

IMPROVEMENT NOTES

- ALL UNDERGROUND UTILITIES AND LATERALS SHALL BE INSTALLED AND/OR RELOCATED BEFORE CONSTRUCTION OF THE CURB AND GUTTER OR SURFACING OF STREETS UNLESS OTHERWISE APPROVED BY THE CITY.
- THE CONTRACTOR SHALL NOTIFY THE CITY'S ENGINEERING DEPARTMENT AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO THE BEGINNING OF WORK AT (760) 752-7550.
- PRECISE LOCATIONS/ELEVATIONS OF THE EXISTING UNDERGROUND UTILITIES ARE NOT KNOWN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAKING EXPLORATIONS TO LOCATE ALL UTILITIES AND SUBSTRUCTURES WHETHER SHOWN OR NOT ON THE PLANS AND TO PROTECT THEM FROM ANY DAMAGE PRIOR TO AND DURING CONSTRUCTION. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID UTILITIES AND SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DEPARTMENT AUTHORIZED REPRESENTATIVE OF ANY POTENTIAL CONFLICTS SUFFICIENTLY IN TIME FOR DESIGN CHANGES TO BE REVIEWED AND APPROVED.
- THE CONTRACTOR SHALL CONTACT THE UNDERGROUND SERVICE ALERT AT 1-800-422-4133 AT LEAST 48 HOURS PRIOR TO EXCAVATING TO VERIFY THE LOCATIONS OF UNDERGROUND FACILITIES OF THE FOLLOWING UTILITIES:
VALLECITOS WATER DISTRICT:
ENG'S DEPT. 1-760-744-0460
COX COMMUNICATION:
ADAM HIGBEE 1-619-266-5598 5159 FEDERAL BLVD. SAN DIEGO, CA
SDGE-GAS: CHARLIE ARCE 1-760-432-5864 571 ENTERPRISE ST. ESCONDIDO, CA
SDGE-ELECTRIC: JANY STALEY 1-858-636-5716 8315 CENTURY PARK CT. SAN DIEGO, CA
AT&T: JOE STRAFACI 1-760-489-3198 950 W. WASHINGTON ST. ESCONDIDO, CA

- A DIG ALERT IDENTIFICATION NUMBER MUST BE ISSUED BEFORE A "PERMIT TO EXCAVATE" IS VALID PER GOVERNMENT CODE SECTION 4216/4217.
- "AS-BUILT" DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR FOR ALL IMPROVEMENTS PRIOR TO ACCEPTANCE OF SAID IMPROVEMENTS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION ACCORDING TO THESE PLANS. THE CITY'S ENGINEERING DEPARTMENT AUTHORIZED REPRESENTATIVE SHALL BE CONTACTED PRIOR TO CHANGES OR ADDITIONS DURING THE PROGRESS OF CONSTRUCTION OR IF THERE IS A MISUNDERSTANDING OF THESE PLANS AND AN INTERPRETATION IS NEEDED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ANY MONUMENTATION AND/OR BENCHMARKS. ANY MONUMENTATION AND/OR BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SUCH POINTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.
 - MINIMUM 90% COMPACTION IS REQUIRED IN ALL ON-SITE FILL AREAS.
 - ALL PUBLIC IMPROVEMENTS SHOWN ON THESE IMPROVEMENT PLANS SHALL BE CONSTRUCTED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY.
 - ALL OPERATIONS CONDUCTED ON THE PROJECT SITE, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF ANY EQUIPMENT SHALL BE LIMITED TO THE HOURS OF 8:00 A.M. TO 5:00 P.M. OR AS APPROVED, SUNDAY THRU THURSDAY, NO WORK SHALL BE PERFORMED ON FRIDAY, SATURDAY OR HOLIDAYS.
 - ALL TRENCH EXCAVATION AND BACKFILL IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE CITY'S EXCAVATION ORDINANCE.
 - THE CONTRACTOR AND IT'S SUBCONTRACTORS SHALL COMPLY WITH GENERAL ENGINEERING STANDARDS AND THE PROJECT STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, RELOCATION OR REPLACEMENT OF ALL STRIPING, SIGNING OR TRAFFIC DETECTOR LOOPS AS REQUIRED AND/OR AS SHOWN ON THE PLANS.
 - DUST CONTROL MEASURES, SUCH AS THE PERIODIC WETTING DOWN OF THE BARE AND EXPOSED AREAS, SHALL BE UTILIZED AT ALL TIMES DURING CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE ADJOINING PUBLIC STREETS AND RIGHTS-OF-WAY IN A CLEAN AND DUST FREE CONDITION WITHIN THE REQUIREMENTS OF THE CITY MUNICIPAL CODE SECTION 26.150000 "ILLICIT DISCHARGES PROHIBITED." THIS SECTION OF THE CODE PROHIBITS THE "WASHING DOWN" OF A STREET INTO A PUBLIC STORM DRAIN. THE REGULAR USE OF STREET SWEEPING MACHINES MAY BE REQUIRED.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS OF THIS PROJECT.
 - A PERMIT MUST BE OBTAINED FROM THE SAN MARCOS FIRE DEPARTMENT PRIOR TO ANY BLASTING. CITY PERMITS ARE REQUIRED PRIOR TO ANY STORAGE OF HAZARDOUS MATERIALS OR ANY OTHER ENCROACHMENTS.
 - THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, THE ENGINEER, THE CITY, AND ITS AGENTS 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, ENGINEER OR CITY.
 - EROSION CONTROL, INCLUDING RIP-RAP, INTERIM SLOPE PROTECTION, SANDBAGS OR OTHER EROSION CONTROL MEASURES SHALL BE PROVIDED TO CONTAIN SEDIMENT AND SILT WITHIN THE PROJECT. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL FACILITIES THROUGHOUT THE DEVELOPMENT OF THE PROJECT IN ACCORDANCE WITH THE PROJECT'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND SOIL EROSION CONTROL PLANS. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ANY PENALTIES OR FINES LEVIED AGAINST IT AS A RESULT OF NON-COMPLIANCE WITH THE PROJECT SWPPP.

CITY OF SAN MARCOS

IMPROVEMENT PLANS FOR SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION CIP No. 86002

IMPROVEMENT NOTES (CONT.)

- TRAFFIC CONTROL PLANS, INCLUDING THE LAYOUT OF THE CONSTRUCTION WARNING AND DETAIL SIGNS, SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 10 WORKING DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TRAFFIC CONTROL SHALL BE IMPLEMENTED BEFORE ANY WORK IS STARTED.
- THE CONTRACTOR SHALL CONFINE OPERATIONS TO THE AREAS SHOWN UNLESS SPECIAL ARRANGEMENTS ARE OTHERWISE MADE WITH INDIVIDUAL PROPERTY OWNERS. THE CONTRACTOR SHALL CONDUCT OPERATIONS IN ACCORDANCE WITH ANY OTHER PROVISIONS AND SHALL OBSERVE ANY RESTRICTIONS AS DIRECTED BY THE AGENCY'S AUTHORIZED REPRESENTATIVE CONCERNING WORK ON PRIVATE PROPERTY. THE CONTRACTOR SHALL PROVIDE THE CITY WITH ANY AGREEMENTS WITH PRIVATE INDIVIDUALS FOR USE OF THEIR PROPERTY.
- IMPORTED MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE. EXPORTED MATERIAL SHALL BE DELIVERED TO A LEGAL SITE.
- NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE CITY'S GRADING ORDINANCE AND THE APPROVAL OF THESE PLANS, THE CONTRACTOR IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE SO AS TO ENDANGER ANY SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING, EROSION, SILTING, SCOUR OR OTHER DAMAGE WHICH MIGHT RESULT FROM THE WORK DESCRIBED ON THIS PLAN. THE CITY WILL HOLD THE CONTRACTOR RESPONSIBLE FOR CORRECTION OF WORK, WHICH CAUSES DAMAGE TO ADJACENT PROPERTY.
- ALL DEBRIS CREATED BY LANDSCAPE CONSTRUCTION OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE DISPOSED OFF THE JOB SITE DAILY IN A MANNER ACCEPTABLE TO THE OWNER.

GEOTECHNICAL ENGINEER CERTIFICATE

THESE PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED RELATIVE TO GEOTECHNICAL ASPECTS OF THE PLANS AND HAVE BEEN FOUND TO BE IN CONFORMANCE WITH INTENTIONS OF THE FINDINGS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT BY SCST, LLC. BY DANIEL J. RICHARDSON RCE 89379, DATED NOVEMBER/04/2019.

Daniel Richardson DATE: 6/15/21
DANIEL J. RICHARDSON RCE 89379 EXP. 12/31/22



HYDROLOGY/HYDRAULIC REPORT

THE HYDROLOGY/ HYDRAULIC REPORT WAS PREPARED BY MICHAEL BAKER INTERNATIONAL (AUGUST 26, 2020)

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, SHEETS 1 THROUGH 27, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THIS PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN MARCOS IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME AS ENGINEER OF WORK OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE SIGNATURE OF THESE PLANS BY AND THE REVIEW OF THE PLANS BY VALLECITOS WATER DISTRICT IS A REVIEW OF GENERAL COMPLIANCE WITH DISTRICT STANDARDS. THIS APPROVAL IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OR ACCURACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH APPROVAL DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS.

Josh C. Stone DATE: 03-03-2021
JOSH C. STONE RCE 60755



"AS - BUILT" DECLARATION

AS ENGINEER-OF-WORK, I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IMPROVEMENTS SHOWN ON THIS SET OF CONSTRUCTION PLANS, SHEET 1 TO 14, HAVE BEEN INSTALLED AND CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE AS-BUILT PLANS, INCLUDING ALL APPROPRIATE STANDARDS AND ANY DISCRETIONARY APPROVAL(S) FOR THE PROJECT.

SIGNED _____ DATE _____
PRINTED NAME _____ P.E. NO. _____
DISCIPLINE _____ MY REGISTRATION EXPIRES _____

Michael Baker INTERNATIONAL
5050 Avenida Encinas Suite 280 Carlsbad, CA 92008 Phone: (760) 476-9193 M.BAKER@INTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

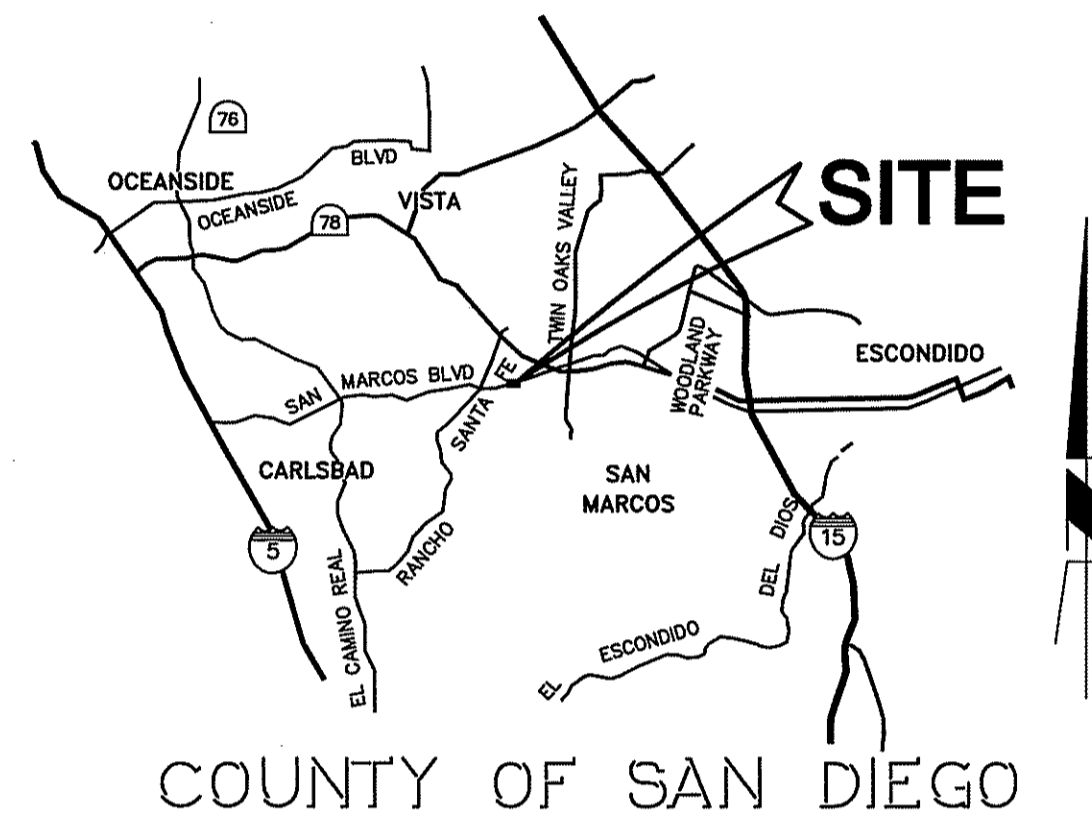
By: Public Works Inspector Date: _____

RECOMMENDED FOR APPROVAL

By: *Josh C. Stone* Date: 6/22/21
Lewis Clopp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/22/21

SHEET INDEX

SHEET NO.	PLAN CODE	DESCRIPTION
1	T-1	TITLE SHEET
2	GN-1	GENERAL NOTES
3	TYP-1	TYPICAL CROSS SECTIONS
4	DM-1	DEMOLITION PLAN
5-8	IM-1 TO IM-4	IMPROVEMENT PLAN AND PROFILE
9-11	SD-1 TO SD-3	STORM DRAIN PLAN AND PROFILE
12-13	CD-1 TO CD-2	CONSTRUCTION DETAILS
14	WL-1	WATER PLAN AND PROFILE
15	SS-1	SIGNING AND STRIPING PLAN GENERAL NOTES
16	SS-2	SIGNING AND STRIPING PLAN
17	TS-1	TRAFFIC SIGNAL PLAN AND NOTES
18	EC-1	EROSION & SEDIMENT CONTROL PLAN
19	DMA-1	DRAINAGE MANAGEMENT AREA PLAN
20-27	LDSC-1 TO LDSC-8	LANDSCAPING AND IRRIGATION PLANS
28	CD-3	CONSTRUCTION DETAILS
29	WL-2	STORM DRAIN PLAN AND PROFILE



VICINITY MAP
N.T.S.

VALLECITOS WATER DISTRICT LEGEND

ITEM	WORK TO BE DONE	QTY/LENGTH	VWD DWG	SYMBOL
EXISTING WATER VALVE	ADJUST TO GRADE	2	W-16	⊙
EXISTING SEWER MANHOLE	ADJUST TO GRADE & RECOAT LINER (MATCH EXISTING)	4	S-1	⊙
EXTEND EXISTING FIRE HYDRANT	RELOCATE TO NEW R/W	1	W-4, W-5 & W-14	⊠
RELOCATE & EXTEND EXISTING WATER SERVICE AND METER. RE-CERT BY DEVICE. (DOMESTIC OR IRRIGATION INDICATED ON PLANS)	(RELOCATED EXISTING WATER METER)	4	W-6, W-7 & W-19	⊕
EXTEND EX. FIRE SERVICE DETECTOR CHECK	RELOCATED EXISTING TO NEW R/W	1/17.0'	W-13	⊕
INSTALL 10" PVC CLASS 350 DR-14 WITH THRUST BLOCKS	INSTALL	***185.5'	W-15 & W-16	—W—
RELOCATE EXISTING 4" METER ABOVE GROUND AND INSTALL NEW BACKFLOW DEVICE	INSTALL	1 EA.	W-11 & W-19	⊕M⊕
DIP SECTION PIPES	INSTALL	67.5 FT. (6" PVC) 32.0 FT. (8" PVC) 41.5 FT. (2" WATER SERVICE)	W-28 W-28 W-28	—W— —W— —W—
REMOVE EXISTING 10" ACP WATER MAIN	REMOVE	+163'		—W—

NOTE: **LENGTH OF SEGMENT MAY VARY, SINCE CONNECTION POINT IS AT NEAREST JOINT.

WORK TO BE DONE

- THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING DOCUMENTS:
- CITY OF SAN MARCOS STANDARD DRAWINGS AND STANDARD SPECIAL PROVISIONS
 - SAN DIEGO AREA REGIONAL STANDARD DRAWINGS
 - STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREEN BOOK"-2015)
 - CITY OF SAN MARCOS GRADING AND EXCAVATION ORDINANCE
 - CITY OF SAN MARCOS TRAFFIC SIGNAL MANUAL FOR NEW SIGNAL DESIGNS AND INSTALLATIONS
 - STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARDS PLANS
 - STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS
 - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
 - STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL TO MUTCD
 - VALLECITOS WATER DISTRICT STANDARD DRAWINGS AND SPECIFICATIONS, DESIGN CRITERIA AND APPROVED MATERIALS LIST
 - CITY OF SAN MARCOS IRRIGATION AND LANDSCAPE APPROVED MATERIALS LIST
 - CITY OF SAN MARCOS IRRIGATION AND LANDSCAPE STANDARD DRAWINGS
- ANY CHANGES OR REVISIONS THEREFROM SHALL BE APPROVED BY THE CITY ENGINEER OR VWD PRIOR TO CONSTRUCTION.

LEGEND

ITEM	STANDARD DRAWING	SYMBOL
PROPOSED CENTERLINE		—C—
*PROPOSED PAVING. SECTION PER PLAN		⊠
*PROPOSED PAVING. SECTION PER PLAN		⊠
PROPOSED 2" AC GRIND AND OVERLAY		⊠
PROPOSED SLURRY SEAL		⊠
PROPOSED MONOLITHIC SIDEWALK	SORS D-7, G-9, G10, G-11	⊠
PROPOSED 6" TYPE 'G' CURB AND GUTTER	SORS G-2	⊠
PROPOSED 6" CURB	SORS G-1	⊠
PROPOSED 6" MEDIAN CURB	SORS G-6	⊠
CONCRETE PED. RAMP WITH RAISED TRUNCATED DOMES (DARK GRAY)	SORS D-27 & G-30	⊠
TYPE 'B-1' CURB INLET	SORS D-2	⊠
SIDEWALK UNDER DRAIN OUTLET	SORS D-25	⊠
PROPOSED STORM DRAIN PIPE (RCP)	SORS D-9	⊠
PROPOSED STORM DRAIN CLEANOUT TYPE A-4&5	SORS D-7	⊠
PROPOSED CATCH BASIN TYPE F	SORS D-8	⊠
PROPOSED CATCH BASIN TYPE G-2	SORS D-8	⊠
PROPOSED 6" PVC PIPE		—W—
PROPOSED PVC PIPE CLEANOUT		⊕
PROPOSED HANDRAIL		—H—
INSTALL CONCRETE COLLAR	SORS D-62	⊠
PROPOSED RIP RAP ENERGY DISSIPATOR	SORS D-40	⊠
PROPOSED CROSS GUTTER	SORS D-12	⊠
PROPOSED RETAINING WALL	SORS D-09 & C-10	⊠
PROPOSED CONTOUR		212
EXISTING CONTOUR		(212)
PROPOSED LIGHT		⊕
LIMITS OF WORK/DAYLIGHT LINE		—L—
EXISTING PROPERTY LINE		—P—
EXISTING RIGHT OF WAY LINE		—R/W—
EXISTING CURB AND GUTTER		⊠
EXISTING EDGE OF PAVEMENT		⊠
EXISTING WALL		⊠
EXISTING FENCE		⊠
EXISTING WATER (PROTECT IN PLACE)		—W—
EXISTING SEWER (PROTECT IN PLACE)		—S—
EXISTING STORM DRAIN (SIZE/MATERIAL AS INDICATED ON PLAN)		—SD—
EXISTING H.P. GAS (SIZE/MATERIAL AS INDICATED ON PLAN)		—G—
EXISTING SEWER FORCE MAIN (PROTECT IN PLACE)		—FM—
EXISTING TELECOMMUNICATIONS LINE (OWNER AS INDICATED ON PLAN)		—TEL—
EXISTING H.P. GAS (SIZE/MATERIAL AS INDICATED ON PLAN)		—G—
EXISTING ELECTRICAL		—E—
EXISTING GAS VALVE		⊕
EXISTING STORM DRAIN CLEANOUT		⊕
SAWCUT		⊠
COMMERCIAL CONCRETE DRIVEWAY		⊠
POINT OF BEGINNING		⊕ (P.O.B.)
DETAIL NO.		⊕
SHEET NO.		⊕

*PAVEMENT SECTION TO BE CONFIRMED AND APPROVED BY ENGINEER PRIOR TO INSTALLATION

PLAN CODE
T-1

CITY OF SAN MARCOS ENGINEERING DIVISION
CITY DRAWING NO. IP18-00009
Sheet 1 of 29

NOTE: PER CALCULATIONS PREPARED UTILIZING THE NATIONAL GEODETIC SURVEY (NGS) VERTCON (VERTICAL DATUM CONVERSION) TOOL, TO CONVERT ELEVATIONS AT THIS BENCHMARK FROM NAVD 1988 TO NGVD 29, ELEVATION DEPICTED HEREON MUST BE DECREASED BY 2.306 FEET. POINT NUMBER 1021 LISTED BELOW HAS AN ELEVATION OF 510.736

100% PLAN SUBMITTAL MARCH 03, 2021

ABBREVIATIONS

AB	AGGREGATE BASE	D.S.	DOWN SPOUT	L.O.W.	LIMIT OF WORK	SS	SANITARY SEWER
AC	ASPHALT CONCRETE	DWG	DRAWING	MCV	MASTER CONTROL VALVE	ST	STREET
ADD	ADDITIVE	E	ELECTRICAL METER VAULT	MIN	MINIMUM	STD	STANDARD
ADJ	ADJACENT	EC	END CURVE	N.I.C.	NOT IN CONTRACT	SWK	SIDEWALK
ALT	ALTERNATE	EJ	EXPANSION JOINT	PA	PLANTING AREA	TB	TOP OF BERM
APN	ACCESSOR'S PARCEL NUMBER	EP	EDGE OF PAVEMENT	PCC	POINT OF COMPOUND CURVE	TC	TOP OF CURB
AVE	AVENUE	EQ	EQUAL	PCR	POINT OF CURB RETURN	TS	TRAFFIC SIGNAL
BC	BEGIN CURVE	EVC	END VERTICAL CURVE	P.O.C.	POINT OF CURVATURE	TW	TOP OF WALL
BLDG	BUILDING	EX	EXISTING	PP	POWER POLE	TY	TYPICAL
B.O.C.	BACK OF CURB	F.A.	FIRE ALARM	PWMT	PAVEMENT	U.O.N.	UNLESS OTHERWISE NOTED
BVC	BEGIN VERTICAL CURVE	FG	FINISH GRADE	RET	RETAINING	U.V.	ULTRA-VIOLET
BW	BOTTOM OF WALL	FL	FLOLINE	ROP	REINFORCED CONCRETE PIPE	VND	VALLECITOS WATER DISTRICT
CATV	CABLE TELEVISION	F.O.B.	FACE OF BLDG.	RCV	REMOTE CONTROL VALVE	WL	WATER LINE
C&G	CURB & GUTTER	F.O.C.	FACE OF CURB	R	RADIUS		
CMP	CORRUGATED METAL PIPE	Gal	GALLONS	RIM	RIM ELEVATION		
CO	CLEANOUT	GB	GRADE BREAK	R.O.W.	RIGHT OF WAY		
COL.	COLUMN	GPM	GALLONS PER MINUTE	SB	SLUMP BLOCK		
CONC	CONCRETE	GV	GAS VALVE	SCO	SEWER CLEANOUT		
COND.	CONDITIONS	HDPE	HIGH DENSITY POLYETHYLENE	SD	STORM DRAIN		
CSM	CITY OF SAN MARCOS	HP	HIGH POINT	SDG&E	SAN DIEGO GAS & ELECTRIC		
DEF	DEGREE	HP GAS	HIGH PRESSURE GAS LINE	SDRSD	SAN DIEGO REGIONAL STANDARD DRAWING		
DG	DRINKING FOUNTAIN	I	INVERT ELEVATION	SIM	SIMILAR		
DG	DECOMPOSED GRANITE	IRRIG.	IRRIGATION	SMWD	SAN MARCOS COUNTY WATER DISTRICT		
DIM	DIMENSION	LF	LINEAL FEET	SMH	SEWER MANHOLE		
D.O.	DRAIN OUTLET/UNDER WALK DRAIN PIPE	LP	LOW POINT	SQ	SQUARE		

BASIS OF COORDINATES & BEARINGS

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 6, (EPOCH NOT STATED). SAID COORDINATES AND BEARINGS ARE BASED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING CONTROL STATIONS PER RECORD OF SURVEY 13928 (CITY OF SAN MARCOS SURVEY CONTROL).

STATION	GRID NORTHING (FT.)	GRID EASTING (FT.)
1017	1992455.016	6270654.335
1021	1992450.992	6274932.043

DISTANCES SHOWN HEREON ARE GROUND AND IN TERMS OF THE U.S. SURVEY FOOT.
CONTROL POINT 300: GRID DISTANCE = GROUND DISTANCE X COMBINED SCALE FACTOR (0.99994091)

DATE OF SURVEY

NOVEMBER 13, 2017

BENCH MARK

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) PER RECORD OF SURVEY 13928 (CITY OF SAN MARCOS SURVEY CONTROL). BENCHMARK DESIGNATION: CONTROL POINT NUMBER 1017. 3" COUNTY BRASS DISC, STAMPED "S.D. CO. ENGINEER DEPT SURVEY MONUMENT ES 385, WITH SMALL RAISED EXTRUSION, INSTEAD OF PUNCH. ELEVATION: 513.042 (NAVD88)

REFERENCE DRAWINGS

- CITY DWG NO. IP-4647
- SAN MARCOS COUNTY WATER DISTRICT DWG. NO. 2534
- SAN MARCOS COUNTY WATER DISTRICT DWG. NO. 5484H-1
- SAN MARCOS COUNTY WATER DISTRICT DWG. NO. B-173
- SAN MARCOS COUNTY WATER DISTRICT DWG. NO. 1304-05

STORM WATER PERMIT SUMMARY

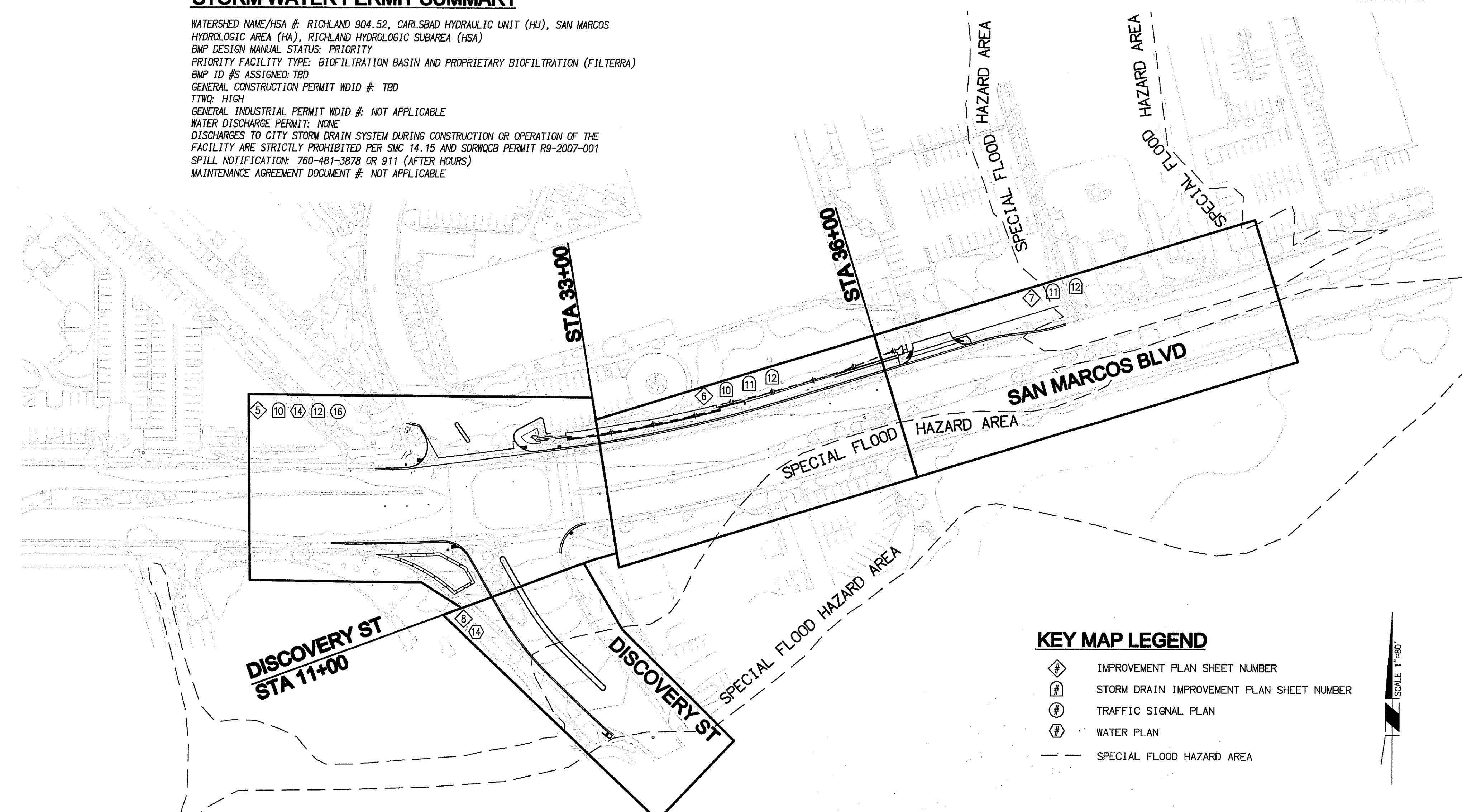
WATERSHED NAME/HSA #: RICHLAND 904.52, CARLSBAD HYDRAULIC UNIT (HU), SAN MARCOS HYDROLOGIC AREA (HA), RICHLAND HYDROLOGIC SUBAREA (HSA)
BMP DESIGN MANUAL STATUS: PRIORITY
PRIORITY FACILITY TYPE: BIOFILTRATION BASIN AND PROPRIETARY BIOFILTRATION (FILTERRA)
BMP ID #S ASSIGNED: TBD
GENERAL CONSTRUCTION PERMIT WDD # TBD
TTR#: HIGH
GENERAL INDUSTRIAL PERMIT WDD #: NOT APPLICABLE
WATER DISCHARGE PERMIT: NONE
DISCHARGES TO CITY STORM DRAIN SYSTEM DURING CONSTRUCTION OR OPERATION OF THE FACILITY ARE STRICTLY PROHIBITED PER SMC 14.15 AND SDRWQCB PERMIT R9-2007-001
SPILL NOTIFICATION: 760-481-3878 OR 911 (AFTER HOURS)
MAINTENANCE AGREEMENT DOCUMENT #: NOT APPLICABLE

VALLECITOS WATER DISTRICT GENERAL NOTES (CITY)

- ALL WATER AND SEWER LINES SHALL BE CONSTRUCTED ACCORDING TO THE CONTRACT DOCUMENTS AND CURRENT STANDARD SPECIFICATIONS, DRAWINGS AND APPROVED MATERIAL LIST OF THE VALLECITOS WATER DISTRICT.
- A MINIMUM OF ONE FOOT VERTICAL CLEARANCE IS REQUIRED AT ALL CROSSINGS OF DISTRICT FACILITIES WITH OTHER UTILITIES UNLESS APPROVED BY THE DISTRICT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL POTHOLE (EXCAVATE AND EXPOSE) ALL UTILITIES ALONG CONSTRUCTION EXCAVATION CORRIDOR AS SHOWN ON PLANS OR IDENTIFIED BY USA MARK-OUT. THE POTHOLE INFORMATION (UTILITY SIZE, TYPE, LOCATION, ELEVATION, GRADE AND ALIGNMENT) SHALL BE SUBMITTED TO VALLECITOS WATER DISTRICT PRIOR TO CONSTRUCTION. IN ADDITION, POTENTIAL CONFLICTS WITH EXISTING UTILITIES, AS IDENTIFIED BY CONTRACTOR, SHALL BE SUBMITTED PRIOR TO CONSTRUCTION. CONSEQUENCES OF CONTRACTOR'S FAILURE TO POTHOLE AND PROVIDE INFORMATION TO DISTRICT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY AND LIABILITY.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ENFORCEMENT OF SAFETY STANDARDS.
- A PRECONSTRUCTION CONFERENCE MEETING WITH VALLECITOS WATER DISTRICT PERSONNEL SHALL BE HELD A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION. INSPECTION OF ALL WORK IS REQUIRED. FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED FOR INSPECTION.
- ANY PROPOSED CHANGES IN THE APPROVED IMPROVEMENT PLANS MUST BE REVIEWED AND APPROVED BY THE DISTRICT PRIOR TO THE INSTALLATION OF SUCH CHANGES AND THE CHANGES SHALL BE SHOWN ON THE IMPROVEMENT PLANS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AT ALL TIMES ON THE JOB SITE, AN "AS-BUILT" RECORD OF ALL WATER AND SEWER MAINS AND APPURTENANCES INSTALLED UNDER THIS CONTRACT.
- A BLASTING PLAN SHALL BE SUBMITTED FOR DISTRICT APPROVAL PRIOR TO THE USE OF EXPLOSIVES NEAR DISTRICT FACILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ACP PIPE WHICH SHALL BE PERFORMED BY A CONTRACTOR REGISTERED BY CAL/OSHA AND CERTIFIED BY THE STATE CONTRACTORS LICENSING BOARD FOR ASBESTOS REMOVAL.
- UPON CONNECTION OF THE NEW WATER SYSTEM TO THE EXISTING SYSTEM, ALL VALVES ON THE EXISTING AND NEW SYSTEM SHALL BE OPERATED ONLY BY DISTRICT PERSONNEL. SHUTDOWNS SHALL BE REQUESTED, IN WRITING, A MINIMUM OF 6 WORKING DAYS IN ADVANCE. ALL SHUTDOWNS REQUIRE STATE CERTIFIED BACTERIA TESTING PRIOR TO REACTIVATION.

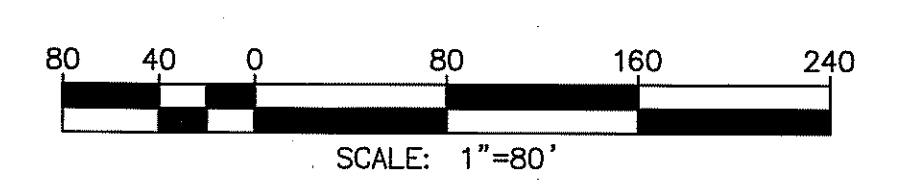
TRIBAL CULTURAL RESOURCE NOTES

- THE QUALIFIED ARCHAEOLOGIST SHALL MAINTAIN ONGOING COLLABORATIVE CONSULTATION WITH THE TCA NATIVE AMERICAN MONITOR DURING ALL GROUND DISTURBING ACTIVITIES. THE APPLICANT/OWNER OR GRADING CONTRACTOR SHALL NOTIFY THE PLANNING DIVISION, PREFERABLY THROUGH E-MAIL, OF THE START AND END OF ALL GROUND DISTURBING ACTIVITIES.
- THE QUALIFIED ARCHAEOLOGIST AND TCA NATIVE AMERICAN MONITOR SHALL ATTEND ALL APPLICABLE PRE-CONSTRUCTION MEETINGS WITH THE GENERAL CONTRACTOR AND/OR ASSOCIATED SUBCONTRACTORS TO PRESENT THE ARCHAEOLOGICAL MONITORING PROGRAM. THE QUALIFIED ARCHAEOLOGIST AND TCA NATIVE AMERICAN MONITOR SHALL BE PRESENT ON-SITE FULL-TIME DURING GRUBBING, GRADING AND/OR OTHER GROUND DISTURBING ACTIVITIES, INCLUDING THE PLACEMENT OF IMPORTED FILL MATERIALS OR FILL USED FROM OTHER AREAS OF THE PROJECT SITE, TO IDENTIFY ANY EVIDENCE OF POTENTIAL ARCHAEOLOGICAL OR CULTURAL RESOURCES. ALL FILL MATERIALS SHALL BE ABSENT OF ANY AND ALL CULTURAL RESOURCES. THE APPLICANT/OWNER OR GRADING CONTRACTOR MAY SUBMIT WRITTEN DOCUMENTATION TO THE CITY TO SUBSTANTIATE IF ANY FILL MATERIAL IS ABSENT OF CULTURAL RESOURCES. SHOULD THE CITY CONCUR THAT THE FILL MATERIAL IS ABSENT OF CULTURAL RESOURCES, IN CONSULTATION WITH A QUALIFIED ARCHAEOLOGIST AND/OR THE TCA NATIVE AMERICAN MONITOR, THEN NO MONITORING OF THAT FILL MATERIAL IS REQUIRED.
- THE QUALIFIED ARCHAEOLOGIST OR THE TCA NATIVE AMERICAN MONITOR MAY HALT GROUND DISTURBING ACTIVITIES IF UNKNOWN ARCHAEOLOGICAL ARTIFACT DEPOSITS OR CULTURAL FEATURES ARE DISCOVERED. GROUND DISTURBING ACTIVITIES SHALL BE DIRECTED AWAY FROM THESE DEPOSITS TO ALLOW A DETERMINATION OF POTENTIAL IMPORTANCE. ISOLATES AND CLEARLY NON-SIGNIFICANT DEPOSITS (AS DETERMINED BY THE QUALIFIED ARCHAEOLOGIST, IN CONSULTATION WITH THE TCA NATIVE AMERICAN MONITOR) WILL BE MINIMALLY DOCUMENTED IN THE FIELD, COLLECTED AND BE GIVEN TO THE TCA TRIBE SO THAT THEY MAY BE REBURIED AT THE SITE ON A LATER DATE. IF A DETERMINATION IS MADE THAT THE UNEARTHED ARTIFACT DEPOSITS OR TRIBAL CULTURAL RESOURCES ARE CONSIDERED POTENTIALLY SIGNIFICANT, THE TCA TRIBE SHALL BE NOTIFIED AND CONSULTED WITH IN REGARDS TO THE RESPECTFUL AND DIGNIFIED TREATMENT OF THOSE RESOURCES. ALL SACRED SITES, SIGNIFICANT TRIBAL CULTURAL RESOURCES AND/OR UNIQUE ARCHAEOLOGICAL RESOURCES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE AVOIDED AND PRESERVED AS THE PREFERRED MITIGATION, IF FEASIBLE. IF HOWEVER, A DATA RECOVERY PLAN IS AUTHORIZED BY THE CITY AS THE LEAD AGENCY UNDER CEQA, THE CONTRACTED TCA TRIBE SHALL BE NOTIFIED AND CONSULTED REGARDING THE DRAFTING AND FINALIZATION OF ANY SUCH RECOVERY PLAN. FOR SIGNIFICANT ARTIFACT DEPOSITS, TRIBAL CULTURAL RESOURCES OR CULTURAL FEATURES THAT ARE PART OF A DATA RECOVERY PLAN, AN ADEQUATE ARTIFACT SAMPLE TO ADDRESS RESEARCH AVENUES PREVIOUSLY IDENTIFIED FOR SITES IN THE AREA WILL BE COLLECTED USING PROFESSIONAL ARCHAEOLOGICAL COLLECTION METHODS. IF THE QUALIFIED ARCHAEOLOGIST COLLECTS SUCH RESOURCES, THE TCA NATIVE AMERICAN MONITOR MUST BE PRESENT DURING ANY TESTING OR CATALOGING OF THOSE RESOURCES. MOREOVER, IF THE QUALIFIED ARCHAEOLOGIST DOES NOT COLLECT THE CULTURAL RESOURCES THAT ARE UNEARTHED DURING THE GROUND DISTURBING ACTIVITIES, THE TCA NATIVE AMERICAN MONITOR, MAY AT THEIR DISCRETION, COLLECT SAID RESOURCES AND PROVIDE THEM TO THE CONTRACTED TCA TRIBE FOR RESPECTFUL AND DIGNIFIED TREATMENT IN ACCORDANCE WITH THE TRIBE'S CULTURAL AND SPIRITUAL TRADITIONS. IF THE DEVELOPER, THE QUALIFIED ARCHAEOLOGIST AND THE TCA TRIBE CANNOT AGREE ON THE SIGNIFICANCE OR MITIGATION FOR SUCH RESOURCES, THESE ISSUES WILL BE PRESENTED TO THE PLANNING DIVISION MANAGER FOR DECISION. THE PLANNING DIVISION MANAGER SHALL MAKE A DETERMINATION BASED UPON THE PROVISIONS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT AND CALIFORNIA PUBLIC RESOURCES CODE SECTION 21083.2(B) WITH RESPECT TO ARCHAEOLOGICAL RESOURCES, TRIBAL CULTURAL RESOURCES AND SHALL TAKE INTO ACCOUNT THE RELIGIOUS BELIEFS, CULTURAL BELIEFS, CUSTOMS AND PRACTICES OF THE TCA TRIBE. NOTWITHSTANDING ANY OTHER RIGHTS AVAILABLE UNDER LAW, THE DECISION OF THE PLANNING DIVISION MANAGER SHALL BE APPEALABLE TO THE PLANNING COMMISSION AND/OR CITY COUNCIL.
- AS SPECIFIED BY CALIFORNIA HEALTH AND SAFETY CODE SECTION 7050.5, IF HUMAN REMAINS ARE FOUND ON THE PROJECT SITE DURING CONSTRUCTION OR DURING ARCHAEOLOGICAL WORK, THE PERSON RESPONSIBLE FOR THE EXCAVATION, OR HIS OR HER AUTHORIZED REPRESENTATIVE, SHALL IMMEDIATELY NOTIFY THE SAN DIEGO COUNTY MEDICAL EXAMINER'S OFFICE. NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE OR ANY NEARBY AREA REASONABLY SUSPECTED TO OVERLIE ADJACENT REMAINS SHALL OCCUR UNTIL THE MEDICAL EXAMINER HAS MADE THE NECESSARY FINDINGS AS TO ORIGIN AND DISPOSITION PURSUANT TO PUBLIC RESOURCES CODE 5097.98. IF SUCH A DISCOVERY OCCURS, A TEMPORARY CONSTRUCTION EXCLUSION ZONE SHALL BE ESTABLISHED SURROUNDING THE AREA OF THE DISCOVERY SO THAT THE AREA WOULD BE PROTECTED, AND CONSULTATION AND TREATMENT COULD OCCUR AS PRESCRIBED BY LAW. BY LAW, THE MEDICAL EXAMINER WILL DETERMINE WITHIN TWO WORKING DAYS OF BEING NOTIFIED IF THE REMAINS ARE SUBJECT TO HIS OR HER AUTHORITY. IF THE MEDICAL EXAMINER RECOGNIZES THE REMAINS TO BE NATIVE AMERICAN, HE OR SHE SHALL CONTACT THE NATIVE AMERICAN HERITAGE COMMISSION (NAHC), BY TELEPHONE, WITHIN 24 HOURS. THE NAHC WILL MAKE A DETERMINATION AS TO THE MOST LIKELY DESCENDENT. IF SUSPECTED NATIVE AMERICAN REMAINS ARE DISCOVERED, THE REMAINS SHALL BE KEPT IN-SITU, OR IN A SECURE LOCATION IN CLOSE PROXIMITY TO WHERE THEY WERE FOUND, AND THE EXAMINATION OF THE REMAINS SHALL ONLY OCCUR ON-SITE IN THE PRESENCE OF A TCA NATIVE AMERICAN MONITOR.



KEY MAP LEGEND

	IMPROVEMENT PLAN SHEET NUMBER
	STORM DRAIN IMPROVEMENT PLAN SHEET NUMBER
	TRAFFIC SIGNAL PLAN
	WATER PLAN
	SPECIAL FLOOD HAZARD AREA



PLAN CODE
GN-1

V.W.D. AS-BUILT

By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: _____
Date: _____
Public Works Inspector

RECOMMENDED FOR APPROVAL

By: _____
Date: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022

APPROVED FOR CONSTRUCTION

By: _____
Date: _____
Isaac E. Chapman, City Engineer
R.C.E.: 131247 exp.: 03/30/2021

BENCHMARK

Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
SS: PT. NO. 1021 PER ROS 13928
Location: PT. NO. 1017: N1992455.016 E6270654.335
PT. NO. 1021: N1992450.992 E6274932.043
Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION

GENERAL NOTES FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

SAN MARCOS FIRE DEPARTMENT

By: _____
Date: _____
JASON NALLEN, FIRE MARSHAL

VALLECITOS WATER DISTRICT

By: _____
Date: _____
JESSE H. GUMPEL, DISTRICT ENGINEER
RCE: C50160 EXP: 6/30/2022

ENGINEER OF WORK

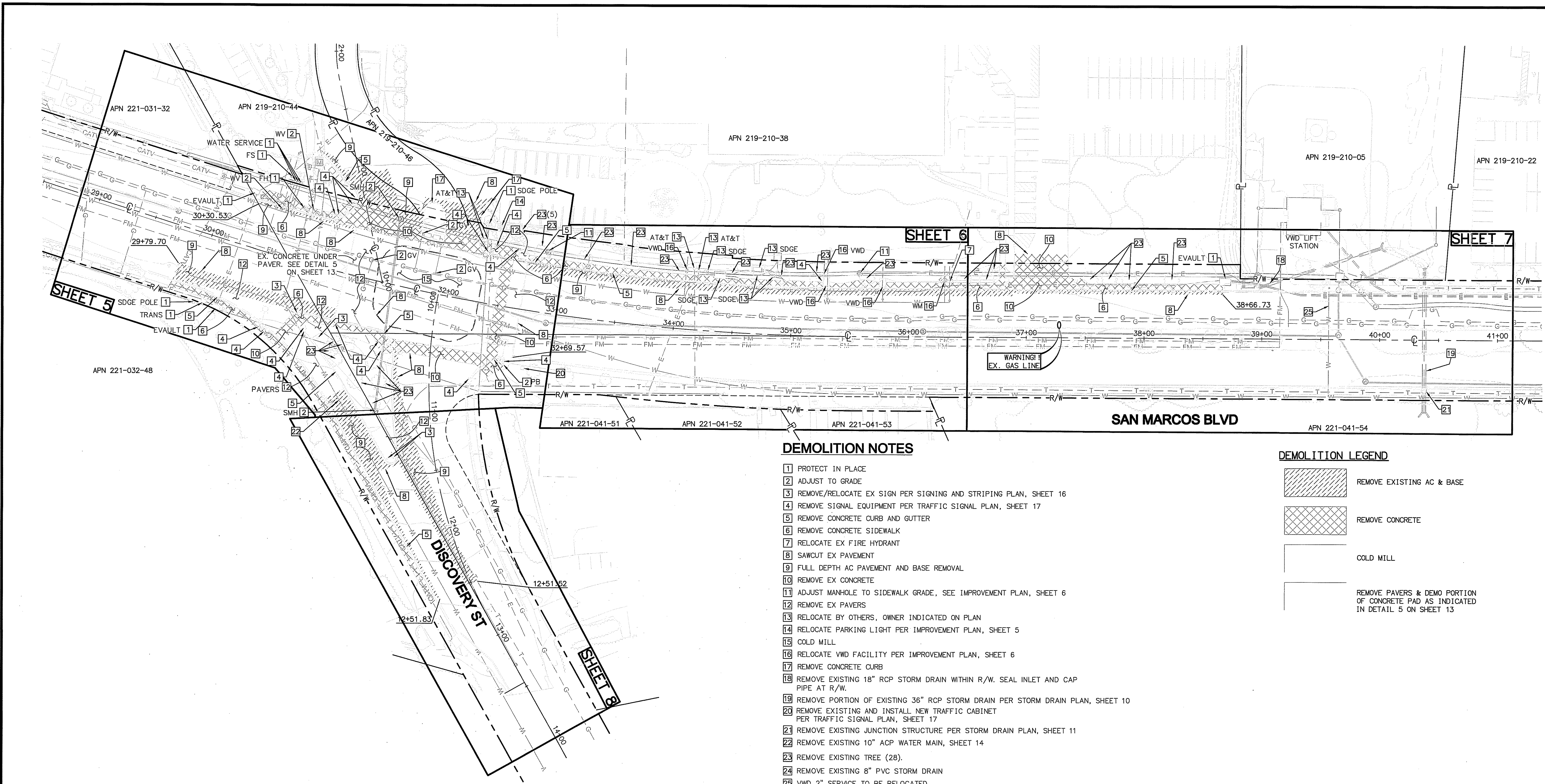
By: _____
Date: _____
Name: JOSH C. STONE
R.C.E.: C60755 exp.: 12/31/22

CITY APPROVED CHANGES

No.	Description	App'd By	Date

VMD W.D. 207141
City Drawing No.
IP18-00009
Sheet 2 of 29

100% PLAN SUBMITTAL MARCH 03, 2021



DEMOLITION NOTES

- 1] PROTECT IN PLACE
- 2] ADJUST TO GRADE
- 3] REMOVE/RELOCATE EX SIGN PER SIGNING AND STRIPING PLAN, SHEET 16
- 4] REMOVE SIGNAL EQUIPMENT PER TRAFFIC SIGNAL PLAN, SHEET 17
- 5] REMOVE CONCRETE CURB AND GUTTER
- 6] REMOVE CONCRETE SIDEWALK
- 7] RELOCATE EX FIRE HYDRANT
- 8] SAWCUT EX PAVEMENT
- 9] FULL DEPTH AC PAVEMENT AND BASE REMOVAL
- 10] REMOVE EX CONCRETE
- 11] ADJUST MANHOLE TO SIDEWALK GRADE, SEE IMPROVEMENT PLAN, SHEET 6
- 12] REMOVE EX PAVERS
- 13] RELOCATE BY OTHERS, OWNER INDICATED ON PLAN
- 14] RELOCATE PARKING LIGHT PER IMPROVEMENT PLAN, SHEET 5
- 15] COLD MILL
- 16] RELOCATE VMD FACILITY PER IMPROVEMENT PLAN, SHEET 6
- 17] REMOVE CONCRETE CURB
- 18] REMOVE EXISTING 18" RCP STORM DRAIN WITHIN R/W. SEAL INLET AND CAP PIPE AT R/W.
- 19] REMOVE PORTION OF EXISTING 36" RCP STORM DRAIN PER STORM DRAIN PLAN, SHEET 10
- 20] REMOVE EXISTING AND INSTALL NEW TRAFFIC CABINET PER TRAFFIC SIGNAL PLAN, SHEET 17
- 21] REMOVE EXISTING JUNCTION STRUCTURE PER STORM DRAIN PLAN, SHEET 11
- 22] REMOVE EXISTING 10" ACP WATER MAIN, SHEET 14
- 23] REMOVE EXISTING TREE (28).
- 24] REMOVE EXISTING 8" PVC STORM DRAIN
- 25] VMD 2" SERVICE TO BE RELOCATED

DEMOLITION LEGEND

- REMOVE EXISTING AC & BASE
- REMOVE CONCRETE
- COLD MILL
- REMOVE PAVERS & DEMO PORTION OF CONCRETE PAD AS INDICATED IN DETAIL 5 ON SHEET 13

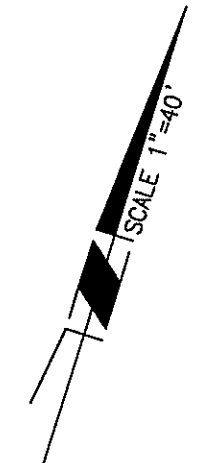
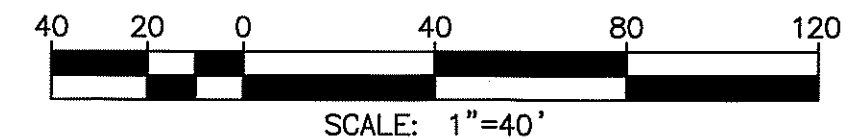
NOTES:

CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS AND PROVIDE CONSTRUCTION WINDOW TO AVOID CONFLICTS WITH ANY TRENCHING, CONDUIT, AND SUBSTRUCTURE IMPROVEMENTS.

EXACT LIMITS SHALL BE DETERMINED BY THE INSPECTOR IN THE FIELD.

SEE IMPROVEMENT PLANS FOR ADDITIONAL DEMOLITION OR CONFLICTS.

