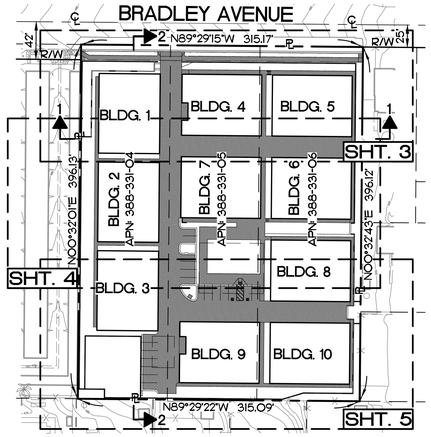
GRADING PLAN FOR BRADLEY APARTMENT COMPLEX

GENERAL NOTES

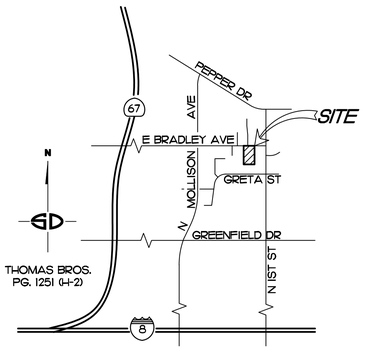
1. APPROVAL OF THIS GRADING PLAN DOES NOT CONSTITUTE APPROVAL OF VERTICAL OR HORIZONTAL ALIGNMENT OF ANY PRIVATE ROAD SHOWN HEREON FOR COUNTY ROAD PURPOSES.
2. FINAL APPROVAL OF THESE GRADING PLANS IS SUBJECT TO FINAL APPROVAL OF THE ASSOCIATED IMPROVEMENT PLANS WHERE APPLICABLE. FINAL CURB GRADE ELEVATIONS MAY REQUIRE CHANGES IN THESE PLANS.
3. IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE.
4. A CONSTRUCTION, EXCAVATION OR ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS WILL BE REQUIRED FOR ANY WORK IN THE COUNTY RIGHT-OF-WAY.
5. ALL SLOPES OVER THREE FEET IN HEIGHT WILL BE PLANTED IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS.
6. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES:

SAN DIEGO GAS AND ELECTRIC	1-800-422-4133
AT&T	1-800-422-4133
HELIX WATER DISTRICT	1-619-446-0585

7. A SOILS REPORT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
8. APPROVAL OF THESE PLANS BY THE DIRECTOR OF PUBLIC WORKS DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND VALID GRADING PERMIT HAS BEEN ISSUED.
9. THE DIRECTOR OF PUBLIC WORK'S APPROVAL OF THESE PLANS DOES NOT CONSTITUTE COUNTY BUILDING OFFICIAL APPROVAL OF ANY FOUNDATION FOR STRUCTURES TO BE PLACED ON THE AREA COVERED BY THESE PLANS. NO WAIVER OF THE GRADING ORDINANCE REQUIREMENTS CONCERNING MINIMUM COVER OVER EXPANSIVE SOIL IS MADE OR IMPLIED (SECTION 87.403 & 87.410). ANY SUCH WAIVER MUST BE OBTAINED FROM THE DIRECTOR OF PLANNING AND DEVELOPMENT SERVICES.
10. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH-MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED GRADING EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00AM AND 6:00PM EACH DAY, MONDAY THROUGH SATURDAY, AND NO EARTH-MOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SUNDAYS OR HOLIDAYS.
11. ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
12. NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE GRADING ORDINANCE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PUBLIC STREET, SIDEWALK, ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL 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 GRADING DESCRIBED ON THIS PLAN. THE COUNTY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION OF NON-DEDICATED IMPROVEMENTS WHICH DAMAGE ADJACENT PROPERTY.
13. SLOPE RATIOS:
    CUT - 1 1/2:1 FOR MINOR SLOPES (SLOPES < 15'), 2:1 FOR MAJOR SLOPES
    FILL - 2:1
    EXCAVATION: 7,500 C.Y. FILL: 7,500 C.Y. IMPORT/EXPORT: 0 C.Y.
    (NOTE: A SEPARATE VALID PERMIT MUST EXIST FOR EITHER WASTE OR IMPORT AREAS BEFORE PERMIT TO BE ISSUED).
14. SPECIAL CONDITION: IF ANY ARCHEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY, AND THE PERMITTEE WILL NOTIFY THE DIRECTOR OF PUBLIC WORKS OF THE DISCOVERY. GRADING OPERATIONS WILL NOT RECOMMENCE UNTIL THE PERMITTEE HAS RECEIVED WRITTEN AUTHORITY FROM THE DIRECTOR OF PUBLIC WORKS TO DO SO.
15. PERMANENT POST-CONSTRUCTION BMP DEVICES SHOWN ON PLAN SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.
16. THE APPLICANT IS RESPONSIBLE FOR THE ROAD MAINTENANCE (SWEEPING AS NECESSARY) AND REPAIRS OF ANY DAMAGE CAUSED BY THEM TO THE ON-SITE AND OFF-SITE COUNTY MAINTAINED OR PRIVATE ROADS THAT SERVE THE PROPERTY EITHER DURING CONSTRUCTION OR SUBSEQUENT OPERATIONS. THE APPLICANT WILL REPAIR THOSE PORTIONS OF THE ROUTE THAT WOULD BE DAMAGED BY THE HEAVY LOADS THAT LOADED TRUCKS PLACE ON THE ROUTE IDENTIFIED.
17. FINAL APPROVAL OF THIS GRADING PLAN IS SUBJECT TO FINAL APPROVAL OF THE ASSOCIATED IMPROVEMENT PLANS WHERE APPLICABLE. FINAL CURB GRADE ELEVATIONS MAY REQUIRE CHANGE TO THESE PLANS.
18. THE ENGINEER-OF-WORK SHALL COMPLY WITH ALL PROJECT APPLICABLE LAWS THAT INCLUDE, BUT ARE NOT LIMITED TO, HEALTH, SAFETY, AND ENVIRONMENTAL LAWS, ORDINANCES, AND REGULATIONS RELATING TO THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND U.S. FEDERAL GOVERNMENT. THE PROJECT IS SUBJECT TO ENFORCEMENT UNDER PERMITS FROM THE SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) AND THE COUNTY OF SAN DIEGO WATERSHED PROTECTION, STORMWATER MANAGEMENT, AND DISCHARGE CONTROL ORDINANCE NO. 10410, COUNTY OF SAN DIEGO HYDRAULIC DESIGN MANUAL, AND ALL OTHER APPLICABLE ORDINANCES AND STANDARDS FOR THE LIFE OF THIS PERMIT. THE PROJECT SITE SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STORMWATER REGULATIONS REFERENCED ABOVE AND ALL OTHER APPLICABLE ORDINANCES AND STANDARDS. THIS INCLUDES COMPLIANCE WITH THE APPROVED STORM WATER QUALITY MANAGEMENT PLAN (SQWMP), ALL REQUIREMENTS FOR LOW IMPACT DEVELOPMENT (LID), HYDROMODIFICATION, DETENTION FACILITIES, MATERIALS AND WASTES CONTROL, EROSION CONTROL, AND SEDIMENT CONTROL ON THE PROJECT SITE.
19. THE ISSUANCE OF THIS PERMIT/APPROVAL BY THE COUNTY OF SAN DIEGO DOES NOT AUTHORIZE THE APPLICANT FOR THE PERMIT/APPROVAL TO VIOLATE ANY FEDERAL, STATE, OR COUNTY LAWS, ORDINANCES, REGULATIONS, OR POLICIES INCLUDING, BUT NOT LIMITED TO THE FEDERAL ENDANGERED SPECIES ACT AND CLEAN WATER ACT. GRADING AND/OR FURTHER DEVELOPMENT ARE PROHIBITED WITHIN THE AREAS DESIGNATED "LIMITS OF JURISDICTIONAL HABITAT" UNTIL FEDERAL PERMITS AND STATE PERMITS (IF ANY) HAVE BEEN ACQUIRED.



KEY MAP
SCALE: 1" =80'



VICINITY MAP
NO SCALE

GEOTECHNICAL NOTES

1. GEOTECHNICAL ENGINEER OF RECORD SHALL TEST AND APPROVE ALL FILL MATERIAL, PRIOR TO PLACEMENT, TO VERIFY SOIL PARAMETERS, INCLUDING EXPANSIVE INDEX, AND ENSURE THAT THE FILL MATERIAL IS ADEQUATE TO SUPPORT IMPROVEMENTS. TEST RESULTS AND CERTIFICATION LETTER STATING THAT SOIL HAS BEEN TESTED AND IS ADEQUATE TO SUPPORT THE PROPOSED IMPROVEMENTS SHALL BE PROVIDED TO THE COUNTY INSPECTOR.
2. PURSUANT TO COUNTY GRADING ORDINANCE SECTION 87.420 THE GEOTECHNICAL ENGINEER OF RECORD AND THE CIVIL ENGINEER OF RECORD SHALL SUPERVISE GRADING OPERATIONS AND SHALL COMPLY WITH THE REQUIREMENTS OF COUNTY OF SAN DIEGO GRADING ORDINANCE SECTIONS 87.421 TO 87.430.
3. IF CAPPING EXPANSIVE SOILS WITH ON-EXPANSIVE SOIL TO MITIGATE THE EXPANSIVE POTENTIAL IS USED, THE CAP SHOULD BE COMPACTED, NON-EXPANSIVE, SELECT SOIL PLACED FOR A MINIMUM THICKNESS 3' OVER THE EXPANSIVE SOIL AND FOR A MINIMUM DISTANCE OF 8' BEYOND THE EXTERIOR PERIMETER OF THE STRUCTURE. SPECIAL PRECAUTIONS SHOULD BE TAKEN TO ENSURE THAT THE NON-EXPANSIVE SOIL REMAINS UNCONTAMINATED AND THE MINIMUM THICKNESS AND DIMENSIONS AROUND THE STRUCTURE ARE MAINTAINED. THE EXPANSIVE SOILS UNDERLYING THE CAP OF NON-EXPANSIVE CAP SHOULD BE PRE-SATURATED TO A DEPTH OF 3' TO OBTAIN A DEGREE SATURATION EXCEEDING 90% BEFORE ANY CONSTRUCTION SUPPORTED BY THE COMPACTED CAP.

THE NON-EXPANSIVE SOIL COMPRISING THE CAP SHOULD CONFORM TO THE FOLLOWING:

MINIMUM COMPACTION	90%
MAXIMUM EXPANSION INDEX	30
MINIMUM ANGLE OF INTERNAL FRICTION	30 DEG.

REFERENCE DRAWINGS

DESCRIPTION	DRAWING NUMBER	AGENCY
WATER MAIN	W.O. 7386	HELIX WATER DISTRICT
SEWER MAIN	A-192, NS-912	COUNTY OF SAN DIEGO SANITATION DISTRICT
ROAD IMPROVEMENTS	CG 2849	COUNTY OF SAN DIEGO

PROJECT INFORMATION

TOTAL NUMBER OF BUILDINGS = 10
TOTAL NUMBER OF DWELLING UNITS = 60

LEGAL DESCRIPTION

APN = 388-331-04, 05, & 06
THE EASTERLY 100 FEET OF THE WESTERLY 445 FEET OF THE WEST 6 ACRES: COMMENCING AT A POINT 11 CHAINS WEST AND 24 RODS NORTH OF THE SOUTH-EAST CORNER OF SECTION 35, TOWNSHIP 15 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE COUNTY OF SAN DIEGO, THENCE 80 RODS, THENCE NORTH 24 RODS, THENCE WEST 80 RODS, THENCE SOUTH 24 RODS TO THE POINT OF COMMENCEMENT, SAID PROPERTY BEING ALSO KNOWN AS LOT 12 OF SOMERMONT PLACE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 661.

TOGETHER WITH:
THE EASTERLY 100 FEET OF THE WESTERLY 545 FEET OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT A POINT 11 CHAINS WEST AND 24 RODS NORTH OF THE SOUTH-EAST CORNER OF SECTION 35, TOWNSHIP 15 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, THENCE 80 RODS, THENCE NORTH 24 RODS, THENCE WEST 80 RODS, THENCE SOUTH 24 RODS TO THE POINT OF COMMENCEMENT, SAID PROPERTY BEING ALSO KNOWN AS LOT 12 OF SOMERMONT PLACE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 661.

ALSO TOGETHER WITH:
ALL THE WESTERLY 6 ACRES, EXCEPTING THE WESTERLY 545 FEET THEREOF OF THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT A POINT 11 CHAINS WEST AND 24 RODS NORTH OF THE SOUTH-EAST CORNER OF SECTION 35, TOWNSHIP 15 SOUTH, RANGE 1 WEST, SAN BERNARDINO BASE AND MERIDIAN, THENCE 80 RODS, THENCE NORTH 24 RODS, THENCE WEST 80 RODS, THENCE SOUTH 24 RODS TO THE POINT OF COMMENCEMENT, SAID PROPERTY BEING ALSO KNOWN AS LOT 12 OF SOMERMONT PLACE, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 661.

OWNER'S CERTIFICATE

IT IS AGREED THAT FIELD CONDITIONS MAY REQUIRE CHANGES TO THESE PLANS.

IT IS FURTHER AGREED THAT THE OWNER (DEVELOPER) SHALL HAVE A REGISTERED CIVIL ENGINEER MAKE SUCH CHANGES, ALTERATIONS, OR ADDITIONS TO THESE PLANS WHICH THE DIRECTOR OF PLANNING & DEVELOPMENT SERVICES DETERMINES ARE NECESSARY AND DESIRABLE FOR THEN PROPER COMPLETION OF THE IMPROVEMENTS.

BY: _____ DATE: _____
PHILIP CHODUR, PRESIDENT

ASSESSOR'S PARCEL NO. 388-331-04, 05 & 06
1065 EAST BRADLEY, LLC.
7626 EL CAJON BLVD.
LA MESA, CA 91942
PHONE: (619) 823-3402

SOILS ENGINEER'S CERTIFICATE

I, CHIN C. CHEN, A REGISTERED GEOTECHNICAL ENGINEER OF THE STATE OF CALIFORNIA, PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOIL MECHANICS, HEREBY VERIFY THAT A SAMPLING AND RELATIVE DENSITY AND "R" VALUE TESTS OF THE SOIL TYPES PREVALENT WITHIN THE SITE WAS MADE BY ME OR UNDER MY DIRECTION BETWEEN .

THESE GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN COMPLIANCE WITH THE RECOMMENDATIONS OUTLINED IN OUR SOILS AND GEOTECHNICAL REPORT FOR THIS PROJECT. THE SOILS REPORT SHALL BE CONSIDERED PART OF THIS PLAN, AND ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH THE SAN DIEGO COUNTY GRADING ORDINANCE AND THE SPECIFICATIONS AND RECOMMENDATIONS OF SAID REPORT:

SITE INSPECTION: PROPOSED RESIDENTIAL BUILDING SITE, 1067 & 1069 E. BRADLEY AVENUE, EL CAJON AREA, COUNTY OF SAN DIEGO, DATED JUNE 27, 2019, PREPARED BY SOIL TESTERS, FILE NO. 1251-H2A-19

SOIL TESTERS
P.O. BOX 1195
LAKESIDE, CA 92040
(619) 443-0060

BY: _____ DATE: _____
CHIN C. CHEN R.C.E. 34442

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE 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 COUNTY OF SAN DIEGO ARE CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

SNIPES-DYE ASSOCIATES
8348 CENTER DRIVE, SUITE G
LA MESA, CA 91942-2910
PHONE: (619) 697-9234

REGISTERED PROFESSIONAL ENGINEER — WILLIAM A. SNIPES — No. 50477 — Exp. 06-30-25 — CIVIL — STATE OF CALIFORNIA

BY: _____ DATE: _____
WILLIAM A. SNIPES, R.C.E. 50477
EXPIRES 06-30-25

SHEET INDEX

EARTHWORK QUANTITIES

EXCAVATION: 7,500 C.Y.
EMBANKMENT: 7,500 C.Y.
IMPORT/EXPORT: 0 C.Y.
(FOR PERMIT PURPOSES ONLY)

WORK TO BE DONE

THE GRADING AND DRAINAGE WORK CONSIST OF THE FOLLOWING WORK TO BE DONE IN ACCORDANCE WITH THE PLANS, THE CURRENT SAN DIEGO COUNTY ENGINEERING DEPARTMENT STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR IMPROVEMENT OF SUBDIVISION STREETS, INCLUDING THE STANDARD REFERENCED DRAWINGS. STANDARD SPECIFICATIONS:

1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (CURRENT EDITION).
2. STANDARD SPECIAL PROVISIONS.
3. SAN DIEGO COUNTY GRADING ORDINANCE.
4. SAN DIEGO AREA REGIONAL STANDARD DRAWING (CURRENT EDITION).
5. HELIX WATER DISTRICT & WATER AGENCY STANDARDS (WAS).

LEGEND

IMPROVEMENT	STANDARD DWGS.	SYMBOL
EXISTING CONTOUR		490
EXISTING SPOT ELEVATION		x 489.6
EXISTING CONCRETE SURFACE		
EXISTING ASPHALT SURFACE		
EXISTING WATER LINE		W
EXISTING SEWER LINE		S
EXISTING OVER-HEAD UTILITIES		OH
EXISTING GAS LINE		G
PROPERTY BOUNDARY		
PROPOSED CONTOUR		490
PROPOSED SPOT ELEVATION		492.47 TC / 491.97
PROPOSED PVT. CONC. PAVEMENT		
PROPOSED PVT. 6" CONCRETE CURB	R.S.D. G-01	
PROPOSED PVT. 6" CONCRETE CURB/GUTTER	R.S.D. G-02, TYPE G	
PROPOSED PVT. RETAINING WALL	SEE SHT'S 24-27	
PROPOSED PVT. PVC SDR-35 STORM DRAIN (SIZE INDICATED ON PLANS)	R.S.D. D-60	SD
PROPOSED PVT. 1" PVC SCH-80 WATER	W.A.S. WP-02	W
PROPOSED PVT. 2" PVC SCH-80 WATER	W.A.S. WP-02	W
PROPOSED PVT. 6" PVC C900 CL-305 FIRE SERVICE	W.A.S. WP-02	FS
PROPOSED PUBLIC 8" PVC SDR-35 MAIN (SEE PDS2019-LDPIIP-60071)	R.S.D. SP-01, SP-02	
PROPOSED PVT. 4" PVC SDR-35 SWR LATERAL (SEE PDS2019-LDPIIP-60071)	W.A.S. SP-01, SP-02	S
PROPOSED ABANDONMENT OF EXIST. PVT. SEWER LATERALS (SEE PDS2019-LDPIIP-60071)	DETAIL 'B', SHT. 2	E S
PROPOSED PUBLIC SEWER MANHOLE	R.SD. SM-01, SM-03, SM-04, SM-05 & W.A.S. SM-09	
PROPOSED STORM DRAIN (PRIVATE) / SEWER CLEANOUT (PRIVATE)	DETAIL 1, SHT. 2	
PROPOSED REMOVAL OF EXIST. 8" SEWER MAIN		
PROPOSED PVT. 1 1/2" RPBPD (IRRIGATION)	W.A.S. WR-01	
PROPOSED PVT. 2" RPBPD (DOMESTIC WATER)	W.A.S. WR-01	
PROPOSED PVT. 6" RPBPD (FIRE)	W.A.S. WF-05	
PROPOSED PVT. 6" FIRE HYDRANT ASSEMBLY	W.A.S. WF-01	FS
PROPOSED PVT. THRUST BLOCK	W.A.S. WT-01	
PROPOSED PVT. 18" CATCH BASIN	DETAIL 4, SHT. 2	
PROPOSED PVT. 6" ATRIUM DRAIN	DETAIL 5, SHT. 2	
PROPOSED PVT. 8" PVC PERFORATED PIPE		
PROPOSED PVT. 4" TRENCH DRAIN	DETAIL 3, SHT. 2	
PROPOSED PVT. 3"-6" ROCKS (SIZE INDICATED ON PLANS)		
PROPOSED PVT. NO. 2 BACKING ROCK (10'X29'X1.1' THICK) RIP-RAP	R.S.D. D-40, TYPE 2	
PROPOSED PVT. BIOFILTRATION BASIN	SEE SECTION'S A-D SHT'S 12-13	
PROPOSED PVT. UNDERGROUND DETENTION	DETAILS SHT'S 15-23	
PROPOSED PVT. MODULAR WETLAND SYSTEM	DETAIL 1, SHT. 14	
PROPOSED PVT. TREE WELL (L.I.D.)		4
PROPOSED PVT. DRAINAGE DITCH	D-75, TYPE D	
DIRECTION OF DRAINAGE		

DISTURBED AREA CALC

PAD + SLOPES:	120,962 SF. (2.77 AC.)
DRIVEWAY:	7,313 SF. (0.17 AC.)
PRIMARY SEPTIC:	N/A
FIRE CLEARING:	N/A
TOTAL:	128,275 SF. (2.94 AC.)
1 AC, PROVIDE WDID# :	
SWPPP/CONSTRUCTION SITE RISK LEVEL:	2

DIGALERT 811

STORMWATER STRUCTURAL POLLUTANT CONTROL AND AND HYDRO-MODIFICATION CONTROL BMP'S

DESCRIPTION / TYPE	SHEET	BMP ID NO.	MAINTENANCE CATEGORY	MAINTENANCE AGREEMENT RECORDED DOCUMENT NO.
BIOFILTRATION BASIN PER BF-1	10, 12-13	BMP #1 & #2	ONE	
MODULAR WETLANDS PER BF-3 W/ W/ UNDERGROUND DETENTION	10, 14-21	BMP'S #3A & #3B	ONE	
TREE WELLS (PDS2019-LDPIIP-60071, SHTS. 9-12)	10	BMP'S #4 TO #9	--	

* BMP'S APPROVED AS PART OF STORMWATER QUALITY MANAGEMENT PLAN (SWQMP) DATE _____ ON FILE WITH DPW. ANY CHANGES TO THE ABOVE BMP'S WILL REQUIRE SWQMP REVISION AND PLAN CHANGE APPROVALS.

NOTE

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

California Council of Civil Engineers & Land Surveyors

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

California Council of Civil Engineers & Land Surveyors

SD COUNTY SANITATION DISTRICT

WINTER GARDENS SERVICE AREA

REVIEWD BY: _____

DATE: _____
"VALID TWO YEARS FROM DATE"

FIRE AGENCY

SAN MIGUEL FIRE PROTECTION DISTRICT

APPROVED BY: _____

DATE: _____

APPLICANT

1065 EAST BRADLEY, LLC.
ATTN: PHILIP CHODUR
7626 EL CAJON BLVD.
LA MESA, CA 91942
(619) 823-3402

ASSESSOR'S PARCEL NUMBER

388-331-04
388-331-05
388-331-06

SITE ADDRESS

1065 E. BRADLEY AVENUE
EL CAJON, 92021

HELIX WATER DISTRICT

RMB20032

ACCEPTED BY TIM ROSS _____ DATE
EXPIRES ONE YEAR AFTER SIGNATURE DATE

RECORD PLAN

BY: _____

DATE: _____

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

PERMITS

WDID NO. 9 C37
IMPROVEMENT PLAN NO. PDS2019-LDPIIP-60071
BUILDING PLAN NO. PDS2020-CWASPC-0000
CERTIFICATE OF COMPLIANCE NO. PDS2020-CC-20-011
CENTERLINE REVIEW NO. PDS2021-LDREFL-00469
LANDSCAPE PLAN NO. PDS2020-LP-20-088

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 1 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

GRADING TITLE / NOTES FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____
DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

1065 E. BRADLEY AVENUE - GRADING

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234
RMB20032

GRADING PLAN NOTES

NOTICE: IN ORDER TO AVOID IMPACTS TO NESTING MIGRATORY BIRDS AND RAPTORS, WHICH ARE A SENSITIVE BIOLOGICAL RESOURCE TO CEQA, THE MBTA AND FISH AND WILDLIFE CODE, BREEDING SEASON AVOIDANCE SHALL BE IMPLEMENTED ON ALL PLANS. THERE SHALL BE NO BRUSHING, CLEARING AND/OR GRADING SUCH THAT NONE WILL BE ALLOWED DURING THE BREEDING SEASON OF MIGRATORY BIRDS OR RAPTORS, BETWEEN JANUARY 15 AND AUGUST 31. THE DIRECTOR OF PDS MAY WAIVE THIS CONDITION, THROUGH WRITTEN CONCURRENCE FROM THE U.S. FISH AND WILDLIFE SERVICE AND THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, PROVIDED THAT NO NESTING OR BREEDING BIRDS ARE PRESENT WITHIN 300 FEET OF THE BRUSHING, CLEARING OR GRADING (500 FEET FROM RAPTORS) BASED ON A SURVEY CONDUCTED BY A COUNTY-APPROVED BIOLOGICAL CONSULTANT WITHIN SEVEN DAYS PRIOR TO THE PROPOSED START OF CLEARING/GRADING. IF NESTING BIRDS ARE PRESENT IN THE VICINITY, PRIOR TO GRANTING PERMISSION PDS AND THE WILDLIFE AGENCIES MARY REQUIRE AVOIDANCE MEASURES SUCH AS, BUT NOT LIMITED TO, STAKING AND POSTING AN AREA 300 FEET FROM THE NEST TO PROHIBIT ALL CLEARING, GRUBBING AND CONSTRUCTION WORK WITHIN THE PERIMETER UNTIL THE QUALIFIED BIOLOGIST DETERMINES THAT THE NESTS ARE NO LONGER OCCUPIED WITH WRITTEN NOTIFICATION TO THE APPROVAL OF THE DIRECTOR OF PDS.

DURING CONSTRUCTION (THE FOLLOWING ACTIONS SHALL OCCUR THROUGHOUT THE DURATION OF GRADING CONSTRUCTION).

PALEO-GR-1 PALEONTOLOGICAL MONITORING INTENT:
IN ORDER TO COMPLY WITH MITIGATION MONITORING AND REPORTING PROGRAM A PALEONTOLOGICAL MONITORING PROGRAM SHALL BE IMPLEMENTED. DESCRIPTION OF REQUIREMENT: THIS PROJECT HAS MARGINAL LEVELS OF SENSITIVE PAEONTOLOGICAL RESOURCES. ALL GRADING ACTIVITIES ARE SUBJECT TO THE COUNTY OF SAN DIEGO GRADING ORDINANCE SECTION 87.430, IF ANY SIGNIFICANT RESOURCES (FOSSILS) ARE ENCOUNTERED DURING GRADING ACTIVITIES.

A. THE GRADING CONTRACTOR IS RESPONSIBLE TO MONITOR FOR PALEONTOLOGICAL RESOURCES DURING ALL GRADING ACTIVITIES. IF ANY FOSSILS ARE FOUND GREATER THAN 12 INCHES IN ANY DIMENSION, STOP ALL GRADING ACTIVITIES AND CONTACT PDS BEFORE CONTINUING GRADING OPERATIONS.

