALL BE COMPLETE BEFORE WORK IN ANOTHER STAGE MAY BEGIN.
22. NEW CONCRETE CURB AND GUTTER, SIDEWALKS, AND DRIVEWAYS SHALL BE COMPLETE AND IN PLACE PRIOR TO THE START OF ANY PAVEMENT RECONSTRUCTION.
23. TRAFFIC SIGNALS (EXISTING, NEW OR TEMPORARY) SHALL BE IN OPERATION AT ALL TIMES AT SIGNALIZED INTERSECTIONS.
24. ALL CONFLICTING SIGNAL HEADS SHALL BE COVERED DURING LONG TERM CLOSURE WHEN DIRECTED BY THE ENGINEER.
25. TEMPORARY "NO PARKING – TOW AWAY" SIGNS SHALL BE POSTED WITHIN AFFECTED CONSTRUCTION AREAS A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
26. THE CONTRACTOR SHALL PROVIDE FOR 24 HOUR ACCESS TO ALL ADJACENT PROPERTIES. THIS SHALL INCLUDE BUT NOT BE LIMITED TO DRIVEWAYS, SIDE STREETS, AND WALKWAYS, 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 POSSIBLE TO ABUTTING PROPERTY OWNERS/OPERATORS.
27. 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 ENGINEER.
28. FLASHING YELLOW BEACONS, TYPE "B", SHALL BE USED ON ALL W20-1 SIGNS AND ALL TYPE III BARRICADES PROTECTING THE WORK AREA OVERNIGHT.

TRAFFIC CONTROL GENERAL NOTES (CONTINUED):

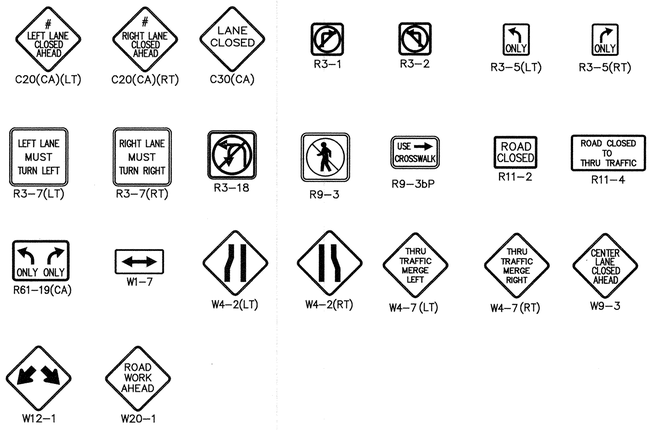
30. THE CONTRACTOR SHALL PROVIDE FOR SAFE PEDESTRIAN ACCESS AT ALL TIMES. TEMPORARY PEDESTRIAN ACCESS SHALL BE 5' MINIMUM WIDTH. ANY AND ALL PEDESTRIAN DETOUR ROUTES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE DETOUR ROUTE IS ESTABLISHED.
31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION 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.
32. 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 STAGING SHEET INDEX

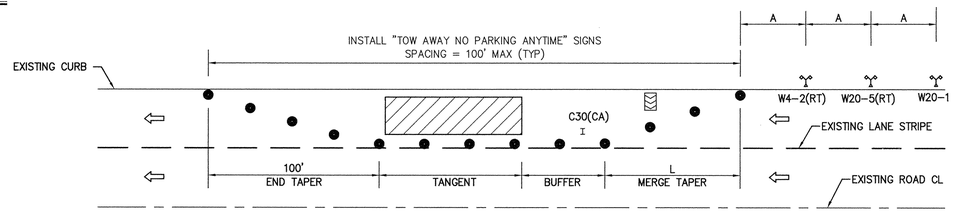
PHASE	WORK	SHEETS
–	TRAFFIC CONTROL GENERAL NOTES, DETAILS AND PCMS PLAN	18
–	CONSTRUCTION STAGING OVERVIEW AND TYPICAL SECTIONS	19 – 20
1 & 3	ROADWAY REHABILITATION	21 – 30
2 & 4	ROADWAY REHABILITATION	31 – 40
–	NORTHBOUND LEFT TURN CLOSURE ON PACIFIC COAST HIGHWAY (CALTRANS)	39

TRAFFIC SIGN LEGEND



LEGEND

- TYPE II BARRICADE
- TYPE II BARRICADE, WITH FLASHER
- TYPE III BARRICADE
- C30(CA), INSTALL SIGN (C30(CA), TYP) ON BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY



MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

DESIGN SPEED	MERGE TAPER LENGTH (L) MIN	DRUM SPACING (TAPER) MAX	DRUM SPACING (TANGENT) MAX	DISTANCE BETWEEN SIGNS (A)	BUFFER LENGTH
45 MPH	540 FEET	45 FEET	50 FEET	350 FEET	270 FEET*

*STREET DOWNGRADES OF 3% AND 6% SHALL HAVE BUFFER ZONES OF 380' AND 400', RESPECTIVELY.

ARTERIAL AND COLLECTOR CURB LANE CLOSURE

CITY OF TORRANCE – WORK AREA TRAFFIC CONTROL – STANDARD PLAN T1004
NOT TO SCALE

CONSTRUCTION NOTES

1 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN ONE WEEK PRIOR TO ANY CONSTRUCTION. CONFIRM EXACT LOCATION AND FLASHING MESSAGE WITH CITY ENGINEER, PRIOR TO INSTALLATION.

PORTABLE CHANGABLE MESSAGE SIGNS:

1. CONTRACTOR SHALL PROGRAM EACH SCREEN OF ALL PORTABLE CHANGABLE MESSAGE SIGNS TO FLASH FOR TWO (2) SECONDS.

(A)&(B) * ONE WEEK PRIOR TO CONSTRUCTION:

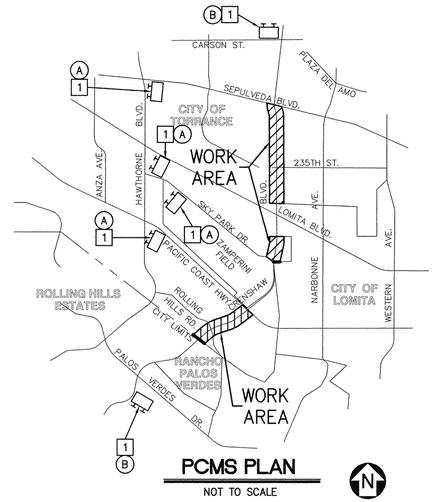
SCREEN 1	SCREEN 2
CRENSHAW	START ING
ROADWORK	MONDAY
BEGINS	XX/XX/XX

(A) * DURING CONSTRUCTION:

SCREEN 1	SCREEN 2
ROADWORK	EXPECT
ON	DELAYS
CRENSHAW	

(B) * DURING CONSTRUCTION:

SCREEN 1	SCREEN 2
ROADWORK	EXPECT
AHEAD	DELAYS



PCMS PLAN
NOT TO SCALE

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TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER – ARIEF NAFTALI – No. 64286 06/30/2017 – CIVIL – STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883
ARIEF NAFTALI, PE 64286, EXP 06/30/17 — 01/25/16 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
TRAFFIC CONTROL PLAN
GENERAL NOTES AND PCMS PLAN

FEDERAL PROJECT NO. STPL-5240(030)

DESIGNED BY: WB | DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 18 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. ST-1048

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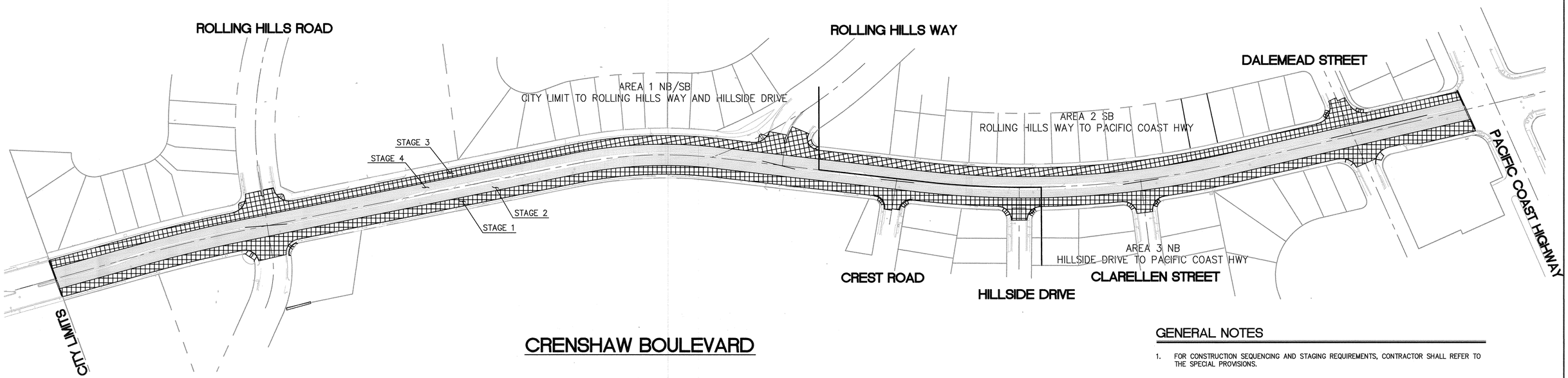
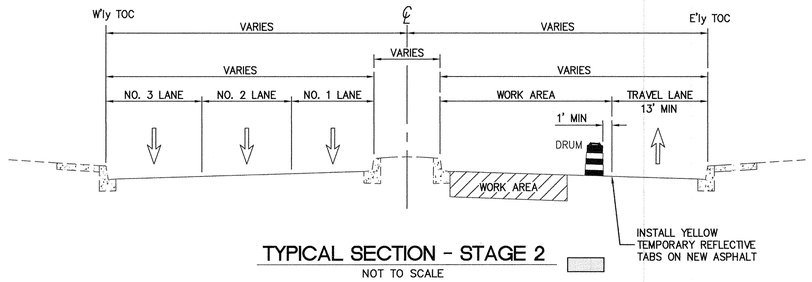
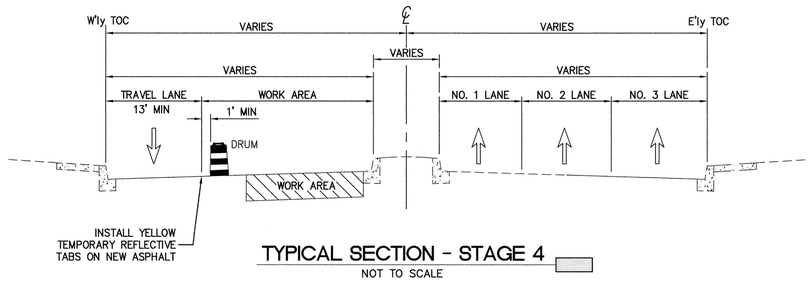


GENERAL NOTES

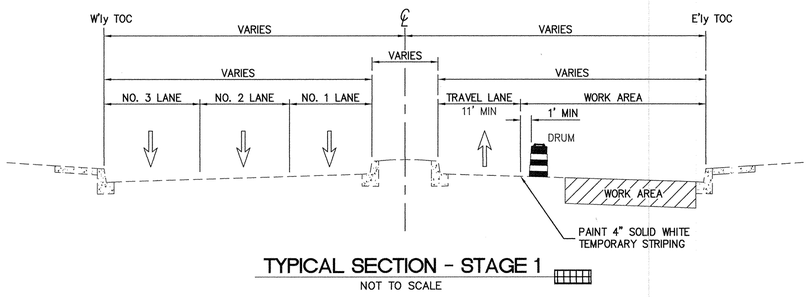
1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.



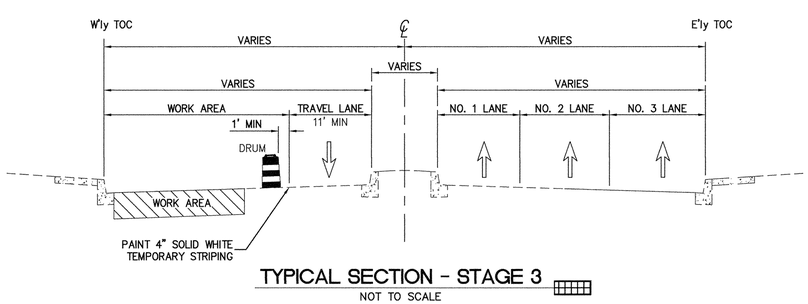
TYPICAL SECTION - STAGE 2
NOT TO SCALE



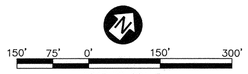
TYPICAL SECTION - STAGE 4
NOT TO SCALE



TYPICAL SECTION - STAGE 1
NOT TO SCALE



TYPICAL SECTION - STAGE 3
NOT TO SCALE



GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND
PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
CONSTRUCTION STAGE OVERVIEW
AND TYPICAL SECTIONS

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET	19 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

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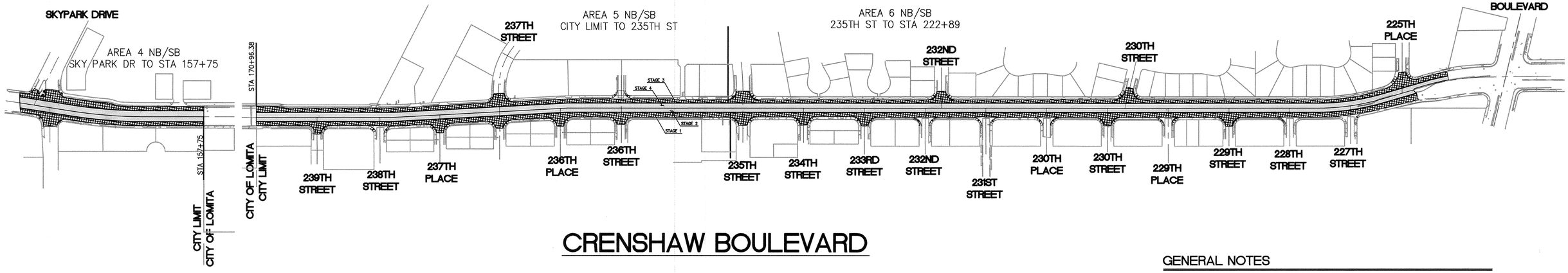
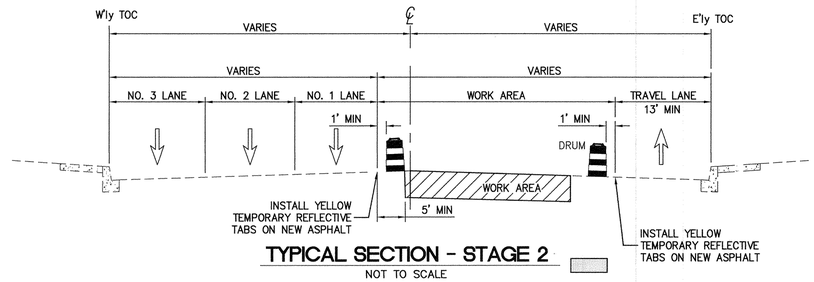


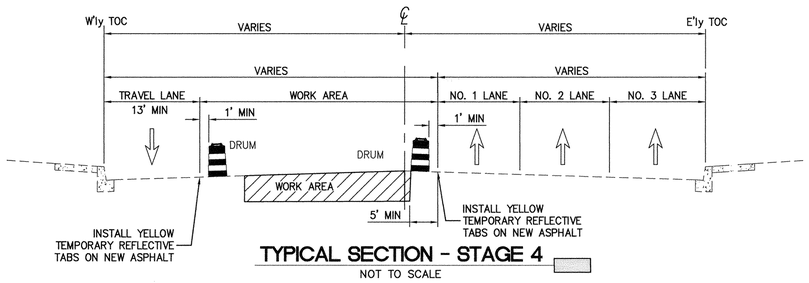
CRENSHAW BOULEVARD

GENERAL NOTES

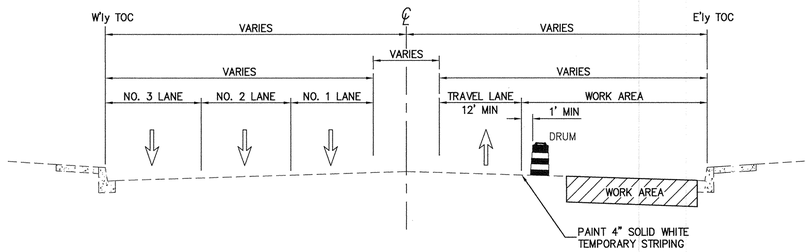
1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.



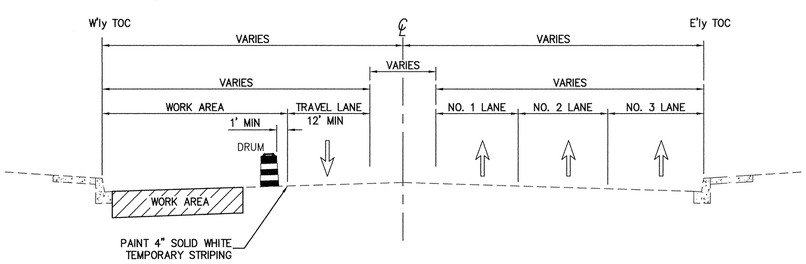
TYPICAL SECTION - STAGE 2
NOT TO SCALE



TYPICAL SECTION - STAGE 4
NOT TO SCALE



TYPICAL SECTION - STAGE 1
NOT TO SCALE



TYPICAL SECTION - STAGE 3
NOT TO SCALE

200' 100' 0' 200' 400'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883
ARIEF NAFTALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
TRAFFIC CONTROL PLAN
CONSTRUCTION STAGE OVERVIEW AND TYPICAL SECTIONS

DESIGNED BY: WB | DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE 4/6/16
CITY ENGINEER DATE
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 20 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. ST-1048

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LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

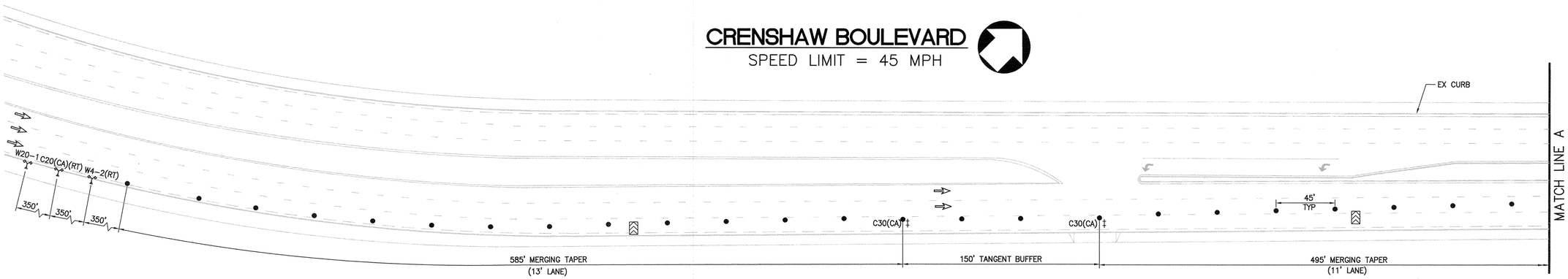
GENERAL NOTES:

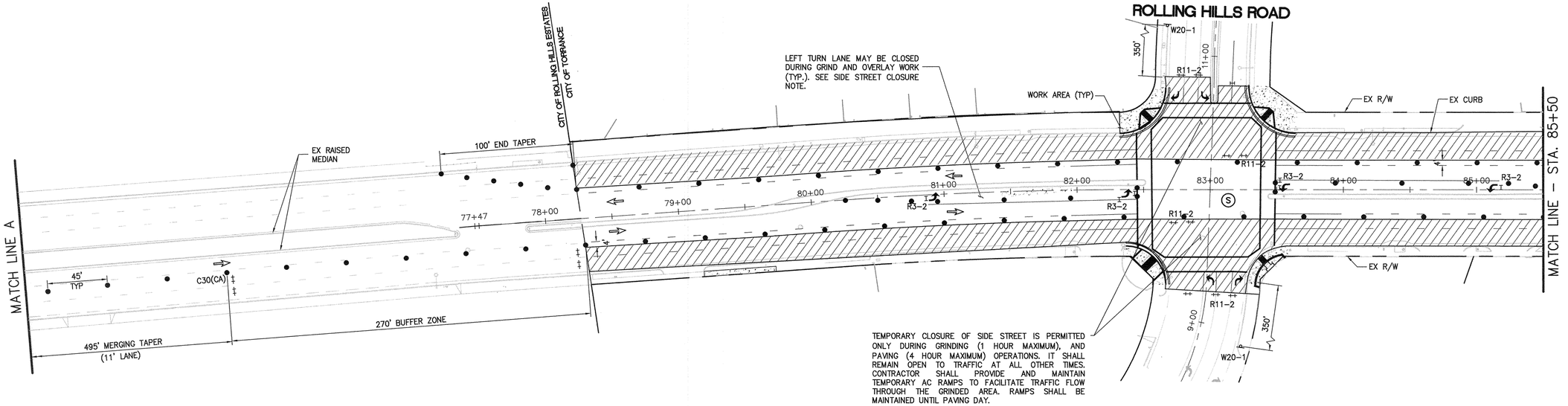
1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CROSS-GUTTER REPAIRS ARE SHOWN ON THESE PLANS FOR CLARITY. REPAIRS WILL BE PERFORMED WITH SIDEWALK CURB/GUTTER REPAIRS, AND PRIOR TO ANY PAVEMENT RECONSTRUCTION. REFER TO SHEET 18 FOR CURB LANE CLOSURE DETAIL.

TRAFFIC SIGN LEGEND

CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH





TEMPORARY CLOSURE OF SIDE STREET IS PERMITTED ONLY DURING GRINDING (1 HOUR MAXIMUM), AND PAVING (4 HOUR MAXIMUM) OPERATIONS. IT SHALL REMAIN OPEN TO TRAFFIC AT ALL OTHER TIMES. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY AC RAMPS TO FACILITATE TRAFFIC FLOW THROUGH THE GRINDED AREA. RAMPS SHALL BE MAINTAINED UNTIL PAVING DAY.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 1 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET	21	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO. **ST-1048**			

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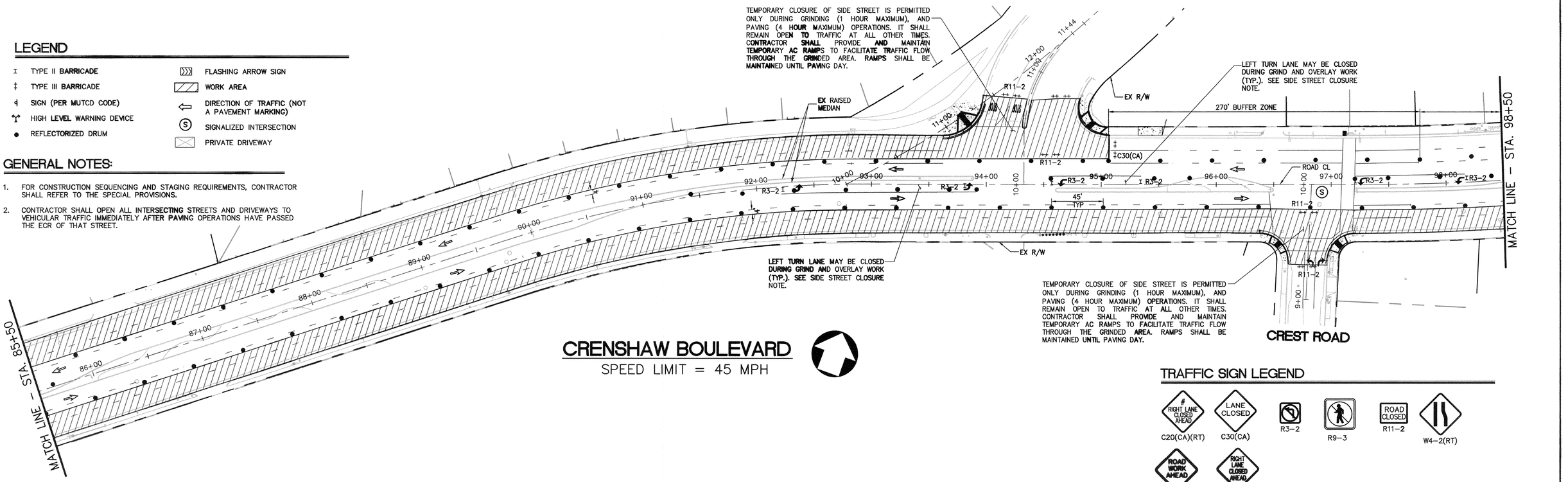
LEGEND

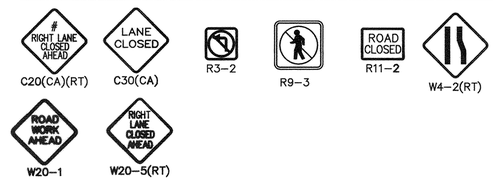
- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

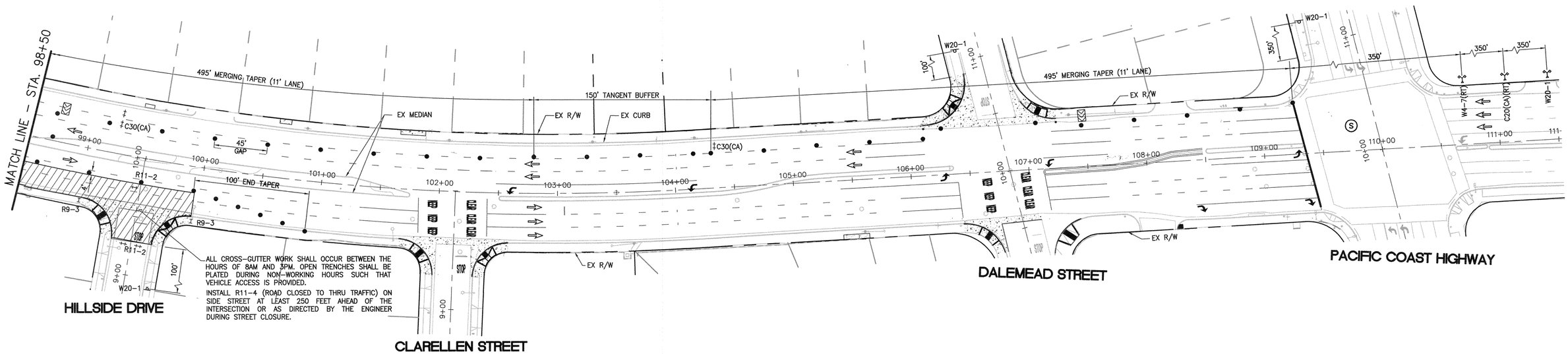
GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.