FOR EXISTING SIGNS REMOVAL OR RELOCATION, SEE SIGNING AND STRIPING PLAN



PLAN CODE
DM-1

V.W.D. AS-BUILT
By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
mbakerintl.com

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____

RECOMMENDED FOR APPROVAL
By: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: 6/28/21

APPROVED FOR CONSTRUCTION
By: _____
Isaac E. Eberhardy, City Engineer
R.C.E.: 81294 exp.: 02/30/2021
Date: _____

BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND S&S PT. NO. 1021 PER RGS 13928
Location: PT. NO. 1017: N1992455.016 E6270654.395
PT. NO. 1021: N1992450.992 E6274932.043
Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
DEMOLITION PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

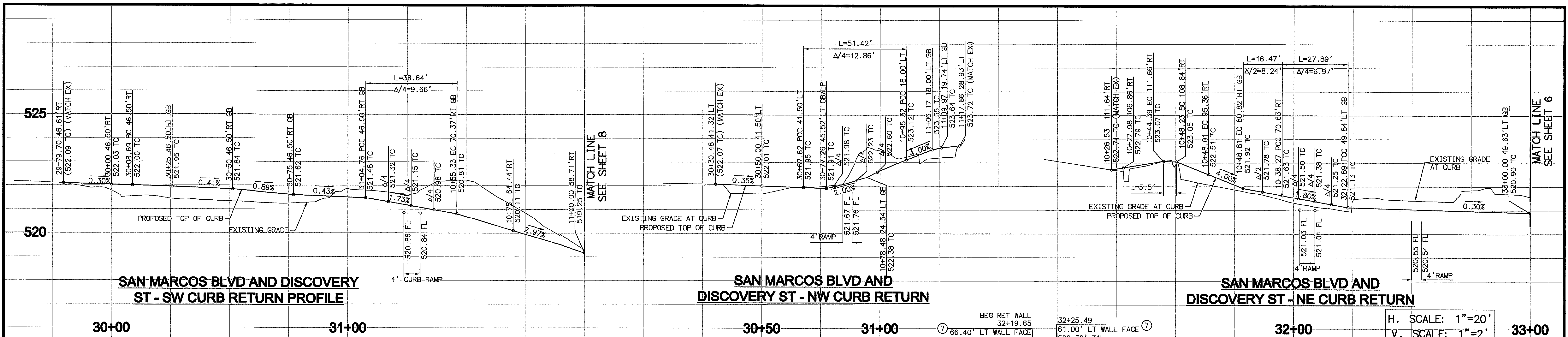
VMD W.D. 207141
City Drawing No. IP18-00009
Sheet 4 of 29

SAN MARCOS FIRE DEPARTMENT
By: _____
JASON NAILON, FIRE MARSHAL
Date: 3-29-21

VALLECITOS WATER DISTRICT
By: _____
JAMES H. GUMPEL, DISTRICT ENGINEER
Date: 4/2/21
R.C.E. C60166 EXP 6/30/2022

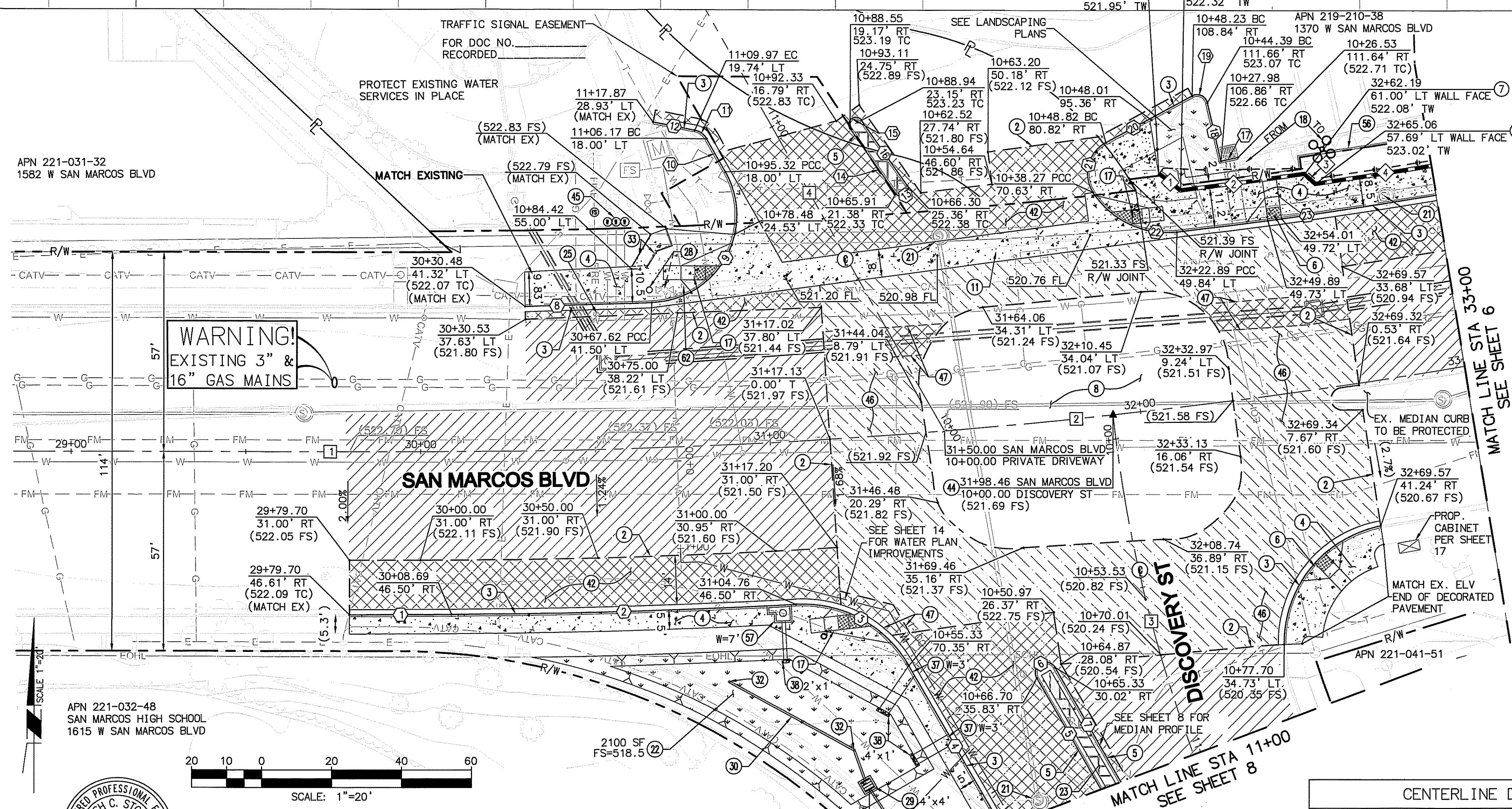
ENGINEER OF WORK
By: _____
Name: JOSH C. STONE
R.C.E.: C60755 exp: 12/31/22

CITY APPROVED CHANGES		
No.	Description	App'd By/Date



CONSTRUCTION NOTES

- 2 SAWCUT EXISTING A.C. PAVEMENT (CURB & GUTTER AND A.C. DIKE IF APPLICABLE)
- 3 CONSTRUCT 6" TYPE G CURB AND GUTTER PER SDRSD G-2
- 4 CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, G-10, & G-11
- 5 CONSTRUCT 6" TYPE 'B-1' MEDIAN CURB PER SDRSD G-6
- 6 CONSTRUCT TYPE A CURB RAMP PER SDRSD G-27
- 7 CONSTRUCT TYPE A GRAVITY WALL PER SDRSD C-9. HEIGHT SHOWN ON WALL DATA TABLE.
- 8 2" AC GRIND AND OVERLAY
- 11 CONSTRUCT CONCRETE CROSS GUTTER PER SDRSD G-12
- 17 CONSTRUCT TYPE D CURB RAMP PER SDRSD G-31
- 18 RELOCATE EXISTING PRIVATE LIGHT
- 21 ADJUST EXISTING SEWER MANHOLE TO GRADE AND LINE ENTIRE MANHOLE WITH COATING (MATCH EXISTING: RAVEN OR ZEBRON) PER VMD STD DWG S-1.
- 22 BIOFILTRATION BASIN PER DETAIL 3 ON SHEET 13
- 23 INSTALL STAMPED CONCRETE MEDIAN PAVEMENT. CONTRACTOR TO PROVIDE THREE SAMPLES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- 25 ADJUST EXISTING VALVE TO NEW GRADE PER VMD SPECIFICATIONS
- 26 EXTEND AND RELOCATE EXISTING FIRE HYDRANT TO NEW RIGHT OF WAY PER VMD W-4 & W-5
- 29 INSTALL MODIFIED TYPE-F CATCH BASIN PER SDRSD D-07. SEE DETAIL ON SHEET 13
- 30 INSTALL 6" PERFORATED PVC DRAIN PIPE
- 31 INSTALL 6" PVC DRAIN PIPE
- 32 INSTALL 6" PVC CLEANOUT PER DETAILS ON SHEET 13
- 33 INSTALL HANDRAILS TO MATCH EXISTING HANDRAILS
- 37 CONSTRUCT REVERSED CURB OUTLET, WITHOUT MANHOLE FRAME AND COVER, PER SDRSD D-25A.
- 38 CONSTRUCT SPLASH PAD PER DETAIL 9 ON SHEET 13
- 42 CONSTRUCT 8" AC/16" AB PER DETAIL ON SHEET 28
- 44 INSTALL CENTER LINE INTERSECTION MONUMENT PER SDRSD M-10
- 45 PROTECT EXISTING WATER SERVICE IN PLACE
- 46 OVERLAY CONCRETE PER DETAIL 5 ON SHEET 13
- 47 CONTRACTOR TO SAWCUT AND REMOVE PORTIONS OF EXISTING CONCRETE PAD FOR BRICK PAVEMENT CONFLICT WITH PLACEMENT OF STORM DRAIN FACILITY.
- 56 CONSTRUCT CONCRETE MOW CURB PER SDRSD L-03
- 57 INSTALL MODIFIED SDRSD D-02 TYPE B CURB INLET PER DETAIL ON SHEET 13
- 62 ADJUST FIRE SERVICE WATER VALVE TO GRADE PER VMD SPECIFICATIONS



LEGEND

- PROPOSED FULL DEPTH PAVING
SEE CONSTRUCTION NOTE 42
- PROPOSED PAVING
SEE CONSTRUCTION NOTE 46
- PROPOSED 2" AC GRIND AND OVERLAY
- PROPOSED SLURRY SEAL
- PROPOSED MONOLITHIC SIDEWALK

CURB DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N89°51'49"W	---	29.20'	6" CURB AND GUTTER
2	03°03'29"W	1846.50'	98.55'	6" CURB AND GUTTER
3	63°15'42"W	35.00'	38.64'	6" CURB AND GUTTER
4	N29°39'36"W	---	53.13'	6" CURB AND GUTTER
5	N29°39'36"W	---	36.73'	6" MEDIAN CURB
6	180°00'00"	3.00'	9.42'	6" MEDIAN CURB
7	N29°39'36"W	---	37.73'	6" MEDIAN CURB
8	N88°32'52"E	---	36.30'	6" CURB AND GUTTER
9	117°50'39"	25.00'	51.42'	6" CURB AND GUTTER
10	N29°17'47"W	---	10.85'	6" CURB AND GUTTER
11	49°19'37"	5.00'	4.30'	6" CURB AND GUTTER
12	N78°37'24"W	---	12.12'	6" CURB AND GUTTER
13	180°00'00"	2.00'	6.28'	6" MEDIAN CURB
14	N34°52'49"W	---	22.74'	6" MEDIAN CURB
15	180°00'00"	2.00'	6.28'	6" MEDIAN CURB
16	N34°52'49"W	---	22.74'	6" MEDIAN CURB
17	N77°34'32"E	---	5.00'	6" CURB
18	N12°59'49"W	---	17.10'	6" CURB
19	105°05'46"	3.00'	5.50'	6" CURB
20	N61°54'25"E	---	28.02'	6" CURB
21	94°23'21"	10.00'	16.47'	6" CURB
22	63°55'04"	25.00'	27.89'	6" CURB AND GUTTER
23	02°42'14"	1590.00'	75.03'	6" CURB AND GUTTER

RETAINING WALL DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	HEIGHT	TYPE
1	N51°49'16"W	---	7.66'	6" TO 1'	A, SDRSD C-09
2	N82°39'18"E	---	35.66'	1'	A, SDRSD C-09
3	N47°56'43"W	---	4.31'	1' TO 2'	A, SDRSD C-09
4	01°13'34"	1581.50'	33.84'	2'	A, SDRSD C-09

CENTERLINE DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N89°36'47"W	---	117.27'	SAN MARCOS BLVD
2	17°21'17"	1800.00'	299.18'	SAN MARCOS BLVD
3	40°30'46"	400.00'	100.00'	DISCOVERY ST
4	N29°17'47"W	---	176.24'	DISCOVERY ST

PLAN CODE
IM-1

V.W.D. AS-BUILT

By: _____
Date: _____
R.C.E. No. _____ EXP. _____

SAN MARCOS FIRE DEPARTMENT
By: JASON NAILON, FIRE MARSHAL
Date: 3/2/2021

VALLECITOS WATER DISTRICT
By: JAMES H. GUMPEL, DISTRICT ENGINEER
Date: 4/2/21
RCE: C60160/EXP: 6/30/2022

Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

REGISTERED PROFESSIONAL ENGINEER
JOSH C. STONE
NO. 80755
Exp. 12-31-22
CIVIL
STATE OF CALIFORNIA

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: _____
Date: _____
Public Works Inspector

RECOMMENDED FOR APPROVAL

By: Lewis Clapp, Senior Civil Engineer
R.C.E.: 76983 exp.: 12/31/2022
Date: 6/28/21

APPROVED FOR CONSTRUCTION

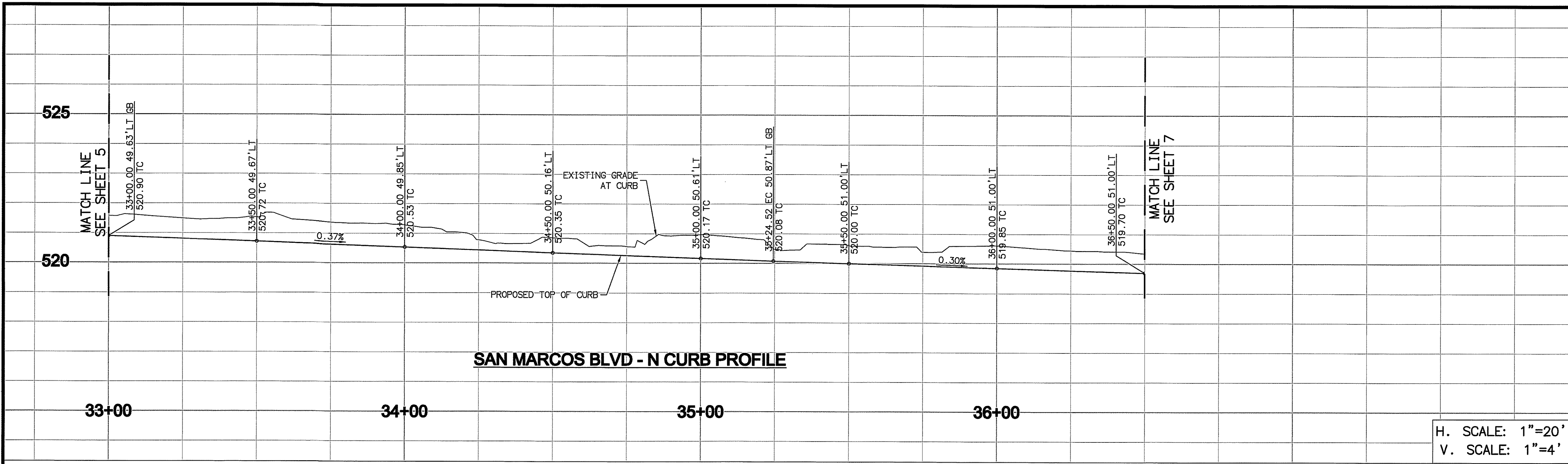
By: _____
Date: _____
City Engineer

BENCH MARK

Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER RGS 13928
Location: PT. NO. 1017; N1992455.016 E6270654.355
PT. NO. 1021; N1992450.892 E6274832.043
Elev.: 513.042 [510.736] Datum: NAVD 1988 [NVD VMD 29]

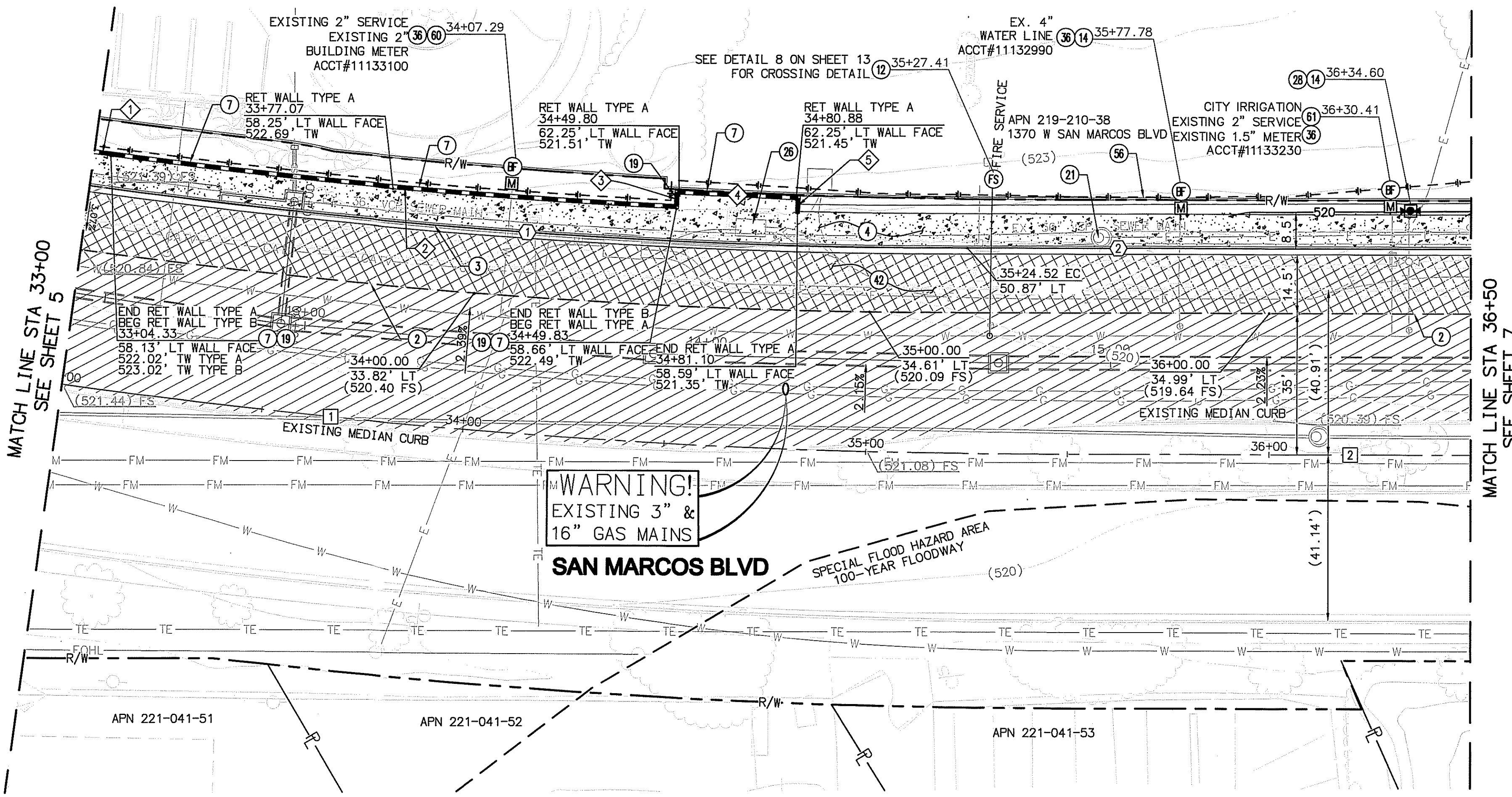
CITY OF SAN MARCOS ENGINEERING DIVISION
IMPROVEMENT PLAN AND PROFILE FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

City Drawing No. IP18-00009
Sheet 5 of 29



H. SCALE: 1"=20'
V. SCALE: 1"=4'

- ### CONSTRUCTION NOTES
- 2 SAWCUT EXISTING A.C. PAVEMENT (CURB & GUTTER AND A.C. DIKE IF APPLICABLE)
 - 3 CONSTRUCT 6" TYPE G CURB AND GUTTER PER SDRSD G-2
 - 4 CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, G-10, & G-11
 - 7 CONSTRUCT TYPE A GRAVITY WALL PER SDRSD C-9. HEIGHT SHOWN ON WALL DATA TABLE.
 - 12 EXTEND AND RELOCATE EXISTING FIRE SERVICE TO NEW RIGHT OF WAY AND ADJUST LINE TO GRADE PER VMD STD DWG W-13. RECERTIFY BACKFLOW DEVICE PER VMD STD DWG W-7 & W-19
 - 14 EXTEND SERVICE TO NEW R/W
 - 18 CONSTRUCT TYPE B GRAVITY WALL PER SDRSD C-09. HEIGHT SHOWN ON WALL DATA TABLE.
 - 21 ADJUST EXISTING SEWER MANHOLE TO GRADE AND LINE ENTIRE MANHOLE WITH COATING (MATCH EXISTING: RAVEN OR ZEBRON) PER VMD STD DWG S-1.
 - 26 EXISTING CABINET TO BE ADJUSTED BY SD&E
 - 28 EXTEND AND RELOCATE EXISTING FIRE HYDRANT TO NEW RIGHT OF WAY PER VMDSD W-4 & W-5
 - 36 EXTEND 6" SERVICE AND RELOCATE EXISTING 4" WATER METER ABOVE GROUND TO NEW RIGHT OF WAY. REMOVE VAULT AND INSTALL NEW BACKFLOW DEVICE. BACKFLOW DEVICE TO BE CERTIFIED PER VMD STD. W-11 & W-19
 - 42 CONSTRUCT 8" AC/16" AB PER DETAIL ON SHEET 28
 - 56 CONSTRUCT CONCRETE MOW CURB PER SDRSD L-03
 - 60 EXTEND AND RELOCATE EXISTING 2" WATER SERVICE TO NEW RIGHT OF WAY, RELOCATE EXISTING 2" WATER METER. INSTALL NEW BACKFLOW DEVICE. BACKFLOW DEVICE TO BE CERTIFIED PER VMD STD. W-11 & W-19
 - 61 EXTEND AND RELOCATE EXISTING 2" WATER SERVICE TO NEW RIGHT OF WAY, RELOCATE EXISTING 1.5" WATER METER. INSTALL NEW BACKFLOW DEVICE. BACKFLOW DEVICE TO BE CERTIFIED PER VMD STD. W-11 & W-19



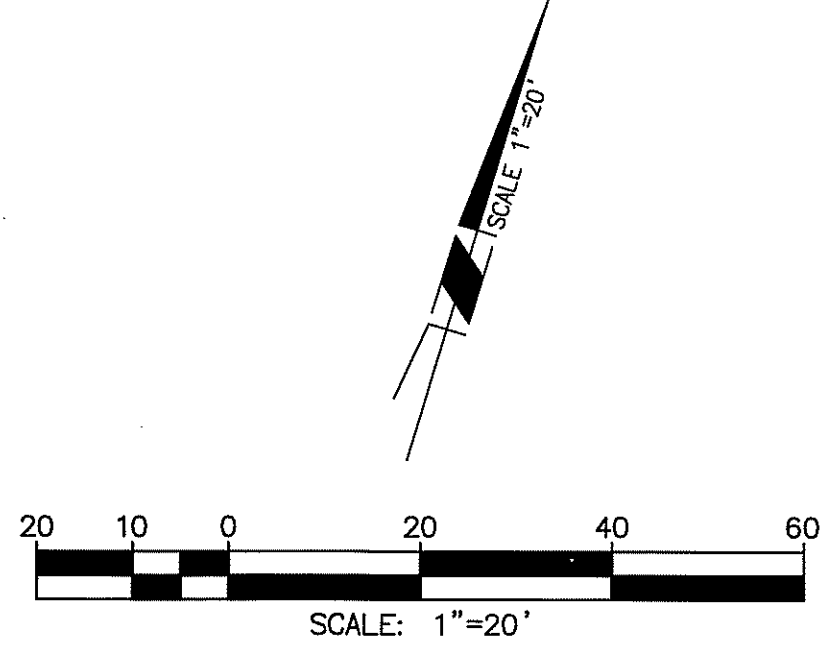
NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	17°21'17"	1800.00'	246.04'	SAN MARCOS BLVD
2	N73°01'56"E	---	103.96'	SAN MARCOS BLVD

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	07°51'57"	1590.00'	218.28'	6" CURB AND GUTTER
2	N73°01'56"E	---	124.87'	6" CURB AND GUTTER

NO	BEARING/Delta	RADIUS	LENGTH	HEIGHT	TYPE
1	00°09'05"	1581.50'	4.18'	2' MAX	A, SDRSD C-9
2	05°06'02"	1581.50'	140.79'	±3'	B, SDRSD C-9
3	N 14°14'22" W	---	3.60'	2' MAX	A, SDRSD C-9
4	N 75°37'03" E	---	30.00'	2' MAX	A, SDRSD C-9
5	N 15°25'31" W	---	3.83'	2' MAX	A, SDRSD C-9

LEGEND

- PROPOSED FULL DEPTH PAVING
SEE CONSTRUCTION NOTE 42
- PROPOSED 2" AC GRIND AND OVERLAY
- PROPOSED SLURRY SEAL
- PROPOSED MONOLITHIC SIDEWALK



PLAN CODE
IM-2

V.W.D. AS-BUILT
By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL

5050 Avenida Encinas
Suite 280
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: _____
Date: _____
Public Works Inspector

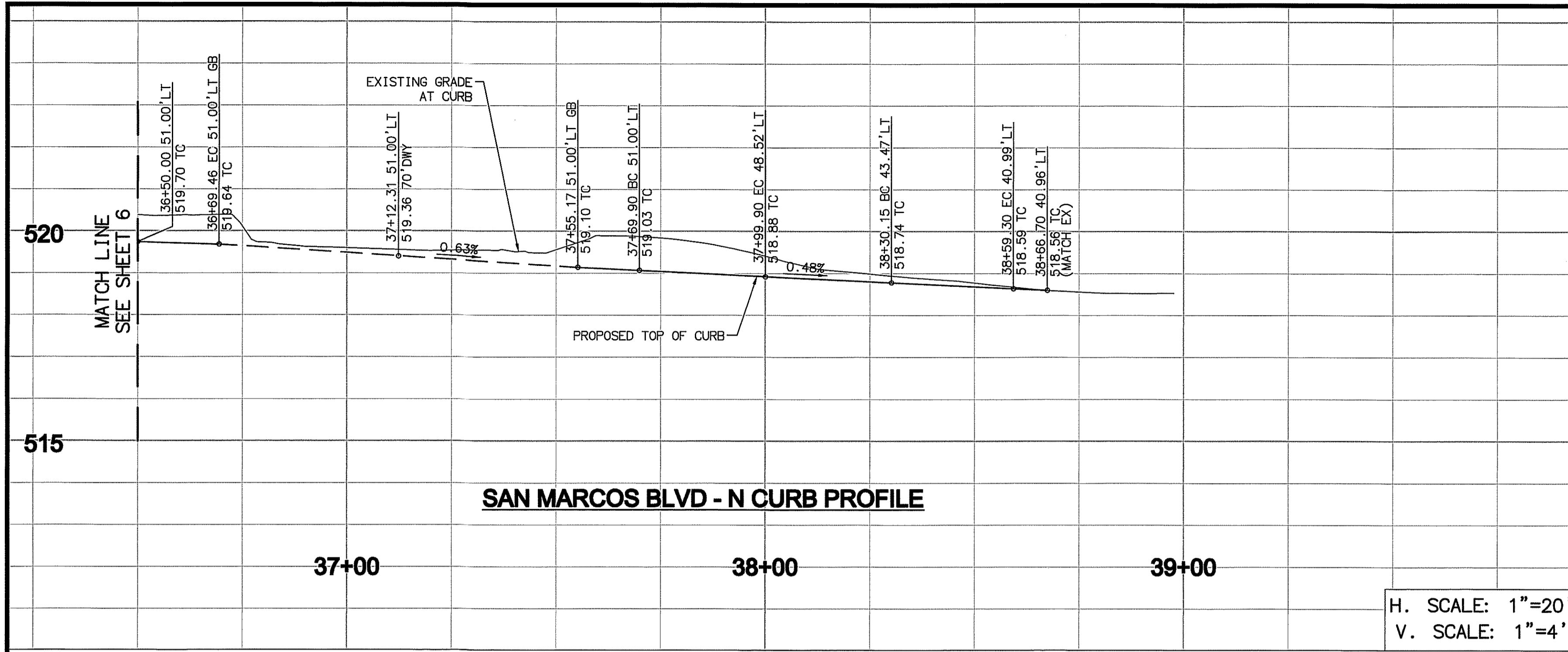
RECOMMENDED FOR APPROVAL
By: _____
Date: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022

APPROVED FOR CONSTRUCTION
By: _____
Date: _____
Isaac Etchamendy, City Engineer
R.C.E.: 21294 exp.: 07/31/2021

BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER RDS 13928
Location: PT. NO. 1017: N1992455.016 E6270854.355
PT. NO. 1021: N1992450.982 E6274832.043
Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
IMPROVEMENT PLAN AND PROFILE FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

VMD NO. 207141
City Drawing No. IP18-00009
Sheet 6 of 29

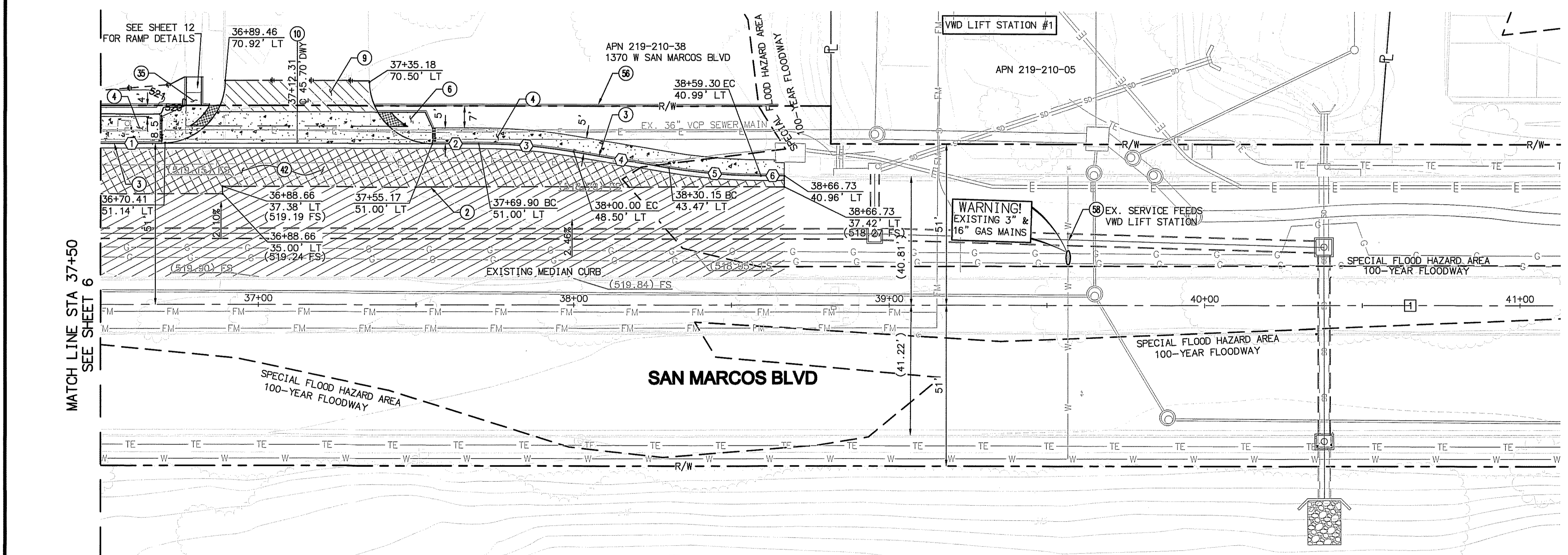


- ### CONSTRUCTION NOTES
- ② SAWCUT EXISTING A.C. PAVEMENT (CURB & GUTTER AND A.C. DIKE IF APPLICABLE)
 - ③ CONSTRUCT 6" TYPE G CURB AND GUTTER PER SDRSD G-2
 - ④ CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, G-10, & G-11
 - ⑥ CONSTRUCT TYPE A CURB RAMP PER SDRSD G-27
 - ⑨ CONSTRUCT 4" AC OVER 6" AB DRIVEWAY TRANSITION
 - ⑩ CONSTRUCT RADIUS TYPE DRIVEWAY PER CITY OF SAN MARCOS STANDARD DRAWING
 - ⑫ CONSTRUCT MODIFIED TYPE-D CURB RAMP PER SDRSD G-31 AND DETAIL ON SHEET 8
 - ⑬ CONSTRUCT 8" AC/16" AB PER DETAIL ON SHEET 28
 - ⑭ CONSTRUCT CONCRETE MOW CURB PER SDRSD L-03
 - ⑮ ADJUST VWD WATER SERVICE CROSSING PER DETAIL AND PROFILE ON SHEET 29

LEGEND

PROPOSED FULL DEPTH PAVING SEE CONSTRUCTION NOTE 42	
PROPOSED 2" AC GRIND AND OVERLAY	
PROPOSED SLURRY SEAL	
PROPOSED MONOLITHIC SIDEWALK	

H. SCALE: 1"=20'
V. SCALE: 1"=4'

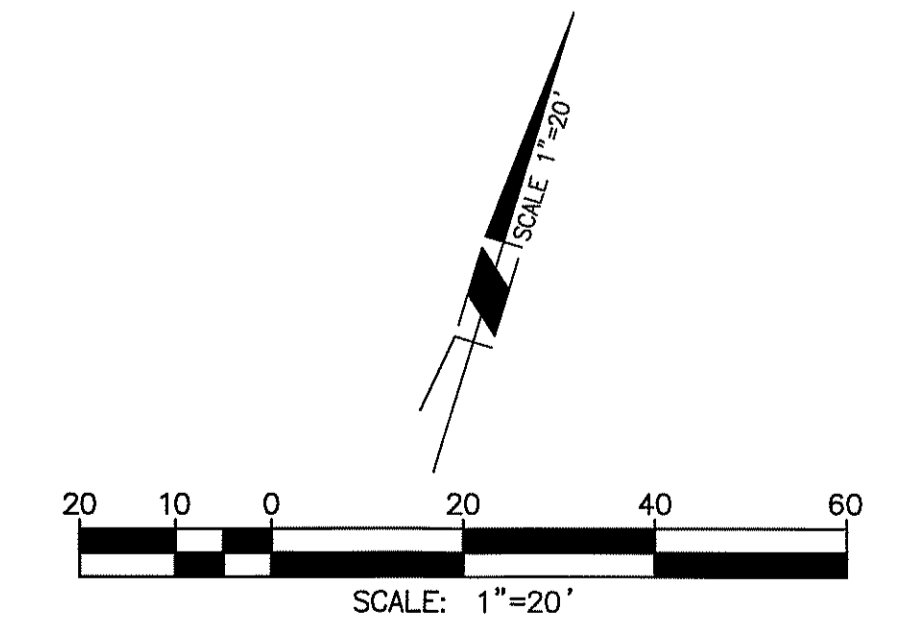


CENTERLINE DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N73°01'56"E	---	362.93'	SAN MARCOS BLVD

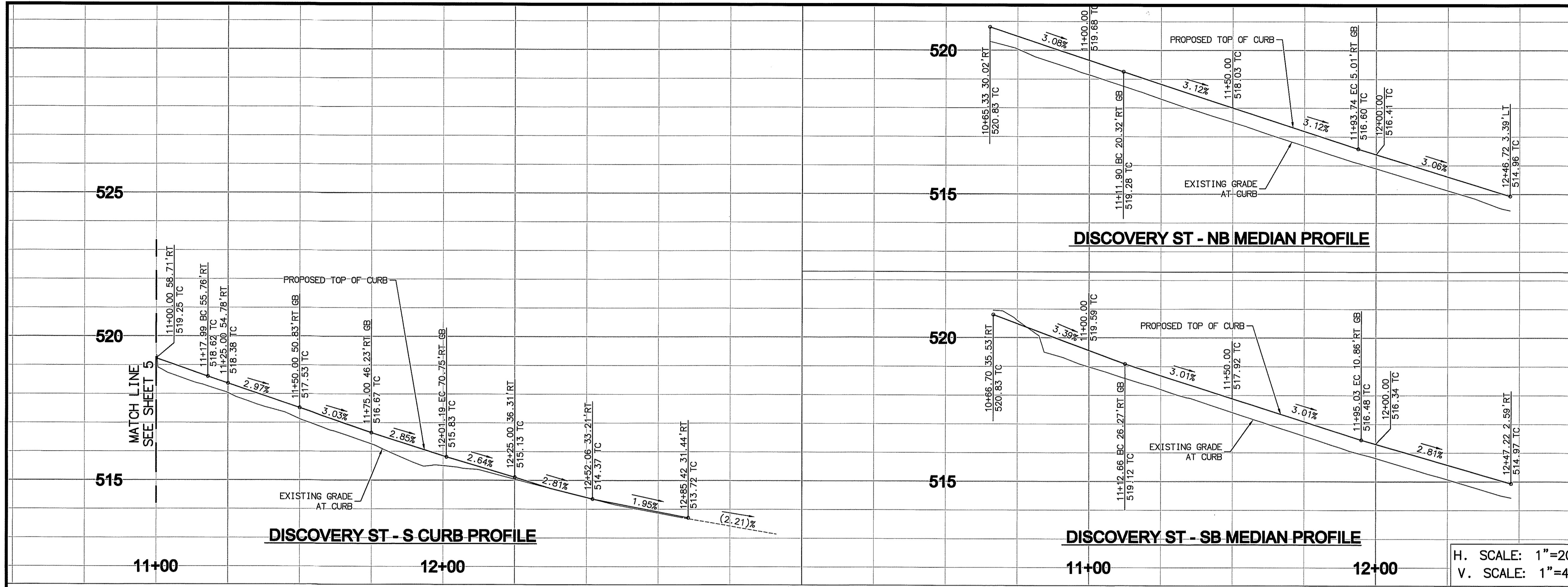
CURB DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N73°01'56"E	---	19.46'	6" CURB AND GUTTER
2	N73°01'56"E	---	14.73'	6" CURB AND GUTTER
3	09°27'45"	182.50'	30.14'	6" CURB AND GUTTER
4	N82°29'41"E	---	30.67'	6" CURB AND GUTTER
5	09°11'40"	182.50'	29.29'	6" CURB AND GUTTER
6	N73°18'01"E	---	7.40'	6" CURB AND GUTTER



PLAN CODE
IM-3

<p>V.W.D. AS-BUILT</p> <p>By: _____</p> <p>Date: _____</p> <p>R.C.E. No. _____ EXP. _____</p>		<p>Michael Baker INTERNATIONAL</p> <p>5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 478-9193 MBAKERINTL.COM</p>	<p>INSPECTED AND RECOMMENDED FOR ACCEPTANCE</p> <p>By: _____</p> <p>Public Works Inspector</p> <p>Date: _____</p>	<p>RECOMMENDED FOR APPROVAL</p> <p>By: _____</p> <p>Lewis Clapp, Senior Civil Engineer</p> <p>R.C.E.: 76583 exp.: 12/31/2022</p> <p>Date: 3/28/21</p>	<p>APPROVED FOR CONSTRUCTION</p> <p>By: _____</p> <p>J. Stone, City Engineer</p> <p>R.C.E.: 81294 exp.: 09/30/2021</p> <p>Date: _____</p>	<p>BENCH MARK</p> <p>Description: CITY OF SAN MARCOS GPS PT. NO. 1012 AND GPS PT. NO. 1021 PER RGS 1392B</p> <p>Location: PT. NO. 1012: N1892455.016 E6270654.355 PT. NO. 1021: N1992450.892 E6274832.043 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]</p>	<p>CITY OF SAN MARCOS ENGINEERING DIVISION</p> <p>IMPROVEMENT PLAN AND PROFILE FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION</p> <p>City Drawing No. IP18-00009 Sheet 7 of 29</p>
---	--	---	---	---	---	---	--

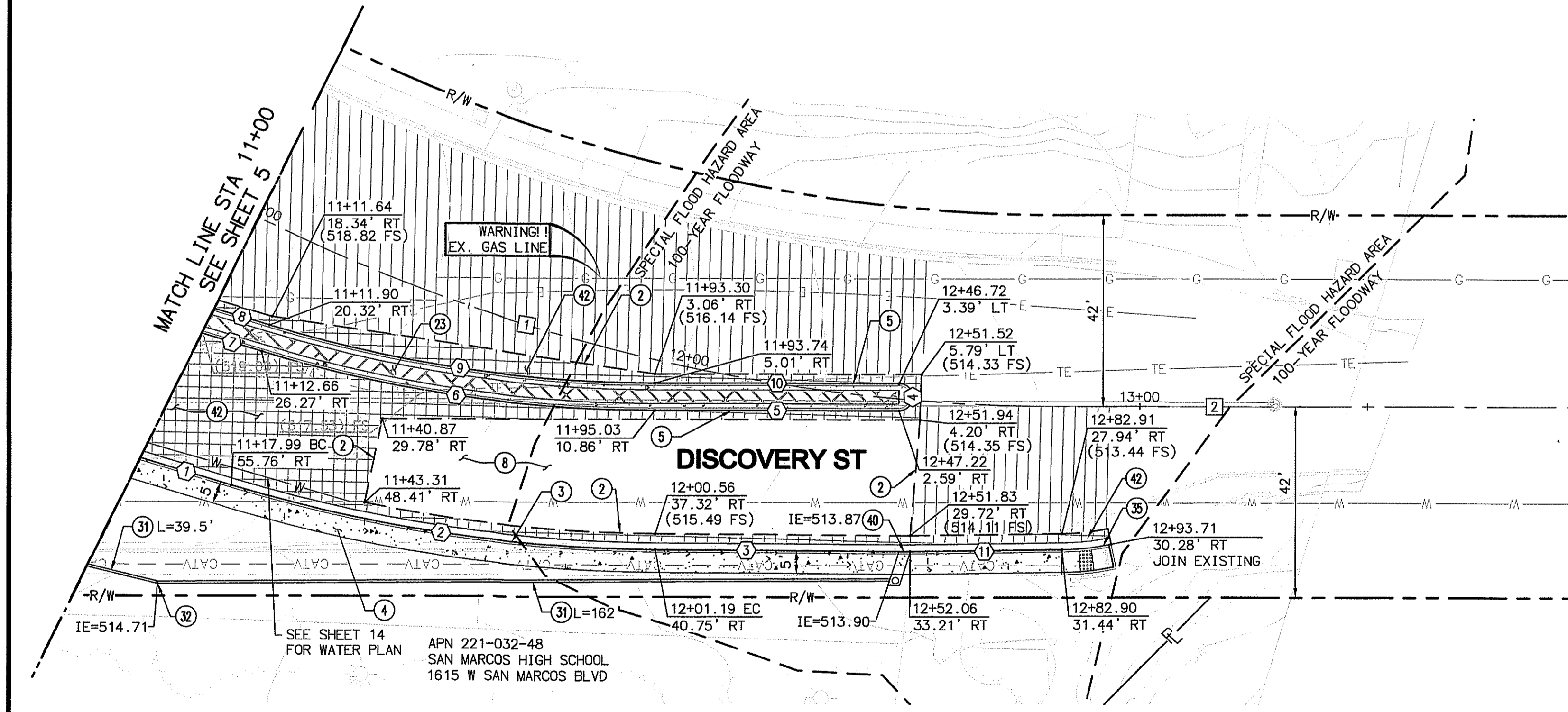


- ### CONSTRUCTION NOTES
- 2 SAWCUT EXISTING A.C. PAVEMENT (CURB & GUTTER AND A.C. DIKE IF APPLICABLE)
 - 3 CONSTRUCT 6" TYPE G CURB AND GUTTER PER SDRSD G-2
 - 4 CONSTRUCT 4" PCC SIDEWALK PER SDRSD G-7, G-9, G-10, & G-11
 - 5 CONSTRUCT 6" TYPE 'B-1' MEDIAN CURB PER SDRSD G-6
 - 8 2" AC GRIND AND OVERLAY
 - 23 INSTALL STAMPED CONCRETE MEDIAN PAVEMENT. CONTRACTOR TO PROVIDE THREE SAMPLES TO THE ENGINEER PRIOR TO CONSTRUCTION.
 - 31 INSTALL 6" PVC DRAIN PIPE
 - 32 INSTALL 6" PVC CLEANOUT PER DETAILS ON SHEET 13
 - 35 CONSTRUCT MODIFIED TYPE-D CURB RAMP PER SDRSD G-31 AND DETAIL ON SHEET 8
 - 40 MODIFIED TYPE "A" CURB OUTLET PER SDRSD D-25A. CONNECT 6" PVC DRAIN PIPE TO THE SIDE OF THE OUTLET
 - 42 CONSTRUCT 8" AC/16" AB PER DETAIL ON SHEET 28

LEGEND

PROPOSED FULL DEPTH PAVING SEE CONSTRUCTION NOTE 42	
PROPOSED 2" AC GRIND AND OVERLAY	
PROPOSED SLURRY SEAL	
PROPOSED MONOLITHIC SIDEWALK	

H. SCALE: 1"=20'
V. SCALE: 1"=4'

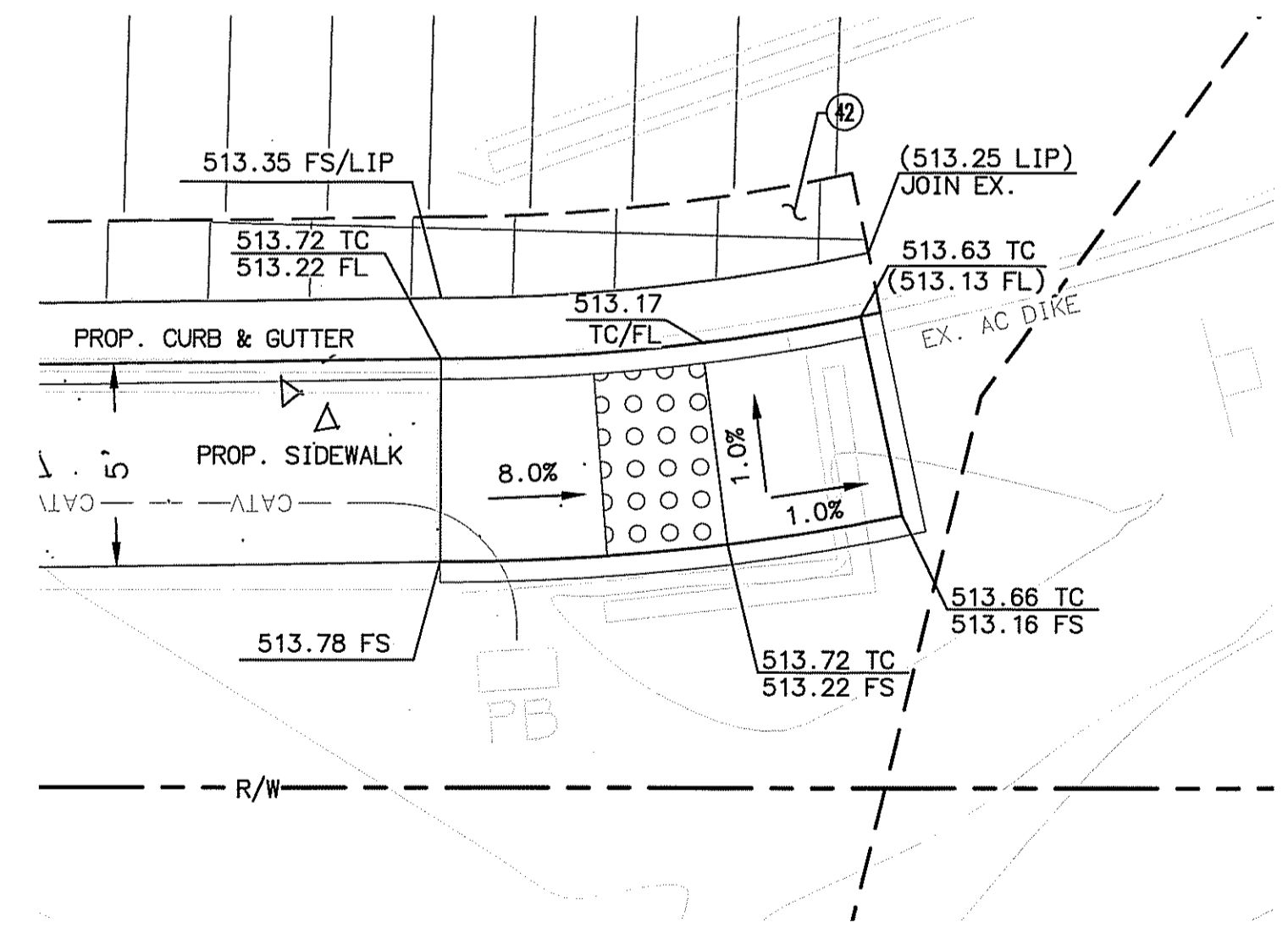


CENTERLINE DATA TABLE

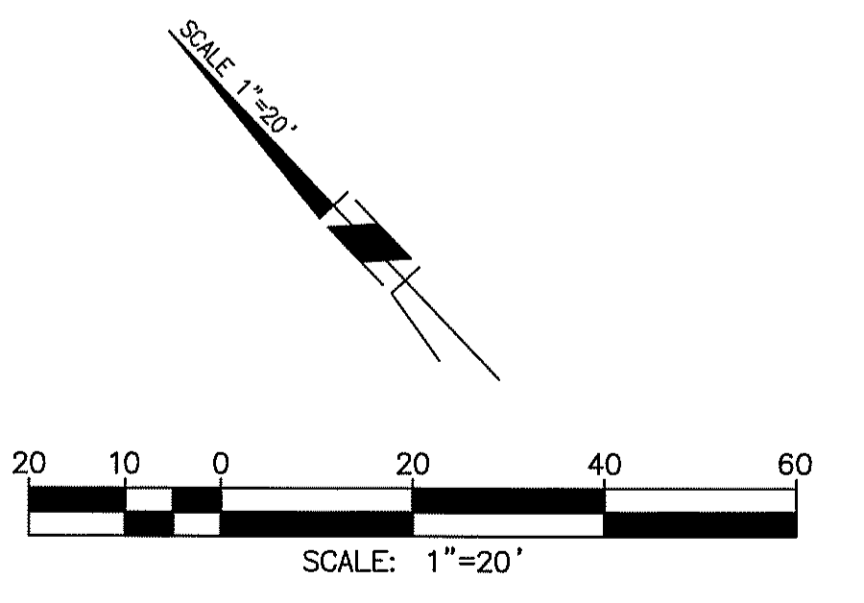
NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	16°45'04"	600.00'	182.83'	DISCOVERY ST
2	N46°24'40"W	---	117.17'	DISCOVERY ST

CURB DATA TABLE

NO	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N29°39'36"W	---	20.77'	6" CURB AND GUTTER
2	16°25'18"	330.00'	94.58'	6" CURB AND GUTTER
3	N46°04'54"W	---	40.00'	6" CURB AND GUTTER
4	180°41'40"	3.00'	9.46'	6" MEDIAN CURB
5	N46°24'40"W	---	53.67'	6" MEDIAN CURB
6	16°45'04"	300.00'	87.71'	6" MEDIAN CURB
7	N29°39'36"W	---	13.67'	6" MEDIAN CURB
8	N29°39'36"W	---	12.67'	6" MEDIAN CURB
9	16°45'04"	294.00'	85.95'	6" MEDIAN CURB
10	N46°24'40"W	---	53.67'	6" MEDIAN CURB
11	N47°14'39"W	---	33.36'	6" MEDIAN CURB



DISCOVERY STREET PED RAMP
(SCALE 1"=4')

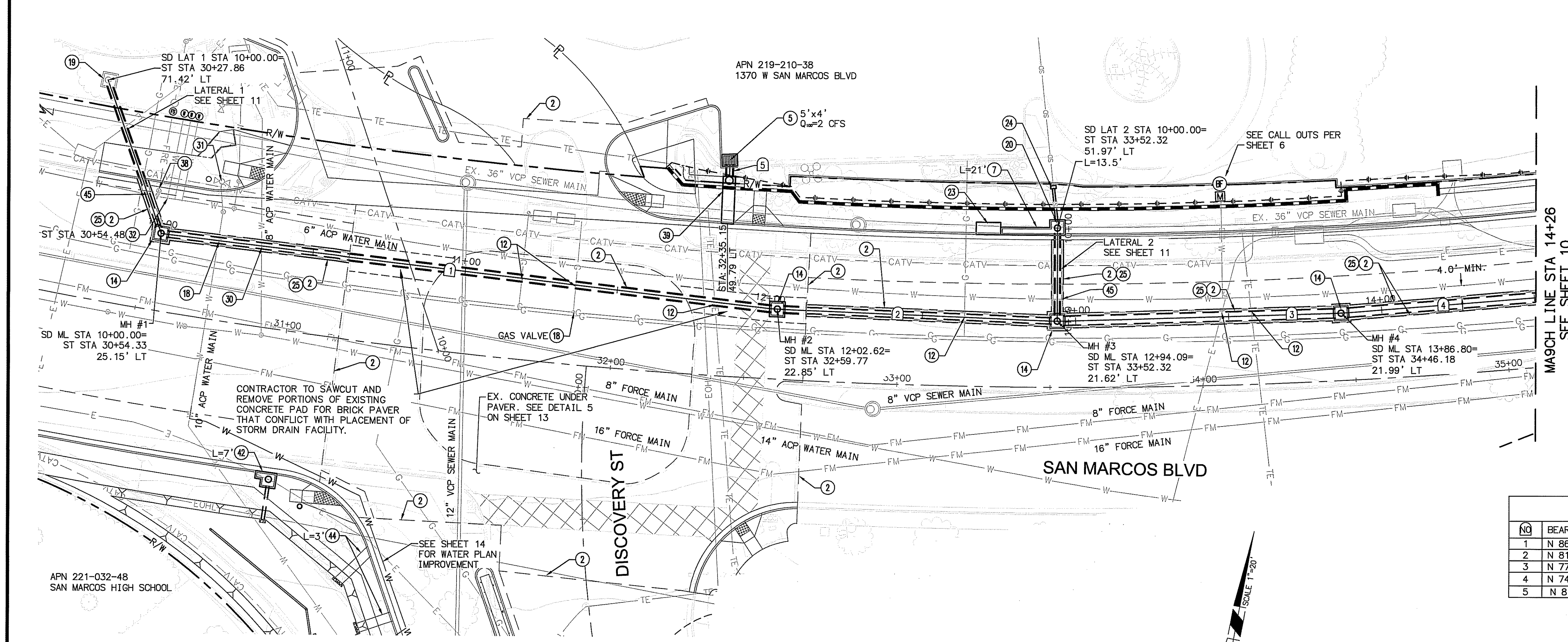
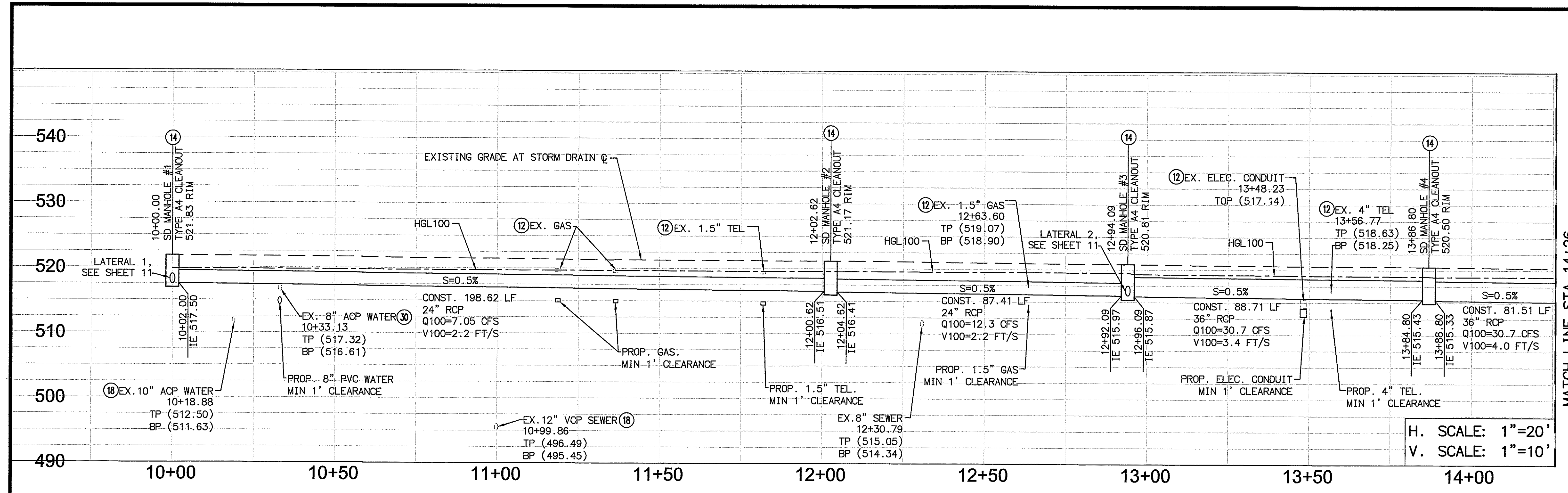


V.W.D. AS-BUILT By: _____ Date: _____ R.C.E. No. _____ EXP. _____				Michael Baker INTERNATIONAL 5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193 MBAKERINTL.COM		INSPECTED AND RECOMMENDED FOR ACCEPTANCE By: Public Works Inspector Date: _____		RECOMMENDED FOR APPROVAL By: Lewis Clapp, Senior Civil Engineer R.C.E.: 76593 exp.: 12/31/2022 Date: 2/23/21		APPROVED FOR CONSTRUCTION By: Isaac E. [Signature] R.C.E.: 21294 exp.: 03/30/2021 Date: _____		BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER RDS 13928 Location: PT. NO. 1017: N1992455.016 E8270654.355 PT. NO. 1021: N1992450.992 E8274932.043 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NAD83 VMD 29]		CITY OF SAN MARCOS ENGINEERING DIVISION IMPROVEMENT PLAN AND PROFILE FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		PLAN CODE IM-4 VMD NO. 207141 City Drawing No. IP18-00009 Sheet 8 of 29	
SAN MARCOS FIRE DEPARTMENT By: JASON NAILON, FIRE MARSHAL Date: 3-29-21		VALLECITOS WATER DISTRICT By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: 3/2/21 RCE: C60180 EXP: 6/30/2022		ENGINEER OF WORK By: JOSH C. STONE Name: JOSH C. STONE R.C.E.: C60755 exp.: 12/31/22		CITY APPROVED CHANGES No. Description App'd By Date		APPROVED FOR APPROVAL By: Lewis Clapp, Senior Civil Engineer R.C.E.: 76593 exp.: 12/31/2022 Date: 2/23/21		APPROVED FOR CONSTRUCTION By: Isaac E. [Signature] R.C.E.: 21294 exp.: 03/30/2021 Date: _____		BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER RDS 13928 Location: PT. NO. 1017: N1992455.016 E8270654.355 PT. NO. 1021: N1992450.992 E8274932.043 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NAD83 VMD 29]		CITY OF SAN MARCOS ENGINEERING DIVISION IMPROVEMENT PLAN AND PROFILE FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		PLAN CODE IM-4 VMD NO. 207141 City Drawing No. IP18-00009 Sheet 8 of 29	

CONSTRUCTION NOTES

- ② SAWCUT EXISTING PAVEMENT
- ⑤ CONSTRUCT SINGLE TYPE G CATCH BASIN WITH STEEL GRATE PER SDRSD D-8, D-13, AND D-15.
- ⑦ CONSTRUCT TYPE-B CURB INLET PER SDRSD D-2. INLET LENGTH INDICATED ON PLANS.
- ⑫ UTILITY LATERAL TO BE ADJUSTED BY UTILITY OWNER. CONTRACTOR TO PROVIDE WINDOW TO UTILITY OWNER FOR ADJUSTMENT.
- ⑭ CONSTRUCT TYPE A4 STORM DRAIN CLEANOUT PER SDRSD D-9, 4' X 4'
- ⑯ PROTECT IN PLACE
- ⑰ REMOVE EXISTING SUMP PUMP AND LUG PROPOSED RCP INTO EXISTING CLEANOUT
- ⑳ REMOVE PORTION OF EXISTING 8" PVC STORM DRAIN PIPE. CONNECT TO PROPOSED INLET
- ㉑ INSTALL 4' X 8' FILTERRA OR CITY-APPROVED EQUAL PER DETAIL ON SHEET 28
- ㉒ INSTALL PIPE COLLAR PER SDRSD D-62
- ㉓ TRENCH, TRENCH BACKFILL, AND RESTORATION PER CITY BACKFILL ORDINANCE. SEE RCP SOIL COVER/PAVEMENT SECTION PER DETAIL ON SHEET 28
- ㉔ INSTALL 8-INCH PVC WATER MAIN CROSSING PER DETAIL AND PROFILE ON SHEET 29
- ㉕ RELOCATE AND RECONNECT FIRE HYDRANT PER VMD STD DWG W-4, W-5 AND W-18
- ㉖ RECONNECT EXISTING WATER SERVICE TO NEW MAIN PER VMD STD DWG W-7
- ㉗ RECONNECT FIRE SERVICE/DETECTOR CHECK PER VMD STD. W-13
- ㉘ CONSTRUCT CURB OUTLET PER SDRSD D-25A
- ㉙ INSTALL MODIFIED SDRSD D-02 TYPE B CURB INLET PER DETAIL ON SHEET 13
- ㉚ CONSTRUCT REVERSED CURB OUTLET, WITHOUT MANHOLE FRAME AND COVER, PER SDRSD D-25A
- ㉛ INSTALL 6-INCH PVC WATER MAIN CROSSING PER DETAIL AND PROFILE ON SHEET 29

NOTE: ALL VMD TRAPEZOIDAL DROPS FOR VMD WATERLINES AND SERVICES NEED TO BE INSTALLED PRIOR TO INSTALLATION OF STORM DRAIN. SEE DETAILS ON SHEET 29.