B. IF ANY PALEONTOLOGICAL RESOURCES ARE DISCOVERED AND SALVAGED, THE MONITORING, RECOVERY, AND SUBSEQUENT WORK DETERMINED NECESSARY SHALL BE COMPLETED BY OR UNDER THE SUPERVISION OF A QUALIFIED PALEONTOLOGIST PURSUANT TO THE SAN DIEGO COUNTY GUIDELINES FOR DETERMINING SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES.

TIMING: THE FOLLOWING ACTIONS SHALL OCCUR THROUGHOUT THE DURATION OF THE GRADING CONSTRUCTION. MONITORING: THE (DPW, PDCI) SHALL MAKE SURE THAT THE GRDING CONTRACTOR IS ON-SITE PERFORMING MONITORING DUTIES OF THIS CONDITION. THE (DPW, PDCI) SHALL CONTACT PDS IF THE GRADING CONTRACTOR OR APPLICANT FAILS TO COMPPLY WITH THIS CONDITION.

ROUGH GRADING: (PRIOR TO ROUGH GRADING APPROVAL AND ISSUANCE OF ANY BUILDING PERMIT).

PALEO-GR-2 PALEONTOLOGICAL MONITORING INTENT:
IN ORDER TO COMPLY WITH THE ADOPTED MITIGATION MONITORING AND REPORTING PROGRAM AND THE COUNTY OF SAN DIEGO GUIDELINES FOR DETERMINING SIGNIFICANCE AND REPORT FORMAT AND CONTENT REQUIREMENTS FOR PALEONTOLOGICAL RESOURCES, A PALEONTOLOGICAL MONITORING PROGRAM SHALL BE IMPLEMENTED. DESCRIPTION OF REQUIREMENT: ONE OF THE FOLLOWING LETTERS SHALL BE PERFORMED UPON COMPLETION OF THE GRADING ACTIVITIES THAT REQUIRE MONITORING:

A. IF PALEONTOLOGICAL RESOURCES WERE DISCOVERED, SUBMIT A "NO FOSSILS FOUND" LETTER FROM THE GRADING CONTRACTOR TO PDS STATING THE MONITORING HAS BEEN COMPLETED AND THAT NO FOSSILS WERE DISCOVERED, AND INCLUDING THE NAMES AND SIGNATURES FROM THE FOSSILS MONITORS. THE LETTER SHALL BE IN THE FORMAT OF ATTACHMENT E OF THE COUNTY OF SAN DIEGO GUIDELINES FOR DETERMINING SIGNIFICANCE FOR PALENTOLOGICAL RESOURCES.

B. IF PALEONTOLOGICAL RESOURCES WERE ENCOUNTERED DURING GRADING, A LETTER SHALL BE PREPARED STATING THAT THE FIELD GRADING MONITORING ACTIVITIES HAVE BEEN COMPLETED, AND THAT RESOURCES HAVE BEEN ENCOUNTERED. THE LETTER SHALL DETAIL THE ANTICIPATED TIME SCHEDULE FOR COMPLETION OF THE CURATION PHASE OF THE MONITORING.

DOCUMENTATION: THE APPLICANT SHALL SUBMIT THE LETTER REPORT TO PDS FOR REVIEW AND APPROVAL. TIMING: UPON COMPLETION OF ALL GRADING ACTIVITIES, AND PRIOR TO ROUGH GRADING FINAL INSPECTION (GRADING ORDINANCE SEC 87.421.A.2), THE LETTER REPORT SHALL BE COMPLETED. MONITORING: PDS SHALL REVIEW THE FINAL NEGATIVE LETTER REPORT OR FIELD MONITORING MEMO FOR COMPLIANCE WITH THE PROJECT MMRP, AND INFORM (DPW, PDCI) THAT THE REQUIREMENT IS COMPLETED.

SPECIAL NOTES

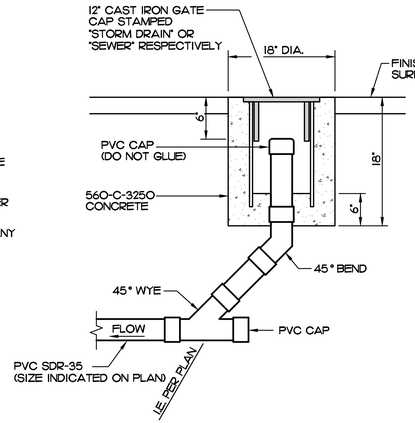
1. ONSITE DRAINAGE FACILITIES WILL BE MAINTAINED BY THE OWNER.
2. PROPERTY OWNER IS AWARE OF THE COUNTY WATER CONSERVATION IN LANDSCAPING ORDINANCE AND WILL PROCESS LANDSCAPE AND IRRIGATION PLANS IN ACCORDANCE WITH ORDINANCE NO. 10032 DURING BUILDING PERMIT PHASE.
3. THE PROPERTY OWNER IS AWARE OF THE COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH POLICIES AND WILL OBTAIN DEH APPROVAL DURING BUILDING PERMIT PHASE.

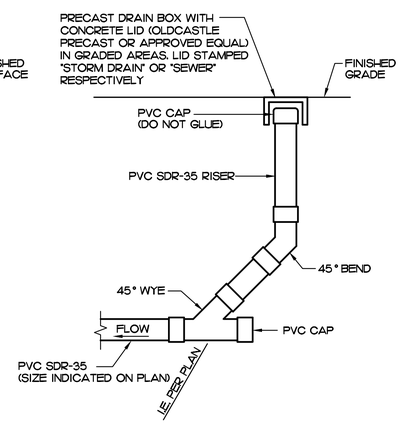
MONUMENTATION GENERAL NOTE

"THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL SURVEY CONTROL MONUMENTS, WHETHER SHOWN ON THESE PLANS OR NOT, WITHIN THE PROJECT AREA. ALL SURVEY MONUMENTS, WHETHER FOR HORIZONTAL OR VERTICAL CONTROL, THAT WILL OR COULD BE DISTURBED OR REMOVED BY THE CONTRACTOR, OR HIS EMPLOYEES, AGENTS, SUBCONTRACTORS, CONSULTANT OR LICENSEES, SHALL BE LOCATED PRIOR TO BEING DISTURBED OR REMOVED AND REPLACED OR RESET, IN ACCORDANCE WITH THE CALIFORNIA BUSINESS & PROFESSIONS CODE SECTION 8771(B), AT THE CONTRACTOR'S SOLE EXPENSE, UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA. IN ADDITION, A RECORD OF SURVEY OR CORNER RECORD, AS APPLICABLE, SHALL BE FILED AND/OR RECORDED, IN ACCORDANCE WITH THE PROVISIONS OF SAID CODE."

HELIX WATER DISTRICT NOTES

1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT HELIX WATER DISTRICT 48 HOURS PRIOR TO COMMENCING WORK AT (619) 596-3860 AND UNDERGROUND SERVICE ALERT FOR LOCATION OF EXISTING WATER FACILITIES AT 1-800-422-4133.
2. CONTRACTOR TO PROTECT ALL EXISTING HELIX WATER DISTRICT FACILITIES AND SHALL BE FINANCIALLY RESPONSIBLE FOR ANY DAMAGE TO HELIX WATER DISTRICT FACILITIES AS A RESULT OF HIS/HER OPERATION. HELIX WATER DISTRICT SHALL BE NOTIFIED IMMEDIATELY TO REPAIR ANY DAMAGE. CONTRACTOR TO PROVIDE CONTINUOUS WATER SERVICE TO ALL WATER ACCOUNTS SHOWN OR NOT SHOWN ON THESE PLANS DURING ALL PHASES OF CONSTRUCTION.
3. APPROVAL/REVIEW OF PLANS BY HELIX WATER DISTRICT DOES NOT CONSTITUTE RESPONSIBILITY FOR ACCURACY OF INFORMATION NOR LOCATIONS OF ANY EXISTING FACILITIES.
4. DEVELOPER SHALL BE RESPONSIBLE FOR THE COST OF RELOCATING ANY WATER FACILITIES THAT FALL WITHIN ANY PROPOSED FACILITIES OR IMPROVEMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OR ADJUSTMENT OF ANY NEW OR EXISTING WATER SERVICE APPURTENANCES, MANHOLES, GATE VALVE COVERS, OR METER BOXES TO NEW FINISH GRADE.
6. EXISTING WATER SERVICES SERVING THE PROPERTY THAT WILL NOT BE USED SHALL BE ABANDONED BY THE DISTRICT AT THE OWNER'S EXPENSE.
7. ALL UNDERGROUND UTILITIES AND LATERALS SHALL BE INSTALLED BEFORE CONSTRUCTION OF CURBS, CONCRETE CROSS GUTTERS, SIDEWALK OR SURFACING OF STREETS.
8. DEVELOPER AGREES THAT IF THEY, THEIR EMPLOYEES, AGENTS, OR ANY INDEPENDENT CONTRACTORS OR SUBCONTRACTORS SHOULD USE WATER OTHER THAN THROUGH AN AUTHORIZED WATER METER, DEVELOPER SHALL PAY A CHARGE, DETERMINED BY HELIX WATER DISTRICT, PER OCCURRENCE FOR SAID USE. SAID PAYMENT MAY BE DEDUCTED FROM ANY DEPOSIT DEVELOPER HAS WITH HELIX WATER DISTRICT.
9. NO PERSON, OTHER THAN AN EMPLOYEE OR AGENT OF THE HELIX WATER DISTRICT, SHALL HAVE A RIGHT TO OPERATE ANY PART OF A HELIX WATER DISTRICT DISTRIBUTION SYSTEM AND FIRE HYDRANTS. ANY PERSON WHO TAMPERS OR INTERFERES WITH ANY PART OR COMPONENT OF SAID SYSTEM, OR CAUSES OR PERMITS ANY ACT OF TAMPERING OR INTERFERING WITH THE SYSTEM, SHALL BE LIABLE FOR ANY INJURY OR DAMAGE CAUSED THEREBY OR RESULTING THERE FROM. A CHARGE, DETERMINED BY HELIX WATER DISTRICT, PER OCCURRENCE WILL BE IMPOSED ON ANY PERSON OR COMPANY WHO OPERATES ANY PART OF THE HELIX WATER DISTRICT WATER SYSTEM WITHOUT PROPER AUTHORIZATION.
10. FOR WORK OVER EXISTING WATER FACILITIES, HEAVY EQUIPMENT (ABOVE H20 LOADING) SHALL NOT BE USED WHEN COVER OVER THE WATER MAIN IS LESS THAN 36 INCHES THROUGH ALL PHASES OF CONSTRUCTION, INCLUDING THE REMOVAL, OVER EXCAVATION, AND/OR INSTALLATION OF PAVEMENT SECTIONS, WITHOUT THE WRITTEN APPROVAL OF HELIX WATER DISTRICT.
11. STOCKPILING OF SPOILS OR ANY MATERIALS IS NOT ALLOWED WITHIN THE HELIX WATER DISTRICT EASEMENT.
12. ANY FINISHED SURFACE IMPROVEMENT OTHER THAN ASPHALT ABOVE THE PIPELINE OR UNDERGROUND FACILITIES, WILL REQUIRE AN ENCROACHMENT REMOVAL AGREEMENT. PERMEABLE FINISH-ED SURFACE IMPROVEMENTS ARE PROHIBITED WITH-IN HELIX WATER DISTRICT WATER MAIN EASEMENT.
13. TRENCH REPAIR IS TO BE BY HELIX WATER DISTRICT TRENCH DETAIL OR THE CITY OR COUNTY TRENCH REPAIR DETAIL, WHICHEVER IS MORE STRINGENT.
14. FOR ALL WATER REQUIREMENTS SEE THE WATER IMPROVEMENT PLANS, HWD RMB20032.



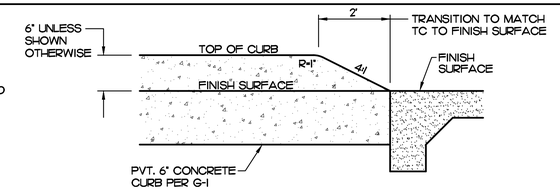


NOTES
1. ALL DRAIN GRATES AND STRUCTURE LIDS TO BE SECURED WITH TAMPER PROOF FASTENERS.
2. ALL PVC PIPE SHALL BE SAME SIZE.

PAVEMENT AREA GRADED AREA

STORM DRAIN/SEWER CLEANOUT (PRIVATE)

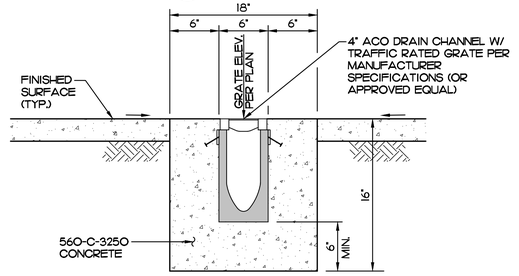
1 DETAIL - NO SCALE



NOTE: CURB END DETAIL TO BE UTILIZED WHERE THE CURB ENDS INTO A DRIVEWAY.

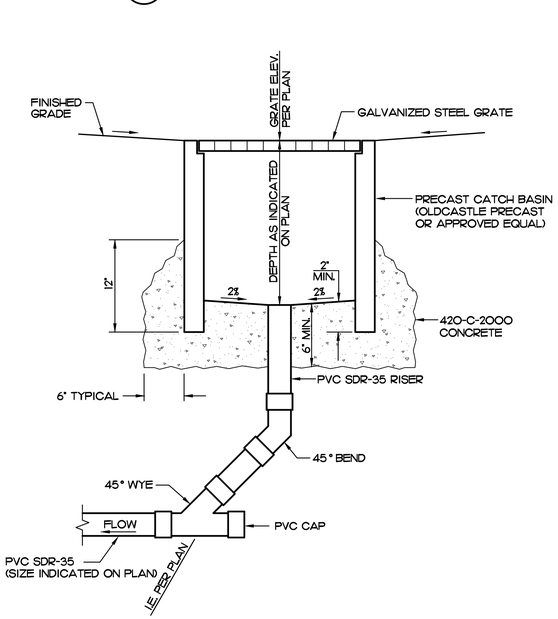
TOP OF CURB TRANSITION (PVT.)

2 DETAIL - NO SCALE

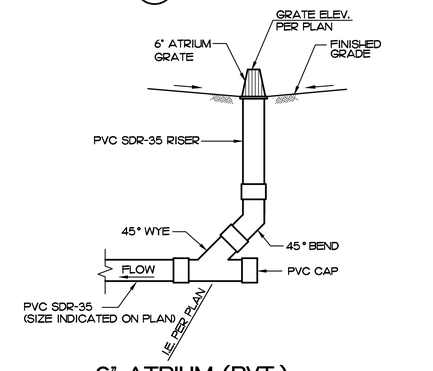


4" TRENCH DRAIN (PRIVATE)

3 DETAIL - NO SCALE

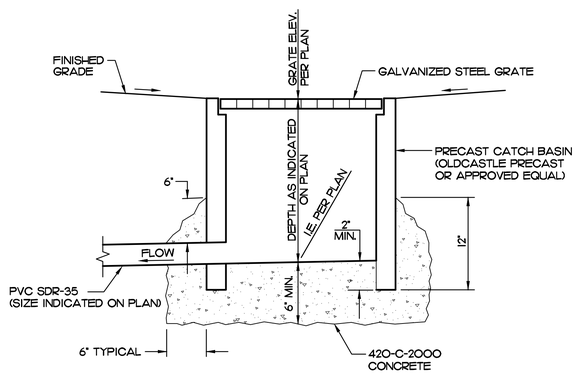


18" DEEP CATCH BASIN (PVT.)



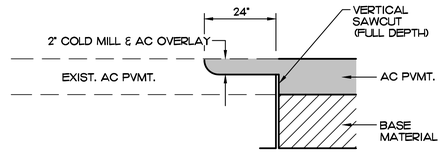
6" ATRIUM (PVT.)

5 DETAIL - NO SCALE



18" SHALLOW CATCH BASIN (PVT.)

4 DETAIL - NO SCALE



AC PAVEMENT MATCH WITH GRIND AND OVERLAY

6 DETAIL - NO SCALE

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK
DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

RECORD PLAN
BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	SHEETS
2		27

NOTES / DETAILS FOR:
BRADLEY APARTMENT COMPLEX
CALIFORNIA COORDINATE INDEX 238-1785

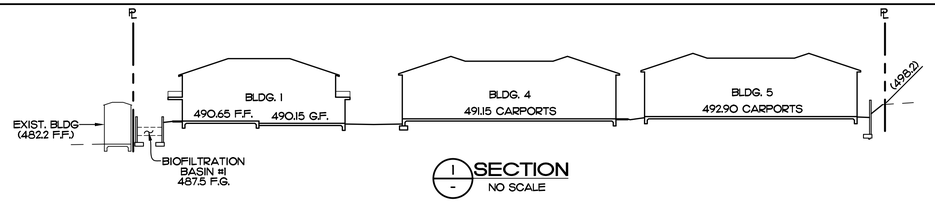
APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032



1 SECTION
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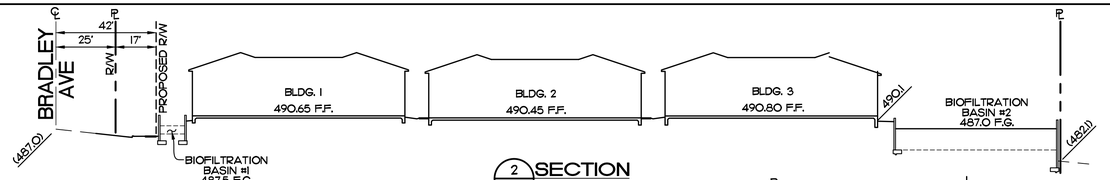

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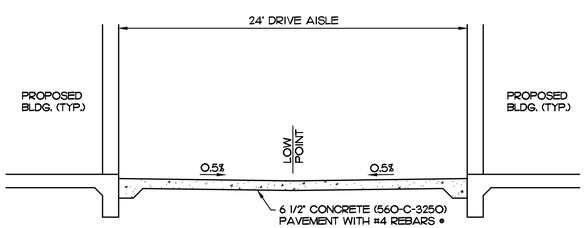

AA TYPICAL SECTION
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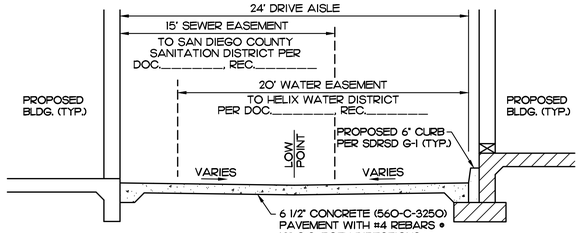

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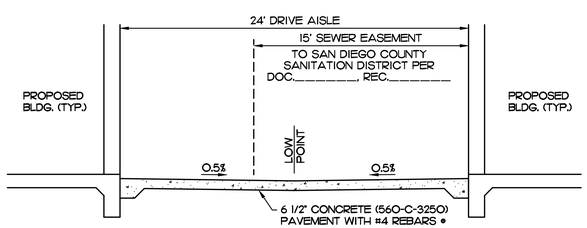

CC TYPICAL SECTION
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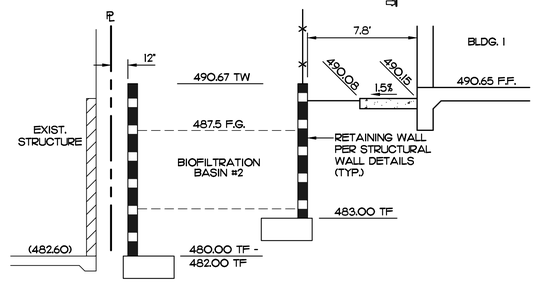

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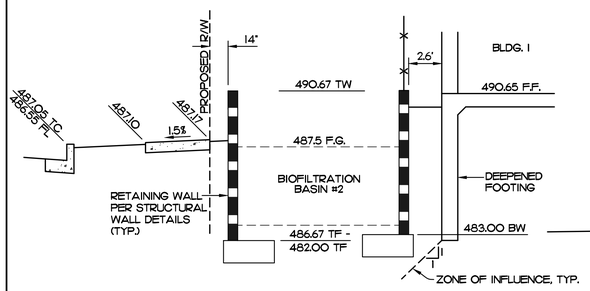

EE TYPICAL SECTION
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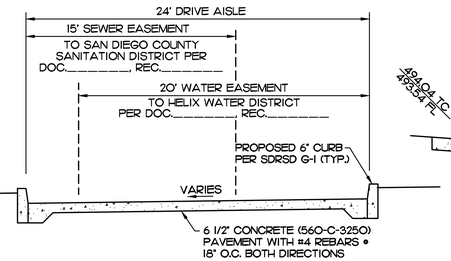

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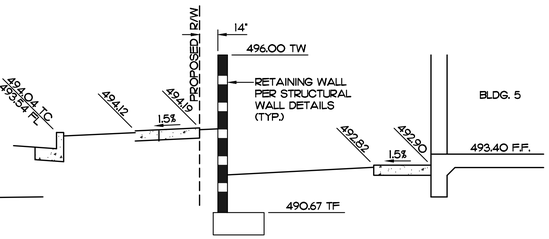

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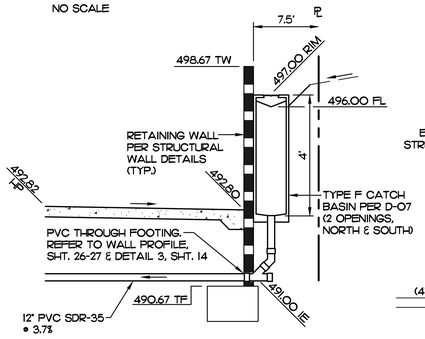

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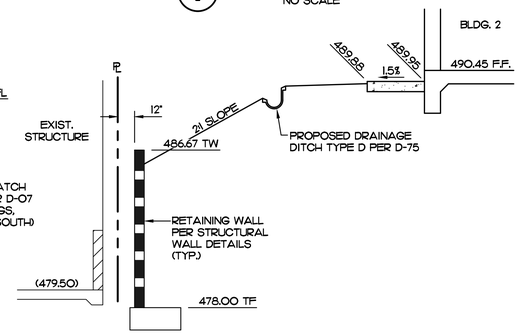

II TYPICAL SECTION
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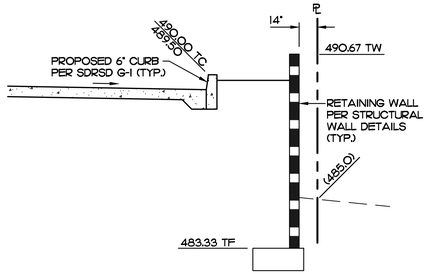

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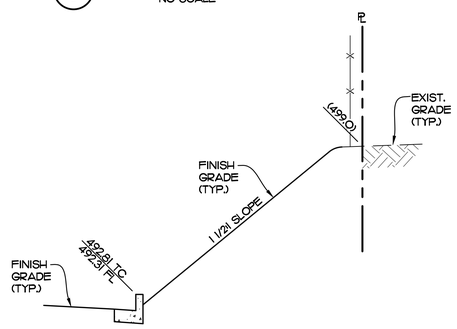

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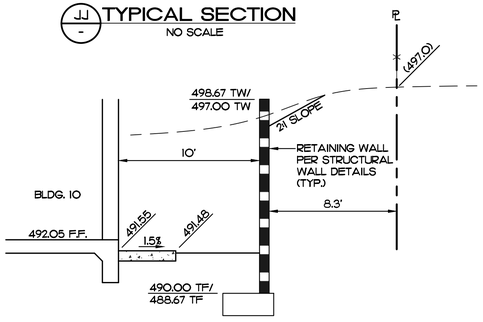

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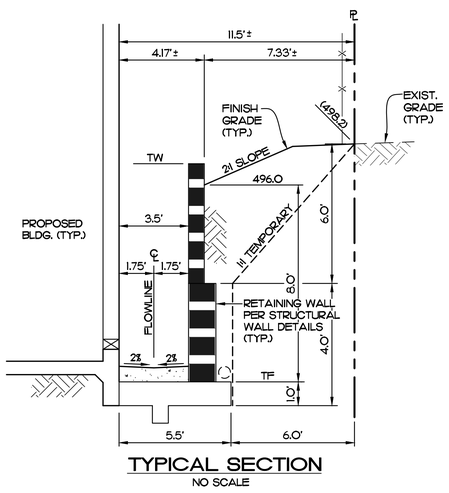

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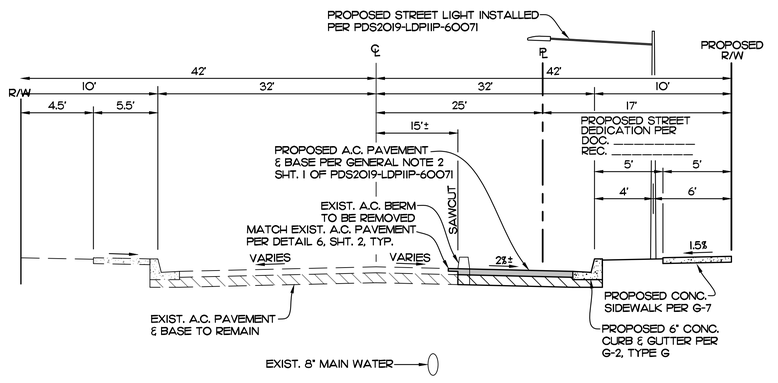


TYPICAL SECTION - BRADLEY AVENUE
NO SCALE

RECORD PLAN

BY:_____ DATE:_____

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS
3		

SECTIONS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY:_____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

BRADLEY AVENUE

FOR WORK WITHIN COUNTY RIGHT-OF-WAY, SEE IMPROVEMENT PERMIT NO. PDS2019-LDPIIP-60071 AND DPW2022-WWSWCP-00074

EXIST. 8" SEWER MAIN PER AS-BUILT A-192 TO BE ABANDONED, SEE IMPROVEMENT PLAN PERMIT NO. PDS2019-LDPIIP-60071

PROPOSED 8" SEWER MAIN EXTENSION, SEE IMPROVEMENT PLAN PERMIT NO. PDS2019-LDPIIP-60071

EXIST. CATV EASEMENT PER DOC. 74-022313, REC. 01-28-1974

N89°29'15"W 315.17'

CONFLUENCE
Q_{100} = 3.79 CFS
V_{100} = 3.32 FPS

CURB OUTLET
Q_{100} = 0.61 CFS
V_{100} = 2.80 FPS

24' WIDE OPENING 290.02 FL

17' RIGHT-OF-WAY DEDICATION PER DOC. _____, REC. _____

PROPOSED R/W

SEE WALL PROFILE D ON SHEET 22

BIOFILTRATION BMP # 2
487.5 FG.
(1,576 SF.)

