

## **ATTACHMENT A – TOP FIVE 30 PERCENT DESIGN PLANS AND COST ESTIMATES**

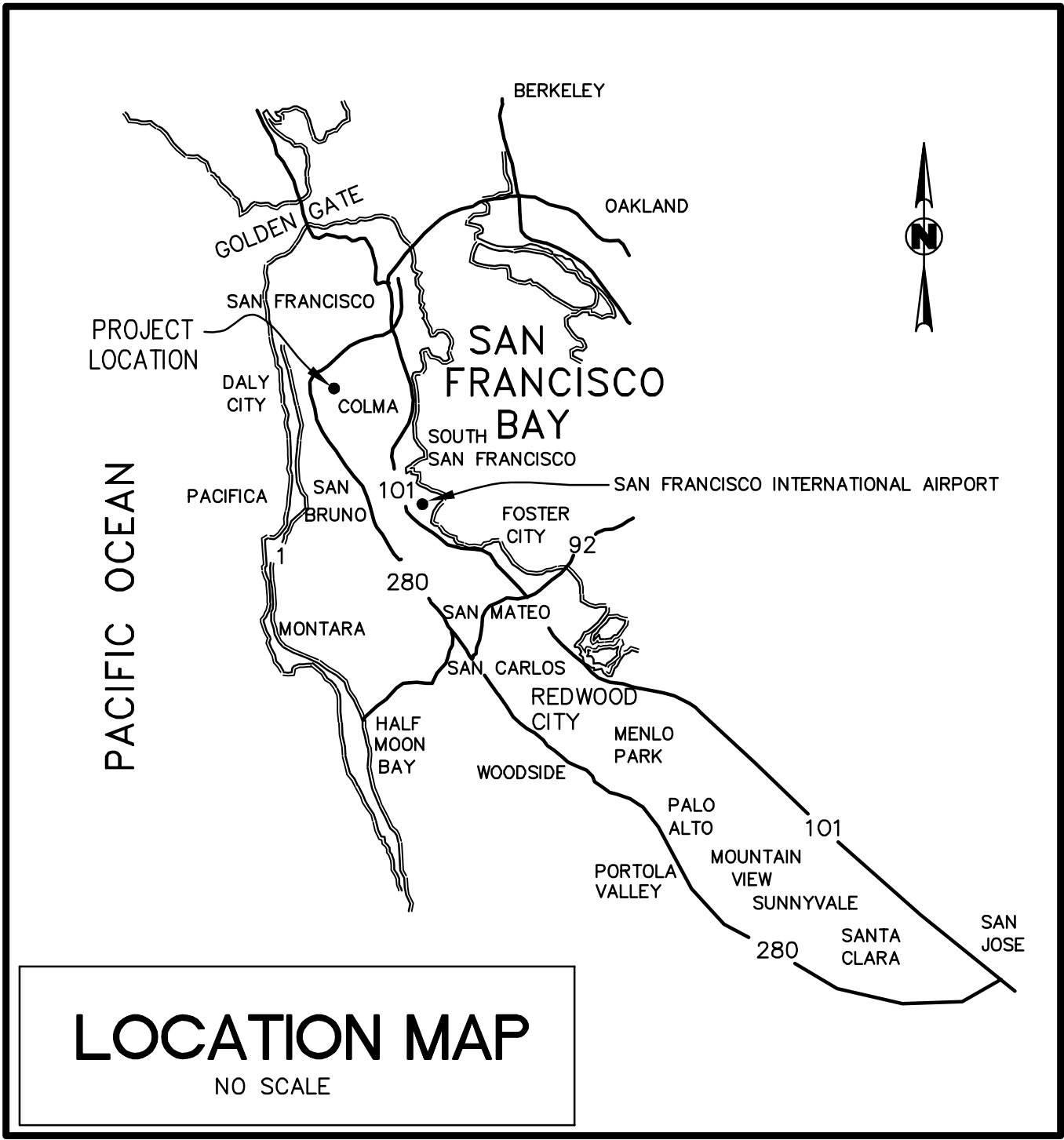


DRAWING NAME: \\bkf-rs\vol4\2017\70252\_SSAR\_Town\_of\_Colma\ENG\SHEETS\Hillside.dwg  
PLOT DATE: 08-06-18 PLOTTED BY: laid

# HILLSIDE BLVD

## SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

### IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



#### PROJECT SUMMARY

OWNER: TOWN OF COLMA  
1198 EL CAMINO REAL  
COLMA, CA 94014

ENGINEER: BKF ENGINEERS  
255 SHORELINE DRIVE  
REDWOOD CITY, CA 94065  
(650) 482-6300

#### SHEET INDEX:

C0.00	TITLE SHEET
C0.01	TYPICAL SECTIONS
C1.00	PLAN, SIGNING & STRIPING
C1.01	PLAN, SIGNING & STRIPING
C2.00	DETAILS

#### LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY	---	==
CURB AND GUTTER	=====	=====
CATCH BASIN UTILITY	■	■
POLE/GUY-WIRE	○ ←	○ ←
MANHOLE	○	●
PARKING STALL CROSSLINE	+ +	+ +
UTILITY BOX/VAULT	○ □	○ □
STREET LIGHT	● ☀	● ☀
BIKE LANE SYMBOL	→ →	→ →
SIGN WITH POST(S)	— —	— —
FENCE	— x —	— x —
TRAFFIC SIGNAL POLE	◆	◆

#### GENERAL NOTES

- THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THE BASE DOES NOT INCLUDE TOPOGRAPHIC SURVEY, IT WAS BASE ON GOOGLE EARTH, COUNTY GIS, AND RECORD DRAWINGS, WITH LIMITED SITE OBSERVATIONS.
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#### ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AB	AGGREGATE BASE	MSEP	MINOR SIDEWALK
AC	ASPHALT CONCRETE		ENCROACHMENT PERMIT
AD	AREA DRAIN	MVG	MODIFIED VALLEY GUTTER
ADD'L	ADDITIONAL	N	NORTHING
AGG	AGGREGATE	NG	NATURAL GROUND
APPROX	APPROXIMATE	NO., #	NUMBER
AVG	AVERAGE	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	(N)	NEW
	AMERICAN WATER WORKS ASSOCIATION	P.A.E.	PUBLIC ACCESS EASEMENT
AWWA	BUILDING	O.C.	ON CENTER
BLDG	BENCH MARK	OH	OVERHEAD
BM	BOTTOM OF WALL	(P)	PROPOSED
BOW	BLUE PAVEMENT MARKER	P	PAD
BPM	BACK OF WALK	PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
BW	CATCH BASIN	PE	PAD ELEVATION OR POLYETHYLENE
CB	CUBIC FEET	PG&E	PACIFIC GAS AND ELECTRIC
CF	CURB & GUTTER	PI	POINT OF INTERSECTION
C&G	CENTERLINE	PL, R	PROPERTY LINE
CL, C	CLEANOUT	PP	POWER POLE
CO	CONCRETE	PR	PROPOSED
CONC	CUBIC YARD	PRC	POINT OF REVERSE CURVATURE
CY	DIAMETER	PT	POINT
DIA	DRIVE	PUE	PUBLIC UTILITY EASEMENT
DR	DOMESTIC WATER	R	RADIUS
D/W	DRIVEWAY	RD	ROAD
(E)	EXISTING	RCP	REINFORCED CONCRETE PIPE
E	ELECTRICAL, or EASTING	RIM	RIM ELEVATION
EA	EACH	RPA	REDUCED PRESSURE ASSEMBLY
EC	END OF CURB	RRFB	RECTANGULAR RAPID FLASHING BEACON
EG	EXISTING GRADE	Rt, RT	RIGHT
EL	ELEVATION	R/W	RIGHT OF WAY
EP	EDGE OF PAVEMENT	S	SLOPE
ESMT	EASEMENT	SDAD	STORM DRAIN AREA DRAIN
F/C	FACE OF CURB	SDCB	STORM DRAIN CATCH BASIN
FG	FINISH GRADE	SDJB	STORM DRAIN JUNCTION BOX
FH	FIRE HYDRANT	SF	SQUARE FEET
FL	FLOW LINE	SHT	SHEET
FP	FINISHED PAVEMENT	SNS	STREET NAME SIGN
FT	FEET	STA	STATION
G	GAS	STD	STANDARD
GB	GRADE BREAK	S/W, SW	SIDEWALK
GE	GRATE ELEVATION	T	TELEPHONE
GND	GROUND	T&B	TOP AND BOTTOM
GR	GRADE	TC	TOP OF CURB
GV	GATE VALVE	TEMP	TEMPORARY
JB	JOINT BOX	TP	TOP OF PAVEMENT
JP	JOINT POLE	TW	TOP OF WALL
JT	JOINT TRENCH	TYP.	TYPICAL
L	LENGTH	UG	UNDER GROUND
LF	LINEAR FEET	VCP	VITRIFIED CLAY PIPE
LP	LOW POINT	VERT	VERTICAL
Lt, LT	LEFT	W/	WITH
MAX	MAXIMUM	W/O	WITHOUT
MH	MANHOLE	W	WATER
MIN	MINIMUM	WH	WALL HEIGHT
MIS	MISCELLANEOUS		



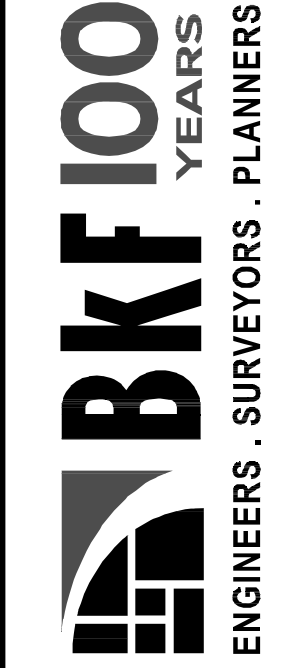
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Design JCM		
Drawn FNC		
Approved JCM		
Job No 20170252		

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1 of 5

Drawing Number:

30% CONCEPT PLANS

COLMA SSAR  
HILLSIDE BLVD  
TITLE SHEET  
SAN MATEO COUNTY  
TOWN OF COLMA

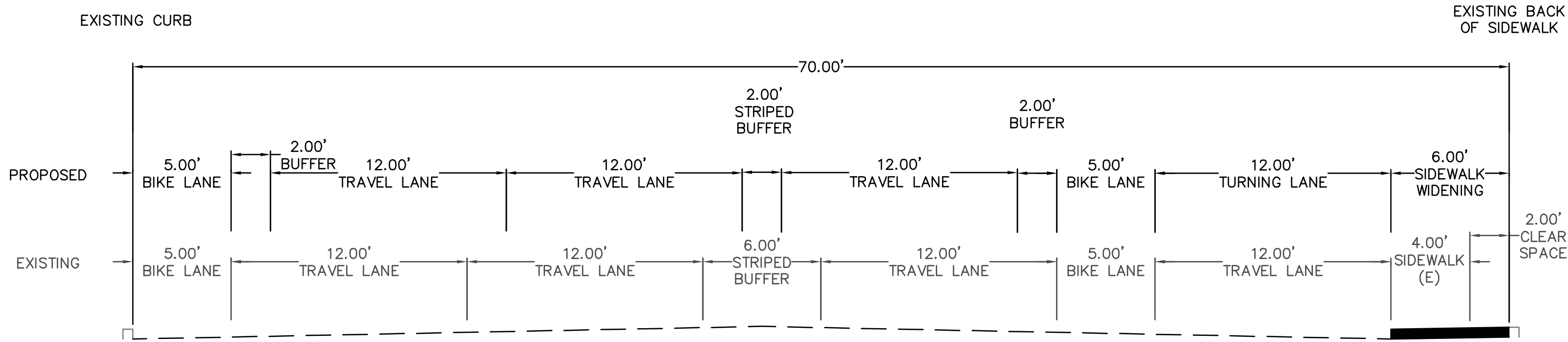


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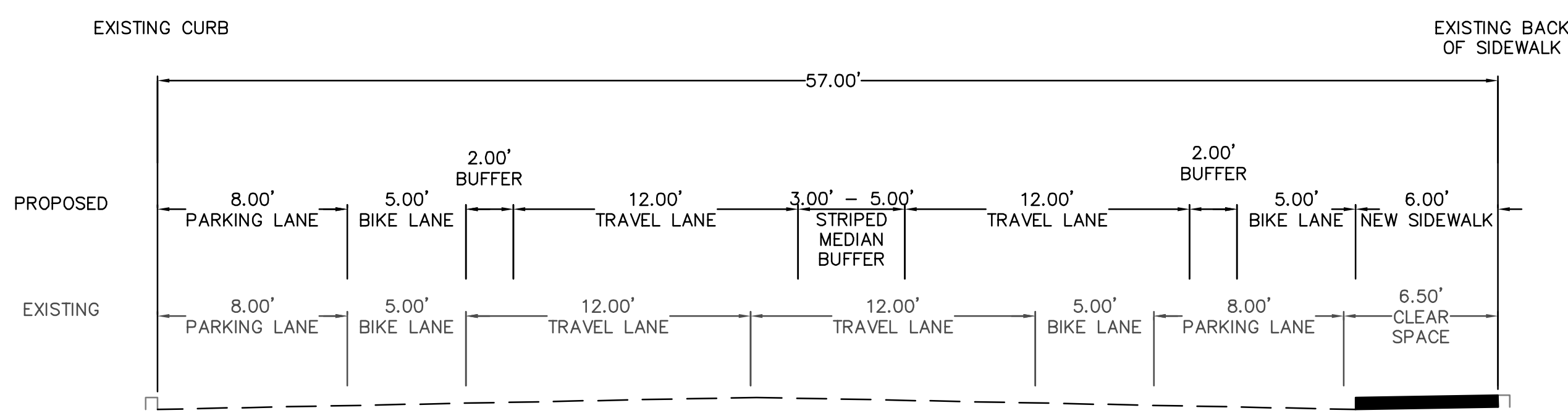
BKF ENGINEERS



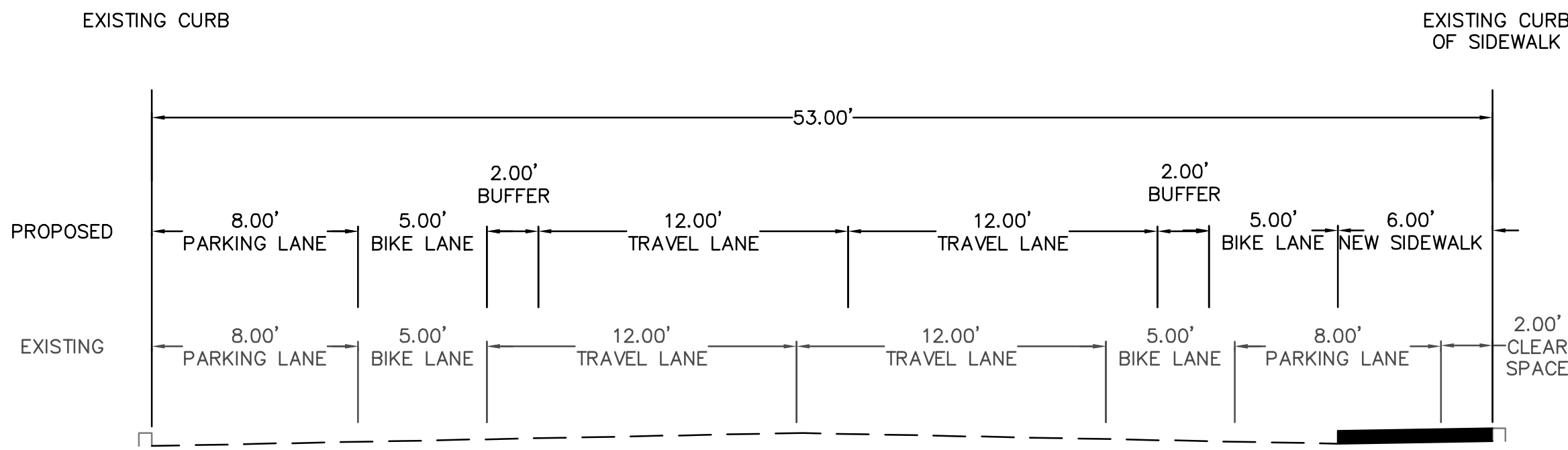
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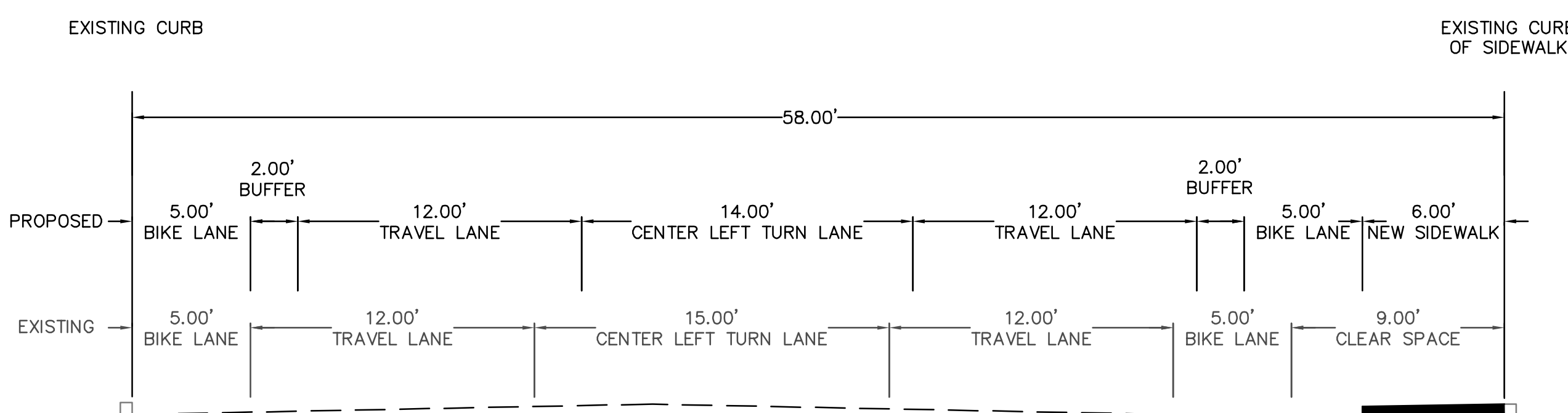
A-A  
HILLSIDE BLVD  
STA 100+88.84 TO 107+33.47



B-B  
HILLSIDE BLVD  
STA 107+33.47 TO 118+07.05



C-C  
HILLSIDE BLVD  
STA 118+07.05 TO 126+18.84

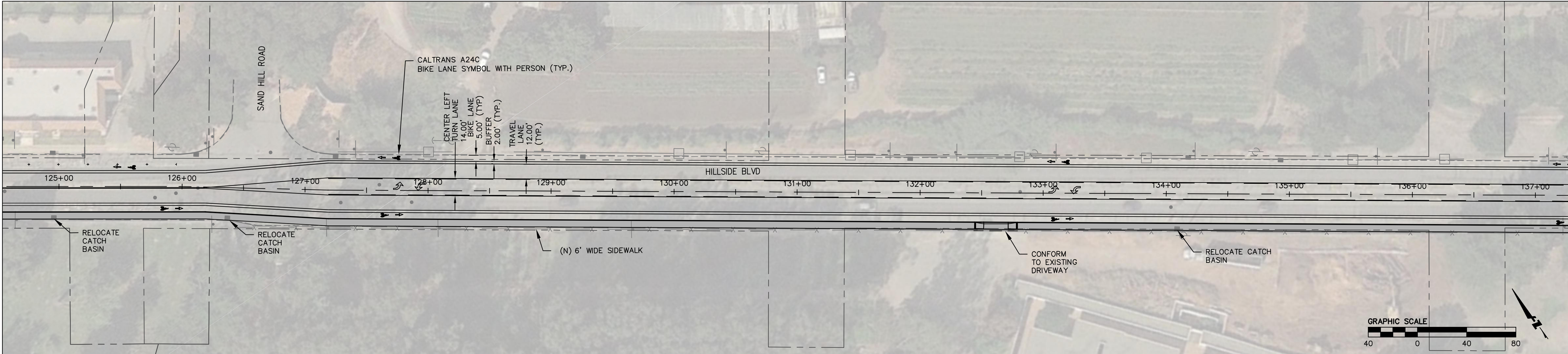
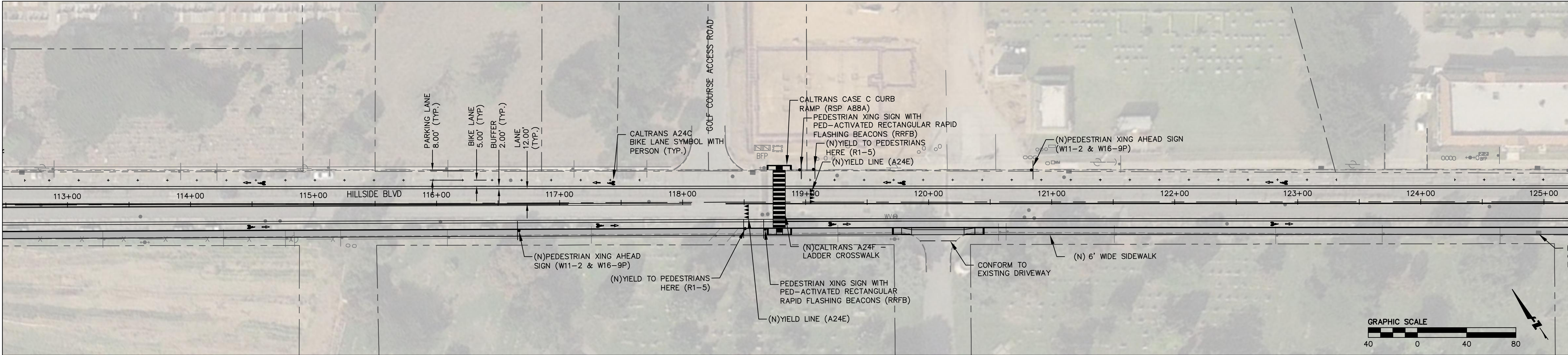
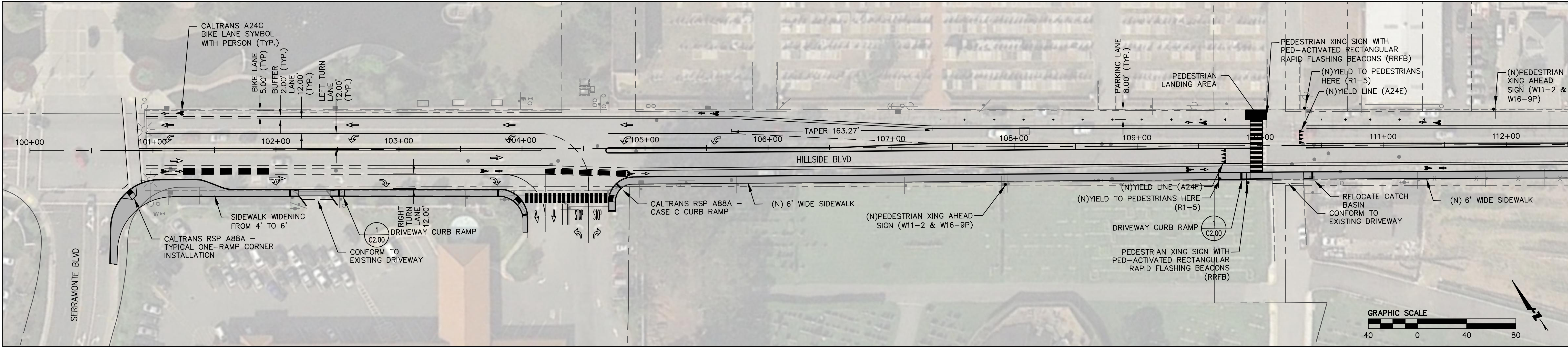


