

**GENERAL NOTES:**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, THE STANDARD DRAWINGS OF THE CITY OF HIGHLAND AND THE COUNTY OF SAN BERNARDINO, AND THE GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. THE CITY OF HIGHLAND WILL NOT BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND FACILITIES.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALL THE CITY ENGINEER'S OFFICE AT (909) 864-8732, EXT. 240 FOR INSPECTION 24 HOURS PRIOR TO PERFORMING ANY WORK. WORK PERFORMED WITHOUT CALLING FOR INSPECTION SHALL BE REJECTED AND SHALL BE REMOVED SOLELY AT THE CONTRACTOR'S EXPENSE.
- UTILITY CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING COMPACTION TESTS OF ALL TRENCH BACKFILL AND STREET SUBGRADES AND SUBMITTING THEM TO THE CITY ENGINEER FOR APPROVAL. NOTIFY CITY ENGINEER'S OFFICE AT (909) 864-8732, EXT. 240, 24-HOURS PRIOR TO TESTS.
- CONTRACTOR TO CONTACT GARY LEOBOLD OF EAST HIGHLANDS RANCH MHOA AT (909) 864-0215 AND COORDINATE CONSTRUCTION SCHEDULE AND OPERATION.
- THE STRUCTURAL SECTIONS SHOWN ON THESE PLANS ARE TENTATIVE. AT THE COMPLETION OF ROUGH GRADING, A MATERIAL REPORT AND THE PROPOSED STRUCTURAL SECTION SHALL BE SUBMITTED BY THE DESIGN ENGINEER TO THE CITY ENGINEER FOR REVIEW AND EVALUATION. APPROVAL WILL BE GIVEN WHEN ALL STRUCTURAL SECTION REQUIREMENTS PREVAILING AT TIME OF SUBMITTAL HAVE BEEN MET. CURRENT MINIMUM STRUCTURAL SECTION IS 3" AC OVER 4" CLASS II AB. IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO CONTACT THE CITY ENGINEER'S OFFICE TO OBTAIN THE LATEST STRUCTURAL SECTION REQUIREMENTS.
- LOCATIONS OF DRIVEWAY APPROACHES SHALL BE ADDED TO THE PRECISE GRADING PLAN IF NOT ON ORIGINAL STREET PLANS. ANY WATER OR SEWER LATERALS CONSTRUCTED WITHIN DRIVEWAY APPROACHES SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE. NOTE THAT 4' OF SIDEWALK AT A 2% SLOPE SHALL BE MAINTAINED AROUND DRIVE APPROACHES IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
- THE CONTRACTOR SHALL SATISFY HIMSELF THAT ESTIMATED QUANTITIES SHOWN ARE CORRECT BEFORE BIDDING ON ANY ITEM.
- THE CONTRACTOR SHALL MAINTAIN DUST CONTROL AT ALL TIMES. WORK SITE AND EXTERIOR STREETS SHALL BE IN A NEAT, CLEAN, HAZARD FREE, ORDERLY STATE THROUGHOUT CONSTRUCTION. SITE SHALL BE CLEANED UPON REQUEST OF THE INSPECTOR.
- ALL EXISTING PAVEMENT TO BE REMOVED SHALL BE SAWCUT OR WHEELCUT AND REMOVED TO CLEAN STRAIGHT LINES.
- AT ALL LOCATIONS WHERE NEW PAVEMENT JOINS EXISTING, THE EXISTING PAVEMENT SHALL BE COATED WITH AN ASPHALTIC EMULSION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY VALVES, BOXES AND COVERS, AND ADJUSTING OF ALL WATER VALVE BOXES AND COVERS TO FINISH GRADE.
- CONTRACTOR SHALL IMPLEMENT SAFE AND EFFECTIVE WATER CONTROL PRACTICES DURING CONSTRUCTION TO ADDRESS EXISTING PIPE AND SURFACE FLOWS FROM EXISTING LINE "A" STORM DRAIN AND LOCAL TRIBUTARY DRAINAGE AREAS. IF PIPES, AC LINING, INLETS, OUTLET STRUCTURE, RIPRAP, CONCRETE PATH AND CURB, SLOPE, TRENCH, AND OTHER TEMPORARY AND PERMANENT IMPROVEMENTS BECOME DAMAGED AND DESTROYED DURING A FLOOD, THEY SHALL BE PROMPTLY REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT IT'S OWN EXPENSE.
- THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE NUMBER 811, TWO WORKING DAYS BEFORE DIGGING. NO INSPECTION WILL BE PROVIDED BY THE CITY ENGINEER'S OFFICE, AND NO CONSTRUCTION PERMIT ISSUED INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES WILL BE VALID UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY USA.
- ALL IRRIGATION LINES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPLACED WITH 12 GAUGE MINIMUM DIPPED AND WRAPPED-WELDED STEEL PIPE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL LANDSCAPING AND OTHER EXISTING IMPROVEMENTS IN KIND (UNLESS OTHERWISE NOTED) WITHIN THE CONSTRUCTION LIMITS THAT ARE DISRUPTED BY CONTRACTOR'S OPERATION. CONTRACTOR SHALL EXERCISE CAUTION TO PREVENT DISRUPTION OF THE EAST HIGHLANDS RANCH CLUB HOUSE OPERATION.
- WHEN IMPROVEMENTS ARE TO BE PLACED ON NATIVE SOIL WHICH CONSISTS OF A ROCKY MATERIAL, THE SUB-GRADE SHALL BE PREPARED BY REMOVING ALL ROCKS WHICH PROTRUDE ABOVE THE SUB-GRADE AND ALL VOIDS OR DEPRESSIONS SHALL BE FILLED WITH A FINE GRADE MATERIAL OF A QUALITY BETTER THAN THE NATIVE MATERIAL.
- NO WORK SHALL COMMENCE WITHIN PUBLIC RIGHT OF WAY WITHOUT OBTAINING A PUBLIC IMPROVEMENTS PERMIT AND NOTIFYING THE CITY INSPECTOR TO SCHEDULE A PRECONSTRUCTION MEETING 24-HOURS PRIOR TO START OF WORK.
- ASPHALT CONCRETE SHALL BE SPREAD AND COMPACTED IN AT LEAST TWO LIFTS, WITH EACH LIFT NO THICKER THAN 2". THE CITY PREFERS THAT THE FINAL LIFT NOT BE PLACED PRIOR TO THE COMPLETION OF CONSTRUCTION OF THE RESIDENCES/BUILDINGS WITHIN THE DEVELOPMENT. SHOULD THE DEVELOPER CHOOSE TO PAVE THE FULL DEPTH OF A.C. PAVEMENT PRIOR TO THE COMPLETION OF BUILDING CONSTRUCTION, NO FINAL INSPECTION OF THE PAVEMENT SURFACE SHALL BE PERFORMED. UPON THE COMPLETION OF BUILDING CONSTRUCTION, A FINAL INSPECTION OF THE PAVEMENT SURFACE SHALL BE PERFORMED AND ANY NOTED DEFICIENCIES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY'S PAVEMENT REPAIR POLICY.

**CONTRACTORS STATEMENT**

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 CITY, 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 ENGINEER.

**CITY OF HIGHLAND, CALIFORNIA  
STORM DRAIN IMPROVEMENT PLANS  
BLEDSOE CREEK STORM DRAIN (LINE "A") AND SLOPE REPAIR**



**LEGEND**

---	STORM DRAIN LINE
- - - - -	INDICATES STREET CENTERLINE
---	INDICATES CURB LINE
---	INDICATES PROPERTY LINE
---	INDICATES EXISTING R/W
BOT	BOTTOM
CL - C/L	CENTERLINE
D/W	DRIVEWAY
TC	TOP OF CURB
FL	FLOW LINE
NS	FINISH SURFACE
INV	INVERT
HW	HEADWALL
SW	SIDEWALK
ESMT	EASEMENT
R/W	RIGHT OF WAY
GB	GRADE BREAK
HP	HIGH POINT

**EARTHWORK QUANTITY ESTIMATE:**

RAW CUT	1,416	RAW FILL	726
		SUBSIDENCE	-
		XX AC @ X.XX'	-
		XXX% LOSS IN SHRINKAGE	-
OVER EXCAVATION	4,311		4,311
		XX% LOSS IN SHRINKAGE (OVER EXCAVATION)	-
RAW TOTAL CUT	5,727 CY	RAW TOTAL FILL	5,037 CY
RAW EXPORT TOTAL =	690 CY		