TRAFFIC SIGN LEGEND





40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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PLANS PREPARED BY:

PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 1 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE 4/8/16
CITY ENGINEER DATE
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 22 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. ST-1048

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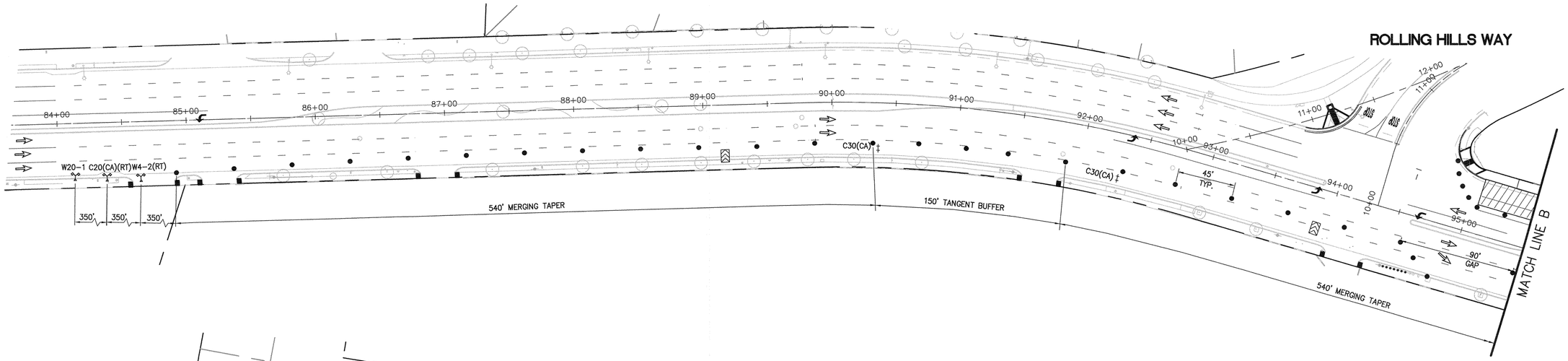
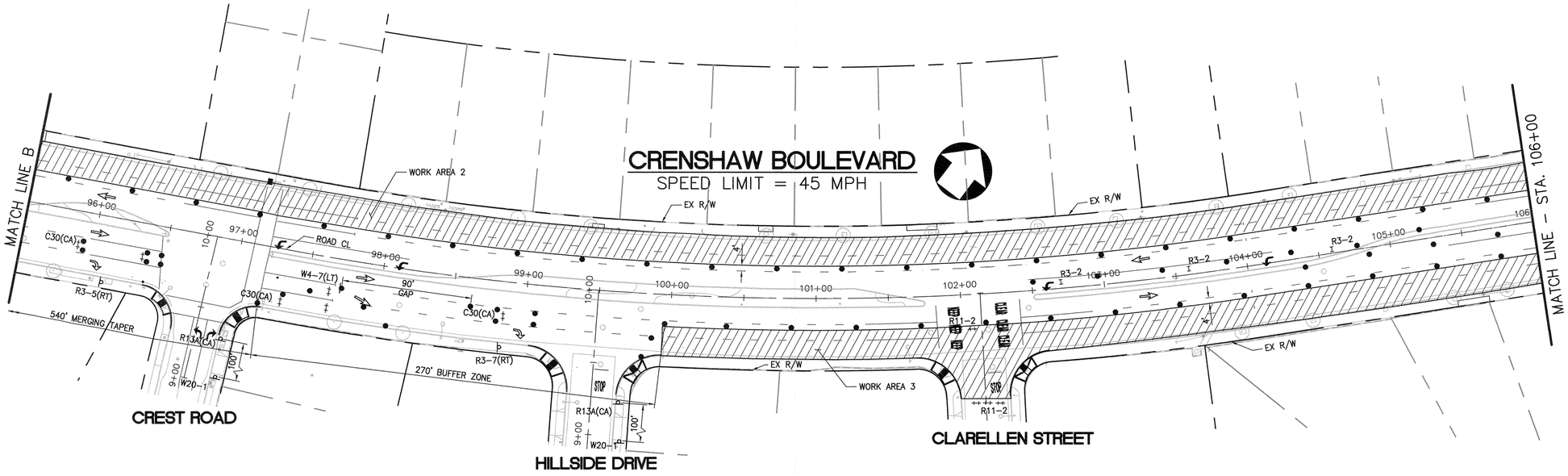
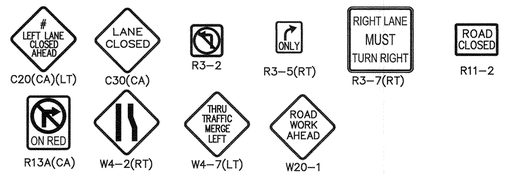




LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- ● REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND



GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 2 - STAGE 3 (SB)
AREA 3 - STAGE 1 (NB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET	23 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

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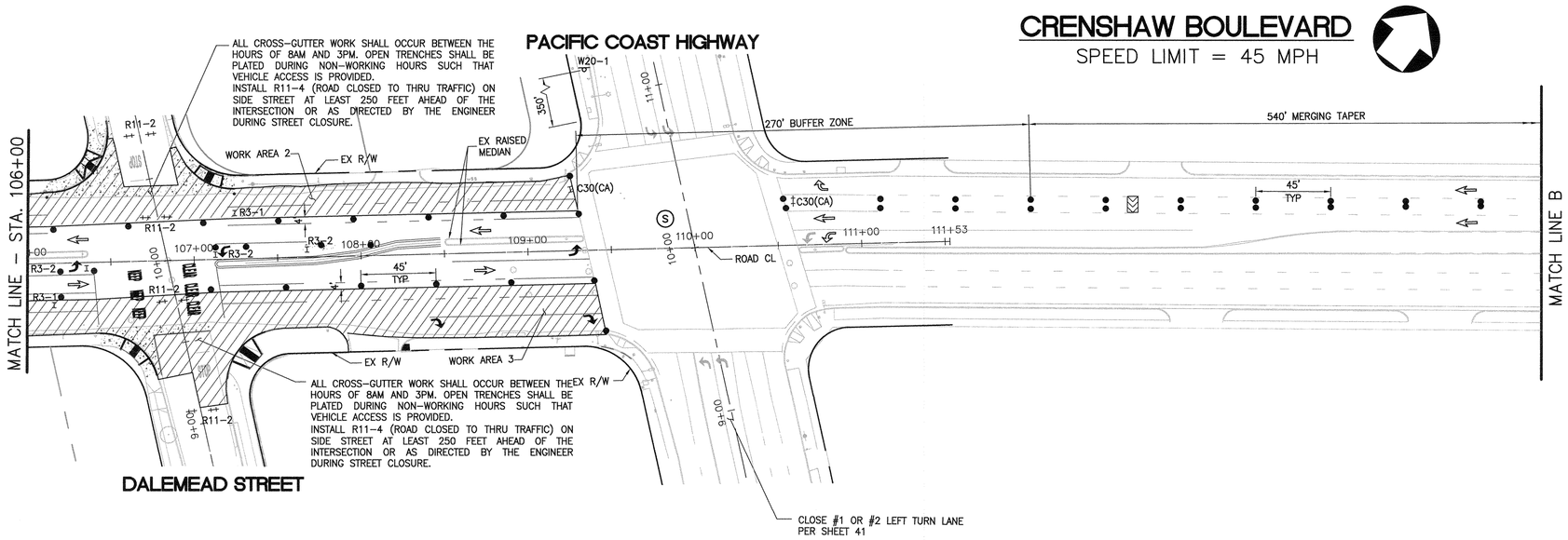
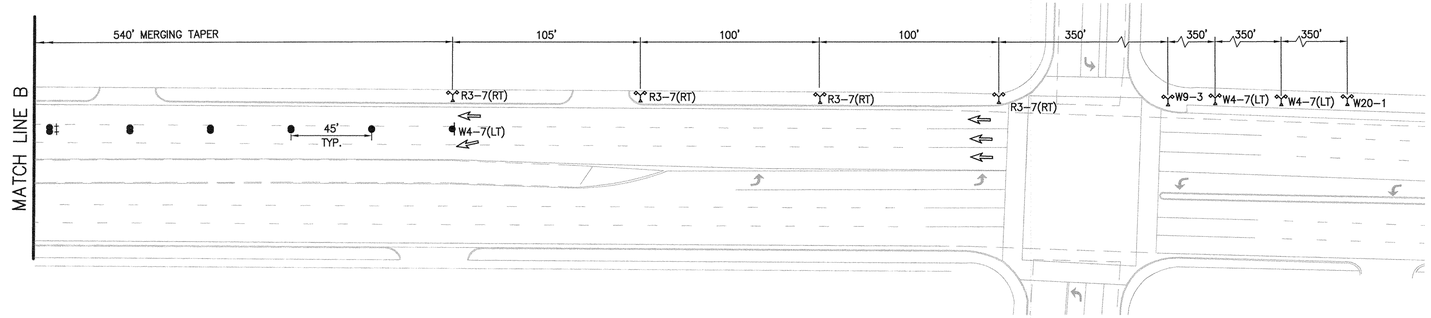
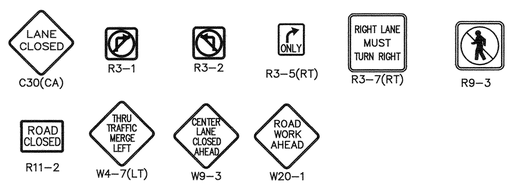




LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND



GENERAL NOTES:

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2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17
01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)
TRAFFIC CONTROL PLAN
AREA 2 - STAGE 3 (SB)
AREA 3 - STAGE 1 (NB)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET 24 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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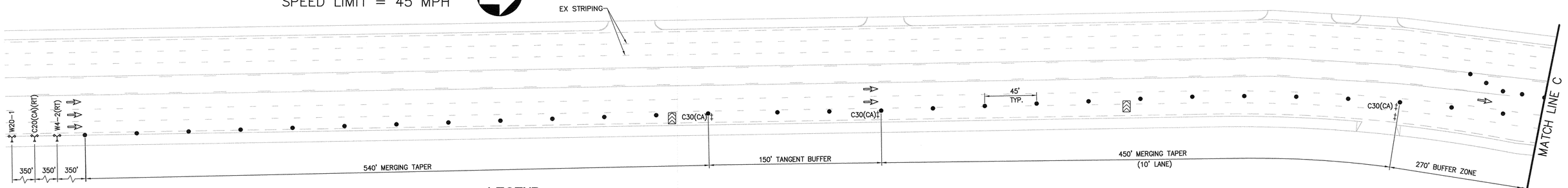
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH

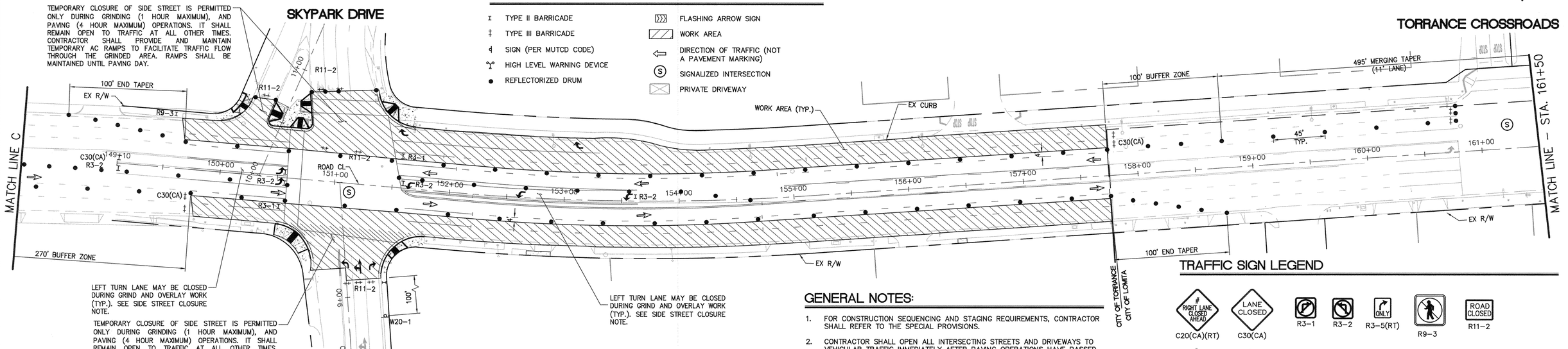


LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TEMPORARY CLOSURE OF SIDE STREET IS PERMITTED ONLY DURING GRINDING (1 HOUR MAXIMUM), AND PAVING (4 HOUR MAXIMUM) OPERATIONS. IT SHALL REMAIN OPEN TO TRAFFIC AT ALL OTHER TIMES. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY AC RAMPS TO FACILITATE TRAFFIC FLOW THROUGH THE GRINDED AREA. RAMPS SHALL BE MAINTAINED UNTIL PAVING DAY.

SKYPARK DRIVE



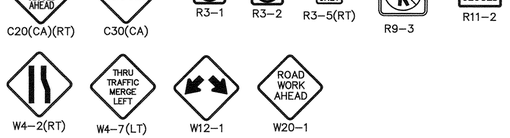
AMSLER STREET

TORRANCE CROSSROADS

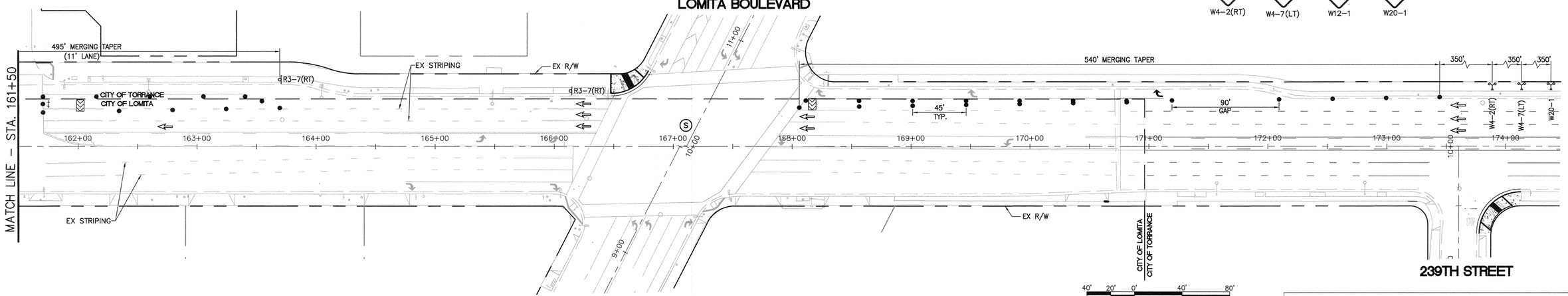
GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

TRAFFIC SIGN LEGEND



LOMITA BOULEVARD



239TH STREET

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 4 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY: WB	DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE	
ENGINEERING MANAGER: STEVEN FINTON, PE	

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

SHEET 25 OF 55	
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO. **ST-1048**	

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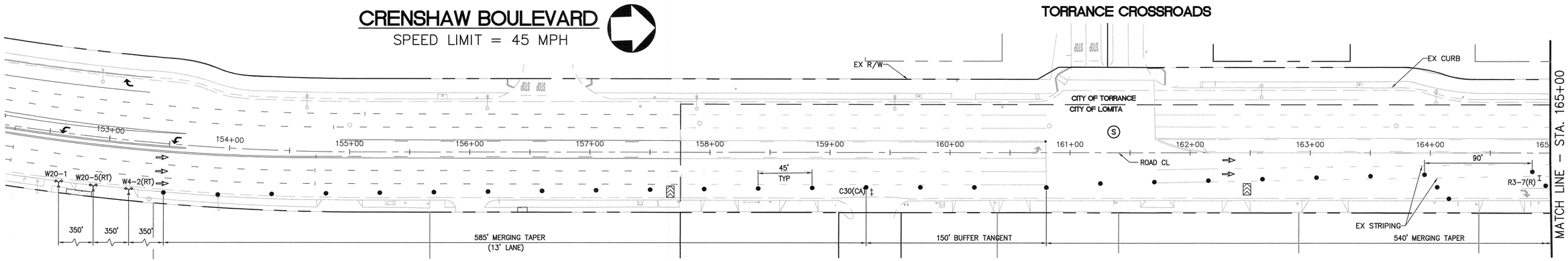
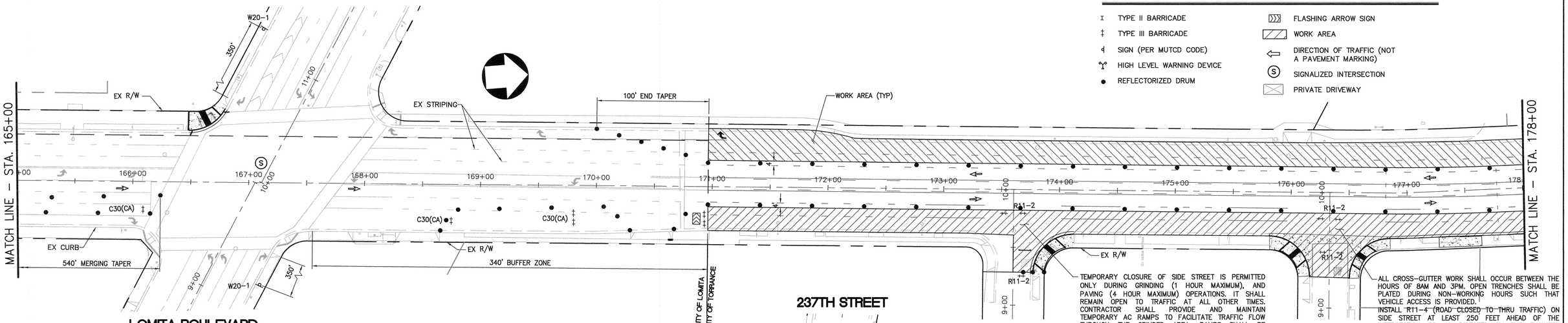
CRENSHAW BOULEVARD

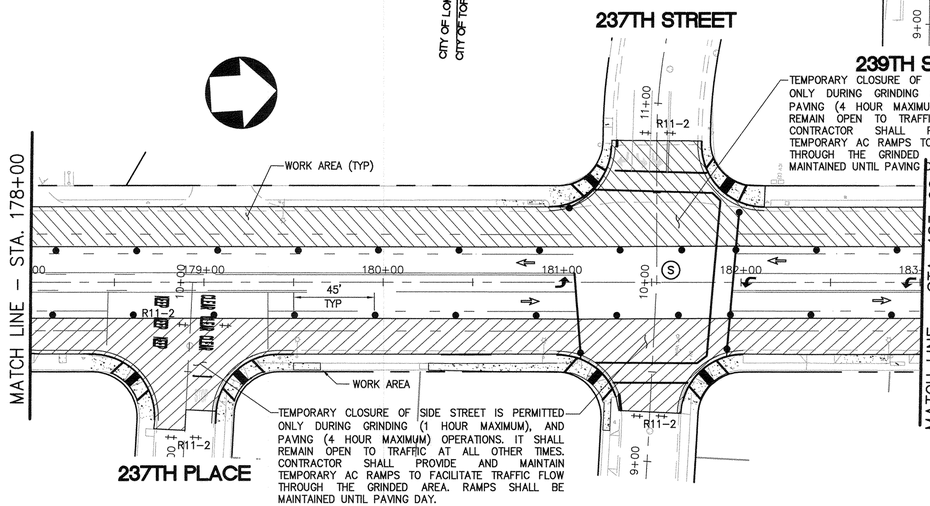
SPEED LIMIT = 45 MPH



LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

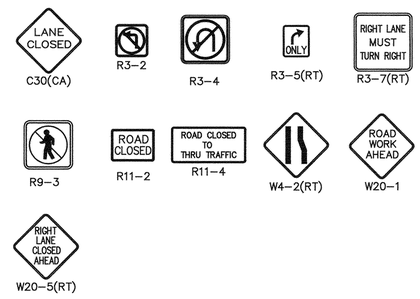




GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

TRAFFIC SIGN LEGEND



40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 5 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY: WB
DRAWN BY: WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 26 OF 55

SCALE: AS SHOWN

SPECIFICATION NO.: SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.:

PLAN NO. **ST-1048**

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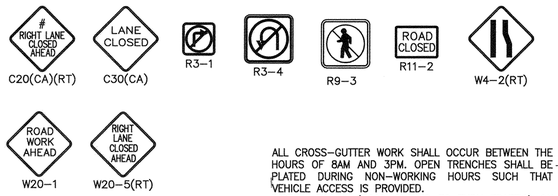
TRAFFIC SIGN LEGEND



GENERAL NOTES:

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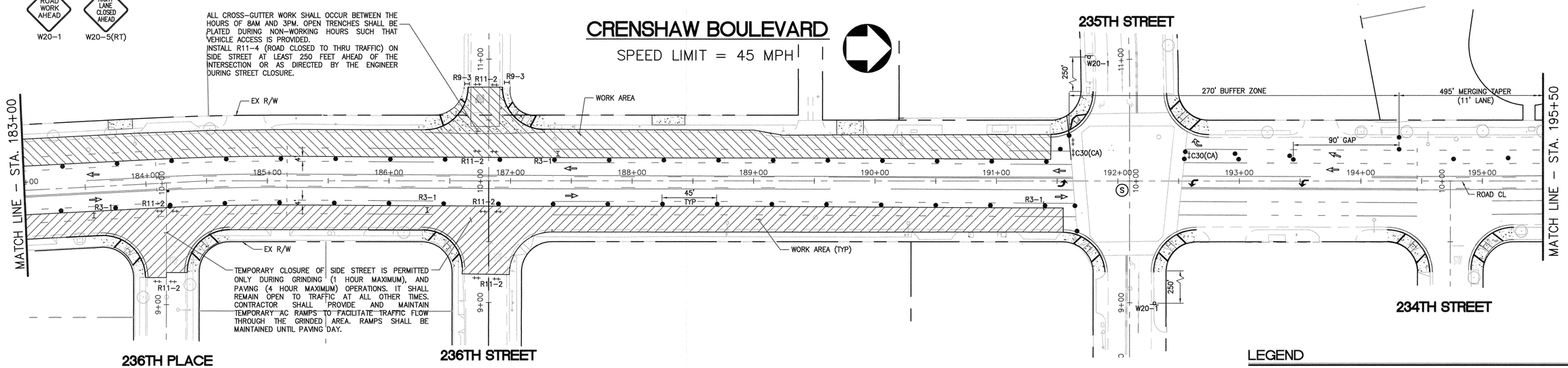

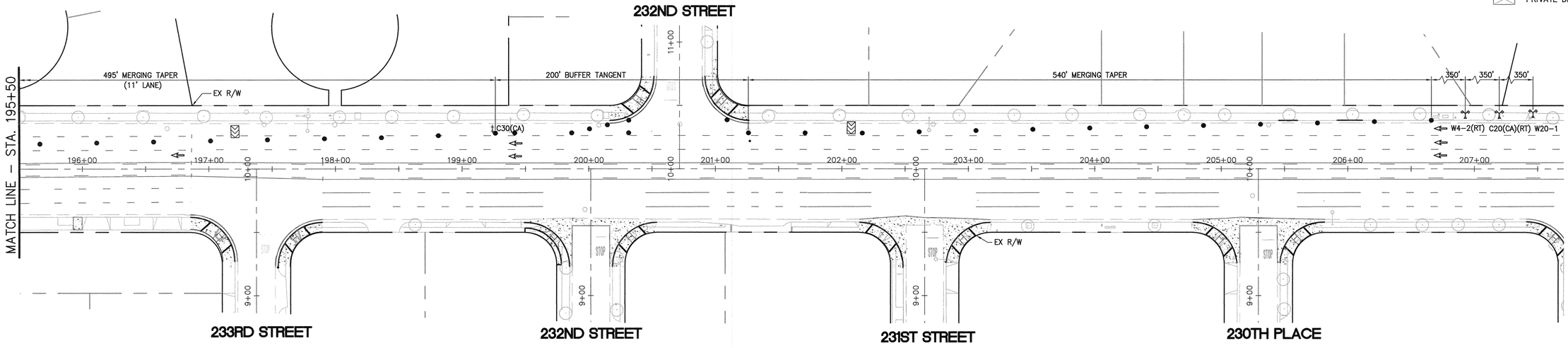

LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- ϕ SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- ● REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17
01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 5 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/6/16
DATE

SHEET	27	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO. **ST-1048**			

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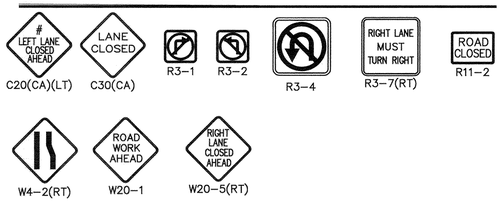
TRAFFIC SIGN LEGEND

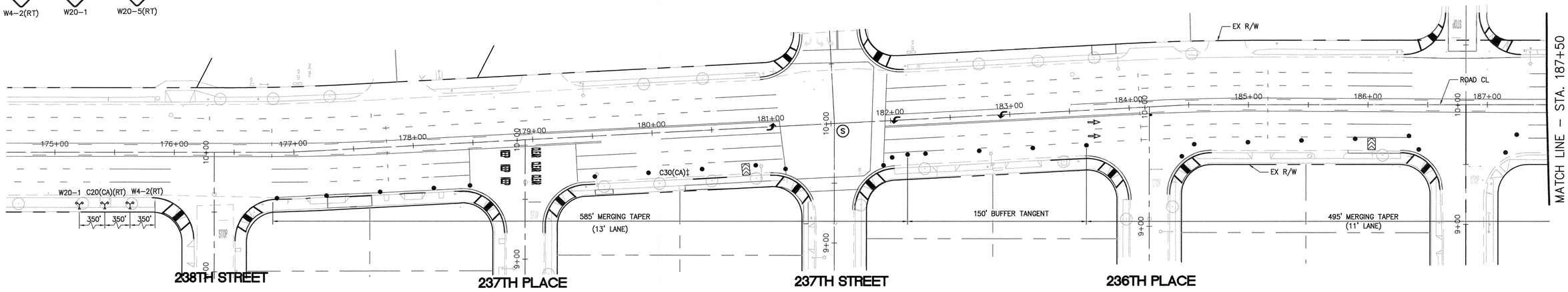


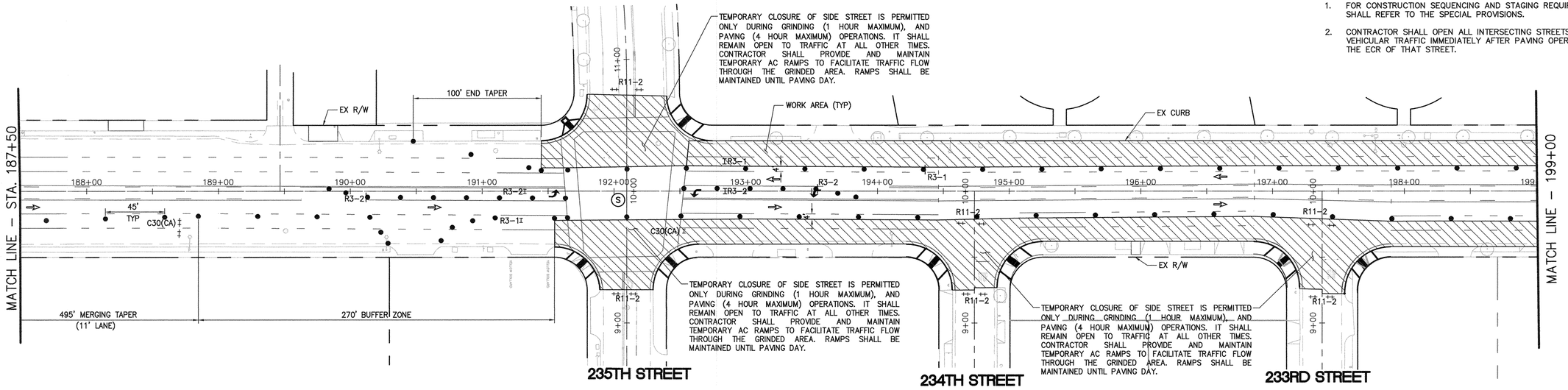
LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH





40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

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PLANS PREPARED BY:

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Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET	28 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

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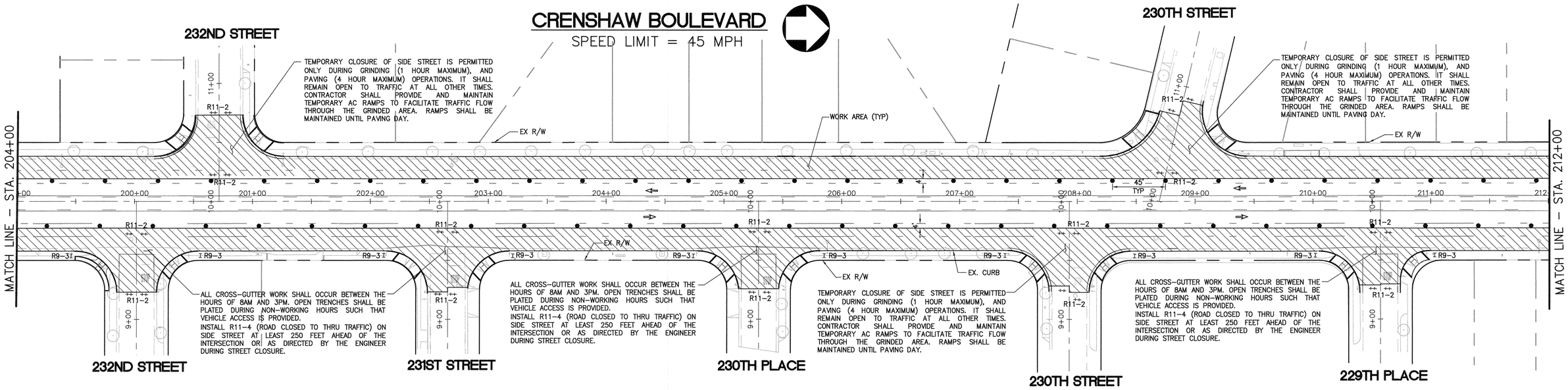
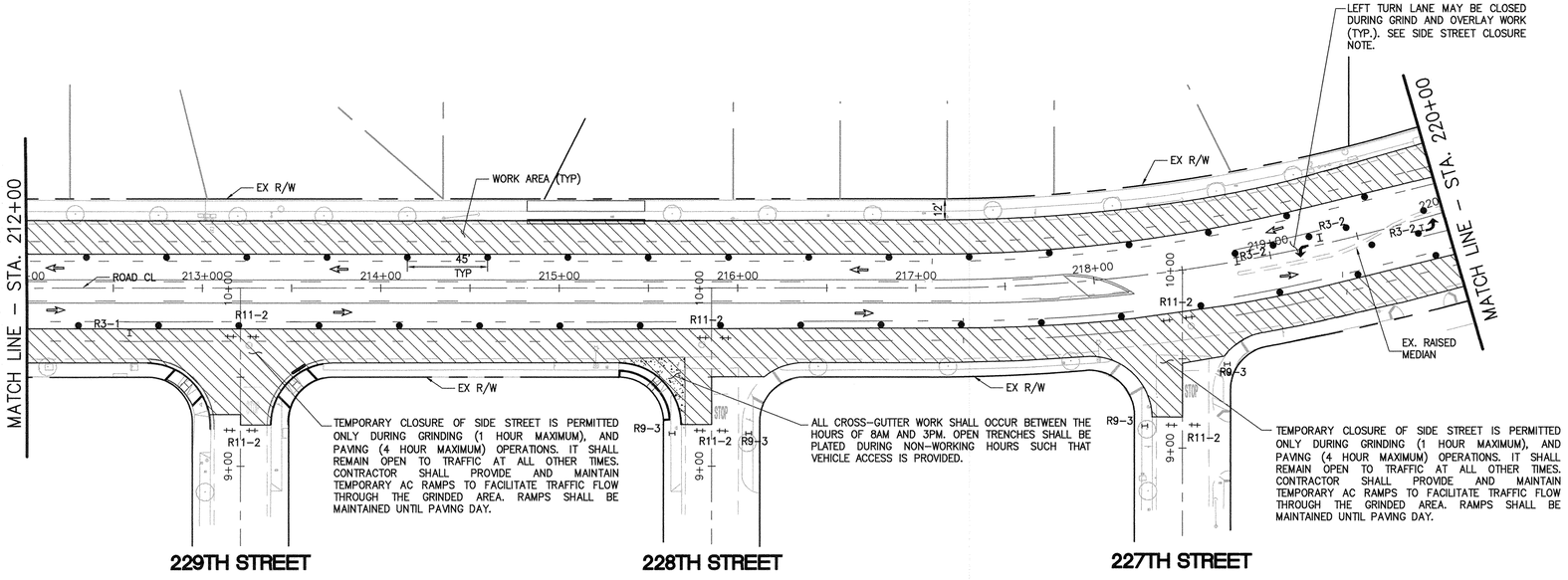
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH





TRAFFIC SIGN LEGEND

LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- ● REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

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TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

01/25/16
ARIEF NAFTALI DATE
PE 64286, EXP 06/30/17

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 29 OF 55

SCALE: AS SHOWN

SPECIFICATION NO. SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.