D-D  
HILLSIDE BLVD  
STA 126+18.84 TO 158+27.78

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	Drawn	FNC	
	Approved	JCM	
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C1.00  
3 of 5

30% CONCEPT PLANS

COLMA SSAR  
HILLSIDE BLVD  
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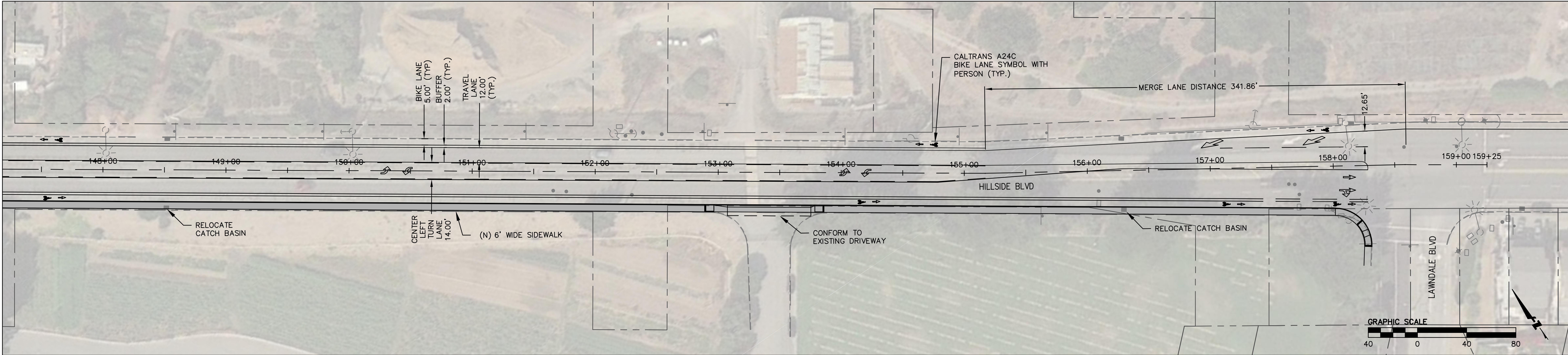
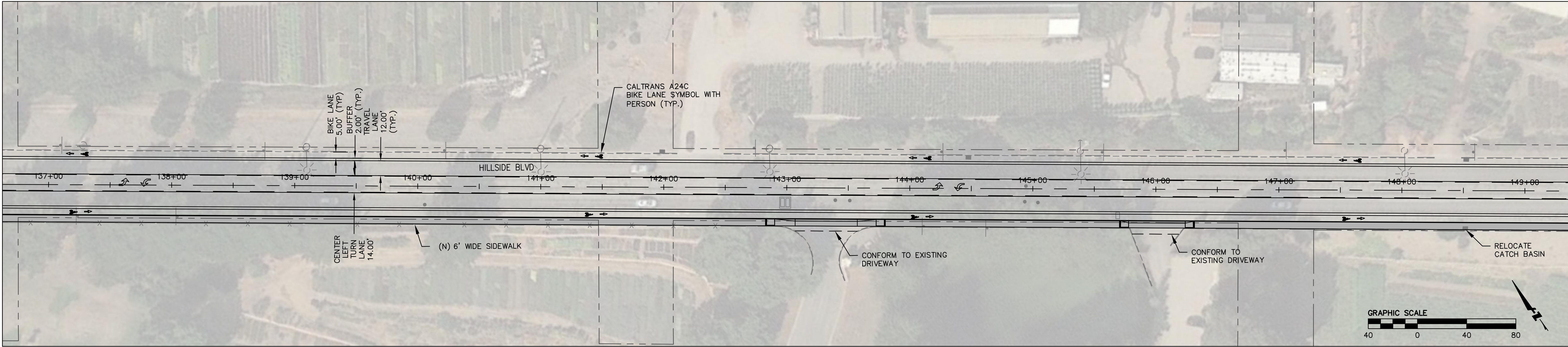


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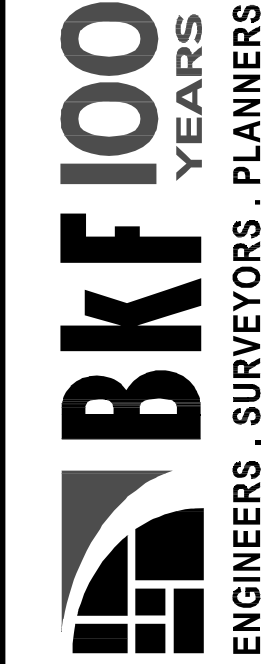
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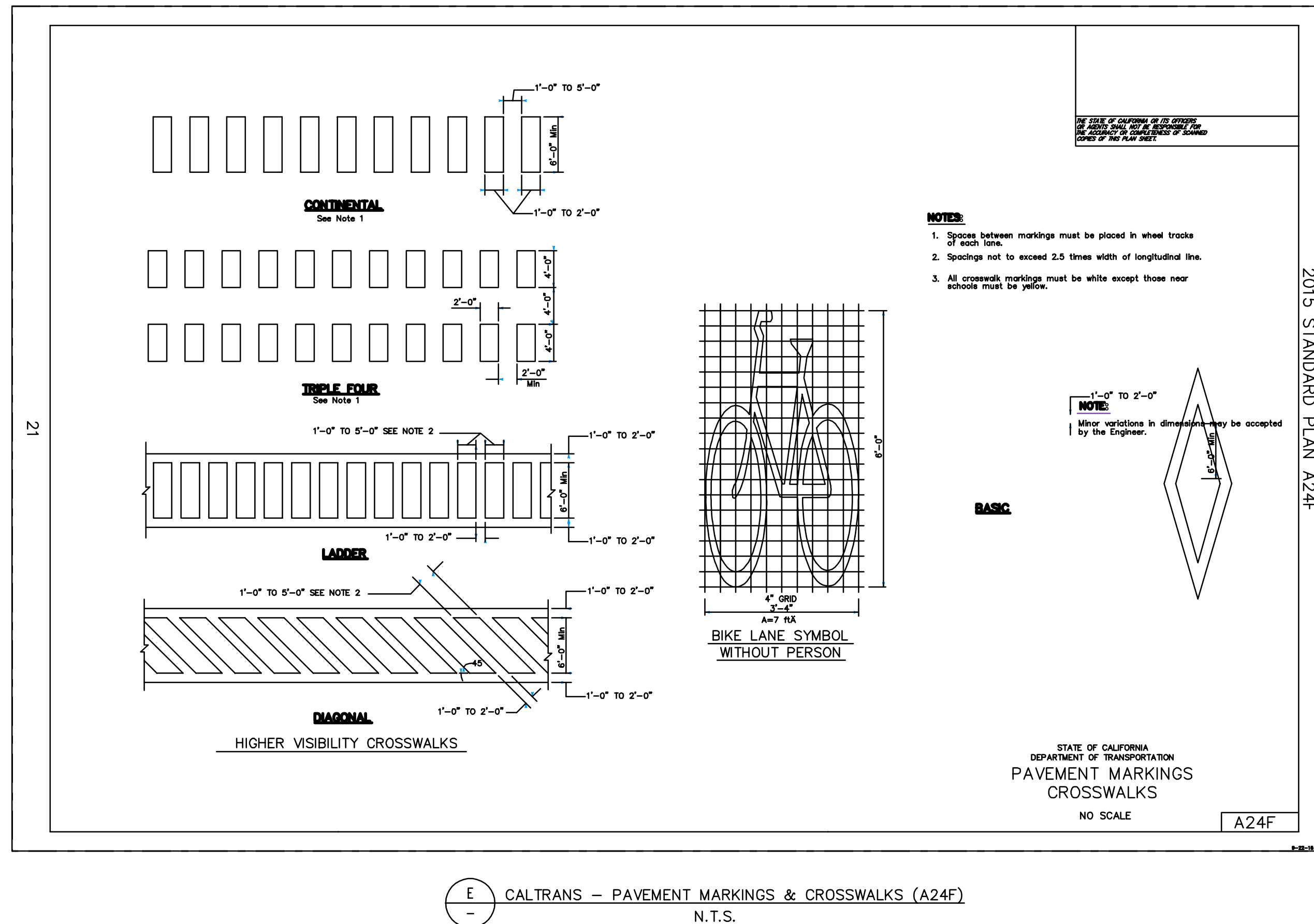
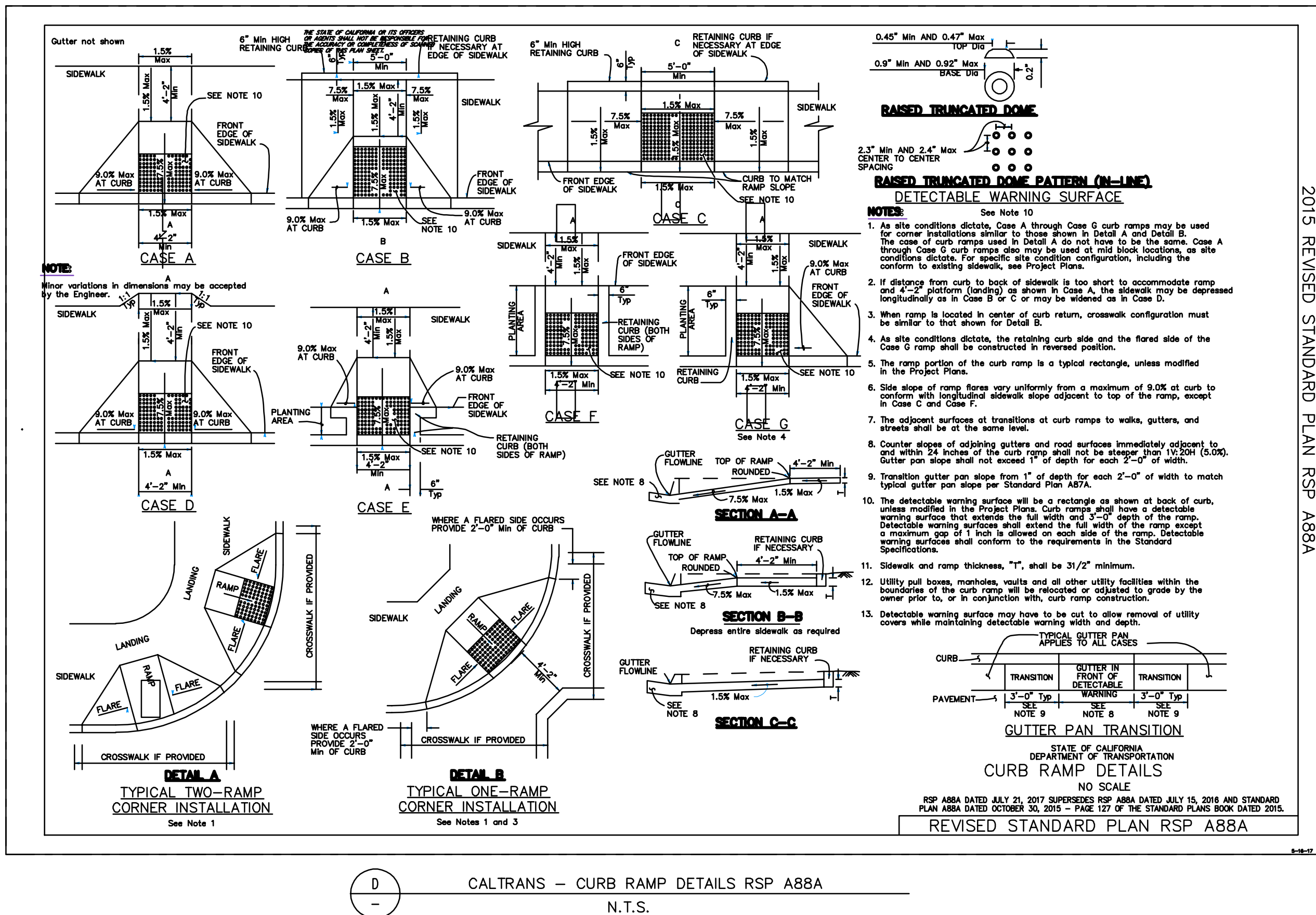
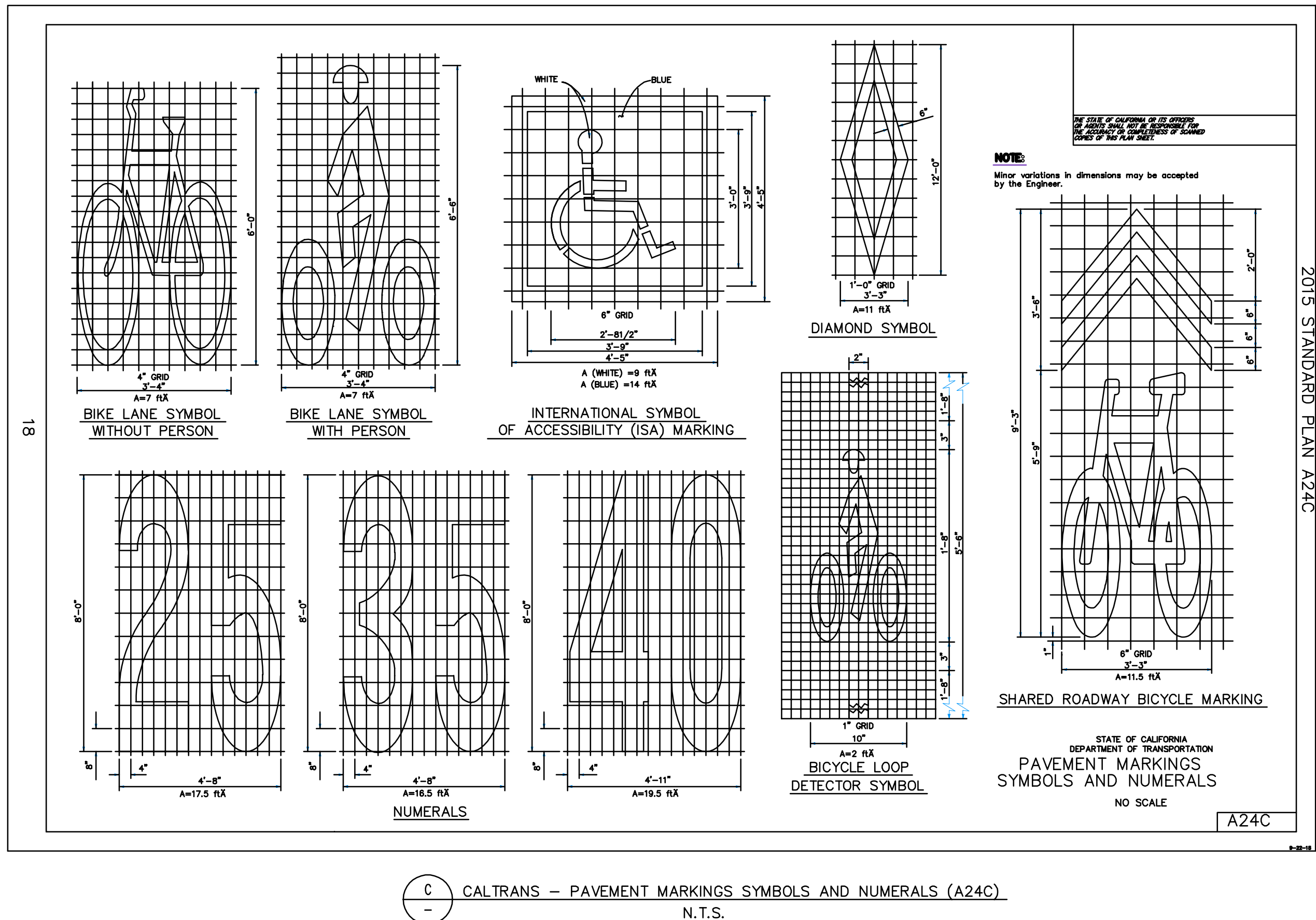
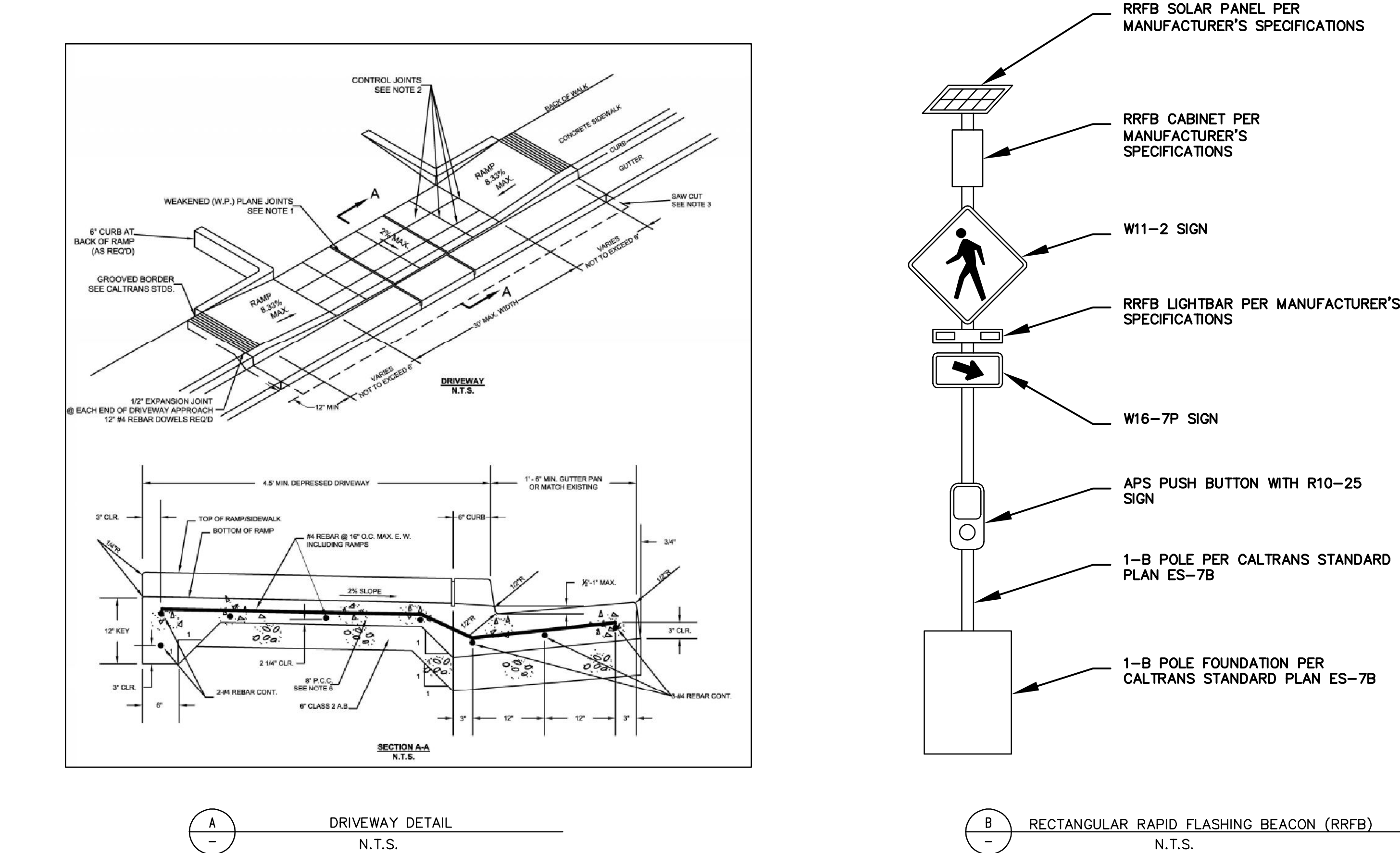
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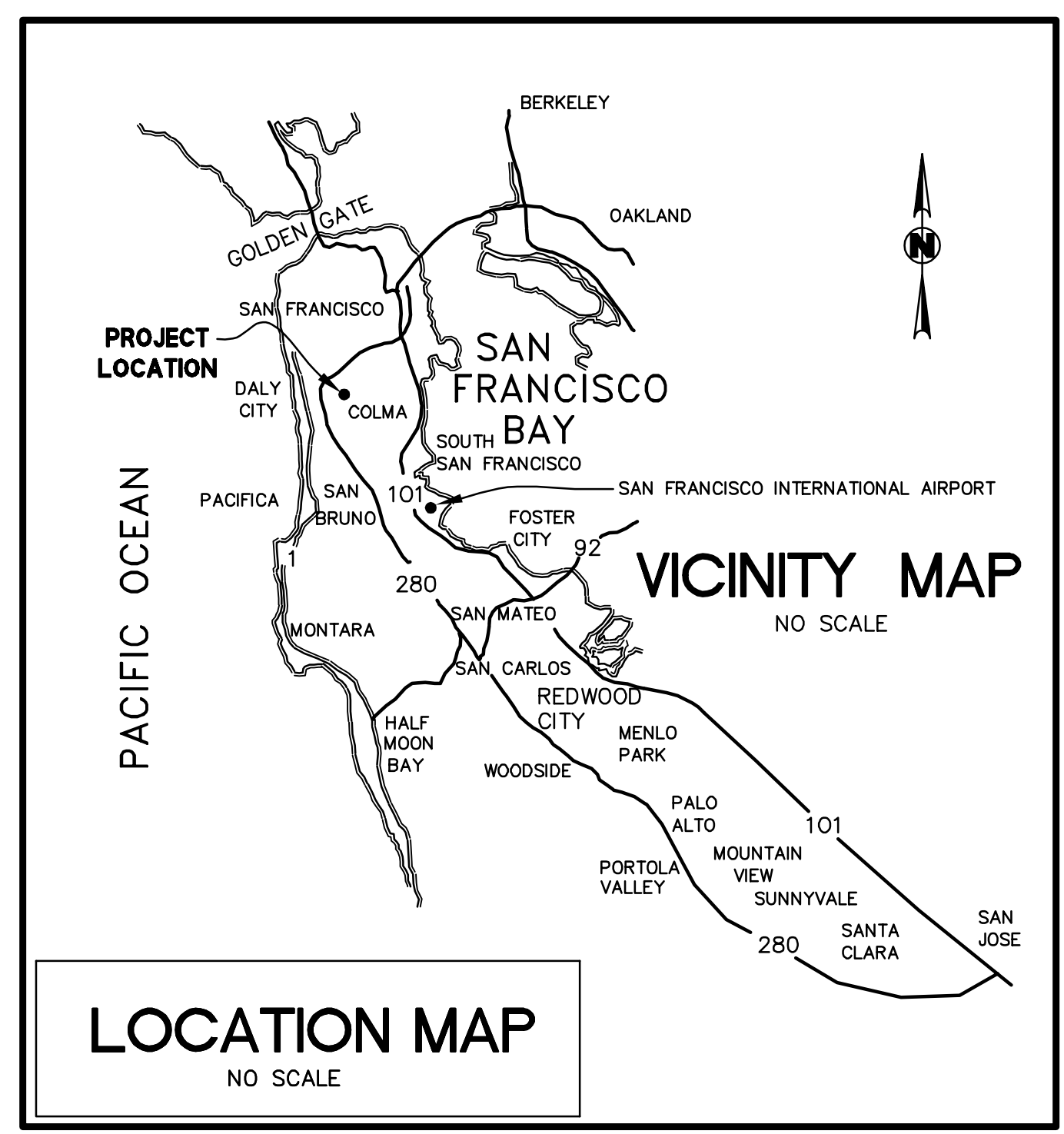