NO	BEARING/DELTA	RADIUS	LENGTH	PIPE SIZE	D-LOAD	OWNER	NOTE
1	N 86°20'36" E	---	198.62'	24" RCP	D-1600	PUBLIC	WATER TIGHT JOINT
2	N 81°29'30" E	---	87.41'	24" RCP	D-1600	PUBLIC	WATER TIGHT JOINT
3	N 77°26'30" E	---	88.71'	36" RCP	D-1350	PUBLIC	WATER TIGHT JOINT
4	N 74°31'17" E	---	61.95'	36" RCP	D-1350	PUBLIC	WATER TIGHT JOINT
5	N 8°38'27" W	---	3.73'	24" RCP	D-1350	PUBLIC	WATER TIGHT JOINT

V.W.D. AS-BUILT

By: _____

Date: _____

R.C.E. No. _____ EXP. _____

Michael Baker INTERNATIONAL

3050 Avenida Encinas
Suite 200
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: _____

Date: _____

RECOMMENDED FOR APPROVAL

By: _____

Date: _____

APPROVED FOR CONSTRUCTION

By: _____

Date: _____

BENCH MARK

Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND 888 PT. NO. 1021 PER ROS 13928

Location: PT. NO. 1017: N1992455.016 E62702654.355
PT. NO. 1021: N1992450.992 E6274932.043
Elev: 513.042 (510.736) Datum: NAVD 1988 (NSVD VMD 21)

SAN MARCOS FIRE DEPARTMENT

By: _____

Date: _____

VALLECITOS WATER DISTRICT

By: _____

Date: _____

ENGINEER OF WORK

By: _____

Date: _____

CITY APPROVED CHANGES

No.	Description	App'd By	Date

RECOMMENDED FOR APPROVAL

By: _____

Date: _____

APPROVED FOR CONSTRUCTION

By: _____

Date: _____

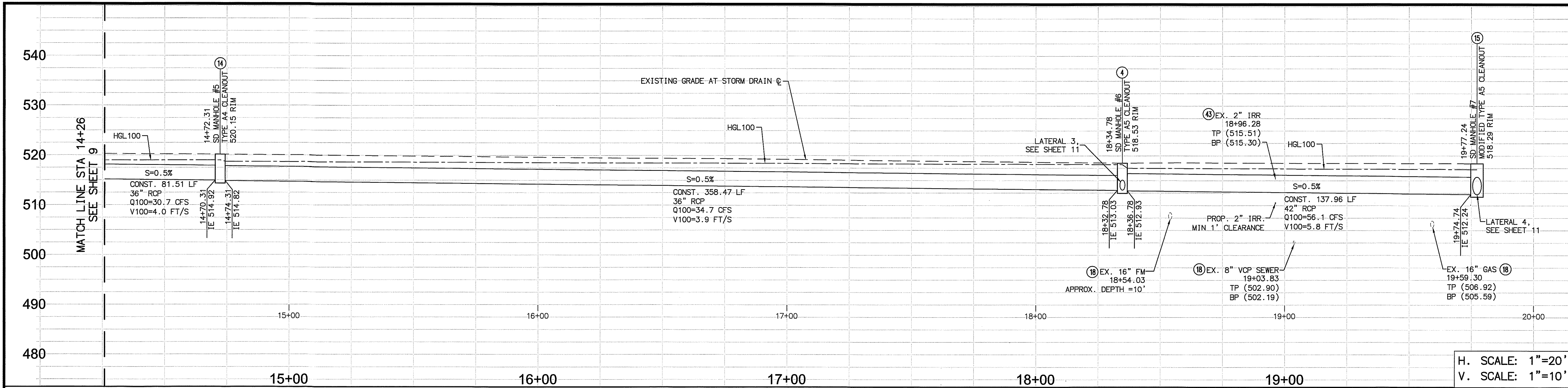
PLAN CODE SD-1

W.D. NO. 207141

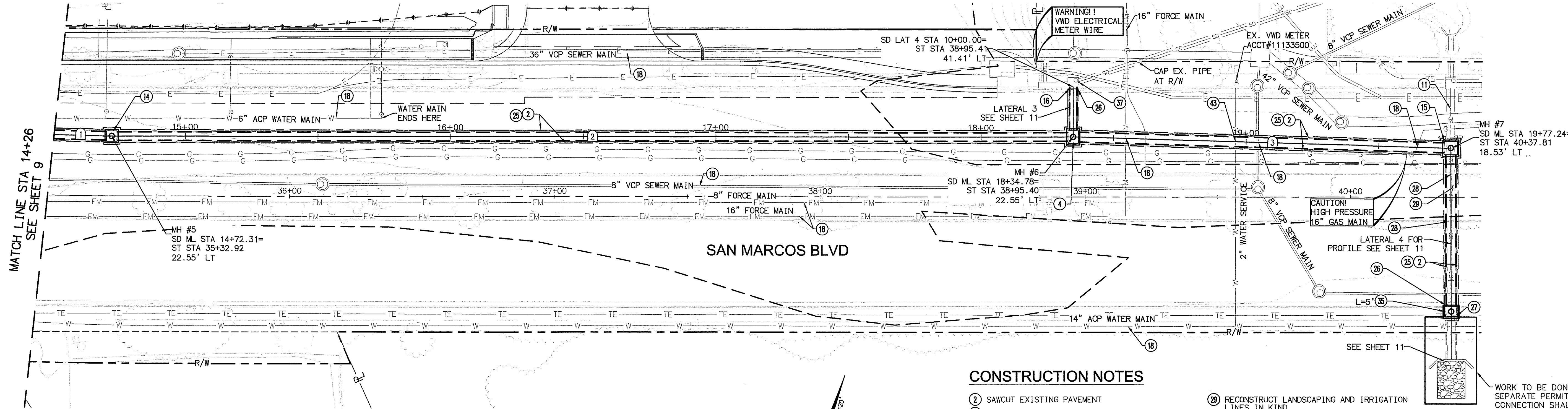
CITY OF SAN MARCOS ENGINEERING DIVISION

City Drawing No. IP18-00009

Sheet 9 of 29



H. SCALE: 1"=20'
V. SCALE: 1"=10'

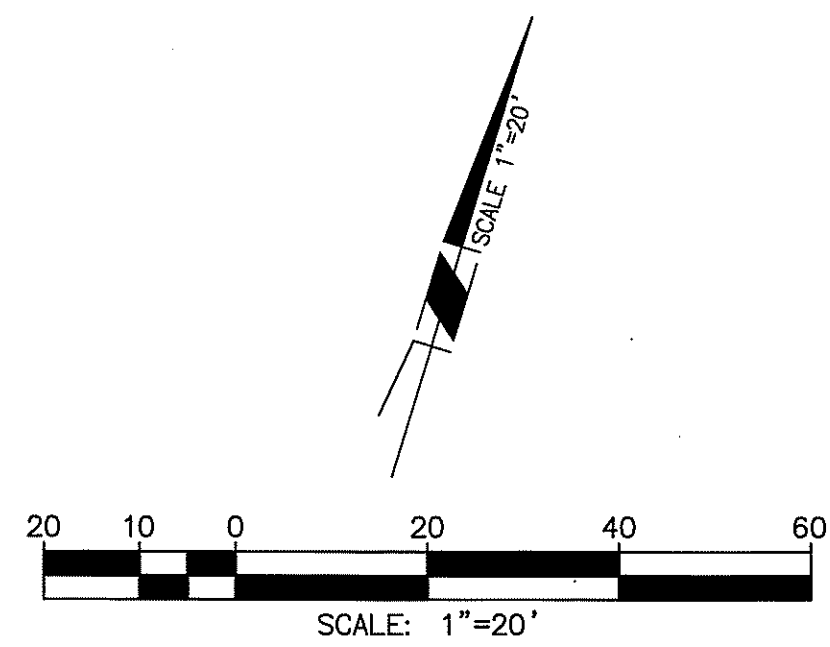


CONSTRUCTION NOTES

- 2 SAWCUT EXISTING PAVEMENT
- 4 CONSTRUCT TYPE A5 STORM DRAIN CLEANOUT PER SDRSD D-9, 5' X 4'
- 11 PROTECT EXISTING STORM DRAIN LINE.
- 14 CONSTRUCT TYPE A4 STORM DRAIN CLEANOUT PER SDRSD D-9, 4' X 4'
- 15 CONSTRUCT MODIFIED TYPE A5 STORM DRAIN CLEANOUT PER SDRSD D-9, 5' X 5'
- 16 CONSTRUCT MODIFIED CONCRETE LUG PER DETAIL 7 ON SHEET 13.
- 18 PROTECT IN PLACE
- 25 TRENCH, TRENCH BACKFILL, AND RESTORATION PER CITY BACKFILL ORDINANCE. SEE RCP SOIL COVER/PAVEMENT SECTION PER DETAIL ON SHEET 25
- 26 REPLACE CURB & GUTTER IN KIND. SAW-CUT AT NEAREST JOINT
- 27 REPLACE ANY DAMAGED SIDEWALK IN KIND
- 28 REPLACE MEDIAN CURB IN KIND. SAW-CUT AT NEAREST JOINT
- 29 RECONSTRUCT LANDSCAPING AND IRRIGATION LINES IN KIND
- 35 REMOVE EXISTING JUNCTION STRUCTURE AND CONSTRUCT A TYPE "B" CURB INLET PER SDRSD D-02
- 37 REMOVE EXISTING RCP STORM DRAIN AND PATCH OPENING IN EXISTING CATCH BASIN. PATCH EXISTING OPENING LEFT BY RCP PIPE REMOVAL WITH BRICK AND MORTAR AND APPLY FINAL COAT OF MORTAR TO PROVIDE SMOOTH FINISH. BACKFILL PIPESIDE OF CATCH BASIN IN SHALLOW LIFTS TO ENSURE 90% COMPACTION.
- 43 2" WATER SERVICE DIP CROSSING FOR VMD LIFT STATION METER PER DETAIL AND PROFILE ON SHEET 29

NOTE:
ALL VMD TRAPEZOIDAL DROPS FOR VMD WATERLINES AND SERVICES NEED TO BE INSTALLED PRIOR TO INSTALLATION OF STORM DRAIN. SEE DETAILS ON SHEET 29.

NO	BEARING/Delta	RADIUS	LENGTH	PIPE SIZE	D-LOAD	OWNER	NOTE
1	N 74°31'17" E	---	19.56'	36" RCP	D-1350	PUBLIC	WATER TIGHT JOINT
2	N 73°01'56" E	---	358.47'	36" RCP	D-1350	PUBLIC	WATER TIGHT JOINT
3	N 74°38'28" E	---	137.96'	42" RCP	D-1350	PUBLIC	WATER TIGHT JOINT



V.V.D. AS-BUILT
By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 280
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____

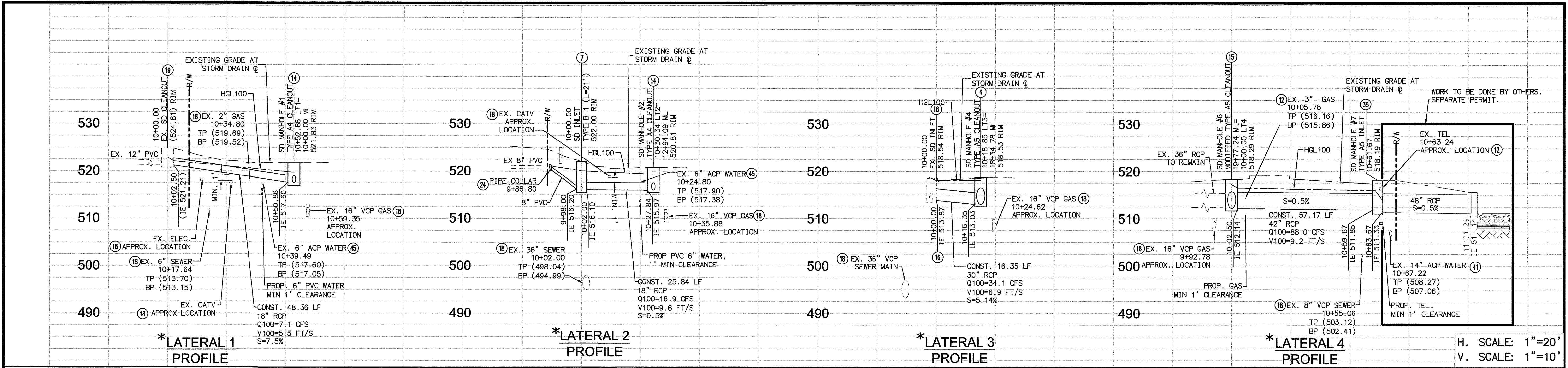
RECOMMENDED FOR APPROVAL
By: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: 6/28/21

APPROVED FOR CONSTRUCTION
By: _____
City Engineer
R.C.E.: 1234 exp.: 09/30/2021
Date: _____

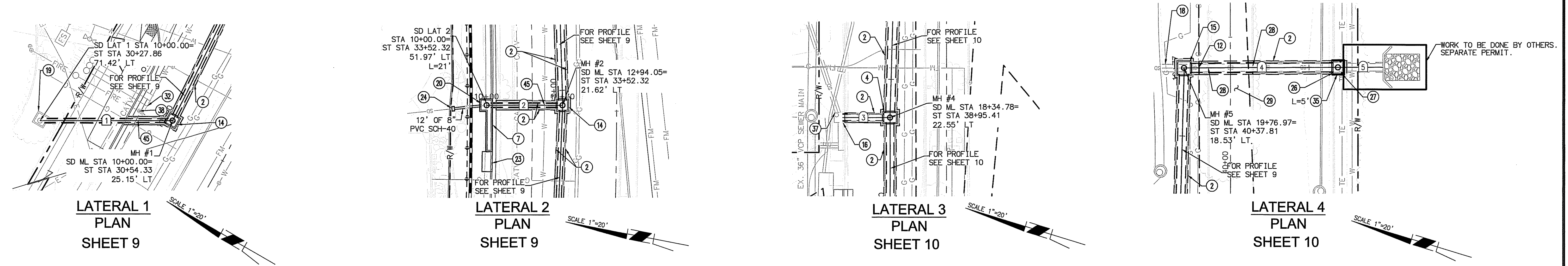
BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928
Location: PT. NO. 1017: N1992455.016 E6220654.355
PT. NO. 1021: N1992450.992 E6274932.043
Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
STORM DRAIN PLAN AND PROFILE FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
City Drawing No. IP18-00009
Sheet 10 of 29

PLAN CODE
SD-2



* = SDG&E TO BE ON STAND-BY DURING EXCAVATION.



CONSTRUCTION NOTES

- (2) SAWCUT EXISTING PAVEMENT
- (4) CONSTRUCT TYPE A5 STORM DRAIN CLEANOUT PER SDRSD D-9, 5' X 4'
- (7) CONSTRUCT TYPE-B CURB INLET PER SDRSD D-2. INLET LENGTH INDICATED ON PLANS.
- (12) UTILITY LATERAL TO BE ADJUSTED BY UTILITY OWNER. CONTRACTOR TO PROVIDE WINDOW TO UTILITY OWNER FOR ADJUSTMENT.
- (14) CONSTRUCT TYPE A4 STORM DRAIN CLEANOUT PER SDRSD D-9, 4' X 4'
- (15) CONSTRUCT MODIFIED TYPE A5 STORM DRAIN CLEANOUT PER SDRSD D-9, 5' X 5'
- (16) CONSTRUCT MODIFIED CONCRETE LUG PER DETAIL 7 ON SHEET 13.
- (18) PROTECT IN PLACE
- (19) REMOVE EXISTING SUMP PUMP AND LUG PROPOSED RCP INTO EXISTING CLEANOUT
- (20) REMOVE PORTION OF EXISTING 8" PVC STORM DRAIN PIPE, CONNECT TO PROPOSED INLET
- (23) INSTALL 4' X 8' FILTERRA OR CITY-APPROVED EQUAL PER DETAIL ON SHEET 28
- (24) INSTALL PIPE COLLAR PER SDRSD D-62
- (26) REPLACE CURB & GUTTER IN KIND. SAW-CUT AT NEAREST JOINT
- (27) REPLACE ANY DAMAGED SIDEWALK IN KIND
- (28) REPLACE MEDIAN CURB IN KIND. SAW-CUT AT NEAREST JOINT
- (29) RECONSTRUCT LANDSCAPING AND IRRIGATION LINES IN KIND
- (32) RECONNECT EXISTING WATER SERVICE TO NEW MAIN PER VMD STD DWG W-7
- (35) REMOVE EXISTING JUNCTION STRUCTURE AND CONSTRUCT A TYPE "B" CURB INLET PER SDRSD D-02
- (37) REMOVE EXISTING RCP STORM DRAIN AND PATCH OPENING IN EXISTING CATCH BASIN. PATCH EXISTING OPENING LEFT BY RCP PIPE REMOVAL WITH BRICK AND MORTAR AND APPLY FINAL COAT OF MORTAR TO PROVIDE SMOOTH FINISH. BACKFILL PIPESIDE OF CATCH BASIN IN SHALLOW LIFTS TO ENSURE 90% COMPACTION.
- (38) RECONNECT FIRE SERVICE/DETECTOR CHECK PER VMD STD. W-13
- (41) CONTRACTOR TO SUBMIT ON HOW TO PROTECT 14" ACP WATER WHILE DIGGING STORM DRAIN STRUCTURE
- (45) INSTALL 6-INCH PVC WATER MAIN CROSSING PER DETAIL AND PROFILE ON SHEET 29

NOTE:
ALL VMD TRAPEZOIDAL DROPS FOR VMD WATERLINES AND SERVICES NEED TO BE INSTALLED PRIOR TO INSTALLATION OF STORM DRAIN. SEE DETAILS ON SHEET 29.

ID	BEARING/DELTA	RADIUS	LENGTH	PIPE SIZE	D-LOAD	OWNER	NOTE
1	N30°00'00"W	---	48.36'	18" RCP	D-1600	PRIVATE	WATER TIGHT JOINT
2	N10°48'23"W	---	25.84'	18" RCP	D-1600	PUBLIC	WATER TIGHT JOINT
3	N16°57'28"W	---	16.35'	30" RCP	D-1800	PUBLIC	WATER TIGHT JOINT
4	N17°07'40"W	---	57.17'	42" RCP	D-1350	PUBLIC	WATER TIGHT JOINT
5	N17°07'40"W	---	37.62'	48" RCP	D-2000	PUBLIC	WORK TO BE DONE BY OTHERS. SEPARATE PERMIT.

V.W.D. AS-BUILT

By: _____ Date: _____

R.C.E. No. _____ EXP. _____

Michael Baker INTERNATIONAL

5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: Public Works Inspector Date: _____

RECOMMENDED FOR APPROVAL

By: Lewis Clapp, Senior Civil Engineer
R.C.E. # 76583 exp.: 12/31/2022
Date: 6/23/21

APPROVED FOR CONSTRUCTION

By: Isaac E. Hernandez, City Engineer
R.C.E. # 81294 exp.: 09/30/2021
Date: _____

BENCH MARK

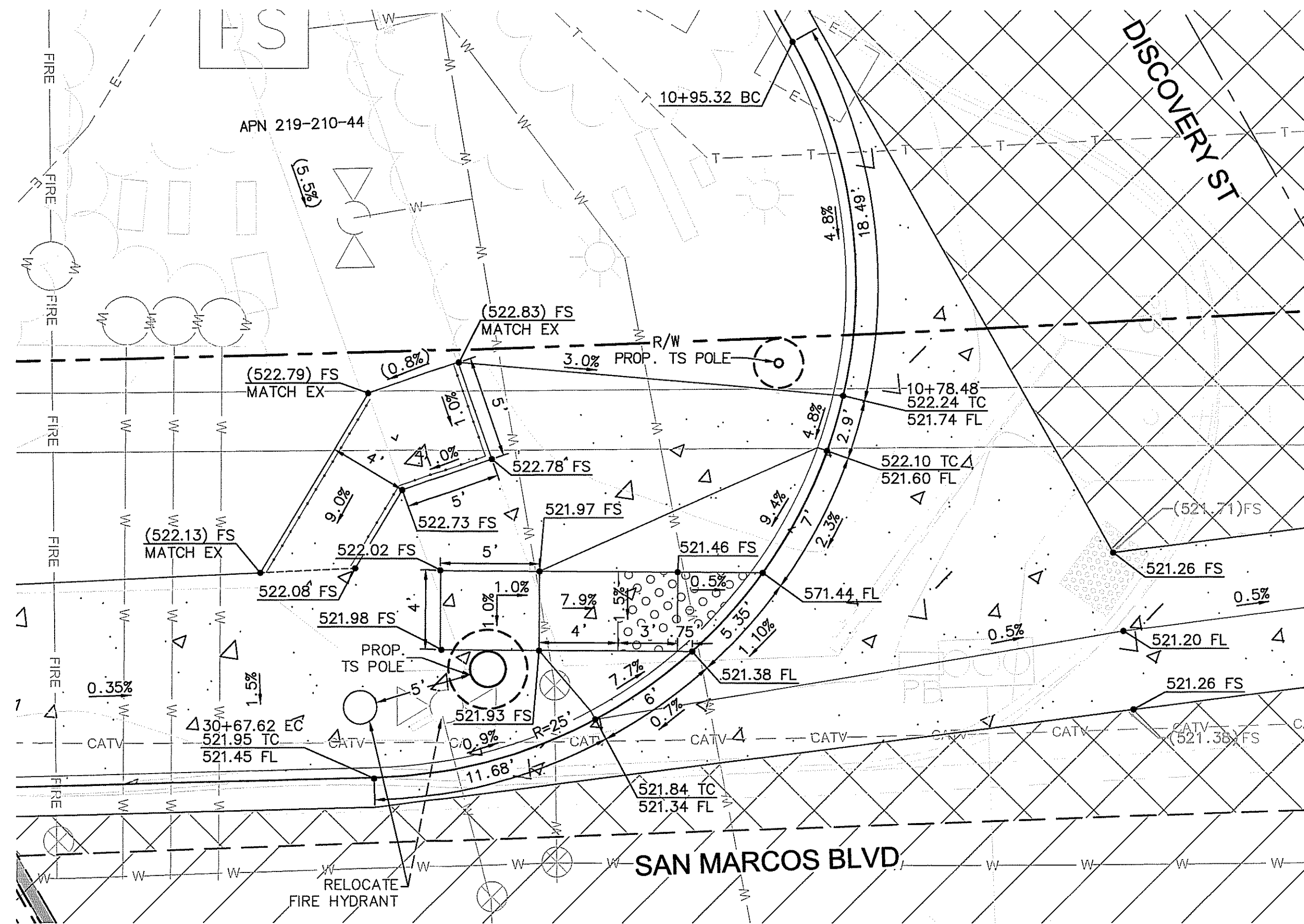
Description: CITY OF SAN MARCOS GCS PT. NO. 1017 AND GCS PT. NO. 1021 PER RGS 13928

Location: PT. NO. 1017: N1992455.016 E6270654.355
PT. NO. 1021: N1992450.892 E6274832.045
Elev.: 513.042 [510.736] Datum: NAVD 1988 [NSVD VMD 29]

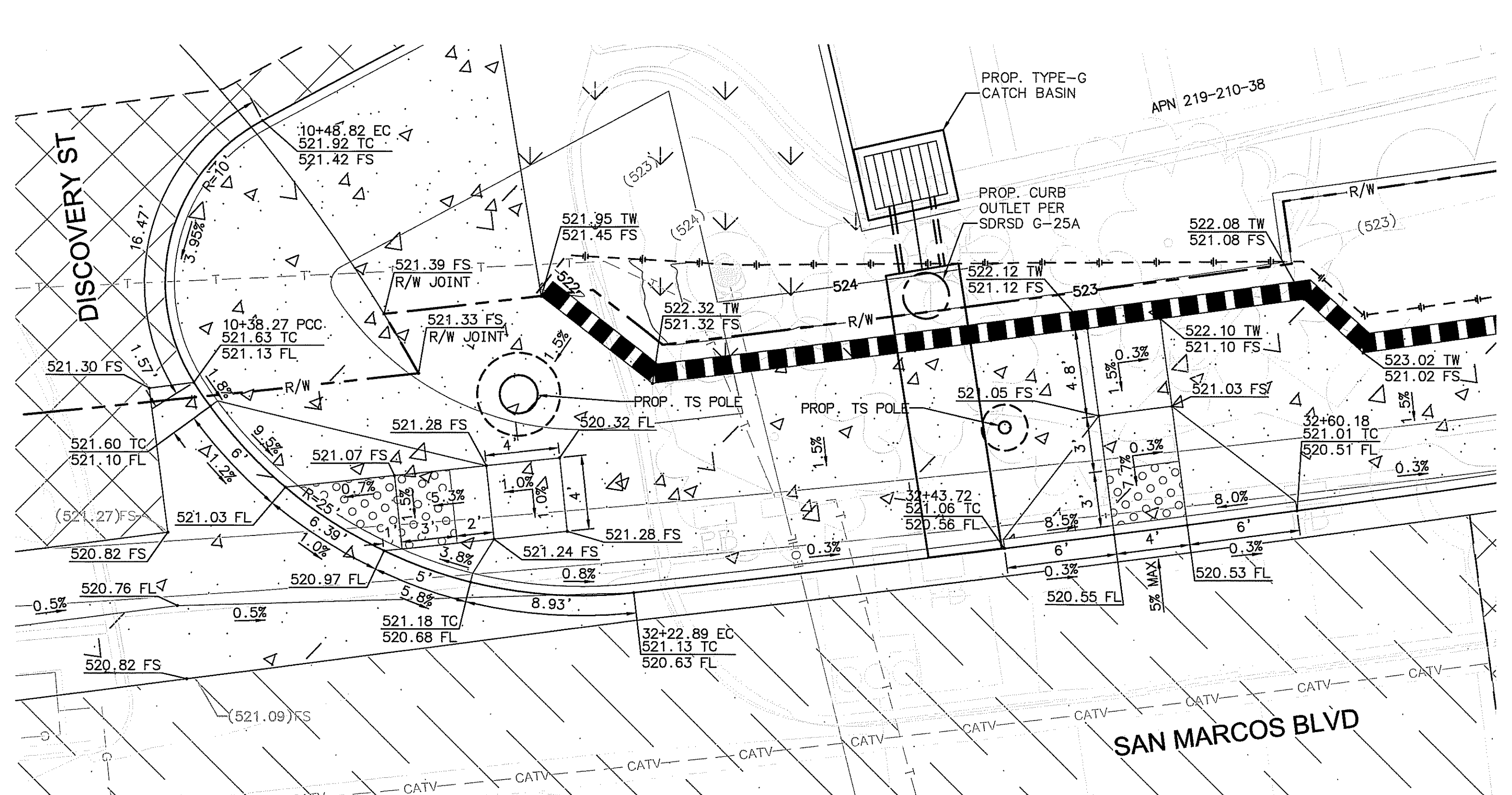
CITY OF SAN MARCOS ENGINEERING DIVISION

STORM DRAIN PLAN AND PROFILE FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

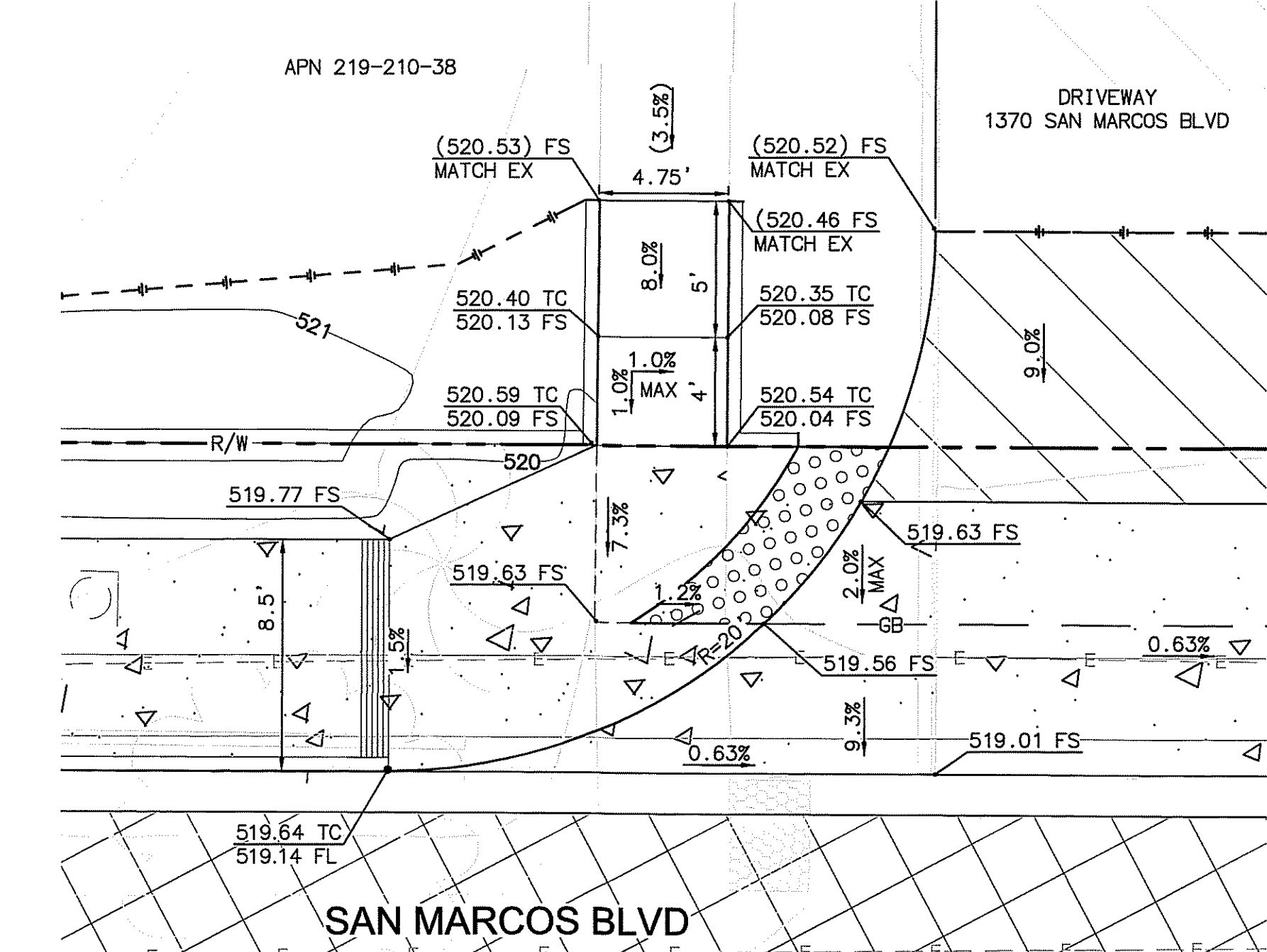
City Drawing No. IP18-00009
Sheet 11 of 29



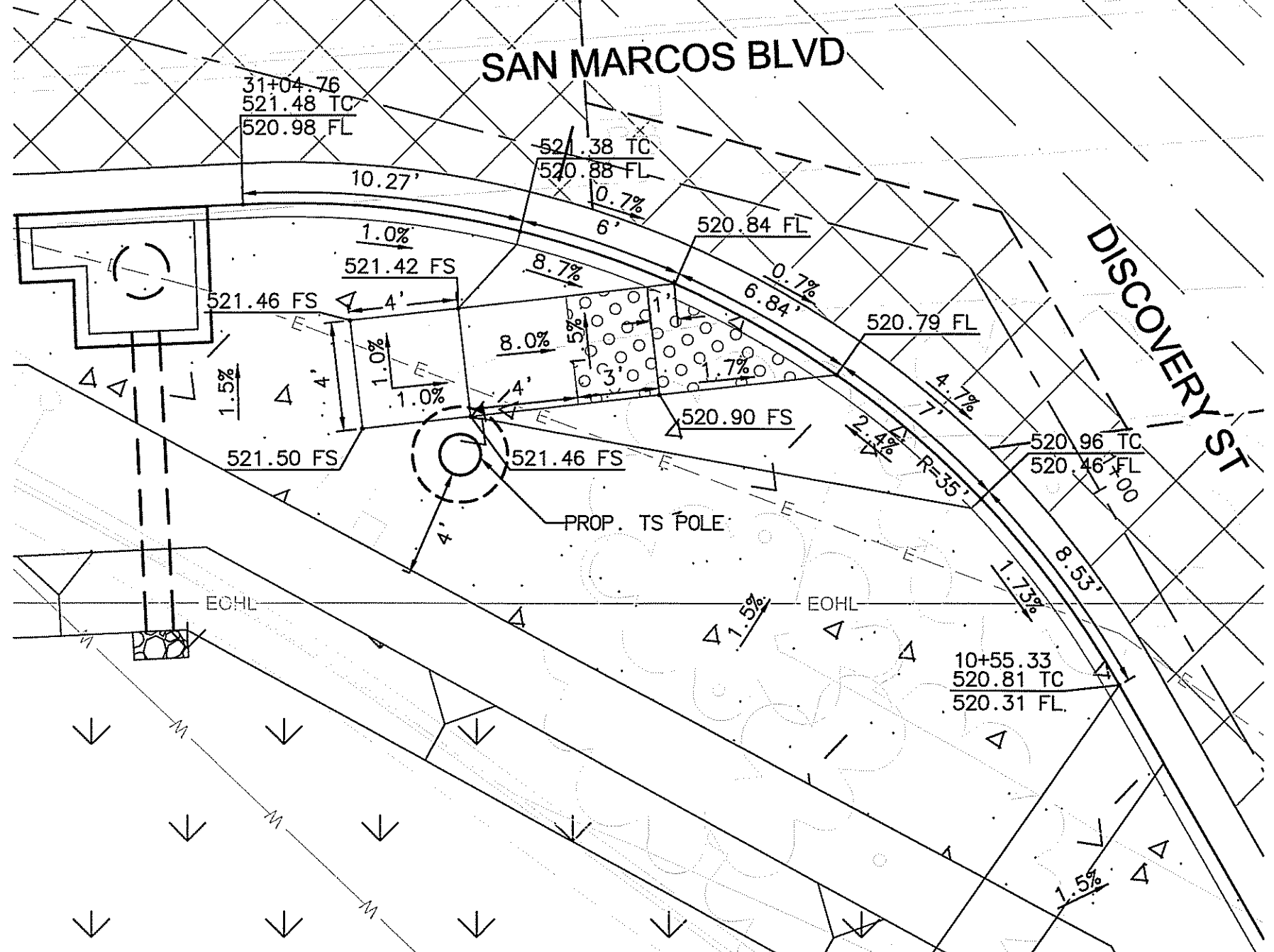
RAMP A, NORTHWEST CORNER
(SEE SHEET 5)



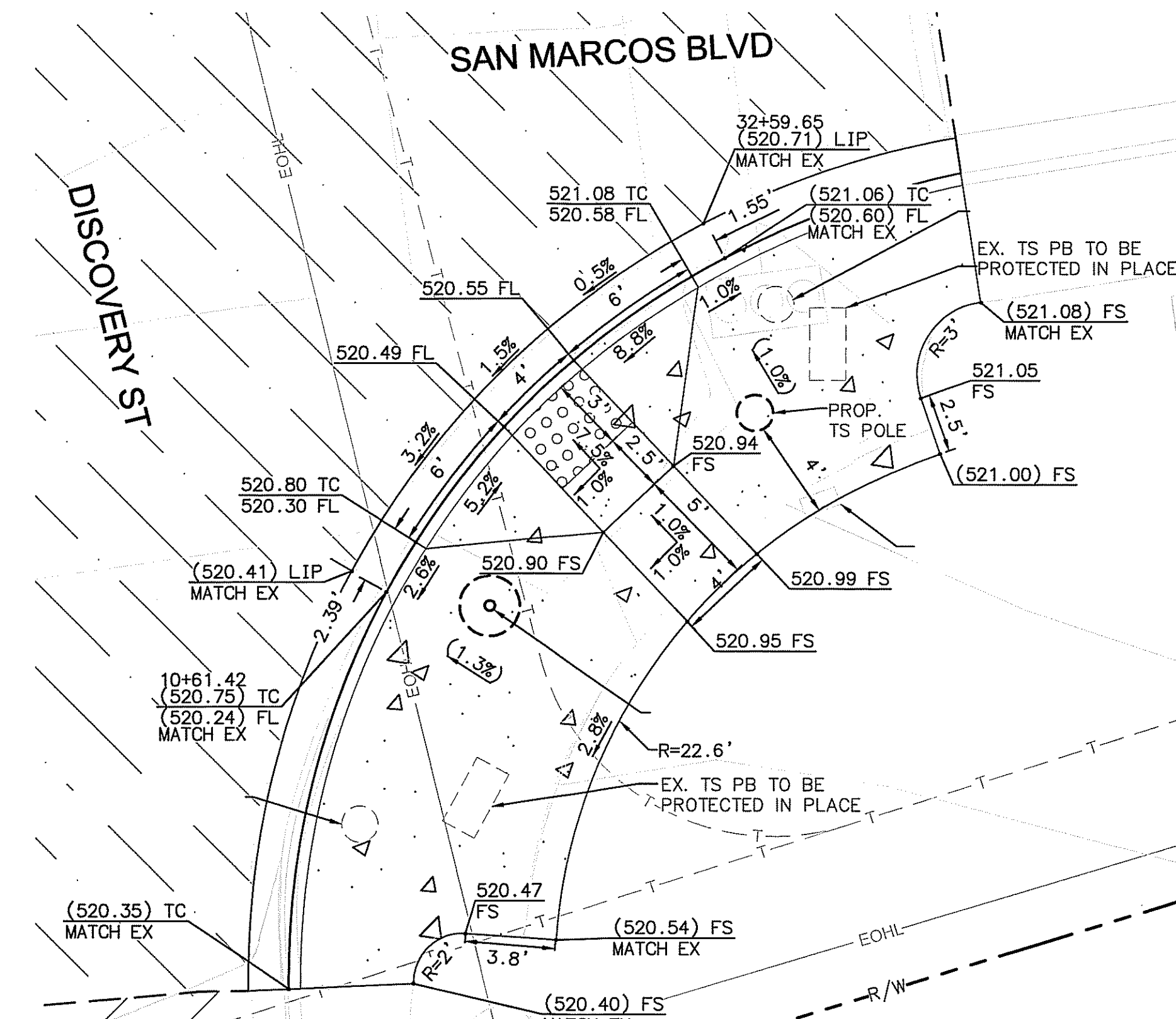
RAMP B & C, NORTHEAST CORNER
(SEE SHEET 5)



DISCOVERY BUSINESS PARK DRIVEWAY
(SEE SHEET 7)



RAMP D, SOUTHWEST CORNER
(SEE SHEET 5)

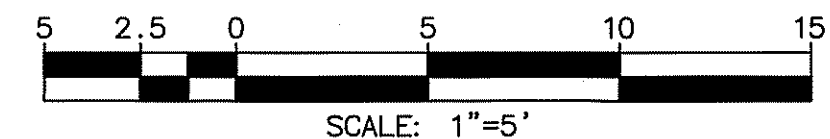


RAMP E, SOUTHEAST CORNER
(SEE SHEET 5)



Michael Baker International
5050 Avenida Encinas
Suite 280
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: Public Works Inspector
Date:



PLAN CODE
CD-1

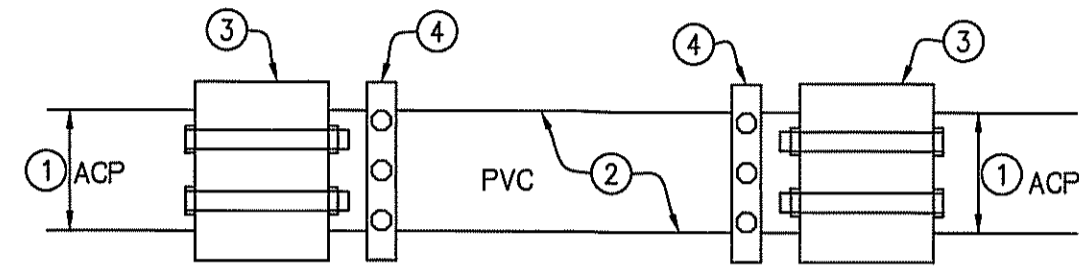
SAN MARCOS FIRE DEPARTMENT		VALLECITOS WATER DISTRICT		ENGINEER OF WORK		CITY APPROVED CHANGES		RECOMMENDED FOR APPROVAL		APPROVED FOR CONSTRUCTION		BENCH MARK		CITY OF SAN MARCOS ENGINEERING DIVISION		City Drawing No.	
By: JASON NAILON, FIRE MARSHAL Date: 3-29-21		By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: RCE C60160 EXP 6/30/2022		By: JOSH C. STONE Date: 12/31/22 R.C.E.: C60755		No. Description App'd By/Date		By: Lewis Clapp, Senior Civil Engineer Date: 2/23/21 R.C.E.: 78583		By: Isaac Etchamendy, City Engineer Date: 03/30/2021 R.C.E.: 81294		Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.992 E6274932.043 Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]		CONSTRUCTION DETAILS FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		IP18-00009 Sheet 12 of 29	

CONNECTION TO ASBESTOS CEMENT PIPE (ACP):

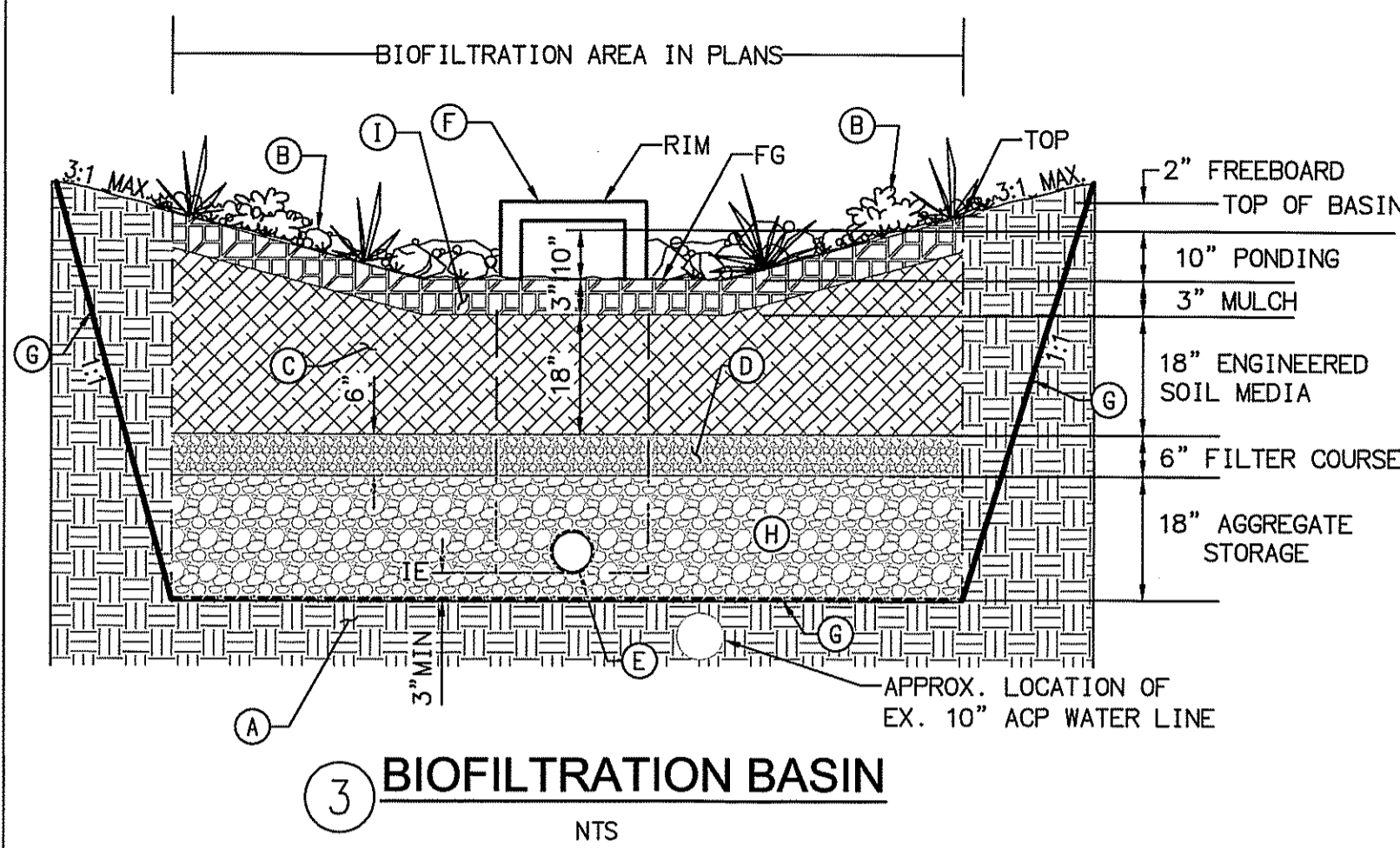
- CONTRACTOR SHALL POTHOLE EXISTING ACP WATER MAIN TO DETERMINE EXACT LOCATION, DIMENSIONS, ELEVATION, AND ORIENTATION OF WATER MAIN INCLUDING LOCATIONS OF EXISTING PIPE JOINTS.
- HOT TAPS OF EXISTING ACP PIPE WILL NOT BE ALLOWED FOR SIZE ON SIZE CONNECTIONS. EXISTING ACP PIPE SHALL BE REMOVED TO NEAREST JOINT. INSTALL NEW TEE, GATE VALVE & THRUST BLOCK.
- TAPPED CONNECTIONS SHALL NOT BE CLOSER THAN 24" (EDGE TO EDGE) TO AN EXISTING PIPE FITTING OR JOINT.
- HOT TAP CONNECTION TO EXISTING ACP WATER MAIN SHALL BE COORDINATED WITH VALLECITOS WATER DISTRICT. CONTRACTOR SHALL PROVIDE MINIMUM TWO WEEK NOTICE TO VALLECITOS WATER DISTRICT PRIOR TO HOT TAP EVENT.
- VALLECITOS WATER DISTRICT RESERVES THE RIGHT TO SELECT THE HOURS OF THE DAY AND DAY OF THE WEEK DURING WHICH THE CONNECTION WILL BE MADE.
- HOT TAP CONNECTIONS FOR FIRE HYDRANTS AND DETECTOR CHECK ASSEMBLIES SHALL INCLUDE 6" TAPPING GATE VALVE, TEE & THRUST BLOCK PER VWD STANDARD DRAWING W-16.
- REMOVAL OF ACP PIPS SHALL BE PERFORMED BY A CONTRACTOR REGISTERED BY CAL/OSHA AND CERTIFIED BY THE STATE CONTRACTORS LICENSING BOARD FOR ASBESTOS REMOVAL.

ITEMS:

- ACP MACHINED END
- C900 PVC
- FLEX COUPLING (PER VWD STANDARDS)
- MEGA-LUG/UNI-FLANGE RESTRAINING GLAND



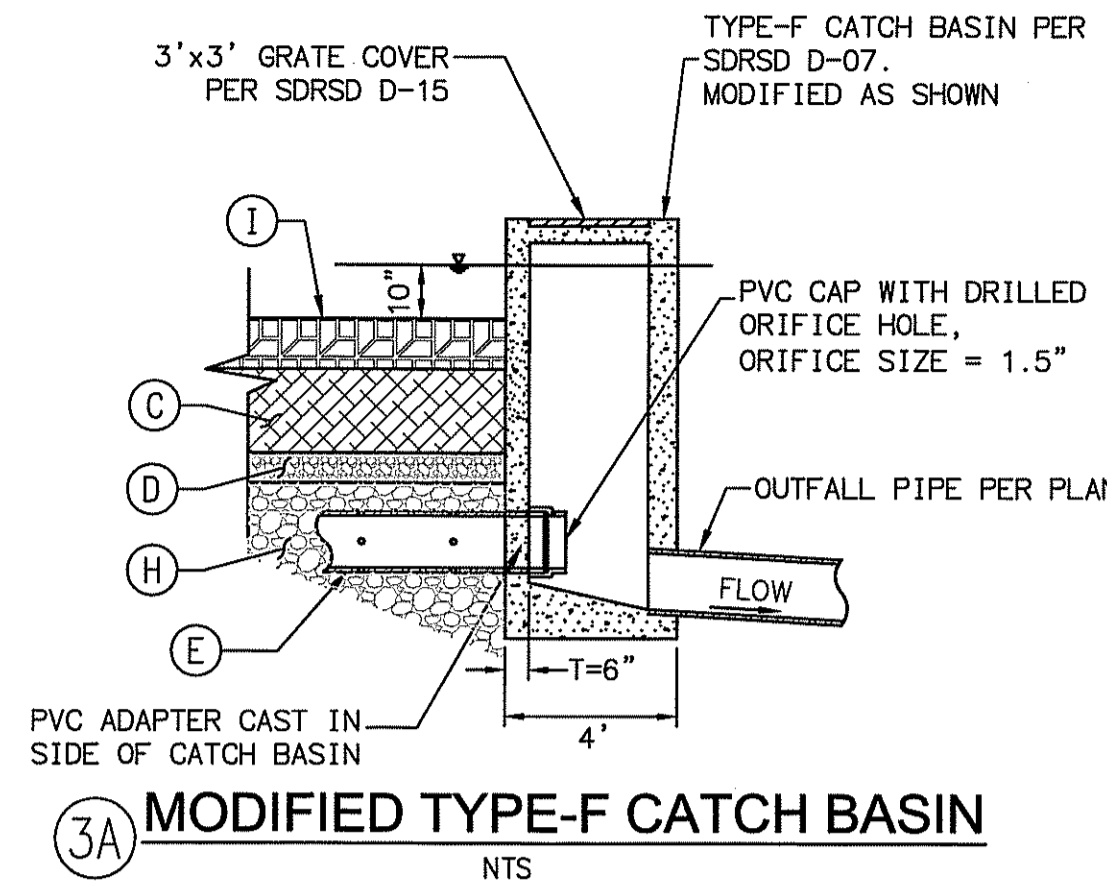
1 STANDARD CLOSURE
NOT TO SCALE



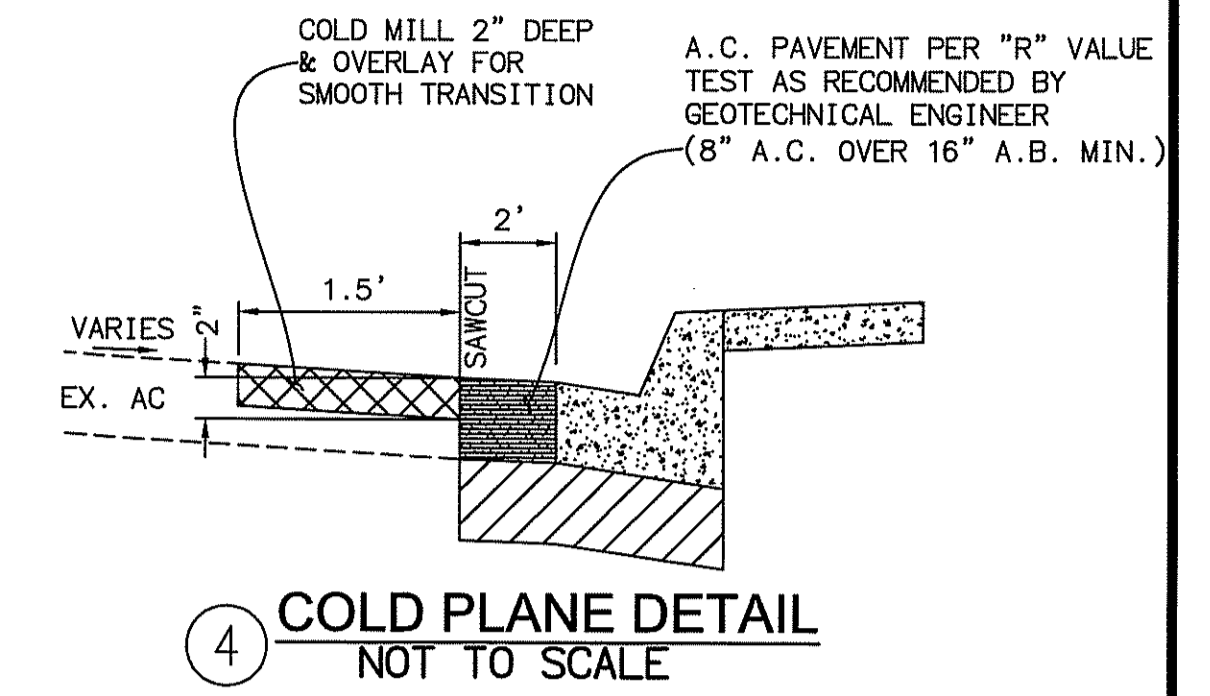
3 BIOFILTRATION BASIN
NTS

LEGEND

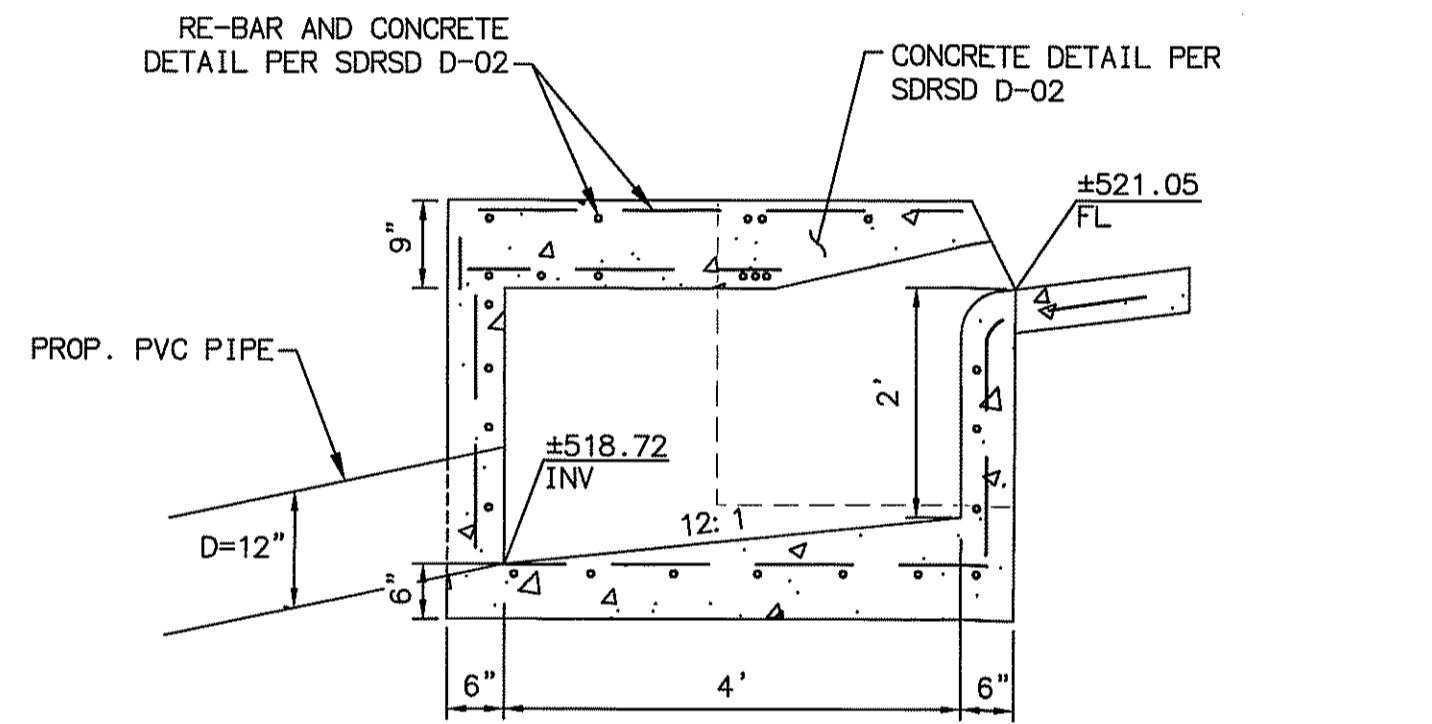
- (A) SUBGRADE COMPACTED TO 90%
- (B) PLANTING PER LANDSCAPE PLAN AND APPENDIX E OF THE CITY OF SAN DIEGO STORM WATER STANDARDS
- (C) 18" BIOFILTRATION SOIL LAYER PER COUNTY OF SAN DIEGO LID MANUAL: 85% WASHED COURSE SAND, 10% FINES, AND 5% ORGANIC MATTER
- (D) 6" FILTER COURSE LAYER CONSISTING OF 3" CLEAN AND WASHED ASTM 33 FINE AGGREGATE SAND OVERLYING A 3" LAYER OF ASTM NO. 8 STONE
- (E) 6" PERFORATED PVC DRAIN PIPE
- (F) MODIFIED TYPE-F CATCH BASIN PER DETAIL 3A.
- (G) ADS 601/451 SUBSURFACE IMPERMEABLE NON-WOVEN FABRIC OR EQUIVALENT
- (H) 18" OF WASHED #57 AGGREGATE
- (I) 2" TO 3" OF DECORATIVE ROCKS



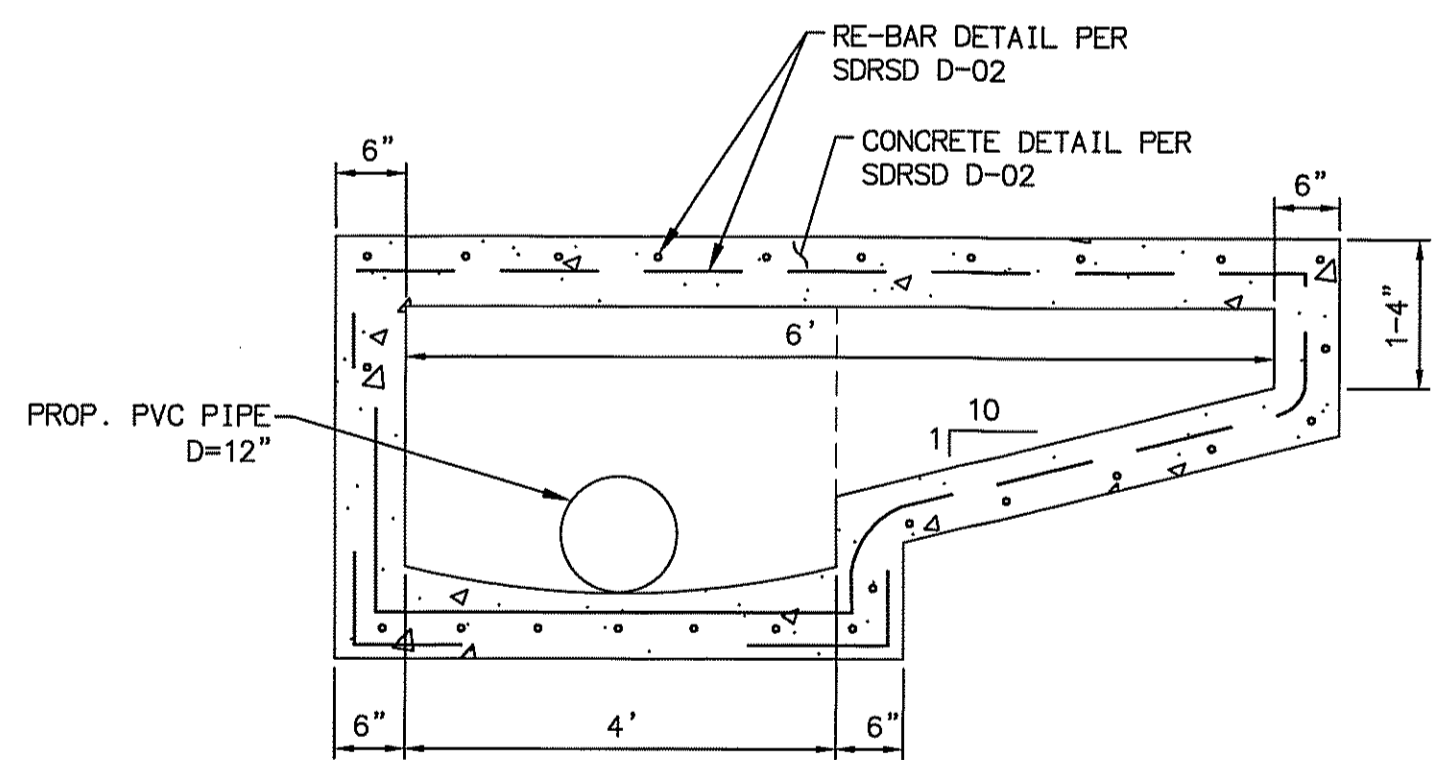
3A MODIFIED TYPE-F CATCH BASIN
NTS



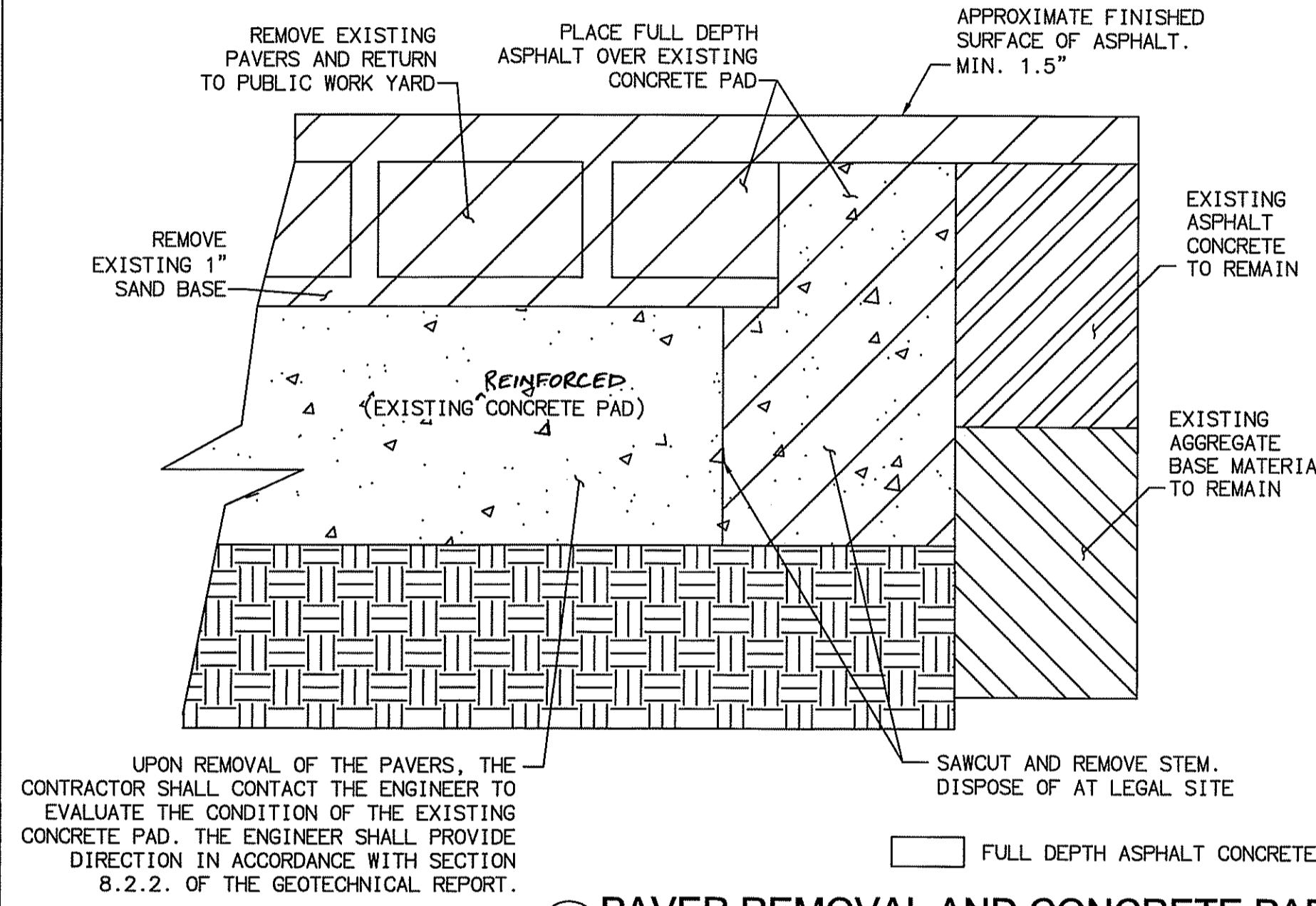
4 COLD PLANE DETAIL
NOT TO SCALE



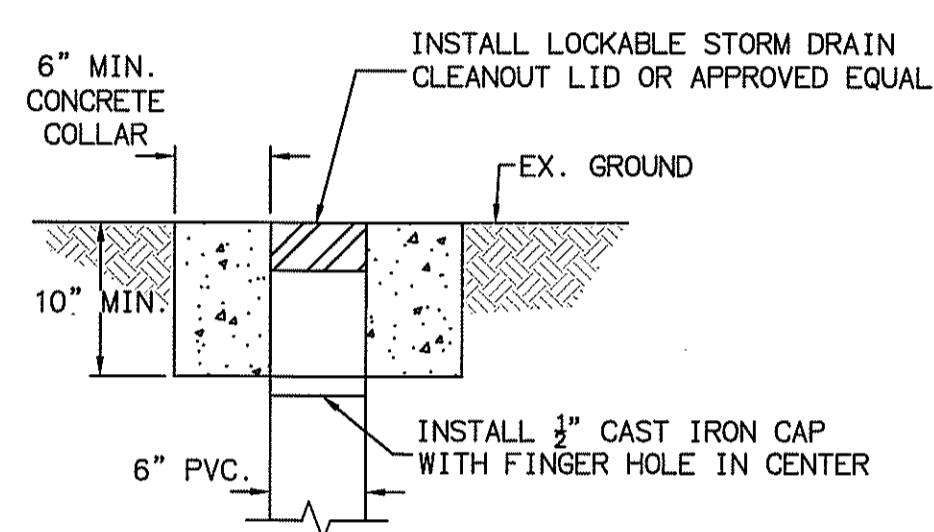
2 MODIFIED TYPE B CURB INLET
NOT TO SCALE