PLAN NO. **ST-1048**

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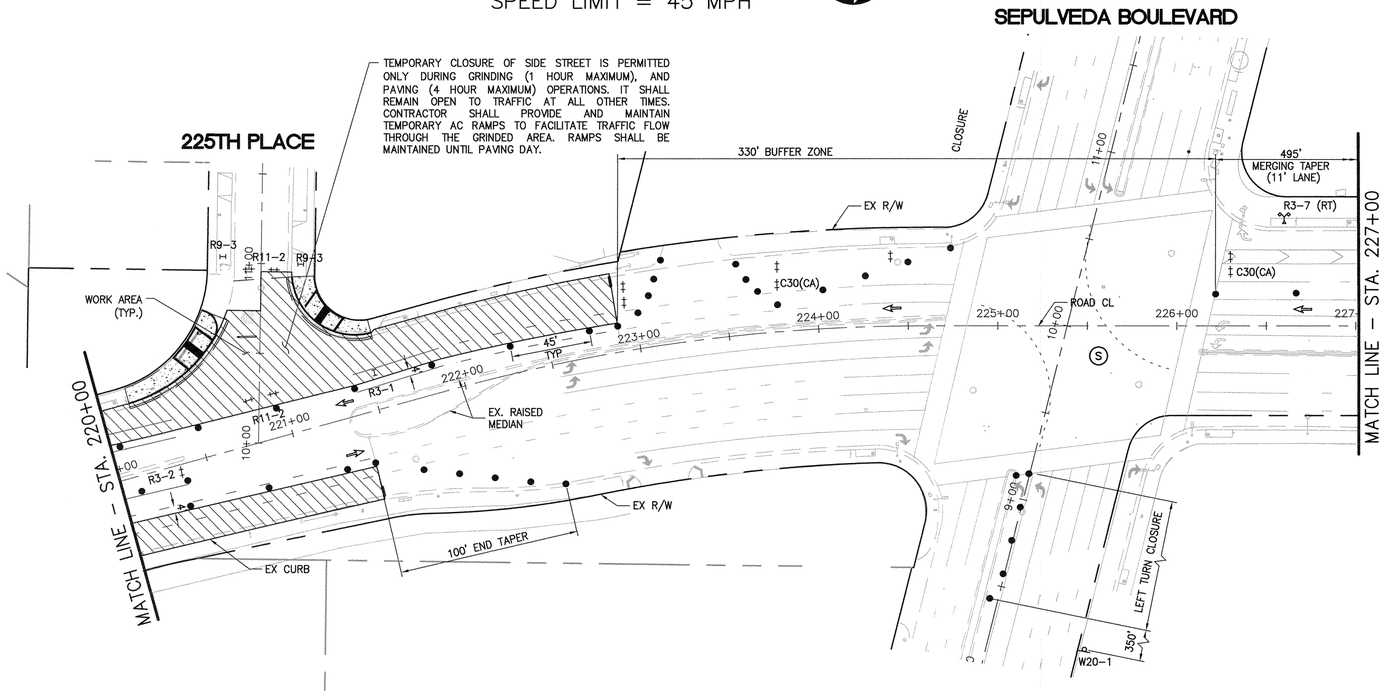
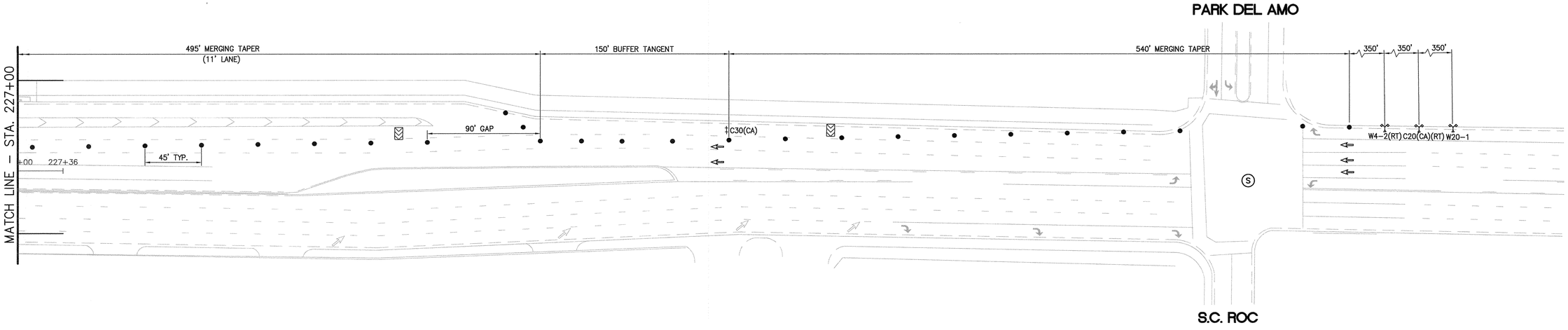
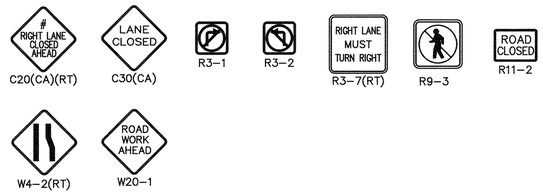
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH





TRAFFIC SIGN LEGEND



GENERAL NOTES:

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2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT OR RIGHT TURN LANES ON SIDE STREETS PER CITY STANDARD T1007. SIMILAR ARRANGEMENT APPLIES TO RIGHT TURN LANE CLOSURE. MODIFY DETAIL AS REQUIRED.

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

40' 20' 0' 40' 80'

GRAPHIC SCALE

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PLANS PREPARED BY:

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ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 1 (NB)
STAGE 3 (SB)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 30 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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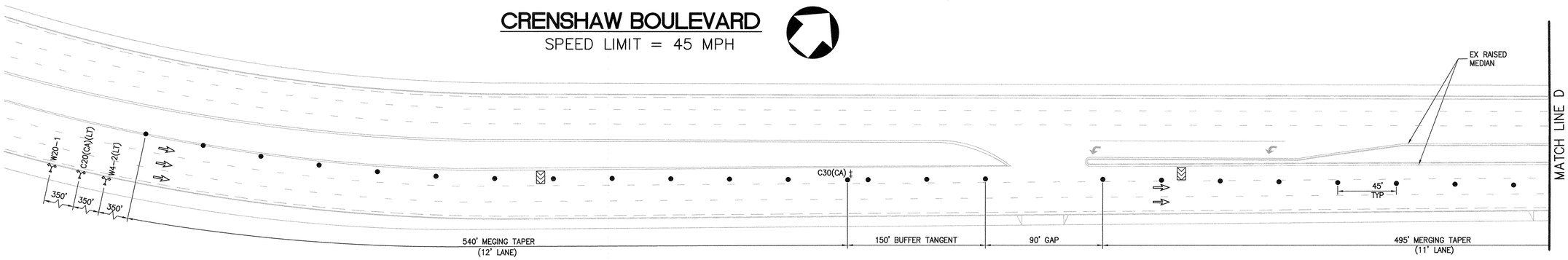
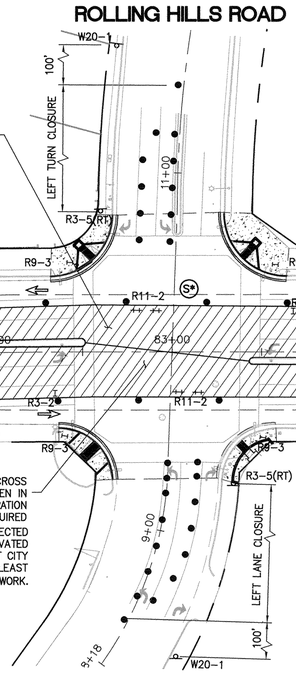
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH



ROLLING HILLS ROAD



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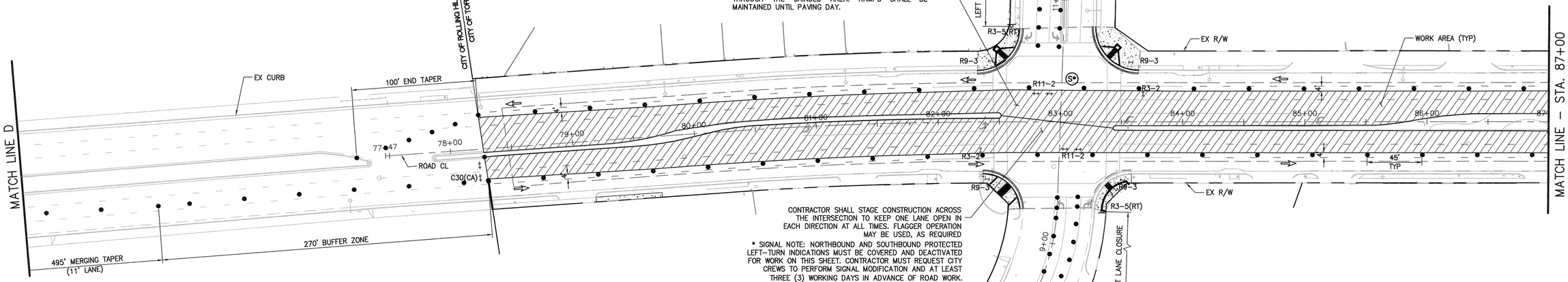
CONTRACTOR SHALL STAGE CONSTRUCTION ACROSS THE INTERSECTION TO KEEP ONE LANE OPEN IN EACH DIRECTION AT ALL TIMES. FLAGGER OPERATION MAY BE USED, AS REQUIRED

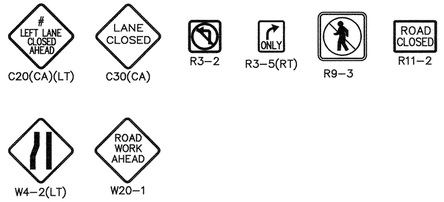
* SIGNAL NOTE: NORTHBOUND AND SOUTHBOUND PROTECTED LEFT-TURN INDICATIONS MUST BE COVERED AND DEACTIVATED FOR WORK ON THIS SHEET. CONTRACTOR MUST REQUEST CITY CREWS TO PERFORM SIGNAL MODIFICATION AND AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF ROAD WORK.



LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- ● REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND



GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT LANES ON SIDE STREETS PER CITY STANDARD T1007.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 1 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 31 OF 55

SCALE: AS SHOWN

SPECIFICATION NO. SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.

PLAN NO. **ST-1048**

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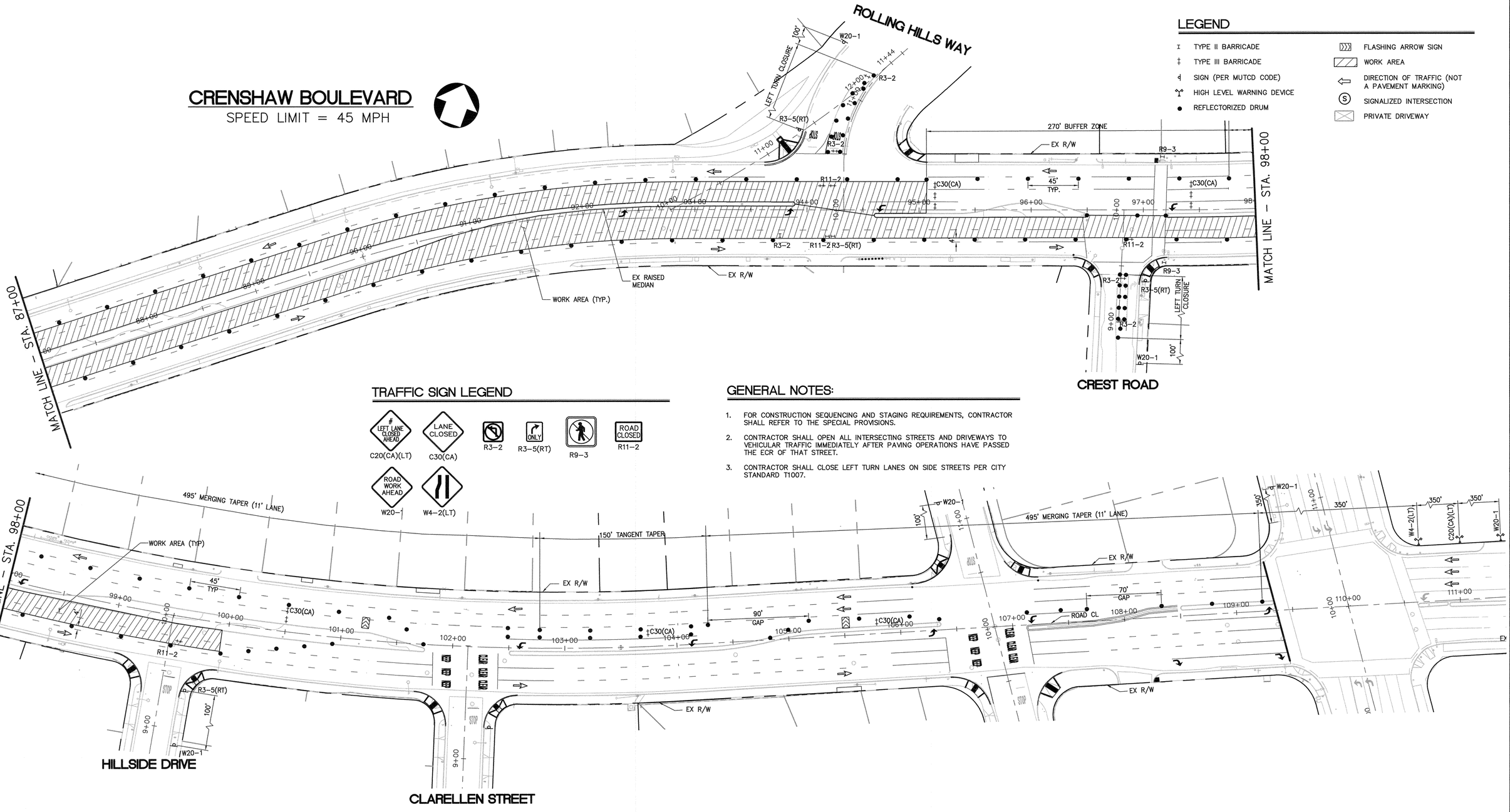
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH



LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND

# LEFT LANE CLOSED AHEAD	LANE CLOSED		ONLY		ROAD CLOSED
C20(CA)(LT)	C30(CA)	R3-2	R3-5(RT)	R9-3	R11-2
ROAD WORK AHEAD					
W20-1	W4-2(LT)				

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT TURN LANES ON SIDE STREETS PER CITY STANDARD T1007.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

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811 Know what's below. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 1 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET	32	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

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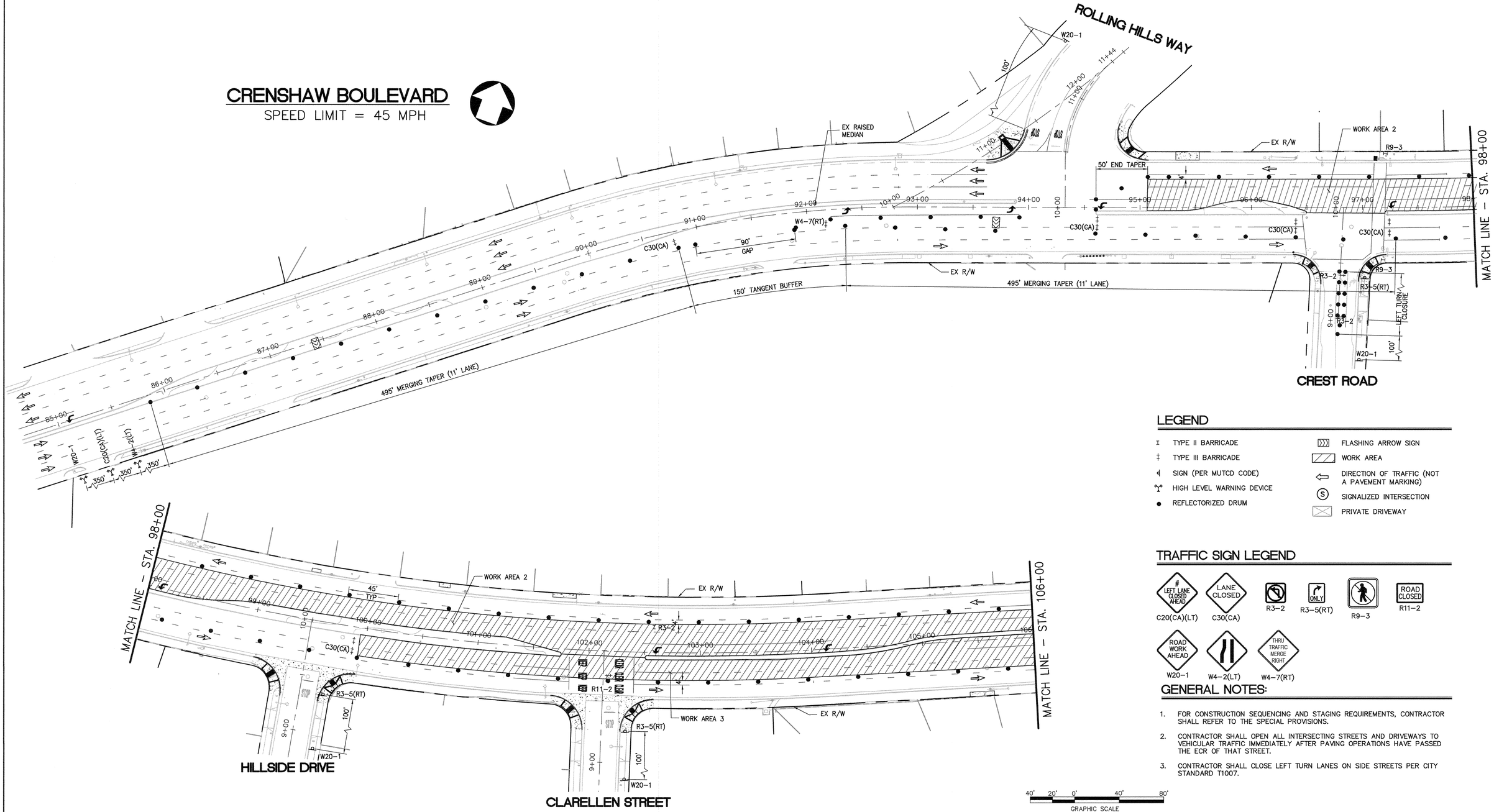

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT TURN LANES ON SIDE STREETS PER CITY STANDARD T1007.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFFALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFFALI
PE 64286, EXP 06/30/17
01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 2 - STAGE 4 (SB)
ARE 3 - STAGE 2 (NB)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET 33 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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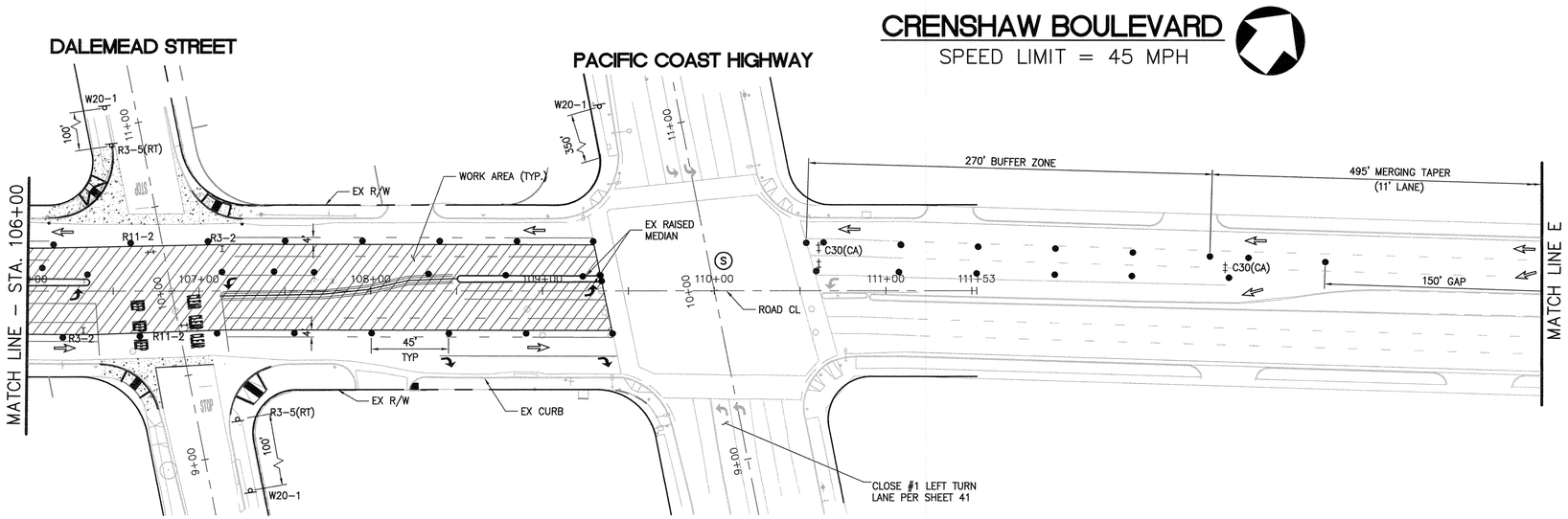
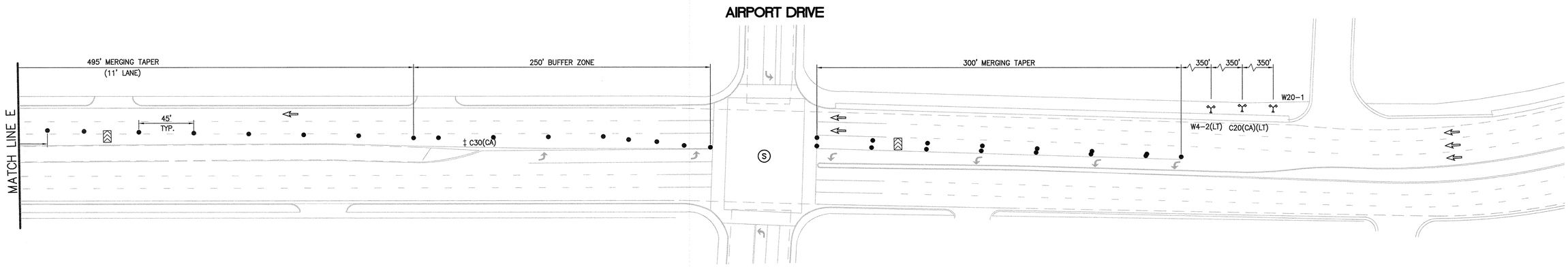
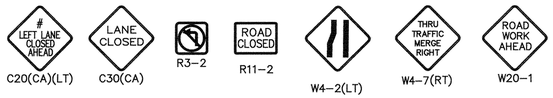




TRAFFIC SIGN LEGEND



GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- ● REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 2 - STAGE 4 (SB)
AREA 3 - STAGE 2 (NB)

DESIGNED BY: WB
DRAWN BY: WB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 34 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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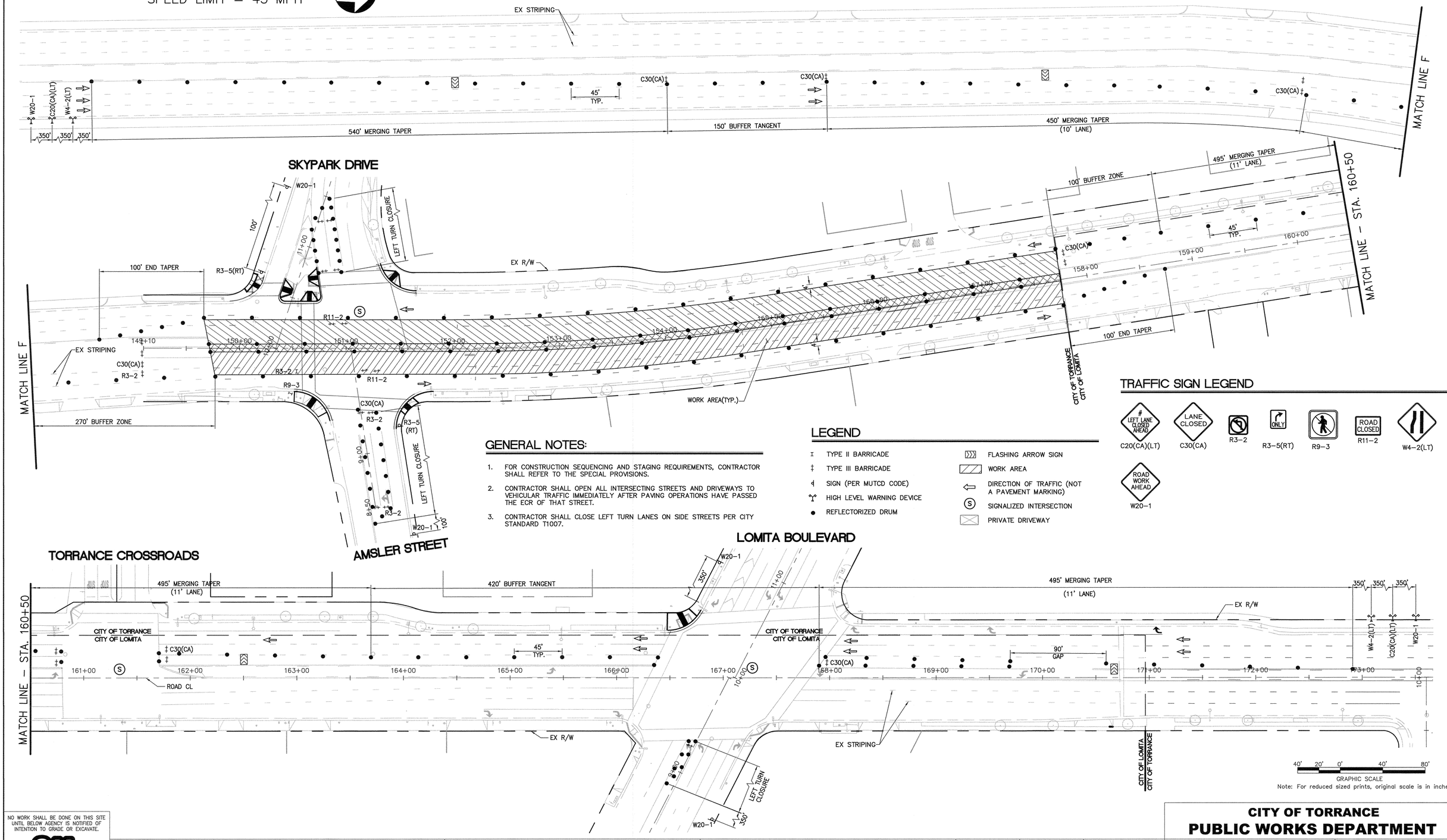
CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH



Note: For reduced sized prints, original scale is in inches

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT TURN LANES ON SIDE STREETS PER CITY STANDARD T1007.

