

**CITY STANDARD GRADING & DRAINAGE NOTES:**

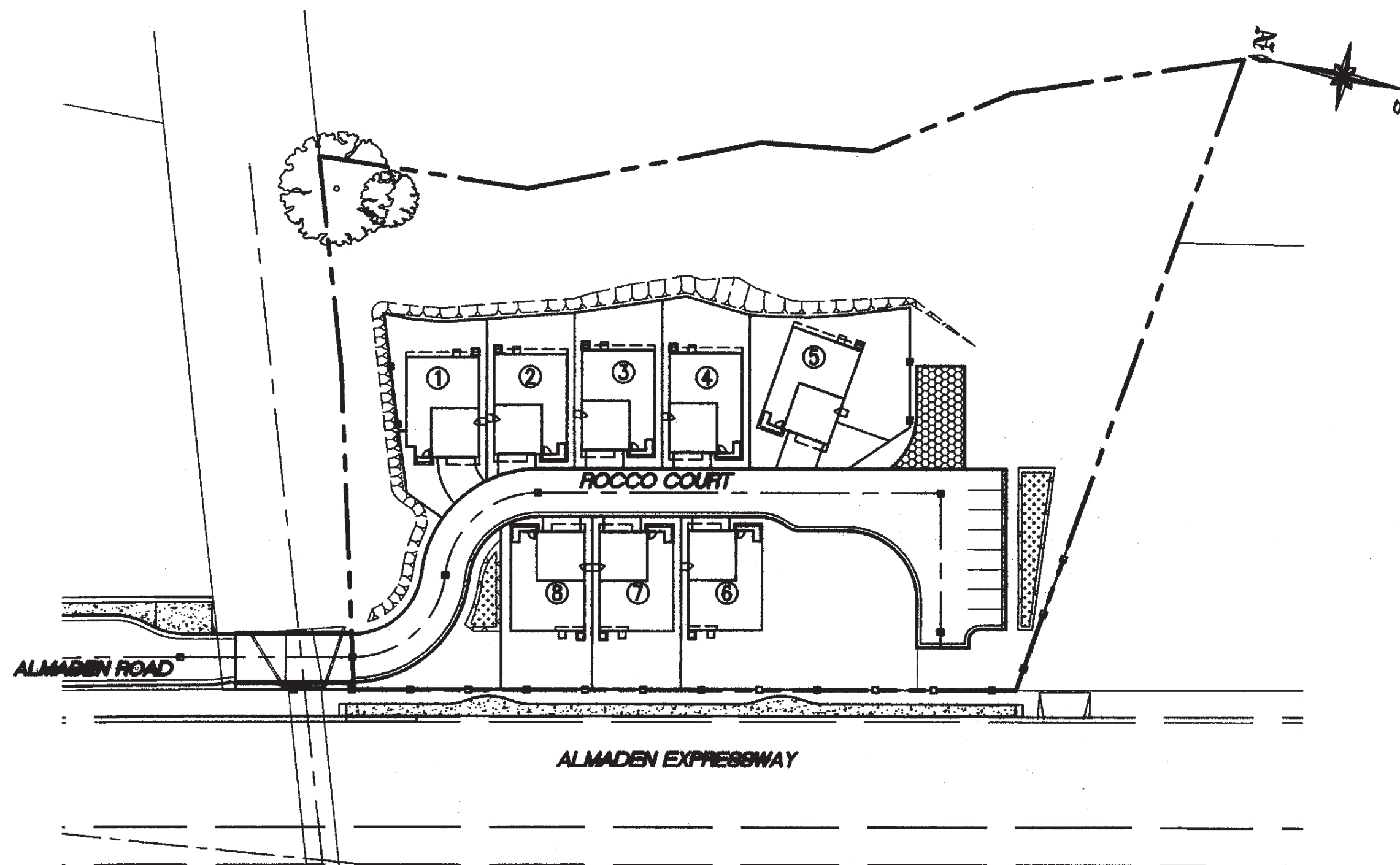
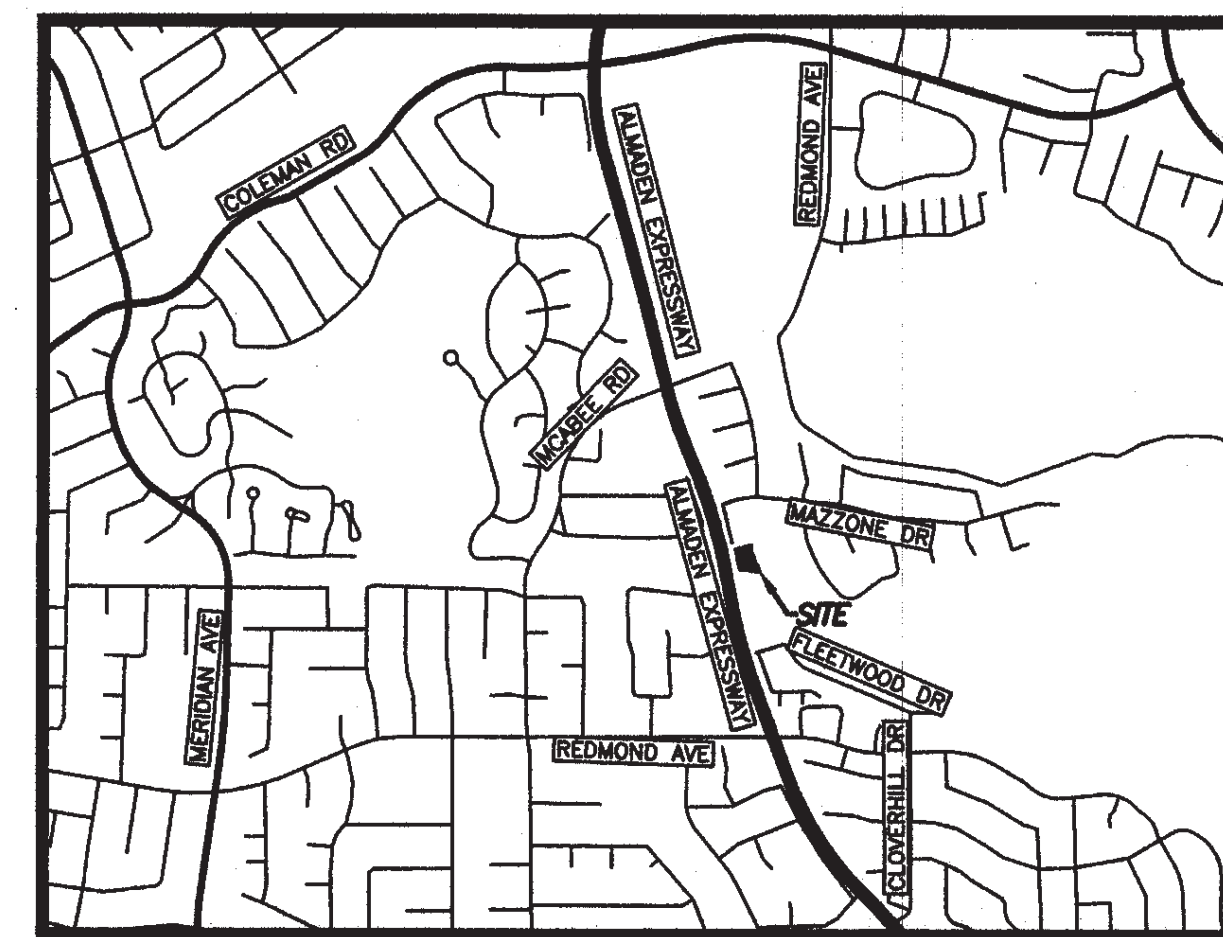
Note: This drawing is approved subject to:

- ALL GRADING IS SUBJECT TO OBSERVATION BY THE CITY. PERMITTEE OR REPRESENTATIVE SHALL NOTIFY THE CITY OF SAN JOSE DEPARTMENT OF PUBLIC WORKS PROJECT INSPECTOR AT LEAST 48 HOURS BEFORE START OF ANY GRADING.  
THE PROJECT INSPECTOR IS STEVE PLETSCHE VOICEMAIL NO. (408) 591-0565
- APPROVAL OF THIS PLAN APPLIES ONLY TO (A) THE EXCAVATION, PLACEMENT, AND COMPACTION OF NATURAL EARTH MATERIALS, (B) THE INSTALLATION OF ON-SITE (I.E. PRIVATE PROPERTY) STORM WATER CONVEYANCE AND TREATMENT FACILITIES THAT ARE OUTSIDE OF THE 5-FOOT BUILDING ENVELOPE, AND (C) THE INSTALLATION OF RETAINING STRUCTURES. THIS APPROVAL DOES NOT CONFER ANY RIGHTS OF ENTRY TO EITHER PUBLIC PROPERTY OR THE PRIVATE PROPERTY OF OTHERS. APPROVAL OF THIS PLAN ALSO DOES NOT CONSTITUTE APPROVAL OF ANY IMPROVEMENTS WITH THE EXCEPTION OF THOSE LISTED ABOVE. PROPOSED IMPROVEMENTS, WITH THE EXCEPTION OF THOSE LISTED ABOVE, ARE SUBJECT TO REVIEW AND APPROVAL BY THE RESPONSIBLE AUTHORITIES AND ALL OTHER REQUIRED PERMITS SHALL BE OBTAINED.
- UNLESS OTHERWISE NOTED ON THE PLAN, ANY DEPICTION OF A RETAINING STRUCTURE ON THIS PLAN SHALL NOT CONSTITUTE APPROVAL FOR CONSTRUCTION OF THE RETAINING STRUCTURE UNLESS A SEPARATE STRUCTURAL REVIEW, BY THE DEPARTMENT OF PUBLIC WORKS IS COMPLETED AND APPROVED
- IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE OR AGENT TO IDENTIFY, LOCATE AND PROTECT ALL UNDERGROUND FACILITIES.
- THE PERMITTEE OR AGENT SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
- ALL GRADING SHALL BE PERFORMED IN SUCH A MANNER AS TO COMPLY WITH THE STANDARDS ESTABLISHED BY THE AIR QUALITY MANAGEMENT DISTRICT FOR AIRBORNE PARTICULATES.
- THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH THE FLOOD HAZARD AREA REGULATIONS AS STATED IN CHAPTER 17.08 OF THE SAN JOSE MUNICIPAL CODE.
- ALL KNOWN WELL LOCATIONS ON THE SITE HAVE BEEN INCLUDED AND SUCH WELLS SHALL BE MAINTAINED OR ABANDONED ACCORDING TO CURRENT REGULATIONS ADMINISTERED BY THE SANTA CLARA VALLEY WATER DISTRICT. CALL (408) 265-2600 EXTENSION 2660 TO ARRANGE FOR DISTRICT OBSERVATION OF ALL WELL ABANDONMENTS.
- IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHOULD CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL, PURSUANT TO SECTION 7050.5 OF THE HEALTH AND SAFETY CODE, AND SECTION 5097.94 OF THE PUBLIC RESOURCES CODE OF THE STATE OF CALIFORNIA, NOTIFY THE SANTA CLARA COUNTY CORONER IMMEDIATELY.
- THIS PLAN DOES NOT APPROVE THE REMOVAL OF TREES. APPROPRIATE TREE REMOVAL PERMITS AND METHODS OF TREE PRESERVATION SHOULD BE OBTAINED FROM THE CITY'S PLANNING DEPARTMENT AND THE CITY ARBORIST.
- FOR NON-RESIDENTIAL PROJECTS, ANY NON-HAZARDOUS EXPORT RESULTING FROM PROJECT RELATED EXCAVATION OR LAND CLEARING SHALL BE 100% REUSED AND RECYCLED PER CALIFORNIA GREEN BUILDING STANDARDS CODE SECTION 5.408.
- CIVIL ENGINEER INFORMATION AND STATEMENTS:  
A. THE CIVIL ENGINEER FOR THIS PROJECT IS:  
CHARLES W. DAVIDSON COMPANY, 255 W. JULIAN STREET, SAN JOSE CALIFORNIA 95110-2406  
B. THIS ROUGH GRADING PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF A LICENSED ENGINEER AND DESIGNED BASED ON THE RECOMMENDATIONS OF THE REFERENCED PROJECT GEOTECHNICAL REPORT.  
C. THE STORMWATER CONVEYANCE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE APPROPRIATE BUILDING AND PLUMBING CODES OR HAS BEEN PROVEN TO BE DESIGNED WITH ADEQUATE CAPACITY THROUGH SIGNED AND SEALED HYDRAULIC CALCULATIONS.
- SOILS ENGINEER INFORMATION AND REQUIREMENTS:  
A. THE SOIL ENGINEER FOR THIS PROJECT IS:  
CORNERSTONE EARTH GROUP, INC. 1259 OAKMEAD PARKWAY, SUNNYVALE, CA 94085  
B. THE GEOTECHNICAL REPORT FOR THIS PROJECT IS:  
"DESIGN-LEVEL GEOTECHNICAL INVESTIGATION" DATED MAY 18, 2016  
C. ALL GRADING WORK SHALL CONFORM TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT AND/OR THE PROJECT SOIL ENGINEER.  
D. ALL GRADING WORK SHALL BE OBSERVED AND APPROVED BY THE SOIL ENGINEER. THE SOIL ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS BEFORE BEGINNING ANY GRADING. UNOBSERVED AND/OR UNAPPROVED GRADING WORK SHALL BE REMOVED AND REPLACED UNDER OBSERVATION.
- A POST CONSTRUCTION "FINAL" REPORT IS REQUIRED BY THE DIRECTOR OF PUBLIC WORKS FROM A CIVIL ENGINEER RETAINED BY THE OWNER TO OBSERVE THE CONSTRUCTION STATING:  
A. "THAT THE CONSTRUCTION CONFORMS TO THE LINES AND GRADES ON THE APPROVED PLANS;" OR  
B. "THAT ALL SIGNIFICANT CHANGES WERE REVIEWED AND APPROVED IN ADVANCE BY THE DEPARTMENT OF PUBLIC WORKS" AND THE CIVIL ENGINEER SHALL SUBMIT A "RECORD DRAWING" PLAN.
- A POST CONSTRUCTION "FINAL" REPORT IS REQUIRED BY THE DIRECTOR OF PUBLIC WORKS FROM A SOIL ENGINEER, AND ALSO FROM AN ENGINEERING GEOLOGIST IF THE PROJECT IS IN A GEOLOGIC HAZARD ZONE, STATING:  
A. "THAT THE ANTICIPATED CONDITIONS AND MATERIALS AND ACTUAL SITE CONDITIONS AND MATERIALS WERE COMPATIBLE," AND SUPPLY SUPPORTING DATA; OR  
B. "THAT THE DESIGN WAS MODIFIED TO MEET THE NEW CONDITIONS AND WAS REVIEWED AND APPROVED IN ADVANCE BY THE DEPARTMENT OF PUBLIC WORKS;" AND PROVIDE SUPPORTING DATA FOR THESE STATEMENTS.
- ACCORDING TO THE CITY'S WASTE WATER ORDINANCE, THE USE OF POTABLE (PIPED OR HYDRANT) WATER FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED.  
RECLAIMED WATER IS AVAILABLE AT MULTIPLE LOCATIONS ACROSS THE CITY. TO CERTIFY FOR A RECYCLED WATER METER, PLEASE CALL LYLE FROHMAN AT (408)794-8805.  
AN APPLICATION FOR AN EXCEPTION PERMIT TO APPROVE USE OF HYDRANT WATER CAN BE CONSIDERED IN THE PW DEVELOPMENT SERVICES OFFICE. FAX-BACK SERVICE IS PROVIDED FOR THIS PERMIT APPLICATION -- CONTACT (408) 535-7802.
- GRADING WILL NOT BE ALLOWED BETWEEN OCTOBER 1ST AND APRIL 30TH OF ANY YEAR WITHOUT EROSION CONTROL PLANS AND MEASURES APPROVED BY THE DIRECTOR OF PUBLIC WORKS. STORMWATER POLLUTION PREVENTION MEASURES IN ACCORDANCE WITH CITY SPECIFICATIONS AND WITH THE DOCUMENT "CLEAN BAY BLUEPRINT" SHALL BE IMPLEMENTED THROUGHOUT THE YEAR TO THE SATISFACTION OF THE DIRECTOR OF PUBLIC WORKS.
- A POST CONSTRUCTION "AS-BUILT" PLAN IS REQUIRED BY THE DIRECTOR OF PUBLIC WORKS FROM A CIVIL OR SOILS ENGINEER RETAINED BY THE OWNER TO PROVIDE THE FINAL HORIZONTAL AND VERTICAL LOCATIONS OF THE IMPROVEMENTS APPROVED WITH THIS PLAN SUCH AS SUBDRAINS, ON-SITE STORM WATER CONVEYANCE AND TREATMENT SYSTEMS, AND ON-SITE RETAINING STRUCTURES.

# ROUGH GRADING AND DRAINAGE PLAN

## SONTERRA TRACT NO. 10383

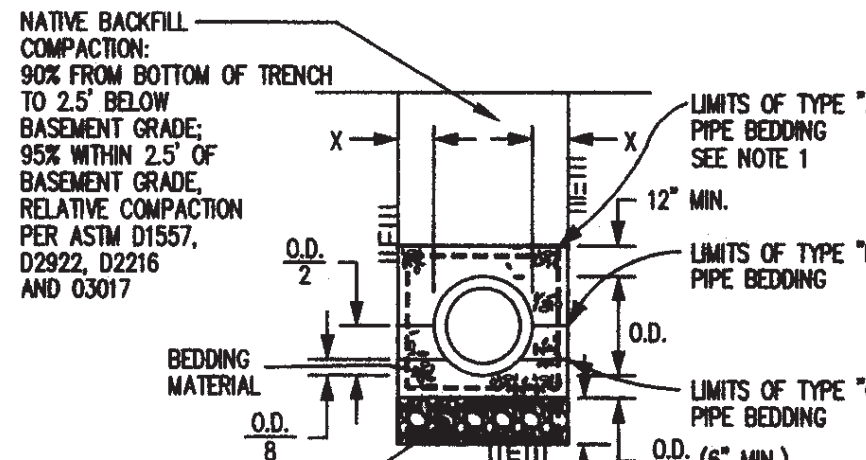
### SAN JOSE, CA



EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY LINE
---	---	CENTERLINE
---	---	CONTOUR
---	---	CONCRETE CURB & GUTTER
---	---	DEPRESSED VERTICAL CURB
---	---	GOOD NEIGHBOR FENCE
---	---	LANDSCAPE AREA DRAIN (SEE DETAIL ON SH 5)
---	---	BUBBLE UP (SEE DETAIL ON SH 5)
---	---	FIELD INLET (CHRISTY V12 OR EQUAL)
---	---	HOODED INLET
---	---	SIDEWALK
---	---	EMERGENCY OVERLAND RELEASE
---	---	SOUND WOOD FENCE
---	---	2' MAX RETAINING WALL
---	---	FINISHED FLOOR ELEVATION
---	---	PAD ELEVATION
---	---	TOP OF CURB ELEVATION
---	---	FLOW LINE ELEVATION
---	---	PAVEMENT ELEVATION
---	---	EXISTING GRADE
---	---	PROPOSED GRADE
---	---	SLOPE
---	---	PROPOSED TREES
---	---	TREES TO REMAIN
---	---	STORM MANHOLE
---	---	STORM DRAIN CLEAN OUT (SEE DETAIL ON SH 5)
---	---	STORM PIPE
---	---	SECTION NO.
---	---	PAGE NUMBER
---	---	DOWNSPOUT
---	---	EVERGREEN TREE
---	---	TURF BLOCK
---	---	AIR CONDITION (AC) UNITS
---	---	RIPARIAN
---	---	PAD OUTLINE

PIPE SIZE	LIMITS OF X	
	MINIMUM	MAXIMUM
24" OR LESS	4"	4" + O.D.
27" AND GREATER	6"	6" + O.D.

BEDDING TYPE	CATEGORY OF PIPE
A	VITRIFIED CLAY PIPE, CONCRETE PIPE 24" DIA. AND GREATER, PVC
B	CONCRETE PIPE 24" DIA. AND LESS
C	DUCTILE IRON PIPE



- ABBREVIATIONS**
- AC = ASPHALT CONCRETE
  - BC = BEGIN CURVE
  - BFE = BASE FLOOD ELEVATION
  - BS = BOTTOM OF STAIR
  - BVC = BEGIN VERTICAL CURVE
  - BW = BOTTOM OF WALL
  - CB = CATCH BASIN
  - CL = CENTERLINE
  - CO = CLEANOUT
  - DS = DISCONNECTED DOWNSPOUT
  - EC = END CURVE
  - ELEV. = ELEVATION
  - EVC = END VERTICAL CURVE
  - EX. = EXISTING
  - F/C = FACE OF CURB
  - FF = FINISHED FLOOR ELEVATION
  - FH = FIRE HYDRANT
  - FL = FLOW LINE
  - GB = GRADE BREAK
  - GFF = GARAGE FINISH FLOOR
  - HP = HIGH POINT
  - IW = INVERT
  - LP = LOW POINT
  - PAD = PAD ELEVATION
  - PCC = PORTLAND CEMENT CONCRETE
  - PL = PROPERTY LINE
  - PV = PAVEMENT GRADE
  - PVC = POLYVINYL CHLORIDE PIPE
  - PVI = POINT OF VERTICAL INTERSECTION
  - RCP = REINFORCED CONCRETE PIPE
  - ROW = RIGHT OF WAY
  - S<sub>0.004</sub> = SLOPE
  - SD = STORM DRAIN
  - SDCO = STORM DRAIN CLEAN OUT
  - SDJB = STORM DRAIN JUNCTION BOX
  - SDMH = STORM DRAIN MANHOLE
  - SS = SANITARY SEWER
  - SSMH = SANITARY SEWER MANHOLE
  - STA = STATION
  - TC = TOP OF CURB
  - TF = TOP OF FENCE
  - TS = TOP OF STAIR
  - TW = TOP OF WALL
  - VCP = VITRIFIED CLAY PIPE
  - WM = WATER METER
  - WV = WATER VALVE

**EARTHWORK QUANTITIES:**

FILL	1,930 CY
EXTRA FILL FOR SUB-EXCAVATION 20% SHRINKAGE FACTOR (ASSUMED)	235 CY
TOTAL FILL:	2,165 CY
TOTAL CUT:	330 CY
NET IMPORT = FILL - CUT	1,835 CY
NET IMPORT = 2,165 CY - 330 CY	(IN-PLACE YARDS)

**SHEET INDEX**

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STORM WATER MAINTENANCE & DETAILS	8-9
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**BIOTREATMENT SOIL REQUIREMENTS**  
PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL MIX SPECIFICATION CHECKLIST, COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

- NOTES & CALCULATIONS ASSUMPTIONS:**
- EARTHWORK QUANTITIES SHOWN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INDEPENDENTLY ESTIMATE QUANTITIES FOR HIS/HER OWN USE.
  - THE PRIVATE STREET SECTION WAS ASSUMED TO BE 12'.
  - PAD TO FINISH FLOOR DELTA WAS ASSUMED TO BE 12'.
  - EARTHWORK QUANTITIES SHOWN DO NOT INCLUDE THE STOCKPILE.
  - 2' OVER EXCAVATION BASED ON PAD ELEVATION.

**APPROVED FOR GRADING AND DRAINAGE ONLY**  
DEPARTMENT OF PUBLIC WORKS  
CITY OF SAN JOSE, CALIFORNIA

Project Engineer: *Joe Dyke* Date: 4/19/2017  
Senior Engineer: *Richard C. MacCarroll* Date: 4/19/2017  
Permit Number: 16-127213GR Expiration Date: 10/19/2018

**RETAINING WALL INSPECTION**  
CONTRACTOR OR PERMITTEE SHALL NOTIFY THE CITY STRUCTURAL INSPECTION AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OF THE RETAINING WALLS. CONTACT LES PAGE AT VOICE MAIL NO. (408) 858-4040 AND JEFF BATELLE AT (408) 978-7424

**GEOTECHNICAL ENGINEER OF RECORD**  
THIS PLAN HAS BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.

CORNERSTONE EARTH GROUP No. GE2582  
PREPARED BY COMPANY NAME: [Signature] EXPIRES 12/31/2018 OF REPORT  
BY G.E. # [Signature]

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR ALL SITE ACTIVITIES INVOLVED IN THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.

**BENCHMARK**  
SCWD'S BRASS DISK; ON TOP OF CONCRETE BASE OF NORTHEASTERLY LEG OF MOST EASTERLY OF THREE POBE TOWERS; AT THE SOUTHWESTLY CORNER OF THE INTERSECTION OF ALMADEN EXPRESSWAY AND GOLF CREEK. ELEV. 216.95', NAVD88.