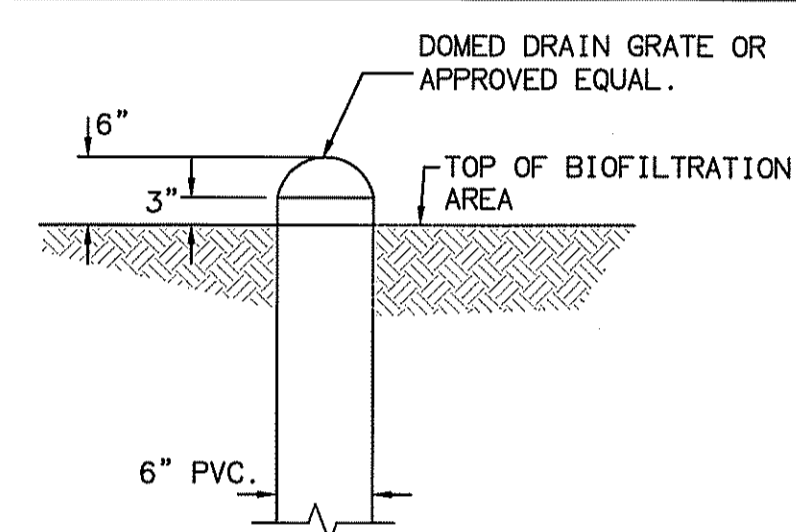
9 MODIFIED CONCRETE SIDEWALK
NTS



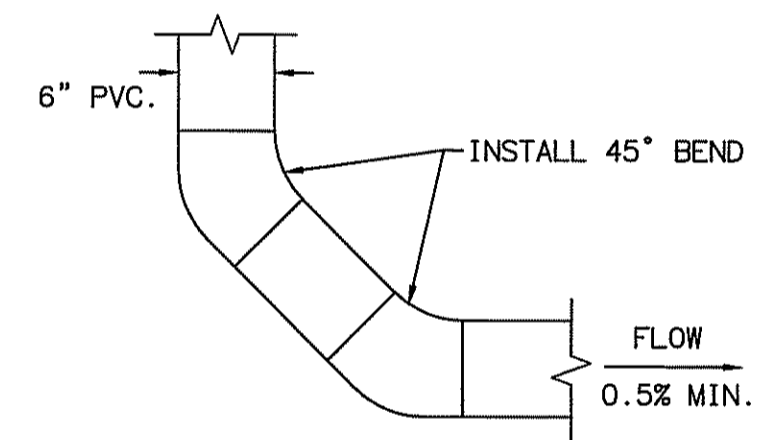
5 PAVER REMOVAL AND CONCRETE PAD
OVERLAY/SAN MARCOS BLVD
NOT TO SCALE



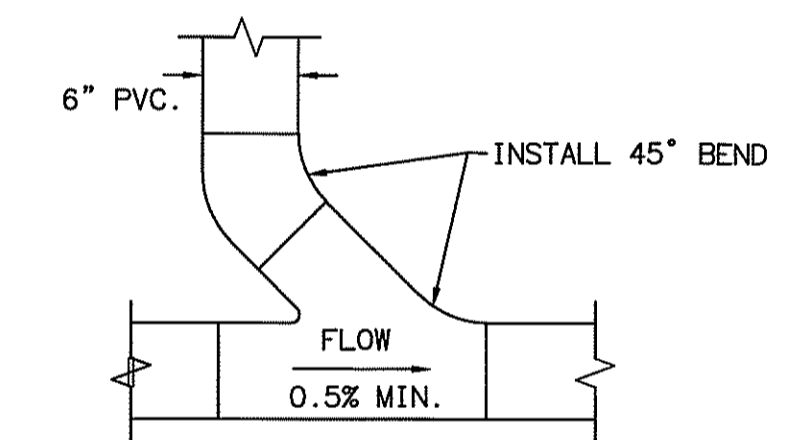
SURFACE CLEANOUT
NTS



SURFACE CLEANOUT
BIOFILTRATION AREA
NTS

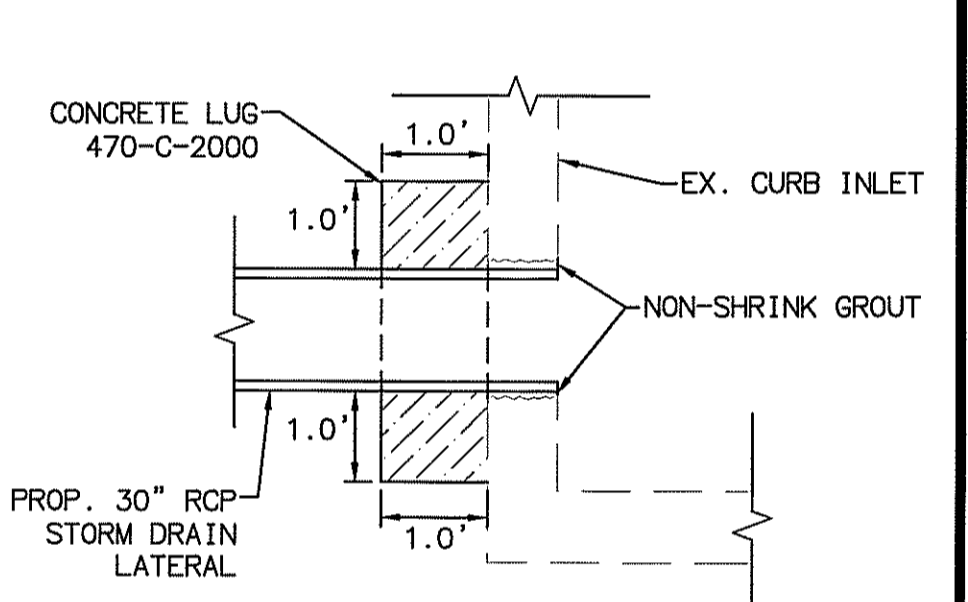
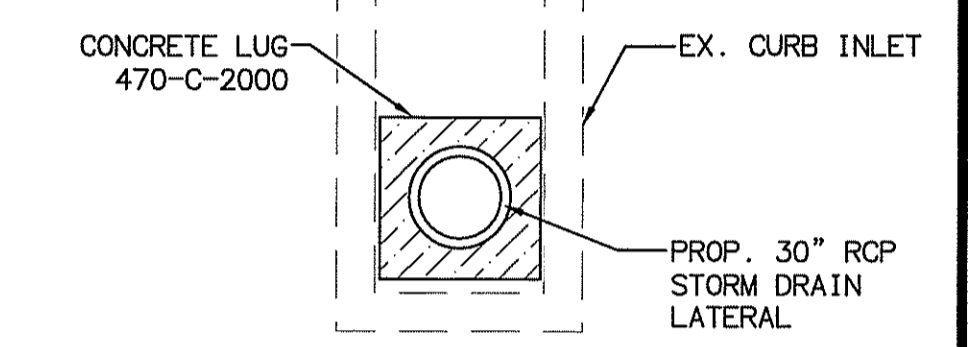


CLEANOUT - UPSTREAM
NTS

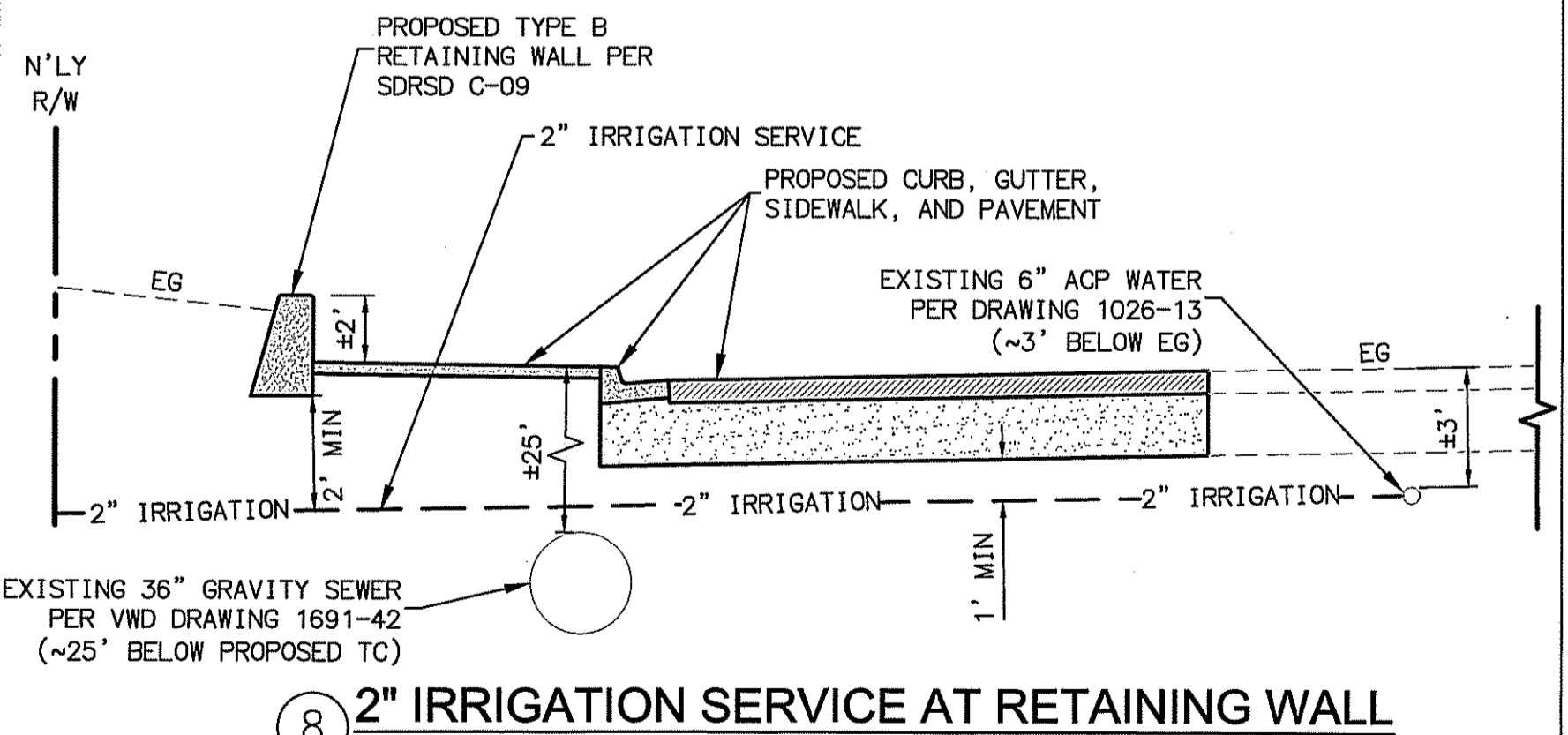


CLEANOUT - MIDSTREAM
NTS

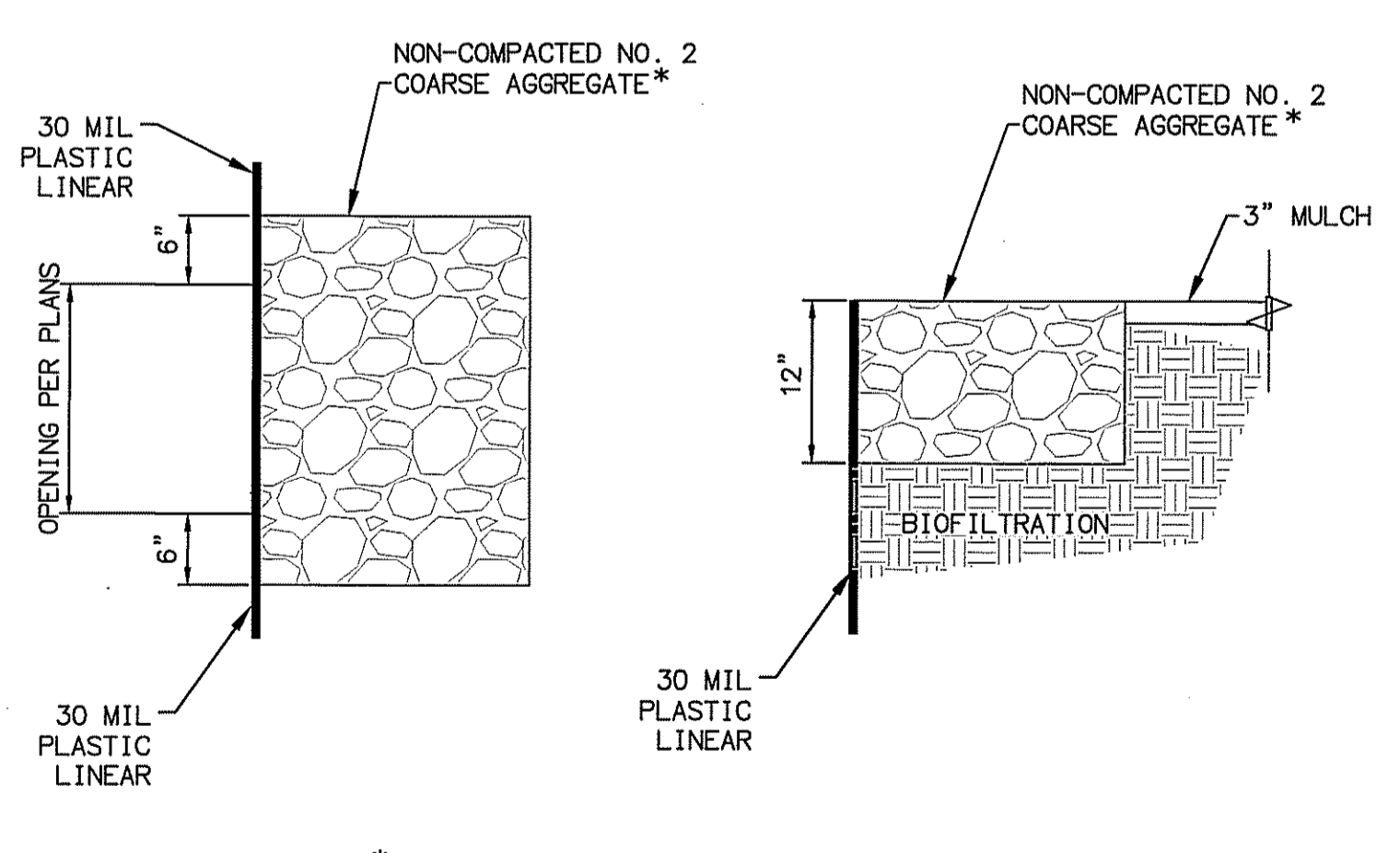
6 6" PVC PIPE CLEANOUT
NTS



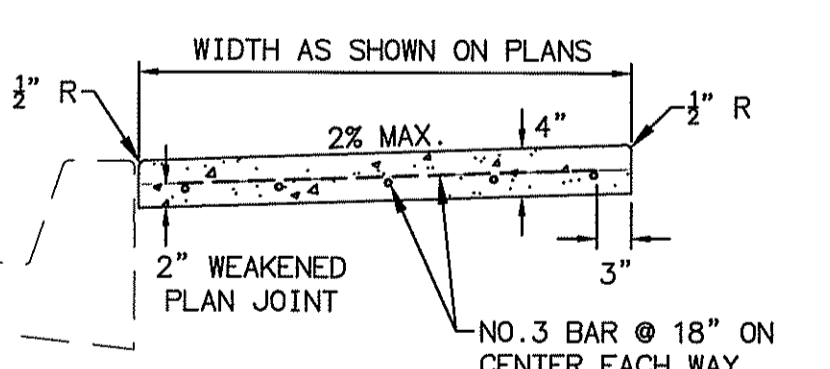
7 MODIFIED CONCRETE LUG
NTS



8 2" IRRIGATION SERVICE AT RETAINING WALL
SHEET 6
NOT TO SCALE



9 SPLASH PAD
NTS



9 MODIFIED CONCRETE SIDEWALK
NTS

- NOTES:
1. MODIFICATION OF SDRSD 6-07

- NOTES:
1. MODIFICATION OF SDRSD D-02 TYPE-B CURB INLET



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 200
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: Public Works Inspector
Date:

RECOMMENDED FOR APPROVAL
By: Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: 6/28/21

APPROVED FOR CONSTRUCTION
By: Isaac Etchamendy, City Engineer
R.C.E.: 81274 exp.: 02/30/2021
Date:

* THE STONE SHALL REQUIRE AN EPOXY/GROUT BINDING TO AVOID WASHOUT.

PLAN CODE
CD-2

SAN MARCOS FIRE DEPARTMENT
By: JASON NAILON, FIRE MARSHAL
Date: 7-29-21

VALLECITOS WATER DISTRICT
By: JAMES H. GUMPEL, DISTRICT ENGINEER
Date: ROE C60160 EXP 6/30/2022

ENGINEER OF WORK
By: JOSH C. STONE
Date: 12/31/22
R.C.E.: C60755

No.	Description	App'd By	Date

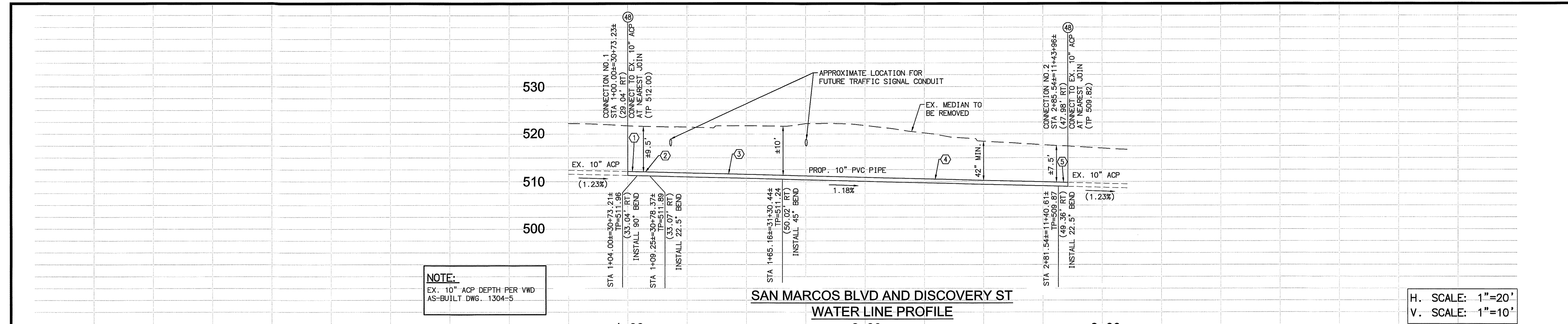
CITY APPROVED CHANGES

RECOMMENDED FOR APPROVAL
By: Isaac Etchamendy, City Engineer
R.C.E.: 81274 exp.: 02/30/2021
Date:

APPROVED FOR CONSTRUCTION
By: Isaac Etchamendy, City Engineer
R.C.E.: 81274 exp.: 02/30/2021
Date:

BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
GSS PT. NO. 1021 PER ROS 13928
Location: PT. NO. 1017: N1992455.016 E6270564.355
PT. NO. 1021: N1992450.892 E6274332.043
Elev: 513.042 [510.736] Datum: NAVD 1988 [NAD 83]

CITY OF SAN MARCOS ENGINEERING DIVISION
CONSTRUCTION DETAILS FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
VWD W.O. 207141
City Drawing No. IP18-00009
Sheet 13 of 29

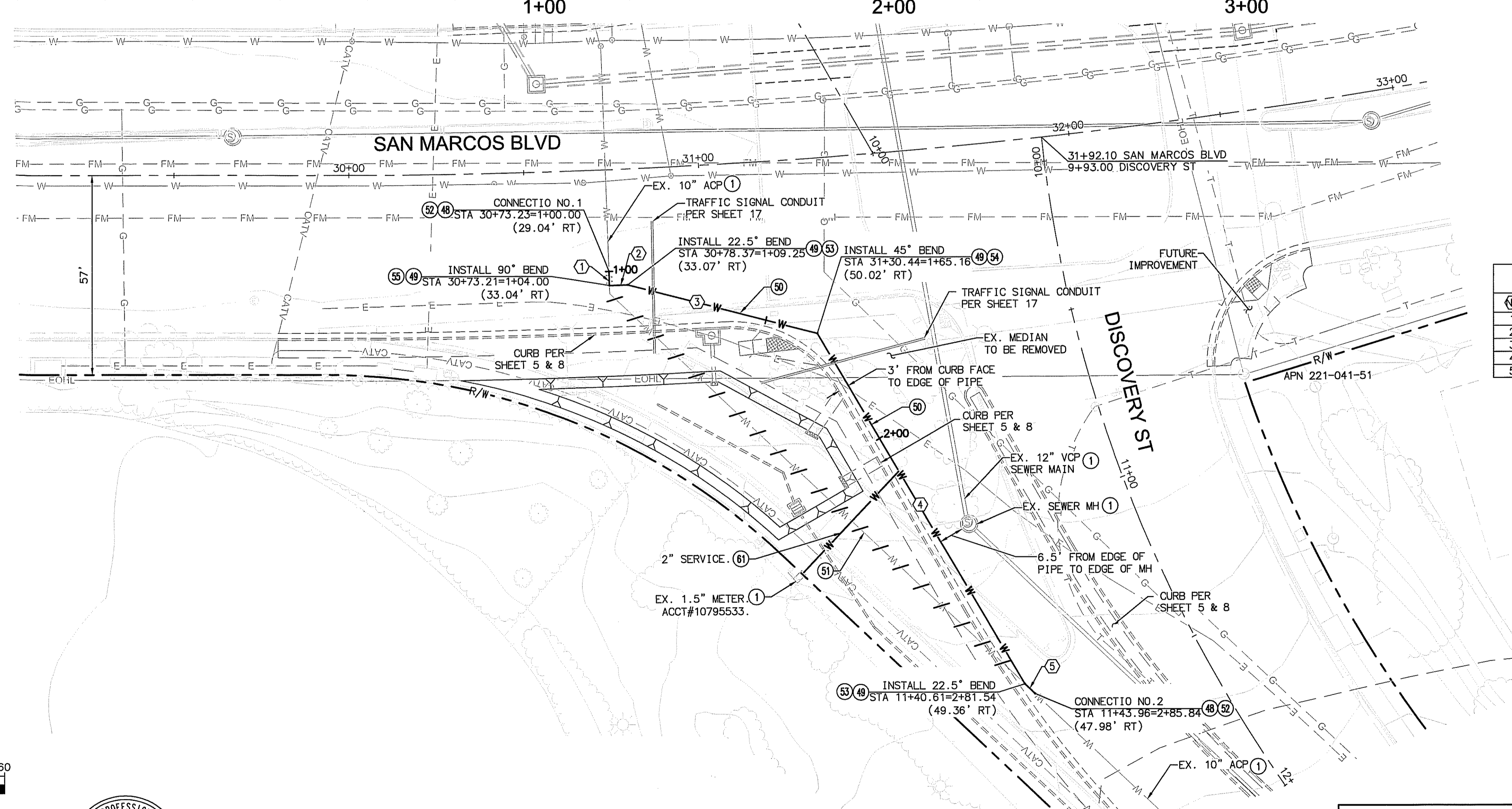


NOTE:
EX. 10" ACP DEPTH PER VWD AS-BUILT DWG. 1304-5

H. SCALE: 1"=20'
V. SCALE: 1"=10'

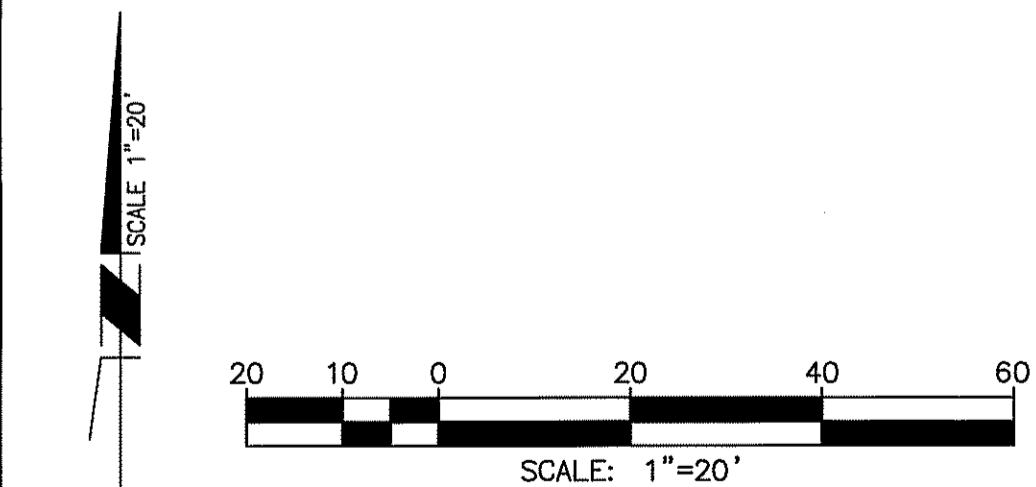
CONSTRUCTION NOTES

- (1) PROTECT IN PLACE
- (48) CONNECT TO EXISTING 10" ACP AT NEAREST JOIN. INSTALL NEW 10" GATE VALVE PER VWD STD DWG NO. W-16. SEGMENT LENGTH MAY VARY.
- (49) INSTALL THRUST BLOCK PER VWD STD DWG NO. W-15
- (50) INSTALL 10-INCH PVC WATERLINE CLASS 350 DR-14 PER VWD STD DWG W-15
- (51) EXISTING 10-INCH ACP WATER MAIN TO BE REMOVED FROM GROUND & PROPERLY DISPOSED OF
- (52) CONTRACTOR TO POTHOLE FOR 10" ACP PIPE LOCATION. IDENTIFY NEAREST JOINT AND INSTALL COUPLING PER DETAIL 1 ON SHEET 13
- (53) INSTALL HIGH DEFLECTION 22.5 DEGREE BEND
- (54) INSTALL HIGH DEFLECTION 45 DEGREE BEND
- (55) INSTALL HIGH DEFLECTION 90 DEGREE BEND
- (61) EXTEND AND RELOCATE EXISTING 2" WATER SERVICE TO NEW RIGHT OF WAY. RELOCATE EXISTING 1.5" WATER METER. INSTALL NEW BACKFLOW DEVICE. BACKFLOW DEVICE TO BE CERTIFIED PER VWD STD. W-11 & W-19



ID	BEARING/Delta	RADIUS	LENGTH	NOTE
1	N01°42'14"W	---	4.00'*	10" PVC CLASS 350 DR-14
2	N88°17'46"E	---	5.25'	10" PVC CLASS 350 DR-14
3	N75°15'44"W	---	55.91'	10" PVC CLASS 350 DR-14
4	N30°15'44"W	---	116.38'	10" PVC CLASS 350 DR-14
5	N46°24'40"W	---	4.00'*	10" PVC CLASS 350 DR-14

* = LENGTH OF SEGMENT MAY VARY, SINCE CONNECTION POINT IS AT NEAREST JOINT.



Michael Baker INTERNATIONAL
5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: Public Works Inspector
Date:

RECOMMENDED FOR APPROVAL
By: Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: 2/28/21

APPROVED FOR CONSTRUCTION
By: Isaac Etchamendy, City Engineer
R.C.E.: 81294 exp.: 07/30/2021
Date:

NOTE:
CONTRACTOR TO POTHOLE TO VERIFY EXACT LOCATION AND ELEVATION OF WATER CONNECTIONS AND PIPE MATERIAL PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF WORK OF ANY DISCREPANCIES WITH PLAN SET.
VWD PRESSURE ZONE: 855

PLAN CODE
WL-1

SAN MARCOS FIRE DEPARTMENT
By: Jason Nailon, Fire Marshal
Date: 3-29-21

VALLEJCITOS WATER DISTRICT
By: James H. Gumpel, District Engineer
Date: 4/2/21

ENGINEER OF WORK
By: Josh C. Stone
Name: JOSH C. STONE
R.C.E.: C60755 exp.: 12/31/22

No.	Description	App'd By	Date

CITY APPROVED CHANGES

BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928
Location: PT. NO. 1017: N1992455.016 E6270654.355
PT. NO. 1021: N1992450.992 E6274932.043
Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
WATER PLAN AND PROFILE FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

VWD NO. 207141
City Drawing No. IP18-00009
Sheet 14 of 29

GENERAL TRAFFIC NOTES:

- A TRAFFIC CONTROL PLAN, INCLUDING THE LAYOUT OF CONSTRUCTION WARNING AND DETOUR SIGNS, SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT FOR APPROVAL A MINIMUM OF (14) CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TRAFFIC CONTROL SHALL BE IMPLEMENTED BEFORE ANY WORK IS STARTED.
- BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND FACILITIES OF THE FOLLOWING UTILITIES BY CONTACTING THE UNDERGROUND SERVICE ALERT AT 1-800-227-2600:
 - AT&T
 - SAN DIEGO GAS & ELECTRIC
 - VALLECITOS WATER DISTRICT
 - COX COMMUNICATIONS

TRAFFIC STRIPING NOTES:

- ALL LETTER AND WORD PAVEMENT MARKING STENCILS USED WITHIN CITY LIMITS SHALL GENERALLY CONFORM TO THE CALTRANS "METRIC" SPECIFICATION, AS PROVIDED BY HAWKINS TRAFFIC SAFETY SUPPLY.
- ALL ARROWS, WHETHER IN TURN LANCES, BIKE LANES OR OTHERWISE, SHALL CONFORM TO THE CALTRANS, "2015 STANDARD PLAN A24A" SPECIFICATION.
- SYMBOLS AND NUMERALS: SYMBOLS AND NUMERALS SHALL CONFORM TO CALTRANS, "2015 STANDARD PLAN A24C" SPECIFICATION. THE CITY OF SAN MARCOS HAS DESIGNATED THE "BIKE LANE SYMBOL WITH PERSON" (FACING LEFT TO ROADWAY) TO BE USED IN ALL BIKE LANE APPLICATIONS. ALL OTHER BIKE LANE SYMBOLS SHALL BE EXCLUDED. ALL BIKE LANE SYMBOLS AND SPEED LIMIT LEGENDS SHALL BE PAINTED.
- STRIPING ALIGNMENT AND LAYOUT, INCLUDING "TURKEY-TRACKS," SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IS SUBJECT TO THE CITY OF SAN MARCOS PUBLIC WORKS DEPARTMENT APPROVAL PRIOR TO FINAL INSTALLATION.
- PAINT SHALL BE APPLIED UNDER SUITABLE WEATHER CONDITIONS AND PER THE PAINT MANUFACTURERS LABEL RECOMMENDATIONS FOR PAVEMENT AND AMBIENT TEMPERATURE REQUIREMENTS. PAINT SHALL NOT BE APPLIED IF RAIN IS FORECASTED WITHIN 24 HOURS.
- THINNING OF PAINT WILL NOT BE ALLOWED.
- SECTION 84-3.02 "MATERIALS" OF THE LATEST EDITION OF THE CALTRANS STANDARD SPECIFICATIONS IS AMENDED TO READ AS FOLLOWS:

PAINT FOR TRAFFIC STRIPES SHALL CONFORM TO THE FOLLOWING CALTRANS SPECIFICATIONS:

RAPID DRY WATER-BORNE, WHITE AND YELLOW 8010-42L-30 OR 8010-61G-10 [LOW VOC (VOLATILE ORGANIC COMPOUND) AND LEAD-BASED PAINTS ARE PROHIBITED].

GLASS BEADS SHALL CONFORM TO CALTRANS STANDARD SPECIFICATION NO.8010-51J-22 (TYPE 1-MOISTURE PROOF).

GLASS BEADS SHALL BE APPLIED WHEN STRIPING TRAFFIC LINES OR PAINTING LEGEND.

INFORMATION REGARDING TRAFFIC PAINT AND GLASS BEADS MAY BE OBTAINED FROM THE CALTRANS ENGINEERING SERVICE CENTER, 5900 FOLSOM BLVD., SACRAMENTO, CA 95819-4612; (916)227-7000.

- ALL STRIPING SHALL INCLUDE RAISED PAVEMENT MARKERS (RPMs) PER THE APPROPRIATE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DETAILS.
- RAISED PAVEMENT MARKERS (RPMs) SHALL BE CERAMIC OR ABS (ACRYLONITRILE-BUTADIENE-STYRENE) PLASTIC. APPROVED RPM TYPES ARE AS FOLLOWS:
 - TYPE A AND AY CERAMIC - 4" (WHITE OR YELLOW);
 - 1 OR 2-WAY REFLECTIVE ABS - 4"x4" SQUARE. MINIMUM RPM THICKNESS SHALL BE 15 MILS.
 RPMs SHALL BE AFFIXED WITH MACHINED APPLIED HOT BITUMEN OR STANDARD SET EPOXY (PART A AND B).
- THE CONTRACTOR SHALL REMOVE ALL CONFLICTING PAINTED LINES, MARKINGS AND PAVEMENT LEGENDS BY SAND BLASTING WITHIN 24 HOURS OF CONFLICT. GRINDING MAY BE USED IF EQUIPMENT AND METHODOLOGY IS APPROVED BY THE CITY. SANDBLASTING OR GRINDING DEBRIS SHALL BE REMOVED AS SOON AS POSSIBLE BUT NO LATER THAN BEFORE THE END OF EACH WORK DAY. "BLACKING OUT" OF EXISTING STRIPING WILL NOT BE ALLOWED. WHERE TRAFFIC STRIPING OR PAVEMENT MARKINGS ARE TO BE REMOVED BY SANDBLASTING OR GRINDING, THE PAVEMENT SHALL ALSO BE PATCHED AND SLURRY SEALED (TYPE II SLURRY) AT THE DISCRETION OF THE CITY INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE CITY OF SAN MARCOS' PUBLIC WORKS DEPARTMENT UPON COMPLETION OF STRIPING.
- TWO COATS OF PAINT SHALL BE APPLIED ON NEW SURFACES AND ONE ON EXISTING SURFACES.
- SIGNALIZED INTERSECTIONS SHALL HAVE MARKED PEDESTRIAN CROSSWALKS. ALL CROSSWALKS, LIMIT LINES, STOP BARS, PAVEMENT ARROWS, SCHOOL LEGENDS, AND PAVEMENT LEGENDS OTHER THAN BICYCLE LEGENDS/ARROWS SHALL BE INSTALLED WITH THERMOPLASTIC, UNLESS OTHERWISE NOTED ON THE PLAN. SPEED LIMIT LEGENDS SHALL BE INSTALLED WITH PAINT.
- ALL NEW OR MODIFIED CROSSWALKS SHALL BE "CONTINENTAL" STYLE MARKED CROSSWALKS WITH A LIMIT BAR SETBACK OF 4- FEET MINIMUM.
- A MINIMUM OF 100 FEET DOUBLE YELLOW CENTERLINE SHALL BE STRIPED ALONG ALL KNUCKLES AND HORIZONTAL CURVATURES WITH THE RADIUS OF 100 FEET OR LESS. RED CURB OR "NO PARKING ANYTIME" SIGNS SHALL BE INSTALLED ON THE INSIDE OF THE ROADWAY CURVATURE.
- ALL CALTRANS DETAIL 40 AND DETAIL 41 WITHIN THE INTERSECTIONS SHALL BE INSTALLED WITH THERMOPLASTIC, UNLESS OTHERWISE NOTED ON THE PLANS.
- U-TURNS SHALL BE RESTRICTED WHERE LESS THAN 44 FEET EXISTS BETWEEN THE RIGHT LANE LINE OF THE LEFT TURN LANE AND THE FACE OF CURB FOR THE OPPOSING DIRECTION OF TRAVEL FOR SINGLE LEFT TURN LANES, WHERE LESS THAN 36 FEET EXISTS BETWEEN THE LEFT EDGE OF THE INSIDE LEFT TURN LANE TO THE FACE OF CURB FOR THE OPPOSING DIRECTION OF TRAVEL FOR DUAL TURN LANES, OR AS REQUIRED BY THE CITY ENGINEER.
- ROUNDBOUT SIGNAGE FOR ONE-LANE, TWO-LANE, AND MINI-ROUNDBOUT TYPES SHALL CONFORM TO CHAPTER 2B (REGULATORY SIGNS, BARRICADES AND GATES) OF THE 2014 CAMUTCD. ROUNDBOUT MARKINGS FOR ONE-LANE, TWO LANE, AND MINI-ROUNDBOUT TYPES SHALL CONFORM TO CHAPTER R3C (ROUNDBOUT MARKINGS) OF THE 2014 CAMUTCD.
- IF IT IS NECESSARY OR DESIRABLE TO PROHIBIT CERTAIN PEDESTRIAN MOVEMENTS AT A TRAFFIC SIGNAL INTERSECTION, A PEDESTRIAN BARRIER SHALL BE INSTALLED TO PREVENT THE PEDESTRIAN MOVEMENTS. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN BARRIER IN CONFORMANCE TO THE CITY OF SAN DIEGO PEDESTRIAN BARRICADE STANDARD (SDE-103). IF IT NOT PRACTICAL TO INSTALL SUCH A BARRIER, THEN THE "NO PEDESTRIAN CROSSING (R9-3) SIGNS SHALL BE USED.

TRAFFIC SIGNALING NOTES:

- SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CITY OF SAN MARCOS PUBLIC WORKS DEPARTMENT APPROVAL. ALL SIGNS SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- SIGN POSTS:
 - SHALL BE, TUBULAR BREAK-AWAY POSTS (TELSPAR OR UNISTRUT), 1 3/4" GALVANIZED STEEL OR EQUAL;
 - SHALL HAVE A SEVEN FEET (7') VERTICAL CLEARANCE ABOVE FINISHED GRADE FOR ONE SIGN MOUNTING OR SIX FEET (6') FOR A TWO SIGN MOUNTING;
 - SHALL HAVE A MAXIMUM OF TWO SIGNS (WITH DIFFERENT MEANINGS) ON EACH SIDE (MAXIMUM NUMBER OF SIGNS ON BOTH SIDES SHALL NOT EXCEED FOUR).
 - SHALL BE ANCHORED A MINIMUM OF TWENTY-FOUR INCHES (24") BELOW FINISHED GRADE IN UNDISTURBED SOIL AND BACKFILLED WITH NATIVE SOIL, DECOMPOSED GRANITE, OR SAND.
 - LOCATED IN THE MEDIAN, SHALL BE SET IN AN EIGHT INCH DIAMETER (8") BY TWENTY-FOUR INCH (24") DEEP PVC SLEEVE AND BACKFILLED WITH NATIVE SOIL, DECOMPOSED GRANITE, OR SAND TO THE TOP OF THE SLEEVE.
 - LOCATED IN THE SIDEWALK, A TEN-INCH DIAMETER CORE (10") SHALL BE DRILLED. BACKFILL SHALL BE FOUR INCHES (4") OF CONCRETE ABOVE TWENTY INCHES (20") OF NATIVE SOIL, DECOMPOSED GRANITE, OR SAND.
 - SHALL BE NEW (USED POSTS ARE PROHIBITED ON NEW SIGN INSTALLATIONS);
 - SHALL BE REJECTED IF DAMAGED, BENT, OR SPLINTERED;
 - LOCATIONS SHALL BE MARKED BY CONTRACTOR AND APPROVED BY THE PUBLIC WORKS DIRECTOR OR HIS ASSIGNEE PRIOR TO FINAL PLACEMENT
 - SHALL HAVE A MINIMUM OF FORTY-EIGHT INCHES (48") HORIZONTAL DISTANCE BETWEEN POST AND BACK EDGE OF SIDEWALK (ADA SPECIFICATION) FOR WHEEL CHAIR ACCESS.
 - SHALL BE 2-7/8" ALUMINUM POSTS FOR STREET NAME SIGNS AND STOP (R1-1) SIGNS.
 - SHALL BE WRAPPED WITH GORILLA TAPE AROUND BASE OF BREAKAWAY POST BELOW SUBGRADE.
 *** WOOD POSTS USED FOR CLASS II OR III BARRICADES SHALL BE PAINTED WHITE.
- SIGNS:
 - SHALL BE ALUMINUM AND HAVE REFLECTIVITY FACING AND MESSAGE WITH A HIGH INTENSITY DESIGN OR BETTER;
 - SHALL HAVE A MINIMUM OF TWELVE INCHES (12") HORIZONTAL CLEARANCE BEHIND THE CURB FACE;
 - THIRTY-SIX INCHES (36") WIDE SHALL BE STRAPPED ON THE BACK OF THE SIGN WITH SIGN STRAP HARDWARE;
 - LARGER THAN THIRTY-SIX INCHES (36") WIDE SHALL BE SET ON TWO POSTS;
 - SHALL BE MOUNTED ON:
 - NEW OR EXISTING STREET LIGHT STANDARDS SHALL USE A 5/8-INCH "BAND IT" STEEL STRAPPING WITH FASTENERS;
 - ALUMINUM POSTS SHALL USE 2 7/8" POST CAPS FOR SINGLE SIGNS AND 2 7/8" CROSS SADDLE FOR TWO SIGNS;
 - MOUNTED ON POWER/UTILITY POLE IS PROHIBITED.
- STREET NAME SIGNS SHALL HAVE 9-INCH EXTRUDED ALUMINUM BLADES, HIGH INTENSITY SHEETING WITH 3M BLUE ELECTROCRUT FILM, 6-INCH HIGHWAY GOTHIC LETTERING WITH FIRST LETTER IN CAPITALS AND THE REST LOWER CASE, BLOCK ADDRESS, AND ROAD DESIGNATIONS.
- WHERE AN R4-7 SIGN AND OM1-3 OBJECT MARKER SIGN ARE TO BE INSTALLED IN A MEDIAN WIDTH LESS THAN 42-INCHES, THE R4-7 SIGN SHALL BE MOUNTED 7- FEET VERTICALLY FROM THE EXISTING GROUND SURFACE. THE R4-7 SIGN SHALL BE 18" X 24" AND THE OM1-3 OBJECT MARKER SHALL BE 18" X 18". OM2-1H SHALL BE INSTALLED BEHIND OM1-3.
- WHERE AN R6-1 SIGN ("ONE WAY") SIGN IS TO BE INSTALLED IN A MEDIAN ISLAND, THE R6-1 SIGN SHALL BE MOUNTED 18-INCHES VERTICALLY FROM THE EXISTING GROUND. IF A LANDSCAPED PLANTER IS PRESENT AND VEGETATION INTERFERES WITH SIGN LOCATION, THE R6-1 SIGN SHALL BE MOUNTED 4- FEET VERTICALLY FROM THE EXISTING GROUND.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF SAN MARCOS' PUBLIC WORKS DEPARTMENT UPON COMPLETION OF SIGNING.
- EXISTING SIGNS SHALL BE SALVAGED AND DELIVERED TO THE PUBLIC WORKS DEPARTMENT LOCATED AT 201 MATA WAY.
- STOP SIGN INSTALLATION SHALL INCLUDE THE SIGN, POST, STOP BAR, STOP LEGEND AND A MINIMUM OF 50' OF DOUBLE YELLOW CENTERLINE STRIPING UNLESS ADJACENT TO MEDIAN.
- NO OUTLET SIGNS SHALL BE POSTED WHERE THERE IS NO LEGAL OUTLET WHEN THE STREET EXCEEDS 800 FEET OR WHEN THE TERMINUS OF THE ROADWAY IS NOT VISIBLE FROM THE INTERSECTION.
- FLOUORESCENT YELLOW GREEN (FYG) BACKGROUND COLORED SIGNS SHALL BE INSTALLED FOR ALL SCHOOL AREA SIGNS PER THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

TRAFFIC SIGNAL GENERAL NOTES:

- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES INCLUDING THOSE NOT SHOWN ON THESE PLANS. VERIFICATION OF THE LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND DIGGING FOR FOUNDATIONS SHALL BE DONE BY HAND EXCAVATION METHODS UNTIL CLEAR OF ALL UNDERGROUND FACILITIES. ALL UNDERGROUND UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION AND EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL UTILITIES, AGENCIES AND THE CITY OF SAN MARCOS (760) 752-7550 AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION.

BEFORE EXCAVATION, THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND FACILITIES OF THE FOLLOWING UTILITIES BY CONTACTING THE UNDERGROUND SERVICE ALERT AT 1-800-227-2600:

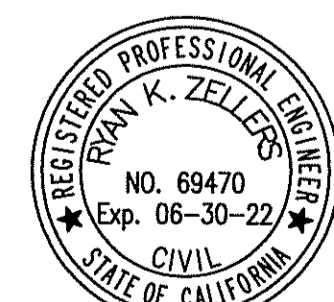
 - AT&T
 - PACIFIC BELL
 - SAN DIEGO GAS & ELECTRIC
 - VALLECITOS WATER DISTRICT
 - COX COMMUNICATIONS
 UTILITY MARK-OUTS SHALL BE CONDUCTED USING A TEMPORARY PAINT THAT CAN BE REMOVED BY POWER WASH, IF NECESSARY. ADD TO THE PLANS "THE CONTRACTOR SHALL REMOVE ALL MARK OUT PAINT UPON COMPLETION OF THE WORK."
- ALL PROPERTY CORNER MONUMENTS SHALL BE UNDISTURBED BY CONSTRUCTION OR IMPROVEMENTS. DISTURBED MONUMENTS SHALL BE RESET OR REPLACED BY A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AUTHORIZED TO SET MONUMENTS.
- POLE, DETECTOR, AND EQUIPMENT LOCATIONS ARE APPROXIMATE. THE CITY OF SAN MARCOS' ENGINEERING DEPARTMENT INSPECTORS/TRAFFIC SIGNAL LIGHTING SUPERVISOR SHALL FIELD VERIFY AND APPROVE THE EXACT EQUIPMENT LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES DURING TRAFFIC SIGNAL INSTALLATION. A TRAFFIC CONTROL PLAN, INCLUDING THE LAYOUT OF CONSTRUCTION WARNING AND DETOUR SIGNS, WORKING HOURS, AND CONSTRUCTION SCHEDULE SHALL BE SUBMITTED TO THE ENGINEERING DIVISION DEPARTMENT FOR APPROVAL A MINIMUM OF FIVE DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TRAFFIC CONTROL SHALL BE IMPLEMENTED BEFORE ANY WORK IS STARTED.
- ALL TRAFFIC SIGNAL CONDUIT AND FITTINGS (AFTER THE ELECTRIC METER PEDESTAL) SHALL BE MINIMUM THREE INCH (3") SCHEDULE 80 PVC. STREET CROSSINGS SHALL BE FOUR INCHES (4") MINIMUM, ENCASED IN A MINIMUM OF TWELVE INCHES (12") OF 560-C-3250 PSI CONCRETE (8" MINIMUM CONCRETE COVER TO TOP OF PIPE). ALL CONDUITS SHALL BE BURIED WITH A MINIMUM OF THIRTY INCHES (30") OF TOTAL COVER FROM THE TOP OF PIPE TO FINISHED GRADE. ALL CONDUITS SHALL BE SEALED UPON COMPLETION. STREET CROSSINGS BY BORE METHOD SHALL BE APPROVED BY THE CITY ENGINEER. ALL DIRECTIONAL BORED RACEWAYS SHALL BE HOPE TYPICAL.
- ALL SIGNAL CONDUCTORS, COMMUNICATION CABLES, AND OTHER ASSOCIATED WIRING SHALL BE LABELED (WITH THE BROTHER P-TOUCH WATERPROOF LABELS OR CITY APPROVED EQUAL) IN THE CABINET WITH ASSOCIATED ASSIGNMENTS (LANE, PHASES, CHANNEL NUMBERS, AND COMMUNICATION FUNCTIONS).
- CURB RAMPS SHALL BE INSTALLED AT ALL CURB RETURNS PER TITLE 24, PART 2, STATE CHAPTER 71, SITE DEVELOPMENT REQUIREMENTS FOR HANDICAPPED ACCESSIBILITY, SECTION 7103, CURB RAMPS OF THE CALIFORNIA BUILDING CODE, AND SHALL INCLUDE TRUNCATED DOMES (TYPE AND COLOR AS DIRECTED BY THE ENGINEER).
- ALL TRENCH EXCAVATION AND BACKFILL IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF SAN MARCOS' EXCAVATION ORDINANCE. MINIMUM 95% COMPACTION IS REQUIRED IN ALL ON-SITE FILL AREAS WITHIN ULTIMATE RIGHT-OF-WAY.
- A NEW SLURRY COAT OR OVERLAY SHALL BE APPLIED A MINIMUM OF 20 FEET EITHER SIDE OF PATCH WORK RESULTING FROM EXCAVATION WORK (TRENCHING AND POTHOLING) ON NEW STREETS (SLURRY COATED WITHIN LAST THREE YEARS) OR STREET WITH CLEAN AND UNIFORM PAVEMENT. THE DETERMINATION OF EXISTING PAVEMENT CONDITION SHALL BE MADE BY THE ENGINEERING DIVISION INSPECTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SERVICE COORDINATION WITH THE S.D.G.&E. SERVICE ORDER INFORMATION WILL BE PROVIDED TO THE CONTRACTOR BY THE CITY ENGINEERING STAFF.
- EXISTING TRAFFIC SIGNAL FACILITIES, SIGNALS, AND COMMUNICATIONS SHALL REMAIN OPERATIONAL UNTIL NEW FACILITIES ARE CUTOVER OR CONNECTED OR AS LONG AS APPROVED BY THE PROJECT INSPECTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE, AND REMOVAL OF ANY TEMPORARY WIRING NECESSARY TO MAINTAIN SIGNAL OPERATIONAL DURING CONSTRUCTION.
- LUMINAIRES SHALL CONFORM TO LATEST CITY OF SAN MARCOS STREET LIGHTING STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, RELOCATION, OR REPLACEMENT OF ALL STRIPING AND SIGNING AS REQUIRED BY THE TRAFFIC ENGINEER. ALL SIGNS SHALL CONFORM TO THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) AND CITY OF SAN MARCOS SIGNING AND STRIPING STANDARDS.
- AN "AS-BUILT" DRAWING SHALL BE SUBMITTED FOR ALL PUBLIC IMPROVEMENTS PRIOR TO THE ACCEPTANCE OF SAID IMPROVEMENTS.
- THESE PLANS HAVE BEEN EXAMINED BY THE CITY OF SAN MARCOS ENGINEERING DIVISION TO INSURE COMPLIANCE WITH GENERAL ENGINEERING STANDARDS AND THE CITY'S DESIGN STANDARDS AND SPECIFICATIONS. THE ENGINEER-OF-WORK SHALL BEAR THE SOLE RESPONSIBILITY OF THE MATHEMATICAL DATA AND ACCURACY OF DESIGN SHOWN HERE ON.
- TRAFFIC SIGNAL CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL MATERIALS INCLUDING POLES, MAST ARMS, AND CONTROLLER ARE ON-HAND UNLESS APPROVED BY THE PROJECT INSPECTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, RELOCATION, OR REPLACEMENT OF ALL TRAFFIC LOOP DETECTORS AS REQUIRED BY THE TRAFFIC ENGINEER WITHIN 48 HOURS OF DIRECTION, OR INSTALL TEMPORARY VIDEO DETECTION UNTIL LOOP DETECTOR WORK IS COMPLETED. EXISTING TRAFFIC SIGNAL DETECTOR LOOPS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITHIN 48 HOURS OF DATE AND TIME DAMAGED OR TEMPORARY VIDEO DETECTION SHALL BE INSTALLED UNTIL THE DAMAGED LOOPS ARE REPLACED.
- WHEN PERFORMING A TRAFFIC SIGNAL MODIFICATION WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING CONTINUED OPERATION OF THE TRAFFIC SIGNAL THROUGHOUT THE PROJECT. IF ANY DAMAGES OCCUR, THE CONTRACTOR SHALL RESPOND WITHIN 3 HOURS AND RESTORE THE OPERATION WITHIN 48 HOURS.

"AS - BUILT" DECLARATION

AS ENGINEER-OF-WORK, I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IMPROVEMENTS SHOWN ON THIS SET OF CONSTRUCTION PLANS, SHEET 15 TO 17, HAVE BEEN INSTALLED AND CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE AS-BUILT PLANS, INCLUDING ALL APPROPRIATE STANDARDS AND ANY DISCRETIONARY APPROVAL(S) FOR THE PROJECT.

SIGNED _____ DATE _____
 PRINTED NAME _____ P.E. NO. _____
 DISCIPLINE _____ MY REGISTRATION EXPIRES _____

PLAN CODE
SS-1



Michael Baker INTERNATIONAL

5050 Avenida Encinas
 Suite 280
 Carlsbad, CA 92008
 Phone: (760) 476-9193
 MBACKERINTL.COM

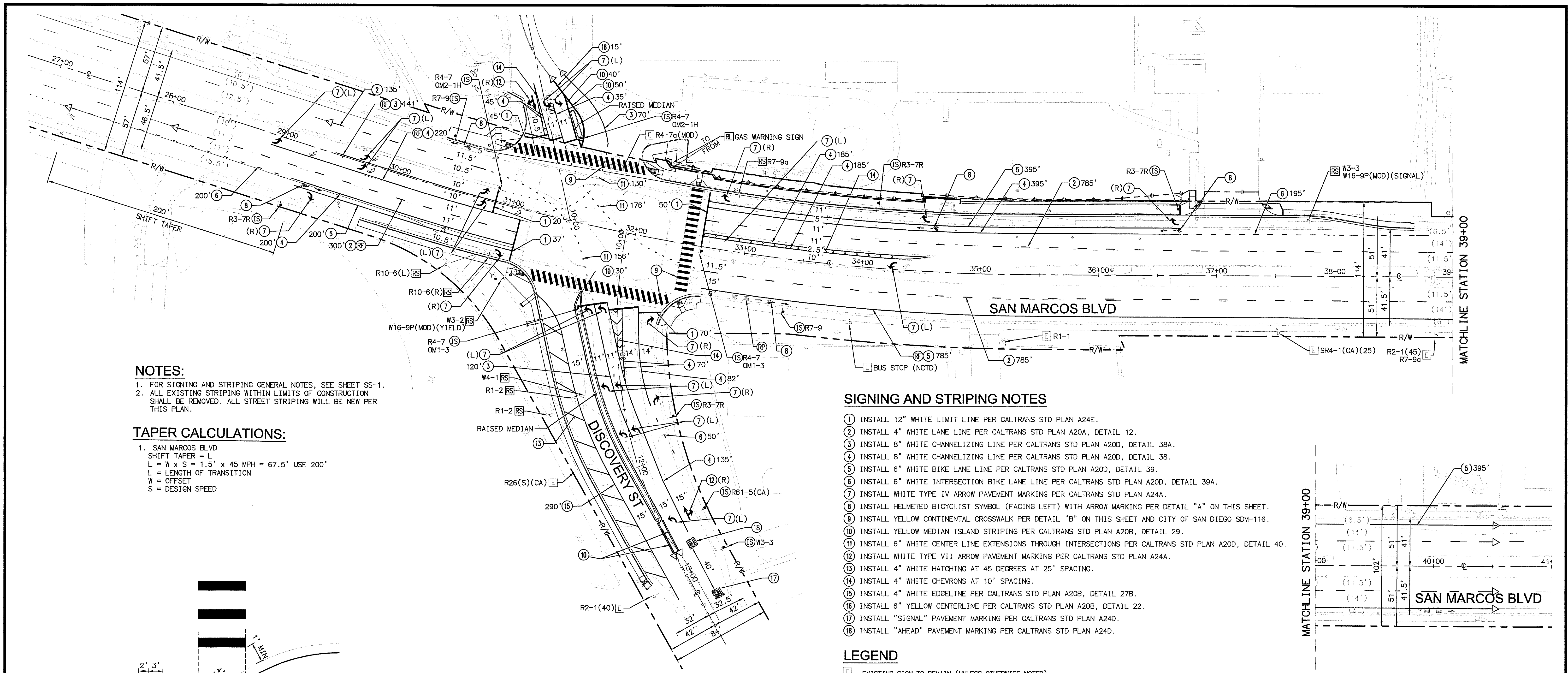
INSPECTED AND RECOMMENDED FOR ACCEPTANCE	
By: _____	Public Works Inspector
Date: _____	

RECOMMENDED FOR APPROVAL	
By: _____	Lewis Clapp, Senior Civil Engineer
R.C.E.: 78583	exp.: 12/31/2022
Date: 6/28/21	

CITY APPROVED CHANGES		
No.	Description	App'd By/Date

SAN MARCOS FIRE DEPARTMENT		VALLECITOS WATER DISTRICT		ENGINEER OF WORK		CITY APPROVED CHANGES		RECOMMENDED FOR APPROVAL		APPROVED FOR CONSTRUCTION		BENCH MARK		CITY OF SAN MARCOS ENGINEERING DIVISION	
By: _____ Date: 7/29/21		By: JAMES H. GUMPEL, DISTRICT ENGINEER RCE 080160 EXP 6/30/2022		By: RYAN K. ZELLERS R.C.E.: 69470 exp: 06 30 22		No. Description App'd By/Date		By: Lewis Clapp, Senior Civil Engineer R.C.E.: 78583 exp.: 12/31/2022 Date: 6/28/21		By: Isaac E. Echamendi, City Engineer R.C.E.: 81294 exp.: 07/30/2021		Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13828 Location: PT. NO. 1017: N1892455.016 E6270654.385 PT. NO. 1021: N1892450.992 E6274932.043 Elev: 513.042 (510.736) Datum: NAVD 1988 (NGVD VMD 29)		City Drawing No. IP18-00009 Sheet 15 of 29	

100% PLAN SUBMITTAL MARCH 03, 2021



NOTES:
 1. FOR SIGNING AND STRIPING GENERAL NOTES, SEE SHEET SS-1.
 2. ALL EXISTING STRIPING WITHIN LIMITS OF CONSTRUCTION SHALL BE REMOVED. ALL STREET STRIPING WILL BE NEW PER THIS PLAN.