LEGEND

- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 4 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER: Stephanie Comon
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE — 4/8/16 — DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	35 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

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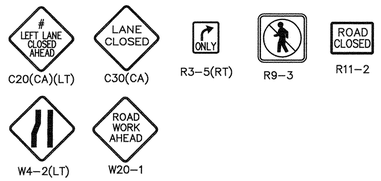
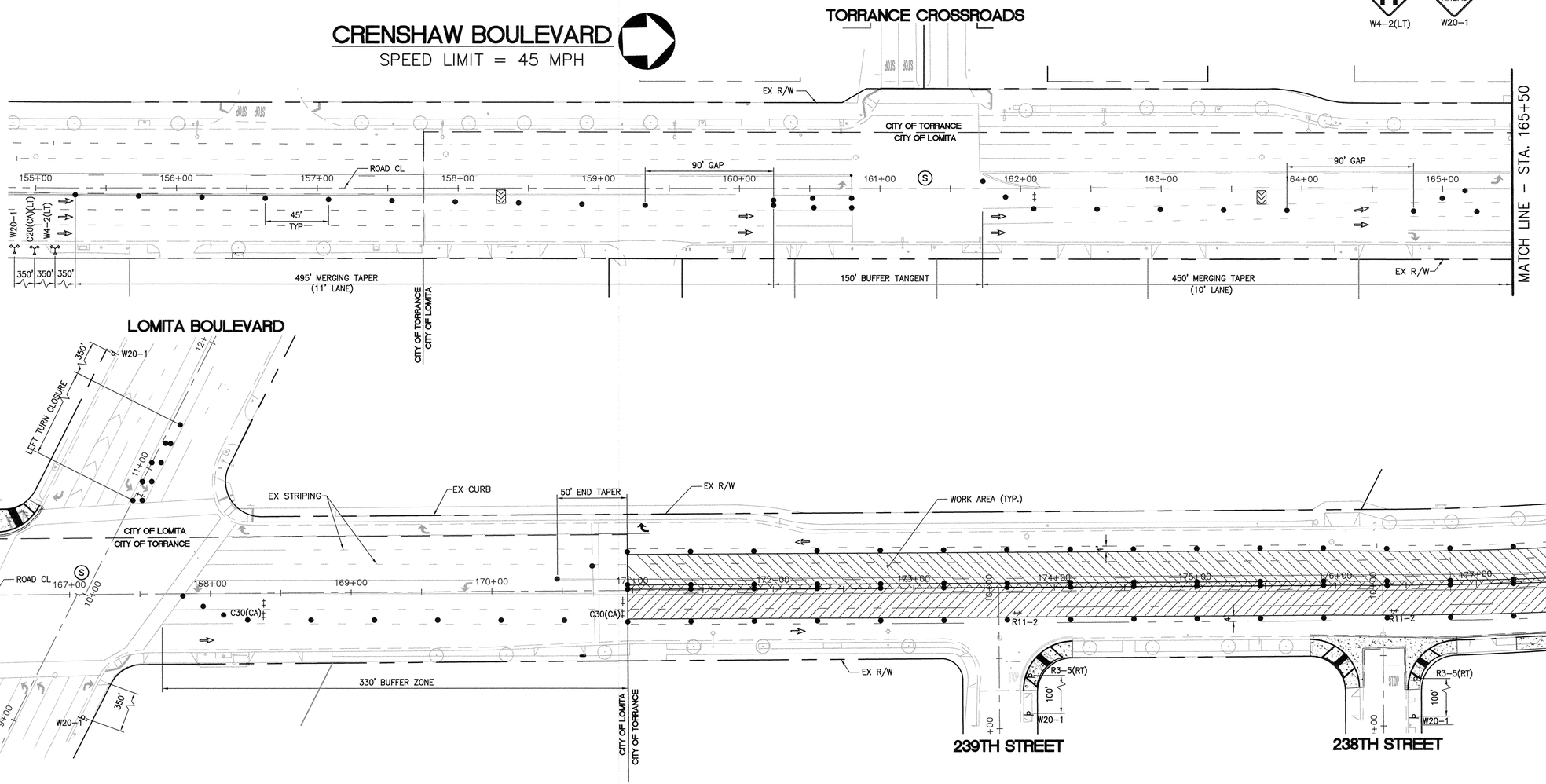
LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND





GENERAL NOTES:

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2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT LANES ON SIDE STREET PER CITY STANDARD T007.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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TWO WORKING DAYS BEFORE YOU DIG

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883
REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA
ARIEF NAFTALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 54 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	36	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

M:\2TOR050500\TRANSP\SHEETS\TC-17.dwg

LEGEND

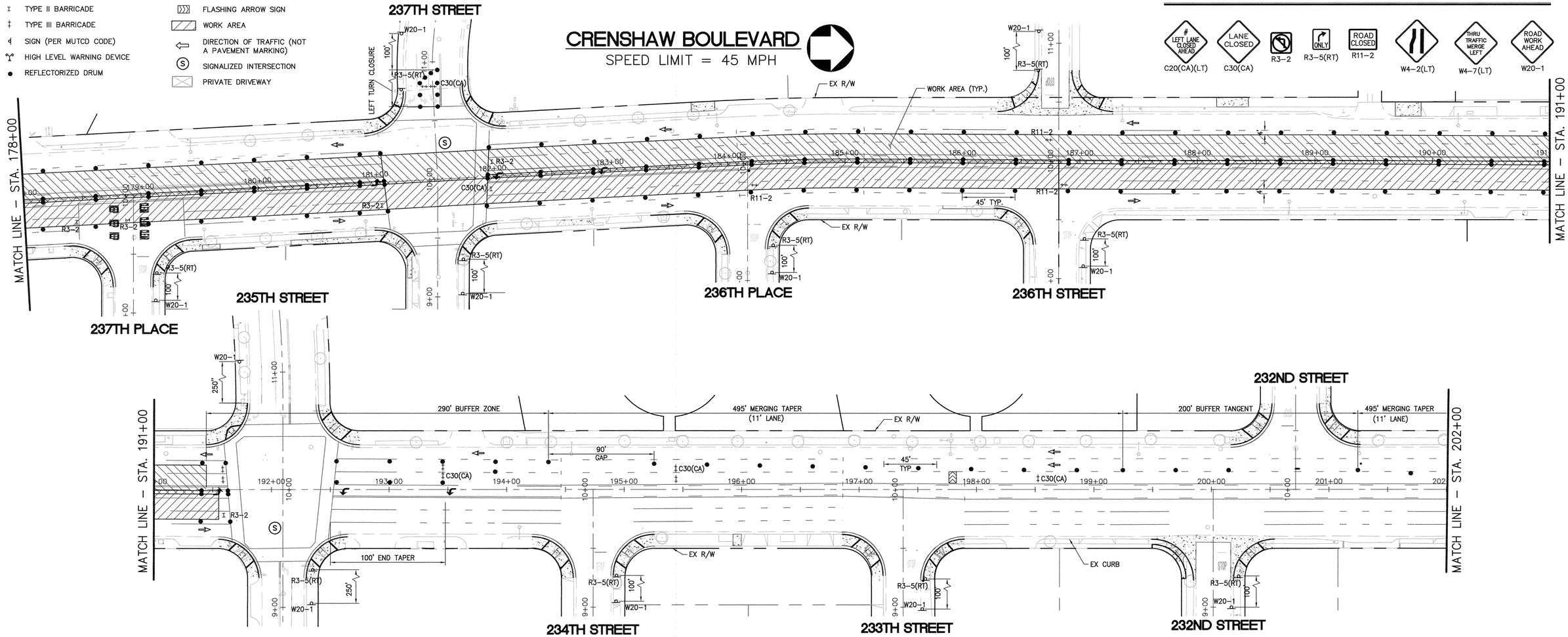
- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND

C20(CA)(LT) · C30(CA) · R3-2 · R3-5(RT) · R11-2 · W4-2(LT) · W4-7(LT) · W20-1

CRENSHAW BOULEVARD

SPEED LIMIT = 45 MPH



GENERAL NOTES:

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2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT LANES ON SIDE STREET PER CITY STANDARD T007.

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REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 5 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

APPROVED BY:

CRAIG BILEZERIAN, PE — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

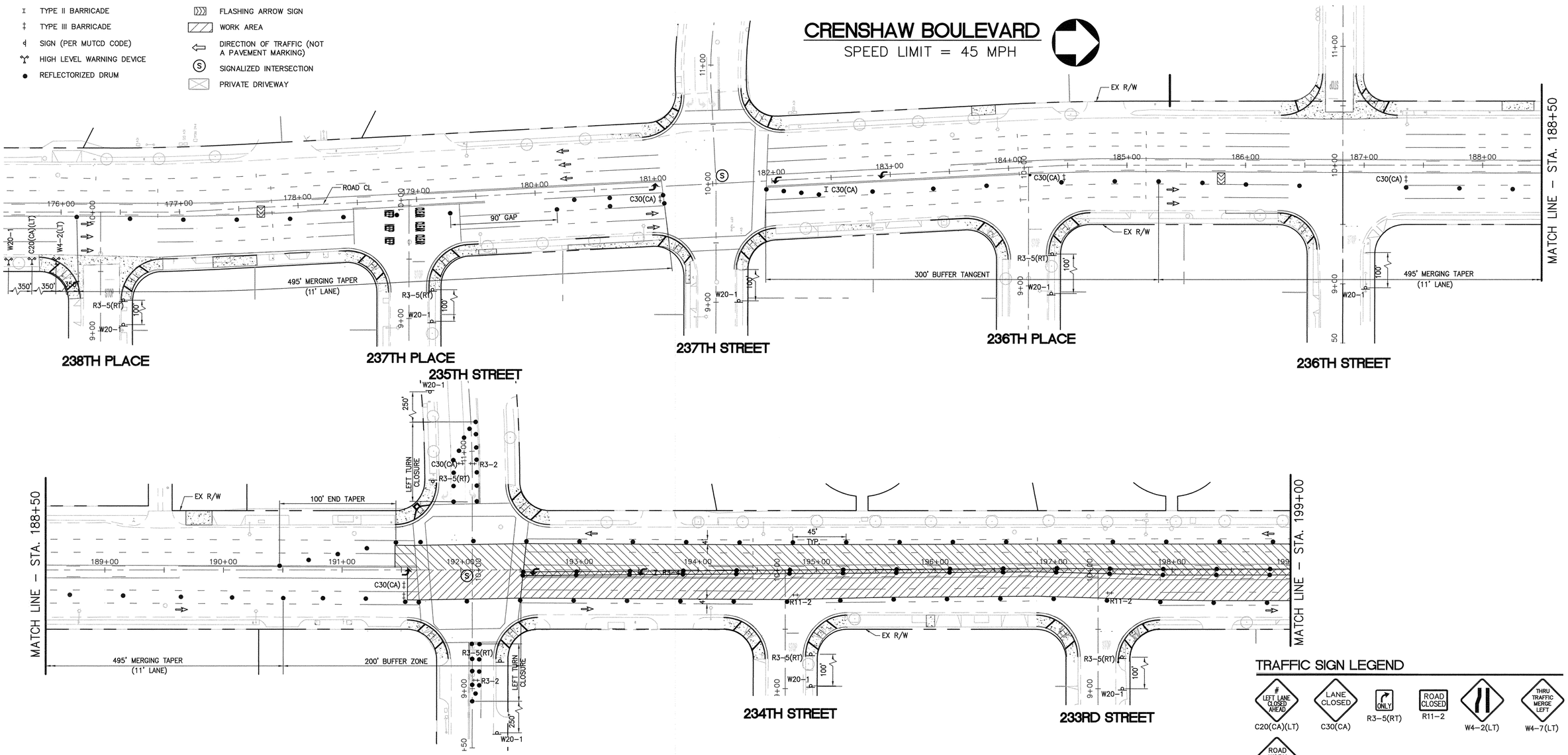
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

SHEET	37	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

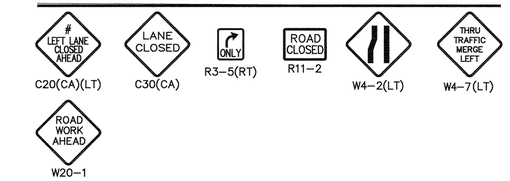
M:\21OR0505000\TRANSP\SHEETS\TC-18.dwg

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY



TRAFFIC SIGN LEGEND



GENERAL NOTES:

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2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI — 01/25/16
PE 64286, EXP 06/30/17 — DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND
PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE — 4/8/16 — DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	38	OF	55
SCALE: AS SHOWN		SPECIFICATION NO.: SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

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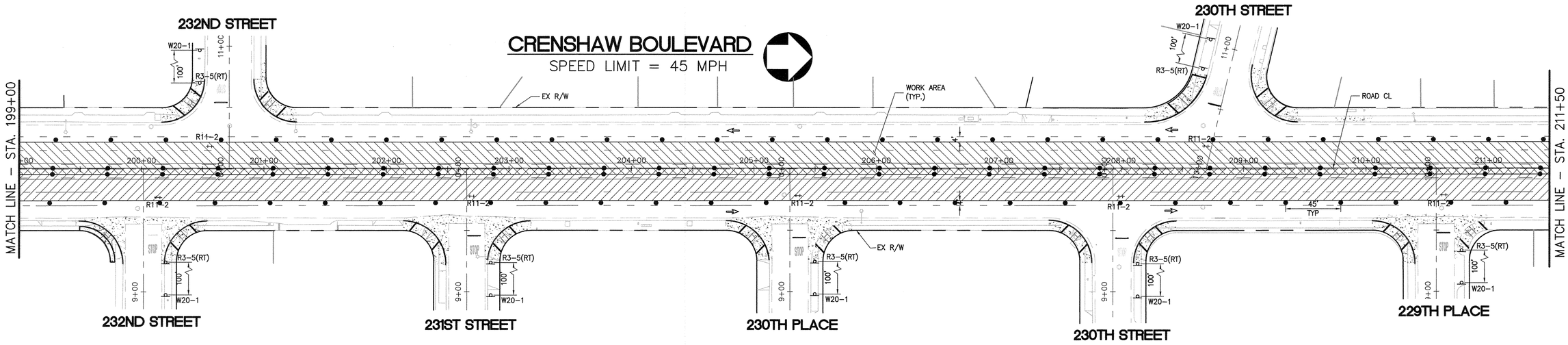

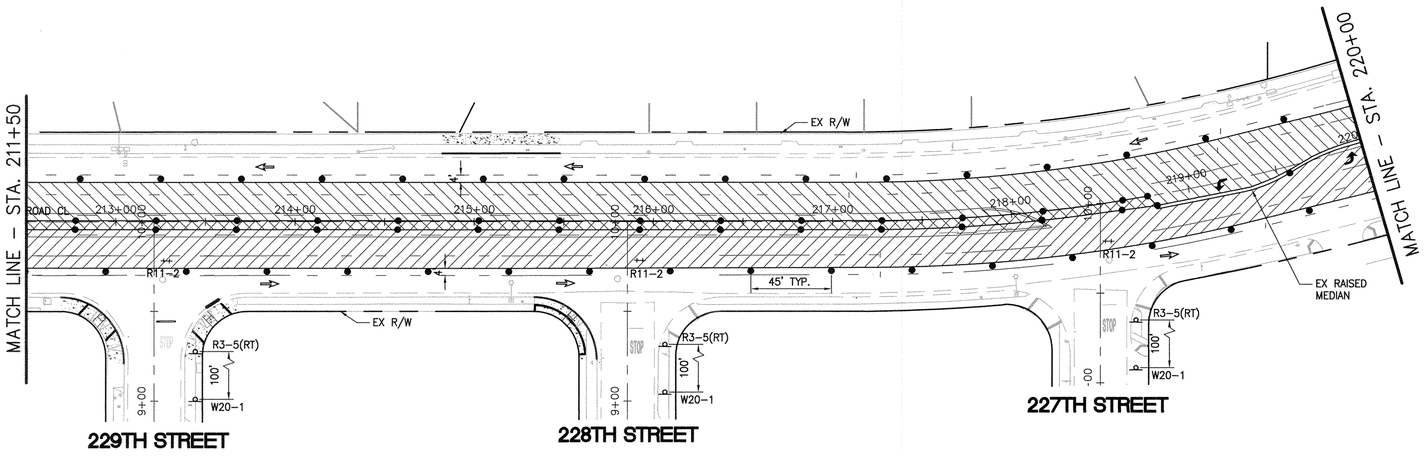

TRAFFIC SIGN LEGEND

R3-5(RT) — ONLY

R11-2 — ROAD CLOSED

W20-1 — ROAD WORK AHEAD

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in 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. Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER — ARIEF NAFTALI — No. 64286 06/30/2017 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17
01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY:	DRAWN BY:
WB	WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	39	OF	55
SCALE: AS SHOWN		SPECIFICATION NO.: SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		

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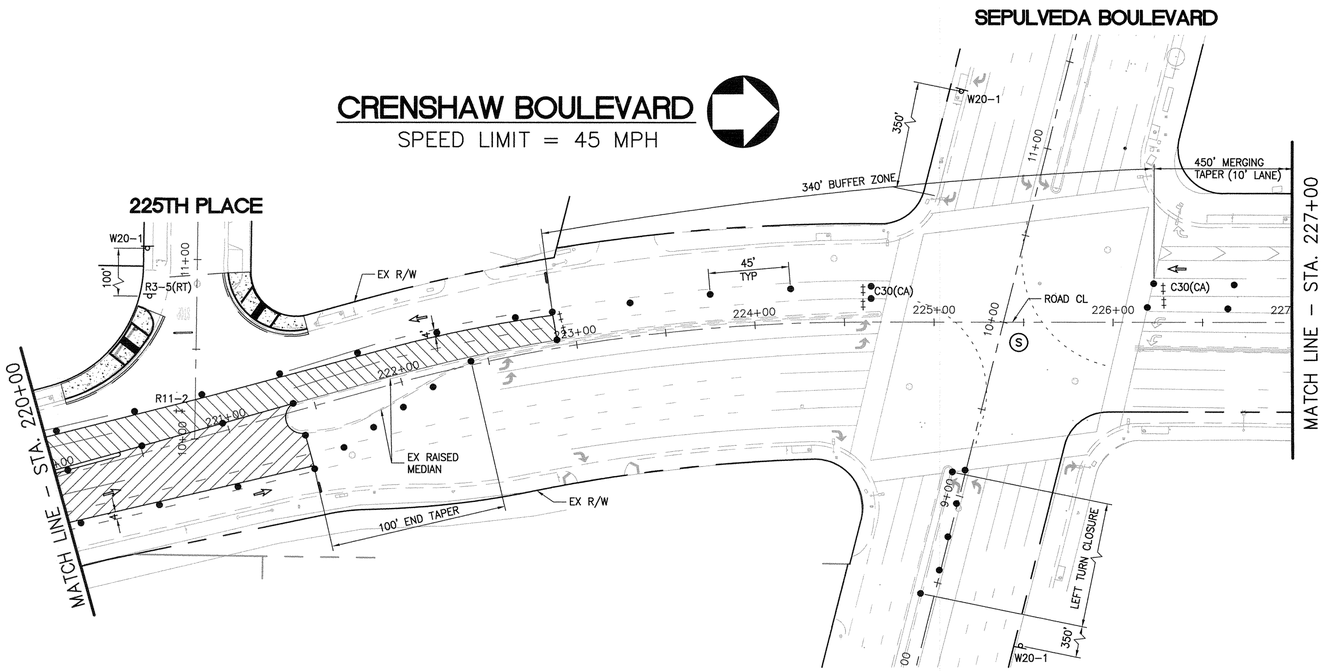

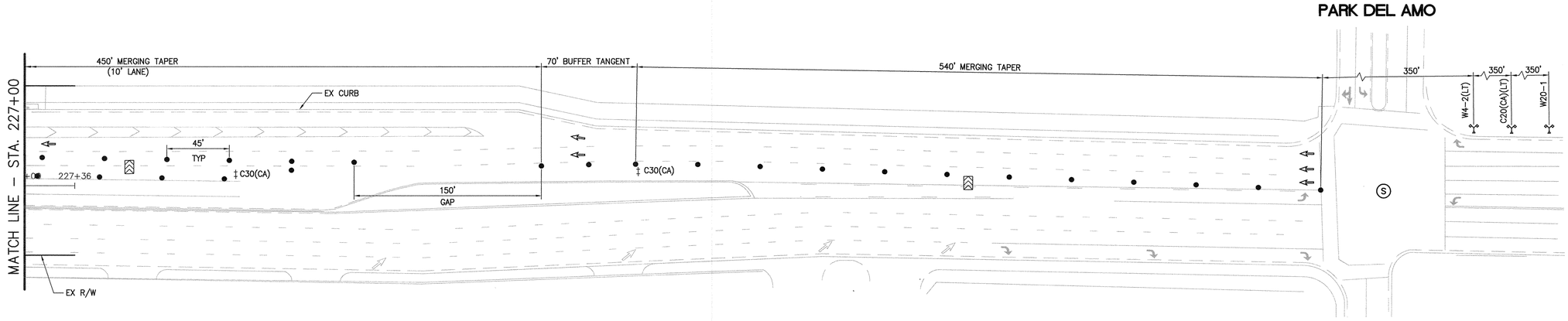

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- SIGN (PER MUTCD CODE)
- HIGH LEVEL WARNING DEVICE
- REFLECTORIZED DRUM
- FLASHING ARROW SIGN
- WORK AREA
- DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- SIGNALIZED INTERSECTION
- PRIVATE DRIVEWAY

TRAFFIC SIGN LEGEND

GENERAL NOTES:

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.
3. CONTRACTOR SHALL CLOSE LEFT TURN LANES ON SIDE STREETS PER CITY STANDARD T1007.

40' 20' 0' 40' 80'

GRAPHIC SCALE

Note: For reduced sized prints, original scale is in inches

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REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751-7373 Fax (714) 545-8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
AREA 6 - STAGE 2 (NB)
STAGE 4 (SB)

DESIGNED BY: WB
DRAWN BY: WB

PROJECT ENGINEER:
STEPHANIE COMON, PE

ENGINEERING MANAGER:
STEVEN FINTON, PE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

4/8/16
DATE

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

SHEET 40 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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CONSTRUCTION NOTE

(1) INSTALL CALTRANS TYPE "E" DETECTOR LOOPS AND SAWCUT TO EXISTING PULL BOX AS INDICATED PER CALTRANS STANDARD PLAN ES-5B.