**NOTE:**  
SEE SOILS REPORT FOR ACCURATE SOILS RESPONSE FACTORS. QUANTITIES SHOWN ABOVE ARE ESTIMATES ONLY.

**ENGINEER:**

AGUILAR CONSULTING INC.  
2155 CHICAGO AVENUE, SUITE 304  
RIVERSIDE, CA. 92507

**SOILS ENGINEER'S STATEMENT:**

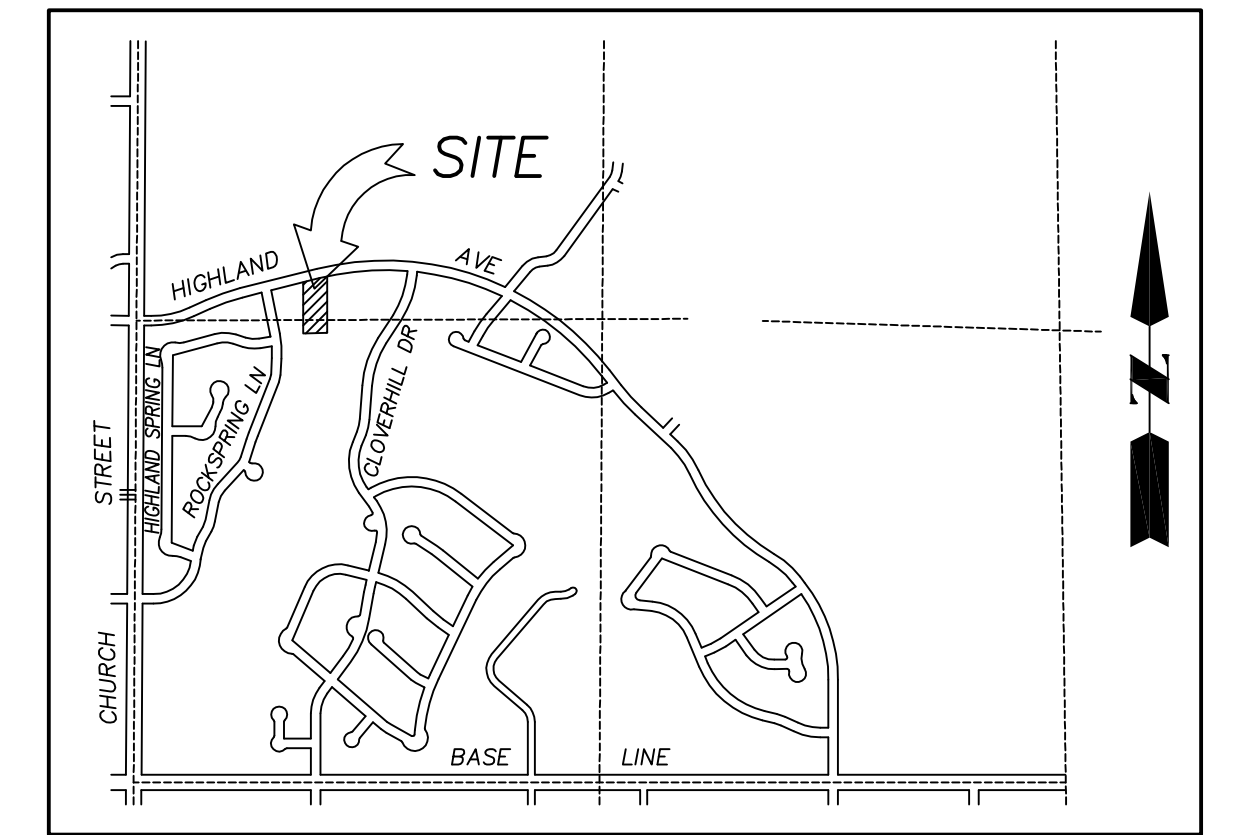
I, THE UNDERSIGNED SOILS ENGINEER, HAVE REVIEWED THESE PLANS AND AM SATISFIED THAT THEY ARE IN COMPLIANCE WITH THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT PREPARED FOR THIS SITE, PROJECT NO. \_\_\_\_\_

BY: \_\_\_\_\_  
COMPANY NAME: LOR GEOTECHNICAL, INC.  
REGISTRATION NO.: GE2030  
PRINT NAME: JOHN P. LEUER  
PHONE: (951) 653-1760



**COMPANIES AND AGENCIES SERVICING THIS PROJECT ARE AS FOLLOWS:**

<b>WATER/SEWER:</b> EAST VALLEY WATER DISTRICT 31111 GREENSPOT ROAD HIGHLAND, CA. 92346 PH: (909) 888-8986	<b>TELEPHONE:</b> ATT 2828 E. CORONADO ST., 2ND FLOOR ANAHEIM, CA. 92807 PH: (714) 666-5415
<b>POWER:</b> SOUTHERN CALIFORNIA EDISON CO. 287 TENNESSEE STREET REDLANDS, CA. 92373 PH: (909) 307-6767	<b>CABLE:</b> TIME WARNER CABLE 1722 ORANGETREE LANE REDLANDS, CA. 92374 PH: (909) 798-3588
<b>GAS:</b> SOUTHERN CALIFORNIA GAS CO. 155 SOUTH "G" STREET SAN BERNARDINO, CA. 92401 PH: (909) 335-7928	<b>SCHOOL DISTRICT:</b> REDLANDS UNIFIED SCHOOL DISTRICT 20 WEST LUGONIA AVENUE REDLANDS, CA. 92374 PH: (909) 793-2301



**VICINITY MAP**

NOT TO SCALE

**SHEET INDEX**

SHEET 1	TITLE SHEET
SHEET 2	PLAN
SHEET 3	PROFILE
SHEET 4	LATERAL "A-1" PROFILE AND SECTION "A"-"A"
SHEET 5	SECTION "B"-"B"
SHEET 6	DETAILS AND SECTIONS
SHEET 7	REMOVAL AND DEMOLITION PLAN
SHEET 8	ROUGH GRADING AND EROSION CONTROL PLAN

**CONSTRUCTION NOTES**

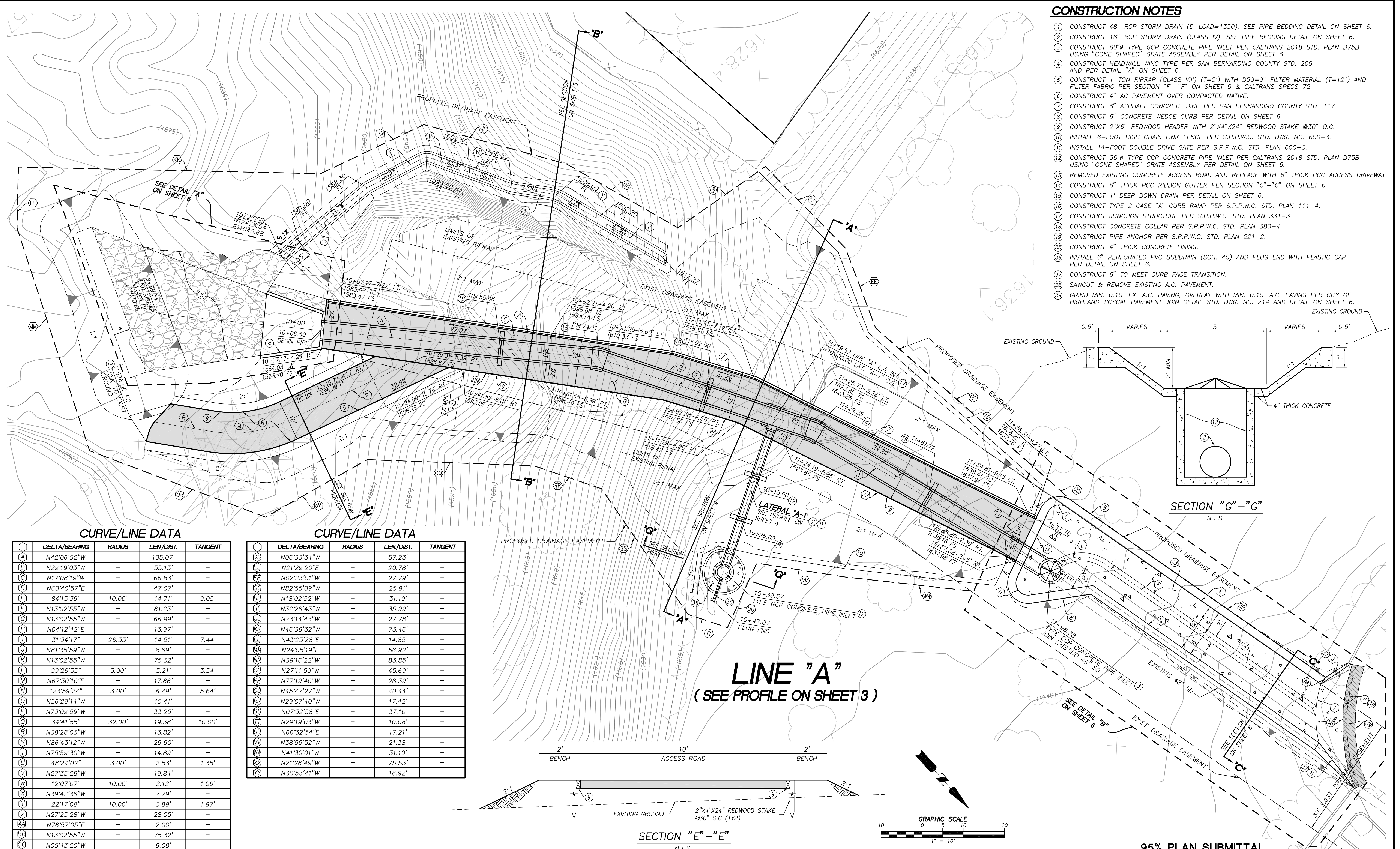
- CONSTRUCT 48" RCP STORM DRAIN (D-LOAD=1350). SEE PIPE BEDDING DETAIL ON SHEET 6. 187 LF
- CONSTRUCT 18" RCP STORM DRAIN (CLASS IV). SEE PIPE BEDDING DETAIL ON SHEET 6. 35 LF
- CONSTRUCT 60"Ø TYPE GCP CONCRETE PIPE INLET PER CALTRANS 2018 STD. PLAN D75B USING "CONE SHAPED" GRATE ASSEMBLY PER DETAIL ON SHEET 6. 1 EA
- CONSTRUCT HEADWALL WING TYPE PER SAN BERNARDINO COUNTY STD. 209 AND PER DETAIL "A" ON SHEET 6. 1 EA
- CONSTRUCT 1-TON RIPRAP (CLASS VIII) (T=5') WITH D50=9" FILTER MATERIAL (T=12") AND FILTER FABRIC PER SECTION "F"-"F" ON SHEET 6 & CALTRANS SPECS 72. 1,170 SF
- CONSTRUCT 4" AC OVER COMPACTED NATIVE. 2,711 SF
- CONSTRUCT 6" ASPHALT CONCRETE DIKE PER SAN BERNARDINO COUNTY STD. 117. 182 LF
- CONSTRUCT 6" CONCRETE WEDGE CURB PER DETAIL ON SHEET 6. 193 LF
- CONSTRUCT 2"x6" REDWOOD HEADER WITH 2"x4"x24" REDWOOD STAKE @30" O.C. 324 LF
- INSTALL 6-FOOT HIGH CHAIN LINK FENCE PER S.P.P.W.C. STD. DWG. NO. 600-3. 197 LF
- INSTALL 14-FOOT DOUBLE DRIVE GATE PER S.P.P.W.C. STD. PLAN 600-3. 1 EA
- CONSTRUCT 36"Ø TYPE GCP CONCRETE PIPE INLET PER CALTRANS 2018 STD. PLAN D75B USING "CONE SHAPED" GRATE ASSEMBLY PER DETAIL ON SHEET 6. 1 EA
- REMOVED EXISTING CONCRETE ACCESS ROAD AND REPLACE WITH 6" THICK PCC ACCESS DRIVEWAY. 940 SF
- CONSTRUCT 6" THICK PCC RIBBON GUTTER PER SECTION "C"-"C" ON SHEET 6. 74 LF
- CONSTRUCT 1' DEEP DOWN DRAIN PER DETAIL ON SHEET 6. 106 LF
- CONSTRUCT TYPE 2 CASE "A" CURB RAMP PER S.P.P.W.C. STD. PLAN 111-4. 1 EA
- CONSTRUCT JUNCTION STRUCTURE PER S.P.P.W.C. STD. PLAN 331-3. 1 EA
- CONSTRUCT CONCRETE COLLAR PER S.P.P.W.C. STD. PLAN 380-4. 2 EA
- CONSTRUCT PIPE ANCHOR PER S.P.P.W.C. STD. PLAN 221-2. 5 EA
- REMOVE AND DISPOSE EXISTING CURB. 49 LF
- REMOVE AND DISPOSE EXISTING RIPRAP. 3,137 SF
- REMOVE AND DISPOSE INTERFERING PORTION OF EXISTING 48" SD PIPE. 96 LF
- REMOVE AND DISPOSE EXISTING HEADWALL. 1 EA
- REMOVE AND DISPOSE EXISTING 44" DIAMETER GRATE INLET. 1 EA
- PROTECT IN PLACE.
- RELOCATE EXISTING SYMBOL SIGN. 4 EA
- REMOVE EXISTING TREES TO FACILITATE CONSTRUCTION OF PROPOSED IMPROVEMENTS. 9 EA
- REMOVE AND DISPOSE EXISTING 6" THICK PCC PAVEMENT. 1,731 SF
- REMOVE AND DISPOSE EXISTING PCC CURB RAMP. 118 SF
- REMOVE EXISTING VEGETATION TO FACILITATE CONSTRUCTION OF PROPOSED IMPROVEMENTS. 14,290 SF
- REMOVE AND SALVAGE EXISTING POST. 4 EA
- PROTECT EXISTING FENCE IN PLACE.
- INSTALL GRAVEL BAG ENERGY DISSIPATOR PER CASQA BMP SE-6 AND DETAIL ON SHEET 8. 396 LF
- INSTALL FIBER ROLLS PER CASQA BMP SE-5 OR SANDBAGS (3 HIGH) PER CASQA BMP SE-8 AT TOP OR TOE OF SLOPE. PERIODIC SEDIMENT REMOVAL IS REQUIRED. 822 LF
- CONSTRUCT 4" THICK CONCRETE LINING. 75 SF
- INSTALL 6" PERFORATED PVC SUBDRAIN (SCH. 40) AND PLUG END WITH PLASTIC CAP PER DETAIL ON SHEET 6. 6 LF
- CONSTRUCT 6" TO MEET EXISTING CURB FACE TRANSITION. 23 LF
- SAWCUT & REMOVE EXISTING A.C. PAVEMENT. 32 LF
- GRIND MIN. 0.10' EX. A.C. PAVING, OVERLAY WITH MIN. 0.10' A.C. PAVING PER CITY OF HIGHLAND TYPICAL PAVEMENT JOIN DETAIL STD. DWG. NO. 214 AND DETAIL ON SHEET 6. 59 SF

