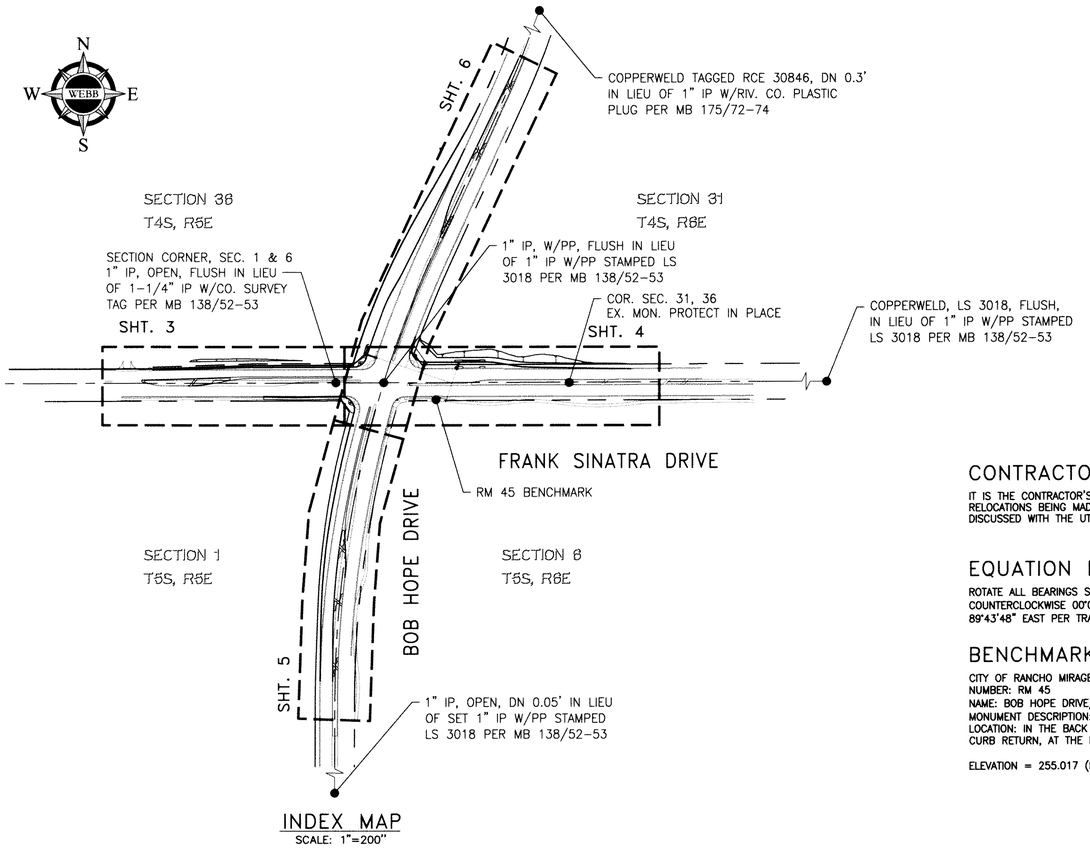
CITY OF RANCHO MIRAGE
CITY PROJECT CP 12-270-1
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENTS

GENERAL NOTES:

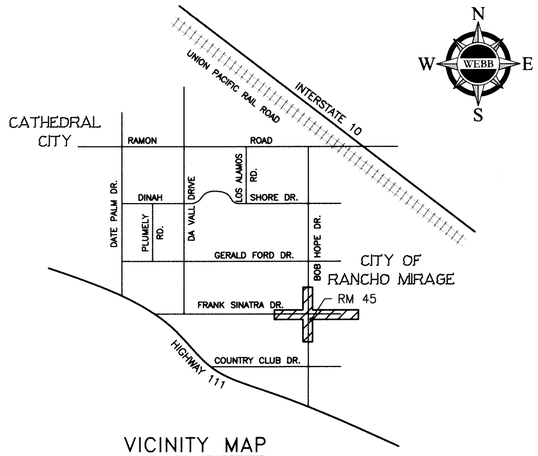
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD PLANS OF THE CITY OF RANCHO MIRAGE AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND OTHER STANDARD PLANS AS SPECIFIED IN THE PLANS.
2. NOTHING IN THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM OBTAINING PERMITS AS REQUIRED BY THE CITY OF RANCHO MIRAGE MUNICIPAL CODE.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, REPLACEMENT, PROTECTION OR RELOCATION OF ALL REGULATORY WARNING, AND GUIDE SIGNS, STRIPING, AND PAVEMENT LEGENDS.
5. STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS, TYPE AND LOCATION SHALL BE APPROVED BY THE CITY ENGINEER. TRAFFIC STRIPING, LEGENDS AND PAVEMENT MARKERS, TYPE AND LOCATIONS SHALL BE APPROVED BY THE CITY ENGINEER.
6. PRIOR TO GRADING OPERATIONS ALL PROPERTY BOUNDARIES SHALL BE VISIBLY MARKED BY SETTING WITNESS STAKES AT ALL FOUND PROPERTY MONUMENTS. FOUND MONUMENTS SHALL BE NOTED ON THE PLANS. RESETTING OF MISSING MONUMENTS OR ANY REMOVAL/REPLACEMENT OF EXISTING MONUMENTS SHALL BE DONE BY AN R.C.E. BELOW 33965 OR L.S. ONLY. THE CONTRACTOR SHALL NOT DISTURB EXISTING MONUMENTS NOTED ON PLANS OR FOUND DURING CONSTRUCTION.
7. ALL STREET SECTIONS ARE TENTATIVE. THE MINIMUM SECTION IS 3" A.C./ 4" A.B. ADDITIONAL SOIL TEST MAY BE TAKEN AFTER ROUGH GRADING TO DETERMINE EXACT SECTION REQUIREMENTS.
8. LOCATIONS OF FIELD DENSITY TEST SHALL BE DETERMINED BY THE CITY OR APPROVED TESTING AGENCY AND SHALL BE SUFFICIENT IN BOTH HORIZONTAL AND VERTICAL PLACEMENT TO PROVIDE REPRESENTATIVE TESTING OF ALL FILL PLACED. TESTING IN AREAS OP A CRITICAL NATURE OR SPECIAL EMPHASIS SHALL BE IN ADDITION TO THE NORMAL REPRESENTATIVE SAMPLINGS.
9. ALL UNDERGROUND FACILITIES, WITH LATERALS, SHALL BE IN PLACE AND INSPECTED PRIOR TO PAVING. INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: SEWER, WATER, ELECTRIC, GAS, TELEPHONE AND DRAINAGE.
10. THE DESIGN CIVIL ENGINEER SHALL EXERCISE SUFFICIENT CONTROL OF THE CONSTRUCTION TO ENSURE COMPLIANCE WITH PLANS, SPECIFICATIONS AND CITY CODES.
11. THE FINAL UTILITY LINE BACKFILL REPORT FROM THE PROJECT SOIL ENGINEER SHALL INCLUDE AN APPROVAL STATEMENT THAT THE BACKFILL IS SUITABLE FOR THE INTENDED USE.
12. THE FINAL COMPACTION REPORT AND APPROVAL FROM THE SOILS ENGINEER SHALL CONTAIN THE TYPE OF FIELD TESTING PERFORMED. EACH TEST SHALL BE IDENTIFIED WITH THE METHOD OF OBTAINING THE IN-PLACE DENSITY. WHETHER SAND CONE OR DRIVE RING AND SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES BY THE FIELD TECHNICIAN.
13. ALL CONSTRUCTION AREAS SHALL BE PROPERLY POSTED AND LIGHTED IN CONFORMANCE WITH THE STATE MANUAL OF WARNING SIGNS. LIGHTS, AND DEVICES FOR USE IN THE PERFORMANCE OF WORK UPON HIGHWAYS, IN ORDER TO ELIMINATE ANY HAZARDS.
14. AT NO TIME WILL PRIVATE PROPERTY BE USED IN CONJUNCTION WITH THE PROJECT UNLESS PROPERTY-OWNER APPROVAL IS OBTAINED IN WRITING AND GIVEN TO THE CITY FOR APPROVAL.
15. ANY CHANGES CONTEMPLATED IN: DRAINAGE, ELEVATIONS OR STRUCTURES SHOWN ON THESE PLANS MUST BE REVIEWED BY THE CITY TO DETERMINE IF REVISED PLANS SHOULD BE SUBMITTED. NONCOMPLYING CONSTRUCTION MAY BE SUBJECT TO PENALTIES AND/OR REMOVAL. "AS-BUILT" PLANS MUST BE SUBMITTED PRIOR TO ANY RELEASE OF SECURITIES AND/OR ISSUANCE OF A CERTIFICATE OF USE.

PAVING NOTES:

1. ALL UNDERGROUND FACILITIES, INCLUDING LATERALS, SHALL BE IN PLACE, AND ALL TRENCHES COMPACTED AND TESTED PRIOR TO PAVING.
2. ALL EXISTING OR NEW IMPROVEMENTS, INCLUDING CURB AND GUTTERS, SIDEWALKS, ASPHALT CONCRETE OR P.C.C. PAVING WHICH ARE BEING JOINED OR MATCHED IN CONNECTION WITH THIS PROJECT SHALL BE JOINED OR MATCHED IN A MANNER SATISFACTORY TO THE CITY ENGINEER, INCLUDING NECESSARY SAWCUTTING, REMOVAL, REPLACEMENT AND CAPPING.
3. NEW CURB AND GUTTER SHALL BE MARKED AT EVERY 10 FEET WITH A SCORE LINE AND EXPANSION JOINTS AS REQUIRED.
4. NEW OR EXISTING CURB AND GUTTER SHALL BE JOINED, MATCHED, OR REPLACED IF DAMAGED, TO A SAWCUT LINE SUCH THAT A MINIMUM LENGTH OF 7 FEET OF CURB AND GUTTER REMAINS IN PLACE AT ALL LOCATIONS.
5. A "TACK COAT" SHALL BE APPLIED BETWEEN PAVEMENT LAYERS, CONCRETE SURFACES AND ON EXISTING PAVEMENT TO BE RESURFACED AT THE RATE OF 0.10 GAL/YD. THE TACK COAT SHALL BE TYPE SS1 ASPHALTIC EMULSION WITH A 60-70 GRADE LIQUID ASPHALT.
6. THE VISCOSITY GRADE OF PAVING ASPHALT SHALL BE PG 70-10 OR AS DETERMINED BY THE CITY ENGINEER AT THE TIME OF PAVING.
7. THE FINAL OR SURFACE LAYER OF ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL ALL ON-SITE IMPROVEMENTS HAVE BEEN COMPLETED, INCLUDING ALL EARTHWORK GRADING.
8. MANHOLES AND VALVE BOX FRAMES SHALL BE ADJUSTED TO FINISHED GRADES AFTER COMPLETION OF CONSTRUCTION TO THE STANDARDS OF THE FACILITY OWNER.
9. ALL EXISTING PAVEMENT WITHIN AND ADJOINING THIS PROJECT SHALL BE EITHER REMOVED OR STRUCTURALLY TESTED TO VERIFY THAT THE STRUCTURAL CAPABILITIES ARE ACCEPTABLE. ALL RESULTS SHALL BE APPROVED BY THE CITY ENGINEER.
10. THE CURB SHALL BE ETCHED SHOWING LATERAL LOCATIONS: "S" FOR SEWER, "G" FOR GAS, AND "E" FOR ELECTRICAL.
11. ALL PERMANENT ROADWAY TRAFFIC STRIPING, LEGENDS AND PAVEMENT MARKERS SHALL BE INSTALLED AFTER PERMANENT PAVING. THE TYPE AND LOCATIONS SHALL BE INSTALLED PER PLAN OR AS DIRECTED BY THE CITY ENGINEER.
12. TEMPORARY ROADWAY STRIPING SHALL BE INSTALLED ON ALL UNFINISHED ROADWAY SURFACES AS DIRECTED BY THE CITY ENGINEER.
13. THE AGGREGATE BASE MATERIAL SPECIFIED IN THE PLANS SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION WITHIN THE TOP FOOT OF THE MATERIAL UNDER PAVING. THE DEEPER SUBGRADE MUST BE COMPACTED TO AT LEAST 90% OF MAXIMUM RELATIVE DENSITY. TESTING WILL BE REQUIRED BY A SOIL ENGINEER.
14. JUST BEFORE PAVING, A SOIL STERILANT SHALL BE APPLIED TO THE COMPACTED BASE MATERIAL FOR ALL ASPHALT PAVING. SEE THE CITY'S STANDARD "SPECIAL PROVISIONS TO THE STANDARD SPECIFICATIONS" FOR THE SOIL STERILANT REQUIREMENTS.



INDEX MAP
SCALE: 1"=200'



VICINITY MAP
NTS

CONTRACTOR NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES OF ANY PROPOSED MODIFICATIONS FOR RELOCATIONS BEING MADE TO THEIR FACILITIES. METHODS FOR MODIFICATIONS AND RELOCATIONS SHOULD BE DISCUSSED WITH THE UTILITY INSPECTOR PRIOR TO CONSTRUCTION

EQUATION BASIS OF BEARINGS:

ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND FRANK SINATRA DRIVE COUNTERCLOCKWISE 00°07'41" TO MATCH CENTERLINE BEARING FOR FRANK SINATRA DRIVE BEING NORTH 89°43'48" EAST PER TRACT 19360 FILED IN MB 138/52-53

BENCHMARK:

CITY OF RANCHO MIRAGE
NUMBER: RM 45
NAME: BOB HOPE DRIVE/FRANK SINATRA DRIVE
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE DRIVE AND FRANK SINATRA DRIVE.

ELEVATION = 255.017 (NAVD88)

LEGEND

TC	TOP OF CURB	REMOVE AND REPLACE EXISTING STRUCTURAL SECTION
GB	GRADE BREAK	
FL	FLOWLINE	
EC	END CURVE	1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
BC	BEGIN CURVE	
ECR	END CURB RETURN	VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
BCR	BEGIN CURB RETURN	
BVC	BEGIN VERTICAL CURVE	
MVC	MIDDLE VERTICAL CURVE	INSTALL TRMAC OVERLAY (1-1/2" MIN.)
EVC	END VERTICAL CURVE	
T.S.	TRAFFIC SIGNAL	
EP	EDGE OF PAVEMENT	
C/L	CENTERLINE	
FS	FINISH SURFACE	SAWCUT LINE
AC	ASPHALT CONCRETE PAVEMENT	
HMA	HOT MIX ASPHALT	DAYLIGHT LINE
CRM	CITY OF RANCHO MIRAGE	
TRMAC	TIRE RUBBER MODIFIED ASPHALT CONCRETE	
TRANS	TRANSITION	
BEG.	BEGIN	
PCC	POINT OF COMPOUND CURVE	
PRC	POINT OF REVERSE CURVE	

UTILITY CONTACT LIST

COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOUTHERN CALIFORNIA GAS	(760) 674-0290
VERIZON	(760) 778-3601
TIME WARNER CABLE	(760) 674-5472
SOUTHERN CALIFORNIA EDISON	(760) 202-4259

SHEET INDEX:

1	TITLE SHEET
2	TYPICAL SECTION & CONSTRUCTION NOTES
3-4	FRANK SINATRA DRIVE PLAN & PROFILE
5-6	BOB HOPE DRIVE PLAN & PROFILE
7	STORM DRAIN LATERALS
8	MODIFIED STORM DRAIN DETAILS
9	APN 674-430-013 OFFSITE IMPROVEMENTS
10	FREESTANDING WALL DETAILS
11	RETAINING WALL DETAILS

REGISTERED PROFESSIONAL ENGINEER DILESH R. SHETH NO. C65078 CIVIL STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
ENGINEER'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE ABOVE

BASIS OF BEARING
SEE ABOVE

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH — DATE 3/24/16
R.C.E. C65078

ALBERT A. WEBB ASSOCIATES
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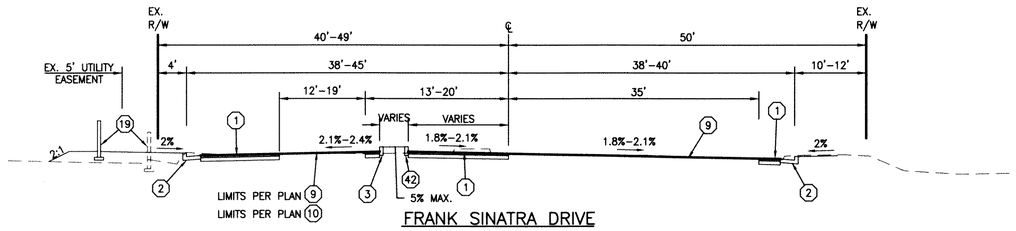
41-990 COOK STREET
BLDG. 1 - #801B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE — DATE 3/24/16
R.C.E. 47159

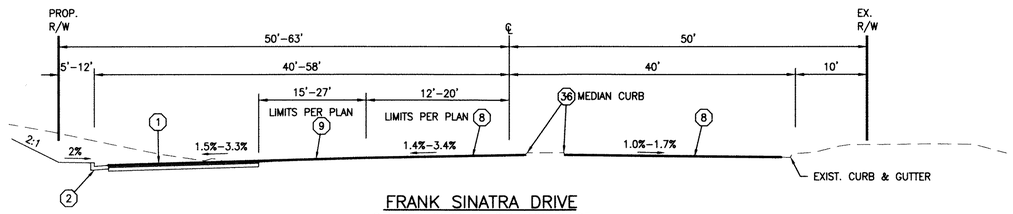
APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER — DATE 3/24/16
R.C.E. 43910

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION
TITLE SHEET
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

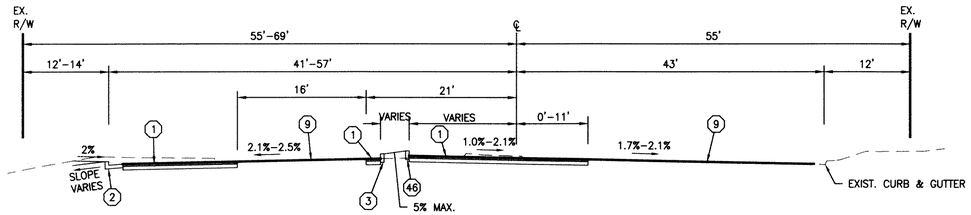
SHEET 1 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



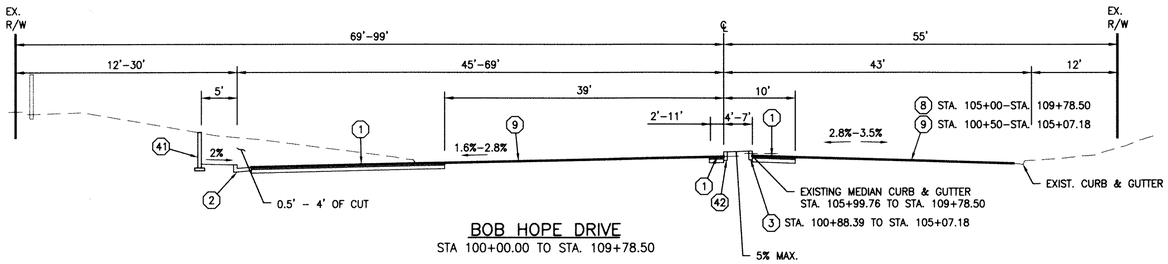
FRANK SINATRA DRIVE
STA 93+25.60 TO STA. 100+00.00



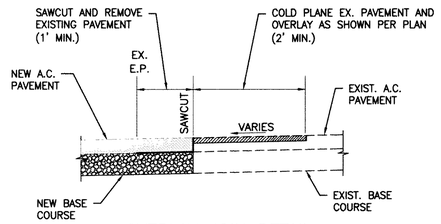
FRANK SINATRA DRIVE
STA 100+00.00 TO STA. 106+90.63



BOB HOPE DRIVE
STA 91+50.00 TO STA. 100+00.00



BOB HOPE DRIVE
STA 100+00.00 TO STA. 109+78.50



OVERLAY JOIN DETAIL
NOT TO SCALE

CONSTRUCTION NOTES

1. CONSTRUCT 4" AC (2-1/2" HMA, 1-1/2" TRMAC) OVER 10" CLASS 2 BASE
2. CONSTRUCT TYPE "A" (6") CURB & GUTTER PER CRM STD. DETAIL 200 JOINTS PER CRM STD. DETAIL 206
3. CONSTRUCT TYPE "D" (8") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
4. CONSTRUCT ACCESS RAMP PER CRM STD. DETAIL 502
5. CONSTRUCT CURB INLET CATCH BASIN PER CRM STD. DETAIL 300 & 303
6. CONSTRUCT GRATE INLET CATCH BASIN PER CRM STD. DETAIL 301 & 304
7. CONSTRUCT MEDIAN NOSE DETAIL PER CRM STD. DETAIL 213, MEDIAN ISLAND NOSE FLARE PER CRM STD. DETAIL 406
8. 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
9. VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
10. INSTALL TRMAC OVERLAY (1-1/2" MIN.)
11. RETRO-FIT EXISTING ACCESS RAMP WITH TRUNCATED DOMES AS SHOWN PER CRM STD. DETAIL 502
12. INSTALL STORM DRAIN COLLAR PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION STD. PLAN 380-4
13. REMOVE EXISTING PAVEMENT SECTION
14. REMOVE EXISTING CURB/CURB & GUTTER
15. REMOVE EXISTING ACCESS RAMP
16. REMOVE EXISTING CATCH BASIN
17. REMOVE EXISTNG TREE
18. REMOVE AND REPLACE EXISTING IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
19. REMOVE AND REPLACE EXISTING WALL WITH 8"X8"X16" BLOCKS, ORCO PRECISION "SINGLE SCORE" V/S 2S OR EQUIVALENT, ORCO TYPE S MORTAR, PAINT TO MATCH (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 10 (FOOTING OPTION "A"), 6' HIGH MIN. FOR CONSTRUCTION REFERENCE
20. REMOVE/RELOCATE EXISTING ELECTRIC PULLBOX
21. REMOVE AND REPLACE EXISTING BACKFLOW PREVENTER AND WATER METER BY CVWD
22. RELOCATE EXISTING TRAFFIC SIGN PER SIGNING & STRIPING PLANS
23. RELOCATE EXISTING SIGNAL POLE, PULLBOX, ETC. PER TRAFFIC SIGNAL PLAN
24. REMOVE EXISTING POWER POLE BY SCE
25. RELOCATE EXISTING GUY POLE BY SCE
26. RELOCATE EXISTING GUY ANCHOR BY SCE
27. RELOCATE EXISTING FIRE HYDRANT AND REFLECTOR BY CVWD
28. RELOCATE EXISTING VENT PIPES BY SCE
29. RELOCATE EXISTING ELECTRIC CONDUIT BY SCE
30. ADJUST EXISTING GAS VALVE CAN TO GRADE BY CONTRACTOR
31. RELOCATE EXISTING ELECTRIC MANHOLE BY SCE
32. RELOCATE EXISTING ELECTRIC VAULT BY SCE
33. RELOCATE EXISTING TELEPHONE VAULT BY VERIZON
34. ADJUST EXISTING WATER VALVE TO GRADE PER CVWD REQUIREMENTS
35. ADJUST EXISTING ELECTRIC MANHOLE TO GRADE BY SCE
36. PROTECT IN PLACE (ITEM NOTED ON PLAN)
37. CONSTRUCT 6' WIDE MEANDERING SIDEWALK PER CRM STD. DETAIL 500
38. REMOVE EXISTING SIDEWALK
39. SAWCUT EXISTING PAVEMENT (SEE JOIN DETAIL ON SHEET 2)
40. RELOCATE EXISTING CATV VAULT BY TIME WARNER
41. CONSTRUCT RETAINING WALL WITH 8"HX16"L (8"X8" PATTERN) X8" ORCO PRECISION "SINGLE SCORE" BLOCKS OR EQUIVALENT, 8"X8"X16" V/S 2S , PAINTED TO MATCH EXISTNG WALL (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 11 (TYPE 2: 6" HEEL), 6' HIGH MAX. FOR CONSTRUCTION REFERENCE. OMIT HEAD JOINTS IN FIRST COURSE.
42. CONSTRUCT TYPE "D" (6") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
43. REMOVE EXISTING MEDIAN STAMPCRETE
44. INSTALL PAVERS PER CRM STD. DETAIL 213 (PER LANDSCAPE PLANS)
45. REBUILD MEDIAN IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
46. CONSTRUCT TYPE "D" (5") CURB PER CRM STD. DETAIL 203 (MODIFIED TO 5" CF), JOINTS PER CRM STD. DETAIL 206
47. CONSTRUCT 24" R.C.P. (CLASS IV)
48. CONSTRUCT 42" R.C.P. (D-1400)
49. EXISTING MONUMENT TO BE REMOVED AND RESET BY CITY DESIGNATED SURVEYOR PER CITY STANDARDS (CRM STD. DETAIL 611), SEE TITLE SHEET FOR DESCRIPTION OF EXISTING BENCHMARKS
50. REMOVE EXISTING RCP (2' ⌀ CATCH BASIN)
51. CONSTRUCT 36" RCP (D-1250)
52. REMOVE AND INSTALL AIR VACUUM PER CVWD REQUIREMENTS

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
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ALBERT A. WEBB ASSOCIATES
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SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
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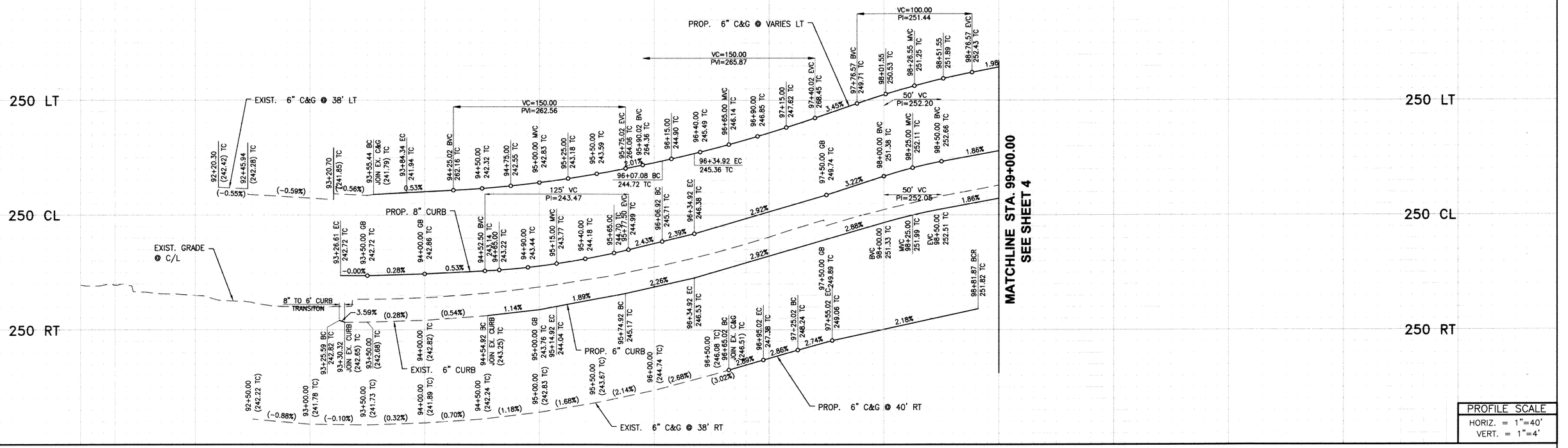
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 2 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



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

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C1	8.21'	3.00	156° 42' 36"	14.56'
C2	28.01'	973.00	1° 38' 58"	14.01'
C3	60.34'	329.60	10° 29' 19"	30.25'
C4	60.34'	329.60	10° 29' 19"	30.25'

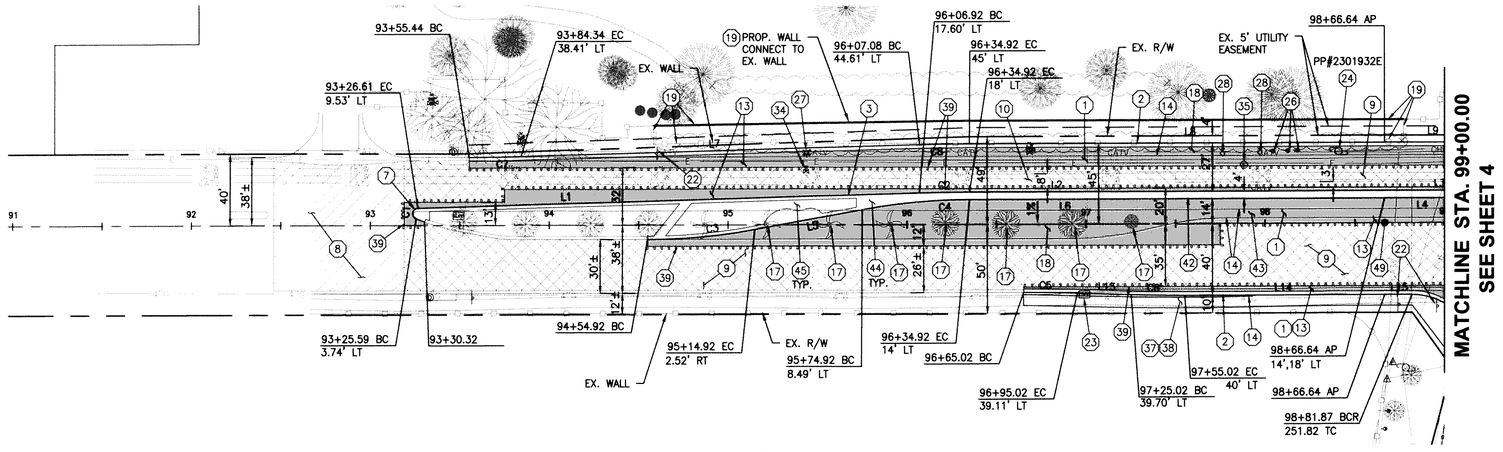
CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C5	30.01'	916.48	1° 52' 33"	15.00'
C6	30.01'	916.48	1° 52' 33"	15.00'
C7	28.91'	1000.00	1° 39' 23"	14.46'
C8	27.85'	1000.00	1° 35' 43"	13.92'

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	280.43'	N88° 12' 28"E
L2	231.71'	N89° 51' 26"E
L3	43.28'	N89° 51' 29"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L4	43.28'	N89° 51' 29"E
L5	61.00'	N79° 27' 19"E
L6	231.71'	N89° 51' 26"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L7	222.83'	N88° 15' 42"E
L8	231.71'	N89° 51' 26"E
L9	49.97'	N89° 51' 29"E

SEE SHEET NO. 9 FOR ANNENBERG PROPERTY GRADING AND REMOVALS



LEGEND

- REMOVE AND REPLACE EXISTING STRUCTURAL SECTION
- VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
- 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
- INSTALL TRMAC OVERLAY (1-1/2" MIN.)

FRANK SINATRA DRIVE

CONSTRUCTION NOTES

1. CONSTRUCT 4" AC (2-1/2" HMA, 1-1/2" TRMAC) OVER 10" CLASS 2 BASE
2. CONSTRUCT TYPE "A" (6") CURB & GUTTER PER CRM STD. DETAIL 200 JOINTS PER CRM STD. DETAIL 206
3. CONSTRUCT TYPE "D" (8") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
7. CONSTRUCT MEDIAN NOSE DETAIL PER CRM STD. DETAIL 213, MEDIAN ISLAND NOSE FLARE PER CRM STD. DETAIL 406
8. 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
9. VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
10. INSTALL TRMAC OVERLAY (1-1/2" MIN.)
13. REMOVE EXISTING PAVEMENT SECTION
14. REMOVE EXISTING CURB/CURB & GUTTER
17. REMOVE EXISTNG TREE
18. REMOVE AND REPLACE EXISTING IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
19. REMOVE AND REPLACE EXISTING WALL WITH 8"X8"X16" BLOCKS, ORCO PRECISION "SINGLE SCORE" V/S 2S OR EQUIVALENT, ORCO TYPE S MORTAR, PAINT TO MATCH (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 10 (FOOTING OPTION "A"), 6' HIGH MIN. FOR CONSTRUCTION REFERENCE
22. RELOCATE EXISTING TRAFFIC SIGN PER SIGNING & STRIPING PLANS
23. RELOCATE EXISTING SIGNAL POLE, PULLBOX, ETC. PER TRAFFIC SIGNAL PLAN
24. REMOVE EXISTING POWER POLE BY SCE
26. RELOCATE EXISTING GUY ANCHOR BY SCE
27. RELOCATE EXISTING FIRE HYDRANT AND REFLECTOR BY CVWD
28. RELOCATE EXISTING VENT PIPES BY SCE
34. ADJUST EXISTING WATER VALVE TO GRADE PER CVWD REQUIREMENTS
35. ADJUST EXISTING ELECTRIC MANHOLE TO GRADE BY SCE
37. CONSTRUCT 6' WIDE MEANDERING SIDEWALK PER CRM STD. DETAIL 500
38. REMOVE EXISTING SIDEWALK
39. SAWCUT EXISTING PAVEMENT (SEE JOIN DETAIL ON SHEET 2)
42. CONSTRUCT TYPE "D" (6") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
43. REMOVE EXISTING MEDIAN STAMPCRETE
44. INSTALL PAVERS PER CRM STD. DETAIL 213 (PER LANDSCAPE PLANS)
45. REBUILD MEDIAN IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
49. EXISTING MONUMENT TO BE REMOVED AND RESET BY CITY DESIGNATED SURVEYOR PER CITY STANDARDS (CRM STD. DETAIL 611), SEE TITLE SHEET FOR DESCRIPTION OF EXISTING BENCHMARKS

N
W WEBB E
S

1" = 40'
20 0 40

REGISTERED PROFESSIONAL ENGINEER
DILESH R. SHETH
NO. C65078
CIVIL
STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
ENGINEER'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/24/16 DATE

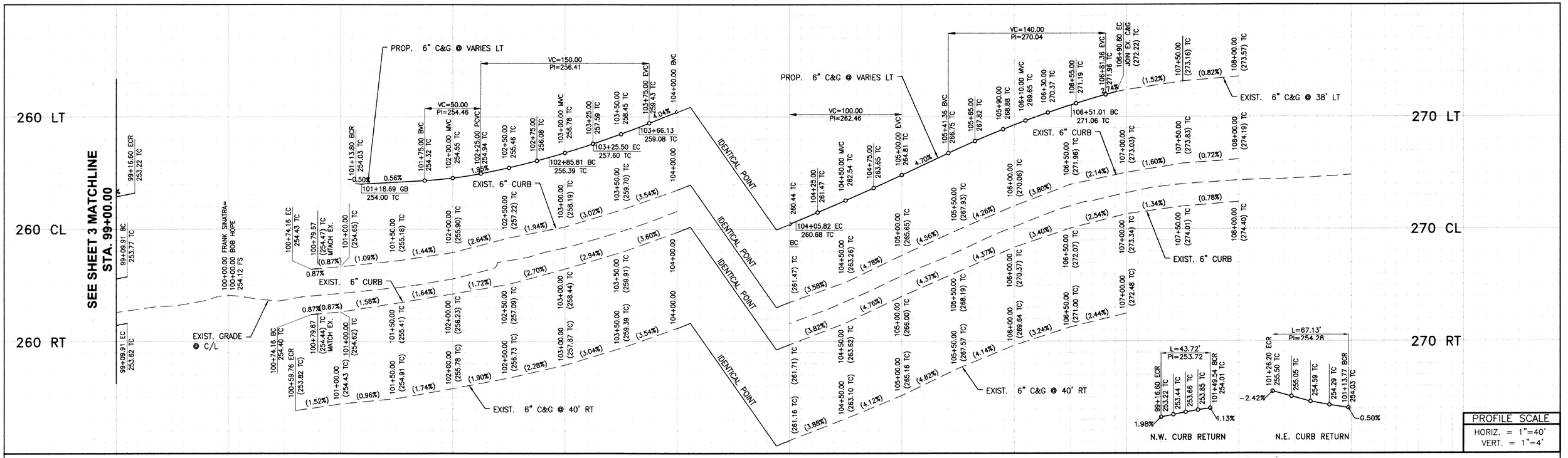
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 – #B01B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE
R.C.E. 47159
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS – CP 12-270-1
PROJECT DESCRIPTION: FRANK SINATRA DR. – STA. 93+00 TO STA. 99+00
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 3
OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



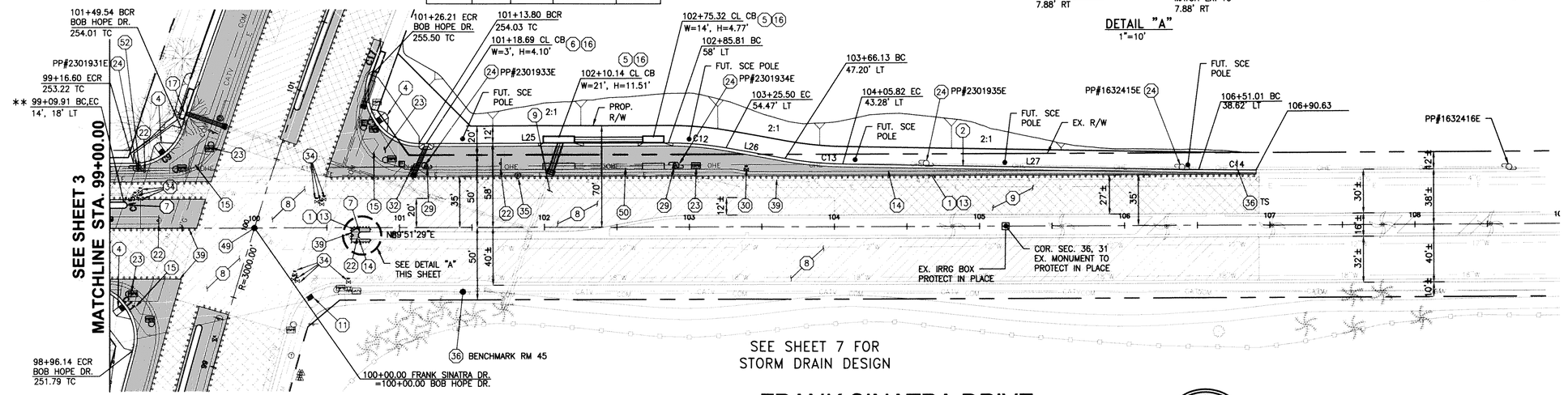
CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C9	43.72'	35.00	71° 34' 23"	25.23'
C10	67.13'	35.00	109° 53' 26"	49.88'
C11	64.44'	35.00	105° 29' 48"	46.02'
C12	39.90'	225.10	10° 09' 17"	20.00'

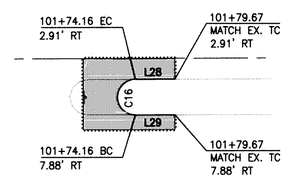
CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C13	39.92'	253.39	9° 01' 39"	20.00'
C14	39.58'	2400.00	0° 56' 42"	19.79'
C15	6.28'	2.00	180° 00' 00"	INFINITY'
C16	7.81'	2.49	180° 00' 00"	INFINITY'
C17	24.00'	2957.00	00° 27' 54"	12.00'

LINE TABLE		
LINE #	LENGTH	DIRECTION
L25	172.01'	N89° 51' 29"E
L26	41.27'	N79° 59' 14"W
L27	245.24'	N89° 00' 53"W

LINE TABLE		
LINE #	LENGTH	DIRECTION
L28	5.51'	N89° 51' 29"E
L29	5.51'	N89° 51' 29"E

** TRANSITION FROM 6" CF TO 8" CF IN MEDIAN NOSE





DETAIL "A"
1"=10'

CONSTRUCTION NOTES

1. CONSTRUCT 4" AC (2-1/2" HMA, 1-1/2" TRMAC) OVER 10" CLASS 2 BASE
2. CONSTRUCT TYPE "A" (6") CURB & GUTTER PER CRM STD. DETAIL 200 JOINTS PER CRM STD. DETAIL 206
4. CONSTRUCT ACCESS RAMP PER CRM STD. DETAIL 502
5. CONSTRUCT CURB INLET CATCH BASIN PER CRM STD. DETAIL 300 & 303
6. CONSTRUCT GRATE INLET CATCH BASIN PER CRM STD. DETAIL 301 & 304
7. CONSTRUCT MEDIAN NOSE DETAIL PER CRM STD. DETAIL 213, MEDIAN ISLAND NOSE FLARE PER CRM STD. DETAIL 406
8. 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
9. VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
11. RETRO-FIT EXISTING ACCESS RAMP WITH TRUNCATED DOMES AS SHOWN PER CRM STD. DETAIL 502
13. REMOVE EXISTING PAVEMENT SECTION
14. REMOVE EXISTING CURB/CURB & GUTTER
15. REMOVE EXISTING ACCESS RAMP
16. REMOVE EXISTING CATCH BASIN
22. RELOCATE EXISTING TRAFFIC SIGN PER SIGNING & STRIPING PLANS
23. RELOCATE EXISTING SIGNAL POLE, PULLBOX, ETC. PER TRAFFIC SIGNAL PLAN
24. REMOVE EXISTING POWER POLE BY SCE
29. RELOCATE EXISTING ELECTRIC CONDUIT BY SCE
30. ADJUST EXISTING GAS VALVE CAN TO GRADE BY CONTRACTOR
32. RELOCATE EXISTING ELECTRIC VAULT BY SCE
34. ADJUST EXISTING WATER VALVE TO GRADE PER CVWD REQUIREMENTS
35. ADJUST EXISTING ELECTRIC MANHOLE TO GRADE BY SCE
36. PROTECT IN PLACE (ITEM NOTED ON PLAN)
39. SAWCUT EXISTING PAVEMENT (SEE JOIN DETAIL ON SHEET 2)
49. EXISTING MONUMENT TO BE REMOVED AND RESET BY CITY DESIGNATED SURVEYOR PER CITY STANDARDS (CRM STD. DETAIL 611), SEE TITLE SHEET FOR DESCRIPTION OF EXISTING BENCHMARKS
50. REMOVE EXISTING RCP (2' @ CATCH BASIN)
52. REMOVE AND INSTALL AIR VACUUM PER CVWD REQUIREMENTS

1" = 40'

LEGEND

- REMOVE AND REPLACE EXISTING STRUCTURAL SECTION
- 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
- VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY

REGISTERED PROFESSIONAL ENGINEER DILESH R. SHETH NO. C65078 CIVIL STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/28/16 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 - #8018
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE
R.C.E. 47159
3/24/16 DATE

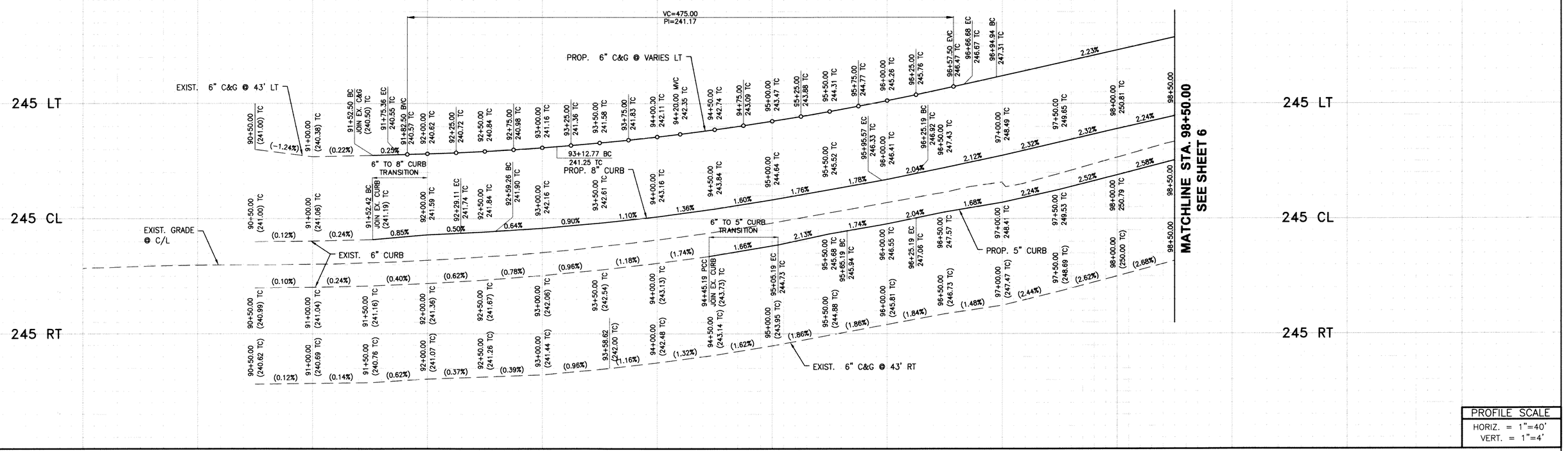
APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE

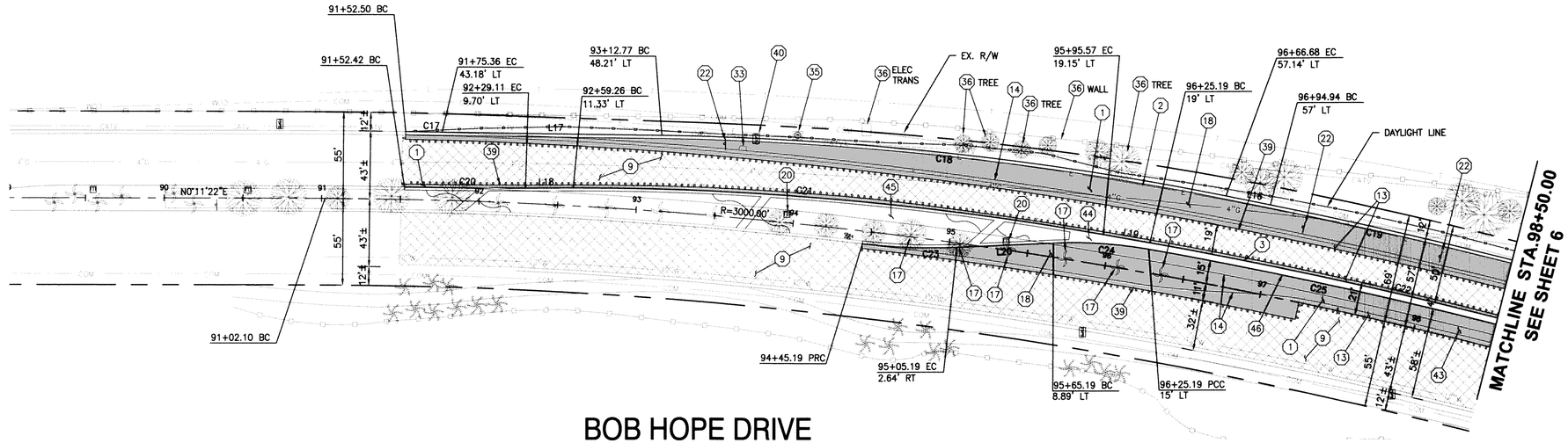
FRANK SINATRA DRIVE AND BOB HOPE DRIVE STREET IMPROVEMENT PLANS - CP 12-270-1

PROJECT DESCRIPTION: FRANK SINATRA DR. - STA. 99+00 TO STA. 107+00
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 4 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



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



BOB HOPE DRIVE

LEGEND

REMOVE AND REPLACE EXISTING STRUCTURAL SECTION

VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C22	299.87	3019.00	5° 41' 28"	150.06
C17	23.18	2965.00	0° 26' 53"	11.59
C18	360.55	1935.00	10° 40' 33"	180.80
C19	205.02	3057.00	3° 50' 34"	102.55
C20	76.93	3000.00	1° 28' 10"	38.47

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C21	338.37	1900.97	10° 11' 55"	169.63
C23	60.20	373.75	9° 13' 46"	30.17
C24	60.67	273.30	12° 43' 10"	30.46
C25	299.47	3015.00	5° 41' 28"	149.86

LINE TABLE		
LINE #	LENGTH	DIRECTION
L16	28.80'	N11° 30' 44"E
L17	139.58'	N00° 50' 10"E
L18	30.31'	N00° 11' 07"W
L19	29.81'	N10° 10' 48"E
L20	61.16'	N02° 24' 45"W

CONSTRUCTION NOTES

1. CONSTRUCT 4" AC (2-1/2" HMA, 1-1/2" TRMAC) OVER 10" CLASS 2 BASE
2. CONSTRUCT TYPE "A" (6") CURB & GUTTER PER CRM STD. DETAIL 200 JOINTS PER CRM STD. DETAIL 206
3. CONSTRUCT TYPE "D" (8") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
9. VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
13. REMOVE EXISTING PAVEMENT SECTION
14. REMOVE EXISTING CURB/CURB & GUTTER
17. REMOVE EXISTING TREE
18. REMOVE AND REPLACE EXISTING IRRIGATION AND LANDSCAPING
20. REMOVE/RELOCATE EXISTING ELECTRIC PULLBOX
22. RELOCATE EXISTING TRAFFIC SIGN PER SIGNING & STRIPING PLANS
33. RELOCATE EXISTING TELEPHONE VAULT BY VERIZON
35. ADJUST EXISTING ELECTRIC MANHOLE TO GRADE BY SCE
36. PROTECT IN PLACE (ITEM NOTED ON PLAN)
39. SAWCUT EXISTING PAVEMENT (SEE JOIN DETAIL ON SHEET 2)
40. RELOCATE EXISTING CATV VAULT BY TIME WARNER
43. REMOVE EXISTING MEDIAN STAMPCRETE
44. INSTALL PAVERS PER CRM STD. DETAIL 213 (PER LANDSCAPE PLANS)
45. REBUILD MEDIAN IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
46. CONSTRUCT TYPE "D" (5") CURB PER CRM STD. DETAIL 203 (MODIFIED TO 5" CF), JOINTS PER CRM STD. DETAIL 206

1" = 40'
20 0 40

REGISTERED PROFESSIONAL ENGINEER
DILESH R. SHETH
NO. C65078
CIVIL
STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/24/16 DATE

ALBERT A. WEBB ASSOCIATES
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RECOMMENDED FOR APPROVAL BY:
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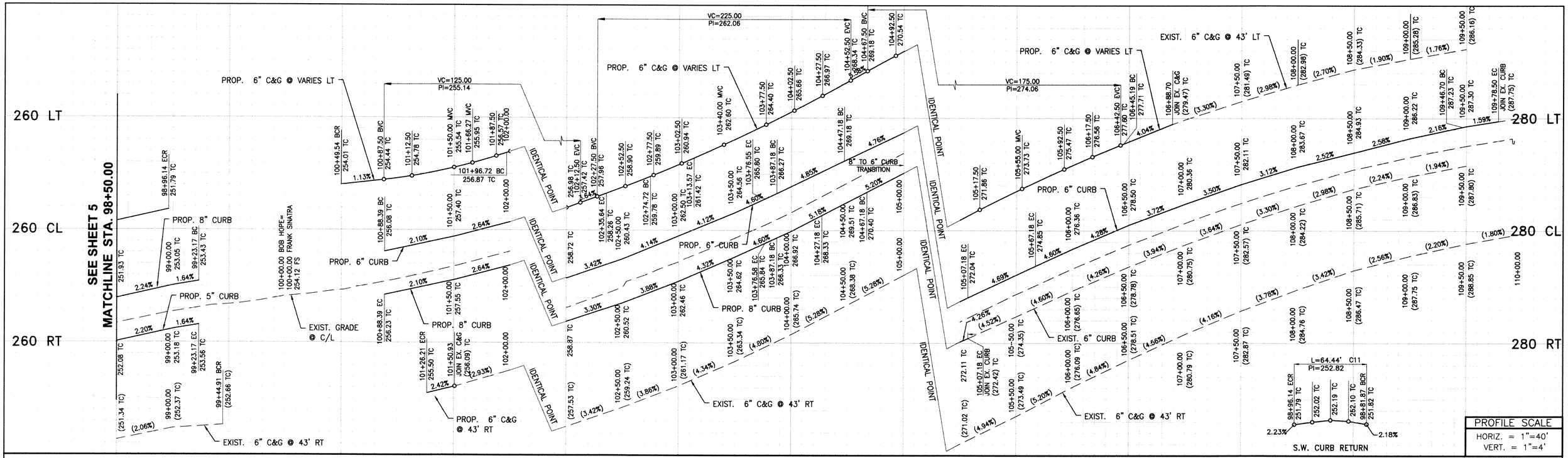
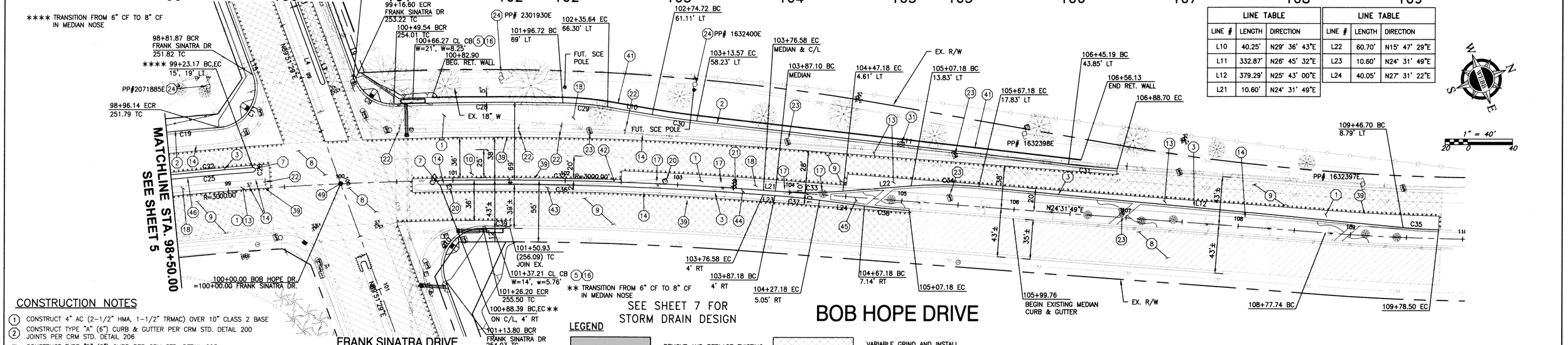
R.C.E. 47159
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION: BOB HOPE DRIVE - STA. 90+50 TO STA. 98+50
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 5
OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222





CONSTRUCTION NOTES

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2. CONSTRUCT TYPE "A" (6") CURB & GUTTER PER CRM STD. DETAIL 200 JOINTS PER CRM STD. DETAIL 206
3. CONSTRUCT TYPE "D" (8") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
5. CONSTRUCT CURB INLET CATCH BASIN PER CRM STD. DETAIL 300 & 303
7. CONSTRUCT MEDIAN NOSE DETAIL PER CRM STD. DETAIL 213, MEDIAN ISLAND NOSE FLARE PER CRM STD. DETAIL 406
8. 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
9. VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
10. INSTALL TRMAC OVERLAY (1-1/2" MIN.)
13. REMOVE EXISTING PAVEMENT SECTION
14. REMOVE EXISTING CURB/GURB & GUTTER
16. REMOVE EXISTING CATCH BASIN
18. REMOVE AND REPLACE EXISTING IRRIGATION AND LANDSCAPING
20. REMOVE/RELOCATE EXISTING ELECTRIC PULLBOX
21. REMOVE AND REPLACE EXISTING BACKFLOW PREVENTER AND WATER METER BY CVWD
22. RELOCATE EXISTING TRAFFIC SIGN PER SIGNING & STRIPING PLANS
23. RELOCATE EXISTING SIGNAL POLE, PULLBOX, ETC. PER TRAFFIC SIGNAL PLAN
24. REMOVE EXISTING POWER POLE BY SCE
31. RELOCATE EXISTING ELECTRIC MANHOLE BY SCE
39. SAWCUT EXISTING PAVEMENT (SEE JOIN DETAIL ON SHEET 2)
41. CONSTRUCT RETAINING WALL WITH 8"HX16"L (8"X8" PATTERN) X8" ORCO PRECISION "SINGLE SCORE" BLOCKS OR EQUIVALENT, 8"X8"X16" V/S 2S , PAINTED TO MATCH EXISTING WALL (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 11 (TYPE 2: 6" HEEL), 6' HIGH MAX. FOR CONSTRUCTION REFERENCE. OMIT HEAD JOINTS IN FIRST COURSE.
42. CONSTRUCT TYPE "D" (6") CURB PER CRM STD. DETAIL 203, JOINTS PER CRM STD. DETAIL 206
43. REMOVE EXISTING MEDIAN STAMPCRETE
44. INSTALL PAVERS PER CRM STD. DETAIL 213 (PER LANDSCAPE PLANS)
45. REBUILD MEDIAN IRRIGATION AND LANDSCAPING PER LANDSCAPE PLANS
46. CONSTRUCT TYPE "D" (5") CURB PER CRM STD. DETAIL 203 (MODIFIED TO 5" CF), JOINTS PER CRM STD. DETAIL 206
49. EXISTING MONUMENT TO BE REMOVED AND RESET BY CITY DESIGNATED SURVEYOR PER CITY STANDARDS (CRM STD. DETAIL 611), SEE TITLE SHEET FOR DESCRIPTION OF EXISTING BENCHMARKS

LEGEND

- REMOVE AND REPLACE EXISTING STRUCTURAL SECTION
- VARIABLE GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
- 1-1/2" GRIND AND INSTALL 1-1/2" TRMAC OVERLAY
- INSTALL TRMAC OVERLAY (1-1/2" MIN.)