TAPER CALCULATIONS:
 1. SAN MARCOS BLVD
 SHIFT TAPER = L
 $L = W \times S = 1.5' \times 45 \text{ MPH} = 67.5'$ USE 200'
 L = LENGTH OF TRANSITION
 W = OFFSET
 S = DESIGN SPEED

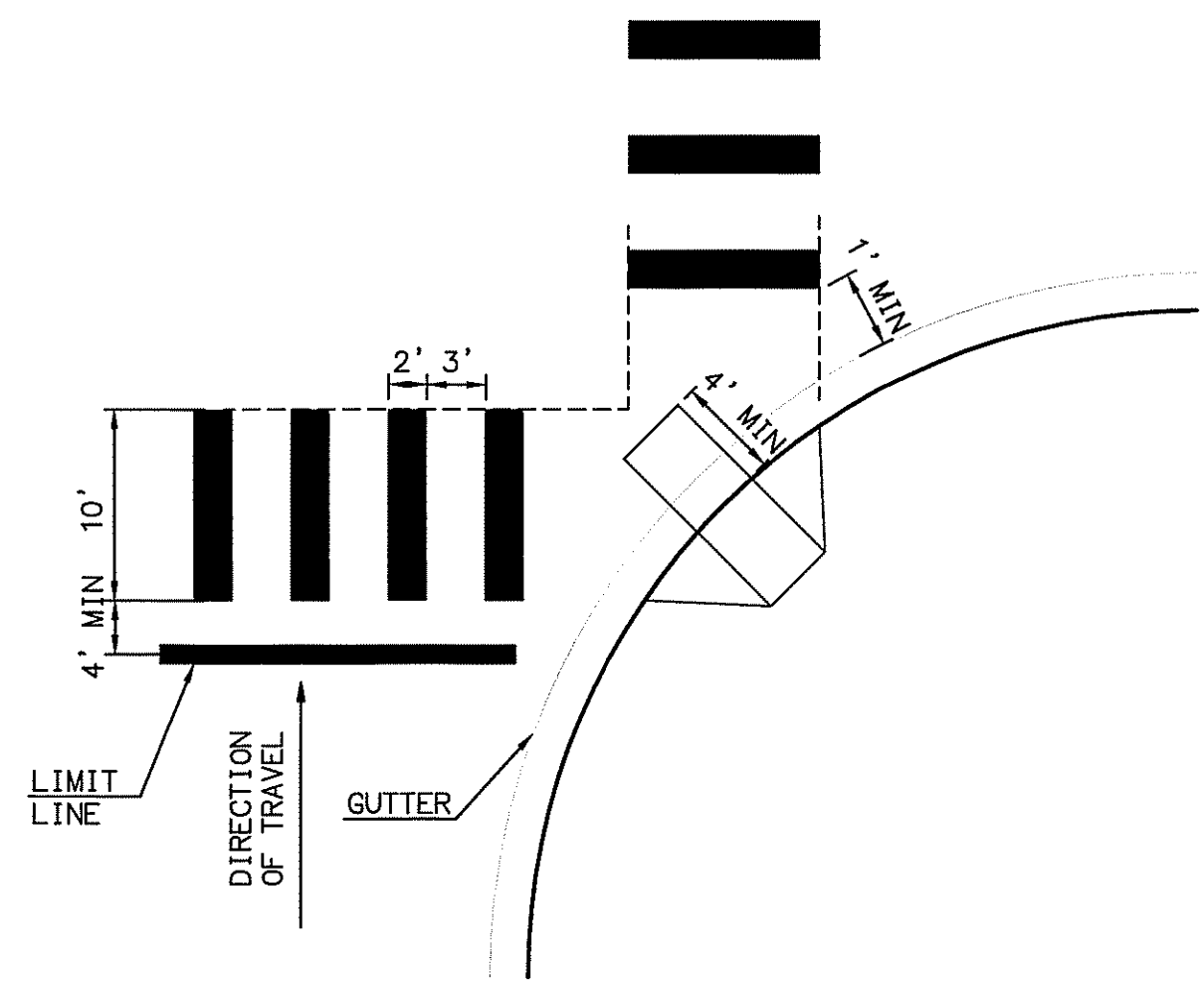
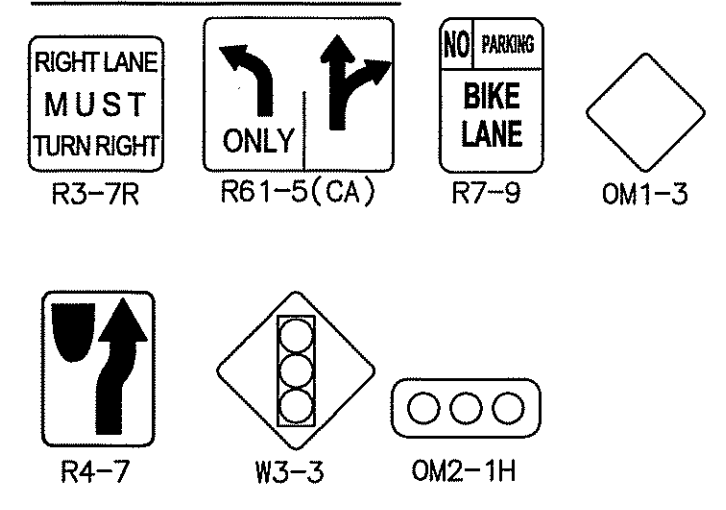
SIGNING AND STRIPING NOTES

1. INSTALL 12" WHITE LIMIT LINE PER CALTRANS STD PLAN A24E.
2. INSTALL 4" WHITE LANE LINE PER CALTRANS STD PLAN A20A, DETAIL 12.
3. INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38A.
4. INSTALL 8" WHITE CHANNELIZING LINE PER CALTRANS STD PLAN A20D, DETAIL 38.
5. INSTALL 6" WHITE BIKE LANE LINE PER CALTRANS STD PLAN A20D, DETAIL 39.
6. INSTALL 6" WHITE INTERSECTION BIKE LANE LINE PER CALTRANS STD PLAN A20D, DETAIL 39A.
7. INSTALL WHITE TYPE IV ARROW PAVEMENT MARKING PER CALTRANS STD PLAN A24A.
8. INSTALL HELMETED BICYCLIST SYMBOL (FACING LEFT) WITH ARROW MARKING PER DETAIL "A" ON THIS SHEET.
9. INSTALL YELLOW CONTINENTAL CROSSWALK PER DETAIL "B" ON THIS SHEET AND CITY OF SAN DIEGO SDM-116.
10. INSTALL YELLOW MEDIAN ISLAND STRIPING PER CALTRANS STD PLAN A20B, DETAIL 29.
11. INSTALL 6" WHITE CENTER LINE EXTENSIONS THROUGH INTERSECTIONS PER CALTRANS STD PLAN A20D, DETAIL 40.
12. INSTALL WHITE TYPE VII ARROW PAVEMENT MARKING PER CALTRANS STD PLAN A24A.
13. INSTALL 4" WHITE HATCHING AT 45 DEGREES AT 25' SPACING.
14. INSTALL 4" WHITE CHEVRONS AT 10' SPACING.
15. INSTALL 4" WHITE EDGELINE PER CALTRANS STD PLAN A20B, DETAIL 27B.
16. INSTALL 6" YELLOW CENTERLINE PER CALTRANS STD PLAN A20B, DETAIL 22.
17. INSTALL "SIGNAL" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.
18. INSTALL "AHEAD" PAVEMENT MARKING PER CALTRANS STD PLAN A24D.

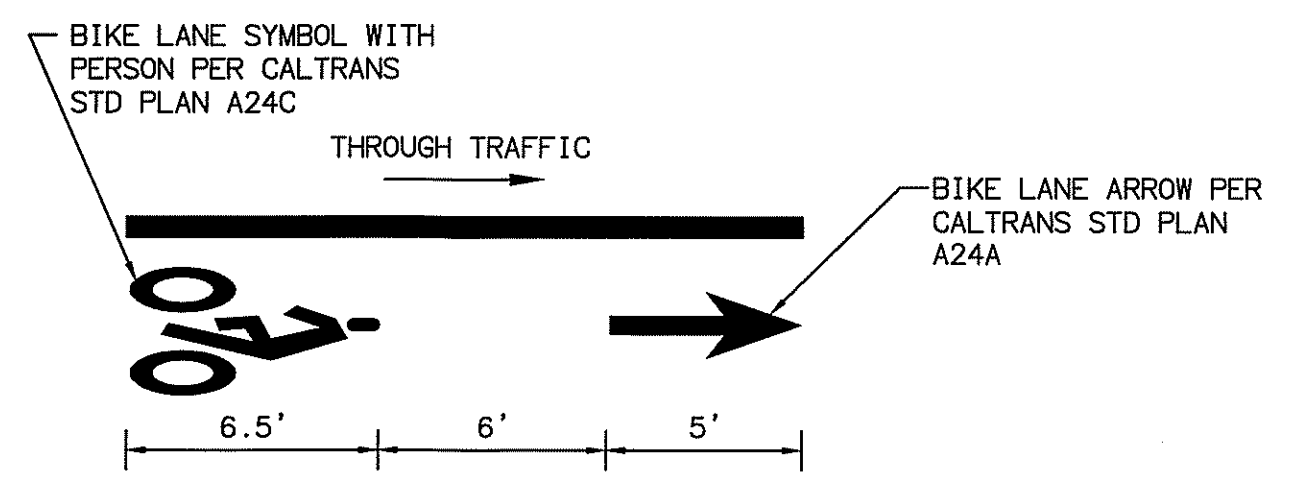
LEGEND

- E EXISTING SIGN TO REMAIN (UNLESS OTHERWISE NOTED)
- IS FURNISH & INSTALL SIGN(S) & POST (IF APPLICABLE)
- RF REFRESH EXISTING PAVEMENT MARKINGS
- RP REMOVE EXISTING, CONFLICTING PAVEMENT MARKINGS
- TS TRAFFIC SIGNAL
- RS REMOVE AND SALVAGE SIGN
- RL RELOCATE EXISTING TRAFFIC SIGN
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED SIGN (ON STREET LIGHT)
- PROPOSED PAINTED CURB
- (12') EXISTING LANE WIDTH
- 12' PROPOSED LANE WIDTH
- SNS STREET NAME SIGN
- MATCH EXISTING STRIPING/END PROPOSED STRIPING
- R/C RED CURB

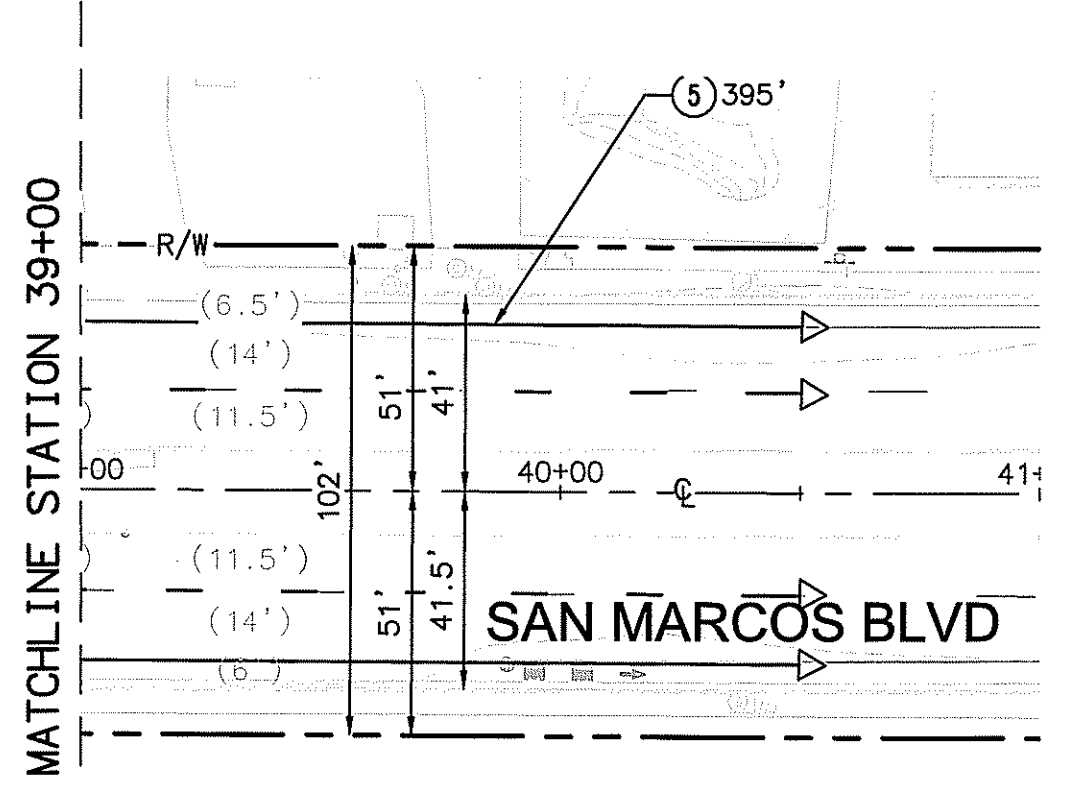
SIGN LEGEND



DETAIL "B"
 CONTINENTAL CROSSWALK MARKING
 NOT TO SCALE



DETAIL "A"
 BIKE LANE SYMBOL WITH PERSON (FACING LEFT) AND BIKE LANE ARROW (PAINT)
 NOT TO SCALE



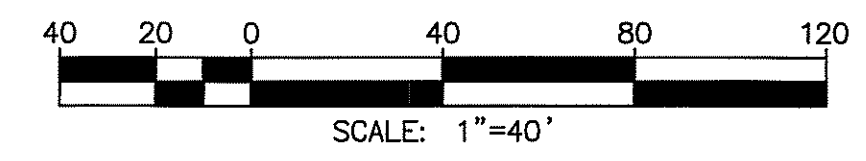
Michael Baker INTERNATIONAL

5050 Avenida Encinas
 Suite 260
 Carlsbad, CA 92008
 Phone: (760) 476-9193
 MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
 By: Public Works Inspector
 Date: _____

RECOMMENDED FOR APPROVAL
 By: Lewis Clapp, Senior Civil Engineer
 R.C.E.: 76583 exp.: 12/31/2022
 Date: 6/28/21

APPROVED FOR CONSTRUCTION
 By: Isaac Etchamendy, City Engineer
 R.C.E.: B17274 exp.: 07/30/2021
 Date: _____



SAN MARCOS FIRE DEPARTMENT
 By: Jason Mallon, Fire Marshal
 Date: 3-29-21

VALLECITOS WATER DISTRICT
 By: James H. Gumpel, District Engineer
 RCE C60160 EXP 6/30/2022

ENGINEER OF WORK
 By: Ryan K. Zellers
 Name: RYAN K. ZELLERS
 R.C.E.: 69470 exp: 06 30 22

No.	Description	App'd By	Date

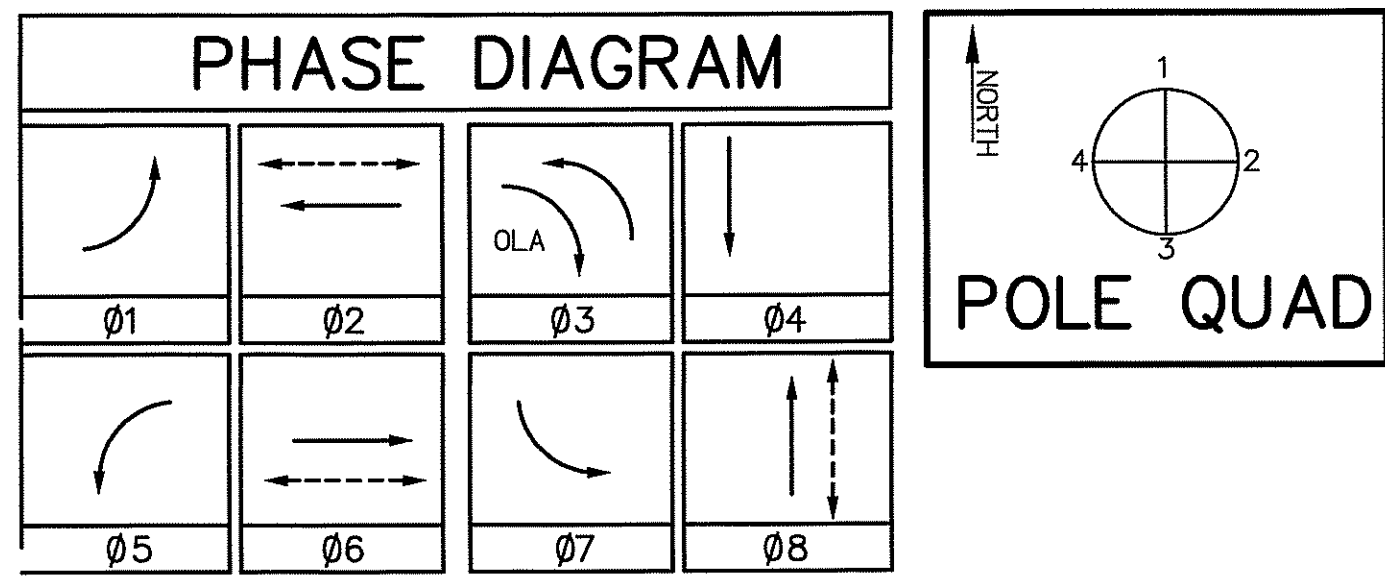
CITY APPROVED CHANGES

BENCH MARK
 Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
 GPS PT. NO. 1021 PER ROS 13928
 Location: PT. NO. 1017: N1982455.016 E6270654.355
 PT. NO. 1021: N1982450.952 E6274932.043
 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NSVD VMD 2011]

CITY OF SAN MARCOS ENGINEERING DIVISION
 SIGNING AND STRIPING PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
 VMD W.O. 207141
 City Drawing No. IP18-00009
 Sheet 16 of 29

CONDUCTOR SCHEDULE

AWG	PHASE	CIRCUIT	1	2	3	4	5	6	7	8	9
3 CSC	Ø1, Ø6, Ø6P	POLE A	-	-	-	-	-	-	-	-	-
	Ø7, Ø8P	POLE B	-	-	-	-	-	-	-	-	-
	Ø4, Ø5, Ø6P, Ø7, Ø8	POLE C	-	-	-	-	-	-	-	-	-
12 CSC	Ø6P	POLE D	-	-	-	-	-	-	-	-	-
	Ø2, Ø2P, Ø5	POLE E	-	-	-	-	-	-	-	-	-
	Ø3, Ø4	POLE F	-	-	-	-	-	-	-	-	-
	Ø1, Ø2P, Ø3, Ø4, Ø8	POLE G	-	-	-	-	-	-	-	-	-
	Ø8P	POLE H	-	-	-	-	-	-	-	-	-
TOTAL CABLES 3 CONDUCT./12 CONDUCT.			-	-	-	-	-	-	-	-	-
#10	LUMINAIRE	-	2	2	2	2	-	-	-	-	-
#6	SIGNAL SERVICE	-	-	-	-	-	-	-	-	-	-



POLE REMOVAL SCHEDULE

No	TYPE	HEIGHT	SIG. M.A.	LUM. M.A.	REMARKS
(A)	19-4-70	30'	30'	-	RS
(B)	1-A	10'	-	-	RS
(C1)	17-2-70	30'	20'	-	RS
(C2)	1-A	10'	-	-	RS
(C3)	15	30'	-	-	RS
(E)	24-4-70	30'	35'	-	RS
(F)	1-A	10'	-	-	RS
(G)	24-4-70	30'	35'	-	RS

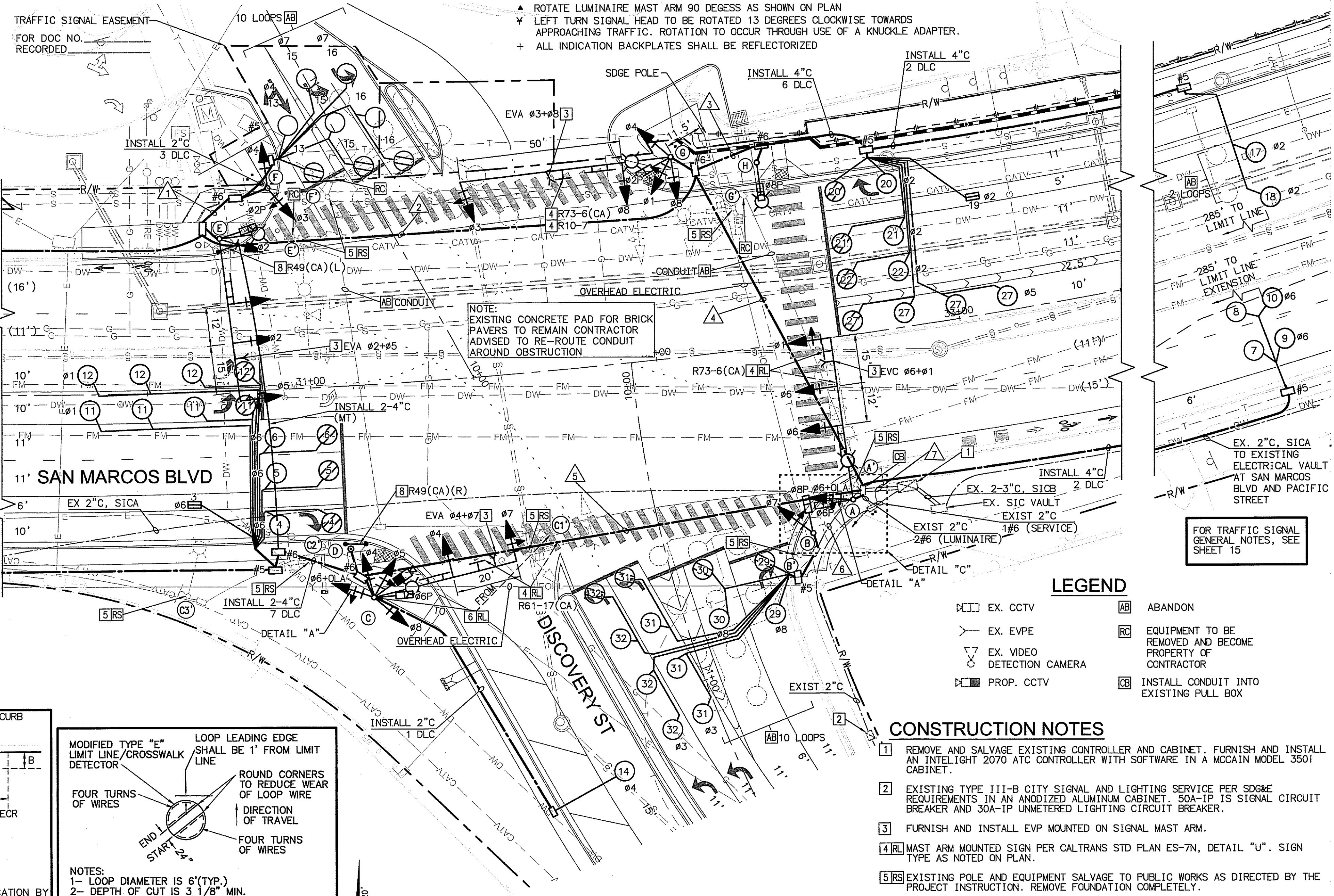
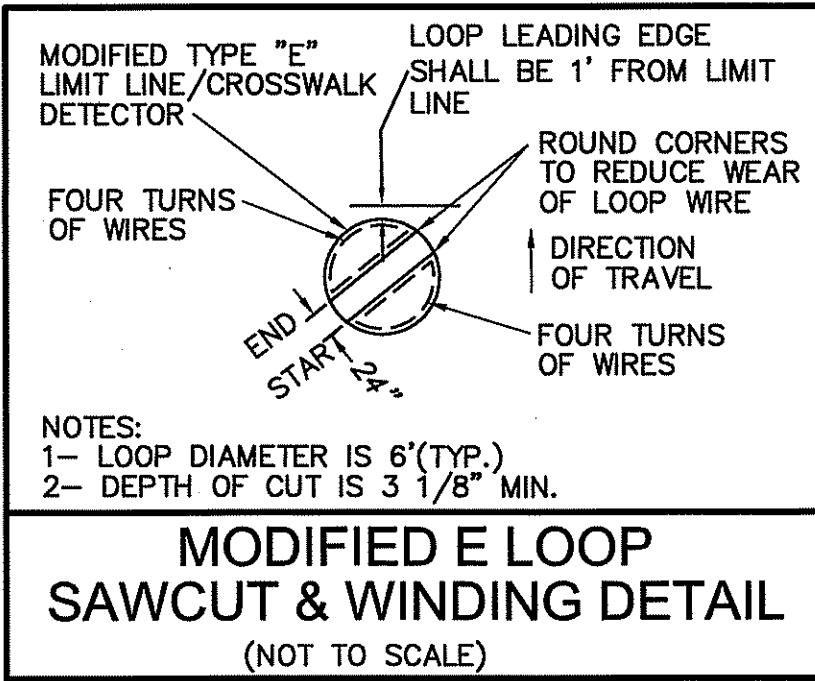
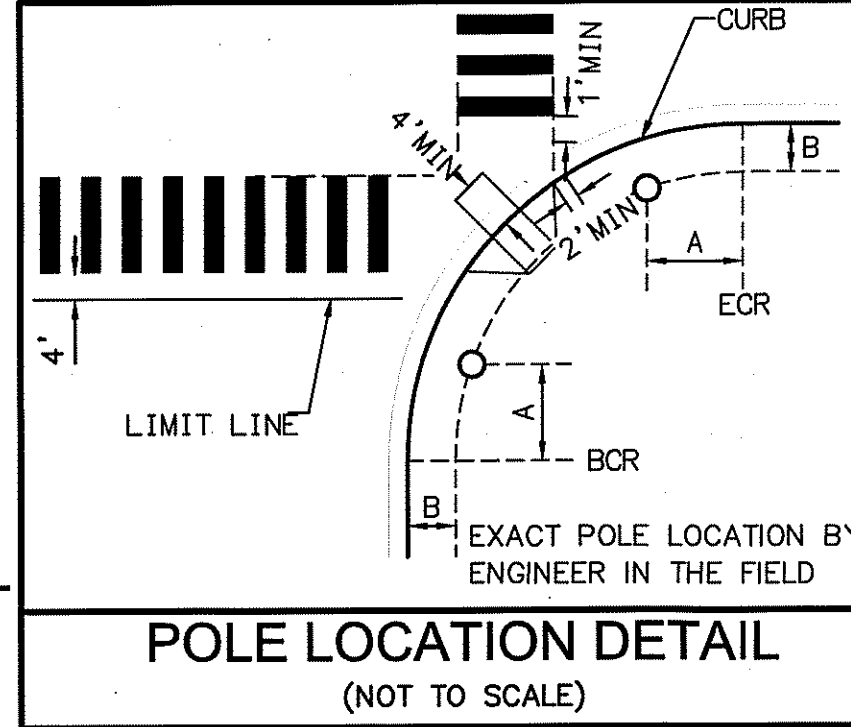
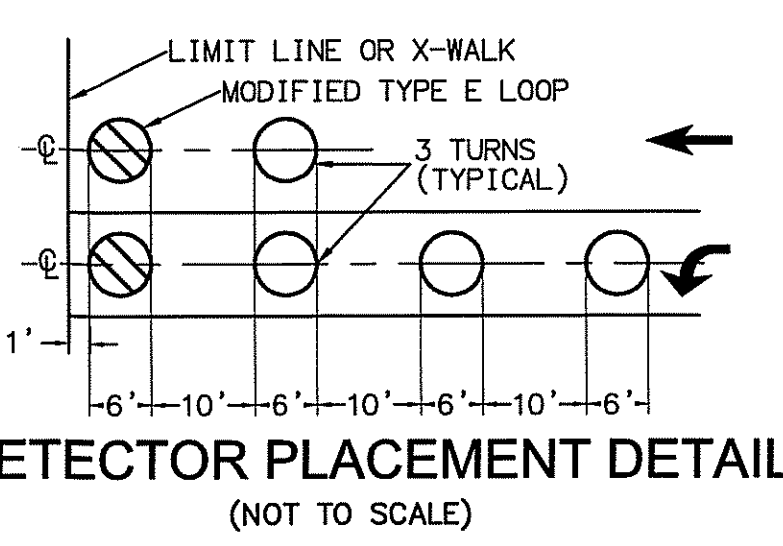
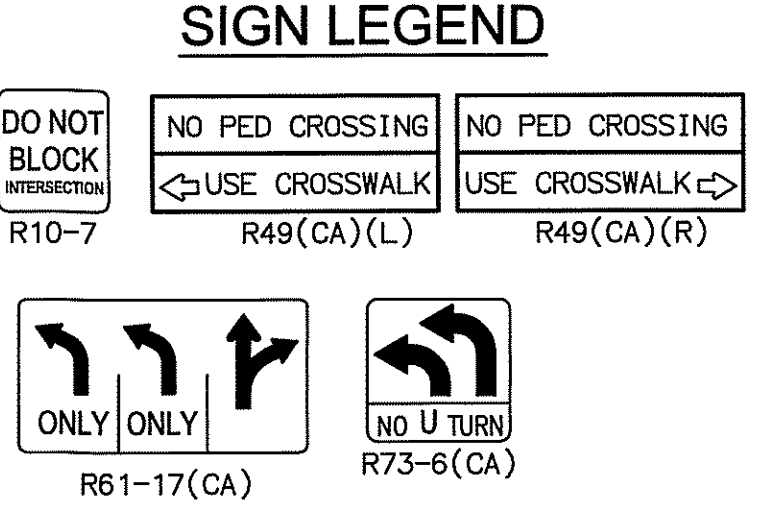
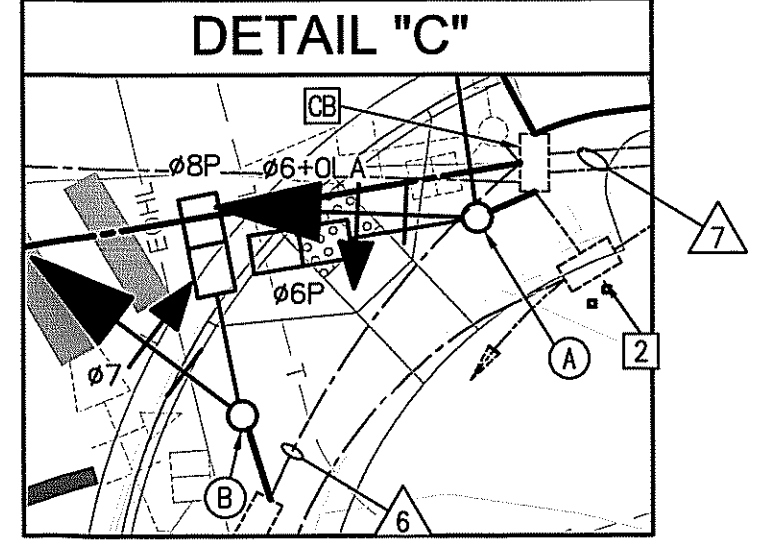
POLE SCHEDULE

POLE DATA		SIGNAL ARM		LUM		SIGNAL MOUNTING			PUSH BUTTON		POLE LOCATION		REMARKS	RETRO - REFLECTIVE SNS
No	TYPE	HEIGHT	MA	F DIST	MA	LPSV	VEH	MA	PED	PHASE	POLE QUAD	A		
(A)	29-5-100	30'	50'	15'	15'	125 W	SV-1-TB	3-MAS	SP-1-T	-	-	8.6'	6.2'	Discovery St
(B)	1-A	10'	-	-	-	-	TV-1-T	-	SP-1-T	6P, 8P	1, 2	13.5'	4.0'	-
(C)	26-4-100	30'	45'	20'	15'	125 W	SV-4-TB	2-MAS	SP-1-T	-	-	9.7'	15.1'	San Marcos Blvd
(D)	PPB	5'-7"	-	-	-	-	-	-	-	6P	3	4.9'	3'	-
(E)	29-5-100	30'	50'	15'	15'	125 W	SV-1-TB	3-MAS	SP-1-T	2P	1	5.8'	3.6"	Discovery St
(F)	1-A	10'	-	-	-	-	TV-2-T	-	-	-	-	13.8'	3.5'	-
(G)	61-5-100	30'	65'	50'	15'	125 W	SV-3-TB	2-MAS	SP-1-T	2P	3	5.0'	11.4'	San Marcos Blvd
(H)	15TS	30'	-	-	-	12'	125 W	-	SP-1-T	8P	2	21.0'	6.5'	-

CSC = CONDUCTOR SIGNAL CABLE
ALL EQUIPMENT NEW UNLESS OTHERWISE NOTED (●) EXISTING

DETECTOR ASSIGNMENT SCHEDULE

NUMBER	PHASE	SLOT	FIT	CHANNEL
1	6	J3U	3	5
2	6	J3L	3	6
3	6B	K1C	2	3
4	6	J4U	4	7
5	6	J4L	4	8
6	6	J5U	5	9
7	6C	K6A	11	21
8	6C	K6B	11	22
9	6C	K6C	12	23
10	6C	K6D	12	24
11	1	I1U	1	1
12	1	I1L	1	2
13	4	I8U	8	15
14	4C	K4A	7	13
15	7	J6U	6	11
16	7	J6L	6	12
17	2	I3U	3	5
18	2	I3L	3	6
19	2B	K1A	1	1
20	2	I4U	4	7
21	2	I4L	4	8
22	2	I5U	5	9
23	2C	K2A	3	5
24	2C	K2B	3	6
25	2C	K2C	4	7
26	2C	K2D	4	8
27	5	J1U	1	1
28	8B	K1D	2	4
29	8	J8U	8	15
30	8	J8L	8	16
31	3	I6U	6	11
32	3	I6L	6	12
EVP	2+5	J11U	11	21
EVP	4+7	J11L	11	22
EVP	1+6	J12U	12	23
EVP	3+8	J12L	12	24
PPB	2P	I11U	11	21
PPB	6P	I12U	12	23
PPB	8P	I12L	12	24



- ### CONSTRUCTION NOTES
- REMOVE AND SALVAGE EXISTING CONTROLLER AND CABINET. FURNISH AND INSTALL AN INTELLIGHT 2070 ATC CONTROLLER WITH SOFTWARE IN A MCCAIN MODEL 350I CABINET.
 - EXISTING TYPE III-B CITY SIGNAL AND LIGHTING SERVICE PER SDG&E REQUIREMENTS IN AN ANODIZED ALUMINUM CABINET. 50A-IP IS SIGNAL CIRCUIT BREAKER AND 30A-IP UNMETERED LIGHTING CIRCUIT BREAKER.
 - FURNISH AND INSTALL EVP MOUNTED ON SIGNAL MAST ARM.
 - MAST ARM MOUNTED SIGN PER CALTRANS STD PLAN ES-7N, DETAIL "U". SIGN TYPE AS NOTED ON PLAN.
 - EXISTING POLE AND EQUIPMENT SALVAGE TO PUBLIC WORKS AS DIRECTED BY THE PROJECT INSTRUCTION. REMOVE FOUNDATION COMPLETELY.
 - RELOCATE EXISTING CCTV CAMERA FROM POLE (C1) TO POLE (C).
 - INSTALL PEDESTRIAN BARRICADE.

Underground Service Alert

Call: TOLL FREE
-800-422-4133

TWO WORKING DAYS BEFORE YOU DIG

IMPORTANT NOTICE

SECTION 4216-4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID FOR YOUR DIG ALERT ID NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-227-2600 TWO WORKING DAYS BEFORE YOU DIG.

PLAN CODE
TS-1

CITY OF SAN MARCOS ENGINEERING DIVISION

SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

City Drawing No. IP18-00009
Sheet 17 of 29

SAN MARCOS FIRE DEPARTMENT By: JASON NAILON, FIRE MARSHAL Date: 3/29/21	VALLECITOS WATER DISTRICT By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: RCE C80180 EXP 6/30/2022	ENGINEER OF WORK By: RYAN K. ZELLERS Name: RYAN K. ZELLERS R.C.E.: 69470 exp: 06/30/22	CITY APPROVED CHANGES No. Description App'd By Date	INSPECTED AND RECOMMENDED FOR ACCEPTANCE By: Public Works Inspector Date:	RECOMMENDED FOR APPROVAL By: Lewis Clapp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/28/21	APPROVED FOR CONSTRUCTION By: Isaac Echamendi, City Engineer R.C.E.: 81294 exp.: 09/30/2021 Date:	BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER RGS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.892 E6274932.043 Elev.: 513.942 (510.736) Datum: NAVD 1983 (NAD 83)
---	---	---	--	---	---	--	---

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR, PERMITTEE, OR OWNER SHALL BE RESPONSIBLE FOR CONTINUAL MAINTENANCE OF THE EROSION CONTROL CONSTRUCTION.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY AFTER AS DIRECTED BY THE INSPECTOR.
3. EMERGENCY WORK MAY BE NECESSARY DURING RAINSTORMS, CONSIDER THE AVAILABILITY OF STAND-BY WORK CREWS.
4. ALL REMOVABLE PROTECTION DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY AND DURING CONSTRUCTION WHEN RAIN IS OCCURRING.
5. EFFECTIVE PLANTING SHALL BE INSTALLED, FULLY GERMINATED, AND SHALL EFFECTIVELY COVER 70% OF THE AREAS OF DISTURBED VEGETATION PRIOR TO FILING OF THE NOTICE OF TERMINATION (NOT).
6. GRAVEL BAGS AND NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS EMINENT.
7. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE GSP AFTER EACH RAIN EVENT.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES WHICH MAY ARISE.
10. TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED (TEMPORARILY) AS THE WORK PROGRESSES, AS RECOMMENDED BY THE GSP.
11. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW UNLESS CHANNELS ARE LINED WITH TEMPORARY MATERIALS SUCH AS PLASTIC SHEETING.

GRADE OF CHANNEL LESS THAN 3%	INTERVAL 100 FEET
3% - 6%	50 FEET
OVER 6%	25 FEET

12. A GRAVEL BAG SILT TRAP SHALL BE PROVIDED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
13. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL, OR WHEN SILT REACHES AN ELEVATION OF 0.5' BELOW WEIR OPENING FOR GRAVEL BAGS.
14. ALL EROSION CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP SHALL BE INCORPORATED HEREON.
15. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.

LEGEND

BEST MANAGEMENT PROTECTION

DESCRIPTION	SYMBOL
WM-1 MATERIAL DELIVERY STORAGE	
WM-5 SOLID WASTE MANAGEMENT	
WM-6 HAZARDOUS WASTE MANAGEMENT	
WM-8 CONCRETE WASTE MANAGEMENT	
WM-9 SANITARY/SEPTIC WASTE MANAGEMENT	
SC-8 GRAVEL BAG BARRIER	
FIBER ROLL	

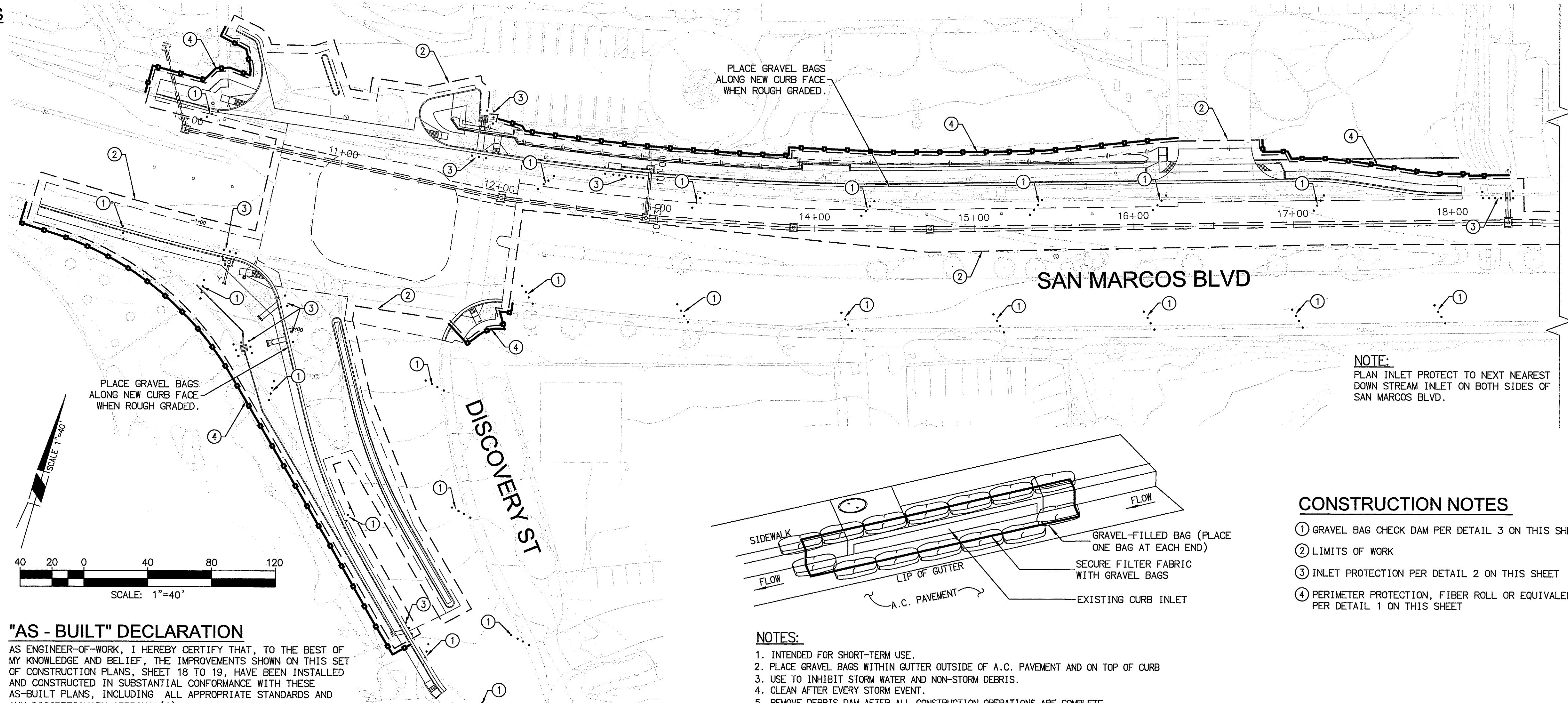
IN THE IMMINENT EVENT OF PRECIPITATION ALL EXPOSED DRIVEWAYS, OR CROSS GUTTERS, SHALL BE PROTECTED WITH (A MINIMUM 20-FOOT LENGTH) OF 1" ROCK/GRAVEL DURING CONSTRUCTION

LOCATION OF BEST MANAGEMENT PROTECTION, INDICATED BY WM-1 THROUGH WM-9, ARE NOT SHOWN ON THIS PLAN. CONTRACTOR MAY MAKE ARRANGEMENTS TO UTILIZE SITES, AS INDICATED IN SPECIFICATION, ALONG INDIVIDUAL LOCATIONS. CONTRACTOR'S Q.S.P. SHALL DETERMINE APPROPRIATE LOCATIONS, DOCUMENT LOCATIONS IN SWPPP AND OBTAIN APPROVAL FROM ENGINEER AND THE INSPECTOR IN THE FIELD

1. CONTRACTOR TO PLACE INLET PROTECTION PER INLET PROTECTION DETAIL (EITHER OPTION 1 OR OPTION 2) LOCATED ON THIS SHEET, WHEN NEEDED AT COMMENCEMENT OF WORK AT EACH INDIVIDUAL LOCATION, ON STREETS INDICATED TO HAVE A GRIND AND OVERLAY. ALL OTHER REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE APPROPRIATE TIME AS DICTATED BY THE CONSTRUCTION SEQUENCE AND THE CITY INSPECTOR.

2. GRAVEL BAG CHECK DAMS TO BE PLACED WITHIN STREET AREAS PER EROSION CONTROL NOTES LOCATED ON THIS SHEET AND PER DETAIL SHOWN ON THESE PLANS.

3. EROSION CONTROL BMPs SHALL BE INSTALLED AT LOCATIONS AS DESCRIBED IN THE NOTES AND DETAILS AND AT LOCATIONS DETERMINED BY THE INSPECTOR DURING CONSTRUCTION, BASED ON CURRENT FIELD CONDITIONS. CONTRACTOR WILL COORDINATE WITH CITY INSPECTOR TO CLEARLY DEMONSTRATE THE FUNCTIONAL ADEQUACY OF THE EROSION CONTROL FACILITIES.



NOTE:
PLAN INLET PROTECT TO NEXT NEAREST DOWN STREAM INLET ON BOTH SIDES OF SAN MARCOS BLVD.

CONSTRUCTION NOTES

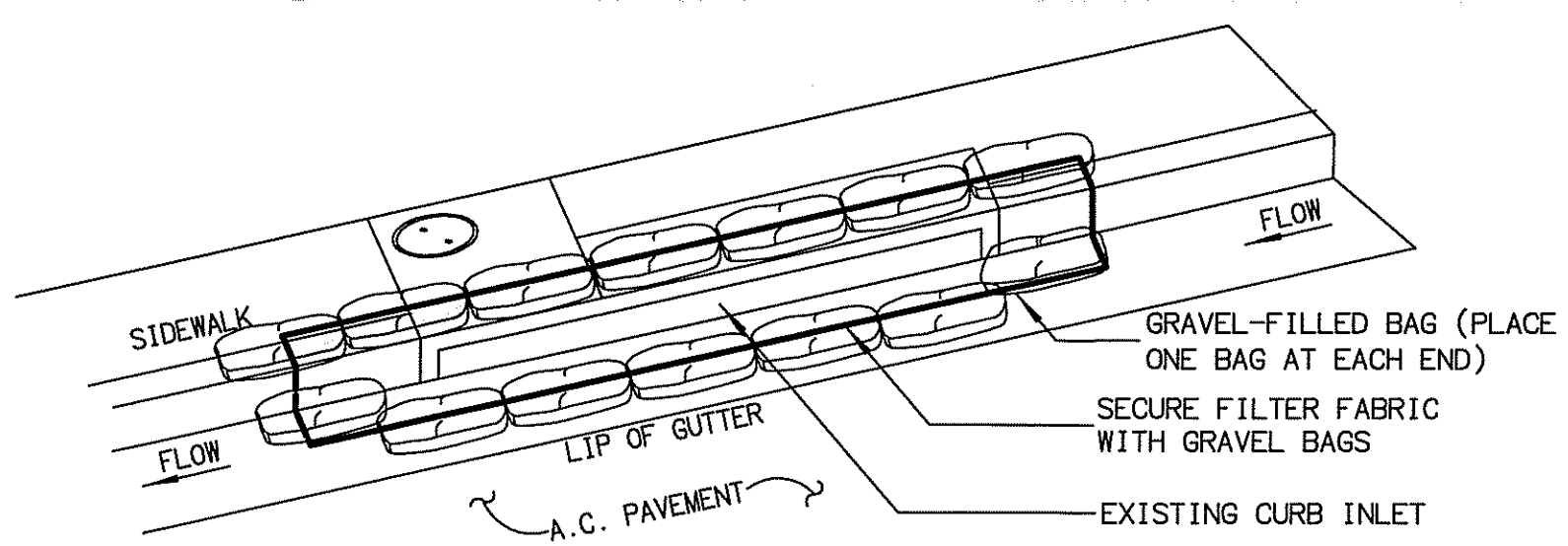
1. GRAVEL BAG CHECK DAM PER DETAIL 3 ON THIS SHEET
2. LIMITS OF WORK
3. INLET PROTECTION PER DETAIL 2 ON THIS SHEET
4. PERIMETER PROTECTION, FIBER ROLL OR EQUIVALENTS, PER DETAIL 1 ON THIS SHEET

"AS - BUILT" DECLARATION

AS ENGINEER-OF-WORK, I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IMPROVEMENTS SHOWN ON THIS SET OF CONSTRUCTION PLANS, SHEET 18 TO 19, HAVE BEEN INSTALLED AND CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE AS-BUILT PLANS, INCLUDING ALL APPROPRIATE STANDARDS AND ANY DISCRETIONARY APPROVAL(S) FOR THE PROJECT.

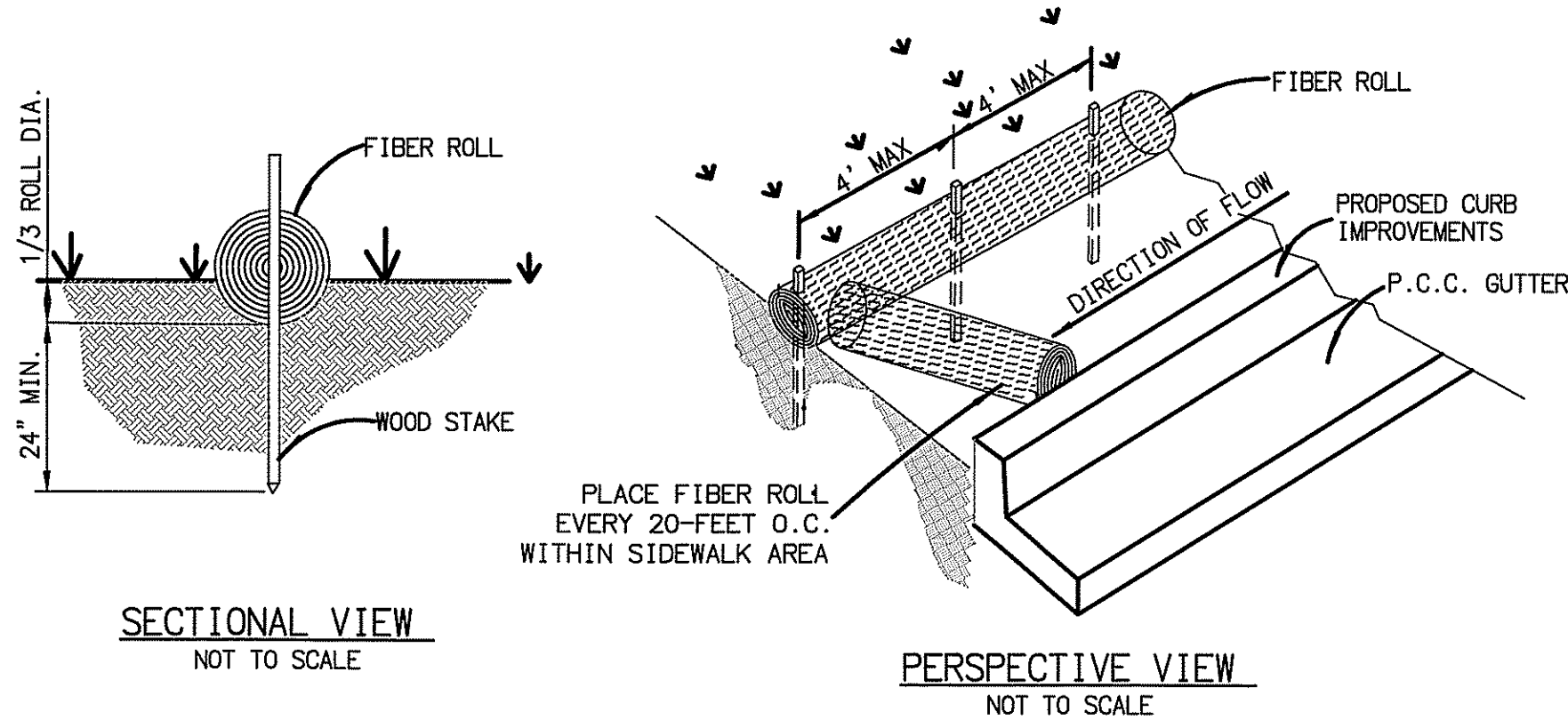
SIGNED _____ DATE _____
 PRINTED NAME _____ P.E. NO. _____
 DISCIPLINE _____ MY REGISTRATION EXPIRES _____

NOTE:
PLAN INLET PROTECT TO NEXT NEAREST DOWN STREAM INLET ON BOTH SIDES OF DISCOVERY ST.



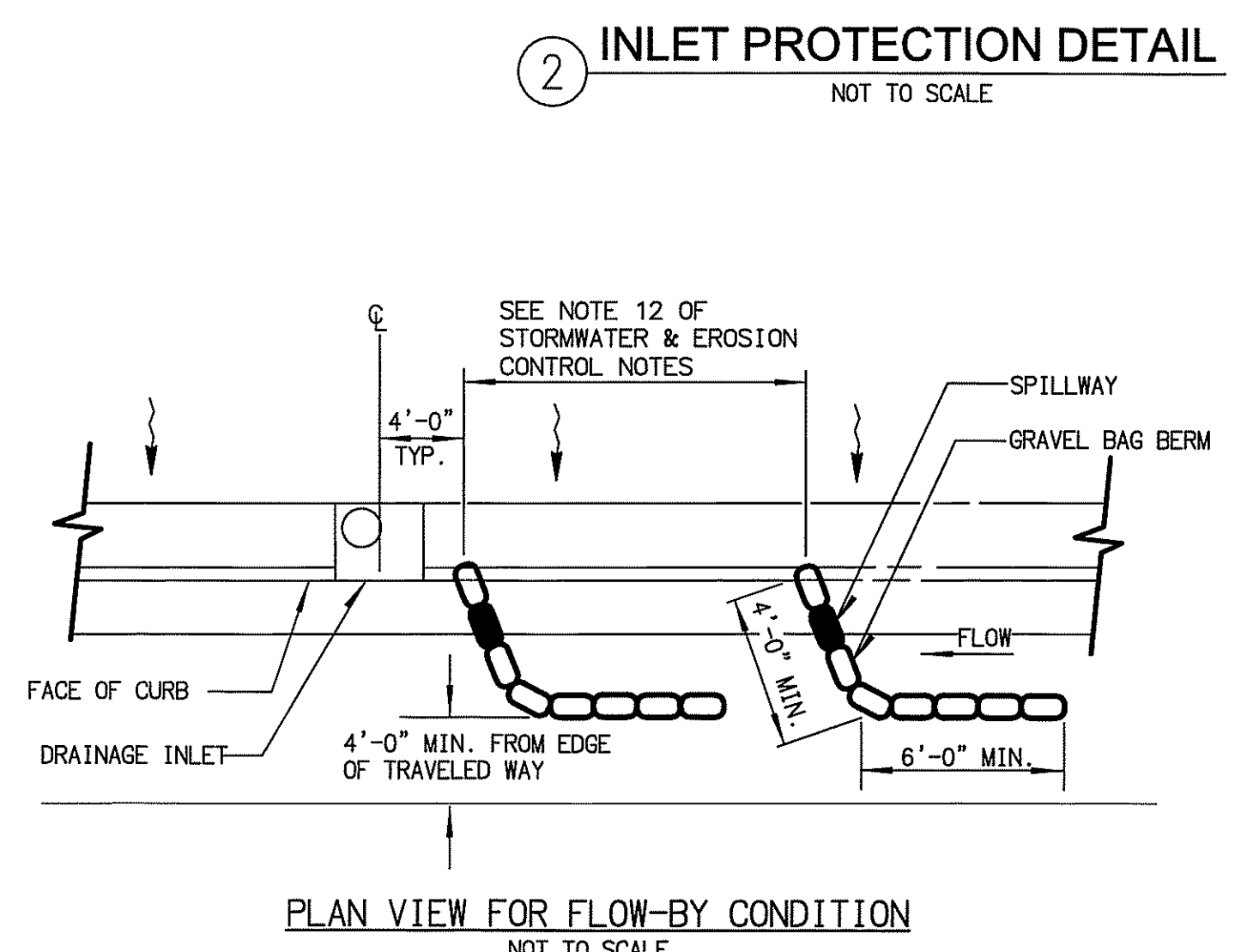
NOTES:

1. INTENDED FOR SHORT-TERM USE.
2. PLACE GRAVEL BAGS WITHIN GUTTER OUTSIDE OF A.C. PAVEMENT AND ON TOP OF CURB
3. USE TO INHIBIT STORM WATER AND NON-STORM DEBRIS.
4. CLEAN AFTER EVERY STORM EVENT.
5. REMOVE DEBRIS DAM AFTER ALL CONSTRUCTION OPERATIONS ARE COMPLETE.
6. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR'S Q.S.P.. SILT & DEBRIS ACCUMULATION MUST BE REMOVED AS IT ACCUMULATES.
7. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND GRINDING OPERATIONS.



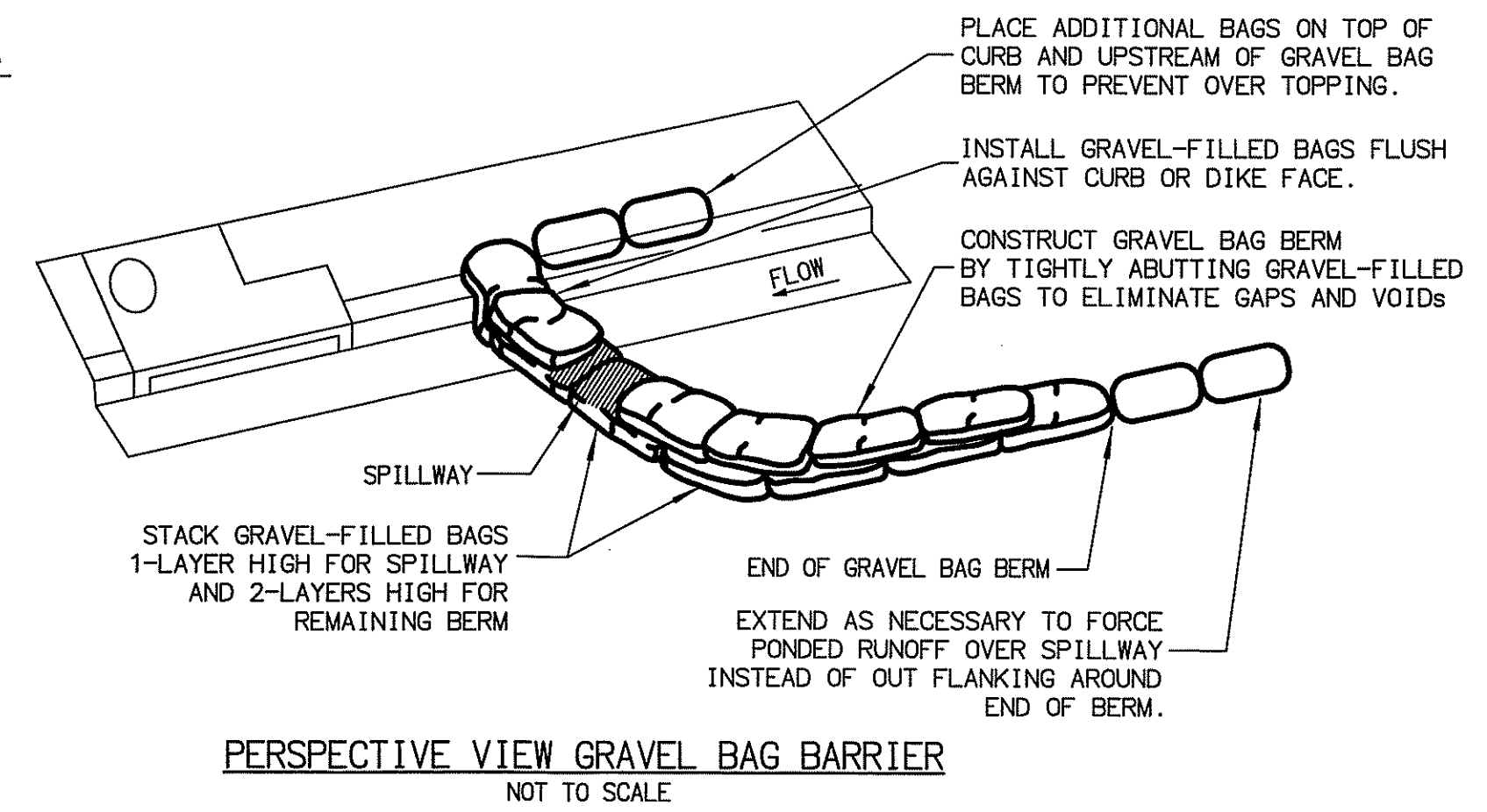
1 FIBER ROLL PLACEMENT

NOT TO SCALE



3 GRAVEL BAG PROTECTION FOR CURB, GUTTER AND SIDEWALK REPLACEMENT

NOT TO SCALE



NOTES:

1. PLACE SAFETY CONES ADJACENT TO DRAINAGE INLET PROTECTION.
2. DIMENSIONS MAY VARY TO FIT FIELD CONDITIONS.
3. INSTALL A MINIMUM OF 3 GRAVEL BAG BERMS UPSTREAM OF EACH DRAINAGE INLET TO BE PROTECTED.
4. EROSION CONTROL BLANKET OR GEOSYNTHETIC FABRIC IS NOT REQUIRED IF THE AREA ADJACENT TO THE DRAINAGE INLET IS VEGETATED OR PAVED.