BLDG. 1
N.A.P
490.65 F.F.
490.15 PAD
490.15 CARPORTS
489.65 PAD

BLDG. 4
N.A.P
491.65 F.F.
491.15 PAD
491.15 CARPORTS
490.65 PAD

BLDG. 5
N.A.P
493.40 F.F.
492.90 PAD
492.90 CARPORTS
492.40 PAD

8" PVC WATER MAIN PER LWD RMB20032

EXIST. HOUSE

EXIST. BUILDING TO REMAIN (TYP.) APN 388-331-03

SEE WALL PROFILE A ON SHEET 21

SEE WALL PROFILE C ON SHEET 22

EXIST. 8" SEWER MAIN PER AS-BUILT A-192 TO BE REMOVED

LIMIT OF GRADING (TYP.)

APN 388-331-07

MATCHLINE, SEE SHEET 5

KEY NOTES

PVT. IMPROVEMENTS

⟨1⟩ PVT. 6" CURB PER SDRSD G-1 (TYP.).

⟨2⟩ PVT. 6" CURB/GUTTER TYPE G PER SDRSD G-2 (TYP.).

⟨3⟩ 6.5" CONCRETE (560-C-3550) PAVEMENT W/ #4 REBARS @ 18" O.C., BOTH DIRECTIONS.

⟨5⟩ RETAINING WALL PLAN/PROFILE PER SHT'S 24-27.

⟨8⟩ PVT. TOP OF CURB TRANSITION PER DETAIL 2, SHT. 2.

⟨11⟩ ALL PROPOSED VEGETATION TO BE CONSTRUCTED/INSTALLED WITHIN BIOFILTRATION BASIN AND TREE WELLS SHALL BE CONFORMANCE WITH APPROVED LANDSCAPE AND IRRIGATION PLAN NO. PDS2020-LP-20-088, AND SHALL BE INCLUDED IN PROJECT SWQMP.

PVT. STORM DRAIN

[1] PVT. STORM DRAIN CLEANOUT PER DETAIL 1 ON SHT. 2.

[2] PVT. DRAINAGE DITCH TYPE D PER SDRSD D-75 (TYP.).

[4] PVT. 4" TRENCH DRAIN PER DETAIL 3, SHT. 2.

[7] PVT. 8" PVC SDR-35 PER SDRSD D-60.

[8] PVT. 8" PVC SDR-35 PERFORATED PIPE.

[12] PVT. 3'-6" ROCKS (3'X3'X0.7' THICK).

[13] PVT. 3'-6" ROCKS (3'X10'X0.7' THICK).

[14] PVT. CATCH BASIN TYPE F PER SDRSD D-07 (2 OPENINGS, NORTH & SOUTH).

[15] PVT. 12" PVC SDR-35 PER SDRSD D-60.

[19] MARK ALL INLETS WITH THE WORDS "NO DUMPING-DRAINS TO WATERWAYS" OR SIMILAR. SEE STENCIL TEMPLATE ON SHT. 10.

[22] PVT. CATCH BASIN TYPE G-1 PER SDRSD D-08 W/ 0.5" LOWFLOW ORIFICE.

[23] 6" SLEEVE W/ BACK WATER CHECK VALVE (CCV 2-HG SOLUTIONS) PER DETAIL 2, SHT. 14.

[24] STORM DRAIN PIPE THRU STEM/ FOOTING PER DETAIL 3, SHT. 14.

PUBLIC IMPROVEMENTS

⟨12⟩ EXIST. SEWER LATERAL TO BE ABANDONED PER PDS2019-LDPIIP-60071.

EASEMENTS

⟨1⟩ EXISTING COUNTY OF SAN DIEGO SEWER EASEMENT REC. OCTOBER 6, 1966 PER DOC. NO. 161743, O.R. TO BE QUITCLAIMED

⟨3⟩ 20' WATER EASEMENT TO HELIX WATER DISTRICT PER DOC. _____, REC. _____

⟨4⟩ 15' SEWER EASEMENT TO SAN DIEGO COUNTY SANITATION DISTRICT PER DOC. _____, REC. _____

SEE SHEET 7 FOR PVT. UTILITY INFORMATION

WALL ELEVATIONS ARE FOR INFORMATIONAL PURPOSES ONLY. SEE WALL PLAN/PROFILE SHT'S. 24-27.

N

SCALE: 1"=10'

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

RECORD PLAN

BY:_____ DATE:_____

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 4 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

GRADING PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

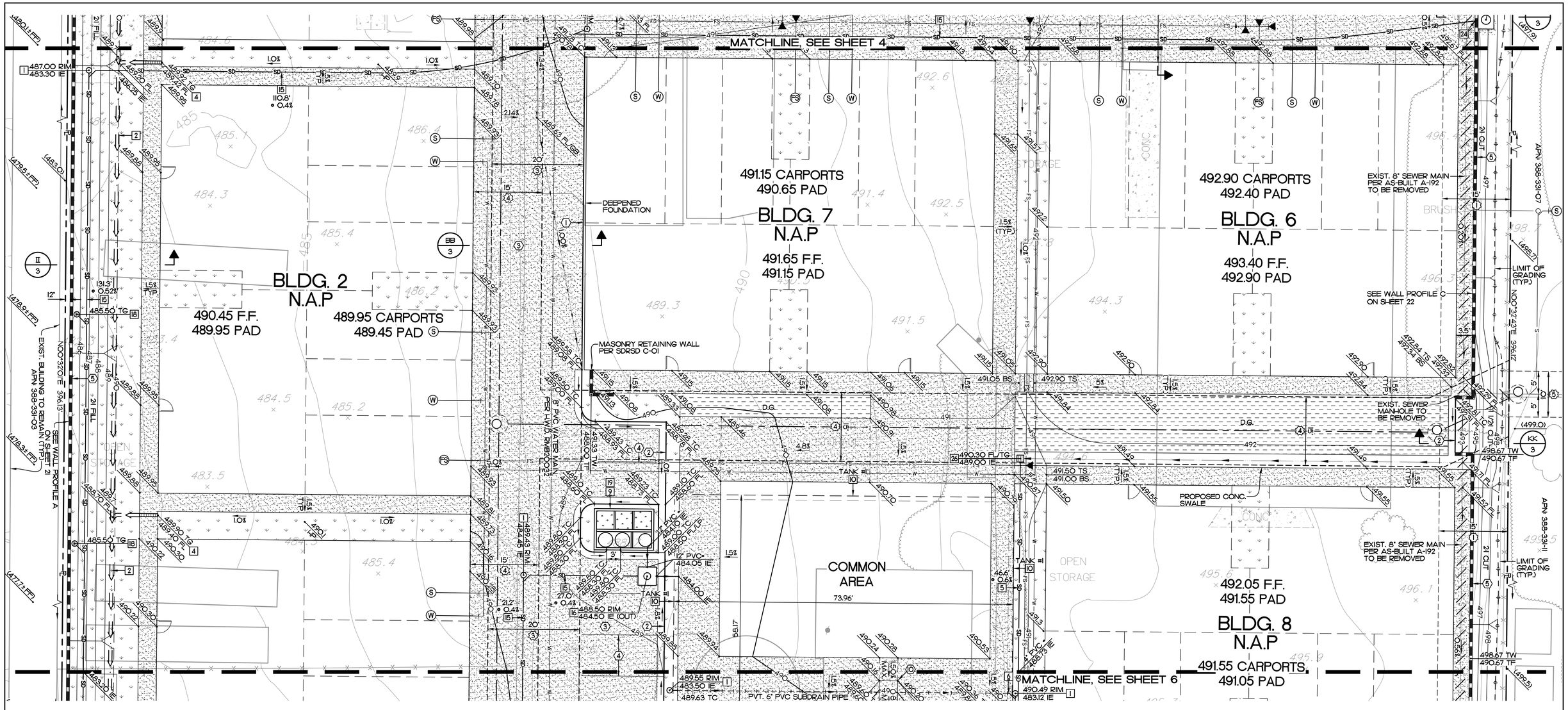
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234



KEY NOTES

PVT. IMPROVEMENTS

(1) PVT. 6" CURB PER SDRSD G-1 (TYP.).

(2) PVT. 6" CURB/GUTTER TYPE G PER SDRSD G-2 (TYP.).

(3) 6.5" CONCRETE (560-C-3550) PAVEMENT W/ #4 REBARS @ 18" O.C., BOTH DIRECTIONS.

(4) STRIPING PER BUILDING PLANS.

(5) RETAINING WALL PLAN/PROFILE PER SHT'S 24-27.

(10) PVT. CURB RAMP PER SDRSD G-30, G-31 (TYPE D) & G-32A.

PVT. STORM DRAIN

[1] PVT. STORM DRAIN CLEANOUT PER DETAIL 1 ON SHT. 2.

[2] PVT. DRAINAGE DITCH TYPE D PER SDRSD D-75 (TYP.).

[4] PVT. 4" TRENCH DRAIN PER DETAIL 3, SHT. 2.

[5] PVT. 4" PVC SDR-35 PER SDRSD D-60.

[6] PVT. 6" PVC SDR-35 PER SDRSD D-60.

[9] PVT. MODULAR WETLANDS SYSTEM PER DETAILS ON SHT. 14.

[10] PVT. BRENTWOOD STORMTANK #1 SYSTEM (LAYFIELD) PER DETAILS ON SHT'S 15-23.

[15] PVT. 12" PVC SDR-35 PER SDRSD D-60.

[16] STORM DRAIN CLEANOUT TYPE A PER SDRSD D-09. SEE DETAIL 4, SHT. 14.

[18] PVT. 6" ATRIUM DRAIN PER DETAIL 5, SHT. 2.

[19] MARK ALL INLETS WITH THE WORDS "NO DUMPING-DRAINS TO WATERWAYS" OR SIMILAR. SEE STENCIL TEMPLATE ON SHT. 10.

[24] STORM DRAIN PIPE THRU STEM/ FOOTING PER DETAIL 3, SHT. 14.

[26] PVT. 18" CATCH BASIN PER DETAIL 4, SHT. 2

EASEMENTS

(1) EXISTING COUNTY OF SAN DIEGO SEWER EASEMENT REC. OCTOBER 6, 1966 PER DOC. NO. 161743, O.R. TO BE QUITCLAIMED

(3) 20' WATER EASEMENT TO HELIX WATER DISTRICT PER DOC. _____, REC. _____

(4) 15' SEWER EASEMENT TO SAN DIEGO COUNTY SANITATION DISTRICT PER DOC. _____, REC. _____

(5) EXISTING 10' SEWER EASEMENT REC. _____ PER DOC. NO. _____, O.R.

SEE SHEET 7 FOR PVT. UTILITY INFORMATION

WALL ELEVATIONS ARE FOR INFORMATIONAL PURPOSES ONLY. SEE WALL PLAN/PROFILE SHT'S. 24-27.

PERMANENT POST-CONSTRUCTION BMP DEVICES (BIOFILTRATION BASIN, MODULAR WETLAND SYSTEM AND STORMTANK SYSTEM) SHOWN ON THIS PLAN SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE COUNTY OF SAN DIEGO.

N

10 5 0 10 20 30

SCALE: 1"=10'

ENGINEER OF WORK

Snipes-Dye associates

civil engineers and land surveyors

8348 CENTER DRIVE, STE. G, LA MESA, CA 91942

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WILLIAM A. SNIPES R.C.E. 50477

EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	SHEETS
5		27

GRADING PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK

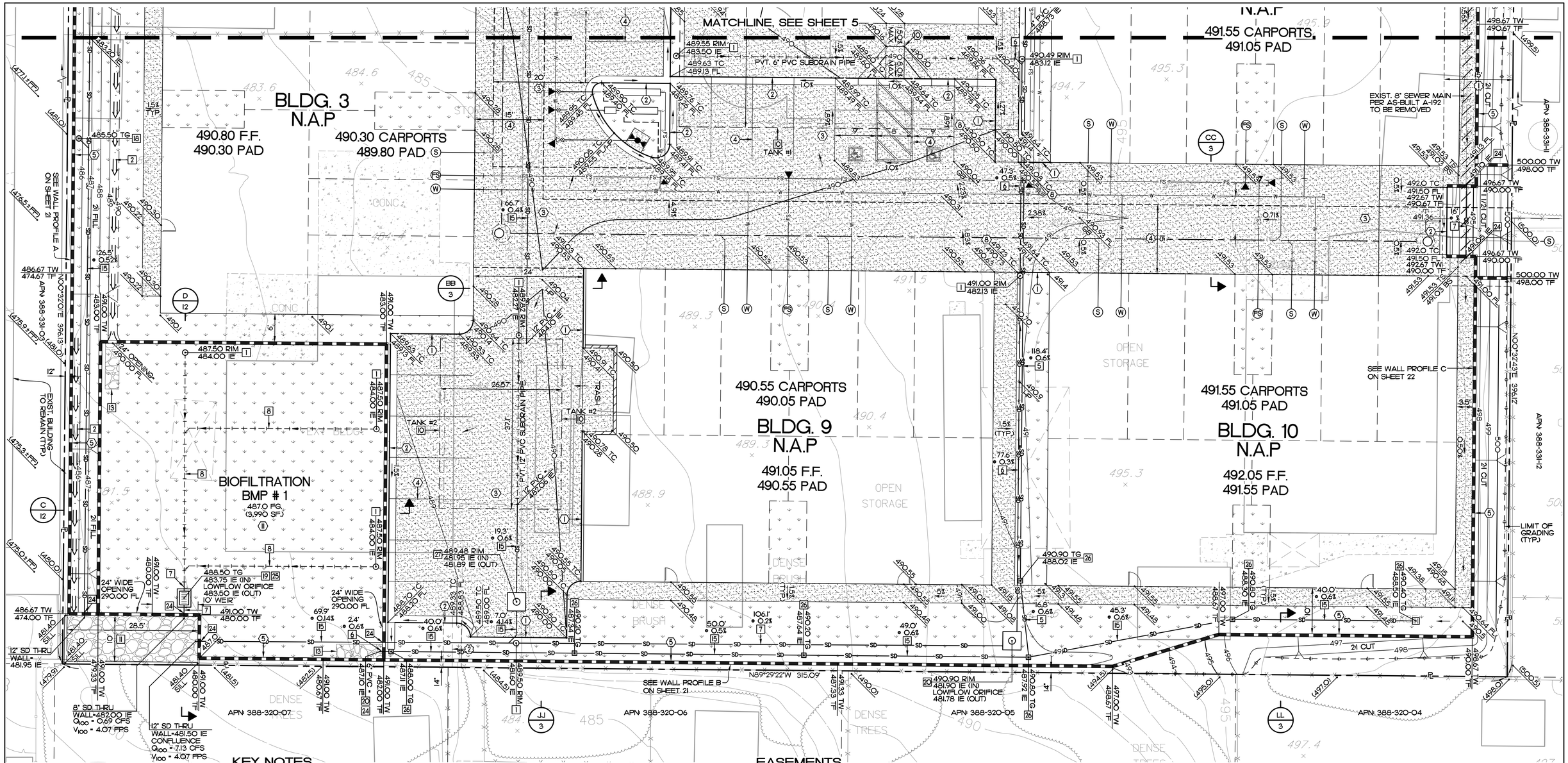
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES

PHONE NO. (619) 697-9234



KEY NOTES

PVT. IMPROVEMENTS

1. PVT. 6" CURB PER SDRSD G-1 (TYP.).
2. PVT. 6" CURB/GUTTER TYPE G PER SDRSD G-2 (TYP.).
3. 6.5" CONCRETE (560-C-3550) PAVEMENT W/ #4 REBARS @ 18" O.C., BOTH DIRECTIONS.
4. STRIPING PER BUILDING PLANS.
5. RETAINING WALL PLAN/PROFILE PER SHT'S 24-27.
6. PVT. TOP OF CURB TRANSITION PER DETAIL 2, SHT. 2.
10. PVT. CURB RAMP PER SDRSD G-30, G-31 (TYPE D) & G-32A.
11. ALL PROPOSED VEGETATION TO BE CONSTRUCTED/INSTALLED WITHIN BIOFILTRATION BASIN AND TREE WELLS SHALL BE CONFORMANCE WITH APPROVED LANDSCAPE AND IRRIGATION PLAN NO. PDS2020-LP-20-088, AND SHALL BE INCLUDED IN PROJECT SWQMP.

PVT. STORM DRAIN

1. PVT. STORM DRAIN CLEANOUT PER DETAIL 1 ON SHT. 2.
2. PVT. DRAINAGE DITCH TYPE D PER SDRSD D-75 (TYP.).
5. PVT. 4" PVC SDR-35 PER SDRSD D-60.
6. PVT. 6" PVC SDR-35 PER SDRSD D-60.
7. PVT. 8" PVC SDR-35 PER SDRSD D-60.
8. PVT. 8" PVC SDR-35 PERFORATED PIPE.
10. PVT. BRENTWOOD STORMTANK #1 & #2 SYSTEM (LAYFIELD) PER DETAILS ON SHT'S 15-23.
11. PVT. NO. 2 BACKING (10'X28.5'X1.1' THICK) ROCK RIP-RAP PER SDRSD D-40, TYPE 2.
13. PVT. 3'-6" ROCKS (3'X10'X0.7' THICK).
15. PVT. 12" PVC SDR-35 PER SDRSD D-60.
18. PVT. 6" ATRIUM DRAIN PER DETAIL 5, SHT. 2.
19. MARK ALL INLETS WITH THE WORDS "NO DUMPING-DRAINS TO WATERWAYS" OR SIMILAR. SEE STENCIL TEMPLATE ON SHT. 10.
20. STORM DRAIN CLEANOUT TYPE A PER SDRSD D-09 W/ 0.81' LOWFLOW ORIFICE.
24. STORM DRAIN PIPE THRU STEM/ FOOTING PER DETAIL 3, SHT. 14.
25. PVT. MODIFIED CATCH BASIN TYPE G-I W/ 2-OPENINGS PER SDRSD D-08.
26. PVT. 18" CATCH BASIN PER DETAIL 4, SHT. 2.
27. STORM DRAIN CLEANOUT TYPE A PER SDRSD D-09 W/ WEIR 1'X2' @ 481.93 ORIFICE. SEE DETAIL 5, SHT. 14.

EASEMENTS

1. EXISTING COUNTY OF SAN DIEGO SEWER EASEMENT REC. OCTOBER 6, 1966 PER DOC. NO. 161743, O.R. TO BE QUITCLAIMED
2. EXISTING SDG&E UTILITIES EASEMENT REC. SEPTEMBER 11, 1968 PER DOC. NO. 1968-156689, O.R. TO BE VACATED
4. 15' SEWER EASEMENT TO SAN DIEGO COUNTY SANITATION DISTRICT PER DOC. _____, REC. _____

N

SCALE: 1"=10'

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
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WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

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COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

RECORD PLAN

BY:_____ DATE:_____

PRIVATE CONTRACT

SHEET		SHEETS
6	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27

GRADING PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

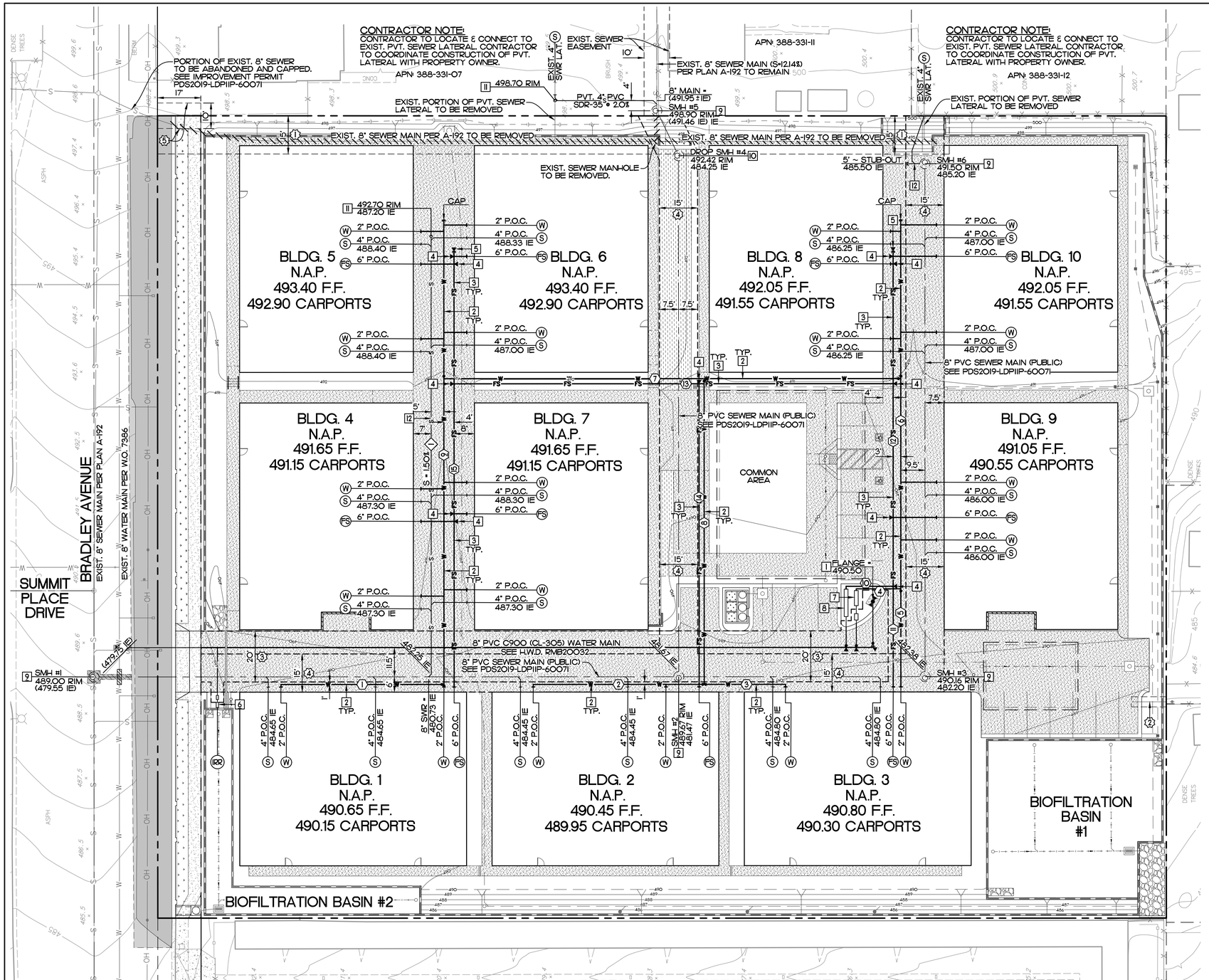
BY:_____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234



KEY NOTES

PVT. WATER / FIRE

1. FIRE HYDRANT ASSEMBLY PER WAS WF-01 & WF-04.
2. PVT. 2" PVC SCHEDULE 80 PER WAS WP-02.
3. PVT. 6" PVC C900 CL-305 FIRE SERVICE PER WAS WP-02.
4. THRUST BLOCK PER WAS WT-01.
5. END CAP & THRUST BLOCK PER WAS WT-01.
6. 1 1/2" RPBPD WATER SERVICE PER WR-01.
7. 2" RPBPD WATER SERVICE PER WR-01.
8. 6" RPBPD FIRE SERVICE PER WR-02.

PVT. SEWER

9. SEWER MANHOLE PER SDRSD SM-01.
10. SEWER DROP MANHOLE PER W.A.S. SM-09.
11. PVT. SEWER CLEANOUT PER DETAIL 1 ON SHT. 2.
12. PVT. 6" PVC SDR-35 SEWER PER SDRSD SP-02, UNLESS OTHERWISE NOTED.

PRIVATE SEWER MAIN NOTE:
PROPOSED PVT. SEWER COLLECTION FACILITIES AND LATERALS SHALL BE REVIEWED, PERMITTED AND INSPECTED BY THE PLANNING & DEVELOPMENT SERVICES (PDS) BUILDING PERMIT DIVISION.

PDS BUILDING NO. PDS2020-CMASP-0000

EASEMENTS

1. EXISTING COUNTY OF SAN DIEGO SEWER EASEMENT REC. OCTOBER 6, 1966 PER DOC. NO. 161743, O.R. TO BE QUITCLAIMED
2. EXISTING SDG&E UTILITIES EASEMENT REC. SEPTEMBER 11, 1968 PER DOC. NO. 1968-156689, O.R. (SDG&E EASEMENT TO BE VACATED)
3. 20' WATER EASEMENT TO HELIX WATER DISTRICT PER DOC. _____, REC. _____
4. 15' SEWER EASEMENT TO SAN DIEGO SANITATION DISTRICT PER DOC. _____, REC. _____
5. EXISTING CATV EASEMENT REC. JANUARY 28, 1974 PER DOC. NO. 74-022313, O.R.

FOR WORK WITHIN COUNTY RIGHT-OF-WAY, SEE IMPROVEMENT PERMIT NO. PDS2019-LDPIIP-60071

FOR PUBLIC SEWER MAIN, SEE IMPROVEMENT PERMIT NO. PDS2019-LDPIIP-60071 AND DPW2022-WWSWCP-00074

PVT. WATER /FIRE SERVICE DATA

◇	DELTA/BRG	RADIUS	LENGTH	REMARK
1	N 00°30'45"E	--	64.03'	PVT. 2" PVC SCH-80
2	N 00°30'45"E	--	67.16'	PVT. 2" PVC SCH-80
3	N 00°30'45"E	--	31.92'	PVT. 2" PVC SCH-80
4	N 00°30'45"E	--	17.50'	PVT. 2" PVC SCH-80
5	N 89°29'15"W	--	38.50'	PVT. 2" PVC SCH-80
6	N 89°29'15"W	--	144.95'	PVT. 2" PVC SCH-80
7	N 00°30'45"E	--	179.46'	PVT. 2" PVC SCH-80
8	N 89°29'15"W	--	120.08'	PVT. 2" PVC SCH-80
9	N 89°29'15"W	--	182.45'	PVT. 2" PVC SCH-80
10	N 00°30'45"E	--	18.50'	PVT. 6" PVC C900 CL-305
11	N 89°29'15"W	--	39.50'	PVT. 6" PVC C900 CL-305
12	N 89°29'15"W	--	131.63'	PVT. 6" PVC C900 CL-305
13	N 00°30'45"E	--	172.46'	PVT. 6" PVC C900 CL-305
14	N 89°29'15"W	--	119.08'	PVT. 6" PVC C900 CL-305
15	N 89°29'15"W	--	171.12'	PVT. 6" PVC C900 CL-305

PVT. SEWER DATA

◇	DELTA/BRG	RADIUS	LENGTH	REMARK
1	N 89°29'15"W	--	173.00'	PVT. 6" PVC SDR-35

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET		
7	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

UTILITY PLAN SHEET FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK: WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER OF WORK

Snipes-Dye associates
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COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

STORM WATER MANAGEMENT NOTES

1. DURING THE RAINY SEASON THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED BY THE PROPERTY OWNER IN THE EVENT OF A RAINSTORM. 125% SHALL BE RETAINED ON THE JOB SITE IN A MANNER THAT ALLOWS FULL DEPLOYMENT AND COMPLETE INSTALLATION IN 48 HOURS OR LESS ON A FORECAST RAIN.