**95% PLAN SUBMITTAL**

<p>Call: TOLL FREE 8-1-1</p> <p>TWO WORKING DAYS BEFORE YOU DIG</p>	<p><b>SEAL:</b></p>	<p><b>PLAN PREPARED UNDER THE SUPERVISION OF:</b></p> <p>2155 CHICAGO AVENUE, SUITE 304 RIVERSIDE, CA 92507 PH: (951) 300-1431 FAX (951) 300-1435</p>	<p><b>BENCH MARK:</b></p> <p>CITY OF HIGHLAND BM NO. 00558</p> <p>MONUMENT: 1-1/2" BRASS CAP IN SOUTH END OF CONCRETE CATCH BASIN. 78' NORTH OF CENTERLINE OF GREENSPOT ROAD AND 32.5' EAST OF CENTERLINE OF CHURCH STREET.</p> <p>ELEVATION = 1327.363 DATUM: NAVD29</p>	<p><b>REVISIONS</b></p> <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DESCRIPTION	DATE				<p><b>CITY OF HIGHLAND</b></p> <p>DRAWN: RVB DESIGNED: LVB CHECKED: CVA</p> <p>RECOMMENDED BY: _____ APPROVED BY: _____</p> <p>CARLOS ZAMANO DATE _____ ERNEST WONG, CITY ENGINEER DATE _____ RCE EXP. _____ RCE 37413, EXP. 6/30/20</p>	<p><b>STORM DRAIN IMPROVEMENT PLANS</b></p> <p><b>BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR</b></p> <p><b>TITLE SHEET</b></p> <p>SCALE: _____ FILE NO. _____ SHEET 1 OF 8</p>
					NO.	DESCRIPTION	DATE					
<p>Underground Service Alert of Southern California</p>	<p>SEAL: _____</p>	<p>PLAN PREPARED UNDER THE SUPERVISION OF: _____</p>	<p>BENCH MARK: _____</p>	<p>REVISIONS: _____</p>	<p>CITY OF HIGHLAND: _____</p>	<p>STORM DRAIN IMPROVEMENT PLANS: _____</p>						

**CONSTRUCTION NOTES**

- ① CONSTRUCT 48" RCP STORM DRAIN (D-LOAD=1350). SEE PIPE BEDDING DETAIL ON SHEET 6.
- ② CONSTRUCT 60" TYPE GCP CONCRETE PIPE INLET PER CALTRANS 2018 STD. PLAN D75B USING "CONE SHAPED" GRATE ASSEMBLY PER DETAIL ON SHEET 6.
- ③ CONSTRUCT HEADWALL WING TYPE PER SAN BERNARDINO COUNTY STD. 209 AND PER DETAIL "A" ON SHEET 6.
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- ⑤ CONSTRUCT 4" AC PAVEMENT OVER COMPACTED NATIVE.
- ⑥ CONSTRUCT 6" ASPHALT CONCRETE DIKE PER SAN BERNARDINO COUNTY STD. 117.
- ⑦ CONSTRUCT 6" CONCRETE WEDGE CURB PER DETAIL ON SHEET 6.
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- ⑮ CONSTRUCT TYPE 2 CASE "A" CURB RAMP PER S.P.P.W.C. STD. PLAN 111-4.
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- ⑳ CONSTRUCT 4" THICK CONCRETE LINING.
- ㉑ INSTALL 6" PERFORATED PVC SUBDRAIN (SCH. 40) AND PLUG END WITH PLASTIC CAP PER DETAIL ON SHEET 6.
- ㉒ CONSTRUCT 6" TO MEET CURB FACE TRANSITION.
- ㉓ SAWCUT & REMOVE EXISTING A.C. PAVEMENT.
- ㉔ GRIND MIN. 0.10' EX. A.C. PAVING, OVERLAY WITH MIN. 0.10' A.C. PAVING PER CITY OF HIGHLAND TYPICAL PAVEMENT JOIN DETAIL STD. DWG. NO. 214 AND DETAIL ON SHEET 6.



**CURVE/LINE DATA**

POINT	DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
(A)	N42°06'52"W	-	105.07'	-
(B)	N29°19'03"W	-	55.13'	-
(C)	N17°08'19"W	-	66.83'	-
(D)	N6°40'57"E	-	47.07'	-
(E)	84°15'39"	10.00'	14.71'	9.05'
(F)	N13°02'55"W	-	61.23'	-
(G)	N13°02'55"W	-	66.99'	-
(H)	N04°12'42"E	-	13.97'	-
(I)	31°34'17"	26.33'	14.51'	7.44'
(J)	N81°35'59"W	-	8.69'	-
(K)	N13°02'55"W	-	75.32'	-
(L)	99°26'55"	3.00'	5.21'	3.54'
(M)	N67°30'10"E	-	17.66'	-
(N)	123°59'24"	3.00'	6.49'	5.64'
(O)	N56°29'14"W	-	15.41'	-
(P)	N73°09'59"W	-	33.25'	-
(Q)	34°41'55"	32.00'	19.38'	10.00'
(R)	N38°28'03"W	-	13.82'	-
(S)	N86°43'12"W	-	26.60'	-
(T)	N75°59'30"W	-	14.89'	-
(U)	48°24'02"	3.00'	2.53'	1.35'
(V)	N27°35'28"W	-	19.84'	-
(W)	12°07'07"	10.00'	2.12'	1.06'
(X)	N39°42'36"W	-	7.79'	-
(Y)	22°17'08"	10.00'	3.89'	1.97'
(Z)	N27°25'28"W	-	28.05'	-
(AA)	N76°57'05"E	-	2.00'	-
(BB)	N13°02'55"W	-	75.32'	-
(CC)	N05°43'20"W	-	6.08'	-