# EL CAMINO REAL

## SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

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COLMA, CA 94014

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(650) 482-6300

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#### LEGEND

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RIGHT-OF-WAY	---	---
CURB AND GUTTER	=====	=====
CATCH BASIN UTILITY	■	■
POLE/GUY-WIRE	○	○
MANHOLE	○	●
PARKING STALL CROSSLINE	+ +	+ +
UTILITY BOX/VAULT	□	□
STREET LIGHT	☼	☼
BIKE LANE SYMBOL	→	→
SIGN WITH POST(S)	—	—
FENCE	-x-x-	-x-x-
TRAFFIC SIGNAL POLE	◆	◆

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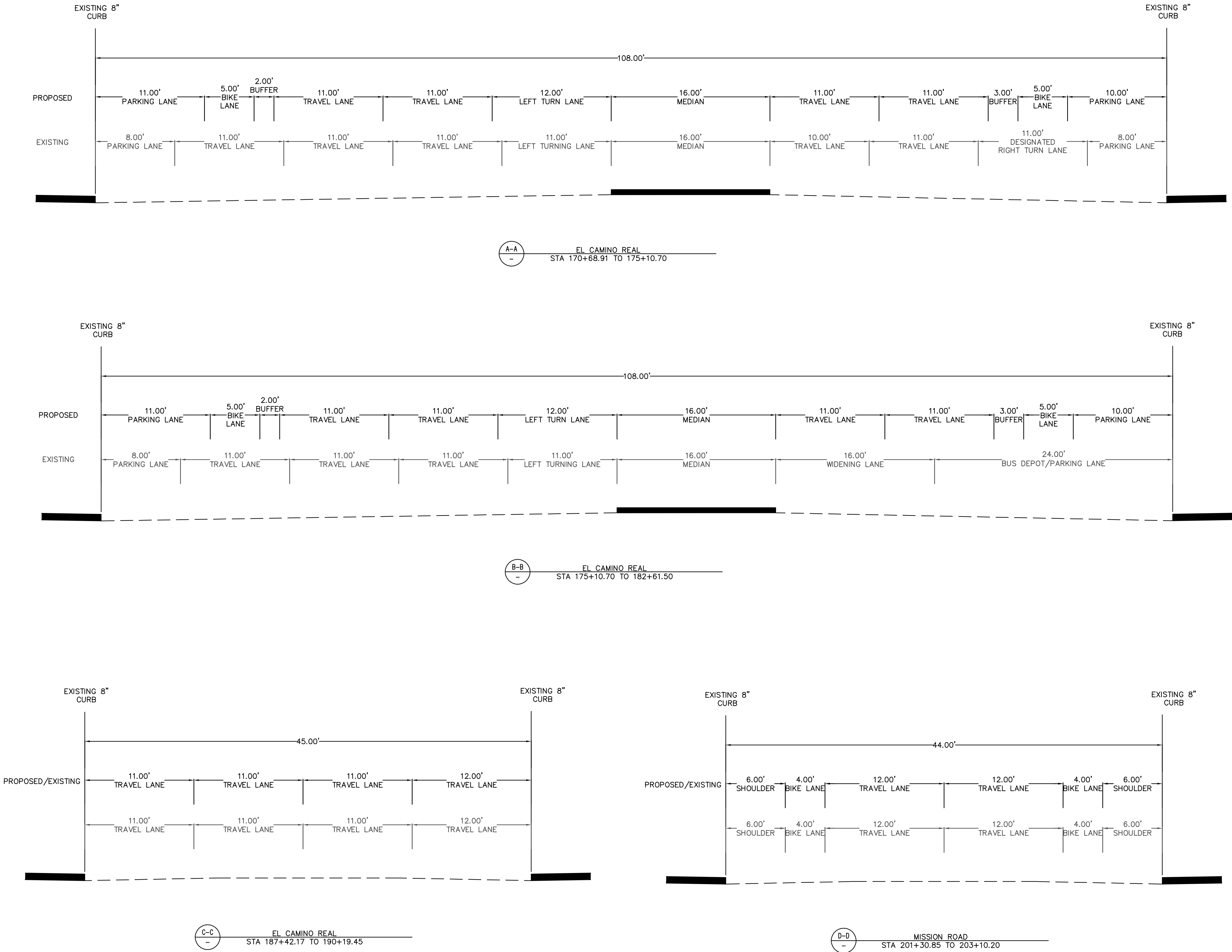
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GE	GRATE ELEVATION	S/W, SW	SIDEWALK
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LP	LOW POINT	VCP	VITRIFIED CLAY PIPE
LT, LT	LEFT	VERT	VERTICAL
MAX	MAXIMUM	W/	WITH
MH	MANHOLE	W/O	WITHOUT
MIN	MINIMUM	W	WATER
MIS	MISCELLANEOUS	WH	WALL HEIGHT





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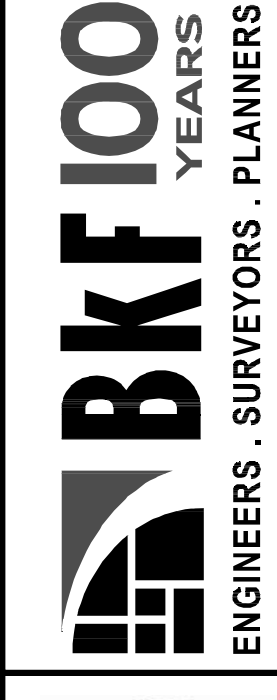


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Approved	JCM		
Job	No20170252		

Drawing Number:  
**CO.01**  
2 OF 4

Revisions

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TYPICAL SECTIONS  
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SAN MATEO COUNTY  
CALIFORNIA

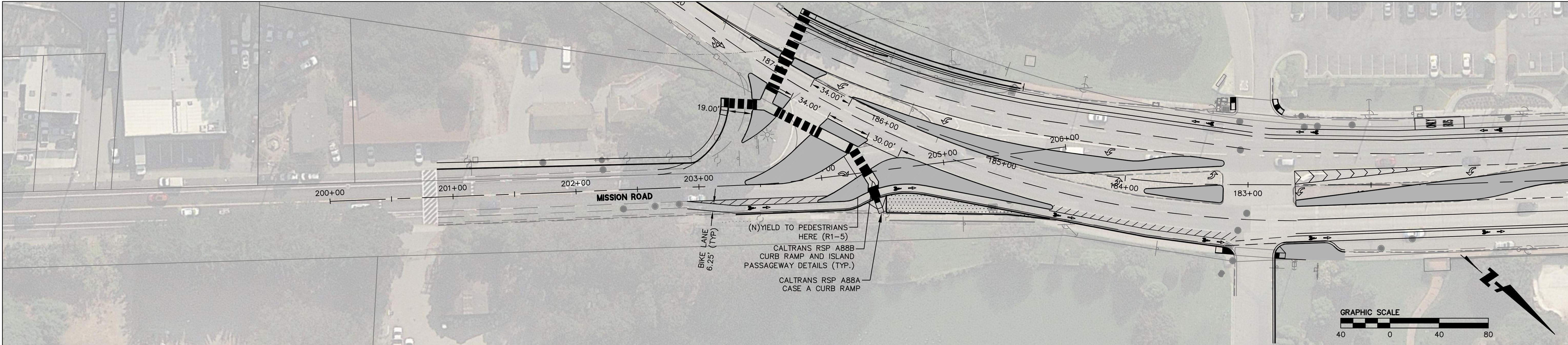
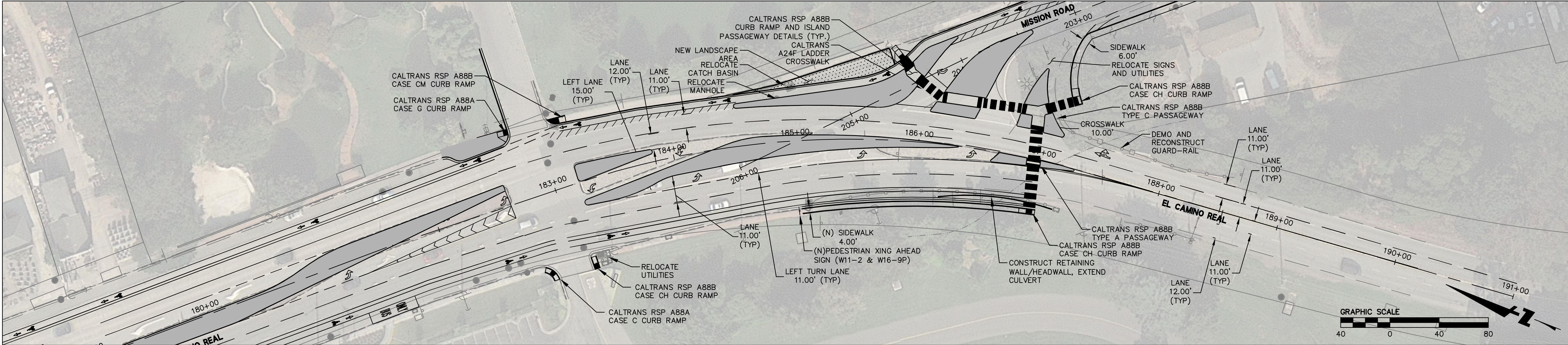
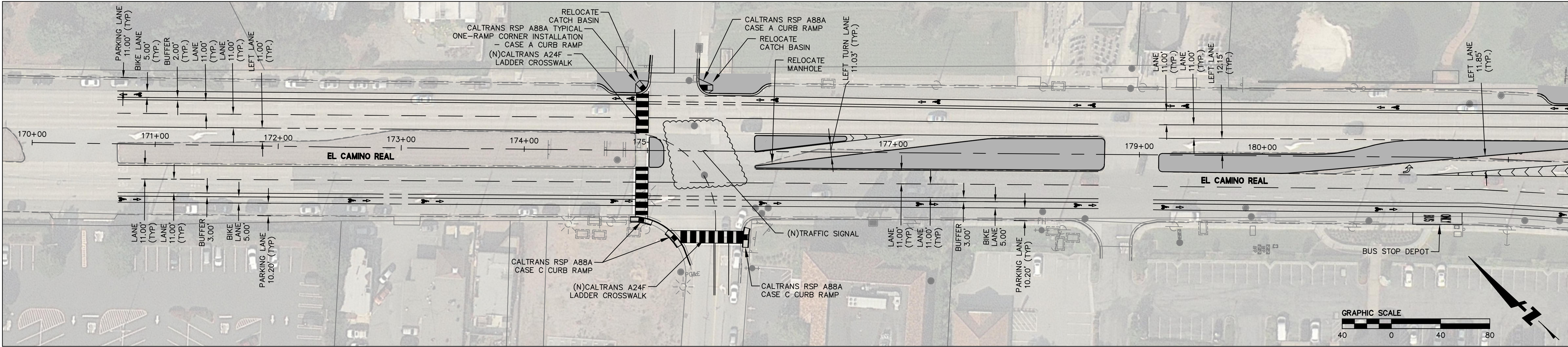


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30% CONCEPT PLANS



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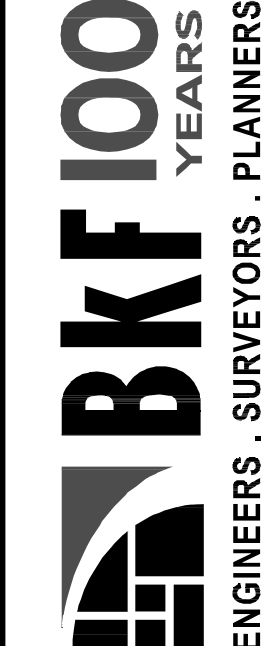
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	08/06/18
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	Approved JCM
	Job No 20170252
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3 OF 4

30% CONCEPT PLANS

COLMA SSAR  
EL CAMINO REAL & MISSION ROAD  
PLAN, SIGNING & STRIPING

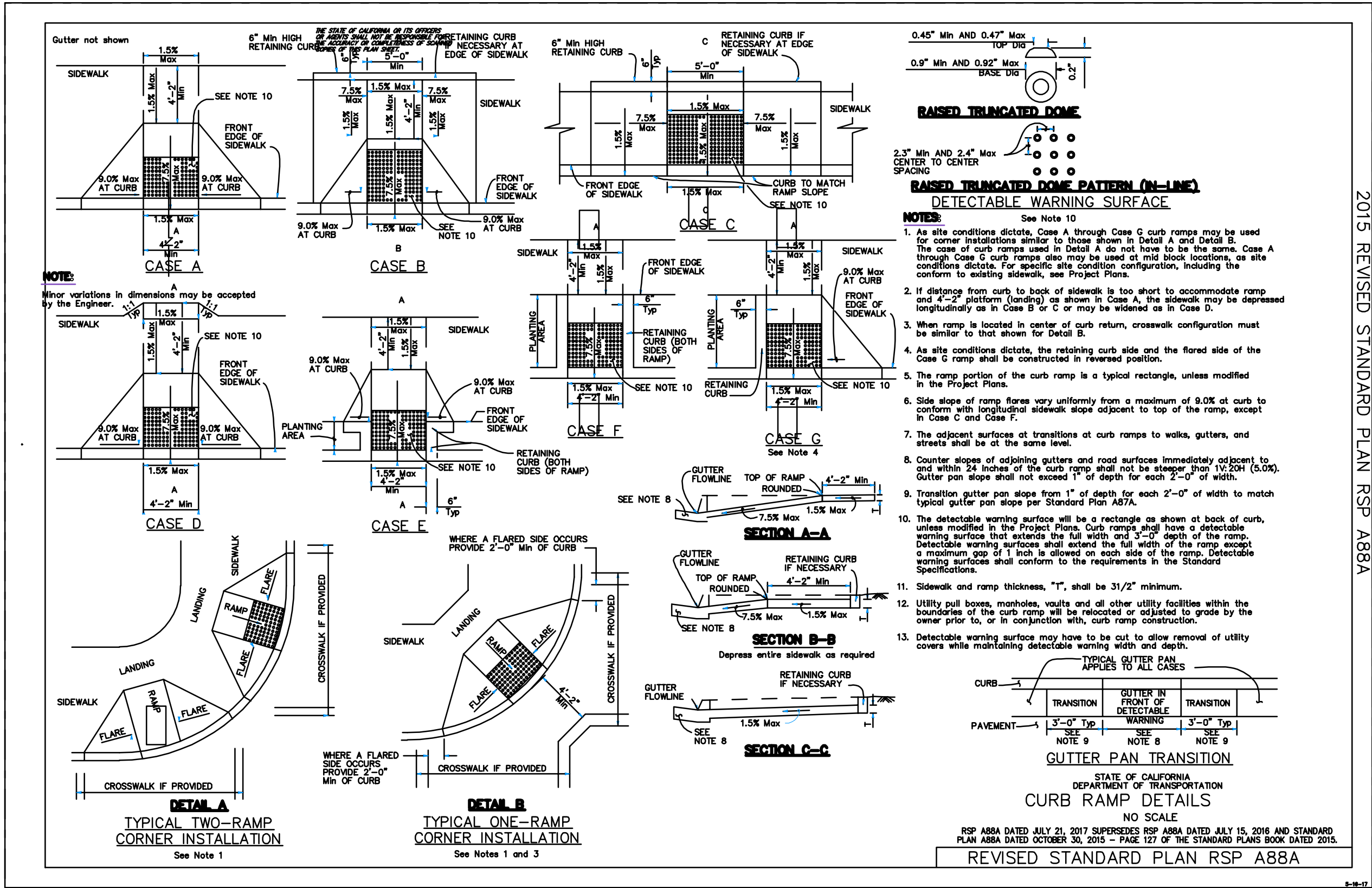
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SAN MATEO COUNTY  
CALIFORNIA



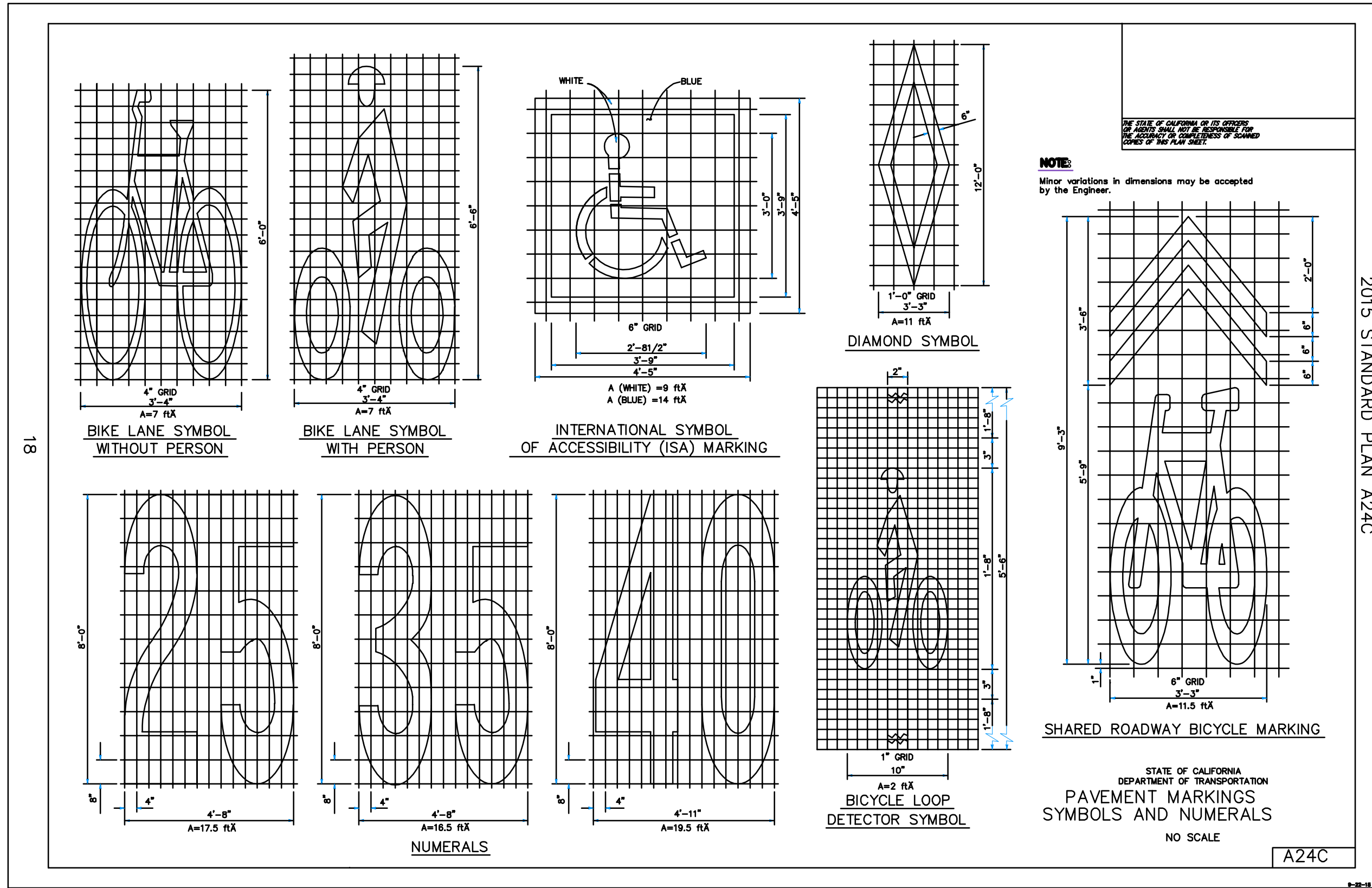
255 SHORELINE DR.,  
SUITE 200  
REDWOOD CITY, CA 94065  
(650) 482-6300  
www.bkf.com