**SOILS ENGINEER**  
CORNERSTONE EARTH GROUP  
1259 OAKMEAD PARKWAY  
SUNNYVALE, CA 94085  
(408) 245-4600

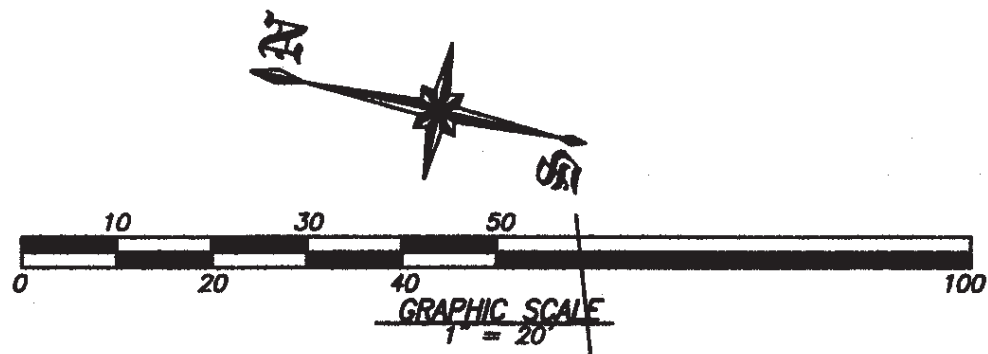


**EDENBRIDGE INC**  
21771 STEVENS CREEK BLVD.  
SUITE 200A  
CUPERTINO, CA 95014  
TEL. (669) 231-4240

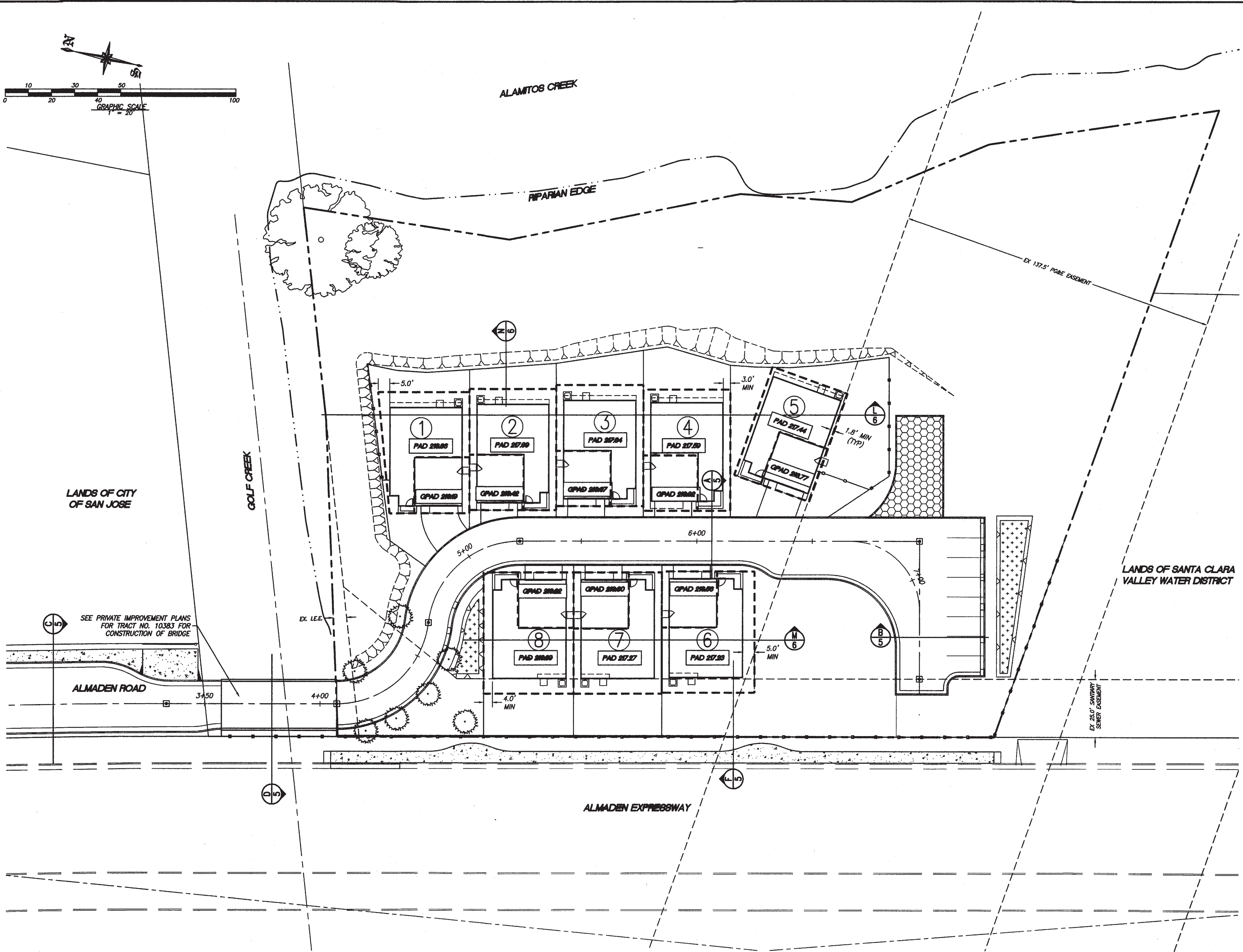
**Charles W. Davidson Co.**  
A CALIFORNIA CORPORATION  
CONSULTING CIVIL ENGINEERS  
255 W. JULIAN ST. #200  
SAN JOSE, CA 95110-2406  
TEL (408) 285-9162  
FAX (408) 287-6350

**ROUGH GRADING & DRAINAGE PLAN**  
TRACT NO. 10383  
COVER SHEET

SHEET 1 OF 12 SHEETS  
PW PROJECT # 3-18273



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



**PAD PREPARATIONS REQUIREMENTS:**

**REMOVAL OF EXISTING FILLS**

UNDOCUMENTED FILL RANGING FROM APPROXIMATELY 2 TO 6 FEET THICK ARE PRESENT ON THE SITE. FOR BUDGETING PURPOSES, AT LEAST 2 FEET OF THE FILL MATERIAL BENEATH THE STREETS AND BUILDING PADS BE OVER-EXCAVATED, SUBJECT TO FIELD OBSERVATIONS AND TESTING CONFIRMATION BY CORNERSTONE EARTH GROUP. THE EXPOSED BOTTOM OF THE OVER-EXCAVATION AREAS SHOULD THEN BE SCARIFIED TO A DEPTH OF 12 INCHES AND RECOMPACTED PRIOR TO PLACING FILL.

WHERE LOCALIZED DEEPER FILLS ARE ENCOUNTERED ADDITIONAL POTHOLES AND DENSITY TESTING SHOULD BE PERFORMED, IF NEEDED, DURING CONSTRUCTION TO DETERMINE IF DEEPER OVER-EXCAVATION IS REQUIRED.

UNDOCUMENTED FILLS SHOULD BE COMPLETELY REMOVED FROM THE BEARING SOME OF THE BUILDING FOUNDATIONS AT LEAST 5 FEET BEYOND THE BUILDING FOOTPRINT OR TO A LATERAL DISTANCE EQUAL TO FILL DEPTH BELOW THE PERIMETER FOOTING, WHICHEVER IS GREATER.

**MATERIAL FOR FILL**

ON-SITE SOILS WITH AN ORGANIC CONTENT LESS THAN 3 PERCENT BY WEIGHT MAY BE REUSED AS GENERAL FILL. GENERAL FILL SHOULD NOT HAVE LUMPS, CLODS OR COBBLE PIECES LARGER THAN 6 INCHES IN DIAMETER; 85 PERCENT OF THE FILL SHOULD BE SMALLER THAN 2 1/2 INCHES IN DIAMETER. MINOR AMOUNTS OF OVERSIZE MATERIAL (SMALLER THAN 12 INCHES IN DIAMETER) MAY BE ALLOWED PROVIDED THE OVERSIZED PIECES ARE NOT ALLOWED TO NEST TOGETHER AND THE COMPACTION METHOD WILL ALLOW FOR LOOSELY PLACED LIFTS NOT EXCEEDING 12 INCHES.

IMPORTED AND NON-EXPANSIVE MATERIAL SHOULD BE INORGANIC WITH A PLASTICITY INDEX (PI) OF 15 OR LESS, AND NOT CONTAIN RECYCLED ASPHALT CONCRETE WHERE IT WILL BE USED WITH THE BUILDING AREAS. TO PREVENT SIGNIFICANT CAVING DURING TRENCHING OR FOUNDATION CONSTRUCTION, IMPORTED MATERIAL SHOULD HAVE SUFFICIENT FINES. SAMPLES OF POTENTIAL IMPORT SOURCES SHOULD BE DELIVERED TO CORNERSTONE EARTH GROUP AT LEAST 10 DAYS PRIOR TO THE IMPORT START DATE. INFORMATION REGARDING THE IMPORT SOURCE SHOULD BE PROVIDED.

**COMPACTION REQUIREMENTS**

COMPACTION OF FILL AND SUBGRADE SHALL BE IN ACCORDANCE WITH SECTION 6.7 OF THE GEOTECHNICAL REPORT PREPARED BY CORNERSTONE EARTH GROUP DATED MAY 18, 2016.

**Charles W. Davidson Co.**  
 A CALIFORNIA CORPORATION  
 CONSULTING CIVIL ENGINEERS  
 255 W. JULIAN ST. #200  
 SAN JOSE, CA 95110-2408  
 TEL (408) 285-0182  
 FAX (408) 287-6350



*Peter B. Smith*  
 PETER B. SMITH  
 RCE 48225 EXP. 12-31-18  
 DATE: 3/29/17

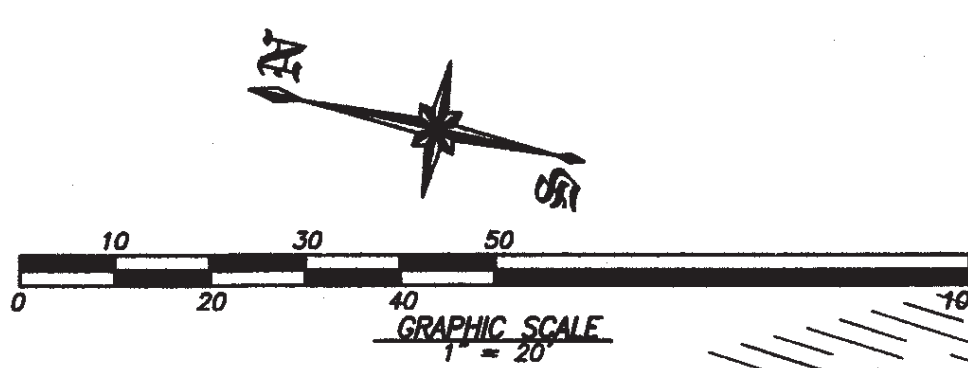
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**ROUGH GRADING AND DRAINAGE PLAN**  
**ROUGH PAD GRADING PLAN**  
 TRACT NO. 10383  
 SONTERRA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETSCHE  
 VOICE MAIL: (408) 591-0585

SHEET  
 2  
 OF 12 SHEETS

*4/17/17*



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

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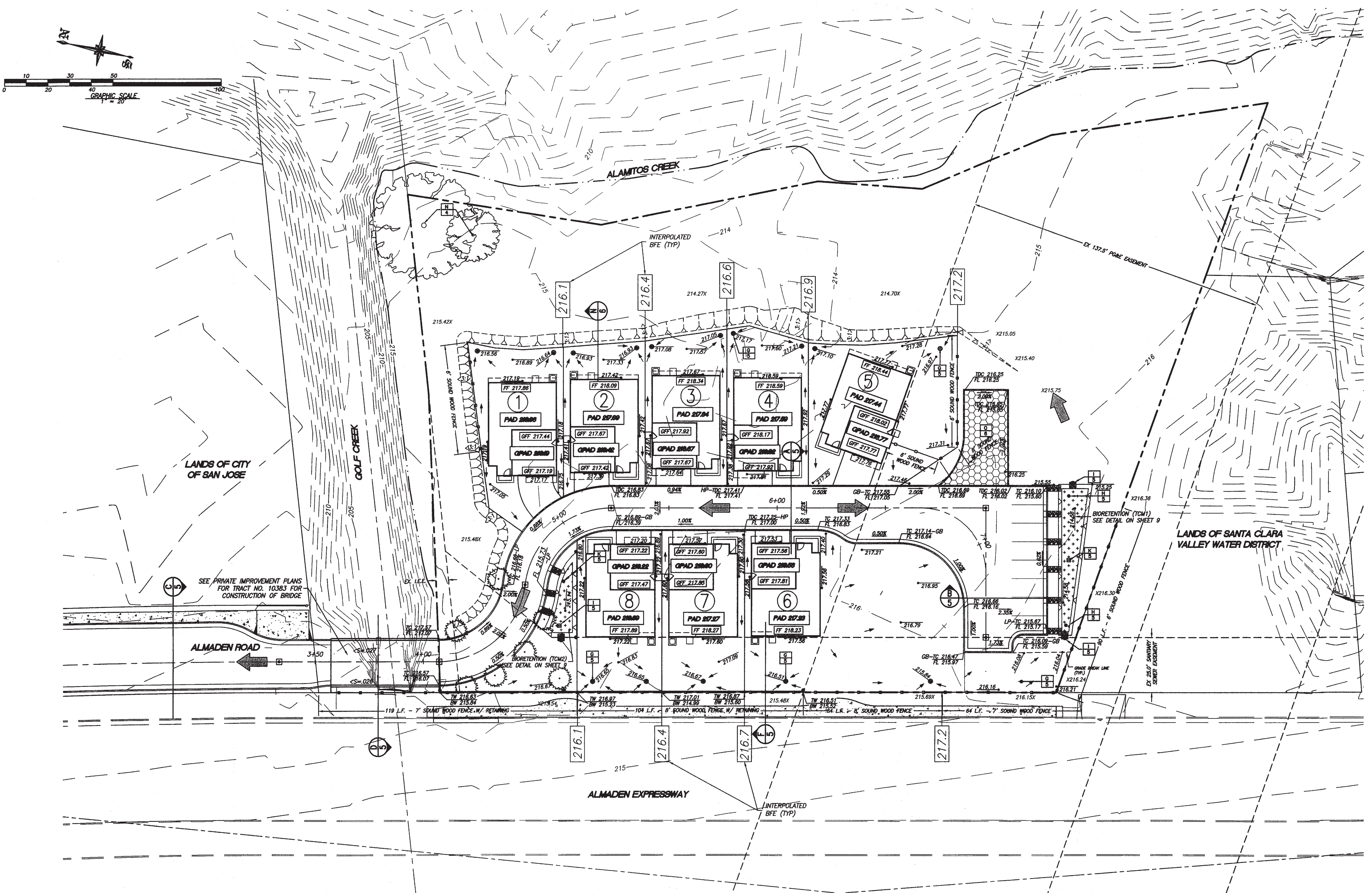
PETER B. SMITH  
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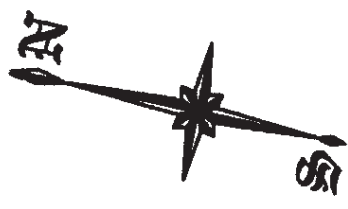
**ROUGH GRADING AND DRAINAGE PLAN**  
**ROUGH GRADING PLAN**  
**TRACT NO. 10383**  
**SONTERRA**  
 SAN JOSE CALIFORNIA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETSCH  
 VOICE MAIL: (408) 591-0565

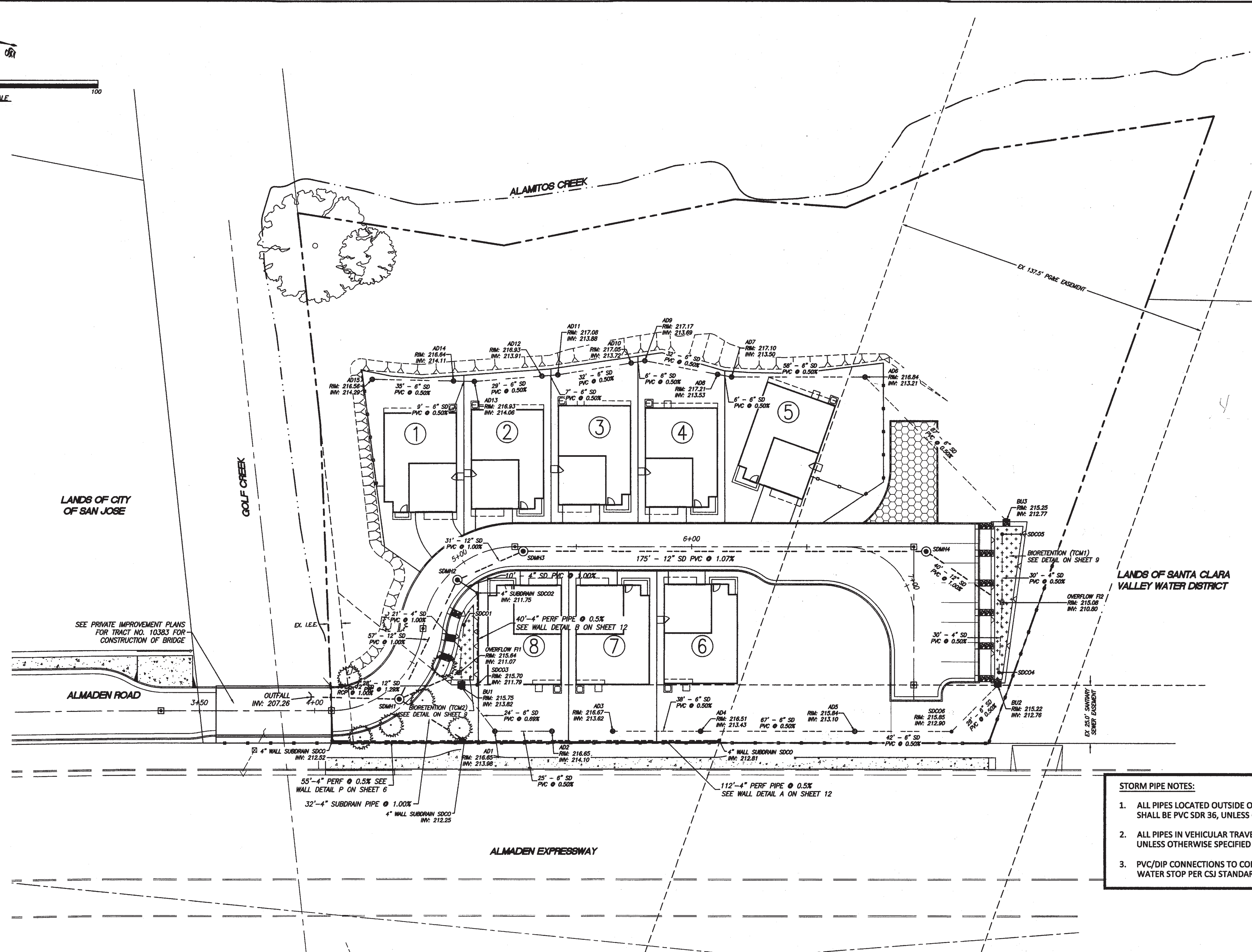
SHEET  
**3**  
 OF 12 SHEETS



04/13/17



CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES ON THIS PROJECT, EXISTING FOR LIABILITY ARISING FROM THE NEGLIGENCE OF THE OWNER OR THE ENGINEER.



LANDS OF CITY OF SAN JOSE

LANDS OF SANTA CLARA VALLEY WATER DISTRICT

SEE PRIVATE IMPROVEMENT PLANS FOR TRACT NO. 10383 FOR CONSTRUCTION OF BRIDGE

- STORM PIPE NOTES:**
1. ALL PIPES LOCATED OUTSIDE OF VEHICULAR TRAVELLED WAYS SHALL BE PVC SDR 36, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  2. ALL PIPES IN VEHICULAR TRAVELLED WAYS SHALL BE PVC SDR 26, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  3. PVC/DIP CONNECTIONS TO CONCRETE STRUCTURES TO BE BY WATER STOP PER CSJ STANDARD DETAIL D-19.

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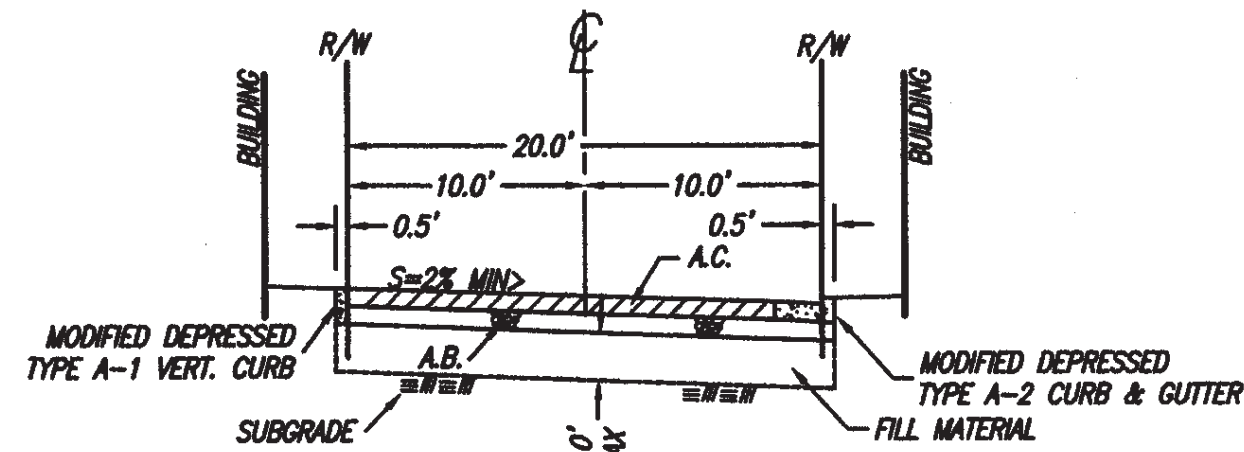
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**ROUGH GRADING AND DRAINAGE PLAN**  
**STORMWATER DRAINAGE PLAN**  
**TRACT NO. 10383**  
**SONTERRA**

PERMIT # 16-127213GR  
PROJECT # 3-18273  
PROJECT INSPECTOR: STEVE PLETSCH  
VOICE MAIL: (408) 591-0565

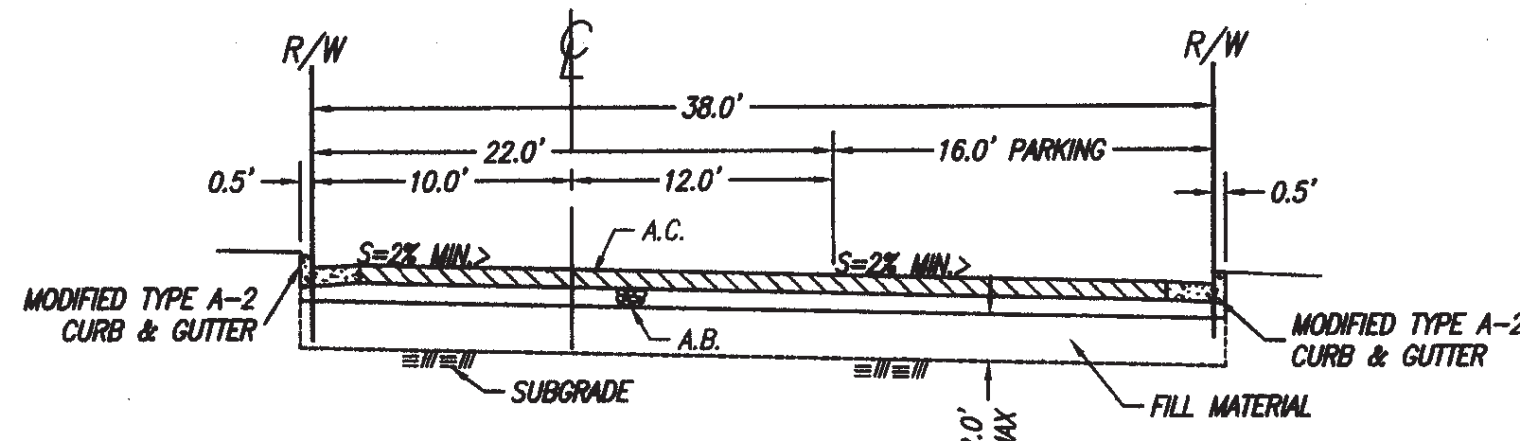
DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE

*[Signature]*  
04/19/17  
SHEET  
4  
OF 12 SHEETS



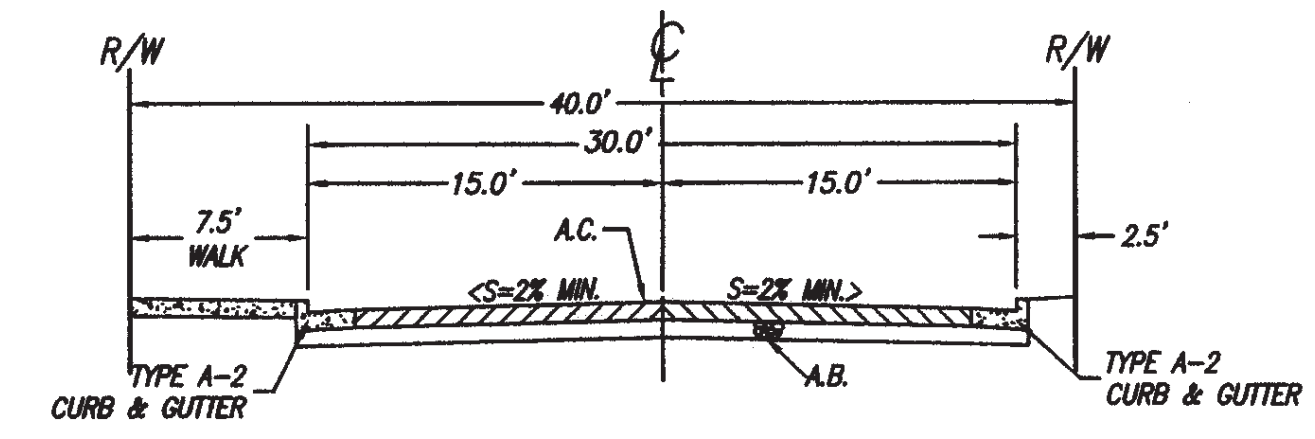
SECTION A - 20' DRIVE  
N.T.S.