LINE TABLE		
LINE #	LENGTH	DIRECTION
L10	40.25'	N29° 36' 43"E
L11	332.87'	N26° 45' 32"E
L12	379.29'	N25° 43' 00"E
L21	10.60'	N24° 31' 49"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L22	60.70'	N15° 47' 29"E
L23	10.60'	N24° 31' 49"E
L24	40.05'	N27° 31' 22"E

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C22	299.87	3019.00	5° 41' 28"	150.06
C9	43.72	35.00	71° 34' 23"	25.23
C10	67.13	35.00	109° 53' 26"	49.88
C11	64.44	35.00	105° 29' 48"	46.02
C19	205.02	3057.00	3° 50' 34"	102.55
C25	299.47	3015.00	5° 41' 28"	149.86
C26	6.28	2.00	180° 00' 00"	INFINITY

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C27	6.28	2.00	180° 00' 00"	INFINITY
C28	150.56	3069.00	2° 48' 39"	75.30
C29	39.93	268.61	8° 31' 00"	20.00
C30	39.99	803.18	2° 51' 10"	20.00
C31	43.53	1120.49	2° 13' 33"	21.77
C32	288.19	3000.00	5° 30' 15"	144.21
C33	60.24	392.63	8° 47' 25"	30.18

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C34	60.21	345.58	9° 58' 56"	30.18
C35	31.68	442.09	4° 06' 22"	15.85
C36	287.81	2996.00	5° 30' 15"	144.01
C37	40.02	765.72	2° 59' 40"	20.01
C38	40.02	765.72	2° 59' 40"	20.01
C39	24.00	2957.00	0° 27' 54"	12.00

REGISTERED PROFESSIONAL ENGINEER — DILESH R. SHETH — NO. C65078 — CIVIL — STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/23/16 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 — #801B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE
R.C.E. 47159
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/28/16 DATE

CITY OF RANCHO MIRAGE

FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS – CP 12-270-1

PROJECT DESCRIPTION: BOB HOPE DRIVE – STA. 98+50 TO STA. 110+00
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

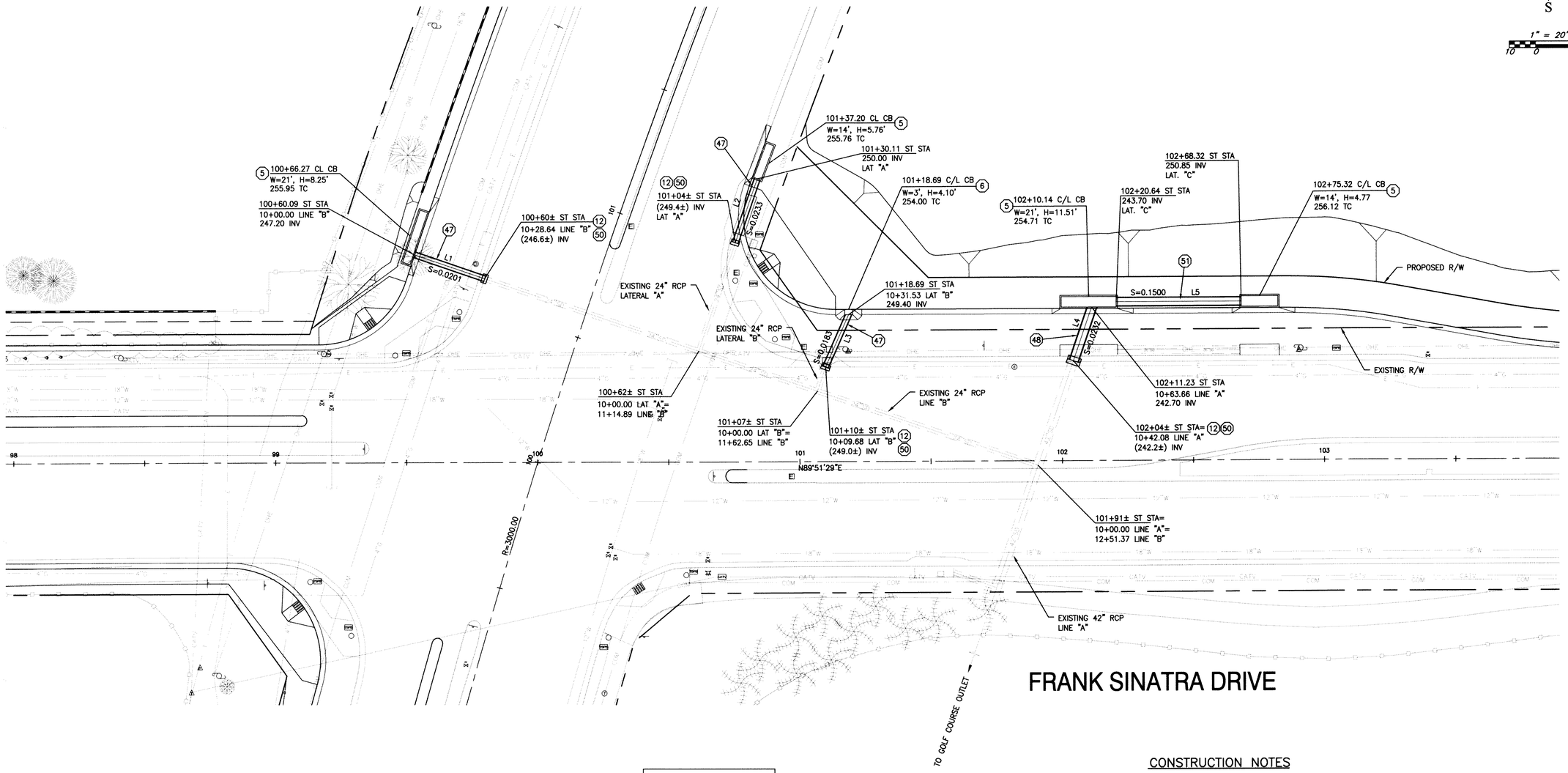
SHEET 6 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222

NOTE
IT IS THE CONTRACTOR'S RESPONSIBLITY TO VERIFY LOCATION AND ELEVATION OF THE EXISTING STORM DRAIN AND EXISTING CONFLICTING UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION

N
W WEBB E
S

1" = 20'
10 0 20

BOB HOPE DRIVE



FRANK SINATRA DRIVE

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	28.64	N71° 19' 21"W
L2	25.75	N19° 00' 56"E
L3	21.85	N23° 44' 56"E
L4	21.58	N18° 40' 39"E
L5	47.68	N89° 51' 29"E

CONSTRUCTION NOTES

(5) CONSTRUCT CURB INLET CATCH BASIN PER CRM STD. DETAIL 300 & 303
(6) CONSTRUCT GRATE INLET CATCH BASIN PER CRM STD. DETAIL 301 & 304
(12) INSTALL STORM DRAIN COLLAR PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION STD. PLAN 380-4
(47) CONSTRUCT 24" R.C.P. (CLASS IV)
(48) CONSTRUCT 42" R.C.P. (D-1400)
(50) REMOVE EXISTING RCP (2' @ CATCH BASIN)
(51) CONSTRUCT 36" R.C.P. (D-1250)

REGISTERED PROFESSIONAL ENGINEER DILESH R. SHETH NO. C65078 CIVIL STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/24/16 DATE

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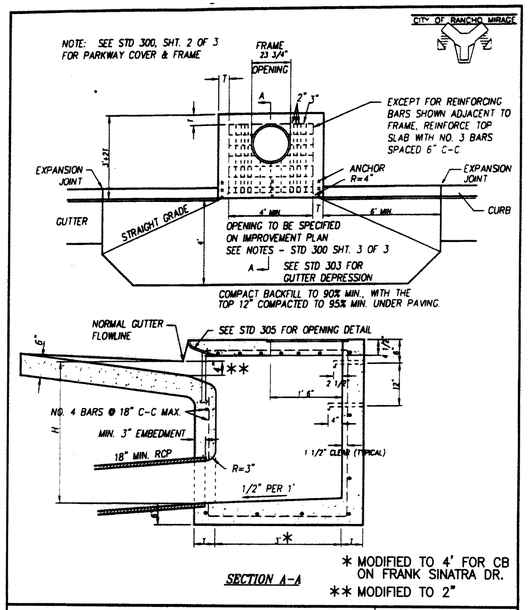
R.C.E. 47159
3/24/16 DATE

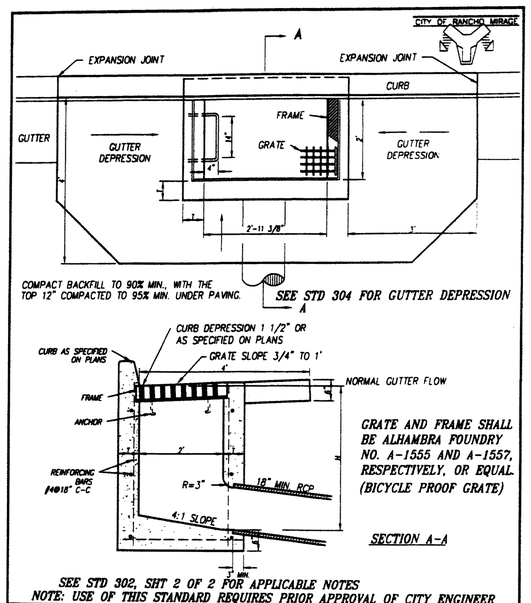
APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION: STORM DRAIN LATERALS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

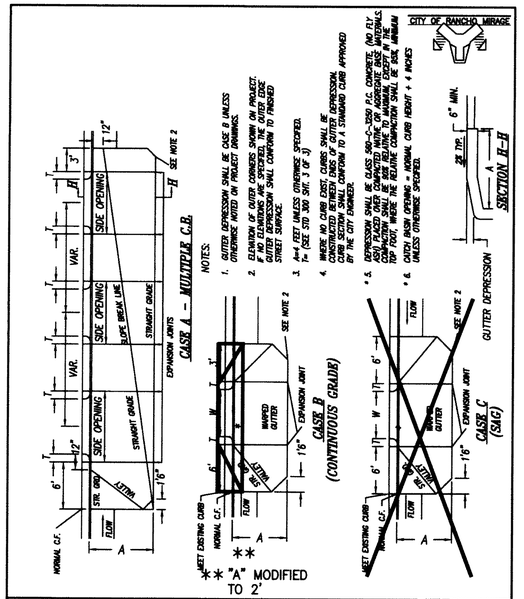
SHEET 7 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



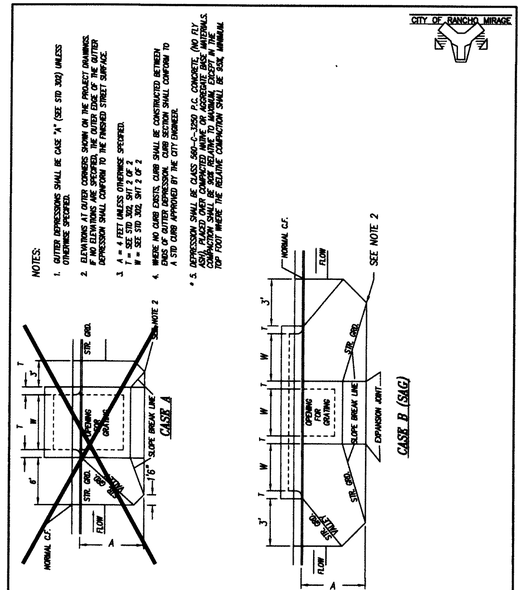
CITY OF RANCHO MIRAGE	STANDARD
REVISIONS	CURB INLET CATCH BASIN
	APPROVED BY: CITY ENGINEER DATE 5/3/01
	DETAIL 300 SHT. 1 OF 3



CITY OF RANCHO MIRAGE	STANDARD
REVISIONS	GRATE INLET CATCH BASIN
	APPROVED BY: CITY ENGINEER DATE 5/3/01
	DETAIL 301



CITY OF RANCHO MIRAGE	STANDARD
REVISIONS * 7/5/2012	GUTTER DEPRESSION FOR CURB OPENING CATCH BASIN
	APPROVED BY: CITY ENGINEER DATE 7/12/12
	DETAIL 303



CITY OF RANCHO MIRAGE	STANDARD
REVISIONS * 7/5/2012	GUTTER DEPRESSION FOR GRATE OPENING CATCH BASIN
	APPROVED BY: CITY ENGINEER DATE 7/12/12
	DETAIL 304

REGISTERED PROFESSIONAL ENGINEER DILESH R. SHETH NO. C65078 CIVIL STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
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R.C.E. C65078
3/23/16 DATE

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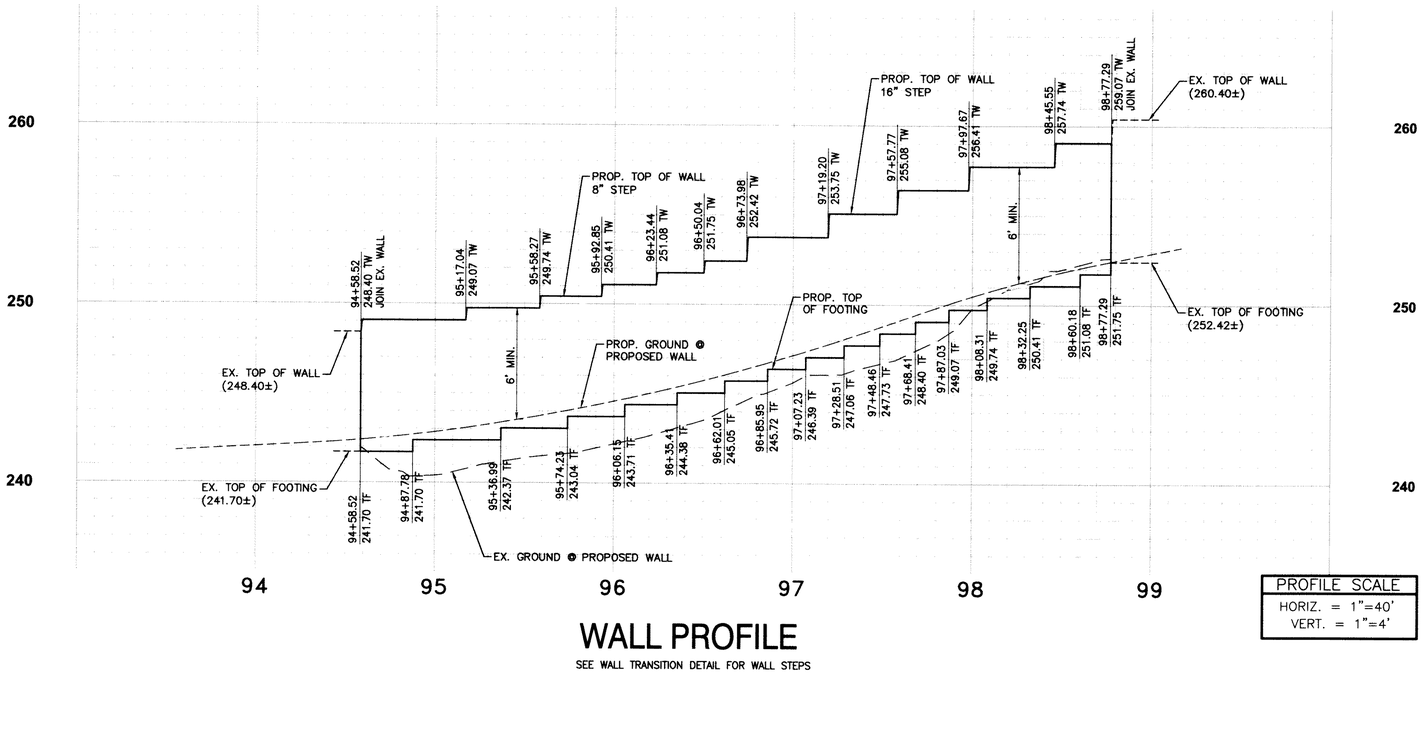
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION
MODIFIED STORM DRAIN DETAILS
SITE ADDRESS FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

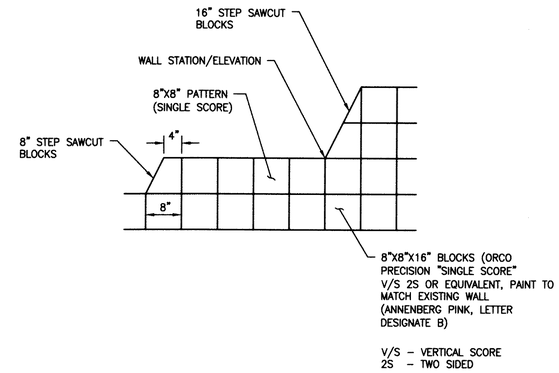
SHEET 8
OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



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

WALL PROFILE

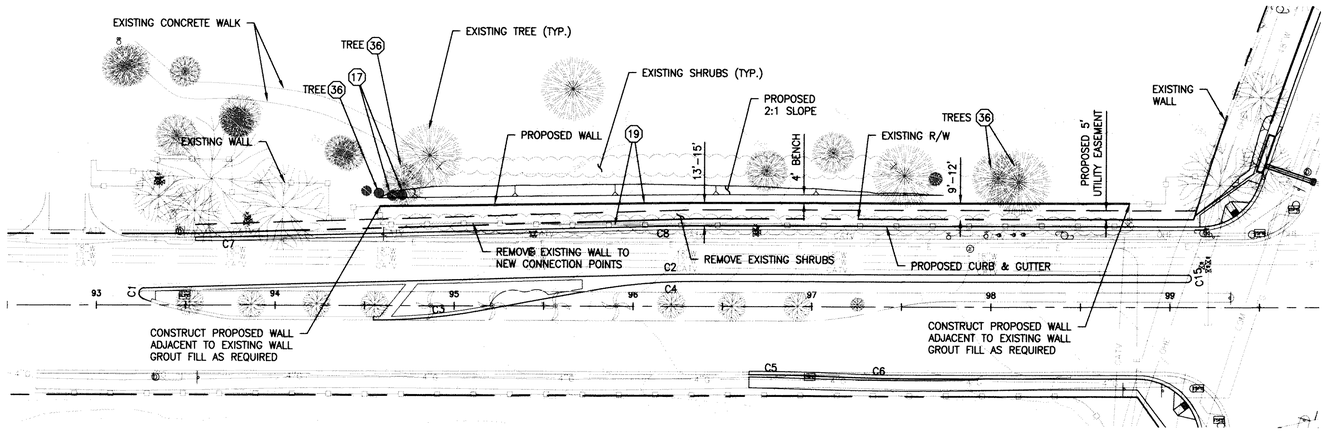
SEE WALL TRANSITION DETAIL FOR WALL STEPS



WALL TRANSITION DETAIL

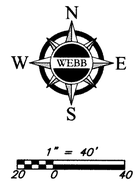
NOT TO SCALE

APN 674-430-013



FRANK SINATRA DRIVE

BOB HOPE DRIVE



WALL NOTES TO CONTRACTOR

1. ANY PORTION OF THE PERIMETER WALL THAT MUST BE RELOCATED SHALL NOT BE REMOVED UNTIL THE REPLACEMENT WALL IS COMPLETED TO ASSURE THE ESTATE'S SECURITY AT ALL TIMES.
2. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE INDEMNIFICATION, SUCH THAT THE CONTRACTOR INDEMNIFIES, DEFENDS AND HOLD HARMLESS THE TRUST AND SUNNYLANDS FROM ANY AND ALL LIABILITY OF ANY KIND FOR PERSONAL INJURY, PROPERTY DAMAGE OR DESTRUCTION RESULTING FROM THE CONTRACTOR'S USE, IMPROVEMENT, MAINTENANCE OR OPERATION OF THE RIGHT OF WAY AND/OR EASEMENT.

CONSTRUCTION NOTES

(17) REMOVE EXISTNG TREE

(19) REMOVE AND REPLACE EXISTING WALL WITH 8"X8"X16" BLOCKS, ORCO PRECISION "SINGLE SCORE" V/S 2S OR EQUIVALENT, ORCO TYPE S MORTAR, PAINT TO MATCH (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 10 (FOOTING OPTION "A"), 6' HIGH MIN. FOR CONSTRUCTION REFERENCE

(36) PROTECT IN PLACE (ITEM NOTED ON PLAN)

REGISTERED PROFESSIONAL ENGINEER
DILESH R. SHETH
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CIVIL
STATE OF CALIFORNIA

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

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CITY OF RANCHO MIRAGE
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STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION: APN 674-430-013 OFFSITE IMPROVEMENTS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 9
OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222

FOOTING OPTION "A"

~~FOOTING OPTION "B"~~

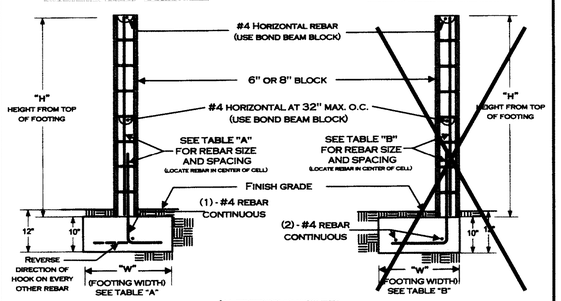


TABLE "A"		
"H"	"W"	VERTICAL REINFORCEMENT
3'	17"	#4 @ 48" O.C.
4'	20"	#4 @ 48" O.C.
5'	23"	#4 @ 48" O.C.
6'	29"	#4 @ 24" O.C.

ALL FOOTINGS ADJACENT TO SLOPES TO BE AT LEAST 5' TO DAYLIGHT AS SHOWN BELOW.

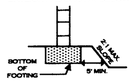


TABLE "B"		
"H"	"W"	VERTICAL REINFORCEMENT
3'	19"	#4 @ 48" O.C.
4'	22"	#4 @ 48" O.C.
5'	29"	#4 @ 48" O.C.
6'	34"	#4 @ 24" O.C.

NOTES:

1) THIS DESIGN DOES NOT ALLOW GRADE DIFFERENTIALS OF MORE THAN 6" ON OPPOSING SIDES OF THE WALL. THIS IS NOT A RETAINING WALL.
2) FENCE HEIGHTS ARE REGULATED -- CONSULT ZONING REGULATIONS BEFORE BEGINNING CONSTRUCTION.
3) NO WATER COURSE OR NATURAL DRAINAGE SHALL BE OBSTRUCTED.
4) GROUT ONLY THE CELLS CONTAINING REBAR. THIS WALL IS NOT DESIGNED FOR ALL CELLS TO BE GROUTED.
5) ALL REBAR TO BE ASTM SPEC. A615, GRADE 40 MINIMUM.
6) ALL REBAR LAP SPLICES TO BE 24" MINIMUM.
7) ALL MASONRY UNITS TO BE ASTM C-90 GRADE N.
8) REBAR TO BE CENTERED IN MASONRY CELLS.

"SEE PAGE 2 FOR ADDITIONAL INFORMATION"

DISCLAIMER:
ALTERNATE DESIGNS MAY BE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS STANDARD DESIGN IS AT THE USER'S RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.

CHECK WITH THE BUILDING DEPARTMENT TO VERIFY IF A BUILDING PERMIT IS REQUIRED.

WHEN A PERMIT IS REQUIRED, THE FOLLOWING INSPECTIONS ARE REQUIRED:

1) FOOTING: EXCAVATION TRENCH CLEAN WITH STEEL IN PLACE AND SUPPORTED 3" ABOVE AND AWAY FROM THE SURROUNDING EARTH/DIRT.
2) REBAR/PREGROUT: BOND BEAM REBAR AND VERTICAL REBAR IN PLACE - INSPECTION PRIOR TO PLACING GROUT.
3) FINAL: AFTER GROUT IS PLACED - PRIOR TO ANY DECORATIVE CAP PLACEMENT.

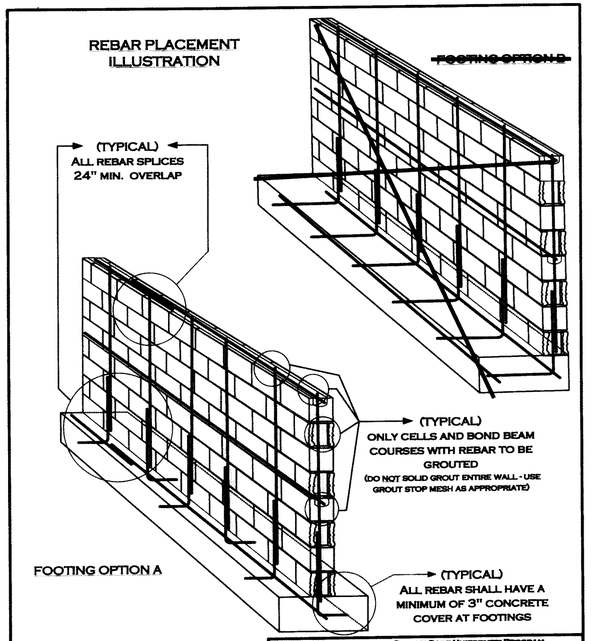
WESTERN RIVERSIDE COUNTY CODE UNIFORMITY PROGRAM

CITY OF RANCHO MIRAGE
BUILDING & SAFETY
FREESTANDING BLOCK WALL

PHONE (760) 202-9253 | 69-825 HIGHWAY 111, RANCHO MIRAGE, CA 92270
FAX (760) 324-8169 | 1/1/2008 | GARDENWALLFINAL3000PANCH 0 MIRAGE.VSD | PAGE 1 OF 2

REBAR PLACEMENT ILLUSTRATION

~~FOOTING OPTION B~~



DESIGN PARAMETERS;
ACTIVE SOIL PRESSURE (PSF) = 30
PASSIVE SOIL BEARING (PSF) = 150
COEFFICIENT OF FRICTION = 0.25
ALLOWABLE SOIL BEARING (PSF) = 1500
⚠ WIND = 85 MPH, EXPOSURE C
SEISMIC DESIGN CATEGORY 'E', SITE CLASS 'D'

WESTERN RIVERSIDE COUNTY CODE UNIFORMITY PROGRAM

CITY OF RANCHO MIRAGE
BUILDING & SAFETY
FREESTANDING BLOCK WALL

PHONE (760) 202-9253 | 69-825 HIGHWAY 111, RANCHO MIRAGE, CA 92270
FAX (760) 324-8169 | 1/1/2008 | GARDENWALLFINAL3000PANCH 0 MIRAGE.VSD | PAGE 2 OF 2

REGISTERED PROFESSIONAL ENGINEER
DILESH R. SHETH
NO. C65078
CIVIL
STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
ENGINEER'S NOTE TO CONTRACTOR: 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; THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH — 3/23/16 DATE
R.C.E. C65078

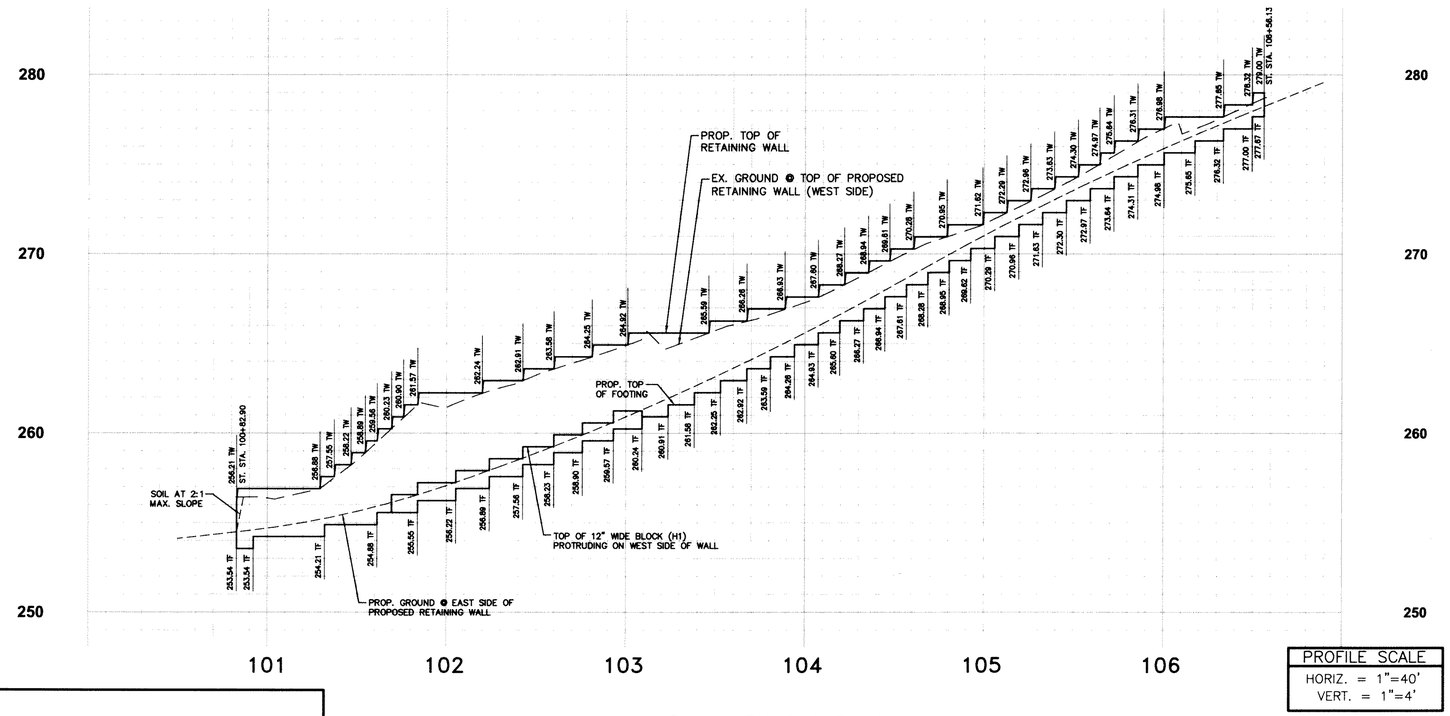
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 - #8019
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE — 3/24/16 DATE
R.C.E. 47159

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER — 3/24/16 DATE
R.C.E. 43910

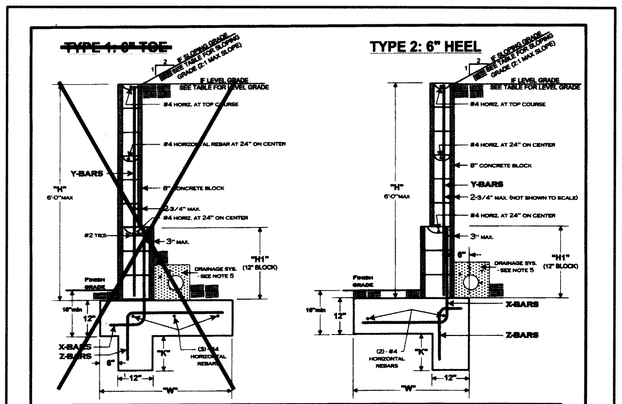
CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
STREET IMPROVEMENT PLANS - CP 12-270-1
PROJECT DESCRIPTION: FREESTANDING WALL DETAILS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 10 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222



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

BOB HOPE DRIVE
RETAINING WALL PROFILE



TYPE 1: 6" TOE							
GRADE CONDITION	"H" (WALL HEIGHT)	"H1" (12" BLOCK)	"W" (FOOTING WIDTH)	X BARS	Y BARS	ZBARS	"K" (KEY DEPTH)
SLOPING GRADE AT TOP OF WALL (2:1 MAX)	0'- 1" to 3'- 0"	24"	60"	#4 @ 16"	#4 @ 32"	#4 @ 11"	26"
	4'- 1" to 5'- 0"	N/R	48"	#4 @ 16"	#4 @ 16"	#4 @ 12"	25"
	3'- 1" to 4'- 0"	N/R	42"	#4 @ 32"	#4 @ 32"	#4 @ 32"	16"
	Up to 3'- 0"	N/R	18"	#4 @ 32"	#4 @ 32"	#4 @ 32"	8"
LEVEL GRADE AT TOP OF WALL	5'- 1" to 6'- 0"	24"	48"	#4 @ 32"	#4 @ 32"	#4 @ 24"	8"
	4'- 1" to 5'- 0"	N/R	36"	#4 @ 24"	#4 @ 32"	#4 @ 24"	7"
	3'- 1" to 4'- 0"	N/R	34"	#4 @ 32"	#4 @ 32"	#4 @ 32"	6"
	Up to 3'- 0"	N/R	21"	#4 @ 32"	#4 @ 32"	#4 @ 32"	N/R

TYPE 2: 6" HEEL							
GRADE CONDITION	"H" (WALL HEIGHT)	"H1" (12" BLOCK)	"W" (FOOTING WIDTH)	X BARS	Y BARS	ZBARS	"K" (KEY DEPTH)
SLOPING GRADE AT TOP OF WALL (2:1 MAX)	5'- 1" to 6'- 0"	24"	36"	#4 @ 16"	#4 @ 32"	#4 @ 12"	28"
	4'- 1" to 5'- 0"	N/R	29"	#4 @ 16"	#4 @ 16"	#4 @ 12"	22"
	3'- 1" to 4'- 0"	N/R	24"	#4 @ 32"	#4 @ 32"	#4 @ 32"	16"
	Up to 3'- 0"	N/R	18"	#4 @ 32"	#4 @ 32"	#4 @ 32"	8"
LEVEL GRADE AT TOP OF WALL	5'- 1" to 6'- 0"	24"	33"	#4 @ 24"	#4 @ 32"	#4 @ 24"	18"
	4'- 1" to 5'- 0"	N/R	28"	#4 @ 24"	#4 @ 32"	#4 @ 24"	13"
	3'- 1" to 4'- 0"	N/R	20"	#4 @ 32"	#4 @ 32"	#4 @ 32"	7"
	Up to 3'- 0"	N/R	20"	#4 @ 32"	#4 @ 32"	#4 @ 32"	N/R

N/R = NOT REQUIRED

"SEE PAGE 2 FOR ADDITIONAL INFORMATION"

DISCLAIMER:
ALTERNATE RETAINING WALL DESIGNS MAY BE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS STANDARD DESIGN IS AT THE USER'S RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.

WESTERN RIVERSIDE COUNTY CODE UNIFORMITY PROGRAM
CITY OF RANCHO MIRAGE
BUILDING & SAFETY
RETAINING WALLS
PHONE (760) 202-9253 | 69-825 HIGHWAY 111, RANCHO MIRAGE, CA 92270
FAX (760) 324-8169 | 12/26/2006 | RETWALL.PMA.RANCHO MIRAGE.VSD | PAGE 1 OF 2

GENERAL NOTES:
1) ALL WORK SHALL CONFORM TO THE ADOPTED CODES AND ZONING REGULATIONS.

2) CONCRETE BLOCK MASONRY SHALL COMPLY WITH THE FOLLOWING:
A. CONCRETE MASONRY SHALL CONFORM TO ASTM C-90, GRADE - N.
B. MORTAR: TYPE M OR S.
C. GROUT ALL CELLS W/2000 PSI PORTLAND CEMENT GROUT.

3) THE ULTIMATE COMPRESSIVE STRENGTH REQUIRED FOR FOUNDATION CONCRETE SHALL BE 2500 PSI.

4) ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE ASTM A615-40 AND OVERLAP SPLICES SHALL BE 40 BAR DIAMETERS MINIMUM. ALL REBAR HOOKS SHALL BE A MINIMUM OF 12 TIMES THE REBAR DIAMETER (12bd) IN LENGTH.

5) PROVIDE RETAINING WALL DRAINAGE SYSTEM AS FOLLOWS:
~~PROVIDE 1 CF./FT. OF CLEAN COARSE GRAVEL WITH 4" DIAMETER PERFORATED PVC DRAINAGE PIPE WITH 1% GRADIENT TO DRAIN~~ OR OMIT HEAD JOINTS IN FIRST COURSE.

6) OPTIONAL: INSTALLATION OF A MOISTURE BARRIER ON THE FILL SIDE OF THE WALL WILL HELP TO PREVENT MOISTURE FROM PENETRATING THE VISIBLE SIDE OF THE WALL, RESULTING IN DISCOLORATION.

7) THIS RETAINING WALL STANDARD IS NOT DESIGNED TO SUPPORT SURCHARGE LOADS FROM MOTOR VEHICLES OR OTHER STRUCTURES.

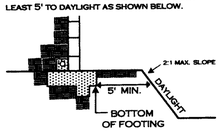
8) CLEANOUTS SHALL BE PROVIDED FOR ALL GROUT POURS OVER 5 FEET IN HEIGHT. WHERE REQUIRED, CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM COURSE AT EVERY VERTICAL BAR AND SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.

REQUIRED INSPECTIONS:
1) FOOTING:
EXCAVATION TRENCH CLEAN WITH STEEL IN PLACE AND SUPPORTED 3" ABOVE AND AWAY FROM THE SURROUNDING EARTH/DIRT.

2) REBAR/PRE-GROUT AND DRAINAGE SYSTEM:
BOND BEAM REBAR AND VERTICAL REBAR IN PLACE - INSPECTION PRIOR TO PLACING GROUT. DRAINAGE SYSTEM COMPLETE.

3) FINAL:
AFTER GROUT IS PLACED AND BACKFILL COMPLETED - PRIOR TO ANY DECORATIVE CAP PLACEMENT.

SETBACK FROM TOP OF SLOPE:
ALL FOOTINGS ADJACENT TO SLOPES TO BE AT LEAST 5' TO DAYLIGHT AS SHOWN BELOW.



DESIGN PARAMETERS:

ACTIVE SOIL PRESSURE (PSF)	
LEVEL BACKFILL	= 30
SLOPING (2: 1 MAX)	= 43
PASSIVE SOIL BEARING (PSF)	= 150
COEFFICIENT OF FRICTION	= 0.25
ALLOWABLE SOIL BEARING PRESSURE (PSF)	= 1500
(NO INCREASES TAKEN FOR DEPTH OR WIDTH OF FOOTING)	

DISCLAIMER:
ALTERNATE RETAINING WALL DESIGNS MAY BE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS STANDARD DESIGN IS AT THE USER'S RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.

WESTERN RIVERSIDE COUNTY CODE UNIFORMITY PROGRAM
CITY OF RANCHO MIRAGE
BUILDING & SAFETY
RETAINING WALLS
PHONE (760) 202-9253 | 69-825 HIGHWAY 111, RANCHO MIRAGE, CA 92270
FAX (760) 324-8169 | 12/26/2006 | RETWALL.PMA.RANCHO MIRAGE.VSD | PAGE 2 OF 2

NOTES

SEE SHEET NO. 6 FOR WALL LOCATION.

SEE SHEET NO. 9 FOR WALL TRANSITION DETAIL.

RETAINING WALL WITH 8"HX16"L (8"X8" PATTERN) X8" ORCO PRECISION "SINGLE SCORE" BLOCKS OR EQUIVALENT, 8"X8"X16" V/S 2S , PAINTED TO MATCH EXISTNG WALL (ANNENBERG PINK, LETTER DESIGNATE B), SEE CRM BUILDING & SAFETY WALL DETAILS ON SHEET 11 (TYPE 2: 6" HEEL), 6' HIGH MAX. FOR CONSTRUCTION REFERENCE. OMIT HEAD JOINTS IN FIRST COURSE.

REGISTERED PROFESSIONAL ENGINEER DILESH R. SHETH NO. C65078 CIVIL STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
ENGINEER'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
SEE SHEET 1

BASIS OF BEARING
SEE SHEET 1

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/24/16 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 - #801B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE
R.C.E. 47159
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

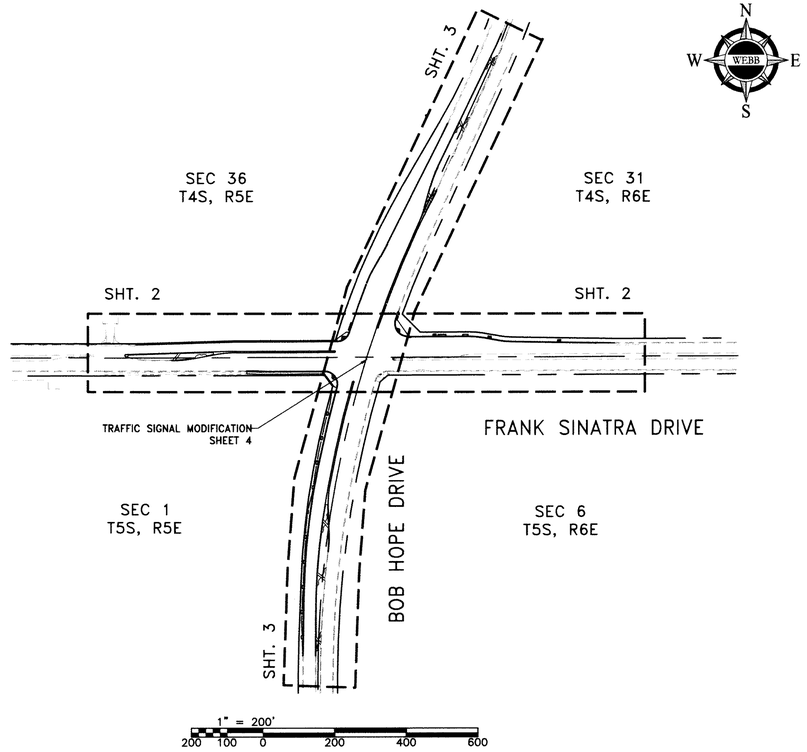
CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
PROJECT DESCRIPTION: STREET IMPROVEMENT PLANS - CP 12-270-1
RETAINING WALL DETAILS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC. 36 T.4S., R.5E., SEC. 31 T.4S., R.6E., SEC. 1, T.5S., R.5E., SEC. 6, T.5S., R. 6E.

SHEET 11 OF 11
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222

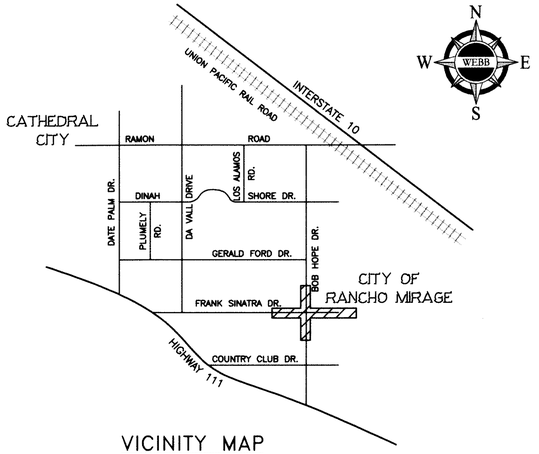
CITY OF RANCHO MIRAGE
CITY PROJECT CP 12-270-1
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
TRAFFIC SIGNAL AND SIGNING & STRIPING PLANS

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD PLANS OF THE CITY OF RANCHO MIRAGE AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND OTHER STANDARD PLANS AS SPECIFIED IN THE PLANS.
2. NOTHING IN THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM OBTAINING PERMITS AS REQUIRED BY THE CITY OF RANCHO MIRAGE MUNICIPAL CODE.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, REPLACEMENT, PROTECTION OR RELOCATION OF ALL REGULATORY WARNING, AND GUIDE SIGNS, STRIPING, AND PAVEMENT LEGENDS.
5. STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS, TYPE AND LOCATION SHALL BE APPROVED BY THE CITY ENGINEER. TRAFFIC STRIPING, LEGENDS AND PAVEMENT MARKERS, TYPE AND LOCATIONS SHALL BE APPROVED BY THE CITY ENGINEER.
6. PRIOR TO GRADING OPERATIONS ALL PROPERTY BOUNDARIES SHALL BE VISIBLY MARKED BY SETTING WITNESS STAKES AT ALL FOUND PROPERTY MONUMENTS. FOUND MONUMENTS SHALL BE NOTED ON THE PLANS. RESETTING OF MISSING MONUMENTS OR ANY REMOVAL/REPLACEMENT OF EXISTING MONUMENTS SHALL BE DONE BY AN R.C.E. BELOW 33965 OR L.S. ONLY. THE CONTRACTOR SHALL NOT DISTURB EXISTING MONUMENTS NOTED ON PLANS OR FOUND DURING CONSTRUCTION.
7. ALL STREET SECTIONS ARE TENTATIVE. THE MINIMUM SECTION IS 3" A.C./ 4" A.B. ADDITIONAL SOIL TEST MAY BE TAKEN AFTER ROUGH GRADING TO DETERMINE EXACT SECTION REQUIREMENTS.
8. LOCATIONS OF FIELD DENSITY TEST SHALL BE DETERMINED BY THE CITY OR APPROVED TESTING AGENCY AND SHALL BE SUFFICIENT IN BOTH HORIZONTAL AND VERTICAL PLACEMENT TO PROVIDE REPRESENTATIVE TESTING OF ALL FILL PLACED. TESTING IN AREAS OP A CRITICAL NATURE OR SPECIAL EMPHASIS SHALL BE IN ADDITION TO THE NORMAL REPRESENTATIVE SAMPLINGS.
9. ALL UNDERGROUND FACILITIES, WITH LATERALS, SHALL BE IN PLACE AND INSPECTED PRIOR TO PAVING. INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: SEWER, WATER, ELECTRIC, GAS, TELEPHONE AND DRAINAGE.
10. THE DESIGN CIVIL ENGINEER SHALL EXERCISE SUFFICIENT CONTROL OF THE CONSTRUCTION TO ENSURE COMPLIANCE WITH PLANS, SPECIFICATIONS AND CITY CODES.
11. THE FINAL UTILITY LINE BACKFILL REPORT FROM THE PROJECT SOIL ENGINEER SHALL INCLUDE AN APPROVAL STATEMENT THAT THE BACKFILL IS SUITABLE FOR THE INTENDED USE.
12. THE FINAL COMPACTION REPORT AND APPROVAL FROM THE SOILS ENGINEER SHALL CONTAIN THE TYPE OF FIELD TESTING PERFORMED. EACH TEST SHALL BE IDENTIFIED WITH THE METHOD OF OBTAINING THE IN-PLACE DENSITY. WHETHER SAND CONE OR DRIVE RING AND SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES BY THE FIELD TECHNICIAN.
13. ALL CONSTRUCTION AREAS SHALL BE PROPERLY POSTED AND LIGHTED IN CONFORMANCE WITH THE STATE MANUAL OF WARNING SIGNS. LIGHTS, AND DEVICES FOR USE IN THE PERFORMANCE OF WORK UPON HIGHWAYS, IN ORDER TO ELIMINATE ANY HAZARDS.
14. AT NO TIME WILL PRIVATE PROPERTY BE USED IN CONJUNCTION WITH THE PROJECT UNLESS PROPERTY-OWNER APPROVAL IS OBTAINED IN WRITING AND GIVEN TO THE CITY FOR APPROVAL.
15. ANY CHANGES CONTEMPLATED IN: DRAINAGE, ELEVATIONS OR STRUCTURES SHOWN ON THESE PLANS MUST BE REVIEWED BY THE CITY TO DETERMINE IF REVISED PLANS SHOULD BE SUBMITTED. NONCOMPLYING CONSTRUCTION MAY BE SUBJECT TO PENALTIES AND/OR REMOVAL. "AS-BUILT" PLANS MUST BE SUBMITTED PRIOR TO ANY RELEASE OF SECURITIES AND/OR ISSUANCE OF A CERTIFICATE OF USE.



INDEX MAP
SCALE: 1"=200'



VICINITY MAP
NTS

GENERAL TRAFFIC SIGNAL NOTES:

1. ALL ITEMS TO BE FURNISHED AND ALL WORK TO BE DONE SHALL CONFORM TO THE REQUIREMENTS OF: THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION; CALTRANS MUTCD LATEST EDITION; AND THE SPECIAL PROVISIONS.
2. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS. THE CONTRACTOR, HOWEVER, IS REQUIRED TO TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL KNOWN SUB-STRUCTURES PRIOR TO DOING WORK THAT MAY DAMAGE OR INTERFERE WITH SUCH FACILITIES. ("UNDERGROUND SERVICE ALERT" (800) 227-2600).
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL AFFECTED AGENCIES AND UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. ALL PULL BOXES SHALL BE NO. 6 UNLESS NOTED ON THE PLAN. ALL PULL BOXES SHALL BE GROUTED AND HAVE A 1" DRAIN HOLE.
5. PULL BOXES SHALL NOT BE LOCATED IN OR WITHIN 1' OF ANY CURB ACCESS RAMP OR DRIVEWAY.
6. A 1' WIDE, 4" DEEP PCC "COLLAR" SHALL BE CONSTRUCTED AROUND ALL PULL BOXES WHICH ARE SET IN AREAS WITH SURFACE OTHER THAN A.C. OR PCC.
7. THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE PRECISE FIELD LOCATIONS OF ALL TRAFFIC SIGNAL EQUIPMENT PRIOR TO INSTALLATION.
8. ALL LANDSCAPING, HARDSCAPE AND ELECTRICAL LIGHTING WHICH IS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CITY AND PROPERTY OWNER.
9. ALL HARDWARE, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLETE THIS PROJECT SHALL BE FURNISHED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIAL PROVISIONS.
10. ALL NEW POLES AND SIGNAL GEAR SHALL BE PAINTED PER THE SPECIAL PROVISIONS.
11. ALL NEW POLES AND SIGNAL GEAR SHALL BE WRAPPED FOR PROTECTION DURING TRANSPORTATION AS SPECIFIED IN THE SPECIAL PROVISIONS.
12. ALL SALVAGED SIGNAL EQUIPMENT AND HARDWARE SHALL BE TRANSPORTED TO THE CITY YARD AT 72201 MANUFACTURING ROAD, THOUSAND PALMS, CA. CALL MR. BILL HARRISON AT (760) 343-6576 PRIOR TO DELIVERY.
13. DURING CONSTRUCTION THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY TRAFFIC CONTROL DEVICES INCLUDING TEMPORARY SIGNAL POLES AND HEADS AS DIRECTED BY THE ENGINEER.

GENERAL SIGNING AND STRIPING NOTES:

1. ALL WORK, MATERIALS, AND EQUIPMENT FOR THE TRAFFIC SIGNING AND STRIPING SHALL CONFORM TO THESE PLANS, THE STANDARD SPECIFICATIONS AND STANDARD DRAWINGS FOR THE CITY OF RANCHO MIRAGE AND THE STATE OF CALIFORNIA LATEST EDITION AND THE CALIFORNIA MUTCD LATEST EDITION.
2. RAISED PAVEMENT MARKERS SHALL CONFORM TO THE PROVISIONS IN SECTION 85, ENTITLED "PAVEMENT MARKERS." ADHESIVE FOR PAVEMENT MARKERS SHALL BE PER HENRY'S HOT MELT AND PROJECT SPECIFICATIONS.
3. ALL CONFLICTING STRIPING AND RAISED PAVEMENT MARKERS SHALL BE REMOVED. PAINT SHALL BE REMOVED USING THE WET SANDBLASTING METHOD AND THERMOPLASTIC SHALL BE REMOVED BY GRINDING. THE CONTRACTOR SHALL IMMEDIATELY CLEAN UP RESIDUE OF THIS ACTION AND BE DISPOSED OF. DEBRIS WITHIN THE ROADWAY SHALL BE REMOVED BY MECHANICAL SWEEPING OR HIGH POWER VACUUM. THE CONTRACTOR MUST TAKE PRECAUTIONS NECESSARY TO PROTECT PERSONS AND PROPERTY ADJACENT TO THE SANDBLASTING OPERATION.
4. LOCATIONS ELEVATIONS, AND DIMENSIONS OF EXISTING IMPROVEMENTS ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THIS PLAN, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. CONTRACTOR SHALL CAT TRACK AND NOTIFY THE CITY OF APPROVAL OF THE PROPOSED LOCATIONS OF ALL IMPROVEMENTS INCLUDING STRIPING AND MARKINGS SHOWN.
5. ALL SIGNS CONFORM TO SECTION 12-3.06A ENTITLED "STATIONARY MOUNTED SIGNS" SHALL BE SHEET ALUMINUM REFLECTORIZED USING VIP GRADE SHEETING WITH 3M #1150 PROTECTIVE OVERLAY FILM OR APPROVED EQUAL. THE SIGN SIZE SHALL BE AS SPECIFIED IN THE CALIFORNIA MUTCD UNLESS OTHERWISE NOTED ON THE PLAN.
6. SIGNS SHALL BE MOUNTED ON TELESPAR POST WITH BREAK-AWAY BASE AND VANDAL-PROOF FASTENERS PER CITY STANDARD NO. 601 UNLESS OTHERWISE NOTED ON THE PLAN. SIGN POSTS IN THE CITY OF RANCHO MIRAGE SHALL BE POWDER COATED BY APPROVED BROWN COATING.
7. ALL REGULATORY SIGNS MAY UTILIZE HIGH INTENSITY GRADE SHEETING WITH GRAFFITI PROOF INK IN LIEU OF NOTE NO. 5.

NOTICE TO CONTRACTOR

ACCORDING TO INFORMATION PROVIDED BY UNDERGROUND SERVICE ALERT (U.S.A.) DATED MAY 21, 2014, THE FOLLOWING ORGANIZATIONS ARE U.S.A. MEMBERS WITHIN THE PROJECT AREA: COACHELLA VALLEY WATER DISTRICT, CITY OF RANCHO MIRAGE, SOUTHERN CALIFORNIA GAS, SOUTHERN CALIFORNIA EDISON DISTRICT 29, VERIZON, CROWN CASTLE, TIME WARNER CABLE, AND IMPERIAL IRRIGATION.

THE EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES (UTILITY PIPES, STRUCTURES, ETC.) SHOWN ON THESE PLANS (MAIN LINES ONLY - NO SERVICE LATERALS) WERE ASCERTAINED BY A REVIEW OF RECORDS PROVIDED BY THESE MEMBER AGENCIES AND ARE APPROXIMATE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITIES SHOWN ON THESE PLANS AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

CALL UNDERGROUND SERVICE ALERT (U.S.A.) 1-800-422-4133 AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION.

CONSTRUCTION NOTES:

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8. PAINT 4" SOLID YELLOW LEFT EDGELINE PER CALTRANS STANDARD PLANS, PLAN NO. A20B, DETAIL 24.
9. PAINT MEDIAN ISLAND PER CALTRANS STANDARD PLANS, PLAN NO. A20B, DETAIL 29.
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REGISTERED PROFESSIONAL ENGINEER
DILESH R. SHETH
NO. C65078
CIVIL
STATE OF CALIFORNIA

SHEET INDEX:

1	TITLE SHEET
2	SIGNING AND STRIPING PLAN - FRANK SINATRA DRIVE
3	SIGNING AND STRIPING PLAN - BOB HOPE DRIVE
4	TRAFFIC SIGNAL PLAN

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.

BASIS OF BEARING

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH
R.C.E. C65078
3/24/16 DATE

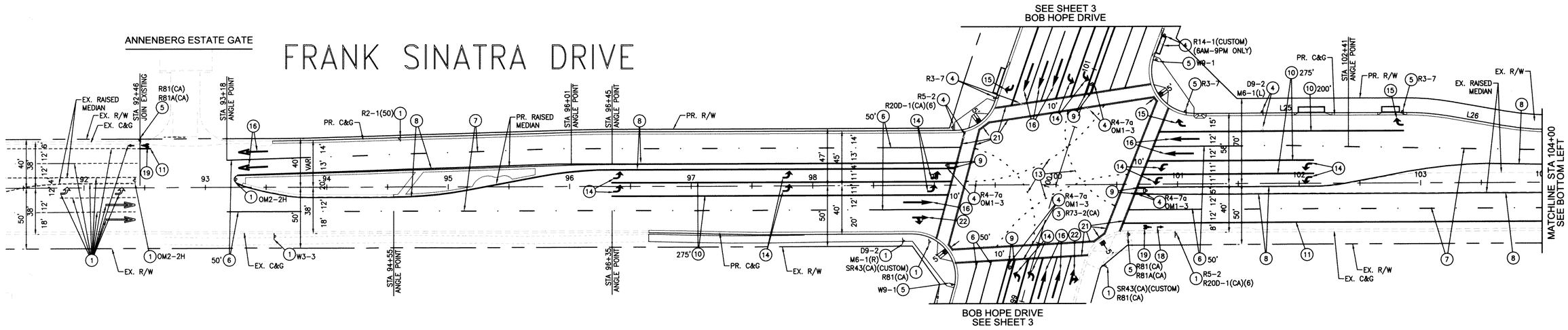
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 - #801B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

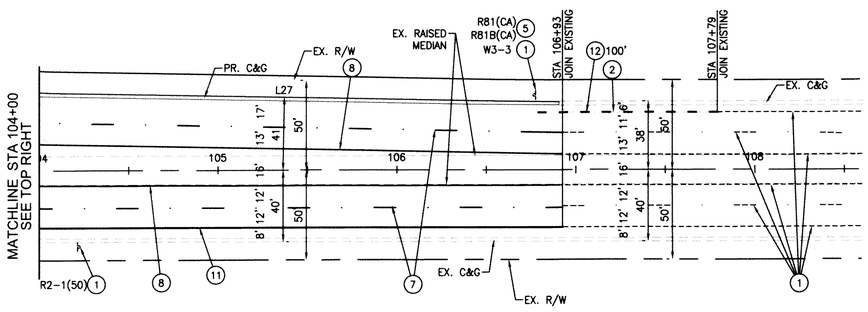
RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE
R.C.E. 47159
3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910
3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE TRAFFIC SIGNAL
PROJECT DESCRIPTION: SIGNING & STRIPING PLANS - CP 12-270-1
TITLE SHEET
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC 36 T4S R5E, SEC 31 T4S R6E, SEC 1 T5S R5E, SEC 6 T5S R6E

SHEET 1 OF 4
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222





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PREPARED UNDER THE DIRECT SUPERVISION OF:
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RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE 3/24/16 DATE
R.C.E. 47159

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER DATE
R.C.E. 43910

CITY OF RANCHO MIRAGE
PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE TRAFFIC SIGNAL, SIGNING & STRIPING PLANS - CP 12-270-1
SIGNING & STRIPING
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: SEC 36 T4S R5E, SEC 31 T4S R6E, SEC 1 T5S R5E SEC 6 T5S R6E

SHEET 2 OF 4
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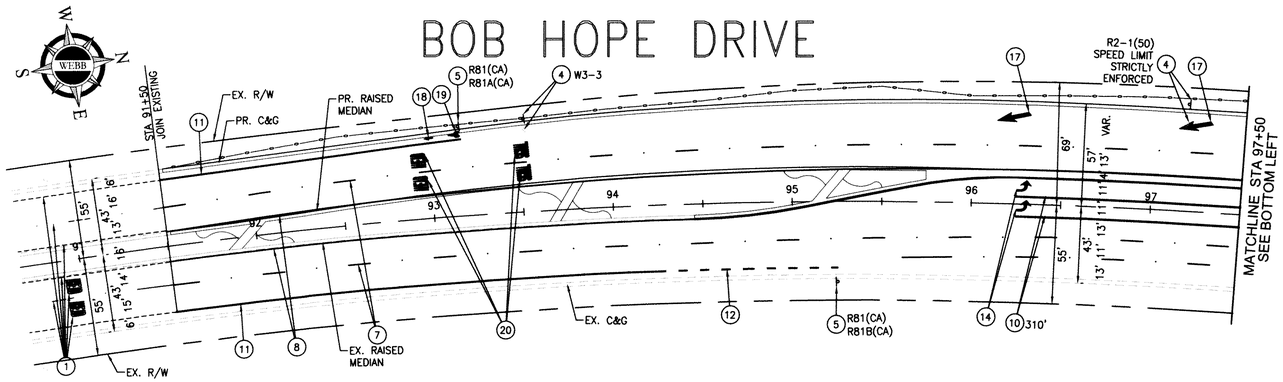

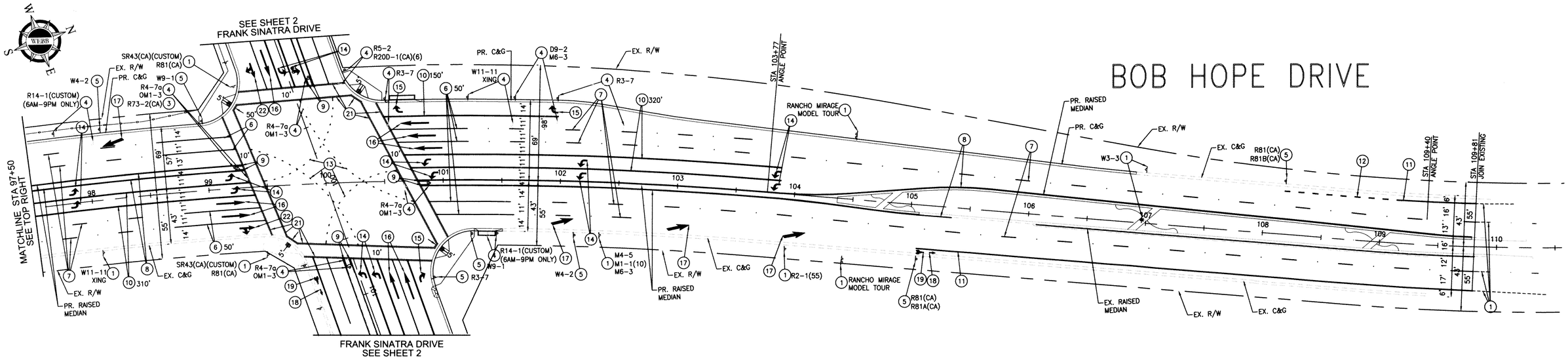

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PROJECT DESCRIPTION: SIGNING & STRIPING PLANS – CP 12-270-1
SIGNING & STRIPING
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: SEC 36 T4S R5E, SEC 31 T4S R6E, SEC 1 T5S R5E SEC 6 T5S R6E

SHEET 3 OF 4
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222

TRAFFIC SIGNAL CONSTRUCTION NOTES: (THIS SHEET ONLY)

1. CONSTRUCT P.C.C. FOUNDATION FOR TYPE "P" CABINET PER CALTRANS STANDARD PLAN ES-3C. THE TOP OF THE FOUNDATION SHALL BE SET 18" ABOVE GRADE. FURNISH AND INSTALL TYPE "P" CABINET WITH ECONOLITE COBALT ATC CONTROLLER, CITY APPROVED ARTERIAL SYSTEM MASTER CONTROLLER, AND ALL EQUIPMENT NECESSARY TO PROVIDE THE INTENDED OPERATION. FURNISH AND INSTALL DIMENSIONS SENSATA 24M11-WBE BATTERY BACK-UP SYSTEM (BBS).
2. FURNISH AND INSTALL TYPE III-CF DUAL METERED 120/240 VOLT ELECTRICAL SERVICE CABINET WITH 100AMP MAIN BREAKER (50 AMP, 30 AMP (TWO METERS) AND 20 AMP BREAKERS FOR SIGNAL, LIGHTING, AND IISNS, RESPECTIVELY).
3. FURNISH AND INSTALL A STANDARD SIZED SIGN ON SIGNAL MAST ARM PER CALTRANS STD. PLAN ES-7N, DETAIL "U".
4. FURNISH AND INSTALL AN OPTICOM MODEL 711 EVP DETECTOR OR A CITY APPROVED EQUIVALENT PER MANUFACTURER'S SPECIFICATIONS.
5. FURNISH AND INSTALL 3" CONDUIT, SCHEDULE 80 WITH PULL ROPE FROM SERVICE CABINET TO PROPOSED S.C.E. HANDHOLE. CONTRACTOR SHALL COORDINATE WITH S.C.E. SERVICE PLANNER FOR SERVICE INSTALLATION.
6. FURNISH AND INSTALL 2" CONDUIT, 3#6 (SERVICE, GFCI).
7. FURNISH AND INSTALL 2" CONDUIT, 2#10 (LUMINAIRE), 2#12 (IISNS).
8. REMOVE AND RELOCATE WIRELESS COMMUNICATION ANTENNA FROM EXISTING TYPE 19-4-80 POLE TO PROPOSED 26-4-100 POLE.
9. REMOVE AND DISCARD POLE AND MAST ARM. REMOVE AND SALVAGE ALL OTHER EQUIPMENT TO CITY YARD. REMOVE FOUNDATION COMPLETELY. BACKFILL WITH CLASS 2 BASE TO 95% COMPACTION.
10. FURNISH AND INSTALL TYPE 1-A ADVANCE FLASHING BEACON INSTALLATION WITH W3-3 SIGN PER CALTRANS STD. PLAN ES-7J, DETAIL "D".
11. REMOVE AND RELOCATE DEMARCATION CABINET. EXTEND TELEPHONE CONDUIT AND LINE TO NEW CABINET LOCATION.
12. FURNISH AND INSTALL ECONOLITE AUTOSCOPE ENCORE VIDEO DETECTION CAMERA WITH BICYCLE DIFFERENTIATION OR A CITY APPROVED EQUIVALENT PER MANUFACTURER'S SPECIFICATIONS.
13. REBAR CAGE, ANCHOR BOLTS, SIGNAL POLE, SIGNAL MAST ARM, LUMINAIRE MAST ARM, IISNS MAST ARM, AND SIGNAL HEADS TO BE FURNISHED BY CITY. CONTRACTOR TO PICK UP CITY FURNISHED EQUIPMENT AT CITY YARD (72-201 MANUFACTURING ROAD, THOUSAND PALMS, CA 92276). CONTRACTOR SHALL FURNISH PEDESTRIAN PUSH BUTTON, PEDESTRIAN SIGNAL HEAD, STREET NAME SIGN, AND ALL OTHER EQUIPMENT AND INSTALL PER PLAN.

AB ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.

BC INSTALL PULL BOX IN EXISTING CONDUIT RUN.

CB INSTALL CONDUIT INTO EXISTING PULL BOX.

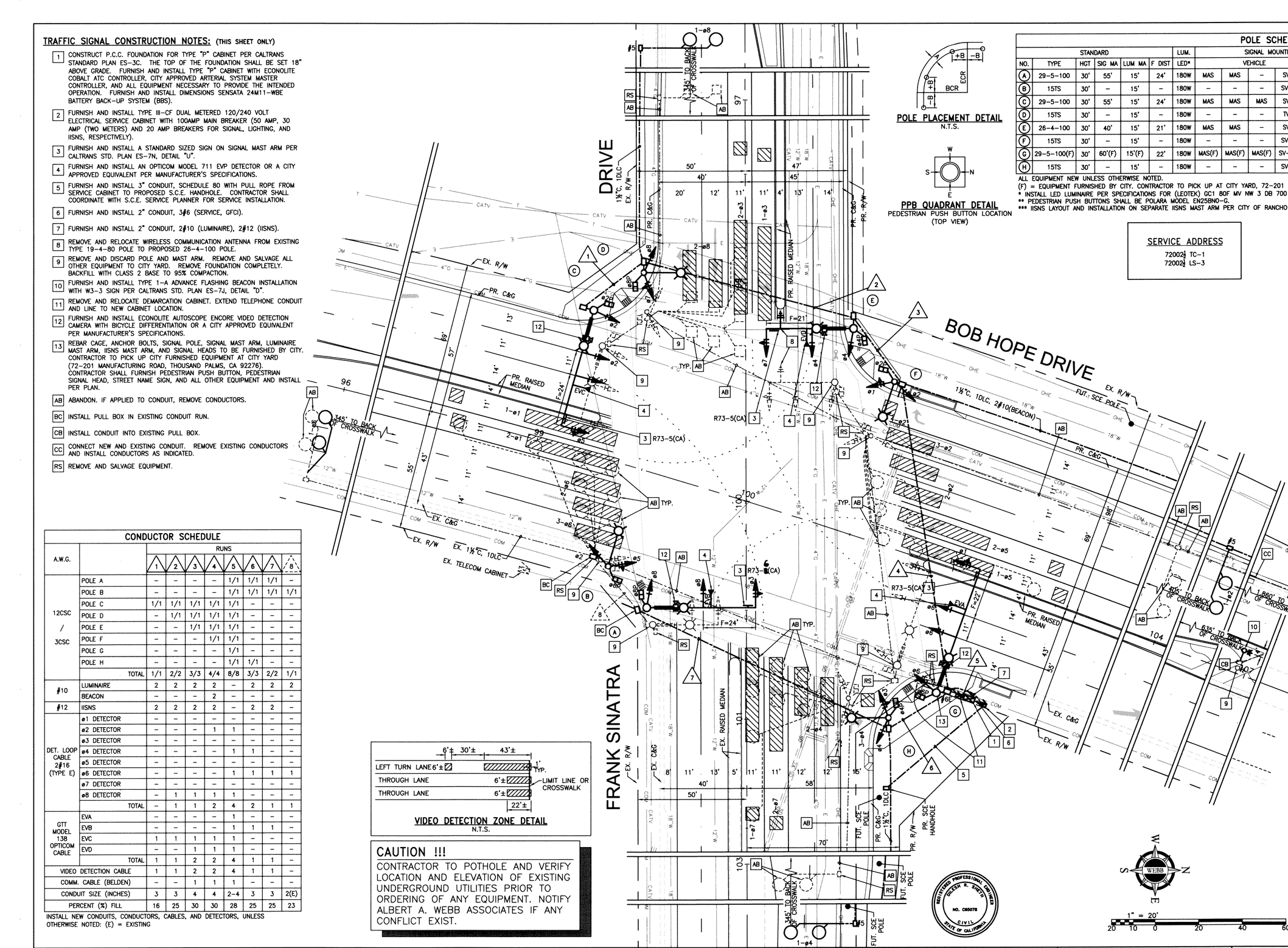
CC CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.

RS REMOVE AND SALVAGE EQUIPMENT.

CONDUCTOR SCHEDULE

A.W.G.		RUNS 1	2	3	4	5	6	7	8
12CSC / 3CSC	POLE A	–	–	–	–	1/1	1/1	1/1	–
	POLE B	–	–	–	–	1/1	1/1	1/1	1/1
	POLE C	1/1	1/1	1/1	1/1	1/1	–	–	–
	POLE D	–	1/1	1/1	1/1	1/1	–	–	–
	POLE E	–	–	1/1	1/1	1/1	–	–	–
	POLE F	–	–	–	1/1	1/1	–	–	–
	POLE G	–	–	–	–	1/1	–	–	–
	POLE H	–	–	–	–	1/1	1/1	–	–
	TOTAL	1/1	2/2	3/3	4/4	8/8	3/3	2/2	1/1
#10	LUMINAIRE	2	2	2	2	–	2	2	2
	BEACON	–	–	–	2	–	–	–	–
#12	IISNS	2	2	2	2	–	2	2	–
DET. LOOP CABLE 2#16 (TYPE E)	ø1 DETECTOR	–	–	–	–	–	–	–	–
	ø2 DETECTOR	–	–	–	–	1	1	–	–
	ø3 DETECTOR	–	–	–	–	–	–	–	–
	ø4 DETECTOR	–	–	–	–	1	1	–	–
	ø5 DETECTOR	–	–	–	–	–	–	–	–
	ø6 DETECTOR	–	–	–	–	1	1	1	1
	ø7 DETECTOR	–	–	–	–	–	–	–	–
	ø8 DETECTOR	–	1	1	1	1	–	–	–
	TOTAL	–	1	1	2	4	2	1	1
GTT MODEL 138 OPTICOM CABLE	EVA	–	–	–	–	1	–	–	–
	EVB	–	–	–	–	1	1	1	–
	EVC	1	1	1	1	1	–	–	–
	EVD	–	–	1	1	1	–	–	–
	TOTAL	1	1	2	2	4	1	1	–
VIDEO DETECTION CABLE		1	1	2	2	4	1	1	–
COMM. CABLE (BELDEN)		–	–	1	1	1	–	–	–
CONDUIT SIZE (INCHES)		3	3	4	4	2-4	3	3	2(E)
PERCENT (%) FILL		16	25	30	30	28	25	25	23

INSTALL NEW CONDUITS, CONDUCTORS, CABLES, AND DETECTORS, UNLESS OTHERWISE NOTED: (E) = EXISTING



VIDEO DETECTION ZONE DETAIL
N.T.S.