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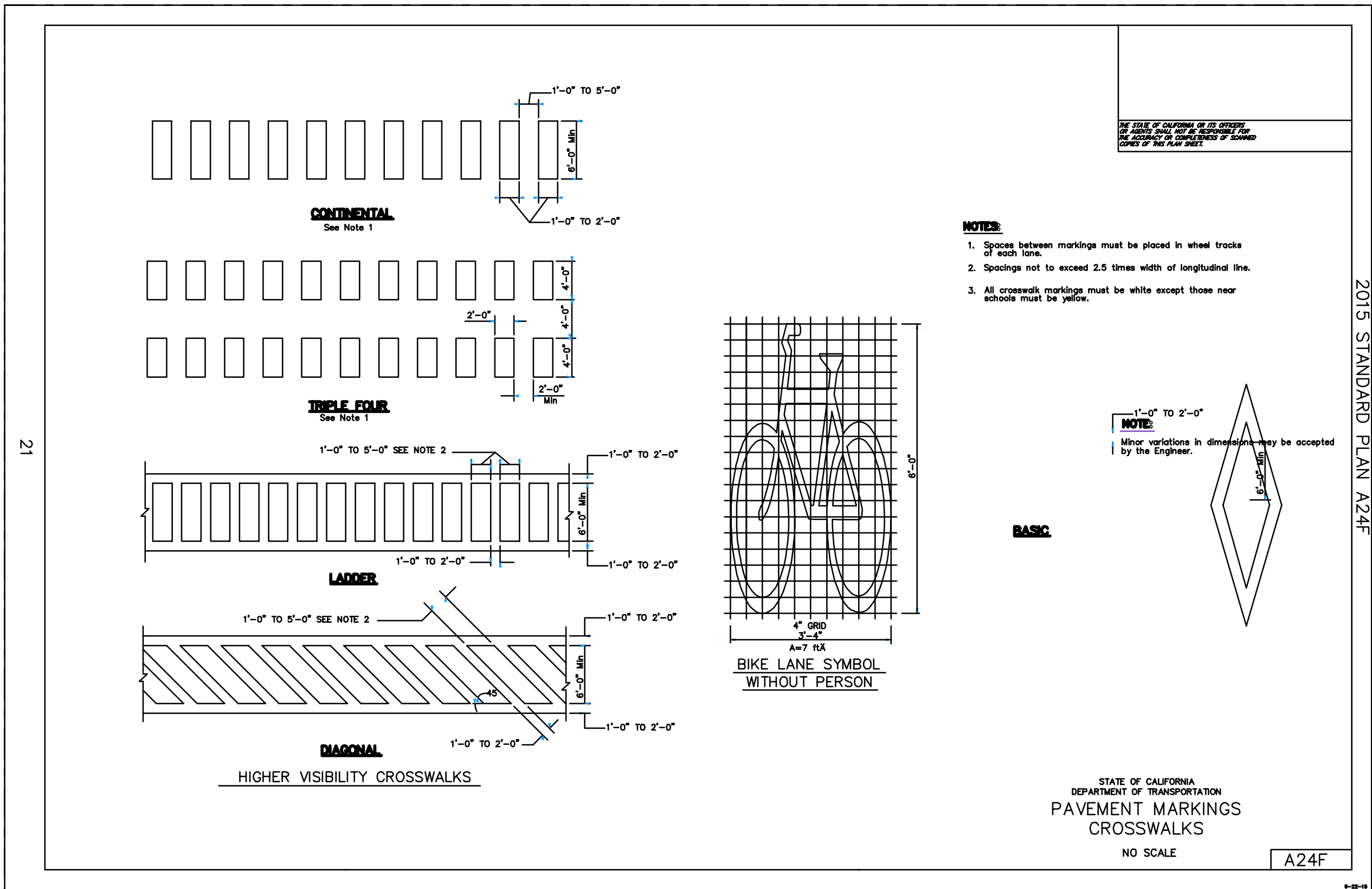




A  
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CALTRANS — CURB RAMP DETAILS RSP A88A  
N.T.S.



B  
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CALTRANS — PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)  
N.T.S.



C  
—  
—  
CALTRANS — PAVEMENT MARKINGS & CROSSWALKS (A24F)  
N.T.S.

Date	08/06/18	No.		Revisions
Scale	AS SHOWN			
Design	JCM			
Drawn	FNC			
Approved	JCM			
Job	No20170252			

C2.00  
4 OF 4

30% CONCEPT PLANS

COLMA SSAR  
EL CAMINO REAL & MISSION ROAD  
PLAN, SIGNING & STRIPING

TOWN OF COLMA  
SAN MATEO COUNTY  
CALIFORNIA



BKF100  
YEARS  
ENGINEERS, SURVEYORS, PLANNERS

2555 SHORELINE DR.,  
SUITE 200  
REDWOOD CITY, CA 94065  
(650) 482-6300  
www.bkf.com

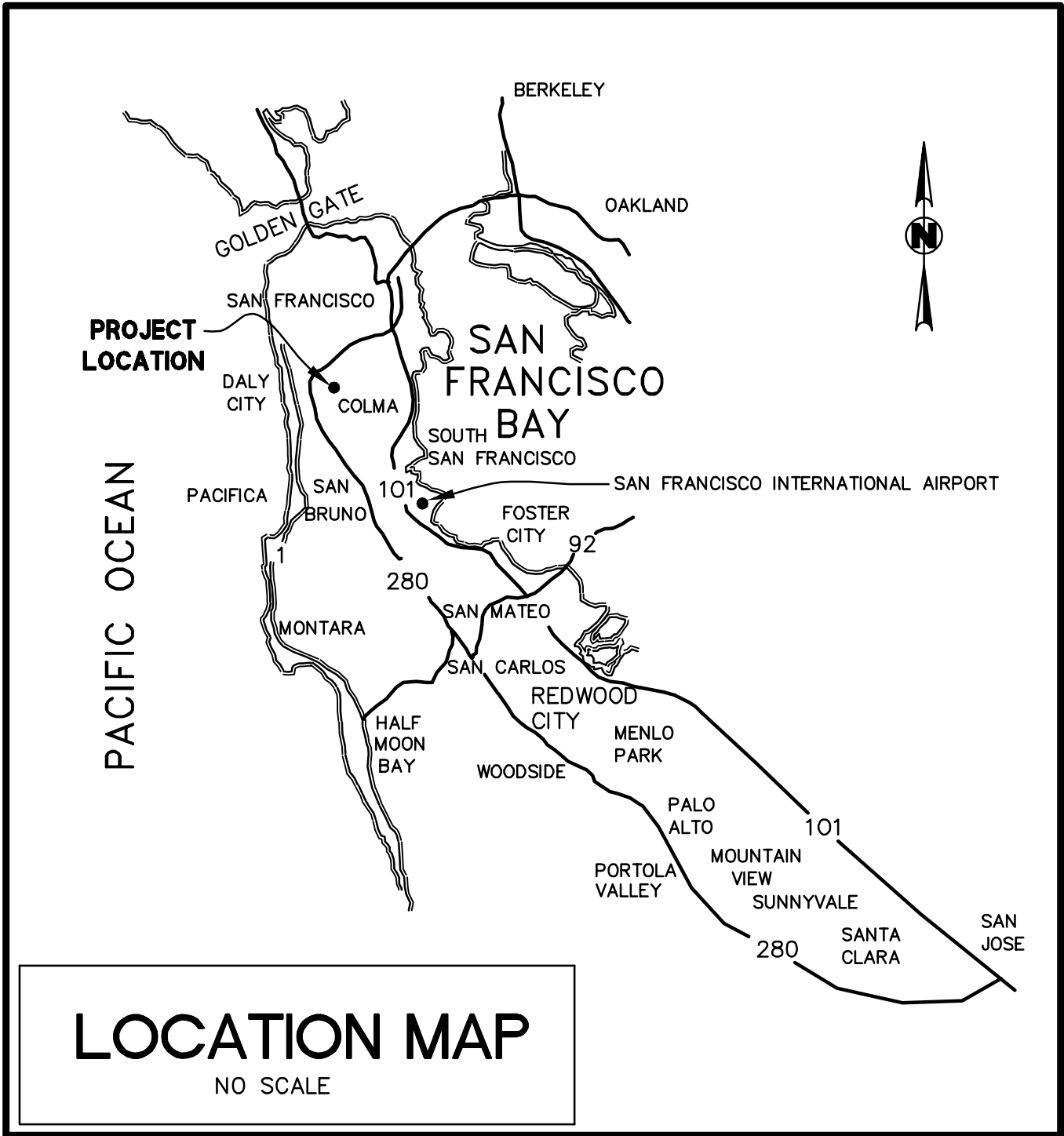


DRAWING NAME: K:\2017\170252\SSAR\_Town\_of\_Colma\ma\ENG\Sheets\3\_Serramonte.dwg  
PLOT DATE: 08-06-18 PLOTTED BY: chd

# SERRAMONTE BLVD + JUNIPERO SERRA BLVD

## SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

### IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



#### PROJECT SUMMARY

OWNER: TOWN OF COLMA  
1198 EL CAMINO REAL  
COLMA, CA 94014

ENGINEER: BKF ENGINEERS  
255 SHORELINE DRIVE  
REDWOOD CITY, CA 94065  
(650) 482-6300

#### SHEET INDEX:

C0.00 TITLE SHEET  
C1.00 PLAN, SIGNING & STRIPING  
C2.00 DETAILS

#### GENERAL NOTES

- THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THE BASE DOES NOT INCLUDE TOPOGRAPHIC SURVEY, IT WAS BASE ON GOOGLE EARTH, COUNTY GIS, AND RECORD DRAWINGS, WITH LIMITED SITE OBSERVATIONS.
- WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, TOWN OF COLMA STANDARDS, CALTRANS STANDARD PLANS AND THESE NOTES.
- REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY THE CIVIL DESIGN ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS, REVISIONS SHALL BE ACCURATELY SHOWN ON REVISED PLANS.
- STANDARD CONSTRUCTION ACTIVITIES SHALL BE LIMITED HOURS REGULATED BY THE CITY. CONTRACTOR SHALL CONFIRM WITH CITY. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE ON SUNDAY AND LEGAL HOLIDAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE CITY BEFORE COMMENCING WORK. THE CONTRACTOR SHALL ALSO PROVIDE FLAGMEN, CONES OR BARRICADES, AS NECESSARY TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS. THE CONTRACTOR SHALL LEAVE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH POLICE, FIRE AND PUBLIC WORKS DEPARTMENTS, AND KEEP THEM INFORMED DAILY OF DETOURS.
- EXISTING PUBLIC PEDESTRIAN WALKWAYS, BIKEPATHS & HANDICAP ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER.
- SHOULD IT APPEAR THAT THE WORK OUTLINED ON THESE PLANS IS NOT SUFFICIENTLY DETAILED OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER, BKF ENGINEERS AT (650) 482-6300, BEFORE PROCEEDING WITH THE WORK IN QUESTION AND REQUEST CLARIFICATION.
- AN ENCROACHMENT PERMIT IS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT AND MUST BE OBTAINED PRIOR TO THE START OF WORK.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
- CONTRACTOR SHALL COMPLY WITH STATE, COUNTY AND CITY LAWS AND ORDINANCES; AND REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA AND INDUSTRIAL ACCIDENT COMMISSION RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL.
- CONTRACTOR TO REMOVE EXISTING PAVEMENT MARKINGS OR MARKERS WITHIN THE LIMITS OF WORK PRIOR TO MICROSURFACING. CONTRACTOR TO MICROSURFACE THE PROJECT LIMIT.
- RECONSTRUCT DRIVEWAYS AND WALKWAYS TO RIGHT-OF WAY AS NEED TO CONFORM.
- CONTRACTOR TO MAINTAIN 7' VERTICAL CLEARANCE BELOW PROPOSED IMPROVEMENTS INCLUDING BUT NOT LIMITED TO ALL NEW SIGNAGE, RRFB ASSEMBLIES, AND POWER SUPPLIES.
- CONTRACTOR SHALL ACQUIRE CITY APPROVAL OF STRIPING LAYOUT, BASED ON CAT TRACKS, PRIOR TO INSTALLATION.
- ALL RECTANGULAR RAPID FLASHING BEACONS SHALL ADHERE TO FHWA INTERIM APPROVAL 1A-21 MEMORANDUM: MUTCD INTERIM APPROVAL FOR OPTIONAL USE OF PEDESTRIAN-ACTUATED RECTANGULAR RAPID-FLASHING BEACONS AT UNCONTROLLED MARKED CROSSWALKS.

#### ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AB	AGGREGATE BASE	MSEP	MINOR SIDEWALK ENCROACHMENT PERMIT
AC	ASPHALT CONCRETE	MVG	MODIFIED VALLEY GUTTER
AD	AREA DRAIN	N	NORTHING
ADD'L	ADDITIONAL	NG	NATURAL GROUND
AGG	AGGREGATE	NO., #	NUMBER
APPROX	APPROXIMATE	NTS	NOT TO SCALE
AVG	AVERAGE	(N)	NEW
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	P.A.E.	PUBLIC ACCESS EASEMENT
AWWA	AMERICAN WATER WORKS ASSOCIATION	O.C.	ON CENTER
BLDG	BUILDING	OH	OVERHEAD
BM	BENCH MARK	(P)	PROPOSED
BOW	BOTTOM OF WALL	P	PAD
BPM	BLUE PAVEMENT MARKER	PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
BW	BACK OF WALK	PE	PAD ELEVATION OR POLYETHYLENE
CB	CATCH BASIN	PG&E	PACIFIC GAS AND ELECTRIC
CF	CUBIC FEET	PI	POINT OF INTERSECTION
C&G	CURB & GUTTER	PL, R	PROPERTY LINE
CL, C	CENTERLINE	PP	POWER POLE
CO	CLEANOUT	PR	PROPOSED
CONC	CONCRETE	PRC	POINT OF REVERSE CURVATURE
CY	CUBIC YARD	PT	POINT
DIA	DIAMETER	PUE	PUBLIC UTILITY EASEMENT
DR.	DRIVE	R	RADIUS
DW	DOMESTIC WATER	RD	ROAD
D/W	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
(E)	EXISTING	RIM	RIM ELEVATION
E	ELECTRICAL, or EASTING	RPA	REDUCED PRESSURE ASSEMBLY
EA	EACH	RRFB	RECTANGULAR RAPID FLASHING BEACON
EC	END OF CURB	Rt, RT	RIGHT
EG	EXISTING GRADE	R/W	RIGHT OF WAY
EL	ELEVATION	S	SLOPE
EP	EDGE OF PAVEMENT	SDAD	STORM DRAIN AREA DRAIN
ESMT	EASEMENT	SDCB	STORM DRAIN CATCH BASIN
F/C	FACE OF CURB	SDJB	STORM DRAIN JUNCTION BOX
FG	FINISH GRADE	SF	SQUARE FEET
FH	FIRE HYDRANT	SHT	SHEET
FL	FLOW LINE	SNS	STREET NAME SIGN
FP	FINISHED PAVEMENT	STA	STATION
FT	FEET	STD	STANDARD
G	GAS	S/W, SW	SIDEWALK
GB	GRADE BREAK	T	TELEPHONE
GE	GRATE ELEVATION	T&B	TOP AND BOTTOM
GND	GROUND	TC	TOP OF CURB
GR	GRADE	TEMP	TEMPORARY
GV	GATE VALVE	TP	TOP OF PAVEMENT
JB	JOINT BOX	TW	TOP OF WALL
JP	JOINT POLE	TYP.	TYPICAL
JT	JOINT TRENCH	UG	UNDER GROUND
L	LENGTH	VCP	VITRIFIED CLAY PIPE
LF	LINEAR FEET	VERT	VERTICAL
LP	LOW POINT	W/	WITH
LT, LT	LEFT	W/O	WITHOUT
MAX	MAXIMUM	W	WATER
MH	MANHOLE	WH	WALL HEIGHT
MIN	MINIMUM		
MIS	MISCELLANEOUS		

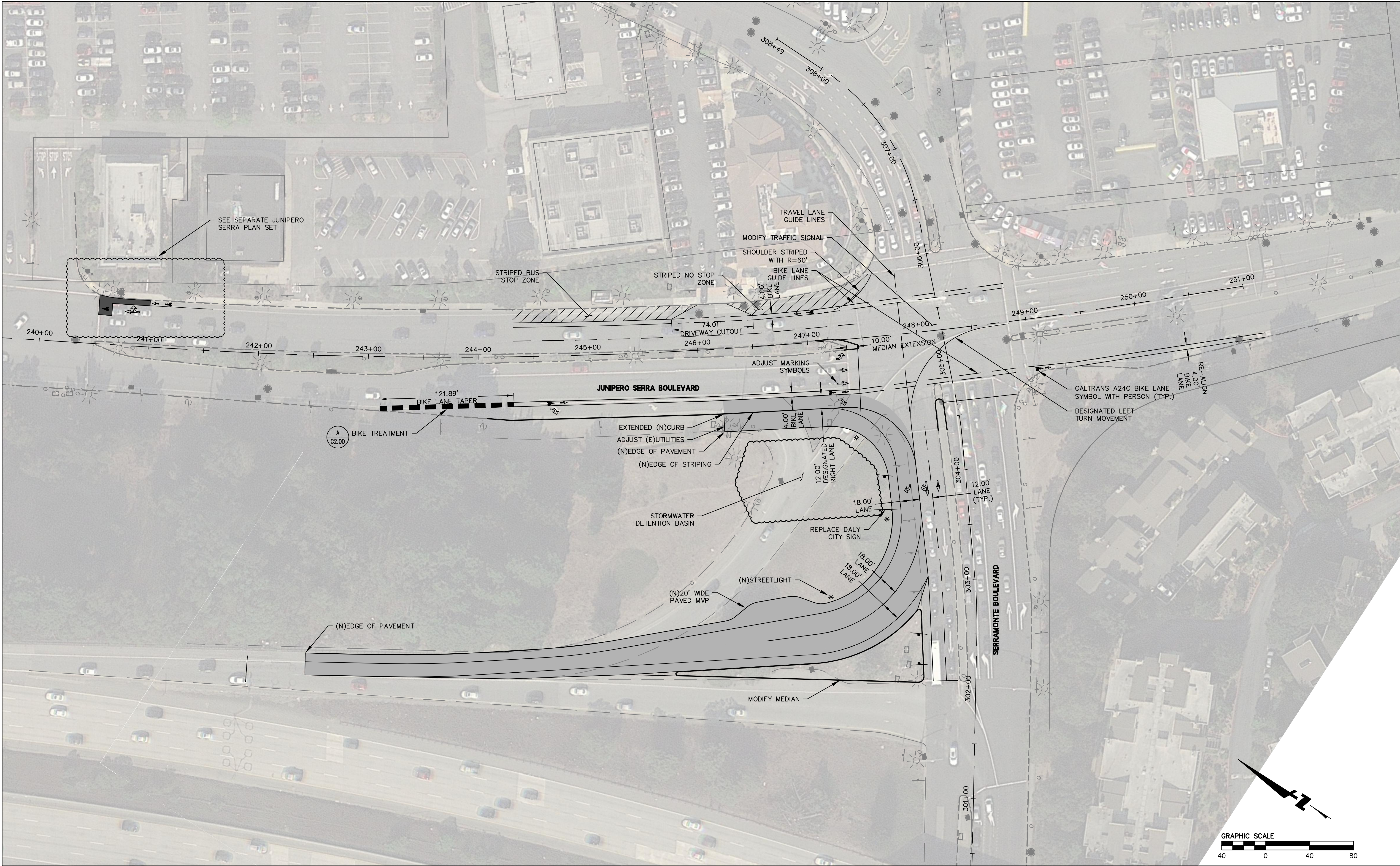


#### LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY	---	---
CURB AND GUTTER	=====	=====
CATCH BASIN UTILITY	■	■
POLE/GUY-WIRE	⊙ ←	⊙ ←
MANHOLE	○	●
PARKING STALL CROSSLINE	+ +	+ +
UTILITY BOX/VAULT	○ □	○ □
STREET LIGHT	● ☼	● ☼
BIKE LANE SYMBOL	→ →	→ →
SIGN WITH POST(S)	— —	— —
FENCE	× ×	× ×
TRAFFIC SIGNAL POLE	◆	◆