**CURVE/LINE DATA**

POINT	DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
(DD)	N06°33'34"W	-	57.23'	-
(EE)	N21°29'20"E	-	20.78'	-
(FF)	N02°23'01"W	-	27.79'	-
(GG)	N82°55'09"W	-	25.91'	-
(HH)	N18°02'52"W	-	31.19'	-
(II)	N32°26'43"W	-	35.99'	-
(JJ)	N73°14'43"W	-	27.78'	-
(KK)	N46°36'32"W	-	73.46'	-
(LL)	N43°23'28"E	-	14.85'	-
(MM)	N24°05'19"E	-	56.92'	-
(NN)	N39°16'22"W	-	83.85'	-
(OO)	N27°11'59"W	-	45.69'	-
(PP)	N77°19'40"W	-	28.39'	-
(QQ)	N45°47'27"W	-	40.44'	-
(RR)	N29°07'40"W	-	17.42'	-
(SS)	N07°32'58"E	-	37.10'	-
(TT)	N29°19'03"W	-	10.08'	-
(UU)	N66°32'54"E	-	17.21'	-
(VV)	N38°55'52"W	-	21.38'	-
(WW)	N41°30'01"W	-	31.10'	-
(XX)	N21°26'49"W	-	75.53'	-
(YY)	N30°53'41"W	-	18.92'	-

**LINE "A"**  
(SEE PROFILE ON SHEET 3)

**SECTION "E"- "E"**  
N.T.S.

**SECTION "G"- "G"**  
N.T.S.

Underground Service Alert of Southern California  
Call: TOLL FREE 8-1-1  
TWO WORKING DAYS BEFORE YOU DIG

SEAL: REGISTERED PROFESSIONAL ENGINEER  
CEZAR V. AGUILAR  
No. 41679  
Exp. 03/31/20  
CIVIL  
STATE OF CALIFORNIA

PLAN PREPARED UNDER THE SUPERVISION OF:  
**ACI**  
AGUILAR CONSULTING INC.  
2155 CHICAGO AVENUE, SUITE 304  
RIVERSIDE, CA 92507  
PH. (951) 300-1431 FAX (951) 300-1435

BENCH MARK:  
CITY OF HIGHLAND BM NO. 00558  
MONUMENT: 1-1/2" BRASS CAP IN SOUTH END OF CONCRETE CATCH BASIN, 78" NORTH OF CENTERLINE OF GREENSPOT ROAD AND 32.5' EAST OF CENTERLINE OF CHURCH STREET.  
ELEVATION = 1327.363 DATUM: NAVD29

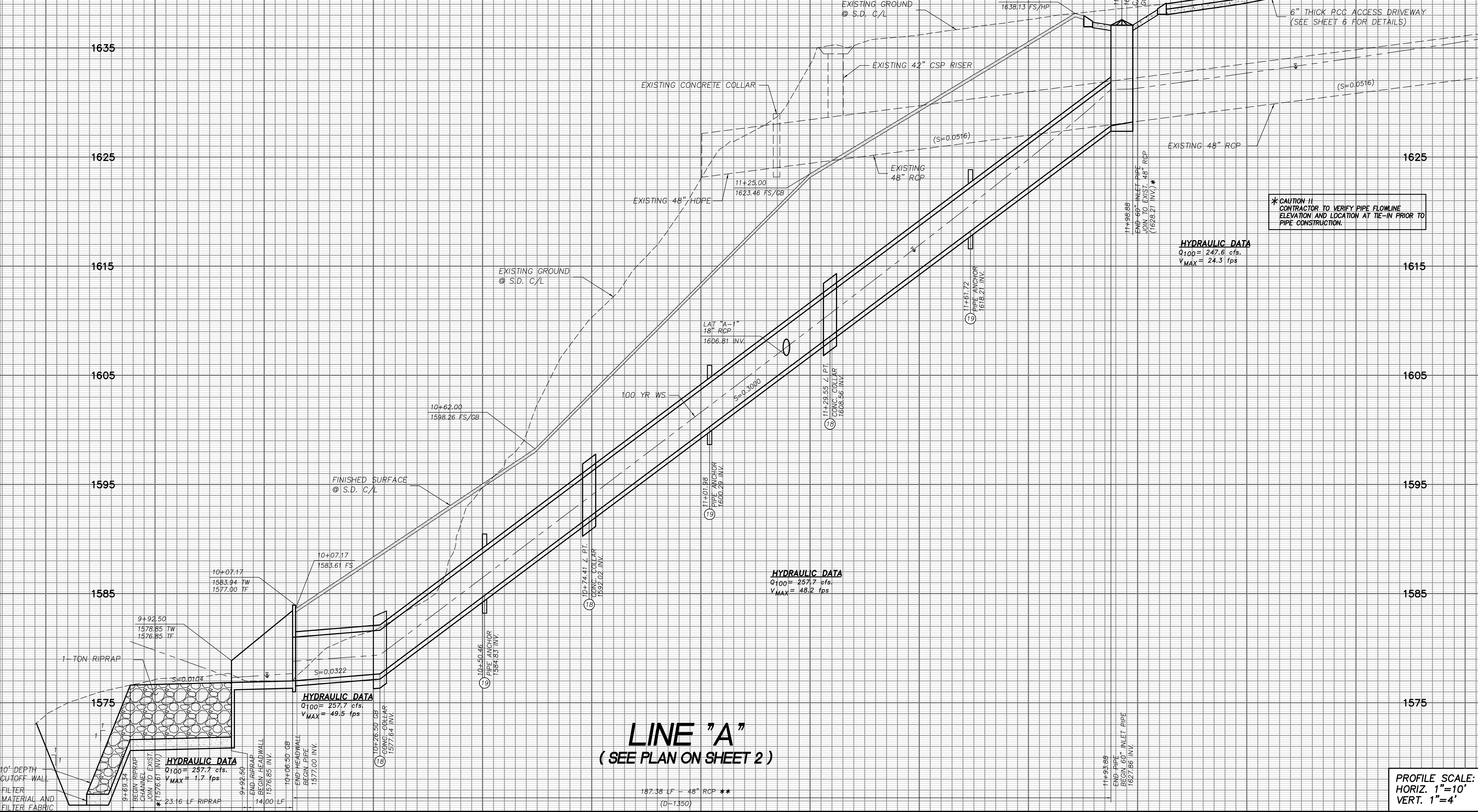
REVISIONS

NO.	DESCRIPTION	DATE

CITY OF HIGHLAND  
DRAWN: RVB DESIGNED: LVB CHECKED: CVA  
RECOMMENDED BY: APPROVED BY:  
CARLOS ZAMANO DATE ERNEST WONG, CITY ENGINEER DATE  
RCE EXP. 6/30/20

95% PLAN SUBMITTAL  
**BLEDSOE CREEK STORM DRAIN (LINE "A") AND SLOPE REPAIR PLAN**  
W.O.  
SCALE:  
FILE NO.  
SHEET 2 OF 8

**\*\* SPECIAL NOTE**  
 THE CONCRETE COVER ON THE INSIDE OF ALL REINFORCED CONCRETE PIPE MUST BE INCREASED TO PROVIDE A MINIMUM OF 1 1/2" OVER THE REINFORCING WHEN THE DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE F'c= 5000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND AND F'c= 6000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.



**\* CAUTION !!**  
 CONTRACTOR TO VERIFY PIPE FLOWLINE ELEVATION AND LOCATION AT TIE-IN PRIOR TO PIPE CONSTRUCTION.

PROFILE SCALE:  
 HORIZ. 1"=10'  
 VERT. 1"=4'

95% PLAN SUBMITTAL

Underground Service Alert of Southern California  
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 8-1-1  
 TWO WORKING DAYS BEFORE YOU DIG

SEAL:  
 REGISTERED PROFESSIONAL ENGINEER  
 CEZAR V. AGUILAR  
 No. 41679  
 Exp. 03/31/20  
 CIVIL  
 STATE OF CALIFORNIA

PLAN PREPARED UNDER THE SUPERVISION OF:  
**ACI**  
 AGUILAR CONSULTING INC.  
 2155 CHICAGO AVENUE, SUITE 304  
 RIVERSIDE, CA 92507  
 PH. (951) 300-1431 FAX (951) 300-1435

BENCH MARK:  
 CITY OF HIGHLAND BM NO. 00558  
 MONUMENT: 1-1/2" BRASS CAP IN SOUTH END OF CONCRETE CATCH BASIN, 78' NORTH OF CENTERLINE OF GREENSPOT ROAD AND 32.5' EAST OF CENTERLINE OF CHURCH STREET.  
 ELEVATION = 1327.363 DATUM: NAVD29