2. NO AREA BEING DISTURBED SHALL EXCEED 50 ACRES AT ANY GIVEN TIME WITHOUT DEMONSTRATING TO THE SAN DIEGO COUNTY D.P.W. DIRECTOR'S SATISFACTION THAT ADEQUATE EROSION AND SEDIMENT CONTROL CAN BE MAINTAINED. ANY DISTURBED AREA THAT IS NOT ACTIVELY GRADED FOR 15 DAYS MUST BE FULLY PROTECTED FROM EROSION, UNTIL ADEQUATE LONG-TERM PROTECTIONS ARE INSTALLED, THE DISTURBED AREA SHALL BE INCLUDED WHEN CALCULATING THE ACTIVE DISTURBANCE AREA. ALL EROSION CONTROL MEASURES SHALL REMAIN INSTALLED MAINTAINED DURING ANY INACTIVE PERIOD.

3. THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORM WATER REGULATIONS AT ALL TIMES. THE B.M.P.'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE MAINTENANCE OF THE B.M.P.'S IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL AND MAINTAIN THE B.M.P.'S MAY RESULT IN ENFORCEMENT ACTION BY THE COUNTY OF SAN DIEGO OR OTHERS. IF INSTALLED B.M.P.'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.

4. A NOTICE OF INTENT (NOI) HAS BEEN, OR WILL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND THAT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN OR WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CASOOOOO2) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE NOI NUMBER ASSIGNED BY SWRCB FOR THIS PROJECT IS WDID NO._____. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW BY COUNTY.

EMERGENCY EROSION CONTROL MEASURES NOTES

1. ALL BUILDING PADS TO BE DIKED AND THE DIKES MAINTAINED TO PREVENT WATER FROM FLOWING FROM THE PAD UNTIL THE STREETS AND DRIVEWAYS ARE PAVED AND WATER CAN FLOW FROM THE PADS WITHOUT CAUSING EROSION, OR CONSTRUCT DRAINAGE FACILITIES TO THE SATISFACTION OF THE COUNTY DEPARTMENT OF PUBLIC WORKS THAT WILL ALLOW WATER TO DRAIN FROM THE PAD WITHOUT CAUSING EROSION.
2. TOPS OF ALL SLOPES TO BE DIKED OR TRENCHED TO PREVENT WATER FROM FLOWING OVER THE CREST OF THE SLOPES.
3. MANUFACTURED SLOPES AND PADS SHALL BE ROUNDED VERTICALLY AND HORIZONTALLY AS APPROPRIATE TO BLEND WITH THE SURROUNDING TOPOGRAPY.
4. AS SOON AS CUTS OR EMBANKMENTS ARE COMPLETED, BUT NOT LATER THAN OCTOBER 1, ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITH A HYDROMULCH MIXTURE OR AN EQUAL TREATMENT APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. BETWEEN OCTOBER 1, AND APRIL 15, APPROVED SLOPE PROTECTION MEASURES SHALL PROCEED IMMEDIATELY BEHIND THE EXPOSURE OF CUT SLOPES AND / OR THE CREATION OF EMBANKMENT SLOPES.
5. CATCH BASINS, DESILTING BASINS AND STORM DRAIN SYSTEMS SHALL BE INSTALLED TO THE SATISFACTION OF THE COUNTY DEPARTMENT OF PUBLIC WORKS.
6. GRAVEL BAG CHECK DAMS TO BE PLACED IN A MANNER APPROVED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS IN UNPAVED STREETS WITH GRADIENTS IN EXCESS OF 2% AND ON OR IN OTHER GRADED OR EXCAVATED AREAS AS REQUIRED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.
7. THE DEVELOPER TO MAINTAIN THE PLANTING AND EROSION CONTROL MEASURES DESCRIBED ABOVE UNTIL RELIEVED OF SAME BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. THE DEVELOPER TO REMOVE ALL SOIL INTERCEPTED BY THE GRAVEL BAGS, CATCH BASINS AND DESILTING BASINS AND KEEP THESE FACILITIES CLEAN AND FREE OF SILT AND SAND AS DIRECTED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS. THE DEVELOPER SHALL REPAIR ANY ERODED SLOPES AS DIRECTED BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.

BMP STENCIL PLACEMENT NOTES

A) ALL STORM DRAIN INLETS AND CATCH BASINS WITHIN THE PROJECT AREA SHALL HAVE A STENCIL OR TILE PLACED WITH PROHIBITIVE LANGUAGE (SUCH AS: "NO DUMPING-I LIVE IN SAN DIEGO RIVER") AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING.

B) SIGNS AND PROHIBITIVE LANGUAGE AND/OR GRAPHICAL ICONS, WHICH PROHIBIT ILLEGAL DUMPING, MUST BE POSTED AT PUBLIC ACCESS POINTS ALONG CHANNELS AND CREEKS WITHIN THE PROJECT AREA.

C) LEGIBILITY OF STENCILS, TILES AND SIGNS MUST BE MAINTAINED AND TILES MUST BE PLACED FLUSH WITH THE TOP OF CONCRETE TO REDUCE TRIPPING BY PEDESTRIANS.

BFM'S AND SFM'S NOTES

THE USE OF BFM'S IS SUBJECT TO THE FOLLOWING LIMITATIONS AND RESTRICTIONS.

1. APPLICATION RATES SHALL BE 3500 POUNDS PER ACRE MINIMUM FOR 2I OR SHALLOWER SLOPES AND 4000 POUNDS PER ACRE FOR SLOPES STEEPER THAN 2I.
2. BFM SHALL BE APPLIED AT LEAST 24 HOURS BEFORE OR AFTER RAINFALL.
3. THE SITE MUST BE PROTECTED WITH BROW DITCHES AND / OR DIVERSION BERMS AT THE TOP OF SLOPES TO DIVERT FLOW FROM THE FACE OF THE SLOPE.
4. BFM SHALL BE APPLIED TO PROVIDE 100% COVERAGE (I.E. APPLICATION FROM MULTIPLE ANGLES).
5. FOR PERMANENT EROSION CONTROL PURPOSES, BFM MUST BE INSTALLED CONJUNCTION WITH SEEDED EROSION CONTROL VEGETATION.
6. A LETTER FROM THE HYDROSEED CONTRACTOR CERTIFYING THAT THE BFM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED APPLICATION RATES AND COVERAGE REQUIREMENTS SHALL BE SUBMITTED TO THE COUNTY INSPECTOR FOR APPROVAL.

THE USE OF SFM'S IS SUBJECT TO THE FOLLOWING LIMITATIONS AND RESTRICTIONS.

1. SFM MAY BE USED FOR TEMPORARY EROSION CONTROL FOR DISTURBED AREAS WITH A SLOPE RATIO OF 1 VERTICAL TO 2 HORIZONTAL OR SHALLOWER, INCLUDING PAD AND SEPTIC FIELD AREAS.
2. THE SFM SHALL BE APPLIED AT LEAST 24 HOURS BEFORE OR AFTER RAINFALL AND SHALL BE APPLIED TO PROVIDE 100% COVERAGE (I.E. APPLIED FROM MULTIPLE DIRECTIONS AND ANGLES.
3. THE APPLICATION AREA MUST BE PROTECTED BY BROW DITCHES AND OR DIVERSION BERMS AT TOP OF SLOPES TO DIVERT FLOW FROM THE SURFACE OF THE PROTECTED SLOPE.
4. FOR PERMANENT EROSION CONTROL PURPOSES, SFM MUST BE INSTALLED IN CONJUNCTION WITH SEEDED EROSION CONTROL VEGETATION OR HAND PLANTINGS. AS WITH ALL OTHER APPLICATIONS, SFM WILL NOT BE CONSIDERED PERMANENT UNTIL 70% VEGETATION ESTABLISHMENT.
5. COVERAGE AND CONCENTRATION FOR EACH AREA COVERED, THE MINIMUM APPLICATION VOLUME SHALL BE 10 GALLONS NON-TOXIC WATER-PERMEABLE SOIL-STABILIZING LIQUID EMULSION WITH 3,000 LBS OF HYDRAULIC MULCH. THE EMULSION MUST BE DESIGNED TO PROTECT SOIL, PREVENT EROSION, AND FLOCCULATE (CLUMP) SEDIMENT.
6. A LETTER FROM THE HYDROSEED CONTRACTOR CERTIFYING THE SFM WAS INSTALLED IN ACCORDANCE WITH APPROVED APPLICATION RATES, COVERAGE AND MANUFACTURER'S DILUTION RATIO SHALL BE SUBMITTED TO THE COUNTY INSPECTOR FOR APPROVAL.

SILTATION AND SEDIMENT CONTROL MEASURES NOTES

1. THE SEDIMENT BASINS SHALL BE PROVIDED AT THE LOWER END OF EVERY DRAINAGE AREA PRODUCING SEDIMENT RUNOFF. THE BASINS SHALL BE MAINTAINED AND CLEANED TO DESIGN CONTOURS AFTER EVERY RUNOFF PRODUCING STORM. THE BASINS SHOULD BE SEMI-PERMANENT STRUCTURES THAT WOULD REMAIN UNTIL SOIL STABILIZING VEGETATION HAS BECOME WELL ESTABLISHED ON ALL ERODIBLE SLOPES.
2. SEDIMENTATION BASINS MAY NOT BE REMOVED OR MADE INOPERATIVE WITHOUT PRIOR APPROVAL OF THE COUNTY ENGINEER.
3. SEWER OR STORM DRAIN TRENCHES THAT ARE CUT THROUGH BASIN DIKES OR BASIN INLET DIKES SHALL BE PLUGGED WITH GRAVEL BAGS FROM TOP OF PIPE TO TOP OF DIKE.
4. ALL UTILITY TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS WITH A DOUBLE ROW OF GRAVEL BAGS WITH A TOP ELEVATION LEVEL WITH, AND TWO GRAVEL BAGS BELOW, THE GRADED SURFACE OF THE STREET. GRAVEL BAGS ARE TO BE PLACED WITH LAPPED COURSES. THE INTERVALS PRESCRIBED BETWEEN GRAVEL BAGS BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT TO EXCEED THE FOLLOWING:

GRADE OF THE STREET	INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

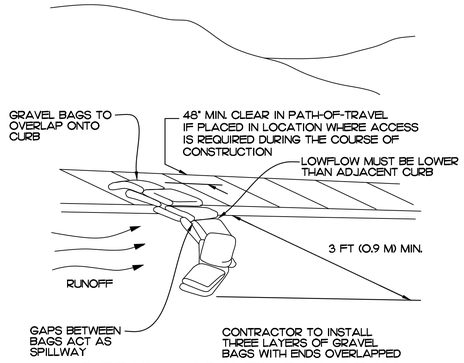
5. AFTER UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOW AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWNED STREET.
6. ALL BUILDING PADS SHOULD BE SLOPED TOWARDS THE DRIVEWAYS AND VELOCITY CHECK DAMS PROVIDED AT THE BASE OF ALL DRIVEWAYS DRAINING INTO THE STREET.
7. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVALS BETWEEN CHECK DAMS
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET

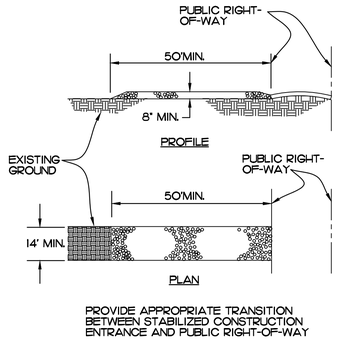
8. PROVIDE VELOCITY CHECK DAMS IN ALL PAVED STREET AREAS ACCORDING TO INTERVALS INDICATED BELOW. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF GRAVEL BAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE COUNTY ENGINEER, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. VELOCITY CHECK DAMS MAY ALSO SERVE AS SEDIMENT TRAPS.

GRADE OF THE STREET	INTERVAL	NUMBER OF BAGS HIGH
LESS THAN 2%	AS REQUIRED 200 FEET MAX.	1
2% TO 4%	100 FEET	1
4% TO 6%	50 FEET	1
6% TO 10%	50 FEET	2
OVER 10%	25 FEET	2

9. PROVIDE A GRAVEL BAG SILT BASIN OR TRAP BY EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING DRAIN SYSTEM.
10. GRAVEL BAGS AND FILL MATERIAL SHALL BE STOCKPILED AT INTERVALS, READY FOR USE WHEN REQUIRED.
11. ALL EROSION CONTROL DEVICES WITHIN THE DEVELOPMENT SHOULD BE MAINTAINED DURING AND AFTER EVERY RUNOFF PRODUCING STORM, IF POSSIBLE, MAINTENANCE CREWS WOULD BE REQUIRED TO HAVE ACCESS TO ALL AREAS.
12. PROVIDE ROCK RIPRAP ON CURVES AND STEEP DROPS IN ALL EROSION PRONE DRAINAGE CHANNELS DOWNSTREAM FROM THE DEVELOPMENT. THIS PROTECTION WOULD REDUCE EROSION CAUSED BY THE INCREASED FLOWS THAT MAY BE ANTICIPATED FROM DENUDED SLOPES, OR FROM IMPERVIOUS SURFACES.
13. ANY PROPOSED ALTERNATE CONTROL MEASURES MUST BE APPROVED IN ADVANCE BY ALL RESPONSIBLE AGENCIES I.E., COUNTY ENGINEER, DEPARTMENT OF ENVIRONMENTAL HEALTH, FLOOD CONTROL AND OFFICE OF ENVIRONMENTAL MANAGEMENT, ETC.

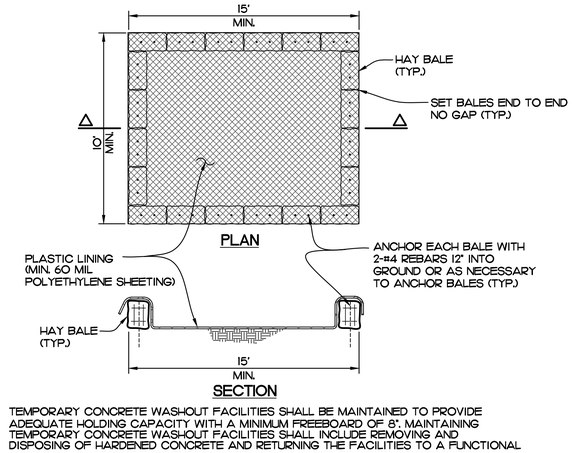


DETAIL - GRAVEL BAG BERM
NO SCALE



PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY

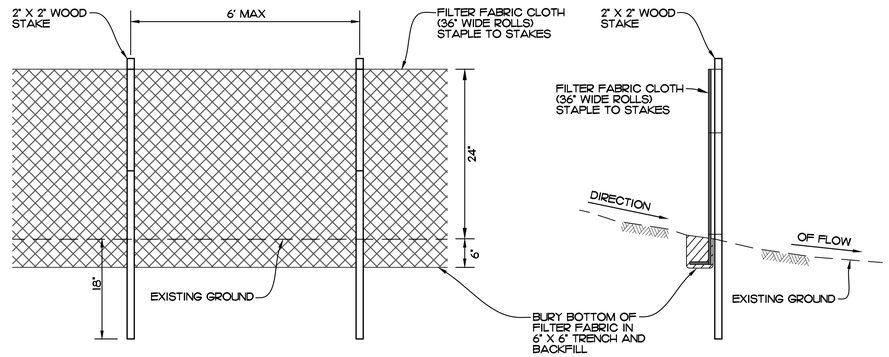
DETAIL - STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



SECTION

TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 8". MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION. HARDENED CONCRETE MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF.

TEMPORARY CONCRETE WASHOUT (ABOVE GRADE)
NO SCALE



DETAIL - SILT FENCE
NO SCALE

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS
8		

EROSION CONTROL NOTES / DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

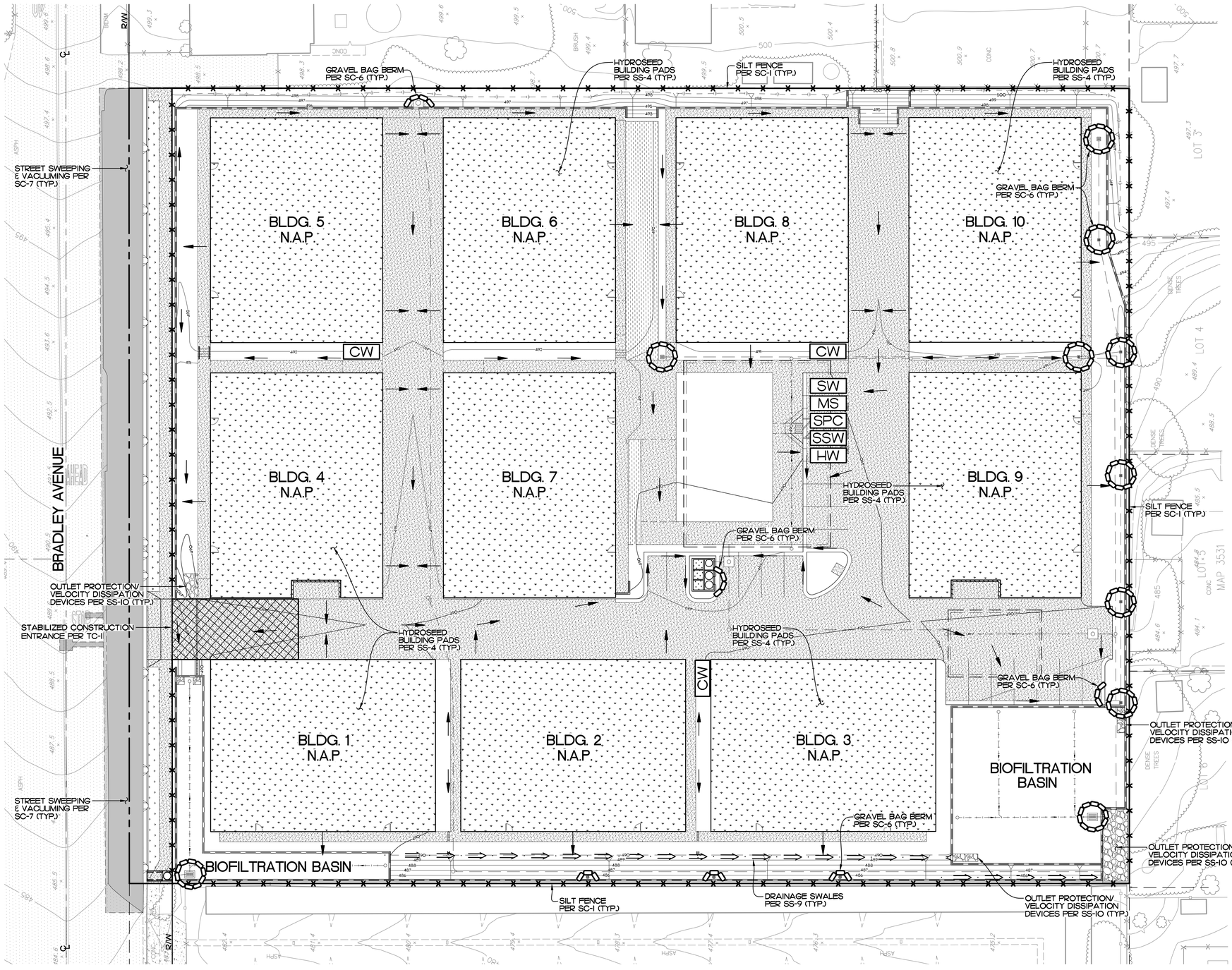
APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY:
DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234



LEGEND

THE FOLLOWING BMP'S ARE TO BE UTILIZED :

			SYMBOL
1.	SCHEDULING	SS-1	
2.	HYDROSEED	SS-4	
3.	EARTH DIKES/DRAINAGE SWALES & LINED DITCHES	SS-9	
4.	OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES	SS-10	
5.	SILT FENCE	SC-1	
6.	GRAVEL BAG BERM	SC-6	
7.	STREET SWEEPING & VACUUMING	SC-7	
8.	STORM DRAIN INLET PROTECTION	SC-10	
9.	WIND EROSION CONTROL	WE-1	
10.	STABILIZED CONSTRUCTION ENTRANCE	TC-1	
11.	WATER CONSERVATION PRACTICES	NS-1	
12	PAVING AND GRINDING OPERATIONS	NS-3	
13.	ILLICIT CONNECTION/ILLEGAL DISCHARGE DETECTION AND REPORTING	NS-6	
14.	CONCRETE CURING	NS-12	
15.	CONCRETE FINISH	NS-14	
16.	MATERIAL DELIVERY & STORAGE	WM-1	MS
17.	MATERIAL USE	WM-2	
18.	SPILL PREVENTION AND CONTROL	WM-4	SPC
19.	SOLID WASTE MANAGEMENT	WM-5	SW
20.	HAZARDOUS WASTE MANAGEMENT	WM-6	HW
21.	CONCRETE WASTE MANAGEMENT	WM-8	CW
22.	SANITARY/SEPTIC WASTE MANAGEMENT	WM-9	SSW
23.	LIQUID WASTE MANAGEMENT	WM-10	
24.	DIRECTION OF FLOW		

N

20 10 0 20 40 60

SCALE: 1"=20'

ENGINEER OF WORK

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civil engineers and land surveyors
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COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET		
9	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

EROSION CONTROL & CONSTRUCTION BMP PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN
COUNTY ENGINEER

BY:

DATE

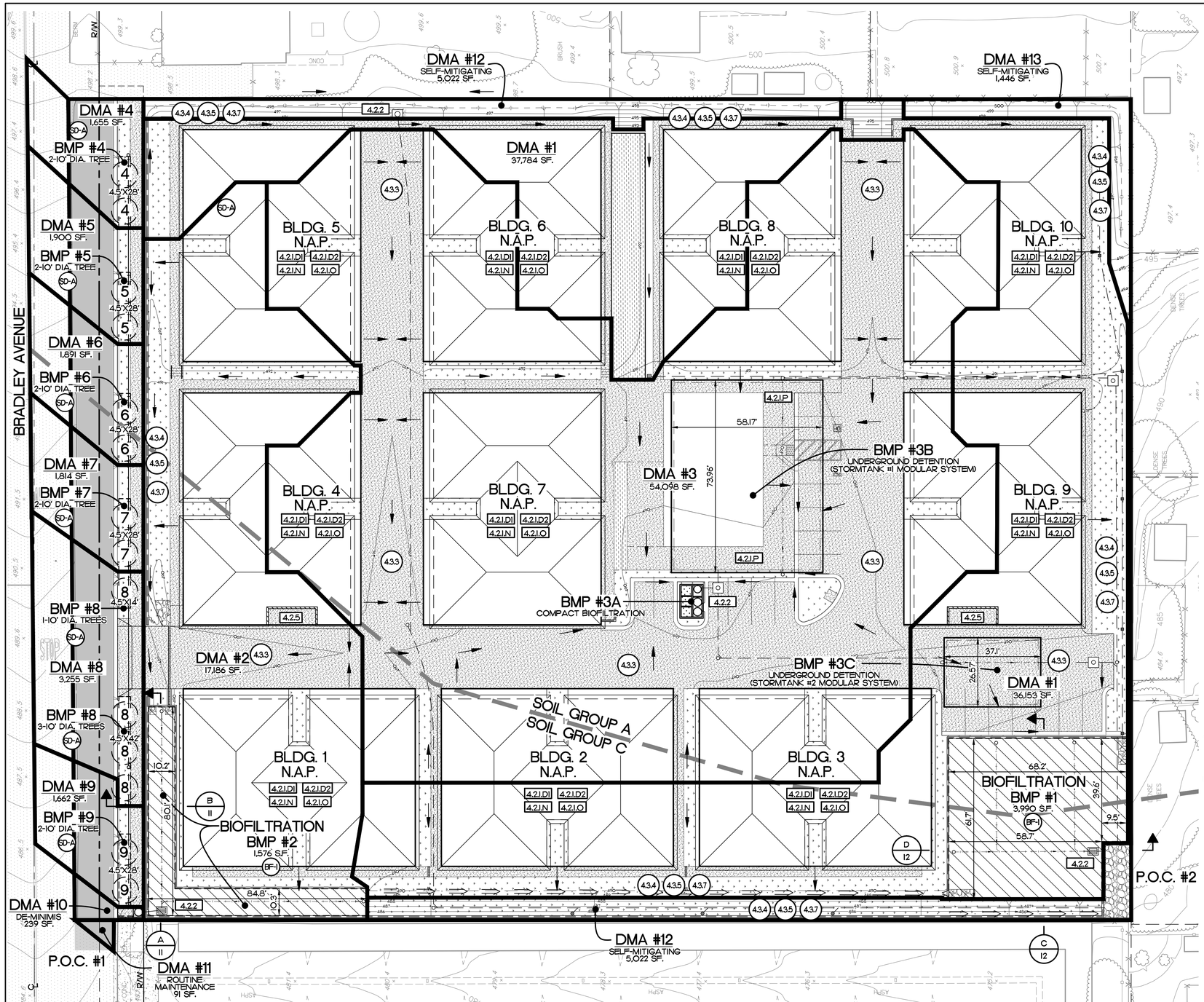
ENGINEER OF WORK

WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032



PROJECT PERMANENT BMP'S

1. SOURCE CONTROL BMP'S:

- 4.2.1 PREVENT ILLICIT DISHCARGES INTO THE MS4.
- 4.2.2 MARK ALL INLETS WITH THE WORDS "NO DUMPING - DRAINS TO OCEAN" OR SIMILAR LANGUAGE. SEE STENCIL TEMPLATE ON THIS SHEET.
- 4.2.5 PROTECT TRASH STORAGE AREAS FROM RAINFALL, RUN-ON, RUNOFF, AND WIND DISPERSAL. TRASH ENCLOSURES WITH CONCRETE SLAB, SCREENED WALLS, AND DUMPSTERS WITH LIDS.
- 4.2.1.D1 NEED FOR FUTURE INDOOR AND STRUCTURAL PEST CONTROL.
- 4.2.1.D2 LANDSCAPE / OUTDOOR PESTICIDE USE. MAINTAIN LANDSCAPING USING MINIMUM OR NO PESTICIDES.
- 4.2.1.N AIR CONDITIONING CONDENSATE DRAIN LINES SHALL DISCHARGE INTO LANDSCAPE AREAS AND MAY NOT DISCHARGE TO THE STORM DRAIN SYSTEM.
- 4.2.1.O AVOID ROOFING, GUTTERS, AND TRIM MADE OF COPPER OR OTHER UNPROTECTED METALS THAT MAY LEACH INTO RUNOFF.
- 4.2.1.P PLAZAS, SIDEWALKS & PARKING LOTS MUST BE SWEPT REGULARLY.

2. SITE DESIGN BMP'S:

- SD-A TREES PLANTED PER COUNTY OF SAN DIEGO BMP DESIGN MANUAL (SEPT. 2020) BMP FACT SHEET SD-A, FOR THE INTERCEPTION OF RAINFALL AND RUNOFF.
- 4.3.3 MINIMIZE IMPERVIOUS AREA: PROPOSED MULTI-STORY BUILDING TO REDUCE SIZE OF FOOTPRINT.
- 4.3.4 MINIMIZE SOIL COMPACTION.
- 4.3.5 IMPERVIOUS AREA DISPERSION: DRAIN ROOFTOPS TO ADJACENT LANDSCAPE AREAS.
- 4.3.7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES.