PLAN CODE
EC-1



Michael Baker INTERNATIONAL
 5050 Avenida Encinas Suite 260
 Carlsbad, CA 92008 Phone: (760) 476-9193
 MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
 By: _____
 Date: _____
 Public Works Inspector

RECOMMENDED FOR APPROVAL
 By: Lewis Clapp, Senior Civil Engineer
 R.C.E.: 76583 exp.: 12/31/2022
 Date: 2/28/21

APPROVED FOR CONSTRUCTION
 By: Isaac E. Pham, City Engineer
 R.C.E.: 21294 exp.: 03/30/2021
 Date: _____

BENCH MARK
 Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
 G.S. PT. NO. 1021 PER ROS 13928
 Location: PT. NO. 1017: N1992455.016 E6270654.355
 PT. NO. 1021: N1992450.982 E6274832.043
 Elev: 513.042 [510.736] Datum: NAVD 1988 [NAD 83]

CITY OF SAN MARCOS ENGINEERING DIVISION
 EROSION & SEDIMENT CONTROL PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

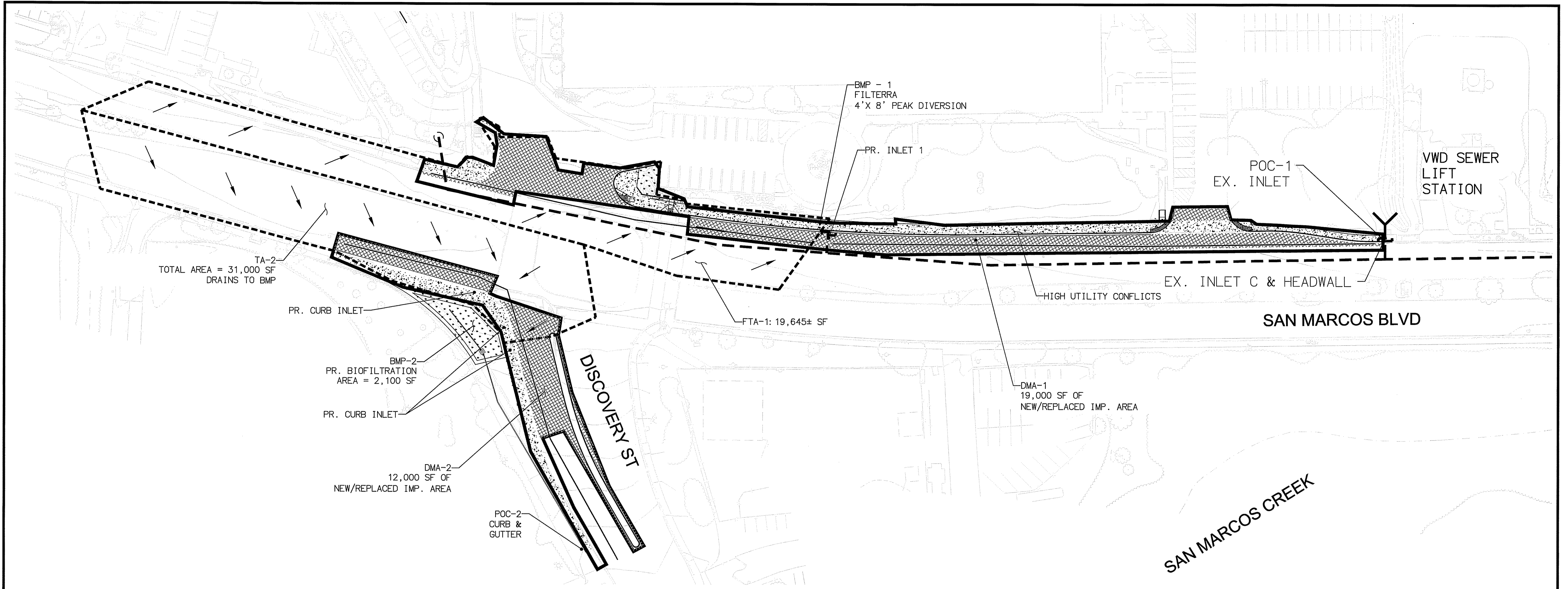
VMD No. 207141
 City Drawing No. IP18-00009
 Sheet 18 of 29

SAN MARCOS FIRE DEPARTMENT
 By: Jason Nialon, Fire Marshal
 Date: 3-29-21

V.W.D. AS-BUILT
 By: _____
 Date: _____
 R.C.E. No. _____ EXP. _____
 VALLECITOS WATER DISTRICT
 By: James H. Gumpel, District Engineer
 Date: _____
 RCE C60160 EXP 6/30/2022

ENGINEER OF WORK
 By: Josh C. Stone
 Name: JOSH C. STONE
 R.C.E.: C60755 exp.: 12/31/22

No.	Description	App'd By	Date



LEGEND

PROPOSED STORM DRAIN SYSTEM

DRAINAGE PATH

TREATMENT AREA

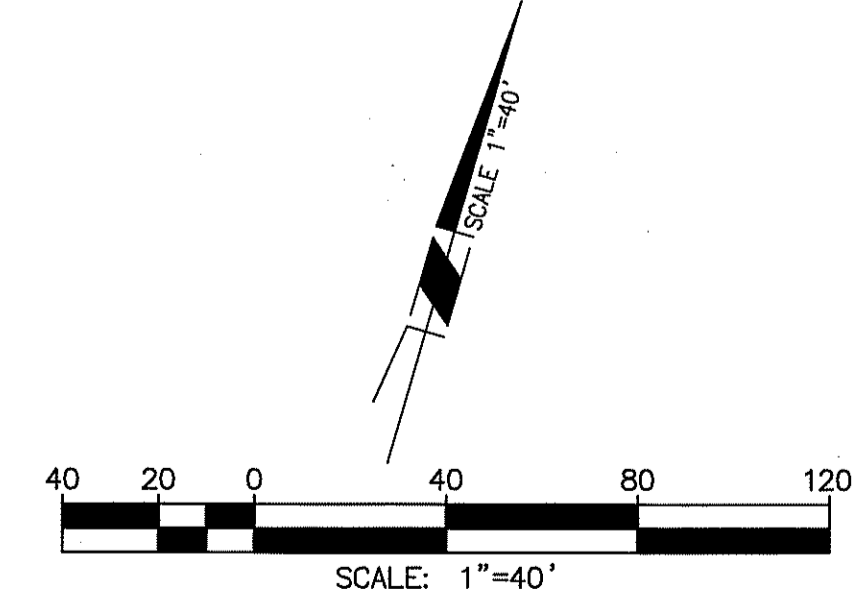
DMA EXHIBIT NOTES

UNDERLYING HYDROLOGIC SOIL GROUP: D
 APPROXIMATE DEPTH TO GROUNDWATER: < 5'
 NO CRITICAL COURSE SEDIMENT YIELD AREAS ON SITE

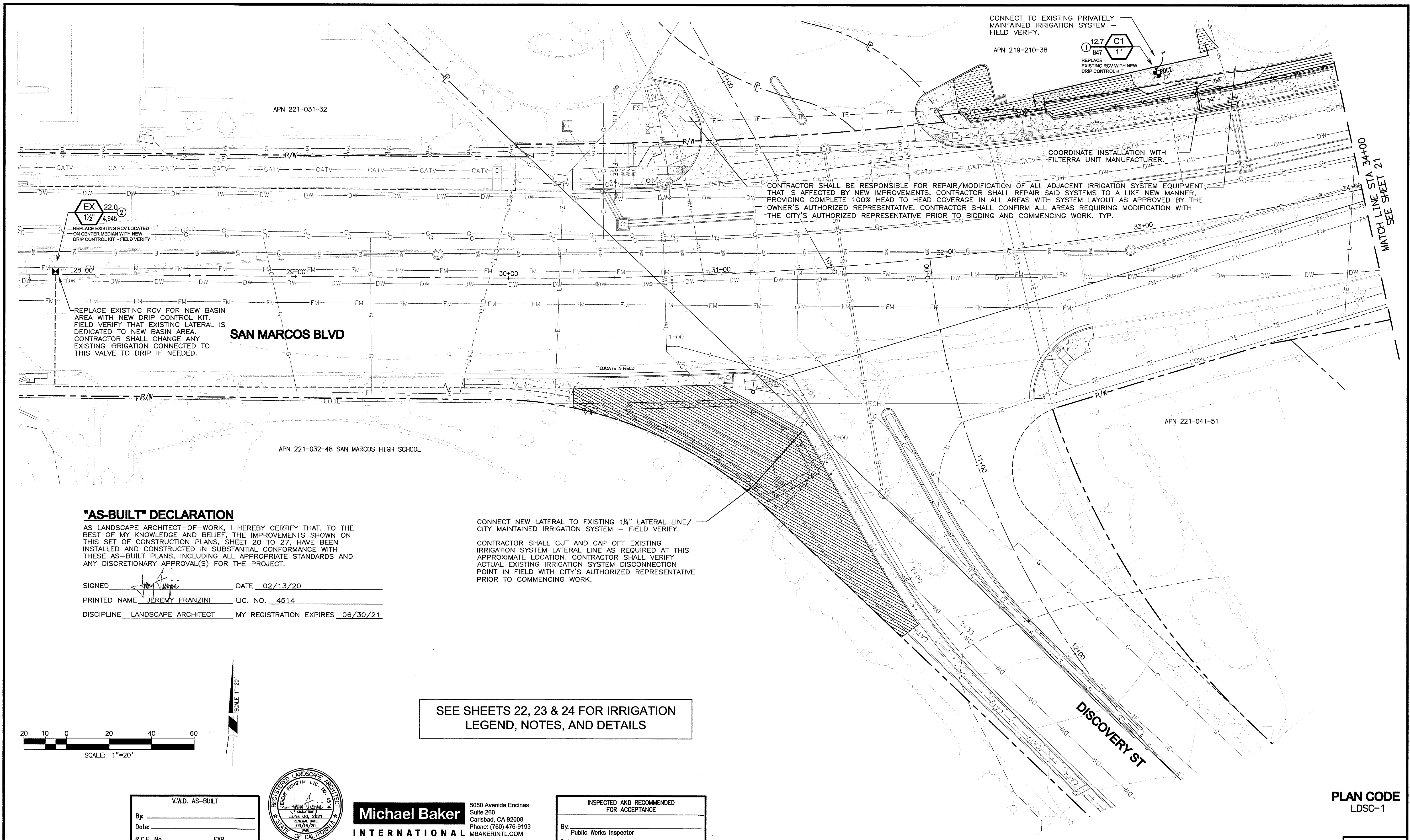
<p>SAN MARCOS FIRE DEPARTMENT</p> <p>By: <i>[Signature]</i> JASON NAILON, FIRE MARSHAL Date: 3.29.21</p>	<p>VALLECITOS WATER DISTRICT</p> <p>By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: RCE C60160 EXP 6/30/2022</p>	<p>ENGINEER OF WORK</p> <p>By: <i>[Signature]</i> Name: JOSH C. STONE R.C.E.: C60755 exp: 12/31/22</p>	<p>CITY APPROVED CHANGES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Description</th> <th>App'd By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	App'd By	Date													<p>INSPECTED AND RECOMMENDED FOR ACCEPTANCE</p> <p>By: Public Works Inspector Date: _____</p>	<p>RECOMMENDED FOR APPROVAL</p> <p>By: <i>[Signature]</i> Lewis Clapp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/28/21</p>	<p>APPROVED FOR CONSTRUCTION</p> <p>By: <i>[Signature]</i> J. SARA Echamendy, City Engineer R.C.E.: 81294 exp.: 09/30/2021 Date: _____</p>	<p>BENCH MARK</p> <p>Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.992 E6274932.043 Elev: 513.042 [510.738] Datum: NAVD 1988 [NAGD VMD 29]</p>	<p>CITY OF SAN MARCOS ENGINEERING DIVISION</p> <p>DRAINAGE MANAGEMENT AREA EXHIBIT FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION</p>
No.	Description	App'd By	Date																					
								<p>PLAN CODE DMA-1</p>	<p>VMD W.O. 207141 City Drawing No. IP18-00009 Sheet 19 of 29</p>															



Michael Baker INTERNATIONAL
 5050 Avenida Encinas
 Suite 250
 Carlsbad, CA 92008
 Phone: (760) 476-9193
 MBAKERINTL.COM



100% PLAN SUBMITTAL SEPTEMBER 18, 2020



"AS-BUILT" DECLARATION

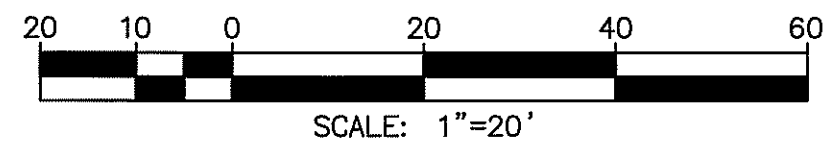
AS LANDSCAPE ARCHITECT-OF-WORK, I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE IMPROVEMENTS SHOWN ON THIS SET OF CONSTRUCTION PLANS, SHEET 20 TO 27, HAVE BEEN INSTALLED AND CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE AS-BUILT PLANS, INCLUDING ALL APPROPRIATE STANDARDS AND ANY DISCRETIONARY APPROVAL(S) FOR THE PROJECT.

SIGNED Jeremy Franzini DATE 02/13/20
 PRINTED NAME JEREMY FRANZINI LIC. NO. 4514
 DISCIPLINE LANDSCAPE ARCHITECT MY REGISTRATION EXPIRES 06/30/21

CONNECT NEW LATERAL TO EXISTING 1/4" LATERAL LINE / CITY MAINTAINED IRRIGATION SYSTEM - FIELD VERIFY.
 CONTRACTOR SHALL CUT AND CAP OFF EXISTING IRRIGATION SYSTEM LATERAL LINE AS REQUIRED AT THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY ACTUAL EXISTING IRRIGATION SYSTEM DISCONNECTION POINT IN FIELD WITH CITY'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE CITY'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING AND COMMENCING WORK. TYP.

SEE SHEETS 22, 23 & 24 FOR IRRIGATION LEGEND, NOTES, AND DETAILS



Michael Baker INTERNATIONAL
 5050 Avenida Encinas
 Suite 260
 Carlsbad, CA 92008
 Phone: (760) 478-9193
 MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
 By: _____
 Public Works Inspector
 Date: _____

RECOMMENDED FOR APPROVAL
 By: Lewis Clapp, Senior Civil Engineer
 R.C.E.: 76983 exp.: 12/31/2022
 Date: 2/23/21

APPROVED FOR CONSTRUCTION
 By: J. Bruce Chapman, City Engineer
 R.C.E.: 81294 exp.: 09/30/2021
 Date: _____

BENCH MARK
 Description: CITY OF SAN MARCOS GCS PT. NO. 1017 AND GCS PT. NO. 1021 PER ROS 13928
 Location: PT. NO. 1017: N1992455.016 E6270654.355
 PT. NO. 1021: N1992450.892 E6274932.043
 Elev.: 513.042 (510.736) Datum: NAVD 1988 (NGVD VMD 29)

SAN MARCOS FIRE DEPARTMENT
 By: JASON HAILON, FIRE MARSHAL
 Date: 3-29-21

VALLECITOS WATER DISTRICT
 By: JAMES H. GUMPEL, DISTRICT ENGINEER
 Date: RCE C60160 EXP 6/30/2020

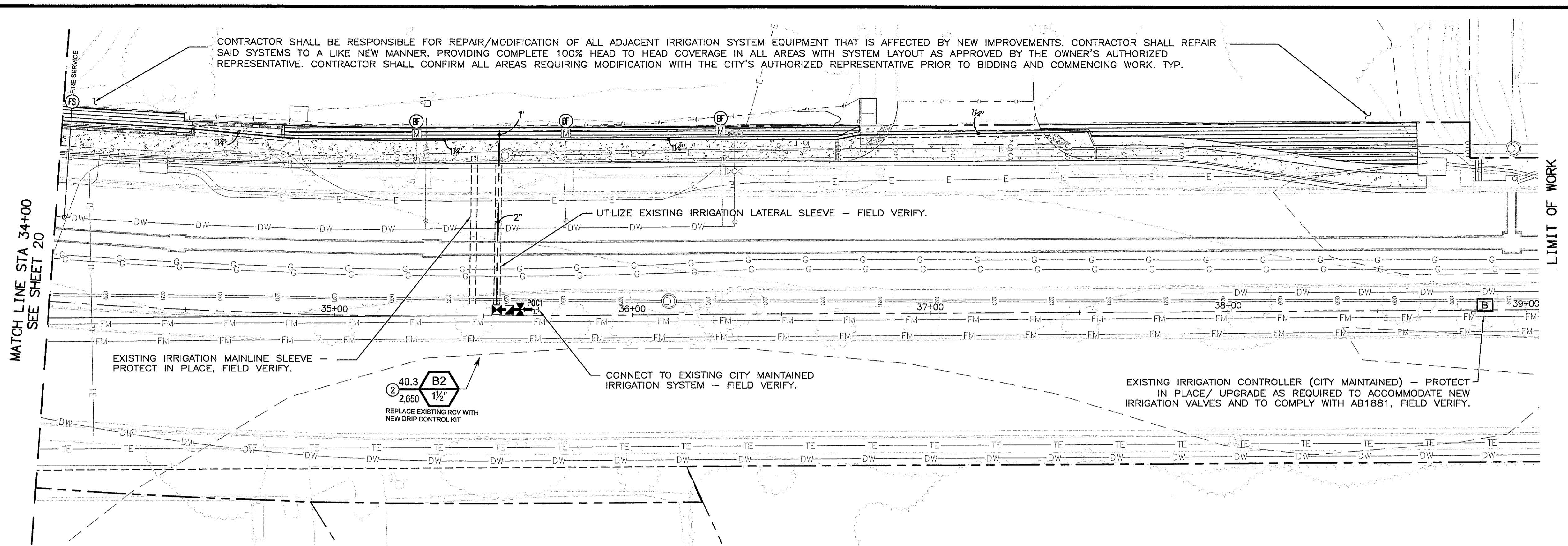
LANDSCAPE ARCHITECT OF WORK
 By: Jeremy Franzini Date: 09/16/20
 Name: JEREMY FRANZINI
 LIC. NO.: 4514 exp.: 06/30/21

CITY APPROVED CHANGES		
No.	Description	App'd By/Date

CITY OF SAN MARCOS ENGINEERING DIVISION
 LANDSCAPING AND IRRIGATION PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

PLAN CODE
 LDSC-1

VMD W.O. 207141
 City Drawing No.
IP18-00009
 Sheet 20 of 29



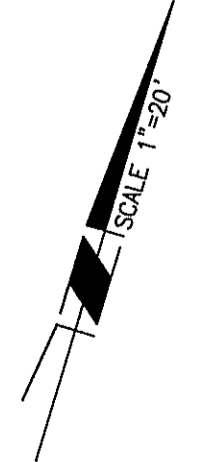
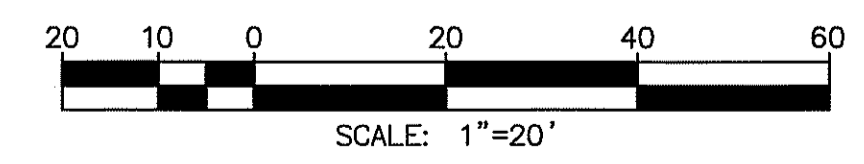
MATCH LINE STA 34+00
SEE SHEET 20

LIMIT OF WORK



Michael Baker International
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____



PLAN CODE
LDSC-2

V.W.D. AS-BUILT By: _____ Date: _____ R.C.E. No. _____ EXP. _____		SAN MARCOS FIRE DEPARTMENT VALLECITOS WATER DISTRICT LANDSCAPE ARCHITECT OF WORK By: <i>Jason Nailon</i> Date: 09/16/20 Name: JEREMY FRANZINI LIC. NO.: 4514 exp.: 06/30/21	CITY APPROVED CHANGES <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Description</th> <th>App'd By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	No.	Description	App'd By	Date													RECOMMENDED FOR APPROVAL By: <i>Lewis Clapp</i> Lewis Clapp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/18/20	APPROVED FOR CONSTRUCTION By: <i>Isaac E. Hernandez</i> Isaac E. Hernandez, Civil Engineer R.C.E.: 61274 exp.: 02/30/2021 Date: 6/18/20	BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.992 E6274932.043 Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]	CITY OF SAN MARCOS ENGINEERING DIVISION LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION VMD W.D. 207141 City Drawing No. IP18-00009 Sheet 21 of 29
No.	Description			App'd By	Date																		
SAN MARCOS FIRE DEPARTMENT By: <i>Jason Nailon</i> JASON NAILON, FIRE MARSHAL Date: 5/29/21	VALLECITOS WATER DISTRICT By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: _____ RCE 060160 EXP 6/30/2020																						

IRRIGATION NOTES:

- ALL LANDSCAPE AND IRRIGATION WORK SHALL CONFORM TO CITY SAN MARCOS LANDSCAPE STANDARDS, THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREEN BOOK" (A COPY SHALL BE KEPT ON THE JOB SITE AT ALL TIMES), THE SPECIFICATION SPECIAL PROVISIONS, LOCAL CODES AND ORDINANCES, AND ALL OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS. ALL WORK SHALL BE SUBJECT TO THE CITY ENGINEER'S ACCEPTANCE AS A CONDITION OF COMPLETION OF WORK BY THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ACTIVITIES WITH ALL AGENCIES AND OTHER TRADES.
- THE CONTRACTOR SHALL OBTAIN, COORDINATE AND PAY FOR ANY AND ALL PERMITS AND ALL INSPECTIONS AS REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY, R.O.W.'S, EASEMENTS, SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR/REPLACE, AT NOT ADDITIONAL COST TO THE OWNER, ANY DAMAGE TO UNDERGROUND UTILITIES THAT MAY OCCUR.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO PROJECT LANDSCAPE ARCHITECT AND THE CITY ENGINEER FOR DIRECTION. ANY CONTINUATION OF WORK IS AT THE CONTRACTOR RISK AND EXPENSE.
- THE CONTRACTOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF THE PLANT MATERIAL. AT NO TIME WILL THE CONTRACTOR APPLY WATER AT A RATE OF FREQUENCY WHICH CAUSES RUN-OFF OR SOIL SATURATION.
- THE WORK ON THESE PLANS IS DIAGRAMMATIC. ALL ITEMS, I.E. CONTROLLERS, VALVES, MAINLINES, SLEEVES, WIRES, IRRIGATION HEADS ETC. ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY AND SHALL BE INSTALLED IN PLANTING AREAS, TYPICAL. DO NOT SCALE DIMENSIONS. DETAIL DRAWINGS MAY CLARIFY LOCATION OF SOME ITEMS. THE CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN CONFLICT WITH UNDERGROUND UTILITIES, STRUCTURES, OTHER IMPROVEMENTS, OR VEHICULAR OR PEDESTRIAN SAFETY CONSIDERATIONS.
- SLEEVE IRRIGATION WIRING UNDER ALL PAVING. SLEEVE IRRIGATION LATERALS UNDER ALL PAVING. SLEEVE MAINLINE UNDER ALL PAVING. ALL SLEEVES TO 2x SIZE OF PIPE TO BE SLEEVED.
- USE CHECK VALVES AS REQUIRED TO ELIMINATE LOW HEAD DRAINAGE.
- THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, ROADWAYS AND/OR BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE ADJUSTING THE HEADS, SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
- ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, PICNIC TABLE, BENCH, BBQ GRILL, DRINKING FOUNTAINS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
- WHEN VERTICAL OBSTRUCTIONS (STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- IRRIGATION SYSTEMS SHALL NOT SPRAY DIRECTLY ONTO ANY GAS OR ELECTRIC FACILITIES, ACCESS ROADS OR MAINTENANCE PADS.
- A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OR THE LANDSCAPE PLANS, IRRIGATION PLANS, OR LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
- AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION. CONTRACTOR WILL BE REQUIRED TO HIRE A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR TO PROVIDE AN AUDIT REPORT TO THE CITY ON THE NEW AND MODIFIED PORTIONS OF THE IRRIGATION SYSTEM IN CONFORMANCE WITH AB 1881 REQUIREMENTS. CONTRACTOR WILL ALSO BE RESPONSIBLE TO MAKE ANY RECOMMENDED REPAIR OR CORRECTIONS THAT RESULT FROM THE IRRIGATION AUDIT REPORT AT NO COST TO THE CITY.
- A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- ALL IRRIGATION EQUIPMENT SHALL BE LOCATED IN THE CITY RIGHT-OF-WAY.
- CONTRACTOR SHALL MEET WITH THE CITY MAINTENANCE REPRESENTATIVE AT THE PROJECT SITE TO LOCATE EXISTING IRRIGATION WATER METERS, BACKFLOW PREVENTERS, MASTER VALVES, FLOW SENSORS, REMOTE CONTROL VALVES, MAINLINE, CONTROLLERS AND ALL OTHER PERTINENT SITE INFORMATION.
- PRIOR TO DEMOLITION AND INSTALLATION OF NEW IMPROVEMENTS, CONTRACTOR SHALL IDENTIFY ITEMS TO BE REMOVED AND/OR RELOCATED. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING IRRIGATION WATER TO EXISTING LANDSCAPE AREAS ADJOINING THE LIMIT OF WORK AND AREAS AFFECTED BY THE NEW IMPROVEMENTS. THE CONTRACTOR SHALL BARE ALL COSTS ASSOCIATED WITH LACK OF IRRIGATION WATER.
- CONTRACTOR SHALL BE PRESENT DURING GRADING OPERATIONS TO PERFORM NECESSARY SERVICES AND PROVIDE ALL EQUIPMENT NECESSARY FOR CAPPING THE EXISTING SYSTEM AND MAKING NECESSARY ADJUSTMENTS TO EXISTING SYSTEMS TO ENSURE SYSTEMS REMAIN OPERATIONAL TO THOSE AREAS LOCATED OUTSIDE THE LIMIT OF WORK DEPICTED ON THESE PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL MATERIAL APPEARING ON PLAN.
- CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO ENSURE FULLY OPERATION IRRIGATION SYSTEMS AS DETERMINED BY CITY ENGINEER.
- SEE THE SPECIFICATION SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

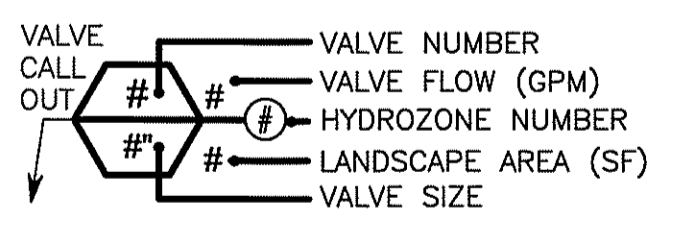
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
☐	RAIN BIRD XCZ-100-PRB-COM WIDE FLOW DRIP CONTROL KIT FOR COMMERCIAL APPLICATIONS. 1" BALL VALVE WITH 1" PESB VALVE AND 1" PRESSURE REGULATING 40PSI QUICK-CHECK BASKET FILTER. 0.3 GPM TO 20 GPM. (CONNECT TO PRIVATELY MAINTAINED SYSTEM, UTILIZE EXISTING CONTROL WIRE)
☒	RAIN BIRD XCZ-150-LCDR HIGH FLOW CONTROL ZONE KIT, FOR LARGE COMMERCIAL DRIP ZONES. 1-1/2" PESB-R SCRUBBER GLOBE VALVE WITH SINGLE 1-1/2" PRESSURE REGULATING (40PSI) QUICK-CHECK BASKET FILTERS. FLOW RANGE: 15-62 GPM. (CONNECT TO CITY MAINTAINED SYSTEM, UTILIZE EXISTING CONTROL WIRE)
NOT SHOWN	NETAFIM 65ARIA075 3/4" MALE PIPE THREAD GUARDIAN AIR/VACUUM RELIEF VENT. INSTALL ONE PER STATION PER MANUFACTURER AT THE HIGHEST POINT IN SUBSURFACE SYSTEMS.
NOT SHOWN	RAIN BIRD MDCFCAP DRIPLINE FLUSH VALVE CAP IN COMPRESSION FITTING COUPLER. INSTALL PER MANUFACTURER AT END OF EACH RUN.
NOT SHOWN	HUNTER ECO-ID ECO-ID: 1/2" FPT CONNECTION WITH 12-60 PSI OPERATING PRESSURE. INSTALL ONE PER STATION PER MANUFACTURER WITH HUNTER SJ SWING JOINT.
	AREA TO RECEIVE DRIPLINE (PRIVATELY MAINTAINED SYSTEM)
	AREA TO RECEIVE DRIPLINE (CITY MAINTAINED SYSTEM)
	AREA TO RECEIVE DRIPLINE (CITY MAINTAINED SYSTEM)
	AREA TO RECEIVE DRIPLINE (CITY MAINTAINED SYSTEM)
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
NOT SHOWN	PROVIDE CARSON VALVE BOXES FOR ALL VALVES (TAN, MODELS 1419, 1220, 708, 910)
☑	HUNTER HQ-44LRC-AW QUICK COUPLER VALVE, YELLOW RUBBER LOCKING COVER, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY. ACME KEY WITH ANTI-ROTATION WINGS.
✕	NIBCO T-580-S6-R-66-LL STAINLESS STEEL BALL VALVE SHUT OFF VALVE
☐	EXISTING IRRIGATION CONTROLLER (CITY MAINTAINED SYSTEM) - PROTECT IN PLACE, FIELD VERIFY.
POC1	DOMESTIC WATER POINT OF CONNECTION (CITY MAINTAINED SYSTEM): APPROXIMATE LOCATION OF EXISTING IRRIGATION MAINLINE - FIELD VERIFY PRESSURE, SIZE AND LOCATION. (EXISTING MAINLINE CONNECTED TO EXISTING 2" DOMESTIC WATER METER "B" PER AS-BUILT PLANS DATED 11-3-09). SEE CIVIL PLANS FOR METERS RELOCATION. CONTRACTOR TO RECERTIFY ALL RELOCATED BACKFLOW PREVENTERS PER VWD REQUIREMENTS.
POC2	DOMESTIC WATER POINT OF CONNECTION (PRIVATELY MAINTAINED SYSTEM): APPROXIMATE LOCATION OF EXISTING IRRIGATION MAINLINE - FIELD VERIFY PRESSURE, SIZE AND LOCATION. (EXISTING MAINLINE CONNECTED TO EXISTING 2" DOMESTIC WATER METER "C" PER AS-BUILT PLANS DATED 11-3-09). SEE CIVIL PLANS FOR METERS RELOCATION. CONTRACTOR TO RECERTIFY ALL RELOCATED BACKFLOW PREVENTERS PER VWD REQUIREMENTS.
---	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
---	IRRIGATION MAINLINE: PVC SCHEDULE 40
---	PIPE SLEEVE: PVC SCHEDULE 40 INSTALL WITH ALL PIPE/WIRE UNDER PAVEMENT, EITHER SHOWN OR NOT SHOWN ON THE PLANS. ALL SLEEVES TO BE MIN. 2x PIPE DIAMETER OF THE PIPE/ WIRE BUNDLE SLEEVED. COORDINATE INSTALLATION OF SLEEVE THROUGH WALKS WITH CIVIL PLANS, THE GENERAL CONTRACTOR AND ALL OTHER RELATED TRADES.
---	EXISTING IRRIGATION SLEEVE - PROTECT IN PLACE/ UTILIZE AS REQUIRED FOR NEW CONTROL WIRE.
---	EXISTING IRRIGATION LATERAL - PROTECT IN PLACE, FIELD VERIFY
---	EXISTING IRRIGATION LATERAL - DISCONNECT/ ABANDON IN PLACE, FIELD VERIFY

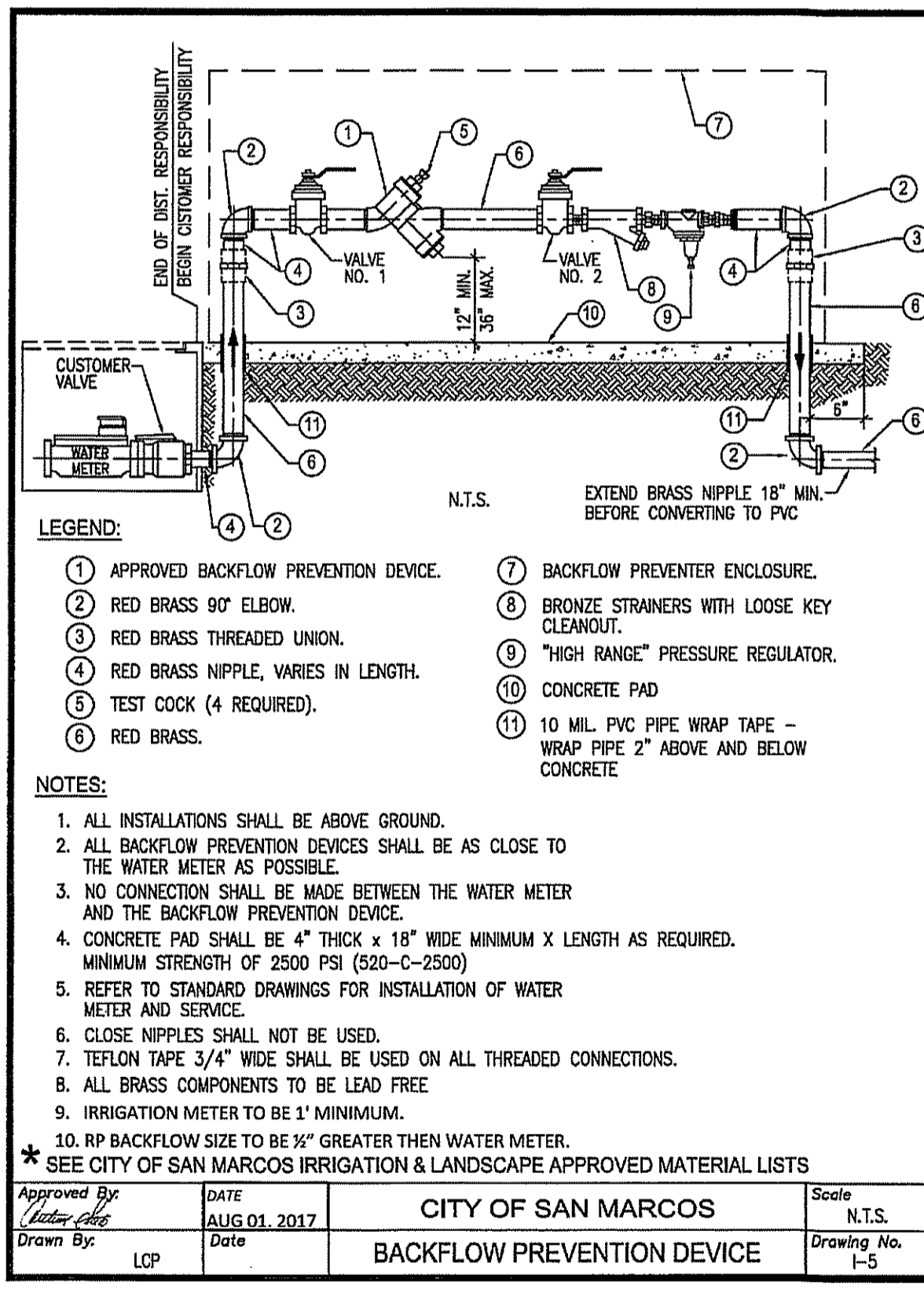
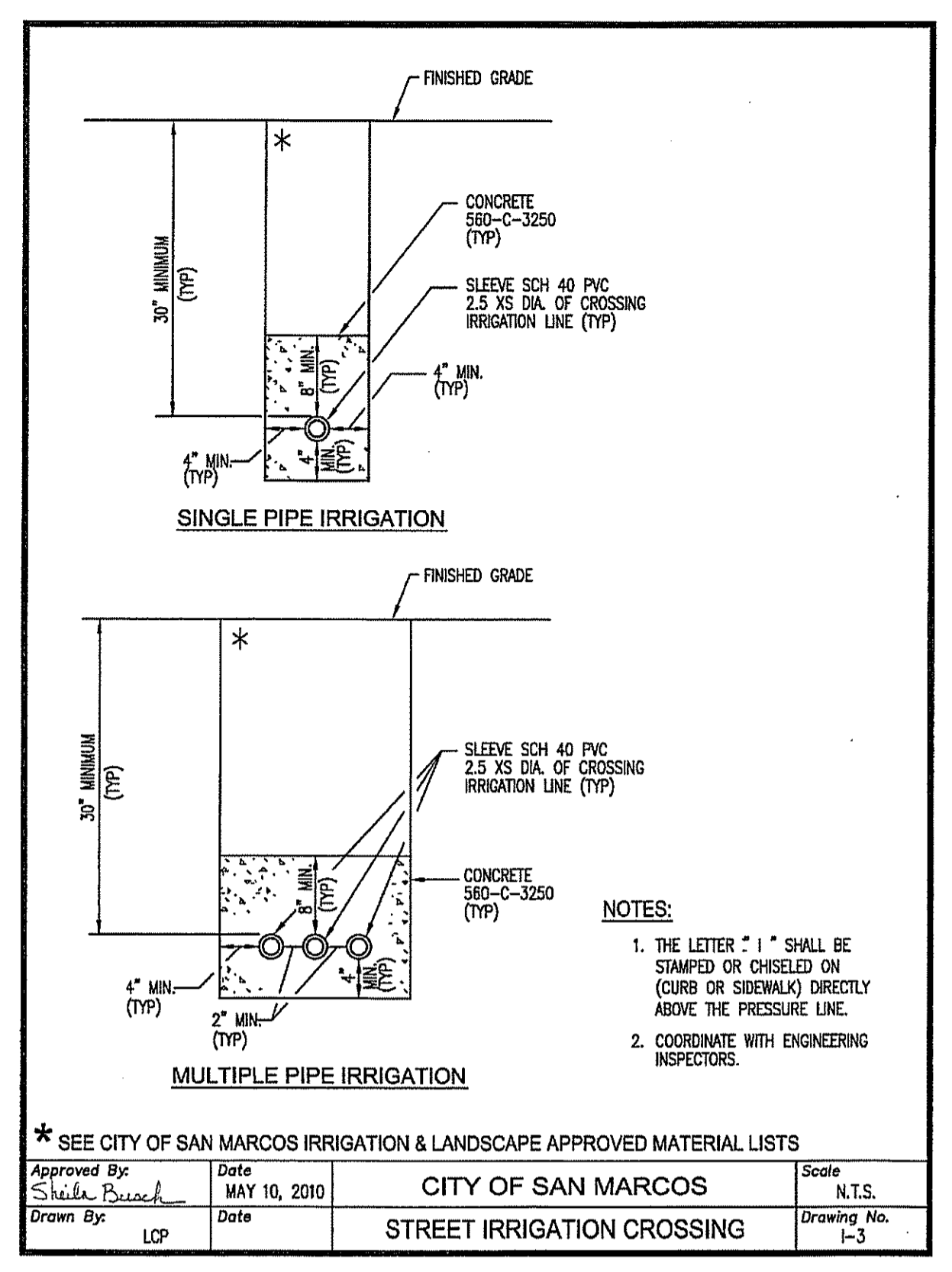
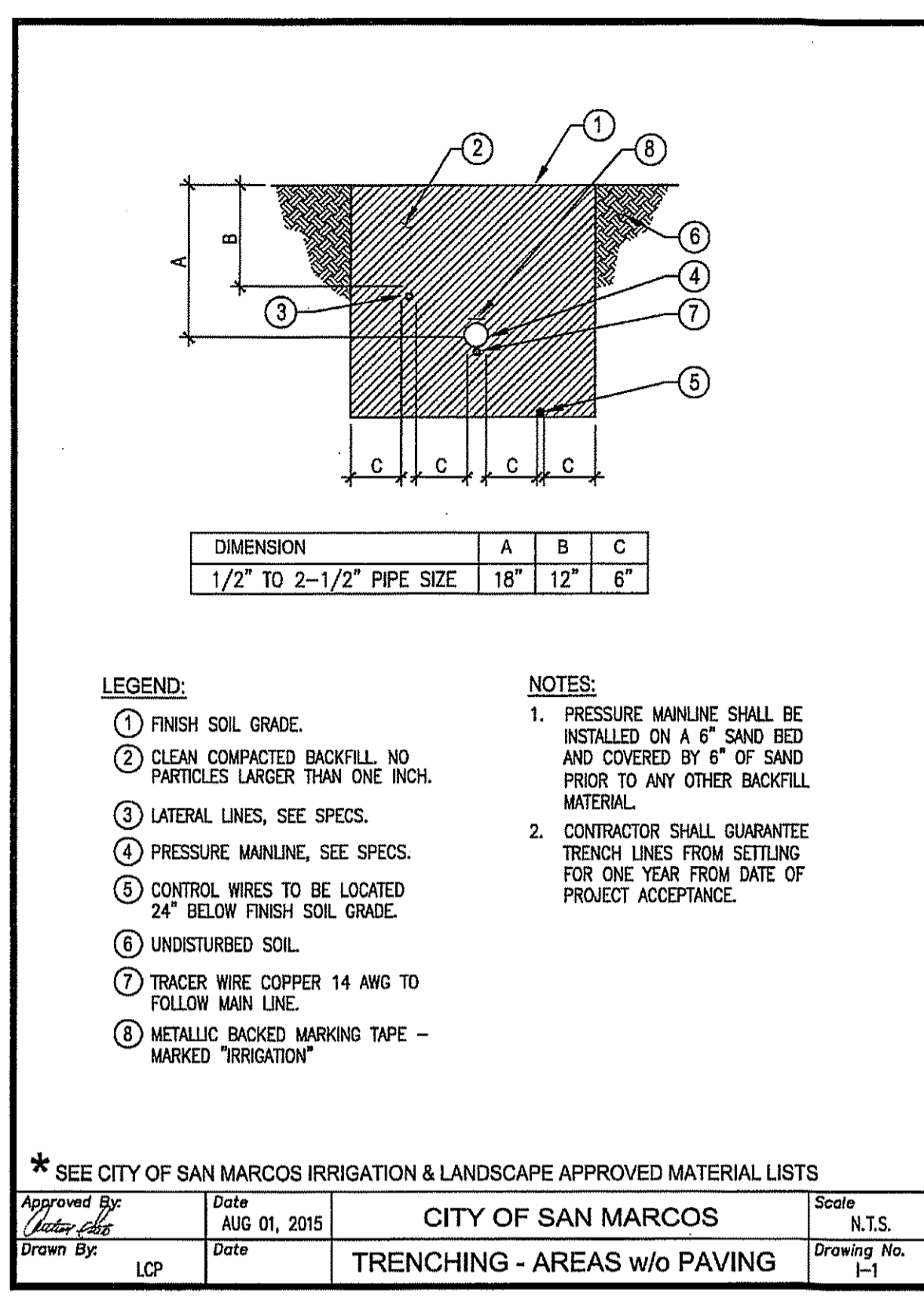
PIPE SIZE LEGEND

0-7 GPM	3/4" MIN.
8-12 GPM	1"
13-21 GPM	1-1/4"
22-31 GPM	1-1/2"
32-50 GPM	2"
51-70 GPM	2-1/2"
71-100 GPM	3"

NOTE:
1/2" PIPE IS NOT ALLOWED. MINIMUM SIZE PIPE TO BE 3/4". CONTRACTOR TO SIZE PIPE BASED ON CHART ABOVE.



- HYDROZONE LEGEND**
- ① LOW WATER USE PLANT W/ DRIP IRRIGATION
 - ② MEDIUM WATER USE PLANT W/ DRIP IRRIGATION



I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE REGULATIONS AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.



2-13-2020
Michael Baker INTERNATIONAL
 JEREMY FRANZINI, P.L.A. 4514
 DATE: 09/16/2020
 5050 Avenida Encinas, Suite 260, Carlsbad, CA 92008, Phone: (760) 476-9193, MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
 By: _____
 Public Works Inspector
 Date: _____

RECOMMENDED FOR APPROVAL
 By: *Jeremy Franzini*
 Lewis Clapp, Senior Civil Engineer
 R.C.E.: 76583 exp.: 12/31/2022
 Date: 9/18/2020

APPROVED FOR CONSTRUCTION
 By: *Isaac Echeverri*
 R.C.E.: 181234 exp.: 09/30/2021
 Date: 9/18/2020

BENCH MARK
 Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928
 Location: PT. NO. 1017: N1992455.016 E6270654.355
 PT. NO. 1021: N1992450.992 E6274932.043
 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

V.W.D. AS-BUILT
 By: _____
 Date: _____
 R.C.E. No. _____ EXP. _____

SAN MARCOS FIRE DEPARTMENT
 By: *Jason Mallon*, FIRE MARSHAL
 Date: 9-29-20

VALLECITOS WATER DISTRICT
 By: *James H. Gumpel*, DISTRICT ENGINEER
 Date: RCE C60160 EXP 6/30/2020

LANDSCAPE ARCHITECT OF WORK
 By: *Jeremy Franzini*
 Name: JEREMY FRANZINI
 LIC. NO.: 4514 exp.: 06/30/21

CITY APPROVED CHANGES

No.	Description	App'd By	Date

PLAN CODE
LDSC-3

CITY OF SAN MARCOS ENGINEERING DIVISION
 LANDSCAPING AND IRRIGATION PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION

City Drawing No. IP18-00009
 Sheet 22 of 29

LEGEND:

- TRAFFIC RATED JUMBO RECTANGULAR CONCRETE BOX W/ LOCKING CAST IRON COVER IN HARDSCAPE AREAS. PLASTIC JUMBO RECTANGULAR BOX WITH LOCKING COVER AND STAINLESS STEEL BOLTS IN LANDSCAPE AREAS. GRIND/HEAT BRAND "M" ON TOP OF COVER.
- FINISH GRADE - INSTALL BOX 1" ABOVE FINISH GRADE IN TURF AREAS, 2" IN SHRUB AREAS AND FLUSH IN PAVED AREAS.
- 36" WIRE LOOP WITH APPROVED CONNECTORS AND VALVE ID TAGS.
- BRASS UNION.
- BRASS NIPPLES.
- 3/4" ROCK, 2 CUBIC FT.
- BRICK SUPPORTS OR CONCRETE BLOCKINGS, 4 MINIMUM.
- PVC SCH. 80 COUPLING.
- MASTER CONTROL VALVE, SEE LEGEND FOR SPEC.
- PVC MAINLINE PIPE FROM BACKFLOW PER SPECS. - SEE TRENCHING DETAIL.
- LANDSCAPE FABRIC.
- PVC MAINLINE TO FLOW SENSOR, PIPE PER SPECS.
- SCH. 80 45°.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	MASTER CONTROL VALVE	Drawing No. I-6

LEGEND:

- TRAFFIC RATED STANDARD RECTANGULAR CONCRETE BOX W/ LOCKING CAST IRON COVER IN HARDSCAPE AREAS. PLASTIC STANDARD RECTANGULAR BOX WITH LOCKING COVER AND STAINLESS STEEL BOLTS IN LANDSCAPE AREAS. GRIND/HEAT BRAND "FS" ON TOP OF COVER.
- 36" WIRE LOOP WITH APPROVED WATER PROOF CONNECTORS.
- FINISH GRADE - INSTALL BOX 1" ABOVE FINISH GRADE IN TURF AREAS, 2" IN SHRUB AREAS AND FLUSH IN PAVED AREAS.
- FLOW SENSOR.
- PVC MAINLINE - REDUCED TO FLOW SENSOR SIZE PER MANUFACTURER'S RECOMMENDATIONS.
- 3/4" ROCK, 2 CUBIC FT.
- BRICK SUPPORTS OR CONCRETE BLOCKINGS, 4 MINIMUM.
- PVC REDUCER COUPLING.
- LANDSCAPE FABRIC.
- APPROVED FLOW SENSOR CABLE.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Shahla Banaei</i>	Date: DEC. 1, 2012	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	FLOW SENSOR	Drawing No. I-7

LEGEND:

- 2" OR LARGER VALVES REQUIRE JUMBO BOX. ALL BOXES REQUIRE LOCKING COVER WITH STAINLESS STEEL BOLT. SET 2" ABOVE GRADE IN PLANTER/SHRUB AREAS - 1" IN TURF.
- MINIMUM 3" CLEARANCE BETWEEN ROCK AND BOTTOM OF PIPE.
- 100% BRASS BALL VALVE.
- PVC SCH. 80, 45° ELL (TYP).
- PVC PRESSURE MAINLINE PIPE.
- 4" MINIMUM 3/4" CRUSHED ROCK.
- 2" x 4" BRICK OR CONCRETE BLOCKING.
- DEPTH - SEE TRENCHING DETAIL.
- BRAND (BV) ON LID WITH 2" LETTERS.
- LANDSCAPE FILTER FABRIC.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	ISOLATION BALL VALVE	Drawing No. I-9

LEGEND:

- ADDRESS ID GOLD BACKING, 2" BLACK LETTERS - (CPD XX WHEN REQ'D).
- CONTROLLER.
- STAINLESS STEEL 24" WIDE TOP ENTRY CONTROLLER ENCLOSURE NEMA 3R RAIN PROOF RATED.
- POWER SWITCH AND GFI RECEPTACLE.
- HIGH FLOW SYSTEM.
- TERMINAL BLOCK FOR COMMUNICATION CABLE (USE IF REQUIRED).
- 3" PVC CONDUIT/SWEEP FOR CONTROL WIRES TO VALVES.
- COMPACTED SITE SOIL.
- 1 1/4" PVC CONDUIT/SWEEP FOR FLOW SENSOR/AMCV WIRES (WHEN REQUIRED).
- 1" PVC CONDUIT/SWEEP FOR FLOW SENSOR/AMCV WIRES (WHEN REQUIRED).
- TERMINAL STRIP FOR CONTROL WIRES.
- STAINLESS STEEL, U.L. LISTED, PRE-DRILLED, REMOVABLE BACKBOARD.
- SEAL ALL CONDUIT OPENINGS WITH EXPANDABLE FOAM SEALANT.
- SEAL ENTIRE BASE OF CABINET WITH SILICONE CAULKING.
- 1 1/2" THICK PCC PAD 520-C-2500 AS DIRECTED BY CITY INSPECTOR. 3" ABOVE GRADE, 6" BELOW GRADE.
- 1 1/4" PVC CONDUIT/SWEEP FOR OTHER CONTROLLERS (IF REQUIRED).
- 3" PVC CONDUIT/SWEEP FOR CONTROL WIRES TO VALVES.
- 5/8" DIA. X 8' COPPER GROUND ROD WITH #10 SOLID COPPER GROUND WIRE AND CLAMP.
- 1" CONDUIT FOR TELEPHONE LINE (WHEN REQUIRED).
- VANDAL RESISTANT RAIN SENSOR GUARD.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	IRRIGATION CONTROLLER ASSEMBLY	Drawing No. I-12

LEGEND:

- TRAFFIC RATED 10" ROUND CONCRETE BOX W/ LOCKING CAST IRON COVER IN HARDSCAPE AREAS. PLASTIC 10" ROUND BOX WITH LOCKING COVER AND STAINLESS STEEL BOLTS IN LANDSCAPE AREAS. GRIND/HEAT BRAND "QC" ON TOP OF COVER.
- FINISH GRADE - INSTALL BOX 1" ABOVE FINISH GRADE IN TURF AREAS, 2" IN SHRUB AREAS AND FLUSH IN PAVED AREAS.
- 1" PVC SCH. 40 IRRIGATION LINE.
- PVC SCH. 80 ADAPTER.
- BRASS NIPPLES AND RISERS (TYP) LENGTH AS REQUIRED.
- 1 CU. FT. CONCRETE ANCHOR BLOCK.
- QUICK COUPLING VALVE.
- BRICK SUPPORTS OR CONCRETE BLOCKINGS, 4 MINIMUM.
- 3/4" CLEAN CRUSHED ROCKS 4" DEEP SLUMP IN, UNDER, AND AROUND VALVE BOX.
- ISOLATION BALL VALVE. ALL QUICK COUPLERS SHALL BE SEPARATED FROM THE MAINLINE BY AN ISOLATION VALVE AS INDICATED ON THE SCHEMATIC PLAN ABOVE. BALL VALVE TO BE INSTALLED PER CITY OF SAN MARCOS STD. DWG.
- IRRIGATION MAINLINE.
- DEPTH - SEE TRENCHING DETAIL.
- BRASS THREADED 90°.
- 10 MIL. PVC PIPE WRAP TAPE - WRAP PIPE 2" BEYOND EDGE OF CONCRETE.
- LANDSCAPE FILTER FABRIC.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	QUICK COUPLER VALVE	Drawing No. I-17

LEGEND:

- THE DOWN STAKE AT 3" O.C.
- TREE TRUNK
- 1/2" NOMINAL DRIPLINE TUBING - MODEL # W/ EMITTER SPACING AND FLOW PER PLAN
- COMPRESSION TEE.
- COMPRESSION ELBOW.
- SWING JOINT ASSEMBLY
- DOUBLE STAKED AT CONNECTION

NOTES:

- TO BE INSTALLED ONLY AT TREES AS DIRECTED BY CITY.
- ALL DRIPLINE TUBING AND FITTINGS SHALL BE MATCHED BY MANUFACTURER AND STAKED ACCORDING TO SPECIFICATIONS.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	DRIPLINE AROUND TREE	Drawing No. I-25

LEGEND:

- FINISH GRADE - INSTALL BOX 1" ABOVE FINISH GRADE IN TURF AREAS, 2" IN SHRUB AREAS AND FLUSH IN PAVED AREAS.
- PVC SCH 80 THREADED ELL.
- 1/2" NOMINAL DRIPLINE TUBING - MODEL # W/ EMITTER SPACING AND FLOW PER PLAN
- 36-INCH LINEAR LENGTH OF WIRE, COILED.
- WATERPROOF CONNECTORS SPLICE (1 OF 2).
- ID TAG.
- TRAFFIC RATED STANDARD RECTANGULAR CONCRETE BOX W/ LOCKING CAST IRON COVER IN HARDSCAPE AREAS. PLASTIC JUMBO RECTANGULAR BOX WITH LOCKING COVER AND STAINLESS STEEL BOLTS IN LANDSCAPE AREAS. GRIND/HEAT BRAND CONTROLLER AND STATION NUMBER ON TOP OF COVER.
- PVC SCH 80 THREADED UNION
- LATERAL PIPE.
- BRICK (1 OF 4)
- 3/4" CRUSHED ROCK - 2 CUBIC FT.
- PRESSURE REGULATING FILTER.
- PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) & PVC SCH 80 ELL.
- PVC SCH 80 TEE OR ELL.
- PVC MAINLINE.
- DRIPLINE CONTROL VALVE
- LANDSCAPE FABRIC
- SCH. 80 BALL VALVE
- SCH. 80 MALE ADAPTER

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	1" CONTROL ZONE DRIP ASSEMBLY WITH PRESSURE REGULATING FILTER	Drawing No. I-21

LEGEND:

- DRIPLINE CONTROL ZONE ASSEMBLY - SEE DETAIL I-21.
- AUTO FLUSHING VALVE
- DRIPLINE EXHAUST HEADER MANIFOLD - SEE DETAIL I-24
- DRIPLINE EXHAUST HEADER RISER - SEE DETAILS I-24
- DRIPLINE INTAKE HEADER MANIFOLD - SEE DETAIL I-23
- DRIPLINE INTAKE HEADER RISER - SEE DETAIL I-23
- 1/2" NOMINAL DRIPLINE TUBING - MODEL # W/ EMITTER SPACING AND FLOW PER PLAN
- PERIMETER TUBING 2" TO 4" FROM EDGE OF PLANTING AREA
- EDGE OF PLANTING AREA

NOTE:

- ALL DRIPLINE TUBING AND FITTINGS SHALL BE MATCHED BY MANUFACTURER AND STAKED ACCORDING TO SPECIFICATIONS

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	DRIPLINE LAYOUT (SHRUB/ AREAS)	Drawing No. I-22

LEGEND:

- 1/2" NOMINAL DRIPLINE TUBING (MODEL# PER PLAN). INSTALL BELOW MULCH.
- PVC/POLY ADAPTER
- 1/2" SLIP X 1/2" FPT TEE
- MULCH LAYER 3"
- SOIL LAYER 3" OVER DRIPLINE
- 1/2" x 8" SCHD. 80 THREADED NIPPLE
- TRENCH FOR SUPPLY AND EXHAUST HEADERS
- 1" x 1" x 1/2" SCH 40 PVC TEE
- 1" SCH 40 PVC SUPPLY HEADER.
- TRENCH BOTTOM

NOTE:

- ALL DRIPLINE TUBING AND FITTINGS SHALL BE MATCHED BY MANUFACTURER AND STAKED ACCORDING TO SPECIFICATIONS

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	DRIPLINE INTAKE HEADER MANIFOLD	Drawing No. I-23

LEGEND:

- 10" ROUND VALVE BOX - REFER TO TECHNICAL SPECIFICATIONS.
- AUTO FLUSHING VALVE ABOVE GRADE
- 1/2" THREADED SCH. 40 PVC COUPLING
- VALVE BOX TO REST ON GRAVEL SUMP
- 1/2" SCH 80 PVC RISER - LENGTH AS REQUIRED.
- 1/2" SXT SCH 40 90° ELL
- 1/2" SCH 40 PVC PIPING - LENGTH AS REQUIRED.
- 1/2" SCH 40 PVC TEE TO FLUSH VALVE
- 1/2" SCH 40 PVC EXHAUST HEADER
- 1/2" SCH 40 PVC TEE
- 1/2" x 8" SCH 40 PVC RISER
- 1/2" NOMINAL DRIPLINE TUBING (MODEL# W/ EMITTER SPACING AND FLOW PER PLAN) INSTALL BELOW MULCH.
- PVC/POLY ADAPTER
- 1/2" SLIP X 1/2" FPT 90° ELL
- MULCH LAYER 3"
- SOIL LAYER 3" OVER DRIPLINE

NOTE:

- ALL DRIPLINE TUBING AND FITTINGS SHALL BE MATCHED BY MANUFACTURER AND STAKED ACCORDING TO SPECIFICATIONS.