REVISIONS	

CITY OF HIGHLAND

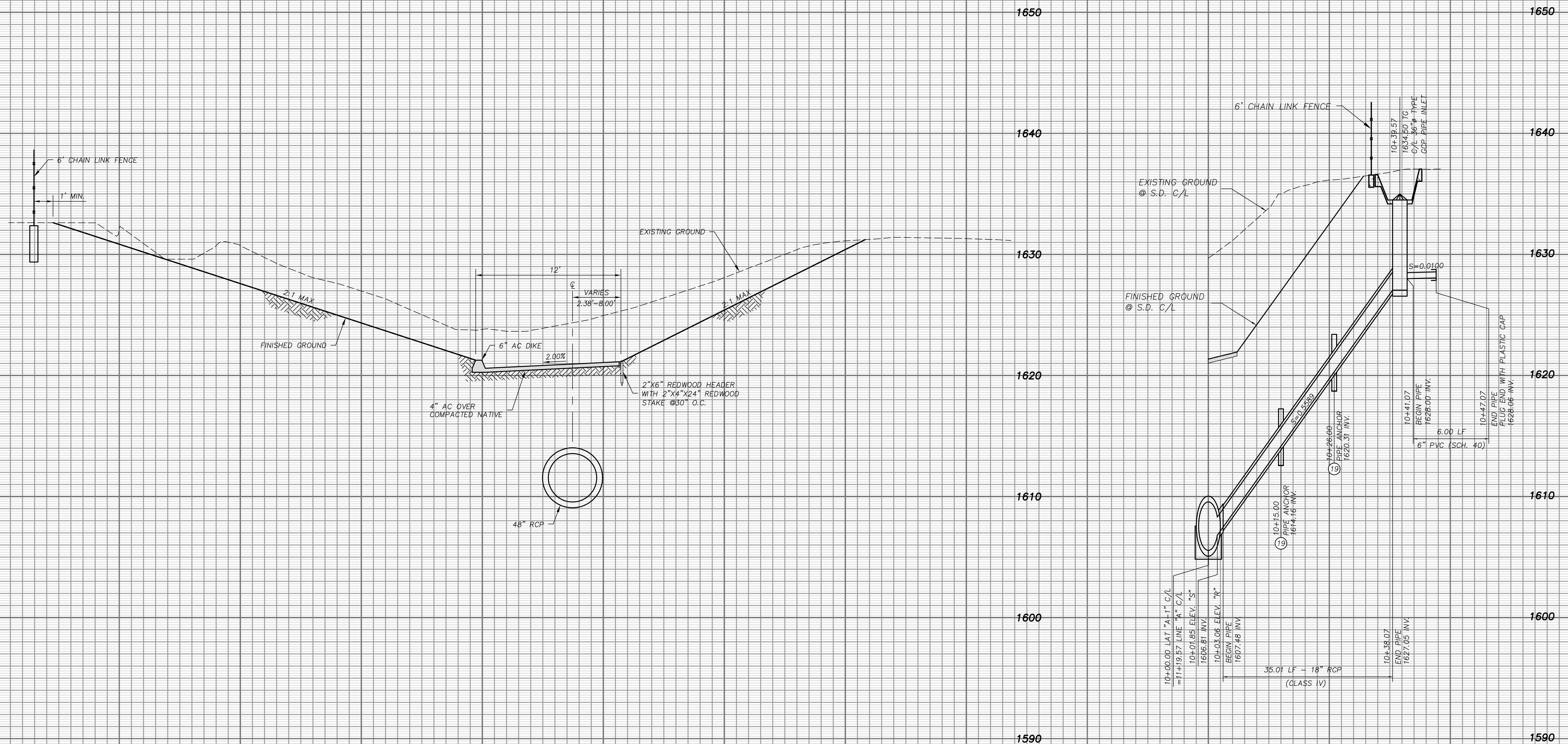
DRAWN: RVB	DESIGNED: LVB	CHECKED: CVA
RECOMMENDED BY:	APPROVED BY:	
CARLOS ZAMANO RCE	ERNEST WONG, CITY ENGINEER RCE 37413, EXP. 6/30/20	DATE

STORM DRAIN IMPROVEMENT PLANS  
**BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR**  
 PROFILE  
 STA. 9+69.34 TO STA. 11+98.88

W.O.  
 SCALE:  
 FILE NO.  
 SHEET 3 OF 8

**\*\* SPECIAL NOTE**

THE CONCRETE COVER ON THE INSIDE OF ALL REINFORCED CONCRETE PIPE MUST BE INCREASED TO PROVIDE A MINIMUM OF 1 1/2" OVER THE REINFORCING WHEN THE DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE F'c= 5000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND AND F'c= 6000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.



**SECTION "A"- "A"**  
(SEE PLAN ON SHEET 2)

**LATERAL "A-1"**  
(SEE PLAN ON SHEET 2)

SCALE:  
HORIZ. 1"=4'  
VERT. 1"=4'

PROFILE SCALE:  
HORIZ. 1"=10'  
VERT. 1"=4'

10+00      10+25

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REVISIONS	

**CITY OF HIGHLAND**

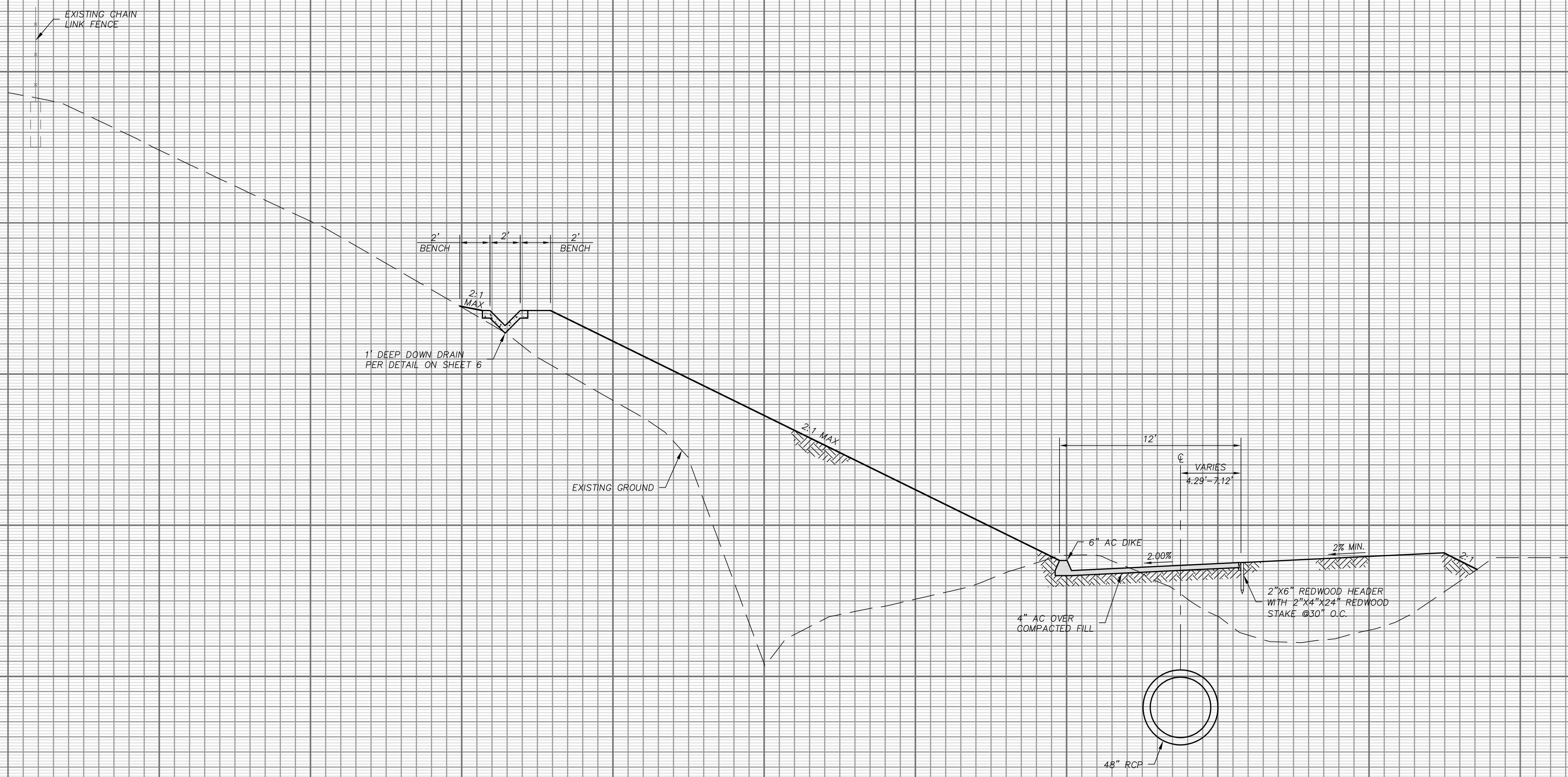
DRAWN: RVB	DESIGNED: LVB	CHECKED: CVA
RECOMMENDED BY:	APPROVED BY:	
CARLOS ZAMANO RCE	DATE	ERNEST WONG, CITY ENGINEER RCE 37413, EXP. 6/30/20