3. STRUCTURAL BMP'S:

- BF-1 BIOFILTRATION BASIN

SELF-MITIGATING DMAs NOTES

SELF-MITIGATING DMAS CONSIST OF NATURAL OR LANDSCAPED AREAS THAT DRAIN DIRECTLY OFFSITE OR TO THE PUBLIC STORM DRAIN SYSTEM. SELF-MITIGATING DMAS MUST MEET ALL OF THE FOLLOWING TO BE ELIGIBLE FOR EXCLUSION:

- VEGETATION IN THE NATURAL OR LANDSCAPED AREA IS NATIVE AND/OR NON-NATIVE/NON-INVASIVE DROUGHT TOLERANT SPECIES THAT DO NOT REQUIRE REGULAR APPLICATION OF FERTILIZERS AND PESTICIDES.
- SOILS ARE UNDISTURBED NATIVE TOPSOIL, OR DISTURBED SOILS THAT HAVE BEEN AMENDED AND AERATED TO PROMOTE WATER RETENTION CHARACTERISTICS EQUIVALENT TO UNDISTURBED NATIVE TOPSOIL.
- THE INCIDENTAL IMPERVIOUS AREAS ARE LESS THAN 5 PERCENT OF THE SELF-MITIGATING AREA.
- IMPERVIOUS AREA WITHIN THE SELF-MITIGATED AREA SHOULD NOT BE HYDRAULICALLY CONNECTED TO OTHER IMPERVIOUS AREAS UNLESS IT IS A STORM WATER CONVEYANCE SYSTEM (SUCH AS A BROW DITCH).
- THE SELF-MITIGATING AREA IS HYDRAULICALLY SEPARATE FROM DMAS THAT CONTAIN PERMANENT STORM WATER POLLUTANT CONTROL BMPS.

BMP STENCIL PLACEMENT NOTES

A) THE PROPOSED CURB INLETS SHALL HAVE A STENCIL OR TILE PLACED WITH PROHIBITIVE LANGUAGE "NO DUMPING THIS DRAINS TO OCEAN" AND/OR GRAPHICAL ICONS TO DISCOURAGE ILLEGAL DUMPING.

B) LEGIBILITY OF STENCILS, TILES AND SIGNS MUST BE MAINTAINED AND TILES MUST BE PLACED FLUSH WITH THE TOP OF CONCRETE TO REDUCE TRIPPING BY PEDESTRIANS.

LEGEND

- DMA BOUNDARY
- DIRECTION OF FLOW
- PERVIOUS AREA (LANDSCAPE)
- IMPERVIOUS AREA (CONCRETE)
- IMPERVIOUS AREA (ASPHALT)
- PERVIOUS AREA (D.G.)
- IMPERVIOUS AREA (ROOF TOP)
- DMA I.D. — DMA #1
- BIOFILTRATION BASIN (BF-1)
- UNDERGROUND DETENTION (STORMTANK SYSTEM)
- BIOFILTRATION BASIN (MODULAR WETLANDS SYSTEM)
- STORM DRAIN CLEANOUT
- PVC SDR-35 STORM DRAIN PIPE
- DRAINAGE DITCH
- TREE WELL (SD-A) — 4
- AMENDED SOIL LIMITS

NOTES

1. SITE IS LOCATED WITHIN LAKE WOHLFORD RAIN GAUGE BASIN.
2. UNDERLYING HYDROLOGIC SOIL GROUPS A & C.
3. SITE IS RELATIVELY FLAT.
4. GROUNDWATER DEPTH IS UNKNOWN.
5. BASED ON WMAA MAPS CRITICAL COARSE SEDIMENT YIELD AREAS (CCSYAS) WERE NOT IDENTIFIED WITHIN PROJECT FOOTPRINT OR UPSTREAM AREAS DRAINING THROUGH THE PROJECT FOOTPRINT.
6. PROPOSED STRUCTURAL AND SIGNIFICANT SITE DESIGN BMP'S FOR POLLUTANT CONTROL CONSIST OF THE FOLLOWING: 2 BIOFILTRATION BASINS (BF-1), 6 TREE WELLS (SD-A), AND 2 PROPRIETARY BIOFILTRATION BASIN (MODULAR WETLANDS SYSTEM).
7. COUNTY OF SAN DIEGO'S 85TH PERCENTILE ISOPLUVIAL MAP WAS UTILIZED FOR SIZING STRUCTURAL BMPS TO COMPLY WITH TREATMENT CONTROL REQUIREMENTS P_{85TH} = 0.49 INCH.

TREE WELL NOTE

FOR TREE WELL CONSTRUCTION DETAILS AND SPECIFICATIONS REFER TO COUNTY OF SAN DIEGO IMPROVEMENT PLANS FOR BRADLEY AVENUE WIDENING DRAWING NO. PDS2019-LDPIIP-60071.

HYDROMODIFICATION MANAGEMENT EXEMPTION

THIS PROJECT IS EXEMPT FROM HYDROMODIFICATION MANAGEMENT REQUIREMENTS SINCE IT WILL DISCHARGE RUNOFF DIRECTLY TO FORESTER CREEK WHICH IS AN AREA IDENTIFIED IN THE WATERSHED MANAGEMENT AREA ANALYSIS (WMAA). THE WMAA HAS SHOWN THAT FUTURE INCREASES IN IMPERVIOUS AREAS WITHIN THE WATERSHED ARE NOT EXPECTED TO INCREASE THE EROSION POTENTIAL IN FORESTER CREEK.

SEE POST-CONSTRUCTION BMP FACILITY SUMMARY TABLE AND DRAINAGE MANAGEMENT AREAS TABLE ON SHEET 11

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET 10 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

DMA EXHIBIT / BMP PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK: WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
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WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

POST-CONSTRUCTION BMP FACILITY SUMMARY TABLE

BMP ID	BMP TYPE	APPROX. DIMENSIONS	PLAN AREA (SF)	PONDING SURFACE DEPTH (IN.)	MEDIA THICKNESS (IN.)	MULCH LAYER (IN.)	ASTM 3.3 WASHED SAND (IN.)	AGGREGATE STORAGE LAYER ABOVE UNDERDRAIN, INCL. 3" ASTM NO. 8 STONE (IN.)	AGGREGATE STORAGE LAYER BELOW UNDERDRAIN (IN.)	TOTAL FACILITY DEPTH INCL. 1'-2" FREEBOARD (FT)
BMP #1	BIOFILTRATION BASIN (BF-1)	40' W X 58' L	3,990	6	18	3	3	12	3	4.92
BMP #2	BIOFILTRATION BASIN (BF-1)	10' W X 158' L	1,576	6	18	3	3	12	3	4.92

BMP ID	BMP TYPE	REQUIRED TREATMENT (CFS)	PROVIDED TREATMENT (CFS)	MODULAR WETLANDS SYSTEM MODEL
BMP #3A	COMPACT BIOFILTRATION (BF-3)	0.318	0.375	MWS-L-8-12-4'-11"-C-HC

BMP ID	BMP TYPE	APPROX. DIMENSIONS	REQUIRED VOLUME (CF)	PROPOSED BMP VOLUME (CF)
BMP #3B	CISTERN BMP (STORMTANK MODULES)	56.5' W X 72' L X 3' D	12,870	12,871

BMP ID	BMP TYPE	# OF TREES	CANOPY DIA. OF TREE (FT.)	TREATMENT VOLUME PROVIDED (CF)	AMENDED SOIL LIMITS FOOTPRINT	DEPTH (INCL. 3" MULCH LAYER & 6" SAND AT BOTTOM - FOR SOIL TYPE C)	NOTES
BMP #4	TREE WELLS (SD-A)	2	10	80	4.5' x 28'	2'-9"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.
BMP #5	TREE WELLS (SD-A)	2	10	80	4.5' x 28'	2'-9"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.
BMP #6	TREE WELLS (SD-A)	2	10	80	4.5' x 28'	3'-3"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.
BMP #7	TREE WELLS (SD-A)	2	10	80	4.5' x 28'	3'-3"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.
BMP #8	TREE WELLS (SD-A)	4	10	160	4.5' X 56'	3'-3"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.
BMP #9	TREE WELLS (SD-A)	2	10	80	4.5' x 28'	3'-3"	FOR TREE WELL CONSTRUCTION SPECIFICATIONS & DETAILS REFER TO COUNTY IMPROVEMENT PLANS NO. PDS2019-LDPIIP-60071 AND LANDSCAPE PLANS NO. PDS2020-LP-20-088.

DRAINAGE MANAGEMENT AREAS - BRADLEY APARTMENTS

DESCRIPTION	TRIBUTARY TO BMP	BMP TYPE	BMP SURFACE AREA (SF)	SOIL TYPE	DEPTH TO GROUNDWATER	PRE-PROJECT SLOPE	IMPERVIOUS DMAs			PERVIOUS DMAs		TOTAL DMA AREA	TOTAL DISTURBED AREA
							POST-PROJECT SURFACE TYPE IMPERVIOUS	POST-PROJECT SURFACE AREA IMPERVIOUS (SF)	OFF-SITE SURFACE AREA	POST-PROJECT SURFACE TYPE PERVIOUS	POST-PROJECT SURFACE AREA PERVIOUS (SF)		
DMA #1	BMP #1	BIOFILTRATION BASIN (BF-1)	3,990	A & C	> 20 FEET	FLAT (0%-5%)	ROOFTOPS & CONCRETE PAVEMENT	29,991	-	LANDSCAPING	6,162		
DMA #2	BMP #2	BIOFILTRATION BASIN (BF-1)	1,576	A & C	> 20 FEET	FLAT (0%-5%)	ROOFTOPS & CONCRETE PAVEMENT	14,080	-	LANDSCAPING	3,106		
DMA #3	BMP #3A/3B	COMPACT BIOFILTRATION (BF-1) W/ CISTERN (HU-1)	N/A	A & C	> 20 FEET	FLAT (0%-5%)	ROOFTOPS & CONCRETE PAVEMENT	50,901	-	LANDSCAPING	3,197		
DMA #4	BMP #4	TREE WELL (SD-A)	126	A	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	1,059	520	LANDSCAPING	76		
DMA #5	BMP #5	TREE WELL (SD-A)	126	A	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	1,080	744	LANDSCAPING	76		
DMA #6	BMP #6	TREE WELL (SD-A)	126	A & C	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	1,133	716	LANDSCAPING	42		
DMA #7	BMP #7	TREE WELL (SD-A)	126	C	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	1,049	693	LANDSCAPING	72		
DMA #8	BMP #8	TREE WELL (SD-A)	252	C	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	1,954	1,299	LANDSCAPING	2		
DMA #9	BMP #9	TREE WELL (SD-A)	126	C	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	991	613	LANDSCAPING	58		
DMA #10	DE-MINIMIS	DE-MINIMIS	N/A	C	> 20 FEET	FLAT (0%-5%)	AC/CONC. PAVEMENT	239	-	LANDSCAPING	0		
DMA #11	EXEMPT	ROUTINE MAINTENANCE ACTIVITIES	N/A	C	> 20 FEET	FLAT (0%-5%)	AC PAVEMENT	91	-	LANDSCAPING	0		
DMA #12	SELF-MITIGATING	SELF-MITIGATING	N/A	C	> 20 FEET	FLAT (0%-5%)	N/A	0	-	LANDSCAPING	5,022		
DMA #13	SELF-MITIGATING	SELF-MITIGATING	N/A	C	> 20 FEET	FLAT (0%-5%)	N/A	0	-	LANDSCAPING	1,446		
TOTAL AREA (SF)			4,782					102,568	4,585		20,925	132,860	128,275

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET 11 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

DMA EXHIBIT / BMP PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK

WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER OF WORK

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EXPIRES 06-30-25

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COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

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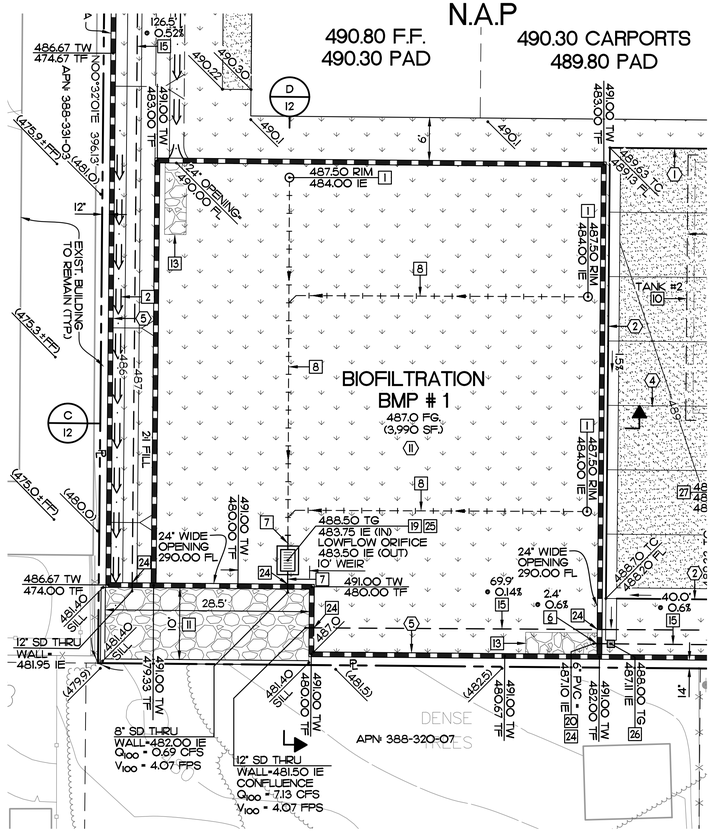


KEY NOTES

PVT. IMPROVEMENTS

(1) PVT. 6" CURB PER SDRSD G-1 (TYP.).

(2) PVT. 6" CURB/GUTTER TYPE G PER SDRSD G-2 (TYP.).

(4) STRIPING PER BUILDING PLANS.

(5) RETAINING WALL PLAN/PROFILE PER SHT'S 24-27.

(11) ALL PROPOSED VEGETATION TO BE CONSTRUCTED/INSTALLED WITHIN BIOFILTRATION BASIN AND TREE WELLS SHALL BE CONFORMANCE WITH APPROVED LANDSCAPE AND IRRIGATION PLAN NO. PDS2020-LP-20-088, AND SHALL BE INCLUDED IN PROJECT SWQMP.

PVT. STORM DRAIN

[1] PVT. STORM DRAIN CLEANOUT PER DETAIL 1 ON SHT. 2.

[2] PVT. DRAINAGE DITCH TYPE D PER SDRSD D-75 (TYP.).

[6] PVT. 6" PVC SDR-35 PER SDRSD D-60.

[7] PVT. 8" PVC SDR-35 PER SDRSD D-60.

[8] PVT. 8" PVC SDR-35 PERFORATED PIPE.

[10] PVT. BRENTWOOD STORMTANK #2 SYSTEM (LAYFIELD) PER DETAILS ON SHT'S 15-23.

[11] PVT. NO. 2 BACKING (10'X28.5'X1.1' THICK) ROCK RIP-RAP PER SDRSD D-40, TYPE 2.

[13] PVT. 3'-6" ROCKS (3'X10'X0.7' THICK).

[15] PVT. 12" PVC SDR-35 PER SDRSD D-60.

[19] MARK ALL INLETS WITH THE WORDS "NO DUMPING-DRAINS TO WATERWAYS" OR SIMILAR. SEE STENCIL TEMPLATE ON SHT. 10.

[24] STORM DRAIN PIPE THRU STEM/ FOOTING PER DETAIL 3, SHT. 14.

[25] PVT. CATCH BASIN TYPE G-1 PER SDRSD D-08.

[27] STORM DRAIN CLEANOUT TYPE A PER SDRSD D-09 W/ WEIR & 1" LOWFLOW ORIFICE. SEE DETAIL 5, SHT. 14.

WALL ELEVATIONS ARE FOR INFORMATIONAL PURPOSES ONLY. SEE WALL PLAN/PROFILE SHT'S. 24-27.

PERMANENT POST-CONSTRUCTION BMP DEVICES (BIOFILTRATION BASIN) SHOWN ON THESE PLANS SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE COUNTY OF SAN DIEGO.

C SECTION
NO SCALE

D SECTION
NO SCALE

NOTE:

ALL PROPOSED VEGETATION TO BE CONSTRUCTED/INSTALLED WITHIN BIOFILTRATION BASIN AND TREE WELLS SHALL BE CONFORMANCE WITH APPROVED LANDSCAPE AND IRRIGATION PLAN NO. PDS2020-LP-20-088, AND SHALL BE INCLUDED IN PROJECT SWQMP.

KEY NOTES

(1) BIORETENTION SOIL MEDIA (BSM) (5in/hr MIN. PERCOLATION RATE) PER BSM MIXTURE RIGHT.

(2) 3" CLEAN & WASHED ASTMC 33 FINE AGGREGATE SAND.

(3) 3" LAYER WASHED ASTM 8 STONE.

(4) CLASS 2 PERMEABLE MATERIAL PER CALTRANS 68-2.02F(3).

(5) IMPERMEABLE LINER (30 MIL PVC GEOMEMBRANE BY EPI OR APPROVED EQUAL) PER MANUFACTURER'S SPECIFICATIONS.

(6) 8" PVC PERFORATED PIPE • 0.5% SLOPE.

(7) 8" PVC SDR-35 • 0.5% SLOPE.

BSM MIXTURE[2]					
BMP COMPOSITION	SAND	SANDY LOAM			COMPOST
		SAND	SILT	CLAY	
VOLUME	65%	20%			15%
WEIGHT	85% - 90%	10% MAX.	5% MAX.		9% MAX.[1]

1. [1] 9% COMPOST BY WEIGHT SHOULD PRIMARILY FALL INTO SAND COMPONENT (SEE COMPOST GRADATION LIMITS RIGHT (ASTM D422 OR APPROVED EQUAL) AND SHOULD RESULT IN APPROXIMATELY 2%-5% ORGANIC MATTER BY WEIGHT.
2. EXTRACTABLE NUTRIENT: PHOSPHORUS SHOULD BE 15% MAX. MG/KG DRY WEIGHT.
3. FOR BSM SPECIFICATIONS, SEE APPENDIX G IN COUNTY OF SAN DIEGO LID MANUAL (JULY, 2014) AND APPENDIX F.2 OF THE COUNTY OF SAN DIEGO 2020 BMP DESIGN MANUAL.

COMPOST GRADATION		
SIEVE SIZE	PERCENT PASSING (BY WEIGHT)	
	MIN.	MAX.
1/2 INCH.	97	100
NO. 200	0	5

SECTION - BIOFILTRATION #1

N

10 5 0 10 20 30

SCALE: 1"=10'

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER • WILLIAM A. SNIPES • No. 50477 • Exp. 06-30-25 • CIVIL • STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET 12 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

BMP SECTIONS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

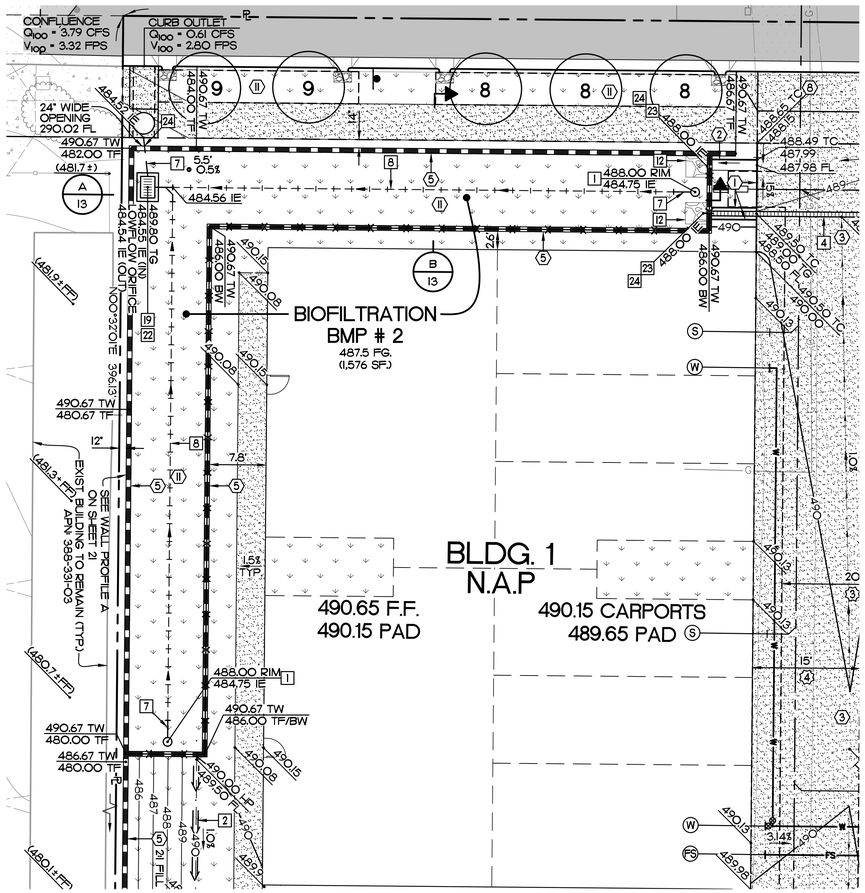
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234



WALL ELEVATIONS ARE FOR INFORMATIONAL PURPOSES ONLY. SEE WALL PLAN/PROFILE SHT'S. 24-27.

PERMANENT POST-CONSTRUCTION BMP DEVICES (BIOFILTRATION BASIN) SHOWN ON THESE PLANS SHALL NOT BE REMOVED OR MODIFIED WITHOUT THE APPROVAL OF THE COUNTY OF SAN DIEGO.

KEY NOTES

PVT. IMPROVEMENTS

(1) PVT. 6" CURB PER SDRSD G-1 (TYP.).

(2) PVT. 6" CURB/GUTTER TYPE G PER SDRSD G-2 (TYP.).

(3) 6.5" CONCRETE (560-C-3550) PAVEMENT W/ #4 REBARS @ 18" O.C., BOTH DIRECTIONS.

(5) RETAINING WALL PLAN/PROFILE PER SHT'S 22-25.

(8) PVT. TOP OF CURB TRANSITION PER DETAIL 2, SHT. 2.

(11) ALL PROPOSED VEGETATION TO BE CONSTRUCTED/INSTALLED WITHIN BIOFILTRATION BASIN AND TREE WELLS SHALL BE CONFORMANCE WITH APPROVED LANDSCAPE AND IRRIGATION PLAN NO. PDS2020-LP-20-088, AND SHALL BE INCLUDED IN PROJECT SWQMP.

PVT. STORM DRAIN

[1] PVT. STORM DRAIN CLEANOUT PER DETAIL 1 ON SHT. 2.

[2] PVT. DRAINAGE DITCH TYPE D PER SDRSD D-75 (TYP.).

[4] PVT. 4" TRENCH DRAIN PER DETAIL 3, SHT. 2.

[7] PVT. 8" PVC SDR-35 PER SDRSD D-60.

[8] PVT. 8" PVC SDR-35 PERFORATED PIPE.

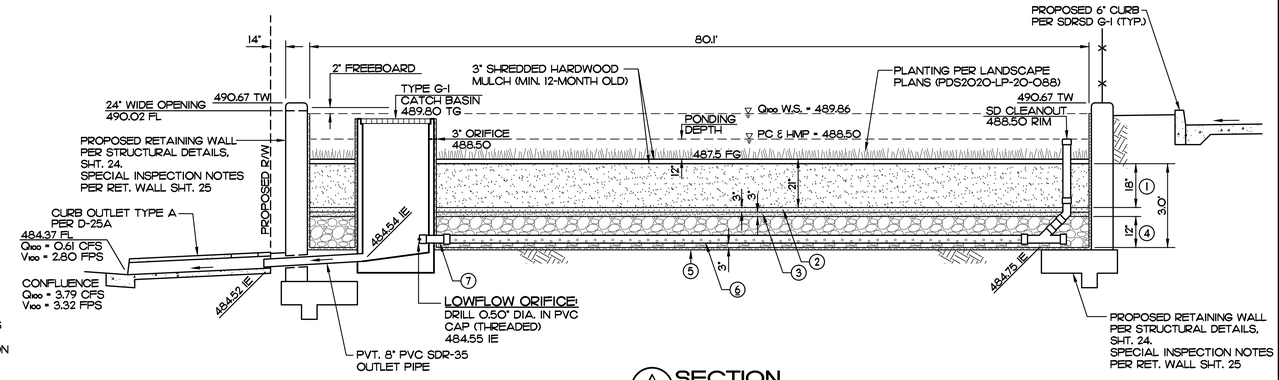
[12] PVT. 3'-6" ROCKS (3'X3'X0.7' THICK).

[19] MARK ALL INLETS WITH THE WORDS 'NO DUMPING-DRAINS TO WATERWAYS' OR SIMILAR. SEE STENCIL TEMPLATE ON SHT. 10.

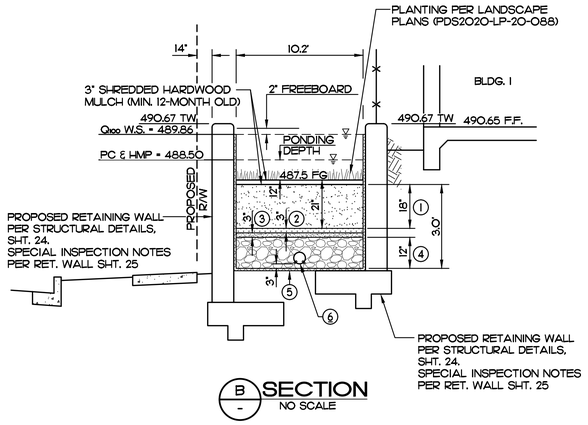
[22] PVT. CATCH BASIN TYPE G-1 PER SDRSD D-08.

[23] 6" SLEEVE W/ BACK WATER CHECK VALVE (CCV 2HG SOLUTIONS) PER DETAIL 2, SHT. 14.

[24] STORM DRAIN PIPE THRU STEM/ FOOTING PER DETAIL 3, SHT. 14.



A SECTION
NO SCALE



B SECTION
NO SCALE

NOTE:

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(5) IMPERMEABLE LINER (30 MIL PVC GEOMEMBRANE BY EPI OR APPROVED EQUAL) PER MANUFACTURER'S SPECIFICATIONS.

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(7) 8" PVC SDR-35 @ 0.5% SLOPE.

BSM MIXTURE[23]					
BMP COMPOSITION	SAND	SANDY LOAM			COMPOST
		SAND	SILT	CLAY	
VOLUME	65%	20%			15%
WEIGHT	85% - 90%	10% MAX.	5% MAX.		9% MAX.[1]

1. [1]9% COMPOST BY WEIGHT SHOULD PRIMARILY FALL INTO SAND COMPONENT (SEE COMPOST GRADATION LIMITS RIGHT (ASTM D422 OR APPROVED EQUAL) AND SHOULD RESULT IN APPROXIMATELY 2%-5% ORGANIC MATTER BY WEIGHT.
2. EXTRACTABLE NUTRIENT: PHOSPHORUS SHOULD BE 15% MAX. MG/KG DRY WEIGHT.
3. FOR BSM SPECIFICATIONS, SEE APPENDIX G IN COUNTY OF SAN DIEGO LID MANUAL (JULY, 2014) AND APPENDIX F.2 OF THE COUNTY OF SAN DIEGO 2020 BMP DESIGN MANUAL.