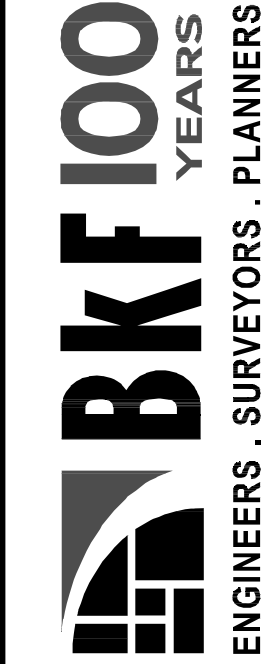


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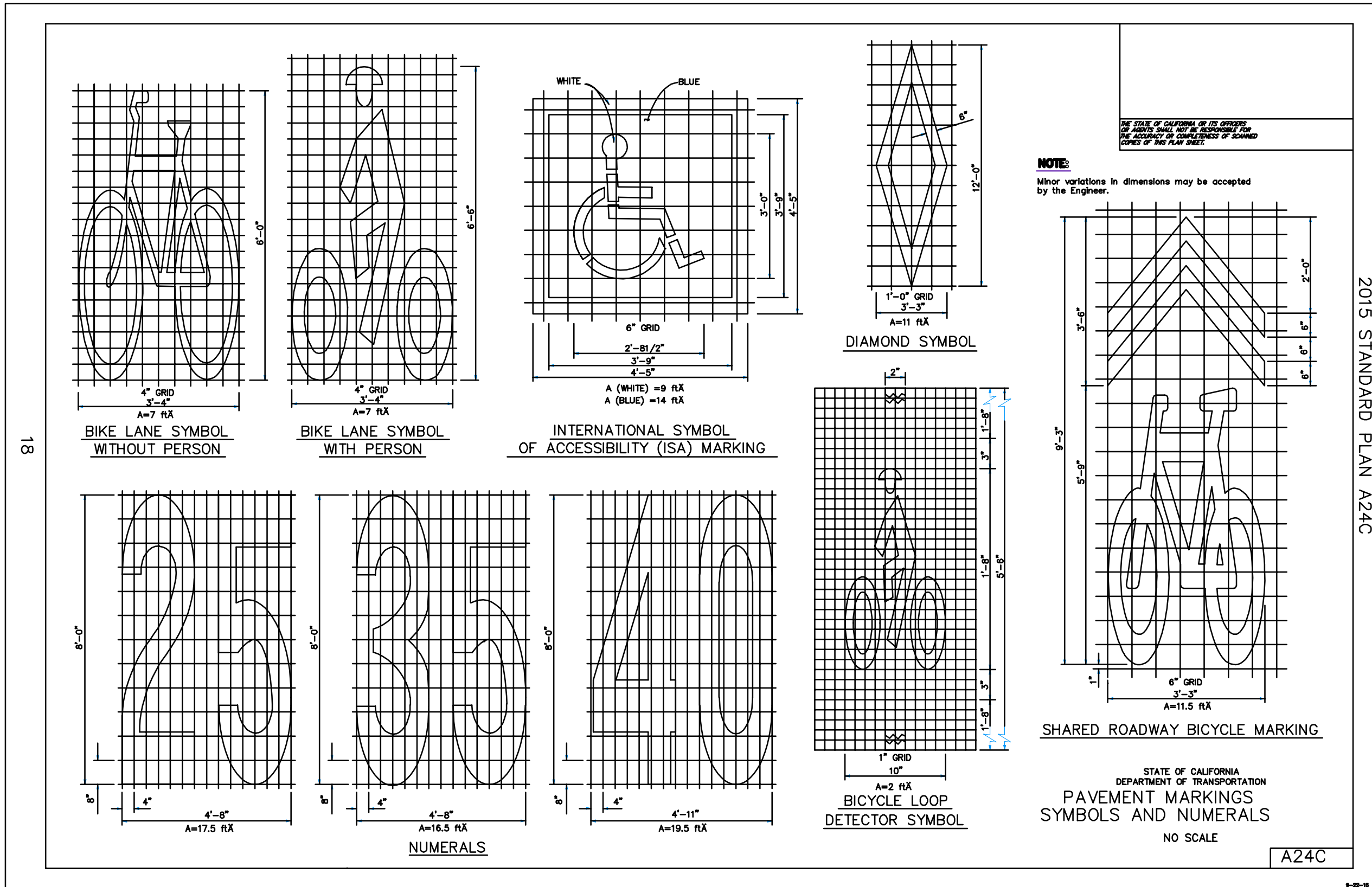
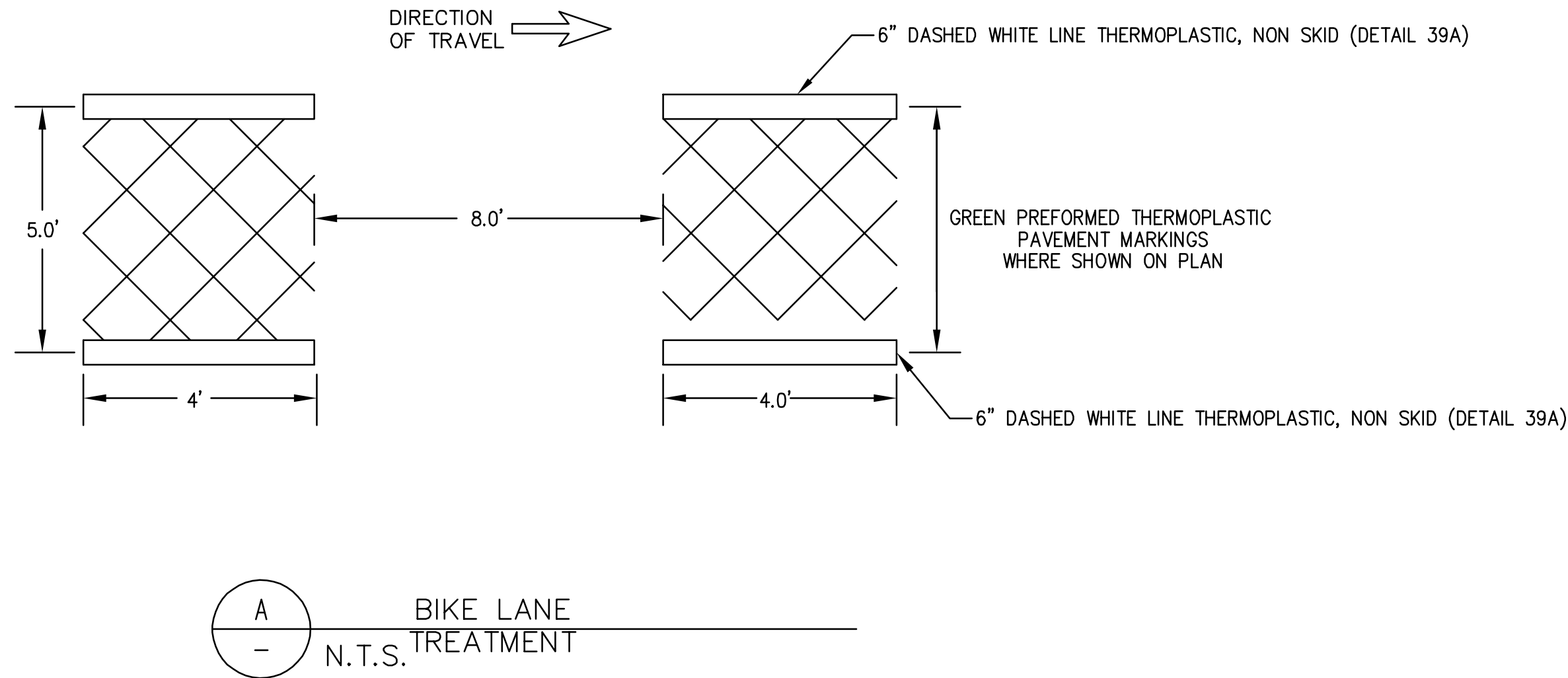
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Drawn	FNC		
Approved	JCM		
Job	No20170252		

COLMA SSAR  
SERRAMONTE + JUNIPERO SERRA  
PLAN, SIGNING & STRIPING  
TOWN OF COLMA  
SAN MATEO COUNTY  
CALIFORNIA

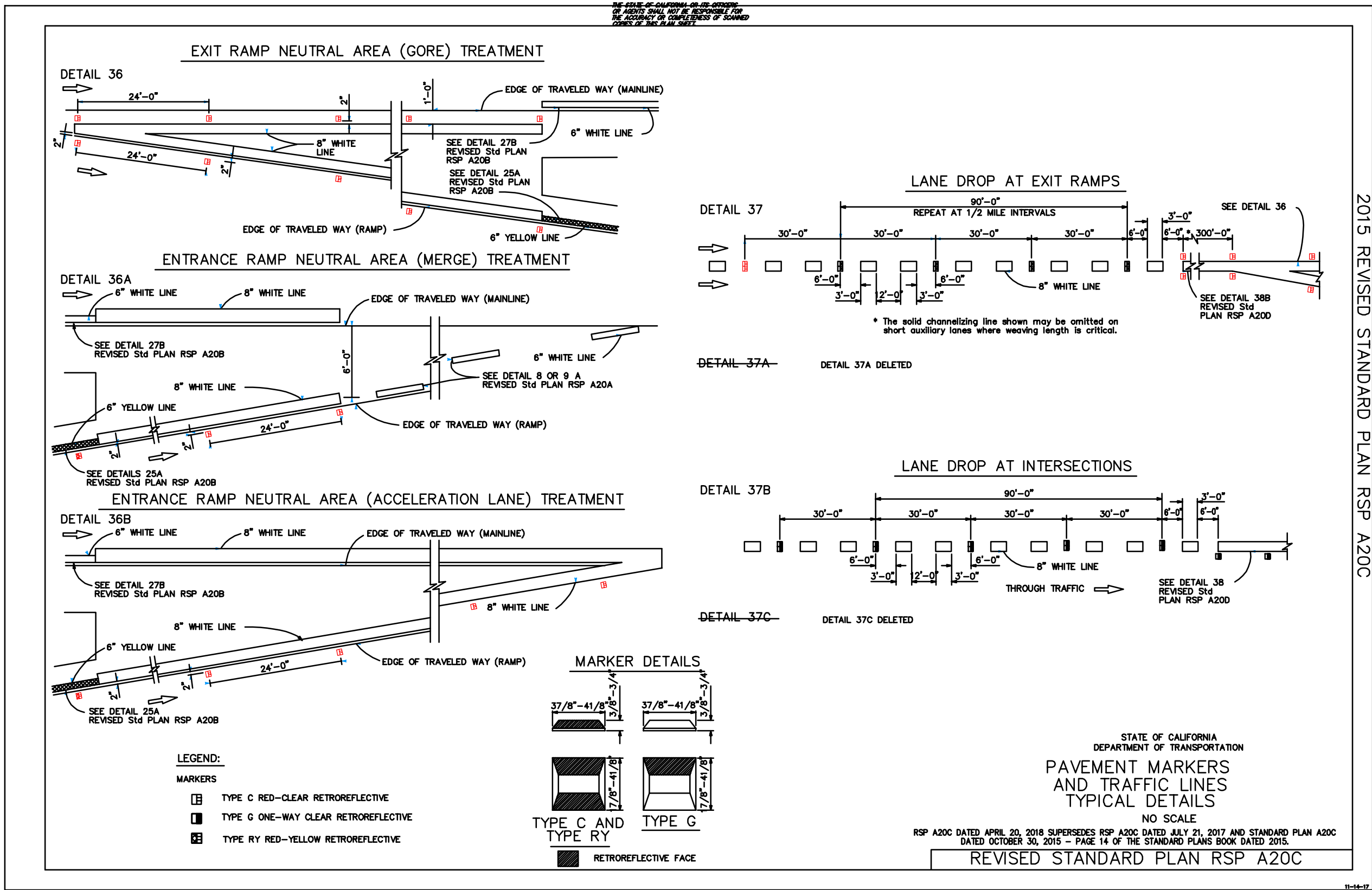


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(650) 482-6300  
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B CALTRANS — PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)  
N.T.S.



C CALTRANS — PAVEMENT MARKINGS AND TRAFFIC LINES TYPICAL DETAILS (A20C)  
N.T.S.

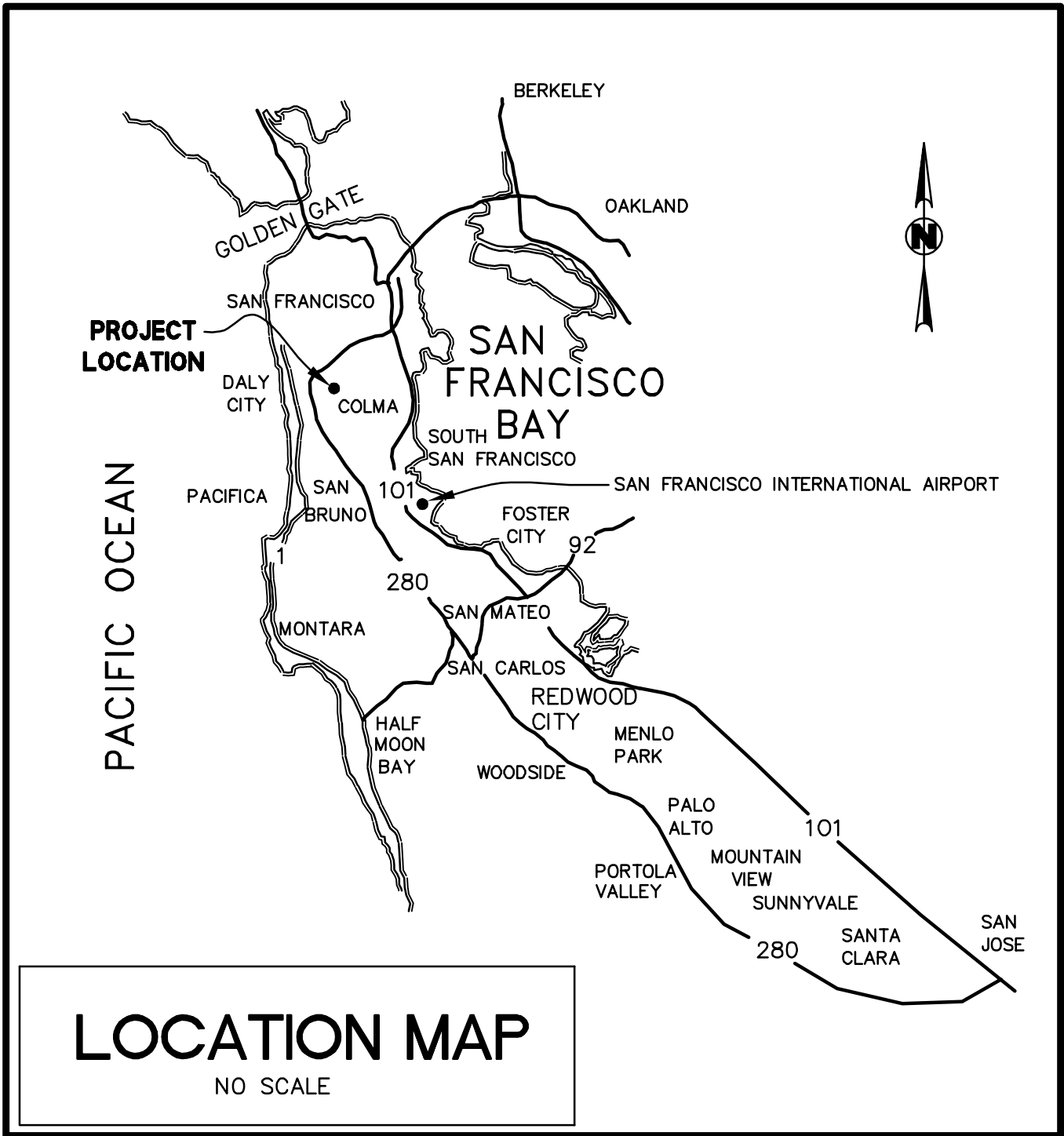


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# JUNIPERO SERRA BLVD

## SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

### IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



#### PROJECT SUMMARY

OWNER: TOWN OF COLMA  
1198 EL CAMINO REAL  
COLMA, CA 94014

ENGINEER: BKF ENGINEERS  
255 SHORELINE DRIVE  
REDWOOD CITY, CA 94065  
(650) 482-6300

#### SHEET INDEX:

C0.00 TITLE SHEET  
C1.00 PLAN, SIGNING & STRIPING  
C2.00 DETAILS

#### LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY	---	---
CURB AND GUTTER	----	----
CATCH BASIN UTILITY	■	■
POLE/GUY-WIRE	○ ←	○ ←
MANHOLE	○	●
PARKING STALL CROSSLINE	+ +	+ +
UTILITY BOX/VAULT	□	□
STREET LIGHT	☼	☼
BIKE LANE SYMBOL	→	→
SIGN WITH POST(S)	—	—
FENCE	—x—	—x—
TRAFFIC SIGNAL POLE	◆	◆

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CONC	CONCRETE	PT	PROPOSED
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DIA	DIAMETER	PT	POINT
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D/W	DRIVEWAY	RD	ROAD
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LP	LOW POINT	W	W/TH
LT, LT	LEFT	W/O	WITHOUT
MAX	MAXIMUM	W	WATER
MH	MANHOLE	WH	WALL HEIGHT
MIN	MINIMUM		
MIS	MISCELLANEOUS		

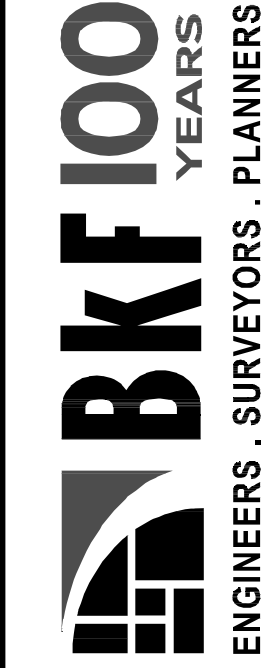


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Design	JCM			
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Job	No20170252			

Drawing Number:  
**C0.00**  
1 OF 4

30% CONCEPT PLANS

COLMA SSAR  
JUNIPERO SERRA BLVD  
TITLE SHEET  
TOWN OF COLMA  
SAN MATEO COUNTY  
CALIFORNIA

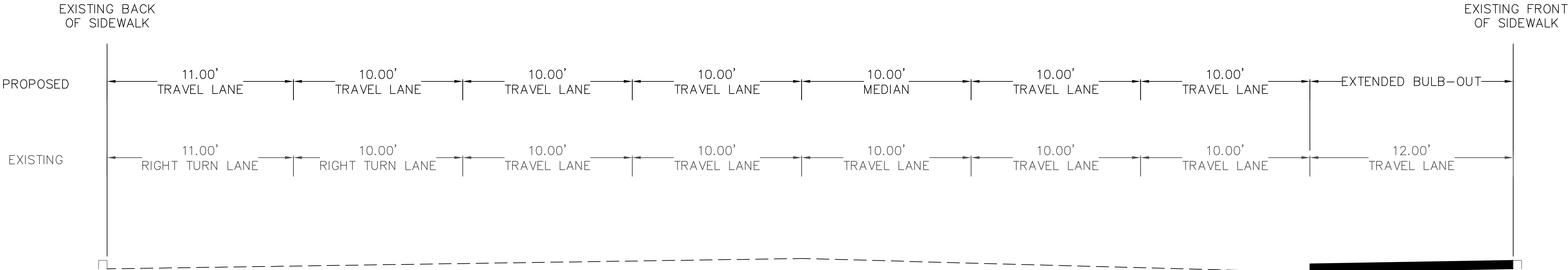


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PLOT DATE: 08-06-18 PLOTTED BY: chd



E-E  
- JUNIPERO SERRA BLVD  
STA 261+41.99 TO 262+43.65

Revisions		No.	Date
Scale AS SHOWN			08/06/18
Design JCM			
Drawn FNC			
Approved JCM			
Job No20170252			

Drawing Number:  
**CO.01**  
2 OF 4

30% CONCEPT PLANS

TOWN OF COLMA  
SAN MATEO COUNTY  
CALIFORNIA

COLMA SSAR  
JUNIPERO SERRA BLVD  
TYPICAL SECTIONS

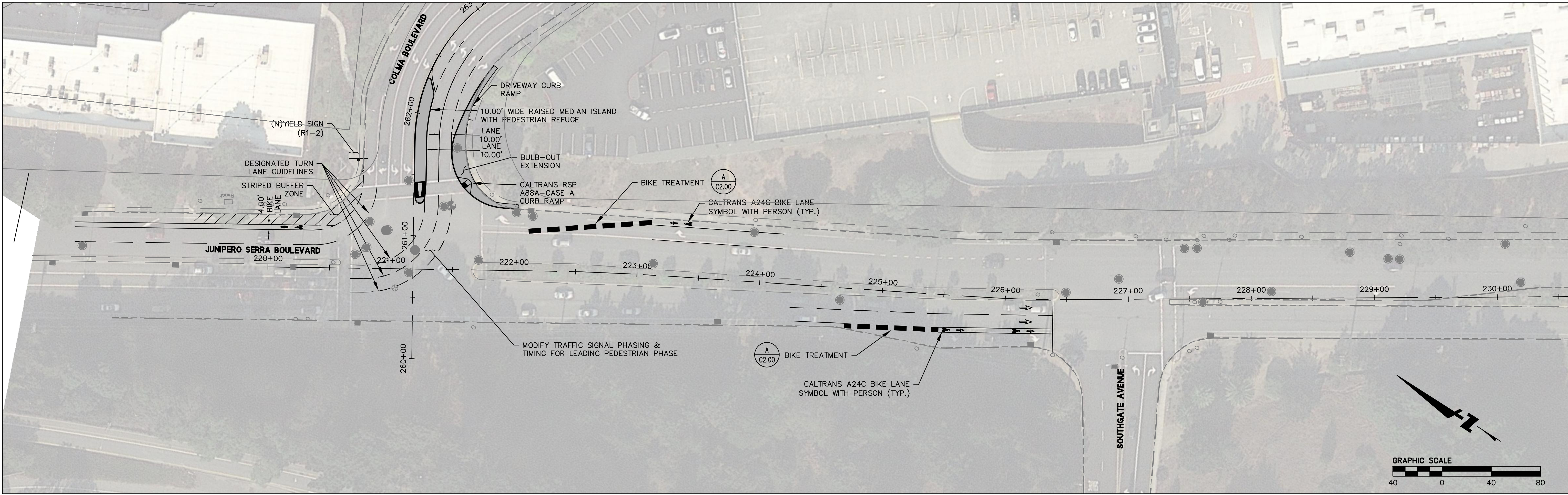
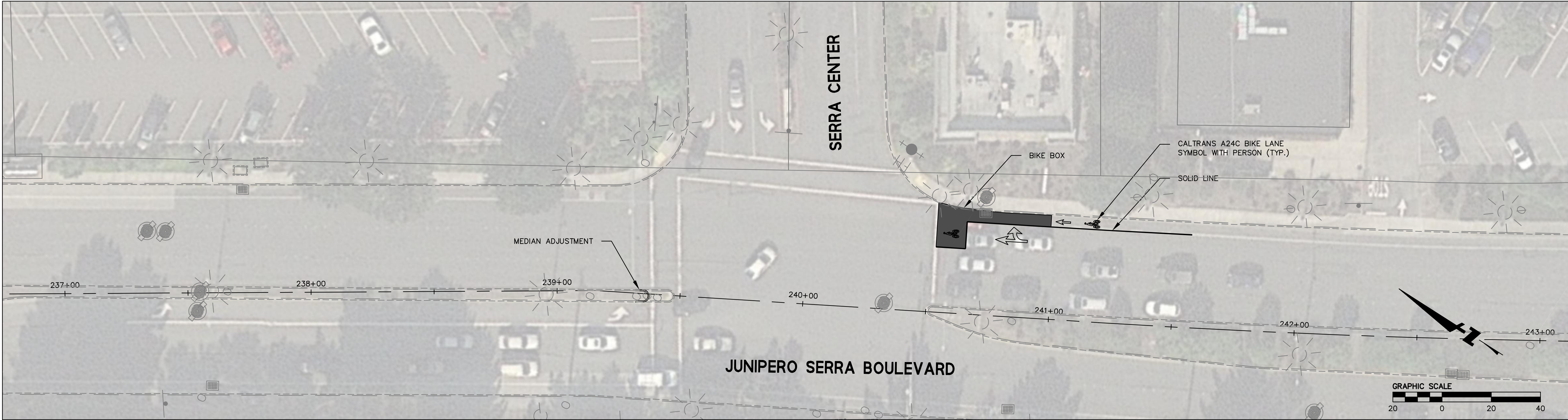
KITTELSON  
& ASSOCIATES