CAUTION !!!
CONTRACTOR TO POTHOLE AND VERIFY LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO ORDERING OF ANY EQUIPMENT. NOTIFY ALBERT A. WEBB ASSOCIATES IF ANY CONFLICT EXIST.

POLE PLACEMENT DETAIL
N.T.S.

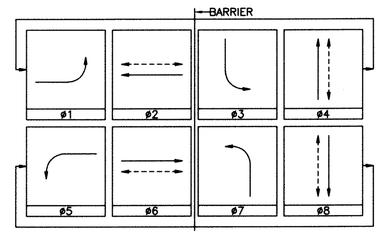
PPB QUADRANT DETAIL
PEDESTRIAN PUSH BUTTON LOCATION (TOP VIEW)

POLE SCHEDULE

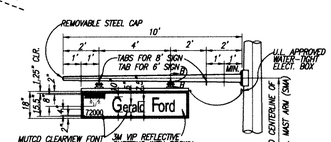
NO.	TYPE	STANDARD HGT	SIG MA	LUM MA	F DIST	LUM. LED*	SIGNAL MOUNTING VEHICLE				PED	PPB** PHASE	PPB** QUAD.	LOCATION A	LOCATION B	IISNS LEGEND*** NAME	IISNS LEGEND*** BLOCK
A	29-5-100	30'	55'	15'	24'	180W	MAS	MAS	–	SV-1-T	CS-1	6	W	6'	3'	Bob Hope	38000
B	15TS	30'	–	15'	–	180W	–	–	–	SV-2-TA	CS-1	8	N	4'	3'		
C	29-5-100	30'	55'	15'	24'	180W	MAS	MAS	MAS	SV-1-T	CS-1	8	N	4'	13'	Frank Sinatra	71990
D	15TS	30'	–	15'	–	180W	–	–	–	TV-2-T	CS-1	2	E	4'	13'		
E	26-4-100	30'	40'	15'	21'	180W	MAS	MAS	–	SV-1-T	CS-1	2	E	4'	4'	Bob Hope	37990
F	15TS	30'	–	15'	–	180W	–	–	–	SV-2-TA	CS-1	4	S	4'	2'		
G	29-5-100(F)	30'	60'(F)	15'(F)	22'	180W	MAS(F)	MAS(F)	MAS(F)	SV-1-T(F)	CS-1	4	S	4'	15'	Frank Sinatra	72000
H	15TS	30'	–	15'	–	180W	–	–	–	SV-2-TA	CS-1	6	W	4'	14'		

ALL EQUIPMENT NEW UNLESS OTHERWISE NOTED.
(F) = EQUIPMENT FURNISHED BY CITY. CONTRACTOR TO PICK UP AT CITY YARD, 72-201 MANUFACTURING ROAD, THOUSAND PALMS, CA 92276.
* INSTALL LED LUMINAIRE PER SPECIFICATIONS FOR (LEOTEK) GC1 80F MV NW 3 DB 700 LPCR WL OR (CREE) BXSP B HT 4ME A 40K-UL PB J Q9 UTL.
** PEDESTRIAN PUSH BUTTONS SHALL BE POLARA MODEL EN25BNO-G.
*** IISNS LAYOUT AND INSTALLATION ON SEPARATE IISNS MAST ARM PER CITY OF RANCHO MIRAGE STANDARD DETAIL 601B.

SERVICE ADDRESS
72002½ TC-1
72002½ LS-3

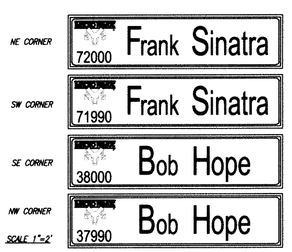


SIGNAL PHASING



HORIZONTAL SIGN MAST ARM SCALE 1"=4'

1. FOR INTERNALLY ILLUMINATED STREET NAME SIGN, MOUNTING HARDWARE, AND ELECTRICAL DETAILS, SEE CALTRANS STD. ES-7O, AND SPECIAL PROVISIONS
2. MAST ARM SHALL BE ROUND TAPERED STEEL TUBE, 0.1793", WITH MAXIMUM TAPER OF 0.14" PER FOOT AND 5.25"-5.50" O.D. AT POLE.**
3. IN LIEU OF THE TORQUE REQUIREMENTS FOR BOLTS, THEY SHALL BE TIGHTENED BY THE TURN-OF-NUT METHOD, 1/3 TURN FROM SNUG TIGHT CONDITION.
4. CALTRANS STANDARD DRAWING ES-7M, DETAIL "F", FATIGUE RESISTANT WELD, IS REQUIRED AT IISNS ARM PLATE AND POLE BASE PLATE.



SCALE 1"=2'

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
ENGINEER'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.

BASIS OF BEARING

PREPARED UNDER THE DIRECT SUPERVISION OF:
DILESH R. SHETH — 3/24/16 DATE
R.C.E. C65078

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
41-990 COOK STREET
BLDG. 1 - #801B
PALM DESERT, CA 92211
PH: 760-568-5005
FAX: 760-568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE — 3/24/16 DATE
R.C.E. 47159

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER — 3/24/16 DATE
R.C.E. 43910

CITY OF RANCHO MIRAGE

FRANK SINATRA DRIVE AND BOB HOPE DRIVE TRAFFIC SIGNAL

PROJECT DESCRIPTION: SIGNING & STRIPING PLANS - CP 12-270-1
TRAFFIC SIGNAL MODIFICATION
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
SEC 36 T4S R5E, SEC 31 T4S R6E, SEC 1 T5S R5E, SEC 6 T5S R6E

SHEET 4 OF 4
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # E1400222

CITY OF RANCHO MIRAGE

FRANK SINATRA DRIVE AND BOB HOPE DRIVE

MEDIAN LANDSCAPE IMPROVEMENTS CITY PROJECT CP 12-270-1

MEDIAN LANDSCAPE REHABILITATION

GENERAL NOTES

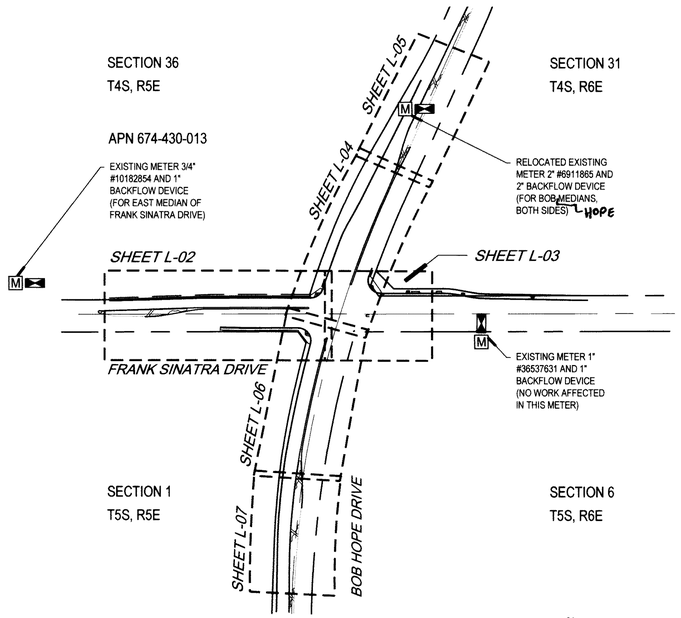
1. PRIOR TO FINAL INSPECTION A "CERTIFICATE OF CONSTRUCTION COMPLIANCE" SHALL BE MADE READY FOR THE INSPECTOR. THE CERTIFICATE SHALL STATE THAT "BASED UPON PERSONAL KNOWLEDGE THE WORK APPEARS IN EVERY MATERIAL RESPECT TO BE IN COMPLIANCE WITH THE PLANS". THE CERTIFICATE MUST BE SIGNED BY THE GENERAL CONTRACTOR.
2. THE CONTRACTOR AND SUBCONTRACTORS SHALL CAREFULLY EXAMINE THE SITE, DRAWINGS, AND SPECIFICATIONS TO OBTAIN FIRSTHAND KNOWLEDGE OF JOB CONDITIONS. ANY DISCREPANCIES OR CONDITIONS NEEDING CLARIFICATION SHALL BE REPORTED TO THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK. NO ALLOWANCE SHALL BE GIVEN FOR FAILURE TO COMPLY WITH THE ABOVE OR ANY CONDITIONS THAT CAN BE DETERMINED BY EXAMINING THE SITE, DRAWINGS, AND SPECIFICATIONS.
3. THE CONTRACTOR AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS ON THE DRAWINGS AND SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION LAYOUT. NO ALLOWANCE SHALL BE GIVEN TO THE CONTRACTOR OR SUBCONTRACTORS FOR CHANGES RESULTING FROM FAILURE TO COMPLY W/ THESE REQUIREMENTS.
4. DO NOT SCALE THE DRAWINGS. ALL DIMENSIONS SPECIFIED GOVERN. DIMENSIONS ARE NOMINAL AND ARE TO THE FACE OF OBJECTS UNLESS OTHERWISE INDICATED.
5. EACH SUBCONTRACTOR IS CONSIDERED A SPECIALIST IN HIS/HER RESPECTIVE FIELD AND SHALL, PRIOR TO SUBMISSION OF HIS/HER BID OR PERFORMANCE OF THE WORK, NOTIFY THE CONTRACTOR AND LANDSCAPE ARCHITECT OF ANY WORK CALLED OUT IN THE DRAWINGS OR SPECIFICATIONS WHICH CANNOT BE FULLY GUARANTEED OR CONSTRUCTED AS DESIGNED OR DETAILED.
6. DETAILS SHALL BE USED WHERE THE CONDITION OCCURS FOR WHICH THEY ARE INTENDED. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR FIRST-CLASS WORK FOR THE TRADE INVOLVED. THE LANDSCAPE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED OF ANY ALTERNATE, NON-STANDARD OR UNTESTED METHODS PROPOSED.
7. LANDSCAPE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED BY CONTRACTOR OF ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND APPLICABLE CODES OF GOVERNING BODY HAVING JURISDICTION. IT IS UNDERSTOOD THAT THE "FIELD INSPECTOR" FOR SUCH AGENCY HAS FINAL AUTHORITY TO APPROVE OR DISAPPROVE PROJECT CONSTRUCTION AND TO ASSESS THE CORRECTNESS OF ALL CODE RELATED ITEMS.
8. CONTRACTOR AND APPROPRIATE SUBCONTRACTORS ARE RESPONSIBLE FOR HOOKUP OF ALL UTILITIES REQUIRED BY THE WORK, BOTH TEMPORARY AND PERMANENT.
9. PRIOR TO EXCAVATION, CONTRACTOR SHALL DETERMINE LOCATIONS OF UTILITY SERVICES IN THE AREA AND THE SUITABILITY OF CONNECTIONS AS INDICATED ON THE DRAWINGS OR AS REQUIRED TO SUPPORT THE WORK. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING UTILITY CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
10. TRADE NAMES AND MANUFACTURERS REFERRED TO IN DRAWINGS AND SPECIFICATIONS INDICATE CHARACTER AND QUALITY STANDARDS OF MATERIALS AND EQUIPMENT TO BE FURNISHED. IF THE CONTRACTOR WISHES TO SUBSTITUTE MATERIAL OR EQUIPMENT OF EQUAL QUALITY BY ANOTHER MANUFACTURER, HE MAY SUBMIT ALTERNATES FOR APPROVAL BY ENGINEER. APPROVAL OF THESE SUBSTITUTIONS WILL BE CONSIDERED AFTER AWARD OF CONTRACT.
11. IT IS THE RESPONSIBILITY OF CONTRACTOR AND ALL SUBCONTRACTORS TO ORDER MATERIAL, EQUIPMENT AND LABOR SUFFICIENTLY IN ADVANCE SO AS TO INSURE TIMELY CONSTRUCTION SEQUENCE.
12. CONTRACTOR AND RESPECTIVE SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THEIR RESPECTIVE MATERIALS DELIVERED TO SITE. MATERIALS SHALL BE SECURELY STORED, PROTECTED AND KEPT DRY BEFORE INSTALLATION. CONTRACTOR SHALL PROVIDE APPROVED TEMPORARY CONSTRUCTION FENCING AND OTHER SECURITY MEASURES TO PROTECT THE PROJECT DURING CONSTRUCTION.
13. CONTRACTOR AND RESPECTIVE SUBCONTRACTORS ARE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DEFECTIVE EQUIPMENT OR WORK BEFORE FINAL ACCEPTANCE BY OWNER.
14. CONTRACTOR SHALL KEEP PREMISES CLEAN AND WELL ORDERED DURING CONSTRUCTION AND SHALL PROVIDE THOROUGH CLEANING PRIOR TO FINAL INSPECTION AND ACCEPTANCE BY OWNER.
15. FINISH GRADE SHALL HAVE A MINIMUM SLOPE OF ¼" PER FOOT (2%) AWAY FROM ANY PORTION OF THE FOUNDATION FOR A DISTANCE OF 3 FEET.
16. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE TO BE IMPROVED OF WEED GROWTH, RUBBISH AND DEBRIS, AND CONCRETE RUBBLE, ETC., THAT ARE TO BE REMOVED FOR CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THE LANDSCAPE PLANS. ROOTS THREE INCHES (3") IN DIAMETER AND LARGER, AND ROCKS AND BROKEN MASONRY LARGER THAN FOUR INCHES (4") IN THE GREATEST DIMENSION SHALL BE REMOVED TO A MINIMUM DEPTH OF TWELVE INCHES (12") BELOW FINISHED GRADE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING OF THE PROPOSED WORK AREA, AND RELOCATION COSTS OF ALL EXISTING UTILITIES. PERMITTEE MUST INFORM OWNER AND CITY OF CONSTRUCTION SCHEDULE AT LEASE 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION.

UNDERGROUND STRUCTURES

ALL UNDERGROUND STRUCTURES OR UTILITIES REPORTED BY THE OWNER OR OTHERS AND THOSE SHOWN ON THE RECORDS EXAMINED ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT.

THE OWNER, BY ACCEPTING THESE PLANS OR PROCEEDING WITH THE IMPROVEMENTS PURSUANT THERETO AGREES TO ASSUME LIABILITY AND TO HOLD THE UNDERSIGNED HARMLESS FOR ANY DAMAGES RESULTING FROM THE EXISTENCE OF UNDERGROUND UTILITIES OR STRUCTURES NOT REPORTED TO THE UNDERSIGNED, NOT INDICATED ON THE PUBLIC RECORDS EXAMINED, LOCATED AT VARIANCE WITH THAT REPORTED OR SHOWN ON THE RECORDS EXAMINED.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES SHOWN AND ANY OTHER UTILITIES OR STRUCTURES FOUND AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK.



SITE INDEX MAP

SCALE: 1"=200'

NOTICE TO CONTRACTORS

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

CONTRACTOR IS TO REVIEW THE HARDSCAPE LAYOUT SHOWN ON THE CIVIL, ARCHITECTURAL, AND LANDSCAPE PLANS FOR DISCREPANCIES PRIOR TO "POURING" ANY CONCRETE. WEBB ASSOCIATES ASSUMES NO RESPONSIBILITY FOR "MIS-POURED" FLATWORK.

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

HOLD HARMLESS & INDEMNIFICATION CLAUSE

CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER/DEVELOPER, THE CITY, COUNTY OF LOCAL JURISDICTION, AND THE LANDSCAPE ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER/DEVELOPER, THE CITY, COUNTY OF LOCAL JURISDICTION, OR THE LANDSCAPE ARCHITECT.

SCOPE OF WORK:

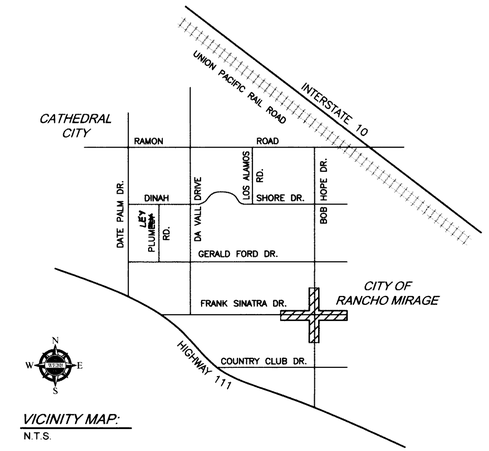
CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS AS DESCRIBED ON THESE DRAWINGS TO PROVIDE PLANTING, IRRIGATION, HARDSCAPE INSTALLATION, AND MISC. SITE AMENITIES AS INDICATED ON PLANS.

PLAT SHEET#

5-6-6-2,
5-5-1-1,
4-5-36-4

UTILITY CONTACT LIST

COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOUTHERN CALIFORNIA GAS	(760) 674-0290
VERIZON	(760) 778-3601
TIME WARNER CABLE	(760) 674-5472
SOUTHERN CALIFORNIA EDISON	(760) 202-4259



VICINITY MAP:

N.T.S.

DEVELOPER / APPLICANT

CITY OF RANCHO MIRAGE
ATTN: PUBLIC WORKS

ENGINEER

ALBERT A. WEBB ASSOCIATES
3788 McCRAY STREET
RIVERSIDE, CA 92506
ATTN: DILESH R. SHETH (951) 320-6037

LANDSCAPE ARCHITECT

ALBERT A. WEBB ASSOCIATES
3788 McCRAY STREET
RIVERSIDE, CA 92506
ATTN: JAIME MACIAS (951) 248-4275

LANDSCAPE AREA:

SQ. FT. OF CONCRETE/ PAVERS .....6,275 SF
SQ. FT. OF ROCK COBBLE .....1,485 SF
SQ. FT. OF TURF AREA .....0 SF
SQ. FT. OF SHRUB AREA.....±18,600 SF
SQ. FT. OF TOTAL LANDSCAPE AREA.....**±26,360 SF**

CLIMATE ZONE:

WUCOLS REGION : 6
SUNSET ZONE : 13
LOCAL C.I.M.I.S. WEATHER STATION: CATHEDRAL CITY #118
C.I.M.I.S. REF. EVAPO TRANSPIRATION (ETO) ZONE: 18

ZONE: 3 - 75.0"

SHEET INDEX

COVER SHEET..... L-01
IRRIGATION / PLANTING PLAN..... L-02 - L-07
LEGENDS AND NOTES..... L-08
IRRIGATION DETAILS..... L-09 - L-10
PLANTING DETAILS..... L-11
LANDSCAPE SPECIFICATIONS..... L-12 - L-15

SUBMITTALS	
NO.	DATE
1	4-27-2015
2	1-28-2016
3	
4	

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date _____ Water Management Department _____

CVWD Plan #_____ Development Services Department _____

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS — No. 5870 — REGISTRATION DATE 12-31-2015 — RENEWAL DATE 11/20/2015 — STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL: UNDERGROUND SERVICE ALERT TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

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

L. ARCH'S NOTE TO CONTRACTOR: 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; THAT 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 DESIGN PROFESSIONAL.
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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FILED IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS, R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES — CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE, R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER, R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE

PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
COVER SHEET
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-01
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

© L:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-CH-TITLE SHEET.DWG

IRRIGATION PLAN

SEE IRRIGATION NOTES ON SHEET L-08

PLANTING PLAN

SEE PLANTING NOTES ON SHEET L-08

IRRIGATION EQUIPMENT LEGEND (THIS SHEET ONLY)

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
(A) triangle	EXISTING CONTROLLER "A" (RAINBIRD ESP-LXD DECODER CONTROLLER) LOCATED IN MEDIAN OF FRANK SINATRA DR. NEAR VON DEHN RD. (PROTECT IN PLACE)	50-200 STATIONS	-	-
M	EXISTING IRRIGATION CVWD WATER METER #10182854 (PROTECT IN PLACE)	3/4"	CVWD STD.	-
	EXISTING FEBCO IRRIGATION R.P. BACKFLOW DEVICE (PROTECT IN PLACE)	3/4"	CVWD STD.	-
MV	EXISTING IRRIGATION MASTER VALVE (PROTECT IN PLACE)	1 1/2"	-	-
FM	EXISTING IRRIGATION FLOW SENSOR (PROTECT IN PLACE)	1"	-	-
	NIBCO BRASS BALL VALVE MOD.# T-580-A TWO-PIECE - STD. PORT, NPT X NPT	LINE SIZE	2C, 3G	1,2,3
⊕	EXISTING POINT SOURCE DRIP REMOTE CONTROL VALVE ("A1") TO BE REMOVED AND RELOCATED PER PLAN AND DETAIL.	1"	2C, 2E, 3F	1,2
	EXISTING TREE BUBBLER REMOTE CONTROL VALVE ("A2") TO BE REMOVED AND RELOCATED PER PLAN AND DETAIL.	1"	2C, 2E, 3C	1,2
	QUICK COUPLER VALVE RAINBIRD 44-LRC	1"	2C, 3A, 3B	1,2,3
	EMITTER: **RAINBIRD XERI-BUG XB-20-PC-1032**, POLY FLEX RISER AND ADAPTER: **RAINBIRD PRF-FRA 12"**	2 GPH 30 PSI	3D	3
•	EXISTING TREE BUBBLERS (TWO PER TREE) (PROTECT IN PLACE)	.5 GPM (EA.)	-	-
	FLOOD BUBBLER ON SCH. 80 RISER RAINBIRD 1402 @ 30 PSI (TWO PER TREE)	.5 GPM (EA.)	3H	3
F	AUTOMATIC FLUSH VALVE ASSEMBLY- INSTALL AT EACH LATERAL TERMINAL MODEL: NETAFIM TL050MFV-1	1/2"	3E	1,2,3
	NON-PRESSURE LATERAL LINE. SCH. 40 PVC PIPE. 12" MIN COVER.	PER PLAN	2A, 2B	1
	EXISTING IRRIGATION MAINLINE (PROTECT IN PLACE)	PER PLAN	-	1
	SCHEDULE 80 PVC PIPE, 2X SERVICE PIPE SIZE. ALLPIPES THAT CROSS UNDER PAVEMENT AND STRUCTURES ARE TO BE SLEEVED SEPARATELY PER DETAIL. 18" MINIMUM COVER.	PER PLAN/	2A, 2B	1

IRRIGATION EQUIPMENT LEGEND (THIS SHEET ONLY)

(1) PIPING AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY. PLANS ARE ESSENTIALLY DIAGRAMMATIC.
(2) VALVE BOXES SHALL BE TAN COLOR.
(3) OR APPROVED EQUAL.
(4) TO BE INSTALLED PER MANUFACTURE SPECIFICATIONS
(5) REMOVED EQUIPMENT TO BE RETRIEVED TO CITY REPRESENTATIVE

LANDSCAPE MATERIALS LEGEND

SYMBOL	QTY.	DESCRIPTION/ MODEL#:	NOTES:
	1,485 SF	ARIZONA COBBLE 4"-6" DIA. SET IN MORTAR BED BY **DESERT ROCK AND SUPPLY**. MATCH EXISTING ROCK COBBLE.	REFER TO DETAIL 4E
	6,275 SF	60 MM ACKERSTONE HOLLAND II, 4"X4" PAVERS THROUGH MIX, CREAM COLOR, OR EQUIV.	REFER TO DETAIL 4C, STD. 213
	37	EXISTING BOULDERS PROTECT IN PLACE. CONTRACTOR SHALL RESET BOULDER PER DETAIL IF MOVED DURING DEMOLITION OR CONSTRUCTION PROCESS. BOULDERS NOT TO EXCEED 15" MAXIMUM ABOVE GRADE.	REFER TO DETAIL 4B
	18,600 SF	2" DEPTH 3/8" MINUS 'DESERT GOLD' DECOMPOSED GRANITE IN ALL PLANTERS. MATCH EXISTING DECOMPOSED GRANITE.	REFER TO DETAIL 4D
		EXISTING CURB / MAINTENANCE BAND. PROTECT IN PLACE.	

PLANTING LEGEND REFER TO DETAIL 4A FOR SHRUB PLANTING

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
•	2	Chamaerops humilis / Mediterranean Fan Palm Multi-trunk (Existing - To be protected in place)	--	--

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	PF
A	10	Agave desmettiana / Dwarf Century Plant	15 GAL	LOW (0.2)
B	39	Bougainvillea x `Oo-La-La` TM / Oo-la-la Bougainvillea	5 GAL	MED (0.5)
C	22	Callistemon citrinus `Little John` / Dwarf Bottle Brush	5 GAL	LOW (0.2)
L	8	Lantana montevidensis / Trailing Lantana	5 GAL	MED (0.5)
N	26	Lantana x `New Gold` / New Gold Lantana	5 GAL	MED (0.5)
⊙	36	Muhlenbergia capillaris `Regal Mist` TM / Muhly	5 GAL	MED (0.5)
RE	3	Russelia equisetiformis / Firecracker Plant	5 GAL	MED (0.5)
Y	12	Yucca rostrata / Beaked Yucca	15 GAL	LOW (0.2)

PLANT TYPE

STATION
VALVE SIZE
FLOW (GPM)

HEAD TYPE
AREA (SF)

GRAPHIC SCALE 1"=20'
20 0 20

LICENSED LANDSCAPE ARCHITECT
JAIME MACIAS No. 5870
SIGNATURE
12-31-2015
RENEWAL DATE
11/20/2015
DATE
STATE OF CALIFORNIA

CVWD LANDSCAPE APPROVAL

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Date ______ Water Management Department

CVWD Plan #______ Development Services Department

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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE

PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
IRRIGATION / PLANTING PLAN
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-02 OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

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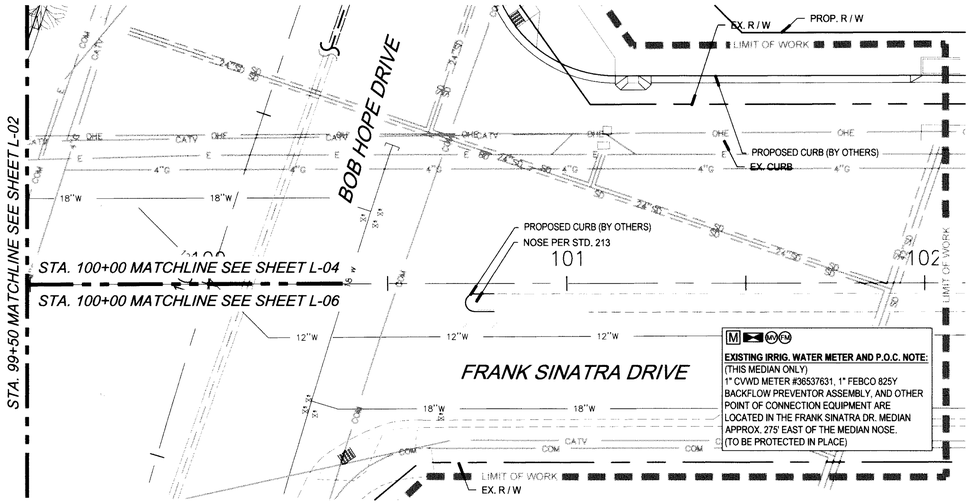
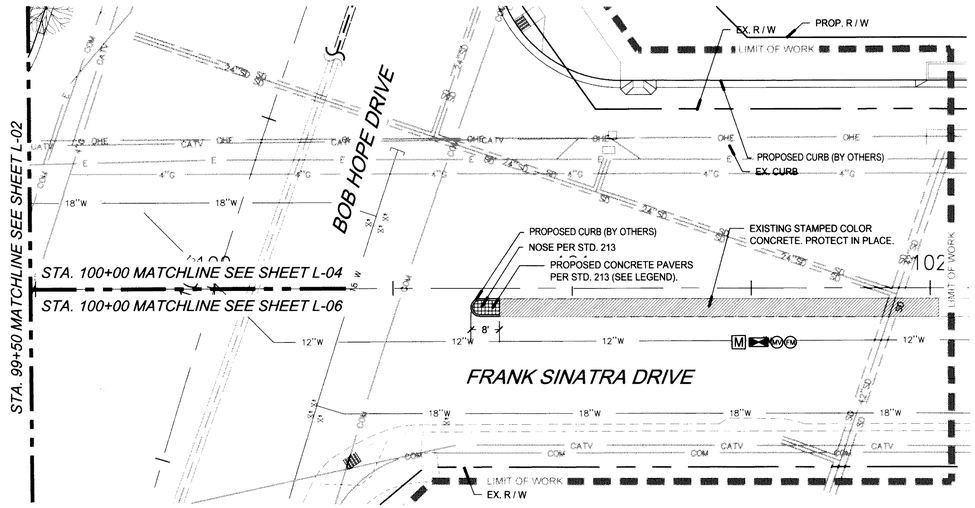


IRRIGATION PLAN

SEE IRRIGATION NOTES ON SHEET L-08



PLANTING PLAN

SEE PLANTING NOTES ON SHEET L-08

IRRIGATION EQUIPMENT LEGEND *(THIS SHEET ONLY)*

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
M	EXISTING IRRIGATION CVWD WATER METER #36537631 (PROTECT IN PLACE)	1"	CVWD STD.	-
	EXISTING FEBCO IRRIGATION R.P. BACKFLOW DEVICE (PROTECT IN PLACE)	1"	CVWD STD.	-
MV	EXISTING IRRIGATION MASTER VALVE (PROTECT IN PLACE)	1 1/2"	-	-
FM	EXISTING IRRIGATION FLOW SENSOR (PROTECT IN PLACE)	1"	-	-

LANDSCAPE MATERIALS LEGEND

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		EXISTING CURB / MAINTENANCE BAND. PROTECT IN PLACE.	

GRAPHIC SCALE 1"=20'

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Date _____ Water Management Department

CVWD Plan # _____ Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS No. 5870 — 12-31-2015 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

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MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
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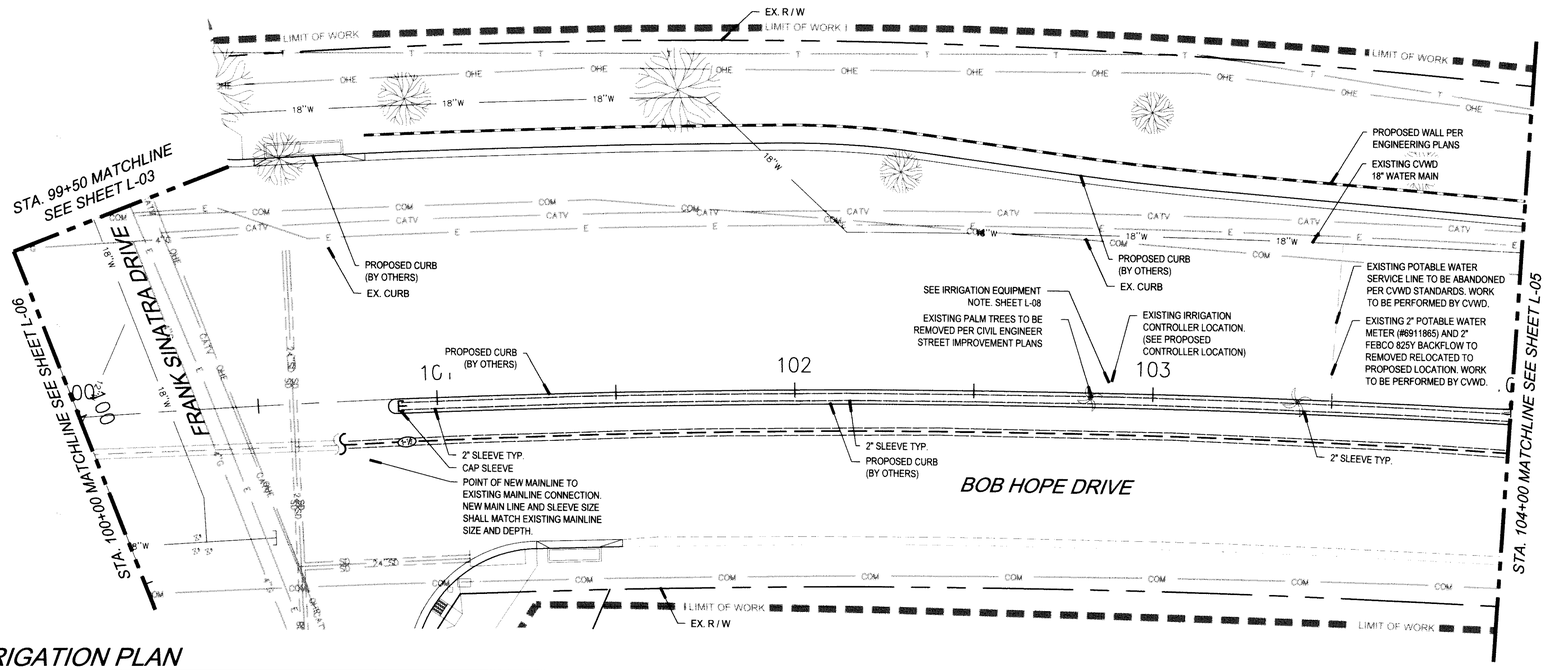
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

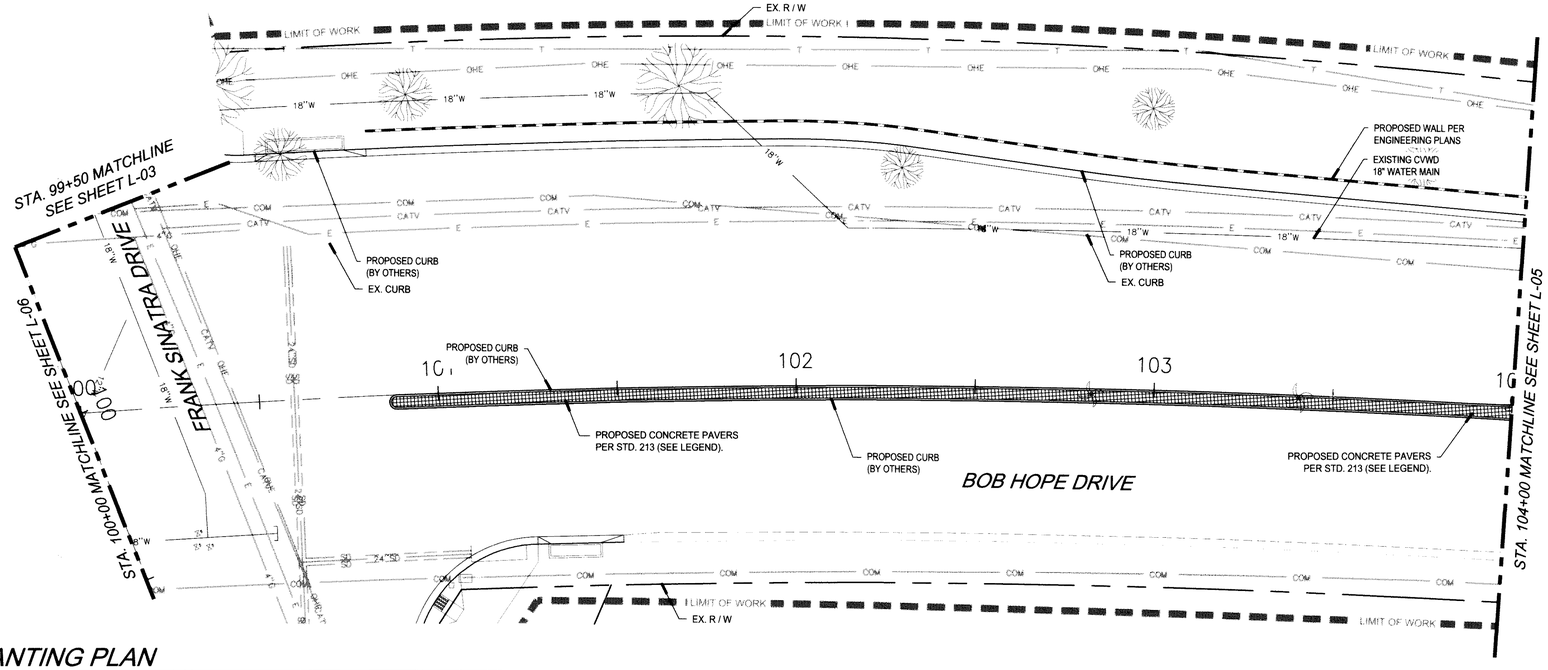
SHEET L-03
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # PW 4-3-2015 EW00222

© 2014 H:\2100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-02 IRRIGATION PLANS.DWG



IRRIGATION PLAN

SEE IRRIGATION NOTES ON SHEET L-08



PLANTING PLAN

SEE PLANTING NOTES ON SHEET L-08

IRRIGATION EQUIPMENT LEGEND *(BOB HOPE DRIVE)*

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
B	EXISTING CONTROLLER "B" (RAINBIRD ESP-LXD DECODER CONTROLLER) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN.	50-200 STATIONS	2D	1
C	EXISTING CONTROLLER "C" (RAINBIRD ESP-LXD DECODER CONTROLLER) LOCATED APPROX. 215' SOUTH FROM NOSE OF SECOND MEDIAN ON BOB HOPE DRIVE. (PROTECT IN PLACE)	50-200 STATIONS	-	1
M	EXISTING IRRIG. WATER METER (#6911865) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	2
	EXISTING BACKFLOW PREVENTION DEVICE TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	3
PR	PRESSURE REGULATOR- WILKENS MODEL 500XLHLR. RANGE: 10-125 PSI	1"	2F	2,4,5
MV	EXISTING IRRIGATION MASTER VALVE (REMOVE AND RELOCATE PER PLAN)	2"	2C, 2E, 2G	2,4
FM	EXISTING IRRIGATION FLOW SENSOR (REMOVE AND RELOCATE PER PLAN)	1"	2C, 2E,2H	2,4
	NIBCO BRASS BALL VALVE MOD.# T-580-A. TWO-PIECE - STD. PORT, NPT X NPT	LINE SIZE	2C, 2G	2,4,5,7
	EXISTING POINT SOURCE DRIP REMOTE CONTROL VALVE. (PROTECT IN PLACE)	1"	-	2,4
	EXISTING TREE BUBBLER REMOTE CONTROL VALVE (PROTECT IN PLACE)	1"	-	2,4
	QUICK COUPLER VALVE RAINBIRD 44-LRC	1"	2C, 3A, 3B	2,4,5,7
■	EMITTER: **RAINBIRD XERI-BUG XB-20-PC-1032.** POLY FLEX RISER AND ADAPTER: **RAINBIRD PRF-FRA 12"**	2 GPH 30 PSI	3D	5
●	EXISTING TREE BUBBLERS (TWO PER TREE) (PROTECT IN PLACE)	.5 GPM (EA.)	-	-
F	AUTOMATIC FLUSH VALVE ASSEMBLY- INSTALL AT EACH LATERAL TERMINAL MODEL: NETAFIM TL050MFV-1	1/2"	3E	2,4,5,6
	NON-PRESSURE LATERAL LINE. SCH. 40 PVC PIPE. 12" MIN COVER.	PER PLAN	2A, 2B	2
	IRRIGATION MAINLINE TO BE SCH 40 PVC PIPE. 18" MIN. COVER.	PER PLAN	2A, 2B	2
	EXISTING IRRIGATION MAINLINE (PROTECT IN PLACE)	PER PLAN	-	2
	SCHEDULE 80 PVC PIPE. 2X SERVICE PIPE SIZE. ALLPIPES THAT CROSS UNDER PAVEMENT AND STRUCTURES ARE TO BE SLEEVED SEPARATELY PER DETAIL 18" MINIMUM COVER.	PER PLAN	2A, 2B	2

(1) LANDSCAPE CONTRACTOR TO FIELD VERIFY ELECTRICAL POWER OUTLET FOR IRRIGATION CONTROLLER
(2) PIPING AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY. PLANS ARE ESSENTIALLY DIAGRAMMATIC.
(3) CONTRACTOR TO LOCATE BACKFLOW PREVENTER IN SHRUB AREA AND SCREEN WHENEVER POSSIBLE.
(4) VALVE BOXES SHALL BE TAN COLOR. SEE DETAIL 3H FOR VALVE BOX LAYOUT
(5) OR APPROVED EQUAL.
(6) TO BE INSTALLED PER MANUFACTURE SPECIFICATIONS
(7) REMOVED IRRIGATION EQUIPMENT THAT WILL NO LONGER BE USED TO BE RETRIEVED TO CITY REPRESENTATIVE

PLANTING LEGEND REFER TO DETAIL 4A FOR SHRUB PLANTING

PLANT TYPE
STATION
VALVE SIZE
FLOW (GPM)
HEAD TYPE
AREA (SF)

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
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SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	PF
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O	36	Muhlenbergia capillaris 'Regal Mist' TM / Muhly	5 GAL	MED (0.5)
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SEE LANDSCAPE MATERIALS LEGEND ON SHEET L-08

GRAPHIC SCALE 1"=20'
20 0 20

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Date _____ Water Management Department

CVWD Plan # _____ Development Services Department

LICENSED LANDSCAPE ARCHITECT JAIME MACIAS 4870 STATE OF CALIFORNIA
Expiration 12-31-2015
Renewal Date 11/20/2015
Date

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PREPARED UNDER THE DIRECT SUPERVISION OF:
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SHEET L-04
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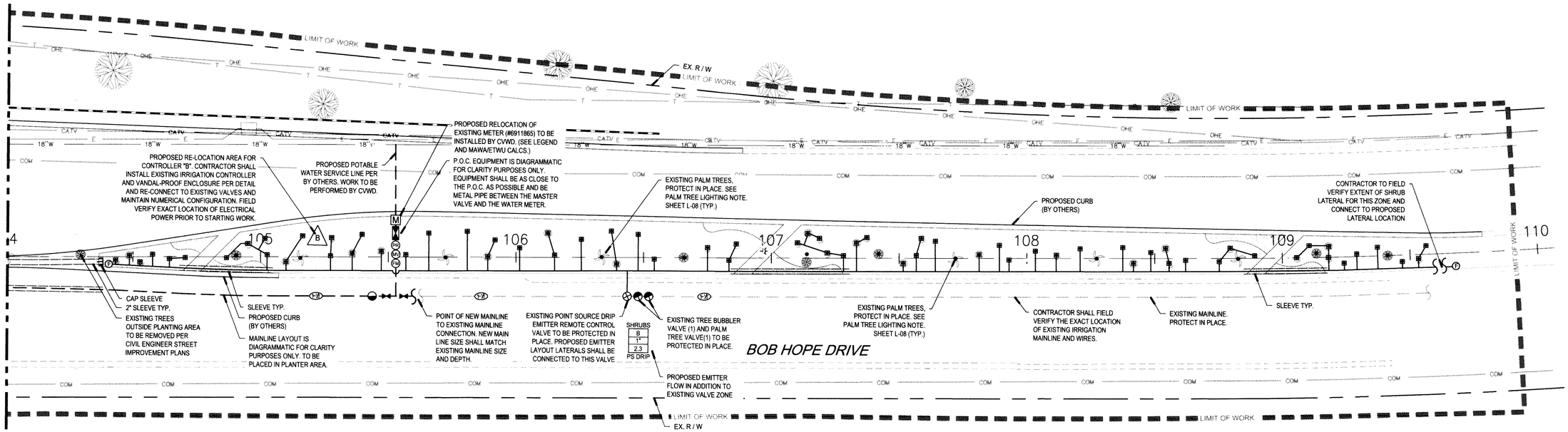
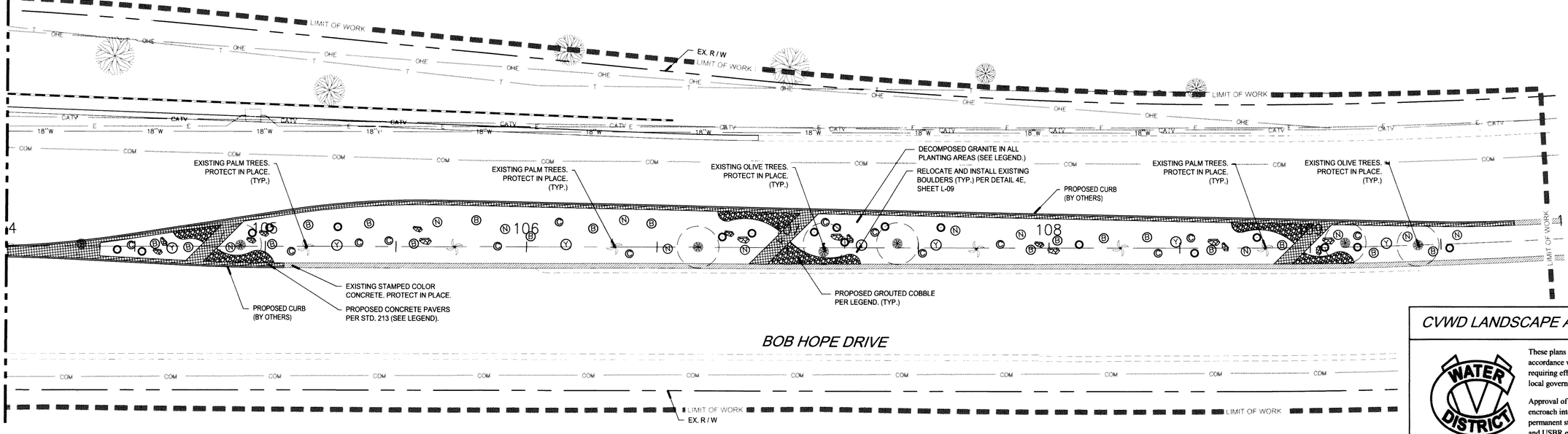


IRRIGATION PLAN

SEE IRRIGATION LEGEND (BOB HOPE DR.) NOTES ON SHEET L-08



PLANTING PLAN

SEE PLANTING/ LANDSCAPE MATERIALS LEGEND AND NOTES ON SHEET L-08

CVWD LANDSCAPE APPROVAL

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Date _____ Water Management Department _____

CVWD Plan # _____ Development Services Department _____

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS NO. 5870 — SIGNATURE 12-31-2015 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

IMPORTANT NOTICE
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L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
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#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS, R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE, R.C.E. 47159 — 3/24/16 DATE

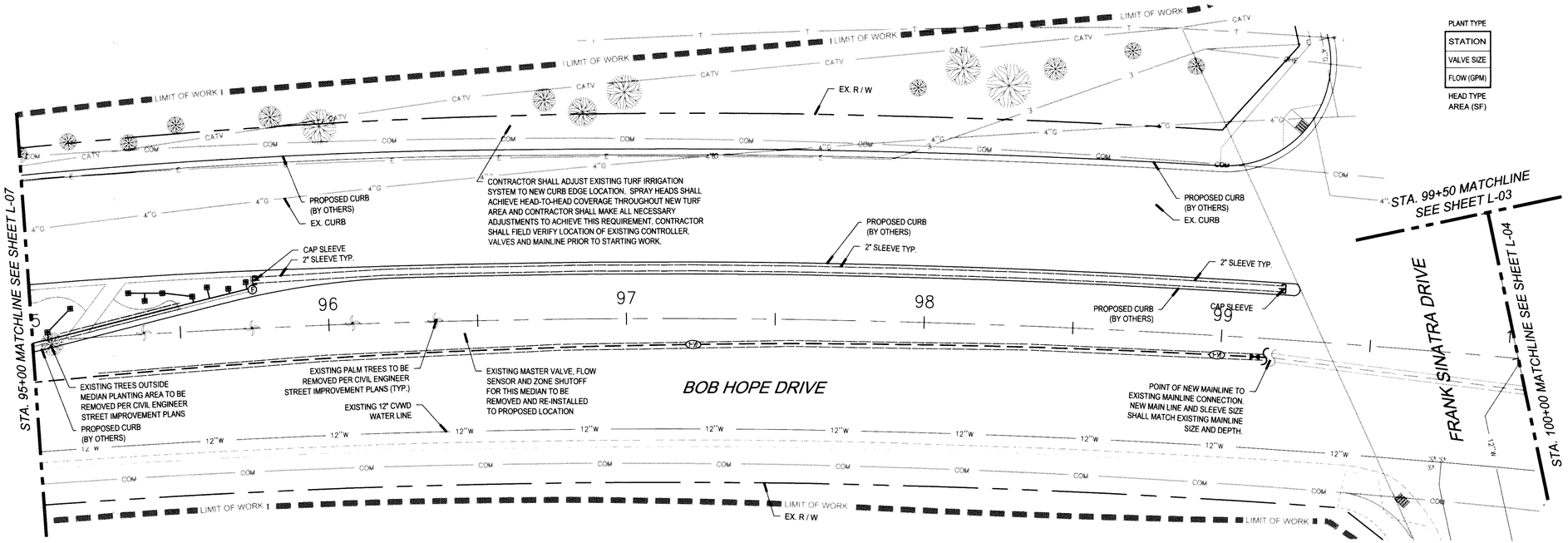
APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER, R.C.E. 43910 — 7/14/16 DATE

CITY OF RANCHO MIRAGE

PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
M.ED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
IRRIGATION / PLANTING PLAN
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-05
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-02-IRRIGATION PLAN.DWG



IRRIGATION PLAN

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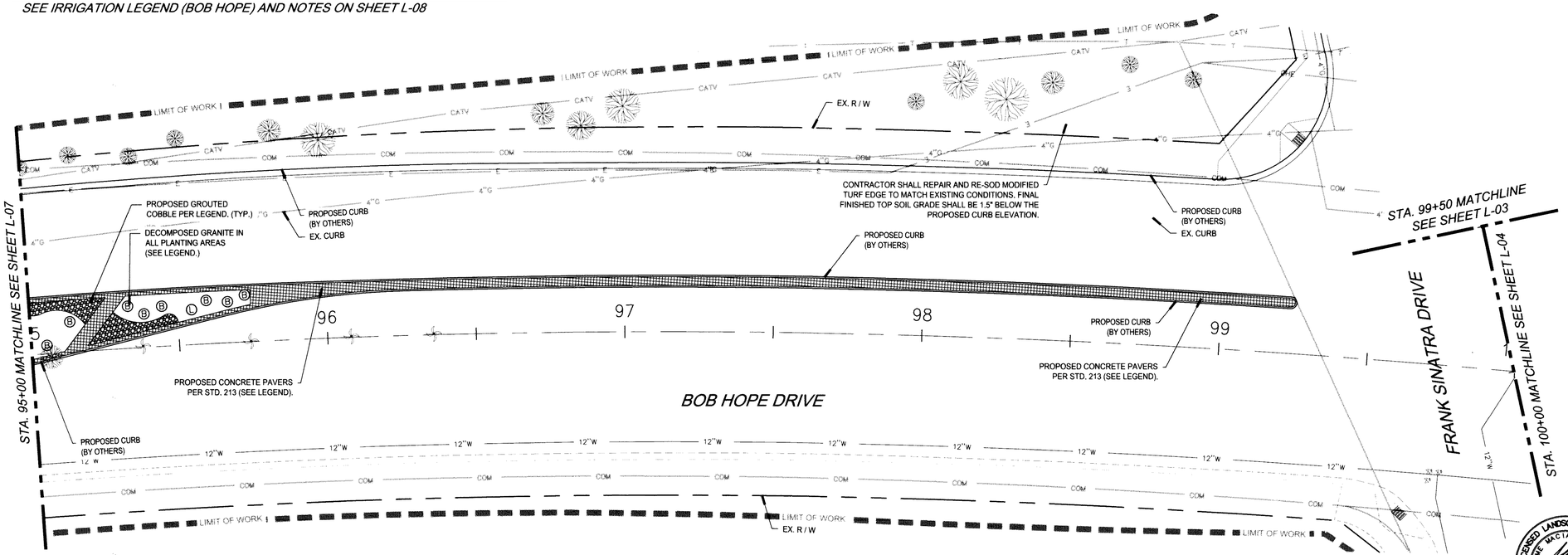

PLANTING PLAN

SEE PLANTING NOTES ON SHEET L-08

PLANT TYPE
STATION
VALVE SIZE
FLOW (GPM)
HEAD TYPE
AREA (SF)

PLANTING LEGEND REFER TO DETAIL 4A FOR SHRUB PLANTING

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
•	2	Chamaerops humilis / Mediterranean Fan Palm Multi-trunk (Existing - To be protected in place)	--	--

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	PF
	10	Agave desmettiana / Dwarf Century Plant	15 GAL	LOW (0.2)
B	39	Bougainvillea x `Oo-La-La` TM / Oo-la-la Bougainvillea	5 GAL	MED (0.5)
C	22	Callistemon citrinus `Little John` / Dwarf Bottle Brush	5 GAL	LOW (0.2)
L	8	Lantana montevidensis / Trailing Lantana	5 GAL	MED (0.5)
N	26	Lantana x `New Gold` / New Gold Lantana	5 GAL	MED (0.5)
O	36	Muhlenbergia capillaris `Regal Mist` TM / Muhly	5 GAL	MED (0.5)
RE	3	Russelia equisetiformis / Firecracker Plant	5 GAL	MED (0.5)
Y	12	Yucca rostrata / Beaked Yucca	15 GAL	LOW (0.2)

LANDSCAPE MATERIALS LEGEND

SYMBOL	QTY.	DESCRIPTION/ MODEL#:	NOTES:
	1,485 SF	ARIZONA COBBLE 4"-6" DIA. SET IN MORTAR BED BY **DESERT ROCK AND SUPPLY**. MATCH EXISTING ROCK COBBLE.	REFER TO DETAIL 4E
	6,275 SF	60 MM ACKERSTONE HOLLAND II, 4"X4" PAVERS THROUGH MIX, CREAM COLOR, OR EQUIV.	REFER TO DETAIL 4C, STD. 213
	37	EXISTING BOULDERS PROTECT IN PLACE. CONTRACTOR SHALL RESET BOULDER PER DETAIL IF MOVED DURING DEMOLITION OR CONSTRUCTION PROCESS. BOULDERS NOT TO EXCEED 15" MAXIMUM ABOVE GRADE.	REFER TO DETAIL 4B
	18,600 SF	2" DEPTH 3/8" MINUS 'DESERT GOLD' DECOMPOSED GRANITE IN ALL PLANTERS. MATCH EXISTING DECOMPOSED GRANITE.	REFER TO DETAIL 4D
		EXISTING CURB / MAINTENANCE BAND. PROTECT IN PLACE.	

GRAPHIC SCALE 1"=20'
20 0 20

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Date — Water Management Department

CVWD Plan # — Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS No. 5870 — 12-31-2016 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

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WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — 3/24/16 DATE

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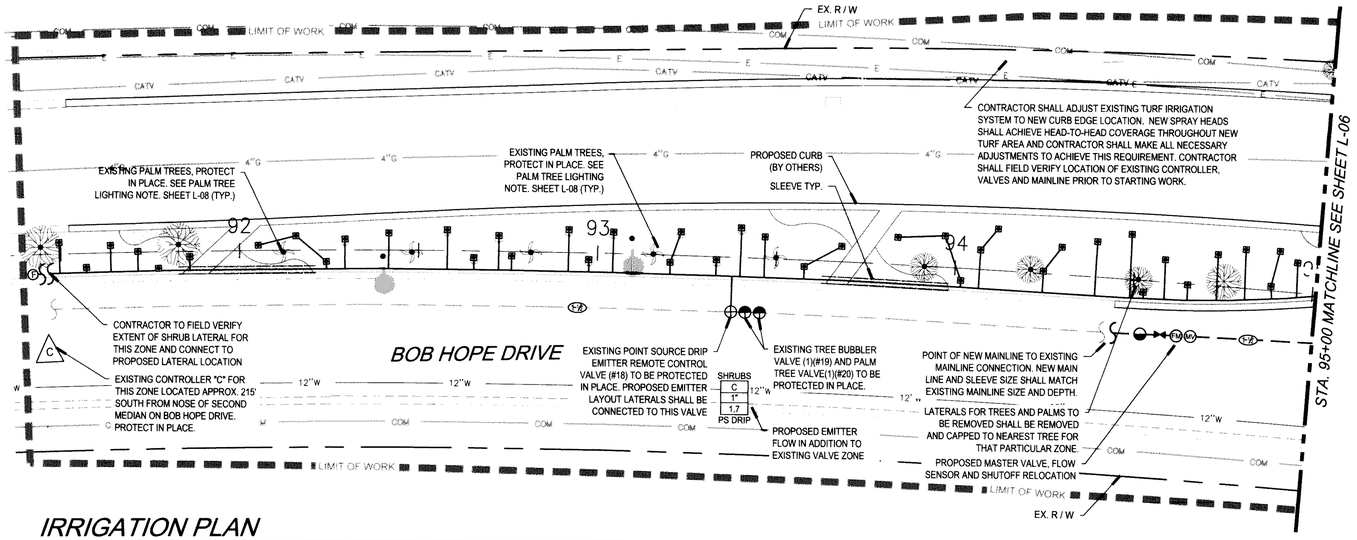
IRRIGATION / PLANTING PLAN
SITE ADDRESS FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-06
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EWO0222

© \\CIVIL14\...\01CDDRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-02 IRRIGATION PLANS.DWG



IRRIGATION PLAN

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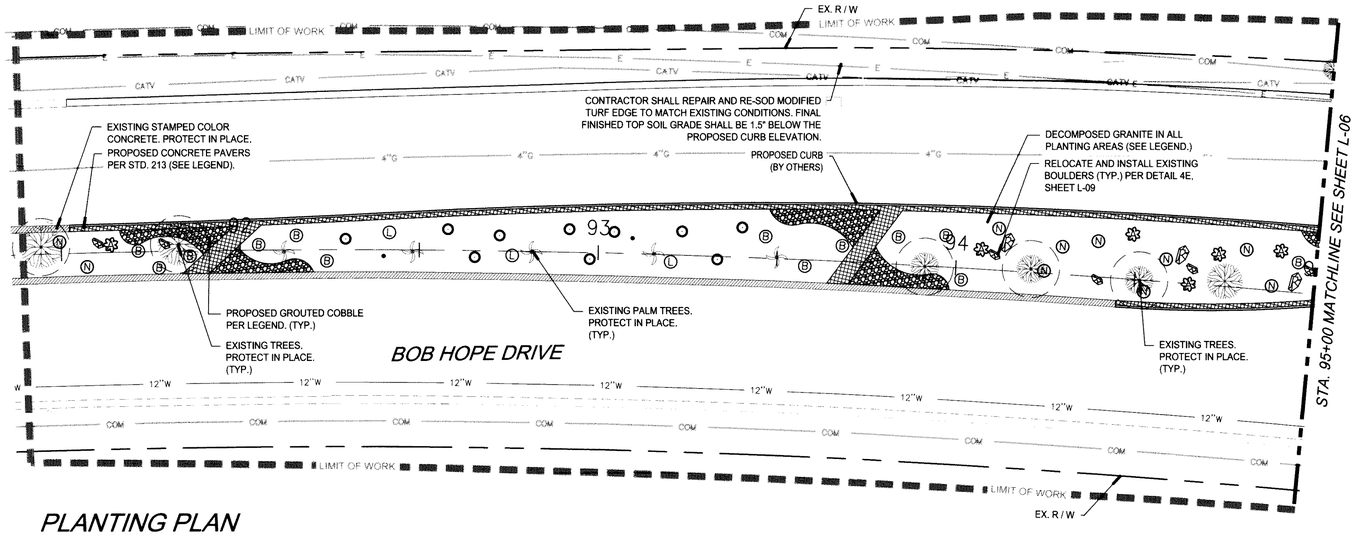

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SEE PLANTING NOTES ON SHEET L-08

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SYMBOL	QTY.	DESCRIPTION/ MODEL#:	NOTES:
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		EXISTING CURB / MAINTENANCE BAND. PROTECT IN PLACE.	