**STORM DRAIN IMPROVEMENT PLANS**

**BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR**

**LATERAL 'A-1' PROFILE AND SECTION 'A'- 'A'**

W.O. SCALE: FILE NO. SHEET **4** OF 8

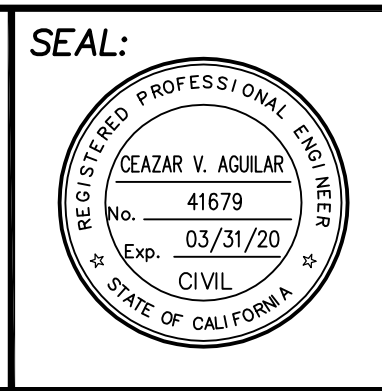


**SECTION "B"- "B"**  
( SEE PLAN ON SHEET 2 )

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

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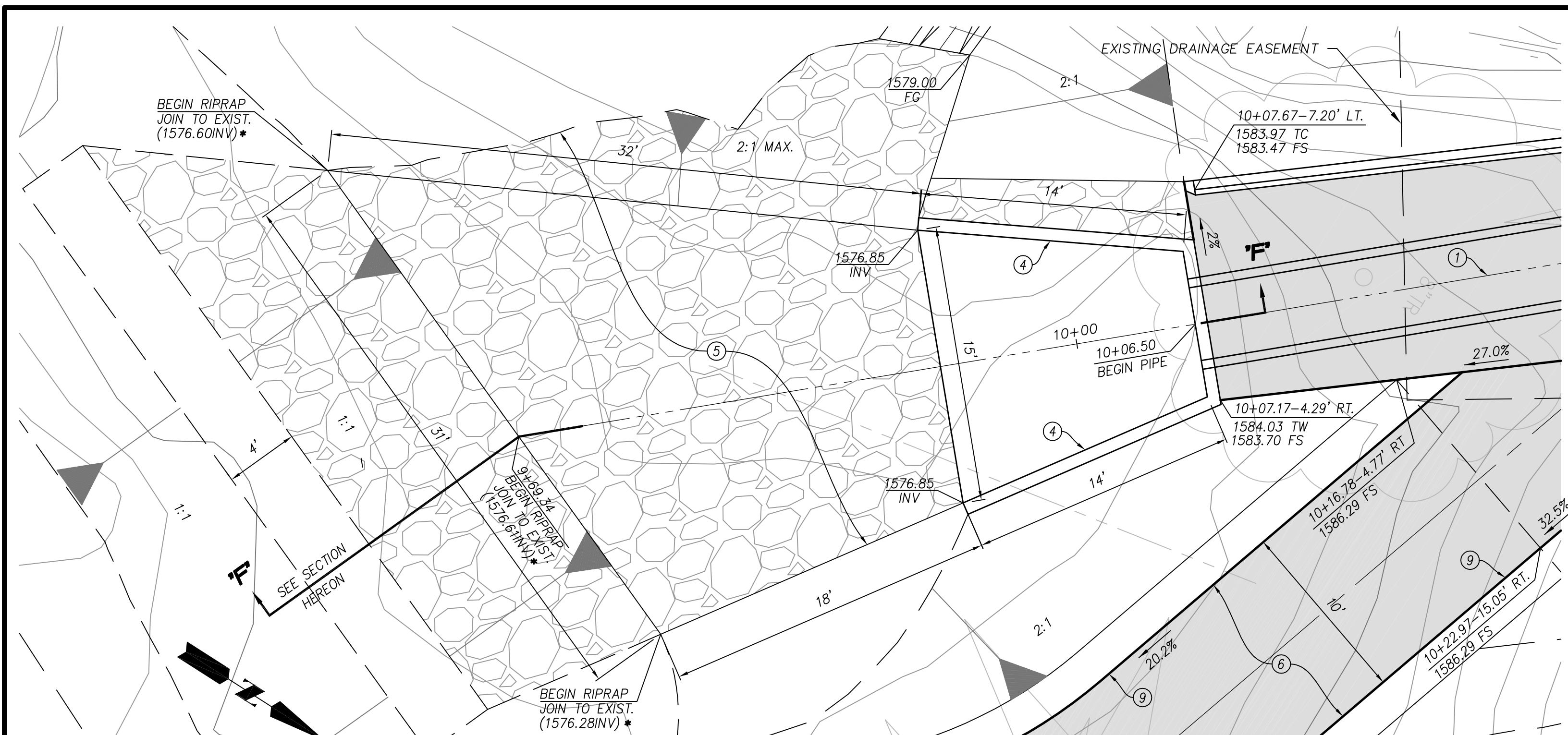
**BENCH MARK:**  
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REVISIONS	

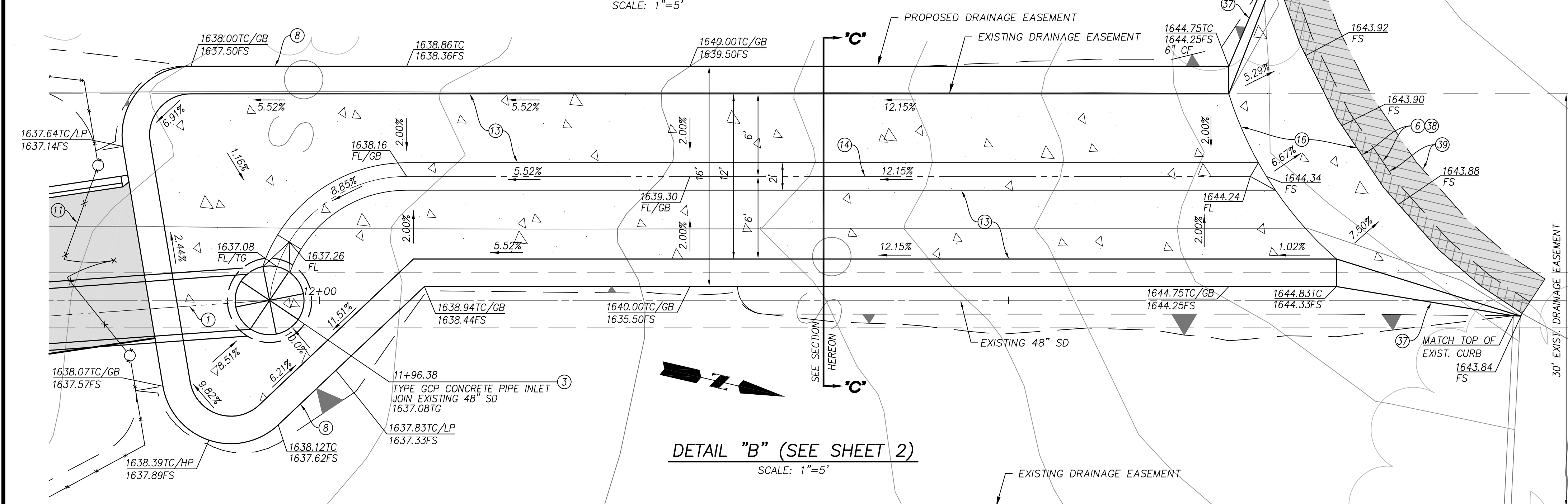
CITY OF HIGHLAND			
DRAWN: RVB	DESIGNED: LVB	CHECKED: CVA	
RECOMMENDED BY: CARLOS ZAMANO	APPROVED BY: ERNEST WONG, CITY ENGINEER		
RCE	RCE 37413, EXP. 6/30/20		

**STORM DRAIN IMPROVEMENT PLANS**  
**BLED SOE CREEK**  
**STORM DRAIN (LINE "A") AND**  
**SLOPE REPAIR**  
**SECTION "B"- "B"**

W.O.  
SCALE:  
FILE NO.  
SHEET **5** OF **8**



**DETAIL "A" (SEE SHEET 2)**  
SCALE: 1"=5'

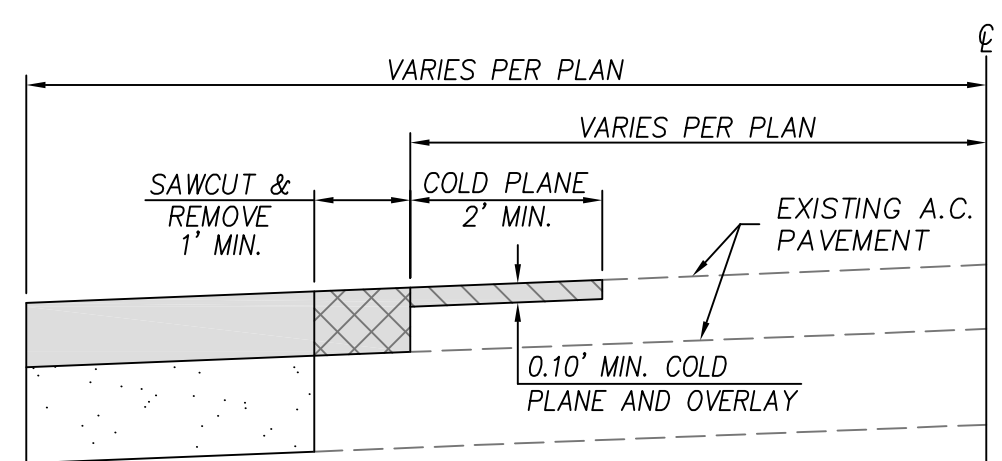


**DETAIL "B" (SEE SHEET 2)**  
SCALE: 1"=5'

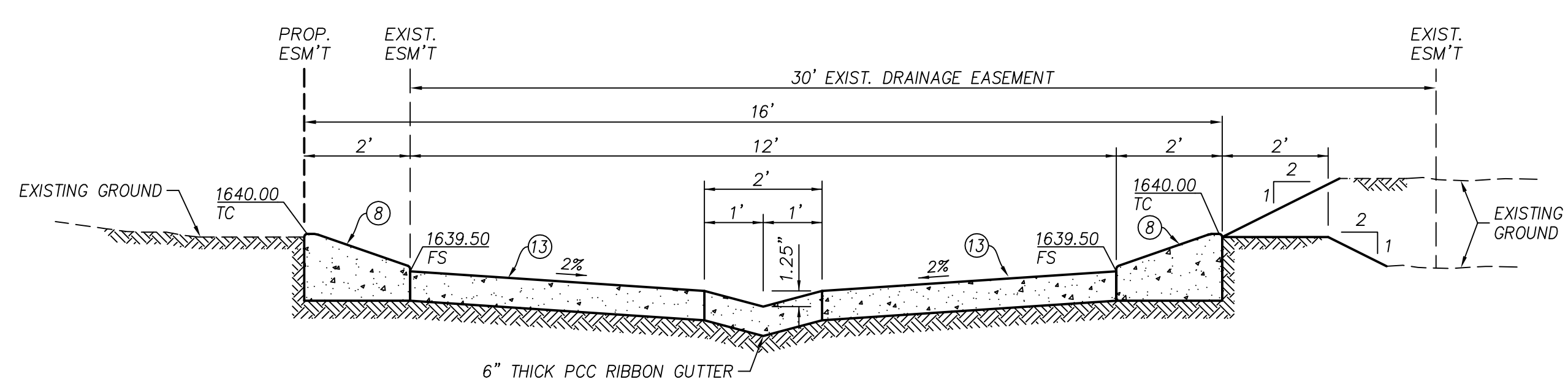
**CAUTION !!**  
CONTRACTOR TO VERIFY PIPE FLOWLINE ELEVATION AND LOCATION AT TIE-IN PRIOR TO PIPE CONSTRUCTION.