NOTE: THESE PLANS DO NOT AUTHORIZE THE CONSTRUCTION OF ANY STREET IMPROVEMENTS. SHOWN FOR GRADING PURPOSES.



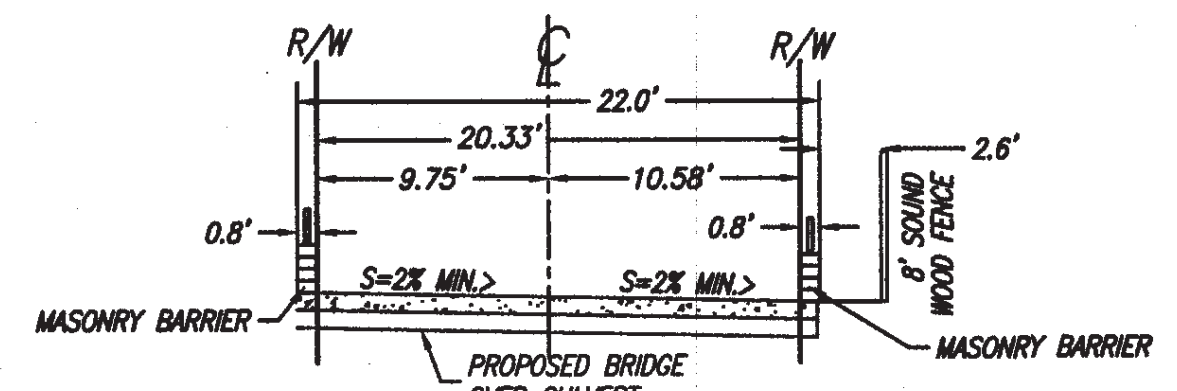
SECTION B - 22' DRIVE  
N.T.S.

NOTE: THESE PLANS DO NOT AUTHORIZE THE CONSTRUCTION OF ANY STREET IMPROVEMENTS. SHOWN FOR GRADING PURPOSES.



SECTION C - ALMADEN ROAD  
N.T.S.

NOTE: THESE PLANS DO NOT AUTHORIZE THE CONSTRUCTION OF ANY STREET IMPROVEMENTS. SHOWN FOR GRADING PURPOSES.



SECTION D - 20.33' DRIVE  
N.T.S.

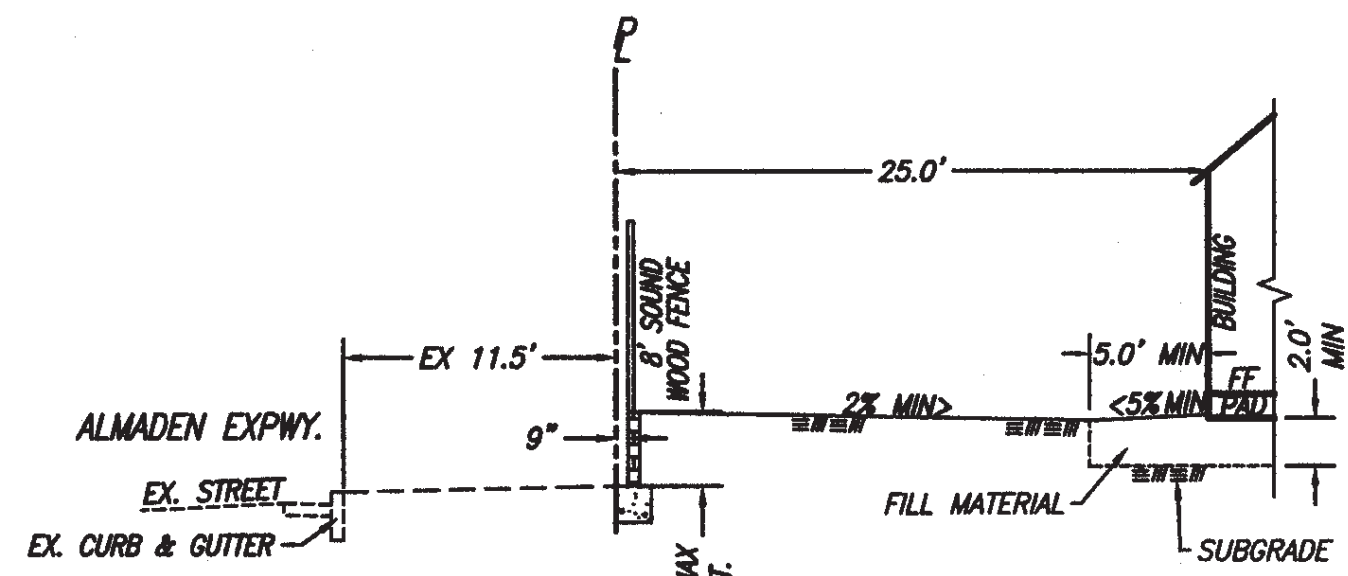
NOTE: THESE PLANS DO NOT AUTHORIZE THE CONSTRUCTION OF ANY STREET IMPROVEMENTS. SHOWN FOR GRADING PURPOSES.

A STREET SECTION

B STREET SECTION

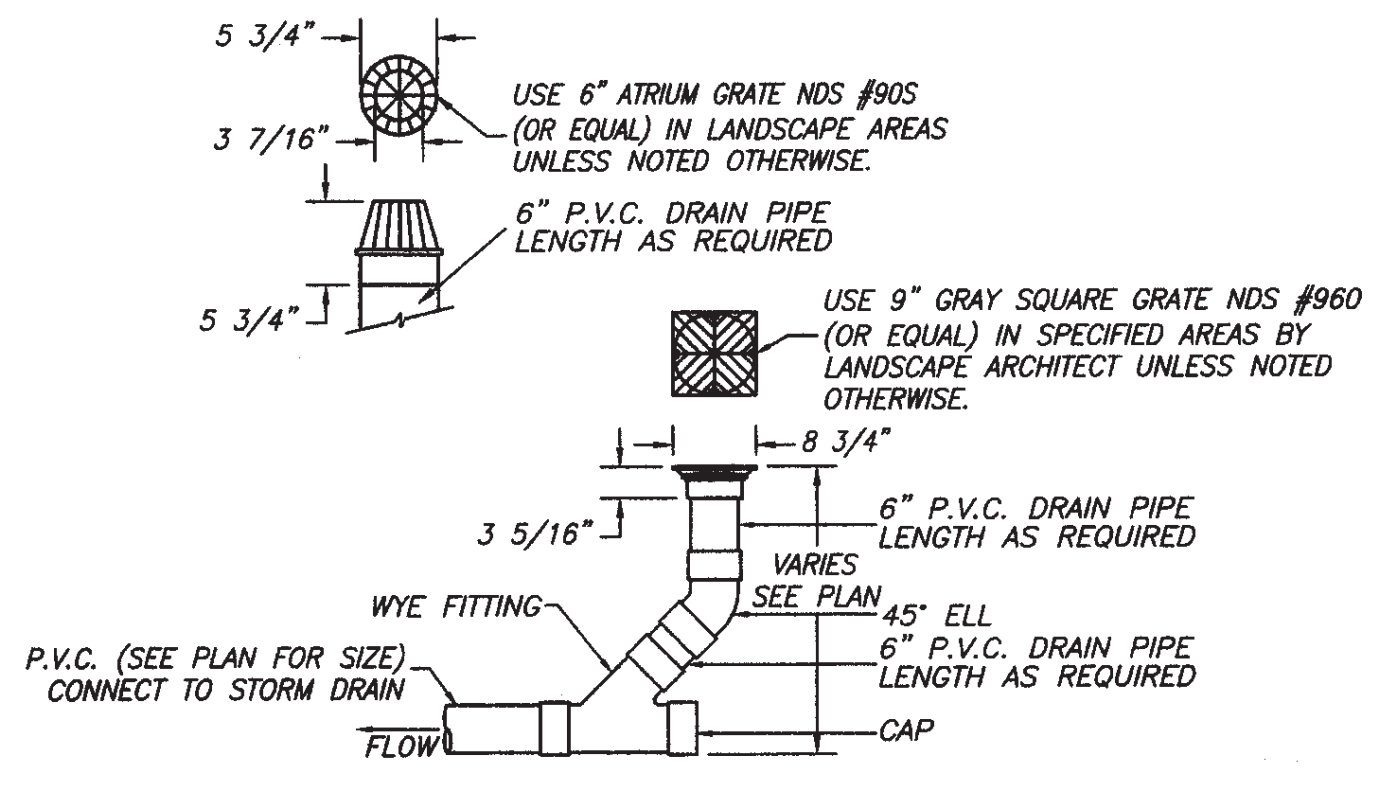
C STREET SECTION

D STREET SECTION

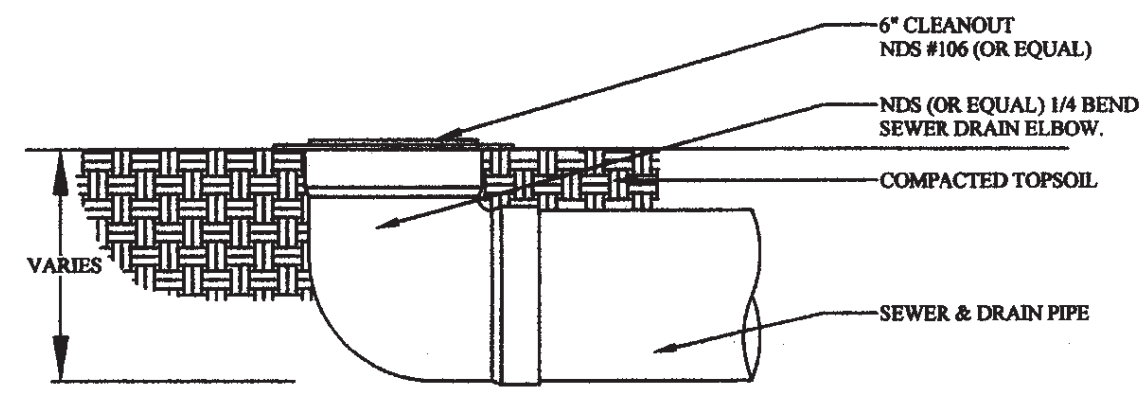


SECTION F  
N.T.S.

NOTE: SEE PAD PREPARATION REQUIREMENTS ON SHEET 2



LANDSCAPE DRAIN DETAIL  
N.T.S.

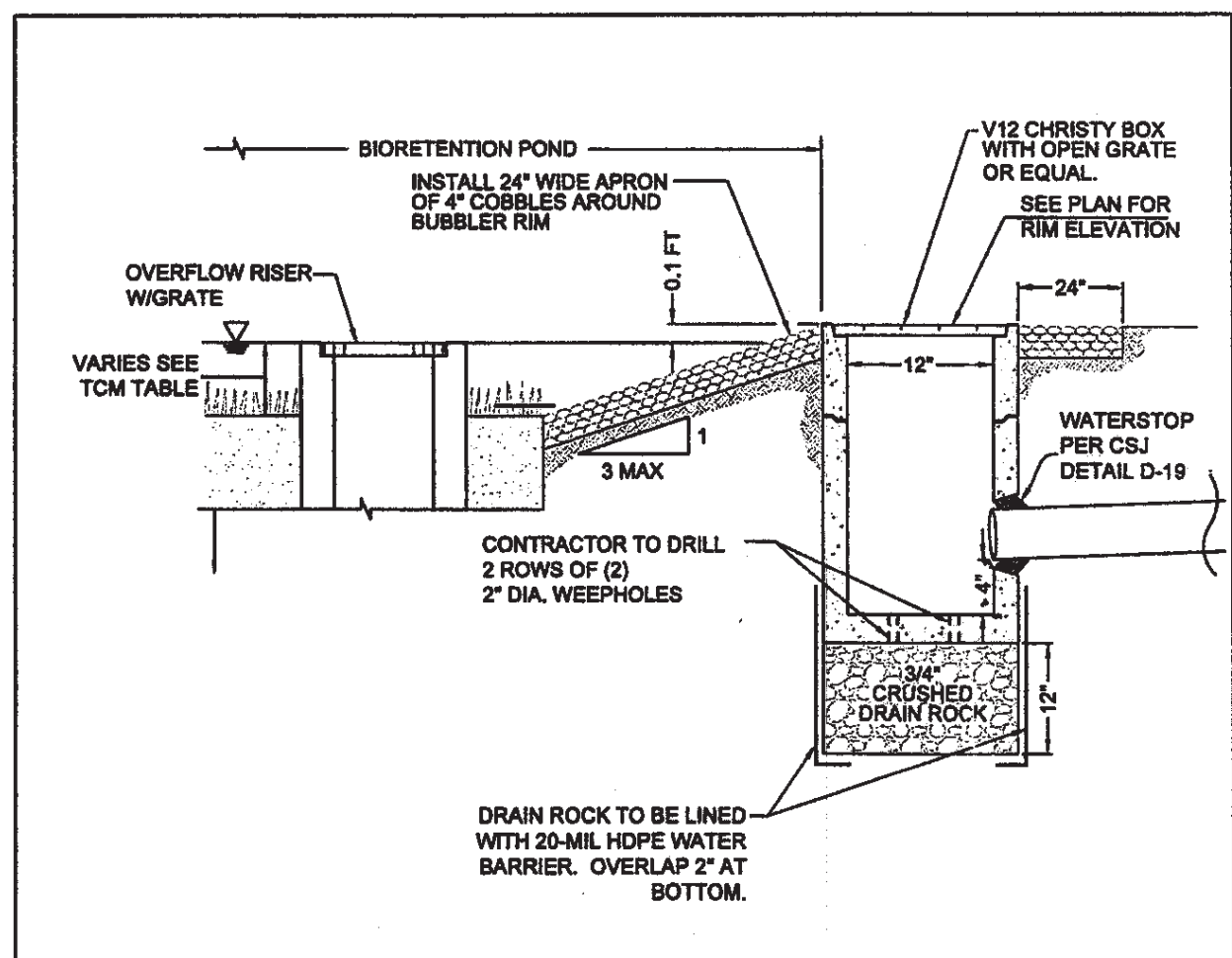


TYPICAL STORM DRAIN CLEANOUT  
N.T.S.

F PL SECTION

G AREA DRAIN

H STORM DRAIN CLEANOUT



TREE PRESERVATION GUIDELINES

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

**Design Recommendations:**

- A TREE PROTECTION ZONE shall be established around each tree by the Consulting Arborist. No grading, excavation, construction or storage of materials shall occur within that zone.
- No underground services including utilities, sub-drains, water or sewer shall be placed in the TREE PROTECTION ZONE.
- Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
- Irrigation systems must be designed so that no trenching will occur within the TREE PROTECTION ZONE.

**Pre-construction Treatments and Recommendations:**

- The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protections.
- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.
- Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed by a Certified Arborist or Tree Worker and adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. Brush shall be chipped and spread beneath the trees within the TREE PROTECTION ZONE.
- Supplemental irrigation shall be applied as determined by the Consulting Arborist. At a minimum all retained trees will be irrigated monthly through the dry months.
- If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
- No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
- Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.

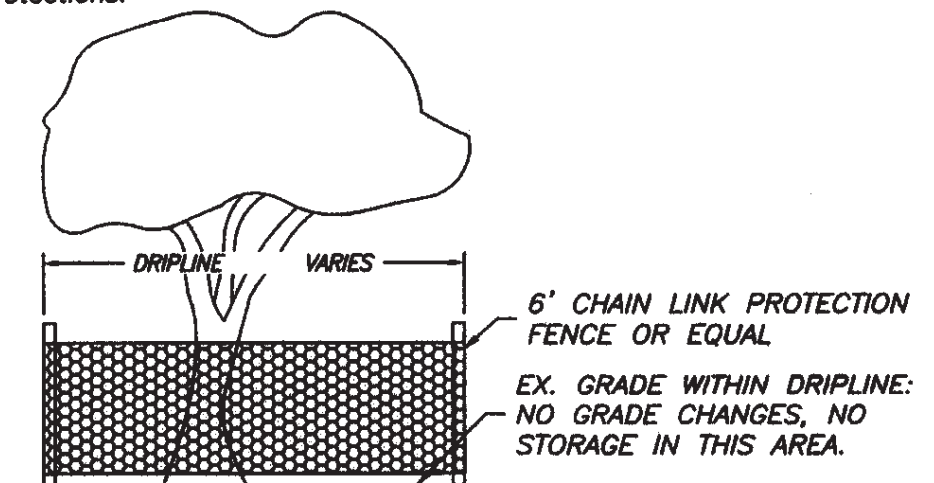
**Recommendations for Tree Protection during Construction:**

- No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the Consulting Arborist.

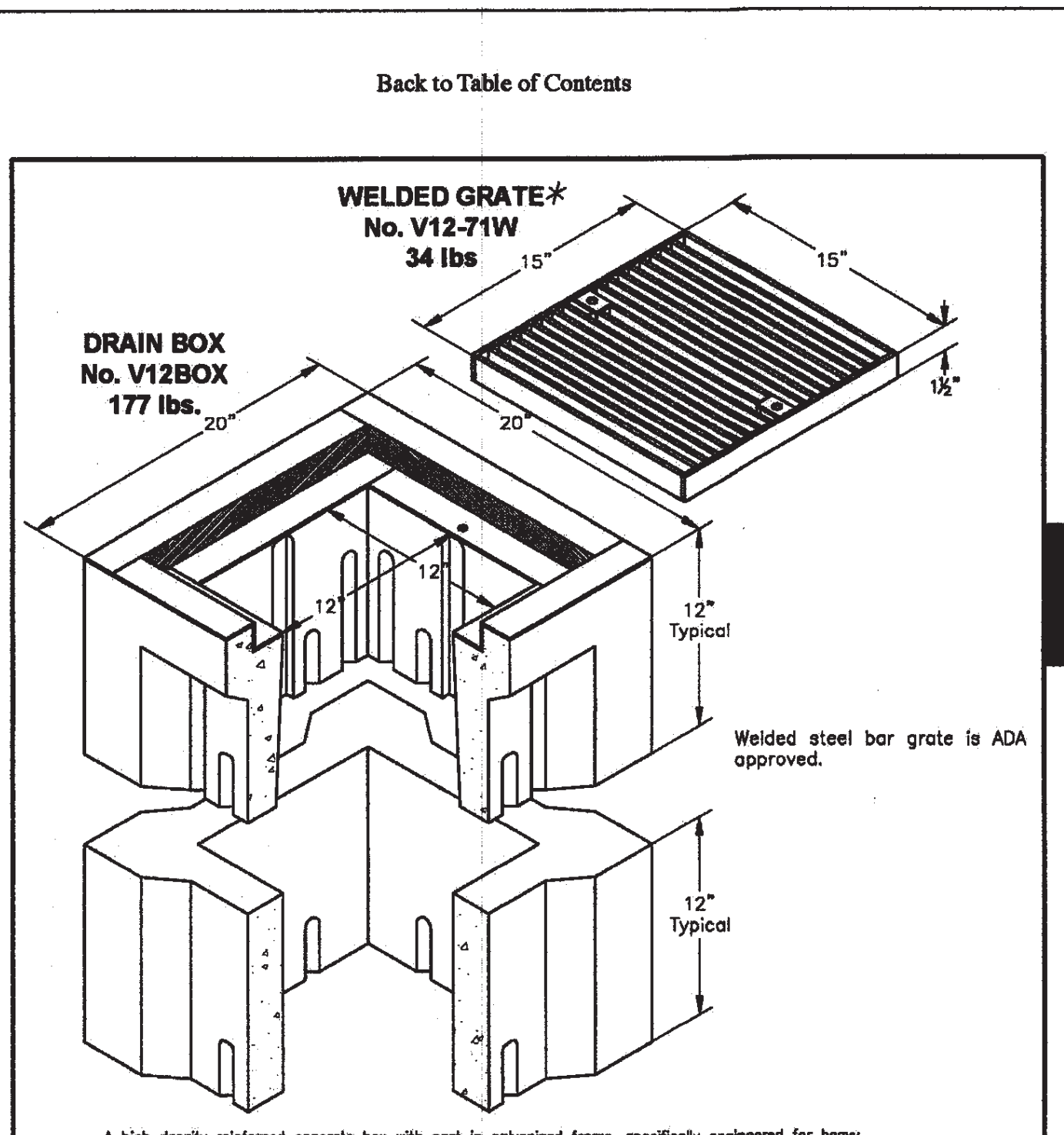
**Tree Protection Notes, prepared by the Consulting Arborist, should be included on all plans.**

**Pre-construction Treatments and Recommendations:**

- The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protections.