IRRIGATION EQUIPMENT LEGEND *(BOB HOPE DRIVE)*

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
B	EXISTING CONTROLLER "B" (RAINBIRD ESP-LXD DECODER CONTROLLER) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN.	50-200 STATIONS	2D	1
C	EXISTING CONTROLLER "C" (RAINBIRD ESP-LXD DECODER CONTROLLER) LOCATED APPROX. 215' SOUTH FROM NOSE OF SECOND MEDIAN ON BOB HOPE DRIVE. (PROTECT IN PLACE)	50-200 STATIONS	-	1
M	EXISTING IRRIG. WATER METER (#6911865) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	2
	EXISTING BACKFLOW PREVENTION DEVICE TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	3
PR	PRESSURE REGULATOR- WILKENS MODEL 500XLHLR. RANGE: 10-125 PSI	1"	2F	2,4,5
MV	EXISTING IRRIGATION MASTER VALVE (REMOVE AND RELOCATE PER PLAN)	2"	2C, 2E, 2G	2,4
FM	EXISTING IRRIGATION FLOW SENSOR (REMOVE AND RELOCATE PER PLAN)	1"	2C, 2E,2H	2,4
	NIBCO BRASS BALL VALVE MOD.# T-580-A TWO-PIECE - STD. PORT, NPT X NPT	LINE SIZE	2C, 2G	2,4,5,7
	EXISTING POINT SOURCE DRIP REMOTE CONTROL VALVE. (PROTECT IN PLACE)	1"	-	2,4
	EXISTING TREE BUBBLER REMOTE CONTROL VALVE (PROTECT IN PLACE)	1"	-	2,4
	QUICK COUPLER VALVE RAINBIRD 44-LRC	1"	2C, 3A, 3B	2,4,5,7
	EMITTER: **RAINBIRD XERI-BUG XB-20-PC-1032**. POLY FLEX RISER AND ADAPTER: **RAINBIRD PRF-FRA 12"**	2 GPH 30 PSI	3D	5
	EXISTING TREE BUBBLERS (TWO PER TREE) (PROTECT IN PLACE)	.5 GPM (EA.)	-	-
F	AUTOMATIC FLUSH VALVE ASSEMBLY- INSTALL AT EACH LATERAL TERMINAL MODEL: NETAFIM TL050MFV-1	1/2"	3E	2,4,5,6
	NON-PRESSURE LATERAL LINE. SCH. 40 PVC PIPE. 12" MIN COVER.	PER PLAN	2A, 2B	2
	IRRIGATION MAINLINE TO BE SCH 40 PVC PIPE. 18" MIN. COVER.	PER PLAN	2A, 2B	2
	EXISTING IRRIGATION MAINLINE (PROTECT IN PLACE)	PER PLAN	-	2
	SCHEDULE 80 PVC PIPE, 2X SERVICE PIPE SIZE. ALLPIPES THAT CROSS UNDER PAVEMENT AND STRUCTURES ARE TO BE SLEEVED SEPARATELY PER DETAIL 18" MINIMUM COVER.	PER PLAN	2A, 2B	2

(1) LANDSCAPE CONTRACTOR TO FIELD VERIFY ELECTRICAL POWER OUTLET FOR IRRIGATION CONTROLLER
(2) PIPING AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY. PLANS ARE ESSENTIALLY DIAGRAMMATIC.
(3) CONTRACTOR TO LOCATE BACKFLOW PREVENTER IN SHRUB AREA AND SCREEN WHENEVER POSSIBLE.
(4) VALVE BOXES SHALL BE TAN COLOR. SEE DETAIL 3H FOR VALVE BOX LAYOUT
(5) OR APPROVED EQUAL
(6) TO BE INSTALLED PER MANUFACTURE SPECIFICATIONS
(7) REMOVED IRRIGATION EQUIPMENT THAT WILL NO LONGER BE USED TO BE RETRIEVED TO CITY REPRESENTATIVE

PLANTING LEGEND REFER TO DETAIL 4A FOR SHRUB PLANTING

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VALVE SIZE
FLOW (GPM)
HEAD TYPE
AREA (SF)

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Water Management Department

CVWD Plan #

Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS No. 5870 — SIGNATURE — 10-31-2015 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

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G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-02-IRRIGATION PLAN.DWG

IRRIGATION NOTES

1. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM GIVING FULL COVERAGE AND READY FOR USE BY THE OWNER. THE DRAWINGS ARE BASED ON LANDSCAPE AND GRADING DRAWINGS IN EFFECT AT THE TIME THESE DRAWINGS WERE MADE. ANY DISCREPANCIES, OMISSIONS, ERRORS, ETC. ON THESE DRAWINGS OR ON SITE CHANGES, DO NOT AND SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE A COMPLETE SYSTEM AS SHOWN. IF NECESSARY, THE CONTRACTOR MAY, WHERE CHANGES OCCUR, ADD OR DELETE SPRINKLERS, REROUTE PIPE, ETC. TO ASSURE ADEQUATE AND FULL COVERAGE.
2. IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL INSTALL CHECK VALVES IN ALL HEADS IN WHICH LOW HEAD DRAINAGE OCCURS.
4. LOCATE ALL VALVES IN PLANTING AREAS.
5. IRRIGATION SYSTEM IS STRICTLY DIAGRAMMATIC, THEREFORE, CONTRACTOR MUST MAKE ADJUSTMENTS IN THE FIELD TO INSURE ADEQUATE COVERAGE.
6. IRRIGATION SYSTEM SHALL CONFORM TO STATE AND LOCAL CODES.
7. ALL SHRUBBERY-TYPE HEADS ADJACENT TO WALKS SHALL BE INSTALLED AS LOW AS NECESSARY TO PREVENT ANY DAMAGE TO IRRIGATION SYSTEM.
8. THE SYSTEM SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR. ANY DEFECTIVE MATERIAL OR POOR WORKMANSHIP SHALL BE REPLACED OR CORRECTED BY THE IRRIGATION CONTRACTOR AT NO COST TO THE OWNER.
9. 120 VOLT ELECTRICAL POWER OUTLET FOR CONTROLLERS SHALL BE PROVIDED AS NOTED. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HOOK-UP FROM OUTLET TO CONTROLLER.
10. ALL WIRE FROM CONTROLLER TO ELECTRIC CONTROL VALVES SHALL BE COPPER UF #14 DIRECT BURIAL. USE BLACK FOR PILOT, WHITE FOR COMMON. COMMON WIRE SHALL BE 12 GAUGE WIRE. INSTALL IN COMMON TRENCH WITH MAIN LINE PIPING WHERE POSSIBLE.
11. THE CONTRACTOR SHALL STUB OUT A MINIMUM OF 2 (TWO) EXTRA SPARE VALVE WIRES (OR AS SHOWN ON IRRIGATION PLANS) AND 1 (ONE) COMMON WIRE FROM IRRIGATION CONTROLLER(S) TO EACH END OF MAINLINE RUN. THE SPARE WIRES SHALL BE STUBBED OUT INSIDE THE FARTHEST VALVE BOX AT EACH END OF MAINLINE RUN.
12. PROVIDE MINIMUM 24" COVER OVER ALL PRESSURE MAIN LINE PIPING, AND 12" OVER ALL NON-PRESSURE LATERAL LINE PIPING. ALL PIPE UNDER PAVED AREAS IS TO BE INSTALLED IN A PVC SCH. 40 SLEEVE WITH 36" MIN. COVER. SLEEVE LOCATIONS TO BE AS SHOWN ON PLANS. CITY DEPTH REQUIREMENTS FOR PIPE SUPERSEDE ALL THE ABOVE DIMENSIONS.
13. DO NOT WILLFULLY INSTALL THE SYSTEM AS DESIGNED WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT KNOWN DURING THE DESIGN PROCESS. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE; OTHERWISE, THE IRRIGATION CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR ANY AND ALL NECESSARY REVISIONS.
14. FINAL LOCATION OF AUTOMATIC CONTROLLER AND THE BACKFLOW PREVENTER SHALL BE DETERMINED BY OWNER'S AUTHORIZED REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT.
15. FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO SIDEWALKS, WALLS/FENCES, ELECTRIC/CABLE BOXES, ETC. AS MUCH AS POSSIBLE.
16. LOCATION OF P.O.C. IS ONLY DIAGRAMMATIC. LOCATION MUST BE VERIFIED IN FIELD.
17. IN ADDITION TO THE SLEEVES SHOWN ON THE PLAN, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ADDITIONAL SLEEVES OF SUFFICIENT SIZE UNDER ALL PAVED AREAS PRIOR TO PAVING UPON APPROVAL OF THE OWNER'S REPRESENTATIVE, IF REQUIRED TO OPERATE SYSTEMS. (REFER TO SLEEVING CHART)
18. MAINLINE FEEDER BETWEEN POINT OF CONNECTION, METER AND BACKFLOW PREVENTER TO BE OF MATERIAL AS REQUIRED BY CURRENT WATER DISTRICT.
19. FIELD ADJUST IRRIGATION SYSTEM WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANT, STREET LIGHTS, TREES, SIGNAGE, ETC.) INTERFERE WITH THE IRRIGATION SPRAY PATTERN. THE CONTRACTOR SHALL INSTALL QUARTER OR HALF CIRCLE ON EACH SIDE OF THE OBSTRUCTION TO PROVIDE PROPER IRRIGATION COVERAGE. ALL ADJUSTMENT SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER, TYPICAL.
20. CONTRACTOR MUST PROVIDE IRRIGATION AS-BUILTS IN A 11X17 REDUCTION COPY FORMAT. COPIES MUST BE LAMINATED AND KEPT INSIDE CONTROLLER BOX. AS-BUILTS MUST SHOW THE IRRIGATION SYSTEM AS IT WAS BUILT.

PALM TREE LIGHTING NOTE

CONTRACTOR SHALL PROTECT IN PLACE ALL PALM TREE LIGHT FIXTURES , WIRES, CONDUITS, JUNCTION BOXES, AND ELECTRICAL SYSTEM COMPONENTS NOT AFFECTED BY STREET IMPROVEMENTS. CONTRACTOR SHALL REMOVE LIGHT FIXTURES WHERE PALM TREES ARE BEING REMOVED AND TURN OVER TO CITY LANDSCAPE REPRESENTATIVE. CONTRACTOR SHALL MAKE ALL NECESSARY ELECTRICAL ADJUSTMENTS IN ORDER TO PROVIDE A FULLY FUNCTIONAL LANDSCAPE LIGHTING SYSTEM. LIGHTING SYSTEM SHALL BE INSTALLED PER LOCAL CODE.

EXISTING IRRIGATION EQUIPMENT NOTE

CONTRACTOR SHALL REMOVE ALL EXISTING IRRIGATION VALVES WHERE PROPOSED IRRIGATION VALVES ARE SPECIFIED (IF APPLICABLE).

EXISTING DECOMPOSED GRANITE NOTE

CONTRACTOR SHALL PROTECT IN PLACE EXISTING DECOMPOSED GRANITE AND REPAIR ANY AFFECTED AREA DURING CONSTRUCTION.

IRRIGATION EQUIPMENT LEGEND (BOB HOPE DRIVE)

SYMBOL	MANUFACTURER/MODEL #	SIZE	DETAIL	NOTES
B	EXISTING CONTROLLER "B" (RAINBIRD ESP-LXD DECODER CONTROLLER) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN.	50-200 STATIONS	2D	1
C	EXISTING CONTROLLER "C" (RAINBIRD ESP-LXD DECODER CONTROLLER) LOCATED APPROX. 215' SOUTH FROM NOSE OF SECOND MEDIAN ON BOB HOPE DRIVE. (PROTECT IN PLACE)	50-200 STATIONS	-	1
M	EXISTING IRRIG. WATER METER (#6911865) TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	2
	EXISTING BACKFLOW PREVENTION DEVICE TO BE REMOVED AND RELOCATED TO PROPOSED LOCATION NOTED ON PLAN. TO BE INSTALLED BY CVWD.	2"	CVWD STD.	3
PR	PRESSURE REGULATOR- WILKENS MODEL 500XLHLR. RANGE: 10-125 PSI	1"	2F	2,4,5
MV	EXISTING IRRIGATION MASTER VALVE (REMOVE AND RELOCATE PER PLAN)	2"	2C, 2E, 2G	2,4
FM	EXISTING IRRIGATION FLOW SENSOR (REMOVE AND RELOCATE PER PLAN)	1"	2C, 2E,2H	2,4
	NIBCO BRASS BALL VALVE MOD.# T-580-A TWO-PIECE - STD. PORT, NPT X NPT	LINE SIZE	2C, 2G	2,4,5,7
	EXISTING POINT SOURCE DRIP REMOTE CONTROL VALVE. (PROTECT IN PLACE)	1"	-	2,4
	EXISTING TREE BUBBLER REMOTE CONTROL VALVE (PROTECT IN PLACE)	1"	-	2,4
	QUICK COUPLER VALVE RAINBIRD 44-LRC	1"	2C, 3A, 3B	2,4,5,7
	EMITTER: **RAINBIRD XERI-BUG XB-20-PC-1032**, POLY FLEX RISER AND ADAPTER: **RAINBIRD PRF-FRA 12"**	2 GPH 30 PSI	3D	5
	EXISTING TREE BUBBLERS (TWO PER TREE) (PROTECT IN PLACE)	.5 GPM (EA.)	-	-
F	AUTOMATIC FLUSH VALVE ASSEMBLY- INSTALL AT EACH LATERAL TERMINAL MODEL: NETAFIM TL050MFV-1	1/2"	3E	2,4,5,6
	NON-PRESSURE LATERAL LINE. SCH. 40 PVC PIPE. 12" MIN COVER.	PER PLAN	2A, 2B	2
	IRRIGATION MAINLINE TO BE SCH 40 PVC PIPE. 18" MIN. COVER.	PER PLAN	2A, 2B	2
	EXISTING IRRIGATION MAINLINE (PROTECT IN PLACE)	PER PLAN	-	2
	SCHEDULE 80 PVC PIPE, 2X SERVICE PIPE SIZE. ALLPIPES THAT CROSS UNDER PAVEMENT AND STRUCTURES ARE TO BE SLEEVED SEPARATELY PER DETAIL. 18" MINIMUM COVER.	PER PLAN	2A, 2B	2

(1) LANDSCAPE CONTRACTOR TO FIELD VERIFY ELECTRICAL POWER OUTLET FOR IRRIGATION CONTROLLER
(2) PIPING AND VALVES ARE SHOWN IN HARDSCAPE FOR CLARITY ONLY. PLANS ARE ESSENTIALLY DIAGRAMMATIC.
(3) CONTRACTOR TO LOCATE BACKFLOW PREVENTER IN SHRUB AREA AND SCREEN WHENEVER POSSIBLE.
(4) VALVE BOXES SHALL BE TAN COLOR. SEE DETAIL 3H FOR VALVE BOX LAYOUT
(5) OR APPROVED EQUAL.
(6) TO BE INSTALLED PER MANUFACTURE SPECIFICATIONS
(7) REMOVED IRRIGATION EQUIPMENT THAT WILL NO LONGER BE USED TO BE RETRIEVED TO CITY REPRESENTATIVE

PLANTING LEGEND REFER TO DETAIL 4A FOR SHRUB PLANTING

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL
•	2	Chamaerops humilis / Mediterranean Fan Palm Multi-trunk (Existing - To be protected in place)	--	--

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	PF
A	10	Agave desmettiana / Dwarf Century Plant	15 GAL	LOW (0.2)
B	39	Bougainvillea x `Oo-La-La` TM / Oo-la-la Bougainvillea	5 GAL	MED (0.5)
C	22	Callistemon citrinus `Little John` / Dwarf Bottle Brush	5 GAL	LOW (0.2)
L	8	Lantana montevidensis / Trailing Lantana	5 GAL	MED (0.5)
N	26	Lantana x `New Gold` / New Gold Lantana	5 GAL	MED (0.5)
⊙	36	Muhlenbergia capillaris `Regal Mist` TM / Muhly	5 GAL	MED (0.5)
RE	3	Russelia equisetiformis / Firecracker Plant	5 GAL	MED (0.5)
Y	12	Yucca rostrata / Beaked Yucca	15 GAL	LOW (0.2)

LANDSCAPE MATERIALS LEGEND

SYMBOL	QTY.	DESCRIPTION/ MODEL#:	NOTES:
	1,485 SF	ARIZONA COBBLE 4"-6" DIA. SET IN MORTAR BED BY **DESERT ROCK AND SUPPLY**. MATCH EXISTING ROCK COBBLE.	REFER TO DETAIL 4E
	6,275 SF	60 MM ACKERSTONE HOLLAND II, 4"X4" PAVERS THROUGH MIX, CREAM COLOR, OR EQUIV.	REFER TO DETAIL 4C, STD. 213
	37	EXISTING BOULDERS PROTECT IN PLACE. CONTRACTOR SHALL RESET BOULDER PER DETAIL IF MOVED DURING DEMOLITION OR CONSTRUCTION PROCESS. BOULDERS NOT TO EXCEED 15" MAXIMUM ABOVE GRADE.	REFER TO DETAIL 4B
	18,600 SF	2" DEPTH 3/8" MINUS 'DESERT GOLD' DECOMPOSED GRANITE IN ALL PLANTERS. MATCH EXISTING DECOMPOSED GRANITE.	REFER TO DETAIL 4D
		EXISTING CURB / MAINTENANCE BAND. PROTECT IN PLACE.	

IRRIGATION EQUIPMENT NOTE

THE CONTRACTOR SHALL LOCATE MAINLINE AND IRRIGATION EQUIPMENT IN PLANTING AREA, TYPICAL.

SLEEVING NOTE

THE CONTRACTOR SHALL SLEEVE ALL LATERAL LINE / MAINLINE AND VALVE WIRES THAT CROSS UNDER HARDSCAPE (SIDEWALK, ETC.). ALL SLEEVING SHALL BE 2 TIMES THE DIAMETER OF THE PIPE USED. REFER TO SLEEVING CHART.

LATERAL SIZE FLOW CHART

GALLONS PER MINUTE	PVC SCH.40	PIPE SYMBOL
1-8 GPM	3/4" PIPE	
9-12 GPM	1" PIPE	
13-22 GPM	1-1/4" PIPE	
23-30 GPM	1-1/2" PIPE	
31-50 GPM	2" PIPE	

SLEEVE CHART FOR IRRIGATION PIPE AND WIRES

PIPE	SCHEDULE 40 PVC SLEEVE SIZE	CONTROLLER WIRES	SCHEDULE 40 PVC SLEEVE SIZE
3/4"	2"	1-18	2"
1"	2"	19-24	2-1/2"
1-1/4"	2-1/2"	25-36	3"
1-1/2"	3"	37-48	4"
2"	4"	49-72	6"
2-1/2"	6"		
3"	6"		
4"	6"		

GUIDELINE IRRIGATION EFFICIENCY VALUES

SPRAY HEADS	0.75
BUBBLERS	0.90
DRIP	0.90
ROTORS	0.80

SLEEVING CHART

PVC SCH.40		
1 1/4" SLEEVE	1-4 WIRES	1/2" PIPE
1 1/2" SLEEVE	5-10 WIRES	3/4" PIPE
PVC CLASS 315		
2" SLEEVE	11-20 WIRES	1" PIPE
2 1/2" SLEEVE	21-30 WIRES	1 1/4" PIPE
3" SLEEVE	31-40 WIRES	1 1/2" PIPE
4" SLEEVE	41-60 WIRES	2" PIPE
PVC CLASS 200		
6" SLEEVE	61-99 WIRES	2 1/2"-3" PIPE
8" SLEEVE	100+ WIRES	4" PIPE
10" SLEEVE	N/A	6" PIPE

PLANTING NOTES

1. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF SITE CONDITIONS WHICH PREVENT INSTALLATION PER PLANS AND SPECIFICATIONS.
2. CONTRACTOR SHALL BE LIABLE FOR REMOVING AND REINSTALLING IRRIGATION EQUIPMENT, AND REPLANTING AREAS WHICH ARE NOT INSTALLED PER PLAN AND SPECIFICATIONS.
3. IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATING PRIOR TO PLANT MATERIALS.
4. TREES AND SHRUBS SHALL BE PLANTED AFTER CONCRETE PLACEMENT, BUT NOT BEFORE IRRIGATION COVERAGE TEST NO. 1 HAS BEEN APPROVED. (SEE SPECIFICATIONS).
5. PLACE TREES BETWEEN IRRIGATION HEADS WHEREVER POSSIBLE.
6. SHREDDED MULCH INSTALLATION: INSTALL SHREDDED MULCH IN ALL SHRUB AND GROUNDCOVER AREAS PER SPECIFICATIONS, UNLESS OTHERWISE INDICATED ON PLANS.
7. CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF ANY DAMAGED LANDSCAPE AREAS BEYOND THE LIMIT OF WORK, THAT IS A DIRECT RESULT OF THE LANDSCAPE CONSTRUCTION AND/OR HIS SUB-CONTRACTOR. REPLACEMENT ITEMS SHALL BE EXACT DUPLICATE OF ORIGINAL WORK OR PLANS, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
8. WHEREVER GROUNDCOVER AREAS ARE ADJACENT TO TURF INSTALL CONCRETE MOWSTRIP OR HEADERBOARD AS INDICATED ON DRAWINGS.
9. CLEAN-UP SHALL TAKE PLACE ON A DAILY BASIS UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.

CVWD | LANDSCAPE WATER USE CALCULATIONS
BOB HOPE MEDIAN | METER #: 6911865

1 MAXIMUM ANNUAL WATER ALLOWANCE (MAWA)

INPUT the total square footage of landscape = 15,585 S.F.
INPUT the Hist. ETo for the area = 75

MAWA = 484 100 cu ft / yr

2 ESTIMATED TOTAL WATER USE (ETWU)

HYDROZONE # 1-SHRUBS (LOW) — INPUT Plant Factor = 0.2
INPUT square footage of hydrozone = 4,364
INPUT hydrozone irrigation efficiency = 0.9 POINT SOURCE DRIP
ETWU = 60 100 cu ft / yr

HYDROZONE # 2-SHRUBS (MED) — INPUT Plant Factor = 0.5
INPUT square footage of hydrozone = 11,221
INPUT hydrozone irrigation efficiency = 0.9 BUBBLERS
ETWU = 388 cu ft / yr

SUBTOTAL ETWU = 448 100 cu ft / yr
INPUT IRRIGATION SYSTEM OPERATION FACTOR 1
TOTAL ETWU = 448
MAWA - ETWU = 36 100 cu ft / yr
(this number must be positive)

PERCENTAGE OF WATER SAVED RELATIVE TO MAX. ALLOWED = 8%

CVWD | LANDSCAPE WATER USE CALCULATIONS
FRANK SINATRA MEDIAN | METER #: 10182854

1 MAXIMUM ANNUAL WATER ALLOWANCE (MAWA)

INPUT the total square footage of landscape = 3,025 S.F.
INPUT the Hist. ETo for the area = 75

MAWA = 94 100 cu ft / yr

2 ESTIMATED TOTAL WATER USE (ETWU)

HYDROZONE # 1-SHRUBS (LOW) — INPUT Plant Factor = 0.2
INPUT square footage of hydrozone = 847
INPUT hydrozone irrigation efficiency = 0.9 POINT SOURCE DRIP
ETWU = 12 100 cu ft / yr

HYDROZONE # 2-SHRUBS (MED) — INPUT Plant Factor = 0.5
INPUT square footage of hydrozone = 2,178
INPUT hydrozone irrigation efficiency = 0.9 BUBBLERS
ETWU = 75 cu ft / yr

SUBTOTAL ETWU = 87 100 cu ft / yr
INPUT IRRIGATION SYSTEM OPERATION FACTOR 1
TOTAL ETWU = 87
MAWA - ETWU = 7 100 cu ft / yr
(this number must be positive)

PERCENTAGE OF WATER SAVED RELATIVE TO MAX. ALLOWED = 7%

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date ____________ Water Management Department

CVWD Plan #____________ Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS No. 5870 — SIGNATURE — 12-31-2017 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE LANDSCAPE ARCHITECT PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS 11/20/2015
R.L.A. 5870 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE 3/24/16
R.C.E. 47159 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER 3/24/16
R.C.E. 43910 DATE

CITY OF RANCHO MIRAGE
PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
LEGENDS AND NOTES
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-08 OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222 14

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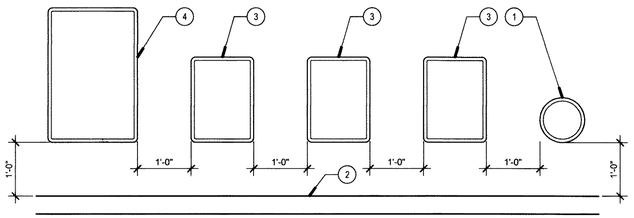


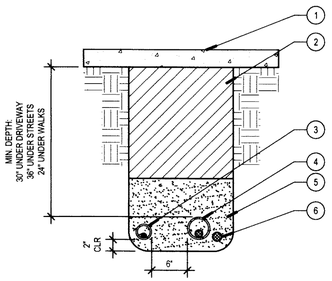
LEGEND:

1. 10" DIAMETER CIRCULAR VALVE BOX
2. EDGE OF LAWN, WALK, FENCE, CURB, ETC.
3. 14" X 19" RECTANGULAR VALVE BOX
4. 20" X 30" RECTANGULAR VALVE BOX

NOTE:

A. CENTER VALVE BOX OVER VALVE TO FACILITATE SERVICING OF VALVE
B. SET VALVE BOXES 2" MAXIMUM ABOVE GRADE IN MULCH COVER OR GROUND AREAS. SET FLUSH WITH FINISHED GRADE IN TURF AREAS.
C. SET VALVE BOX AND VALVE ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE - INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUND COVER.
D. SET VALVE BOXES PARRALLEL TO ONE ANOTHER AND PERPENDICULAR TO EDGE
E. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION/ COLLAPSE.

2C VALVE BOX LAYOUT
SCALE: 3/4"=1'-0"



LEGEND:

1. HARDSCAPE SURFACE
2. CLEAN BACKFILL AS REQUIRED. TO BE SET IN 6" LIFTS. REFER TO SPECIFICATIONS FOR SPECIFIC MATERIAL AND COMPACTION REQUIREMENTS.
3. LATERAL LINE WITH SLEEVE.
4. PRESSURE MAIN LINE WITH SLEEVE.
5. CLEAN SAND.
6. CONTROL WIRES & COMPUTER HARDWARE WIRE SLEEVE.

NOTES:

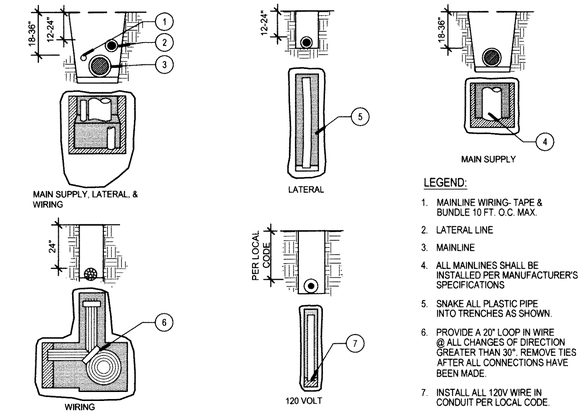
ALL SLEEVES TO BE PVC. SCH. 80 AND TWICE THE DIAMETER OF THE WORKING PIPE. (EXCEPT WHERE NOTED ON PLAN)

ALL SLEEVES TO RUN A MIN. OF 12" BEYOND HARDSCAPE EDGES.

CLEAN BACKFILL MAY BE SUBSTITUTED FOR SAND UNDER WALKS AND DRIVES.

ALL SLEEVE OPENINGS SHALL BE SPRAYED WITH URETHANE FOAM TO SEAL AROUND PIPES TO PREVENT SEDIMENT INTRUSION

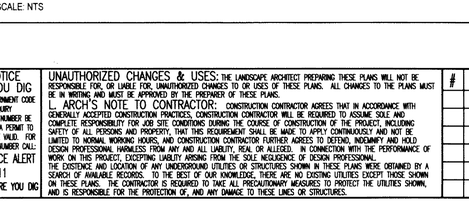
2B IRRIGATION PIPE SLEEVING
SCALE: 1"=1'-0"



LEGEND:

1. MAINLINE WIRING- TAPE & BUNDLE 10 FT. O.C. MAX.
2. LATERAL LINE
3. MAINLINE
4. ALL MAINLINES SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
5. SNAKE ALL PLASTIC PIPE INTO TRENCHES AS SHOWN.
6. PROVIDE A 20" LOOP IN WIRE @ ALL CHANGES OF DIRECTION GREATER THAN 30°. REMOVE TIES AFTER ALL CONNECTIONS HAVE BEEN MADE.
7. INSTALL ALL 120V WIRE IN CONDUIT PER LOCAL CODE.

2A IRRIGATION TRENCHING
SCALE: NTS



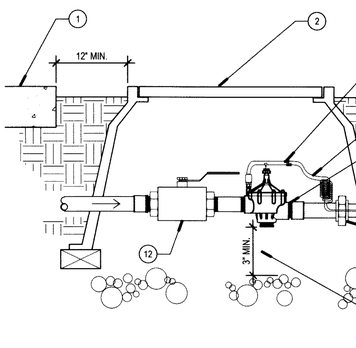
LEGEND:

1. CURB, SIDEWALK, ETC.
2. ROUND PLASTIC VALVE BOX W/ LOCKING TOP (HEAT BRAND "PRV" IN 2" LETTERS). SET 1" ABOVE FINISH GRADE IN PLANTING AREAS ONLY.
3. FINISH GRADE
4. PRESSURE REDUCING VALVE (REFER TO LEGEND)
5. PVC MAINLINE
6. BRICK (1 OF 4)
7. SCH. 80 PVC UNION
8. 2 C.F. PEA GRAVEL SUMP
9. 6" AIR GAP BELOW VALVE MINIMUM
10. PVC MALE ADAPTER (2 REQUIRED)
11. PVC SCHEDULE 80 T.O.E. NIPPLE

NOTE:

ALL VALVES TO BE INSTALLED IN SHRUB AREAS, WHERE POSSIBLE.

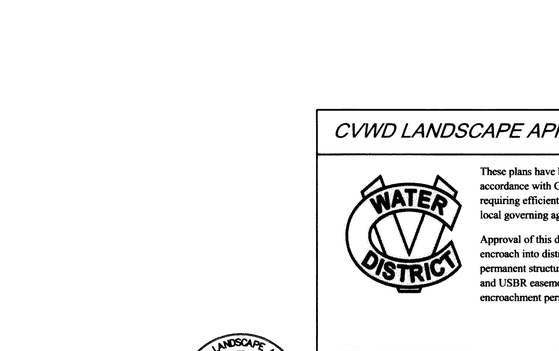
2F PRESSURE REDUCING VALVE
SCALE: NTS



LEGEND:

1. CLEAN AND STRIP WIRES. CONNECT WIRES WITH A 'SCOTCH-LOC' OR EQUAL ELECTRICAL WIRE CONNECTOR. WIRES ARE TO REMAIN CLEAN AND DRY TO ENABLE SLEEVE TO PROPERLY SEAL.
2. POSITION SLEEVE TO APPROX. 1/4" OVER WIRE CONNECTOR (FIG. 2). PUSH CLIP OVER SLEEVE END AT EACH PAIR OF WIRES AS SHOWN.
3. SHRINK THE SLEEVE WITH A TORCH AT A LOW FLAME. SWEEP SLOWLY BACK AND FORTH AROUND SLEEVE UNTIL ADHESIVE FLOWS AND SEALS AROUND WIRES AT EACH CLIP. HOLD TORCH 4-6 INCHES FROM SLEEVE. DO NOT TOUCH FLAME TO SLEEVES OR WIRES. AVOID SCORCHING. ALLOW TO COOL FOR APPROX. TWO (2) MINUTES.

2E IRRIGATION WIRE CONNECTIONS
SCALE: NTS



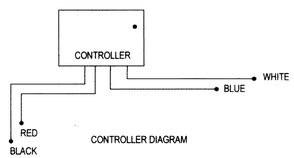
LEGEND:

1. IRRIGATION CONTROLLER ENCLOSURE (STAINLESS STEEL UNLESS OTHERWISE NOTED)
2. AUTOMATIC CONTROLLER - INSTALL PER MANUFACTURER'S RECOMMENDATION
3. ELECTRICAL OUTLET AND ON/OFF SWITCH
4. DIRECT BURIAL WIRES TO AUTOMATIC VALVES IN FIELD
5. LONG SWEEP PVC ELL - SIZE AS REQUIRED
6. 110 V POWER SUPPLY
7. EXTEND PVC SLEEVE AS REQUIRED TO CLEAR SLAB, FOOTING, ETC.

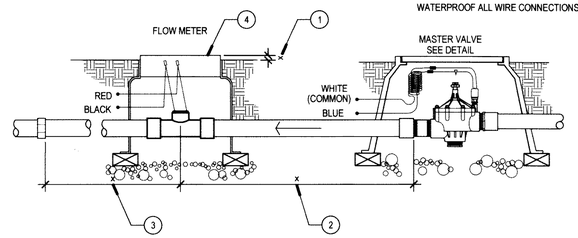
NOTE:

CONSTRUCT 6" THICK CONCRETE SLAB FOR CONTROLLER. ALLOW 6" LIP ALL SIDES. CONNECT ENCLOSURE TO SLAB PER MFG.'S RECOMMENDATION.

2D CONTROLLER WITH ENCLOSURE
SCALE: 3/4"=1'-0"



CONTROLLER DIAGRAM



LEGEND:

1. 1" IN TURF AREAS, 2" IN PLANTING BEDS
2. MINIMUM DISTANCE UPSTREAM 10X DIAMETER OF MAINLINE SIZE
3. MINIMUM DISTANCE DOWNSTREAM 5X DIAMETER OF MAINLINE SIZE
4. HEAT BRAND 'FM' ON LID IN 2" LETTERS

NOTE:

WATERPROOF ALL WIRE CONNECTIONS

2H FLOW SENSOR INSTALLATION
SCALE: NTS

LEGEND:

1. CURB, SIDEWALK, ETC.
2. PLASTIC VALVE BOX W/ LOCKING TOP (LABELED "MV") SET 1" ABOVE FINISH GRADE IN PLANTING AREAS ONLY.
3. WATERPROOF WIRE CONNECTORS
4. FINISH GRADE
5. COMMON AND CONTROL WIRES TO CONTROLLER LOCATION
6. MASTER VALVE (REFER TO LEGEND)
7. PVC MAINLINE
8. BRICK (1 OF 4)
9. 2 C.F. PEA GRAVEL SUMP
10. SCH. 80 PVC UNION
11. 3" AIR GAP BELOW VALVE
12. BRASS BALL VALVE. LINE SIZE.

NOTE:

ALL VALVES TO BE INSTALLED IN SHRUB AREAS WHERE POSSIBLE.

2G MASTER VALVE
SCALE: 1"=1'-0"

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS — R.L.A. 5870 — EXPIRATION DATE 12-31-2016 — 11/20/2015 — STATE OF CALIFORNIA

CVWD LANDSCAPE APPROVAL

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Date _____ Water Management Department

CVWD Plan #_____ Development Services Department

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UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE LANDSCAPE ARCHITECT PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS 11/20/2015
R.L.A. 5870 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

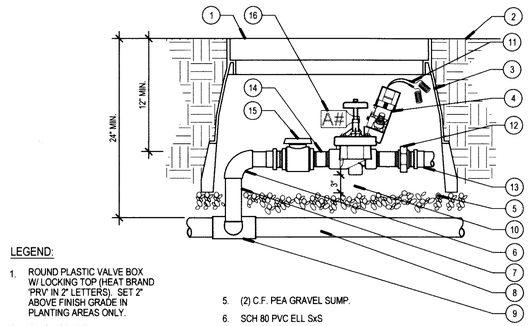
RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE 3/24/16
R.C.E. 47159 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER 3/24/16
R.C.E. 43910 DATE

CITY OF RANCHO MIRAGE
PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
M.E.D. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
IRRIGATION DETAILS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-09
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-03-IRRIGATION DETAILS.DWG

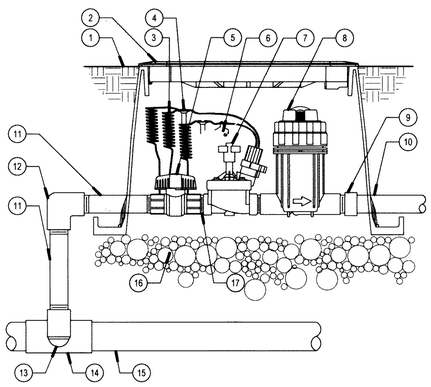


LEGEND:

1. ROUND PLASTIC VALVE BOX W/ LOCKING TOP (HEAT BRAND 'PRV' IN 2" LETTERS). SET 2" ABOVE FINISH GRADE IN PLANTING AREAS ONLY.
2. FINISH GRADE.
3. RECTANGULAR PLASTIC VALVE BOX WITH LOCKING COVER (HEAT BRAND CONTROLLER AND STATION NUMBER ON LID IN 2" LETTERS).
4. ELECTRIC CONTROL VALVE WITH PRS. (REFER TO LEGEND).
5. (2) C.F. PEA GRAVEL SUMP.
6. SCH 80 PVC ELL SxS
7. SCH 80 PVC PIPE (TYP.)
8. MAINLINE PER PLAN.
9. SCH 80 PVC FITTING SxSxS.
10. 3" AIR GAP BELOW VALVE.
11. WATERPROOF WIRE CONNECTORS.
12. SCH. 80 PVC UNION
13. SCH. 40 PVC MALE ADAPTER
14. SCH.80 PVC NIPPLE
15. PVC BALL VALVE
16. CHRISTY I.D. TAD WITH STATION #

3C AUTOMATIC VALVE W/ PRS

SCALE: 1"=1'-0"

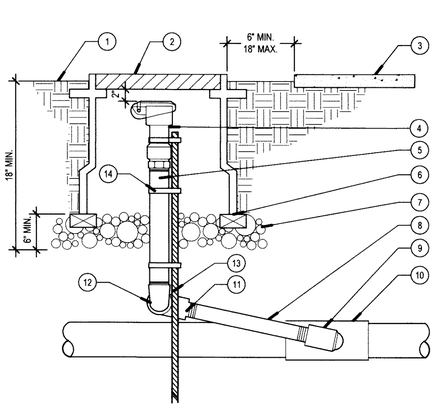


LEGEND:

1. FINISH GRADE/TOP OF MULCH
2. RECTANGULAR VALVE BOX (SEE SPECIFICATIONS)
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTORS
5. 1-INCH PVC BALL VALVE
6. VALVE ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB-R (INCLUCED IN KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: (INCLUDED IN KIT) FLOWS GREATER THAN 20 GPM OR 1.5" VALVES SHALL HAVE TWO BASKET FILTERS PER VALVE.
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE

3B QUICK COUPLING VALVE

SCALE: NTS

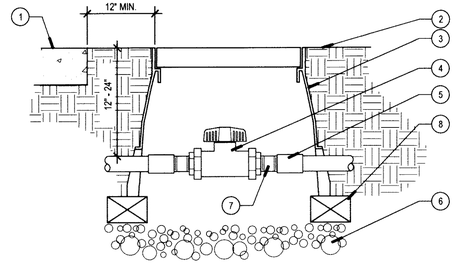


LEGEND:

1. FINISH GRADE
2. ROUND PLASTIC VALVE BOX & COVER- HEAT BRAND 'QC' ON LID IN 2" LETTERS SET 1" ABOVE GRADE IN LAWN AREA, OR 2" ABOVE FINISH GRADE IN PLANTING AREA
3. STRUCTURE OR HARDSCAPE WHERE OCCURS
4. QUICK COUPLING VALVE.
5. BRASS NIPPLE 8" LONG
6. BRICK (1 OF 3)
7. 3/4" WASHED CRUSHED AGGREGATE BASE
8. BRASS NIPPLE 6" LONG
9. BRASS 90 STREET ELL FITTING
10. PRESSURE SUPPLY LINE
11. BRASS 90 STREET ELL
12. BRASS 90 ELL
13. #4 REBAR STAKE (24" MIN)
14. STAINLESS STEEL SCREW CLAMP.

3A BALL VALVE

SCALE: 3/4"=1'-0"



LEGEND:

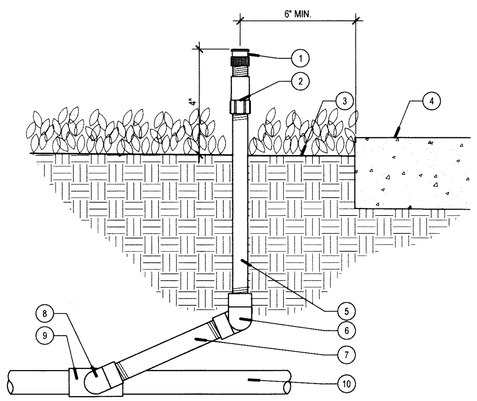
1. CURB, SIDEWALK, ETC.
2. FINISH GRADE
3. ROUND PLASTIC VALVE BOX W/ LOCKING TOP (HEAT BRANDED 'BV' IN 2" LETTERS)
4. SCH. 80 TRUE UNION BALL VALVE (LINE SIZE)
5. SxT SCH. 80 FITTING (TYP.)
6. 2 C.F. PEA GRAVEL SUMP
7. SCH. 80 PVC NIPPLE
8. BRICK CONT. (TYP.)(1 OF 4)

NOTE:

ALL VALVES TO BE INSTALLED IN PLANTER AREAS WHERE POSSIBLE

3F DRIP VALVE ASSEMBLY

SCALE: NTS

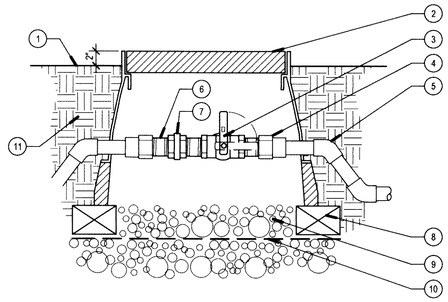


LEGEND:

1. BUBBLER NOZZLE AND SCREEN (SEE LEGEND)
2. EXTERNAL CHECK VALVE IF NEEDED (SEE SPECS)
3. FINISH GRADE
4. ADJACENT HARDSCAPE (IF APPLICABLE)
5. ¾" PVC SCH. 80 RISER (LENGTH VARIES)
6. ¾" FIPT X FIPT SCH. 40 90° ELBOW (1 REQUIRED)
7. ¾" X 8" PVC SCH. 80 NIPPLE
8. ¾" FIPT X MIPT SCH. 40 90° ELBOW (2 REQUIRED)
9. S X S ST TEE IN LATERAL LINE (LATERAL SIZE X ¾" FIPT)
10. NON-PRESSURE LATERAL LINE (SIZE PER PLAN)

3E AUTOMATIC FLUSH VALVE (PLUMBED TO PVC)

SCALE: NTS



LEGEND:

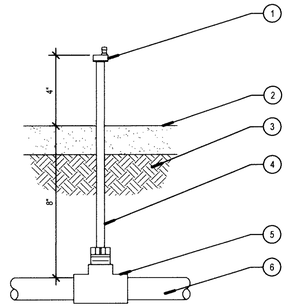
1. FINISHED GRADE TO BE 2" BELOW BOX.
2. RECTANGULAR VALVE BOX W/ LOCKING SS BOLT HEAT BRAND "BV"
3. BRASS BALL VALVE PER LEGEND
4. SCH 80 PVC FEMALE ADAPTER
5. PVC MAINLINE USE SCH 80 45° ELL TO DEPTH PER LEGEND
6. BRASS NIPPLE (3X TYP.)
7. BRASS UNION
8. CONC. BRICKS (4)
9. 2 CU. FT. ¾" GRAVEL PROVIDE 3" CLEARANCE BETWEEN VALVE AND GRAVEL
10. ¼" GALV. WIRE MESH BELOW BOX
11. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY

NOTES:

1. ALL THREADED FITTINGS MUST HAVE ¾" TEFLON TAPE
2. PROVIDE 2' CLEARANCE BETWEEN VALVE AND BOX.
3. PROVIDE 4 EA. SCH 80 45° ELLS TO SCHIEVE BALL VALVE HEIGHT PER DETAIL

3D DRIP EMITTER OF FLEXIBLE RISER

SCALE: NTS



LEGEND:

1. SINGLE-OUTLET 10-32 THREADED INLET X BARB OUTLET EMITTER: RAINBIRD XERI-BUG EMITTER XB-PC-1032
2. FINISHED GRADE IN SHRUB AREAS
3. NATIVE OR AMENDED SOIL
4. RAINBIRD 12" POLYFLEX RISER: PFR-FRA
5. SCH. 40 PVC SXSXT TEE FITTING LATERAL X 1/2" INLET SIZE
6. PVC LATERAL LINE PIPE (SIZE PER PLAN)

NOTE:
USE TEFLON TAPE ON ALL PVC THREADED RISER FITTINGS

3H BUBBLER ON RISER

SCALE: 3"=1'-0"

3G BRASS BALL VALVE 2" AND SMALLER

SCALE: 3/4"=1'-0"

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Date

Water Management Department

CVWD Plan #

Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS NO. 5870 — STATE OF CALIFORNIA — RENEWAL DATE 12-31-2015 — DATE 11/20/2015

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PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS, R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE, R.C.E. 47159 — 3/24/16 DATE

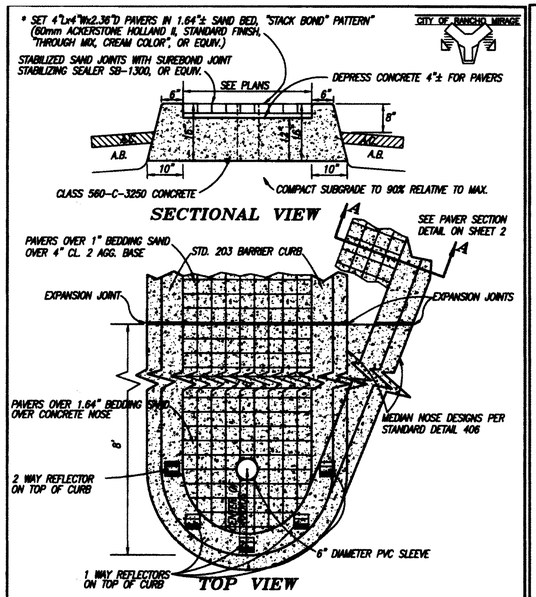
APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER, R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE

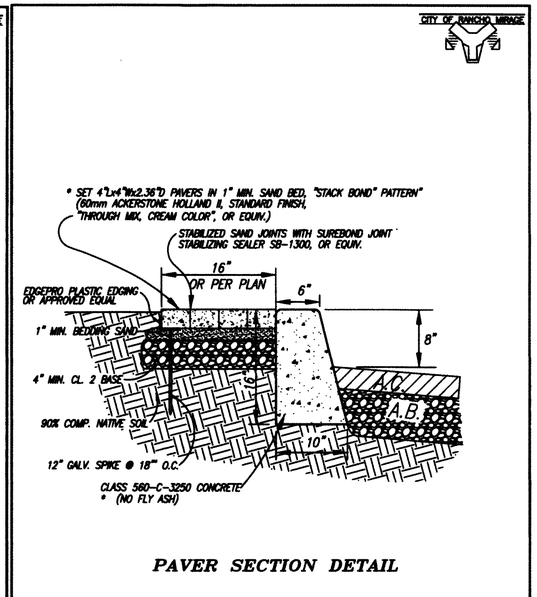
PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
IRRIGATION DETAILS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-10
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-03-IRRIGATION DETAILS.DWG

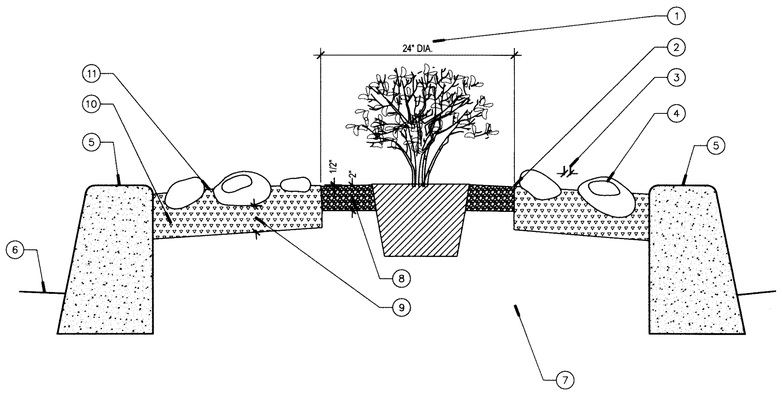


CITY OF RANCHO MIRAGE		STANDARD
REVISIONS 07/01/2008 08/12/2011 * 7/5/2012	MEDIAN NOSE DETAIL APPROVED BY: CITY ENGINEER 7/12/12 DATE	DETAIL 213 SHT. 1 OF 2



CITY OF RANCHO MIRAGE		STANDARD
REVISIONS 07/01/2008 08/12/2011 * 7/5/2012	MEDIAN PAVER DETAIL APPROVED BY: CITY ENGINEER 7/12/12 DATE	DETAIL 213 SHT. 2 OF 2

4C MEDIAN NOSE/ PAVER DETAIL

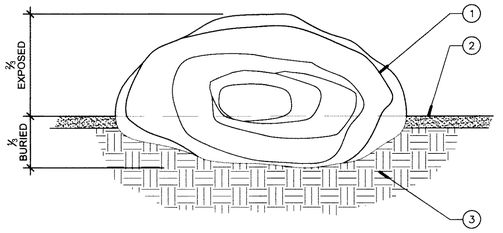


LEGEND

1. PROVIDE BLOCK-OUTS IN MORTARED IN-PLACE COBBLE WHERE OCCURS. FOR PLANT MATERIAL SEE PLANTIING PLANS AND DETAILS FOR LOCATIONS AND TYPE.
2. CONTAIN MORTAR IN TEMPORARY "BENDER BOARD", TO BE REMOVED AFTER SETTING.
3. AVERAGE 1/2" SPACING
4. SET COBBLE 50% INTO MORTAR
5. CURB
6. ROADWAY
7. SUB GRADE
8. 2" COMPACTED DECOMPOSED GRANITE OVER NATIVE SOIL
9. EQUAL TO THE SIZE OF THE AVERAGE COBBLE BEING INSTALLED.
10. ROCKS TO BE SET IN "DRY-PACK" MORTAR THEN WATERED AFTER INSTALLATION.
11. TOP OF MORTAR

4E MORTARED IN-PLACE COBBLE DETAIL

SCALE: NTS



LEGEND:

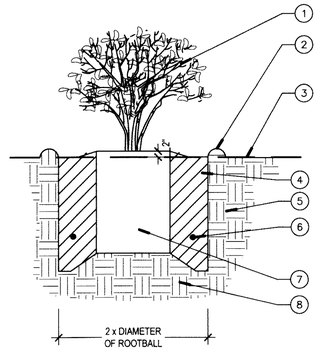
1. LANDSCAPE BOULDER (SEE PLANTING LEGEND).
2. FINISH GRADE (TOP OF D.G.)
3. COMPACTED SUBGRADE.

NOTES:

A. MAXIMUM EXPOSURE OF BOULDER SHALL BE NO MORE THAN ~~24~~ 15" FROM TOP OF FINISHED SURFACE AT PARKWAYS

4B BOULDER PLACEMENT

SCALE: 1" = 1'-0"



LEGEND:

1. 1, 5, OR 15 GALLON SHRUB.
2. 3" WATER BASIN.
3. FINISH GRADE.
4. PLANTING BACKFILL TO BE NATIVE SITE SOIL ONLY.
5. PLANT PIT EXCAVATION.
6. 7 GRAM PLANTING TABLET
   -3 PER 1 GAL.
   -9 PER 5 GAL.
   -15 PER 15 GAL.
7. ROOTBALL TO BE SET 2" ABOVE FINISH GRADE AND BACKFILLED WITH NATIVE SITE SOIL ONLY. ROOTBALL NOT TO BE EXPOSED. TAPER BACKFILL SOIL PER THIS DETAIL.
8. NATIVE SUBGRADE.

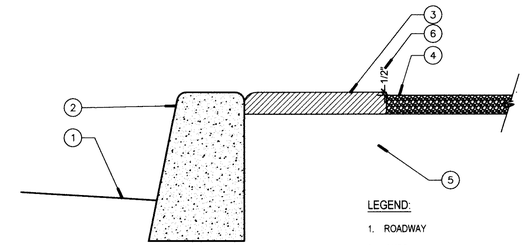
NOTE:

UNTANGLE MATTED ROOTS BY LOOSENING ALL ROOTS AT EDGE OF ROOT BALL W/ WATER FROM HOSE. DO NOT CRACK ROOT BALL.

DESERT TREES AND SHRUBS: PLANTING DETAILS SHOW 2X ROOTBALL FOR PLANTING HOLE, AND BACKFILL TO BE NATIVE SITE SOIL ONLY.

4A CONTAINER PLANTING

SCALE: 1/2" = 1'-0"



LEGEND:

1. ROADWAY
2. CURB
3. ADJACENT PAVERS
4. 2" COMPACTED DECOMPOSED GRANITE OVER NATIVE SOIL.
5. 90% COMPACTED SUB-GRADE
6. DECOMPOSED GRANITE ELEVATION SHOULD BE 1/2" BELOW ADJACENT SURFACE ELEVATION

4D DECOMPOSED GRANITE

SCALE: 1" = 1'-0"

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date — Water Management Department

CVWD Plan # _____ — Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS NO. 5870 — 12-31-2015 RENEWAL DATE — 11/20/2015 DATE — STATE OF CALIFORNIA

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

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

L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FILED IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE
FRANK SINATRA DRIVE AND BOB HOPE DRIVE
PROJECT DESCRIPTION MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
PLANTING DETAILS
SITE ADDRESS FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-11
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

G:\2014\14-0100\DRAWING\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-05-PLANTING DETAILS.DWG

IRRIGATION SYSTEM | SECTION 328400

PART 1 | *GENERAL*

1.01 SUMMARY

A. This section covers the furnishings of all materials and performing all operations to provide a complete operable landscape irrigation system as shown on the drawings including the following:
   1. Trenching, stockpiling excavated materials and refilling trenches.
   2. Irrigation system components including but not limited to: piping, backflow prevention devices and enclosures, valves, fittings, rotors, spray heads, central control system controllers, wiring and final adjustments as determined by the architect to insure efficient and uniform distribution.
   3. Pipe connections to irrigation pump stations, water meters and backflow prevention devices.
   4. Testing and inspection of irrigation system.
   5. Clean-up and maintenance

B. The conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.02 GENERAL REQUIREMENTS

A. Code Requirements shall be those of State and Municipal Codes and Regulations locally governing this work, providing that any requirements of the Drawings and Specifications, not conflicting therewith but exceeding the Code Requirements shall govern, unless written permission to the contrary is granted by the Architect.

B. Conform to the requirements of the reference information listed below except where more stringent requirements are shown or specified in the most current set of construction documents:
   1. American Society for Testing Material (ASTM), for test methods specifically referenced in this section.
   2. Underwriter's Laboratories (UL), for UL wires and cables.

C. Work involving substantial plumbing for installation of brass piping, backflow prevention devices and other related work shall be executed by a licensed and bonded plumbing contractor. Any necessary permits shall be obtained prior to beginning work.

D. Specified depths of pressure supply lines, laterals and pitch of pipes as stated in this section are minimums. Settlement of trenches lower than grades specified on the final grading plans is cause for removal of finish grade treatment, refilling trenches, recompacting and repairing of finish grade treatment.

E. Follow current printed manufacturer's specifications and drawings for items or information not specified or graphically indicated in the most current set of construction drawings.

F. Scaled dimensions are approximate and at times it is not possible to indicate offsets, fittings and other related equipment graphically on the construction drawings. Contractor shall be responsible for minor changes caused by actual site conditions. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions of related architectural elements, utilities and landscaping and furnish and install required fittings.

G. Do not install the irrigation system as shown on the construction drawings when it is obvious that actual field conditions such as physical obstructions, grading discrepancies and field dimensions vary from those recorded on the construction drawings. Immediately bring any such discrepancies to the attention of the architect prior to proceeding with work. If immediate notification is not given and such discrepancies exist, the contractor shall assume full responsibility for necessary revisions, as determined by the architect.

H. All central control system telephone communication and/or radio communication shall be tested and certified in writing by the appropriate manufacturer's representative and shall also be tested on line with the central computer system prior to requesting a walk through for substantial completion.

1.03 EXISTING FIELD CONDITIONS

A. Preserve and protect all existing trees, plants, monuments, structures, hardscape and architectural elements from damage due to work in this section. In the event that damage does occur to inanimate object and structures, the contractor will repair or replace such damage to the satisfaction of the owner or owner's representative. Damage or injury to living plant material will be replaced by the contractor at the contractor's expense.

B. Trenching or other work required in this section under the limb spread of existing trees shall be done by hand or by other methods so as to prevent damage or harm to limbs, branches and roots.

C. Trenching in areas where root diameter exceeds 2 inches shall be done by hand. Exposed roots of this size shall be heavily wrapped with moistened burlap to avoid scarring or excessive drying. Where a trenching machine is operated in proximity to roots that are less than 2 inches, the wall of the trench shall be hand trimmed , making clean cuts through roots.

D. Trenches adjacent to or under existing trees shall be closed within 24 hours , and when this is not possible, the side of trench closest to the tree or trees affected shall be covered with moistened burlap.

E. Protect, maintain and coordinate work with other contracts, specifications, trades, and utilities. Extreme care shall be exercised in excavating and working in the area due to existing utilities. Contractor shall be responsible for damages caused by their operations. In the event that damage does occur, the costs of such repairs shall be paid by the contractor unless other arrangements have been made with the owner.

F. Use caution where trenches and piping cross existing roadways, sidewalks, hardscape, paths or curbs. In the event that damage does occur, the contractor will repair such damage at the contractor's expense.

1.04 REQUIRED DOCUMENTS

A. Submittals
   1. Submit (6) six sets of all irrigation equipment to be used, manufacturer's brochures, service manuals, guarantees, and operating instructions for approval to the architect prior to beginning work. Submittals should be in a bound form complete with table of contents. The contractor shall not proceed with work in the field until this submittal is approved in its entirety by the architect.

B. Service Manuals
   1. The Contractor shall furnish (4) four service manuals to the owner prior to scheduling a walk through for substantial completion. Manuals shall be submitted in a bound form complete with a table of contents, and workmanship form on company letterhead copy of contractor's warranty, copy of the letter of certification for the central control system on the central control system manufacturer's letterhead and shall contain complete enlarged drawings of all equipment installed showing component warranties and catalog numbers together with the manufacturer's name and address. Manuals shall include operation instructions. Manuals shall be subject to approval by the owner or owner's representative as to completeness.

C. Record Drawings/As-builts
   1. Prior to beginning work in the field the contractor shall secure a complete set of irrigation plans at the original scale complete with details and specifications. The contractor shall be responsible for making a set of ~~blueline~~ prints for every week on the project. At the end of each working day, the contractor shall record all work accomplished for that day on the set of ~~blueline~~ prints in red ink. These record drawings shall be brought up to date at the end of each work week by a qualified draftsperson. The drawings should indicate the following:
      a. Any zoning changes.
      b. Dimension from two permanent points of reference (building corners, fixed hardscape corners, road intersections, permanent existing utilities) the location of the following items:
         .1 Water meters.
         .2 Pump stations.
         .3 Connection to existing water lines.
         .4 Routing of pressure supply lines at every 100' along routing.
         .5 Backflow Prevention Devices
         .6 Flow Sensors
         .7 Master Valves
         .8 Isolation Ball Valves
         .9 Quick Coupling Valves
         .10 Air Release Valves
         .11 Electric Control Valves
         .12 Drip Valve Assemblies
         .13 Flush Valve Assemblies
         .14 Swing Check Valves
         .15 Central Control System Controllers
         .16 Grounding rods.
         .17 Control wire routing (if routed separately from pressure supply line).
         .18 Control wire splices that are outside of the controller.
         .19 Weather Station Equipment
         .20 Communication Equipment for Central Control System
         .21 Other equipment as directed by the architect.
   2. Prior to scheduling a walk through for substantial completion, provide a record set of field as-built drawings as described above to the architect for review. After review, the architect will return the as-built set to the field foreman requesting further information or will notify the owner that the record set of field as-builts drawings are complete. After approval from the owner, a walk through for substantial completion may be scheduled.
   3. Prior to scheduling the final walk through, the final set of irrigation as-built drawings shall be professionally drafted in auto-cadd by the architect.
   4. The architect and the contractor shall verify the final as-builts at the time of the final walk through and once successful the architect shall deliver the final set of as-built drawings to the owner or owner's representative prior to initiating the maintenance period for the contractor.

D. Controller Charts
   1. Prior to scheduling a walk through for substantial completion, provide a record set of field controller charts which have color coded each station within each controller to the architect for review. After review, the architect will return the controller charts to the field foreman requesting further information or will notify the owner that the record set of controller charts are complete. After approval from the owner, a walk through for substantial completion may be scheduled.
   2. Prior to scheduling a final walk through, one set of controller charts shall be professionally drafted in Auto-cadd by the architect for each controller unit installed on the project. The controller drawings shall be an actual Auto-cadd reduction of the area covered by that controller unit and shall be at the maximum allowable scale that will fit inside the controller door without folding the drawing.
   3. The architect and the contractor shall verify each controller chart at the time of the final walk through and once successful the architect shall deliver the final set of controller charts to the owner or owner's representative prior to initiating the maintenance period for the contractor. The controller chart sent to the owner shall be hermetically sealed between two (2) pieces of minimum 20 mils thick plastic.
   4. The architect shall then deliver one controller chart to the contractor who will permanently fix the controller chart to the inside of the applicable controller.

PART 2 | *PRODUCTS*

2.01 PIPING

A. General Piping:
   1. Pipe sizes shown are nominal inside diameter unless otherwise noted.
   2. Pipe shall be identified with the following indelible markings:
      a. Manufacturer's name.
      b. Nominal pipe size.
      c. Schedule or class.
      d. Pressure rating.
      e. NSF (National Sanitation Foundation) seal of approval.
      f. Date of extrusion.

B. Solvent Weld Pressure Supply Line:
   1. Solvent Weld Pressure Supply Line: (downstream of Backflow prevention device) PVC CL315BE (1" - 3")
      a. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12454-B.
      b. Type 1, Grade 1.
   2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
      b. Threads- Injection molded type (where required)
      c. Tees and Ells- side gated
   3. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
   4. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.

C. Gasket-End Pressure Supply Line:
   1. Gasket-End Pressure Supply Line: (downstream of Backflow prevention device) PVC Class 200 (4" and larger).
      a. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12454-B.
      b. Type 1, Grade 1.
   2. Fittings: Cast Iron or Epoxy coated steel; complying with ASTM D1784 and D2466, cell classification 12454-B.
   3. Gaskets: Factory installed in pipe and fittings, having a metal or plastic support within the gasket or a plastic retainer ring for gasket.
   4. Lubricant: As recommended by manufacturer of pipe fittings.

D. Non-Pressure Lines Below Grade:
   1. Non-Pressure Lines: (downstream of electric remote control valve) PVC SCH 40.
   2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
      a. Threads- Injection molded type (where required)
      b. Tees and Ells- side gated
      c. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
   3. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.

E. Non-Pressure Lines Above Grade:
   1. Non-Pressure Lines: (downstream of electric remote control valve) Ultraviolet Resistant PVC SCH 40, conforming to ASTM D1785-83.
   2. Fittings: Standard weight, Schedule 40, injection molded PVC, complying with ASTM D1784 and D2466, cell classification 12454-B.
      a. Threads- Injection molded type (where required)
      b. Tees and Ells- side gated
      c. Threaded Nipples: ASTM D2464, Schedule 80 with molded threads.
   3. Joint Cement and Primer: Type as recommended by manufacturer of pipe and fittings.
   4. On-Grade Pipe Stabilizer Bars: 5/16" hot rolled "J" Hook with protective vinyl tubing, welded to #4 rebar stake.

F. Sleeving and Conduit:
   1. All PVC sleeving for pressure supply line and non- pressure supply line shall be twice the nominal size of the pipe within and used for sleeves below grade as indicated in the following sleeve and conduit schedule:
   2. Sleeving and Conduit Material Under Hardscape:
      a. PVC SCH 40 for 1"-2 1/2" pressure supply line.
      b. PVC SCH40 for 3" and larger pressure supply line.
      c. PVC SCH 40 for non- pressure lines.
      d. (1) one ¾" PVC SCH. 40 conduit for up to 5 wires.
      e. (1) one 1" PVC SCH. 40 conduit for up to 8 wires.
      f. (1) one 1 ¼" PVC SCH. 40 conduit for up to 15 wires.
      g. (1) one 1 ½" PVC SCH. 40 conduit for up to 20 wires
      h. (1) one 2" PVC SCH 40 conduit for up to 30 wires.
      i. (1) one 2 ½"" PVC SCH 40 conduit for up to 35 wires.
      j. (1) one 3/4" PVC SCH 40 wire conduit for flow sensing cable.
      k. (1) one 3/4" PVC SCH 40 wire conduit for master valve wire.
   3. Flow sensing cable and master valve wires shall be installed each in their own conduit separate and apart from all other wires.
   4. Sleeving and Conduit Material Over Concrete V-Ditches:
      a. Galvanized SCH. 40 for 1"-2 1/2" pressure supply line.
      b. Galvanized SCH.40 for 3" and larger pressure supply line.
      c. Galvanized SCH. 40 for non- pressure lines.
      d. (1) one ¾" Galvanized SCH. 40 conduit for up to 5 wires.
      e. (1) one 1" Galvanized SCH. 40 conduit for up to 8 wires.
      f. (1) one 1 ¼" Galvanized SCH. 40 conduit for up to 15 wires.
      g. (1) one 1 ½" Galvanized SCH. 40 conduit for up to 20 wires
      h. (1) one 2" Galvanized SCH. 40 conduit for up to 30 wires.
      i. (1) one 2 ½"" Galvanized SCH. 40 conduit for up to 35 wires.
      j. (1) one 3/4" Galvanized SCH. 40 wire conduit for flow sensing cable.
      k. (1) one 3/4" Galvanized SCH. 40 wire conduit for master valve wire.
   5. On-Grade Pipe Stabilizer Bars: 5/16" hot rolled "J" Hook with protective vinyl tubing, welded to #4 rebar stake.

G. Brass Pipe and Fittings:
   1. Pressure Supply line (from point of connection through Backflow Prevention Device) Brass pipe shall be regular weight, 85% red brass, ANSI Schedule 40 screwed pipe.
   2. Fittings: Medium brass, screwed at 125 pound class.

2.02 BACKFLOW PREVENTION DEVICE 2" AND SMALLER

A. Backflow Prevention Device: Reduced pressure principal Backflow assembly shall consist of an approved brass or bronze body, brass check valves, hydraulically actuated relief valve, inlet and discharge shutoffs and field test cocks, as specified on drawings.

B. Backflow prevention units shall be approved by the Foundation for Cross-Connection Control and Hydraulic Research.

C. Backflow device enclosure shall be constructed of stainless steel tube and wire construction and have a smooth surface to protect against handling industry. Enclosure shall have a full release locaking mechanism and provide easy access for service and repairs.

2.03 BACKFLOW PREVENTION DEVICE 2 1/2" AND LARGER

A. Backflow Prevention Device: Double check assembly shall consist of an approved ductile iron grade 65-45-12 with fusion epoxy coated (interior and exterior) body and NRS resilient wedge gate valves with stainless steel springs and flanged fittings.

2.04 ATMOSPHERIC VACUUM BREAKER

A. Atmospheric vacuum breaker shall consist of and approved brass or bronze body with non spilling type bronze bonnet rated to 150 PSI.

2.07 WYE STRAINER

A. Wye strainer shall be bronze construction with a stainless steel screen element. Wye strainer shall have a standard filtration size of 80 mesh.

2.08 PRESSURE REGULATING VALVE

A. Pressure reducing valves shall be of bronze and stainless steel construction and be adjusted from 25 P.S.I. to 125 P.S.I.

2.09 MASTER VALVES

A. The master valve shall be normally closed, pressure reducing, surge protecting, supplying constant downstream pressure when opened. Operating voltage of 16-40 VAC. Regulating and surge anticipation control pilot range from 5 125 psi with accuracy within =/1 5 percent of setting. Capable of operating within a range of .01 to 400 GPM. Copper encased solenoids that area corrosion resistant and provide heat dissipation for prolonged coil life, cast iron, epoxy coated body and bronze trim fully guided, 600 psi rated diaphragm assembly, with manual on-off capability.

2.10 FLOW SENSORS

A. The flow meter shall use two #14 AWG; one red, and one black in 1"PVC conduit to connect to the irrigation controller. The maximum wire run between flow meter and controller shall be 2000 ft. The flow meter shall send low voltage digital pulses back to the controller and therefore all electrical connections must be waterproof and shall resist any moisture entry.