* SEE CITY OF SAN MARCOS IRRIGATION & LANDSCAPE APPROVED MATERIAL LISTS

Approved By: <i>Victor Chis</i>	Date: AUG. 01, 2015	CITY OF SAN MARCOS	Scale: N.T.S.
Drawn By: LCP	Date:	DRIPLINE EXHAUST HEADER MANIFOLD	Drawing No. I-24



Michael Baker INTERNATIONAL
 5050 Avenida Encinas
 Suite 200
 Carlsbad, CA 92008
 Phone: (760) 476-9193
 M.BAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE
 By: _____
 Public Works Inspector
 Date: _____

RECOMMENDED FOR APPROVAL
 By: *Lawis Clapp, Senior Civil Engineer*
 R.C.E.: 76583 exp.: 12/31/2022
 Date: *6/18/21*

APPROVED FOR CONSTRUCTION
 By: *J. Sade Ethcoeniendi, City Engineer*
 R.C.E.: 81274 exp.: 07/30/2021
 Date: _____

BENCH MARK
 Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928
 Location: PT. NO. 1017: N1992455.016 E6270654.355
 PT. NO. 1021: N1992450.982 E6274832.043
 Elev: 513.042 [510.736] Datum: NAVD 1988 [NAD 83] VMD 201

SAN MARCOS FIRE DEPARTMENT
 By: *Jason Nailon, Fire Marshal*
 Date: *9-29-21*

V.W.D. AS-BUILT
 By: _____
 Date: _____
 R.C.E. No. _____ EXP. _____

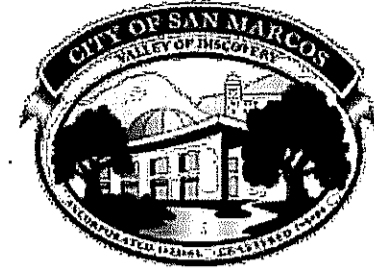
VALLECITOS WATER DISTRICT
 By: *James H. Gumpel, District Engineer*
 Date: *ROE C60160 EXP 6/30/2020*

LANDSCAPE ARCHITECT OF WORK
 By: *Jeremy Franzini*
 Name: JEREMY FRANZINI
 LIC. NO.: 4514 exp.: 06/30/21

CITY APPROVED CHANGES

No.	Description	App'd By	Date

CITY OF SAN MARCOS ENGINEERING DIVISION
 LANDSCAPING AND IRRIGATION PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
 City Drawing No. IP18-00009
 Sheet 23 of 29



STANDARD IRRIGATION & LANDSCAPE PLAN NOTES FOR PUBLICLY CONSTRUCTED CAPITAL IMPROVEMENT PROJECTS (CIP) AND CAPITAL IMPROVEMENT PROJECTS HAVING COMMUNITY FACILITY DISTRICTS (CFD)

NOTE TO DESIGNERS: The following standard notes shall be included on the respective irrigation and landscape plan sheets of all publicly constructed Capital Improvement Projects (CIP). Project specific notes for items not covered by the City's irrigation and landscape special provisions, standard drawings, approved materials list, and these standard notes may be added to the plans as approved by the Public Works Department. These standard notes shall not be amended without approval from the Public Works Department.

STANDARD IRRIGATION NOTES:

- The Contractor shall schedule a landscape preconstruction meeting with the Public Works Department Landscape Inspector via the Engineering Department Inspector prior to the commencement of irrigation work. The Contractor and its landscape subcontractor shall attend the meeting.
- The work shall be constructed in accordance with the Contract Documents, including but not limited to the plans, special provisions, the city's irrigation and landscape standard drawings, the city's approved materials list, the Standard Specifications for Public Works Construction, and these standard irrigation notes.
- The Contractor shall submit a complete materials list and associate catalogue cuts for all irrigation and landscape materials to be incorporated in the Work prior to start of construction. The submittal shall be in bound form.
- Irrigation plans are diagrammatic. The actual location of irrigation improvements shall be in planted areas where possible. Locations of irrigation improvements are subject to the Public Works Department approval prior to installation. Irrigation controllers shall be installed "outside" of irrigation coverage in locations approved by the Public Works Department.
- The Contractor shall schedule inspections twenty four (24) hours in advance of the work being ready for inspection unless otherwise approved by the Landscape Inspector. Call (760) 752-7550 x3350 to schedule inspections. If the work is not ready for inspection on the scheduled date and time the Contractor shall reschedule the inspection as above. The City may charge the Contractor for rescheduled inspections and withhold further inspections until such time as the Contractor pays the reinspection fee.

rev. 9/29/11

- Irrigation inspections are required for the following:
 - Pressure main layout including controller and backflow preventer locations.
 - Excavation and bedding including control and communication wiring.
 - Mainline pressure test (see required submittals above).
 - Lateral lines and terminal appurtenances layout and installation.
 - Preliminary coverage test prior to planting.
 - Final irrigation coverage test after planting.
- Control wiring shall be color coded and labeled at the controller and all junction and valve boxes to correspond to the appropriate station. Install three (3) additional control wires from the controller to the end of each mainline run leaving 3' minimum of slack at both ends.
- All threaded fittings require Teflon tape.
- Contractor shall verify and coordinate locations of irrigation water services and irrigation controller electrical service locations with other trades to ensure they correspond with irrigation water points of connection and controller locations.
- Excavation for new improvements in or through existing landscaped areas shall be performed by hand, unless otherwise approved by the Public Works Department, and shall be outside of existing tree drip lines.
- Controller and communication wire splices shall only be made with Public Works Department approval and, when approved, shall only be made in an approved box with a minimum of 3' loop (6' of wire).
- Irrigation controllers shall be as shown on the plans. Each controller assembly shall include remote receiver card and remote control transmitter.
- The Contractor shall submit the controller assembly fabricator's installation certification to the Public Works Department prior to coverage test inspection.
- Contractor shall provide accurate and current as-built drawings at the time of the mainline pressure test inspection to facilitate the inspection.
- Pressure mainlines shall be center loaded and not backfilled leaving joints visible until such time as the pressure test has been completed and accepted.
- Pressure mainlines shall hold 150psi for a minimum of four (4) hours.
- As-built drawings shall be kept on-site and up to date at all times.
- As-built drawings shall show the locations of:
 - Water Services and meter.
 - Electrical Services and meter.
 - Backflow assemblies.
 - Controller assemblies.
 - Automatic control valves.
 - Remote control valves with station designation.
 - Isolation and quick coupler valves.
 - Pressure main lines.
 - Control and communication wires.
 - Lateral lines.
 - Sleeves.
- Contractor shall submit full size (24"x36") "redlined" as-built drawings at the time of the coverage test inspection. As-builts shall be on new plan sheets and be clean and legible. Submission of as-builts shall be made at the coverage test inspection and is precedent to start of City performed maintenance.

rev. 9/29/11

STANDARD LANDSCAPE NOTES:

- The work shall be constructed in accordance with the Contract Documents including the plans, special provisions, the City's irrigation and landscape standard drawings, the City's approved materials list, the Standard Specifications for Public Works Construction, and these standard planting notes.
- The Contractor shall schedule inspections twenty four (24) hours in advance of the work being ready for inspection unless otherwise approved by the Landscape Inspector. Call (760) 752-7550 x3350 to schedule inspections. If the work is not ready for inspection on the scheduled date and time the Contractor shall reschedule the inspection as above. The City may charge the Contractor for rescheduled inspections and withhold further inspections until such time as the Contractor pays the reinspection fee.
- Planting inspections are required for the following:
 - Tree planting pit percolation tests (both fills).
 - Plant material layout prior to planting.
 - Plant material quality prior to planting.
 - Amendment verification (prior to application)
 - Plant material installation.
 - Final plant material inspection (punch list developed).
 - Final irrigation and landscape punch lists completion inspection.
- Prior to installing plant material control weeds by watering for three (3) weeks to adequately germinate the seed bed and then apply a post emergent herbicide by a licensed applicator and wait as directed by the manufacturer before planting.
- Soil samples for amendment testing shall be taken after completion of grading and prior to weed control and soil preparation at a minimum of three (3) locations approved by the Public Works Department. Tests shall be performed by an approved laboratory. Tests performed shall include but not be limited to organic matter content, N,P,K, Ph, E.C., and percent silt, sand, & clay. Test results and application recommendations shall be submitted to the Public Works Department prior to application of amendments. Amendments shall be applied pursuant to the laboratory and manufacturers recommendations.
- Percolation tests shall be performed on all tree planting pits for fifteen gallon and larger trees prior to hardscape installation. Pits shall be filled with 18" of water and allowed to completely drain. Pits shall then be filled with 12" of water and allowed to drain. The second fill must drain at a minimum rate of 1" per hour for 4 hours.
- Tree well drain systems shall be installed pursuant to City of San Marcos Standard Drawings when percolation tests fail.
- The Contractor shall provide positive drainage in all landscape areas.
- Trees supplied to the Project shall meet the following minimum standards:
 - Special Provisions.
 - Trees shall have a straight trunk with symmetrical crown.
 - Trees shall have a substantial, single, central leader.
 - Tree bark shall not be discolored, sunken, or swollen, and shall be free of cuts, scrapes, or other damage.
 - Trees showing galleries, sun scald, or frost damage will not be accepted.
 - The caliper of the tree shall be in proportion to the rootball.

rev. 9/29/11

- Trees with girdling roots wrapping around the trunk or otherwise rootbound will not be accepted.
 - Tree trunks more than 10% off center will not be accepted.
 - Trees shall be free of crossing branches and branches growing too close to one another.
 - Freshly pruned trees will not be accepted.
10. Trees shall not be pruned unless otherwise approved by the Public Works Department.
11. The City will assume maintenance of all irrigation and landscaping upon Contractor's successful completion and City's acceptance of the final irrigation and landscape punch list AND completion of the final project punch list AND receipt of end of project submittals. The Contractor, at its expense, shall perform all irrigation and landscape maintenance until such time as these conditions are met. Upon meeting these conditions the City's maintenance contractor will perform the irrigation and landscape maintenance at City's expense.
12. The City will provide written notice to the Contractor designating the date of City's assumption of irrigation and landscape maintenance.
13. The City's irrigation and landscape maintenance contractor will maintain the new improvements for 90 calendar days in the case of "streetscapes" and 120 calendar days in the case of "parks" at City cost. During this time, an irrigation and landscape retention in the minimum amount of \$5,000 to maximum amount of \$15,000, as determined by the City, will be withheld from payment to the Contractor to warrant that defects in materials and workmanship on the part of the Contractor are remedied in a timely manner.

The Contractor will be notified by the City immediately upon discovery of defects in irrigation and landscape materials and workmanship and the Contractor shall take immediate action, as demanded by City, to remedy said defects. Failure of the Contractor to respond within the required time shall be cause for the City to use such funds that are available in the irrigation and landscape retention or other remedies available in the Contract Documents, such as but not limited to, making demand on performance bonds to remedy the defect.

All repairs to seeded turf or sod turf during the maintenance period shall be made at the Contractor's expense.

Should emergency repairs preclude prior notification of the Contractor, notice will be provided in due course. Costs associated with emergency repairs shall be paid by the City out of funds in the irrigation and landscape retention up to the amount remaining in the retention and any balance above this amount shall be reimbursed to the City within 10 working days of demand from the City. The City will provide the Contractor with appropriate documentation for any such repairs made.

Failure of the Contractor to make timely reimbursement to the City shall be cause for the City to make demand on the performance bond for such reimbursement.

The City will release any remaining balance of the irrigation and landscape retention upon expiration of the 90 or 120 calendar day City maintenance period.

rev. 9/29/11

The above requirements are in addition to any warranty requirements set forth in the Contract Documents.

- When the Contract Documents require security fencing for the project the Contractor shall include in its rental agreement with the fencing company the assumption of the fence rental by the City at the same unit price/cost established in the Contractor's original rental agreement so that the fence may remain in place until the City's 90 or 120 calendar day maintenance period ends. The cost of the rental fence during the City's maintenance period shall be borne by the City.

BUILDING AND GROUNDS NOTES:

- All public playground equipment supplied to a project shall comply with all applicable provisions of the current "Handbook for Public Safety" published by Consumer Product Safety Commission (CPSA) and ASTM F1487-98, "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use" published by the American Society of Testing and Materials (ASTM). All products shall bear the certification seal of the International Play Equipment Manufacturers Association (IPEMA). All designs shall meet or exceed the most current edition of the Americans with Disabilities Act (ADA) "Final Guidelines for Play Areas". All manufacturers must be ISO certified.
- Play equipment, structures, and surfaces shall be installed by a contractor certified by the Consumer Products Safety Commission.
- Play equipment, structures, and surfaces shall be inspected, audited, and certified by an independent inspector certified by the Consumer Products Safety Commission. The audit and certification shall be submitted to the Public Works Department prior to the acceptance of the maintenance and establishment period.
- All improvements shall meet all requirements of the American Disabilities Act.

Note to Designer: Changes to previous Irrigation and Landscape Design Standards are designated in gray font.

Appendix B - Sample Water Efficient Landscape Worksheet.

(City Maintained Parkway Area)
WATER EFFICIENT LANDSCAPE WORKSHEET
This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Hydrozone # / Planting Description ^a	Plant Factor (PF) ^b	Irrigation Method ^c	Irrigation Efficiency (IE) ^d	ETAF (PF/IE) ^e	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^f
Regular Landscape Areas							
1. Shrub & GC	0.4	Drip	0.81	0.49	2,650	1,309	43,976
2. Rock Mulch	0.0	None		0.0	275	0	0
					Totals	2,925	43,976
Special Landscape Areas							
					Totals		
						ETWU Total	43,976
						Maximum Allowed Water Allowance (MAWA)^g	44,231

^aHydrozone #/Planting Description
E.g.
1) front lawn
2) low water use plantings
3) medium water use plantings

^bPlant Factor (PF)
0.75 for spray or drip
0.81 for drip

^cIrrigation Method^d
0.75 for spray or drip
0.81 for drip

^dIrrigation Efficiency (IE)^e
Eto x 0.62 = ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

^fETWU (Annual Gallons Required) = Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

^gMAWA (Annual Gallons Allowed) = (Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year; LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	1,309
Total Area	2,925
Average ETAF	0.45

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	1,309
Total Area	2,925
Sitewide ETAF	0.45

Appendix B - Sample Water Efficient Landscape Worksheet.

(City Maintained Basin Area)
WATER EFFICIENT LANDSCAPE WORKSHEET
This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Hydrozone # / Planting Description ^a	Plant Factor (PF) ^b	Irrigation Method ^c	Irrigation Efficiency (IE) ^d	ETAF (PF/IE) ^e	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^f
Regular Landscape Areas							
1. Shrub & GC	0.4	Drip	0.81	0.49	4,945	2,442	82,060
2. Rock Mulch	0.0	None		0.0	640	0	0
					Totals	5,585	82,060
Special Landscape Areas							
					Totals		
						ETWU Total	82,060
						Maximum Allowed Water Allowance (MAWA)^g	84,455

^aHydrozone #/Planting Description
E.g.
1) front lawn
2) low water use plantings
3) medium water use plantings

^bPlant Factor (PF)
0.75 for spray or drip
0.81 for drip

^cIrrigation Method^d
0.75 for spray or drip
0.81 for drip

^dIrrigation Efficiency (IE)^e
Eto x 0.62 = ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

^fETWU (Annual Gallons Required) = Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

^gMAWA (Annual Gallons Allowed) = (Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year; LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	2,442
Total Area	5,585
Average ETAF	0.44

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	2,442
Total Area	5,585
Sitewide ETAF	0.44

PLAN CODE
LDSC-5

VWD NO. 207141

City Drawing No.

IP18-00009

Sheet 24 of 29

V.W.D. AS-BUILT

By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 200
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: _____
Public Works Inspector
Date: _____

RECOMMENDED FOR APPROVAL

By: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 78583 exp.: 12/31/2022
Date: 6/13/21

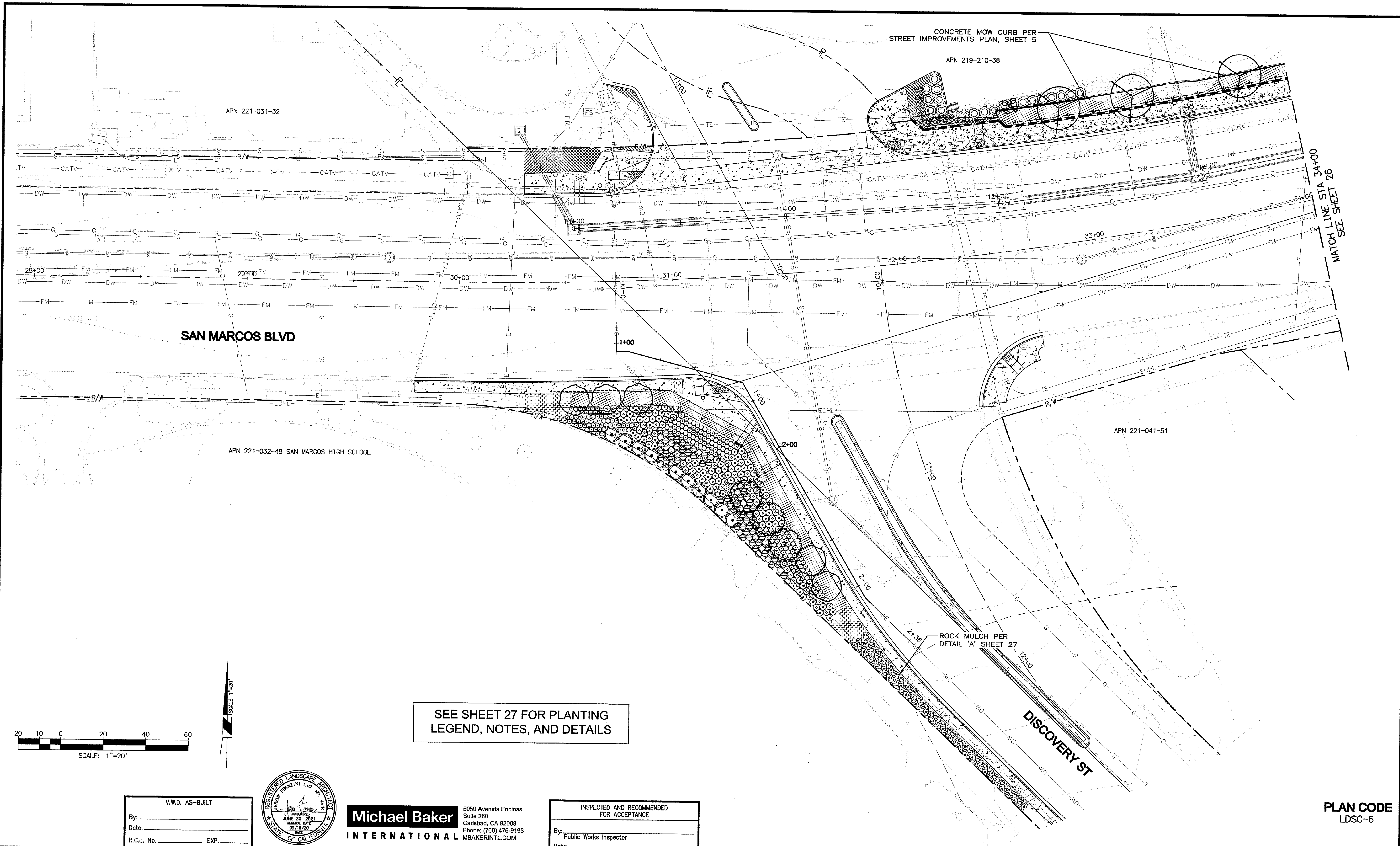
APPROVED FOR CONSTRUCTION

By: _____
Isaac Echeamendy, City Engineer
R.C.E.: 81294 exp.: 07/30/2021
Date: _____

BENCH MARK

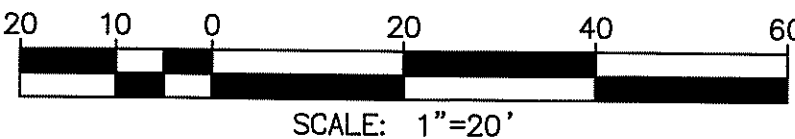
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
SPS PT. NO. 1021 PER R05 13928
Location: PT. NO. 1017: N1992455 016 E6270654 355
PT. NO. 1021: N1992450 982 E6274932 043
Elev: 513.042 [S110.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
LANDSCAPING AND IRRIGATION PLAN FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION



100% PLAN SUBMITTAL SEPTEMBER 18, 2020

SEE SHEET 27 FOR PLANTING
LEGEND, NOTES, AND DETAILS



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED
FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____

RECOMMENDED FOR APPROVAL
By: *Isaac Echeamendy*
Isaac Echeamendy, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: *8/23/21*

APPROVED FOR CONSTRUCTION
By: *Isaac Echeamendy*
Isaac Echeamendy, CHy Engineer
R.C.E.: 81294 exp.: 09/30/2021
Date: _____

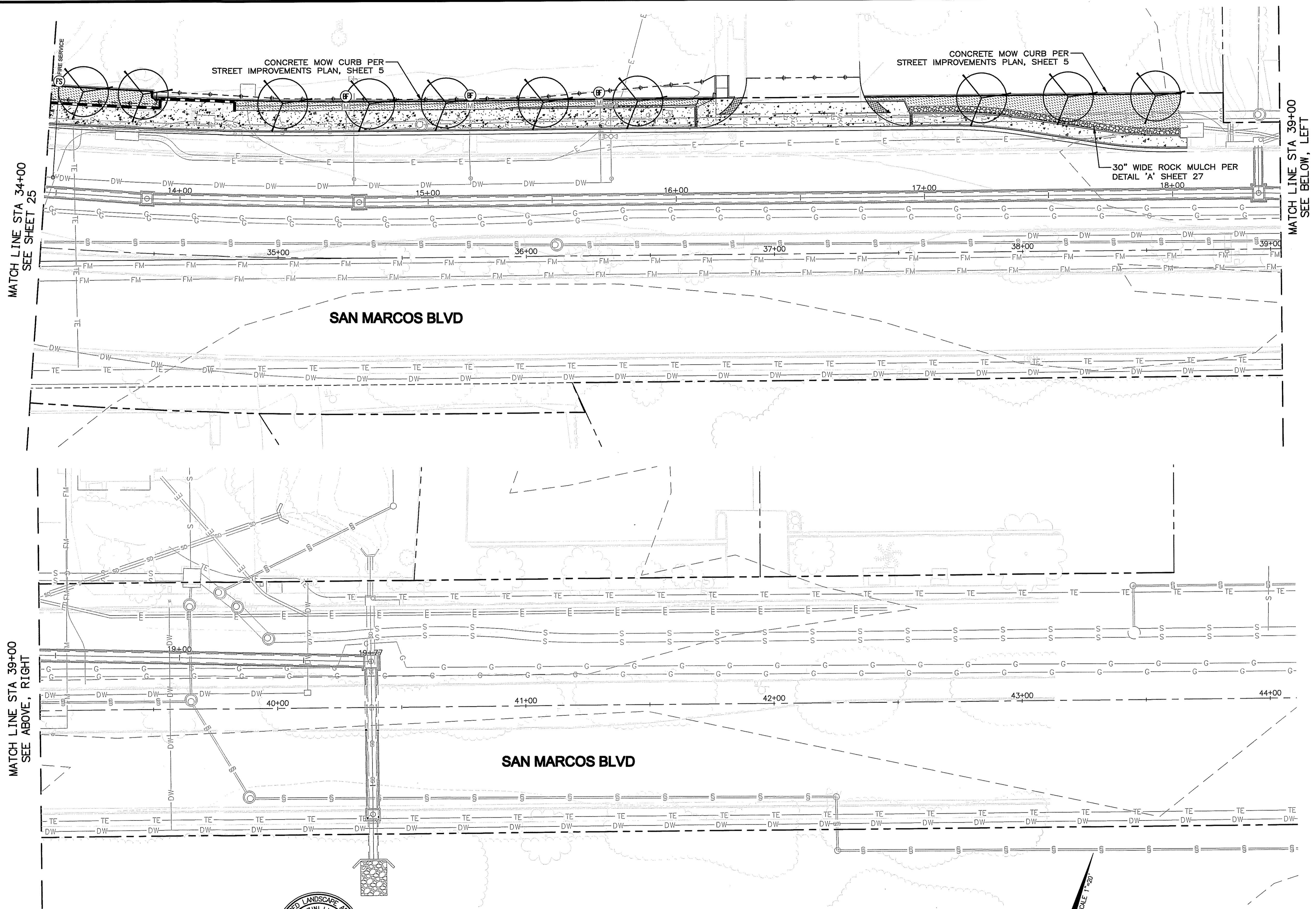
BENCHMARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND
GS PT. NO. 1021 PER BOS 13928
Location: PT. NO. 1017: N1892455.616 E6270854.355
PT. NO. 1021: N1982450.992 E6274932.043
Elev: 513.042 [510.736] Datum: NAVD 1988 [NSVD VMD 28]

PLAN CODE
LDSC-6

V.W.D. AS-BUILT By: _____ Date: _____ R.C.E. No. _____ EXP. _____		Michael Baker INTERNATIONAL 5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193 MBAKERINTL.COM		INSPECTED AND RECOMMENDED FOR ACCEPTANCE By: _____ Public Works Inspector Date: _____		RECOMMENDED FOR APPROVAL By: <i>Isaac Echeamendy</i> Isaac Echeamendy, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: <i>8/23/21</i>		APPROVED FOR CONSTRUCTION By: <i>Isaac Echeamendy</i> Isaac Echeamendy, CHy Engineer R.C.E.: 81294 exp.: 09/30/2021 Date: _____		BENCHMARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GS PT. NO. 1021 PER BOS 13928 Location: PT. NO. 1017: N1892455.616 E6270854.355 PT. NO. 1021: N1982450.992 E6274932.043 Elev: 513.042 [510.736] Datum: NAVD 1988 [NSVD VMD 28]		CITY OF SAN MARCOS ENGINEERING DIVISION LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		VMD W.O. 207141 City Drawing No.													
SAN MARCOS FIRE DEPARTMENT By: <i>Jason Nailon</i> Jason Nailon, Fire Marshal Date: <i>5.29.21</i>	VALLECITOS WATER DISTRICT By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: RCE 060160 EXP 6/30/2020	LANDSCAPE ARCHITECT OF WORK By: <i>Jeremy Franzini</i> Name: JEREMY FRANZINI LIC. NO.: 4514 exp: 06/30/21	CITY APPROVED CHANGES <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> <th>App'd By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Description	App'd By	Date													RECOMMENDED FOR APPROVAL By: <i>Isaac Echeamendy</i> Isaac Echeamendy, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: <i>8/23/21</i>		APPROVED FOR CONSTRUCTION By: <i>Isaac Echeamendy</i> Isaac Echeamendy, CHy Engineer R.C.E.: 81294 exp.: 09/30/2021 Date: _____		CITY OF SAN MARCOS ENGINEERING DIVISION LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		VMD W.O. 207141 City Drawing No.
No.	Description	App'd By	Date																								
H:\PDATA\163212\CADD\LARCH\DLV\163212-25-LDSC-6.DWG CHAABANI, ALAA 9/16/2020 1:22 PM																											

PLAN CODE
LDSC-6

VMD W.O. 207141
City Drawing No.
IP18-00009
Sheet 25 of 29



MATCH LINE STA 34+00
SEE SHEET 25

MATCH LINE STA 39+00
SEE BELOW, LEFT

MATCH LINE STA 39+00
SEE ABOVE, RIGHT

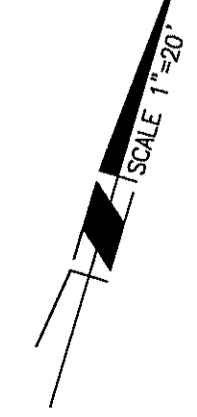
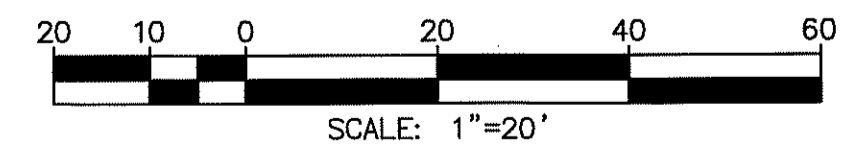
SEE SHEET 27 FOR PLANTING
LEGEND, NOTES, AND DETAILS



**Michael Baker
INTERNATIONAL**

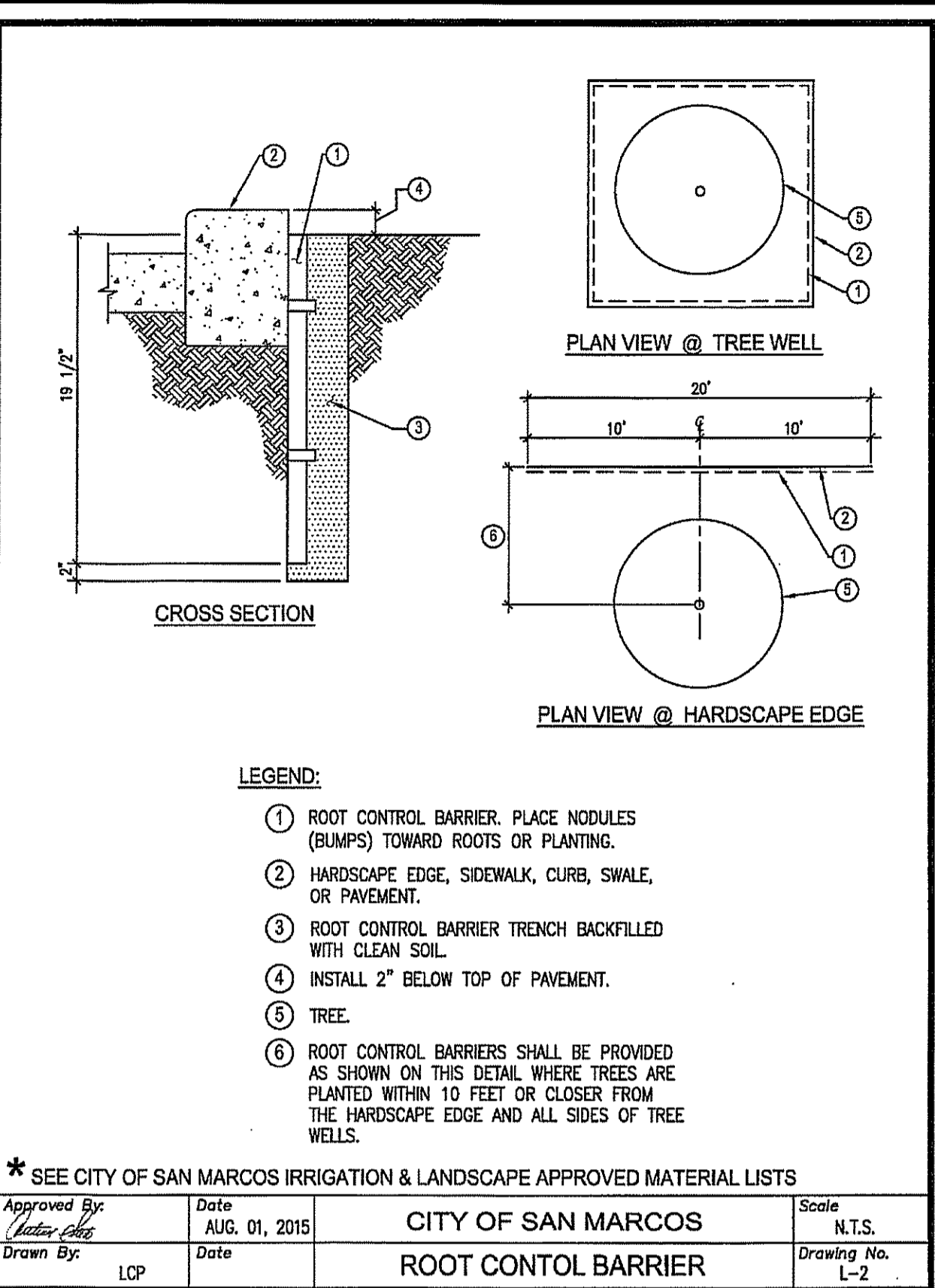
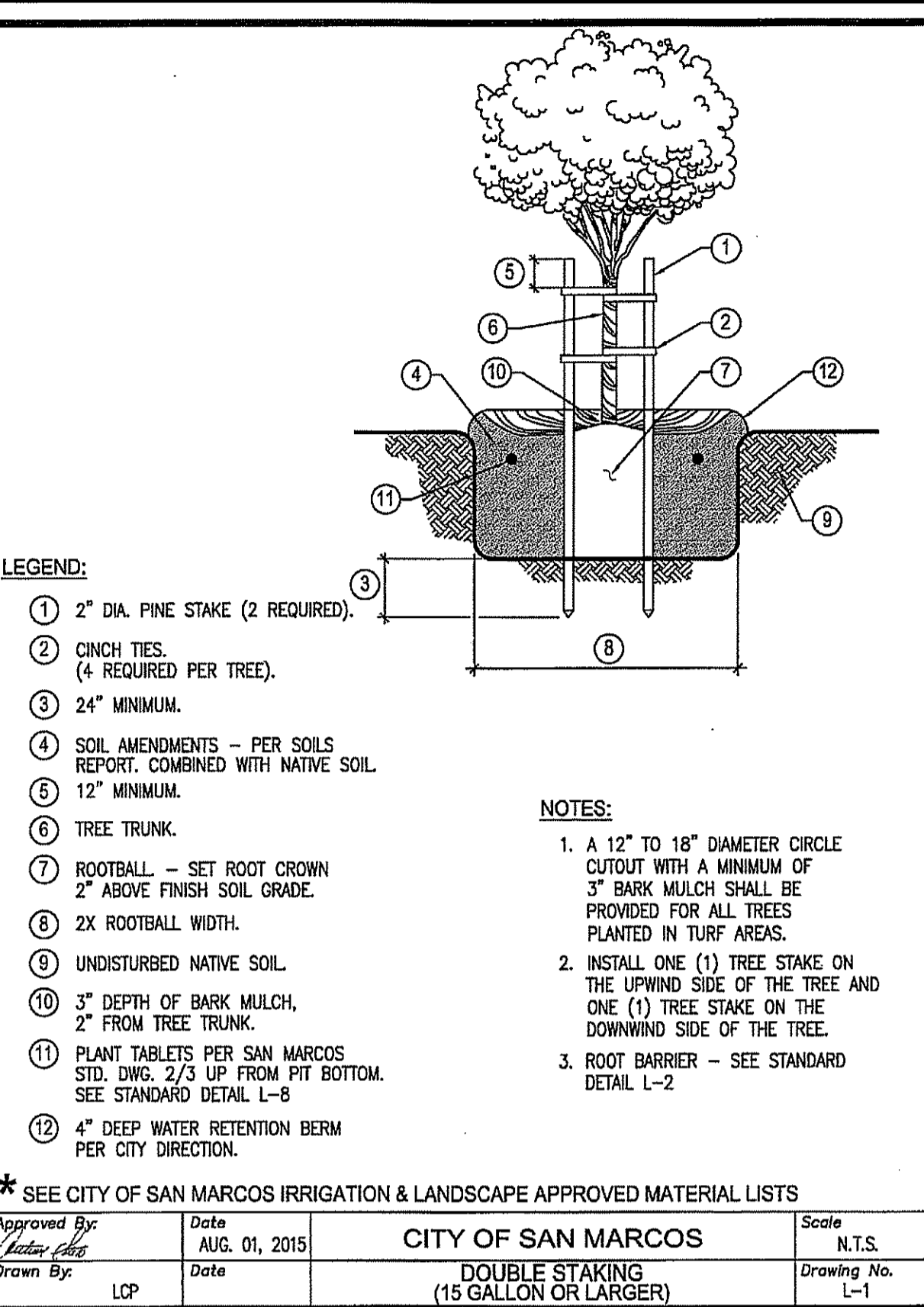
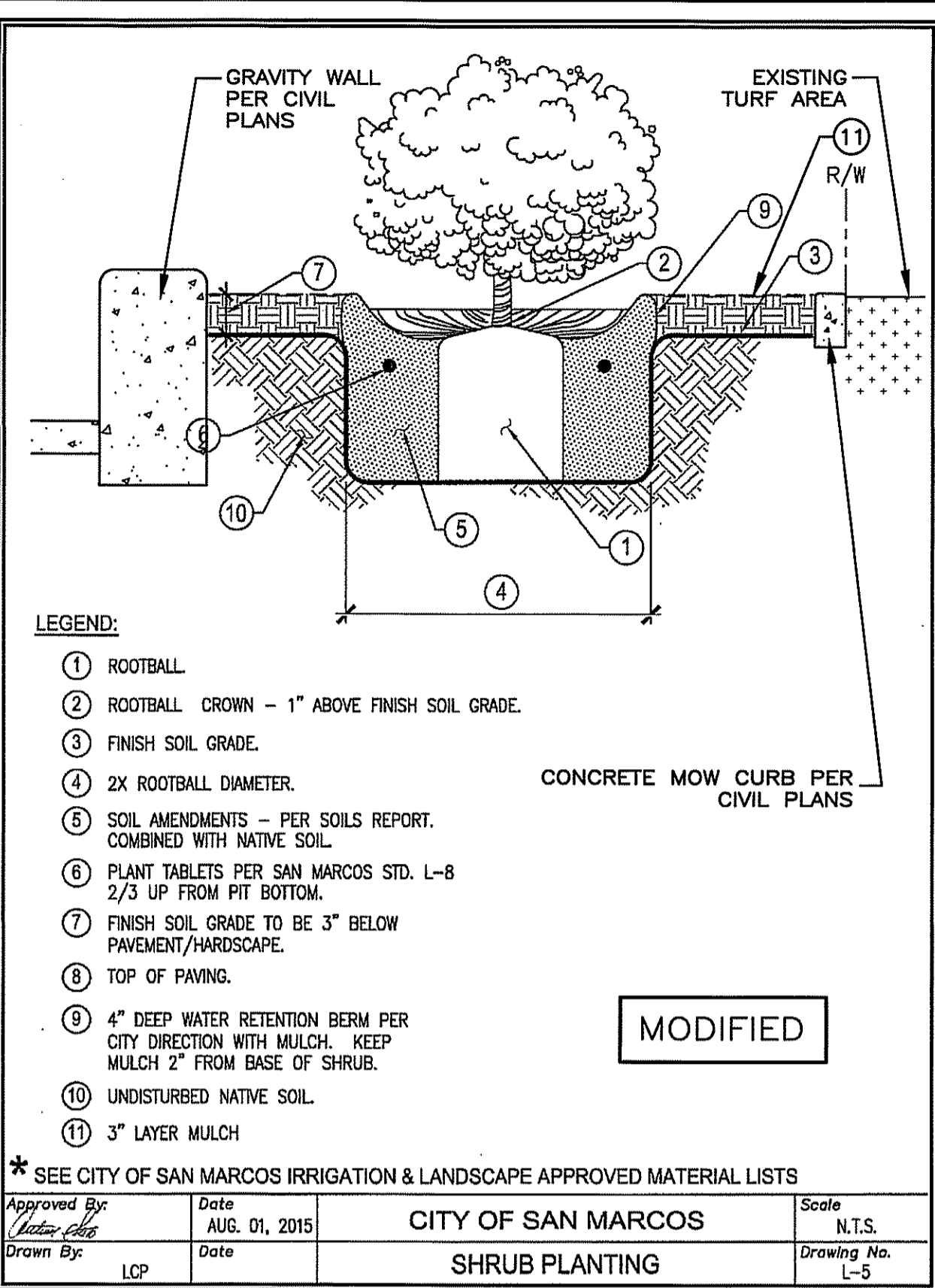
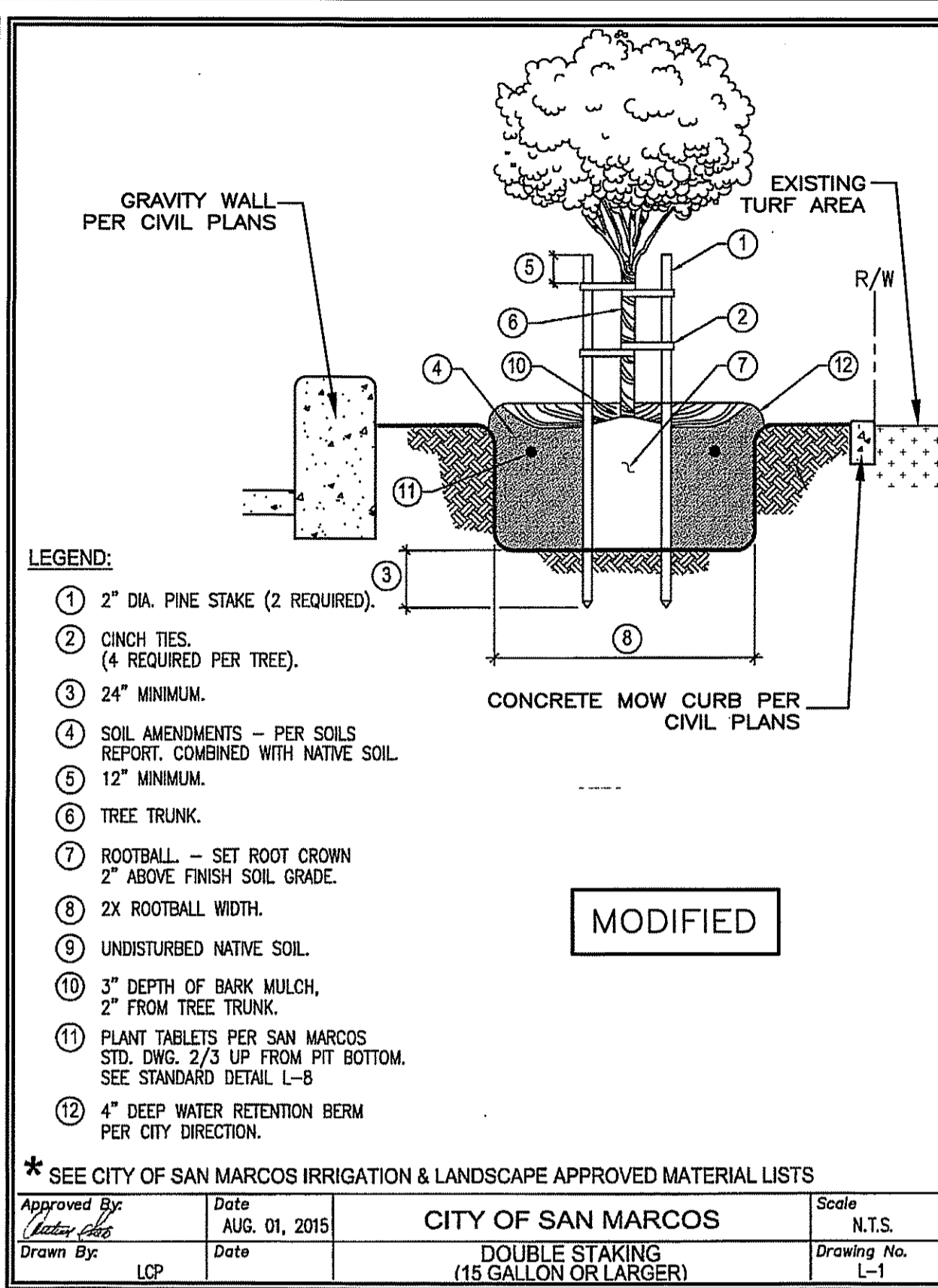
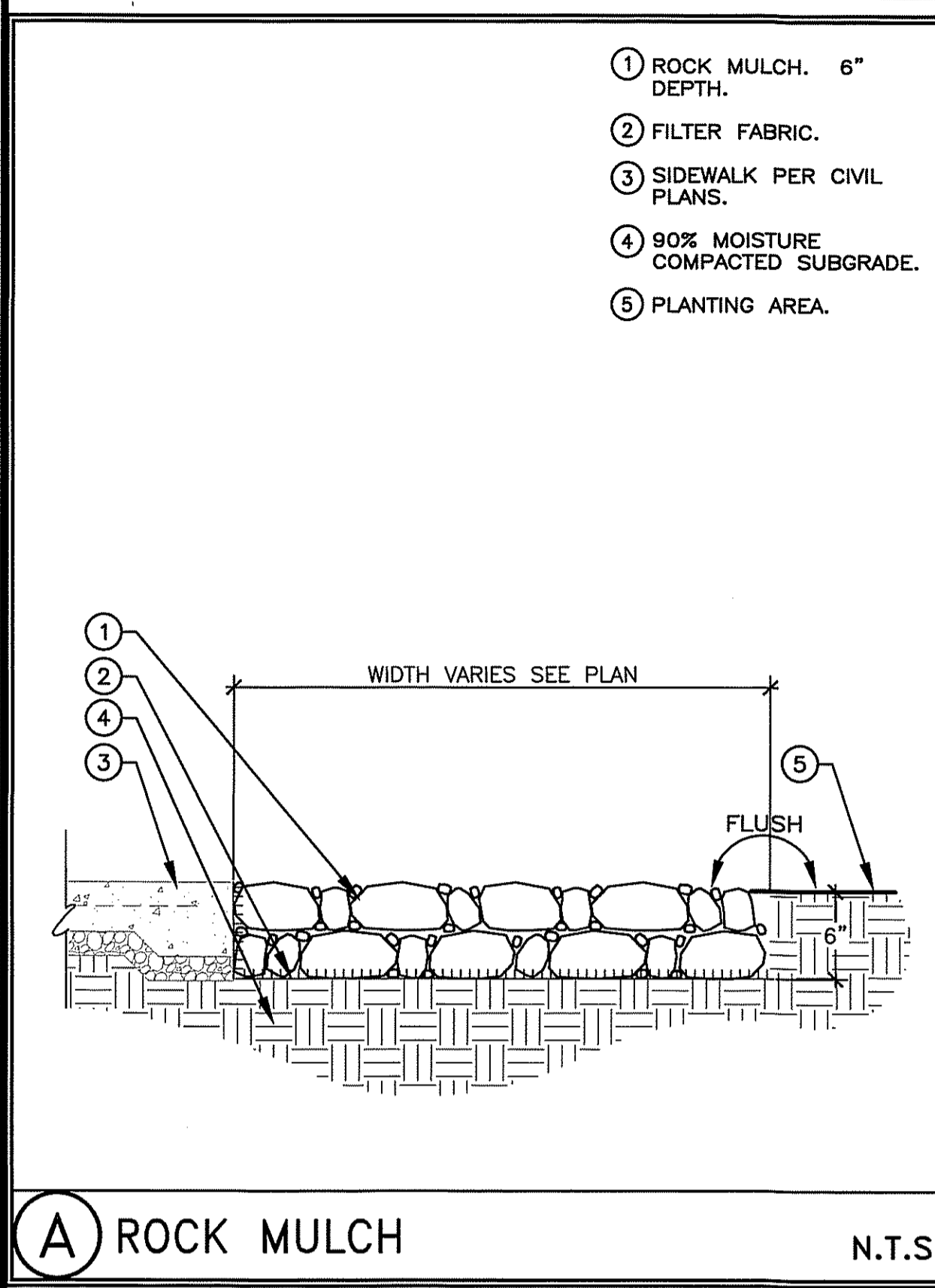
5050 Avenida Encinas
Suite 260
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED
FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____



**PLAN CODE
LDSC-7**

V.W.D. AS-BUILT By: _____ Date: _____ R.C.E. No. _____ EXP. _____		Michael Baker International 5050 Avenida Encinas Suite 260 Carlsbad, CA 92008 Phone: (760) 476-9193 MBAKERINTL.COM		INSPECTED AND RECOMMENDED FOR ACCEPTANCE By: _____ Public Works Inspector Date: _____		RECOMMENDED FOR APPROVAL By: _____ Lewis Clapp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/28/21		APPROVED FOR CONSTRUCTION By: _____ Isaac Echamendi, City Engineer R.C.E.: B1294 exp.: 03/30/2021 Date: _____		BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.392 E6274932.043 Elev.: 513.042 (510.725) Datum: NAVD 1988 (NGVD VMD 29)		CITY OF SAN MARCOS ENGINEERING DIVISION LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		VMD W.O. 207141 City Drawing No. IP18-00009 Sheet 26 of 29															
SAN MARCOS FIRE DEPARTMENT By: _____ Date: 3-29-21	VALLECITOS WATER DISTRICT By: JAMES H. GUMPEL, DISTRICT ENGINEER Date: _____ RCE C60160 EXP 6/30/2020	LANDSCAPE ARCHITECT OF WORK By: _____ Date: 09/16/20 Name: JEREMY FRANZINI LIC. NO.: 4514 exp.: 06/30/21	CITY APPROVED CHANGES <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> <th>App'd By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Description	App'd By	Date													RECOMMENDED FOR APPROVAL By: _____ Lewis Clapp, Senior Civil Engineer R.C.E.: 76583 exp.: 12/31/2022 Date: 6/28/21		APPROVED FOR CONSTRUCTION By: _____ Isaac Echamendi, City Engineer R.C.E.: B1294 exp.: 03/30/2021 Date: _____		BENCH MARK Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.392 E6274932.043 Elev.: 513.042 (510.725) Datum: NAVD 1988 (NGVD VMD 29)		CITY OF SAN MARCOS ENGINEERING DIVISION LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION		VMD W.O. 207141 City Drawing No. IP18-00009 Sheet 26 of 29
No.	Description	App'd By	Date																										



PLANT LEGEND

SYMBOL	SCIENTIFIC NAME/ COMMON NAME	SIZE	QTY	WATER USE
TREES				
	CERCIS OCCIDENTALIS/ WESTERN REDBUD	24" BOX	3	L
	ARBUTUS UNEDO 'COMPACTA'/ STRAWBERRY TREE	24" BOX	5	L
	LAGERSTROEMIA 'NATCHEZ'/ GRAPE MYRTLE	24" BOX	13	M
SHRUBS				
	BOUGAINVILLEA 'OO LA LA'/ BOUGAINVILLEA	5 GAL	20	L
	CALANDRINA SPECTABILIS/ ROCK PURSLANE	1 GAL	31	L
DEFENTION BASIN SHRUBS				
	LEYMUS CONDENSATUS 'CANYON PRINCE'/ CANYON PRINCE GIANT RYE	1 GAL	85 @ 36" O.C.	L
	RIBES VIBURNIFOLIUM/ EVERGREEN CURRANT	1 GAL	216 @ 24" O.C.	M
	MUHLBERGIA DUBIA/ PINE MUHLY	1 GAL	152 @ 36" O.C.	L
	RHUS INTEGRIFOLIA/ LEMONADE BERRY	1 GAL	10	L
GROUND COVER				
	CAREX PRAEGRACILIS/ CALIFORNIA FIELD SEDGE	1 GAL 3,585 SF	1840 @ 18" O.C.	M
	ROSMARINUS 'HUNTINGTON CARPET'/ HUNTINGTON CARPET ROSEMARY	1 GAL 430 SF	125 @ 24" O.C.	L

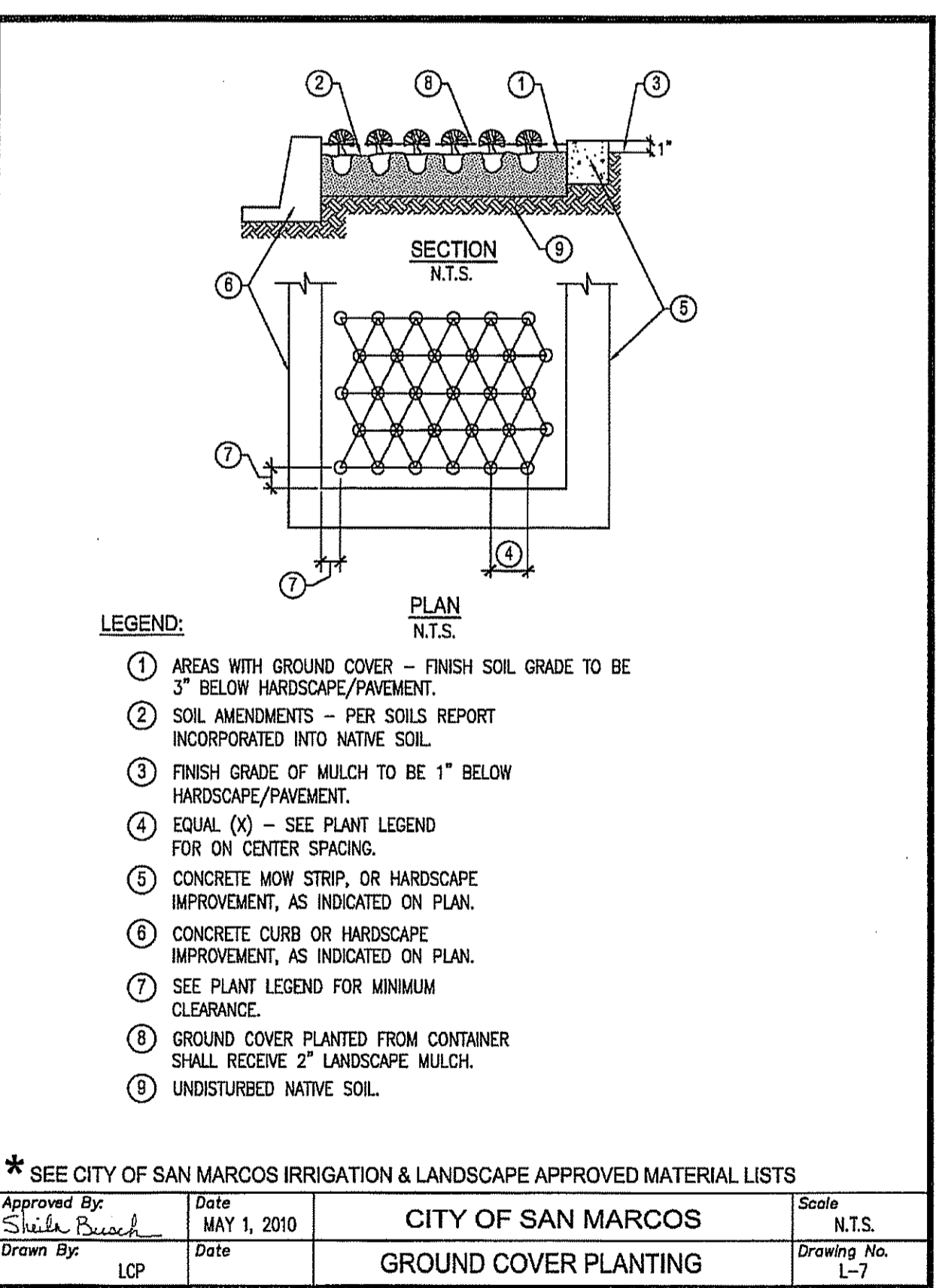
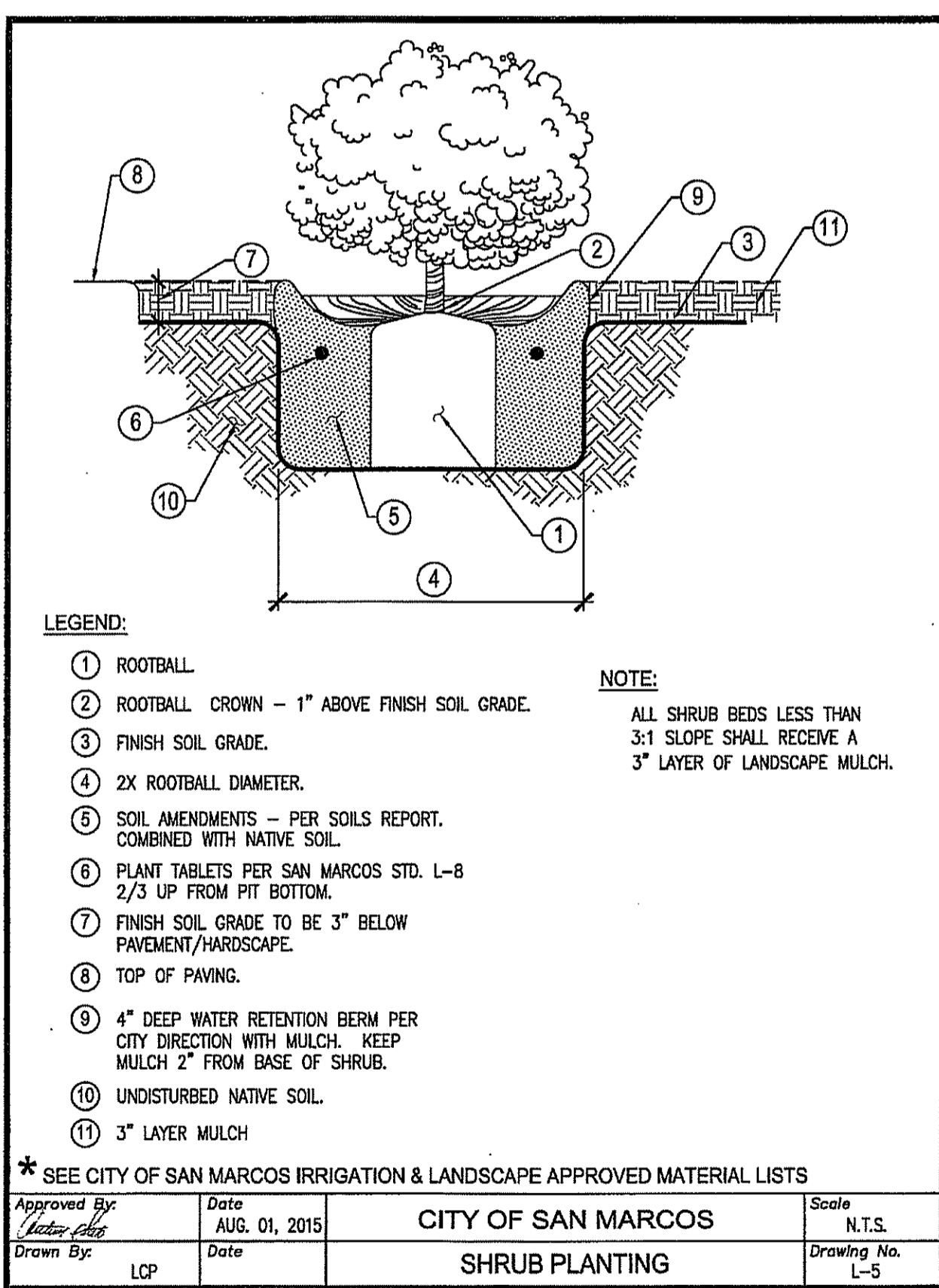
GROUND COVER (CONTINUED)

	SENECIO MANDRALISCAE / BLUE CHALK STICKS	FLATS 622 SF	715 @ 12" O.C.	L
	HONEY QUARTZ ROCK MULCH FROM KRC ROCK OR APPROVED EQUAL	3"-8" ROCK	915 SF	
	ROOT BARRIER			

TOTAL CITY MAINTAINED LANDSCAPE AREA = 5,585 + 2,925 = 8,510 SF
TOTAL PRIVATELY MAINTAINED LANDSCAPE AREA = 847 SF

PLANTING NOTES

- ALL LANDSCAPE AND IRRIGATION WORK SHALL CONFORM TO CITY SAN MARCOS LANDSCAPE STANDARDS, THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREEN BOOK" (A COPY SHALL BE KEPT ON THE JOB SITE AT ALL TIMES), THE SPECIFICATION SPECIAL PROVISIONS, LOCAL CODES AND ORDINANCES, AND ALL OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS. ALL WORK SHALL BE SUBJECT TO THE CITY ENGINEER'S ACCEPTANCE AS A CONDITION OF COMPLETION OF WORK BY THE CONTRACTOR.
- PLANT QUANTITIES ARE SHOWN FOR CONTRACTOR'S CONVENIENCE IN ESTIMATING ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE PLANT MATERIAL FOR EACH SYMBOL SHOWN ON THE PLANTING PLAN.
- ALL WORK SHALL BE SUBJECT TO THE CITY ENGINEER'S ACCEPTANCE AS A CONDITION OF COMPLETION OF WORK BY THE CONTRACTOR.
- THE PLANTING PLAN IS DIAGRAMMATIC. MINOR ADJUSTMENTS IN PLANT LOCATIONS MAY BE MADE AT THE DISCRETION OF THE PROJECT LANDSCAPE ARCHITECT OR THE CITY ENGINEER'S.
- ALL PLANT MATERIAL SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR THE CITY ENGINEER'S PRIOR TO INSTALLATION. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL NURSERY TYING MATERIAL AND MARKING TAPES SHALL BE REMOVED AT THE TIME OF PLANTING.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL EXISTING UTILITIES, SITE CONDITIONS, STRUCTURES, PROPERTY LINES, AND SERVICES BEFORE COMMENCING WORK TO ENSURE THAT THERE IS NO DAMAGE DURING CONSTRUCTION. THE LOCATIONS OF THESE CONDITIONS SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE CITY ENGINEER'S. THE CONTRACTOR IS RESPONSIBLE TO REPAIR AND REPLACE ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION WITH NO ADDITIONAL COST TO THE OWNER.
- PLANT MATERIAL LOCATED ADJACENT TO ANY LIGHT STANDARDS, UTILITY EQUIPMENT, OR DRIVEWAYS, ETC. SHALL BE ADJUSTED TO MAINTAIN A SUITABLE CLEARANCE AS APPROVED BY THE CITY ENGINEER'S. TREES SHALL NOT BE INSTALLED OVER UNDERGROUND UTILITIES.
- ALL PLANTING AREAS SHALL HAVE A 3" LAYER OF BARK MULCH PER THE SPECIFICATIONS.
- SEE THE SPECIFICATION SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.