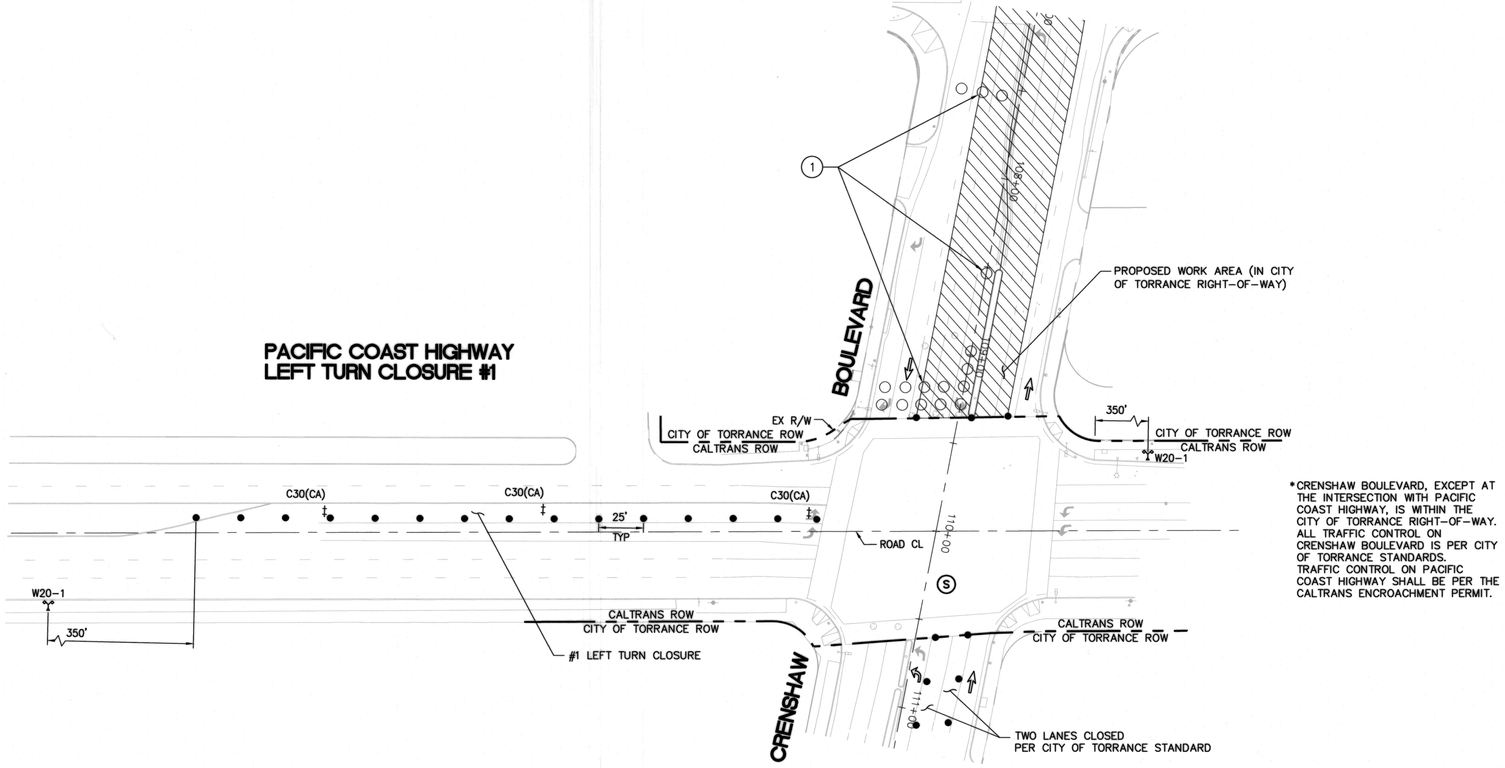
LEGEND

- ‡ TYPE III BARRICADE
- ⊣ SIGN (PER MUTCD CODE)
- • REFLECTORIZED DRUM
- ⅄ HIGH LEVEL WARNING DEVICE
- ▨ WORK AREA
- ⇦ DIRECTION OF TRAFFIC (NOT A PAVEMENT MARKING)
- (S) SIGNALIZED INTERSECTION

TRAFFIC SIGN LEGEND

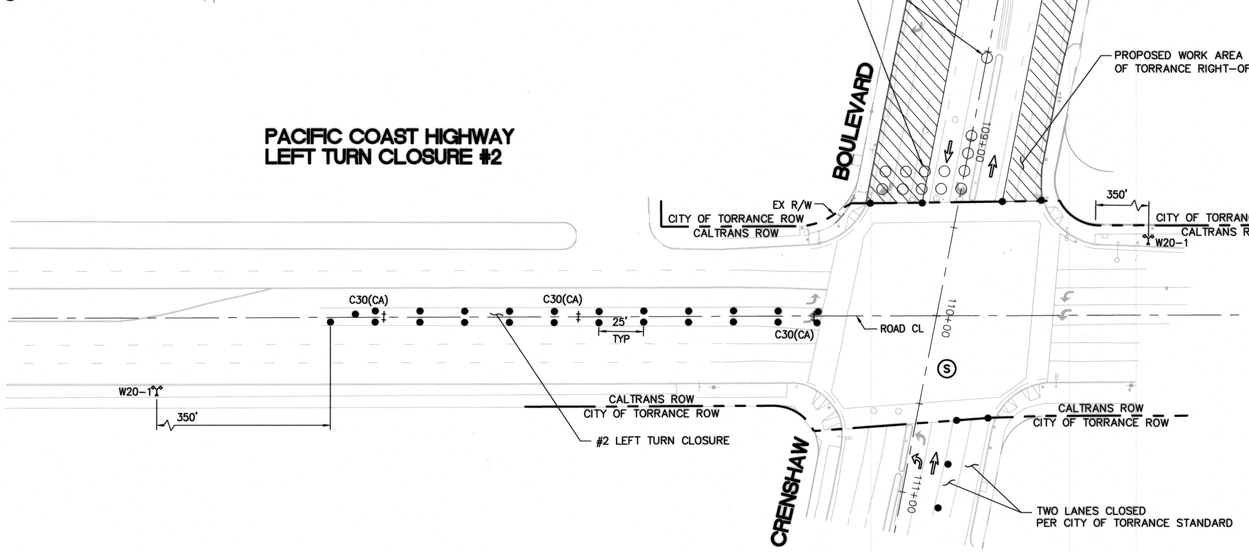
LANE CLOSED	ROAD WORK AHEAD
C30(CA) 36"x36"	W20-1 36"x36"

PACIFIC COAST HIGHWAY LEFT TURN CLOSURE #1



*CRENSHAW BOULEVARD, EXCEPT AT THE INTERSECTION WITH PACIFIC COAST HIGHWAY, IS WITHIN THE CITY OF TORRANCE RIGHT-OF-WAY. ALL TRAFFIC CONTROL ON CRENSHAW BOULEVARD IS PER CITY OF TORRANCE STANDARDS. TRAFFIC CONTROL ON PACIFIC COAST HIGHWAY SHALL BE PER THE CALTRANS ENCROACHMENT PERMIT.

PACIFIC COAST HIGHWAY LEFT TURN CLOSURE #2



*CRENSHAW BOULEVARD, EXCEPT AT THE INTERSECTION WITH PACIFIC COAST HIGHWAY, IS WITHIN THE CITY OF TORRANCE RIGHT-OF-WAY. ALL TRAFFIC CONTROL ON CRENSHAW BOULEVARD IS PER CITY OF TORRANCE STANDARDS. TRAFFIC CONTROL ON PACIFIC COAST HIGHWAY SHALL BE PER THE CALTRANS ENCROACHMENT PERMIT.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

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REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION, I-120
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC CONTROL PLAN
NORTHBOUND LEFT TURN CLOSURE ON PACIFIC COAST HIGHWAY (CALTRANS)

DESIGNED BY: SC | DRAWN BY: DB
PROJECT ENGINEER: STEPHANIE COMON, PE
ENGINEERING MANAGER: STEVEN FINTON, PE

REGISTERED PROFESSIONAL ENGINEER CRAIG BILEZERIAN No. 55339 Exp. 12/31/16 CIVIL STATE OF CALIFORNIA

CALTRANS
APPROVED BY: _____ DATE

CALTRANS #

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY: 6/16/2016 DATE
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 41 OF 55
SCALE: AS SHOWN
SPECIFICATION NO.: SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.:
PLAN NO. ST-1048

X:\ENG\CIP_Crenshaw Blvd Rehabilitation, I-120\Design\Final Plans\CAD Files\TC-30-PCH(COT).dwg

EXISTING SIGNAL PHASE DIAGRAM

ø1	ø2	ø3	ø4
ø5	ø6	ø7	ø8

CONDUCTOR SCHEDULE ■

AWG	CIRCUIT	RUN No. 1	2	3	4	5	6	7	8	9
#14	ø1	–	3	–	–	–	–	–	6	6
	ø2	–	–	–	–	3	3	3	3	3
	ø3	3	3	3	3	3	3	3	6	6
	ø4	–	–	–	–	–	3	6	6	6
	ø5	–	–	–	3	6	6	6	6	6
	ø6	–	3	–	–	–	–	–	–	–
	ø7	–	–	–	–	–	–	–	–	–
	ø8	–	–	–	–	–	–	–	–	–
	ø2P	–	–	–	–	2	2	2	4	4
	ø4P	2	2	–	–	–	–	2	4	4
	ø6P	–	2	–	2	2	2	2	4	4
	ø8P	–	–	–	–	–	–	–	–	–
	ø2 PPB	–	–	–	–	–	1	1	1	1
	ø4 PPB	–	1	–	–	–	–	–	1	1
	ø6 PPB	1	1	1	1	1	1	1	2	2
	ø8 PPB	–	–	–	–	–	–	–	–	–
	PPB COM	1	1	1	1	1	1	1	2	2
	SPARES	3	3	3	3	3	3	3	6	6
	TOTAL	10	19	8	13	21	25	30	54	54
#12	IISNS	–	2	2	2	2	2	2	4	4
	TOTAL	–	2	2	2	2	2	2	4	4
#10	IISNS	1	1	1	1	1	1	1	2	2
	TOTAL	1	1	1	1	1	1	1	2	2
#8	SERVICE	–	–	–	–	–	–	–	–	–
	LUMINAIRE	–	2	2	2	2	2	2	4	4
	TOTAL	–	2	2	2	2	2	2	4	4
DET. LOOP CABLE	ø1	–	–	–	1	1	1	1	1	1
	ø2	–	–	–	–	–	–	–	–	6
	ø3	–	–	–	–	–	3	3	3	3
	ø4	2	2	–	–	–	–	–	2	2
	ø5	–	–	–	–	–	–	–	–	1
	ø6	–	–	–	6	6	6	6	6	6
	ø7	–	–	–	–	–	–	–	–	–
	ø8	–	–	–	–	–	–	–	–	–
	TOTAL	2	2	–	7	7	10	10	12	19
BELDEN 8281 COAXIAL CABLE		–	1(N)	1(N)	1(N)	1 1(N)	1 1(N)	1 2(N)	1 3(N)	1 3(N)
6Pr#19 INT. CABLE		–	–	–	1	1	1	1	1	1
138 OPTICOM CABLE		–	1	1	1	2	2	3	4	4
CONDUIT SIZE		2"	2"	2"	3"	3"	3.5"	3.5"	2–3"	2–3.5"

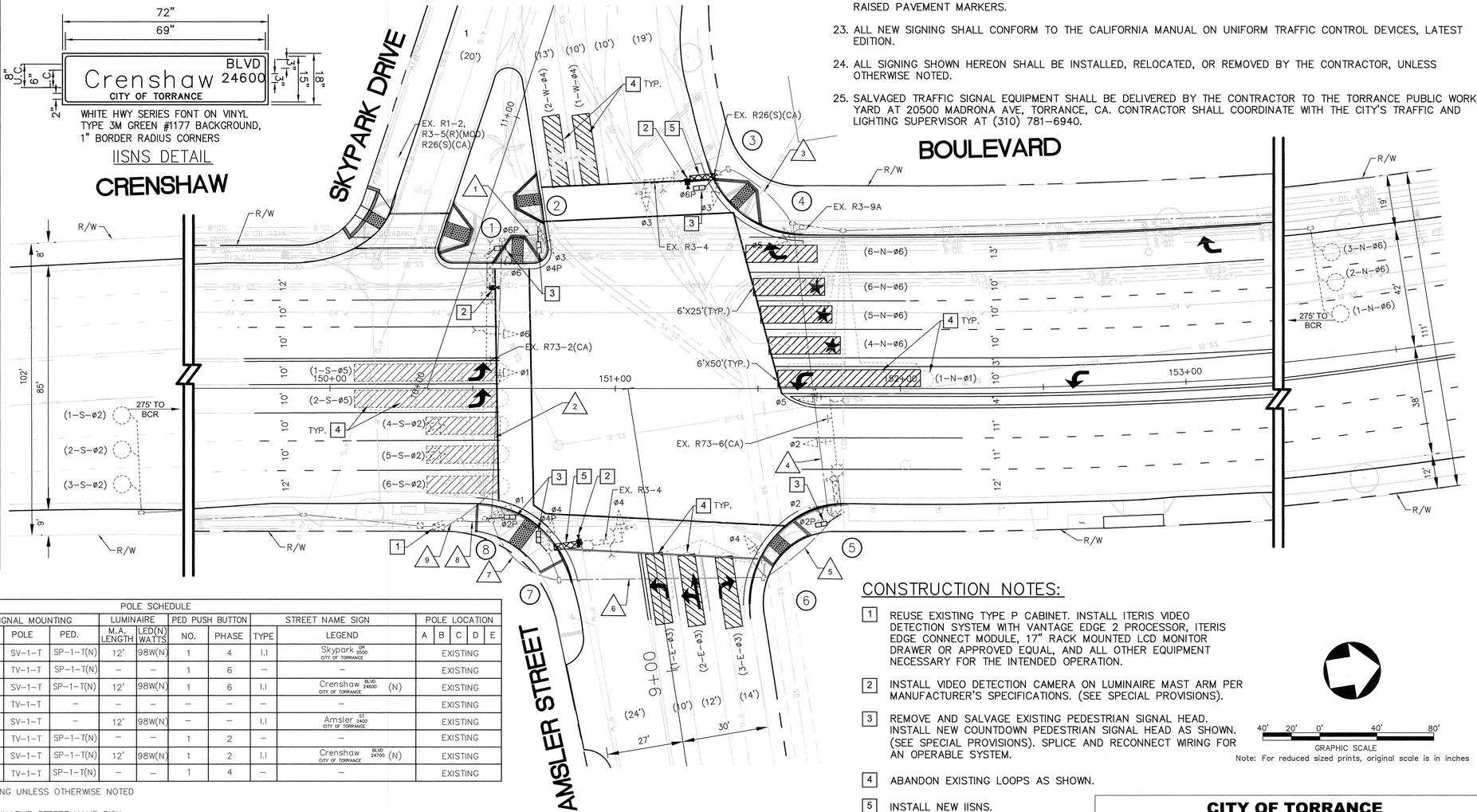
CONDUITS ARE EXISTING UNLESS NOTED OTHERWISE.
ALL CONDUCTORS ARE EXISTING UNLESS NOTED OTHERWISE.
(N) = NEW, (E) = EXISTING

■ CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION. ALL NEW CONDCUTORS SHALL BE CONTINUOUS FROM TERMINAL COMPARTMENTS TO CONTROLLER CABINET.

GENERAL NOTES:

1. TRAFFIC SIGNAL, LIGHTING, STRIPING AND MARKINGS SHALL CONFORM TO THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS – SECTION 86, 2010 EDITION, AND STANDARD PLANS, 2010 EDITION, UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIAL PROVISIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
3. ALL WIRING SHALL BE MARKED (TAGGED) WITHIN THE CONTROLLER CABINET FOR PHASE IDENTIFICATION.
4. ALL SIGNAL EQUIPMENT SHALL BE WIRED IN ACCORDANCE WITH THE PROPOSED SIGNAL PHASE DIAGRAM.
5. (X–X–XX) INDICATES LOOP ASSIGNMENT IN THE CONTROLLER CABINET. EACH LOOP ASSIGNMENT SHALL HAVE A SEPARATE LEAD–IN CABLE TO THE CONTROLLER.
6. DETECTORS AND/OR VIDEO DETECTION ZONES SHALL BE WIRED/RE–CONFIGURED PER DETECTOR ASSIGNMENTS SHOWN ON THIS PLAN.
7. VIDEO DETECTION SYSTEM AND CAMERA SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. MANUFACTURER REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE VIDEO DETECTION SYSTEM AND CAMERA. SEE SPECIAL PROVISIONS.
8. ALL DETECTION ZONES SHALL BE CENTERED IN THE MIDDLE OF THE LANE AND FRONT DETECTION ZONES SHALL BE PLACED BEHIND THE EDGE OF THE CROSSWALK OR LIMIT LINE, UNLESS OTHERWISE NOTED.
9. INDICATES PROPOSED VIDEO DETECTION ZONE, NOT A PHYSICAL INSTALLATION.
10. INDICATES NEW VIDEO DETECTION CAMERA.
11. ALL NEW PULL BOXES SHALL BE NO. 6 UNLESS SHOWN OTHERWISE.
12. ALL NEW UNDERGROUND CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
13. ALL EXISTING CONDUITS SHALL BE REUSED UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
14. ★ INDICATES PROPOSED QUEUE DETECTION.
15. SIGNAL, LIGHTING, AND ELECTRICAL SYSTEMS SHALL CONFORM TO THE CITY OF TORRANCE SPECIFICATIONS AS OUTLINED IN THE SPECIAL PROVISIONS.
16. NEW PEDESTRIAN HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE) GE GT1 COUNTDOWN PEDESTRIAN INDICATION.
17. THE CONTRACTOR SHALL MAINTAIN PROPER ADA CLEARANCES AROUND ALL NEW POLES, CABINETS, OR ANY OTHER ABOVE–GROUND EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT. ALL NEW POLES, CONDUIT AND PULL BOXES SHALL BE INSTALLED OUTSIDE OF CURB ACCESS RAMPS.
18. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT BY DIALING 811 FORTY–EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF THE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH THEIR SERVICE.
19. EXACT LOCATION OF ALL SHOWN UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
20. ALL TRAFFIC LINES AND MARKINGS SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST EDITION).
21. ALL TRAFFIC LINES AND PAVEMENT MARKINGS SHALL BE INSTALLED WITH THERMOPLASTIC BY THE CONTRACTOR.
22. ALL CONFLICTING LINES AND MARKINGS SHALL BE REMOVED BY WET SANDBLASTING AND INCLUDES REMOVAL OF RAISED PAVEMENT MARKERS.
23. ALL NEW SIGNING SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
24. ALL SIGNING SHOWN HEREON SHALL BE INSTALLED, RELOCATED, OR REMOVED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
25. SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR TO THE TORRANCE PUBLIC WORKS YARD AT 20500 MADRONA AVE, TORRANCE, CA. CONTRACTOR SHALL COORDINATE WITH THE CITY'S TRAFFIC AND LIGHTING SUPERVISOR AT (310) 781–6940.

IISNS DETAIL



POLE SCHEDULE

No.	POLE TYPE	SIGNAL M.A. LENGTH	SIGNAL MOUNTING M.A.	SIGNAL MOUNTING POLE	SIGNAL MOUNTING PED.	LUMINAIRE M.A. LENGTH	LUMINAIRE LED(N) WATTS	PED PUSH BUTTON NO.	PED PUSH BUTTON PHASE	STREET NAME SIGN TYPE	STREET NAME SIGN LEGEND	POLE LOCATION A	B	C	D	E
1	26–4–70	45'	MAT MAS	SV–1–T	SP–1–T(N)	12'	98W(N)	1	4	I.I	Skypark DR 2500 CITY OF TORRANCE	EXISTING				
2	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	6	–	–	EXISTING				
3	19–4–70	25'	MAT	SV–1–T	SP–1–T(N)	12'	98W(N)	1	6	I.I	Crenshaw BLVD 24600 CITY OF TORRANCE (N)	EXISTING				
4	1A	–	–	TV–1–T	–	–	–	–	–	–	–	EXISTING				
5	26–4–70	45'	MAT MAS	SV–1–T	–	12'	98W(N)	–	–	I.I	Amsler ST 2400 CITY OF TORRANCE	EXISTING				
6	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	2	–	–	EXISTING				
7	19–4–70	30'	MAT	SV–1–T	SP–1–T(N)	12'	98W(N)	1	2	I.I	Crenshaw BLVD 24700 CITY OF TORRANCE (N)	EXISTING				
8	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	4	–	–	EXISTING				

ALL INDICATED EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED
(N) – INDICATES NEW EQUIPMENT
I.I – INDICATES INTERNALLY–ILLUMINATIVE STREET NAME SIGN

CONSTRUCTION NOTES:

1. REUSE EXISTING TYPE P CABINET. INSTALL ITERIS VIDEO DETECTION SYSTEM WITH VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, 17" RACK MOUNTED LCD MONITOR DRAWER OR APPROVED EQUAL, AND ALL OTHER EQUIPMENT NECESSARY FOR THE INTENDED OPERATION.
2. INSTALL VIDEO DETECTION CAMERA ON LUMINAIRE MAST ARM PER MANUFACTURER'S SPECIFICATIONS. (SEE SPECIAL PROVISIONS).
3. REMOVE AND SALVAGE EXISTING PEDESTRIAN SIGNAL HEAD. INSTALL NEW COUNTDOWN PEDESTRIAN SIGNAL HEAD AS SHOWN. (SEE SPECIAL PROVISIONS). SPLICE AND RECONNECT WIRING FOR AN OPERABLE SYSTEM.
4. ABANDON EXISTING LOOPS AS SHOWN.
5. INSTALL NEW IISNS.

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in inches

FEDERAL PROJECT NO. STPL-5249 (038)

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PLANS PREPARED BY:
REGISTERED PROFESSIONAL ENGINEER ARIEF NAFFALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA
PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883
ARIEF NAFFALI 01/25/16
PE 64286, EXP 06/30/17 DATE

REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC SIGNAL PLAN
CRENSHAW BOULEVARD AND SKYPARK DRIVE / AMSLER STREET

DESIGNED BY: KN | DRAWN BY: KN
PROJECT ENGINEER: STEPHANIE COMON, PE
OPERATIONS MANAGER: STEVEN COOPER

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16 DATE

SHEET 42 OF 55
SCALE: AS SHOWN
SPECIFICATON NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. ST-1048
PLAN NO. TS92 - 247A

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CONDUCTOR SCHEDULE ■

AWG	CIRCUIT	RUN No. 1	2	3	4	5	6	7	8	9
#14	ø1	3	3	3	3	3	3	3	3	6
	ø2	–	–	–	–	–	–	–	–	3
	ø4	–	–	–	–	–	–	3	3	3
	ø5	–	–	–	3	3	–	–	–	3
	ø6	3	3	3	3	3	–	–	–	3
	ø8	–	3	3	3	3	–	–	3	6
	ø2P	–	–	–	–	–	2	2	2	4
	ø4P	–	2	2	2	2	–	2	2	4
	ø6P	2	2	2	2	2	–	–	–	2
	ø8P	–	–	2	2	2	–	–	2	2
	ø2 PPB	–	–	–	–	–	–	1	1	1
	ø4 PPB	1(N)	1(N)	1(N)	1(N)	1(N)	1	1	1	1 / 1(N)
	ø6 PPB	–	1	1	1	1	–	–	–	1
	ø8 PPB	–	–	–	1	1	–	–	–	1
	PPB COMM	1	1	1	1	1	1	1	1	1
	INTERCONNECT	–	–	–	–	–	–	–	–	–
	SPARES	3	3	3	3	3	3	3	3	3
	TOTAL	13	19	21	25	25	10	16	21	44
#12	ø2 DET	–	–	–	–	–	2	2	2	2
	ø6 DET	–	–	–	1	1	–	–	–	1
#10	SIGNAL COMMON	1	1	1	1	1	1	1	1	1
	LUMINAIRE	–	2	2	2	2	2	2	2	2
#12	ILLUM STREET NAME SIGNS	–	2	2	2	2	2	2	2	2
BELDEN 8281 COAXIAL CABLE		1(N)	1(N)	2(N)	2(N)	2(N)	–	1(N)	1(N)	4(N)

CONDUITS ARE EXISTING UNLESS NOTED OTHERWISE.
ALL CONDUCTORS ARE NEW UNLESS NOTED OTHERWISE.
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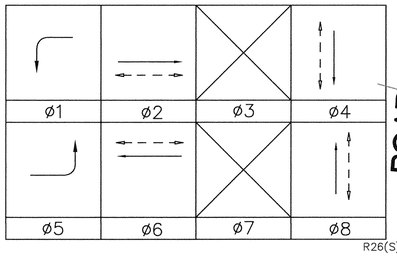
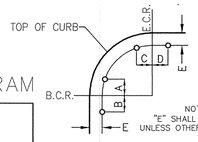
GENERAL NOTES:

1. TRAFFIC SIGNAL, LIGHTING, STRIPING AND MARKINGS SHALL CONFORM TO THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS – SECTION 86, 2010 EDITION, AND STANDARD PLANS, 2010 EDITION, UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIAL PROVISIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
3. ALL WIRING SHALL BE MARKED (TAGGED) WITHIN THE CONTROLLER CABINET FOR PHASE IDENTIFICATION.
4. ALL SIGNAL EQUIPMENT SHALL BE WIRED IN ACCORDANCE WITH THE PROPOSED SIGNAL PHASE DIAGRAM.
5. (X–X–XX) INDICATES LOOP ASSIGNMENT IN THE CONTROLLER CABINET. EACH LOOP ASSIGNMENT SHALL HAVE A SEPARATE LEAD–IN CABLE TO THE CONTROLLER.
6. DETECTORS AND/OR VIDEO DETECTION ZONES SHALL BE WIRED/RE–CONFIGURED PER DETECTOR ASSIGNMENTS SHOWN ON THIS PLAN.
7. VIDEO DETECTION SYSTEM AND CAMERA SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. MANUFACTURER REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE VIDEO DETECTION SYSTEM AND CAMERA. SEE SPECIAL PROVISIONS.
8. ALL DETECTION ZONES SHALL BE CENTERED IN THE MIDDLE OF THE LANE AND FRONT DETECTION ZONES SHALL BE PLACED BEHIND THE EDGE OF THE CROSSWALK OR LIMIT LINE, UNLESS OTHERWISE NOTED.
9. ▨ INDICATES PROPOSED NEW VIDEO DETECTION ZONE, NOT A PHYSICAL INSTALLATION.
10. ■► INDICATES NEW VIDEO DETECTION CAMERA.
11. ALL NEW PULL BOXES SHALL BE NO. 6 UNLESS SHOWN OTHERWISE.
12. ALL NEW UNDERGROUND CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
13. ALL EXISTING CONDUITS SHALL BE REUSED UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
14. ★ INDICATES PROPOSED QUEUE DETECTION.
15. SIGNAL, LIGHTING, AND ELECTRICAL SYSTEMS SHALL CONFORM TO THE CITY OF TORRANCE SPECIFICATIONS AS OUTLINED IN THE SPECIAL PROVISIONS.
16. NEW PEDESTRIAN HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE) AND COUNTDOWN PEDESTRIAN SIGNAL HEAD.
17. THE CONTRACTOR SHALL MAINTAIN PROPER ADA CLEARANCES AROUND ALL NEW POLES, CABINETS, OR ANY OTHER ABOVE–GROUND EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT. ALL NEW POLES, CONDUIT AND PULL BOXES SHALL BE INSTALLED OUTSIDE OF CURB ACCESS RAMPS.
18. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT BY DIALING 811 FORTY–EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF THE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH THEIR SERVICE.
19. EXACT LOCATION OF ALL SHOWN UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
20. ALL TRAFFIC LINES AND MARKINGS SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST EDITION).
21. ALL TRAFFIC LINES AND PAVEMENT MARKINGS SHALL BE INSTALLED WITH THERMOPLASTIC BY THE CONTRACTOR.
22. ALL CONFLICTING LINES AND MARKINGS SHALL BE REMOVED BY WET SANDBLASTING AND INCLUDES REMOVAL OF RAISED PAVEMENT MARKERS.
23. ALL NEW SIGNING SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
24. ALL SIGNING SHOWN HEREON SHALL BE INSTALLED, RELOCATED, OR REMOVED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
25. SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR TO THE TORRANCE PUBLIC WORKS YARD AT 20500 MADRONA AVE, TORRANCE, CA. CONTRACTOR SHALL COORDINATE WITH THE CITY'S TRAFFIC AND LIGHTING SUPERVISOR AT (310) 781–6940.

EXISTING SIGNAL PHASE DIAGRAM

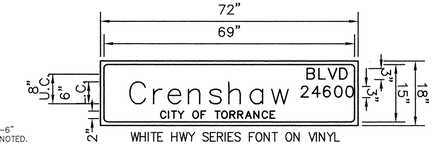


POLE LOCATION DETAIL
NO SCALE

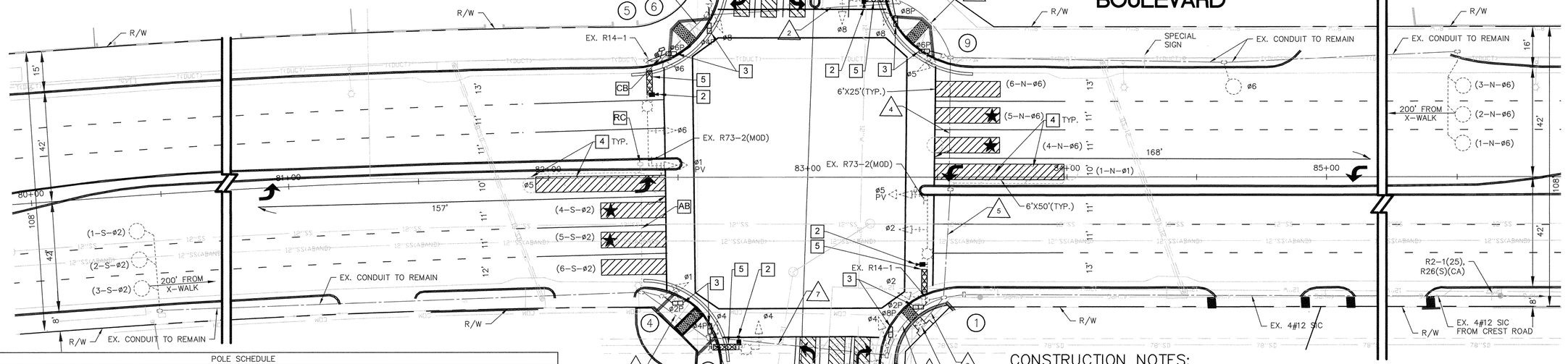


NOTE:
"E" SHALL BE 2'–6" UNLESS OTHERWISE NOTED.