B. It is intended that all wire runs between the controller and flow meter shall be direct pulls and shall have no splices. If wire splices are unavoidable, they shall be installed in a valve box with water proof connectors and properly labeled valve boxes.

C. Each flow meter shall have the following characteristics:
   1. Housing to be a SCH. 80 polyvinyl chloride tee or bronze tee
   2. Have a pulsing output that operates at 9V DC and a pulse rate that is proportionate to the GPM
   3. Fully compatible with the internal interface at each field controller
   4. Powered by the controller
   5. Replaceable metering insert shall feature a six-bladed design with a proprietary, non-magnetic sensing mechanism
   6. Supplied by the same manufacturer as the irrigation controller.

D. Irrigation zones must be sized so that the specified flow meter is capable of reading the minimum and maximum gallons per minute for all proposed zones.

E. Install down stream of master valve.

2.11 ISOLATION VALVES

A. Isolation Ball PVC Valves: Industrial Grade sealed unit socket weld schedule 80 PVC ball valve (Use for mainline pipe 1-1/2" and smaller) as manufactured by Spears model 2122 or approved equal.

B. Isolation Gate Valve: Bronze, screw-in-bonnet, non-rising stem, cross handle, solid wedge, threaded valve (Use on mainline pipe 2" and 2-1/2" in size) as manufactured by Nibco model T-113-K, or approved equal.

C. Isolation Gate Valve: Iron bolted bonnet with 2" square operating nut, non-rising stem, resilient wedge type, soft seat, flanged end epoxy coated, bronze trimmed iron body, (Use on pipe 3" and greater) as manufactured by Nibco model F-619-RW flanged, or approved equal.

2.12 QUICK COUPLING VALVES

A. Quick coupler valves shall have a body constructed of red brass with a wall thickness guaranteed to withstand normal working pressure of 150 P.S.I. without leakage with female threads (penning at base). Quick coupler valve shall have a hinge cover constructed of red brass with leather like vinyl cover bonded to it on such a manner that it becomes permanent type cover. Quick coupler valves used with potable water shall have vinyl covers yellow in color. Quick coupler valves used for reclaimed water shall have vinyl covers purple in color with appropriate reclaimed water warnings in English and Spanish as well as the International "Do Not Drink" symbol

B. All quick coupler valves must have a schedule 80 ball valve to isolate mainline from quick coupler valve. Mainline shall be the size of quick coupler valve from mainline tee to quick coupler.

2.13 HOSE BIB

A. Hose bib shall be a one-piece body with ¾" FIPT inlet and ¾" hose thread non-kink, angled outlet.

B. Hose bib shall have optional recessed locking nut.

2.14 AIR RELIEF VALVES FOR PRESSURE SUPPLY LINES

A. Air relief valve shall be composed of schedule 80 PVC material and be continuous acting in type. Air relief valve shall have a minimum inlet size of 1" MIPT.

2.15 ELECTRIC CONTROL VALVES

A. Electric Remote Control Valves: Electric control valves with pressure regulating feature two way solenoid, pilot operated made of synthetics, non corrosive material; diaphragm activated and slow closing. Include freely pivoted seat seal, retained (mounted) without attachment to diaphragm.

B. Isolation Ball Valve at Manifold and/or Electric Control Valve:
   1. Ball Valve: PVC threaded true union ball valve, with heavy bodied PVC construction, buttress threaded double union nuts, safe-t-block seal carrier, PTFE ball seat, high impact polypropylene handlesafe-t-shear stem, full schedule 80 bore, 235PSI rating, NSF listed.

2.16 DRIP VALVE ASSEMBLIES

A. Electric Remote Control Valves: Electric control valves with pressure regulating feature two way solenoid, pilot operated made of synthetics, non corrosive material; diaphragm activated and slow closing. Include freely pivoted seat seal, retained (mounted) without attachment to diaphragm.

B. Wye Strainer: 150 mesh screen for point to point drip and sub surface

C. Isolation Ball Valve: Ball Socket Ball Valve with thermoplastic molded one piece construction and teflon seat with EDPM cushions.

2.17 HARD PIPED POINT TO POINT DRIP IRRIGATION

A. Riser Assembly For Hard Piped Point to Point Drip Irrigation:
   1. 12" Long, ½" IPS flexible PVC tubing with factory attached ½" schedule 40 PVC MIPT adapters on both ends.

B. Emitters For Hard Piped Point to Point Drip Irrigation:
   1. Pressure compensating single outlet emitter with ½" FIPT base and 20 mesh screen.
      ½ GPH, 1 GPH or 2GPH. Mulch Camo Brown in color.

2.18 MULTI OUTLET POINT TO POINT DRIP IRRIGATION

A. Drip Tubing For Point to Point Drip Irrigation with Multi-Port Adapter:
   1. DuraPolyHose 1/4", manufactured of flexible vinyl chloride conforming to ASTM D2855M, D380 and D1599.

B. 6 Outlet Manifold for Point to Point Drip Irrigation
   1. Emission Device with ½" FPT inlet thread for ½" MIPT threaded riser, providing a manifold with six free-flowing ¼" barb outlets. Each barb outlet shall be sealed with a durable, removable, plastic cap that can be removed for additional emission devices.

C. Emitters For Point to Point Drip Irrigation with Multi-Port Adapter:
   1. ¼" barbed pressure compensating emitter with a high quality diaphragm for improved pressure compensation and uniformity over a wide range of pressure.
      Emitter shall have a take apart feature for inspection and cleaning as well as an outlet baffle to deter entry of insects.

      Emitters shall be installed according to the following schedule:
      1 Gallon Shrub - (2) .5 GPH Emitters
      5 Gallon Shrub - (2) .5 GPH Emitters
      15 Gallon Shrub/Tree - (3) 1 GPH Emitters
      24" Box Tree - (4) 1 GPH Emitters
      36" Box Tree - (6) 1 GPH Emitters
      48" Box Tree - (8) 1 GPH Emitters

D. Tubing Stakes For Point to Point Drip Irrigation with Multi-Port Adapter:
   1. 6" galvanized, 9 gauge, pvc coated tubing stake.

2.20 CHECK VALVES

A. Swing check valves: PVC, Slip x Slip check valves, for non-pressure lateral line applications on slopes.

B. Spring Check Valves: for pop-up sprayheads and sprayheads on risers and 3/4" for pop-up rotors and rotors on risers.

2.21 FLUSH VALVE ASSEMBLIES

A. Schedule 80 Ball valve, threaded schedule 80 nipples and fittings with polyethylene tubing for flush hose.

2.22 VALVE BOXES

A. Jumbo rectangular valve boxes shall be 14-7/8 inch wide by 21-3/8 inch long and 12 inch high. Rectangular valve boxes shall be 11-3/4 inch wide by 17 inch long and 12 inch high. Round valve boxes shall be 10-inch diameter and 10 1/2 inch high. All valve boxes shall be constructed of rigid polyolefin.

B. Valve boxes shall have locking covers secure with a 3/8-inch stainless steel bolt and washer.

C. Jumbo rectangular valve boxes shall be used for master control valves.

D. Rectangle valve boxes shall be used for control valves, pressure regulators, flow sensors, wye strainers, filtration devices, ball valves and pull boxes.

E. Round valve boxes shall be used for gate valves quick coupler valves, flush valve assemblies and spare wires.

F. All valve boxes to be tan in color unless otherwise specified for use of reclaimed water.

G. Heat brand all box lids with the appropriate two-inch high identification letters and/or numbers.

H. All valve boxes shall receive landscape fabric. Landscape fabric shall be constructed of
   5.0 oz. weight proven polypropylene weed barrier with burst strength of 225 P.S.I. and capable of 12 gallons per minute of water flow and puncture strength of 60 lbs. Dewitt Pro, Mirrify or approved equal.

I. All valve boxes shall receive 2 cubic feet of 3/4-inch gravel.

J. Valve Tag: Manufactured from UV stabilized plastic with 180lbs pull out resistance and hot stamped for maximum visibility. Top hole shall be designed to pass a 16 gauge or smaller solenoid pigtail or attach with a nylon tie.

2.24 BUBBLERS

A. Bubblers shall be constructed of heavy duty plastic and be pressure compensation full circle. The bubbler shall have a 20 mesh screen to protect it from clogging.

B. Bubblers shall be from .25 - 1.0 GPM and operate between 20-90 PSI.

2.33 ELECTRIC CONTROL VALVE WIRE

A. Low Voltage:
   1. AWG UF UL approved No. 14 direct burial copper wire for all control wires and No. 14 direct burial copper wire for all common wires.
   2. Wire Colors:
      a. Control Wires- As specified on drawings
      b. Common Wires- As specified on drawings.
      c. Master Valve Wires- Blue.
      d. Spare Wires- Green (labeled at termination)
   3. Wire Splice Connectors: 3M DBY Direct Bury Splice Kits.

B. High Voltage:
   1. Type required by local codes and ordinances, of proper size to accommodate needs of equipment serviced.

2.35 SAND BEDDING

A. Sand bedding shall be constructed on grade

PART 3 | *EXECUTION*

3.01 PREPARATION

A. Examine field conditions prior to beginning work described in this section. Grading operations shall be completed and approved prior to beginning work.

B. Verify all sleeve locations below future hardscape and/or across concrete v-ditches prior to beginning work in this section. Flag all existing sleeves and conduits installed by other trades. Report any conflicts and discrepancies to the architect immediately.

C. Irrigation system shall be constructed to the sizes and grades at the locations shown on the drawings. Mark with powdered lime or marking paint routing of pressure supply line and stake the location of each sprayhead, rotor, electric control valve and other related equipment for the first three zones. Architect shall review staking and direct any necessary changes with the contractor prior to proceeding to other zones. This review does not in any way alleviate the contractor from the responsibilities associated with proper uniformity and distribution of head placement after staking

D. Install sleeves, to accommodate pipes and wires, under paving, hardscape areas, sidewalks, and paths prior to asphalt and concrete operations. Compact backfill around sleeves to 95% Modified Proctor Density within 2% of optimum moisture content in accordance with ASTM D1557.

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS No. 5870 — EXPIRATION 12-31-2016 — RENEWAL 11/20/2015 — STATE OF CALIFORNIA

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date _____ Water Management Department _____

CVWD Plan # _____ Development Services Department _____

IMPORTANT NOTICE
CALL BEFORE YOU DIG
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UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

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

L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THESE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 11°13'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES — CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE

PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
LANDSCAPE SPECIFICATIONS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-12
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

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3.02 EXCAVATION AND BACKFILLING OF TRENCHES

A. Trench excavation shall as much as possible follow the layout shown on the drawings.
Trenches shall be straight in alignment and support pipe continuously on bottom of trench. Remove rocks and debris greater than 1" in diameter. Over excavate as required for bedding material.

B. Depth of Trench (in landscape areas):

Pressure Supply Line (3" and smaller): 18" from top of pipe to finish grade.
Non-Pressure Line (12" pop-up Rotors): 18" from top of pipe to finish grade.
Non-Pressure Line (6" and smaller pop-up Rotors): 12" from top of pipe to finish grade. Non-Pressure Line (12" pop-up Spray Heads): 18" from top of pipe to finish grade.
Non-Pressure Line (6" and smaller pop-up Spray Heads): 12" from top of pipe to finish grade
Control Wiring: directly at side and bottom of pressure supply line.
Pressure Supply line Locator Tape: 6" above top of pipe.

C. Depth of Trench (under asphalt paving or concrete):

Pressure Supply Line (3" and smaller): 24" from top of pipe to aggregate base. Non-Pressure Line: 24" from top of pipe to aggregate base.
Control Wiring: directly at side and bottom of pressure supply line.
Pressure Supply line Locator Tape: 6" above top of pipe.

1. Piping located under asphalt paving or concrete shall be installed with the appropriate sized sleeve and backfilled with sand bedding (6" below pipe and 6" above pipe).
2. Compact backfill material in 6" lifts at 90% maximum density determined in accordance with ASTM D1557 using manual or mechanical tamping device.
3. Set in place, cap, and pressure test piping in the presence of the owner or owner's representative prior to backfilling.

D. Width of Trench:
Pipe Greater than 3": 14" minimum.
Pipe Less than 3": 7" minimum.

E. Width between Trenches:
Irrigation Trench to Irrigation Trench: 6" minimum.
Irrigation Trench and other Trade Trenches: 12" minimum.

F. Boring: Boring will only be permitted where pipe must pass under an obstruction that cannot be avoided or removed. Backfill shall match surrounding soil density and grain. Boring under existing paving, sidewalks, or hardscape may be permitted at contractor's own risk. Contractor is responsible for any repairs or damage to such items at their own expense.

G. Backfilling: Backfilling of trenches may not be done until all required testing for the irrigation system has been completed.
1. Material: Excavated material is generally considered to be adequate for backfilling operations. Before beginning the backfilling operation, insure that backfill material is free from debris and rocks greater than 1" in diameter, and is not mixed with topsoil. These materials after being separated from backfill, shall be legally disposed of at contractor's expense.
2. Bedding: Bed pressure supply line with construction grade sand 6" above and 6" below pipe as shown on details. Remaining backfill may be as described above.
3. Bed all electrical control wire trenched separate from pressure supply line, with construction grade sand 6" above and 6" below wires.
4. When backfilling, slightly mound filled trenches for settlement after backfilling is compacted. Compact backfill to a 90% maximum density in accordance with ASTM D1557 with a mechanical tamper. Do not leave trenches open for a period greater than 48 hours. Open trenches shall be protected in accordance with current OSHA regulations.
5. Smooth trenches to finish grade prior to requesting a walk through for substantial completion with the landscape architect.

3.03 POINT OF CONNECTION(S)

A. Point of connection shall be approximately as shown on drawings. Connect new underground piping and valves and provide all flanges, adapters, or other necessary fittings.

3.04 INSTALLATION OF SOLVENT WELD POLYVINYL CHLORIDE PIPE (PVC)

A. Polyvinyl chloride pipe shall be cut with an approved PVC pipe cutter designed only for that purpose.

B. All plastic-to-plastic solvent weld joints shall use only the solvent recommended by the pipe manufacturer. Do not install solvent weld pipe when temperature is below 40° F.

C. Pipe ends and fittings shall be wiped with MEK, or approved equal, before welding solvent is applied. Welded joints shall be given a minimum of 15 minutes to set before moving or handling.

D. Pipe shall be snaked from side-to-side on trench bottom to allow for expansion and contractions.

E. All changes of direction over 15 degrees shall be made with appropriate fittings.

F. When pipe laying is not in progress at the end of each working day, close pipe ends with tight plug or cap.

G. Install pressure supply line locating tape along the entire length of pressure supply line.

H. Coordinate pressure supply line with sand bedding operations.

I. No water shall be permitted in the pipe until inspections have been completed and a period of at least 24 hours has elapsed for solvent weld setting and curing.

J. Center load pipe with small amount of backfill to prevent arching and slipping under pressure. Leave joints exposed for inspection during testing.

3.05 INSTALLATION OF GASKET-END POLYVINYL CHLORIDE PIPE

A. Lay pipe and make pipe to fitting or pipe to pipe joints following OR70 recommendations (Johns- Manville Guide for Installation of Ring-Tite Pipe), or pipe manufacturer's recommendations.

B. Pipe shall be snaked from side-to-side of trench bottom to allow for expansion and contractions.

C. All changes of direction over 15 degrees shall be made with fittings.

D. Install pipe joint restraints on all gasket end fittings as specified above and as shown on details.

E. When pipe laying is not in progress and at the end of each working day, close pipe ends with tight plug or cap.

F. Install pressure supply line locating tape along the entire length of pressure supply line. G. Center load pipe with small amount of backfill to prevent arching and slipping under
pressure. Leave joints exposed for inspection during testing.

H. Coordinate pressure supply line with sand bedding operations.

I. No water shall be permitted in the pipe until inspections have been completed and a period of at least 24 hours has elapsed for solvent weld setting and curing.

3.06 INSTALLATION OF BRASS PIPE

A. Brass piping shall be cut by a power hacksaw, a circular cutting machine using an abrasive wheel, or by means of a hand hacksaw. All pipe shall be reamed and rough edges or burrs removed so that a smooth and unobstructed flow is obtained.

B. Eccentric reducing fittings shall be used where any change in pipe size occurs.
Bushings shall not be used unless specifically authorized by the architect.

C. Joint compound shall be carefully and smoothly placed on the male thread only. All screwed joints must be tightened with tongs or wrenches. Caulking of any kind will not be permitted.

D. All exposed piping under structural slabs shall be stenciled with "Irrigation Main" or "Irrigation Lateral" as required, at ten foot (10') intervals in black lettering, 3/4" minimum high.

3.07 BACKFLOW PREVENTION DEVICE

A. Install Backflow prevention device, enclosure and associated equipment at the location as specified on drawings.

B. Coordinate installation with local governing codes and ordinances.

3.08 FLOW SENSORS

A. Install flow sensors as specified on drawings and per manufacturer's specifications.

B. Install flow sensing cable in a separate conduit and connect to terminal strip at controller.

3.09 MASTER VALVES

A. Install master valves as specified on drawings and per manufacturer's specifications.

B. Install master valve wire in a separate conduit and connect to terminal strip at controller.

3.10 ISOLATION BALL VALVES

A. Install isolation ball valves in separate valve boxes as specified on the drawings.

3.11 QUICK COUPLING VALVES

A. Install quick coupling valves in a separate valve box as specified on the detail drawings

B. Angeled nipplie relative to pressure supply line shall be no greater than 45° and no less than 10°

3.12 AIR RELIEF VALVES

A. Install air release valves in separate valve boxes as specified on the drawings

3.13 ELECTRIC CONTROL VALVES

A. Install each electric control valve in a separate valve box so that cross handle is 3" min. below valve box cover as specified on the detail drawings.

B. Group electric control valves together as specified on the drawings allowing a maximum of 12 " between each valve box. Install valve boxes in the same direction and parallel with one another and perpendicular to paving, hardscape, sidewalks and paths.

C. Install electric control valves on slopes within two feet from toe of slope. Use same trench as toe of slope non-pressure lateral line for pressure supply line and wire routing see section 3.02 B and C for pipe and wire depths.

3.14 CHECK VALVES

A. Install swing check valves as specified on drawings.

B. Install spring check valves as specified on drawings.

3.15 VALVE BOXES

A. Install valve boxes with each type of irrigation equipment so that top of valve box is above finish grade as specified on the detail drawings. Valve box extensions are not acceptable.

B. Place gravel sump below and around each valve box prior to installing valve box as specified on the drawings. Place remaining portion of gravel inside valve box allowing full access in and around all fittings. Valve box shall be fully supported by gravel sump. No brick or wood supports are allowed.

C. Brand valve box lid of associated equipment as follows:
Electric control valve box lid with "Controller Letter and Station Number".
Quick coupling valve box lid with the letters "QC".
Isolation ball valve box lid with the letters "BV".
Air relief valve box lid with the letters "AR".
Spare Wire box lids with the letters "SW"
Wire Splice box lid with the letters "WS".

Letter and number size of brand shall be no less than 1" and no greater than 1 1/2" in height and shall be 1/8" maximum in depth. Provide sample branding to the owner or owner's representative prior to commencement of work.

D. Walk through for substantial completion will not be allowed until all branding is complete.

3.17 AUTOMATIC CONTROLLER UNIT

A. Verify electrical power at location of automatic controller unit prior to installation of automatic controller unit. Notify architect immediately if power source is not available.

B. Hardwire controller to the on/off switch and existing power source. Controller shall not be plugged into socket provided for other equipment.

C. Install automatic controller unit where shown on drawings per manufacturer's specifications. Controller shall be tested with complete electrical connections. The Contractor shall be responsible for temporary power to the Controller for operation and testing purposes.

D. Connect electric control valve wiring to controller unit in the same numerical sequence as indicated on the drawings and label within 1" of the terminal strip. Label all spare wires as "spare".

E. Connect flow sensing and master valve wiring to controller unit and label within 1" of the terminal strip.

F. Install a separate ground rod and wire for each controller unit as specified on the drawings and per manufacturer's specifications.

G. Above ground conduit shall be rigid galvanized pipe with the appropriate fittings.
Below ground conduit shall be PVC SCH 40 pipe with appropriate fittings.

H. Label each automatic controller unit with the letter or number designated on the drawings. Letter or number shall be located in a visible location on the inside panel cover with 3" high vinyl letters.

I. Each automatic controller unit shall be completely operable prior to scheduling a walk through for substantial completion.

3.18 ELECTRICAL WIRE

A. Low Voltage Wiring:
1. Bury control wiring in same trench as pressure supply line as specified.
2. Bundle all 24 volt wires at 20' intervals with electrical tape.
3. Provide expansion loops at every pressure supply line angle fitting and at 250' length intervals along routing. Form expansion loop by wrapping wire a minimum of 10 times around a 3/4" pipe and withdrawing pipe as specified on the drawings
4. Limit splicing of electrical wiring. Provide each splice made at intervals or in electric control valve and drip valve assembly valve boxes with 3M DBY Direct Bury Splice Kits.
5. Wire splices occurring at intervals outside electric control valve boxes shall be installed in a separate valve box.
6. Provide (1) one electrical control wire for every electric control valve. Piggy backing like zones on the same electrical control wire is not allowed.
7. Install (2) two spare #14-1 electrical control wires from the automatic controller unit pedestal to the last electric control valve on each leg of pressure supply line. Locate the spare wires in their own valve box as specified on the drawings. In addition to these spare wires, check the drawings for any additional wires that may be required and locate them in the same valve box as the spare wires.

B. High Voltage Wiring:

1. Install 120 volt power from power source to automatic controller unit following local governing codes and ordinances.

3.19 QUALITY CONTROL

A. Preconstruction Meeting: The contractor is responsible for contacting the landscape architect prior to beginning construction and/or ordering materials to establish a meeting to review and discuss project objectives, concerns and to review the construction documents to insure a complete understanding of required installation procedures.

B. General Observation: The landscape architect will visit the construction site at interim times during the construction process to access construction progress regarding installation of irrigation equipment to be in compliance with the drawings, details, specifications and site conditions. The architect will prepare a site report after each visit noting progress of installation, verbal communication with the contractor and identifying any field adjustments necessary which require modifications to the designed irrigation system. A copy of this site report will be delivered to both the owner and the contractor. The contractor is responsible to immediately address each item on the site report before proceeding with further construction.

C. Pressure Testing the Pressure Supply Line: After backfilling, flushing, and prior to the installation of each electric control valve, isolation ball valve and quick coupling valve the irrigation system shall be pressure tested.

1. Pressure testing shall be performed in the presence of the architect and owner or owner's representative utilizing the following procedure:
   a. Pressurize the irrigation system to 40 psi greater than the designated static pressure or 150 psi whichever is greater for a period of no less than 2 hours. The pressure gauge used for the pressure test shall not exceed readings greater than 300psi. Pressure pump and other equipment necessary for the test shall be furnished by the contractor.
   b. Test is acceptable if no leakage occurs within the system for the duration of the testing period.
   c. If leaks occur, repair said leaks and begin pressure test again. Repeat this operation until no leaks occur in the irrigation system.
   d. Before requesting a walk through for substantial completion, the entire irrigation system shall remain under pressure for a period of no less than 48 hours.
2. The contractor is responsible for notifying the architect one day in advance of the pressure test.

D. Flushing: Center load all piping prior to flushing. After all new irrigation piping and risers are in place and connected and all necessary diversion work has been completed and prior to the installation of sprinkler heads, rotors and quick coupling valves, thoroughly flush piping system under full head of pressure. After the furthermost riser from the point of connection begins to flush, continue flushing for a duration of five minutes. After the system is thoroughly flushed, cap all risers.

E. Walk Through For Substantial Completion:
1. Before requesting a walk through for substantial completion the following requirements must be entirely satisfied:
   a. The entire irrigation system is completely installed, flushed and satisfactorily pressure tested. If the contractor failed to notify the architect for the pressure test and flushing procedures stated above than the contractor assumes full responsibility for any design modifications directed by the architect during the walk through for substantial completion regarding pressure and flushing issues.
   b. All valve boxes have been branded.
   c. All automatic controllers are fully operable and communication has been certified in writing and checked at central control system by the central control system manufacturer on their letter head.
   d. Record as-built drawings have been submitted to the architect for review as to completeness.
   e. (4) Four service manuals have been delivered to the owner or owner's representative.
2. Once the above requirements have been met a walk through for substantial completion may be requested. The following procedures will be used during the walk through:
   a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
   b. All valve box lids shall be removed from valve boxes and placed face up adjacent to the valve box prior to beginning the walk through.
   c. The walk through will be divided into (2) two sections and proceed as follows
1. Visual Walk Through: This will consist of walking through the entire irrigation system and examining all components of the system without turning on zones. A punch list will be established of deficiencies in the construction and workmanship of the irrigation system as compared to the construction drawings, details, and specifications
2. Operational Walk Through: This will consist of walking through the entire irrigation system observing each zone in a fully operable condition. Valves must be activated from the automatic controller unit (Manual bleeding of individual electric control valves will not be acceptable). A punch list will be established of deficiencies in the operation of each zone in the irrigation system evaluating but not limited to head spacing, row spacing, nozzle sizing, correct radius of throw, correct stationing, as compared to the construction drawings, details, and specifications.
3. Once the Walk Through for Substantial Completion has been completed the architect will provide a copy of all punch list items to the owner for review and distribution to the contractor. It is the contractor's responsibility to repair, replace, and adjust all items on the punch prior to requesting a final walk through.

F. Final Walk Through:
1. Before commencement of a final walk through is requested, the following requirements must be entirely satisfied:
   a. Each item on the walk through for substantial completion has been thoroughly addressed and resolved by the contractor.
   b. All final record as-built drawings and controller charts have been produced by the architect for review by the architect and contractor at the final walk through.
2. Once the above requirements have been met a final walk through may be requested. The following procedures will be used:
   a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
   b. Only those valve box lids shall be removed from valve boxes as indicated on the walk through for substantial completion punch list. The valve box lids shall be placed faced up adjacent to the valve box prior to beginning the final walk through.
   c. The final walk through will be divided into (2) two sections and proceed as follows:
1. Visual Walk Through: This will consist of walking through the punch list items created at the time of the walk through for substantial completion, examining all components of the system without turning on zones. Any remaining deficiencies in the construction and workmanship of the irrigation system as compared to the punch list generated at the time of the walk through for substantial completion, construction drawings, details and specifications will be noted.
2. Operational Walk Through: This will consist of walking through the punch list items created at the time of the walk through for substantial completion and observing each zone in a fully operable condition. Valves must be activated from the automatic controller unit (Manual bleeding of individual electric control valves will not be acceptable). Any remaining deficiencies in the operation of each zone in the irrigation system including but not limited to head spacing, row spacing, nozzle sizing, correct radius of throw, correct stationing as compared to the punch list generated at the time of the walk through for substantial completion construction drawings, details, and specifications.
3. Once the Final Walk Through is completed and all items created on the final punch list have been addressed the maintenance period may begin. Any additional walk-throughs required due to contractors' inability to address all issues on the punch lists described above will be provided at the contractor's expense.
4.

3.21 MAINTENANCE PERIOD

A. The Maintenance Period shall be for ninety (90) days after notification from the architect of a successful final walk through and will begin once all items on the final walk through punch list have been satisfactorily addressed by a written statement indicating such from the architect to the owner.

1. The contractor is responsible for obtaining and following any maintenance manuals created specifically for the project from the owner at the beginning of the maintenance period.
2. At the end of the maintenance period and prior to turning the project over to the owner, the contractor shall deliver the following to the owner:
   a. Five (5) pop-up spray heads with nozzles of each type used, for every 100 pop-up spray heads installed on the project.
   b. Five (5) rotor heads with nozzles of each type used, for every 100 rotors installed on the project.
3. Once the contractor has fulfilled all maintenance agreement obligations an has provided the above items to the owner, the maintenance period will end see section 320533 Landscape Maintenance, for maintenance responsibilities.

***END OF SECTION** | 328400*

CVWD LANDSCAPE APPROVAL

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Date

Water Management Department

CVWD Plan #

Development Services Department

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS — No. 5874 — EXPIRATION DATE 12-31-2015 — RENEWAL DATE 11/20/2015 — STATE OF CALIFORNIA

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BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS R.L.A. 5874 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
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36951 COOK STREET, #103
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PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — DATE

CITY OF RANCHO MIRAGE
PROJECT: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
DESCRIPTION: MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
LANDSCAPE SPECIFICATIONS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-13
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EA00222

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LANDSCAPING | SECTION 329300

PART 1 | GENERAL

1.01 SUMMARY

A. The work includes all services, labor, materials, transportation and equipment necessary to perform the work indicated on the Drawings and as specified. The conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.02 RELATED REQUIREMENTS

A. Section 328400 Irrigation System
C. Section 320533 Landscape Maintenance

1.03 SUBMITTALS

A. A.Submit certificates of compliance and invoices for soil amendments, fertilizers, and plant materials, with quantities of each.

B. Tree Samples: Deliver to the site, a minimum of one sample of each tree variety and size indicated, 15 gallons in size and larger, a minimum of 15 days before planting operations. At the Contractor's option and expense, he may retain the services of the Landscape Architect to review trees 15 gallon and larger tagged at the nursery or at its place of growth, or as otherwise indicated.

C. Shrub and Tree Samples: Submit 3 samples of each variety and size of plant materials at the site a minimum of 15 days before planting operations. Accepted samples shall remain on the site and shall be maintained as standards of comparison for plant materials to be furnished. Samples may be incorporated into the work.

D. A sample of the soil amendments and proposed mulch material(s), including manufacturer or supplier certificate or invoice, shall be delivered to the Landscape Architect within thirty-five (35) days after recording of the Contract.

1.04 GUARANTEES AND REPLACEMENTS

A. Shrubs, vines and groundcovers shall be guaranteed to remain healthy and vigorously growing for a period of ninety (90) days from date of final acceptance of Maintenance Period of project.

B. Trees shall be guaranteed to live in a healthy condition for a period of one (1) year from date of final acceptance of Maintenance Period of project.

C. Plants found to be dead or not in a vigorous condition within the Maintenance and Guarantee Periods shall be replaced within fourteen (14) days at Contractor's expense.

D. Plants used for replacement shall be the same kind and size as specified in the plant list. They shall be furnished, planted and fertilized as originally specified. The expense of all repair work on existing improvements damaged during replacement shall be borne by the Contractor.

1.05 QUALITY ASSURANCE

A. Reviews herein specified shall be made by the Landscape Architect or Landscape Inspector. The Contractor shall request review in writing a minimum of 48 hours in advance, for the following parts of work:

1. Pre-job meeting to introduce Landscape Architect, Landscape Inspector, Contractor, job project manager and job superintendent and to discuss the particular requirements of the job.
2. Incorporation of soil conditioning and fertilizing into the soil. Observation shall begin prior to amendments being rototilled into the soil. Amendment materials shall be distributed in piles around the site in quantities corresponding to the soils analysis recommendations "per 1,000 sq. ft.". Invoices showing materials and quantities purchased shall be available for review.
3. Upon completion of grading prior to planting. Review of plant materials is to coincide with this review.
4. When trees, shrubs and vines are spotted in place for planting, but before planting holes are excavated.
5. Upon completion of finish grades and planting. Application of pre-emergent herbicide is to coincide with this review.
6. When planting, and all other indicated and specified work, except the Maintenance Period, has been completed. Acceptance, in writing, shall establish beginning of the Maintenance Period.
7. Final review at the completion of the Maintenance Period. Contingent on acceptance, this review shall establish the beginning date for the Guarantee Period.

1.06 MAINTENANCE

A. The Contractor shall continuously maintain all involved areas during the progress of the work and during the maintenance period until the final acceptance of the work.

B. The Maintenance Period begins on the first day after written acceptance of planting operations is received from the Landscape Architect, and shall continue thereafter for no less than ninety (90) continuous calendar days.

C. The contract completion date of the contract maintenance period will be extended, when in the opinion of the Landscape Architect, improper maintenance or possible poor or unhealthy condition of planted material or poorly established non-covering turf areas are evident at the termination of the scheduled maintenance period. The Contractor shall be responsible for all additional maintenance of the work until work is completed and acceptable.

D. See Section 320533 for specific Maintenance Requirements.

1.07 GENERAL REQUIREMENTS

A. The term "Planting Area" shall mean all areas to be planted with trees, shrubs, groundcovers, sod and seed.

B. Actual planting shall be performed during those periods when weather and soil conditions are suitable in accordance with locally accepted horticultural practice.

C. All rock and other growth or debris accumulated during the duration of the project shall be removed from the site.

D. Prior to excavation for planting or placing of plant materials, locate all underground improvements, utility lines, etc. and take proper precautions to avoid damage. In the event of a conflict between such lines and plant locations, notify Landscape Architect and receive direction prior to proceeding. The Contractor assumes responsibility for making repairs for damages resulting from work as herein specified.

E. Grading and soil preparation work shall be performed only during the period when beneficial and optimum results may be obtained. If the moisture content of the soil should reach such a level that working it would destroy soil structure, spreading and grading operations shall be suspended until the moisture content is increased or reduced to acceptable levels and the desired results are likely to be obtained.

F. Scaled dimensions are approximate. Before proceeding with work, carefully check and verify dimensions and immediately inform the Landscape Architect of discrepancies between the drawings and specifications and actual conditions.

G. Quantities for plant materials are shown for convenience only, and not guaranteed.
Check and verify count and supply sufficient number to fulfill intent of drawings.

H. Adequately stake, barricade, and protect irrigation equipment, manholes, utility lines, and other existing property during all phases of the soil amending and grading operations.

I. Rejection and Substitution: Plants not conforming to the requirements herein specified shall be considered defective, and such plants, whether in place or not, shall be
marked as rejected and be immediately removed from the site of the work and replaced with acceptable plant materials. The plant materials shall meet all applicable inspections required by law. Plants shall be of the species, variety, size, age, flower color and condition as specified herein and/or as indicated on the drawings. Under no condition will there be any substitution of plant species, variety, or reduced sizes for those listed on the accompanying drawings, except with the expressed written consent of the Landscape Architect.

J. All utilities (water and electricity) used during the installation and maintenance of the landscaping and irrigation systems for this project shall be paid for by the Owner.

1.08 FINAL SOIL AMENDMENT QUANTITIES

A. Upon completion of all backfill and/or rough grading of planted areas, a minimum of six (6) representative samples of existing soil found in the planting areas shall be taken by the Contractor and at his/her expense sent to an independent soil testing laboratory for an agricultural suitability analysis and recommendations for quantity and application rate of amendments and include any corrective measures required to adjust pH or salt to acceptable levels. These recommendations shall then be compared with those listed in Paragraphs 2.02 and 3.01 and the contract modified accordingly.

1.09 SOIL PREPARATION CONFORMANCE

A. Amendment materials shall be distributed in piles around the site in quantities corresponding to the soils analysis "per 1,000 sq. ft." recommendations. Invoices showing materials and quantities purchased shall be available for review. The Landscape Architect will compare the distribution piles and total quantities of each material furnished against the soils analysis recommendations. If the minimum rates of application have not been met, the Landscape Architect will require the distribution of additional quantities of these materials to fulfill the minimum application requirements specified. After approval by the Landscape Architect of the distribution and quantities of soil amendments, the Contractor will then commence with soil conditioning operations per section 3.01.

1.10 PLANT MATERIAL QUALITY CONFORMANCE

A. After installation of plant materials, and coinciding with the pre-maintenance observation, the Landscape Architect, with the heretofore specified signed copies of the required certificates, trip slips and invoices for the plant materials and related items, will inventory such material, comparing the total area and/or the amounts specified. If the minimum amounts have not been furnished, the Landscape Architect may require the installation of additional materials to fulfill the minimum requirements specified or require that the Contractor provide credit(s) to the Owner.

PART 2 | PRODUCTS

2.01 SOIL AMENDMENT AND FERTILIZER

A. Provide singly or in combination as required to meet specified requirements for topsoil. Soil conditioners shall be nontoxic to plants.
1. Composted Derivatives: Ground bark, nitrolized sawdust, humus, or other wood green waste material free of stones sticks, and soil stabilized with nitrogen and having the following properties:
2. Particle size: Minimum percent by weight passing:
   a. No. 4 mesh screen 95
   b. No. 8 mesh screen 80
3. Nitrogen Content: Minimim percent based on dry weight:
   a. Fir Saw dust 0.7
   b. Fir or Pine Bark 1.0

B. Gypsum shall be a commercially processed and packaged gypsum (CaSo, 2H 0) with minimum 80% grade containing 14% minimum combined sulfur.

C. Iron Sulphate: Ferric or ferrous sulphate in pelleted or granular form containing not less then 18 percent metallic iron. Material shall conform to the Agricultural Code of the State of California.

D. Pre-plant fertilizer for incorporation with rototilling or plant pit backfill mix shall be of a uniform 'beaded' homogeneous granular composition suitable for application with approved equipment and shall contain the following minimum available percentages by weight of plant food:

Nitrogen	5% minimum
Phosphoric acid	3% minimum
Potash	1% minimum
Iron	1%
Manganese	.05%
Zinc	.05%
Humic Acids (derived from compost)	15%
Soil Penetrant (alkyl naphthalene sodium sulfonate)	15%

E. Post-planting Fertilizer for Maintenance Period Fertilization: Organic base, long lasting, nonburning, controlled slow release, free flowing, uniform in composition, suitable for application with approved equipment, and shall contain the following minimum available percentages of weight of plant food :

Nitrogen	12% minimum
Phosphoric acid	8% minimum
Potash	8% minimum
Sulphur	7%
Iron	2%
Manganese	.05%
Zinc	.05%
Humic Acids (derived from compost)	5%

WARNING: Some fertilizers contain chelated iron which has caused staining of concrete surfaces in other projects. Contractor shall be responsible for removing all iron stains from concrete by sandblasting, or as directed by architect, at no additional cost to the Owner.

F. Planting Tablets: Tightly compressed chip type commercial grade planting tablets of varying weighted sizes with the following available percentages by weight of plant food:

Nitrogen	20% minimum
Phosphoric acid	10% minimum
Potash	5% minimum

G. Post-planting Fertilizer for Palms: Organic base, long lasting, nonburning, controlled slow release, free flowing, uniform in composition, suitable for application with approved equipment, and shall contain the following minimum available percentages of weight of plant food :

Nitrogen	3% minimum
Phosphoric acid	1% minimum
Potash	3% minimum

A micro-nutrient foliar spray for palm fronds is recommended to avoid micro-nutrient deficiencies.

2.02 PLANTING BACKFILL

A. Planting backfill shall be a thoroughly blended mixture of topsoil amendments at the following mixture:

Soil Conditioner	1 part
Stock-piled on site soil	3 parts
Iron sulphate	2 lbs/per cu. yd. of mix
Gypsum	10 lbs/per cu. yd. of mix
Pre-plant fertilizer	4 lbs/per cu. yd. of mix

Soil to be used as planting medium for the project shall be fertile, well-drained, of uniform quality, free of stones over 1 inch diameter, sticks, oils, chemicals, plaster, concrete and other deleterious materials. On-site soil may be stockpiled for re-use provided it meets all requirements.

B. Planting Backfill for Date Palms: Pure, washed plaster sand only. Do not incorporate fertilizer into backfill mix. Apply post-planting fertilizer only.

2.03 PLANT MATERIALS

A. Nomenclature: The scientific and common names of plants herein specified conform with the approved names given in "Sunset Western Garden Book", published by Lane Publishing Company, Menlo Park, California, latest edition. See list of plant material on drawings.

B. Quality and size of all plants shall be No. 1, of Pinto Tag stock. They shall be vigorous, of normal growth, free from disease, insects, insect eggs, and/or exceed the measurements specified or the American standards for nursery stock. Pinto Tags shall be submitted to the landscape architect.

C. Container stock (1 gal., 5 gal., and 15 gal.) shall have grown in containers for at least six months, but not over two years. No container plants that have cracked or broken balls of earth, when taken from the container, shall be planted, except upon special approval. No trees with damaged roots or broken balls shall be planted and no shrubs, vines or groundcovers shall be planted that are "pot-bound" or that have damaged roots.

D. Pruning shall not be done, prior to delivery, except by written approval.

E. Observation of Plant Materials, required by County authorities, shall be a responsibility of the contractor, and where necessary, the contractor shall have secured permits or certificates prior to delivery of plants to site.

F. Plants shall be subject to observation and approval or rejection, at the project site at any time before or during progress of work, for size, variety, condition, latent defects and injuries. Rejected plants shall be removed from the project site immediately.

G. Substitutions will not be permitted except that if proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of the nearest equivalent size, variety and cost.

H. Quantities shall be furnished as needed to complete work as shown on drawings.

I. The landscape architect reserves the right to observe root condition of any species, particularly those grown from seed, and if found defective, to reject the plants represented by the defective sample.

J. Identify plant species or varieties correctly on legible, weather-proof labels attached securely at the job site. There shall be a minimum of one labeled plant for each 5 plants in a lot.

K. Groundcover plants shall be healthy vigorous rooted cuttings grown in flats until transplanting.

2.04 HERBICIDE

A. Weed Contact Spray, post emergent, systemic product with no soil residual activity formulated as a water soluble liquid containing 50% glyphosate and
14.5% surfactant with surfian additive.

2.05 RODENT REPELLENT

A. Rodent Repellent: Repellent X or approved equal.

2.06 HYDROSEED

A. n/a

2.07 MULCHING MATERIAL

A. n/a

2.08 STAKING MATERIAL FOR TREES

A. Double Staking (Triple Staking for High Wind Areas) for Trees from up to 36" Box Size:
1. Stakes shall be of lodgepole pine. These shall be straight shafts, shaved and cut clean and bare of branches and stubs, of uniform thickness with a minimum diameter of 2 inches (3 inches in high wind exposure areas), free of loose knots, splits or bends. Stakes shall be no less than eight (8) feet in length.

B. Tree Tie Materials shall be one of the following:
1. Hose wires used for stabilizing trees with stakes, shall be 12 gauge galvanized wire with ultra-violet resistant precut hoses to 10 ½" and wire precut to 27" or 36" the length necessary per details.
2. Twist Braces shall be used in areas with high wind exposure, utilizing twist brace stability bars with the following criteria:
   4 ½" loop diameter by 24" length for 24" box trees
   4 ½" loop diameter by 36" length for 36" box trees

2.09 GUYING MATERIALS FOR TREES 48" BOX SIZE AND LARGER

A. n/a

2.10 TRIM GUARDS FOR TREES

A. Trim Guards shall be made from quality polyethylene with ultra violet inhibitors and ratcheting latching device.

2.11 ROOT BARRIERS FOR TREES

A. #UB-24-2 root barriers as manufactured by Deep Root Corp. or approved equal.

PART 3 | EXECUTION

3.01 LEACHING, SOIL CONDITIONING, ROTOTILLING AND FERTILIZING

A. Deep Water Leaching:
1. After complete installation and testing of the irrigation system, all areas shall be deep water leached and compacted and settled by continuous application of irrigation water until the soil has received a minimum of 12" of water.
2. After leaching operation, soil samples shall be taken by contractor per landscape architect's direction and given to the Owner's soil laboratory for testing. Soil test shall meet the following requirements:
   ECe - Maximum 3.0
   pH - Maximum 7.50
   Minimum 6.00
3. Deep water leaching shall be done prior to the application of the commercial fertilizer.
4. Care shall be taken that the rate of application of water does not cause erosion or slufffing of soils. Do not undertake leaching operations in expansive soils.
5. All depressions, voids, erosion scars and settled trenches generated by the deep watering shall be filled with conditioned topsoil and brought to finish grade prior to digging planting pits.

B. After leaching operations and after the areas have been graded, follow the Soil Preparation Conformance procedures per section 1.09. After approval by the Landscape Architect of the requirements in section 1.09, the soil conditioning and amendment materials shall be evenly spread over all planting areas and shall be thoroughly scarified to an average depth of six (6) inches by rototilling a minimum of two (2) alternating passes:
The following materials and quantities are to be used as a basis for bidding, and may be modified based on soil analysis results.

Soil conditioner:	4 cu. yd. per 1,000 sq. ft.
Soil sulphur:	20 lbs/per 1,000 sq. ft.
Iron sulphate:	20 lbs/per 1,000 sq. ft.
Gypsum:	100 lbs/per 1,000 sq. ft.
Pre-plant fertilizer:	20 lbs/per 1,000 sq. ft.

1. Fertilizer shall be incorporated into the top six (6) inches of finish grade. Fertilizer shall be applied after leaching operation.
2. The thoroughness and completeness of the rototilling and incorporation of the soil conditioners/amendments shall be accepted by the landscape architect in writing, prior to digging planting pits. For slopes 2:1 and steeper, or as per the drawings, omit soil conditioner application and rototilling.

3.02 FINISH GRADING

A. Finish grades shall be as indicated on landscape and civil drawings. Contractor shall notify landscape architect for a decision should any discrepancies exist between the drawings and the site conditions.

B. Finish grades shall be measured as the final water compacted and settled surface grades and shall be within ± 0.1 foot of the spot elevations and grade lines indicated. Grades adjacent to hardscape shall be within +/- .01 feet of the grades indicated on the

C. Molding and rounding of the grades shall be provided at all changes in slope.

D. All undulations and irregularities in the planting surfaces resulting from tillage, rototilling and all other operations shall be leveled and floated out before planting operations are initiated.

E. Take every precaution to protect and avoid damage to erosion control materials, sprinkler heads, irrigation lines, and other underground utilities during grading and conditioning operations.

F. Final finish grades shall insure positive drainage of the site with all surface drainage away from buildings, walls, and toward roadways, drains and catch basins.

G. Final grades shall be accepted by the landscape architect/Owner's representative in writing on company letterhead prior to digging planting pits and/or before planting operations will be allowed to begin

H. Planting surfaces shall be graded with no less than 2 percent surface slope for positive drainage.

3.03 PLANTING

A. The layout of locations for plants and outlines of groundcover beds to be planted shall be accepted by the landscape architect in writing prior to digging plant pits for planting. All such locations shall be checked by the contractor for possible interference with existing underground piping prior to excavation of holes. If underground construction or utility lines are encountered in the excavation of planting areas, other locations for the planting may be selected by the landscape architect at no additional cost to the owner. Damage to existing utilities shall be the responsibility of the contractor.

B. Planting Trees, Shrubs and Vines:

1. All excavated holes shall have vertical sides with roughened surfaces and shall be of the minimum sizes indicated on drawings. Holes shall be, in all cases, large enough to permit handling and planting without injury or breakage of root balls or roots.
2. Excavation shall include the stripping and stacking of all acceptable soil encountered within the areas to be excavated for plant pits and planting beds. Protect all areas that are to be trucked over and upon which soil is to be temporarily stacked pending its re-use for the filling of holes, pits and beds.
3. Excess soil, generated from the planting holes shall be spread evenly on the site within the tolerances indicated in section 3.02, or as directed by the landscape architect.
4. The plants shall be planted at approved locations with the heretofore specified plant pit fertilizer and soil planting backfill. Place plant pit fertilizer after two thirds of backfill material is installed at the rates specified by the manufacturer and soils report.
5. The plants shall be placed in the planting pits, which have been hand-tamped, and water settled to the rootball base levels prior to the placement of the plants. After setting the plants, the remaining backfill material shall be carefully tamped and settled around each rootball to fill all voids.
6. Each tree and shrub shall be placed in the center of the hole and shall be set plumb and held rigidly in position until the planting backfill has been tamped around each rootball.
7. All plants shall be set at such a level that after settling they bear the same relationship to the surrounding finish grade as they bore to the soil line grade in the container, unless otherwise noted.
8. No plant will be accepted if the rootball is broken or cracked, either before, during, or after the process of installation.
9. Plants shall be thoroughly watered into the full depth of each planting hole immediately after planting.
10. Install shrubs and vines as shown on the drawings.
11. For 1 gallon trees, utilize pre-installed nursery stakes if stakes are in good condition as described above. Broken, cracked and/or unsecured nursery stakes will not be allowed. If new stakes are required, install stakes with materials as specified as shown on the drawings.
12. For trees up to 36" Box size, install tree stakes with materials specified and as shown on the drawings. The stakes shall be driven in plumb and secure. Special care shall be taken that the driving in of the stake does not damage the tree roots or rootball. Tree ties shall be fastened to each stake by tacking the wire tie to the stake. Protective hoses shall be in contact with all tree trunk or branch areas per the details on the drawings.
13. For trees 48" Box size and greater guy all trees with the materials specified and as shown on the drawings.
14. The staking and guying shall be accomplished in such a manner as to insure the proper and healthy growth and the safety of the plants, property, and the public.
15. The contractor shall be responsible for all surface and subsurface drainage required which may affect his guarantee of the trees, shrubs, and vines.
16. Pruning after planting shall be required on all trees, shrubs, and vines when necessary to provide the specified or approved standard shapes, form and/or sizes characteristic to each plant. Pruning may include thinning, and/or cutting and shall be under the direction of the landscape architect or certified arborist.
17. Install tree guards on all trees within turf areas.

C. Planting Groundcovers:

1. Groundcovers shall be planted in the areas indicated on the drawings. The groundcover plants shall be rooted cuttings grown in flats and shall remain in those flats until transplanting.
2. All groundcover plants shall be planted with soil around roots in staggered row, evenly spaced at the intervals called out on the drawings.
3. The groundcover plants shall be planted sufficiently deep to cover all roots.
4. The groundcover planting area shall be hand smoothed after planting to provide an even, smooth final finish grade.

3.05 HERBICIDE APPLICATION

A. Herbicide or pesticide applications shall be performed only by personnel licensed for such work by the State of California.

3.06 RODENT REPELLENT

A. Once plants have been planted and watered in, apply rodent repellent for plants indicated on plant legends on the drawings around the entire perimeter of the planting area at application rates and with methods as specified by the manufacturer.

3.07 MULCHING

A. Landscape areas other than those hydroseeded or planted with turf shall be covered with the specified mulching material to the minimum depth indicated on the drawings.

3.08 CLEAN-UP

A. As the project progresses on a daily basis, the contractor shall maintain all areas in a neat manner and remove unsightly debris as necessary, remove all debris and containers used in accomplishing work and sweep and clean all sidewalks, asphalt, and concrete areas adjacent to plantings.

3.09 SITE OBSERVATION & WALK-THROUGHS FOR SUBSTANTIAL COMPLETION

A. General Observation: The landscape architect will visit the construction site at interim times during the construction process to access construction progress regarding installation of landscape material to be in compliance with the drawings, details, specifications and site conditions. The landscape architect will prepare a site report after each visit noting progress of installation, verbal communication with the contractor and identifying any field adjustments necessary that require modifications to the designed landscape. A copy of this site report will be delivered to both the owner and the contractor. The contractor is responsible to immediately address each item on the site report before proceeding with further construction.

B. Walk Through For Substantial Completion (Punch List #1):

1. Before requesting a walk through for substantial completion the following requirements must be entirely satisfied:
   a. The entire planting area is completely installed, and when letters of acceptance as described above have been obtained from the landscape architect and/or owner's representative. If the contractor failed to notify the landscape architect for any of the above items as listed above than the contractor assumes full responsibility for any design modifications directed by the landscape architect during the walk through for substantial completion any of these issues at no additional cost to the owner.
   b. All invoices, plant tags and receipts have been delivered to the landscape architect and/or owner's representative.
2. Once the above requirements have been met a walk through for substantial completion may be requested. The following procedures will be used during the walk through:
   a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
   b. A visual walk through of the entire site will take place consisting of an examination of planting areas as compared to the drawings, and installation procedures as shown on the details and specifications. A punch list will be established of deficiencies in the construction and workmanship of the landscaped area as compared to the construction drawings, details, and specifications.
3. Once the Walk Through for Substantial Completion has been completed the landscape architect will provide a copy of all punch list items to the owner for review and distribution to the contractor. It is the contractor's responsibility to repair, replace, and adjust all items on the punch prior to requesting a final walk through.

C. Final Walk Through:

1. Before commencement of a final walk through is requested, each item on the walk through for substantial completion (punch list #1) must be thoroughly satisfied, addressed, and resolved by the contractor.
2. Once the above requirement has been met a final walk through may be requested. The following procedures will be used.
   a. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
   b. Unless new issues arise between walk throughs, only those items as indicated on the walk through for substantial completion punch list will be addressed. This visual walk through will consist of walking through the punch list items created at the time of the walk through for substantial completion, and examining outstanding items. Any remaining deficiencies in the construction and workmanship of the landscape as compared to the punch list generated at the time of the walk through for substantial completion, construction drawings, details and specifications will be noted.
3. Once the Final Walk Through is completed and all items created on the final punch list have been addressed, the Maintenance Period may begin. Any additional walk throughs required due to contractors' inability to address all issues on the punch lists described above will be provided at the contractor's expense.

3.10 MAINTENANCE PERIOD

A. The Maintenance Period shall last for ninety (90) days after notification from the landscape architect of a successful final walk through and will begin once all items on the final walk through punch list have been satisfactorily addressed by a written statement indicating such from the landscape architect to the owner.

1. The contractor is responsible for obtaining and following any maintenance manuals created specifically for the project from the owner at the beginning of the maintenance period.
2. Once the contractor has fulfilled all maintenance agreement obligations the maintenance period will end see section 320533 Landscape Maintenance, for maintenance responsibilities.

END OF SECTION | *329300*

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date _____ Water Management Department _____

CVWD Plan # _____ Development Services Department _____

LICENSED LANDSCAPE ARCHITECT JAIME MACIAS No. 5870 STATE OF CALIFORNIA
12-31-2015 RENEWAL DATE
11/20/2015 DATE

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE LANDSCAPE ARCHITECT PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE. ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS R.L.A. 5870 — 11/20/2015 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE R.C.E. 47159 — 3/24/16 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER R.C.E. 43910 — 3/24/16 DATE

CITY OF RANCHO MIRAGE
PROJECT DESCRIPTION: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
MSD. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
LANDSCAPE SPECIFICATIONS
SITE ADDRESS: FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION: NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-14
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 04
4-3-2015 EM00222

G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-06 SPECIFICATIONS.DWG

LANDSCAPE MAINTENANCE | SECTION 320533

PART 1 | GENERAL

1.01 SUMMARY

A. The work includes all services, labor, materials, transportation and equipment necessary to perform the work indicated on the Drawings and as specified. The conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.02 RELATED REQUIREMENTS

A. Section 328400 Irrigation System
B. Section 328400-R Recycled Water Irrigation System
C. Section 329300 Landscaping

1.03 DEFINITIONS

A. Pesticide: Includes any of the following:
   1. Fumigant
   2. Herbicide
   3. Insecticide
   4. Fungicide
   5. Rodent repellents.

B. Planting Bed: An area comprised of trees, shrubs, flowers, and ground cover, excluding grass.

1.04 DELIVERY, STORAGE AND HANDLING OF MATERIALS FOR PERMANENTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES AND FLAT AREAS

A. Fertilizer, Gypsum, and Iron Sulphate: Deliver to the site in original containers bearing manufacturer's chemical analysis, name, trade name, or trademark, and indication of conformance to state and federal laws. Instead of containers, fertilizer, and gypsum may be furnished in bulk with a certificate indicating the above information.

B. Pesticides: Deliver to the site in original containers with legible label indicating Environmental Protection Agency (EPA) registration number and manufacturer's registered uses.

1.05 STORAGE FOR PERMANENTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES AND FLAT AREAS

A. Fertilizer, Gypsum, Iron Sulphate, and Mulch: Store in dry locations away from contaminants.

B. Pesticides: Do not store with other maintenance material. Store herbicides "downwind," relative to the airflow from other pesticides.

1.05 HANDLING FOR PERMANENTLY IRRIGATED AND TEMPORARILY IRRIGATED SLOPES AND FLAT AREAS

A. Do not drop or dump materials from vehicles.

PART 2 | PRODUCTS

2.01 PH ADJUSTERS
A. See Specification Section: 329300 Landscaping

2.02 SOIL CONDITIONERS
A. See Specification Section: 329300 Landscaping

2.03 PLANTING BACKFILL
A. See Specification Section: 329300 Landscaping

2.04 FERTILIZERS
A. See Specification Section: 329300 Landscaping

2.05 WATER
A. See Specification Section: 329300 Landscaping

2.06 PESTICIDES
A. See Specification Section: 329300 Landscaping

PART 3 | EXECUTION

3.01 MAINTENANCE REQUIREMENTS DURING THE NINETY (90) DAY MAINTENANCE PERIOD

A. Shrubs, and Vines:

1. The contractor is responsible for the restoration and maintenance of all vegetation included in these specifications for the duration of the maintenance period. During the first two weeks of the maintenance period, the contractor shall conduct a survey of all areas and identify by quantity, species, and location, all dead, dying, and diseased vegetation. The contractor shall be responsible for restoring dying and diseased vegetation to a healthy state in accordance with accepted Horticultural Practice and Treatment. The architect and/or owners representative will be the final authority in determining which vegetation is considered dead or irreparably damaged. Restoration and replacement of vegetation is considered routine maintenance and shall be accomplished as often as necessary during the maintenance period. Vegetation replacement shall be accomplished within 5 days after the contractor discovers or has been notified of the situation. Diseased or dead vegetation shall be removed and replaced with healthy plants of the same species. All replacement plants must be approved by the architect and/or owner's representative before planting.
2. Planting beds shall be cultivated, pruned, trimmed, weeded, irrigated, fertilized, mulched, and otherwise maintained in a manner that presents a professionally landscaped appearance at all times. Plant beds shall be kept weed, gopher, squirrel, rabbit and pest free. Ground cover shall not be allowed to grow into flowers, shrubs or trees. Planting beds shall be maintained in a manner that provides balance between the various types of vegetation, and prevents dominance of any one species. The contractor shall provide and maintain a minimum of three-inch layer of mulch in all planting beds with a slope gradient of 3:1 or less. The contractor shall provide for the special needs of various species. Diseased or dead vegetation shall be removed and replaced with healthy plants of the same species.
3. The contractor shall not use steel bow type rakes or equipment of similar design to clean plant beds. Lightweight fan rakes or vacuum equipment may be used. The contractor shall maintain the soil level in the plant beds, and ensure all surface root systems and irrigation piping are covered as required. The contractor shall be responsible for damage caused by contractor operations at no additional cost to the owner.
4. Shrubs and Vines shall be trimmed pruned, irrigated, fertilized to present a healthy and manicured appearance. Shrubs and Vines will not be allowed to encroach into grass areas. A definite break shall be maintained between grass and shrub areas. In such areas the contractor shall maintain a healthy and well-balanced landscape.
5. All shrubs, vines, and other cultivated plants shall be trimmed and pruned according to their natural growth characteristics for proper health and attractive appearance. All clippings shall be removed and disposed of by the end of each day. Pruning shall be accomplished as necessary in accordance with conditions (a) through (d) specified below. Shrubs and vines shall be trimmed to shape for aesthetic appearance and health at the frequency specified in this section.
   a. Remove growth in front of windows, over entrance ways or walks, and any growth which will obstruct vision at street intersections. Shrubs around perimeter of buildings shall be trimmed to maintain natural growth characteristics.
   b. Remove dead, damaged or diseased branches or limbs and crossing, rubbing and interfering branches.
   c. Evenly form and balance the shrub to natural growth characteristics.
      Hedges are to be trimmed to maintain their natural growth characteristics and not allowed to obstruct pedestrian walkways. Shrubs shall be allowed to completely fill planter beds. Shrubs, hedges and vines shall not be trimmed into round, square and or geometric shapes. Side growth shall be allowed to grow unless growth is in front of windows, over entrance ways, streets, driveways, parking area or walks, and/or any growth which will obstruct vision at street intersections.
   d. Remove growth against or over structures and into any type of electrical or telephone lines (leave growth on block walls).
6. Shrubs shall be pruned to evenly form and balance plant to natural growth characteristics. Shoots, suckers, and branches of shrubs not conforming to desired shape and size shall be removed. Retain typical growth habit of individual plants with as much height and spread as is practical. Shrubs shall be allowed to completely fill planter beds.
7. Any depression or mound around the base of shrubs intended to retain water in place for proper irrigation shall be maintained in good condition to permit the most efficient application of water and reduce waste.
8. Do not fertilize native plant material as shown on the planting legend during the maintenance period.

B. Trees:

1. Tree maintenance and care is considered routine on going maintenance and shall be accomplished as specified or as often as necessary during the maintenance period. Tree maintenance and care includes, staking trees, adjustment of ties and supports, removal of stakes, watering, fertilization, pest control, pruning, turf clearance, mulch clearance, removal of broken limbs and branches, tree removal/replacement, and fall cleanup.
2. The contractor shall maintain and/or replace tree staking and guying as necessary as specified in section 329300 Landscaping for the duration of the maintenance period. Stakes, ties and supports shall be inspected and adjusted monthly to prevent girdling and rubbing, and to promote natural development of trees. Stakes, ties, and supports shall be removed when the tree becomes capable of supporting itself.
3. Trees shall be pruned according to their natural growth characteristics to evenly form and balance the tree and to promote proper health and growth in accordance with accepted standards and horticultural practices of the National Aboriculture Society, of the Western Chapter. All tree maintenance must be performed in compliance with ANSI Z133.1 Safety Standards. Tree pruning shall include all areas of the project, which are permanently and/or temporarily irrigated for the duration of the maintenance period. All sucker growth shall be removed from and around the trees. All trees are to be inspected monthly to identify pruning needs. Pruning or trimming shall be accomplished at any time during the maintenance period as required in accordance with conditions (a) through (h) below:
   a. Remove dead, damaged or diseased wood, or structurally weak limbs that may cause a safety hazard. Remove interfering branches, crossing and rubbing branches.
   b. Remove branches which endanger roofs, eaves, and windows or hang within eight feet of sidewalks, parking lot driveways, and which obstruct traffic signs or streetlights. This includes removal of dead or broken branches on the ground or still hanging in the tree.
   c. Provide clearance for buses, moving vans and similar vehicles along streets.
   d. Eliminate and prevent growth into electrical or telephone transmission lines. Anticipate the effects of wind on branches, which might fall on transmission lines. Shape the entire tree rather than notch the top.
   e. Prevent growth of trees in front of windows, over entranceways and walkways and which will obstruct vision at street intersections.
   f. Remove partially attached broken limbs and branches from trees regardless of diameter or length. Provide stakes or braces as required for future protection.
   g. "Skirting-Up" and "pollarding" a tree is prohibited.
   I. Topping of trees is prohibited.

C. Weeds, Rodent and Pest Control:

1. Weed and pest control shall be performed to prevent encroachment of undesirable vegetation and noxious weeds, and infestation of pest (rodent, insect and fungus) into established landscapes, including lawns and around trees, shrubs, flower beds, etc. Noxious weeds in landscaped and natural growth areas, plant beds and landscaped areas shall not be allowed to establish themselves and be maintained weed free. Additionally, weed control is to be performed to eliminate grass and weeds in cracks and joints on all paved and concreted areas. Weed control is to be performed to prevent the encroachment of vegetation into perimeter fences and fire breaks. Rodent control shall be performed as required to maintain healthy vigorous plant growth. Live or dead rodents shall be removed within 24 hours from the project property and properly disposed of. Trees, shrubs, turf and vegetation shall be protected from all varieties of insect and rodent damage. Pesticides may be used to control pests. Pesticides and herbicides shall be used in a manner, which will not affect landscape plants health.
2. All pesticides, including herbicides, insecticides, fungicides, etc., shall be applied only by persons holding a valid state license for each category of pest control work involved. Any required state, county, or local permits for possession, procurement, or use of any pesticide shall be obtained and complied with at no additional expense to the owner.
3. All pesticides shall be procured, transported, stored, handled, and applied in strict accordance with the manufacturer's label, which shall be registered with the Environmental Protection Agency and the State of California. The contractor shall comply with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act, 40 CFR 170-171, CCR Title 3, and CCR Title 8. All pesticide containers shall be managed in accordance with the requirements of CCR Title 3, Section 6684 and disposed of in accordance with CCR Title 22. Each pesticide formulation shall be registered for use under the particular environmental conditions under which it was applied. The contractor shall exercise extreme care to prevent any damage or illegal contamination by pesticides to vegetation, water, fish, animals, and humans. The contractor shall be held responsible and liable for all damage, contamination, and effects resulting from contractor's pesticide use.
4. Pesticide spraying shall be performed only on still days and will be stopped when unfavorable weather or other conditions exist which would unduly increase the hazard to personnel or desirable vegetation by drift, runoff, or leaching through the soil. Any project property or desirable vegetation damaged by the contractor due to pesticide applications shall be repaired or replaced at no additional cost to the owner.
5. Pesticide rinse water or excess pesticides from contractor operations shall be collected by the contractor in an appropriate receptacle and disposed of at an approved disposal site; or shall be applied to a similar target area to which the original application was made and in the same manner of application if allowed by the EPA registered label.
6. Job site pesticide applications shall be made by personnel capable of identifying the pest species to be controlled, knowledgeable of control techniques, and able to apply pesticide active ingredients at prescribed dosages and rates of application, as required by the label to achieve the required control under job site conditions, without danger to people, pets or other non-target animals, plants, or property.
7. The contractor shall be responsible for having a spill kit on service vehicles and for reporting and cleaning pesticide spills as required by state laws and regulations. The contractor shall submit a written report of spills on or in project property, within 8 hours of incident to the owner on company letterhead.