**LEGEND**

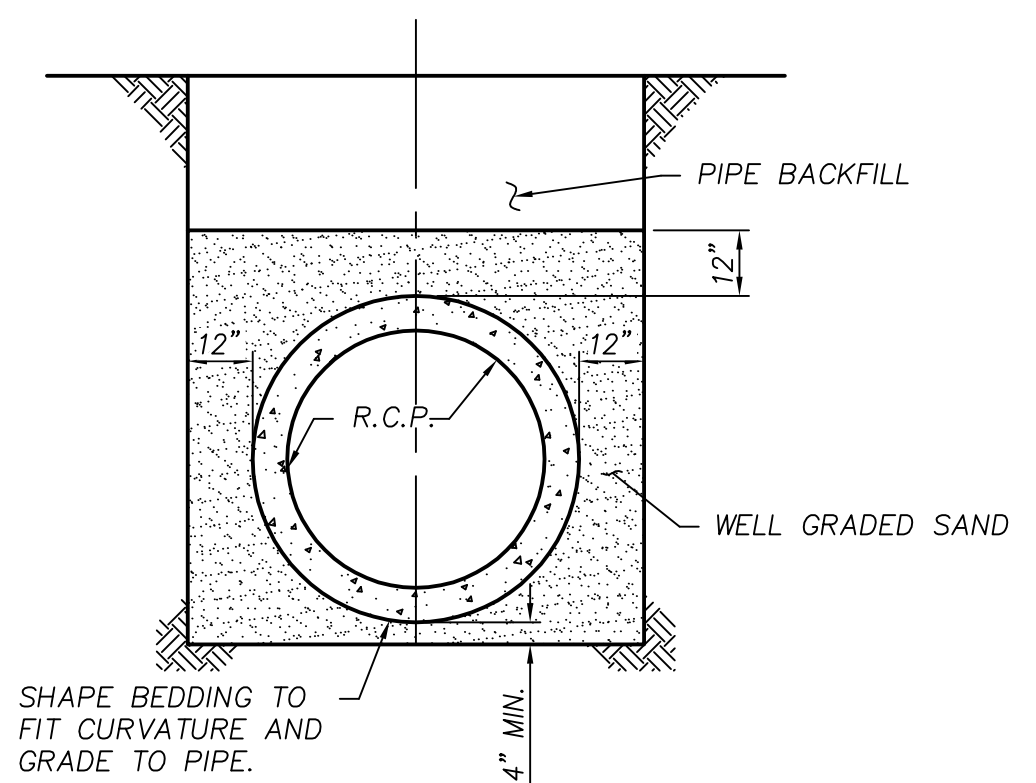
- LIMITS OF NEW PAVEMENT
- EXISTING PAVING TO BE REMOVED
- LIMITS OF PAVEMENT GRIND AND OVERLAY



**39 PAVEMENT JOIN DETAIL**  
N.T.S.

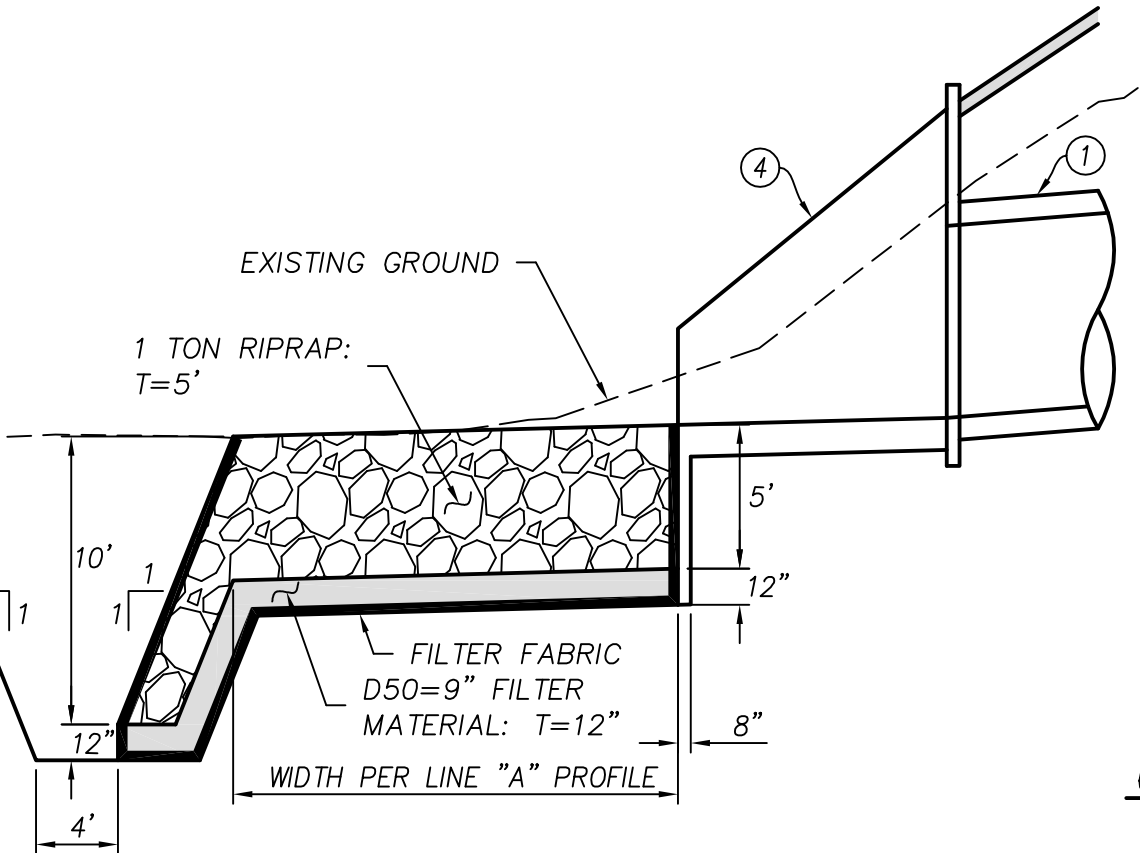


**SECTION "C"-"C"**  
N.T.S.

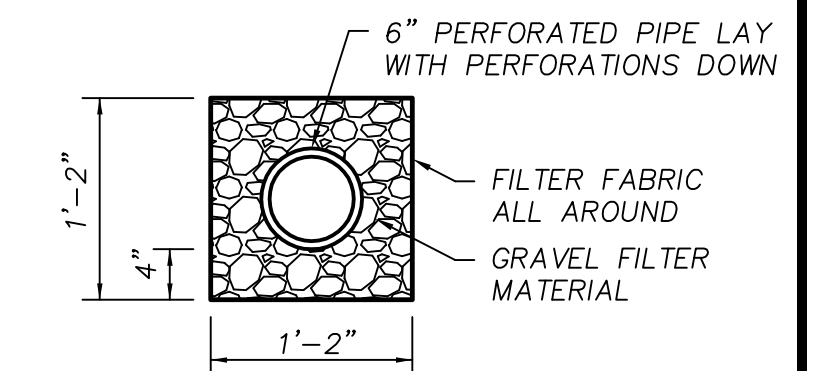


- NOTES:**
- BEDDING SHALL BE COMPOSED OF FINE SAND, NO. 3 OR NO. 4 CRUSHED ROCK OR GRAVEL PER STANDARD SPECIFICATIONS (GREENBOOK). BACKFILL SHALL BE PER SECTION 306-1.3 OF THE STANDARD SPECIFICATIONS.
  - THIS BEDDING DETAIL SHALL ONLY BE USED FOR RCP OR AS APPROVED BY ENGINEER OF RECORD.

**R.C.P. TRENCH DETAIL**  
N.T.S.

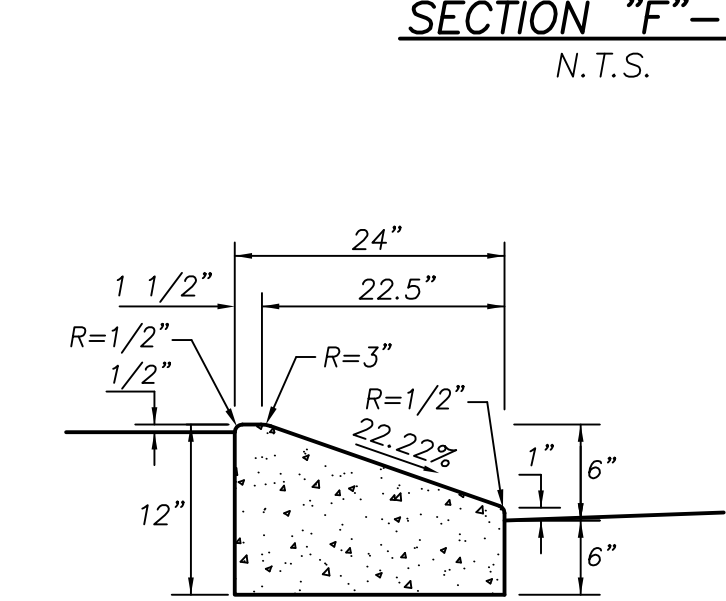


**SECTION "F"-"F"**  
N.T.S.

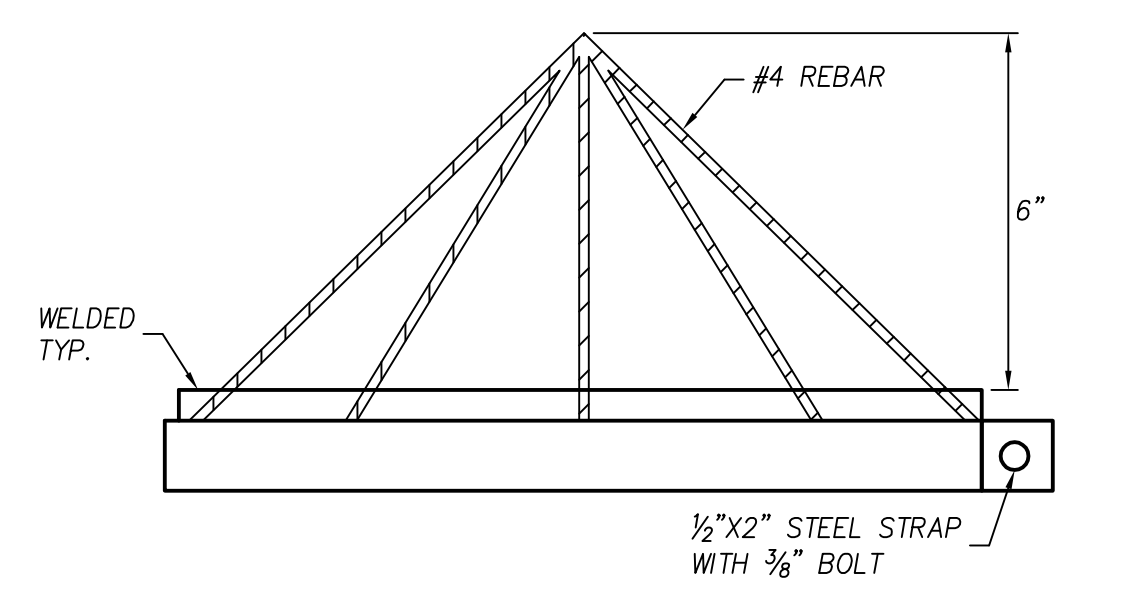


- NOTES:**
- DRAIN PIPE OUTLETS SHALL BE COVERED WITH 2" MESH GALVANIZED SCREEN, ANCHORED IN CONCRETE A MINIMUM OF 4 INCHES, OF 16 GAGE WIRE OR HEAVIER.