COMPOST GRADATION		
SIEVE SIZE	PERCENT PASSING (BY WEIGHT)	
	MIN.	MAX.
1/2 INCH	97	100
NO. 200	0	5

SECTION - BIOFILTRATION #2

N

10 5 0 10 20 30

SCALE: 1"=10'

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET		
13	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

BMP SECTIONS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY:

DATE

ENGINEER OF WORK

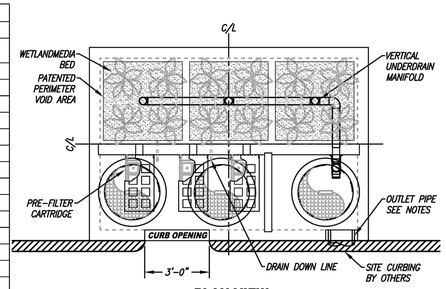
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

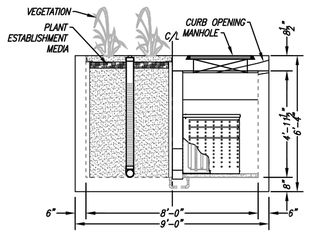
ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

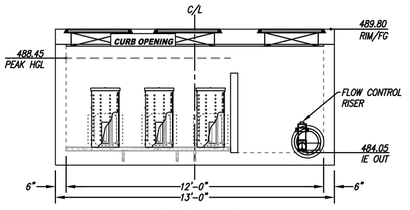
SITE SPECIFIC DATA			
PROJECT NUMBER		728877-010	
PROJECT NAME		BRADLEY APARTMENT COMPLEX (BCE 9964)	
PROJECT LOCATION		EL CAJON, CA	
STRUCTURE ID		BMP #3A	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.375	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			7.31
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	N/A	N/A	N/A
OUTLET PIPE	484.05	PVC	12"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	489.80	489.80	489.80
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	2EA ø30"	OPEN PLANTER	ø30"
WETLANDMEDIA VOLUME (CY)			8.62
ORIFICE SIZE (DIA. INCHES)			ø2.71"
NOTES: PRELIMINARY NOT FOR CONSTRUCTION. OUTLET IE LOWERED BY 0.05' TO MEET FABRICATION REQUIREMENTS. EOR TO CONFIRM.			



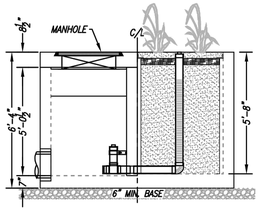
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



RIGHT END VIEW

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

INTERNAL BYPASS DISCLOSURE:

THE DESIGN AND CAPACITY OF THE PEAK CONVEYANCE METHOD TO BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD. HGL(S) AT PEAK FLOW SHALL BE ASSESSED TO ENSURE NO UPSTREAM FLOODING. PEAK HGL AND BYPASS CAPACITY SHOWN ON DRAWING ARE USED FOR GUIDANCE ONLY.

TREATMENT FLOW (CFS)	0.375
OPERATING HEAD (FT)	3.7
PRETREATMENT LOADING RATE (GPM/SF)	1.5
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

CMP-ULA-S WETLANDS — FOR PATENT INFORMATION, GO TO www.ContechES.com/IP

PROPRIETARY AND CONFIDENTIAL:

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

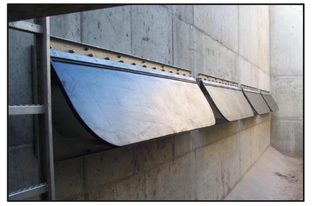
MWS-L-8-12-5'-8"-C-HC
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

√2gH Solutions LLC
Engineered Water Technology
www.2gHSolutions.com (727) 378-8180

VEOLIA HYDROVEX®
2gH Solutions, LLC is the exclusive US representative for stormwater applications of the Hydrovex® line of products from Veolia Water Technologies Canada.

Hydrovex® CCV & LCV Check Valves

CCV Check Valve



LCV Check Valve

The Hydrovex® CCV & LCV Check Valves are designed to have extremely low head loss in submerged conditions. Their Buna-N rubber flaps are resistant to oils and greases, and are much lighter than conventional cast iron or steel flaps.

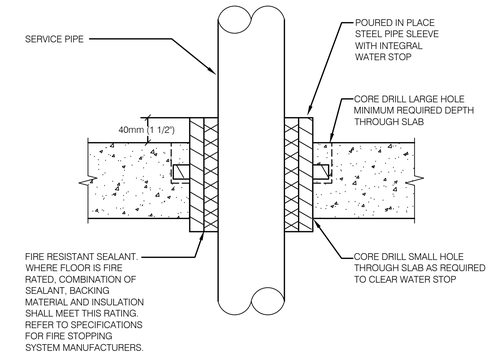
All materials are corrosion resistant, with frames available in 304 or 316 stainless steel.

The Hydrovex® CCV is available in a gasketed flat back or round wall mounting configuration. Available sizes range from 4" to 24", with larger diameters available by request. A reinforced flap is available for high back pressure installations.

The Hydrovex® LCV check valve is designed for installations over weirs and slots. Available heights from 4" to 24", and in lengths up to 6 feet.

Advantages:

- Low headloss
- Minimal cracking pressure (less than 20% of the diameter or height)
- Minimal back pressure required for water-tight seating
- No mechanical components (bearings, bushings, etc.)
- Fast closing and seals properly, even with small downstream pressures
- Easy installation in existing overflow structures

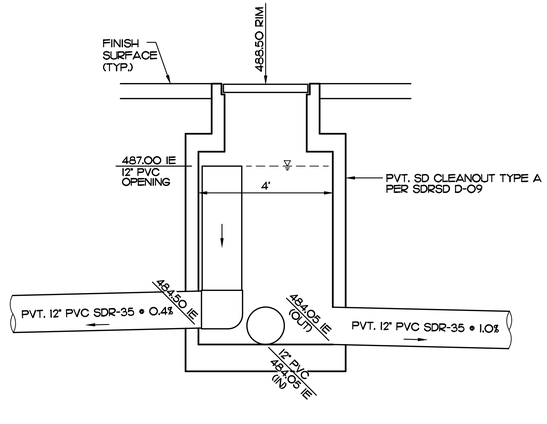


1 - DETAIL : PVT. STORMWATER BIODILTRATION SYSTEM (BMP #3A) OR APPROVED EQUAL

NO SCALE

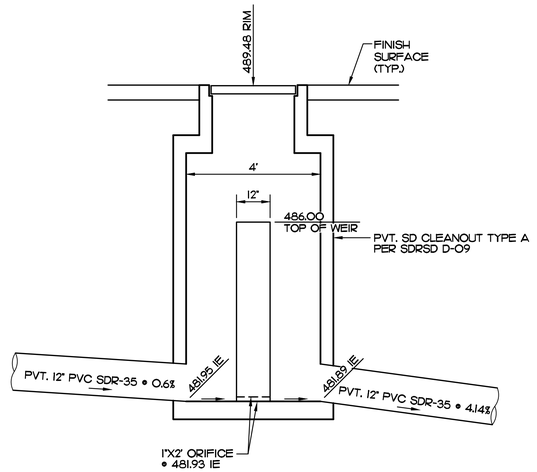
2 - DETAIL : BACK WATER VALVE

NO SCALE



4 - PVT. STORM DRAIN CLEANOUT

NO SCALE



5 - PVT. STORM DRAIN CLEANOUT W/ WEIR AND LOWFLOW ORIFICE

NO SCALE

3 - DETAIL : CORE DRILLED PIPE SLEEVE

NO SCALE

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER — WILLIAM A. SNIPES — No. 50477 — Exp. 06-30-25 — CIVIL — STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

RECORD PLAN

BY: _____ DATE: _____

PRIVATE CONTRACT

SHEET 14 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY:
DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

LAYFIELD

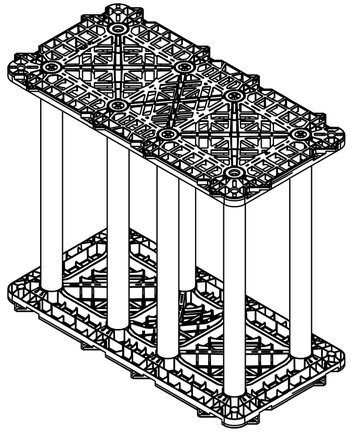
BRENTWOOD STORMTANK MODULE LAYOUT DRAWINGS

1065 E. BRADLEY AVENUE

(Bradley Apartment Complex)

El Cajon, CA

Pages:



REFER TO STORMTANK INSTALLATION INSTRUCTIONS

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		16,269 ft^3
Module Storage Volume		14,194.54 ft^3
Stone Storage Volume (Excluding Top)		2,074.46 ft^3
System Footprint		5,287.97 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,351yd^2 3,068yd^2
Estimated Liner		13,805 ft^2
Estimated Stone Volume		401.46 yd^3
Excavation Required		1,101.31yd^3
Minimum Excavation Depth		4.67 5.17ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
0	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: Cover Page

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE STORMTANK SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH BRENTWOOD'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet: **01 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER — WILLIAM A. SNIPES — No. 50477 — Exp. 06-30-25 — CIVIL — STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 15 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

Material Quantity (ST-36)

ST-36	656
Platens	1312
36" Columns	5248
36" Side Panels	151
10" Observation Port	5

Elevations

Leveling Stone Invert	483.18
Bottom of Module	483.85
Module Invert	484.00
Top of Module	486.85
Top of Stone Backfill	487.85
Minimum Finished Grade	488.85
Maximum Finished Grade	494.85

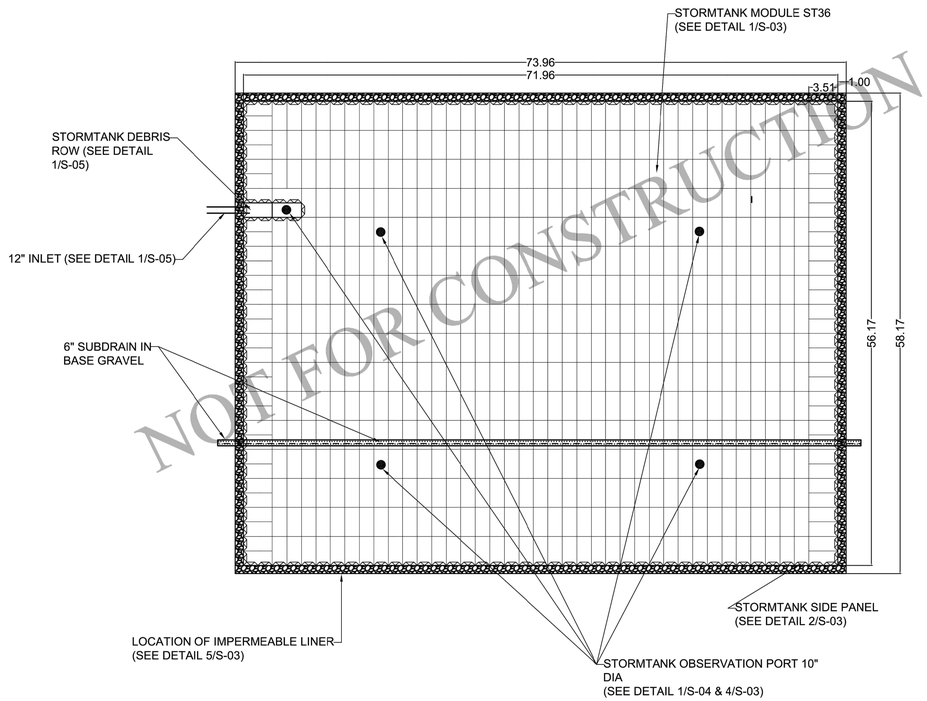
Contractor to confirm that quantities shipped to site match those listed above. Please report any discrepancy or damage to Layfield immediately.

NOTES:

a. All dimensions are measured in feet unless noted otherwise.
b. Reference Brentwood Industries standard drawings and notes for detailed information.
c. Reference current Brentwoood Module installation instructions for proper installation practices.
   https://stormwater.brentwoodindustries.com/resources/
d. Engineer of record to confirm conformance to manufacturer's allowable proximity to other structures and slopes.
e. All inlet and pipe locations and designs by others.
f. The sub-grade and side backfill needs to be compacted to 95%, unless noted otherwise.
g. During and after installation, the Brentwood Module area should be clearly marked and roped off to prevent unauthorized construction and equipment trafficking over the modules.
h. Top of Ground water is to be maintained 610 mm (2 ft) below the module to prevent buoyancy, unless otherwise noted by engineer.
i. The quantities related to stone and geosynthetics are estimated values as the roll size, overlaps, waste, ect. may vary.
j. Materials must be stored in a manner to prevent prolonged exposure to UV light.
k. Storm tank system is not considered complete until all backfill is installed to the minimum depth shown on Detail 5 Typical System Cross-Section. The installer MUST insure that the project site remains dry and free of water (both surface and groundwater) until the installation is complete, including the backfill as noted, to avoid damage to the tank system due to buoyancy.

1 S-02 **NOTES**

TANK 1



2 S-02 **MODULE LAYOUT**
SCALE: NTS

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		13,163 ft^3
Module Storage Volume		11,698 ft^3
Stone Storage Volume (Excluding Top)		1,465 ft^3
System Footprint		4,302 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,093 yd^2 2,418 yd^2
Estimated Liner		10,882 ft^2
Estimated Stone Volume		295 yd^3
Excavation Required		876 yd^3
Minimum Excavation Depth		4.67 ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
0	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490
Page Name: Tank 1 Layout
Drawn by: PE | Checked By: JF
Scale: NTS | Date: 15AUG2023

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE STORMTANK SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH BRENTWOOD'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet: **02 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN
BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK
DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	SHEETS
16		27

POST-CONSTRUCTION BMP DETAILS FOR:
BRADLEY APARTMENT COMPLEX
CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

Material Quantity (ST-36)

ST-36	140
Platens	280
36" Columns	1120
36" Side Panels	77
10" Observation Port	3

Elevations

Leveling Stone Invert	481.98
Bottom of Module	483.60
Module Invert	483.75
Top of Module	486.60
Top of Stone Backfill	487.60
Minimum Finished Grade	488.60
Maximum Finished Grade	494.60

Contractor to confirm that quantities shipped to site match those listed above. Please report any discrepancy or damage to Layfield immediately.

NOTES:

a. All dimensions are measured in feet unless noted otherwise.
b. Reference Brentwood Industries standard drawings and notes for detailed information.
c. Reference current Brentwoood Module installation instructions for proper installation practices.
https://stormwater.brentwoodindustries.com/resources/
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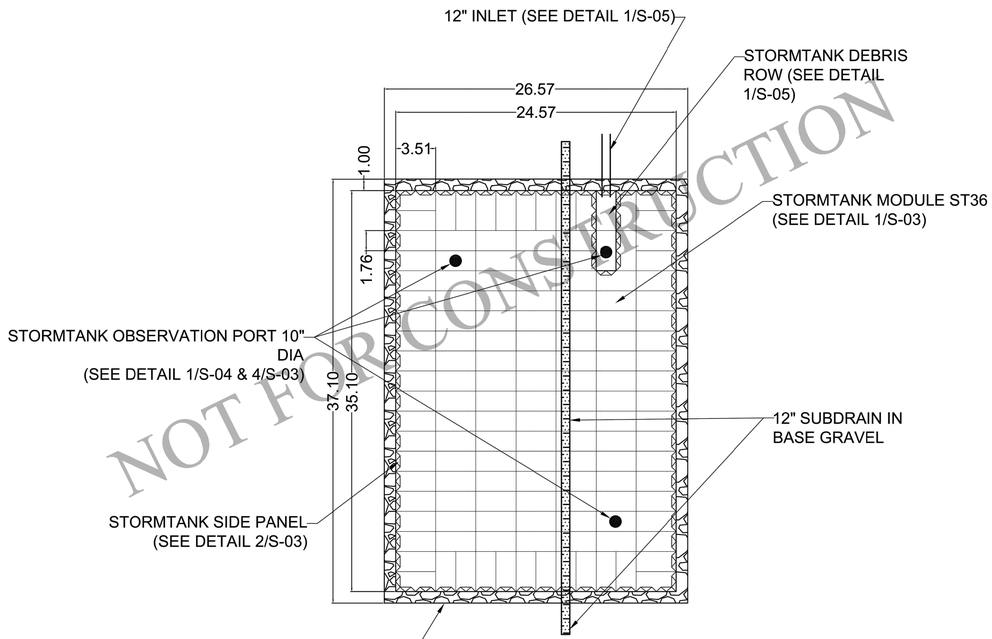
j. Materials must be stored in a manner to prevent prolonged exposure to UV light.
k. Storm tank system is not considered complete until all backfill is installed to the minimum depth shown on Detail 5 Typical System Cross-Section. The installer MUST insure that the project site remains dry and free of water (both surface and groundwater) until the installation is complete, including the backfill as noted, to avoid damage to the tank system due to buoyancy.

1 S-02 NOTES



TANK 2

2 S-02 MODULE LAYOUT
SCALE: NTS

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		3,106 ft^3
Module Storage Volume		2,496.54 ft^3
Stone Storage Volume (Excluding Top)		609.46 ft^3
System Footprint		985.97 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	258 yd^2 650 yd^2
Estimated Liner		2,923 ft^2
Estimated Stone Volume		106.46 yd^3
Excavation Required		225.31 yd^3
Minimum Excavation Depth		5.17 ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
△	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490
Page Name: Tank 2 Layout
Drawn by: PE | Checked By: JF
Scale: NTS | Date: 15AUG2023

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE STORMTANK SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH BRENTWOOD'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet: **03 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN
BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK
DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 17 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:
BRADLEY APARTMENT COMPLEX
CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY: _____ DATE

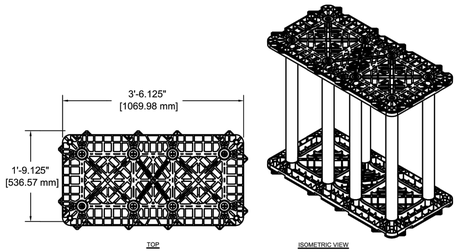
ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

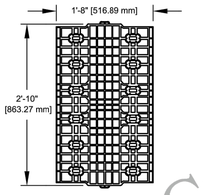
HWD RMB20032

TANK 1

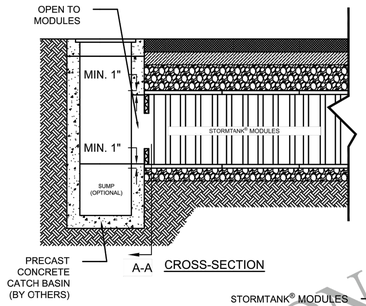


20 SERIES MODULE				
MODEL	HEIGHT (mm)	CAPACITY (m^3)	NOMINAL VOID	NOMINAL WEIGHT (kg)
2018	18" (457.2)	8.767 cf (0.2488)	95.50%	26.81 lbs. (12.16)
2024	24" (609.6)	11.789 cf (0.3346)	96.25%	29.39 lbs. (13.33)
2036	36" (914.4)	17.832 cf (0.5062)	97.05%	34.55 lbs. (15.67)

1 S-03 **36"(914 mm) MODULE DETAIL**

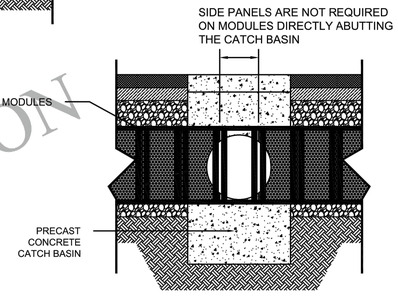


2 S-03 **36"(914 mm) SIDE PANEL DETAIL**

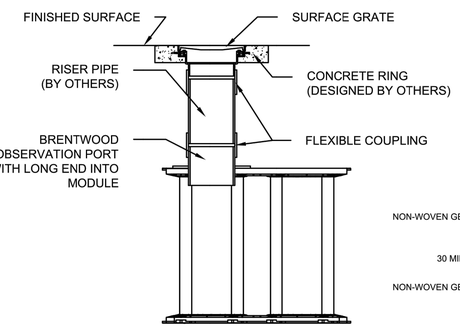


ORIFICE CONFIGURATIONS (BY OTHERS)

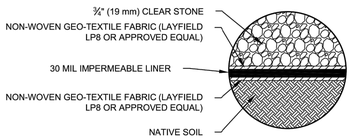
MAXIMUM PIPE DIAMETERS	
MODULE	NOMINAL PIPE DIAMETER (mm)
ST-18	14" (356)
ST-24	20" (508)
ST-30	26" (660)
ST-33	29" (737)
ST-36	32" (813)



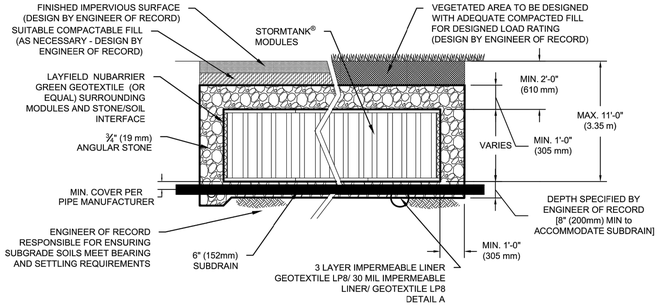
3 S-03 **TYP. CATCH BASIN ABUTMENT DETAIL (IF APPLICABLE)**



4 S-03 **SINGLE STACK OBSERVATION PORT DETAIL**



DETAIL "A"



5 S-03 **TYPICAL SINGLE STACKED SYSTEM BASIC CROSS-SECTION**

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		13,163 ft^3
Module Storage Volume		11,698 ft^3
Stone Storage Volume (Excluding Top)		1,465 ft^3
System Footprint		4,302 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,093 yd^2 2,418 yd^2
Estimated Liner		10,882 ft^2
Estimated Stone Volume		295 yd^3
Excavation Required		876 yd^3
Minimum Excavation Depth		4.67 ft
Stone Type		¾" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
△	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: TYP. Construction Details

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

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Sheet: **04 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 18 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

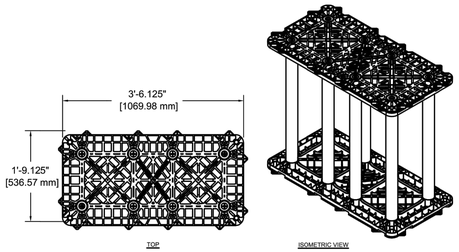
ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

TANK 2



20 SERIES MODULE				
MODEL	HEIGHT (mm)	CAPACITY (m^3)	NOMINAL VOID	NOMINAL WEIGHT (kg)
2018	18" (457.2)	8.767 cf (0.2488)	95.50%	26.81 lbs. (12.16)
2024	24" (609.6)	11.789 cf (0.3346)	96.25%	29.39 lbs. (13.33)
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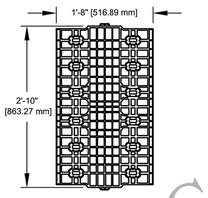
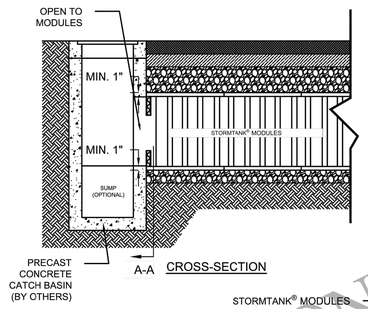
1 S-03 **36"(914 mm) MODULE DETAIL**



2 S-03 **36"(914 mm) SIDE PANEL DETAIL**



ORIFICE CONFIGURATIONS (BY OTHERS)

MAXIMUM PIPE DIAMETERS	
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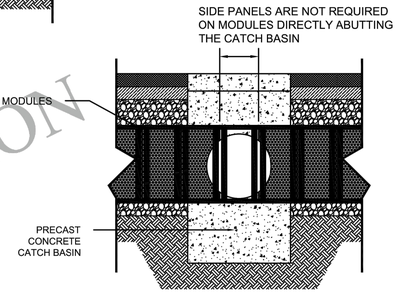
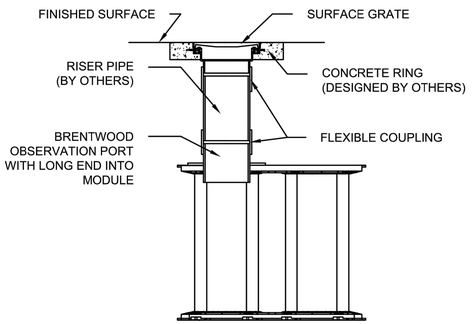
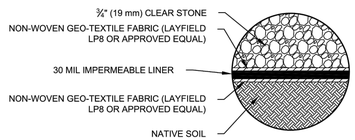


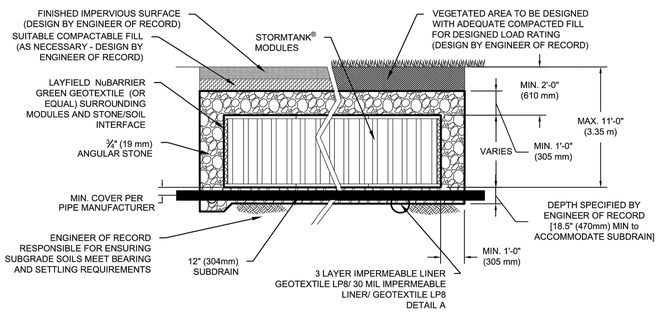
3 S-03 **TYP. CATCH BASIN ABUTMENT DETAIL (IF APPLICABLE)**



4 S-03 **SINGLE STACK OBSERVATION PORT DETAIL**



DETAIL "A"



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LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

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System Footprint		862.61 ft^2
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Estimated Liner		2,923 ft^2
Estimated Stone Volume		92.95 yd^3
Excavation Required		225.31 yd^3
Minimum Excavation Depth		5.17 ft
Stone Type		¾" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
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1	Revised Drawing	01NOV2019	AC
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Project Number: OP2021-0490

Page Name: TYP. Construction Details

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

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Sheet: **05 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 19 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK: WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

STEP 1:

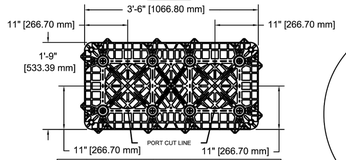
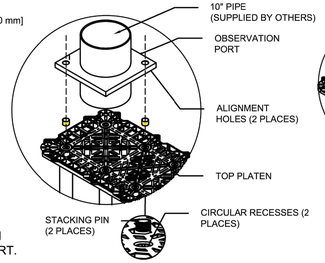


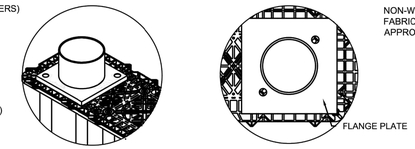
TABLE A: OBSERVATION PORT DIMENSION		
PORT SIZE	OPEN SIZE	RISER PIPE DIA.
6" (152 mm)	7" (178 mm)	6" (152 mm)
8" (203 mm)	9" (229 mm)	8" (203 mm)
10" (254 mm)	11" (279 mm)	10" (254 mm)

LAYOUT & CUT OPENING INTO EITHER CIRCLE SHOWN ON TOP PLATEN FOR BRENTWOOD OBSERVATION PORT.