TREE PROTECTION DETAIL AND NOTES



Ordering Code	Item	Approx. Shipping Weight	Description
V12BOX	BOX	177	V12 Drain Box (12 x 12") H/20 Loading, bolt down interchangeable with Brooks #1212 Box-- 12 per pallet
V12-71W	GRATE	34	Welded, steel cross bars, H/20 loading, galvanized
V12X12	EXTENSION	120	12" Reinforced concrete-- 12 per pallet

**Oldcastle Precast®**  
Enclosure Solutions  
MASONRY/ROCK/CONCRETE PRODUCTS  
Phone: (800) 456-7070 Fax: (800) 456-8804  
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**V12 DRAIN BOX**  
FILE NAME: V12\_JSD  
ISSUE DATE: January, 2009  
www.oldcastleprecast.com

**V12 DRAIN BOX**  
12" x 12"  
CRUST®

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47

I POP UP EMITTER

J TREE PROTECTION DETAIL

K OVERFLOW FIELD INLET

**Charles W. Davidson Co.**  
A CALIFORNIA CORPORATION  
CONSULTING CIVIL ENGINEERS  
255 W. JULIAN ST. #200  
SAN JOSE, CA 95110-2406  
TEL (408) 285-9182  
FAX (408) 287-6390



*Peter B. Smith*  
PETER B. SMITH  
RCE 46225 EXP. 12-31-18  
DATE: 3/29/17

Date:	3-27-17
Scale:	N.T.S.
Designed:	LL/AD
Drawn:	
Checked:	<i>PS</i>
Proj. Engr.:	
File:	1880

REVISIONS			
DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE

**ROUGH GRADING AND DRAINAGE PLAN**

SECTION & DETAILS  
TRACT NO. 10383  
SONTERRA

PERMIT # 16-127213GR  
PROJECT # 3-18273

PROJECT INSPECTOR: STEVE PLETECH  
VOICE MAIL: (408) 591-0565

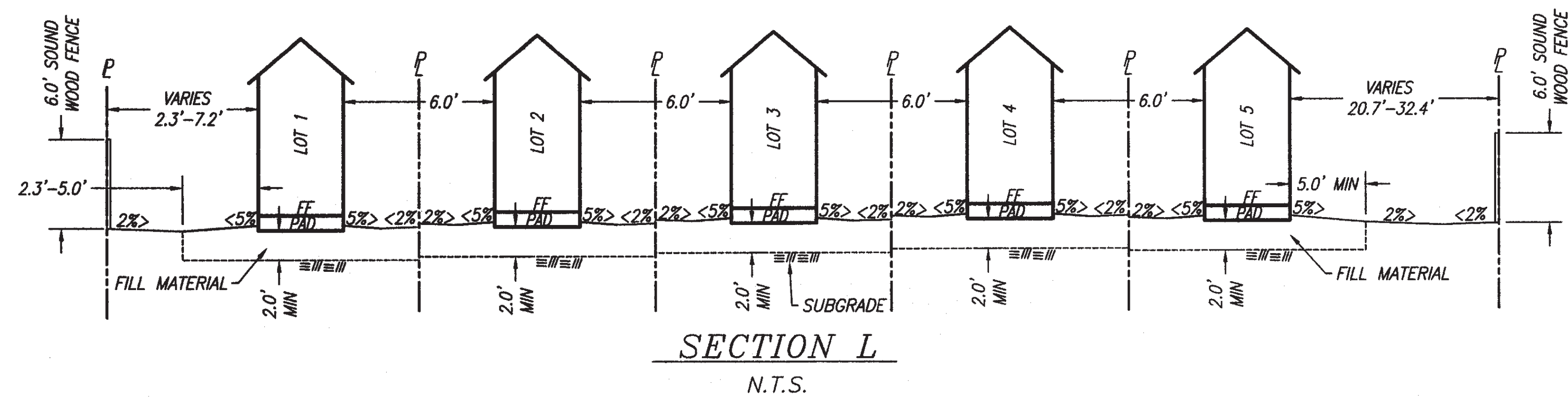
SHEET  
5  
OF 12 SHEETS

CONTRACTOR AGREES THAT HE SHALL ASSUME THE FULL RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THIS PROJECT, INCLUDING THE OBTAINING OF ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

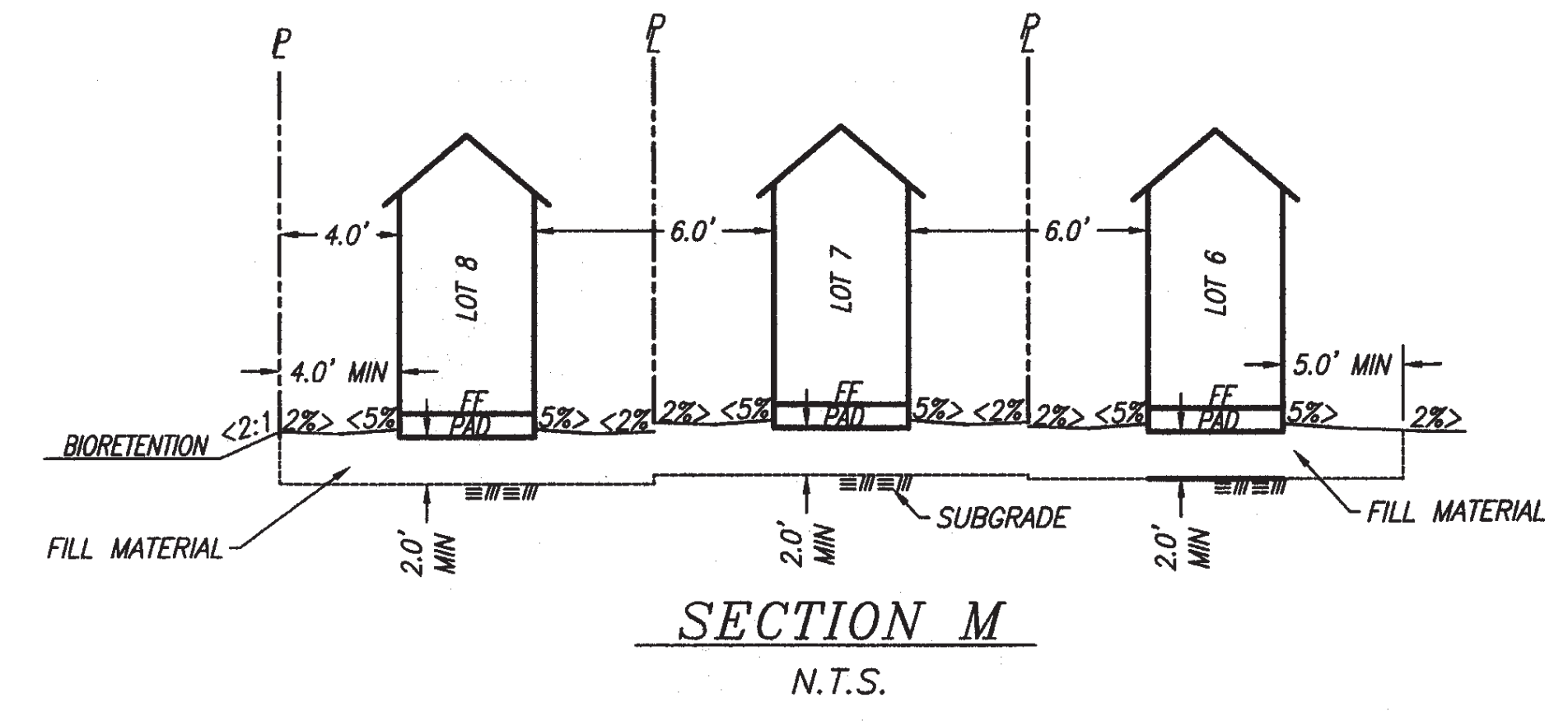
PLOTTED: JASON DAY 3/28/2017 10:04 AM  
FILE: 1880.DWG (SHEET) 1880.DWG

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

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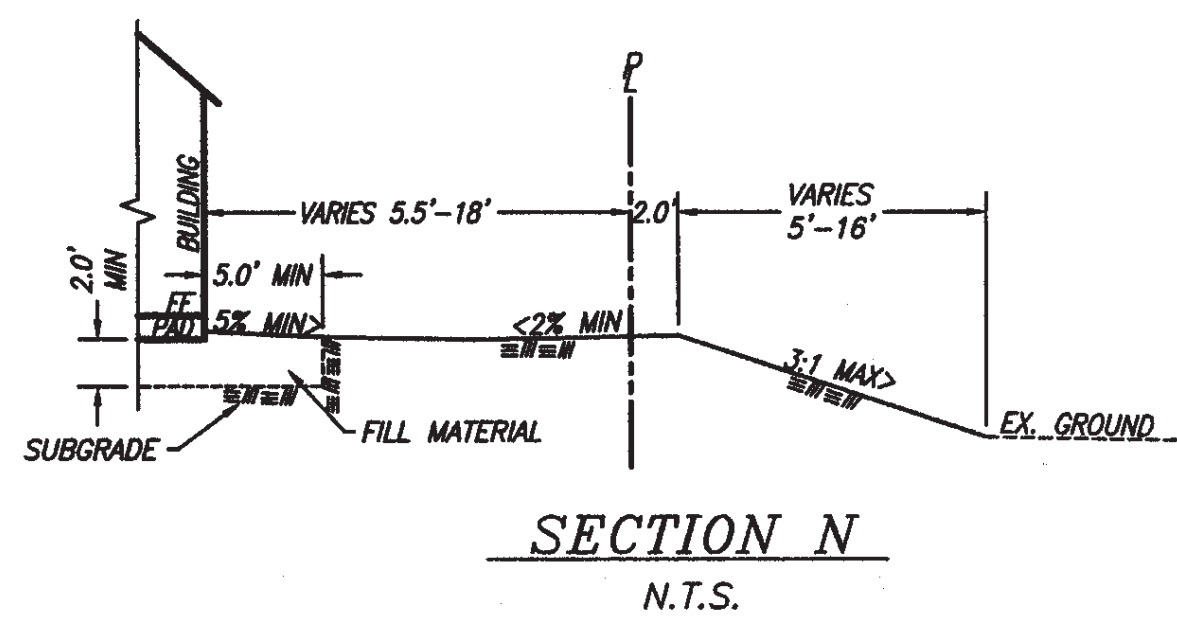


NOTE: SEE PAD PREPARATION REQUIREMENTS ON SHEET 2



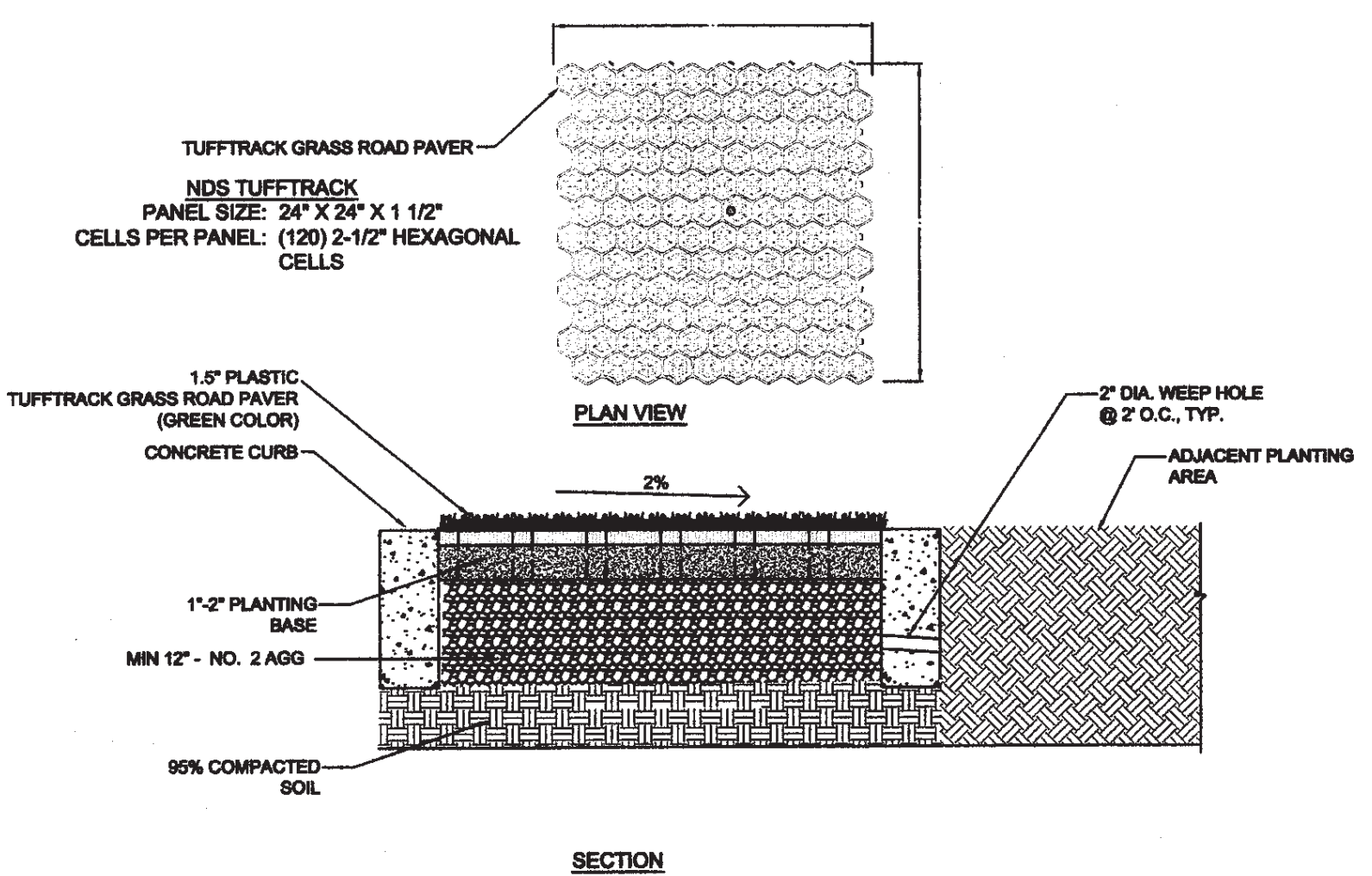
NOTE: SEE PAD PREPARATION REQUIREMENTS ON SHEET 2

**L** PL SECTION



NOTE: SEE PAD PREPARATION REQUIREMENTS ON SHEET 2

**M** PL SECTION



**N** PL SECTION

**O** TURFBLOCK DETAIL

**Charles W. Davidson Co.**  
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 CONSULTING CIVIL ENGINEERS  
 255 W. JULIAN ST. #200  
 SAN JOSE, CA 95110-2408  
 TEL. (408) 295-9182  
 FAX (408) 287-8390



PETER B. SMITH  
 RCE 46225 EXP. 12-31-18  
 DATE: 3/29/17

Date:	3-27-17				
Scale:	N.T.S.				
Designed:	LL/LL				
Drawn:					
Checked:					
Proj. Engr:					
File:	1860				

**ROUGH GRADING AND DRAINAGE PLAN**  
 SECTION & DETAILS  
 TRACT NO. 10383  
 SONTERRA  
 SAN JOSE CALIFORNIA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETECH  
 VOICE MAIL: (408) 591-0565

**PROJECT INFORMATION:**

SOIL TYPES: ALLUVIAL DEPOSITS CONSISTING OF CLAY, SANDS AND GRAVEL.

GROUND WATER DEPTH: 0-10 FEET BELOW THE GROUND SURFACE.

NAME OF RECEIVING WATER BODY: ALMATOS CREEK

100 YEAR FLOOD ELEVATION: AE 217' TO 218'

**POLLUTANTS AND POLLUTANT SOURCE AREAS:**

SEDIMENT: ROADS, PARKING LOTS AND ROOFS

THE MAIN COMPONENT OF TOTAL SUSPENDED SOLIDS (TSS), AND IS DETRIMENTAL TO AQUATIC LIFE. THEY ALSO TRANSPORT POLLUTANTS SUCH AS TRACE METAL, NUTRIENTS, AND HYDROCARBONS THAT ATTACH TO EACH PARTICLE.

ORGANIC COMPOUNDS: AUTOMOTIVE FLUIDS, PESTICIDES AND FERTILIZERS

ORGANIC COMPOUNDS OFTEN ATTACH TO SOIL PARTICLES

NUTRIENTS: ORGANIC LITTER, FERTILIZERS, FOOD WASTE, SEWAGE AND SEDIMENT.

NUTRIENTS INCLUDE NITROGEN, PHOSPHORUS AND OTHER ORGANIC COMPOUNDS.

EXCESS NUTRIENTS IMPACT CREEK HEALTH AND IMPAIR USE OF WATER IN WATER SUPPLY SOURCES BY PROMOTING EXCESSIVE GROWTH OF ALGAE OR VEGETATION.

METALS: MOTOR VEHICLES, ROOFING AND CONSTRUCTION MATERIALS AND CHEMICALS.

TRACE METALS SUCH AS COPPER, LEAD, CADMIUM, CHROMIUM, NICKEL AND ZINC CAN BE TOXIC TO AQUATIC ORGANISMS AND, IN ACCUMULATED QUANTITIES, CAN CONTAMINATE DRINKING WATER SUPPLIES.

BACTERIA & VIRUSES: ANIMAL EXCREMENT (AREAS WHERE PETS ARE OFTEN WALKED), SANITARY OVERFLOW, AND TRASH HANDLING AREAS (DUMPSTERS).

BACTERIA & VIRUSES MAY POSE PUBLIC HEALTH AND SAFETY CONCERNS IF THEY ARE PRESENT IN DRINKING WATER SOURCES.

OIL & GREASE: MOTOR VEHICLES, FOOD SERVICE ESTABLISHMENTS AND FUELING STATIONS.

OIL & GREASE ACT AS CARRIERS FOR HEAVY METALS AND CONTAIN HYDROCARBON COMPOUNDS, WHICH EVEN AT LOW CONCENTRATIONS MAY BE TOXIC TO AQUATIC ORGANISMS.

**STORMWATER TREATMENT SUMMARY:**

THE INFILL SITE WILL BE DESIGNED TO MINIMIZE THE DIRECTLY CONNECTED IMPERVIOUS AREA (DCA). THE DOWNSPOUTS WILL NOT BE DIRECTLY CONNECTED TO THE STORM SEWER SYSTEM AND WILL BE DIRECTED INTO THE LANDSCAPE AREAS. AS PER THE 50% RULE THE "INTERVENING PERVIOUS AREAS RECEIVING RUNOFF (P) MUST BE AT LEAST ONE HALF THE SIZE OF IMPERVIOUS SURFACE AREAS GENERATING RUNOFF (I).  $P > OR = \frac{1}{2} I$ "

THE SITE IS IN THE HM INCLUSION AREA. HOWEVER THE SITE CREATES AND/OR REPLACES <1AC OF IMPERVIOUS AREA, THEREFORE HMP IS NOT REQUIRED.

STANDARD LID IS INFEASIBLE FOR THIS SITE DUE TO THE AMOUNT OF LANDSCAPE VS. IMPERVIOUS AREA & THE SOIL TYPE PER CITY REQUIREMENTS.

THE SOILS HAVE A SATURATION HYDRAULIC CONDUCTIVITY (KSAT) THAT WILL NOT ALLOW INFILTRATION OF 80% OF THE ANNUAL RUNOFF, THEREFORE INFILTRATION IS INFEASIBLE.

THE POTENTIAL RAINWATER CAPTURE AREA WAS CALCULATED.

IT WAS DETERMINED THAT THE LANDSCAPE AREA IS LESS THAN 2.5 TIMES THE SIZE OF THE POTENTIAL RAINWATER CAPTURE AREA.

IT WAS DETERMINED THAT NUMBER OF DWELLING UNITS PER IMPERVIOUS ACRE WAS LESS THAN 120.

THEREFORE RAINWATER HARVESTING IS INFEASIBLE.

THEREFORE, THE SITE WILL USE BIO-RETENTION TO TREAT IMPERVIOUS AREAS. A RANGE OF TREATMENT MEASURES MAY BE UTILIZED FOR THIS INFILL SITE, INCLUDING BUT NOT LIMITED TO BIO-RETENTION, AND SELF TREATING AREAS. THE CREEK AREA WILL BE LEFT AS RIPARIAN AREA AND PLANTED WITH NATIVE PLANTS.

THIS WILL MAXIMIZE THE OPPORTUNITY FOR THE RUNOFF TO BE CLEANED BEFORE IT ENTERS THE COLLECTION SYSTEM.

THESE MEASURES WILL BE MAINTAINED BY A HOME OWNERS ASSOCIATION OR EQUAL.

"8082 ALMADEN EXPRESSWAY SAN JOSE, CALIFORNIA FLOOD IMPACT STUDY UPDATE", FINAL REPORT, JANUARY 22, 2015 BY SCHAAF & WHEELER

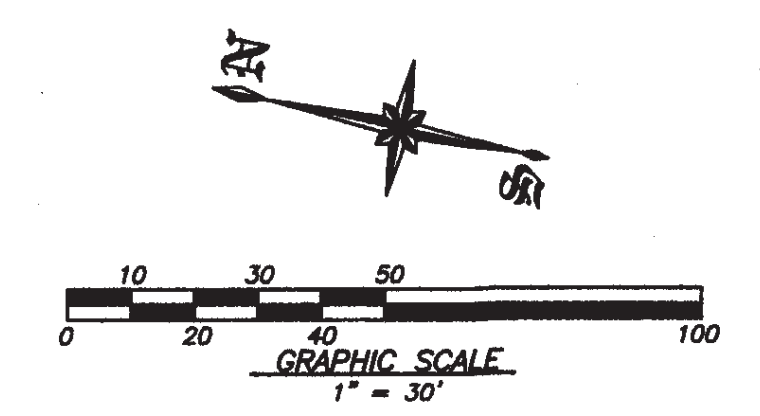
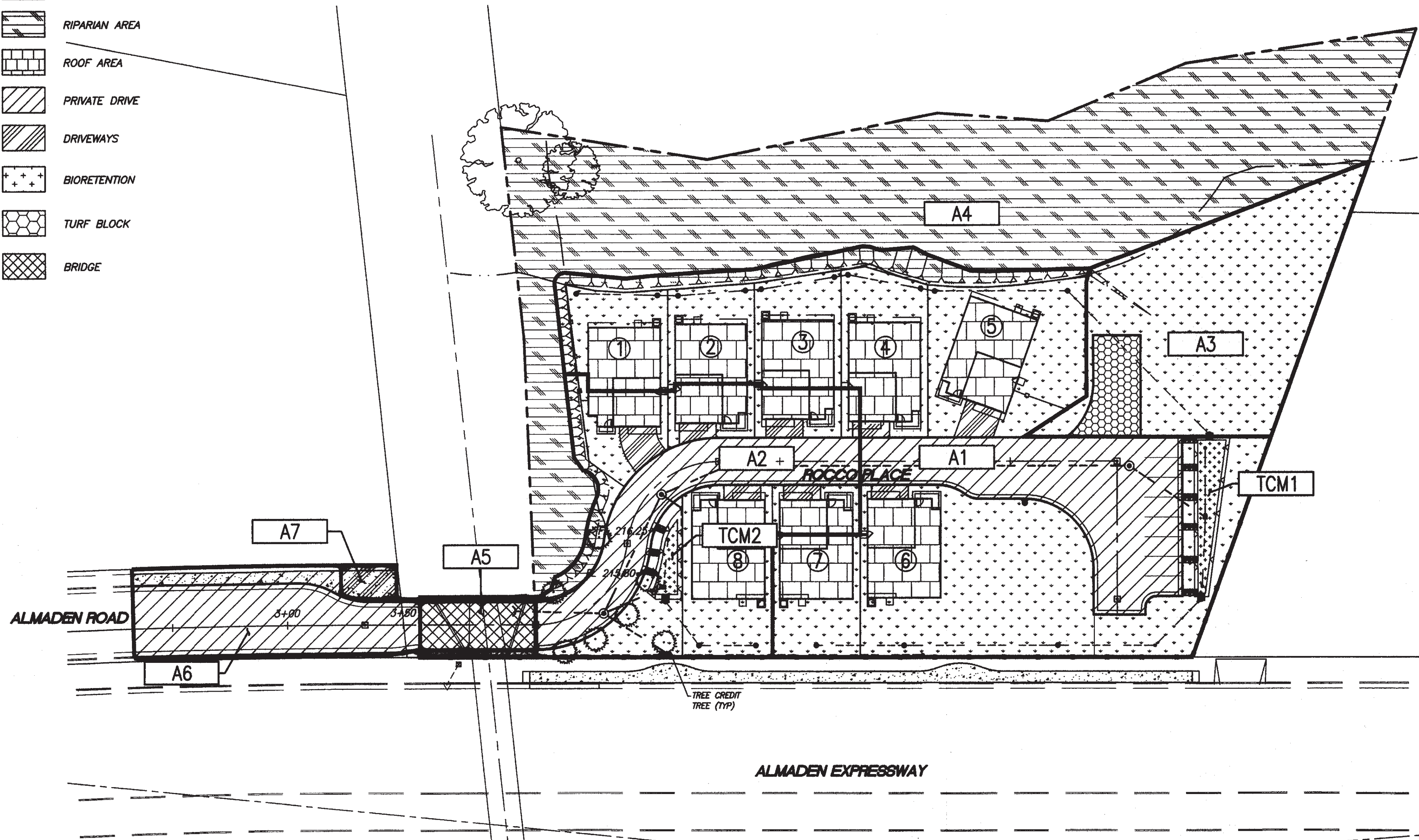
**MITIGATION MEASURES:**

THE APPLICANT SHALL PLACE ALL STRUCTURAL PADS SO THAT THE LOWEST ADJACENT GRADE TO EACH HOUSING STRUCTURE IS ABOVE THE BASE FLOOD ELEVATION. THE HIGHEST BASE FLOOD ELEVATION ACROSS THE PROJECT SITE IS APPROXIMATELY 217.1 FEET NAVD

(TO CONVERT BASE FLOOD ELEVATIONS PUBLISHED IN NVD29 TO NAVD, ADD 2.78 FEET.)