D. Irrigation and Irrigation System Maintenance:

1. The contractor shall plan and adjust irrigation schedules for automatic, hand or portable irrigation systems based on minimal water requirements with the following considerations:
   a. the precipitation rates of irrigation components
   b. soil water infiltration rate and holding capacity
   c. exposure
   d. plant material
   e. site climate conditions
   f. ET (Evapotranspiration) rate
   g. Slope

   It shall be the contractor's responsibility to adjust controllers and/or hand/portable irrigation application to compensate for weekly environmental changes for the duration of the maintenance period. The contractor shall perform irrigation in a manner that promotes the health, growth, color and appearance of cultivated vegetation while preventing over watering, water run-off, erosion and ponding.
2. Irrigation includes watering of shrubs, vines, trees and plants for both permanently irrigated slopes and flat areas. Care shall be exercised by regulating the time and equipment to prevent wasting of water. Sprinkler heads shall be adjusted to prevent water spray on buildings, sidewalks, walls, monuments and adjacent hardscape. It shall be the contractor's responsibility to apply enough water to assure and maintain the health and vigor of all shrubs, trees, and planted areas. Irrigation controllers shall be programmed for no irrigation during periods of rain that exceed twelve hours of rainfall in one day or during rain storms of one day or more. Once rain has subsided controllers shall be reprogrammed for irrigation operations. Controllers shall also be checked and reset if necessary after power outages.
3. The contractor shall provide all equipment necessary to perform all irrigation operations. For temporarily irrigated slopes, flat areas and trees within future private lots that require manual irrigation, the contractor shall provide hoses and irrigation equipment to adequately irrigate this plant material for the duration of the maintenance period. In the event that an area has no water supply due to a system failure, the contractor shall provide a supply by either hose or truck. All valves and valve box covers shall be kept closed at all times except when in actual use.
4. Irrigation equipment shall be kept clear of any obstructions including plant material. Dirt or other debris surrounding sprinkler heads, which prevents proper operation, shall be removed. The contractor shall be held responsible for any damage to project property caused by careless handling of irrigation equipment including slope failure at no additional cost to the owner.
5. The contractor is responsible for the maintenance and repair of all components of the irrigation system for the duration of the maintenance period. This includes irrigation equipment items as shown on the original irrigation drawings. Maintenance and repairs of irrigation equipment during the maintenance period shall be done at no additional cost to the owner. Maintenance shall include but not be limited to the following:
   a. Repair or replace broken, missing, or inoperative pop-up spray heads and pop-up rotors.
   b. Repair or replace defective sprinkler head risers, rotors on risers, fittings, swing arms and breaks in piping. Adjust and align risers. Repairs shall include all fittings as specified in the original irrigation drawings.
   c. Clean and adjust pop-up sprayheads, pop-up rotors, sprinkler head risers and rotors on risers and their gears and/or mechanisms, check and adjust for proper coverage.
   d. Remove dirt and debris from around pop-up spray heads and pop-up rotors.
   e. Repair or replace defective or malfunctioning control valves (Electric and/or Manual) flow sensors and master valves. Clean and service valves. The contractor shall replace any damaged or missing valve boxes or valve lids. Valve box lids shall be kept in place at all times. Barricades shall be placed over any valve boxes with missing lids until replaced. Valve boxes shall be kept level with existing grade as shown on the drawings.
   f. Maintain, service, repair or replace central controller systems as specified by the product manufacturer.
   g. System repairs and replacement shall be accomplished with new parts and equipment that are identical to existing.
   h. The contractor is responsible for required irrigation by any means during the periods of system breakdown.

E. Fertilizer Application During the Maintenance Period:

1. Apply fertilizer in a manner that promotes health, growth, color and appearance of cultivated vegetation at applications rates described in sections 329300 Landscaping and 329200 Turf for the duration of the maintenance period.

F. Fallen Vegetation and Debris Removal:

1. The contractor shall police the entire project area including all paved areas, planters, lawn areas, sidewalks (including common area sidewalks) and trash enclosures and collect fallen leaves, branches and limbs regardless of length or diameter, dead vegetation, paper, trash, cigarette butts, garbage, rocks, and any and all other debris to prevent unsightly and inordinate accumulations during normal maintenance working hours. Sidewalks shall be swept or washed as necessary to keep free of trash and graffiti. Collected items shall be promptly removed and taken to a legal disposal site.

G. Removal of Dead Animals:

1. Removal and legal disposal of animal carcasses are considered a normal maintenance task for the duration of the maintenance period. Dead carcasses shall be legally removed immediately when discovered by the contractor.

H. Erosion Control:

1. The contractor is responsible for daily visual inspection of slopes and immediately reporting areas experiencing erosion to the landscape architect and/or owner's representative on the same day noticed. If the contractor fails to notify the landscape architect and/or owner's representative of areas experiencing erosion on the same day noticed, then the contractor assumes full responsibility
   for any erosion control measures and/or repairs as directed by the landscape architect and/or owner's representative at no additional cost to the owner.
2. Upon notification and agreement of the applicable erosion control measure by the landscape architect, the owner and the contractor, the contractor is responsible for immediately repairing and correcting any progressive rilling that may occur.
3. Erosion control measures may include but not be limited to:
   a. Filling
   b. Raking
   c. Redirecting runoff
   d. Properly programming irrigation operations
   e. Replanting
   f. Providing additional erosion control materials such as:
      - jute matting
      - filter fabric
      - hay bales
      - hay rolls
      - silt fencing
      - sand bags
      - and/or other erosion control items as required to maintain healthy plant material and stable slopes.
4. Additional erosion control measures required due to irrigation operations programmed by the contractor that did not take into account cycle and soak functions of the controller will be installed and/or repaired as directed by the landscape architect and/or owner's representative at no additional cost to the owner.

I. Frequency of Maintenance Operations:

TASK:	FREQUENCY:
Shrub and Vine Restoration and Replacement:	As Required
Weeding:	Daily
Pruning:	As Required
Tree Replacement:	As Required
Tree Staking:	As Required
Pesticide Applications:	As Required
Debris Removal & Disposal:	As Required
Irrigation System Maintenance:	As Required
Fertilizer Application:	As Required
Fallen Vegetation and Debris Removal:	Twice Weekly
Removal of Dead Animals:	As Required
Re-Mulching (Maintained at 3 Inches):	As Required
Erosion Control:	As Required

J. At the end of the ninety (90) day maintenance period, the contractor shall request a post- maintenance walk through with the landscape architect. Prior to requesting this walk through the following requirements must be entirely satisfied:

1. Any outstanding maintenance items that were previously directed to be completed by the restoration specialist.

K. Preliminary Post Maintenance Walk Through: Once the above requirements have been met a preliminary post maintenance walk through may be scheduled. At the preliminary post maintenance walk through, the following procedures will be used:

1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
2. A visual walk through of the entire landscape area will take place consisting of an examination of planting areas and noting any remaining maintenance items to be completed.
3. Once the preliminary post maintenance walk through has been completed, the landscape architect shall prepare a punch list of outstanding items to be completed and will provide a copy of this list to the owner and contractor for review and use. It is the contractor's responsibility to repair, replace, and adjust all items on the punch list prior to requesting a final post maintenance walk through.

L. Final Post Maintenance Walk Through: Before commencement of a final post maintenance walk through, each item on the preliminary post maintenance walk through punch list must be thoroughly satisfied, addressed, and resolved by the contractor. Once the above requirement has been met a final post maintenance walk through may be requested. At the final post maintenance walk through, the following procedures will be used:

1. Contractor must have (2) two personnel available with radio communication for the entire length of the walk through.
2. Only those items as indicated on the preliminary post maintenance walk through punch list will be addressed. This visual walk through will consist of walking through the punch list items created at the time of the preliminary post maintenance walk through, and examining outstanding items. Any remaining deficiencies in the maintenance of the landscape will be noted.
3. Once the final post maintenance walk through is completed and any outstanding items created on the final punch list have been addressed the maintenance period may end. Any additional walk throughs required due to contractors' inability to address all issues on the punch lists described above will be provided at the contractor's expense.

END OF SECTION | 320533

LICENSED LANDSCAPE ARCHITECT JAIME MACIAS No. 5870 12-31-2016 RENEWAL DATE 11/20/2015 DATE STATE OF CALIFORNIA

CVWD LANDSCAPE APPROVAL

These plans have been reviewed by the Coachella Valley Water District in accordance with California Government Code, Section 65591 et seq. requiring efficient landscape and irrigation design in cooperation with the local governing agency (City or County).

Approval of this drawing by CVWD staff does not constitute approval to encroach into district and USBR right-of way. Trees, plants, walls and permanent structures of any kind may not be planted or installed in CVWD and USBR easements or Right-of-Way without first obtaining an encroachment permit from CVWD.

Date _____ Water Management Department _____

CVWD Plan # _____ Development Services Department _____

IMPORTANT NOTICE
CALL BEFORE YOU DIG
SECTION 4216 OF THE GOVERNMENT CODE REQUIRES AN INQUIRY IDENTIFICATION NUMBER BE ISSUED BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR YOUR PRE-EXCAVATION I.D. NUMBER CALL:
UNDERGROUND SERVICE ALERT
TOLL FREE 811
TWO WORKING DAYS BEFORE YOU DIG

UNAUTHORIZED CHANGES & USES: THE LANDSCAPE ARCHITECT PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
L. ARCH'S NOTE TO CONTRACTOR: 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, THAT 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 DESIGN PROFESSIONAL.
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN IN THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

#	REVISIONS	DATE	APP.

BENCH MARK, SEA LEVEL REF.
CITY OF RANCHO MIRAGE NUMBER: RM 45
MONUMENT DESCRIPTION: 2-1/2" BRASS DISK IN CONCRETE, FLUSH
LOCATION: IN THE BACK OF A 14 FOOT STORM DRAIN INLET, 90 FEET EAST OF THE E.C.R. OF THE SOUTHEAST CURB RETURN, AT THE INTERSECTION OF BOB HOPE AND FRANK SINATRA DRIVE ELEVATION = 255.017 (NAVD88)

BASIS OF BEARING:
ROTATE ALL BEARINGS SHOWN FOR THE INTERSECTION OF BOB HOPE DRIVE AND GERALD FORD DRIVE CLOCKWISE 00°00'08" TO MATCH CENTERLINE BEARING FOR BOB HOPE DRIVE BEING NORTH 0°11'35" EAST PER PARCEL MAP NO. 30677 FIELD IN PM 208/82-83

PREPARED UNDER THE DIRECT SUPERVISION OF:
JAIME MACIAS 11/20/2015
R.L.A. 5870 DATE

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
36951 COOK STREET, #103
PALM DESERT, CA 92211
PH: (760) 568-5005
FAX: (760) 568-3443

RECOMMENDED FOR APPROVAL BY:
LELAND E. COLE 3/24/16
R.C.E. 47159 DATE

APPROVED BY CITY OF RANCHO MIRAGE:
WILLIAM A. ENOS, CITY ENGINEER 3/24/16
R.C.E. 43910 DATE

CITY OF RANCHO MIRAGE
PROJECT FRANK SINATRA DRIVE AND BOB HOPE DRIVE
DESCRIPTION MED. LANDSCAPE IMPROVEMENT PLANS CP 12-270-1
LANDSCAPE SPECIFICATIONS
SITE ADDRESS FRANK SINATRA DRIVE AND BOB HOPE DRIVE
LEGAL DESCRIPTION NOT APPLICABLE
A.P.N. 674-43, 685-23, 688-05

SHEET L-15
OF 15
PRIVATE REFERENCE # 2014-0100
CITY REFERENCE # 4-3-2015 EM00222

G:\2014\14-0100\DRAWINGS\LANDSCAPE\FRANK SINATRA AND BOB HOPE\2014-0100-06-SPECIFICATIONS.DWG

SUNNYLANDS: PARKWAY

LANDSCAPE AMENDMENT

CITY OF RANCHO MIRAGE, CALIFORNIA

THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS

GENERAL NOTES

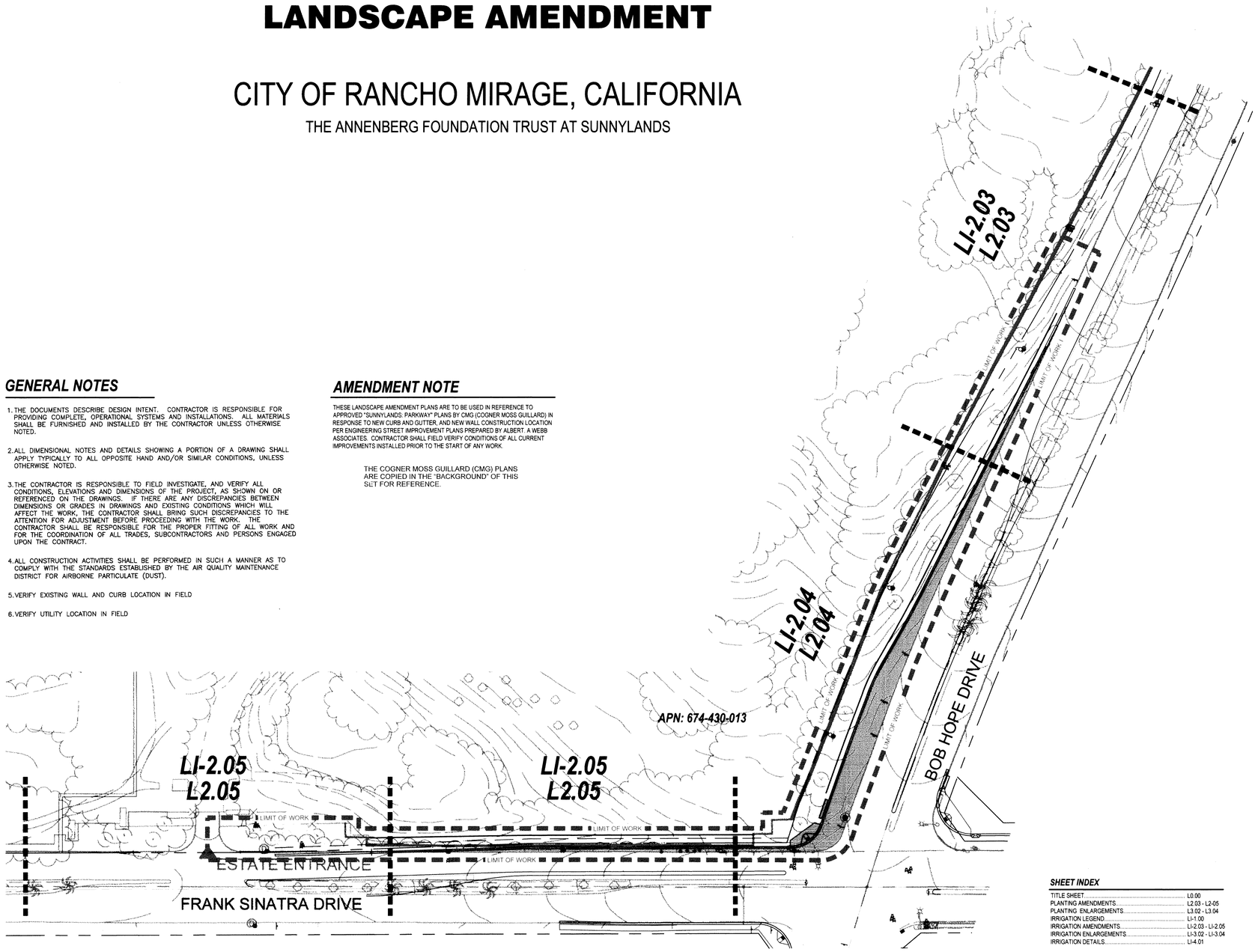
1. THE DOCUMENTS DESCRIBE DESIGN INTENT. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE, OPERATIONAL SYSTEMS AND INSTALLATIONS. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONAL NOTES AND DETAILS SHOWING A PORTION OF A DRAWING SHALL APPLY TYPICALLY TO ALL OPPOSITE HAND AND/OR SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR IS RESPONSIBLE TO FIELD INVESTIGATE, AND VERIFY ALL CONDITIONS, ELEVATIONS AND DIMENSIONS OF THE PROJECT, AS SHOWN ON OR REFERENCED ON THE DRAWINGS. IF THERE ARE ANY DISCREPANCIES BETWEEN DIMENSIONS OR GRADES IN DRAWINGS AND EXISTING CONDITIONS WHICH WILL AFFECT THE WORK, THE CONTRACTOR SHALL BRING SUCH DISCREPANCIES TO THE ATTENTION FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF ALL WORK AND FOR THE COORDINATION OF ALL TRADES, SUBCONTRACTORS AND PERSONS ENGAGED UPON THE CONTRACT.
4. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN SUCH A MANNER AS TO COMPLY WITH THE STANDARDS ESTABLISHED BY THE AIR QUALITY MAINTENANCE DISTRICT FOR AIRBORNE PARTICULATE (DUST).
5. VERIFY EXISTING WALL AND CURB LOCATION IN FIELD
6. VERIFY UTILITY LOCATION IN FIELD

AMENDMENT NOTE

THESE LANDSCAPE AMENDMENT PLANS ARE TO BE USED IN REFERENCE TO APPROVED "SUNNYLANDS: PARKWAY" PLANS BY CMG (COGNER MOSS GUILLARD) IN RESPONSE TO NEW CURB AND GUTTER, AND NEW WALL CONSTRUCTION LOCATION PER ENGINEERING STREET IMPROVEMENT PLANS PREPARED BY ALBERT. A WEBB ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY CONDITIONS OF ALL CURRENT IMPROVEMENTS INSTALLED PRIOR TO THE START OF ANY WORK.

THE COGNER MOSS GUILLARD (CMG) PLANS ARE COPIED IN THE "BACKGROUND" OF THIS SET FOR REFERENCE.

VICINITY MAP



SHEET INDEX MAP

SCALE: 1"=50'-0"

SHEET INDEX

TITLE SHEET	L0.00
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PLANTING ENLARGEMENTS	L3.02 - L3.04
IRRIGATION LEGEND	LI-1.00
IRRIGATION AMENDMENTS	LI-2.03 - LI-2.05
IRRIGATION ENLARGEMENTS	LI-3.02 - LI-3.04
IRRIGATION DETAILS	LI-4.01

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — STEVE MACIAS — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

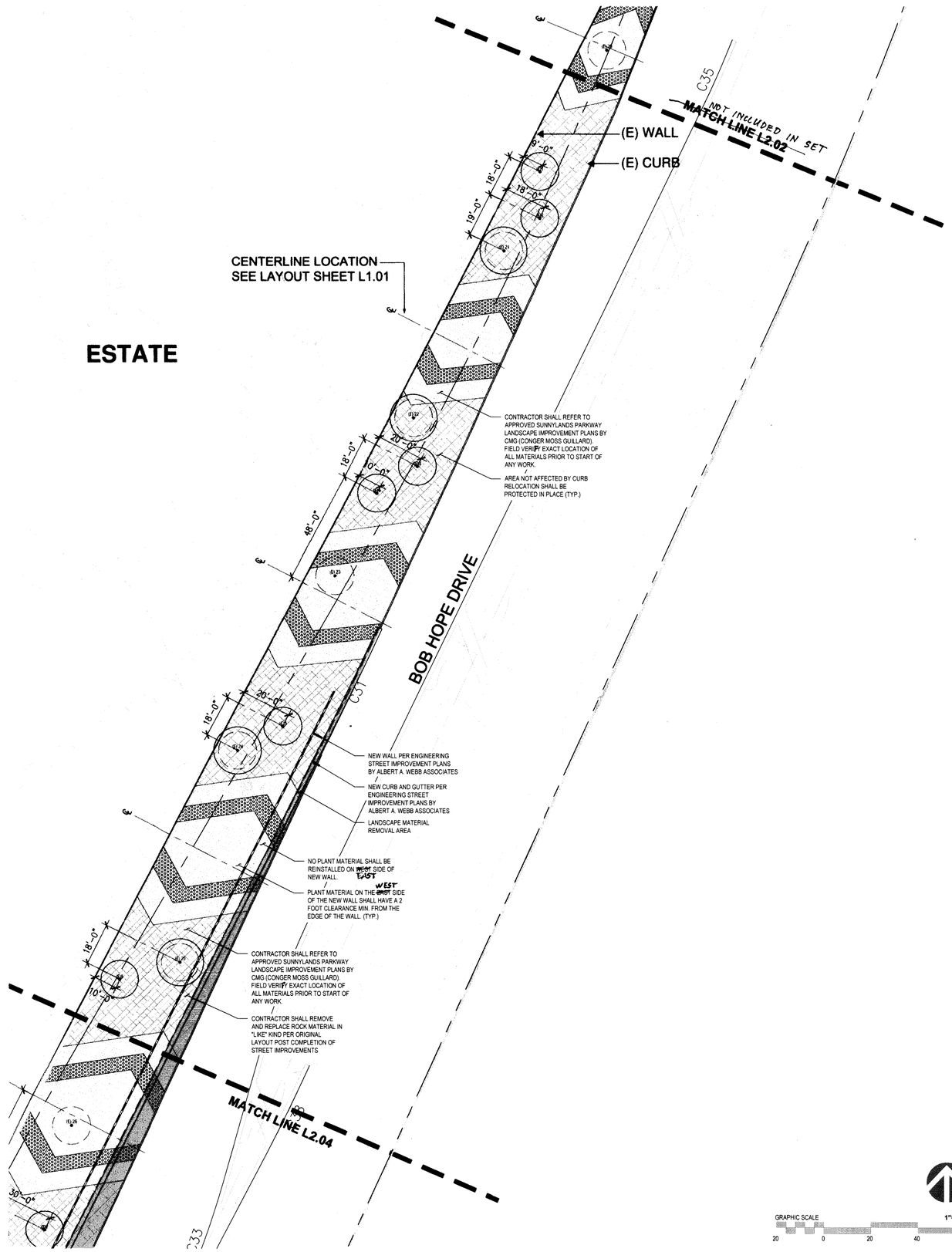
JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIG ALERT — DIAL BEFORE YOU DIG — TOLL-FREE — TWO WORKING DAYS BEFORE YOU DIG — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
TITLE SHEET

SHEET NO.:
L0.00
OF: 15

G:\2014\14-0100\DRAWINGS\LANDSCAPE\SUNNYLANDS PARKWAY\14-0100-TITLE SHEET.DWG 3/23/2016 11:01 AM



GRAPHIC SCALE 1"=20'

20 0 20 40 60

PLANTING SCHEDULE **

SYMBOL	TAG	NAME	LATIN NAME	NOTE
TREES				
	OL EU	(E) TREE TO BE RELOCATED	OLEA EUROPAEA	-
	OL EU	(E) TREE TO REMAIN IN PLACE	OLEA EUROPAEA	-
	OL EU	RELOCATED TREE: PROPOSED LOCATION	OLEA EUROPAEA	-

SYMBOL	TAG	LATIN NAME	COMMON NAME	SIZE	SPACING	QUANTITY	IRRIGATION TYPE	WATER USE
PLANTS								
	AG SH	AGAVE 'SHARKSKIN'	SHARKSKIN AGAVE	5 - GAL	3'-0" AVG.	168		LOW
	CY BI	CYLINDROPUNTIA VERSICOLOR	STAGHORN CHOLLA	5 - GAL	6'-0" AVG.	103		VERY LOW
	DA WH	DASYLIRION WHEELERI	DESERT SPOON	1 - GAL	3'-0" AVG.	192		LOW
	EU RI	EUPHORBIA RIGIDA	SILVER SPURGE	1 - GAL	2'-6" AVG.	201	DRIP	LOW
	OP AC	OPUNTIA ACANTHOCARPA	BUCKHORN CHOLLA	1 - GAL	4'-0" AVG.	155		VERY LOW
	OP EN	OPUNTIA ENGELMANNII	PRICKLY PEAR	5 - GAL	4'-0" AVG.	129		VERY LOW
	PA MA	PACHYCEREUS MARGINATUS	FENCE POST CACTUS	1 - GAL, 5 - GAL	2'-6" AVG.	1155		VERY LOW

MATERIAL SCHEDULE **

HATCH	TAG	DESCRIPTION	METHOD AND QUANTITY
	P1	FIELD OF ROCK	4"-6" ROCK MULCH PALM SPRINGS GOLD
	P2	ACCENT ROCK MULCH	1"-3" ROCK MULCH BARSTOW GOLD
	P3	PLANTING MULCH	3/4" ROCK MULCH PALM SPRINGS GOLD

TREE RELOCATION PLAN **

TREE NO.	CANOPY SIZE	NOTE
(E) 1	16' DIA.	TO BE RELOCATED
(E) 2	16' DIA.	TO BE RELOCATED
(E) 3	16' DIA.	TO BE RELOCATED
(E) 4	16' DIA.	TO BE RELOCATED
(E) 5	16' DIA.	TO BE RELOCATED
(E) 6	16' DIA.	TO BE RELOCATED
(E) 7	16' DIA.	TO BE RELOCATED
(E) 8	16' DIA.	TO BE RELOCATED
(E) 9	16' DIA.	TO BE RELOCATED
(E) 10	16' DIA.	TO BE RELOCATED
(E) 11	16' DIA.	TO BE RELOCATED
(E) 12	16' DIA.	TO BE RELOCATED
(E) 13	16' DIA.	TO BE RELOCATED
(E) 14	16' DIA.	TO BE RELOCATED
(E) 15	16' DIA.	TO BE RELOCATED
(E) 16	16' DIA.	TO BE RELOCATED
(E) 17	16' DIA.	TO BE RELOCATED
(E) 18	16' DIA.	TO BE RELOCATED
(E) 19	16' DIA.	REMAIN
(E) 20	16' DIA.	TO BE RELOCATED
(E) 21	16' DIA.	REMAIN
(E) 22	16' DIA.	TO BE RELOCATED
(E) 23	30' DIA.	TO BE RELOCATED
(E) 24	24' DIA.	REMAIN
(E) 25	24' DIA.	REMAIN
(E) 26	30' DIA.	TO BE RELOCATED
(E) 27	24' DIA.	REMAIN
(E) 28	24' DIA.	REMAIN
(E) 29	24' DIA.	TO BE RELOCATED
(E) 30	48' DIA.	REMAIN
(E) 31	30' DIA.	TO BE RELOCATED
(E) 32	30' DIA.	REMAIN
(E) 33	30' DIA.	TO BE RELOCATED
(E) 34	48' DIA.	REMAIN

NOTE:
THIS CHART IS COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY. NO TREE RELOCATIONS ARE EXPECTED FOR THE WALL INSTALLATION "AMENDMENT" PLANS.

SCHEDULE NOTE:
ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

NOTE:
RELOCATED OLIVE TREES SHALL BE CLOSELY MONITORED AND, IF THEY DIE, SHALL BE REPLACED WITH A 36" BOX OLIVE TREE. RELOCATED TREES SHOULD BE CLOSELY MONITORED EVERY THREE MONTHS FOR TWO YEARS AFTER TRANSPLANTING.

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — M.W. MAC LEAN — No. 5570 — 12-31-2017 — 01-12-2018 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIGALERT — DIAL BEFORE YOU DIG TOLL FREE — NO WORKING DAYS BEFORE YOU DIG — 1-800-227-2600 OR 811 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
PLANTING AMENDMENTS

SHEET NO.:
L2.03

OF: 15

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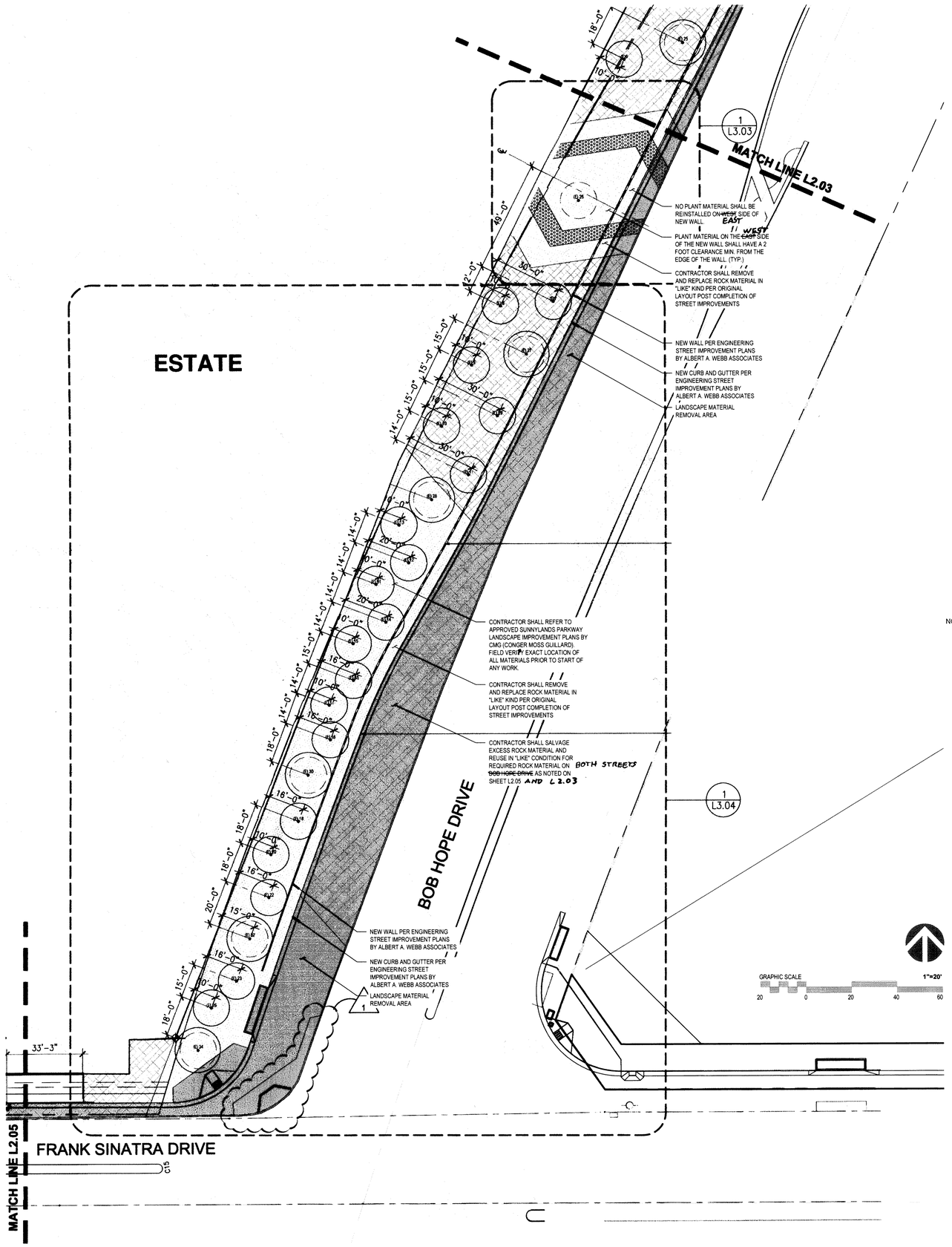

PLANTING SCHEDULE **

SYMBOL	TAG	NAME	LATIN NAME	NOTE
TREES				
	OL EU	(E) TREE TO BE RELOCATED	OLEA EUROPAEA	-
	OL EU	(E) TREE TO REMAIN IN PLACE	OLEA EUROPAEA	-
	OL EU	RELOCATED TREE: PROPOSED LOCATION	OLEA EUROPAEA	-

SYMBOL	TAG	LATIN NAME	COMMON NAME	SIZE	SPACING	QUANTITY	IRRIGATION TYPE	WATER USE
PLANTS								
	AG SH	AGAVE 'SHARKSKIN'	SHARKSKIN AGAVE	5 - GAL	3'-0" AVG.	168		LOW
	CY BI	CYLINDROPUNTIA VERSICOLOR	STAGHORN CHOLLA	5 - GAL	6'-0" AVG.	103		VERY LOW
	DA WH	DASYLIRION WHEELERI	DESERT SPOON	1 - GAL	3'-0" AVG.	192		LOW
	EU RI	EUPHORBIA RIGIDA	SILVER SPURGE	1 - GAL	2'-6" AVG.	201	DRIP	LOW
	OP AC	OPUNTIA ACANTHOCARPA	BUCKHORN CHOLLA	1 - GAL	4'-0" AVG.	155		VERY LOW
	OP EN	OPUNTIA ENGELMANNII	PRICKLY PEAR	5 - GAL	4'-0" AVG.	129		VERY LOW
	PA MA	PACHYCEREUS MARGINATUS	FENCE POST CACTUS	1 - GAL, 5 - GAL	2'-6" AVG.	1155		VERY LOW

MATERIAL SCHEDULE **

HATCH	TAG	DESCRIPTION	METHOD AND QUANTITY
	P1	FIELD OF ROCK	4"-6" ROCK MULCH PALM SPRINGS GOLD
	P2	ACCENT ROCK MULCH	1"-3" ROCK MULCH BARSTOW GOLD
	P3	PLANTING MULCH	3/4" ROCK MULCH PALM SPRINGS GOLD

TREE RELOCATION PLAN **

NOTE:
THIS CHART IS COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY.
NO TREE RELOCATIONS ARE EXPECTED FOR THE WALL INSTALLATION "AMENDMENT" PLANS.

TREE NO.	CANOPY SIZE	NOTE
(E) 1	16' DIA.	TO BE RELOCATED
(E) 2	16' DIA.	TO BE RELOCATED
(E) 3	16' DIA.	TO BE RELOCATED
(E) 4	16' DIA.	TO BE RELOCATED
(E) 5	16' DIA.	TO BE RELOCATED
(E) 6	16' DIA.	TO BE RELOCATED
(E) 7	16' DIA.	TO BE RELOCATED
(E) 8	16' DIA.	TO BE RELOCATED
(E) 9	16' DIA.	TO BE RELOCATED
(E) 10	16' DIA.	TO BE RELOCATED
(E) 11	16' DIA.	TO BE RELOCATED
(E) 12	16' DIA.	TO BE RELOCATED
(E) 13	16' DIA.	TO BE RELOCATED
(E) 14	16' DIA.	TO BE RELOCATED
(E) 15	16' DIA.	TO BE RELOCATED
(E) 16	16' DIA.	TO BE RELOCATED
(E) 17	16' DIA.	TO BE RELOCATED
(E) 18	16' DIA.	TO BE RELOCATED
(E) 19	16' DIA.	REMAIN
(E) 20	16' DIA.	TO BE RELOCATED
(E) 21	16' DIA.	REMAIN
(E) 22	16' DIA.	TO BE RELOCATED
(E) 23	30' DIA.	TO BE RELOCATED
(E) 24	24' DIA.	REMAIN
(E) 25	24' DIA.	REMAIN
(E) 26	30' DIA.	TO BE RELOCATED
(E) 27	24' DIA.	REMAIN
(E) 28	24' DIA.	REMAIN
(E) 29	24' DIA.	TO BE RELOCATED
(E) 30	48' DIA.	REMAIN
(E) 31	30' DIA.	TO BE RELOCATED
(E) 32	30' DIA.	REMAIN
(E) 33	30' DIA.	TO BE RELOCATED
(E) 34	48' DIA.	REMAIN

SCHEDULE NOTE:
ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

NOTE:
RELOCATED OLIVE TREES SHALL BE CLOSELY MONITORED AND, IF THEY DIE, SHALL BE REPLACED WITH A 36" BOX OLIVE TREE. RELOCATED TREES SHOULD BE CLOSELY MONITORED EVERY THREE MONTHS FOR TWO YEARS AFTER TRANSPLANTING.

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SEAL:

LICENSED LANDSCAPE ARCHITECT
LANE MACIAS No. 5985
12-31-2017
01-12-2016
STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.:	14-0100
SCALE:	PER PLAN
DRAWN:	G.GON
CHECKED:	J.MAC

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TWO WORKING DAYS BEFORE YOU DIG 1-800-227-2600 OR 811
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

3/24/16

SHEET TITLE:
PLANTING AMENDMENTS

SHEET NO.:
L2.04
OF: 15

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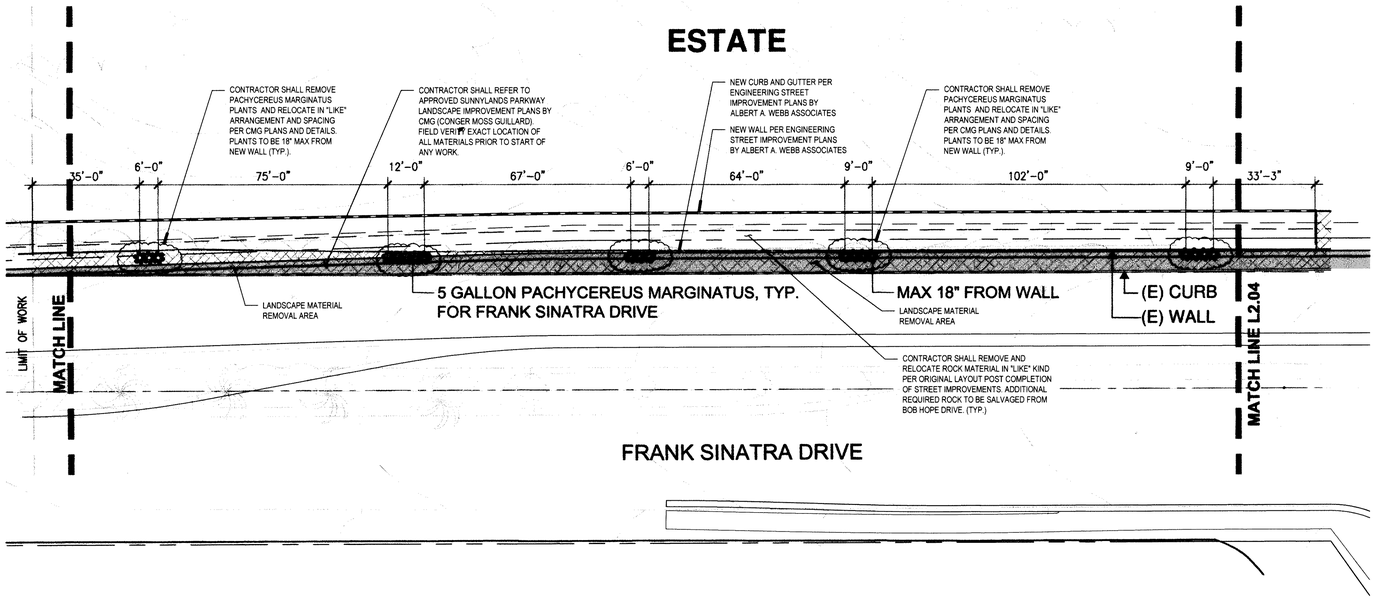
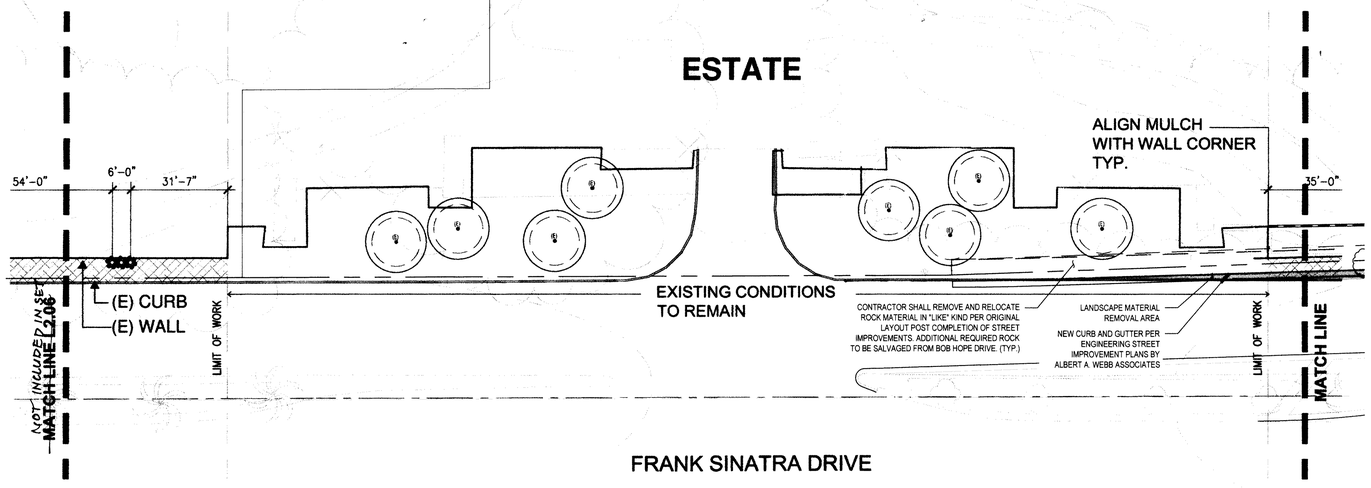


NOTE:
THIS CHART IS COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY. NO TREE RELOCATIONS ARE EXPECTED FOR THE WALL INSTALLATION "AMENDMENT" PLANS.



GRAPHIC SCALE 1"=20'
20 0 20 40 60

PLANTING SCHEDULE **

SYMBOL	TAG	NAME	LATIN NAME	NOTE
TREES				
	OL EU	(E) TREE TO BE RELOCATED	OLEA EUROPAEA	-
	OL FU	(E) TREE TO REMAIN IN PLACE	OLEA EUROPAEA	-
	OL EU	RELOCATED TREE: PROPOSED LOCATION	OLEA EUROPAEA	-

SYMBOL	TAG	LATIN NAME	COMMON NAME	SIZE	SPACING	QUANTITY	IRRIGATION TYPE	WATER USE
PLANTS								
	AG SH	AGAVE 'SHARKSKIN'	SHARKSKIN AGAVE	5 - GAL	3'-0" AVG.	168		LOW
	CY BI	CYLINDROPUNTIA VERSICOLOR	STAGHORN CHOLLA	5 - GAL	6'-0" AVG.	103		VERY LOW
	DA WH	DASYLIRION WHEELERI	DESERT SPOON	1 - GAL	3'-0" AVG.	192		LOW
	EU RI	EUPHORBIA RIGIDA	SILVER SPURGE	1 - GAL	2'-6" AVG.	201	DRIP	LOW
	OP AC	OPUNTIA ACANTHOCARPA	BUCKHORN CHOLLA	1 - GAL	4'-0" AVG.	155		VERY LOW
	OP EN	OPUNTIA ENGELMANNII	PRICKLY PEAR	5 - GAL	4'-0" AVG.	129		VERY LOW
	PA MA	PACHYCEREUS MARGINATUS	FENCE POST CACTUS	1 - GAL, 5 - GAL	2'-6" AVG.	1155		VERY LOW

MATERIAL SCHEDULE **

HATCH	TAG	DESCRIPTION	METHOD AND QUANTITY
	P1	FIELD OF ROCK	4"-6" ROCK MULCH PALM SPRINGS GOLD
	P2	ACCENT ROCK MULCH	1"-3" ROCK MULCH BARSTOW GOLD
	P3	PLANTING MULCH	3/4" ROCK MULCH PALM SPRINGS GOLD

TREE RELOCATION PLAN **

TREE NO.	CANOPY SIZE	NOTE
(E) 1	16' DIA.	TO BE RELOCATED
(E) 2	16' DIA.	TO BE RELOCATED
(E) 3	16' DIA.	TO BE RELOCATED
(E) 4	16' DIA.	TO BE RELOCATED
(E) 5	16' DIA.	TO BE RELOCATED
(E) 6	16' DIA.	TO BE RELOCATED
(E) 7	16' DIA.	TO BE RELOCATED
(E) 8	16' DIA.	TO BE RELOCATED
(E) 9	16' DIA.	TO BE RELOCATED
(E) 10	16' DIA.	TO BE RELOCATED
(E) 11	16' DIA.	TO BE RELOCATED
(E) 12	16' DIA.	TO BE RELOCATED
(E) 13	16' DIA.	TO BE RELOCATED
(E) 14	16' DIA.	TO BE RELOCATED
(E) 15	16' DIA.	TO BE RELOCATED
(E) 16	16' DIA.	TO BE RELOCATED
(E) 17	16' DIA.	TO BE RELOCATED
(E) 18	16' DIA.	TO BE RELOCATED
(E) 19	16' DIA.	REMAIN
(E) 20	16' DIA.	TO BE RELOCATED
(E) 21	16' DIA.	REMAIN
(E) 22	16' DIA.	TO BE RELOCATED
(E) 23	30' DIA.	TO BE RELOCATED
(E) 24	24' DIA.	REMAIN
(E) 25	24' DIA.	REMAIN
(E) 26	30' DIA.	TO BE RELOCATED
(E) 27	24' DIA.	REMAIN
(E) 28	24' DIA.	REMAIN
(E) 29	24' DIA.	TO BE RELOCATED
(E) 30	48' DIA.	REMAIN
(E) 31	30' DIA.	TO BE RELOCATED
(E) 32	30' DIA.	REMAIN
(E) 33	30' DIA.	TO BE RELOCATED
(E) 34	48' DIA.	REMAIN

SCHEDULE NOTE:
ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

NOTE:
RELOCATED OLIVE TREES SHALL BE CLOSELY MONITORED AND, IF THEY DIE, SHALL BE REPLACED WITH A 36" BOX OLIVE TREE. RELOCATED TREES SHOULD BE CLOSELY MONITORED EVERY THREE MONTHS FOR TWO YEARS AFTER TRANSPLANTING.

ALBERT A. WEBB ASSOCIATES
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3788 McCRAY STREET
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SEAL:
LICENSED LANDSCAPE ARCHITECT JAIME MACIAS No. 5971 12-31-2017 01-12-2016 STATE OF CALIFORNIA

CONSULTANT:

PROJECT:
SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

APPR. DATE
MARK BY DATE REVISIONS
ENGINEER

SUBMITTALS:
NO. DATE:
1 2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIG ALERT
DIAL BEFORE YOU DIG
TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE 1-800-227-2600 OR 811
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
PLANTING AMENDMENTS

SHEET NO.:
L2.05
OF: 15

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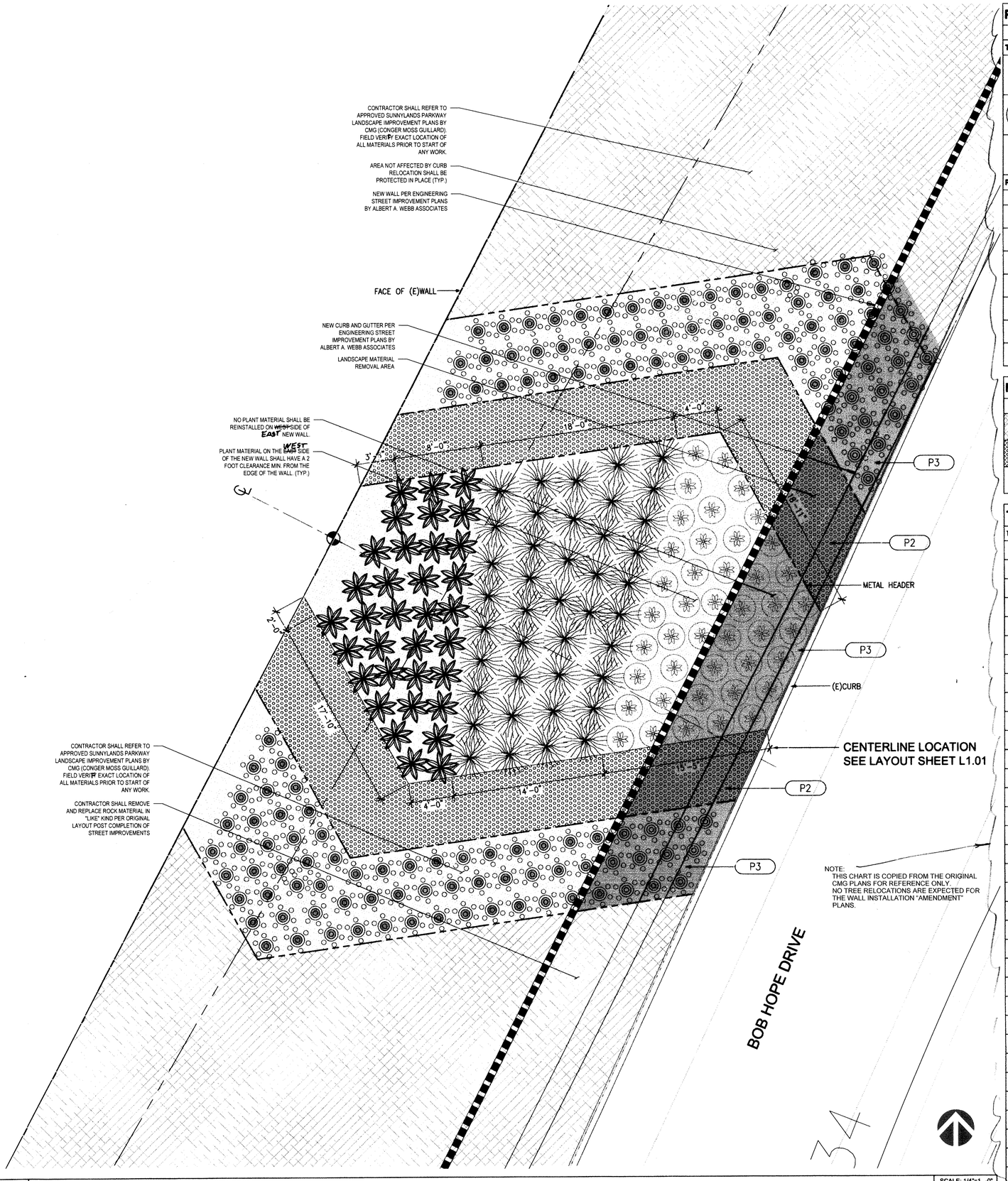

1 PLANTING PLAN TYPE 3

SCALE: 1/4"=1'-0"

PLANTING SCHEDULE **

SYMBOL	TAG	NAME	LATIN NAME	NOTE
TREES				
	OL EU	(E) TREE TO BE RELOCATED	OLEA EUROPAEA	-
	OL EU	(E) TREE TO REMAIN IN PLACE	OLEA EUROPAEA	-
	OL EU	RELOCATED TREE: PROPOSED LOCATION	OLEA EUROPAEA	-

SYMBOL	TAG	LATIN NAME	COMMON NAME	SIZE	SPACING	QUANTITY	IRRIGATION TYPE	WATER USE
PLANTS								
	AG SH	AGAVE 'SHARKSKIN'	SHARKSKIN AGAVE	5 - GAL	3'-0" AVG.	168		LOW
	CY BI	CYLINDROPUNTIA VERSICOLOR	STAGHORN CHOLLA	5 - GAL	6'-0" AVG.	103		VERY LOW
	DA WH	DASYLIRION WHEELERI	DESERT SPOON	1 - GAL	3'-0" AVG.	192		LOW
	EU RI	EUPHORBIA RIGIDA	SILVER SPURGE	1 - GAL	2'-6" AVG.	201	DRIP	LOW
	OP AC	OPUNTIA ACANTHOCARPA	BUCKHORN CHOLLA	1 - GAL	4'-0" AVG.	155		VERY LOW
	OP EN	OPUNTIA ENGELMANNII	PRICKLY PEAR	5 - GAL	4'-0" AVG.	129		VERY LOW
	PA MA	PACHYCEREUS MARGINATUS	FENCE POST CACTUS	1 - GAL, 5 - GAL	2'-6" AVG.	1155		VERY LOW

MATERIAL SCHEDULE **

HATCH	TAG	DESCRIPTION	METHOD AND QUANTITY
	P1	FIELD OF ROCK	4"-6" ROCK MULCH PALM SPRINGS GOLD
	P2	ACCENT ROCK MULCH	1"-3" ROCK MULCH BARSTOW GOLD
	P3	PLANTING MULCH	3/4" ROCK MULCH PALM SPRINGS GOLD

TREE RELOCATION PLAN **

TREE NO.	CANOPY SIZE	NOTE
(E) 1	16' DIA.	TO BE RELOCATED
(E) 2	16' DIA.	TO BE RELOCATED
(E) 3	16' DIA.	TO BE RELOCATED
(E) 4	16' DIA.	TO BE RELOCATED
(E) 5	16' DIA.	TO BE RELOCATED
(E) 6	16' DIA.	TO BE RELOCATED
(E) 7	16' DIA.	TO BE RELOCATED
(E) 8	16' DIA.	TO BE RELOCATED
(E) 9	16' DIA.	TO BE RELOCATED
(E) 10	16' DIA.	TO BE RELOCATED
(E) 11	16' DIA.	TO BE RELOCATED
(E) 12	16' DIA.	TO BE RELOCATED
(E) 13	16' DIA.	TO BE RELOCATED
(E) 14	16' DIA.	TO BE RELOCATED
(E) 15	16' DIA.	TO BE RELOCATED
(E) 16	16' DIA.	TO BE RELOCATED
(E) 17	16' DIA.	TO BE RELOCATED
(E) 18	16' DIA.	TO BE RELOCATED
(E) 19	16' DIA.	REMAIN
(E) 20	16' DIA.	TO BE RELOCATED
(E) 21	16' DIA.	REMAIN
(E) 22	16' DIA.	TO BE RELOCATED
(E) 23	30' DIA.	TO BE RELOCATED
(E) 24	24' DIA.	REMAIN
(E) 25	24' DIA.	REMAIN
(E) 26	30' DIA.	TO BE RELOCATED
(E) 27	24' DIA.	REMAIN
(E) 28	24' DIA.	REMAIN
(E) 29	24' DIA.	TO BE RELOCATED
(E) 30	48' DIA.	REMAIN
(E) 31	30' DIA.	TO BE RELOCATED
(E) 32	30' DIA.	REMAIN
(E) 33	30' DIA.	TO BE RELOCATED
(E) 34	48' DIA.	REMAIN

SCHEDULE NOTE:

ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

NOTE:
RELOCATED OLIVE TREES SHALL BE CLOSELY MONITORED AND, IF THEY DIE, SHALL BE REPLACED WITH A 36" BOX OLIVE TREE. RELOCATED TREES SHOULD BE CLOSELY MONITORED EVERY THREE MONTHS FOR TWO YEARS AFTER TRANSPLANTING.

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FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JAMES M. HAYES — No. 5810 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIG ALERT — TOLL FREE 811 — TWO WORKING DAYS BEFORE YOU DIG — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT — 1-800-227-2600 OR 811

SHEET TITLE:
PLANTING ENLARGEMENTS

SHEET NO.:
L3.02
OF: 15

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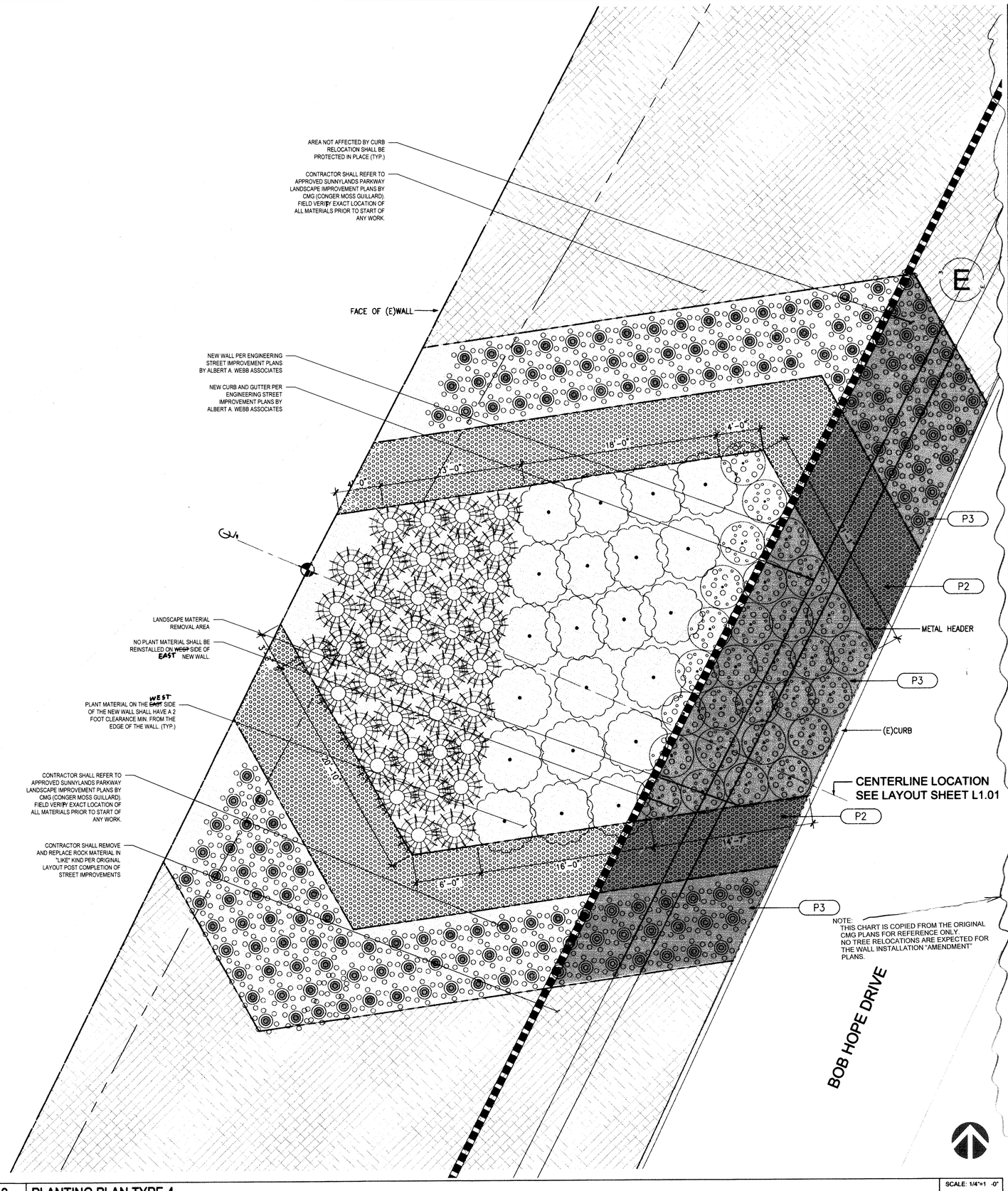

2 PLANTING PLAN TYPE 4

SCALE: 1/4"=1 -0"

PLANTING SCHEDULE **

SYMBOL	TAG	NAME	LATIN NAME	NOTE
TREES				
	OL EU	(E) TREE TO BE RELOCATED	OLEA EUROPAEA	-
	OL EU	(E) TREE TO REMAIN IN PLACE	OLEA EUROPAEA	-
	OL EU	RELOCATED TREE: PROPOSED LOCATION	OLEA EUROPAEA	-

SYMBOL	TAG	LATIN NAME	COMMON NAME	SIZE	SPACING	QUANTITY	IRRIGATION TYPE	WATER USE
PLANTS								
	AG SH	AGAVE 'SHARKSKIN'	SHARKSKIN AGAVE	5 - GAL	3'-0" AVG.	168		LOW
	CY BI	CYLINDROPUNTIA VERSICOLOR	STAGHORN CHOLLA	5 - GAL	6'-0" AVG.	103		VERY LOW
	DA WH	DASYLIRION WHEELERI	DESERT SPOON	1 - GAL	3'-0" AVG.	192		LOW
	EU RI	EUPHORBIA RIGIDA	SILVER SPURGE	1 - GAL	2'-6" AVG.	201	DRIP	LOW
	OP AC	OPUNTIA ACANTHOCARPA	BUCKHORN CHOLLA	1 - GAL	4'-0" AVG.	155		VERY LOW
	OP EN	OPUNTIA ENGELMANNII	PRICKLY PEAR	5 - GAL	4'-0" AVG.	129		VERY LOW
	PA MA	PACHYCEREUS MARGINATUS	FENCE POST CACTUS	1 - GAL, 5 - GAL	2'-6" AVG.	1155		VERY LOW

MATERIAL SCHEDULE **

HATCH	TAG	DESCRIPTION	METHOD AND QUANTITY
	P1	FIELD OF ROCK	4"-6" ROCK MULCH PALM SPRINGS GOLD
	P2	ACCENT ROCK MULCH	1"-3" ROCK MULCH BARSTOW GOLD
	P3	PLANTING MULCH	3/4" ROCK MULCH PALM SPRINGS GOLD

TREE RELOCATION PLAN **

TREE NO.	CANOPY SIZE	NOTE
(E) 1	16' DIA.	TO BE RELOCATED
(E) 2	16' DIA.	TO BE RELOCATED
(E) 3	16' DIA.	TO BE RELOCATED
(E) 4	16' DIA.	TO BE RELOCATED
(E) 5	16' DIA.	TO BE RELOCATED
(E) 6	16' DIA.	TO BE RELOCATED
(E) 7	16' DIA.	TO BE RELOCATED
(E) 8	16' DIA.	TO BE RELOCATED
(E) 9	16' DIA.	TO BE RELOCATED
(E) 10	16' DIA.	TO BE RELOCATED
(E) 11	16' DIA.	TO BE RELOCATED
(E) 12	16' DIA.	TO BE RELOCATED
(E) 13	16' DIA.	TO BE RELOCATED
(E) 14	16' DIA.	TO BE RELOCATED
(E) 15	16' DIA.	TO BE RELOCATED
(E) 16	16' DIA.	TO BE RELOCATED
(E) 17	16' DIA.	TO BE RELOCATED
(E) 18	16' DIA.	TO BE RELOCATED
(E) 19	16' DIA.	REMAIN
(E) 20	16' DIA.	TO BE RELOCATED
(E) 21	16' DIA.	REMAIN
(E) 22	16' DIA.	TO BE RELOCATED
(E) 23	30' DIA.	TO BE RELOCATED
(E) 24	24' DIA.	REMAIN
(E) 25	24' DIA.	REMAIN
(E) 26	30' DIA.	TO BE RELOCATED
(E) 27	24' DIA.	REMAIN
(E) 28	24' DIA.	REMAIN
(E) 29	24' DIA.	TO BE RELOCATED
(E) 30	48' DIA.	REMAIN
(E) 31	30' DIA.	TO BE RELOCATED
(E) 32	30' DIA.	REMAIN
(E) 33	30' DIA.	TO BE RELOCATED
(E) 34	48' DIA.	REMAIN

NOTE:
RELOCATED OLIVE TREES SHALL BE CLOSELY MONITORED AND, IF THEY DIE, SHALL BE REPLACED WITH A 36" BOX OLIVE TREE. RELOCATED TREES SHOULD BE CLOSELY MONITORED EVERY THREE MONTHS FOR TWO YEARS AFTER TRANSPLANTING.