IISNS DETAIL



WHITE HWY SERIES FONT ON VINYL
TYPE 3M .GREEN #1177 BACKGROUND,
1" BORDER RADIUS CORNERS



POLE SCHEDULE

No.	POLE TYPE	SIGNAL M.A. LENGTH	SIGNAL MOUNTING M.A.	SIGNAL MOUNTING POLE	PED.	LUMINAIRE M.A. LENGTH	LUMINAIRE LED(N) WATTS	PED PUSH BUTTON NO.	PED PUSH BUTTON PHASE	PED PUSH BUTTON TYPE	STREET NAME SIGN LEGEND	POLE LOCATION A	B	C	D	E
①	26–4–70	40'	MAT MAS	SV–1–T	SP–1–T(N)	15'	98W(N)	1	8	I.I	Rolling Hills RD CITY OF TORRANCE (N)	EXISTING				
②	1A	–	–	TV–2–T	SP–1–T(N)	–	–	1	2	–	–	EXISTING				
③	XVII	18'	MAT	SV–1–T	SP–1–T(N)	12'	98W(N)	1	2	I.I	Crenshaw BLVD CITY OF TORRANCE (N)	EXISTING				
④	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	4	–	–	EXISTING				
⑤	26–4–70	40'	MAT MAS	SV–1–T	SP–1–T(N)	15'	98W(N)	–	–	I.I	Rolling Hills RD CITY OF TORRANCE (N)	EXISTING				
⑥	PPB POLE(N)	–	–	–	–	–	–	1(N)	4(N)	–	–	–	–	10'	–	3'
⑦	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	6	–	–	EXISTING				
⑧	XVII	18'	MAT	SV–1–T	SP–1–T(N)	12'	98W(N)	1	6	I.I	Crenshaw BLVD CITY OF TORRANCE (N)	EXISTING				
⑨	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	8	–	–	EXISTING				

ALL INDICATED EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED
(N) – INDICATES NEW EQUIPMENT
I.I – INDICATES INTERNALLY–ILLUMINATIVE STREET NAME SIGN

CONSTRUCTION NOTES:

1. REUSE EXISTING TYPE P CABINET. INSTALL ITERIS VIDEO DETECTION SYSTEM WITH VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, 17" RACK MOUNTED LCD MONITOR DRAWER OR APPROVED EQUAL, AND ALL OTHER EQUIPMENT NECESSARY FOR THE INTENDED OPERATION.
2. INSTALL VIDEO DETECTION CAMERA ON LUMINAIRE MAST ARM PER MANUFACTURER'S SPECIFICATIONS. (SEE SPECIAL PROVISIONS).
3. REMOVE AND SALVAGE EXISTING PEDESTRIAN SIGNAL HEAD. INSTALL NEW COUNTDOWN PEDESTRIAN SIGNAL HEAD AS SHOWN. (SEE SPECIAL PROVISIONS). SPLICE AND RECONNECT WIRING FOR AN OPERABLE SYSTEM.
4. ABANDON EXISTING LOOPS AS SHOWN.
5. INSTALL NEW IISNS
- AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
- CB INSTALL CONDUIT INTO EXISTING PULL BOX
- RC EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR

40' 20' 0' 40' 80'
GRAPHIC SCALE
Note: For reduced sized prints, original scale is in 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. Call before you dig.
TWO WORKING DAYS BEFORE YOU DIG

PLANS PREPARED BY:

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PSOMAS
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17 — 01/25/16 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I–120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC SIGNAL PLAN
CRENSHAW BOULEVARD AND ROLLING HILLS ROAD

DESIGNED BY:	DRAWN BY:
KN	KN

PROJECT ENGINEER:
STEPHANIE COMON, PE — Stephanie Comon

OPERATIONS MANAGER:
STEVEN COOPER — Richard Hall

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE — 4/6/16 DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET	43 OF 55
SCALE:	AS SHOWN
SPECIFICATON NO.	SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	ST – 1048
PLAN NO.	TL – 171A

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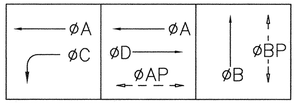
PHASE DIAGRAM



CONDUCTOR SCHEDULE ■

AWG	CIRCUIT	RUN No. 1	2	3	4	5
#14	øA	3	3	3	–	3
	øB	3	3	3	–	3
	øC	3	3	3	3	6
	øD	3	3	3	–	3
	øAP	–	–	2	2	2
	øBP	–	2	2	–	4
	øAPPB	–	–	1	1	1
	øBPPB	–	1	1	–	1
	PPB COMMON	–	1	1	1	1
	SPARES	3	3	3	3	3
	TOTAL	12	16	18	10	22
#10	SIGNAL COMMON	1	1	1	1	1
	LUMINAIRE	2	2	2	–	2
BELDEN 8281 COAXIAL CABLE		2	2	2	–	3

CONDUITS ARE EXISTING UNLESS NOTED OTHERWISE.
ALL CONDUCTORS ARE NEW UNLESS NOTED OTHERWISE.
(N) = NEW, (E) = EXISTING

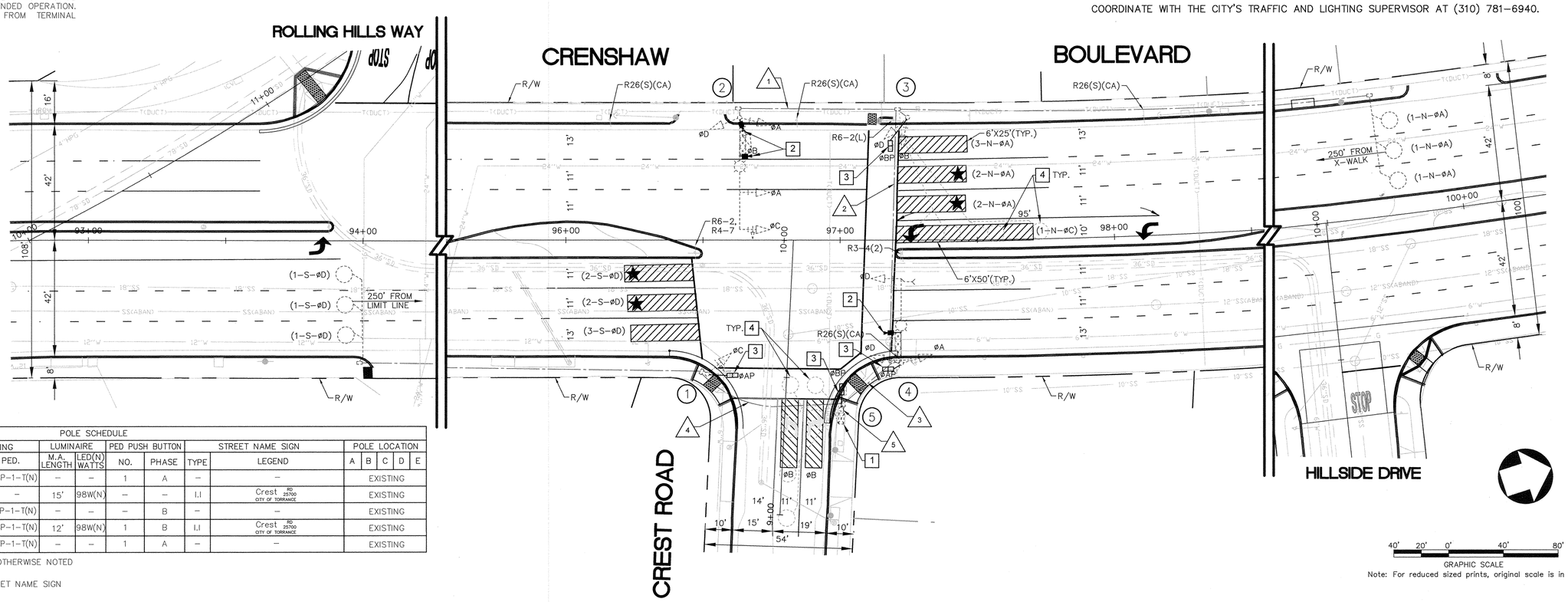
■ CONDUCTOR SCHEDULE IS FURNISHED AS AN INSTALLATION GUIDE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE CORRECT CONDUCTORS REQUIRED FOR THE INTENDED OPERATION. ALL NEW CONDCUTORS SHALL BE CONTINUOUS FROM TERMINAL COMPARTMENTS TO CONTROLLER CABINET.

CONSTRUCTION NOTES:

1. REUSE EXISTING TYPE P CABINET. INSTALL ITERIS VIDEO DETECTION SYSTEM WITH VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, 17" RACK MOUNTED LCD MONITOR DRAWER OR APPROVED EQUAL, AND ALL OTHER EQUIPMENT NECESSARY FOR THE INTENDED OPERATION.
2. INSTALL VIDEO DETECTION CAMERA ON LUMINAIRE MAST ARM PER MANUFACTURER'S SPECIFICATIONS. (SEE SPECIAL PROVISIONS).
3. REMOVE AND SALVAGE EXISTING PEDESTRIAN SIGNAL HEAD. INSTALL NEW COUNTDOWN PEDESTRIAN SIGNAL HEAD AS SHOWN. (SEE SPECIAL PROVISIONS). SPLICE AND RECONNECT WIRING FOR AN OPERABLE SYSTEM.
4. ABANDON EXISTING LOOPS AS SHOWN.

GENERAL NOTES:

1. TRAFFIC SIGNAL, LIGHTING, STRIPING AND MARKINGS SHALL CONFORM TO THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS – SECTION 86, 2010 EDITION, AND STANDARD PLANS, 2010 EDITION, UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIAL PROVISIONS.
2. ALL MATERIALS AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
3. ALL WIRING SHALL BE MARKED (TAGGED) WITHIN THE CONTROLLER CABINET FOR PHASE IDENTIFICATION.
4. ALL SIGNAL EQUIPMENT SHALL BE WIRED IN ACCORDANCE WITH THE PROPOSED SIGNAL PHASE DIAGRAM.
5. (X–X–XX) INDICATES LOOP ASSIGNMENT IN THE CONTROLLER CABINET. EACH LOOP ASSIGNMENT SHALL HAVE A SEPARATE LEAD–IN CABLE TO THE CONTROLLER.
6. DETECTORS AND/OR VIDEO DETECTION ZONES SHALL BE WIRED/RE–CONFIGURED PER DETECTOR ASSIGNMENTS SHOWN ON THIS PLAN.
7. VIDEO DETECTION SYSTEM AND CAMERA SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. MANUFACTURER REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE VIDEO DETECTION SYSTEM AND CAMERA. SEE SPECIAL PROVISIONS.
8. ALL DETECTION ZONES SHALL BE CENTERED IN THE MIDDLE OF THE LANE AND FRONT DETECTION ZONES SHALL BE PLACED BEHIND THE EDGE OF THE CROSSWALK OR LIMIT LINE, UNLESS OTHERWISE NOTED.
9. ▨ INDICATES PROPOSED NEW VIDEO DETECTION ZONE, NOT A PHYSICAL INSTALLATION.
10. ■◄ INDICATES NEW VIDEO DETECTION CAMERA.
11. ALL NEW PULL BOXES SHALL BE NO. 6 UNLESS SHOWN OTHERWISE.
12. ALL NEW UNDERGROUND CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
13. ALL EXISTING CONDUITS SHALL BE REUSED UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
14. ★ INDICATES PROPOSED QUEUE DETECTION.
15. SIGNAL, LIGHTING, AND ELECTRICAL SYSTEMS SHALL CONFORM TO THE CITY OF TORRANCE SPECIFICATIONS AS OUTLINED IN THE SPECIAL PROVISIONS.
16. NEW PEDESTRIAN HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE) GE GT1 COUNTDOWN PEDESTRIAN INDICATION.
17. THE CONTRACTOR SHALL MAINTAIN PROPER ADA CLEARANCES AROUND ALL NEW POLES, CABINETS, OR ANY OTHER ABOVE–GROUND EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT. ALL NEW POLES, CONDUIT AND PULL BOXES SHALL BE INSTALLED OUTSIDE OF CURB ACCESS RAMPS.
18. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT BY DIALING 811 FORTY–EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF THE UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH THEIR SERVICE.
19. EXACT LOCATION OF ALL SHOWN UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
20. ALL TRAFFIC LINES AND MARKINGS SHALL CONFORM TO CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST EDITION).
21. ALL TRAFFIC LINES AND PAVEMENT MARKINGS SHALL BE INSTALLED WITH THERMOPLASTIC BY THE CONTRACTOR.
22. ALL CONFLICTING LINES AND MARKINGS SHALL BE REMOVED BY WET SANDBLASTING AND INCLUDES REMOVAL OF RAISED PAVEMENT MARKERS.
23. ALL NEW SIGNING SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
24. ALL SIGNING SHOWN HEREON SHALL BE INSTALLED, RELOCATED, OR REMOVED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
25. SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR TO THE TORRANCE PUBLIC WORKS YARD AT 20500 MADRONA AVE, TORRANCE, CA. CONTRACTOR SHALL COORDINATE WITH THE CITY'S TRAFFIC AND LIGHTING SUPERVISOR AT (310) 781–6940.



Note: For reduced sized prints, original scale is in inches

POLE SCHEDULE

POLE No.	POLE TYPE	SIGNAL M.A. LENGTH	SIGNAL MOUNTING M.A.	POLE	PED.	LUMINAIRE M.A. LENGTH	LUMINAIRE LED(N) WATTS	PED PUSH BUTTON NO.	PED PUSH BUTTON PHASE	STREET NAME SIGN TYPE	STREET NAME SIGN LEGEND	POLE LOCATION A	B	C	D	E
①	1A	–	–	TV–1–T	SP–1–T(N)	–	–	1	A	–	–	EXISTING				
②	26–3–70	40'	2–MAS	SV–3–T	–	15'	98W(N)	–	–	I.I	Crest RD 25700 CITY OF TORRANCE	EXISTING				
③	1A	–	–	TV–2–T	SP–1–T(N)	–	–	–	B	–	–	EXISTING				
④	. XVII	20'	MAS	SV–2–T	SP–1–T(N)	12'	98W(N)	1	B	I.I	Crest RD 25700 CITY OF TORRANCE	EXISTING				
⑤	1A	–	–	–	TP–1–T(N)	–	–	1	A	–	–	EXISTING				

ALL INDICATED EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED
(N) – INDICATES NEW EQUIPMENT
I.I – INDICATES INTERNALLY–ILLUMINATIVE STREET NAME SIGN

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

REGISTERED PROFESSIONAL ENGINEER ARIEF NAFTALI No. 64286 06/30/2017 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:

PSOMAS

3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707
(714) 751–7373 Fax (714) 545–8883

ARIEF NAFTALI
PE 64286, EXP 06/30/17

01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

TRAFFIC SIGNAL PLAN
CRENSHAW BOULEVARD AND CREST ROAD

DESIGNED BY:	DRAWN BY:
KN	KN

PROJECT ENGINEER:
STEPHANIE COMON, PE
Stephanie Comon

OPERATIONS MANAGER:
STEVEN COOPER
Richard Hall

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16
DATE

SHEET 44 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO. ST-1048
PLAN NO. TL-151A

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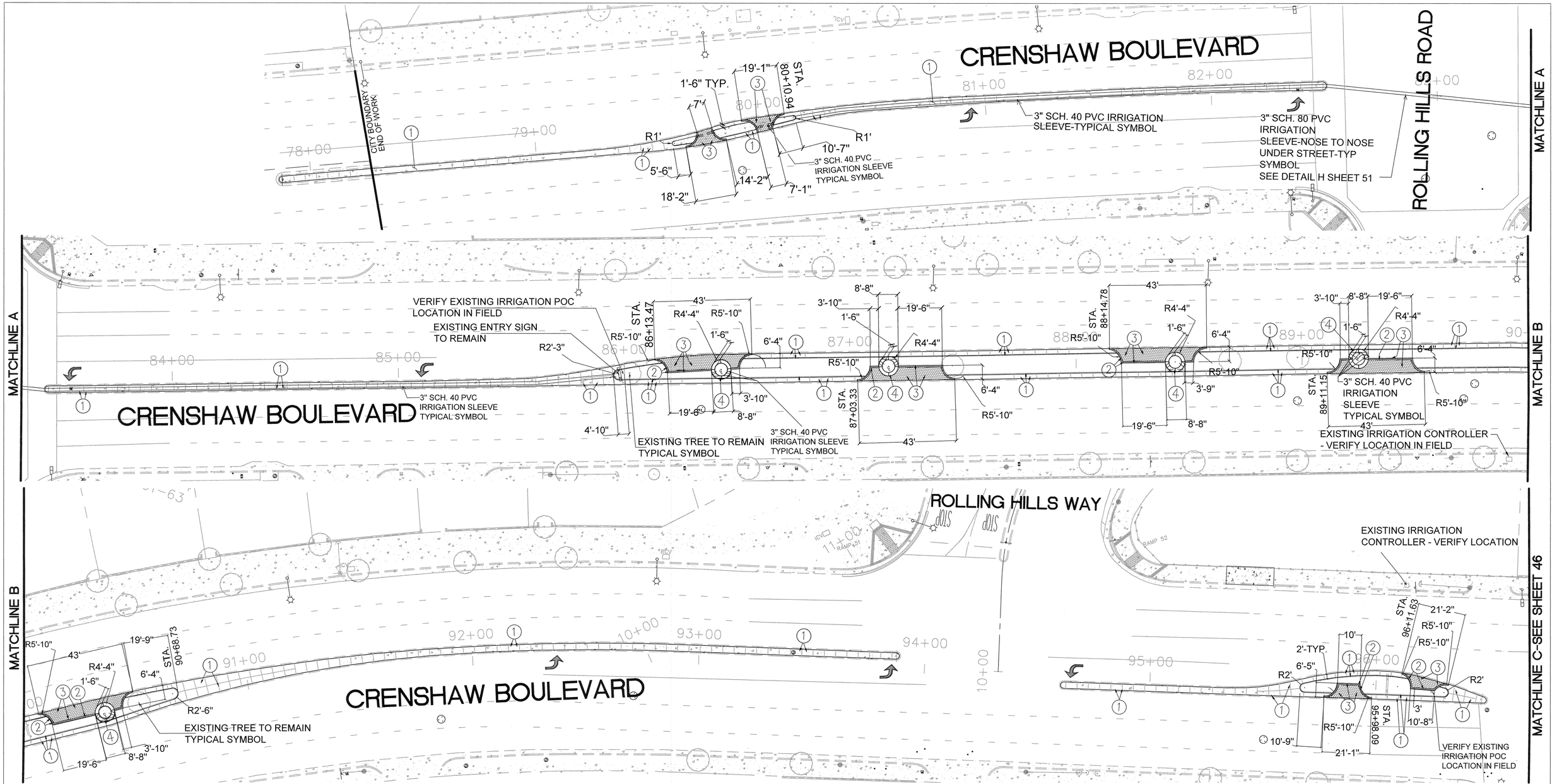


SHEET 46 FOR CONSTRUCTION DETAILS

CONSTRUCTION NOTES

1. Construct new 4" thick colored concrete paving, light broom finish with score lines as shown on plan, full depth expansion joints at maximum 10' on center and cold joints at other score lines. In median areas with concrete only, crown concrete surface minimum 2% to drain toward street unless slope is otherwise indicated on plan. In median areas where concrete borders landscape, slope concrete surface 2% to drain toward landscape and away from street paving, and install 20 mil. thick PVC liner/ moisture barrier; see detail _A_, sheet 46. Concrete color to be Chromix Admixture C-25, Sombrero Buff, cured with Lithocrome Colorwax in the matching color. Color manufactured by L.M. Scofield Company, 6533 Bandini Blvd., Los Angeles, CA 90040, (323) 720-3000, fax (323) 720-3030, www.scofield.com . Concrete to be poured over minimum 95% compacted subgrade.
2. Construct 6" wide x 8" deep continuous colored concrete strip, color per above specification, light broom finish, per detail _B_, sheet 46. Install alternating cold joints and full depth expansion joints at 5' spacing and at all corners. Concrete strip to border precast pavers and/or landscape areas as shown on plans.
3. Construct permeable precast interlocking concrete pavers over varying size aggregate/ stone base, and 95% compacted subgrade per detail _B_, sheet 46, and manufacturer's details and specifications. Install in Parquet pattern. Pavers to be Arbor Stone permeable type, color Castaic Blend, texture flat top, 80 mm (3-1/8") thickness. Install continuous edging of 5" x 10" permeable Cumulo-Nimbus Stone in header course pattern, color Castaic Blend, same base material and installation detail as above. All pavers to be manufactured by Olsen Pavingstone Co. or approved equal, P.O. Box 1330 or 31511 Ortega Hwy., San Juan Capistrano, CA 92639, (949) 728-0415, fax (949) 728-0540, www.olsenpavingstone.com . Edge of pavers to be flush and level with adjacent curbs; paver surface to slope 2% to drain toward landscape and away from street, and install 20 mil. thick PVC liner as shown on detail. Submit samples of pavers, both shapes and a range of specified colors, for approval by the City prior to ordering materials.
4. Construct 18" wide x 4" thick colored concrete tree ring, color to match other paving, light broom finish, per detail _C_, sheet 46. Construct per layout and dimensions shown on plan. Install alternating cold joints and full depth expansion joints at 5' spacing.

Note: Following completion of demolition and construction work in medians, contractor shall remove all debris, broken concrete, gravel, and other foreign materials, and shall provide and install Class A import topsoil as necessary to bring finish grade in landscape areas to 1-1/2" below tops of surrounding curbs.

SCALE 1"=20'-0"

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED LANDSCAPE ARCHITECT ANNA M. ARMSTRONG No. 2293 Exp. 03/31/18 STATE OF CALIFORNIA

PLANS PREPARED BY:
ARMSTRONG AND WALKER
Landscape Architecture
280 Mel Canyon Road
Duarte, Ca. 91010
Phone: (626) 357-4599
Email:armstrongwalker@gmail.com

ANNA ARMSTRONG 01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

HARDSCAPE PLAN

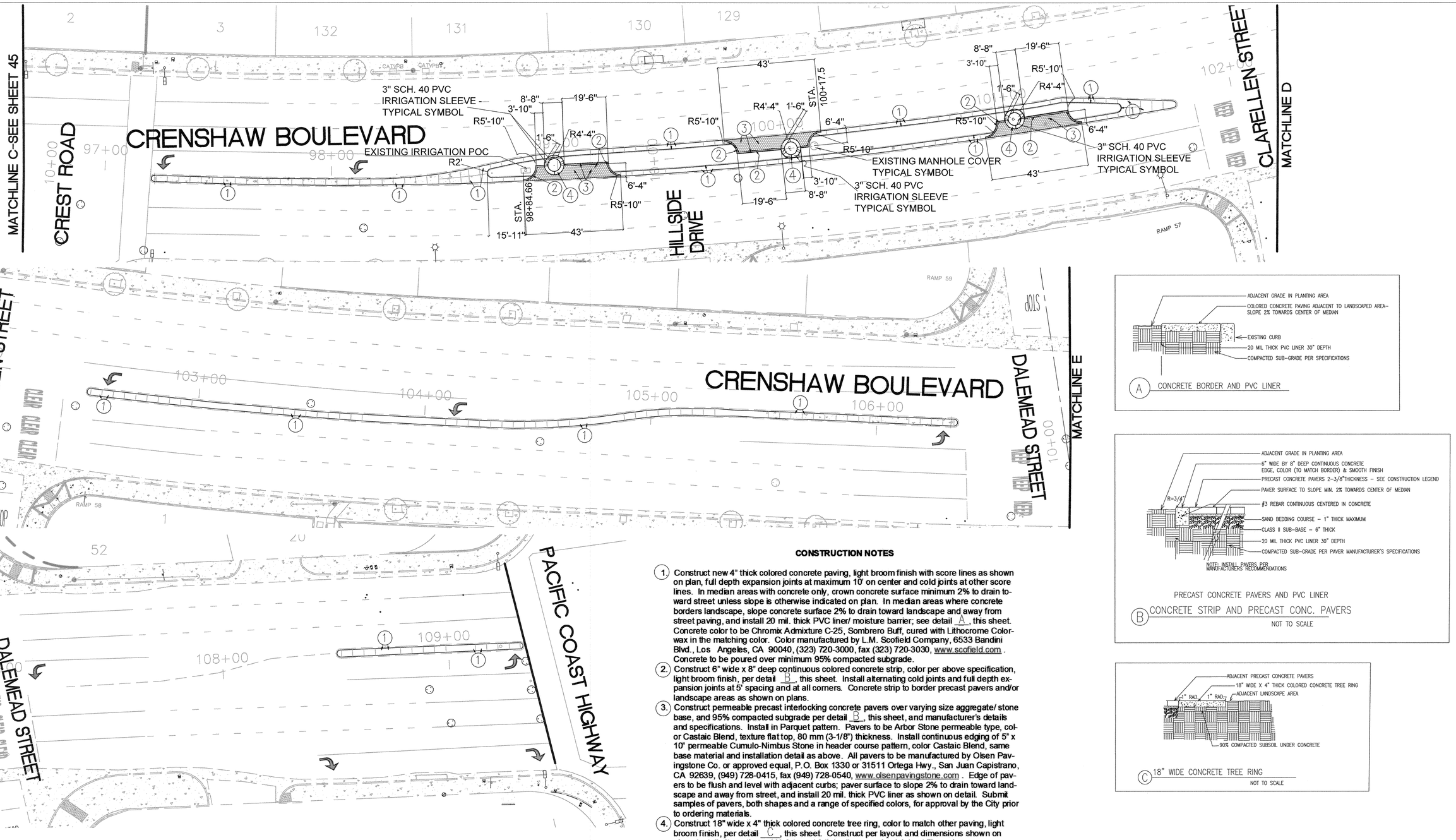
FEDERAL PROJECT NO. STPL-5249 (030)

DESIGNED BY:	DRAWN BY:
AA	RW
PROJECT ENGINEER: STEPHANIE COMON, PE	ENGINEER MANAGER: STEVE FINTON, PE
STREETSCAPE MANAGER:	

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET	45	OF	55
SCALE: AS SHOWN		SPECIFICATION NO. SEE TITLE SHEET	
SUPPLEMENTAL PLAN NO.			
PLAN NO.	**ST-1048**		



A CONCRETE BORDER AND PVC LINER

PRECAST CONCRETE PAVERS AND PVC LINER

B CONCRETE STRIP AND PRECAST CONC. PAVERS

NOT TO SCALE

C 18" WIDE CONCRETE TREE RING

NOT TO SCALE

CONSTRUCTION NOTES

1. Construct new 4" thick colored concrete paving, light broom finish with score lines as shown on plan, full depth expansion joints at maximum 10' on center and cold joints at other score lines. In median areas with concrete only, crown concrete surface minimum 2% to drain toward street unless slope is otherwise indicated on plan. In median areas where concrete borders landscape, slope concrete surface 2% to drain toward landscape and away from street paving, and install 20 mil. thick PVC liner/ moisture barrier; see detail A, this sheet. Concrete color to be Chromix Admixture C-25, Sombrero Buff, cured with Lithocrome Colorwax in the matching color. Color manufactured by L.M. Scofield Company, 6533 Bandini Blvd., Los Angeles, CA 90040, (323) 720-3000, fax (323) 720-3030, www.scofield.com . Concrete to be poured over minimum 95% compacted subgrade.
2. Construct 6" wide x 8" deep continuous colored concrete strip, color per above specification, light broom finish, per detail B, this sheet. Install alternating cold joints and full depth expansion joints at 5' spacing and at all corners. Concrete strip to border precast pavers and/or landscape areas as shown on plans.
3. Construct permeable precast interlocking concrete pavers over varying size aggregate/ stone base, and 95% compacted subgrade per detail B, this sheet, and manufacturer's details and specifications. Install in Parquet pattern. Pavers to be Arbor Stone permeable type, color Castaic Blend, texture flat top, 80 mm (3-1/8") thickness. Install continuous edging of 5" x 10" permeable Cumulo-Nimbus Stone in header course pattern, color Castaic Blend, same base material and installation detail as above. All pavers to be manufactured by Olsen Pavingstone Co. or approved equal, P.O. Box 1330 or 31511 Ortega Hwy., San Juan Capistrano, CA 92639, (949) 728-0415, fax (949) 728-0540, www.olsenpavingstone.com . Edge of pavers to be flush and level with adjacent curbs; paver surface to slope 2% to drain toward landscape and away from street, and install 20 mil. thick PVC liner as shown on detail. Submit samples of pavers, both shapes and a range of specified colors, for approval by the City prior to ordering materials.
4. Construct 18" wide x 4" thick colored concrete tree ring, color to match other paving, light broom finish, per detail C, this sheet. Construct per layout and dimensions shown on plan. Install alternating cold joints and full depth expansion joints at 5' spacing.