**STORMWATER LEGEND**

- LANDSCAPE AREA
- RIPARIAN AREA
- ROOF AREA
- PRIVATE DRIVE
- DRIVEWAYS
- BIORETENTION
- TURF BLOCK
- BRIDGE



**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY LINE
---	---	CENTERLINE
---	---	CONTOUR
---	---	CONCRETE CURB & GUTTER
---	---	DEPRESSED CURB
---	---	SOUND WOOD FENCE
---	---	VERTICAL CURB
---	---	V-12 CHRISTY DRAIN (OR EQUAL)
---	---	STANDARD HOODED INLET
---	---	POSITIVE RELEASE
---	---	FINISHED FLOOR ELEVATION
---	---	PAD ELEVATION
---	---	TOP OF CURB ELEVATION
---	---	FLOW LINE ELEVATION
---	---	GRADE
---	---	SLOPE
---	---	GRADE BREAK
---	---	TOP OF WALL
---	---	LANDSCAPE AREA
---	---	ROOF AREA
---	---	STREET AREA
---	---	PAVER AREA
---	---	TURF BLOCK
---	---	SECTION NAME
---	---	EVERGREEN TREE (TREE CREDIT)

**Treatment Control Measure (TCM) Summary Table**

AREA ID	Description	Total Area (SF)	Areas					TCM ID	Type of mitigation that will be used			
			Perm. Paver Area (SF)	Turf Block Area (SF)	Landscape Area (SF)	Roof Area (SF)	Parking/Pvt. Drive Area (SF)					
A1	Lot 1-8, Private Drive, Landscape	29,841	0	0	16,338	7,602	5,568	433	16,338	13,503	1	Bioretention
A2	Lot 1-3 & 7-8, Private Drive, & Landscape	12,819	0	0	4,566	3,598	3,800	714	4,566	8,053	2	Bioretention
A3	Landscape	9,045	0	1,172	7,873	0	0	0	9,045	0	-	Self-Treating
A4	Riparian	-	-	-	-	-	-	-	-	-	-	Self-Treating (Area not Disturbed)
A5	Bridge	1,300	0	0	0	0	1,300	0	0	1,300	-	Tree Credit***
A6	Public Sidewalk and Street	-	-	-	-	-	-	-	-	-	-	Maintenance
A7	Public Driveway	351	0	0	0	0	351	0	0	351	-	Roadway Project**
<b>Totals</b>		<b>53,156</b>	<b>0</b>	<b>1,172</b>	<b>28,777</b>	<b>11,041</b>	<b>11,019</b>	<b>1,147</b>	<b>29,949</b>	<b>23,207</b>		

\* Bay Area Stormwater Management Agencies Association (BASMAA), Start at the Source, Design Guidance Manual For Stormwater Quality Protection (1999 Ed.), pg. 34.  
 \*\* Per Chapter 2 (Section 2.3.1) of Stormwater Control Handbook, Roadway Projects that add new sidewalk along an existing roadway are exempt from the C3 requirements.  
 \*\*\* Per CSJ Policy Number 6-29 Tree Credits will be allowed. For each new Evergreen Tree 200 sqft of tree credit may be given.  
 Highlighted cells indicate input value cells.

**Flow-Based Treatment Measures - Bioretention**

Area ID	TCM ID	Description	Drainage Area		Bioretention Sizing		Sizing Factor 4%*	Surface Area Required sf	Surface Area Provided sf
			Total Ac	Total ft	Pervious sf	Impervious sf			
A1	1	Lots 1-8, Private Drive, Parking, Landscape	0.89	29,841	16,338	13,503	0.040	540	584
A2	2	Lots 1-3, 6-7, Private Drive, Landscape	0.29	12,819	4,566	8,053	0.040	322	384

\* Calculations are based on the 4% sizing method

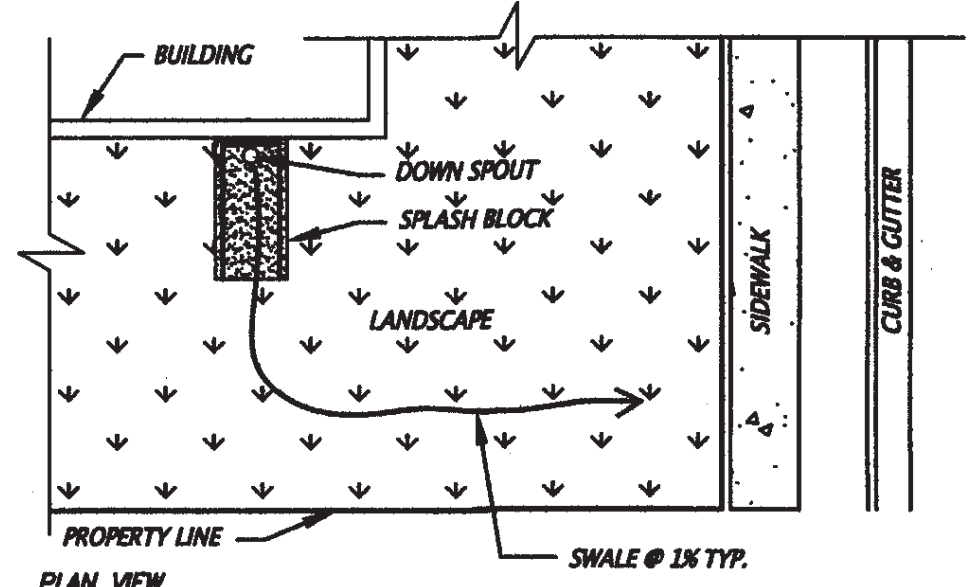
**Tree Credit Summary Table**

Area ID	TCM ID	Type	Total Ac	Total ft	Pervious sf	Impervious sf	Treatment Area Provided (sf)
A5	-	Evergreen Tree Credit**	0.03	1,300	0	1,300	1,400

\*\* Per CSJ Policy Number 6-29 Tree Credits will be allowed. For each new Evergreen Tree 200 sqft of tree credit may be given.

**NOTES:**

1. SPLASH BLOCKS SHALL BE LOCATED UNDER ALL BUILDING DOWNSPOUTS.
2. SWALE SHALL RUN FROM SPLASH BLOCK AWAY FROM BUILDING TO AREA DRAIN. MIN. SWALE SLOPE 0.5%, TYPICAL SWALE SLOPE 1%.



**SPLASH BLOCK DETAIL**  
N.T.S.

**Charles W. Davidson Co.**  
 A CALIFORNIA CORPORATION  
 CONSULTING CIVIL ENGINEERS  
 255 W. JULIAN ST. #200  
 SAN JOSE, CA 95110-2408  
 TEL. (408) 285-9162  
 FAX (408) 287-8350

**PETER B. SMITH**  
 No. 46225  
 Exp. 12-31-18  
 CIVIL  
 STATE OF CALIFORNIA

**PETER B. SMITH**  
 RCE 46225, Exp. 12-31-18  
 DATE: 3/23/17

Date:	3-27-17								
Scale:	1"=30'								
Designed:	LL/LLD								
Drawn:									
Checked:	116								
Proj. Engr:									
File:	1880								

**ROUGH GRADING AND DRAINAGE PLAN**  
**STORMWATER CONTROL PLAN**  
 TRACT NO. 10383  
 SONTERRA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETSCHE  
 VOICE MAIL: (408) 591-0565

**Bioretention Area Maintenance Plan for  
Sonterra**

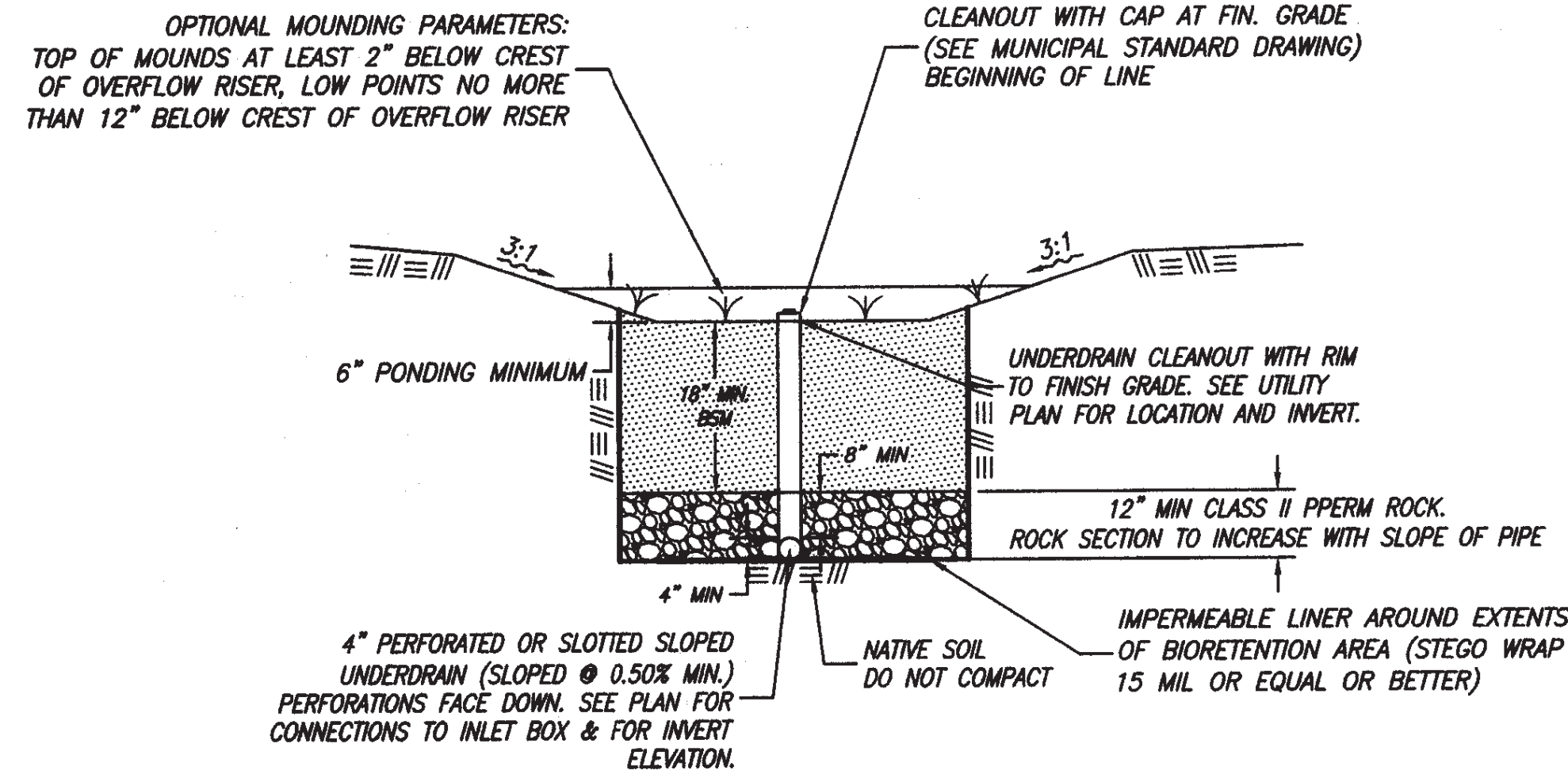
November 18, 2016

Project Address and Cross Streets: 6082 ALMADEN EXPRESSWAY  
 Assessor's Parcel No.: TRACT NO. 10383  
 Property Owner: EDENBRIDGE HOMES Phone No.: (669) 231-4240  
 Designated Contact: \_\_\_\_\_ Phone No.: \_\_\_\_\_  
 Mailing Address: 21771 Stevens Creek Blvd, Suite 200A Cupertino, CA 95014

The property contains 2 bioretention area(s), located as described below and as shown in the attached site plan.  
 Bioretention Area No. 1 is located at SOUTHERLY SIDE OF PROJECT.  
 Bioretention Area No. 2 is located at NOUTHERLY SIDE OF LOT 8.

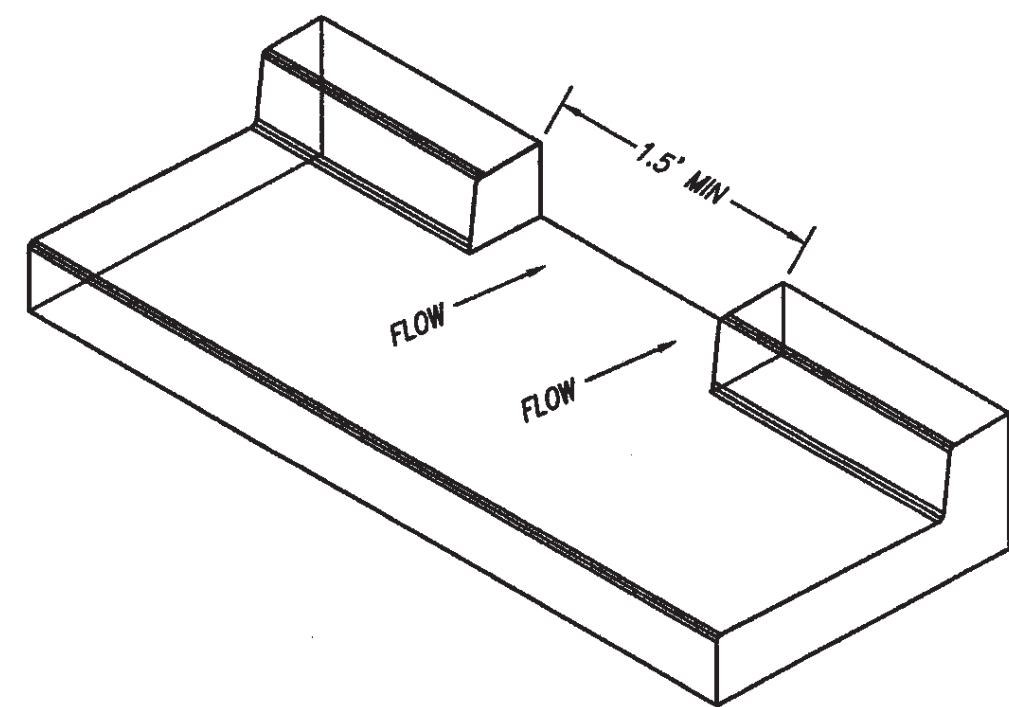
- I. **Routine Maintenance Activities**  
 The principal maintenance objective is to prevent sediment buildup and clogging, which reduces pollutant removal efficiency and may lead to bioretention area failure. Routine maintenance activities, and the frequency at which they will be conducted, are shown in
- II. **Use of Pesticides**  
 Do not use pesticides or other chemical applications to treat diseased plants, control weeds or removed unwanted growth. Employ non-chemical controls (biological, physical and cultural controls) to treat a pest problem. Prune plants properly and at the appropriate time of year. Provide adequate irrigation for landscape plants. Do not over water.
- III. **Vector Control**  
 Standing water shall not remain in the treatment measures for more than five days, to prevent mosquito generation. Should any mosquito issues arise, contact the Santa Clara Valley Vector Control District (District). Mosquito larvicides shall be applied only when absolutely necessary, as indicated by the District, and then only by a licensed professional or contractor. Contact information for the District is provided below.

Santa Clara Valley Vector Control District  
 1580 Berger Dr.  
 San Jose, California 95112  
 Phone: (408) 918-4770 / (800) 675-1155 - Fax: (408) 288-6356  
[www.sccgov.org/portals/site/vector](http://www.sccgov.org/portals/site/vector)



**TYPICAL CROSS SECTION OF BIORETENTION AREA**  
 PER FIGURE G-2, C.3 STORMWATER HANDBOOK

BIO-RETENTION LAYOUT DETAILS  
 (SEE SPECIFIC DETAILS ON SHEET 9)



**CURB OPENING**  
 N.T.S.

**BIOTREATMENT SOIL REQUIREMENTS**  
 PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL MIX SPECIFICATION CHECKLIST, COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

Table 1.

Table 1 Routine Maintenance Activities for Bioretention Areas		
No.	Maintenance Task	Frequency of Task
1	Remove obstructions, weeds, debris and trash from bioretention area and its inlets and outlets; and dispose of properly.	Quarterly, or as needed after storm events
2	Inspect bioretention area for standing water. If standing water does not drain within 2-3 days, till and replace the surface bioretention soil with the approved soil mix and replant.	Quarterly, or as needed after storm events
3	Check underdrains for clogging. Use the cleanout riser to clean any clogged underdrains.	Quarterly, or as needed after storm events
4	Maintain the irrigation system and ensure that plants are receiving the correct amount of water (if applicable).	Quarterly
5	Ensure that the vegetation is healthy and dense enough to provide filtering and protect soils from erosion. Prune and weed the bioretention area. Remove and/or replace any dead plants.	Annually, before the wet season begins
6	Use compost and other natural soil amendments and fertilizers instead of synthetic fertilizers, especially if the system uses an underdrain.	Annually, before the wet season begins
7	Check that mulch is at appropriate depth (2 - 3 inches per soil specifications) and replenish as necessary before wet season begins. It is recommended that 2' - 3' of arbor mulch be reapplied every year.	Annually, before the wet season begins
8	Inspect the energy dissipation at the inlet to ensure it is functioning adequately, and that there is no scour of the surface mulch. Remove accumulated sediment.	Annually, before the wet season begins
9	Inspect overflow pipe to ensure that it can safely convey excess flows to a storm drain. Repair or replace damaged piping.	Annually, before the wet season begins
10	Replace biotreatment soil and mulch, if needed. Check for standing water, structural failure and clogged overflows. Remove trash and debris. Replace dead plants.	Annually at the end of the rainy season, and/or after large storm events
11	Inspect bioretention area using the attached inspection checklist.	Annually, before the wet season begins

**IV. Inspections**  
 The attached Bioretention Area Inspection and Maintenance Checklist shall be used to conduct inspections monthly (or as needed), identify needed maintenance, and record maintenance that is conducted.

**Bioretention Area  
Inspection and Maintenance Checklist**

Property Address: 6082 ALMADEN EXPRESSWAY Property Owner: EDENBRIDGE HOMES

Treatment Measure No.: \_\_\_\_\_ Date of Inspection: \_\_\_\_\_ Type of Inspection:  Quarterly  Pre-Wet Season  After heavy runoff  End of Wet Season

Inspector(s): \_\_\_\_\_

Conditions When Maintenance is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)	Results Expected When Maintenance is Performed
Water stands in the bioretention area between storms and does not drain within 2-3 days after rainfall.			There should be no areas of standing water cross storm event has occurred. Any of the following may occur: sediment or trash blockages removed, improved grade from need to foot of bioretention area, or added underdrains.
Trash and debris accumulated in the bioretention area, inlet, or outlet.			Trash and debris removed from bioretention area and disposed of properly.
Evidence of sedimentation in bioretention area.			Material removed so that there is no clogging or blockage. Material is disposed of properly.
Channels have formed around inlets, there are areas of bare soil, and/or other evidence of erosion.			Obstructions and sediment removed so that water flows freely and disperses over a wide area. Obstructions and sediment are disposed of properly.
Vegetation is dead, diseased and/or overgrown.			Vegetation is healthy and attractive in appearance.
Mulch is missing or patchy in appearance. Areas of bare earth are exposed, or mulch layer is less than 2 inches in depth.			All bare earth is covered, except mulch is kept 6 inches away from border of tree and shrub. Mulch is even in appearance, at a depth of 2 - 3 inches.
Any condition not covered above that needs attention in order for the bioretention area to function as designed.			Meets the design specifications.

CONTRACTOR AGREES THAT HE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE SAFETY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE PROTECTION OF ALL UTILITIES, AND THAT HE SHALL BE WAIVED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFINE, INDICATE, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

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**Charles W. Davidson Co.**  
 A CALIFORNIA CORPORATION  
 CONSULTING CIVIL ENGINEERS  
 255 W. JULIAN ST. #200  
 SAN JOSE, CA 95110-2406  
 TEL (408) 285-9162  
 FAX (408) 287-6390



*Peter B. Smith*  
 PETER B. SMITH  
 RCE 46225 EXP. 12-31-18  
 DATE: 3/29/17

Date:	3-27-17				
Scale:	N.T.S.				
Designed:	LL/LLD				
Drawn:					
Checked:	<i>[Signature]</i>				
Proj. Engr:					
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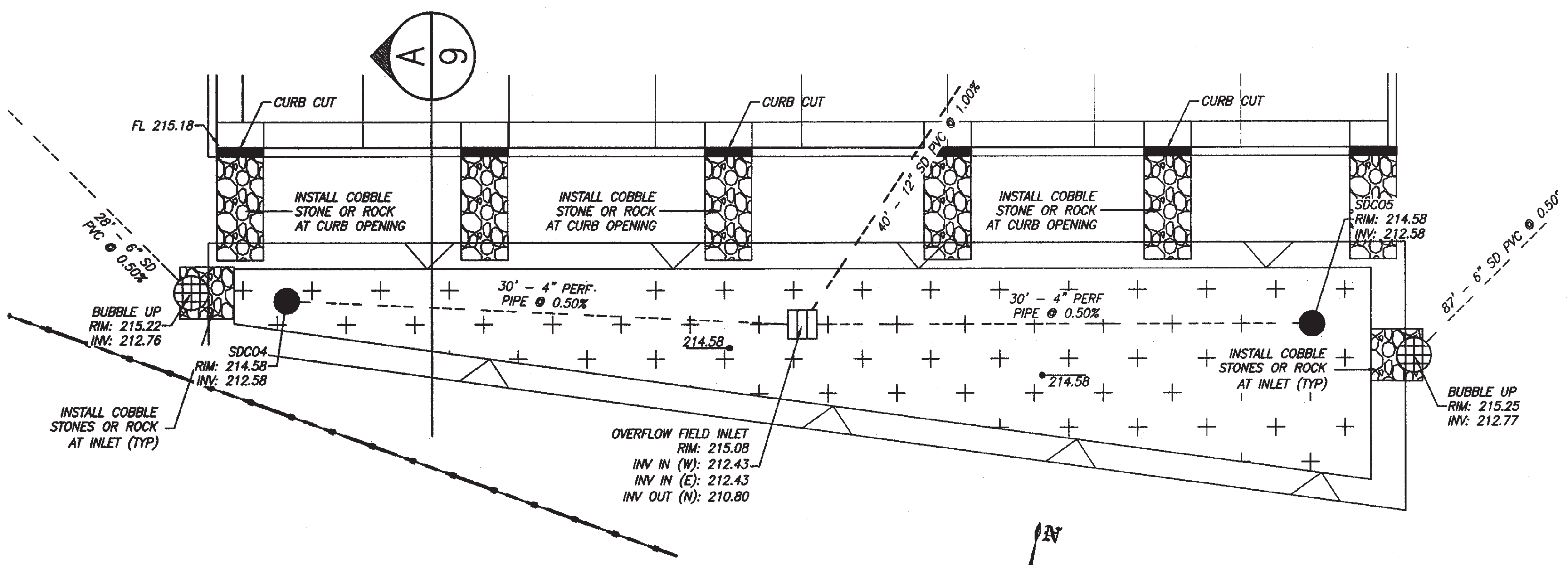
**ROUGH GRADING AND DRAINAGE PLAN**  
**STORMWATER DETAILS & MAINTENANCE**  
 TRACT NO. 10383  
 SONTERRA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETSCH  
 VOICE MAIL: (408) 591-0565