STEP 2:

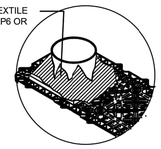


STEP 3:



INSTALL OBSERVATION PORT

STEP 4:

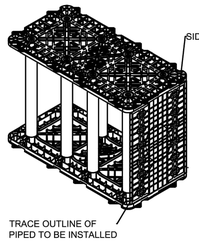


STEP 5:

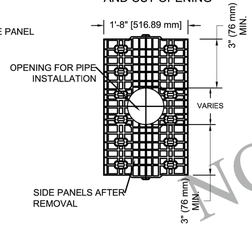
INSTALL GEOTEXTILE:
WRAP SPECIFIED GEOTEXTILE FABRIC AROUND ENTIRE INSTALLATION OF STORNTANK MODULES. CUT "X" PATTERN INTO GEOTEXTILE FABRIC AT OBSERVATION PORT AND PEEL EDGES OUT

1 S-04 TYP. OBSERVATION PORT INSTALLATION DETAIL

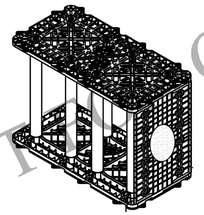
STEP 1:
LOCATE AND MARK OPENING



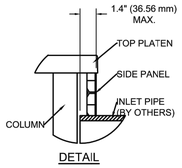
STEP 2:
REMOVE SIDE PANELS FROM MODULES AND CUT OPENING



STEP 3:
REINSTALL SIDE PANELS

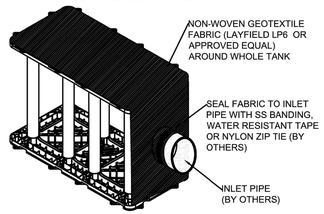


STEP 4:
INSTALL PIPE (SLIP FIT)



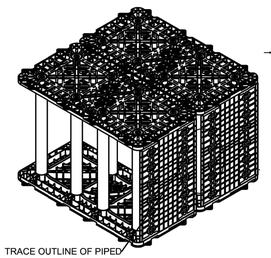
DETAIL

STEP 5:
WRAP AND SECURE GEOTEXTILE

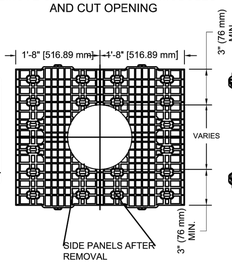


2 S-04 SMALL DIAMETER (14" [356 mm] AND SMALLER) PIPE CONNECTION DETAIL

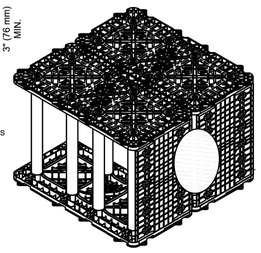
STEP 1:
LOCATE AND MARK OPENING



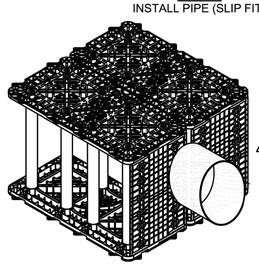
STEP 2:
REMOVE SIDE PANELS FROM MODULES AND CUT OPENING



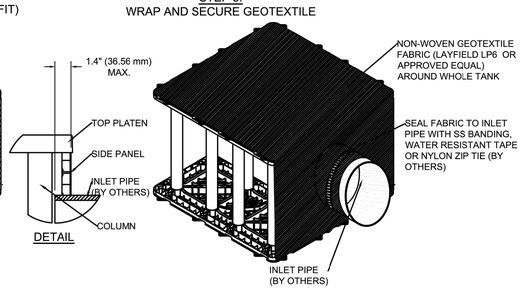
STEP 3:
REINSTALL SIDE PANELS



STEP 4:
INSTALL PIPE (SLIP FIT)



STEP 5:
WRAP AND SECURE GEOTEXTILE



3 S-04 LARGE DIAMETER (15" [381 mm] AND GREATER) PIPE CONNECTION DETAIL

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		16,269 ft^3
Module Storage Volume		14,194.54 ft^3
Stone Storage Volume (Excluding Top)		2,074.46 ft^3
System Footprint		5,287.97 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,351yd^2 3,068yd^2
Estimated Liner		13,805 ft^2
Estimated Stone Volume		401.46 yd^3
Excavation Required		1,101.31yd^3
Minimum Excavation Depth		4.67 5.17ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
0	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: TYP. Pipe Penetration Details

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE STORMTANK SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH BRENTWOOD'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet: **06 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 20 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

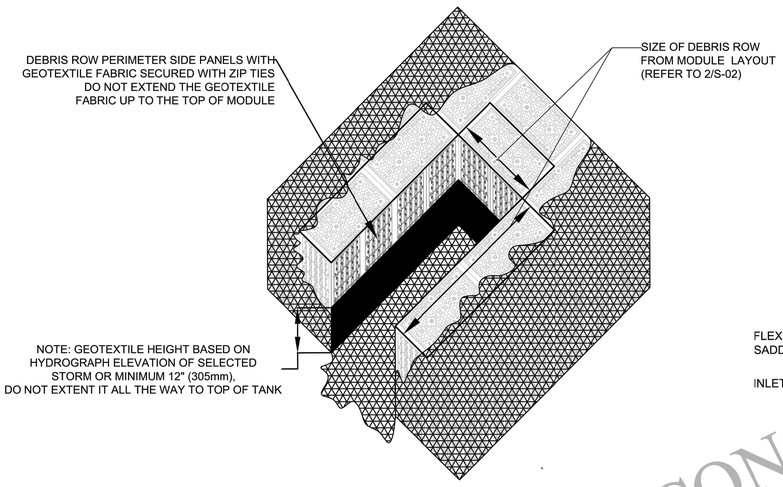
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

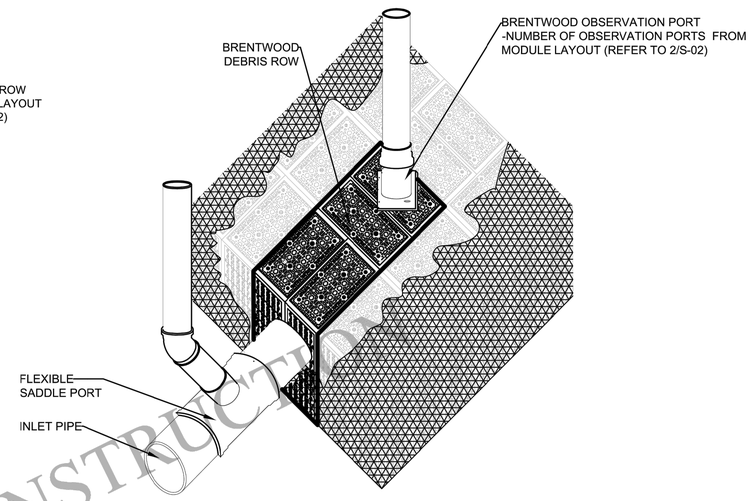
PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

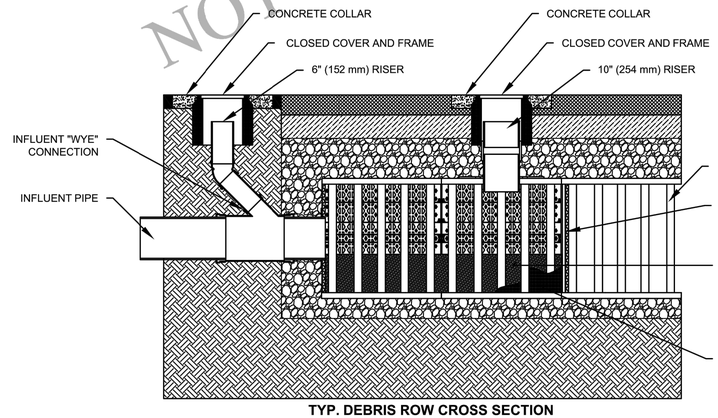
HWD RMB20032



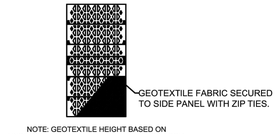
SIDE PANELS AND GEOTEXTILE FABRIC ALONG THE PERIMETER OF DEBRIS ROW



FINISHED DEBRIS ROW WITH INLET AND OBSERVATION PORT



TYP. DEBRIS ROW CROSS SECTION



1 / S-05 TYP. DEBRIS ROW DETAIL
SINGLE STACK SYSTEM

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		16,269 ft^3
Module Storage Volume		14,194.54 ft^3
Stone Storage Volume (Excluding Top)		2,074.46 ft^3
System Footprint		5,287.97 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,351yd^2 3,068yd^2
Estimated Liner		13,805 ft^2
Estimated Stone Volume		401.46 yd^3
Excavation Required		1,101.31yd^3
Minimum Excavation Depth		4.67 5.17ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
0	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: TYP. Debris Row Details

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

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Sheet: **07 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK

Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES

No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 21 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

General Conditions

- Review installation procedures and coordinate the installation with other construction activities, such as grading, excavation, utilities, construction access, erosion control, etc.
- Engineered Contract Drawings supersede all provided documentation, as the information furnished in this document is based on a typical installation.
- Coordinate the installation with manufacturer's representative/distributor to be on-site to review start up procedures and installation instructions.
- Components shall be unloaded, handled and stored in an area protected from traffic and in a manner to prevent damage.
- Assembled modules may be walked on, but vehicular traffic is prohibited until backfilled per Manufacturer's requirements. Protect the installation against damage with highly visible construction tape, fencing, or other means until construction is complete.

Ensure all construction occurs in accordance with Federal, Provincial and Local Laws, Ordinances, Regulations and Safety Requirements.

- Extra care and caution should be taken when temperatures are at or below 40° F (4.4° C).

NOT FOR CONSTRUCTION

These drawings shall not be used for construction until they have been reviewed for all design aspects (structural, geotechnical, stormwater) and approved by the Engineer of Record for the Project.

It is the Buyer's responsibility to ensure that the design into which the Product will be used has been approved by the Engineer of Record (not Layfield) with a review that may include, but not be limited to, Inlet and outlet configurations including inverts and pipe connections, storage volume, system footprint, Stormtank elevations including cover soil requirements, and proximity to structures and slopes.

1.0 StormTank® Assembly

StormTank® Modules:

StormTank® modules are delivered to the site as palletized components requiring simple assembly. No special equipment, tools or bonding agents are required; only a rubber mallet. A single worker can typically assemble a module in two minutes.

ASSEMBLY INSTRUCTIONS:

1. Place a platen on a firm level surface and insert the eight (8) columns into the platen receiver cups. Firmly tap each column with a rubber mallet to ensure the column is seated.
2. Place a second platen on a firm level surface. Flip the previously assembled components upside down onto the second platen, aligning the columns into the platen receiver cups.
3. Once aligned, seat the top assembly by alternating taps, with a rubber mallet at each structural column until all columns are firmly seated.

SIDE PANEL

4. If side panels are required, firmly tap the top platen upward to raise the top platen. Insert the side panel into the bottom platen.
5. Align the top of the side panel with the top platen and firmly seat the top platen utilizing a rubber mallet.

GENERAL NOTES:

- Remove packaging material and check for any damage. Report any damaged components to a StormTank® Distributor or Brentwood personnel.
- StormTank® components are backed by a one year warranty, when installed per manufacturer's recommendations.

2.0 Basin Excavation

1. Stake out and excavate to elevations per approved plans.Excavation Requirements:
   a. Sub-grade excavation must be a minimum of 6" (152 mm) below designed StormTank® Module invert.
   b. The excavation should extend a minimum of 12" (305 mm) beyond the StormTank® dimensions in each length and width (an additional 24" [610 mm] in total length and total width) to allow for adequate placement of side backfill material.
   c. Remove objectionable material encountered within the excavation, including protruding material from the walls.
   d. Furnish, install, monitor and maintain excavation support (e.g., shoring, bracing, trench boxes, etc.) as required by Federal, Provincial and Local Laws, Ordinances, Regulations and Safety Requirements.

3.0 Sub-Grade Requirements

1. Sub-grade shall be unfrozen, level (plus or minus 1%), and free of lumps or debris with no standing water, mud or muck. Do not use materials nor mix with materials that are frozen and/or coated with ice or frost.
2. Unstable, unsuitable and/or compromised areas should be brought to the Engineer's attention and mitigating efforts determined prior to compacting the sub-grade.
3. Sub-grade must be compacted to 95% Standard Proctor Density or as approved by the Engineer of Record. If code requirements restrict subgrade compaction, it is the requirement of the geotechnical Engineer to verify that the bearing capacity and settlement criteria for support of the system are met.

* The Engineer of Record shall reference Brentwood StormTank Module Installation document Appendix A for minimum soil bearing capacity required based on Load Rating and top cover depth. Minimum soil bearing capacity is required so that settlements are less than 1" through the entire sub-grade and do not exceed long-term 1/2" differential settlement between any two adjacent units within the system. Sub-grade must be designed to ensure soil bearing capacity is maintained throughout all soil saturation levels.

4.0 Leveling Bed Installation

1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. After the geotextile is secured, place a minimum 6" (152 mm) Leveling Bed.
   a. Material should be a 3/4" (19 mm) angular stone meeting Appendix B – Acceptable Fill Material.
   b. Material should be raked free of voids, lumps, debris, sharp objects and plate vibrated to a level with a maximum 1% slope.
3. Correct any unsatisfactory conditions.

5.0 StormTank® Module Placement

1. 1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. Mark the footprint of the modules for placement.
   a. Ensure module perimeter outline is square or similar prior to Module placement.
   b. Care should be taken to note any connections, ports or other irregular units to be placed.
3. Install the individual modules by hand, as detailed below.
   a. The modules should be installed as shown in the StormTank® submittal drawings with the short side of perimeter modules facing outward, except as otherwise required.
   b. Make sure the top/bottom platens are in alignment in all directions to within a maximum 1/4" (6.4 mm).
   c. For double stack configurations:
      i. Install the bottom module first. **DO NOT INTERMIX VARIOUS MODULE HEIGHTS ACROSS LAYERS.** Backfilling prior to proceeding to second layer is optional.
      ii. Insert stacking pins (2 per module) into the top platen of the bottom module.
      iii. Place the upper module directly on top of the bottom module in the same direction, making sure to engage the pins.
4. Install the modules to completion, taking care to avoid damage to the geotextile and/or liner material.
5. Locate any ports or other penetration of the StormTank®.
   a. Install ports/penetrations in accordance with the approved submittals, contract documents and manufacturer's recommendations.
6. Upon completion of module installation, wrap the modules in geotextile fabric and/or liner.
   a. Geotextile fabric shall be wrapped and secured per manufacturer's recommendations.
   b. Seal any ports/penetrations per Manufacturer's requirements

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations.

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

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Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
△	Preliminary Drawing	22OCT2019	AC
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2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: Supplementary Notes

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

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Sheet: **08 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER — WILLIAM A. SNIPES — No. 50477 — Exp. 06-30-25 — CIVIL — STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 22 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY: _____ DATE

ENGINEER OF WORK

WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032

6.0 Side Backfill

1. Inspect all geotextile, ensuring that no voids or damage exists; which will allow sediment into the StormTank® system.
2. Adjust the stone/soil interface geotextile along the side of the native soil to ensure the geotextile is taught to the native soil.
3. Once the geotextile is secured, begin to place the Side Backfill.
   a. a. Material should be a 3/4" (19 mm) angular stone meeting Appendix B – Acceptable Fill Material.
   b. b. Backfill sides "evenly" around the perimeter without exceeding single 12" (305 mm) lifts.
   c. Place material utilizing an excavator, dozer or conveyor boom.
   d. Utilize a plate vibrator to settle the stone and provide a uniform distribution.

Notes:

- Do not apply vehicular load to the modules during placement of side backfill. All material placement should occur with equipment located on the native soil surrounding the system.
- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations

7.0 Top Backfill (Stone)

1. Begin to place the Top Backfill.
   a. Material should be a 3/4" (19 mm) angular stone meeting Appendix B – Acceptable Fill Material.
   b. Place material utilizing an excavator, dozer or conveyor boom (Tech Bulletin Stormtank Module 25 Series Construction Equipment) and use a walk-behind plate vibrator to settle the stone and provide an even distribution.

DO NOT DRIVE ON THE MODULES WITHOUT A MINIMUM 12" (305 mm) COVER.

2. Upon completion of Top Backfilling, wrap the system in geotextile fabric and/or liner per manufacturer's recommendations.
3. Install metallic tape around the perimeter of the system to mark the area for future utility detection.

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations.

8.0 Suitable Compactable Fill

Following Top Backfill placement and geotextile fabric wrapping; complete the installation as noted below.

Vegetated Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover/backfill to finished grade must not be less then that shown on Detail 5 Typical System Cross Section, and the maximum depth from final grade to the bottom of the lowest module should not exceed that shown on Detail 5.
2. Finish to the surface and complete with vegetative cover.

Impervious Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover/backfill to finished grade must not be less then that shown on Detail 5 Typical System Cross Section, and the maximum depth from final grade to the bottom of the lowest module should not exceed that shown on Detail 5.
2. Finish to the surface and complete with asphalt, concrete, etc.

Notes:

- A vibratory roller may only be utilized after a minimum 24" (610 mm) of compacted material has been installed or for the installation of the asphalt wearing course.
- If damage occurs to the geotextile fabric, repair the material in accordance with the geotextile Manufacturer's recommendations.
- For most recent installation guidelines visit: http://www.brentwoodindustries.com/resources/

9.0 Inspection and Maintenance

If the following inspections and maintenance procedures are not followed as specified below then the end-user is responsible for the performance of the modules. These Maintenance procedure must be performed after a heavy rainfall, flooding or any incident that will vary the flow of water drastically.

Inspection

1. Inspect all observation ports, inflow and outflow connection and the discharge area
2. Identify and log any sediment and debris accumulation, system backup, or discharge rate changes.
3. If there is a sufficient need for a cleanout, contact a local cleaning company for assistance.

Cleaning:

1. If a pretreatment device is installed, follow manufacturer recommendations.
2. Using vacuum pump truck, evacuate debris from the inflow and outflow points.
3. Flush the system with clean water, forcing debris from the system.
4. Repeat steps 2 and 3 until no debris is evident

STORMTANK Expert Results™

TECH BULLETIN

Revision 1 02/09/21

StormTank® Module 20 Series Construction Equipment

Background

To provide clarity on construction equipment that can travel over a StormTank Module system during construction, the below table has been created. This table is not all inclusive and evaluation by the contractor on a case by case equipment may be necessary before proceeding.

Cover Depth over Module	Wheel Load (Vehides and Equipment)		Maximum Tracked Equipment		Roller Loads
	Maximum (Vehicle)	Maximum (Equipment)	Track Width	Maximum Weight (including material)	Maximum Drum Weight
6 in.	Not Permitted	Not Permitted	N/A	LGP Equipment (< 5 psi) Only	To Be Evaluated on a Case by Case Basis
12 in.	5,000 lbs.	7,500 lbs.	N/A	LGP Equipment (< 10 psi) Only	To Be Evaluated on a Case by Case Basis
18 in.	8,500 lbs.	12,000 lbs.	12 in. 18 in. 24 in. 36 in.	To Be Evaluated on a Case by Case Basis	To Be Evaluated on a Case by Case Basis
24 in.	13,000 lbs.	16,000 lbs.	12 in. 18 in. 24 in. 36 in.	To Be Evaluated on a Case by Case Basis	To Be Evaluated on a Case by Case Basis

1. Vehicle has a tire contact area of 10"x10"
2. Equipment has a tire contact area of 10"x20" (duel wheel trucks like dump trucks)
3. Cover depth is based on angular material, utilization of other materials impacts load rating
4. Dumping directly over the system is prohibited, excluding asphalt into a paver unit
5. Consideration must be given for rutting into cover material when utilizing table
6. Excavation equipment cannot operate (excavate) from over the system
7. Material is prohibited from being stockpiled over a system
8. For specialty equipment (material handles, cranes, units with outriggers, etc.) contact a StormTank Rep. before utilization over the system

LAYFIELD
18417 72nd Avenue
South Kent, WA 98032
Ph: (425)-254-1075
seattle@layfieldgroup.com

SINGLE STACK MODULE SYSTEM

Total Storage Volume		16,269 ft^3
Module Storage Volume		14,194.54 ft^3
Stone Storage Volume (Excluding Top)		2,074.46 ft^3
System Footprint		5,287.97 ft^2
Estimated Geotextile Fabric	NuBarrier LP8	1,351yd^2 3,068yd^2
Estimated Liner		13,805 ft^2
Estimated Stone Volume		401.46 yd^3
Excavation Required		1,101.31yd^3
Minimum Excavation Depth		4.67 5.17ft
Stone Type		$\frac{3}{4}$" Clear Stone
Stone Void Space		40%
Module Type		20 Series ST-36

1065 E. BRADLEY AVENUE
El Cajon, CA

REV	Record of Changes	Date	By
0	Preliminary Drawing	22OCT2019	AC
1	Revised Drawing	01NOV2019	AC
2	Revised Drawing	20NOV2019	AC
3	Revised Drawing	19MAY2020	AC
4	Revised Drawing	14JUL2020	AC
5	Revised Drawing + Layout	11JAN2022	LP
6	Corrected Quantities	15AUG2023	PE
7	Second Tank Added	31OCT2023	PE

Project Number: OP2021-0490

Page Name: Supplementary Notes

Drawn by: PE | Checked By: JF

Scale: NTS | Date: 15AUG2023

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE STORMTANK SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH BRENTWOOD'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet: **09 OF 09**

ANSI B Size Page (Horizontal)

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER · WILLIAM A. SNIPES · No. 50477 · Exp. 06-30-25 · CIVIL · STATE OF CALIFORNIA

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 23 | COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS | 27 SHEETS

POST-CONSTRUCTION BMP DETAILS FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

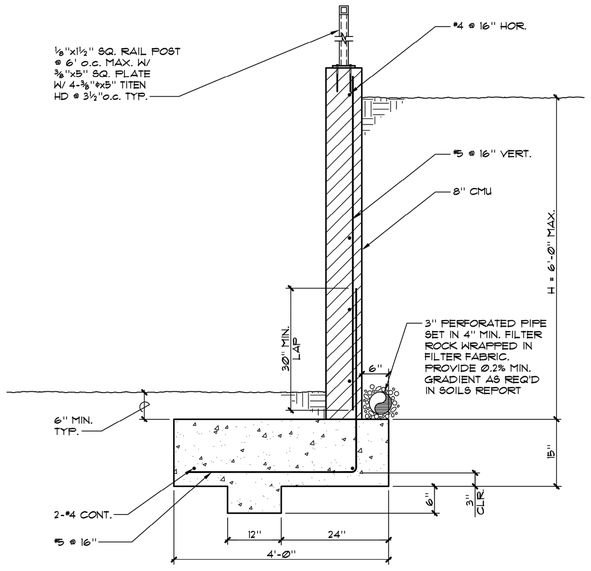
BY: _____ DATE

ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

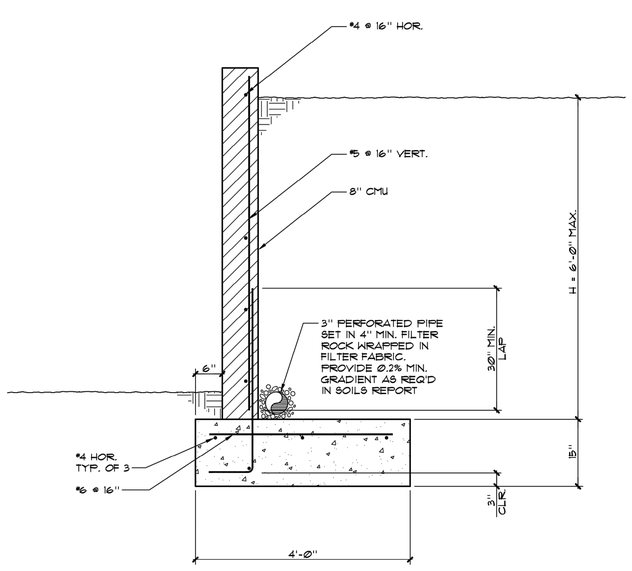
ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234

HWD RMB20032



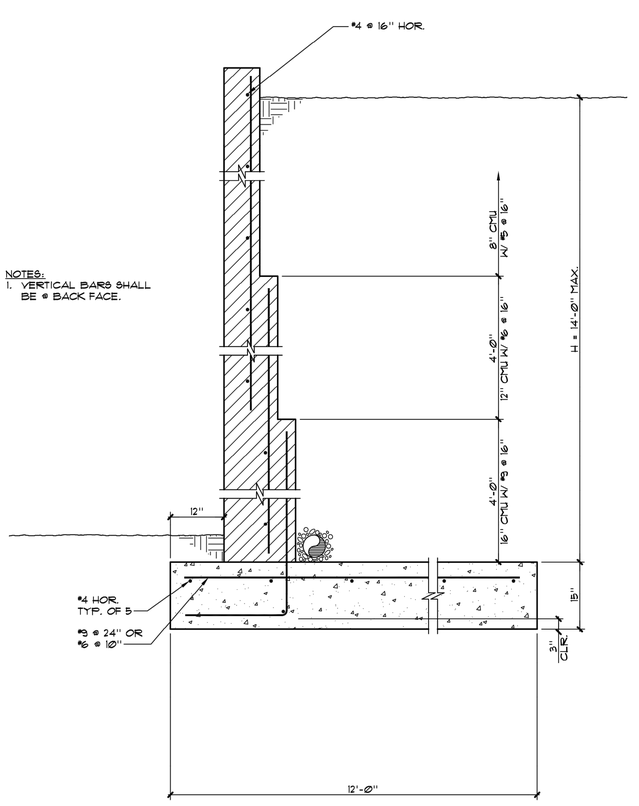
H = 6'-Ø"

SITE RETAINING WALL @ CUT SIDE



H = 6'-Ø"

SITE RETAINING WALL @ FILL SIDE



H = 14'-Ø"

SITE RETAINING WALL @ FILL SIDE

H = 8'-Ø" & 11'-Ø"

SITE RETAINING WALL @ CUT SIDE

¾"=1'-Ø"

1

H = 8'-Ø" & 11'-Ø"

SITE RETAINING WALL @ FILL SIDE

¾"=1'-Ø"

2

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE 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 COUNTY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

MARTIN STRUCTURAL CONSULTING, INC.
547 E. 6TH AVE.
ESCONDIDO, CA 92025
(760) 745-6012

BY: Tod Martin DATE: 1/20/20
NAME, R.C.E.
EXPIRES

REGISTERED PROFESSIONAL ENGINEER TOD R. MARTIN S 4096 EXP. 9/22 STRUCTURAL STATE OF CALIFORNIA

MARTIN STRUCTURAL CONSULTING, INC.
547 E. 6TH AVE., ESCONDIDO, CA 92025 (760) 445-3453

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91

LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET

RECORD FROM: CITY OF EL CAJON

ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET 24	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

RETAINING WALL PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER

BY:

DATE

ENGINEER OF WORK

TOD MARTIN
NAME R.C.E.