Note: Following completion of demolition and construction work in medians, contractor shall remove all debris, broken concrete, gravel, and other foreign materials, and shall provide and install Class A import topsoil as necessary to bring finish grade in landscape areas to 1-1/2" below tops of surrounding curbs.

20' 10' 0' 20' 40'

SCALE 1"=20'-0"

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

REGISTERED LANDSCAPE ARCHITECT ANNA M. ARMSTRONG No. 2293 Exp. 03/31/18 STATE OF CALIFORNIA

PLANS PREPARED BY:
ARMSTRONG AND WALKER
Landscape Architecture
280 Mel Canyon Road
Duarte, Ca. 91010
Phone: (626) 357-4599
Email:armstrongwalker@gmail.com

ANNA ARMSTRONG 01/25/16

DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

HARDSCAPE PLAN

DESIGNED BY:	DRAWN BY:
AA	RW
PROJECT ENGINEER:	ENGINEER MANAGER:
STEPHANIE COMON, PE	STEVE FINTON, PE
STREETSCAPE MANAGER:	

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

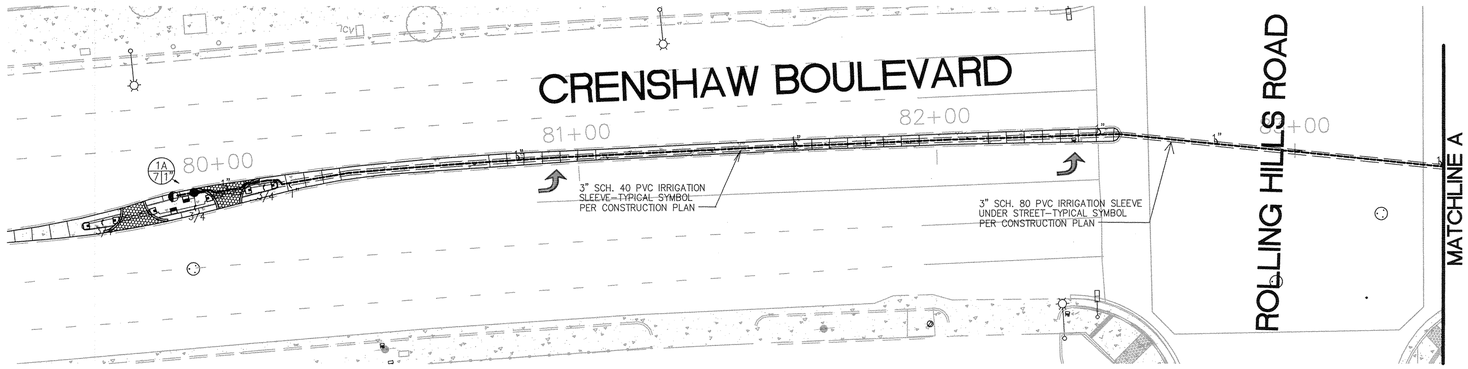
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

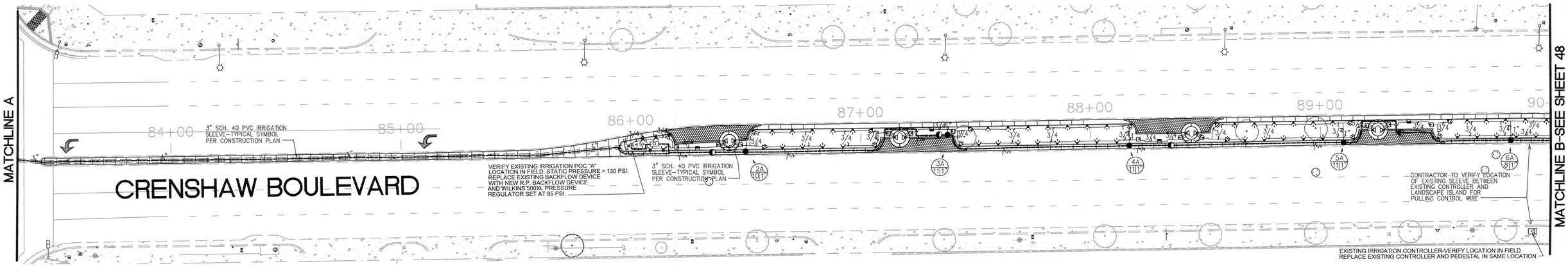
4/8/16
DATE

SHEET	46 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

IRRIGATION LEGEND

SYMBOL	PATTERN		MANUFACTURER	MODEL #	RADIUS	MIN PSI	GPM
	POP-UP HEAD	VARIABLE ARC NOZZ.	RAINBIRD	1806-8VANH, 8VANQ	8'	30 PSI	1.19, .72
	POP-UP HEAD	HALF	RAINBIRD	1806-5H, 5Q	5'	30 PSI	.2, .1
	POP-UP HEAD	VARIABLE ARC NOZZ.	RAINBIRD	1806-6VANH, 6VANQ	6'	30 PSI	.6, .37
	POP-UP HEAD	SIDE STRIP	RAINBIRD	1806-SST, EST	4 X 30',4 X 15'	30 PSI	1.21, .61
	REMOTE CONTROL VALVE		SUPERIOR	SUPERIOR 950	SEE PLAN FOR SIZE & LOCATION		
	BALL VALVE		WATTS	FBV	LINE SIZE		
	QUICK COUPLING VALVE		RAINBIRD	33DLRC	SEE PLAN FOR LOCATION		
	AUTOMATIC CONTROLLER "A"		RAINBIRD	ESP-LXME-ETC-LX, 8 STATION INSTALLED IN EXISTING PEDESTAL**			
	R.P. BACKFLOW AT POC "A"		FEBCO	825-Y-1" WITH WILKINS 500XL PRESSURE REG. SET AT 85 PSI*			
	MAIN LINE		CLASS 315 P.V.C.				
	LATERAL LINE		SCHED. 40 P.V.C.				
	SLEEVING		3" SCHEDULE 40 P.V.C.				
	VALVE SEQUENCE						
	GPM						
	VALVE SIZE		INSTALL PCS SCREENS IN HEADS TO ELIMINATE OVERSPRAY ON TO PAVING				
			* INSTALLED IN GUARDSHACK EC-1 ENCLOSURE				
			** IF NOT ABLE TO INSTALL IN EXISTING PEDESTAL, INSTALL IN NEW RAINBIRD LXMMPED ENCLOSURE				





20' 10' 0' 20' 40'

SCALE 1"=20'-0"

Note: For reduced sized prints, original scale is in 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. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

PLANS PREPARED BY:

ARMSTRONG AND WALKER

Landscape Architecture

280 Mel Canyon Road

Duarte, Ca. 91010

Phone: (626) 357-4599

Email:armstrongwalker@gmail.com

REGISTERED LANDSCAPE ARCHITECT ANNA M. ARMSTRONG No. 2293 Exp. 03/31/18 STATE OF CALIFORNIA

ANNA ARMSTRONG — 01/25/16 DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)

(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

LANDSCAPE IRRIGATION PLAN

DESIGNED BY:	DRAWN BY:
AA	RW
PROJECT ENGINEER: STEPHANIE COMON, PE	ENGINEER MANAGER: STEVE FINTON, PE
STREETSCAPE MANAGER:	

CITY OF TORRANCE

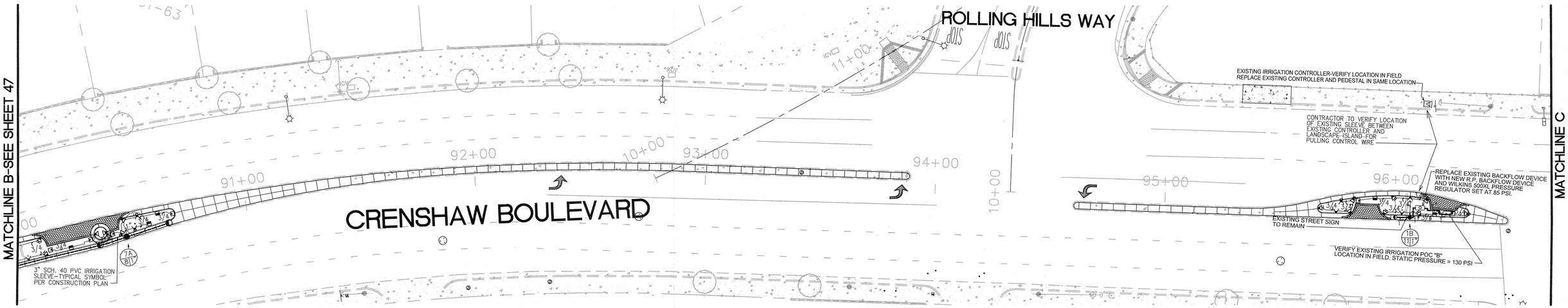
PUBLIC WORKS DEPARTMENT

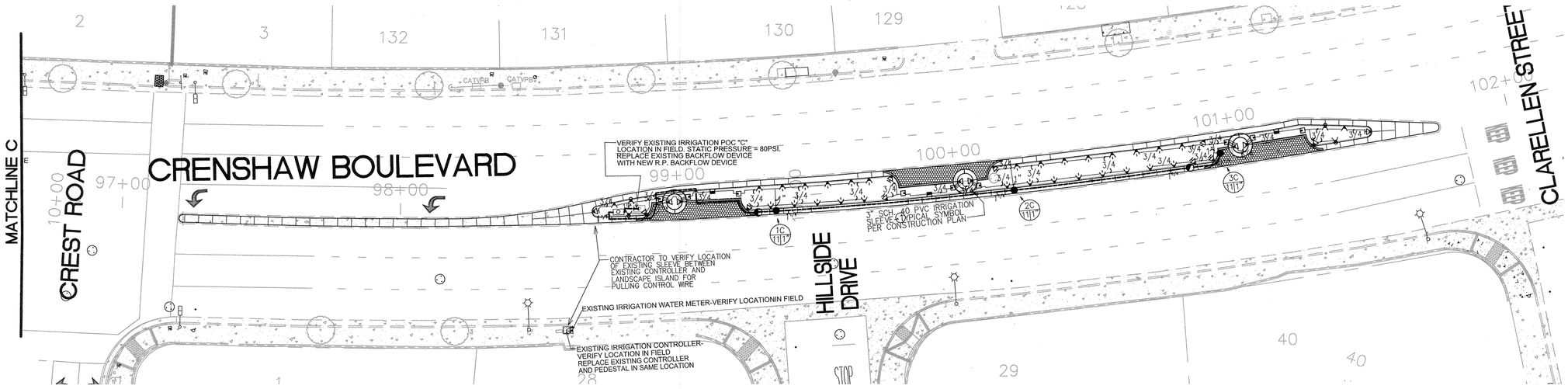
APPROVED BY:

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

4/6/16 DATE

SHEET	47 OF 55
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**





IRRIGATION LEGEND

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	POP-UP HEAD	VARIABLE ARC NOZZ.	RAINBIRD	1806-8VANH, 8VANQ	8'	30 PSI	1.19, .72
	POP-UP HEAD	HALF	RAINBIRD	1806-5H, 5Q	5'	30 PSI	.2, .1
	POP-UP HEAD	VARIABLE ARC NOZZ.	RAINBIRD	1806-6VANH, 6VANQ	6'	30 PSI	.6, .37
	POP-UP HEAD	SIDE STRIP	RAINBIRD	1806-SST, EST	4 X 30',4 X 15'	30 PSI	1.21, .61
	REMOTE CONTROL VALVE		SUPERIOR	SUPERIOR 950	SEE PLAN FOR SIZE & LOCATION		
	BALL VALVE		WATTS	FBV	LINE SIZE		
	QUICK COUPLING VALVE		RAINBIRD	33DLRC	SEE PLAN FOR LOCATION		
	AUTOMATIC CONTROLLER "B"		RAINBIRD	ESP-LXME-ETC-LX, 4 STATION INSTALLED IN EXISTING PEDESTAL**			
	R.P. BACKFLOW AT POC "B"		FEBCO	825-Y-1" WITH WILKINS 500XL PRESSURE REG. SET AT 85 PSI*			
	AUTOMATIC CONTROLLER "C"		RAINBIRD	ESP-LXME-ETC-LX, 4 STATION INSTALLED IN EXISTING PEDESTAL**			
	R.P. BACKFLOW AT POC "C"		FEBCO	825-Y-1"			
	MAIN LINE		CLASS 315 P.V.C.				
	LATERAL LINE		SCHED. 40 P.V.C.				
	SLEEVING		3" SCHEDULE 40 P.V.C.				
	VALVE SEQUENCE						
	GPM						
	VALVE SIZE		INSTALL PCS SCREENS IN HEADS TO ELIMINATE OVERSPRAY ON TO PAVING				
			* INSTALLED IN GUARDSHACK EC-1 ENCLOSURE				
			** IF NOT ABLE TO INSTALL IN EXISTING PEDESTAL, INSTALL IN NEW RAINBIRD LXMMPED ENCLOSURE				
			USE PRESSURE REGULATOR ON RP BACKFLOW IF PRESSURE EXCEEDS 90 PSI.				

20' 10' 0' 20' 40'

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ANNA ARMSTRONG — 01/25/16 DATE

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REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)

(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

LANDSCAPE IRRIGATION PLAN

DESIGNED BY: AA — DRAWN BY: RW

PROJECT ENGINEER: STEPHANIE COMON, PE — ENGINEER MANAGER: STEVE FINTON, PE

STREETSCAPE MANAGER:

CITY OF TORRANCE

PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE — DATE 4/8/16

CITY ENGINEER

R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 48 OF 55

SCALE: AS SHOWN

SPECIFICATION NO. SEE TITLE SHEET

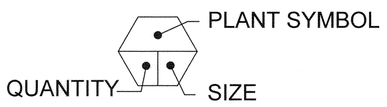
SUPPLEMENTAL PLAN NO.

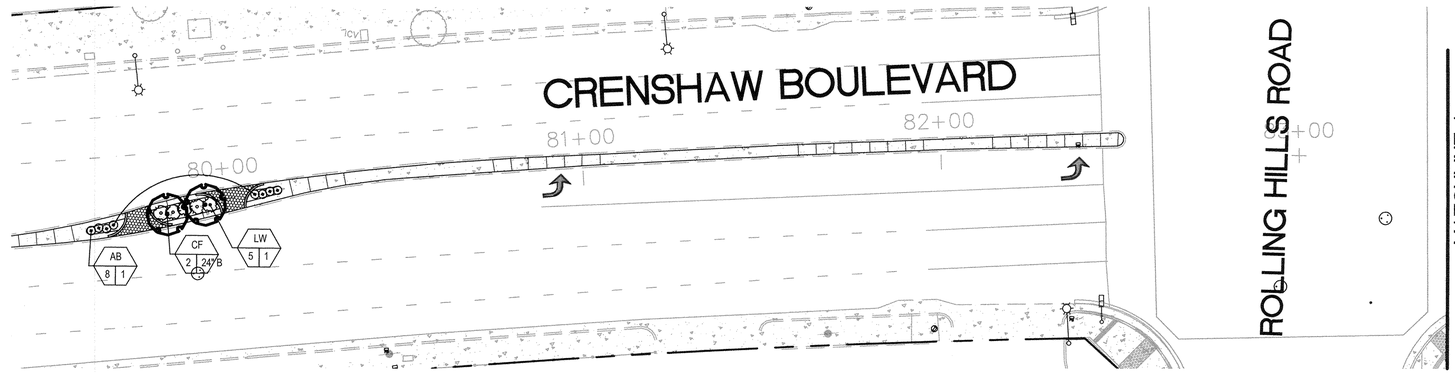
PLAN NO. **ST-1048**

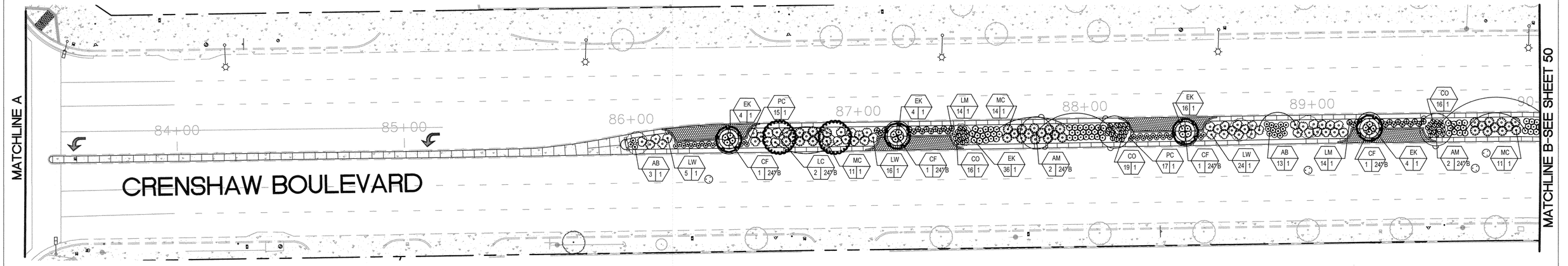
PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	PLANT FACTOR	SIZE	QUANTITY
Trees					
A M	Arbutus marina	no common name	M/L	24" box	4
C F	Cercis canadensis 'Forest Pansy"	Forest Pansy Redbud	M	24" box	6
L C	Lophostemon confertus	Brisbane Box	M	24" box	2
Shrubs/Perennials/Ornamental Grasses					
A B	Anigozanthos hybrid 'Bush Ranger'	Kangaroo Paw hybrid	M/L	1 gallon	27
C O	Coreopsis auriculata "Nana"	Dwarf Coreopsis	M	1 gallon	51
E K	Erigeron karvinskianus	Santa Barbara Daisy	M	1 gallon	64
L M	Lavandula angustifolia 'Munstead"	Lavender hybrid	M/L	1 gallon	28
L W	Lantana m. "White Lightning'	Lantana hybrid	M/L	1 gallon	50
M C	Muhlenbergia capillaris	Pink Muhly	M	1 gallon	36
P C	Pittosporum t. 'Creme de Mint'	Pittosporum hybrid	M	1 gallon	32

Note: Install a 3" thick layer of shredded bark mulch throughout all landscape areas.







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ANNA ARMSTRONG 01/25/16
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LANDSCAPE PLANTING PLAN

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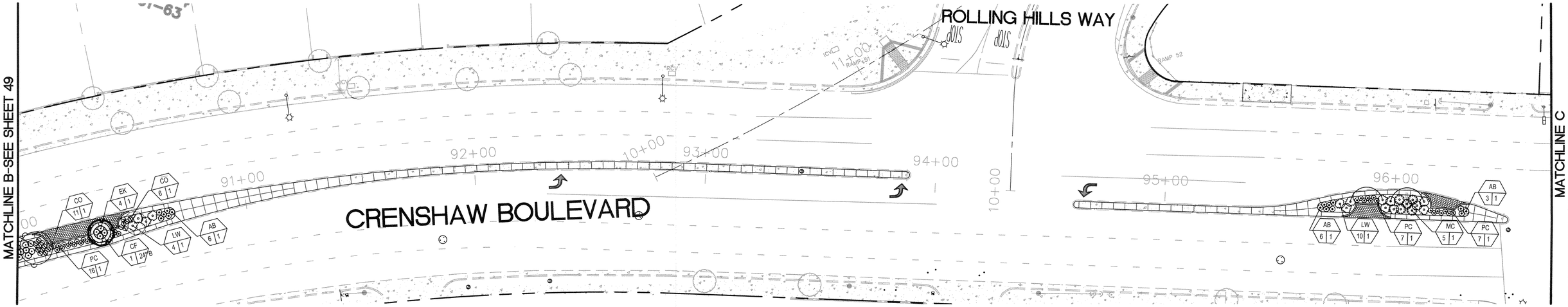
STREETSCAPE MANAGER:	

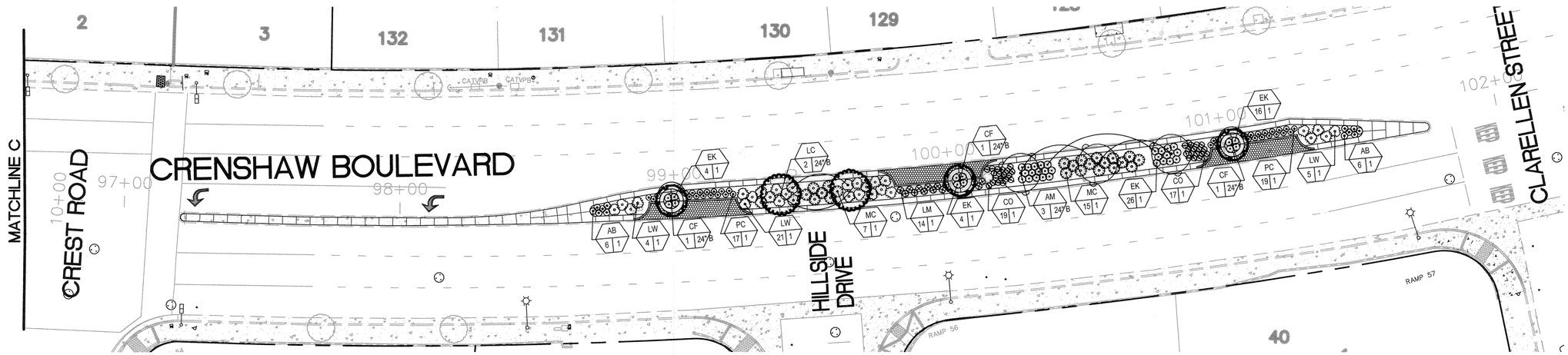
CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

CRAIG BILEZERIAN, PE 4/8/16
CITY ENGINEER DATE
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 49 OF 55	
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO. **ST-1048**	





PLANT LEGEND

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E K	Erigeron karvinskianus	Santa Barbara Daisy	M	1 gallon	58
L M	Lavandula angustifolia 'Munstead"	Lavender hybrid	M/L	1 gallon	16
L W	Lantana m. "White Lightning'	Lantana hybrid	M/L	1 gallon	44
M C	Muhlenbergia capillaris	Pink Muhly	M	1 gallon	27
P C	Pittosporum t. 'Creme de Mint'	Pittosporum hybrid	M	1 gallon	66

PLANT SYMBOL
QUANTITY — SIZE

Note: Install a 3" thick layer of shredded bark mulch throughout all landscape areas.

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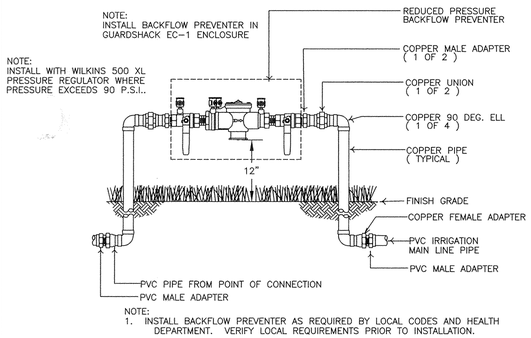
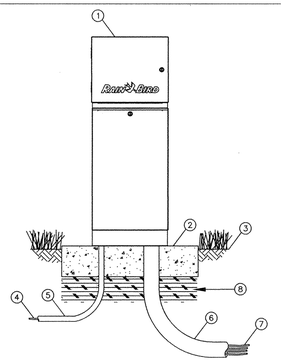


NOTE:
1. INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

(A.) BACKFLOW PREVENTER

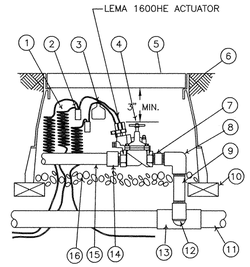


NOTE: INSTALL NEW PEDESTAL MOUNTS ONLY IF EXISTING PEDESTAL MOUNTS DON'T ACCOMMODATE PROPOSED IRRIGATION CONTROLLERS

1. IRRIGATION CONTROLLER: RAIN BIRD ESP-LXME CONTROLLER WITH LXMM METAL CABINET AND LXMMPED METAL PEDESTAL. INSTALL CONTROLLER, CABINET AND PEDESTAL PER MANUFACTURER'S RECOMMENDATIONS.
2. CONCRETE PAD: 6-INCH MINIMUM THICKNESS
3. FINISH GRADE
4. POWER SUPPLY WIRE
5. 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR POWER SUPPLY
6. 3-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR STATION WIRES
7. WIRES TO REMOTE CONTROL VALVES
8. COMPACTED SUBGRADE

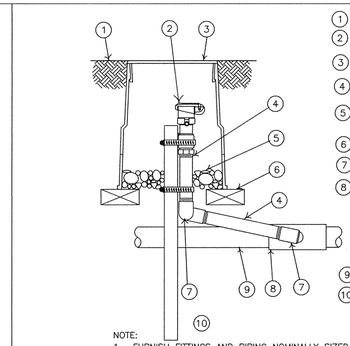
NOTES:
1. ESP-LXME CONTROLLER IS AVAILABLE IN 8- OR 12-STATION BASE MODELS. ADDITIONAL MODULES IN 4-, 8- AND 12-STATION VERSIONS MAY BE ADDED TO BRING THE CONTROLLER UP TO 48 STATIONS MAXIMUM.
2. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

(B) ESP-LXME-CONTROLLER IN-METAL-ENCLOSURE
NTS



1. 30-INCH LINEAR LENGTH OF WIRE COILED
2. WATER PROOF CONNECTION (1 OF 2)
3. ID TAG
4. REMOTE CONTROL VALVE RAINBIRD EFB-CP-R
5. VALVE BOX WITH COVER 1/2- INCH SIZE
6. FINISH GRADE/ TOP OF MULCH
7. PVC SCH 40 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 40 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH 80 NIPPLE (2- INCH LENGTH HIDDEN) AND SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40- MALE ADAPTER
15. PVC LATERAL PIPE
16. 3.0- INCH MINIMUM DEPTH OF 3/4"- WASHED GRAVEL

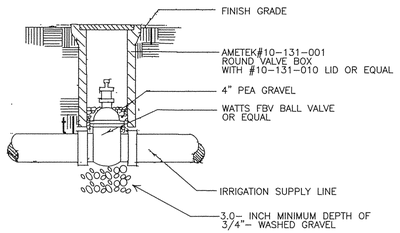
(C.) REMOTE CONTROL VALVE



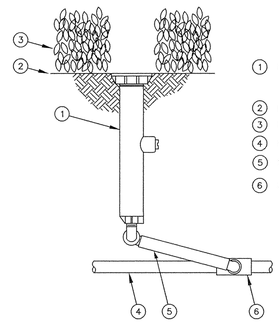
1. FINISH GRADE/ TOP OF MULCH
2. QUICK- COUPLING VALVE: RAIN BIRD MODEL 33DLRC
3. VALVE BOX WITH COVER: 6- INCH SIZE
4. PVC SCH 40 NIPPLE (LENGTH AS REQUIRED)
5. 3- INCH MINIMUM DEPTH OF 3/4" - INCH WASHED GRAVEL
6. BRICK (1 OF 2)
7. PVC SCH 40 STREET ELL
8. PVC SCH 40 TEE OR ELL
9. PVC SCH 40 ELL
10. 2"X18" GALVANIZED PIPE W/ STAINLESS STEEL GEAR CLAMPS OR EQUIVALENT SUPPORT SYSTEM

NOTE:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

(D.) QUICK-COUPLING VALVE

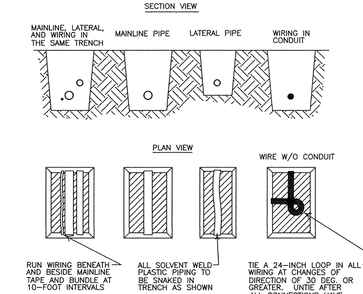


(E.) BALL VALVE



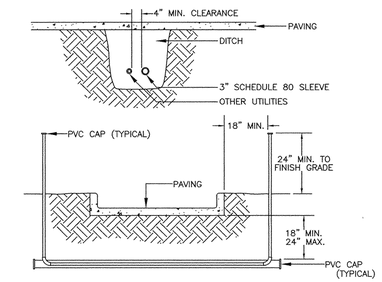
1. POP-UP SPRAY SPRINKLER: RAIN BIRD 1806
2. FINISH GRADE/TOP OF MULCH
3. PLANT MATERIAL
4. PVC LATERAL PIPE
5. SWING ASSEMBLY: RAIN BIRD MODEL SA 6050
6. PVC SCH 40 TEE OR ELL

(F.) POP-UP SPRAY SPRINKLER



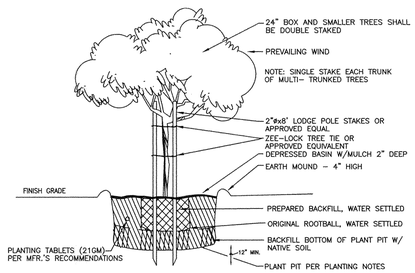
NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH SCH 40 PVC TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

(G.) PIPE & WIRE TRENCHING



NOTES:
1. ALL PVC IRRIGATION SLEEVES UNDER STREET TO BE SCHED 80 PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP TO 95% PROCTOR.