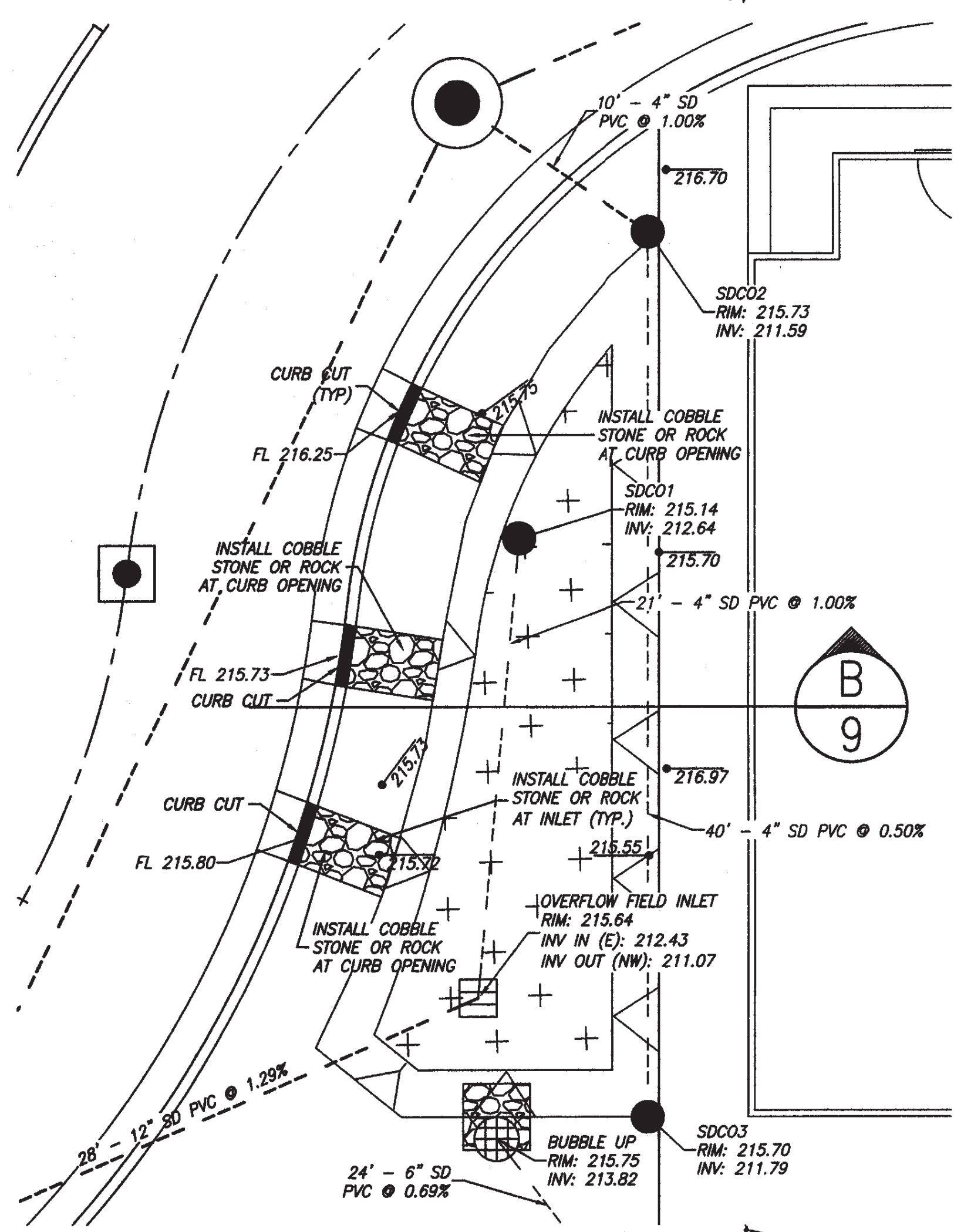


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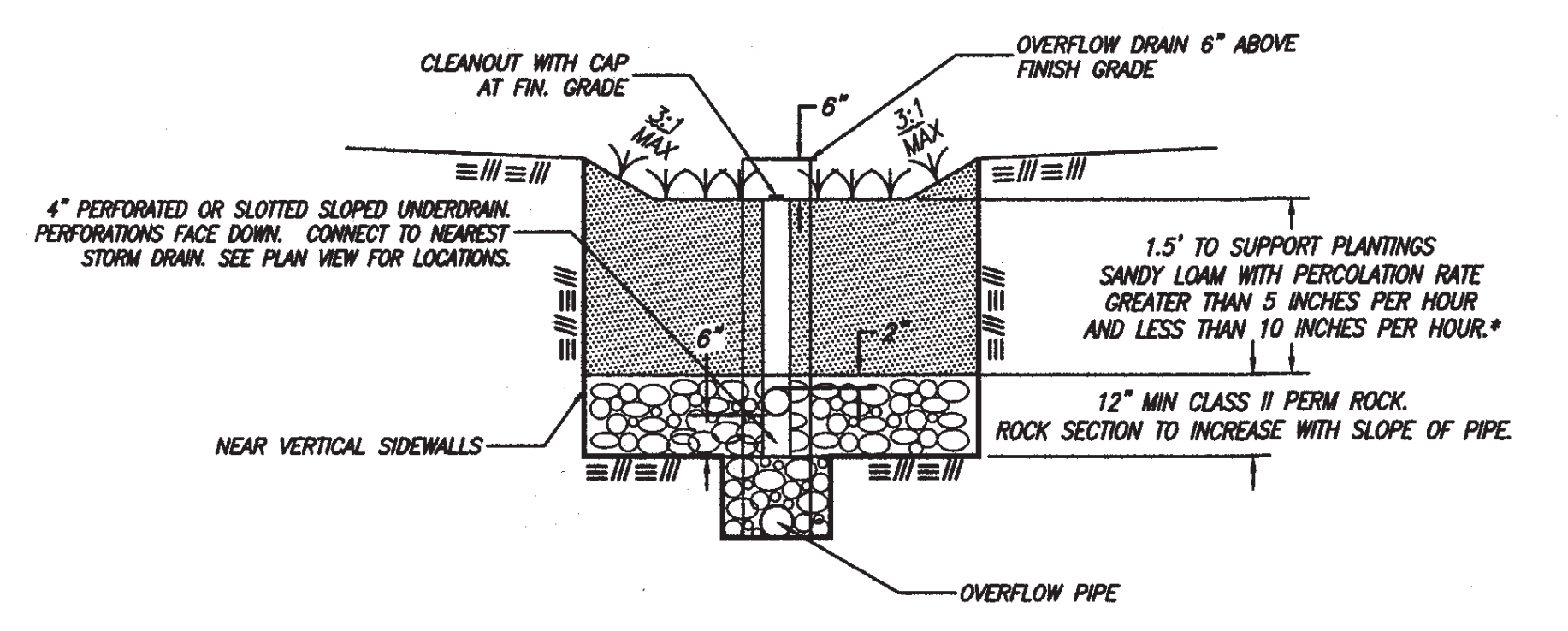
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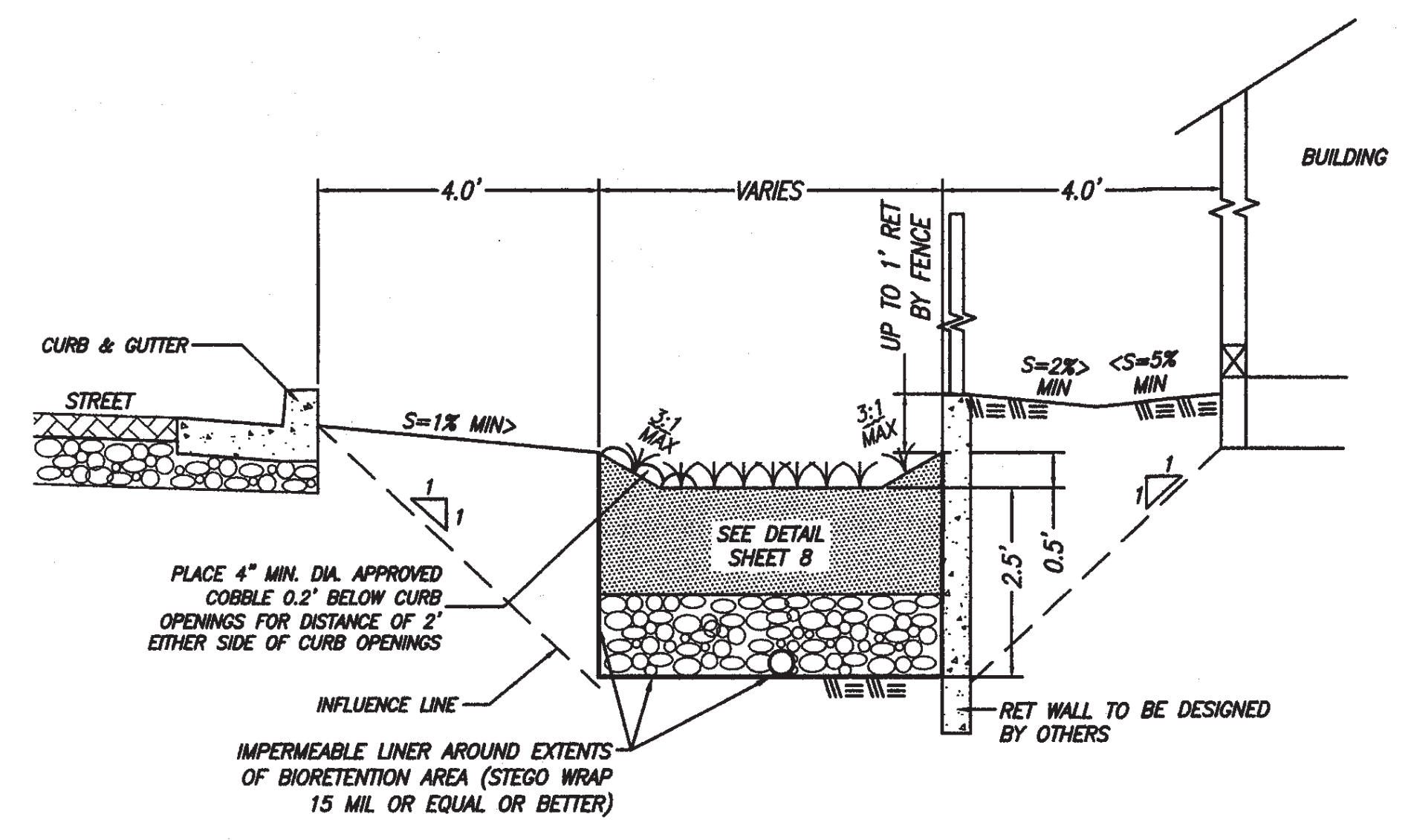
**TCM 1 - BIORETENTION**  
SCALE 1"=5'



**TCM 2 - BIORETENTION**  
SCALE 1"=5'



**SECTION A**  
N.T.S.



**SECTION B**  
N.T.S.

- BIORETENTION AREA NOTES:**
- SEE SHEET 8 FOR ADDITIONAL BIORETENTION GENERAL INFORMATION.
  - SOIL USED IN LANDSCAPE BASED TREATMENT MEASURE SHALL MEET THE INTENT OF THE SPECIFICATIONS INCLUDED IN THE MOST RECENT VERSION OF THE SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM C.3 STORMWATER HANDBOOK.
  - COBBLE INSTALLED AT CURB OPENINGS SHALL CONSIST OF 4" MINIMUM DIAMETER APPROVED COBBLE, 0.2 FEET BELOW THE CURB OPENING FOR A MINIMUM DISTANCE OF 2 FEET. PLACE GEOTEXTILE (MIRAFI FILTERWEAVE FW500 OR EQUAL) BETWEEN COBBLE AND NATIVE SOIL (IF APPLICABLE) FOR EROSION CONTROL.

**BIOTREATMENT SOIL REQUIREMENTS**  
PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL MIX SPECIFICATION CHECKLIST, COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

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FAX (408) 287-8390



*Peter B. Smith*  
PETER B. SMITH  
RCE 46225 EXP. 12-31-18  
DATE: 3/29/17

Date:	3-27-17				
Scale:	N.T.S.				
Designed:	LL/ld				
Drawn:					
Checked:					
Proj. Engr:					
File:	1880				

**ROUGH GRADING AND DRAINAGE PLAN**  
**STORMWATER DETAILS & MAINTENANCE**  
TRACT NO. 10383  
SONTERRA  
SAN JOSE CALIFORNIA

PERMIT # 16-127213GR  
PROJECT # 3-18273  
PROJECT INSPECTOR: STEVE PLETSCH  
VOICE MAIL: (408) 591-0565

# EROSION CONTROL PLAN

## TRACT NO. 10383

### WDID# 2 43C376161

#### GENERAL EROSION AND SEDIMENT CONTROL NOTES:

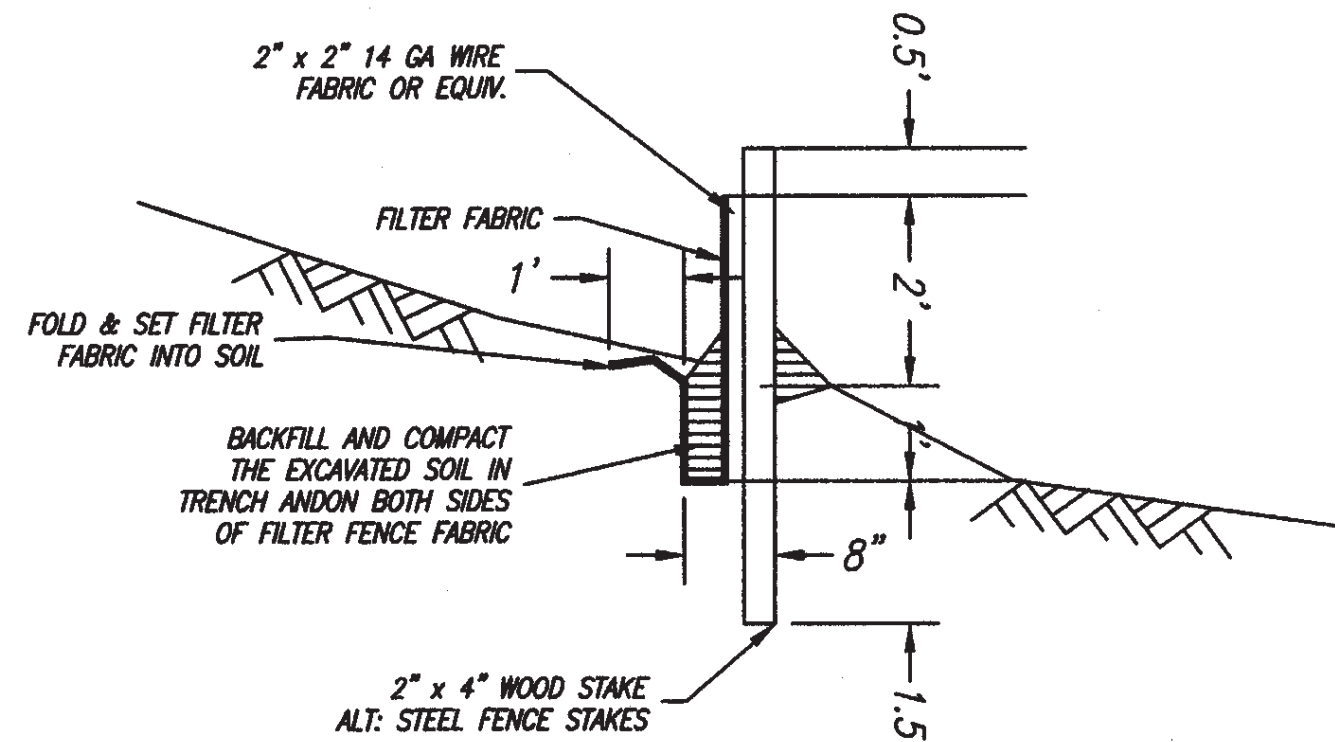
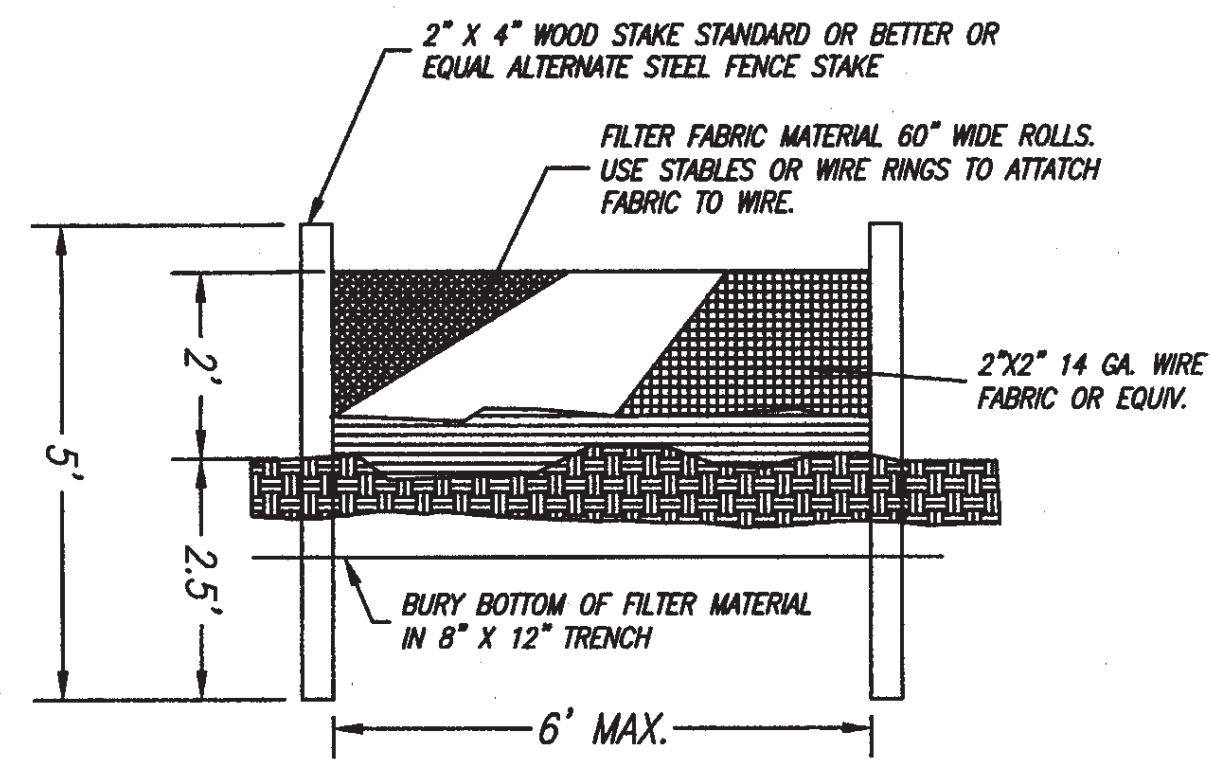
- OWNER: EDENBRIDGE INC. 21771 STEVENS CREEK BLVD., STE 200A CUPERTINO, CA 95014 (669) 231-4240  
CONTACT: CHRISTOPHER GATLEY
- CONTRACTOR: EDENBRIDGE HOMES 21771 STEVENS CREEK BLVD., STE 200A CUPERTINO, CA 95014 (669) 231-4240  
CONTACT: CHRISTOPHER GATLEY
- IT SHALL BE THE OWNER'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THE SOIL EROSION CONTROL PLAN.
- CIVIL ENGINEER: CHARLES W. DAVIDSON CO., A CALIFORNIA CORPORATION 255 W. JULIAN STREET, SUITE 200, SAN JOSE, CA 95110 PHONE: (408) 295-9182
- CONSTRUCTION SUPERINTENDENT: JEFF RICE 24 HR. PHONE: (510) 292-6286
- GRADING CONTRACTOR: EDENBRIDGE, INC. 21771 STEVENS CREEK BLVD STE 200A (669) 231-4240
- THIS PLAN IS INTENDED TO BE USED FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY AND IS NOT TO BE USED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS.
- DEVELOPER WILL SUBMIT TO THE CITY MONTHLY (AT THE FIRST OF EACH MONTH BETWEEN OCTOBER 1st AND APRIL 30th) CERTIFICATIONS THAT ALL EROSION/SEDIMENT MEASURES IDENTIFIED ON THE APPROVED EROSION CONTROL PLAN ARE IN PLACE. IF MEASURES ARE NOT IN PLACE, DEVELOPER SHALL PROVIDE THE CITY WITH A WRITTEN EXPLANATION OF WHY THE MEASURE IS NOT IN PLACE AND WHAT WILL BE DONE TO REMEDY THIS SITUATION.
- OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING EROSION AND SEDIMENT CONTROL MEASURES PRIOR, DURING, AND AFTER STORM EVENTS.
- REASONABLE CARE SHALL BE TAKEN WHEN HAULING ANY EARTH, SAND, GRAVEL, STONE DEBRIS, PAPER OR ANY OTHER SUBSTANCE OVER ANY PUBLIC STREET, ALLEY OR OTHER PUBLIC PLACE. SHOULD ANY BLOW, SPILL, OR TRACK OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY, IMMEDIATE REMEDY SHALL OCCUR.
- SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
- DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM, INCLUDING EXISTING DRAINAGE SWALES AND WATER COURSES.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE COMPLIED WITH.
- CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.

#### EROSION AND SEDIMENT CONTROL MEASURES:

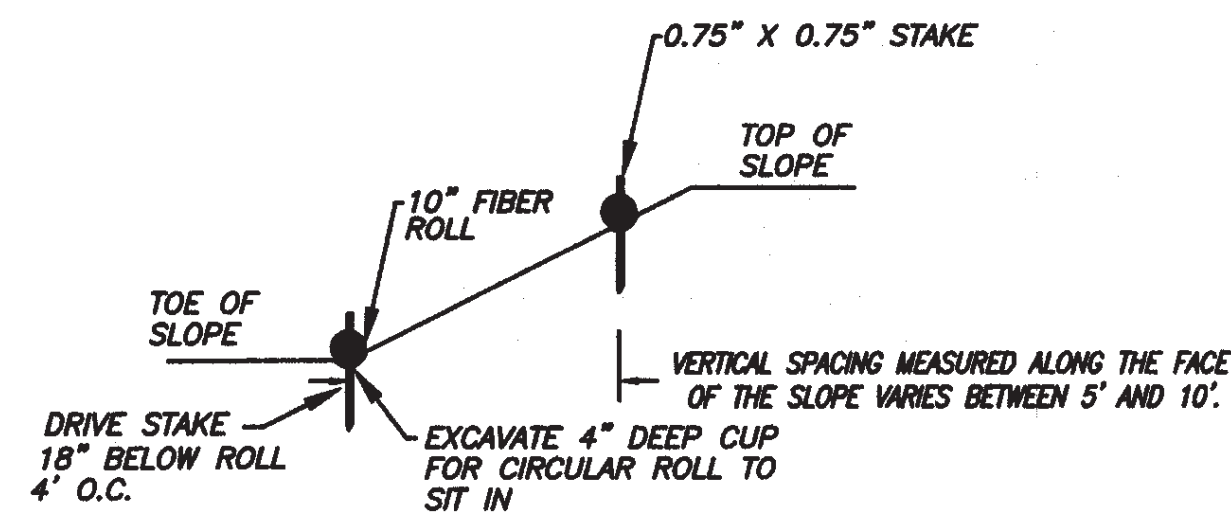
- THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 1, TO APRIL 30. FACILITIES ARE TO BE OPERABLE PRIOR TO SEPTEMBER 15 OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE EXPOSED AREAS SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES. DURING THE NON-RAINY SEASON BEST MANAGEMENT PRACTICES (BMPs) MUST BE IMPLEMENTED DURING CONSTRUCTION WHICH INCLUDES, BUT IS NOT LIMITED TO: STABILIZED CONSTRUCTION ENTRANCE, TIRE WASH AREA AND INLET PROTECTION.
- THIS PLAN COVERS ONLY THE FIRST WINTER FOLLOWING GRADING WITH ASSUMED SITE CONDITIONS AS SHOWN ON THE EROSION CONTROL PLAN. PRIOR TO SEPTEMBER 15, THE COMPLETION OF SITE IMPROVEMENTS SHALL BE EVALUATED AND REVISIONS MADE TO THIS PLAN AS NECESSARY WITH THE APPROVAL OF THE CITY ENGINEER. PLANS ARE TO BE RESUBMITTED FOR CITY APPROVAL PRIOR TO SEPTEMBER 1 OF EACH SUBSEQUENT YEAR UNTIL SITE IMPROVEMENTS ARE ACCEPTED BY THE CITY.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCEWAYS. (ALSO INCLUDE THIS NOTE ON GRADING PLANS.)
- CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE CITY.
- IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY SEPTEMBER 23, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER, 2) BLOWN STRAW, 3) TACKLIFIER AND MULCH.
- INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT.
- LOTS WITH HOUSES UNDER CONSTRUCTION WILL NOT BE HYDROSEEDED. EROSION PROTECTION FOR EACH LOT WITH A HOUSE UNDER CONSTRUCTION SHALL CONFORM TO THE TYPICAL LOT EROSION CONTROL DETAIL SHOWN ON THIS SHEET.
- THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN IN THE FIELD. NOTIFY THE CITY REPRESENTATIVE OF ANY FIELD CHANGES.