V.W.D. AS-BUILT

By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
3050 Avenida Encinas
Suite 250
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: _____
Date: _____
Public Works Inspector

RECOMMENDED FOR APPROVAL

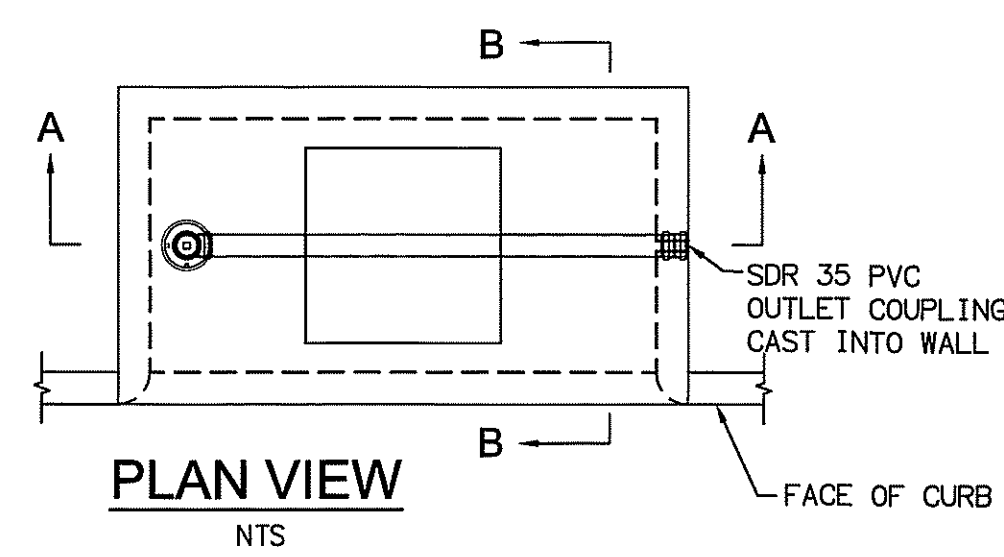
By: *Lewis Clapp*
Date: *6/22/20*
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76353 exp.: 12/31/2022

APPROVED FOR CONSTRUCTION

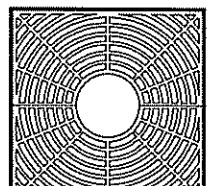
By: *Isaac E. Chamandy*
Date: _____
Isaac E. Chamandy, City Engineer
R.C.E.: 81294 exp.: 09/30/2021

PLAN CODE LDSC-8

By	Date	By	Date	By	Date	By	Date	By	Date	By	Date
SAN MARCOS FIRE DEPARTMENT	VALLECITOS WATER DISTRICT	LANDSCAPE ARCHITECT OF WORK	CITY APPROVED CHANGES	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SAN MARCOS ENGINEERING DIVISION	City Drawing No.			
<i>Jason Nailon</i>	JAMES H. GUMPEL, DISTRICT ENGINEER	<i>Jeremy Franzini</i>	No. Description App'd By Date	<i>Lewis Clapp</i>	<i>Isaac E. Chamandy</i>	CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928	LANDSCAPING AND IRRIGATION PLAN FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION	IP18-00009			
Date: 3.29.21	Date: RCE C60160 EXP 6/30/2020	Name: JEREMY FRANZINI LIC. NO.: 4514 exp.: 06/30/21		Date: 6/22/20	Date: 09/30/2021	Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.892 E6274932.043 Elev.: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]		Sheet 27 of 29			



36"X36" TREE GRATE
NTS



1.0 GENERAL

- 1.1 This item shall govern the furnishing and installation of the Filterra[®] Bioretention System by Contech Engineered Solutions LLC, complete and operable as shown and as specified herein, in accordance with the requirements of the plans and contract documents.
- 1.2 Contractor shall furnish all labor, materials, equipment and incidentals necessary to install the bioretention system, appurtenances and incidentals in accordance with the Drawings and as specified herein.
- 1.3 Bioretention system shall utilize the physical, chemical and biological mechanisms of an engineered biofiltration media, plant and microbe complex to remove pollutants typically found in urban stormwater runoff. The treatment system shall be a fully equipped, pre-constructed, drop-in-place unit designed for applications in the urban landscape to treat contaminated runoff from impervious surfaces.
- 1.4 Bioretention system shall be capable of stand-alone stormwater treatment. No pretreatment to bioretention media shall be required.
- 1.5 The bioretention system shall be of a type that has been installed and in use for a minimum of five (5) consecutive years preceding the date of installation of the system. The Manufacturer shall have been, during the same consecutive five (5) year period, engaged in the engineering design and production of systems deployed for the treatment of storm water runoff and which have a history of successful production, acceptable to the Engineer of Record and/or the approving Jurisdiction. The Manufacturer of the Filterra Bioretention System shall be, without exception:

 Contech Engineered Solutions LLC
 5025 Centre Pointe Drive
 West Chester, OH 45399
 Tel: 1 800 398 1122
- 1.6 Applicable provisions of any Division shall govern work in this section.
- 1.7 American Society for Testing and Materials (ASTM) Reference Specifications
 - 1.7.1 ASTM C857: Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures
 - 1.7.2 ASTM C858: Standard Specification of Underground Precast Concrete Utility Structures
 - 1.7.3 ASTM C990: Standard Specification for Joints for Precast Box Sections Using Performed Flexible Joint Sealants

1.7.4 ASTM C109: Standard Test Method for Compressive Strength of Hydraulic Cement Mortars

1.8 Manufacturer or authorized supplier to submit shop drawings for bioretention System with the vault, engineered biofiltration media and accessory equipment. Drawings shall include principal dimensions, engineered biofiltration media placement, location of piping and unit foundation.

1.8.1 Manufacturer or authorized supplier shall submit installation instructions to the contractor.

1.8.2 Manufacturer or authorized supplier shall submit Operations and Maintenance Manual to the contractor.

1.8.3 Before installation of the bioretention system, Contractor shall obtain the written approval of the Engineer of Record for the system drawings.

1.9 No product substitutions shall be accepted unless submitted 30 days prior to project bid date, or as directed by the Engineer of Record. Substitutions require review and approval by the Engineer of Record, for hydraulic performance, impact to project designs, equivalent treatment performance, and any required project plan and report (hydrology/hydraulic, water quality, stormwater pollution) modifications that would be required by the approving Jurisdiction/Agencies. Contractor to coordinate with the Engineer of Record any applicable modifications to the project estimates of cost, bonding amount determinations, plan check fees for changes to approved documents, and/or any other regulatory requirements resulting from the product substitution.

2.0 MATERIALS

2.1 All internal components including engineered biofiltration media, underdrain stone, PVC underdrain piping, mulch, dissipation stone, and vegetation must be included as part of the bioretention system and shall be provided by Contech Engineered Solutions LLC.

2.1.1 Engineered biofiltration media shall consist of both organic and inorganic components. Stormwater shall be directed to flow vertically through the media profile, saturating the full media profile without downstream flow control.

2.1.2 Underdrain stone shall be of size and shape to provide adequate bridging between the media and stone for the prevention of migration of fine particles. Underdrain stone must also be able to convey the design flow rate of the system without restriction and be approved for use in the Filterra Bioretention System by Contech Engineered Solutions LLC.

2.1.3 PVC Underdrain Piping shall be SDR35 with perforation pattern designed to convey system design flow rate without restriction.

2.1.4 Mulch shall be double shredded wood or bark mulch approved for use with the Filterra Bioretention System by Contech Engineered Solutions LLC.

2.1.5 Vegetation shall comply with the type and size required by the approved drawings and shall be alive and free of obvious signs of disease.

2.1.6 Dissipation stone shall be 3"-6" diameter washed stones or cobbles.

2.2 Precast concrete vault shall be provided by Manufacturer or authorized supplier according to ASTM C857 and C858.

2.2.1 Vault joint sealant shall be Consel CS-101 or approved equal. Joints shall be sealed with preformed joint sealing compound conforming to ASTM C 990.

2.2.2 If interior concrete baffle walls are provided, baffle walls shall be cast-in or sealed to the interior vault walls and floor with a polyurethane construction sealant rated for use below the waterline, Sikaflex 1a or equal. Contractor to provide sealant material and installation unless completed prior to shipment.

2.3 Tree grates and access covers shall be cast iron. Tree grate frames shall be galvanized steel.

2.4 Curb Nosing (where applicable) shall be galvanized steel and where specified shall be cast into a top slab designed to support AASHTO HS-20 loading at the curb.

2.5 All contractor-provided components shall meet the requirements of this section, the plans specifications and contract documents. In the case of conflict, the more stringent specification shall apply.

2.5.1 Crushed rock base material shall be six-inch minimum layer of 1/2-inch minus rock. Compact undisturbed sub-grade materials to 95% of maximum density at +/-2% of optimum moisture content. Unsuitable material below sub-grade shall be replaced to engineer's approval.

2.5.2 Concrete shall have an unconfined compressive strength at 28 days of at least 3000 psi, with 1/2-inch round rock, a 4-inch slump maximum, and shall be placed within 90 minutes of initial mixing.

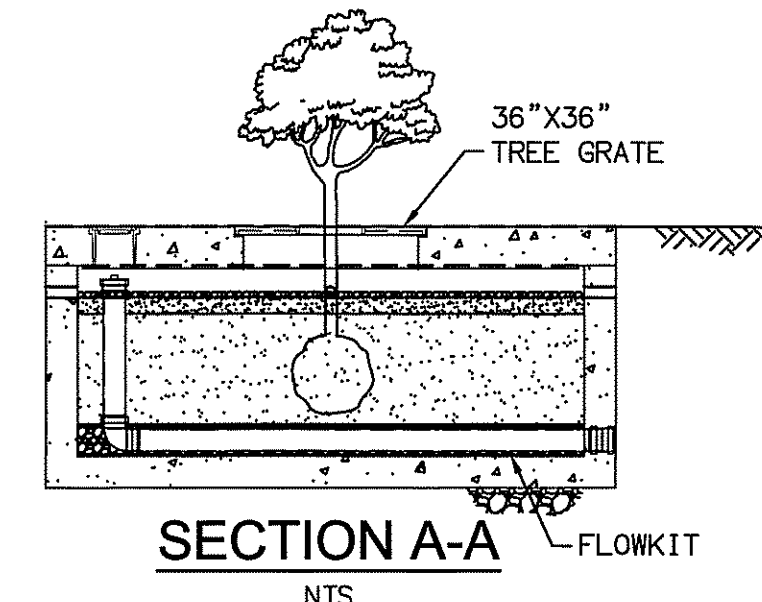
2.5.3 Silicone Sealant shall be pure RTV silicone conforming to Federal Specification Number TT S001545A or TT S00230C or Engineer's approval.

2.5.4 Grout shall be non-shrink grout meeting the requirements of Corps of Engineers CND-C588. Specimens molded, cured and tested in accordance with ASTM C-109 shall have minimum compressive strength of 5,200 psi. Grout shall not exhibit visible bleeding.

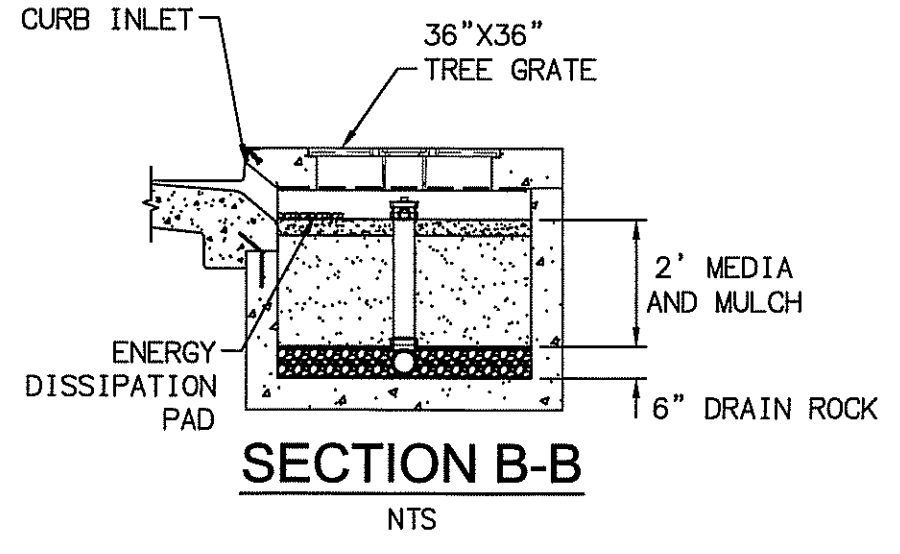
2.5.5 Backfill material shall be 1/2-inch minus crushed rock, or approved equal.

3.0 PERFORMANCE

3.1 Treatment Capabilities shall be verified via third-party reports following TAPE or TARP protocols.



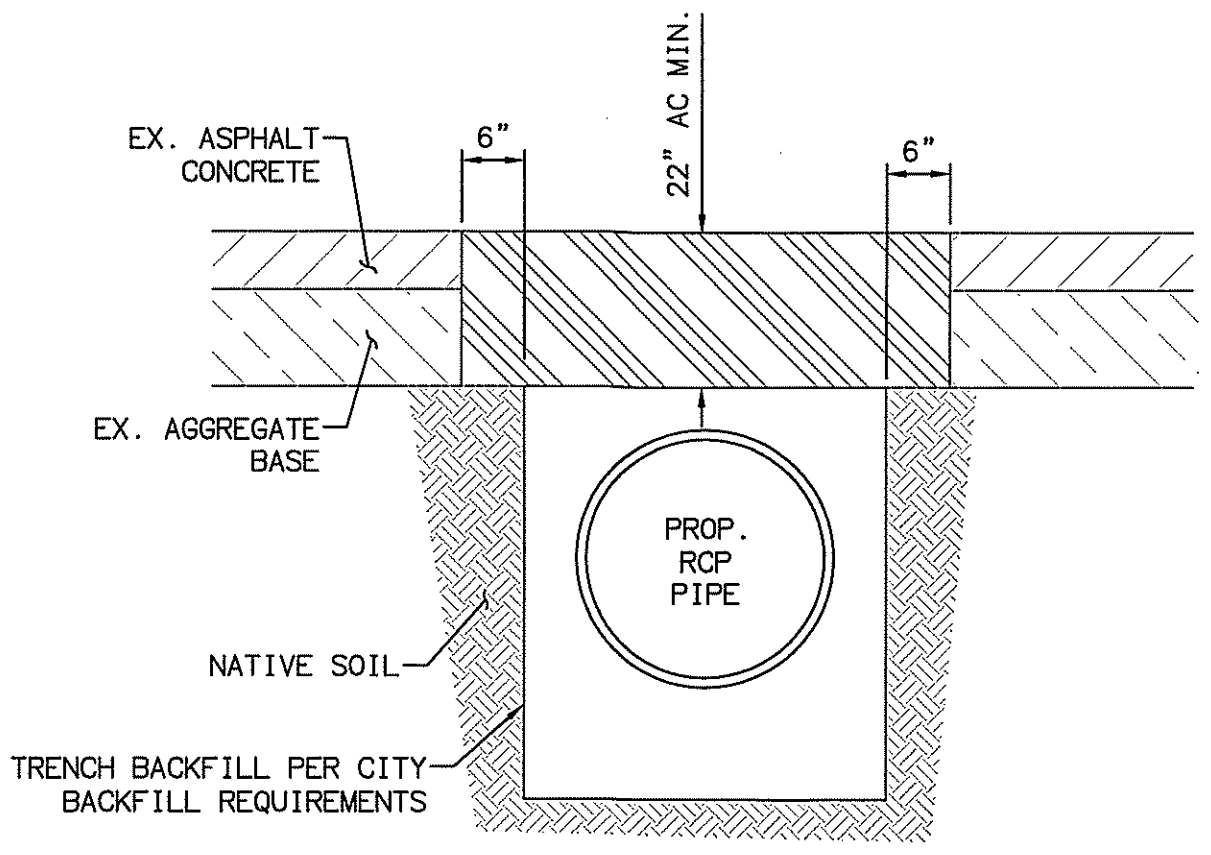
SECTION A-A
NTS



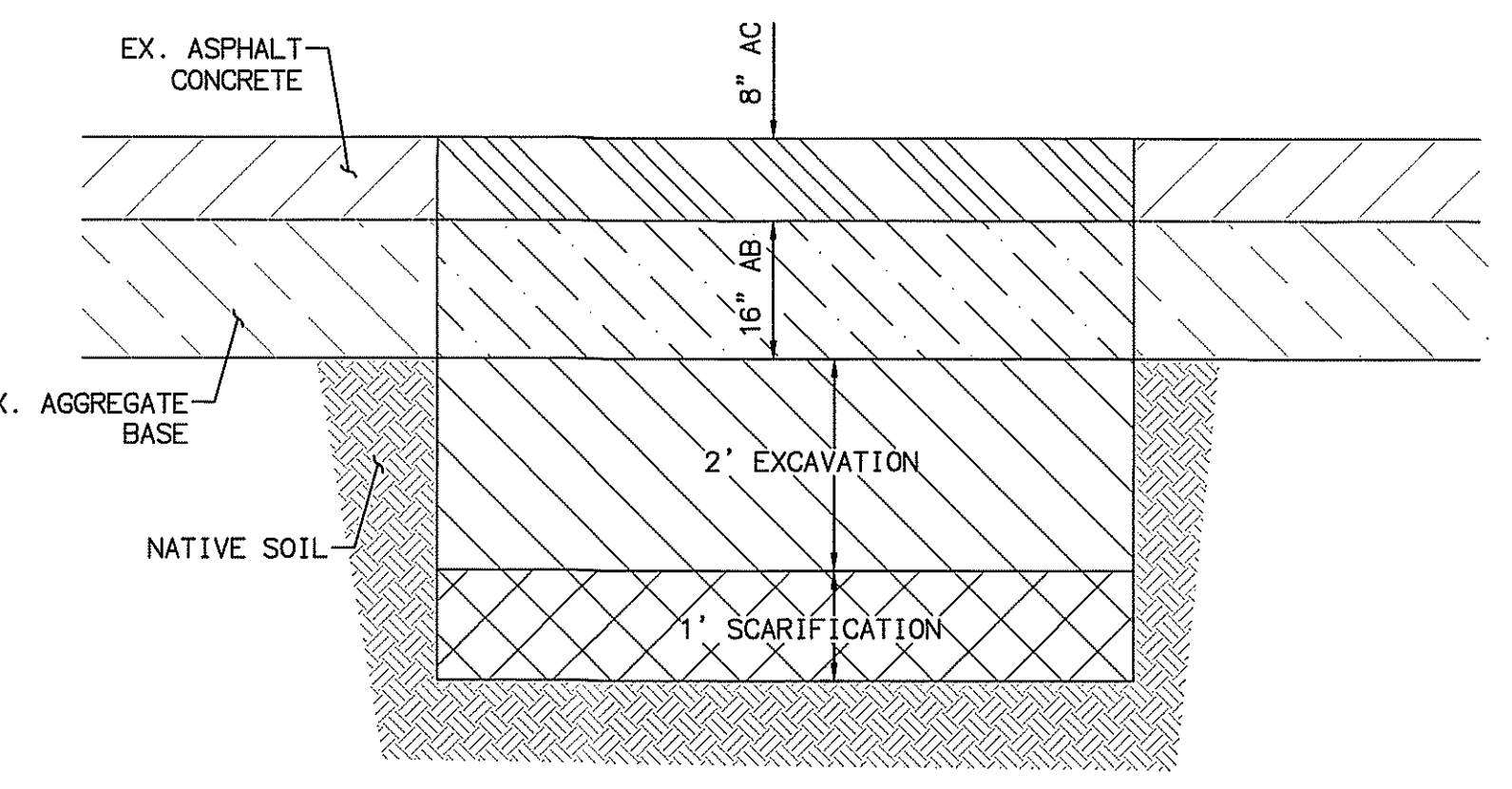
SECTION B-B
NTS

FILTERRA DETAIL
NTS

NOTE:
CONTRACTOR TO CONTACT AND VERIFY
FILTERRA DETAIL AND SPECIFICATIONS
BEFORE ORDER THE UNIT.



RCP PAVEMENT SECTION DETAIL
NTS



PROPOSED PAVEMENT SECTION DETAIL
NTS

3.1.1 Engineered biofiltration Media flow rate shall be verified via third-party report following TAPE or TARP protocols. The minimum treatment flow rate based on target pollutant shall be as follows:
 TSS: 100³/hr
 Phosphorus: 100³/hr
 Oil/Grease: 50³/hr
 Metals: 35³/hr

The system shall be designed to ensure that high flow events shall bypass the Engineered biofiltration media preventing erosion and resuspension of pollutants.

3.1.2 The system shall remove a minimum of 85% Total Suspended Solids (TSS) based on aggregated data from at least four third party field studies following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 3.3 mg/L.

3.1.3 The system shall remove a minimum of 70% Total Phosphorus (TP) based on aggregated data from at least two third party field studies following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.05 mg/L.

3.1.4 The system shall remove a minimum of 34% Total Nitrogen (TN) based on aggregated data from at least one third party field study following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.54 mg/L.

3.1.5 The system shall remove a minimum of 55% Total Copper based on aggregated data from at least two third party field studies following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.004 mg/L.

3.1.6 The system shall remove a minimum of 43% Dissolved Copper based on aggregated data from at least one third party field study following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.003 mg/L.

3.1.7 The system shall remove a minimum of 56% Total Zinc based on aggregated data from at least three third party field studies following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.04 mg/L.

3.1.8 The system shall remove a minimum of 54% Dissolved Zinc based on aggregated data from at least one third party field study following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.003 mg/L.

3.1.9 The system shall remove a minimum of 87% Total Petroleum Hydrocarbons based on aggregated data from at least one third party field study following TAPE or TARP protocols. Aggregated median effluent concentration shall be less than 0.71 mg/L.

3.2 The system shall have General Use Level Designation from Washington Department of Ecology for basic (TSS, Phosphorus, Enhanced (Metals), and Oil/Grease) and have Certification by New Jersey Department of Environment.

3.3 Quality Assurance and Quality Control procedures shall be followed for all batches of engineered biofiltration media produced. Engineered biofiltration media shall be certified by the Manufacturer for performance and composition.

3.3.1 Media particle size distribution and composition shall be verified as per relevant ASTM Standards.

3.3.2 Media pollutant removal performance shall be verified as per relevant ASTM Standards as well as a minimum of one scientific method approved by the USEPA.

3.3.3 Media hydraulic performance shall be verified as per relevant ASTM Standards.

3.3.4 Media fertility shall be verified as per a minimum of one published scientific method.

3.4 The Manufacturer shall ensure through third party full scale field testing of installed units that the design flow rate of the system is not reduced over time. Studies shall be performed on a minimum of 10 systems of various ages, maintenance frequencies, and land uses. At least 80% of the tested systems shall have been installed 2.5 or more years. At least 50% of the systems shall have previous maintenance intervals greater than 2 times the manufacturer's recommendation.

4.0 EXECUTION

4.1 Set precast vault on crushed rock base material that has been placed in maximum 6-inch lifts, loose thickness, and compacted to at least 95-percent of the maximum dry density as determined by the standard Proctor compaction test, ASTM D698, at moisture content of +/- 2% of optimum water content.

4.2 Inlet and outlet pipes shall be attached to provided couplers or grouted in and connected to precast concrete vault according to Engineer's requirements and specifications. All connections to be water tight.

4.3 All throat and grate protection covers shall remain in place until the system is activated.

4.4 Contractor to cast-in-place throat inlet to convey stormwater into bioretention System according to Engineer's requirements and specifications.

4.5 Engineered biofiltration media shall be delivered installed in the vault, unless otherwise agreed upon with the Manufacturer. Contractor shall take appropriate action to protect the media from sediment and other debris during construction. The method ultimately selected shall be at Contractor's discretion and Contractor's risk.

4.5.1 If media is shipped separately from vault, Manufacturer or a Manufacturer's certified representative shall install media into the vault, or be present to supervise installation in order to ensure proper installation.

4.6 The bioretention system shall not be placed in operation (activated) until the project site is clean and stabilized (construction erosion control measures no longer required). The project site includes any surface that contributes storm drainage to the system. All impermeable surfaces shall be clean and free of dirt and debris. All catch basins, manholes and pipes shall be free of dirt and sediment. Activation shall be provided by Manufacturer or authorized supplier.

4.7 Each correctly installed system shall be maintained by Manufacturer or authorized supplier for a minimum period of one year. The cost of this service shall be included in the price of the system.

4.7.1 Annual maintenance consists of a maximum of two (2) scheduled visits.

4.7.2 Each routine maintenance visit shall consist of only the following items: system inspection; removal of foreign debris, silt, loose plant material and trash; mulch removal; engineered biofiltration media evaluation; plant health evaluation and pruning; replacement of mulch; disposal of all maintenance refuse items; and updating of maintenance records.

4.8 To ensure long term performance of the bioretention system, continuing annual maintenance programs should be performed or purchased by the owner per the latest Filterra Bioretention System Operation and Maintenance manual.

V.W.D. AS-BUILT
By: _____
Date: _____
R.C.E. No. _____ EXP. _____



Michael Baker INTERNATIONAL
5050 Avenida Encinas
Suite 250
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

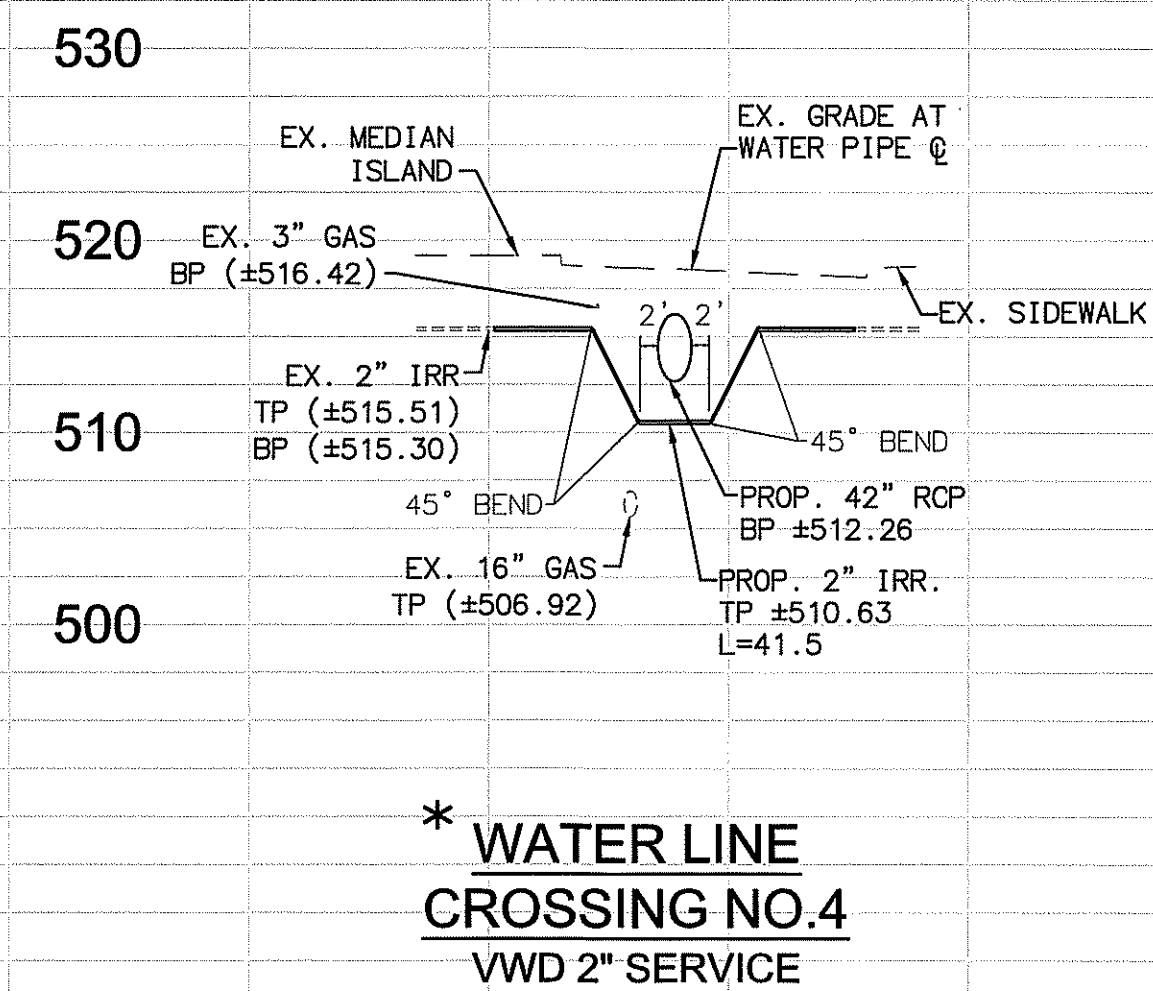
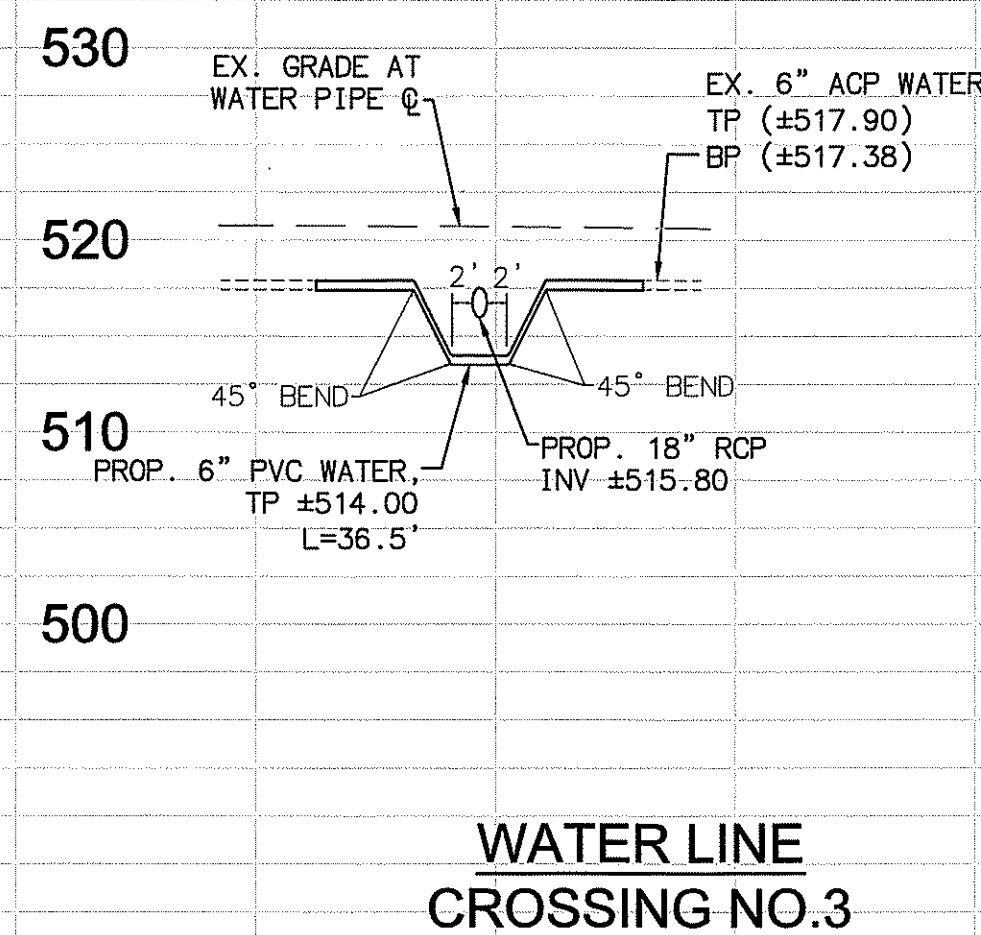
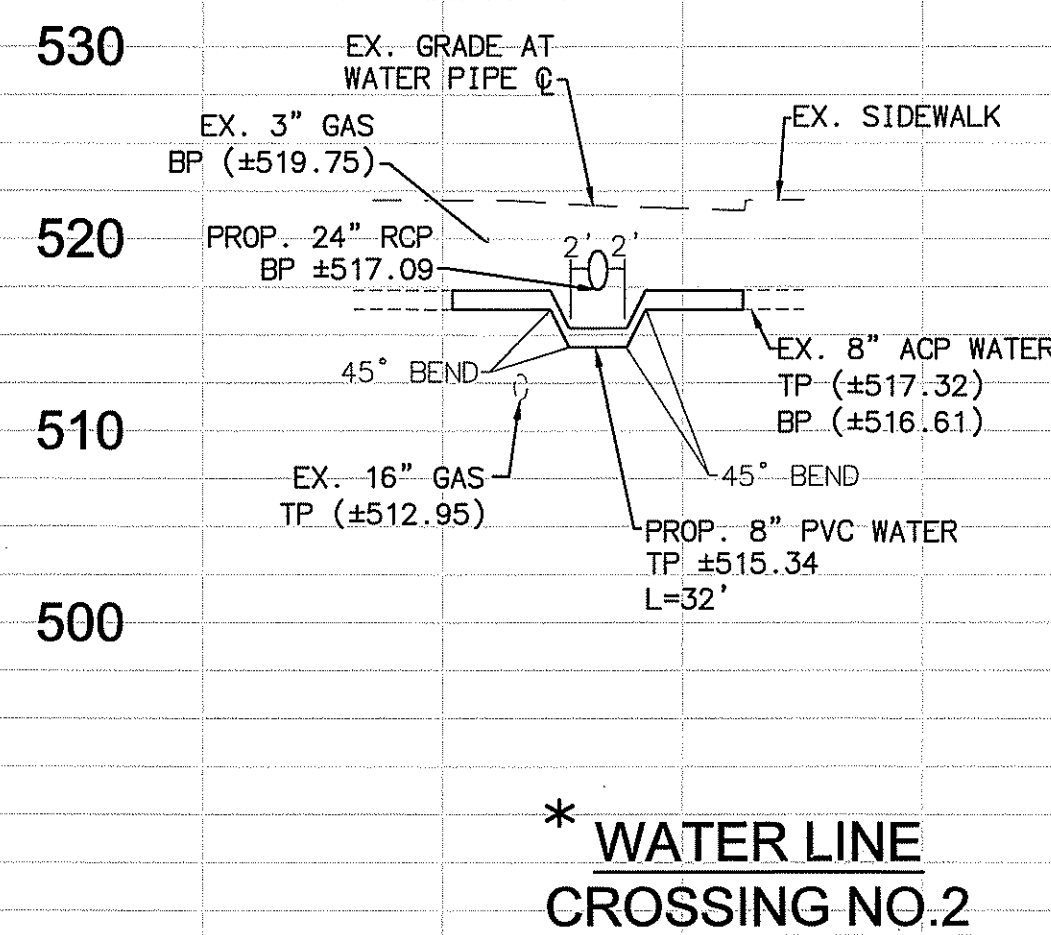
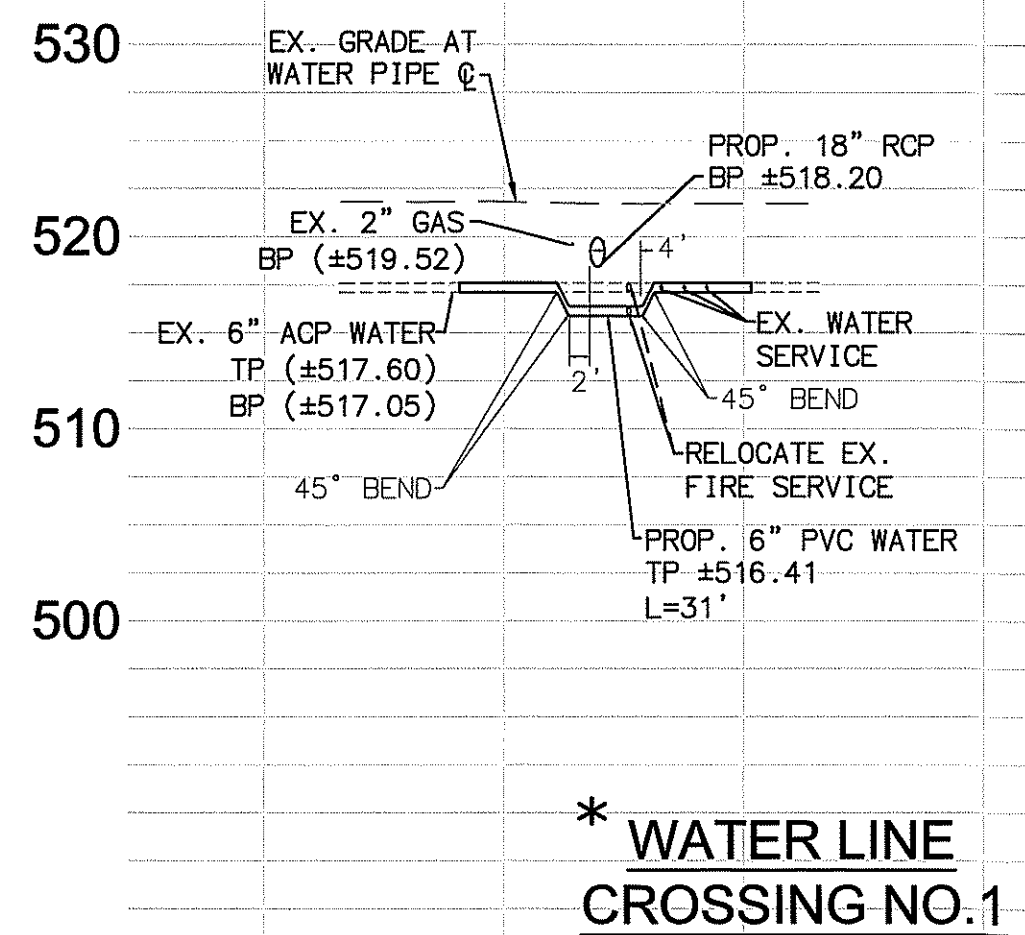
INSPECTED AND RECOMMENDED FOR ACCEPTANCE
By: _____
Public Works Inspector
Date: _____

RECOMMENDED FOR APPROVAL
By: _____
Lewis Clapp, Senior Civil Engineer
R.C.E.: 76583 exp.: 12/31/2022
Date: 3/1/21

APPROVED FOR CONSTRUCTION
By: _____
Isaac E. Hernandez, City Engineer
R.C.E.: 81294 exp.: 07/30/2021
Date: _____

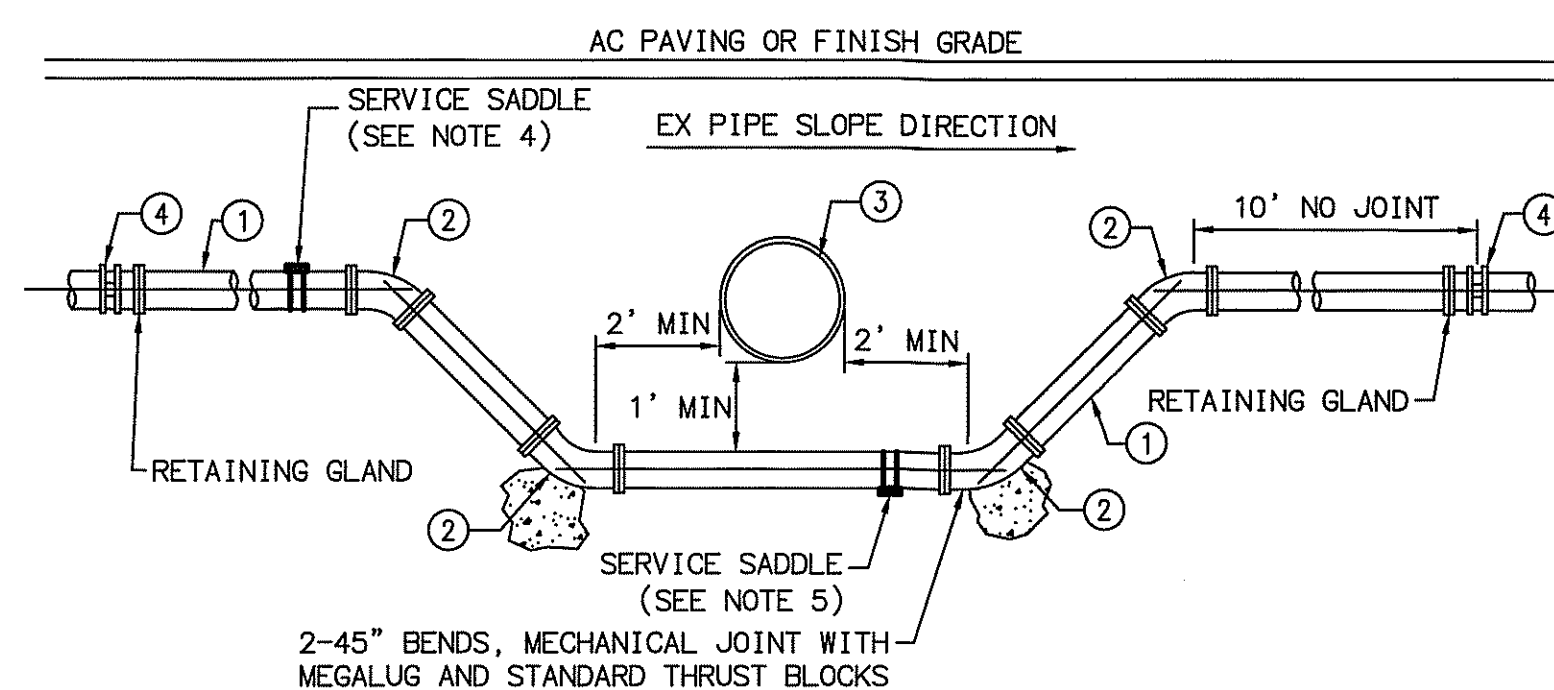
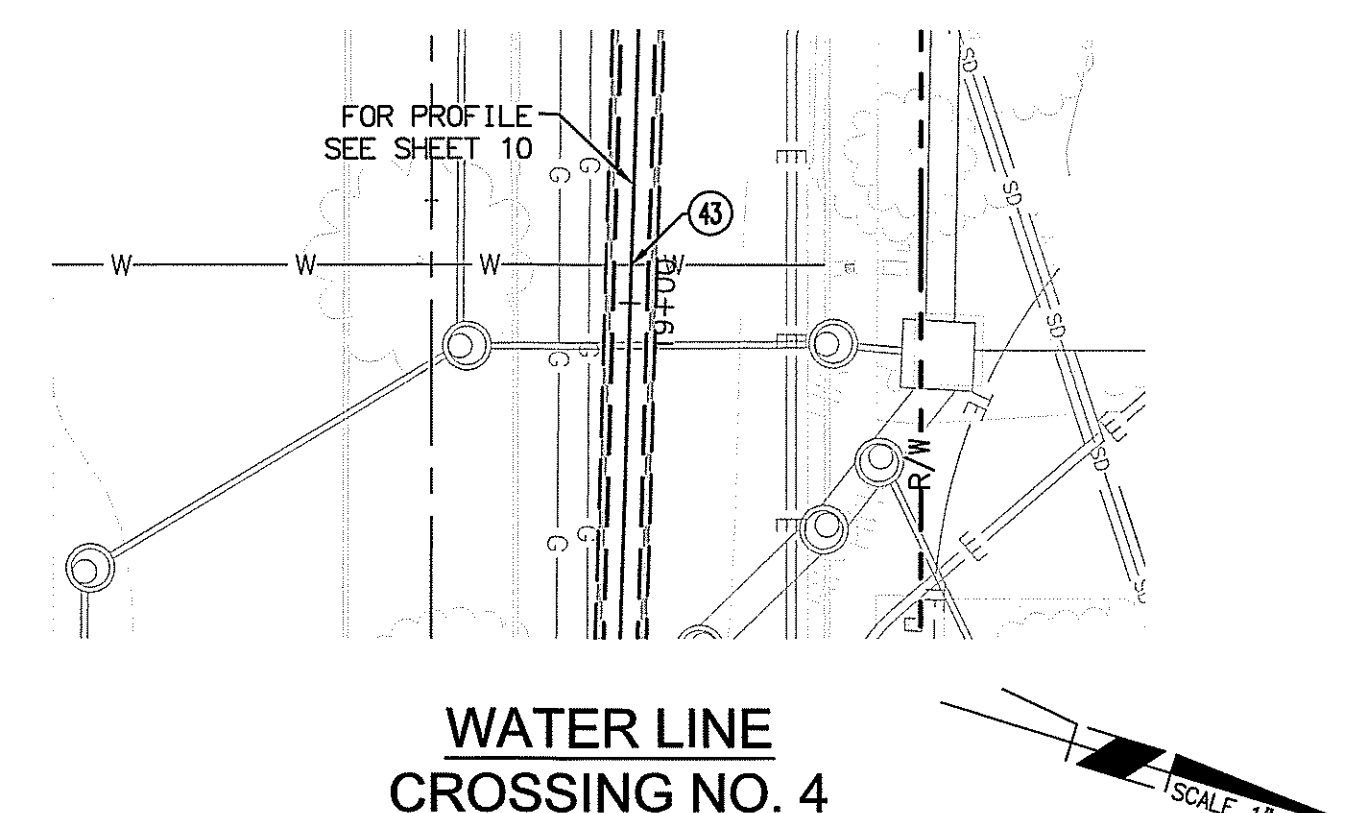
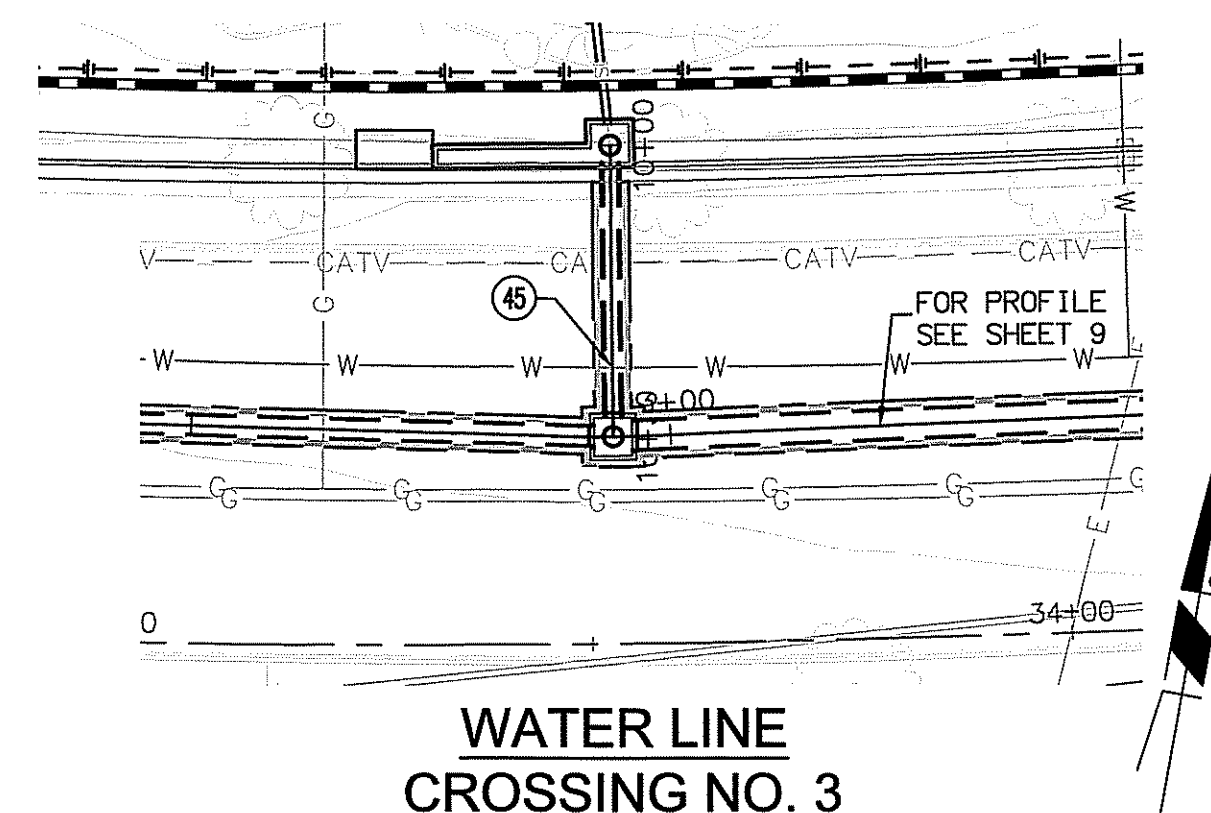
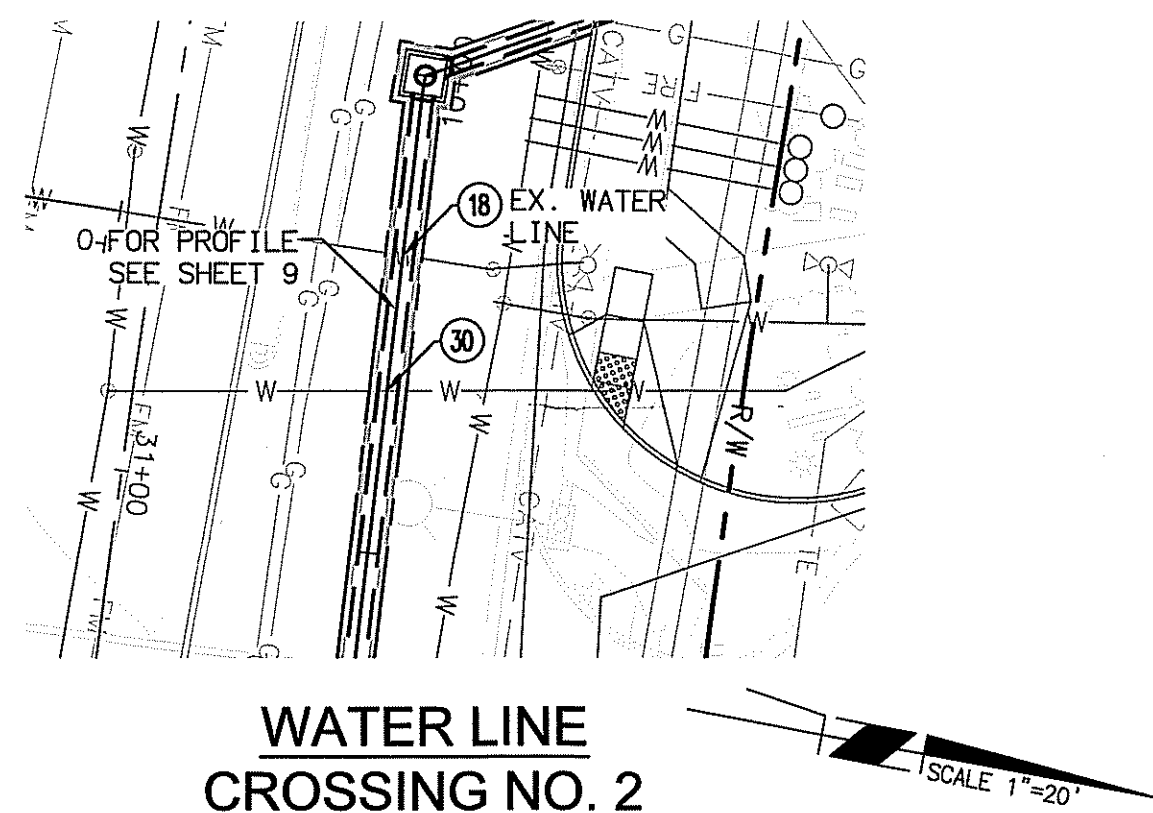
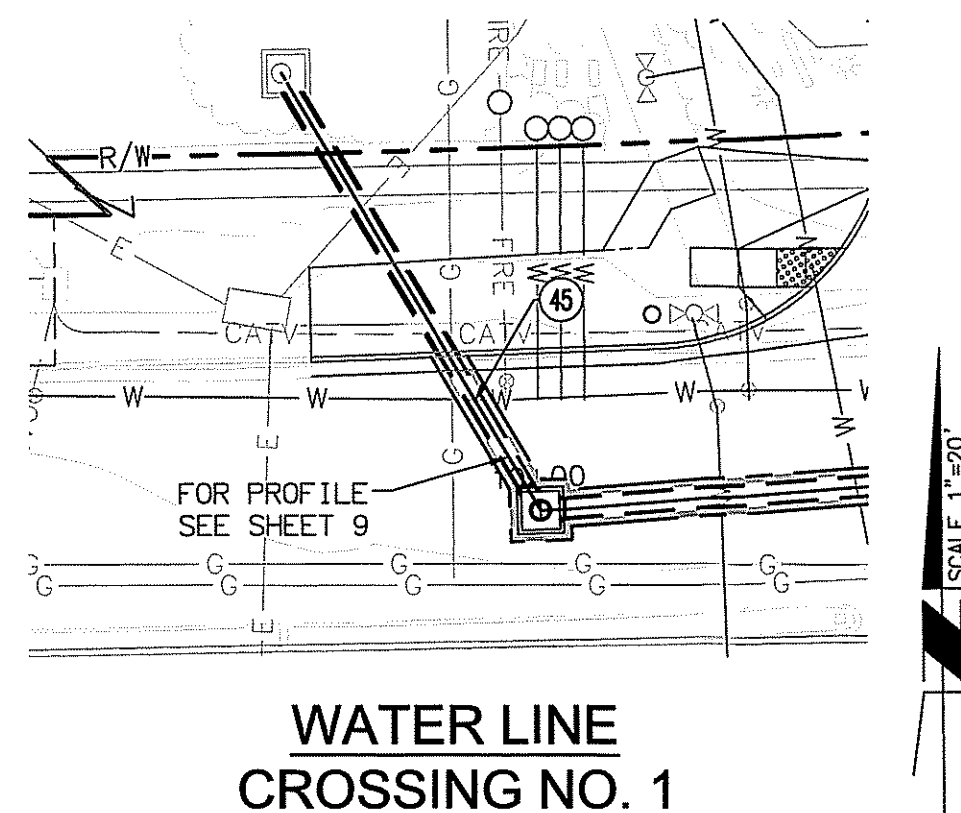
BENCH MARK
Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928
Location: PT. NO. 1017: N1992455.016 E6270564.355
PT. NO. 1021: N1992450.952 E6274932.043
Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]

CITY OF SAN MARCOS ENGINEERING DIVISION
CONSTRUCTION DETAILS FOR:
SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
City Drawing No. IP18-0009
Sheet 28 of 29



H. SCALE: 1"=20'
V. SCALE: 1"=10'

* = SDG&E TO BE ON STAND-BY DURING EXCAVATION.



NOTES:

- ALL PIPE JOINTS AT 45-DEGREE BENDS SHALL BE RESTRAINED.
- THE THRUST AND ANCHOR BLOCKS SHALL BE PER VWD STD. DWG. W-15.
- DIP INSTALLATION SHALL BE DOUBLE ENCASED POLYETHYLENE WRAPPING PER VWD STANDARDS SECTION 15056 PART 3 C4.
- AN AUTOMATIC AIR AND VACUUM VALVE SHALL BE INSTALLED ON THE HIGH POINT OF THE OFFSET AS SPECIFIED ON THE PLAN OR DIRECTED BY VWD INSPECTOR.
- A BLOW OFF MAY BE REQUIRED AT THE LOW POINT OF THE OFFSET AS SPECIFIED ON THE PLAN OR DIRECTED BY VWD INSPECTOR.
- IF BOTTOM LENGTH EXCEEDS 18 FEET, CONNECT PIPE SECTIONS WITH MECHANICAL JOINT RETAINING GLAND.

MATERIAL:

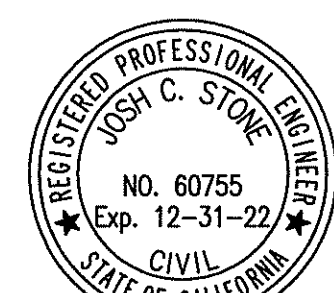
- PVC
- 45° BEND MECHANICAL JOINT W/ RESTRAIN
- UTILITY CONDUIT
- FACTORY JOINT OR EXISTING PIPE MATERIAL X D.I. TRANSITION COUPLING

WATER LINE CROSSING TABLE:

NO.	STATIONS	EX PIPE INFO	PROP. PIPE INFO
1	10+39.49 SD LATERAL 1 = 30+47.72 SAN MARCOS BLVD	6" ACP	RESTRAINED 6" PVC
2	10+33.13 SD MAIN = 30+87.84 SAN MARCOS BLVD	8" ACP	RESTRAINED 8" PVC
3	10+24.80 SD LATERAL 2 = 33+52.32 SAN MARCOS BLVD	6" ACP	RESTRAINED 6" PVC
4	18+96.28 SD MAIN = 39+56.67 SAN MARCOS BLVD	2" IRR	2" IRR

CONSTRUCTION NOTES

- PROTECT IN PLACE
- INSTALL 8-INCH PVC WATER MAIN CROSSING PER DETAIL AND PROFILE ON SHEET 29
- 2" WATER SERVICE DIP CROSSING FOR VWD LIFT STATION METER PER DETAIL AND PROFILE ON SHEET 29
- INSTALL 6-INCH PVC WATER MAIN CROSSING PER DETAIL AND PROFILE ON SHEET 29



Michael Baker INTERNATIONAL

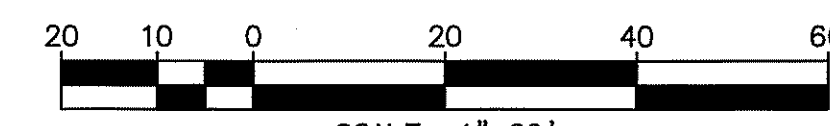
5050 Avenida Encinas
Suite 200
Carlsbad, CA 92008
Phone: (760) 476-9193
MBAKERINTL.COM

INSPECTED AND RECOMMENDED FOR ACCEPTANCE

By: *Public Works Inspector*
Date: _____

RECOMMENDED FOR APPROVAL

By: *Lewis Clapp, Senior Civil Engineer*
R.C.E.: 76593 exp.: 12/31/2022
Date: *2/28/21*



PLAN CODE
WL-2

SAN MARCOS FIRE DEPARTMENT	VALLEJCITOS WATER DISTRICT	ENGINEER OF WORK	CITY APPROVED CHANGES	RECOMMENDED FOR APPROVAL	APPROVED FOR CONSTRUCTION	BENCH MARK	CITY OF SAN MARCOS ENGINEERING DIVISION
By: <i>JASON NAILON, FIRE MARSHAL</i> Date: <i>2-29-21</i>	By: JAMES H. GUMPELL, DISTRICT ENGINEER Date: RCE C60180 EXP 6/30/2022	By: <i>Josh C. Stone</i> Name: JOSH C. STONE R.C.E.: C60755 exp.: 12/31/22	No. Description App'd By Date	By: <i>Lewis Clapp</i> R.C.E.: 76593 exp.: 12/31/2022 Date: <i>2/28/21</i>	By: <i>Isaac Etchemendy, City Engineer</i> R.C.E.: 81234 exp.: 07/30/2021 Date: _____	Description: CITY OF SAN MARCOS GPS PT. NO. 1017 AND GPS PT. NO. 1021 PER ROS 13928 Location: PT. NO. 1017: N1992455.016 E6270654.355 PT. NO. 1021: N1992450.992 E6274932.043 Elev: 513.042 [510.736] Datum: NAVD 1988 [NGVD VMD 29]	STORM DRAIN PLAN AND PROFILE FOR: SAN MARCOS BOULEVARD AT DISCOVERY STREET INTERSECTION
							VWD W.D. 207141 City Drawing No. IP18-00009 Sheet 29 of 29