SCHEDULE NOTE:

ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

3/24/16

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SEAL:

LICENSED LANDSCAPE ARCHITECT — JAMES M. LATHAM — No. 5805 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

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SHEET TITLE:
PLANTING ENLARGEMENTS

SHEET NO.:
L3.03
OF: 15

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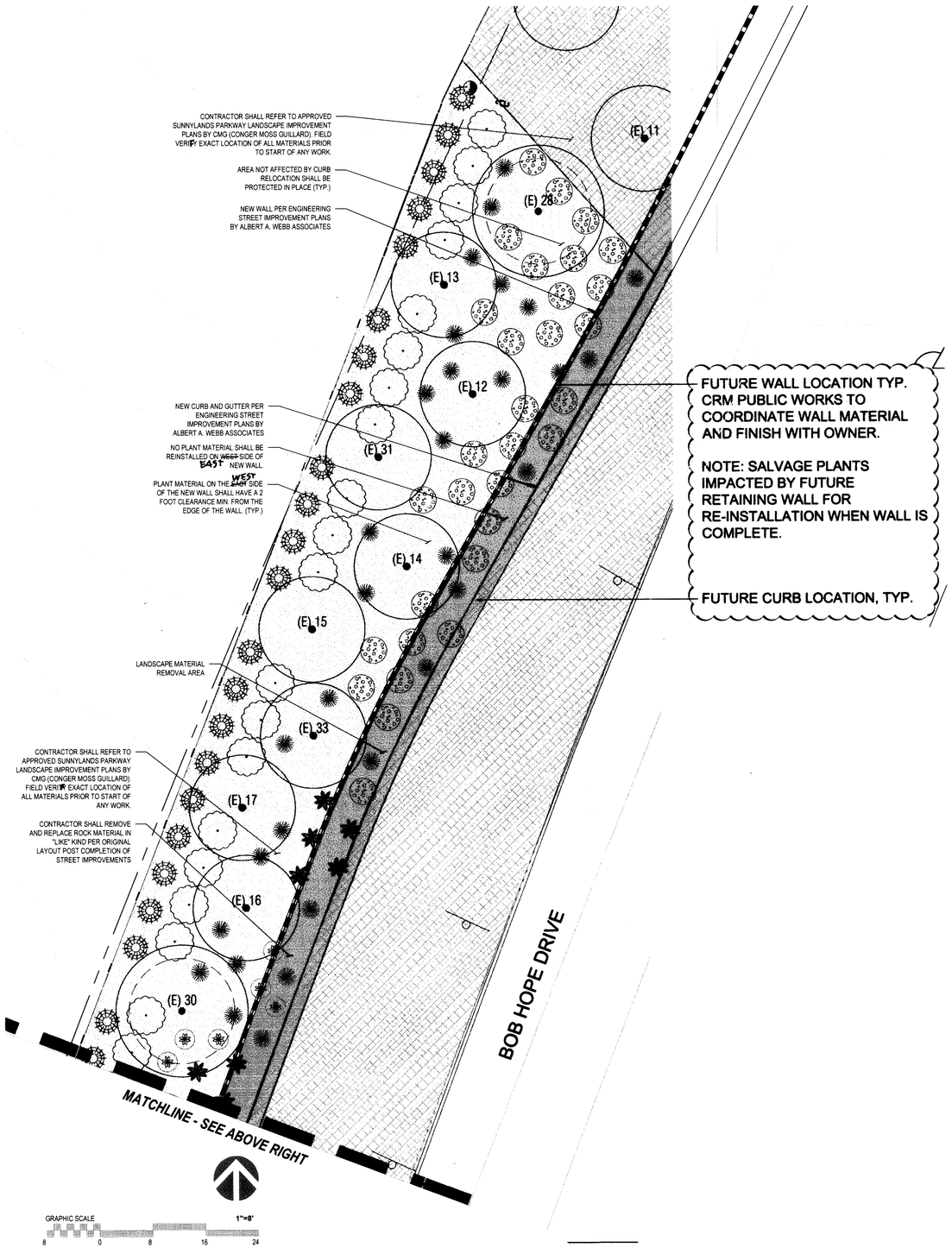

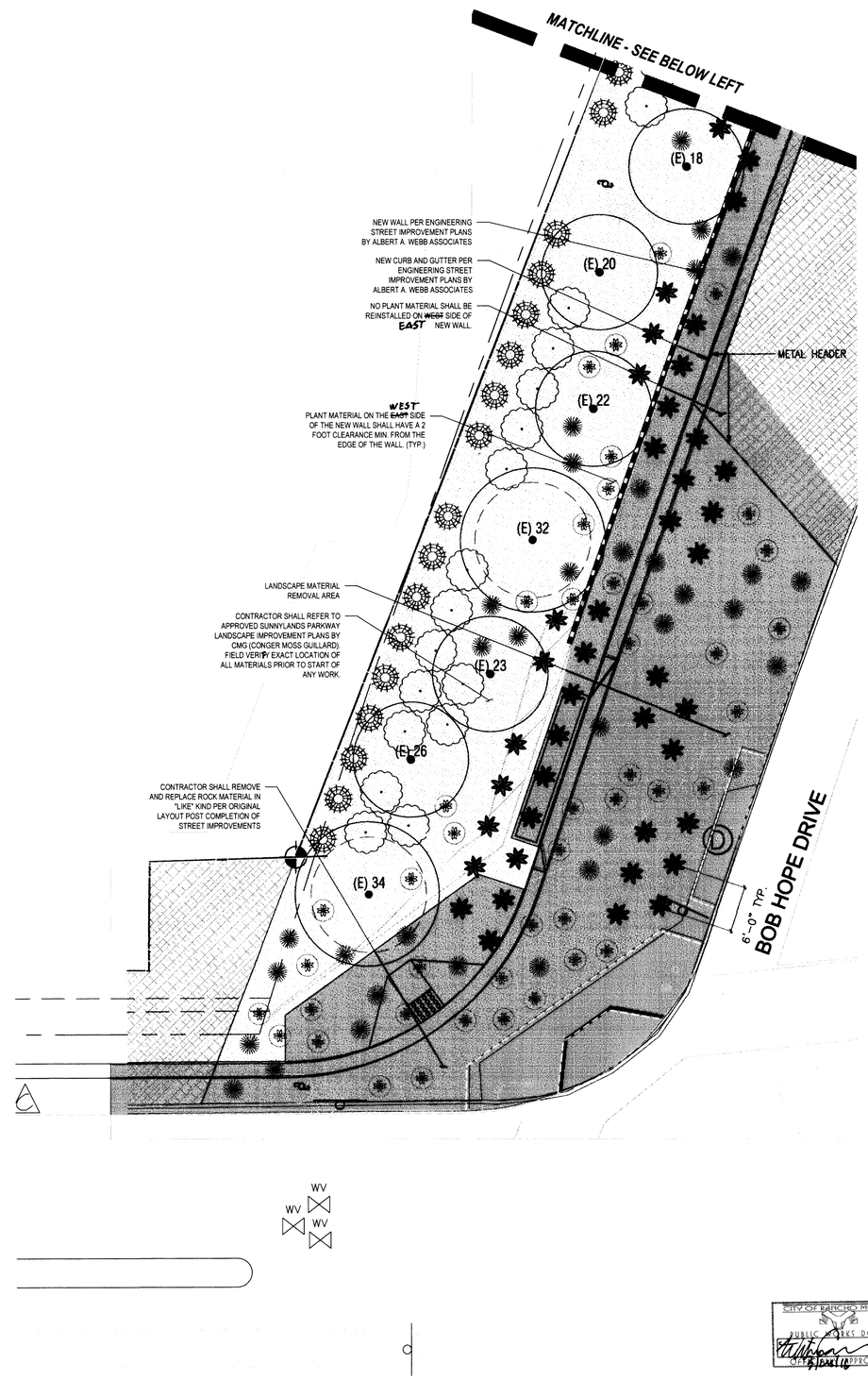

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SEAL:

LICENSED LANDSCAPE ARCHITECT
JAIME MACIAS No. 5870
12-31-2017
01-12-2016
STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
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MARK	BY	DATE	REVISIONS	APPR.	DATE

ENGINEER

SUBMITTALS:

NO.	DATE:
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RAINBIRD ROTOR LEGEND - RECYCLED WATER **

SYMBOL	DESCRIPTION	MANUFACTURER PART NO.	NOZZLE	PATTERN	FLOW	RADIUS	PRES	PRECIP
SHRUB ROTOR POP UPS								
21	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R13-18 F	FULL	1.60	16'	30	0.61
21	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R13-18 H	HALF	0.80	16'	30	0.61
21	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R13-18 Q	QRTR	0.40	16'	30	0.61
21	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R13-18 T	THRD	0.65	16'	30	0.61
22	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R17-24 F	FULL	3.00	21'	30	0.65
22	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R17-24 H	HALF	1.50	21'	30	0.65
22	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R17-24 Q	QRTR	0.75	21'	30	0.65
22	SHRUB ROTOR POP	RAINBIRD 1812 SAM PRS NP	R17-24 T	THRD	1.22	21'	30	0.65
23	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 25 FULL	FULL	3.82	25'	45	0.59
23	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 25 HALF	HALF	1.98	25'	45	0.61
23	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 25 QRTR	QRTR	1.00	25'	45	0.62
23	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 25 THRD	THRD	1.38	25'	45	0.64
24	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 30 FULL	FULL	5.78	30'	45	0.62
24	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 30 HALF	HALF	2.96	30'	45	0.63
24	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 30 QRTR	QRTR	1.40	30'	45	0.60
24	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 30 THRD	THRD	1.85	30'	45	0.59
25	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 35 FULL	FULL	7.58	35'	45	0.60
25	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 35 HALF	HALF	3.81	35'	45	0.60
25	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 35 QRTR	QRTR	1.92	35'	45	0.60
25	SHRUB ROTOR POP	RAINBIRD 5012 PL-R SAM PC NP	MPR 35 THRD	THRD	2.46	35'	45	0.58
ROTORS ON RISER								
11	ROTOR ON RISER	RAINBIRD PA-8S PRS	R13-18 F	FULL	1.60	16'	30	0.61
11	ROTOR ON RISER	RAINBIRD PA-8S PRS	R13-18 H	HALF	0.80	16'	30	0.61
11	ROTOR ON RISER	RAINBIRD PA-8S PRS	R13-18 Q	QRTR	0.40	16'	30	0.61
11	ROTOR ON RISER	RAINBIRD PA-8S PRS	R13-18 T	THRD	0.65	16'	30	0.61
12	ROTOR ON RISER	RAINBIRD PA-8S PRS	R17-24 F	FULL	3.00	21'	30	0.65
12	ROTOR ON RISER	RAINBIRD PA-8S PRS	R17-24 H	HALF	1.50	21'	30	0.65
12	ROTOR ON RISER	RAINBIRD PA-8S PRS	R17-24 Q	QRTR	0.75	21'	30	0.65
12	ROTOR ON RISER	RAINBIRD PA-8S PRS	R17-24 T	THRD	1.22	21'	30	0.65
13	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 25 FULL	FULL	3.82	25'	45	0.59
13	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 25 HALF	HALF	1.98	25'	45	0.61
13	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 25 QRTR	QRTR	1.00	25'	45	0.62
13	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 25 THRD	THRD	1.38	25'	45	0.64
14	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 30 FULL	FULL	5.78	30'	45	0.62
14	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 30 HALF	HALF	2.96	30'	45	0.63
14	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 30 QRTR	QRTR	1.40	30'	45	0.60
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15	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 35 FULL	FULL	7.58	35'	45	0.60
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15	ROTOR ON RISER	RAINBIRD 5000S-PL-R PC NP	MPR 35 THRD	THRD	2.46	35'	45	0.58

NOTE: ALL IRRIGATION HEADS ARE SPECIFIED WITH PURPLE NON-POTABLE IDENTIFICATION CAPS.

NOTE:
THIS CHART IS COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY.

IRRIGATION EQUIPMENT LEGEND **

SYMBOL	ITEM	MANUFACTURER - MODEL NUMBER - DESCRIPTION
	PRESSURE REGULATOR	EXISTING
	GATE VALVE	EXISTING
	GATE VALVE	EXISTING GATE VALVE
	QUICK COUPLER	EXISTING RECYCLED WATER QUICK COUPLER
	CONTROL VALVE	EXISTING CONTROL VALVE
	SPLICE BOX	EXISTING
	CONTROL VALVE DRIP	RAINBIRD PESB-R 100 1" CONTROL VALVE WITH A RAINBIRD ICM SOLENOID, RAINBIRD PRB-QKCHK-100 BASKET STRAINER WITH 200 MESH STAINLESS STEEL FILTER (INCLUDES 40 PSI PRESSURE REGULATOR)
	CONTROL VALVE	RAINBIRD PESB-R CONTROL VALVE WITH ICM SOLENOID (USED WITH MAXI-CABLE) - REFER TO PLAN FOR SIZES
	FLUSH VALVE	NETAFIM TLSOV BARBED MANUAL FLUSH VALVE FOR DRIP SYSTEM END FLUSH
	OLIVE TREE IRRIGATION	FOUR (4) RAINBIRD 1806 SAM PRS - POP UP SPRAY HEADS WITH 5Q-B NOZZLES AND PCS 030 SILVER SCREENS - REFER TO DETAIL
	BELOW GRADE PRESSURE MAINLINE	EXISTING RECYCLED WATER BELOW GRADE PRESSURE MAINLINE
	BELOW GRADE LATERAL LINE	PURPLE SCHEDULE 40 SOLVENT WELD PVC - 3/4" MINIMUM REFER TO PLAN FOR SIZES AND TRENCHING DETAIL FOR BURIAL DEPTHS
	TREE IRRIGATION LATERAL	PURPLE SCHEDULE 40 SOLVENT WELD PVC LATERAL LINE - 3/4" MINIMUM REFER TO PLAN FOR SIZES AND TRENCHING DETAIL FOR BURIAL DEPTHS
	SLEEVE	PURPLE SCHEDULE 40 PVC REFER TO SLEEVING LEGEND FOR QUANTITY AND SIZE
DW	DOMESTIC WATER LINE	DOMESTIC WATER LINES PER CIVIL PLANS - FOR REFERENCE ONLY
FW	FIRE LINE	FIRE SERVICE WATER LINES PER CIVIL PLANS - FOR REFERENCE ONLY
NOT SHOWN	WIRE CONNECTORS	3M DBY OR 3M DBR WATERPROOF DIRECT BURY CONNECTORS
NOT SHOWN	MAINLINE FITTINGS	PRESSURE MAINLINE FITTINGS TO BE SCHEDULE 40 PVC SOLVENT WELD
	LATERAL FITTINGS	NON-PRESSURE LATERAL LINE FITTINGS TO BE SCHEDULE 40 PVC SOLVENT WELD (ABOVE GRADE PIPE FITTINGS SHALL BE UVR)
NOT SHOWN	ID TAGS	T CHRISTY ID-MAX-P2-RC006 PURPLE BILINGUAL RECYCLED WATER WARNING TAG - PER VALVE
NOT SHOWN	ID TAGS	T CHRISTY ID-MAX-Y1 YELLOW STATION ID TAGS WITH BLACK LETTERING - PER VALVE
NOT SHOWN	VALVE BOX	RECTANGULAR CARSON 1419 - 14" X 19" CIRCULAR CARSON 910 - 10" ROUND JUMBO CARSON 1220 - 12" X 20" JUMBO BOX / LID COLOR: TAN - INCLUDE BOLT DOWN LOCKING LID WITH "RECYCLED WATER - DO NOT DRINK" MOLDED OR EMBOSSED ON THE LID

A1 / 60
- DENOTES STATION NUMBER
- DENOTES VALVE FLOW (GPM)
- DENOTES VALVE SIZE
- DENOTES HYDROZONE

DRIP EMITTER LEGEND **

SYMBOL	DESCRIPTION	MANUFACTURER PART NO.	FLOW PER EMITTER GPH	AMOUNT OF EMITTERS	COLOR	FLOW PER SHRUB GPH
☐	DRIP EMITTER THREADED	RAINBIRD XB-05PC1032	0.5	1	BLUE	0.5
⧠	DRIP EMITTER THREADED	RAINBIRD XB-05PC1032	0.5	2	BLUE	1.0
▣	DRIP EMITTER THREADED	RAINBIRD XB-10PC1032	1.0	2	BLACK	2.0
⊞	DRIP EMITTER THREADED	RAINBIRD XB-20PC1032	2.0	2	RED	4.0
■	DRIP EMITTER THREADED	RAINBIRD XB-20PC1032	2.0	4	RED	8.0

1

Water Calculation Narrative

Calculations provided are for the existing condition and the new proposed renovation. The existing turf landscape is calculated using Low Half Distribution Uniformity (DULH).

Water type is currently domestic, the water allotment calculation utilized the new 2015 State of California MWELO formulas.

SCHEDULE NOTE:

ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

Water Source

The parkway irrigation systems are connected to the golf course irrigation system and well water source. The golf course water source will be converted to recycled water from Coachella Valley Water District in the future. The irrigation system will be designed for use with recycled water.

Controls

The irrigation control system will be the Rain Bird IC system compatible and operated with the existing golf central control system.

All mainline pipe and wires are existing and will remain in use, protect in place during construction. Remote control valves and lateral pipe will be new per plans.

WATER USAGE ESTIMATION - NON RESIDENTIAL LANDSCAPES **

Sunnylands Parkway Existing Turf Planting

CATEGORY	UNITS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HYRDOZONE / WATER USE REQUIREMENT		TURF MODERATE	TURF HIGH	TURF MODERATE	TURF MODERATE	GRASSES HIGH	GRASSES HIGH	SHRUB MODERATE	SHRUB MODERATE	SHRUB MODERATE	SHRUB LOW	SHRUB LOW	SHRUB LOW	SHRUB VERY LOW	SHRUB VERY LOW
HYDROZONE AREA (HA)	Square Feet	89,740													
IRRIGATION METHOD		ROTOR	ROTOR	HE SPRAY	ROTOR	HE SPRAY	ROTATOR	SPRAY	ROTOR	DRIP	SPRAY	ROTOR	DRIP	SPRAY	ROTOR
WATER TYPE		DOMESTIC													
SPECIAL LANDSCAPE AREA (SLA)		NO													
SPECIAL LANDSCAPE AREA	Square Feet														
PERCENT AREA USE	Percentage	100%													
YEARLY ETo	Inches / Year	93.90													
YEARLY AVG PLANT FACTOR (PF)		0.60													
ESTIMATED EFFICIENCY (IE)	Percentage	77%													
ESTIMATED WATER USAGE PER ZONE (EWU)	HCF / Year	5,478													
	Gallons / Year	4,097,634													
	Ac Ft / Year	12.58													

Yearly ETo obtained from: CIMIS Map Zone
Additional Notes: Efficiencies include a .90 Irrigation Management Efficiency adjustment

TOTAL LANDSCAPE AREA	TOTAL SPECIAL LANDSCAPE AREA	UNITS
89,740		SQ. FT.
2.06		ACRES

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
77%	0.60	NO

ESTIMATED TOTAL WATER USAGE	HCF / Year	5,478
	Gallons / Year	4,097,634
	Ac Ft / Year	12.576
MAXIMUM APPLIED WATER ALLOWANCE	HCF / Year	3,143
	Gallons / Year	2,351,017
	Ac Ft / Year	7.22

FORMULAS
MAWA = Eto x 0.62 x [(0.45 x LA) + (0.55 x SLA)]
ETWU = Eto x 0.62 x [(PF x HA) / IE]

WATER USAGE ESTIMATION - NON RESIDENTIAL LANDSCAPES **

Sunnylands Parkway New Landscape - Trees + Cacti + Succulents

CATEGORY	UNITS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HYRDOZONE / WATER USE REQUIREMENT		TURF HIGH	TURF HIGH	TURF MODERATE	TURF MODERATE	GRASSES HIGH	GRASSES HIGH	SHRUB MODERATE	SHRUB MODERATE	SHRUB MODERATE	TREE LOW	SHRUB LOW	SHRUB LOW	SHRUB VERY LOW	SHRUB VERY LOW
HYDROZONE AREA (HA)	Square Feet										10,912				21,461
IRRIGATION METHOD		HE SPRAY	ROTOR	HE SPRAY	ROTOR	HE SPRAY	ROTATOR	SPRAY	ROTOR	DRIP	HE SPRAY	ROTOR	DRIP	SPRAY	DRIP
WATER TYPE											DOMESTIC				DOMESTIC
SPECIAL LANDSCAPE AREA (SLA)											NO				NO
SPECIAL LANDSCAPE AREA	Square Feet														
PERCENT AREA USE	Percentage										34%				66%
YEARLY ETo	Inches / Year										93.90				93.90
YEARLY AVG PLANT FACTOR (PF)											0.30				0.20
ESTIMATED EFFICIENCY (IE)	Percentage										77%				81%
ESTIMATED WATER USAGE PER ZONE (EWU)	HCF / Year										333				412
	Gallons / Year										249,127				308,498
	Ac Ft / Year										0.76				0.95

Yearly ETo obtained from: CIMIS Map Zone
Additional Notes: Efficiencies include a .90 Irrigation Management Efficiency adjustment

TOTAL LANDSCAPE AREA	TOTAL SPECIAL LANDSCAPE AREA	UNITS
32,373		SQ. FT.
0.74		ACRES

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
79%	0.23	YES

ESTIMATED TOTAL WATER USAGE	HCF / Year	745
	Gallons / Year	557,625
	Ac Ft / Year	1.711
MAXIMUM APPLIED WATER ALLOWANCE	HCF / Year	1,134
	Gallons / Year	848,111
	Ac Ft / Year	2.60

FORMULAS
MAWA = Eto x 0.62 x [(0.45 x LA) + (0.55 x SLA)]
ETWU = Eto x 0.62 x [(PF x HA) / IE]

CITY OF RANCHO MIRAGE
PUBLIC WORKS DEPT.
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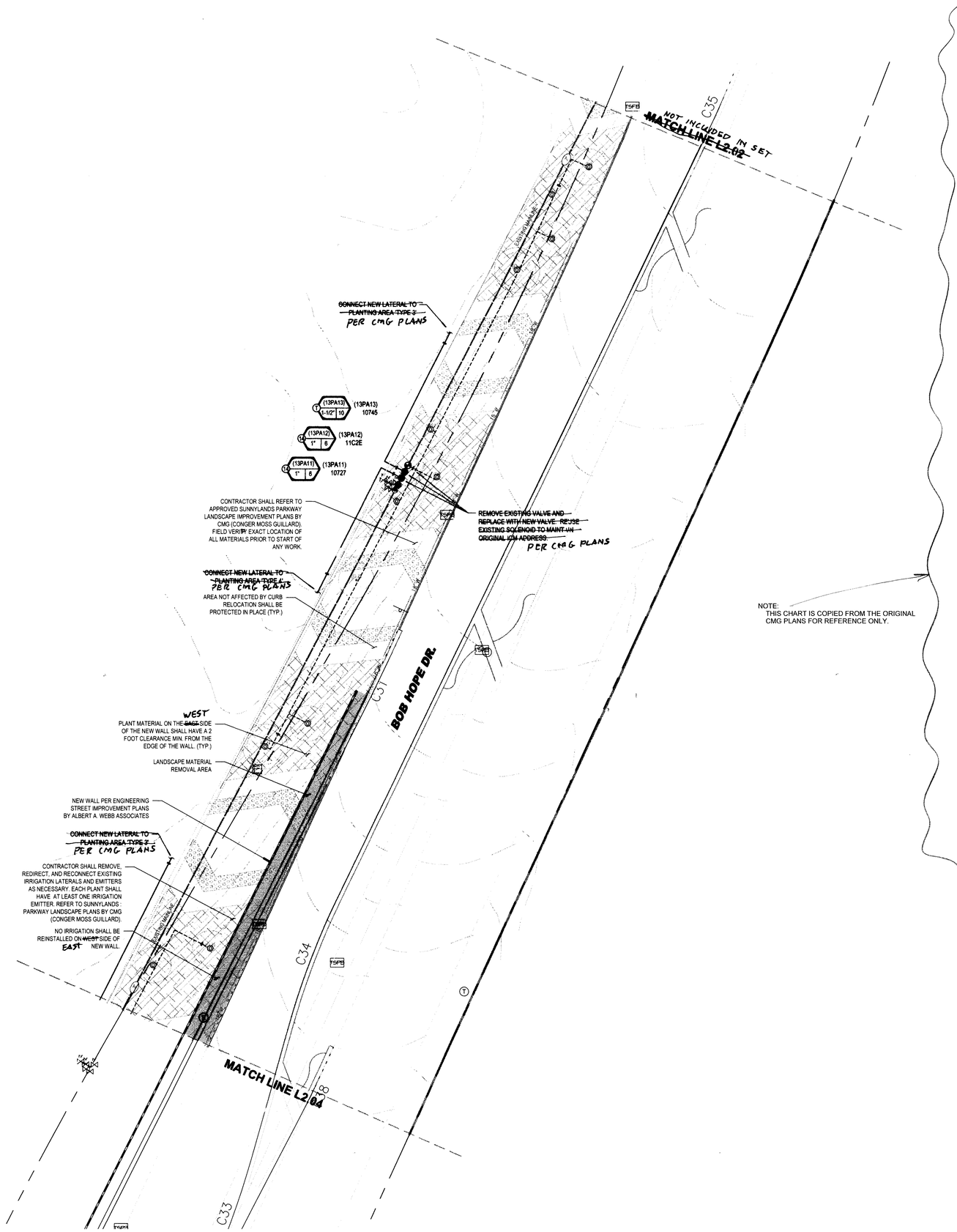

NOTE:
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LATERAL PIPE SIZING LEGEND **

NO 1/2" PIPE PERMITTED

- 3/4" MINIMUM
- 1"
- 1-1/4"
- 1-1/2"
- 2"
- 2-1/2"
- 3"

SLEEVE SIZING LEGEND **

REFER TO IRRIGATION LEGEND FOR SLEEVE MATERIAL. REFER TO DETAIL FOR BURIAL REQUIREMENTS

A	(2) 2"	H	(2) 4"
B	(3) 2"	I	(3) 4"
C	(4) 2"	J	(4) 4"
D	(2) 3"	K	(5) 4"
E	(3) 3"	L	(1) 6" + (2) 4"
F	(4) 3"	M	(1) 6" + (3) 4"
		N	(1) 6" + (4) 4"

G GALVANIZED SLEEVE - TO BE MINIMUM 2X DIAMETER OF PIPE OVER TERRACE DRAIN

SLEEVING NOTES **

- IRRIGATION PIPE AND LOW VOLTAGE CONTROL VALVE WIRE SHALL BE SLEEVED UNDER PAVING.
- SLEEVES TO BE MINIMUM TWICE THE DIAMETER OF THE PIPE SLEEVED.
- PRESSURE MAINLINE SLEEVES SHALL BE ACCOMPANIED WITH A MINIMUM 2" WIRE SLEEVE.
- SLEEVES TO EXTEND MINIMUM 12" BEYOND PAVING.
- PROTECT ALL SLEEVE ENDS TO PROHIBIT SOIL FROM ENTERING THE SLEEVE.
- IRRIGATION CONTRACTOR TO COORDINATE SLEEVING WITH THE HARDSCAPE CONTRACTOR PRIOR TO INSTALLATION OF ANY HARDSCAPE.
- REFER TO LEGEND FOR SLEEVE SPECIFICATION AND PLAN FOR SLEEVE SIZE MATRIX

EQUIPMENT LOCATION NOTES **

ALL PIPING, ABOVE GROUND EQUIPMENT, AND ANY VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE OR IN TURF AREAS WITHOUT PERMISSION FROM THE IRRIGATION CONSULTANT. GROUP ALL VALVE BOXES AND LOCATE IN SHRUB AREAS ONLY. CONTRACTOR WILL BE RESPONSIBLE TO RE-LOCATE VALVE BOXES INSTALLED IN TURF AREAS AT NO COST TO THE OWNER.

PLANTING NOTE **

1. REPLACE ALL VALVE BOXES FOR EXISTING EQUIPMENT LOCATED WITHIN THE TURF REMOVAL LIMITS WITH NEW TAN COLORED BOXES PER LEGEND - INCLUDING SPLICE BOXES, CONTROL VALVES, GATE VALVES, AND REGULATORS. EXISTING EQUIPMENT IS SHOWN ON THE PLAN FOR REFERENCE. INCLUDE THE REPLACEMENT OF 8 EXTRA BOXES IN BID.

2. REMOVE EXISTING VALVES AS NOTED AND INSTALL NEW VALVE ASSEMBLY TO THE EXISTING MAINLINE CONNECTION.

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SCHEDULE NOTE:

ALL SCHEDULES SHOWN SHALL BE USED FOR REFERENCE PURPOSES ONLY. MATERIAL QUANTITIES DO NOT REFLECT FINAL CONDITIONS.

CITY OF RANCHO MIRAGE PUBLIC WORKS DEPT. APPROVED

GRAPHIC SCALE 1"=20'
20 0 20 40 60

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JUSTIN MACIAS — No. 5787 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

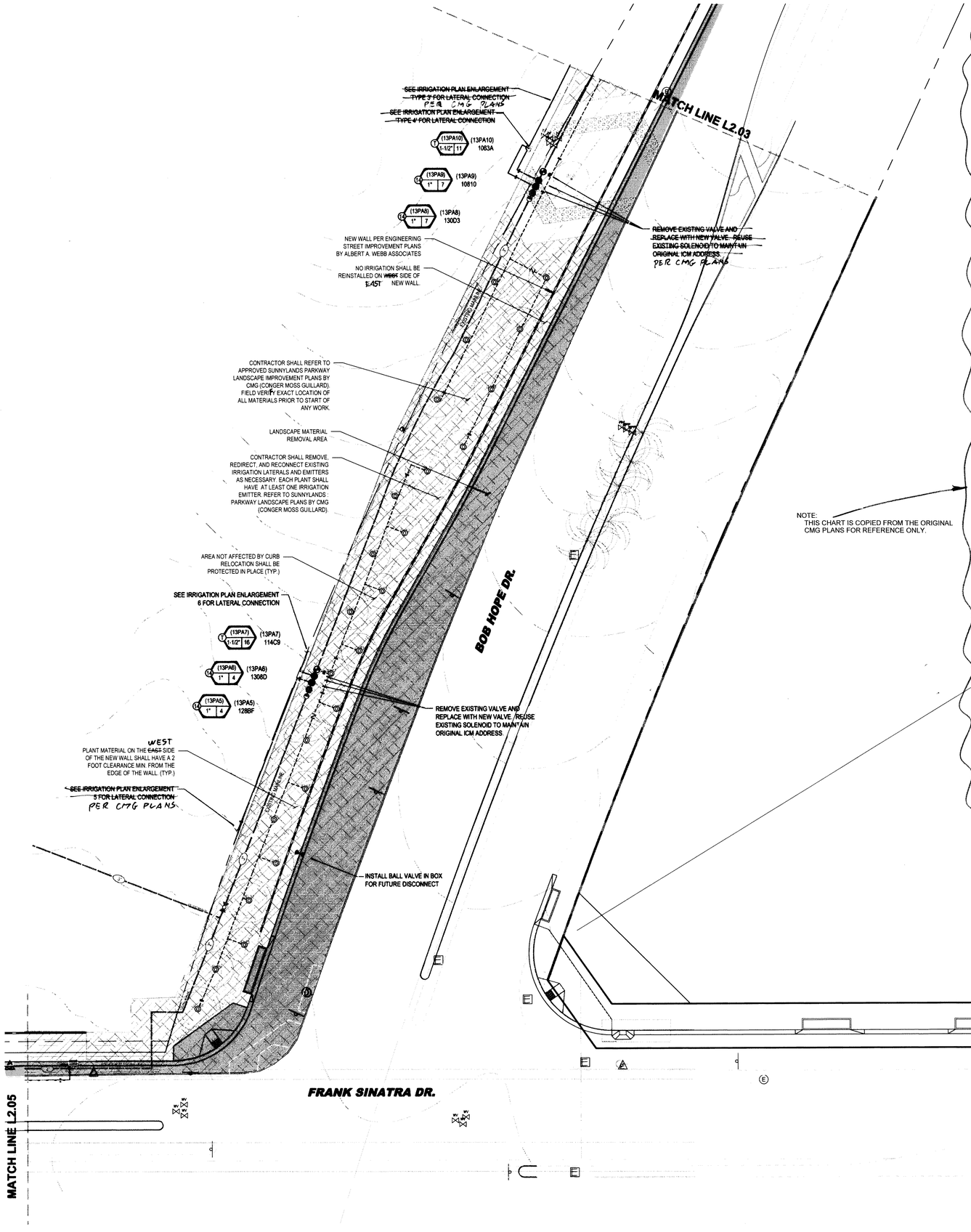
JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIGALERT — DIAL BEFORE YOU DIG — TOLL FREE — TWO WORKING DAYS BEFORE YOU DIG — 800-227-2600 OR 811 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
IRRIGATION AMENDMENTS

SHEET NO.:
LI-2.03
OF: 15

G:\2014\14-0100\DRAWINGS\LANDSCAPE\SUNNYLANDS PARKWAY\14-0100-IRRIGATION PLAN-LI-2.03.DWG 3/23/2016 11:02 AM



LATERAL PIPE SIZING LEGEND **

NO 1/2" PIPE PERMITTED

- 3/4" MINIMUM
- 1"
- 1-1/4"
- 1-1/2"
- 2"
- 2-1/2"
- 3"

SLEEVE SIZING LEGEND **

REFER TO IRRIGATION LEGEND FOR SLEEVE MATERIAL. REFER TO DETAIL FOR BURIAL REQUIREMENTS

A	(2) 2"	H	(2) 4"
B	(3) 2"	I	(3) 4"
C	(4) 2"	J	(4) 4"
D	(2) 3"	K	(5) 4"
E	(3) 3"	L	(1) 6" + (2) 4"
F	(4) 3"	M	(1) 6" + (3) 4"
		N	(1) 6" + (4) 4"

G — GALVANIZED SLEEVE - TO BE MINIMUM 2X DIAMETER OF PIPE OVER TERRACE DRAIN

SLEEVING NOTES **

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***SCHEDULE NOTE:**

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CITY OF RANCHO MIRAGE PUBLIC WORKS DEPT. APPROVED

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JAIME MACIAS — 4570 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
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DIG ALERT — CALL BEFORE YOU DIG — TOLL FREE 1-800-227-2600 OR 811 — TWO WORKING DAYS BEFORE YOU DIG — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
IRRIGATION AMENDMENTS

SHEET NO.:
LI-2.04
OF: 15

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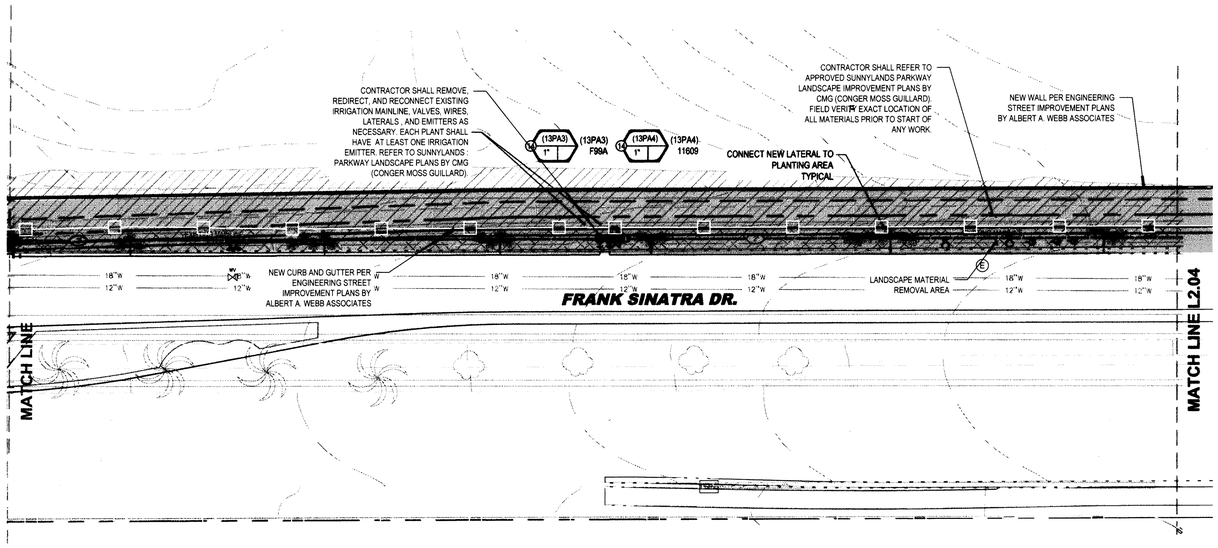

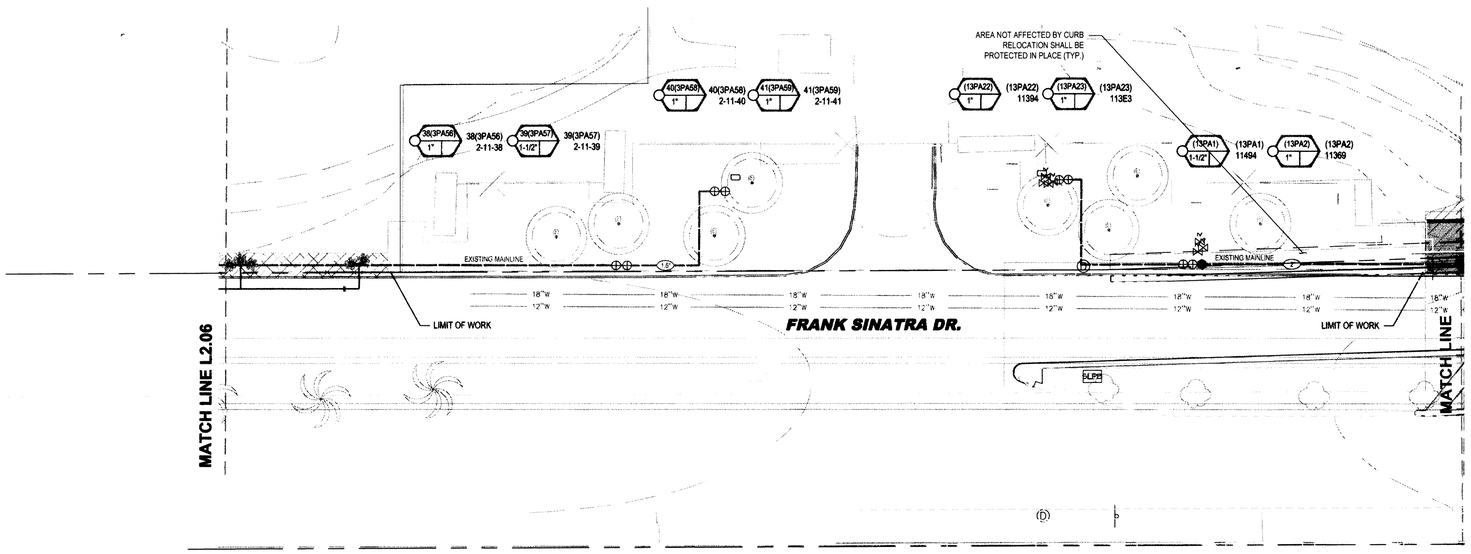

GRAPHIC SCALE 1"=20'
20 0 20 40 60

NOTE:
THIS CHART IS COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY.

LATERAL PIPE SIZING LEGEND **

NO 1/2" PIPE PERMITTED

- 3/4" MINIMUM
- 1"
- 1-1/4"
- 1-1/2"
- 2"
- 2-1/2"
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CITY OF RANCHO MIRAGE PUBLIC WORKS DEPT. APPROVED 4/6/16

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:
LICENSED LANDSCAPE ARCHITECT JAE MAC IAS No. 5787 12-31-2017 01-12-2016 STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

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SHEET TITLE:
IRRIGATION AMENDMENTS

SHEET NO.:
LI-2.05
OF: 15

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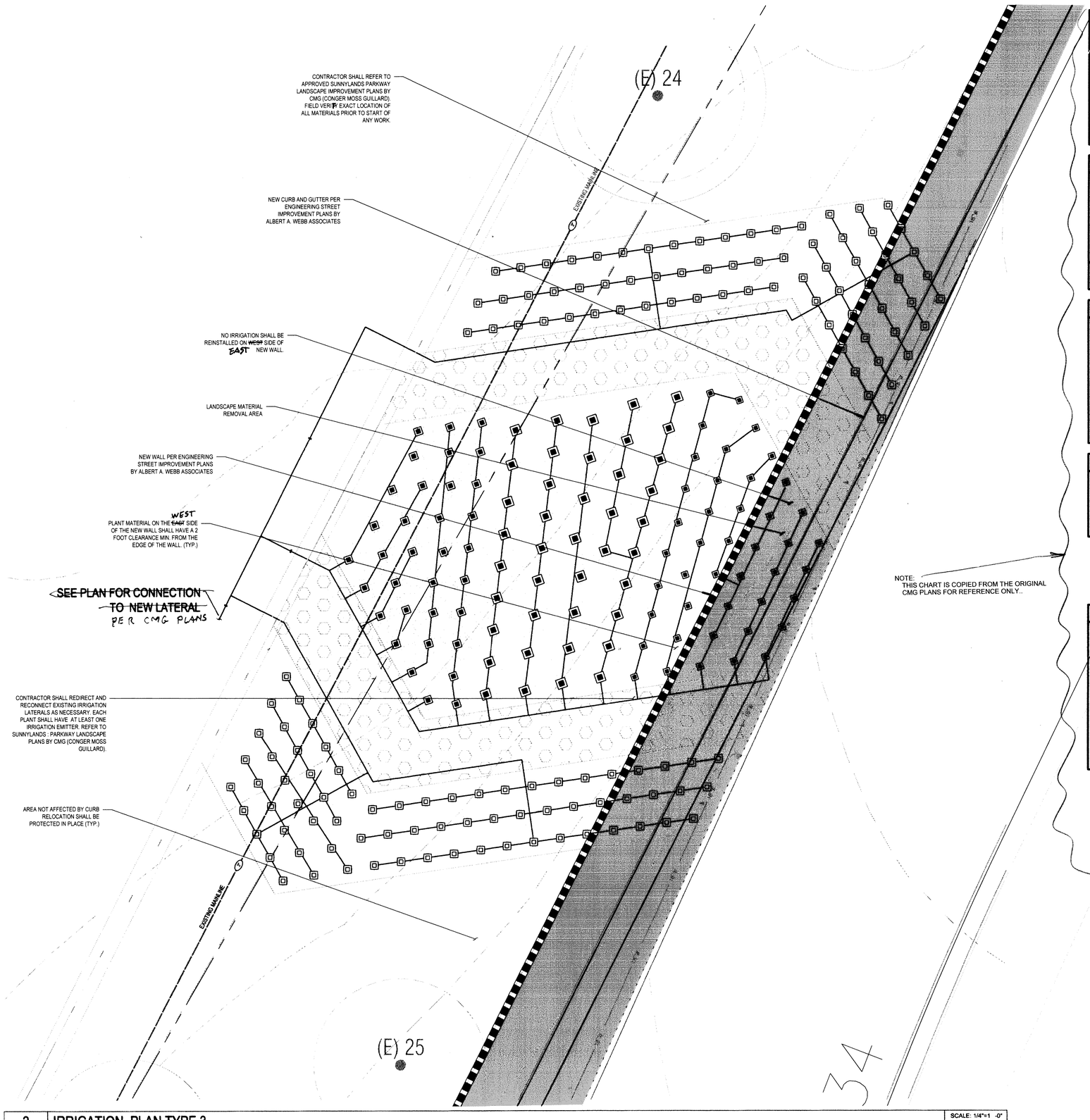

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3	IRRIGATION PLAN TYPE 3	SCALE: 1/4"=1 -0"

CITY OF RANCHO MIRAGE
PUBLIC WORKS DEPT.
FINAL APPROVED
5/11/16

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JAMES MACIAS — No. 5815 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIG ALERT — CALL BEFORE YOU DIG — TOLL FREE — TWO WORKING DAYS BEFORE YOU DIG — 1-800-227-2600 OR 811 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
IRRIGATION ENLARGEMENTS

SHEET NO.:
LI-3.02
OF: 15

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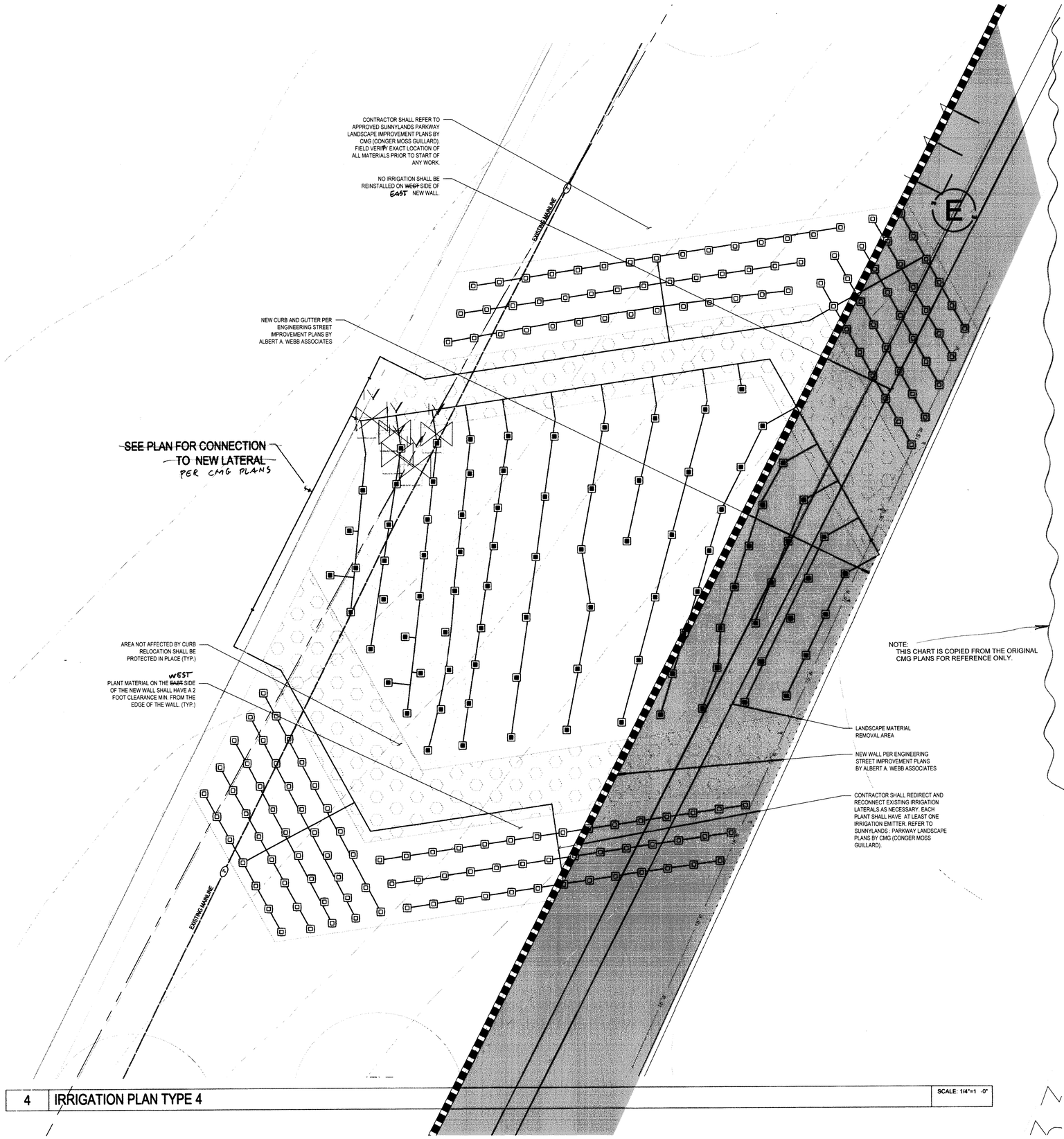

LATERAL PIPE SIZING LEGEND **

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CITY OF RANCHO MIRAGE
PUBLIC WORKS DEPT.
APPROVED
3/16/16

GRAPHIC SCALE 1"=4'
4 0 4 8 12

4 IRRIGATION PLAN TYPE 4 — SCALE: 1/4"=1'-0"

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JAMIE MACIAS — No. 5670 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE
			ENGINEER		

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
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DIG ALERT — DIAL BEFORE YOU DIG TOLL FREE — TWO WORKING DAYS BEFORE YOU DIG — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT — 800-227-2600 OR 811

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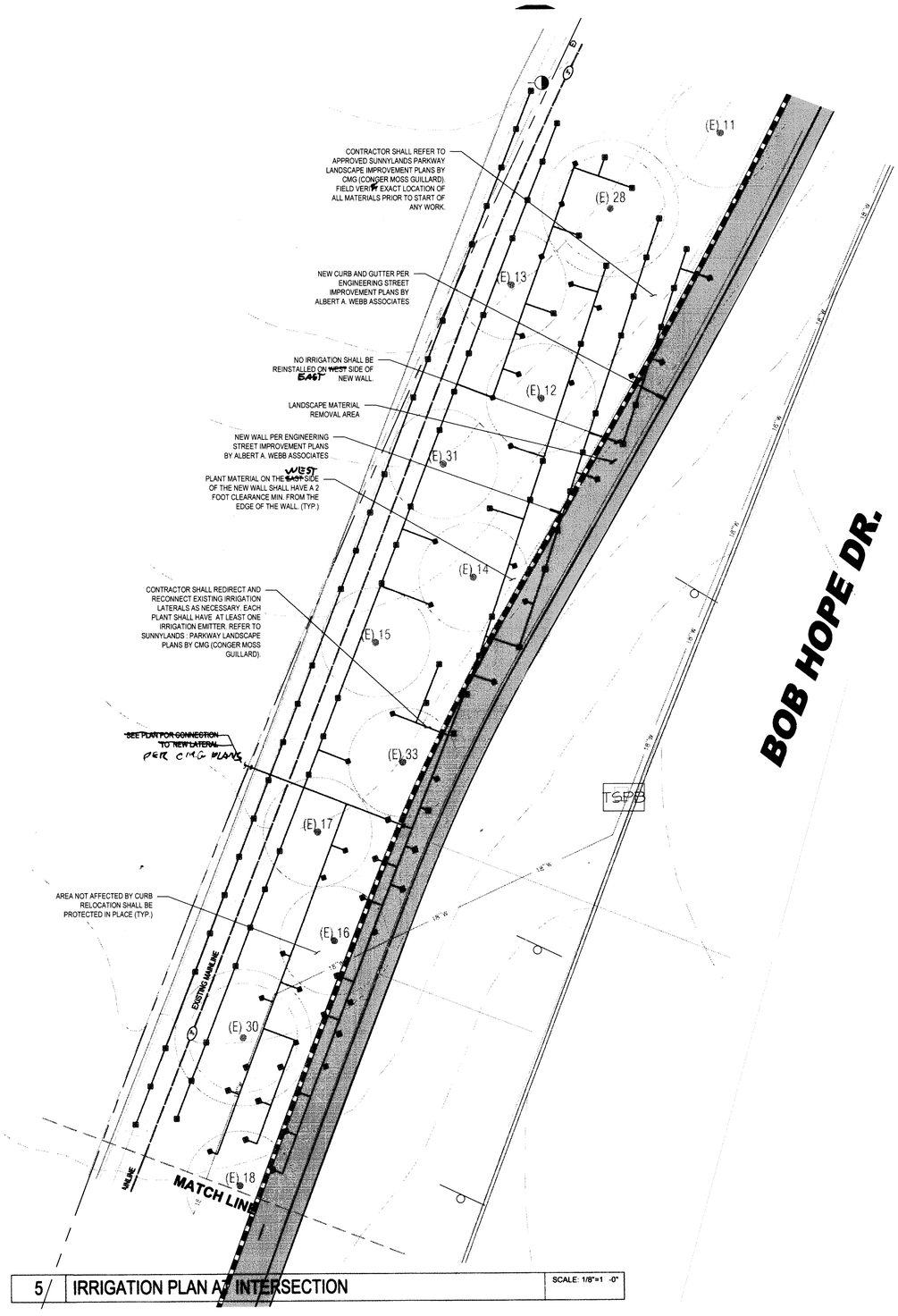
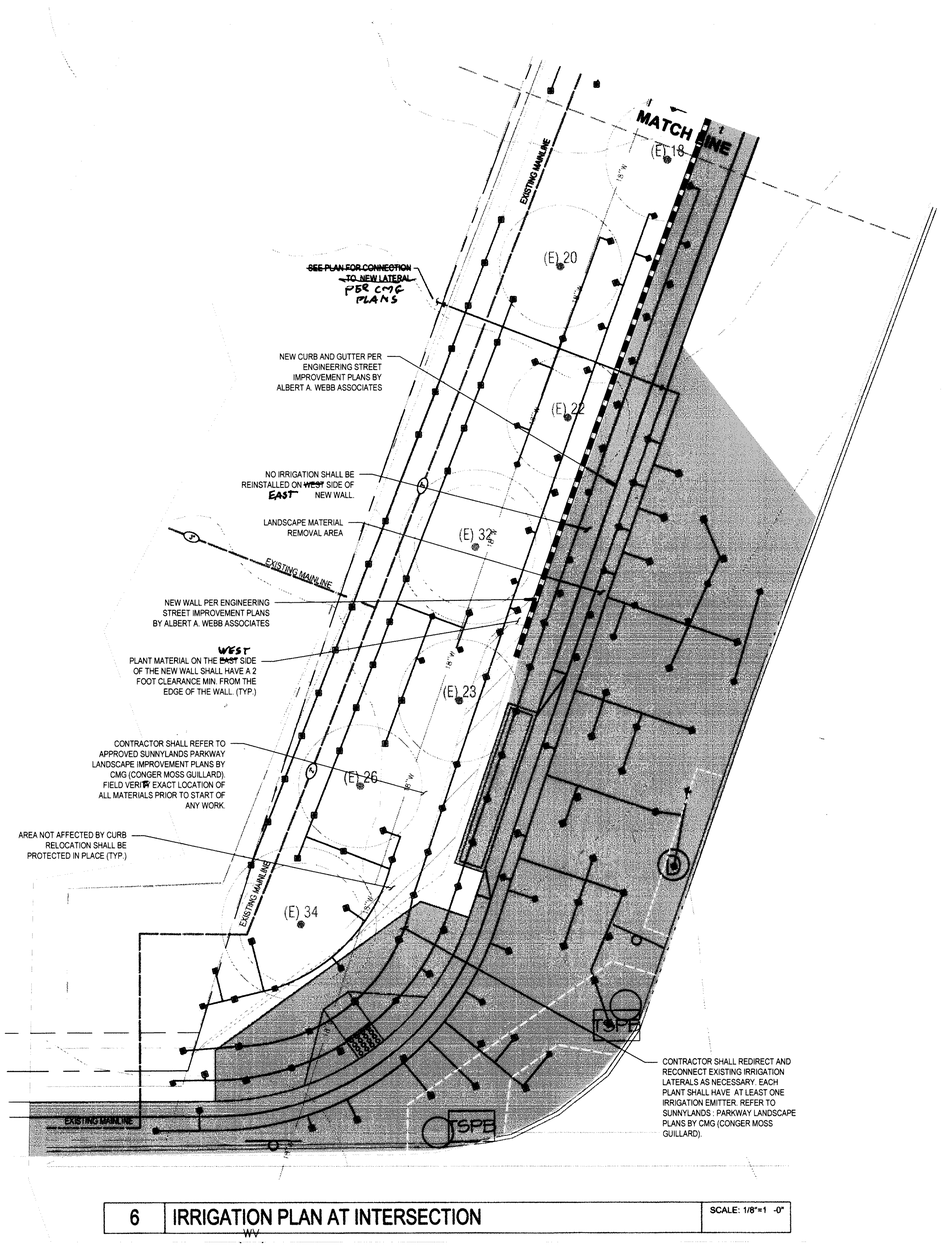


5 IRRIGATION PLAN AT INTERSECTION SCALE: 1/8"=1 -0"



6 IRRIGATION PLAN AT INTERSECTION SCALE: 1/8"=1 -0"

GRAPHIC SCALE 1"=8'
8 0 8 16 24

GRAPHIC SCALE 1"=8'
8 0 8 16 24

CITY OF RANCHO MIRAGE
PUBLIC WORKS DEPT.
OFFICIALLY APPROVED
3/14/16

ALBERT A. WEBB ASSOCIATES
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RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT
JAIME MACIAS NO. 5870
12-31-2017
01-12-2016
STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
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71231 TAMARISK LANE
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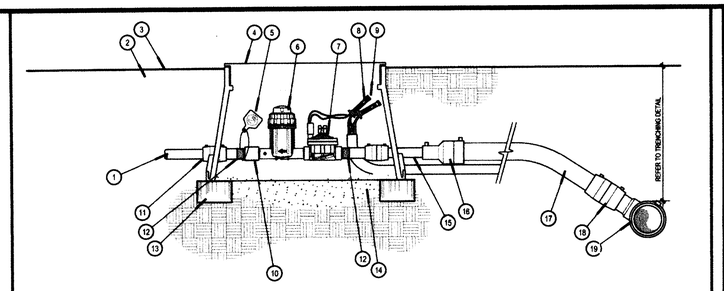
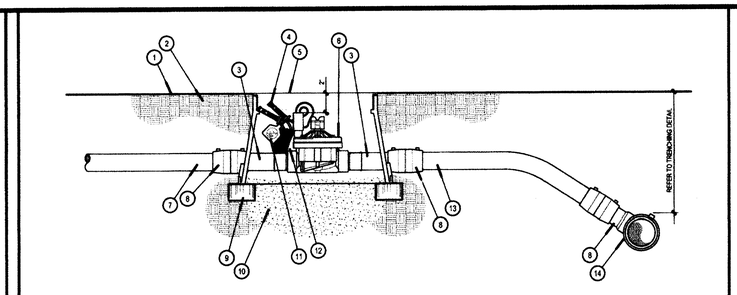


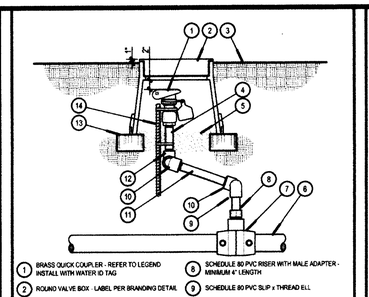
1. HDPE NON-PRESSURE LATERAL PIPE CONVERT TO PVC AT DRIP HEADER - SIZE PER PLAN
2. SUB-GRADE
3. FINISH GRADE
4. RECTANGULAR VALVE BOX
5. PURPLE RECYCLED WARNING TAG ATTACHED TO PIPE WITH ZIP TIE
6. IN-LINE BASKET FILTER REFER TO LEGEND
7. CONTROL VALVE WITH IC SOLENOID - REFER TO LEGEND AND SIZE PER PLAN
8. CONNECT VALVE WIRES TO MAXI-CABLE WITH WATERPROOF CONNECTORS
9. INCLUDE 24" EXPANSION COIL OF MAXI-CABLE WIRE BUNDLED WITH ZIP TIE
10. SCHEDULE 80 PVC TxT COUPLING
11. 1" HDPE ELECTROFUSION COUPLING
12. PIPE TRANSITION - 1" 4710 HDPE TO BRASS MALE THREADED IPS
13. COMMON BRICK SUPPORT - FOUR REQUIRED
14. 3/4" CRUSHED GRAVEL - 12" DEEP
15. 1" HDPE PRESSURE MAINLINE INLET
16. 2" X 1" HDPE ELECTROFUSION TRANSITION COUPLING
17. 2" HDPE PRESSURE MAINLINE
18. 2" HDPE ELECTROFUSION COUPLING
19. HDPE ELECTROFUSION TEE ON PRESSURE MAINLINE

IRRIGATION CONTROL VALVE - DRIP NO SCALE



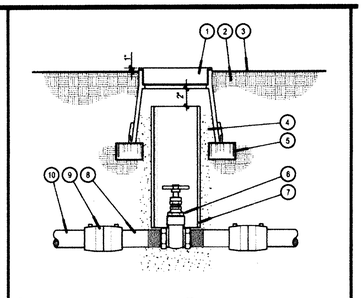
1. FINISH GRADE
2. SUB-GRADE
3. PIPE TRANSITION - HDPE TO BRASS MALE THREADED IPS - SIZE TO MATCH VALVE
4. WATERPROOF WIRE CONNECTORS
5. RECTANGULAR VALVE BOX
6. CONTROL VALVE - REFER TO LEGEND
7. HDPE NON-PRESSURE LATERAL PIPING
8. ELECTROFUSION COUPLING
9. COMMON BRICK SUPPORT - FOUR REQUIRED
10. 3/4" CRUSHED GRAVEL - 12" DEEP
11. PURPLE RECYCLED WARNING TAG ATTACHED TO PILOT WIRE
12. 24" EXPANSION COIL FOR PILOT AND COMMON WIRE LOOP
13. HDPE PRESSURE MAINLINE INLET
14. HDPE ELECTROFUSION TEE AT MAINLINE

TREE IRRIGATION CONTROL VALVE NO SCALE



1. BRASS QUICK COUPLER - REFER TO LEGEND INSTALL WITH WATER ID TAG
2. ROUND VALVE BOX - LABEL PER BRANDING DETAIL
3. FINISH GRADE
4. BRASS NIPPLE - INLET SIZE 3" LENGTH
5. 3/4" CRUSHED GRAVEL - 12" DEEP
6. HDPE MAINLINE - SIZE PER PLAN
7. HDPE ELECTROFUSION COUPLING - SIZE PER MAINLINE
8. SCHEDULE 80 PVC RISER WITH MALE ADAPTER - MINIMUM 4" LENGTH
9. SCHEDULE 80 PVC SLIP x THREAD ELL
10. BRASS STREET ELL - INLET SIZE
11. BRASS NIPPLE - INLET SIZE 12" MINIMUM LENGTH
12. BRASS ELL - INLET SIZE
13. BRICK SUPPORT - TWO REQUIRED
14. #4 REBAR, 18" LONG - SECURE TO QUICK COUPLER WITH TWO STAINLESS STEEL HOSE CLAMPS

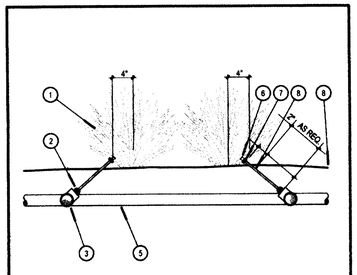
QUICK COUPLER w/ SUPPORT



1. ROUND VALVE BOX - LABEL PER BRANDING DETAIL
2. SUBGRADE
3. FINISH GRADE
4. 3/4" CRUSHED GRAVEL - 12" DEEP
5. BRICK SUPPORT - TWO REQUIRED
6. GATE VALVE - REFER TO LEGEND
7. ACCESS SLEEVE - CLASS 200 PVC WHITE 6" DIAMETER - LENGTH AS REQUIRED
8. PIPE TRANSITION - 4710 HDPE TO BRASS MALE THREADED IPS
9. 1" HDPE ELECTROFUSION COUPLING
10. HDPE MAINLINE - SIZE PER PLAN

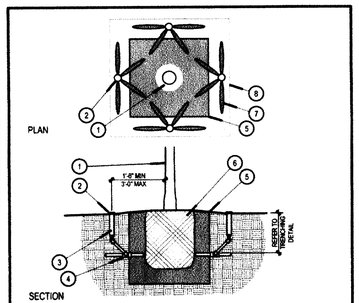
GATE VALVE - CROSS TOP

NOTE:
THESE DETAILS ARE COPIED FROM THE ORIGINAL CMG PLANS FOR REFERENCE ONLY.