**BKF100**  
YEARS  
ENGINEERS . SURVEYORS . PLANNERS

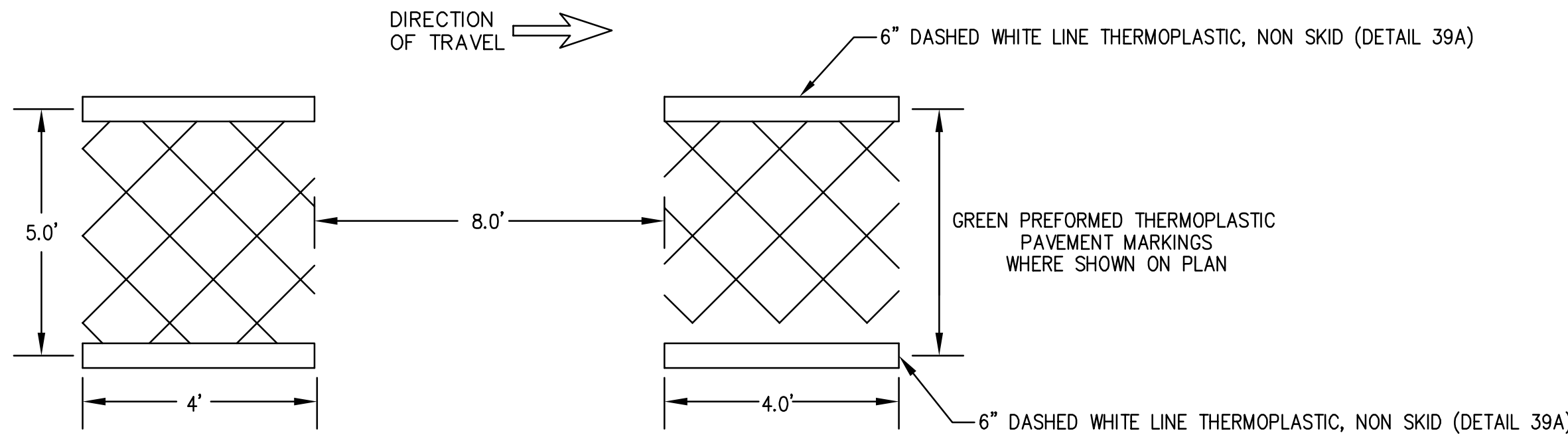
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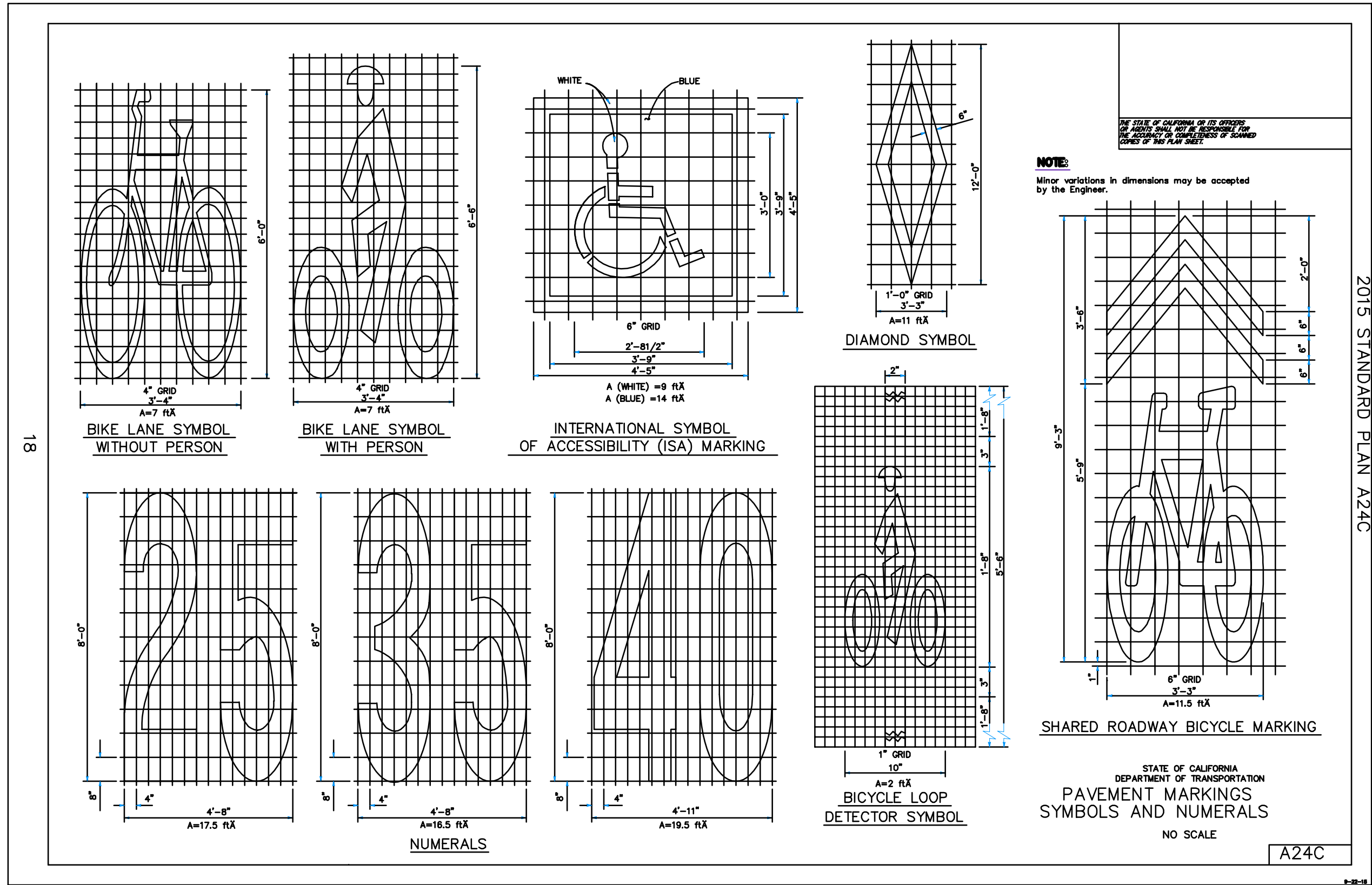




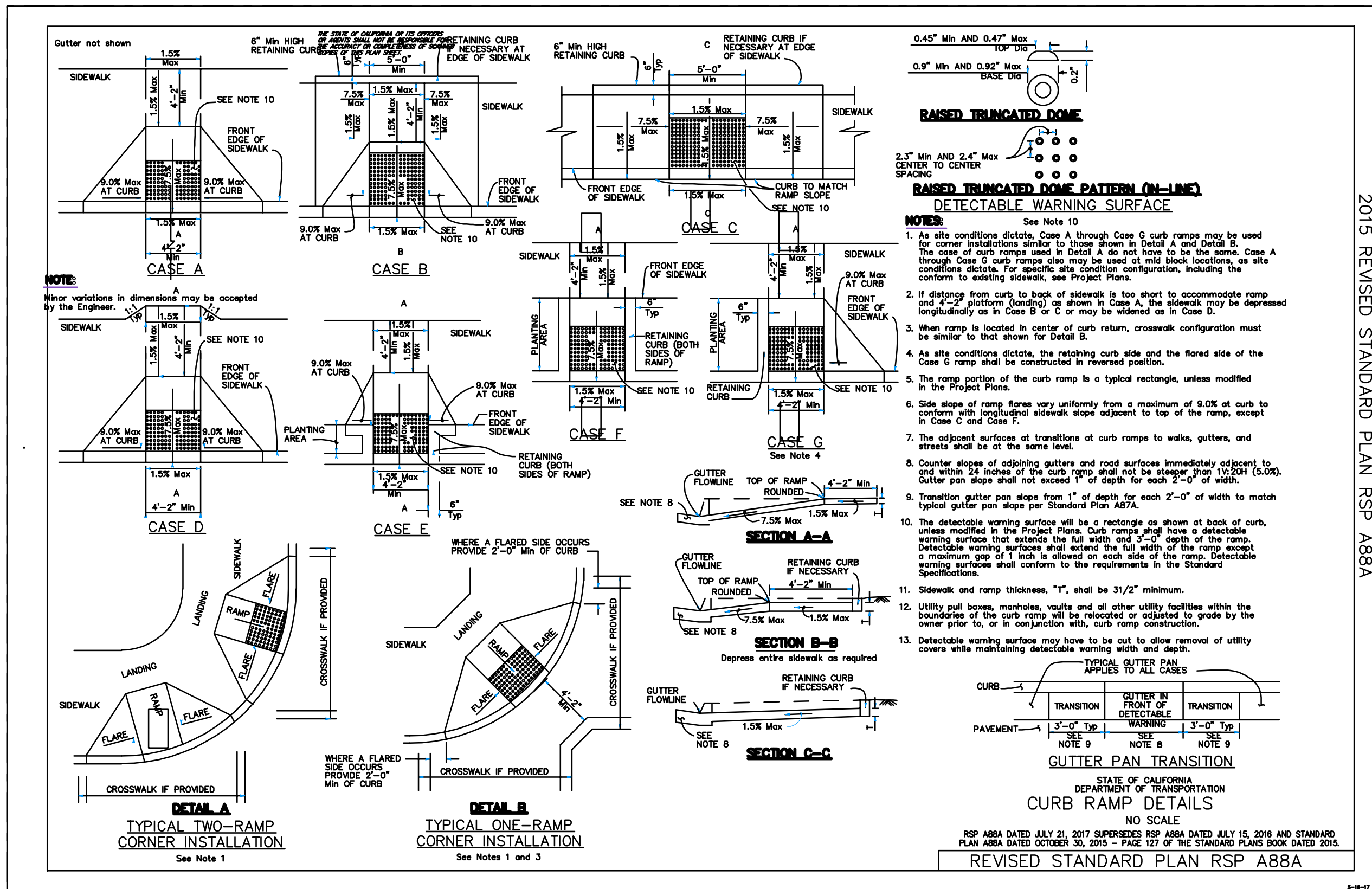
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PLOT DATE: 08-06-18 PLOTTED BY: chd



A  
—  
BIKE LANE  
TREATMENT  
N.T.S.



B  
—  
CALTRANS — PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)  
N.T.S.



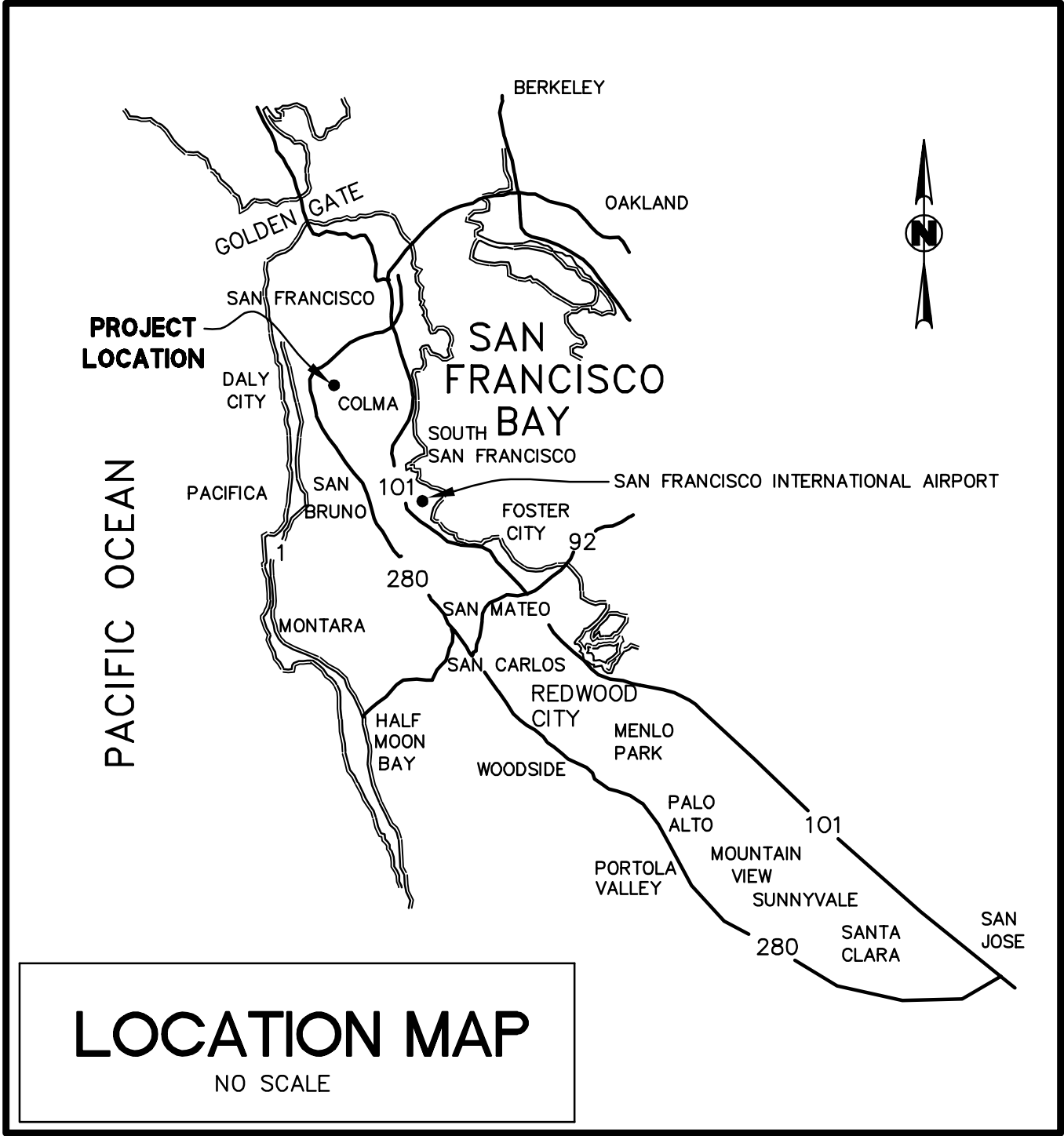
C  
—  
CALTRANS — CURB RAMP DETAILS RSP A88A  
N.T.S.



# COLMA BLVD

## SYSTEMIC SAFETY ANALYSIS REPORT (SSAR)

### IN TOWN OF COLMA, SAN MATEO COUNTY, CALIFORNIA



#### PROJECT SUMMARY

OWNER: TOWN OF COLMA  
1198 EL CAMINO REAL  
COLMA, CA 94014

ENGINEER: BKF ENGINEERS  
255 SHORELINE DRIVE  
REDWOOD CITY, CA 94065  
(650) 482-6300

#### SHEET INDEX:

C0.00 TITLE SHEET  
C0.01 TYPICAL SECTIONS  
C1.00 PLAN, SIGNING, & STRIPING  
C2.00 DETAILS

#### LEGEND

	EXISTING	PROPOSED
RIGHT-OF-WAY	---	---
CURB AND GUTTER	=====	=====
CATCH BASIN UTILITY	■	■
POLE/GUY-WIRE	○	○
MANHOLE	○	●
PARKING STALL CROSSLINE	+ +	+ +
UTILITY BOX/VAULT	□	□
STREET LIGHT	⊙	⊙
BIKE LANE SYMBOL	→	→
SIGN WITH POST(S)	—	—
FENCE	—x—	—x—
TRAFFIC SIGNAL POLE	◆	◆

#### GENERAL NOTES

- THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THE BASE DOES NOT INCLUDE TOPOGRAPHIC SURVEY, IT WAS BASE ON GOOGLE EARTH, COUNTY GIS, AND RECORD DRAWINGS, WITH LIMITED SITE OBSERVATIONS.
- WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, TOWN OF COLMA STANDARDS, CALTRANS STANDARD PLANS AND THESE NOTES.
- REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY THE CIVIL DESIGN ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS, REVISIONS SHALL BE ACCURATELY SHOWN ON REVISED PLANS.
- STANDARD CONSTRUCTION ACTIVITIES SHALL BE LIMITED HOURS REGULATED BY THE CITY. CONTRACTOR SHALL CONFIRM WITH CITY. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE ON SUNDAY AND LEGAL HOLIDAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE CITY BEFORE COMMENCING WORK. THE CONTRACTOR SHALL ALSO PROVIDE FLAGMEN, CONES OR BARRICADES, AS NECESSARY TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS. THE CONTRACTOR SHALL LEAVE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH POLICE, FIRE AND PUBLIC WORKS DEPARTMENTS, AND KEEP THEM INFORMED DAILY OF DETOURS.
- EXISTING PUBLIC PEDESTRIAN WALKWAYS, BIKEPATHS & HANDICAP ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER.
- SHOULD IT APPEAR THAT THE WORK OUTLINED ON THESE PLANS IS NOT SUFFICIENTLY DETAILED OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER, BKF ENGINEERS AT (650) 482-6300, BEFORE PROCEEDING WITH THE WORK IN QUESTION AND REQUEST CLARIFICATION.
- AN ENCROACHMENT PERMIT IS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT AND MUST BE OBTAINED PRIOR TO THE START OF WORK.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
- CONTRACTOR SHALL COMPLY WITH STATE, COUNTY AND CITY LAWS AND ORDINANCES; AND REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA AND INDUSTRIAL ACCIDENT COMMISSION RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL.
- CONTRACTOR TO REMOVE EXISTING PAVEMENT MARKINGS OR MARKERS WITHIN THE LIMITS OF WORK PRIOR TO MICROSURFACING. CONTRACTOR TO MICROSURFACE THE PROJECT LIMIT.
- RECONSTRUCT DRIVEWAYS AND WALKWAYS TO RIGHT-OF WAY AS NEED TO CONFORM.
- CONTRACTOR TO MAINTAIN 7' VERTICAL CLEARANCE BELOW PROPOSED IMPROVEMENTS INCLUDING BUT NOT LIMITED TO ALL NEW SIGNAGE, RRFB ASSEMBLIES, AND POWER SUPPLIES.
- CONTRACTOR SHALL ACQUIRE CITY APPROVAL OF STRIPING LAYOUT, BASED ON CAT TRACKS, PRIOR TO INSTALLATION.
- ALL RECTANGULAR RAPID FLASHING BEACONS SHALL ADHERE TO FHWA INTERIM APPROVAL IA-21 MEMORANDUM: MUTCD INTERIM APPROVAL FOR OPTIONAL USE OF PEDESTRIAN-ACTUATED RECTANGULAR RAPID-FLASHING BEACONS AT UNCONTROLLED MARKED CROSSWALKS.