#### MAINTENANCE NOTES:

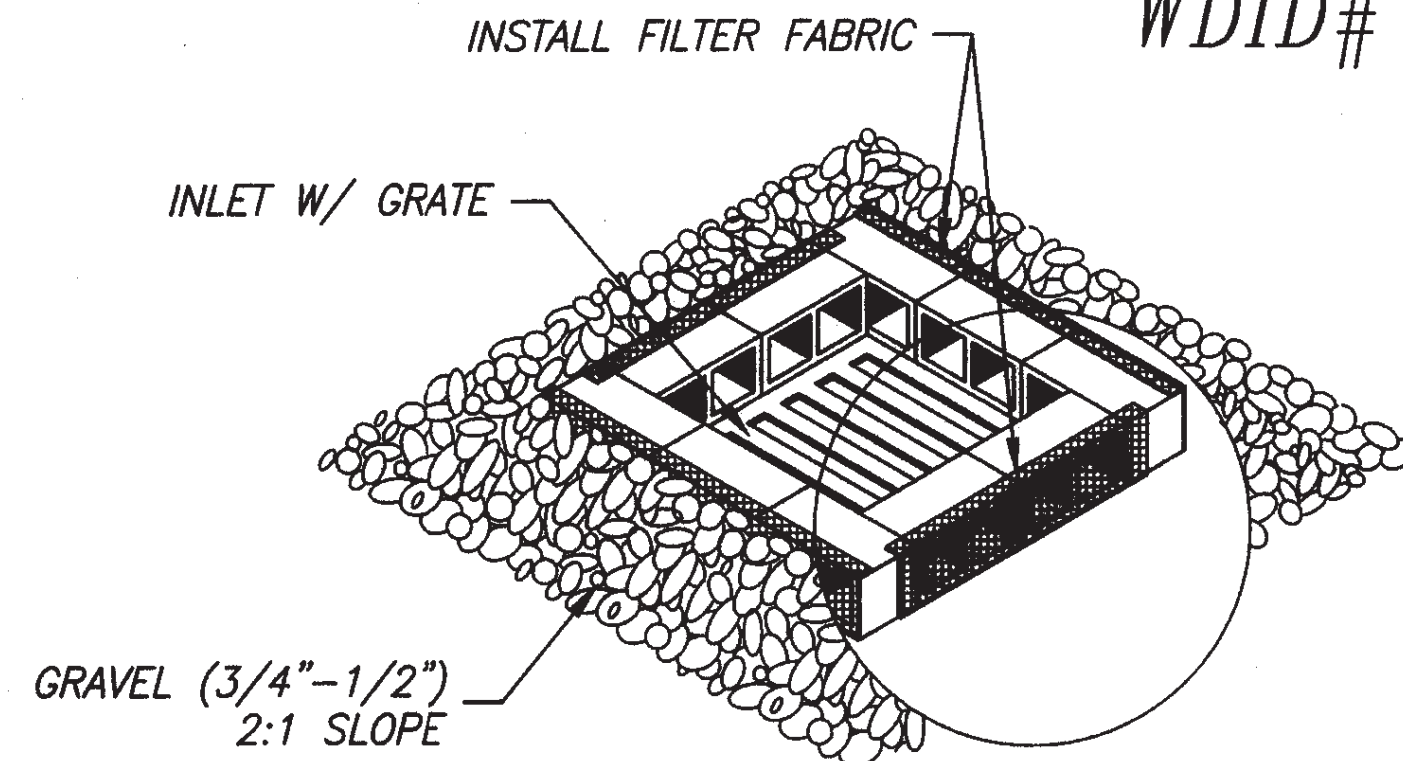
- MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
  - REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
  - SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED.
  - SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
  - SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1 FOOT.
  - SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
  - RILLS AND GULLIES MUST BE REPAIRED.
- SAND BAG INLET PROTECTIONS SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE SAND BAG.



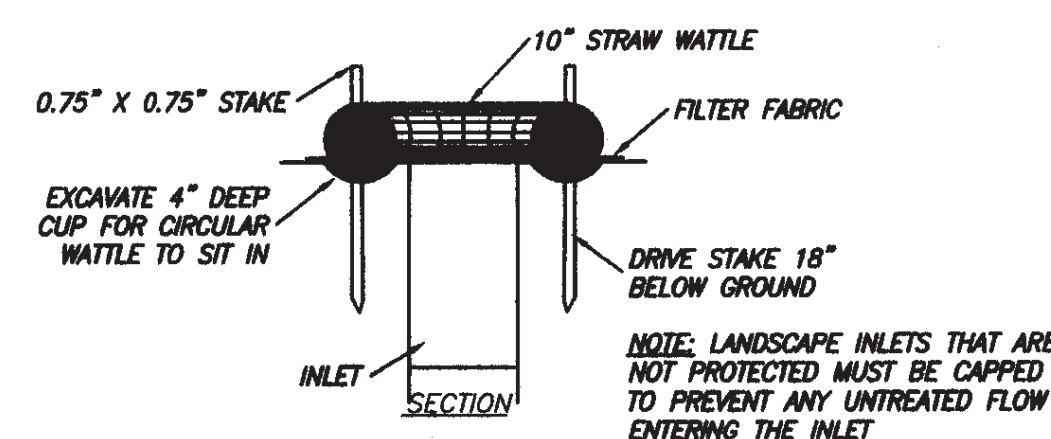
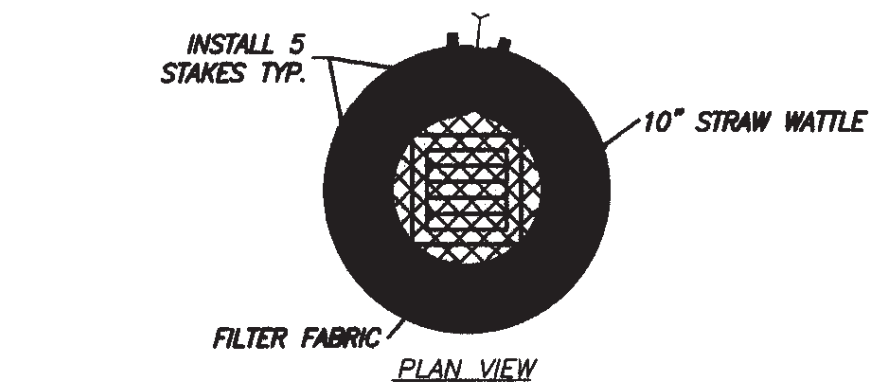
**SILT FENCE DETAIL**  
N.T.S.



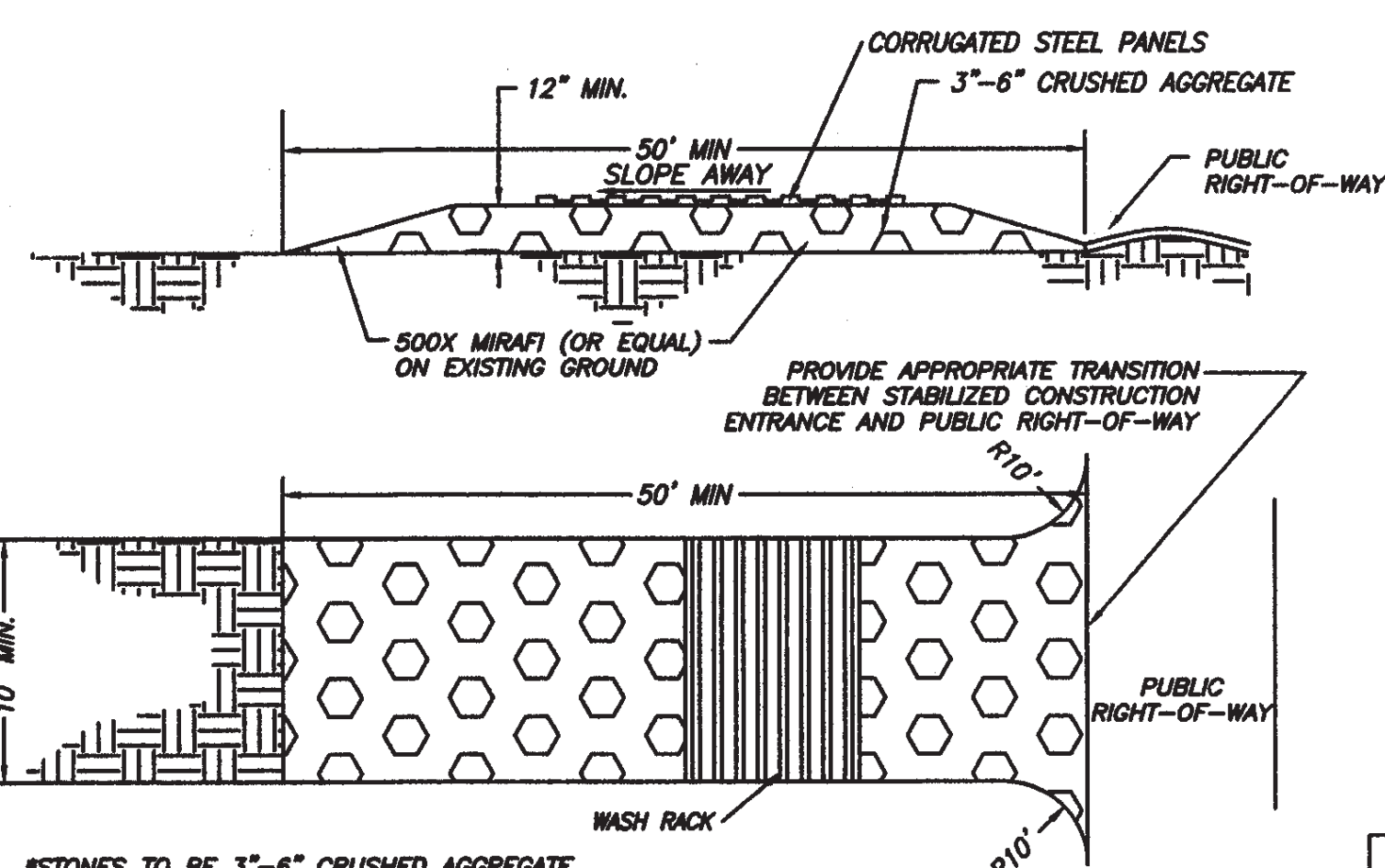
**FIBER ROLL INSTALLATION DETAIL**  
N.T.S.



**BLOCK & GRAVEL INLET PROTECTION**  
BEFORE STREETS ARE PAVED  
N.T.S.



**ALTERNATE FIBER ROLL INLET PROTECTION**  
MAY BE USED IN LANDSCAPE AREA DRAINS  
N.T.S.

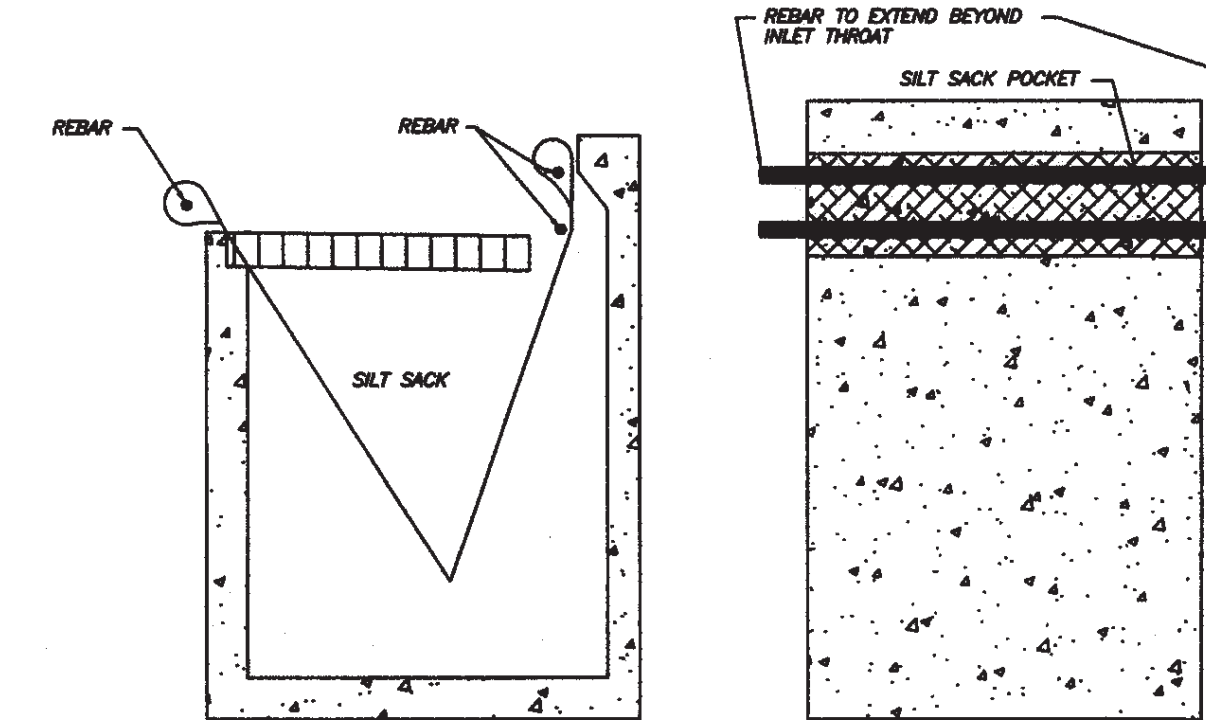


**STABILIZED CONSTRUCTION ENTRANCE**  
N.T.S.

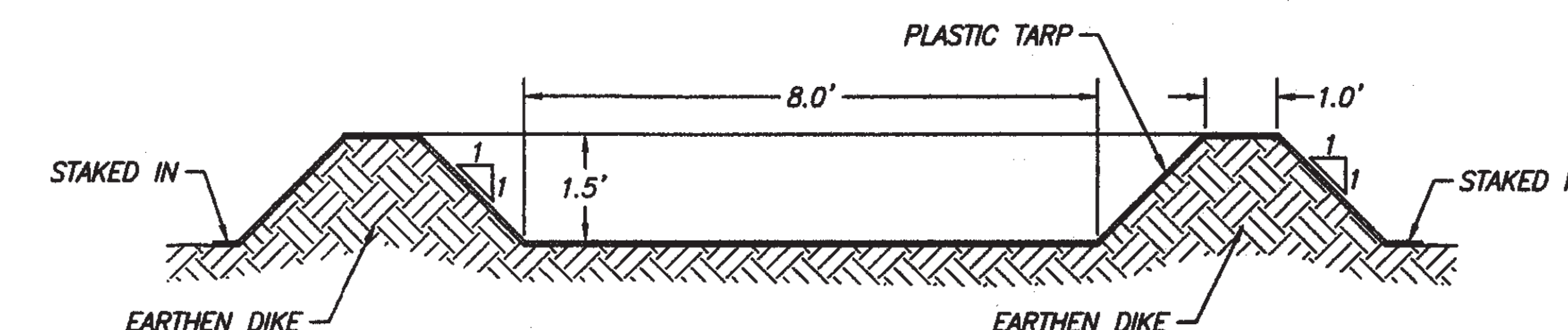
BMP SUMMARY TABLE	
BMP CATEGORY	BMP USED
EROSION CONTROL	WIND EROSION CONTROL CONSTRUCTION ENTRANCE OUTLET PROTECTION/ VELOCITY DISSIPATION DEVICES
SEDIMENT CONTROL	SILT FENCE STABILIZED CONSTRUCTION ROADWAY STREET SWEEPING AND VACUUMING
GOOD SITE MANAGEMENT	STORM DRAIN INLET PROTECTION
NON-STORMWATER MANAGEMENT	STORAGE OF CONSTRUCTION MATERIALS APPLICATION AND STORAGE OF LANDSCAPE MATERIALS MANAGEMENT OF WASTES AND WASTE MATERIALS ON SITE
RUN-ON AND RUN-OFF CONTROL	WATER CONSERVATION PRACTICES ILLEGAL DUMPING REPORTING VEHICLE AND EQUIPMENT MAINTENANCE
ACTIVE TREATMENT SYSTEMS	STABILIZED ENTRANCE, FIBER ROLLS, SILTFENCE
	NOT APPLICABLE

#### MAINTENANCE MEASURES

CONTROLS	INSPECTION FREQUENCY	MAINTENANCE/REPAIR MEASURES
STABILIZED CONSTRUCTION ENTRANCE	WEEKLY AND 2 BUSINESS DAYS (24 HOURS) AFTER QUALIFYING RAIN	REPLACE GRAVEL MATERIAL WHEN VOIDS ARE PRESENT REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS WITHIN 24 HOURS REMOVE GRAVEL AT COMPLETION OF CONSTRUCTION
JUTE MAT	WEEKLY AND 2 BUSINESS DAYS (24 HOURS) AFTER QUALIFYING RAIN	REPAIR WHENEVER JUTE MAT IS DAMAGED REMOVE SEDIMENT WHEN IT REACHES 1/3 THE DEPTH OF THE JUTE MAT ESPECIALLY IF HEAVY RAINS ARE EXPECTED
FIBER ROLLS	WEEKLY AND 2 BUSINESS DAYS (24 HOURS) AFTER QUALIFYING RAIN	REPAIR WHENEVER FIBER ROLL IS DAMAGED REMOVE SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE FIBER ROLL ESPECIALLY IF HEAVY RAINS ARE EXPECTED
STORM DRAIN INLET PROTECTION	WEEKLY AND 2 BUSINESS DAYS (24 HOURS) AFTER QUALIFYING RAIN	REPLACE CLOGGED FILTER FABRIC IMMEDIATELY REMOVE SEDIMENT WHEN THE DEPTH EXCEEDS 2/3 THE HEIGHT OF THE FILTER



**CALIFORNIA MODIFIED SILT SACK**  
REED & GRAHAM, INC. (OR EQUAL)  
AFTER STREETS ARE PAVED



**CONCRETE TRUCK WASHOFF AREA**  
N.T.S.

TENTATIVE CONSTRUCTION SCHEDULE	
ROUGH GRADING COMPLETION	1/28/17
UNDERGROUND UTILITIES COMPLETED	3/31/17
PAVING COMPLETED	4/15/17

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING THE DESIGN, CONSTRUCTION, AND MAINTENANCE OF ALL EROSION CONTROL MEASURES AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

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PETER B. SMITH  
 CIVIL ENGINEER  
 RCE 46225 EXP. 12-31-18  
 DATE: 2/29/17

Date: 3-27-17  
 Scale: N.T.S.  
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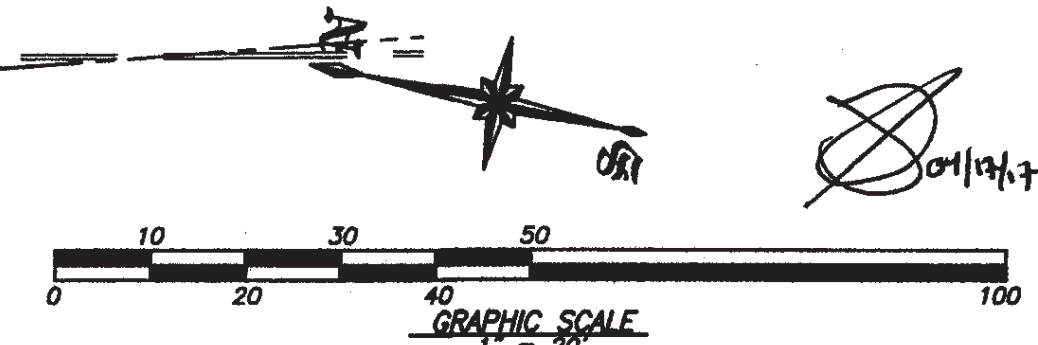
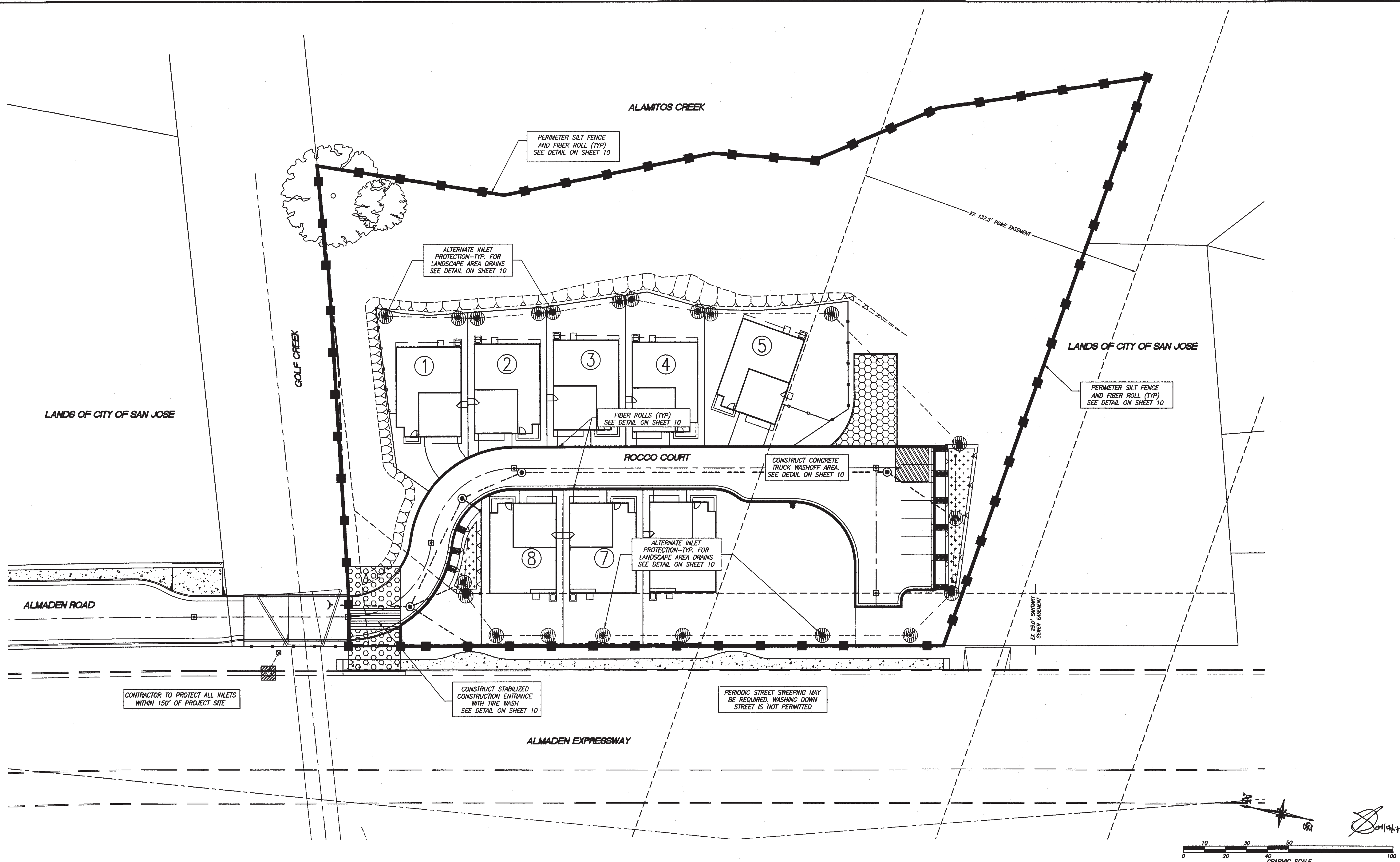
DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE

**ROUGH GRADING AND DRAINAGE PLAN**  
**EROSION CONTROL PLAN**  
 TRACT NO. 10383  
 SONTERRA

PERMIT # 16-127213GR  
 PROJECT # 3-18273  
 PROJECT INSPECTOR: STEVE PLETSCH  
 VOICE MAIL: (408) 591-0565

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F:\1646\DWG\ENGR\1646\GRD-EROSION CONTROL



**Charles W. Davidson Co.**  
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FAX (408) 287-8390



*Peter B. Smith*  
PETER B. SMITH  
RCE 46225 EXP. 12-31-18  
DATE: 3/20/17

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**ROUGH GRADING AND DRAINAGE PLAN**

**EROSION CONTROL PLAN**  
TRACT NO. 10383  
SONTERRA

SAN JOSE CALIFORNIA

PERMIT # 16-127213GR  
PROJECT # 3-18273

PROJECT INSPECTOR: STEVE PLETSCH  
VOICE MAIL: (408) 591-0585

SHEET  
11  
OF 12 SHEETS

**PROJECT STRUCTURAL NOTES**

**GENERAL INFORMATION:**

- THE CONTROLLING DESIGN CODE IS THE 2013 IBC AND 2015 CALIFORNIA BUILDING CODE.
- THE PROJECT WAS DESIGNED FOR THE FOLLOWING LOADS:
  - A. SOIL DESIGN VALUES: (PER CORNERSTONE EARTH GROUP REPORT #166-3-1 DATED MAY 18, 2016).
    - EFP (LEVEL): 40 PCF (NO LATERALS)
    - PASSIVE PRESSURE: 450 PCF (IGNORE TOP 12")
    - FRICITION: 0.45
    - UNIT WEIGHT: 110 PCF
  - B. ALLOWABLE SOIL BEARING PRESSURE: 2000DL 3000DL+LL 4000EQ/ML PSF
  - C. WIND LOAD: 85 MPH EXPOSURE B
  - D. SEISMIC LOAD: SITE CLASSIFICATION "D"
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING WORK.
- ALL FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME TYPE AND CHARACTER AS SHOWN FOR SIMILAR CONDITIONS. SUBJECT TO REVIEW OF A.O.R. AND E.O.R.