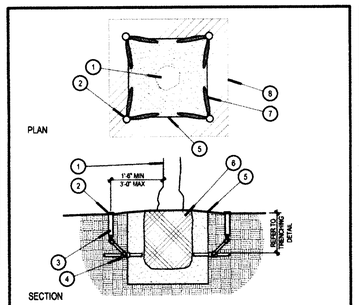
1. PLANT MATERIAL - REFER TO PLANTING PLAN
2. RAINBIRD PFRFRADI POLY FLEX RISER ASSEMBLY
3. SCHEDULE 40 SxSxT 1/2" TEE OR ELL
4. SCHEDULE 40 SxSxT 1/2" TEE OR ELL
5. PVC LATERAL LINE - REFER TO LEGEND
6. RAINBIRD DIFFUSER CAP, TYP.
7. PRESSURE COMPENSATING EMITTER WITH 10-32 THREADED INLET - EMITTER MUST BE THREADED DOWN UNTIL SEATED AGAINST FLEX RISER, TYP.
8. POLY FLEX RISER TUBING - LENGTH AS REQUIRED
9. FINISH GRADE

POINT SOURCE EMITTER DETAIL



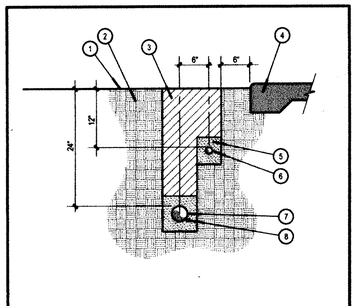
1. TREE
2. SPRAY OR BUBBLER HEAD TYPICAL - REFER TO LEGEND FOR QUANTITY AND TYPE
3. SWING JOINT ASSEMBLY - REFER TO SPRAY HEAD POP UP DETAIL
4. SCHEDULE 40 PVC SxSxT TEE OR SxT ELBOW AND NON PRESSURE LATERAL LINE- SEE PLAN FOR SIZE
5. EDGE OF TREE PLANTING PIT
6. ROOTBALL
7. SPRAY PATTERN
8. EDGE OF PLANTER OR HARDSCAPE AS OCCURS

TREE IRRIGATION NO SCALE



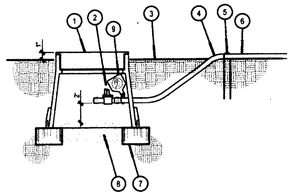
1. TREE
2. SPRAY HEADS OR BUBBLERS TYPICAL - REFER TO LEGEND FOR QUANTITY AND TYPE
3. SWING JOINT ASSEMBLY - REFER TO SPRAY HEAD POP UP DETAIL
4. SCHEDULE 40 PVC SxSxT TEE OR SxT ELBOW AND NON PRESSURE LATERAL LINE- SEE PLAN FOR SIZE
5. EDGE OF TREE PLANTING PIT
6. ROOTBALL
7. SPRAY PATTERN
8. ADJUST ADJACENT IRRIGATION TO ELIMINATE OVERSPRAY ONTO OLIVE TREE TRUNK

OLIVE TREE IRRIGATION NO SCALE



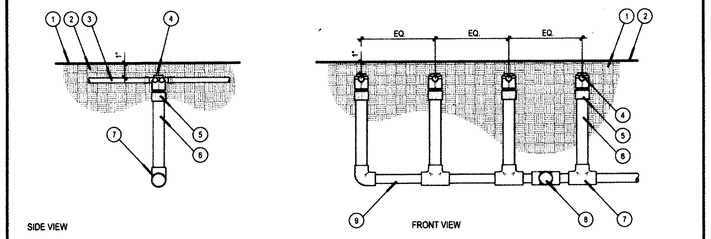
1. FINISH GRADE
2. SUBGRADE
3. BACKFILL - REFER TO SPECIFICATIONS
4. HARDSCAPE OR STRUCTURE
5. DEBRIS AND ROCK FREE BACKFILL (OR SAND) MINIMUM 2" ABOVE AND BELOW PIPING
6. LATERAL
7. MAINLINE
8. CONTROL WIRE / MAXI CABLE - ATTACH TO PIPE AT 10' INTERVALS - PROVIDE 20" EXPANSION LOOP AT CHANGE IN DIRECTIONS

TRENCHING



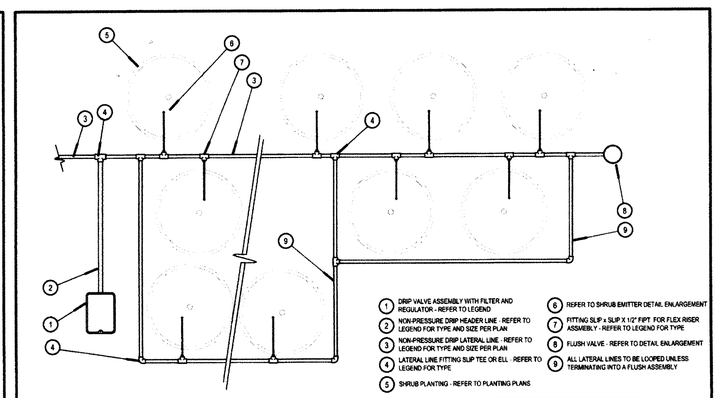
1. VALVE BOX - SEE LEGEND
2. NETAFIM TLSOV BARBED MANUAL FLUSH VALVE
3. FINISH GRADE
4. TRANSITION FROM ON GRADE TO BELOW GRADE WITH MIN 7" RADIUS BENDS
5. SOIL STAPLE - INSTALL PER MANUFACTURER RECOMMENDATIONS
6. INLINE DRIP TUBING SEE LEGEND - INSTALL ON GRADE UNDER MULCH LAYER
7. BRICK SUPPORT, TWO REQUIRED
8. 1 CUBIC FOOT 3/4" CRUSHED GRAVEL
9. WATER IDENTIFICATION TAG - AS REQUIRED

IN-LINE DRIP FLUSH VALVE NO SCALE



1. FINISH GRADE - DOES NOT INCLUDE BARK MULCH LAYER
2. SUBGRADE
3. INLINE DRIP TUBING - REFER TO LEGEND
4. BARBED 17MM X 17MM X 3/4" FPT COMBINATION TEE
5. SCHEDULE 40 PVC MALE ADAPTER
6. 3/4" SCHEDULE 40 PVC LATERAL LINE RISER - REFER TO TRENCHING DETAIL FOR LENGTH
7. SCHEDULE 40 PVC SLIP TEE OR SLIP ELL CONNECTION TO HEADER
8. SCHEDULE 40 PVC SLIP TEE CONNECTION TO ADDITIONAL DRIP PLANTERS
9. SCHEDULE 40 PVC LATERAL LINE HEADER - REFER TO PLAN FOR SIZE

SUB-SURFACE DRIP IRRIGATION HEADER CONNECTION NO SCALE



1. DRIP VALVE ASSEMBLY WITH FILTER AND REGULATOR - REFER TO LEGEND
2. NON-PRESSURE DRIP HEADER LINE - REFER TO LEGEND FOR TYPE AND SIZE PER PLAN
3. NON-PRESSURE DRIP LATERAL LINE - REFER TO LEGEND FOR TYPE AND SIZE PER PLAN
4. LATERAL LINE FITTING SLIP TEE OR ELL - REFER TO LEGEND FOR TYPE
5. SHRUB PLANTING - REFER TO PLANTING PLANS
6. REFER TO SHRUB EMITTER DETAIL ENLARGEMENT
7. FITTING SLIP x SLIP X 1/2" FIPT FOR FLEX RISER ASSEMBLY - REFER TO LEGEND FOR TYPE
8. FLUSH VALVE - REFER TO DETAIL ENLARGEMENT
9. ALL LATERAL LINES TO BE LOOPED UNLESS TERMINATING INTO A FLUSH ASSEMBLY

POINT SOURCE DRIP IRRIGATION - LAYOUT NO SCALE

DETAILS NOTE:

ANY IRRIGATION ITEMS THAT ARE TO BE MODIFIED PER NEW CURB AND WALL LOCATIONS SHALL BE RE-INSTALLED BY CONTRACTOR PER ORIGINAL SPECIFICATION AND DETAILS NOTED ON ORIGINAL APPROVED PLANS.

CITY OF RANCHO MIRAGE
PUBLIC WORKS DEPT
CONDITIONALLY APPROVED
4/14/16

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

SEAL:

LICENSED LANDSCAPE ARCHITECT — JAMES D. MACIAS — No. 5187 — 12-31-2017 — 01-12-2016 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT:

SUNNYLANDS: PARKWAY
CITY OF RANCHO MIRAGE, CALIFORNIA
THE ANNENBERG FOUNDATION TRUST AT SUNNYLANDS
71231 TAMARISK LANE
RANCHO MIRAGE, CA 92270

MARK	BY	DATE	REVISIONS	APPR.	DATE

ENGINEER

SUBMITTALS:

NO.	DATE:
1	2-5-2016

JOB NO.: 14-0100
SCALE: PER PLAN
DRAWN: G.GON
CHECKED: J.MAC

DIGALERT — DIAL BEFORE YOU DIG — TOLL - FREE — TWO WORKING DAYS BEFORE YOU DIG — 1-800-227-2600 OR 811 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

SHEET TITLE:
IRRIGATION DETAILS

SHEET NO.:
LI-4.01
OF: 15

G:\2014\14-0100\DRAWINGS\LANDSCAPE\SUNNYLANDS PARKWAY\14-0100-IRRIGATION DETAILS-LI-4.01.DWG 3/23/2016 11:03 AM

THIS PLAN APPROVED AS TO LOCATION AND TYPE OF ELECTRIC SUBSTRUCTURES

Developer: CITY OF RANCHO MIRAGE
Attn: BILL ENOS
Address:
Telephone: (760)-770-3224
FAX:

Dwg./Rev.	Developer's Signature	Date
Original		
Rev.		
Rev.		
Rev.		

CHANGES IN THESE PLANS WILL REQUIRE AN ADDITIONAL 3 TO 4 WEEKS AND CUSTOMER WILL BE CHARGED IN ADVANCE FOR REQUESTED CHANGES.

D26: Rev. 02/12/08

LEGEND CODE DEFINITIONS

CI – CUSTOMER CONTRACTOR INSTALLED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT EDISON'S EXPENSE AND ARE DEEDED TO EDISON. (EXCEPTION: STREET LIGHT ELECTROLIERS WILL BE INSTALLED BY EDISON'S CONTRACTOR.)

CO – CUSTOMER CONTRACTOR OWNED: MATERIALS FURNISHED. INSTALLED. OWNED. AND MAINTAINED BY APPLICANT.

CF – CUSTOMER CONTRACTOR FURNISHED: MATERIALS FURNISHED AND INSTALLED BY APPLICANT AT APPLICANT'S EXPENSE THAT MAY BE DEEDED TO EDISON.

IN – INSTALL: MATERIALS FURNISHED AND INSTALLED BY APPLICANT IF APPLICANT INSTALLED PROJECT OR BY EDISON IF EDISON INSTALLED PROJECT. (EXCEPTION: FOR AN APPLICANT INSTALLED LINE EXTENSION. STATION NOS.____ HAVING AN ASTERISK ADJACENT TO AN "IN" LEGEND CODE REPRESENTS MATERIALS TO BE PROVIDED BY APPLICANT AND INSTALLED BY EDISON IN ALL CASES. REFER TO DPB 8258. PROJECT MATERIAL LIST BY ASSEMBLY WITHIN A STATION.)

MI – MEMO INSTALL: SAME AS IN-INSTALL.

MR – MEMO REMOVE: MATERIALS REMOVED BY EDISON.

RM – MEMO REMOVED: MATERIALS REMOVED BY EDISON.

SI – SHOOFLY IN: MATERIALS FURNISHED AND INSTALLED BY EDISON FOR TEMPORARY CONSTRUCTION.

SR – SHOOFLY REMOVE: MATERIALS REMOVED BY EDISON FOR TEMPORARY CONSTRUCTION.

TR – TRANSFER: EDISON LABOR REQUIRED TO TRANSFER EXISTING FACILITIES.

D31: Rev. 11/85

WARNING

THE EXCAVATOR MUST TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH UNDERGROUND FACILITIES WHICH MAY RESULT IN INJURY TO PERSONS OR DAMAGE TO FACILITIES IN THE AREA. THE INDICATED LOCATIONS OF EDISON UNDERGROUND FACILITIES, AS PROVIDED, ARE BELIEVED TO BE ACCURATE, HOWEVER, THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF THE EXCAVATOR.

CUSTOMER NOTES:
1. SCHEDULE 40 PVC
2. 3" DUCT = 36" SWEEPS
3. 4" DUCT = 48" SWEEPS
4. DUCT TO BE MINIMUM 30" BELOW FINISHED GRADE
5. DUCT MUST BE INSPECTED BEFORE BACKFILLING
6. DUCT MUST BE MANDRELLED AFTER BACKFILL
7. **CUSTOMER TO FURNISH AND INSTALL 10' OF 1-3" CONDUIT FROM HH-B TO PED WITH 3/8" YELLOW PULL ROPE INSIDE DUCT.**

CONCRETE PRODUCTS

Precast concrete item complete with neck. Cover and inserts may be obtained from any of the following listed and approved manufactureres:

JENSEN PRECAST
14221 San Bernardino Ave., Fontana, Calif. 92335
Phone: (909) 350-4111
(800) 257-6100

OLDCASTLE PRECAST
10650 Hemlock Ave., Fontana, Calif. 92337
Phone: (909) 428-3700
(800) 626-3860

FOR HANDHOLE AND PULLBOX MANUFACTURERS, SEE UGS HP 200.

D41: Rev. 01/21/09

WHERE CONDUITS ARE PICKED UP OR INTERCEPTED, CONDUIT SHALL BE MANDRELLED AND PULL ROPE INSTALLED FROM TERMINAL TO TERMINAL.

TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120

DIRECT BURIAL
SIMILAR CONSTRUCTION FOR FEWER CONDUIT
2 CONDUITS MAX.

D81: Rev. 09/23/09

NOTE:
ALL ELECTRICAL DUCTS AND STRUCTURES WILL CONFORM TO GENERAL ORDER #128 (RULES FOR CONSTRUCTION OF UNDERGROUND ELECTRICAL SUPPLY AND COMMUNICATION PRESCRIBED BY THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA, JANUARY 2006).

CONSTRUCTION NOTES:

Unless otherwise specified on the working drawing which forms a part of the specification, the Contractor/Developer shall furnish the following items at no cost to the Edison Company.

Southern California Edison Company has attempted to correctly show all existing utilities and substructures in the vicinity of the work, but does not guarantee there are no other substructures in the area. Failure of SCE to show all substructures in their correct location will not be a basis for a claim for extra work, and the contractor shall be responsible for all damages to substructures whether shown or not.

1. FOR GENERAL SPECIFICATIONS SEE UGS GI 001.

2. CONDUIT:
   a. Minimum cover in street or parkway is 30" below gutter grade, unless noted otherwise.
   b. Minimum cover on private property is 30" below finished grade, unless noted otherwise.
   c. Contractor is to furnish and install approved conduit to Edison specifications per UGS CD 100.1, 110 AND 120.
   d. For the type of conduit for this job, See UGS CD 110.1.
   e. Install all risers per UGS CD 160, 161, 162 and 170.
   f. Cap all mainline conduits per UGS CD 148 and service conduits per UGS CD 150.
   g. Install blank conduit plugs in all conduits terminating into Vaults, Manhole's, PMH's, SOE's & all cap locations, per UGS CD 180.1 & UGS CD 180.2
   h. Install pull rope in all conduit runs. Pull rope to be at least 3/8" polypropylene rope, braided or twisted. For specifications, approved makes, and suppliers, see UGS GI 040.
   i. All conduit must be mandreled with the approved mandrel UGS CD 197.

3. CONDUIT RADIUS REQUIREMENTS:
   a: The minimum radius for bends are:
   36" for conduits 3" in diameter or smaller
   48" for conduits 4" and 5" in diameter
   60" for 6" diameter conduit
   b: The minimum radius for all sweeps of all mainline conduits is 12'-6" (unless noted otherwise).

4. EXCAVATION AND BACKFILL:
   a. Work area shall be cleared and rough graded to within four inches of final grade prior to installation of Edison conduit or structures.
   b. All excavations shall be in accordance with the California State Construction Safety Orders (when applicable), Edison specifications, and all governing local ordinances.
   c. Each trench to be a uniform depth below final grade prior to installation of Edison conduit or structures.
   d. Backfill shall be provided by the Contractor for all excavations and shall include crushed rock, concrete, and/or imported backfill, when required.
   e. Backfill with a MINIMUM of one sack per yard sand cement slurry around and over vaults and manholes per UGS GI 030, section 6.4 and around PMH's within one foot of finished grade, per UGS SS 590.1.
   f. Backfill, per Edison specifications, shall immediately follow conduit or substructure installation. At no time shall conduit be left exposed over 24 hours.
   g. No rocks are allowed within 12 inches of direct-buried cables or any conduit without concrete encasement. Native backfill capable of passing through a one-half inch mesh screen shall be considered to be "rock free". If existing backfill does not pass through a 1/2" screen, place imported sand 3" below and 12" above Edison cables. After this point, no rocks larger than 12" diameter are permitted.
   h. All backfill shall be compacted to meet or exceed local ordinances or other requirements. It shall be placed in a manner that will not damage the conduit or substructure or allow future subsidence of the trench or structures.

5. PAVING:
   Repaving, where required, shall be placed in such a manner that interference with traffic, including pedestrian traffic, will be kept to a minimum. The Contractor shall establish a program of repaving acceptable to the Municipality, County, or other authority having jurisdiction and which is acceptable to Edison.

6. STRUCTURES:
   a. All substructures shall be constructed or installed to Edison specifications.
   b. Install protection barriers per UGS MS 830 when required in areas exposed to traffic, per Edison Inspector.
   c. All conduit lines and concrete floored substructures shall be water tight.
   d. All grounding materials shall be furnished and installed by the Contractor.

7. RETAINING WALLS:
   When required, retaining walls shall be provided by the ~~Developer~~. Walls are required wherever grade rises more than 18 inches above the structure or 24" above the pad surface at a distance of 5 feet from the same, or in areas subject to erosion. Design and installation must comply with local building ordinances. Refer to Edison Inspector for typical space requirements.

8. PERMITS:
   All permits necessary for excavation shall be provided by the Contractor/Developer.

9. ACCESS:
   Heavy truck access shall be maintained to equipment locations. Structures must be clear of all appurtenances that would obstruct the loading or unloading of equipment.

10. SERVICES:
   a. Meters and services shall comply with Edison Electrical Services Requirements.
   b. Wiring must be in accordance with applicable local ordinances and approved by local Inspection Authorities.

11. LOCATION:
   a. The location of excavations and structures for Edison shall be as shown on the working drawing. No deviation from the planned locations will be permitted unless approved by the Edison Inspector. See UGS GI 001, section 2.2.
   b. Actual location of obstructions, storm drains, and/or other foreign utilities to be the responsibility of the Contractor. See UGS GI 001, section 2.3.

12. Contractor is to verify location and widths of all sidewalks and driveways prior to street light installation. See UGS CD 175.1, UGS CD 175.2 and UGS CD 175.3.

13. SURVEY:
   Surveying of street improvements, property corners, lot lines, finished grade, etc., necessary for the installation of underground facilities must be completed and markers or stakes placed prior to the start of the installation. In addition, Developer shall maintain the markers during the installation and inspection by Edison. Grade and property line stakes must show any offset measurements.

14. COORDINATION AND SUPERVISION:
   The Developer shall provide supervision over and coordination among the various contractors working within the development in order to prevent damage to Edison facilities. He is responsible for the cost of repairs, replacement, relocation, or other corrections to Edison facilities made necessary by his failure to provide supervision or to otherwise comply with these specifications.

15. TELEPHONE AND OTHER UTILITY REQUIREMENTS:
   The drawing prepared for this job may also cover the facilities to be installed for the telephone company and/or other utility. Any questions concerning details of their installation should be referred to the company concerned.

16. OWNERSHIP:
   Developer is to deed to the Edison Company all structures shown hereon except those shown as customer owned.

17. WARRANTY:
   Applicants expressly represent and warrant that all work performed and all material used in meeting Applicants' obligations herein are free from defects in workmanship and are in conformity with Southern California Edison Company's requirements. This warranty shall commence upon receipt by Applicants of Company's final acceptance and shall expire one year from that date. Applicants agree to promptly correct to the Company's satisfaction and that of any governmental agency having jurisdiction and at Applicant's expense any breach of this warranty which may become apparent through inspection or operation of underground electric system by Company during this warranty period.

18. INSPECTION:
   Inspection is required during the construction period. A 48 hour advance notice of intent to start construction is required from the contractor to the Southern California Edison Company. Standards of Edison construction requirements are available upon request.

Duct and Structure Inspector: COLIN ROSE — Phone: 951-200-9589
Cabling Construction Coordinator: PETE FLORES — Phone: 760-616-4026

D05: Rev. 11/02/15

CONNECTING TO EXISTING SCE STRUCTURES

- Per SCE requirements, customers are not allowed to enter, intercept or tie-in to existing SCE structures, equipment or conductors. This work will only be performed by SCE. Contact the appropriate SCE inspector to schedule an appointment. Customers may connect to an existing duct stub without a SCE inspector present.
- Per CPUC/SCE's Rule 15 B.1.A and Rule 16 D.1.A., the customer will provide all necessary excavations (with the exception of excavation under pads and primary splice boxes), material (including conduit and structures) and encasement, to be utilized in the intercept/tie-in process.
- The customer must adhere to all applicable Cal-OSHA, local, city, state and federal regulations, (including, but not limited to, all necessary shoring and traffic control in place to perform the intercept/tie-in work by SCE's underground civil contractors(s))
- Intercept/tie-in work must be coordinated with SCE's civil contractors through the Division Inspector/CCM to limit exposure of excavation(s). Customer is responsible for securing excavation(s).

D08: 12/10/07

CONDUIT RADIUS REQUIREMENTS:
A: The minimum radius for bends are:
36" for conduits 3" in diameter or smaller
48" for conduits 4" and 5" in diameter
60" for 6" diameter conduit
B: The minimum radius for sweeps are:
36" for conduits 3" in diameter or smaller
12'-6" for conduits 4" in diameter and larger, unless otherwise noted.

UNDERGROUND SERVICE ALERT
Dial 811
Call USA
For Underground Locating
2 Working Days Before You Dig

NOTES TO CREW:
- TRUCK ACCESS GOOD
- TC REQ'D – ROUTE #9
- PERMIT REQ'D – BLANKET PERMIT FOR LANE CLOSURE
- TWO EXISTING PEDS WILL BE REMOVED AND COMBINED INTO ONE PED FOR TC-1 & LS-3

PROJECT REQUIREMENTS (Y/N)	
EDISON EASEMENT REQUIRED	N
PWRD 88 REQUIRED	N
PERMIT REQUIRED	Y
PERMIT TYPE: BLANKET	
OUTAGE REQUIRED	Y
OUTAGE DATE: ____ TIME: ____	
TRAFFIC CONTROL REQUIRED	Y
PED. TRAFFIC CONTROL REQ'D	N
CONVEYANCE LETTER REQ'D	N
ENVIRONMENTAL SCREENING REQ'D	N
CSD 140 (TLM) REQ'D	N

D124: Rev. 09/24/15

UNDERGROUND SERVICE ALERT
DIAL 811
CALL USA
FOR UNDERGROUND LOCATING
2 WORKING DAYS BEFORE YOU DIG

PRELIMINARY
Not For Construction

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

SCALE: 1" = 30'
0 30 60

CUSTOMER CONTACT
BILL ENOS
(760)-770-3224

VICINITY MAP

DISTRICT: 79 – PALM SPRINGS	PROJ. MGR. HOUSTON, ASHLEY N PHONE 760-202-4236	PLANNER HOUSTON, ASHLEY N PHONE 760-202-4236	DESIGNER HOUSTON, ASHLEY NOELLE
PROJECT NO. 1194483; SERVICE REQUEST 2113806	MSR NO.	PRODUCT-1 1095386 – METER & SERVICE CHANGE	ASSOC DESGN
CIRCUIT / VOLTAGE ARNEZ 12KV	THOMAS GUIDE RIV 818-C1	PRODUCT-2	ASSOC DESGN
SUB / PG NO. SANTA ROSA	CIRCUIT CODE	PRODUCT-3	ASSOC DESGN
INVENTORY MAP 584-1951-5	J.P.A. NO.	PROPOSED CONSTRUCTION (LOCATION): CITY OF RANCHO MIRAGE XSTRT BOB HOPE & FRANK SINATRA RANCHO MIRAGE, CA 92270	
ADDITIONAL FIM#: CSD 140 Y__ N X; RELATED W.O.	T.L.M. DATA: SIZE KVA CUST % LOAD; EXIST. 25 12.2 3 48.8; PROP. 25 12.2 3		
NOTIFICATION#: DUE DATE:	VOLTAGE DROP: 1.22 FLICKER FACTOR: N/A	SHEET 1 OF 1	DESIGN\DRWG NO. 779420_0.01

PLEASE READ AND FILL OUT THIS DOCUMENT APPROPRIATELY. EVEN SMALL PROJECTS MUST DO THEIR PART. PM_{10} DUST (POWDERY DUST OF 10 MICRONS OR SMALLER DIAMETER) HAS BEEN IDENTIFIED AS A POTENTIALLY SERIOUS HEALTH THREAT. THIS FINE DUST CAN LODGE DEEP IN THE LUNGS AND HAS BEEN ASSOCIATED WITH BRONCHITIS AND OTHER RESPIRATORY ILLNESSES. DESERT DUST CAN BE PARTICULARLY UNHEALTHFUL, BEING ASSOCIATED WITH "DESERT LUNG SYNDROME" AND LUNG INFECTIONS CAUSED BY FUNGAL SPORES CARRIED IN DESERT DUST. CHILDREN, THE ELDERLY, AND PERSONS WITH RESPIRATORY CONDITIONS, ARE PARTICULARLY SENSITIVE TO FINE DUST, BUT EVERYONE IS ADVERSELY AFFECTED BY THE RELATIVELY HIGH LEVELS OF PM_{10} THAT OCCUR IN THE COACHELLA VALLEY. LARGER SAND PARTICLES CAN BE TURNED INTO THIS DUST THROUGH THE GRINDING ACTION OF TIRES ON ROADWAYS AND THROUGH REPETITIVE PLOWING AND DISKING OPERATIONS.

PROJECT DATA (SEE ATTACHED PLAN ALSO)

DATE: ____ PROJECT NAME: ____

STREET ADDRESS / SITE LOCATION: ____

ADJOINING PROPERTY INFO. (FOR SENSITIVITY, TYP. WINDS BLOW N.W. TO S.E.)

- EASTERLY ____
- SOUTHEASTERLY ____
- SOUTHERLY ____
- SOUTHWESTERLY ____
- WESTERLY ____
- NORTHWESTERLY ____
- NORTHERLY ____
- NORTHEASTERLY ____

CURRENT LAND USAGE: ____

PROPOSED LAND USAGE: ____

LOT: ____ TRACT/PM: ____ LAND USE PERMIT NO.: ____

A.P.N. ____ PARCEL SIZE: ____ ACRES ____ SQ. FT.

EARTHWORK QUANTITIES ESTIMATE (BALANCED SITE PREFERRED)

TOTAL AREA TO BE DISTURBED ____ ACRES ____ SQ. FT.

STRIPPING & SUBSIDENCE LOSSES (TYP. 0.3' X AREA/27CF./CY.) ____ C.Y.

RAW CUT VOLUME: ____ C.Y. CUT AFTER SHRINKAGE: ____ C.Y.

RAW IMPORT VOLUME: ____ C.Y. IMPORT AFTER SHRINKAGE: ____ C.Y.

COMPACTED FILL VOLUME: ____ C.Y.

RAW EXPORT VOLUME: ____ C.Y. COMPACTED EXPORT VOL.: ____ C.Y.

(SEE HAUL ROUTE DETAIL ON ATTACHED PLAN IF ANY IMPORT OR EXPORT, EXCEPT TRASH.)

PHASING OF GRADING ACTIVITIES

THE AMOUNT OF ACTIVE DISTURBED AREA MUST BE LIMITED TO WHAT CAN BE EFFECTIVELY WATERED 4 TIMES PER DAY BY EITHER SPRINKLERS OR WATER TRUCKS. TYPICAL 2000 GALLON WATER TRUCKS CAN EFFECTIVELY WATER ABOUT 4 ACRES PER HOUR. THEREFORE AN 8 HR. WORKDAY DIVIDED BY 4 WATERINGS PER DAY TIMES 4 AC./HR. = 8 ACRES PER TRUCK. SINCE WATER TRUCKS ARE ALLOWED TO WORK 7 DAYS A WEEK, 24 HOURS A DAY, IN SOME LOCATIONS, UP TO 24 AC. PER TRUCK MAY BE ACHIEVED THAT WAY, WITH SPECIAL PERMISSION. LARGER PROJECTS MUST HAVE MORE TRUCKS, MORE HOURS, MORE SPRINKLERS, OR LESS DISTURBED AREA AT ANY ONE TIME. AREAS ALREADY GRADED OR STOCKPILED MUST BE STABILIZED WITH CHEMICALS, HYDROMULCH, OR VEGETATION, BEFORE ADDITIONAL AREAS CAN BE STRIPPED FOR GRADING. THE PHASING PATTERN BELOW SHALL BE SHOWN IN THE REFERENCE MAP ON THIS SHEET AT UPPER RIGHT. DRIVING ROUTES THROUGH A PROJECT MUST BE COUNTED IN ALL PHASES WHERE THEY ARE ONLY TREATED WITH WATER. IT IS BETTER TO TREAT THEM WITH AN APPROVED "OIL" (LIKE ENVIROKLEEN) OR SIMILAR NON-CRUSTING DUST PALLIATIVE, TO SAVE WATER.

SUB-PHASE	APPROX. DATE	DISTURBED AC.	SPRINKLER AC.	WATER TRUCK AC.	# OF TRUCKS
PHASE "A" ROUGH GRADING (SITE PREPARATION / MOBILIZATION)					
A1					
A2					
A3					
PHASE "B" ROUGH GRADING (MASS GRADING OF STREETS, PADS, RET. BASINS, PERIMETER WALL)					
B1					
B2					
B3					
PHASE "C" FINISH GRADING (MAJOR UTILITY AND STREET CONSTRUCTION)					
C1					
C2					
C3					
PHASE "D" FINISH GRADING (BUILDING UTILITIES, BUILDING CONSTRUCTION, LANDSCAPING)					
D1					
D2					
D3					

FUGITIVE PM_{10} DUST CONTROL MEASURES

HERE IS THE SUMMARIZED MATRIX OF REQUIRED DUST MITIGATION MEASURES IDENTIFIED BY PHASE:

A	B	C	D	
X				PRE-GRADING SITE WATERING (IRRIGATION SYSTEM FOR MIN. 72 HRS.)
X	X	X	X	SIGNS POSTED ON SITE WITH 24 HR. PHONE NUMBER(S) FOR DUST CONTROLLER
X	X	X	X	SAND FENCING (ON ALL SIDES OF PROJECT LACKING EXISTING MASONRY WALLS)
X	X	X	X	SITE WATERING 7 DAYS A WEEK (IRRIGATION SYSTEM, MIN. 4 TIMES PER 24 HRS., OR BY WATER TRUCKS, MIN. 4 TIMES PER 24 HRS., 1 TRUCK / 8 ACRES)
X	X	X	X	PERIMETER SPRINKLER SYSTEM (ALL SIDES, CONTINUOUS NIGHT WATERING WHEN WINDY)
X	X	X	X	GRAVEL (MIN. 1.5" DIAM. X 4" DEEP AT OFF-STREET STORAGE AND PARKING AREAS)
X	X	X	X	WHEEL CLEANING AT TRUCK EXITS, ("RUMBLE STRIPS", DRIVE-THROUGH PONDS, GRAVEL AREAS, ETC. DETAIL METHOD ON REFERENCE MAP AT AT RIGHT)
X	X	X	X	INACTIVE AREA SOIL STABILIZERS (POLYMER, HYDROMULCH, APPROVED OIL, OR PLANTS)
X	X	X	X	ACTIVE AREA SOIL STABILIZERS (ENVIROKLEEN "OIL", OR SIMILAR WETTING AGENTS)
X	X	X	X	STOP ALL VEHICLE ACTIVITY EXCEPT WATER TRUCKS WHEN WIND > 25 MPH
X	X	X	X	STREET SWEEPING WHENEVER NEEDED
	X	X	X	PERMANENT VEGETATION / LANDSCAPING
	X	X	X	BLOCK WALLS
		X	X	ROAD PAVING

NOTE: THESE CONTROL METHODS ARE DISCUSSED IN DETAIL IN THE "DUST CONTROL PLAN REVIEW GUIDANCE FOR LOCAL GOVERNMENT" FROM THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, AVAILABLE FROM THE CITY OF RANCHO MIRAGE OR THE S.C.A.Q.M.D.

PROJECT RECORDKEEPING/REPORT: RECORD ALL ACTIVITIES, CONTRACTS AND MATERIALS PURCHASES ASSOCIATED WITH BLOWSAND/FUGITIVE DUST PROGRAM. WEEKLY REPORTS SHOULD BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT FOR REVIEW. THIS "FEEDBACK" WILL EVENTUALLY HELP THE CITY TO DETERMINE WHAT METHODS OF DUST CONTROL ARE MOST COST EFFECTIVE IN BOTH SHORT TERM AND LONG TERM SITUATIONS. SEE THE REPORT FORM THAT'S AVAILABLE FROM THE CITY OR IN THE AFORESAID DOCUMENT.

FUGITIVE PM_{10} DUST CONTROL PROGRAM DETAILS

EACH MITIGATION MEASURE OR CONTROL PROGRAM SHALL BE DESCRIBED IN DETAIL BELOW AND ON ADDITIONAL SHEETS AS NECESSARY. PLEASE USE THE REQUIRED DUST CONTROL PLAN EXHIBIT (AT RIGHT OR ATTACHED) TO INDICATE THE LOCATION OF ON-SITE WATER AVAILABILITY, STAGING AREAS TEMPORARY IRRIGATION LINES, TRUCK/WHEEL WASHERS, TEMPORARY SAND FENCING, CONSTRUCTION PHASING, WORKER'S PARKING AREAS, GRAVELED ENTRANCE/EXIT, AND OTHER THINGS AS NEEDED.

PHASE "A": ROUGH GRADING (SITE PREP. & MOBILIZATION)

GENERAL REQUIREMENTS

1. WRITTEN AND NOTARIZED PERMISSION LETTERS SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT FROM ANY ADJACENT LAND OWNERS WHOSE PROPERTY WILL BE USED IN ANY MANNER FOR CONSTRUCTION, STAGING, ACCESS, ETC., PRIOR TO ANY SUCH USAGE. THE OWNER AND AUTHORIZED DUST CONTROLLER FOR THIS PROJECT WILL BE RESPONSIBLE FOR THE DUST CONTROL ON ANY OFF-SITE DISTURBED AREAS AS WELL AS ON THIS PROJECT. A DUST CONTROL SECURITY OF $2,000 PER ACRE, OR AS OTHERWISE APPROVED BY THE CITY ENGINEER, SHALL BE POSTED FOR ALL AREAS TO BE DISTURBED BY THE PROJECT, BOTH ON-SITE AND OFF-SITE. DISTURBANCE OF SITE AREAS NOT INCLUDED IN THIS AGREEMENT SHALL BE REASON FOR THE CITY TO ASSESS ADDITIONAL CHARGES, AND POSSIBLY STOP ALL WORK AT THE SITE UNTIL THE EXTENT OF THE DISTURBANCE IS MEASURED. THEREFORE, IF IT IS SUSPECTED THAT OFF-SITE AREAS MAY BE DISTURBED DURING THE WORK, SHOW THEM ON THIS PLAN AND MAKE THE APPROPRIATE ARRANGEMENTS IN ADVANCE.
2. SAND FENCING, OF EITHER THE WOOD AND WIRE OR THE PLASTIC TYPE, SHALL BE INSTALLED AROUND THE PERIMETER OF THE PROJECT ON ALL SIDES THAT DO NOT HAVE EXISTING MASONRY WALLS OR SIMILAR SOLID FENCING OR HEDGES. THIS SERVES THE MULTIPLE PURPOSES OF: CATCHING SOME WINDBLOWN DUST; REDUCING WIND SPEEDS ON THE PROJECT PERIMETER, AND RESTRICTING VEHICULAR ACCESS POINTS INTO THE PROJECT. THIS RESTRICTED ACCESS HELPS REDUCE DAMAGE TO ANY "CRUST" OF STABILIZED SOIL ON THE PROJECT, AND ALLOWS PLACING OF THE EXIT WHERE "TRACK OUT" CAN BE STOPPED PER #5 BELOW.
3. PRE-WATERING SHALL COMMENCE AT LEAST THREE (3) DAYS PRIOR TO ACTUAL GRADING USING A TEMPORARY ON-SITE IRRIGATION SYSTEM. CONNECTION TO ANY EXISTING WATER SYSTEM SHALL BE DONE IN COMPLIANCE WITH C.V.W.D. TEMPORARY WATER LINES SHALL BE INSTALLED WITH A MINIMAL DISTURBANCE OF ANY OFF-SITE AREAS THEY PASS THROUGH. WHEN THE GRADING BEGINS, A SPRINKLER SYSTEM SHALL BE PLACED AROUND THE PERIMETER OF THE PROJECT, WITH FREQUENT WATERING, ESPECIALLY IN THE TYPICALLY WINDY EVENINGS. PLACING THE PERIMETER SPRINKLERS ON THE SAND FENCE KEEPS THEM SAFE AND EFFECTIVE. WATERING FOR AREAS NOT COVERED BY THE SPRINKLERS SHALL BE PROVIDED BY WATER TRUCKS. (ONE TRUCK PER 8 ACRES FOR 8 HR. WORKDAYS. SEE ABOVE.)
4. ACTIVITY AREAS SUCH AS: EQUIPMENT STORAGE AREA, MATERIALS STORAGE AREA, TEMPORARY OFFICE TRAILERS, AND EMPLOYEE PARKING, SHOULD BE LOCATED IF POSSIBLE ON EXISTING PAVED SURFACES, IF TRAFFIC WOULD NOT BE AFFECTED. IN LIEU OF EXISTING PAVING, A SOIL STABILIZER THAT DOES NOT REQUIRE CONSTANT WATERING, SUCH AS A WASHED GRAVEL, OR "BIODEGRADABLE OIL" COULD BE USED FOR THE INITIAL STAGING AREA. ANY CHEMICALS USED MUST BE CLEARED WITH THE CITY AND REGIONAL WATER QUALITY CONTROL BOARD.

PHASE "A": ROUGH GRADING (SITE PREP. & MOBILIZATION) CONTINUED

5. THE TIRES OF VEHICLES BEING USED ON-SITE SHOULD BE INSPECTED AND WASHED IF NECESSARY TO STOP TRACKING OF DIRT ONTO PUBLIC STREETS. IF EXTENSIVE EXPORT OR IMPORT OF DIRT IS TO BE DONE, A PAVED OR GRAVELED WHEEL WASHING AREA AT LEAST 12' WIDE BY 100' LONG SHOULD BE PROVIDED AT THE EXIT, TO FACILITATE THE INSPECTION AND CLEANING OF TIRES. "RUMBLE STRIPS" MADE FROM LUMBER, RAILROAD TRACK,OR SIMILAR MATERIALS CAN HELP REDUCE THE MUD GETTING ONTO THE CLEANING AREA. STREET SWEEPING AND WASHING IS STILL TYPICALLY REQUIRED, BUT MAY BE REDUCED BY PROPER USE OF A "WHEEL WASHING AREA" LIKE THIS. THEY ARE REQUIRED ON PROJECTS OVER 5 ACRES OR WITH OVER 5,000 CUBIC YARDS OF IMPORT OR EXPORT.
6. A STANDARD SIGN WITH THE FOLLOWING INFORMATION MUST BE POSTED ON THE SITE, AT LEAST ONE SIGN PER FRONTING STREET. THE SIGN MUST INCLUDE: THE GRADING PERMIT NUMBER, THE PROJECT NAME, MAP NUMBER IF APPROPRIATE, THE AUTHORIZED DUST CONTROLLER PHONE NUMBER(S), THE CITY PHONE NUMBER, AND THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (S.C.A.Q.M.D.) PHONE NUMBER. THE SIGNS MUST BE OBTAINED AND INSTALLED BY THE DEVELOPER USING THE SAMPLE FORMAT. THE SIGNS MUST BE PRESENT AT THE PRE-CONSTRUCTION MEETING OR THE GRADING PERMIT WILL NOT BE ISSUED. THE DEVELOPER MUST KEEP THE CONTACT NAME AND PHONE NUMBER ACTIVE AND CURRENT AT ALL TIMES. FAILURE OF THE CONTACT SYSTEM MAY BE CONSIDERED GROUNDS FOR TEMPORARY OR PERMANENT CANCELLATION OF THE PERMIT.
7. VEHICLES TRAVELING ON DIRT AND/OR ON UNPAVED ROADS SHOULD RESTRICT THEIR SPEED TO 15 M.P.H. MAXIMUM. SIGNS TO THAT EFFECT SHOULD BE PLACED AT THE PROJECT ENTRANCE ON PROJECTS OVER 5 ACRES TO IMPROVE COMPLIANCE.
8. WHEN WIND SPEEDS EXCEED 25 MPH, BY CONTINUOUS ANEMOMETER READING, OR IN GUSTS AT LEAST TWICE WITHIN A THIRTY MINUTE PERIOD, MEASURED ON THE SITE, VEHICULAR ACTIVITY ON THE SITE SHALL CEASE, EITHER VOLUNTARILY, OR BY CITY OR A.Q.M.D. INSPECTOR NOTIFICATION, EXCEPT FOR WATER TRUCKS AND SPRINKLER-TENDING VEHICLES, IF ANY.

SITE SPECIFIC DETAILS:
(PLEASE DESCRIBE ANY SPECIFIC OR ADDITIONAL CONTROL MEASURE PROPOSED.)

1. PRE-WATERING METHOD (AS SHOWN IN 3. OR AS DETAILED HERE): ____

   WATER AVAILABILITY, INITIAL STAGE ____
2. OFF-SITE WORK PERMISSION NEEDED: ____
3. ACCESS WILL BE CONTROLLED BY: ____
4. INITIAL STAGING AREA: ____

   EQUIPMENT STORAGE ____

   TEMPORARY OFFICE ____

   EMPLOYEE PARKING ____
5. WHEEL WASHING PROVISIONS: ____
6. SPEED RESTRICTION SIGN LOCATION: ____
7. NUMBER OF POSTED "DUST CONTROL SIGNS" ____
   (TYP. 1 PER FRONTING ROAD OR 1 PER 660 FEET OF FRONTAGE)
8. OTHER PRELIMINARY WORK: ____

PHASE "B": ROUGH GRADING (MASS GRADING, PERIMETER WALLS)

GENERAL REQUIREMENTS

1. HAULING PROCEDURES:
   ALL VEHICLES GOING FROM DIRT AREAS ONTO PAVED STREETS SHALL HAVE TIRES AND WHEELS INSPECTED AND WASHED IF NECESSARY TO AVOID "TRACKING-OUT" DIRT.
   TRUCKS HAULING DIRT ON PAVED STREETS SHALL MAINTAIN AT LEAST A HALF FOOT "FREEBOARD" FROM RIM TO DIRT, AND COVER ALL DIRT OR DUSTY DEBRIS LOADS WITH AN APPROPRIATE TARP.
   THE HAUL ROUTE SHOULD BE SHOWN HEREON OR ON AN ATTACHED SHEET, AND SHALL BE CLEARED WITH THE CITY ENGINEER FOR ANY APPLICABLE TRANSPORT PERMITS PRIOR TO ITS USE. ALL HAULING TRUCKS SHALL HAVE A COPY OF THESE PROVISIONS WITH THEM AT ALL TIMES.
   THE IMPORT OR EXPORT SITE MUST HAVE A VALID GRADING PERMIT ALSO, AND SHOULD BE COMPLYING WITH ALL APPROPRIATE DUST MITIGATION MEASURES ALSO.
   WHEN PRACTICAL, TRUCKS AND EQUIPMENT, SHOULD SHUT OFF ENGINES RATHER THAN IDLING FOR EXTENDED PERIODS, TO MINIMIZE EXHAUST EMISSIONS AND NOISE. THIS BECOMES MORE CRITICAL AS THE SIZE AND NUMBERS OF VEHICLES INCREASES.
2. ALL STRIPPED, GRADED OR OTHERWISE DISTURBED AREAS SHALL BE STABILIZED BY SOME APPROPRIATE MEANS. AREAS ACTIVELY BEING GRADED CAN USUALLY BE STABILIZED BY APPLYING LOTS OF WATER. DISTURBED AREAS NOT ACTIVELY BEING WORKED MAY BE EFFECTIVELY TREATED WITH SOME MORE DURABLE SOIL STABILIZER, SUCH AS HYDROMULCH, TO AVOID CONSTANT WATERING. THE PREFERRED METHOD OF SITE WATERING IS BY SPRINKLER, ESPECIALLY AROUND THE PERIMETER. SPRINKLERS MUST BE SET TO RUN ON WEEKENDS AND EVENINGS WHEN WATER TRUCK DRIVERS ARE NOT AVAILABLE. A TYPICAL WATER TRUCK CAN ONLY HANDLE WELL ABOUT 4 ACRES PER HOUR.
3. IF PERIMETER BLOCK WALLS ARE TO BE BUILT THEY SHOULD BE GIVEN A HIGH PRIORITY SINCE THEY WILL HELP TO CATCH BLOWSAND AND COULD THEREBY REDUCE THE AMOUNT OF STREET SWEEPING REQUIRED.

SITE SPECIFIC DETAILS:
(PLEASE DESCRIBE ANY SPECIFIC OR ADDITIONAL CONTROL MEASURE PROPOSED.)

1. HAULING PROCEDURES: (AS SHOWN ABOVE UNLESS OTHERWISE DETAILED) ____
2. SOIL STABILIZATION METHODS:
   ACTIVE AREA WATER SCHEDULE: (MIN. 4 TIMES PER 24 HRS.) ____

   WEEKEND WATERING SCHEDULE: (MIN. 4 TIMES PER 24 HRS.) ____

   INACTIVE AREA STABILIZATION METHOD(S): (ACRYLIC POLYMER, HYDROMULCH, PLANTINGS, BIODEGRADABLE "OIL", OR AS SHOWN HERE) ____
3. PERIMETER BLOCK WALL SCHEDULE: ____
4. OTHER: ____

PHASE "C": FINISH GRADING (UTILITY & STREET CONST.)

GENERAL REQUIREMENTS:

1. DIRT STOCKPILED NEXT TO UTILITY TRENCHES SHALL BE KEPT WATERED OR OTHERWISE STABILIZED OR COVERED TO HELP COUNTERACT THEIR HIGH PROFILE EXPOSURE TO THE WIND.
2. ALL PREVIOUSLY ROUGH GRADED AREAS THAT WILL BE INACTIVE IN THIS PHASE SHOULD BE TREATED WITH A DURABLE SOIL STABILIZER OR GROUND COVER SYSTEM. IF A VEGETATED GROUND COVER IS UTILIZED IT IS ONLY NECESSARY TO GET IT INITIALLY ESTABLISHED. THE ROOT SYSTEM AND TOP STUBBLE MAY BE SUFFICIENT TO HOLD THE DUST EVEN IF WATERING IS DISCONTINUED.
3. FOR TRACTS, MULTIPLE PARCELS, AND EXTENSIVE COMMERCIAL SITES, PAVED ACCESS TO THE BUILDING SITES WILL BE REQUIRED PRIOR TO FRAMING OF THE BUILDINGS. THIS CONSTRUCTION STAGE USUALLY INDICATES AN INCREASE IN THE NUMBERS OF WORKERS AND THEIR VEHICLES. ALSO, THE PAVED ACCESS IS RECOMMENDED FOR FIRE FIGHTING PURPOSES. IF PAVING IS DESIRED BEFORE ALL UTILITIES AND/OR LATERALS ARE INSTALLED, THE BASE LIFT OF ASPHALT IS SUFFICIENT FOR ACCESS. THE A.C. CAN BE "CAPPED" LATER, LEAVING A FINAL SURFACE THAT IS FREE OF UTILITY CUTS AND PATCHES.
4. AS PAVED ACCESS IS EXTENDED, THE STAGING AREA CAN BE MOVED CLOSER TO THE BUILDING SITES. THE STORAGE AND OFFICE TRAILERS, EQUIPMENT, AND EMPLOYEE PARKING CAN BE MOVED ONTO PAVED PORTIONS OF THE SITE.

SITE SPECIFIC DETAILS:
(PLEASE DESCRIBE ANY SPECIFIC OR ADDITIONAL CONTROL MEASURE PROPOSED.)

1. TRENCH STOCKPILE TREATMENT: (WATER AS NECESSARY) ____
2. INACTIVE AREA TREATMENT: (SEAL WITH HYDROMULCH, ACRYLIC POLYMER, PLANTINGS, ETC.) ____
3. STREET PAVING SCHEDULE: ____
4. STAGING AREA MOVEMENT SCHEDULE: ____
5. OTHER: ____

PHASE "D": FINISH GRADING (BLDG. UTIL., BLDG. CONST., LANDSCAPING)

GENERAL REQUIREMENTS:

1. ALL INACTIVE AREAS SHOULD HAVE BEEN STABILIZED BY THIS STAGE. IF PREVIOUSLY COVERED, THE ACTUAL BUILDING PADS MAY NOW NEED TO BE STRIPPED, SCARIFIED, AND RECOMPACTED FOR BUILDING PAD COMPACTION AND ELEVATION CERTIFICATIONS. DUST WOULD BE KEPT DOWN BY WATERING, USUALLY BY TEMPORARY SPRINKLERS.
2. TRENCHING FOR BUILDING UTILITIES, DRYWELL CONSTRUCTION, POOLS, AND TENNIS COURT CONSTRUCTION FORM THE BULK OF EARTHWORK AFTER THE PADS HAVE BEEN CERTIFIED. TEMPORARY SPRINKLERS MAY STILL BE USED ON THE BUILDING SITE FOR DUST CONTROL PRIOR TO THE BEGINNING OF FRAMING. TREATMENT WITH A BIODEGRADABLE "OIL" APPROVED FOR DUST CONTROL IS RECOMMENDED WHERE IT IS DIFFICULT TO WATER.
3. ESTABLISHING THE LANDSCAPE AND SPRINKLER SYSTEM AROUND THE PERIMETER OF LARGE PROJECTS SHOULD BE DONE AT THIS STAGE. PLANTINGS AROUND THE PERIMETER SERVE AS A WIND BUFFER AND COLLECTION SYSTEM FOR DUST AND SAND. IT IS GOOD TO HAVE DUST AND SAND WELL UNDER CONTROL PRIOR TO THE BUILDING PHASE FOR THE SAKE OF CERTAIN GLUING AND PAINTING PROCESSES THAT CAN BE RUINED BY BLOWSAND OR DUST.
4. DISTURBED AREAS AROUND BUILDINGS SHOULD BE WATERED BY HAND FOR DUST CONTROL UNTIL SUCH TIME THAT THE SPRINKLER SYSTEM IS FULLY FUNCTIONAL AND GROUND COVER AND/OR LANDSCAPING IS ESTABLISHED. IF WATERING IS DIFFICULT DUE TO BUILDING INTERFERENCE, CHEMICAL OR MULCH TREATMENTS ARE AVAILABLE THAT CAN STABILIZE THE SOIL WITHOUT FREQUENT WATERING.
5. CONSTRUCTION DUST SUCH AS FROM CEMENT, PLASTER, PAINT OVERSPRAY, WOOD CUTTING, GRINDING OPERATIONS, ETC., SHOULD BE MINIMIZED ALSO. A PERIMETER BARRIER OF SPRINKLERS AND PLANTINGS CAN SERVE TO CATCH SOME OF THIS POTENTIALLY HAZARDOUS MATERIAL AS WELL AS NATURAL DUST AND BLOWSAND. CONCENTRATIONS OF CONSTRUCTION DUSTS CAN RESULT FROM WASHING OF EQUIPMENT AND SHOULD BE PROPERLY DISPOSED OF BEFORE THEY CAN DRY OUT AND BLOW OR BE WASHED ACROSS PROJECT BOUNDARIES.
6. NOTE THAT SWALES SHOULD BE INSPECTED BY CITY PRIOR TO SETTING OF PERMANENT GROUND COVER OR OTHER PLANTS.

SITE SPECIFIC DETAILS:
(PLEASE DESCRIBE ANY SPECIFIC OR ADDITIONAL CONTROL MEASURE PROPOSED.)

1. BUILDING PAD WATERING: (BY HAND WATERING AS NECESSARY AROUND BUILDING SITE) ____
2. FORMWORK AND TRENCH WATERING: (BY HAND WATERING AS NECESSARY) ____
3. PERIMETER LANDSCAPE SCHEDULE: (AS SOON AS POSSIBLE) ____
4. OTHER: ____

ABATEMENT OF DUST MITIGATION FAILURE

AN IRREVOCABLE LICENSE IS HEREBY GRANTED OR CAUSED TO BE GRANTED TO PERMIT THE CITY OR THEIR DESIGNEE TO ENTER UPON THE SITE UNDER THE FOLLOWING CIRCUMSTANCES:

A. IN THE EVENT THAT WIND SPEEDS IN EXCESS OF 25 M.P.H. ARE FORECAST TO OCCUR BY THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (S.C.A.Q.M.D.) FOR A PARTICULAR DAY;

B. IN THE EVENT OF AN ON-SITE ANEMOMETER THAT CONFORMS TO ALL S.C.A.Q.M.D. STANDARDS REGISTERING 2 WIND GUSTS IN EXCESS OF 25 M.P.H. WITHIN A CONSECUTIVE 30 MINUTE PERIOD; OR

C. IN THE EVENT FUGITIVE DUST EMISSIONS ARE VISIBLE FOR A DISTANCE OF 50 FEET FROM ANY BOUNDARY LINE; OR

D. THE CITY IS UNABLE, BY TELEPHONE, TO ESTABLISH A PERSONAL CONTACT WITH THE "AUTHORIZED DUST CONTROLLER" AFTER A 60 MINUTE CONSECUTIVE PERIOD WHICH SHALL START WITH THE FIRST TELEPHONE CALL, WHETHER ANSWERED OR NOT; THEN THE CITY WILL UNDERTAKE TO INITIATE ONE OR ALL OF THE BELOW LISTED ACTIONS:

1. THE CITY WILL CAUSE THE CESSATION OF ANY ON-SITE ACTIVITY, INCLUDING BUT NOT LIMITED TO EARTH MOVING, CONSTRUCTION, DEMOLITION OR VEHICULAR MOVEMENT AND MANEUVERING. ANY WATER TRUCKS OR VEHICLES SERVICING SPRINKLERS WOULD CONTINUE.
2. IN THE EVENT THAT AN ON-SITE IRRIGATION SYSTEM IS NOT INSTALLED AND/OR OPERATIONAL, THE CITY WILL CAUSE THE SITE TO BE WATERED OR TREATED WITH DUST CONTROL CHEMICALS. THE DUST CONTROL SECURITY WILL BE UTILIZED FIRST TO COVER ANY COSTS INCURRED. IF COSTS EXCEED ANY DUST CONTROL SECURITY REMAINING, ADDITIONAL COSTS MAY BE ASSESSED AGAINST THE OWNER OF THE PROJECT.
3. IN THE EVENT AN ON-SITE IRRIGATION SYSTEM IS INSTALLED, BUT ITS CONTROL CLOCK HAS NOT TURNED THE SYSTEM ON WHEN NEEDED, THE CITY MAY TAKE ALL NECESSARY STEPS TO TURN ON THE SYSTEM. IF IT IS INACCESSIBLE BEHIND LOCKED GATES OR LOCKED CONTROL BOXES, AND THE CITY CAN NOT FIND THE APPROPRIATE KEYS, THE CITY MAY CUT OR BREAK LOCKS AS NECESSARY.

E. IF, IN THE OPINION OF THE CITY ENGINEER OR HIS DESIGNEE, THE INTENSITY, FREQUENCY OR DURATION OF FUGITIVE DUST EMISSIONS FROM THE SITE CONSTITUTES A HAZARD TO THE SAFETY OF THE PUBLIC, BY INTRUSION BEYOND THE PROJECT BOUNDARY, THE CITY ENGINEER OR HIS DESIGNEE OR AGENT MAY IMMEDIATELY ENTER UPON THE SITE OR IMMEDIATELY TAKE OTHER SUCH ACTION AS MAY BE NECESSARY TO REMEDY THE HAZARD, SUCH AS, BUT NOT LIMITED TO COMMENCING WATERING ON THE SITE OR ORDERING THE CESSATION OF ANY EMISSION-GENERATING ACTIVITY OCCURRING ON-SITE.

F. ANY OF THE ABOVE ACTIONS MAY BE CONSTRUED AS AN ABATEMENT FOR WHICH THE CITY WILL "BACK CHARGE" THE GENERAL CONTRACTOR, DEVELOPER, AND/OR THE OWNER AS THE CITY SHALL DEEM APPROPRIATE.

APPLICATION CONSENT

APPLICATION FOR APPROVAL OF A LOCAL AIR QUALITY MANAGEMENT (L.A.Q.M.P.) PLAN IS HEREBY MADE TO THE CITY ENGINEER OR HIS DESIGNEE, AS PART OF A GRADING PERMIT APPLICATION, SUBJECT TO THE CONDITIONS AND RESTRICTIONS SET FORTH HEREIN:

1. EACH PERSON UPON WHOSE BEHALF THIS APPLICATION IS MADE AND EACH PERSON AT WHOSE REQUEST AND FOR WHOSE BENEFIT WORK IS PERFORMED UNDER AND PURSUANT TO ANY PERMIT ISSUED AS A RESULT OF THIS APPLICATION AGREES TO, AND SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF RANCHO MIRAGE, ITS OFFICERS, AGENTS AND EMPLOYEES.
2. ANY PERMIT ISSUED AS A RESULT OF THIS APPLICATION BECOMES NULL AND VOID IF WORK IS NOT COMMENCED WITHIN 90 DAYS FROM THE DATE OF ISSUANCE OF SUCH PERMIT.
3. THE APPLICANT, OWNER, CONTRACTOR(S), SUBCONTRACTOR(S) OR OTHER AGENTS, HEIRS OR ASSIGNEES SHALL CONFORM TO THE ATTACHED DUST CONTROL PLAN AS APPROVED BY THE CITY. SAID PLAN INCLUDES NOTES AND/OR DRAWINGS OF TEMPORARY OR PERMANENT CONTROL METHODS OR DEVICES PROPOSED TO BE USED. THIS L.A.Q.M.P. SHALL BE CONSIDERED AN ADDENDUM TO, AND A NECESSARY PART OF, ANY GRADING, STOCKPILE, IMPROVEMENT, OR DEMOLITION PLAN OTHERWISE REQUIRED FOR CITY PERMITS.
4. BY AGREEING TO CONFORM TO THIS PLAN AS APPROVED BY THE CITY, THE OWNER AND DESIGNATED "AUTHORIZED DUST CONTROLLER" DO ALSO AGREE TO ABIDE BY THE PROVISIONS OF THE ABATEMENT PROCEDURES AS SHOWN ABOVE.

OWNER'S CERTIFICATION:

I CERTIFY THAT I HAVE READ THIS APPLICATION AND UNDERSTAND THAT I AM RESPONSIBLE FOR THE COMPLIANCE OF THIS PROJECT TO THE DUST CONTROL PROVISIONS NOTED OR REFERENCED HERE. I UNDERSTAND THAT THE DUST CONTROL SECURITY THAT I'VE POSTED WITH THE CITY MAY BE USED BY THE CITY, PLUS ADDITIONAL CHARGES IF NEEDED, IF I FAIL TO KEEP THE DUST UNDER CONTROL. I UNDERSTAND THAT DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK, FROM THE TIME THAT THIS SITE IS DISTURBED IN ANY WAY FROM THE NATURAL VEGETATED CONDITION, AND MUST CONTINUE UNTIL THE TIME THAT THE PROJECT SITE IS ACCEPTABLY RE-VEGETATED OR PAVED. RESPONSIBILITY FOR THE DUST CONTROL ON THIS SITE CAN NOT BE TRANSFERRED SOLELY BY TRANSFERRING ALL OR A PORTION OF THIS PROPERTY TO OTHER PEOPLE. A REPLACEMENT L.A.Q.M.P. AND DUST CONTROL SECURITY MUST BE SUBMITTED FOR ANY TRANSFERRED PORTION. I HEREBY AUTHORIZE THE PERSON LISTED BELOW AS "AUTHORIZED DUST CONTROLLER" TO BE MY REPRESENTATIVE AND CONTACT PERSON FOR ALL DUST COMPLAINTS INVOLVING THIS PROJECT. I CERTIFY THAT I HAVE READ THIS APPLICATION AND THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT. I AGREE TO COMPLY WITH CITY ORDINANCE 398 (MUNI. CODE SEC. 15.32) AND ALL LAWS RELATING TO GRADING OPERATIONS. I AUTHORIZE REPRESENTATIVES OF THE CITY OF RANCHO MIRAGE TO ENTER UPON THE ABOVE-MENTIONED PROPERTY FOR INSPECTION AND/OR ABATEMENT PURPOSES, AND I AGREE TO HOLD HARMLESS THE CITY AND ITS REPRESENTATIVES FROM LIABILITY FOR ANY ACTIONS RELATED TO THIS PERMIT.

OWNER'S NAME(S) ____ ____

OWNER'S ADDRESS ____

OWNER'S SIGNATURE(S) ____ ____

DATE ____

AUTHORIZED DUST CONTROLLER CERTIFICATION: #____

I CERTIFY THAT I HAVE READ THIS APPLICATION AND UNDERSTAND THAT I AM RESPONSIBLE FOR THE COMPLIANCE OF THIS PROJECT TO THE DUST CONTROL PROVISIONS NOTED OR REFERENCED HERE. AS THE "AUTHORIZED DUST CONTROLLER" FOR THIS PROJECT I WILL HAVE MY PHONE NUMBER ON THE REQUIRED SITE SIGNS, AND WILL RESPOND TO DUST COMPLAINTS WITHIN THE 1 HOUR LIMIT. I UNDERSTAND THAT DUST CONTROL IS REQUIRED 24 HOURS A DAY, 7 DAYS A WEEK, FROM THE TIME THAT THIS SITE IS DISTURBED IN ANY WAY FROM THE NATURAL VEGETATED CONDITION, AND MUST CONTINUE UNTIL THE TIME THAT THE PROJECT SITE IS ACCEPTABLY RE-VEGETATED OR PAVED.

DUST CONTROLLER NAME (PRINT) ____

DUST CONTROLLER ADDRESS ____

DUST CONTROLLER SIGNATURE ____ DATE ____

CONTACT PHONE NUMBERS (24HR) ____

COPYRIGHTED CITY LOGO

SIGN AND LETTER SIZE CRITERIA			
PROJECT SIZE	0–1 ACRE	1–10 ACRE	OVER 10 ACRE
SIGN SIZE	24"Hx36"W	36"Hx48"W	48"Hx96"W
CITY OF RANCHO MIRAGE — PERMIT # E1000###	2"	3"	4"
DEVELOPER'S NAME	2"	3"	4"
PROJECT NAME / TRACT #####	2"	3"	4"
IF YOU SEE DUST COMING FROM	2"	3"	4"
THIS PROJECT CALL:	2"	3"	4"
24 HR. NAME, PH. ###-###-####	3"	4.5"	6"
IF YOU DO NOT GET A RESPONSE WITHIN ONE HOUR, PLEASE CALL	1.5"	2.25"	3"
THE CITY OF RANCHO MIRAGE PUBLIC WORKS AT 760-774-8503	1.5"	2.25"	3"
AND CALL THE A.Q.M.D. AT 1-800-CUT-SMOG (1-800-288-7664)	1.5"	2.25"	3"

CONTRASTING COLOR, TYPICALLY BLACK LETTERS ON WHITE BACKGROUND

DUST CONTROL SIGN CRITERIA

ADD A DRAWING HERE FOR SPECIAL DUST CONTROL ITEMS NOT TYPICALLY SHOWN ON GRADING PLANS, SUCH AS: TRUCK WHEEL WASH AREAS, EMPLOYEE PARKING AREAS, WATER TOWER LOCATIONS, HAUL ROAD DETAILS, SPEED SIGN LOCATION, SAND FENCE LOCATIONS, PERIMETER SPRINKLER LOCATIONS, STAGING AREAS, BORROW PITS, ETC. IF ALL REQUIRED FEATURES ARE ALREADY SHOWN ON THE GRADING PLAN WHICH IS ATTACHED, OWNER INITIAL HERE ____

REFERENCE MAP / GRADING PLAN FEATURES

SCALE ____ = ____

SHOW THE ROADS WHICH WILL BE USED FOR IMPORT OR EXPORT OF DIRT FOR THE PROJECT. IF THE PLANS INDICATE A DIRT BALANCE AND THUS NO HAUL ROUTE IS REQUIRED, OWNER INITIAL HERE ____

VICINITY MAP / HAUL ROUTE

NOT TO SCALE

NOTE: PROJECTS OF 10 ACRES OR LARGER MUST ALSO FILE THE 8.5"x11" FORM WITH THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SEE THEIR WEB SITE OR CITY ENGINEERING FOR APPROPRIATE FORMS)

FORM REVISED 5/21/2010

PREPARED BY: ____ CERT. # ____

SIGNATURE ____ DATE ____

PRINT NAME ____

ADDRESS, PH. ____

APPROVED BY CITY OF RANCHO MIRAGE:

____ DATE ____

WILLIAM A. ENOS, CITY ENGINEER
R.C.E. 43910, EXP. 6/30/2011

CITY OF RANCHO MIRAGE

LOCAL AIR QUALITY MANAGEMENT PLAN
PM_{10} DUST MITIGATION

PROJECT NAME ____

SITE ADDRESS ____ A.P.N. ____

SEC. ____, T. ___ S., R. ___ E., S.B.& M.

SHEET ____ OF ____

GRADING PERMIT #
E ____