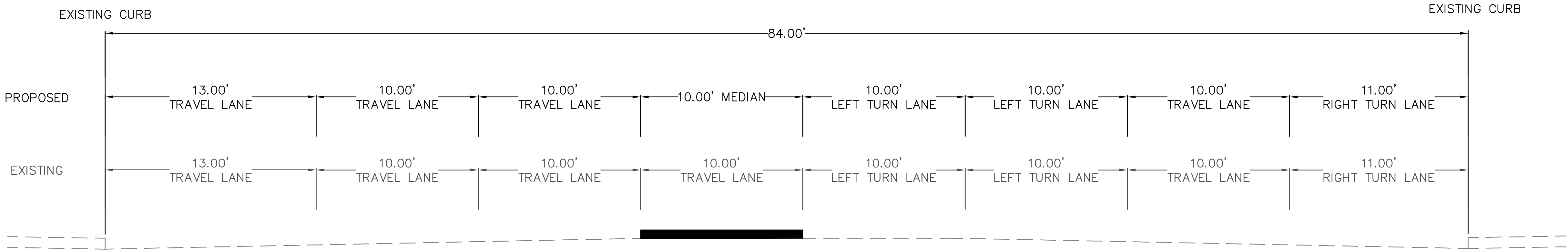
#### ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AB	AGGREGATE BASE	MSEP	MINOR SIDEWALK
AC	ASPHALT CONCRETE		ENCROACHMENT PERMIT
AD	AREA DRAIN	MVG	MODIFIED VALLEY GUTTER
ADD'L	ADDITIONAL	NG	NORTHING
AGG	AGGREGATE	NG	NATURAL GROUND
APPROX	APPROXIMATE	NO., #	NUMBER
AVG	AVERAGE	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	(N)	NEW
	AMERICAN WATER WORKS ASSOCIATION	P.A.E.	PUBLIC ACCESS EASEMENT
AWWA		O.C.	ON CENTER
		OH	OVERHEAD
BLDG	BUILDING	(P)	PROPOSED
BM	BENCH MARK	P	PAD
BOW	BOTTOM OF WALL	PCC	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
BPM	BLUE PAVEMENT MARKER	PE	PAD ELEVATION OR POLYETHYLENE
BW	BACK OF WALK	PG&E	PACIFIC GAS AND ELECTRIC
CB	CATCH BASIN	PI	POINT OF INTERSECTION
CF	CUBIC FEET	PL, P	PROPERTY LINE
C&G	CURB & GUTTER	PP	POWER POLE
CL, C	CENTERLINE	PR	PROPOSED
CO	CLEANOUT	PRC	POINT OF REVERSE CURVATURE
CONC	CONCRETE	PT	POINT
CY	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
DIA	DIAMETER	R	RADIUS
DR	DRIVE	RD	ROAD
DW	DOMESTIC WATER	RCP	REINFORCED CONCRETE PIPE
D/W	DRIVEWAY	RIM	RIM ELEVATION
(E)	EXISTING	RPA	REDUCED PRESSURE ASSEMBLY
EA	EACH	RRFB	RECTANGULAR RAPID FLASHING BEACON
EC	END OF CURB	Rt, RT	RIGHT
EG	EXISTING GRADE	R/W	RIGHT OF WAY
EL	ELEVATION	S	SLOPE
EP	EDGE OF PAVEMENT	SDAD	STORM DRAIN AREA DRAIN
ESMT	EASEMENT	SDCB	STORM DRAIN CATCH BASIN
F/C	FACE OF CURB	SDJB	STORM DRAIN JUNCTION BOX
FG	FINISH GRADE	SF	SQUARE FEET
FL	FIRE HYDRANT	SHT	SHEET
FP	FINISHED PAVEMENT	SNS	STREET NAME SIGN
FT	FEET	STA	STATION
G	GAS	STD	STANDARD
GB	GRADE BREAK	S/W, SW	SIDEWALK
GE	GRATE ELEVATION	T	TELEPHONE
OND	GROUND	T&B	TOP AND BOTTOM
GR	GRADE	TC	TOP OF CURB
GV	GATE VALVE	TEMP	TEMPORARY
JB	JOINT BOX	TP	TOP OF PAVEMENT
JP	JOINT POLE	TW	TOP OF WALL
JT	JOINT TRENCH	TYP.	TYPICAL
L	LENGTH	UG	UNDER GROUND
LF	LINEAR FEET	VCP	VITRIFIED CLAY PIPE
LP	LOW POINT	VERT	VERTICAL
LT, LT	LEFT	W	WITH
MAX	MAXIMUM	W/O	WITHOUT
MH	MANHOLE	W	WATER
MIN	MINIMUM	WH	WALL HEIGHT
MIS	MISCELLANEOUS		

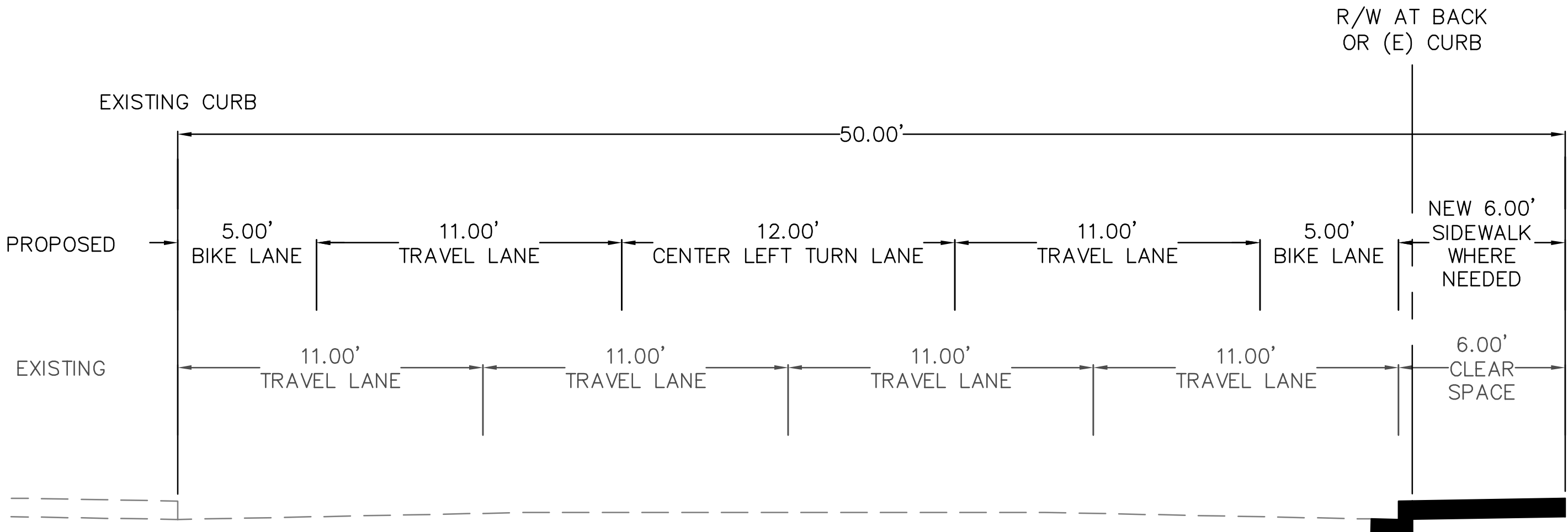




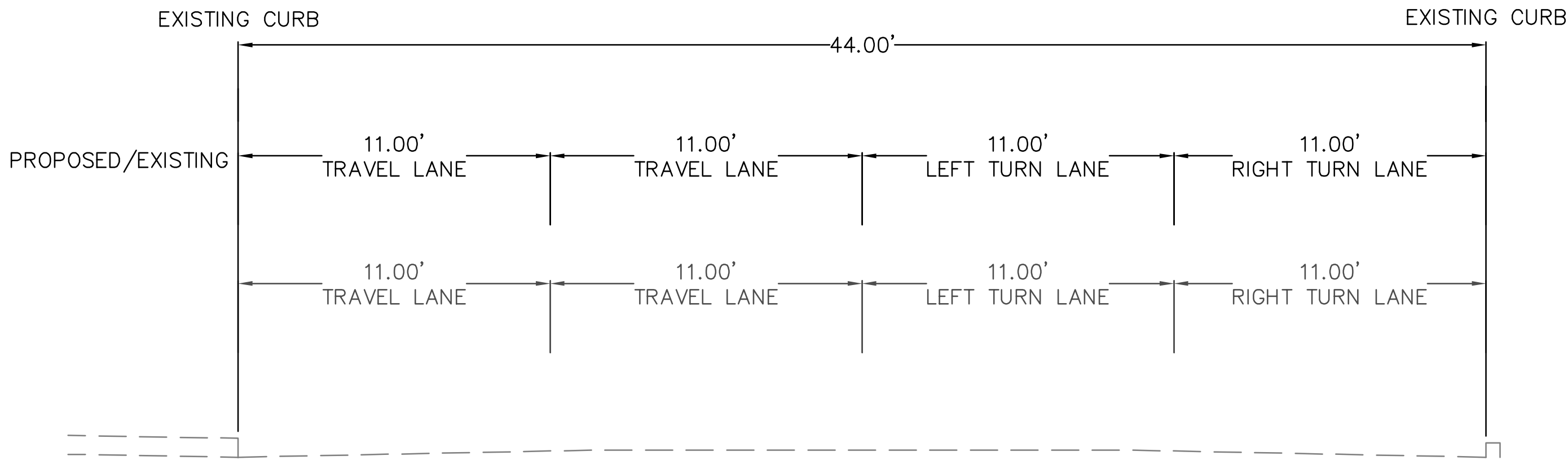
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PLOT DATE: 08-06-18 PLOTTED BY: chd



A-A  
COLMA BOULEVARD  
STA 263+32.53 TO 264+40.11



B-B  
COLMA BOULEVARD  
STA 268+27.00 TO 283+94.00



C-C  
COLMA BOULEVARD  
STA 283+94.00 TO 288+34.37

Date	08/06/18	No.		Revisions
Scale	AS SHOWN			
Design	JCM			
Drawn	FNC			
Approved	JCM			
Job	Ne20170252			

Drawing Number:  
**CO.01**  
**2** OF **4**

COLMA SSAR  
COLMA BLVD  
TYPICAL SECTIONS

TOWN OF COLMA  
SAN MATEO COUNTY  
CALIFORNIA



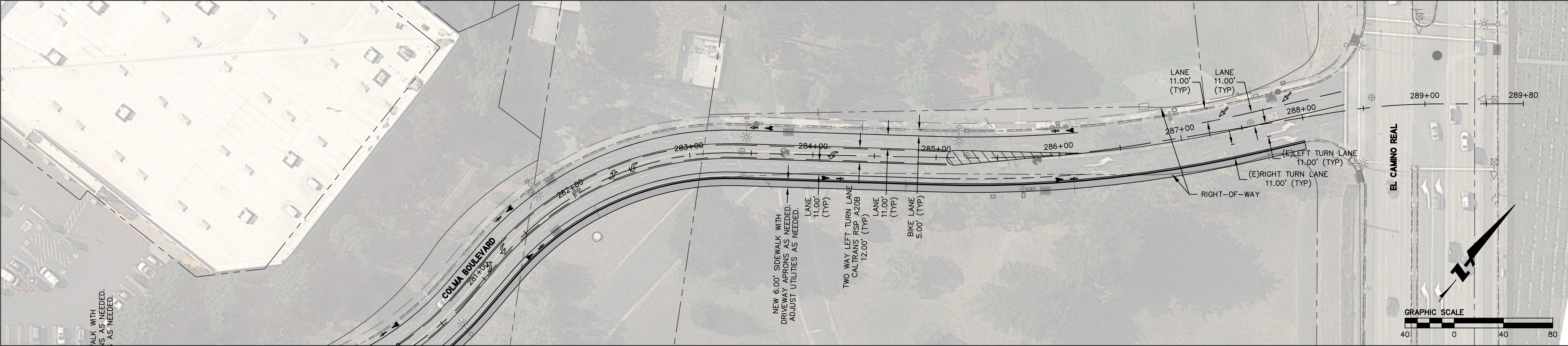
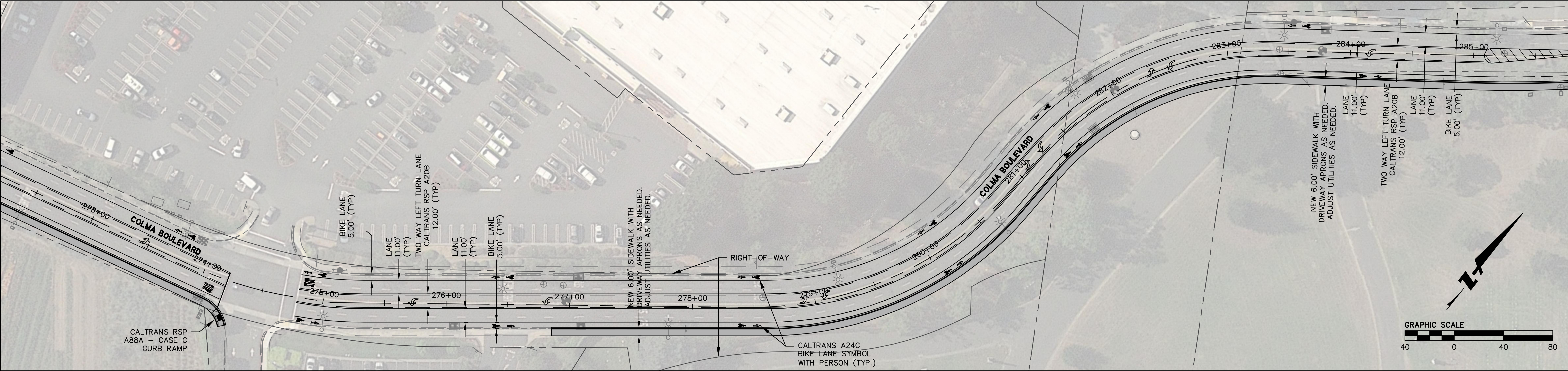
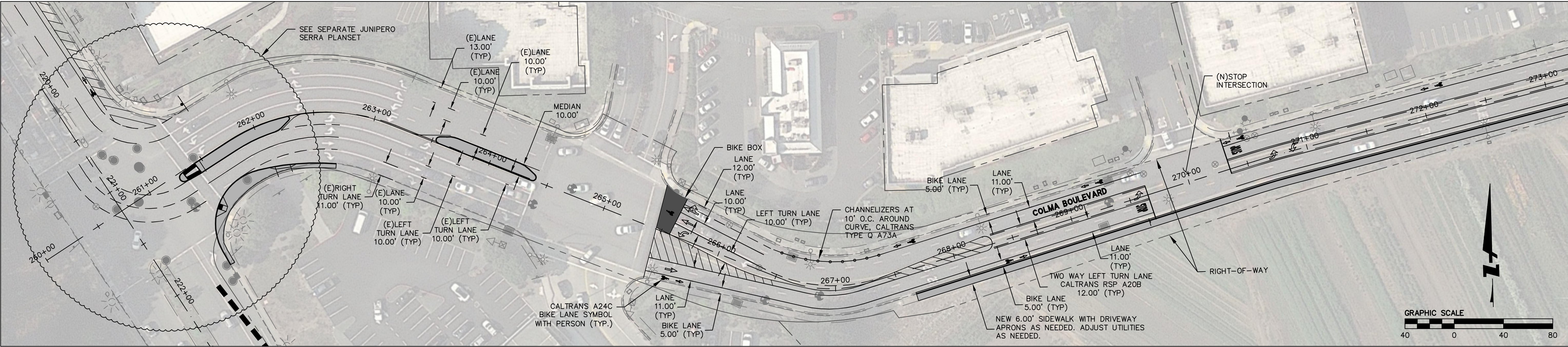
KITTILSON  
& ASSOCIATES

**BKF100**  
YEARS  
ENGINEERS . SURVEYORS . PLANNERS

255 SHORELINE DR.,  
SUITE 200  
REDWOOD CITY, CA 94065  
(650) 482-6300  
www.bkf.com

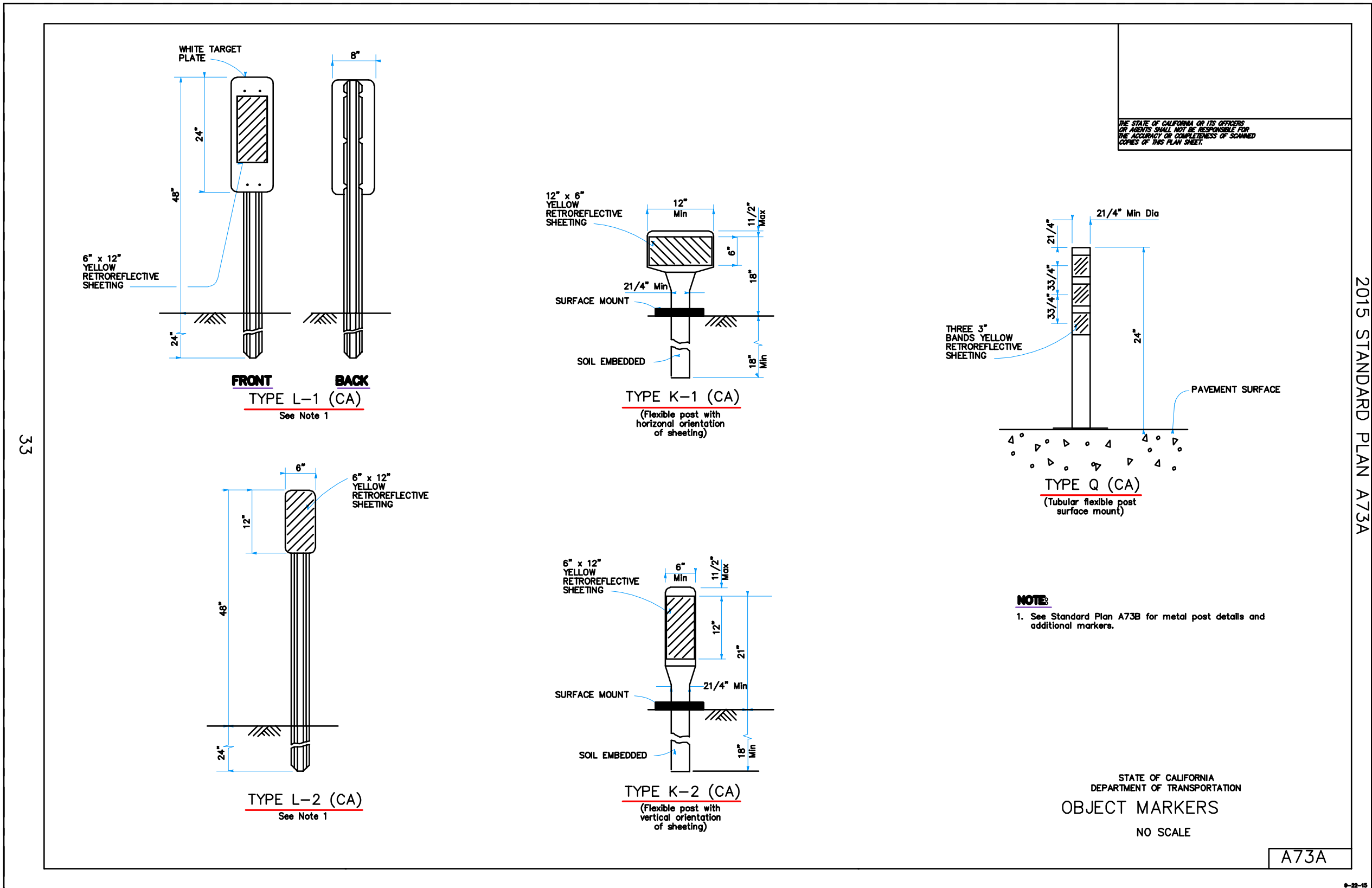


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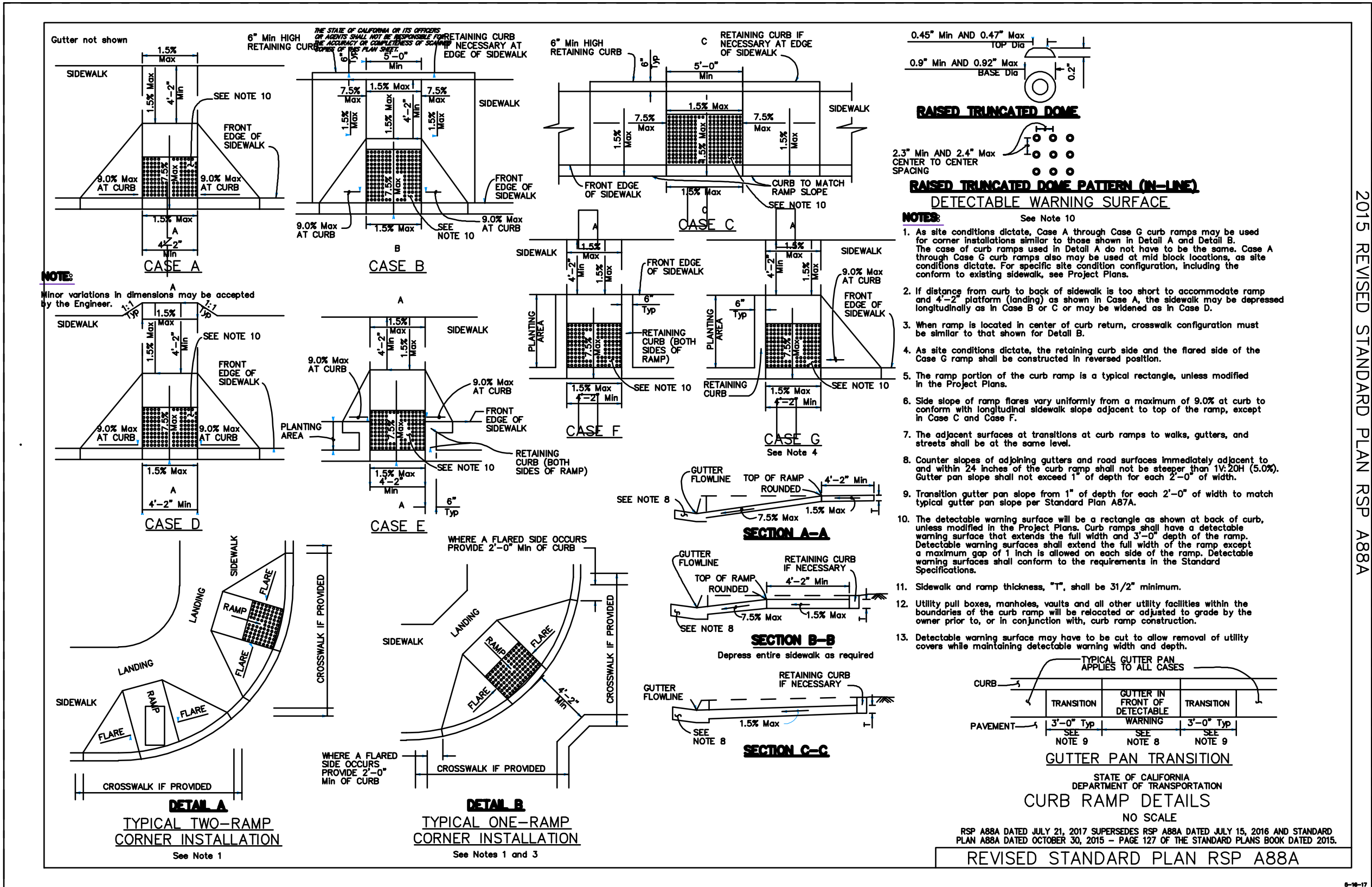


Revisions	
No.	Date
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Scale AS SHOWN	
Design JCM	
Drawn FNC	
Approved JCM	
Job No 20170252	
Drawing Number:	