**SPECIAL INSPECTION:**

- SPECIAL INSPECTION REQUIRED SHALL BE PROVIDED PER CBC CHAPTER 17, ALSO SEE CITY OF SAN JOSE - DEPARTMENT OF PUBLIC WORKS COMPLETED SPECIAL INSPECTION FORM SPECIFICALLY SHOWING THE TEST REQUIRED FOR THIS PROJECT AND SITE.
- SPECIAL INSPECTION IS REQUIRED AS FOLLOWS:
  - A. REINFORCING STEEL SHALL BE INSPECTED PERIODICALLY DURING INSTALLATION TO VERIFY SIZE AND LOCATION.
  - B. CONCRETE SHALL BE INSPECTED CONTINUOUSLY DURING PLACEMENT. INSPECTOR SHALL MAKE CONCRETE CYLINDERS AND TEST 3 CYLINDERS FOR EVERY 100 YARDS OF CONCRETE POURED, OR FOR EACH DAY'S POUR. THE CYLINDERS SHALL BE TESTED AT 7 DAY, 28 DAY AND 1 HELD FOR CONTROL.
  - C. ALL INSPECTION REPORTS SHALL BE DISTRIBUTED TO THE OWNER, ARCHITECT, ENGINEER, AND PERMIT AGENCY. THE INSPECTOR SHALL PROVIDE A SUMMARY LETTER OF PROJECT COMPLETION.

**FOUNDATIONS:**

- WALLS TO BE SUPPORTED ON SPREAD FOOTINGS. SEE SCHEDULE/DETAIL SECTION FOR REINFORCING AND SIZES. GEOTECHNICAL ENGINEER TO REVIEW ALL EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.

**REINFORCING STEEL:**

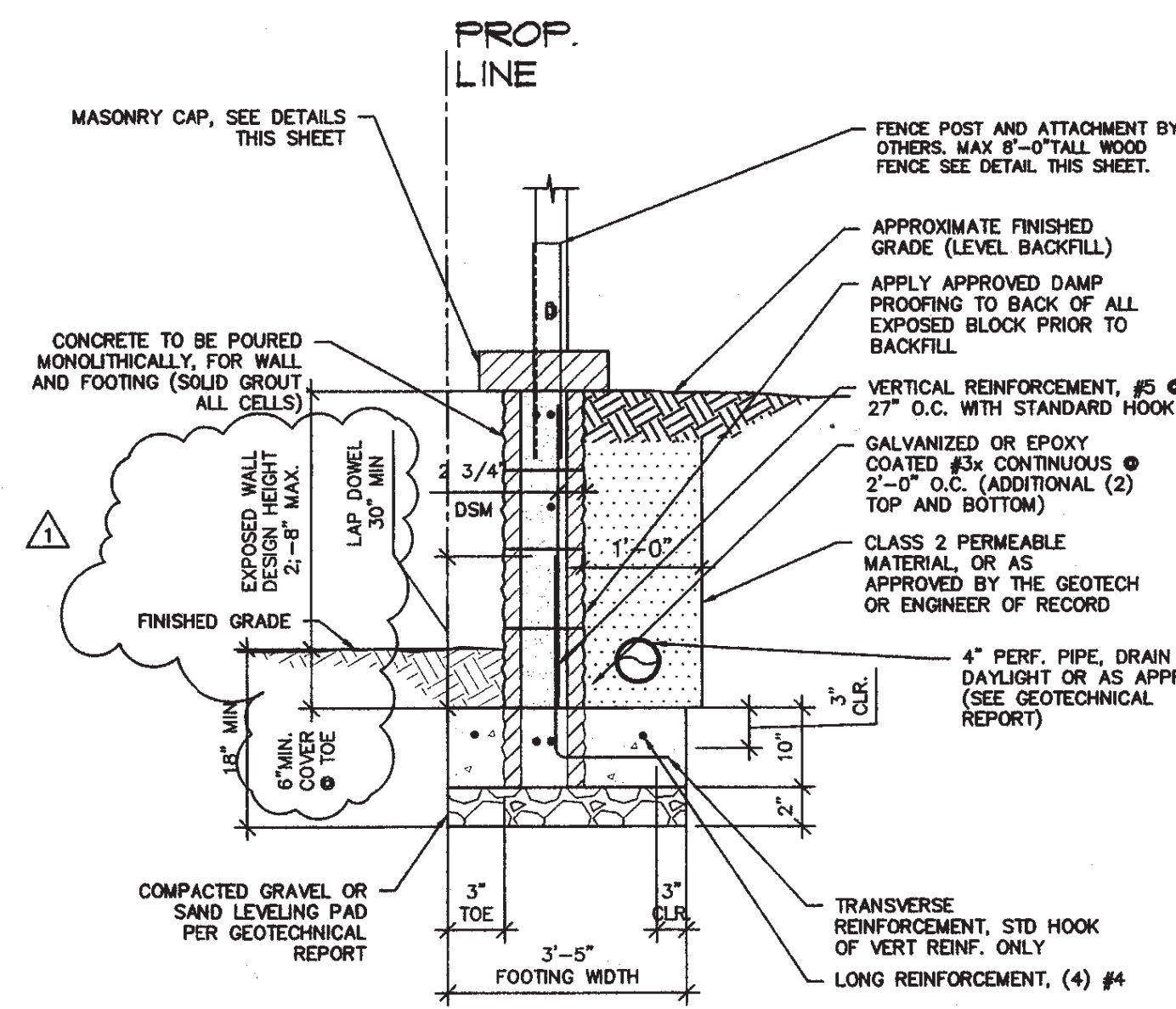
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60.
- AT FOOTING PLACE 2-0 x 2-0 BARS MATCHING SIZE AND SPACING AT CORNERS AND INTERSECTIONS.
- ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH ACI DETAILING MANUAL 315.
- AT FOOTING LAP ALL REINFORCING BARS PER ACI DETAILING MANUAL.
- AT FOOTING SECURELY TIE ALL REINFORCING. ALL TIRES TO BE GALVANIZED OR ANNEALED WIRE PER THE ACI.
- AT FOOTING PROVIDE 3" CLEARANCE FOR ALL REINFORCING IN CONCRETE CAST AGAINST EARTH, 2" FOR CONCRETE EXPOSED TO AIR, AND 1 1/2" FOR ALL INTERIOR EXPOSURE.
- AT WALL ALL HORIZONTAL REINFORCING TO BE GALVANIZED OR EPOXY COATED. WALLS 4'-0" AND SHORTER MAY USE NON-GALVANIZED REINFORCEMENT FOR HORIZONTAL BARS IF NOT SUPPORTING VEHICULAR LOADS.
- AT WALL PROVIDE MINIMUM (2) #3 HORIZONTAL BAR AT TOP AND BOTTOM OF WALL, AND MINIMUM (1) #3 AT 2'-0" O.C. TYPICAL.
- AT WALL ALL VERTICAL BARS ARE TO TERMINATE IN FOOTING WITH STANDARD HOOK OR LAPPED TO BAR WITH STANDARD HOOK INTO FOOTING.
- AT WALL PROVIDE 1/2" CLEARANCE FOR ALL VERTICAL BARS AND INSIDE FACE OF BLOCK.

**CONCRETE:**

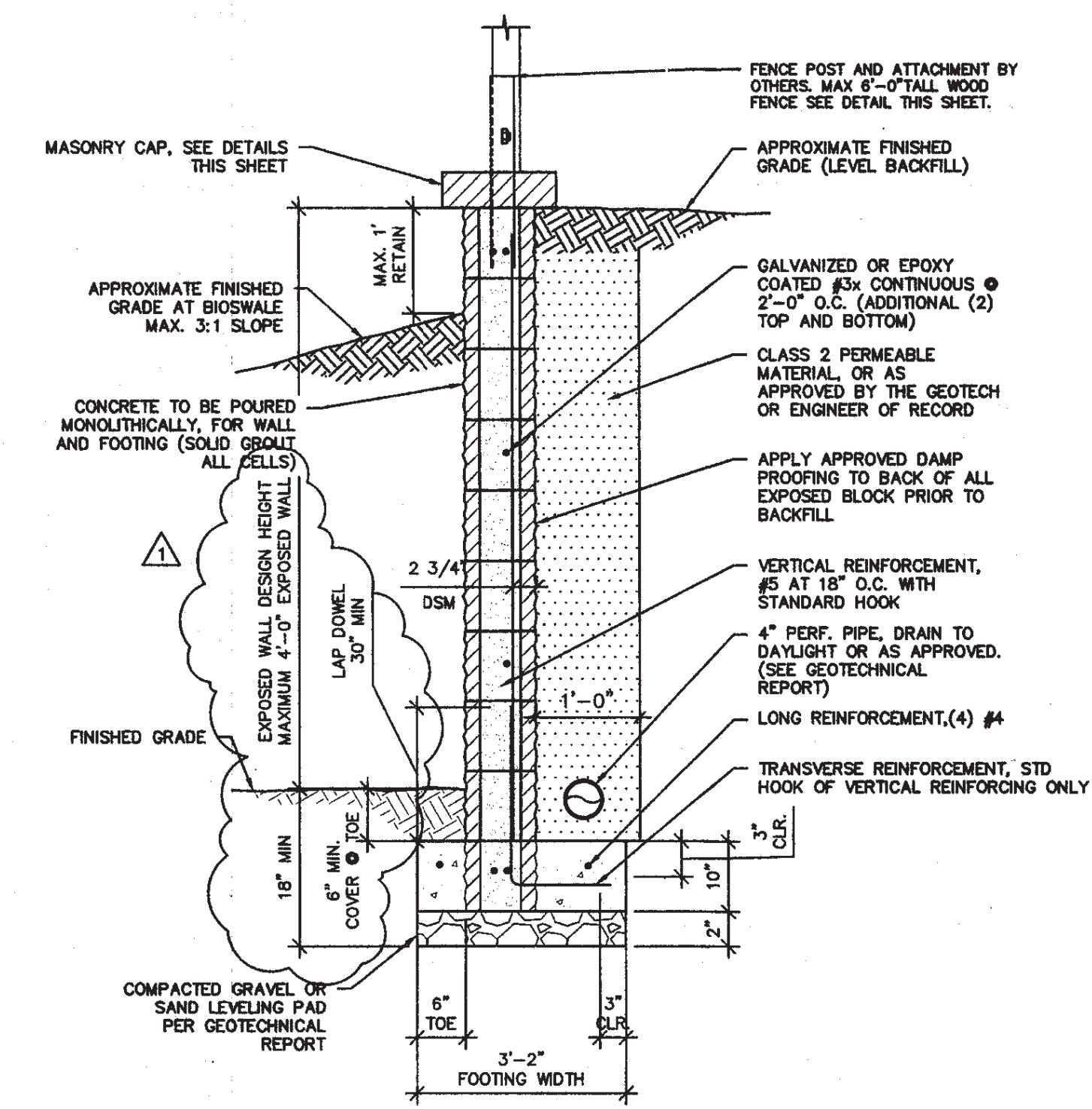
- ALL CONCRETE SHALL DEVELOP A MINIMUM 28 DAY LAB CURED COMPRESSIVE STRENGTH OF 5000 PSI FOOTING AND 5000 PSI AT WALL.
- ALL EXPOSED CONCRETE TO HAVE 5% +/- 1% AIR, BY VOLUME, CONFORMING TO ASTM C 260.
- THE CONCRETE AGGREGATE SHALL BE A CRUSHED PEA-GRAVEL MIX (MAXIMUM AGGREGATE SIZE OF 1/4")

**CONCRETE MASONRY BLOCK:**

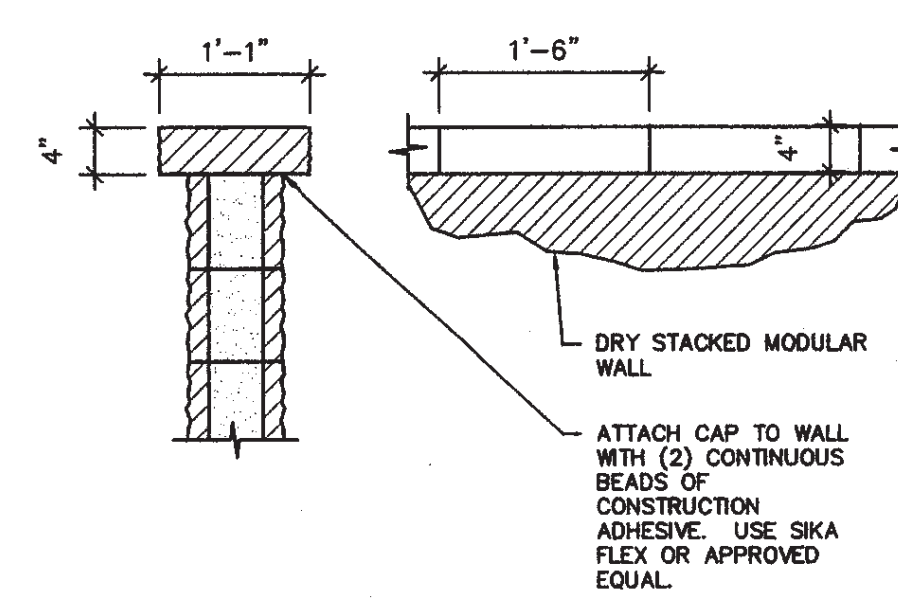
- UNITS TO BE 28 DAY STRENGTH OF 1800 PSI OR APPROVED EQUAL.
- ALL DSM RETAINING WALLS TO BE SOLID GROUTED.
- GROUT TO BE A PEA-GRAVEL CONCRETE MIX WITH 28 DAY STRENGTH OF 5000 PSI. CONCRETE FOR FOOTINGS 5000 PSI. WALL DSM TO BE 5000 PSI.
- AN EFFLORESCENCE CONTROLLING ADMIXTURE IS RECOMMENDED.



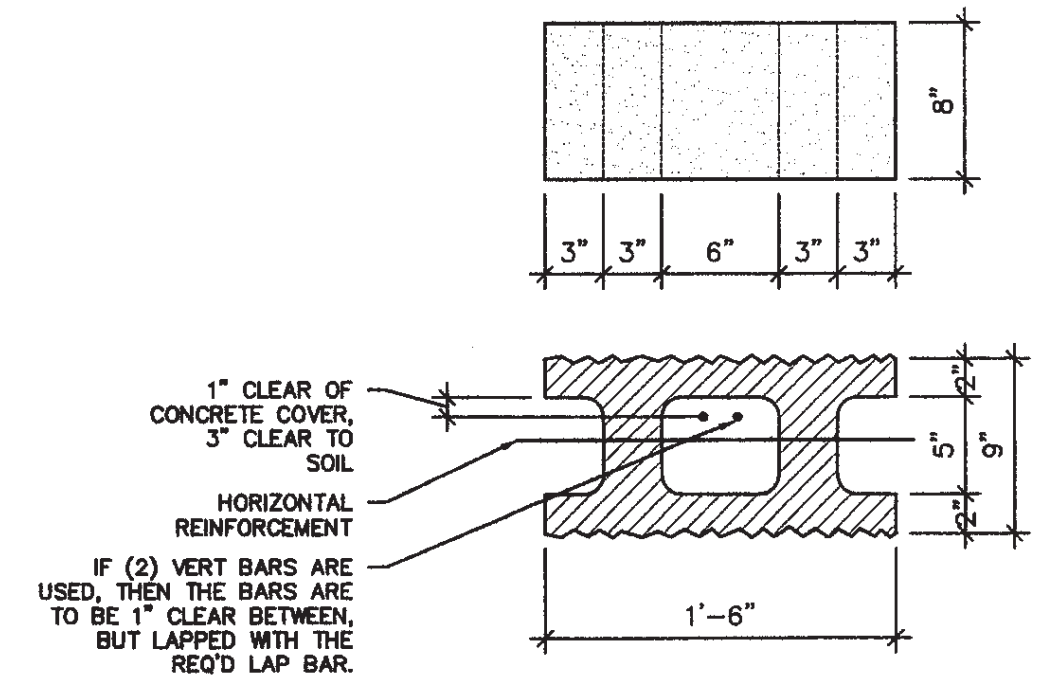
**SECTION - WALL WITH SOUND FENCE ALONG LOTS**  
3/4"= 1'-0"



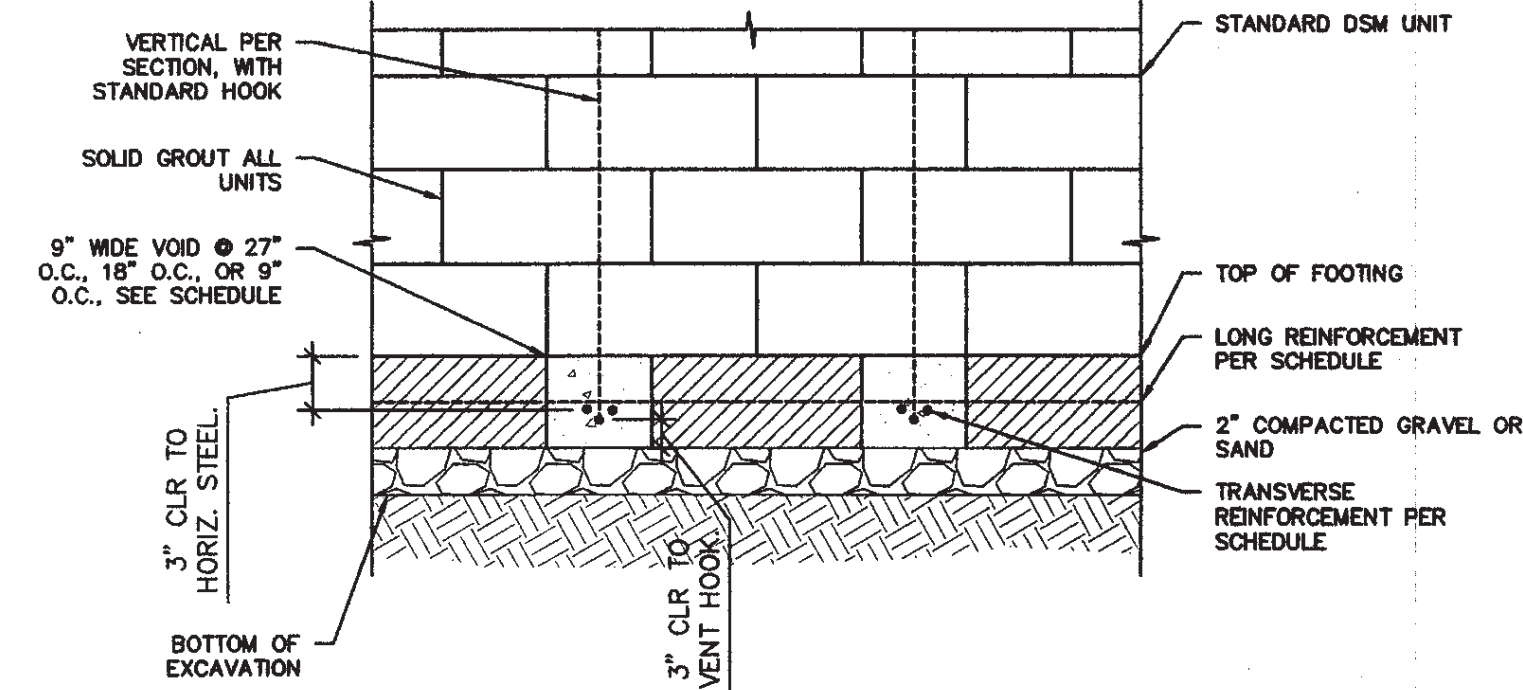
**SECTION - WALL AT BIOSWALE**  
3/4"= 1'-0"



**TOP OF WALL CAP BLOCK**  
3/4"= 1'-0"

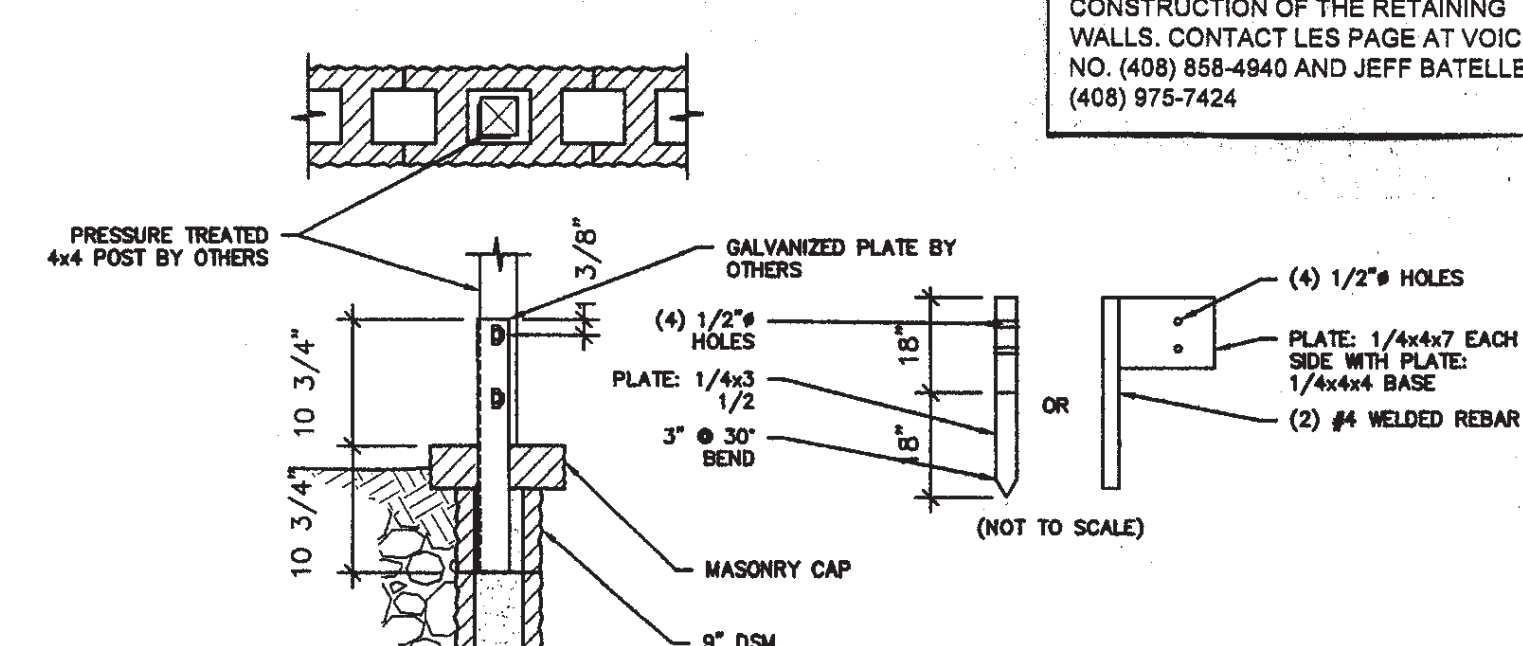


**TYPICAL DRY STACK BLOCK**  
3/4"= 1'-0"



**DSM WALL ELEVATION**  
3/4"= 1'-0"

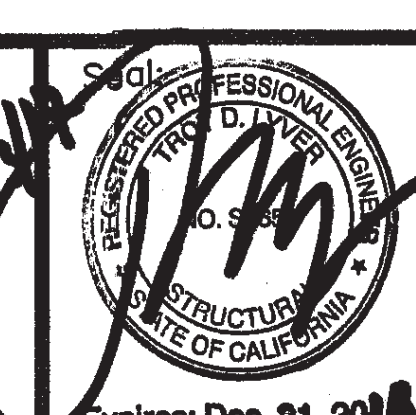
**SPECIAL NOTE:**  
THE SOIL ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND RETAINING WALL FOUNDATION PHASE OF CONSTRUCTION PER SOIL REPORT RECOMMENDATIONS AND THAT INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT.



**FENCE IN WALL DETAIL**  
3/4"= 1'-0"

**RETAINING WALL INSPECTION**  
CONTRACTOR OR PERMITEE SHALL NOTIFY THE CITY STRUCTURAL INSPECTION AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OF THE RETAINING WALLS. CONTACT LES PAGE AT VOICE MAIL NO. (408) 858-4840 AND JEFF BATELLE AT (408) 975-7424

APPROVED  
City of San Jose  
SECI, ES Division, Public Works  
Building  
Plumbing/Mechanical  
Code Criteria Used: *CSO 13*  
Approved By: *[Signature]* Date: *4/17/17*



**LYVER ENGINEERING AND DESIGN**  
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CALIFORNIA RETAINING WALLS  
SONTERRA - TRACT #10383  
DSM SITE RETAINING WALLS  
SAN JOSE, CALIFORNIA

LEAD Job#: 17-060  
Revisions:  
PLAN RVW-4/3/17

Date: 02/27/2017  
Drawn by: TDL  
Checked by: TDL

DSM WALL DETAILS  
Sheet No. **S1**

*OFFICE*

*16-127213*