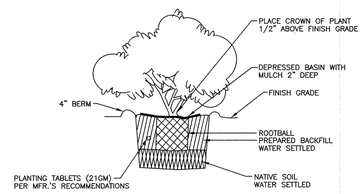
(H) SLEEVING UNDER STREET



15 GAL. + 24" BOX TREES

TREE STAKING NO SCALE

(I.) TREE PLANTING



SHRUB PLANTING NO SCALE

(J.) SHRUB PLANTING

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ANNA ARMSTRONG 01/25/16
DATE

REVISIONS				
REV	DATE	BY	CHECKED	DESCRIPTION

CRENSHAW BOULEVARD REHABILITATION (I-120)
(SEPULVEDA BOULEVARD TO SKYPARK DRIVE AND PACIFIC COAST HIGHWAY TO SOUTHERLY CITY LIMIT)

IRRIGATION AND PLANTING DETAILS

DESIGNED BY:	DRAWN BY:
AA	RW
PROJECT ENGINEER: STEPHANIE COMON, PE	ENGINEER MANAGER: STEVE FINTON, PE
STREETSCAPE MANAGER:	

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:
CRAIG BILEZERIAN, PE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

SHEET	51 OF 55
SCALE:	AS SHOWN
SPECIFICATION NO.	SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO.	**ST-1048**

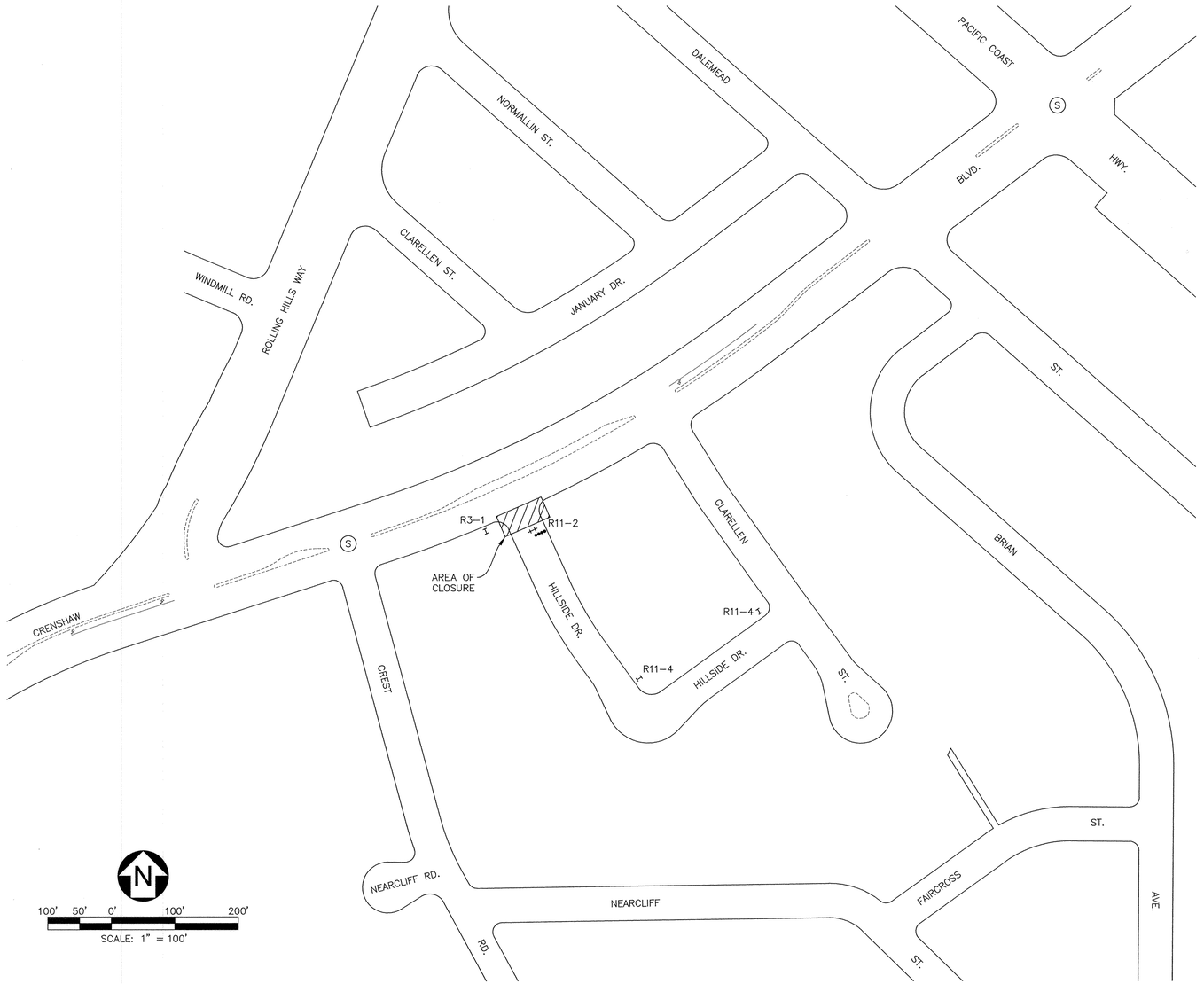
GENERAL NOTES

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

I	TYPE II BARRICADE	•	DELINEATOR
‡	TYPE III BARRICADE	(S)	SIGNALIZED INTERSECTION

TRAFFIC SIGN LEGEND



CRENSHAW BOULEVARD
REHABILITATION PROJECT, I-120

DETOUR PLAN FOR
CROSS-GUTTER CONSTRUCTION
HILLSIDE DRIVE

DESIGNED BY: SC | DRAWN BY: DB

PROJECT ENGINEER: STEPHANIE COMON, P.E.

ENGINEERING MANAGER: STEVE FINTON, P.E.

REGISTERED PROFESSIONAL ENGINEER
CRAIG BILEZERIAN
No. 55339
Exp. 12/31/16
CIVIL
STATE OF CALIFORNIA

APPROVED BY:

CRAIG BILEZERIAN, P.E. — DATE 4/8/16
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

SHEET 52 OF 55
SCALE: AS SHOWN
SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.
PLAN NO. **ST-1048**

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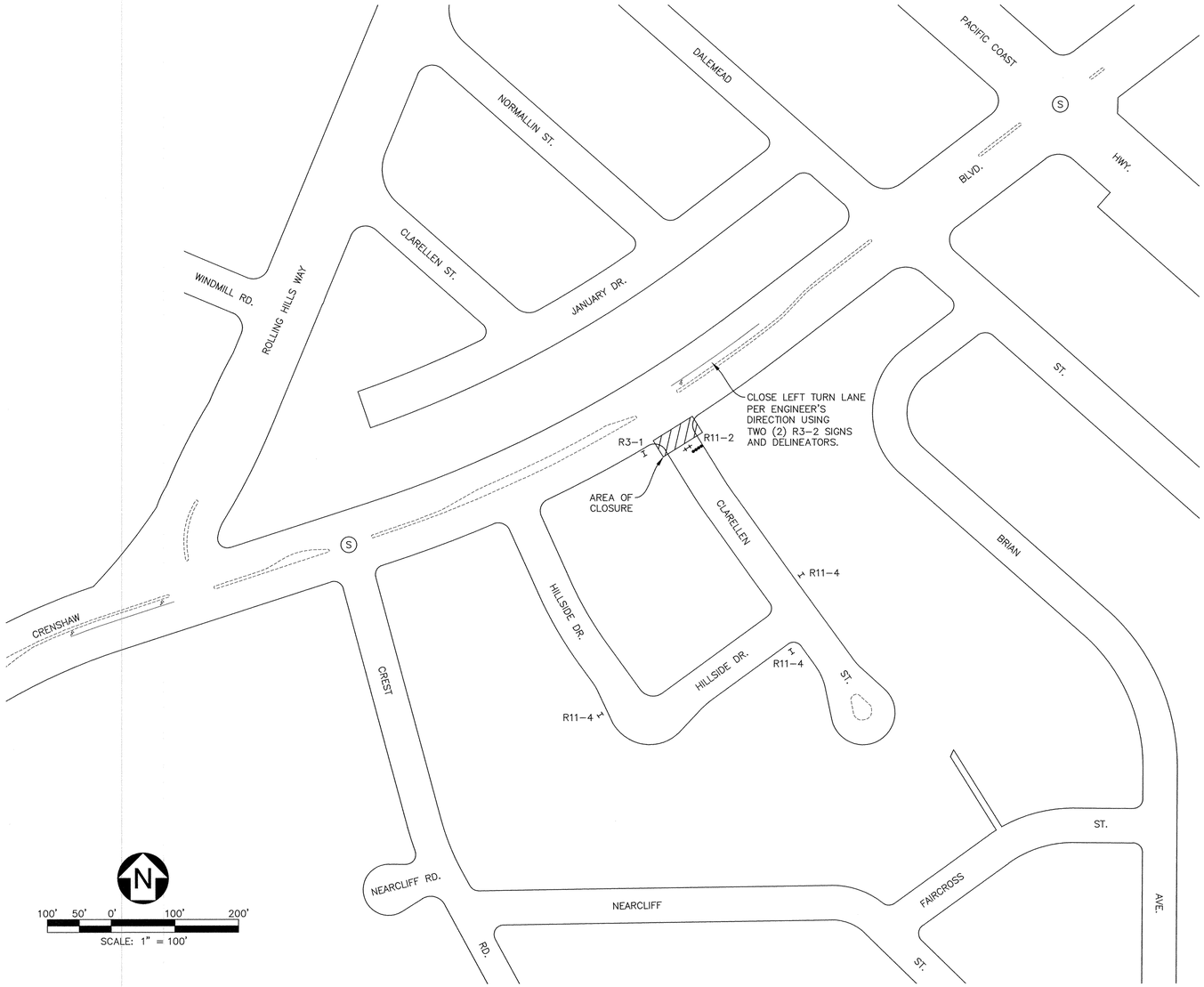
GENERAL NOTES

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

I	TYPE II BARRICADE	•	DELINEATOR
‡	TYPE III BARRICADE	Ⓢ	SIGNALIZED INTERSECTION

TRAFFIC SIGN LEGEND



CRENSHAW BOULEVARD
REHABILITATION PROJECT, I-120

DETOUR PLAN FOR
CROSS-GUTTER CONSTRUCTION
CLARELLEN STREET

DESIGNED BY: SC	DRAWN BY: DB
PROJECT ENGINEER: STEPHANIE COMON, P.E.	
ENGINEERING MANAGER: STEVE FINTON, P.E.	

REGISTERED PROFESSIONAL ENGINEER
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No. 55339
Exp. 12/31/16
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STATE OF CALIFORNIA

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY: 4/8/16
CRAIG BILEZERIAN, P.E. DATE
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)

SHEET 53 OF 55	
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO. ST-1048	

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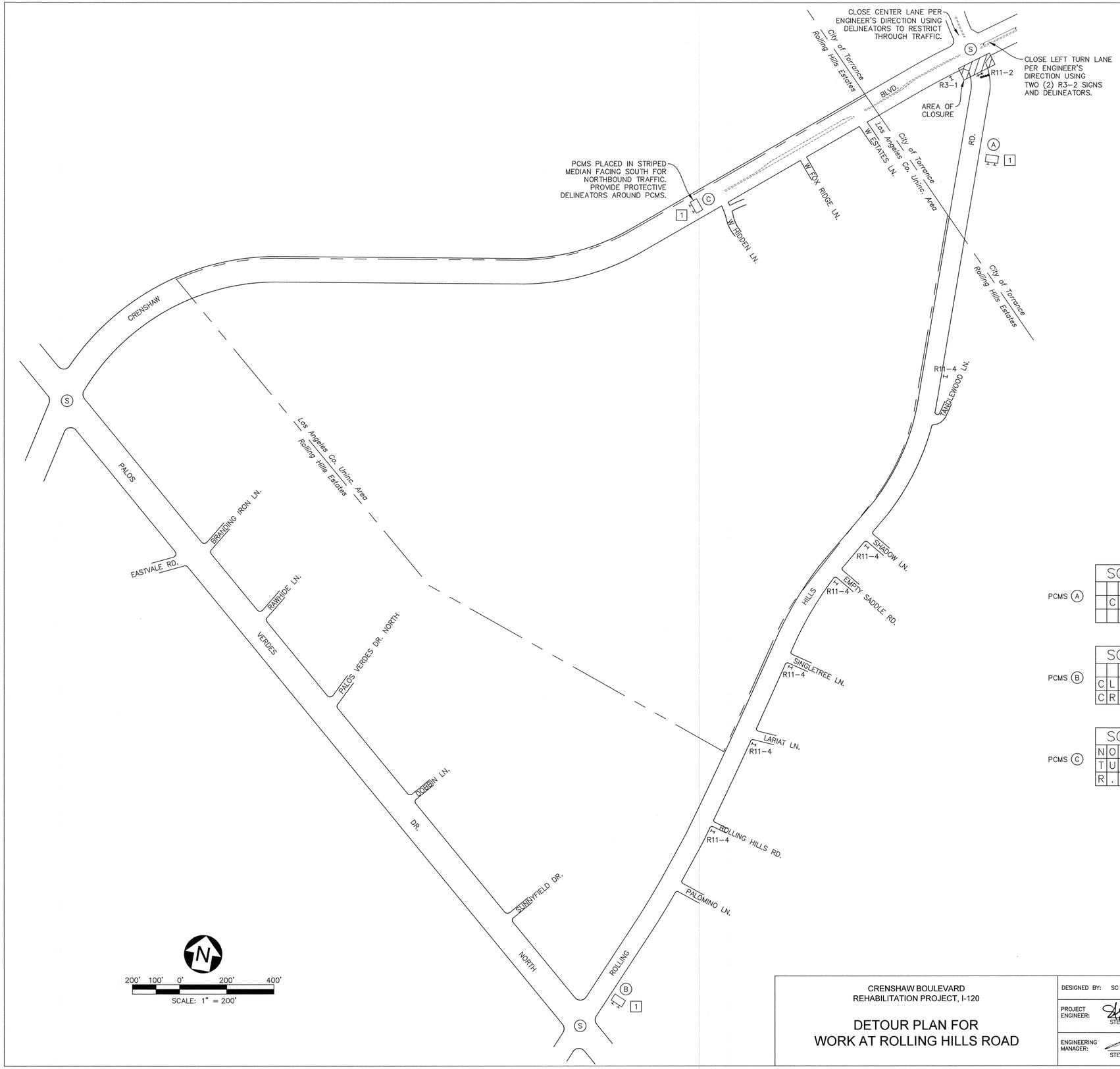

CONSTRUCTION NOTES

1 INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF CLOSURE. DISPLAY MESSAGE PER PLAN. CONFIRM LOCATION WITH ENGINEER.

GENERAL NOTES

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

- TYPE II BARRICADE
- TYPE III BARRICADE
- DELINEATOR
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- (S) SIGNALIZED INTERSECTION

TRAFFIC SIGN LEGEND

PORTABLE CHANGEABLE MESSAGE SIGN NOTES

1. CONTRACTOR SHALL PROGRAM EACH SCREEN OF ALL PORTABLE CHANGEABLE MESSAGE SIGNS TO FLASH FOR TWO (2) SECONDS.

	ONE WEEK BEFORE CONSTRUCTION		DURING CONSTRUCTION	
PCMS (A)	SCREEN 1: ROAD / CLOSED / AHEAD	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: ROAD / CLOSED / AHEAD	SCREEN 2: LOCAL / ACCESS / ONLY
PCMS (B)	SCREEN 1: ROAD / CLOSED @ / CRENSHAW	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: ROAD / CLOSED @ / CRENSHAW	SCREEN 2: LOCAL / ACCESS / ONLY
PCMS (C)	SCREEN 1: NO RIGHT / TURN AT / R.H. RD	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: NO RIGHT / TURN AT / R.H. RD	SCREEN 2: USE / ALT / ROUTE

CRENSHAW BOULEVARD
REHABILITATION PROJECT, I-120

DETOUR PLAN FOR
WORK AT ROLLING HILLS ROAD

DESIGNED BY: SC	DRAWN BY: DB
PROJECT ENGINEER: STEPHANIE COMON, P.E.	
ENGINEERING MANAGER: STEVE FINTON, P.E.	

REGISTERED PROFESSIONAL ENGINEER — CRAIG BILEZERIAN — No. 55339 — Exp. 12/31/18 — CIVIL — STATE OF CALIFORNIA

APPROVED BY:
CRAIG BILEZERIAN, P.E.
CITY ENGINEER
R.C.E. NO. 55339 (EXP. 12/31/2016)
4/8/16
DATE

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

SHEET 54 OF 55	
SCALE: AS SHOWN	SPECIFICATION NO. SEE TITLE SHEET
SUPPLEMENTAL PLAN NO.	
PLAN NO. ST-1048	

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CONSTRUCTION NOTES

[1] INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF CLOSURE. DISPLAY MESSAGE PER PLAN. CONFIRM LOCATION WITH ENGINEER.

GENERAL NOTES

1. FOR CONSTRUCTION SEQUENCING AND STAGING REQUIREMENTS, CONTRACTOR SHALL REFER TO THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL OPEN ALL INTERSECTING STREETS AND DRIVEWAYS TO VEHICULAR TRAFFIC IMMEDIATELY AFTER PAVING OPERATIONS HAVE PASSED THE ECR OF THAT STREET.

LEGEND

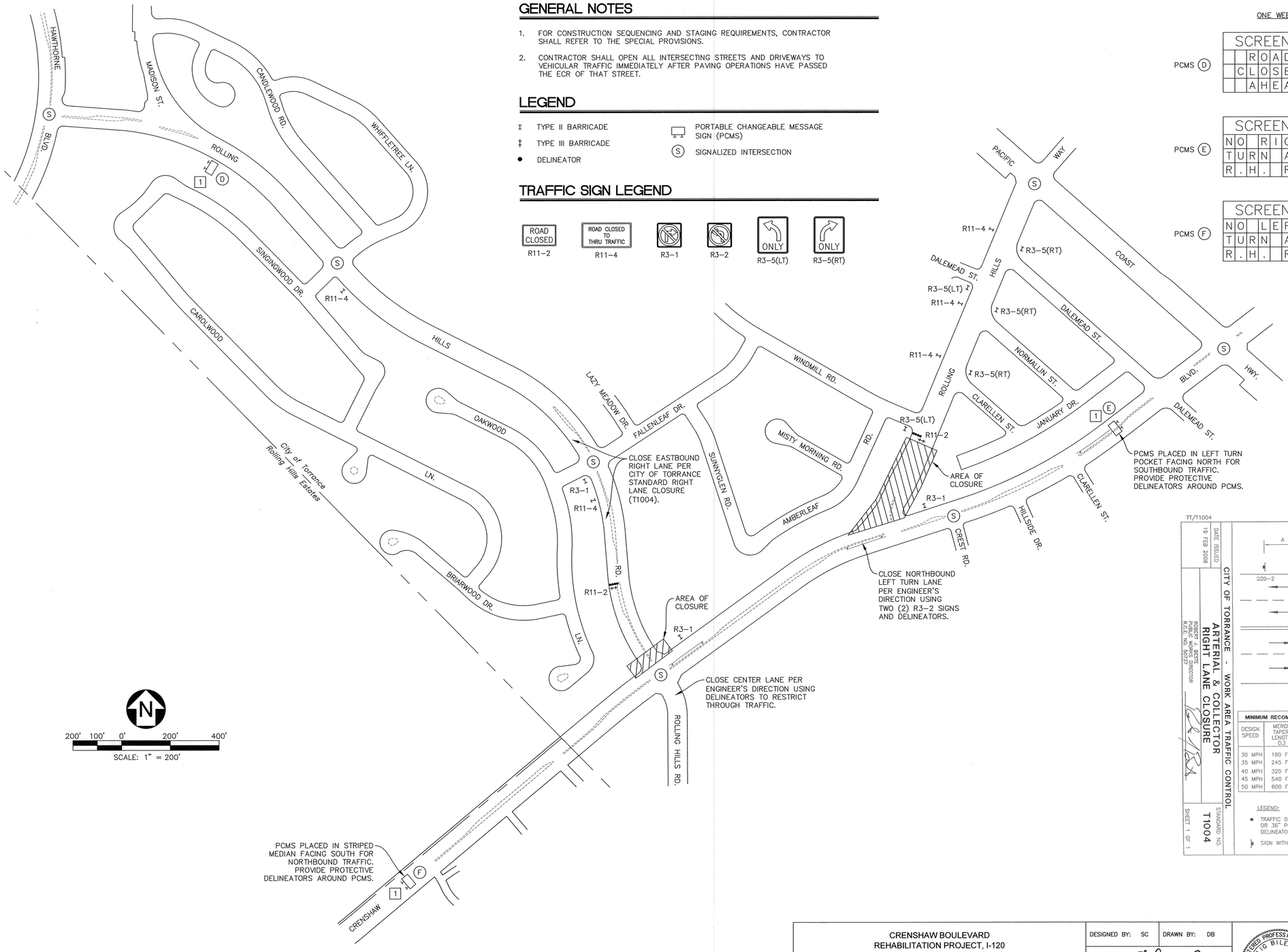
- I TYPE II BARRICADE
- ‡ TYPE III BARRICADE
- • DELINEATOR
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- (S) SIGNALIZED INTERSECTION

TRAFFIC SIGN LEGEND

PORTABLE CHANGEABLE MESSAGE SIGN NOTES

1. CONTRACTOR SHALL PROGRAM EACH SCREEN OF ALL PORTABLE CHANGEABLE MESSAGE SIGNS TO FLASH FOR TWO (2) SECONDS.

	ONE WEEK BEFORE CONSTRUCTION		DURING CONSTRUCTION	
PCMS (D)	SCREEN 1: ROAD / CLOSED / AHEAD	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: ROAD / CLOSED / AHEAD	SCREEN 2: LOCAL / ACCESS / ONLY
PCMS (E)	SCREEN 1: NO RIGHT / TURN AT / R.H. RD	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: NO RIGHT / TURN AT / R.H. RD	SCREEN 2: USE / ALT / ROUTE
PCMS (F)	SCREEN 1: NO LEFT / TURN AT / R.H. RD	SCREEN 2: STARTING / MONDAY / OCT. 3	SCREEN 1: NO LEFT / TURN AT / R.H. RD	SCREEN 2: USE / ALT / ROUTE



TT/T1004

DATE ISSUED: 19 FEB 2008

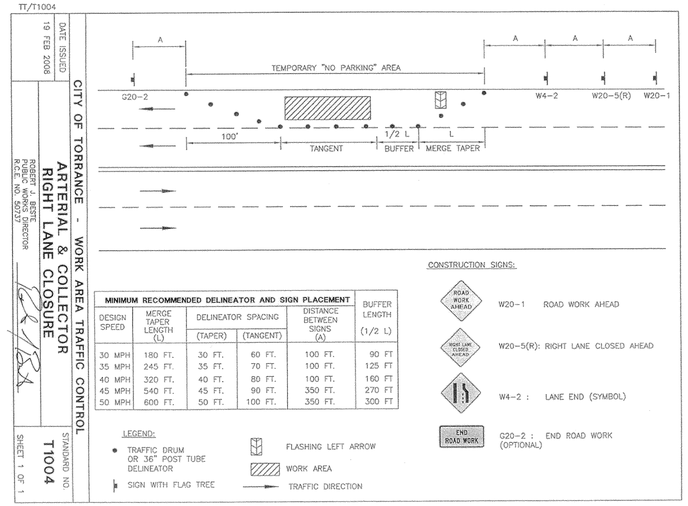
CITY OF TORRANCE - WORK AREA TRAFFIC CONTROL

ARTERIAL & COLLECTOR RIGHT LANE CLOSURE

STANDARD NO. T1004

SHEET 1 OF 1

RAUL F. SOTELO, PUBLIC WORKS DIRECTOR R.C.E. NO. 50737



MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT					
DESIGN SPEED	MERGE TAPER LENGTH (L)	DELINEATOR SPACING (TAPER)	DELINEATOR SPACING (TANGENT)	DISTANCE BETWEEN SIGNS (A)	BUFFER LENGTH (1/2 L)
30 MPH	180 FT.	30 FT.	60 FT.	100 FT.	90 FT
35 MPH	245 FT.	35 FT.	70 FT.	100 FT.	125 FT
40 MPH	320 FT.	40 FT.	80 FT.	100 FT.	160 FT
45 MPH	540 FT.	45 FT.	90 FT.	350 FT.	270 FT
50 MPH	600 FT.	50 FT.	100 FT.	350 FT.	300 FT

LEGEND:
- • TRAFFIC DRUM OR 36" POST TUBE DELINEATOR
- SIGN WITH FLAG TREE
- FLASHING LEFT ARROW
- WORK AREA
- TRAFFIC DIRECTION

CONSTRUCTION SIGNS:
- ROAD WORK AHEAD — W20-1 ROAD WORK AHEAD
- RIGHT LANE CLOSED AHEAD — W20-5(R): RIGHT LANE CLOSED AHEAD
- W4-2 : LANE END (SYMBOL)
- END ROAD WORK — G20-2 : END ROAD WORK (OPTIONAL)

CRENSHAW BOULEVARD REHABILITATION PROJECT, I-120

DETOUR PLAN FOR WORK AT ROLLING HILLS ROAD AND ROLLING HILLS WAY

DESIGNED BY: SC | DRAWN BY: DB

PROJECT ENGINEER: STEPHANIE COMON, P.E.

ENGINEERING MANAGER: STEVE FINTON, P.E.

REGISTERED PROFESSIONAL ENGINEER — CRAIG BILEZERIAN — No. 55339 — Exp. 12/31/16 — CIVIL — STATE OF CALIFORNIA

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

APPROVED BY:

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

4/8/16 DATE

SHEET 55 OF 55

SCALE: AS SHOWN

SPECIFICATION NO. SEE TITLE SHEET

SUPPLEMENTAL PLAN NO.

PLAN NO. **ST-1048**

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