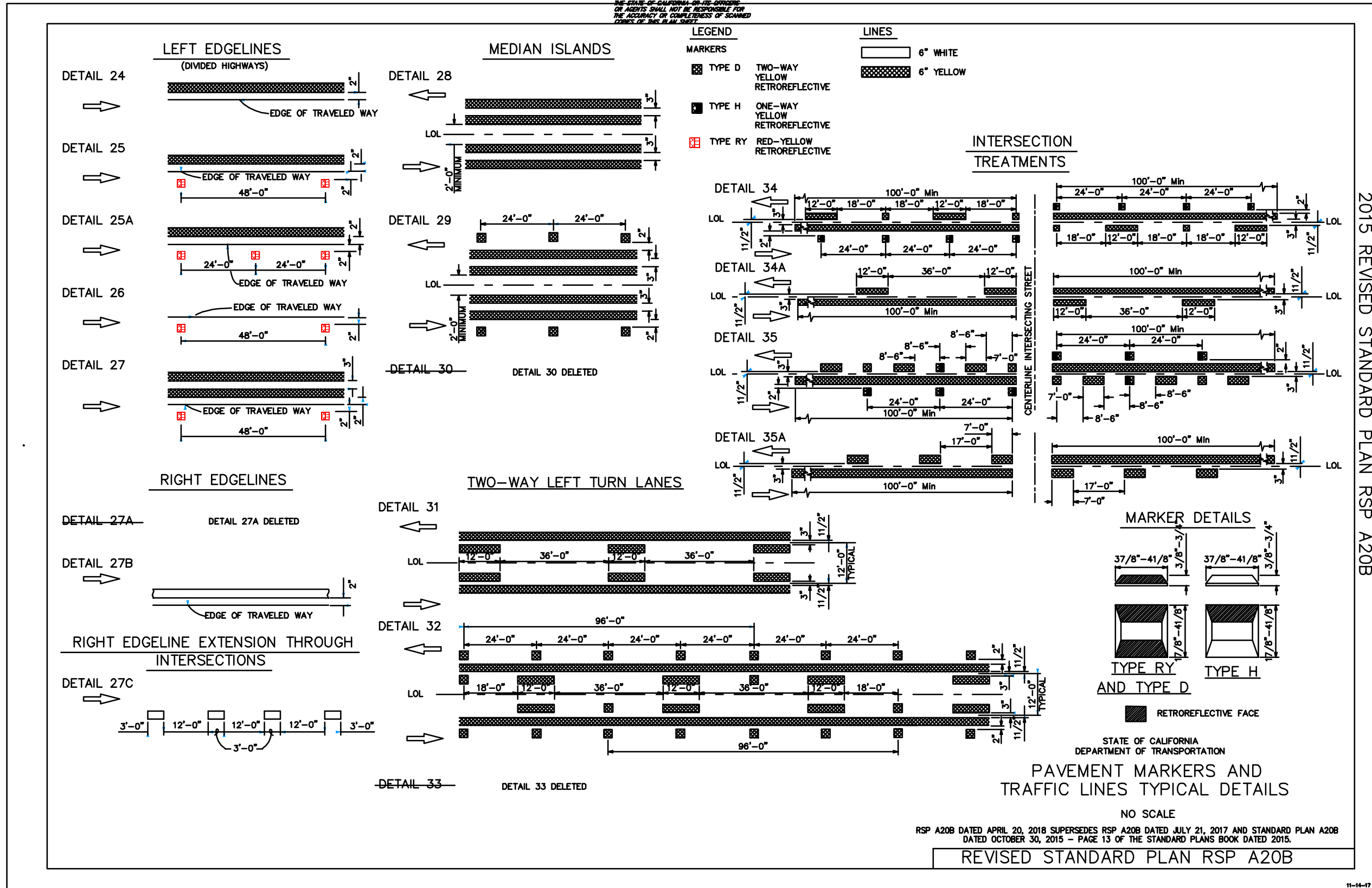




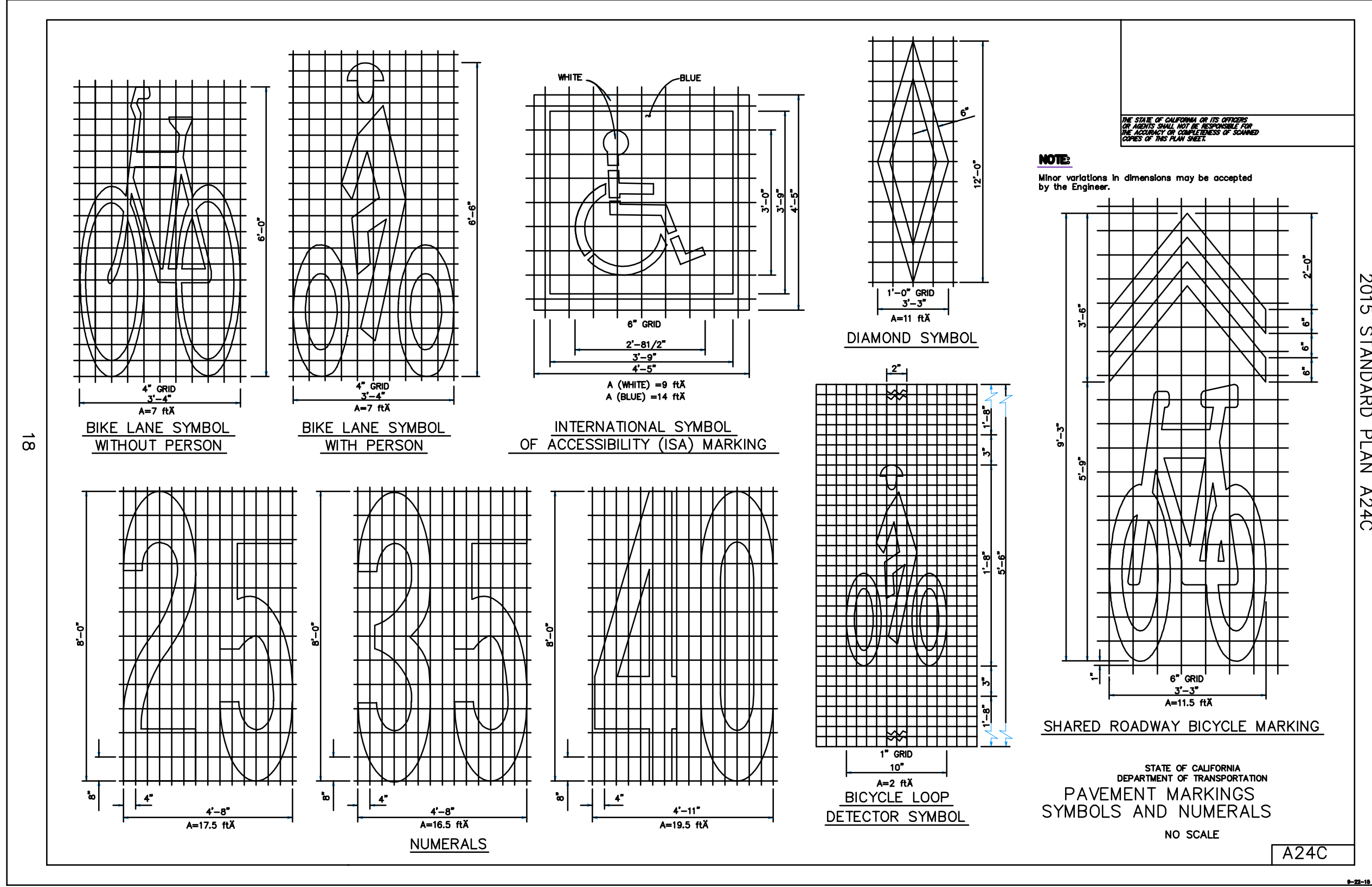
C CALTRANS - OBJECT MARKERS (A73A)  
N.T.S.



A CALTRANS - CURB RAMP DETAILS RSP A88A  
N.T.S.



D CALTRANS - PAVEMENT MARKINGS & TRAFFIC LINES TYP. DETAILS (A20B)  
N.T.S.



B CALTRANS - PAVEMENT MARKINGS SYMBOLS AND NUMERALS (A24C)  
N.T.S.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON HILLSIDE BLVD  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

**SUMMARY**

<b>A. ROAD WORK</b>	<b>\$ 1,473,000</b>
<b>B. DEMOLITION WORK</b>	<b>\$ 94,000</b>
<b>C. UTILITY WORK</b>	<b>\$ 105,000</b>
<b>D. MISCELLANEOUS WORK</b>	<b>\$ 230,000</b>
<b>E. SIGNING AND STRIPING</b>	<b>\$ 200,000</b>
	<b>SUBTOTAL \$ 2,102,000</b>
<b>10% MINOR ITEMS</b>	<b>\$ 211,000</b>
<b>25% CONSTRUCTION CONTINGENCY</b>	<b>\$ 526,000</b>
	<b>TOTAL CONSTRUCTION COST \$ 2,839,000</b>

**General Notes:**

**TOTAL PROJECT COST \$ 2,839,000**

- 1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Hillside between Serramonte Blvd and Lawndale Blvd.
- 2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
- 3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
- 4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
- 5) Total costs round off to the nearest thousand dollars.
- 6) Driveway, walkway, and conform work on private property is excluded.

**Project Description:**

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON HILLSIDE BLVD  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

ITEMS	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>A. ROAD WORK</b>					
1	Curb and Gutter	5,400	LF	\$30.00	\$ 162,000
2	Concrete Sidewalk	41,000	SF	\$20.00	\$ 820,000
3	ADA Ramps	6	EA	\$6,000.00	\$ 36,000
4	Concrete Driveway	7	EA	\$15,000.00	\$ 105,000
5	Microsurfacing	300,000	SF	\$1.00	\$ 300,000
6	Conform (Asphalt)	2,500	SF	\$20.00	\$ 50,000
SUBTOTAL					\$ 1,473,000
<b>B. DEMOLITION WORK</b>					
1	Remove Existing Concrete	3,650	SF	\$20.00	\$ 73,000
2	Sawcut	5,400	LF	\$2.00	\$ 10,800
3	Remove Existing Markings	1	LS	\$10,000.00	\$ 10,000
SUBTOTAL					\$ 93,800
<b>C. UTILITY WORK</b>					
1	Relocate Existing Catch Basin	6	EA	\$15,000.00	\$ 90,000
2	Adjust Utility Box to Grade	1	LS	\$15,000.00	\$ 15,000
SUBTOTAL					\$ 105,000
<b>D. MISCELLANEOUS WORK</b>					
1	Pedestrian Landing Area (Include Bollards)	1	EA	\$10,000.00	\$ 10,000
2	Traffic Control	1	LS	\$100,000.00	\$ 100,000
3	Erosion Control	1	LS	\$20,000.00	\$ 20,000
4	Rectangular Rapid Flashing Beacon	4	EA	\$25,000.00	\$ 100,000
SUBTOTAL					\$ 230,000
<b>E. SIGNING AND STRIPING</b>					
1	Signing and Striping	1	LS	\$200,000.00	\$ 200,000
SUBTOTAL					\$ 200,000



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON EL CAMINO REAL  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

**SUMMARY**

<b>A. ROAD WORK</b>	<b>\$ 1,055,000</b>
<b>B. DEMOLITION WORK</b>	<b>\$ 54,000</b>
<b>C. UTILITY WORK</b>	<b>\$ 165,000</b>
<b>D. MISCELLANEOUS WORK</b>	<b>\$ 470,000</b>
<b>E. SIGNING AND STRIPING</b>	<b>\$ 700,000</b>
	<b>SUBTOTAL \$ 2,444,000</b>
<b>10% MINOR ITEMS</b>	<b>\$ 245,000</b>
<b>25% CONSTRUCTION CONTINGENCY</b>	<b>\$ 611,000</b>
	<b>TOTAL CONSTRUCTION COST \$ 3,300,000</b>

**General Notes:**

**TOTAL PROJECT COST \$ 3,300,000**

- 1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Hillside between Serramonte Blvd and Lawndale Blvd.
- 2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
- 3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
- 4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
- 5) Total costs round off to the nearest thousand dollars.
- 6) Driveway, walkway, and conform work on private property is excluded.

**Project Description:**

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON EL CAMINO REAL  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

ITEMS	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>A. ROAD WORK</b>					
1	Curb and Gutter	1,100	LF	\$30.00	\$ 32,985
2	Curb	3,670	LF	\$25.00	\$ 91,753
3	Concrete Sidewalk	23,210	SF	\$20.00	\$ 464,200
4	ADA Ramps	12	EA	\$6,000.00	\$ 72,000
5	Microsurfacing	193,600	SF	\$1.00	\$ 193,600
6	Asphalt	5,014	SF	\$20.00	\$ 100,276
7	Landscaping	1	LS	\$100,000.00	\$ 100,000
SUBTOTAL					\$ 1,054,814
<b>B. DEMOLITION WORK</b>					
1	Remove Existing Curb	1,610	SF	\$20.00	\$ 32,192
2	Sawcut	5,663	LF	\$2.00	\$ 11,326
3	Remove Existing Markings	1	LS	\$10,000.00	\$ 10,000
SUBTOTAL					\$ 53,518
<b>C. UTILITY WORK</b>					
1	Relocate Existing Catch Basin	5	EA	\$15,000.00	\$ 75,000
2	Relocate Manhole	1	EA	\$15,000.00	\$ 15,000
3	Relocate Existing Water Structure	1	EA	\$15,000.00	\$ 15,000
4	Relocate Streetlight	2	EA	\$15,000.00	\$ 30,000
5	Adjust Utility Box to Grade	2	LS	\$15,000.00	\$ 30,000
SUBTOTAL					\$ 165,000
<b>D. MISCELLANEOUS WORK</b>					
1	Traffic Control	1	LS	\$200,000.00	\$ 200,000
2	Erosion Control	1	LS	\$20,000.00	\$ 20,000
3	Culvert Headwall	1	LS	\$250,000.00	\$ 250,000
SUBTOTAL					\$ 470,000
<b>E. SIGNING AND STRIPING</b>					
1	Signing and Striping	1	LS	\$100,000.00	\$ 100,000
2	Traffic Signal	1	LS	\$600,000.00	\$ 600,000
SUBTOTAL					\$ 700,000



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON SERRAMONTE BLVD AND JUNIPERO SERRA BLVD INTERSECTION  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

**SUMMARY**

<b>A. ROAD WORK</b>	<b>\$ 913,000</b>
<b>B. DEMOLITION WORK</b>	<b>\$ 18,000</b>
<b>C. UTILITY WORK</b>	<b>\$ 84,000</b>
<b>D. MISCELLANEOUS WORK</b>	<b>\$ 320,000</b>
<b>E. SIGNING AND STRIPING</b>	<b>\$ 340,000</b>
	<b>SUBTOTAL \$ 1,675,000</b>
<b>10% MINOR ITEMS</b>	<b>\$ 168,000</b>
<b>25% CONSTRUCTION CONTINGENCY</b>	<b>\$ 419,000</b>
	<b>TOTAL CONSTRUCTION COST \$ 2,262,000</b>

**General Notes:**

**TOTAL PROJECT COST \$ 2,262,000**

- 1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks at the Serramonte Blvd and Junipero Serra Blvd intersection.
- 2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
- 3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
- 4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
- 5) Total costs round off to the nearest thousand dollars.
- 6) Driveway, walkway, and conform work on private property is excluded.

**Project Description:**

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON SERRAMONTE AND JUNIPERO SERRA INTERSECTION  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

ITEMS	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>A. ROAD WORK</b>					
1	Curb and Gutter	100	LF	\$30.00	\$ 3,000
2	Curb	580	LF	\$25.00	\$ 14,500
3	Concrete Median	5,390	SF	\$20.00	\$ 107,800
5	Microsurfacing	83,000	SF	\$1.00	\$ 83,000
6	Asphalt	30,250	SF	\$20.00	\$ 605,000
7	Landscaping	1	LS	\$100,000.00	\$ 100,000
SUBTOTAL					\$ 913,300
<b>B. DEMOLITION WORK</b>					
1	Remove Existing Curb	300	LF	\$20.00	\$ 6,000
2	Sawcut	450	LF	\$2.00	\$ 900
3	Remove Existing Street Light	1	EA	\$1,500.00	\$ 1,500
4	Remove Existing Markings	1	LS	\$10,000.00	\$ 10,000
SUBTOTAL					\$ 18,400
<b>C. UTILITY WORK</b>					
1	Relocate Existing Catch Basin	1	EA	\$15,000.00	\$ 15,000
2	Adjust Existing Utilities	1	LS	\$15,000.00	\$ 15,000
3	New Street Light	3	EA	\$18,000.00	\$ 54,000
SUBTOTAL					\$ 84,000
<b>D. MISCELLANEOUS WORK</b>					
1	Traffic Control	1	LS	\$300,000.00	\$ 300,000
2	Erosion Control	1	LS	\$20,000.00	\$ 20,000
SUBTOTAL					\$ 320,000
<b>E. SIGNING AND STRIPING</b>					
1	Signing and Striping	1	LS	\$40,000.00	\$ 40,000
2	Traffic Signal	1	LS	\$300,000.00	\$ 300,000
SUBTOTAL					\$ 340,000



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON JUNIPERO SERRA  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

**SUMMARY**

<b>A. ROAD WORK</b>	<b>\$ 74,000</b>
<b>B. DEMOLITION WORK</b>	<b>\$ 10,000</b>
<b>C. UTILITY WORK</b>	<b>\$ 15,000</b>
<b>D. MISCELLANEOUS WORK</b>	<b>\$ 50,000</b>
<b>E. SIGNING AND STRIPING</b>	<b>\$ 50,000</b>
	<b>SUBTOTAL \$ 199,000</b>
<b>10% MINOR ITEMS</b>	<b>\$ 20,000</b>
<b>25% CONSTRUCTION CONTINGENCY</b>	<b>\$ 50,000</b>
<hr/>	
<b>TOTAL CONSTRUCTION COST</b>	<b>\$ 269,000</b>

**General Notes:**

**TOTAL PROJECT COST \$ 269,000**

- 1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Junipero Serra between Serramonte Blvd and Colma Blvd.
- 2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
- 3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
- 4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
- 5) Total costs round off to the nearest thousand dollars.
- 6) Driveway, walkway, and conform work on private property is excluded.

**Project Description:**

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON JUNIPERO SERRA  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

ITEMS	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>A. ROAD WORK</b>					
1	Curb and Gutter	180	LF	\$30.00	\$ 5,400
2	Curb	240	LF	\$25.00	\$ 6,000
3	Concrete Sidewalk & Median	1,170	SF	\$20.00	\$ 23,400
4	Detectable Warning Surface	820	SF	\$20.00	\$ 16,400
5	ADA Ramps	1	EA	\$6,000.00	\$ 6,000
6	Concrete Driveway	1	SF	\$15,000.00	\$ 15,000
7	Microsurfacing	1,650	SF	\$1.00	\$ 1,650
SUBTOTAL					\$ 73,850
<b>B. DEMOLITION WORK</b>					
1	Remove Existing Curb	230	SF	\$20.00	\$ 4,600
2	Sawcut	440	LF	\$2.00	\$ 880
3	Remove Existing Markings	1	LS	\$5,000.00	\$ 5,000
SUBTOTAL					\$ 10,480
<b>C. UTILITY WORK</b>					
1	Adjust Utility Box to Grade	3	EA	\$5,000.00	\$ 15,000
SUBTOTAL					\$ 15,000
<b>D. MISCELLANEOUS WORK</b>					
1	Traffic Control	1	LS	\$50,000.00	\$ 50,000
SUBTOTAL					\$ 50,000
<b>E. SIGNING AND STRIPING</b>					
1	Signing and Striping	1	LS	\$50,000.00	\$ 50,000
SUBTOTAL					\$ 50,000



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
ON COLMA BOULEVARD  
TOWN OF COLMA**

June 29, 2018  
Job No. 20170252-10

**SUMMARY**

<b>A. ROAD WORK</b>	<b>\$ 411,000</b>
<b>B. DEMOLITION WORK</b>	<b>\$ 15,000</b>
<b>C. MISCELLANEOUS WORK</b>	<b>\$ 50,000</b>
<b>D. SIGNING AND STRIPING</b>	<b>\$ 90,000</b>
	<b>SUBTOTAL \$ 566,000</b>
<b>10% MINOR ITEMS</b>	<b>\$ 57,000</b>
<b>25% CONSTRUCTION CONTINGENCY</b>	<b>\$ 142,000</b>
	<b>TOTAL CONSTRUCTION COST \$ 765,000</b>

**General Notes:**

**TOTAL PROJECT COST \$ 765,000**

- 1) This Opinion of Probable Construction Costs is an estimate of the possible improvements associated with the roadway curb, gutter, sidewalk, driveways, and crosswalks along Colma Boulevard between El Camino Real and Junipero Serra.
- 2) Information regarding existing conditions was taken from a site visit performed by BKF Engineers and Google Earth.
- 3) BKF Engineers makes no warranty, either expressed or implied, that actual costs will not vary from amounts indicated, and assumes no liability for such variances.
- 4) Inflation, permitting, and professional services are not included in this Opinion of Probable Construction Costs.
- 5) Total costs round off to the nearest thousand dollars.
- 6) Driveway, walkway, and conform work on private property is excluded.

**Project Description:**

- Remove portions of existing curb, gutter, sidewalk, driveway, road, and crosswalks and replace them with new curb, gutter, sidewalk, driveway, road, and crosswalks.



**OPINION OF PROBABLE CONSTRUCTION  
COSTS FOR IMPROVEMENTS ASSOCIATED WITH THE  
PEDESTRIAN IMPROVEMENTS  
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June 29, 2018  
Job No. 20170252-10

ITEMS	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
<b>A. ROAD WORK</b>					
1	Concrete Sidewalk/Median	15,000	SF	\$20.00	\$ 300,000
2	Microsurfacing	100,100	SF	\$1.00	\$ 100,100
3	Caltrans Type Q Posts	9	EA	\$500.00	\$ 4,500
4	ADA Ramps	1	EA	\$6,000.00	\$ 6,000
SUBTOTAL					\$ 410,600
<b>B. DEMOLITION WORK</b>					
1	Sawcut	2,500	LF	\$2.00	\$ 5,000
2	Remove Existing Markings	1	LS	\$10,000.00	\$ 10,000
SUBTOTAL					\$ 15,000
<b>C. MISCELLANEOUS WORK</b>					
1	Traffic Control	1	LS	\$50,000.00	\$ 50,000
SUBTOTAL					\$ 50,000
<b>D. SIGNING AND STRIPING</b>					
1	Signing and Striping	1	LS	\$90,000.00	\$ 90,000
SUBTOTAL					\$ 90,000