PDS2019-LDGRMJ-30236

HWD RMB20032

ENGINEER'S NAME – MARTIN STRUCTURAL CONSULTING, INC.
PHONE NO. (760) 445-3453

GENERAL NOTES

1. ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE PROVISIONS OF THE 2022 EDITION OF THE "CALIFORNIA BUILDING CODE", AND STANDARDS REFERENCED THEREIN.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT SHALL IMMEDIATELY BE NOTIFIED IN WRITING, OF ANY DISCREPANCIES.
3. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF, AND A SOLUTION GIVEN BY, THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
5. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THESE STRUCTURAL DRAWINGS.

FOUNDATIONS AND SOILS

1. AN EXPLORATION OF THE SOILS UNDERLYING THE SITE OF THIS PROJECT WAS MADE BY: SOIL TESTERS INC. AND IS DESCRIBED IN A REPORT DATED: 6/27/19 WITH ADDENDUMS DATED 1/3/20 AND 3/21/22 WHICH IS ON FILE WITH THE ARCHITECT. THE CONTRACTOR SHOULD BECOME FAMILIAR WITH THE INFORMATION CONTAINED THEREIN, PRIOR TO COMMENCING ANY WORK.
2. BEFORE COMMENCING ANY EARTHWORK, THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES, VALVE PITS OR VAULTS AND SHALL NOT PERFORM ANY WORK THAT WILL DAMAGE OR INTERFERE WITH THE SERVICE OF SAME.
3. FOOTING EXCAVATIONS SHALL BE NEAT AND TRUE TO LINE, WITH ALL LOOSE MATERIAL AND STANDING WATER REMOVED BEFORE FOOTING CONCRETE IS PLACED.
4. EARTH FORMS MAY BE USED FOR FOOTINGS ONLY WHERE THE SOIL IS FIRM AND STABLE AND THE CONCRETE WILL NOT BE EXPOSED.
5. SOIL COMPACTION AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE SOILS REPORT. ALL SOILS SITE WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE SOILS ENGINEER.
6. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
   A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
   B. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED.
   C. THE FOUNDATION EXCAVATIONS, THE SOILS EXPANSIVE CHARACTERISTICS AND BEARING CAPACITY CONFORM TO THE SOILS REPORT.
7. FOUNDATIONS SUPPORTING WOOD SHALL EXTEND AT LEAST 8" ABOVE THE ADJACENT FINISH GRADE PROVIDE 18" CLEARANCE UNDER WOOD JOISTS AND 12" CLEARANCE UNDER WOOD GIRDERS.
8. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD SHALL BE PERFORMED TO:
   1. VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT.
   2. VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH AND BEARING STRATA.
   3. PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY, BEARING VALUES.
9. ALLOWABLE SOIL BEARING PRESSURE SHALL BE 2000 PSF PER SOILS REPORT.

REINFORCED CONCRETE

1. THE MINIMUM 28-DAY CYLINDER COMPRESSIVE STRENGTHS SHALL BE 2500 PSI FOR ALL CONCRETE. WATER TO CEMENTITIOUS MATERIALS RATIO SHALL BE 0.5 MAX.
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
3. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33.
4. ADMIXTURES SHALL CONFORM TO ASTM A494 AND SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT.
5. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
6. ALL VERTICAL SURFACES OF CONCRETE ABOVE FINISHED GRADE SHALL BE FORMED.
7. TYPICAL EMBEDMENT OF 5/8" DIAMETER ANCHOR BOLTS SHALL BE 7".
8. TYPICAL ANCHOR BOLTS FOR HOLDOWNS SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTIONS.
9. THIS DESIGN ASSUMES THE SOILS TO HAVE NEGLIGIBLE SULFATE CONTENT. IF SULFATE CONTENT IS BELIEVED TO BE MODERATE OR WORSE, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY FOR REVISED CONCRETE SPECIFICATIONS.

REINFORCING STEEL

1. BAR REINFORCEMENT SHALL CONFORM TO GRADE 60 OF ASTM A615, INCLUDING SUPPLEMENT S1. ALL REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706.
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE AMERICAN CONCRETE INSTITUTE (AC) 318, U.O.N.
3. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
4. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
5. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.
6. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.

CONCRETE BLOCK/UNIT MASONRY

1. ALL CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE I, MEDIUM WEIGHT, COMPRESSIVE STRENGTH OF UNITS SHALL BE AT LEAST 1900 PSI. DESIGN f'm = 1,500 PSI. SINGLE OR DOUBLE OPEN END UNITS SHALL BE USED ON ALL SOLID GROUTED WALLS.
2. MORTAR SHALL BE TYPE "S" PORTLAND CEMENT/LIME OR MORTAR CEMENT, CONFORMING TO IBC TABLE NO. 2103.8 AND ATTAINING A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI PRIOR TO BACKFILLING BEHIND WALLS. PLASTIC AND MASONRY CEMENTS ARE NOT ACCEPTABLE.
3. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI PRIOR TO BACKFILLING BEHIND WALLS AND BE IN CONFORMANCE WITH IBC SECTION 2103.12 AND SHALL CONTAIN A WATER REDUCING ADMIXTURE.
4. ALL REINFORCEMENT SHALL CONFORM TO GRADE 60 OF ASTM A615, INCLUDING SUPPLEMENT S1.
5. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS.
6. VERTICAL REINFORCEMENT IN WALLS, PILASTERS, ETC., SHALL BE DOWELED TO THE FOOTINGS WITH DOWELS THE SAME SIZE AND SPACING AS THE VERTICAL REINFORCEMENT.
7. ELECTRICAL CONDUIT SHALL NOT BE PLACED IN THE SAME CELL AS REINFORCEMENT UNLESS APPROVED BY THE ENGINEER.
8. OVERHANGING MORTAR AND MORTAR DROPPINGS AND ALL DEBRIS SHALL BE REMOVED FROM ALL CELLS TO RECEIVE GROUT.
9. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT THE BASES OF VERTICAL CELLS HAVING GROUT LIFTS WHICH ARE MORE THAN 4'-0" IN HEIGHT.
10. SOLID GROUT ALL MASONRY CELLS.
11. WHEN GROUTING IS STOPPED FOR ONE HOUR OR MORE, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT 1-1/2" BELOW THE TOP OF THE UPPERMOST UNIT.
12. GROUT SHALL BE CONSOLIDATED IN LIFTS WITH A MECHANICAL VIBRATOR.

SPECIAL INSPECTION

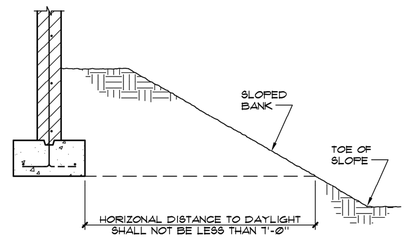
STATEMENT OF SPECIAL INSPECTION:
SPECIAL INSPECTION SHALL BE PROVIDED FOR CMU AND SOILS IN ACCORDANCE WITH THE FOLLOWING TABLE:

TYPE OF INSPECTION	INSPECTION TASK	FREQUENCY OF INSPECTION
STRUCTURAL MASONRY	1. AT THE START OF LAYING UNITS INSPECTOR SHALL CHECK PROPORTIONS OF SITE PREPARED MORTAR, CONSTRUCTION OF MORTAR JOINTS, AND LOCATION OF REINFORCEMENT	PERIODIC
	2. PRIOR TO GROUTING THE INSPECTOR SHALL CHECK SIZE AND LOCATION OF MASONRY, TYPE, SIZE, GRADE AND LOCATION OF REINFORCEMENT AND ANCHORS, GROUT SPACE IS CLEAN AND CONSTRUCTION OF MORTAR JOINTS.	PERIODIC
	3. DURING GROUTING THE INSPECTOR SHALL VERIFY PROPER PLACEMENT OF GROUT.	CONTINUOUS
SOILS	1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC
	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC

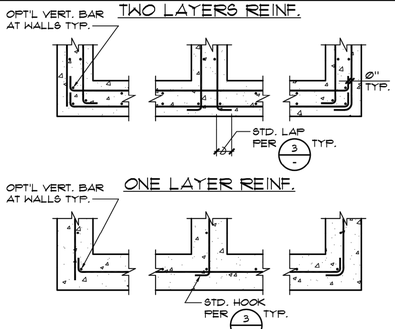
A. THE SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO THE STANDARD CITY INSPECTIONS, AS AMENDED. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR.
B. CONTINUOUS INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED. WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED IN ACCORDANCE WITH THE PROVISIONS OF IBC CHAPTER 17, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL THE WORK IS INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.
C. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE CITY OF RECORD DEVELOPMENT SERVICES DIVISION TO PERFORM THE TYPE OF INSPECTION SPECIFIED.
D. PERIODIC SPECIAL INSPECTION SHALL BE PERFORMED BY EITHER THE REGISTERED DESIGN PROFESSIONAL OF RECORD OR A REGISTERED SPECIAL INSPECTOR.
E. SOIL ENGINEER OF RECORD SHALL SUBMIT A FINAL COMPACTION REPORT TO BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO FOUNDATION INSPECTION.
F. A PROPERTY OWNER'S FINAL REPORT OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNERS AGENT OF RECORD, ARCHITECT OF RECORD, OR ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.

EXCEPTIONS:
1. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD.
2. SMOKE CONTROL SYSTEM, BY THE MECHANICAL ENGINEER OF RECORD.
3. WHEN WAIVED BY THE BUILDING OFFICIAL.

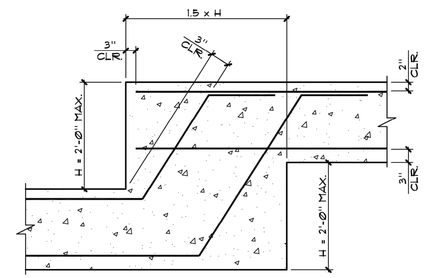
G. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.
H. WORK REQUIRING SPECIAL INSPECTION THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE AT NO COST TO THIS JURISDICTION.
I. A CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
J. AN APPLICATION FOR OFF-SITE FABRICATION MUST BE SUBMITTED TO THE FIELD INSPECTION DIVISION FOR APPROVAL PRIOR TO FABRICATION. SEE BUILDING NEWSLETTER 17-6 FOR OFF-SITE FABRICATION REQUIREMENTS.
K. A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION MUST BE COMPLETED AND SUBMITTED TO THE FIELD INSPECTION DIVISION PRIOR TO ERECTION OF PRE-FABRICATED COMPONENTS.
L. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE CITY OF RECORD, DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
M. NOTICE TO THE APPLICANT/OWNER/OWNER'S AGENT/ARCHITECT OR ENGINEER OF RECORD: BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIALS TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.
N. NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUB-CONTRACTOR/OWNER-BUILDER: BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIALS TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.
O. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE MAIN WINDFORCE-RESIST SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLD-DOWNS. (NOT REQUIRED STRUCTURALLY WHERE NAIL SPACING IS GREATER THAN 4"o.c.)



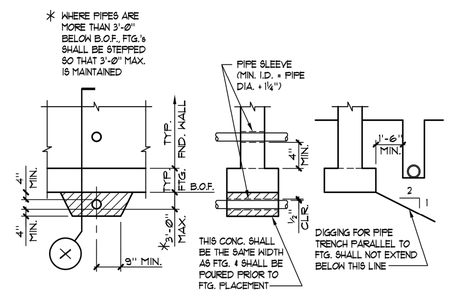
FOUNDATION ADJACENT TO BANK 4
¾"=1'-0"
4/XS1=DAYLIGHT2



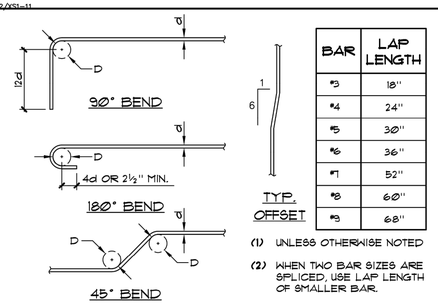
REINF. @ CONC. WALL & FOOTING INTERSECTIONS 1
¾"=1'-0"
6/XS1=8



WALL FOOTING STEPS 5
¾"=1'-0"
4/XS1=STEP



1"=1'-0" 2
2/XS1=11



BAR	LAP LENGTH
#3	18"
#4	24"
#5	30"
#6	36"
#7	52"
#8	60"
#9	68"

(1) UNLESS OTHERWISE NOTED
(2) WHEN TWO BAR SIZES ARE SPLICED, USE LAP LENGTH OF SMALLER BAR.

NOTE:
D = 6d FOR #3 THRU #8
D = 8d FOR #9 THRU #10 & #11

TYP. REINFORCING BENDS / LAPS 3
1"=1'-0"
12/XS1=12

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

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MARTIN STRUCTURAL CONSULTING, INC.
547 E. 6TH AVE.
ESCONDIDO, CA 92025
(760) 745-6012

BY: _____ DATE: 1/20/20
NAME, R.C.E.
EXPIRES

REGISTERED PROFESSIONAL ENGINEER TOD D. MARTIN S 4096 EXP. 9/22 STRUCTURAL STATE OF CALIFORNIA

MARTIN STRUCTURAL CONSULTING, INC.
547 E. 6TH AVE., ESCONDIDO, CA 92025 (760) 445-3453

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK
DESCRIPTION: STANDARD BENCHMARK # 91
LOCATION: TOP OF CURB, N END CB RETURN AT NW CORNER GRETA STREET AND FIRST STREET
RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

PRIVATE CONTRACT

SHEET		
25	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

RETAINING WALL PLAN FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

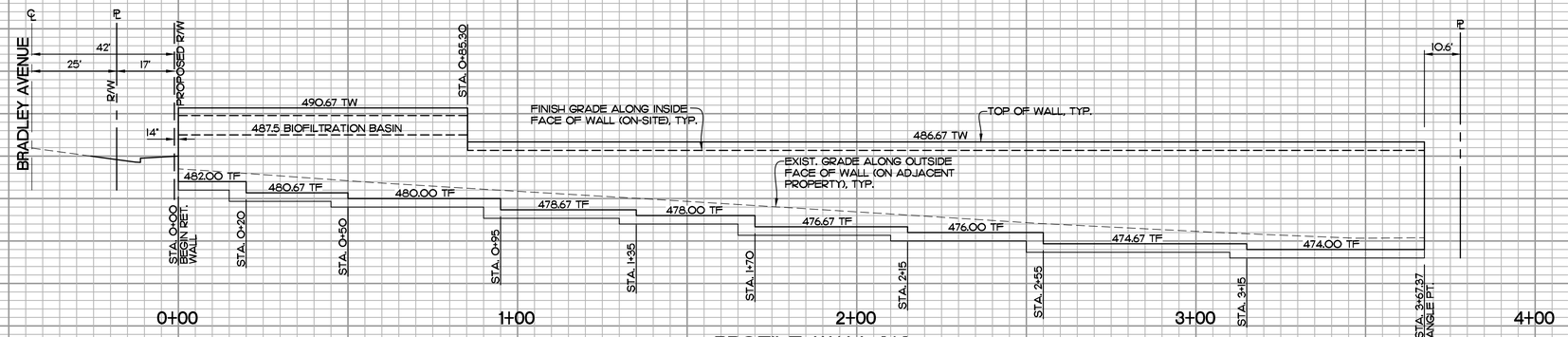
APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY: _____ DATE

ENGINEER OF WORK
TOD MARTIN
NAME R.C.E.

PDS2019-LDGRMJ-30236

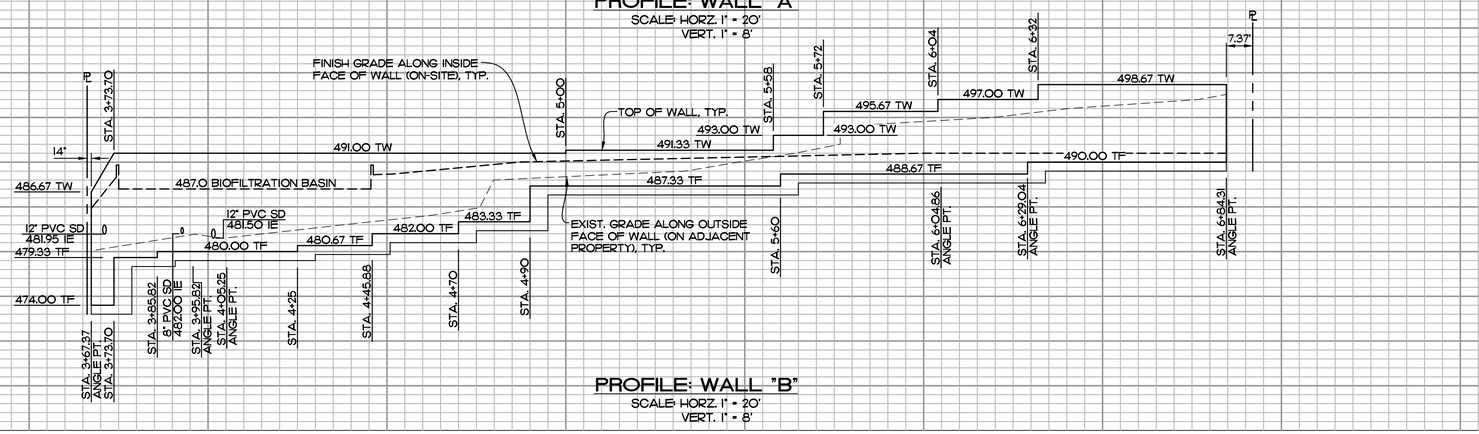
HWD RMB20032

ENGINEER'S NAME - MARTIN STRUCTURAL CONSULTING, INC.
PHONE NO.(760) 445-3453



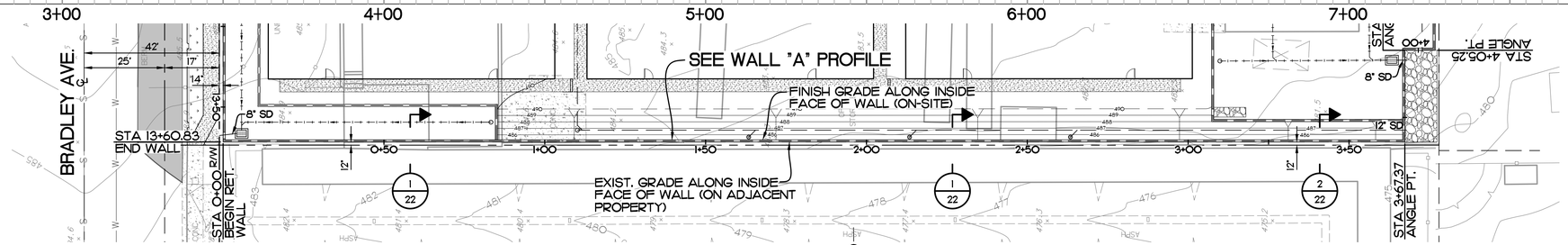
PROFILE: WALL "A"

SCALE: HORZ. 1" = 20'
VERT. 1" = 8'

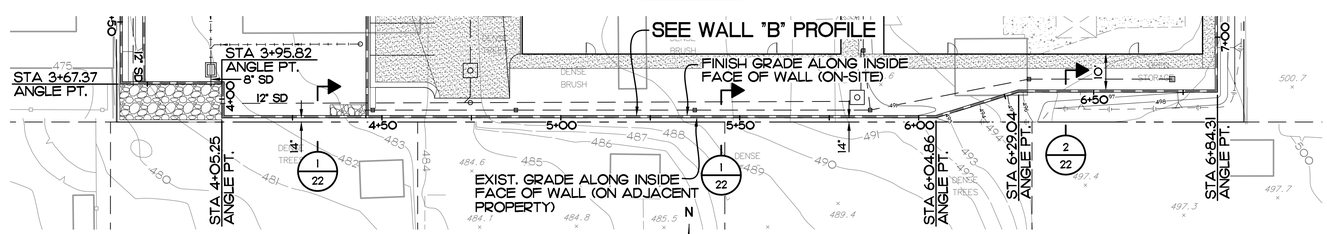


PROFILE: WALL "B"

SCALE: HORZ. 1" = 20'
VERT. 1" = 8'



WALL "A"



WALL "B"

20 10 0 20 40 60
SCALE: 1"=20'

COUNTY APPROVED CHANGES			
No.	Description	Approved by	Date

BENCH MARK

DESCRIPTION: STANDARD BENCHMARK # 91
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RECORD FROM: CITY OF EL CAJON
ELEVATION: 515.161 DATUM: NAVD 88

RECORD PLAN

BY: _____ DATE: _____

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033
WILLIAM A. SNIPES R.C.E. 50477
EXPIRES 06-30-25

REGISTERED PROFESSIONAL ENGINEER • WILLIAM A. SNIPES • No. 50477 • Exp. 06-30-25 • CIVIL • STATE OF CALIFORNIA

PRIVATE CONTRACT

SHEET		
26	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

WALL PLAN / PROFILE FOR:

BRADLEY APARTMENT COMPLEX

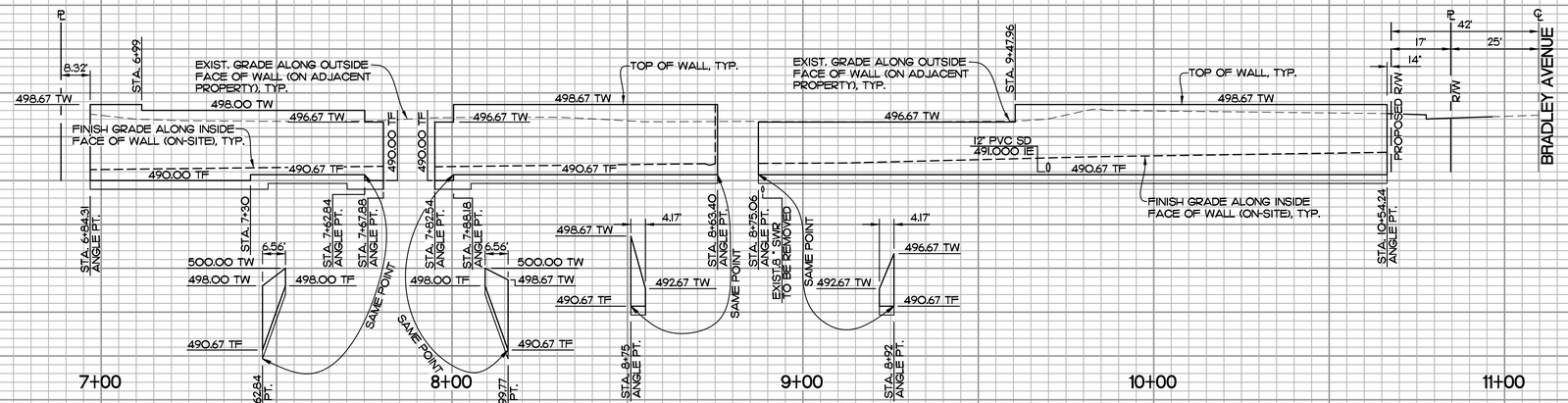
CALIFORNIA COORDINATE INDEX 238-1785

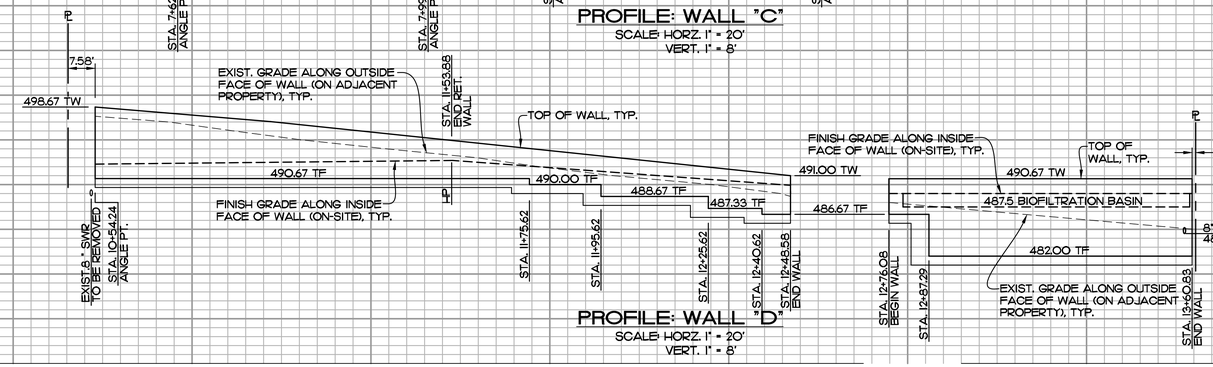
APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
BY: _____ DATE

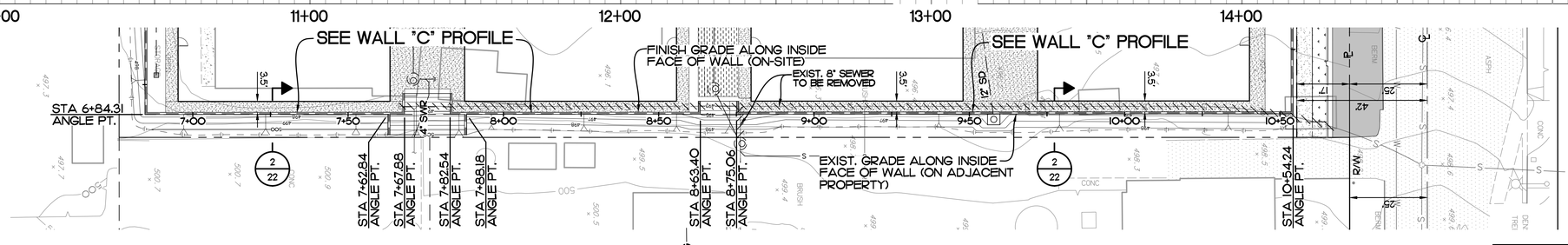
ENGINEER OF WORK
WILLIAM A. SNIPES R.C.E. 50477

PDS2019-LDGRMJ-30236

ENGINEER'S NAME - SNIPES-DYE ASSOCIATES
PHONE NO. (619) 697-9234







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SHEET 27	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	27 SHEETS

WALL PLAN / PROFILE FOR:

BRADLEY APARTMENT COMPLEX

CALIFORNIA COORDINATE INDEX 238-1785

APPROVED: FOR WILLIAM P. MORGAN COUNTY ENGINEER
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