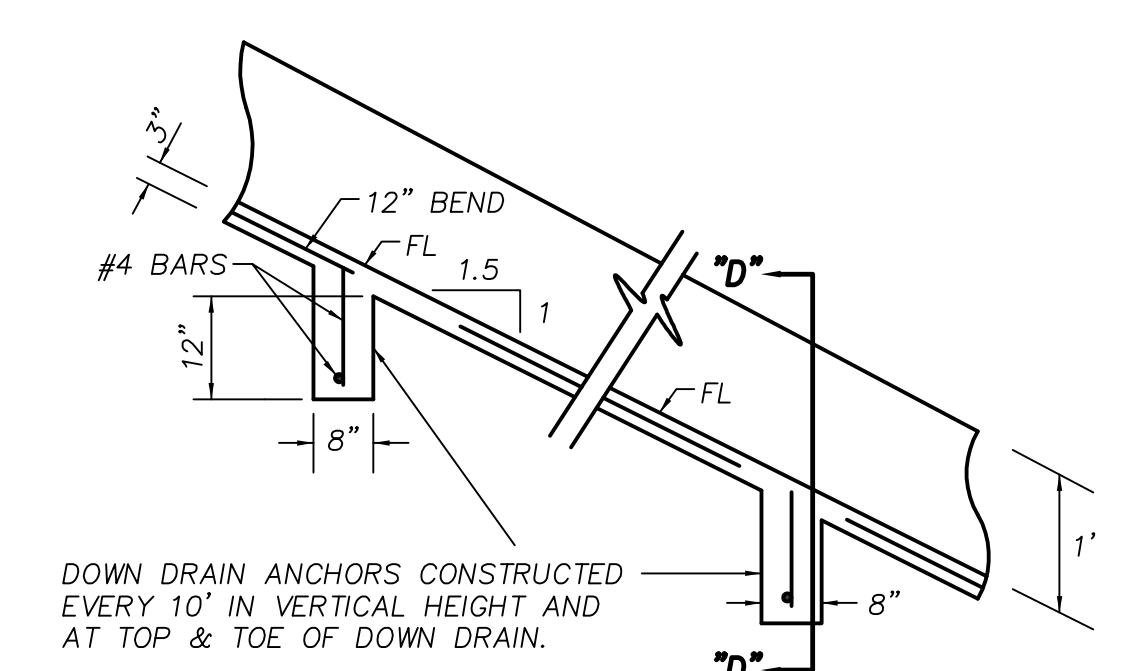
**6" PERFORATED PVC SUBDRAIN**  
N.T.S.



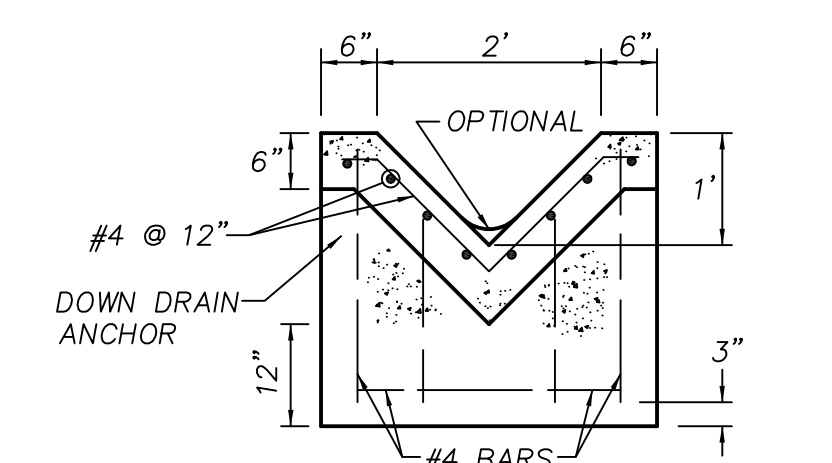
**6" WEDGE CURB DETAIL**  
N.T.S.



**"CONE SHAPED" GRATE ASSEMBLY DETAIL**  
N.T.S.



**LONGITUDINAL SECTION DOWN DRAIN**  
N.T.S.



**SECTION "D"-"D" DOWN DRAIN ANCHOR**  
N.T.S.

- NOTES:**
- CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI. CONCRETE MAY BE PNEUMATICALLY PLACED AND SHALL CONFORM TO SECTION 2621 OF THE UNIFORM BUILDING CODE.
  - REINFORCING SHALL BE 6"x6" - W 1.4 x W 1.4 WELDED WIRE MESH (W.W.M.) OR APPROVED EQUAL.
  - GROUND SHALL BE PRE-WETTED TO THE SATISFACTION OF THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE. MOISTURE LOSS RETARDANT SHALL BE USED WHEN REQUIRED BY THE ENGINEER.

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REVISIONS	

**CITY OF HIGHLAND**

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RECOMMENDED BY:	APPROVED BY:	
CARLOS ZAMANO RCE	ERNEST WONG, CITY ENGINEER RCE 37413, EXP. 6/30/20	

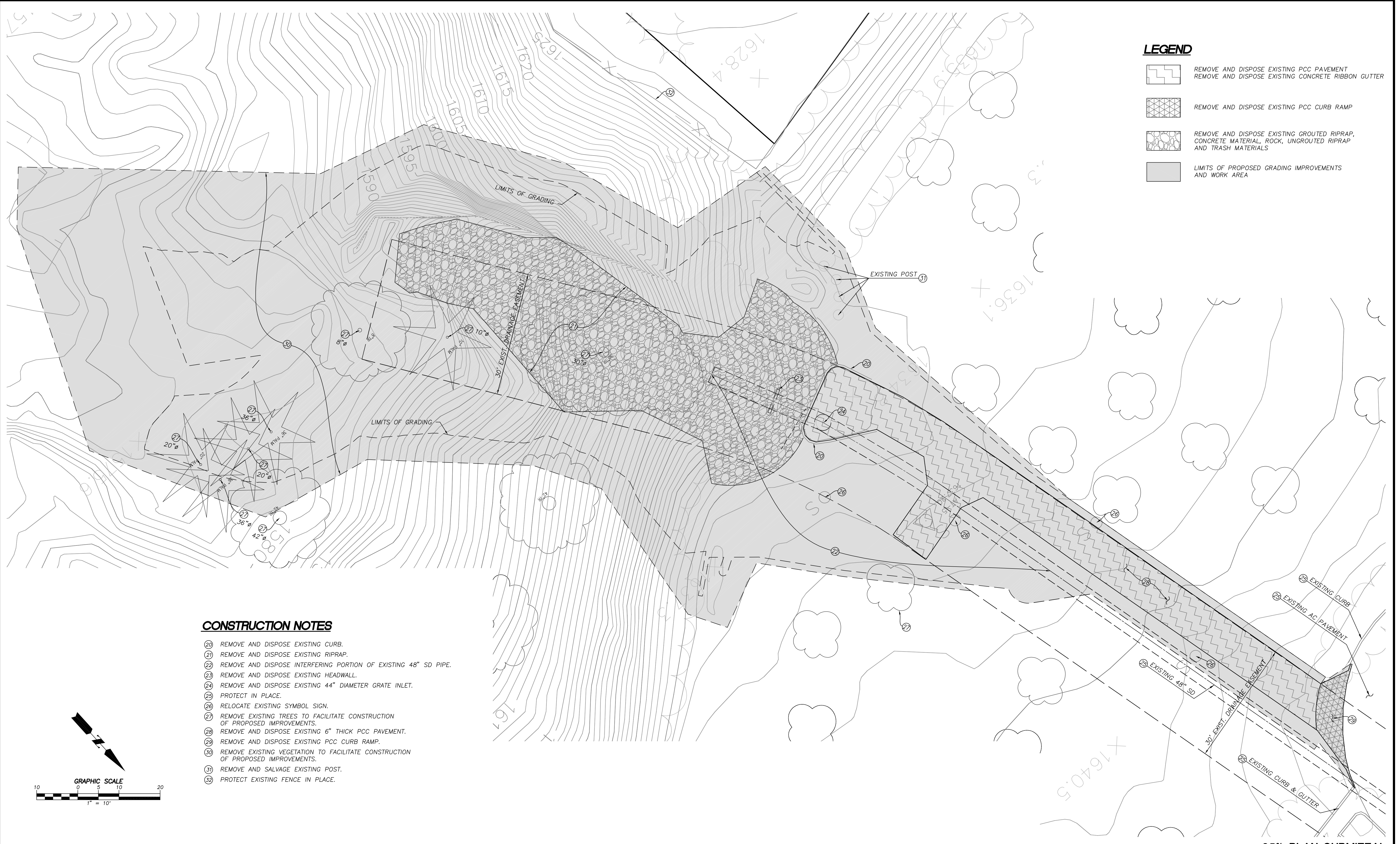
**STORM DRAIN IMPROVEMENT PLANS**

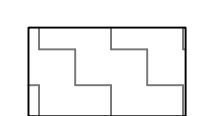
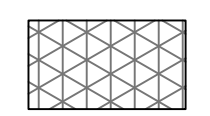
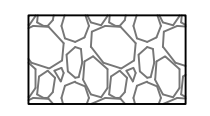
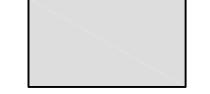
**BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR DETAILS AND SECTIONS**

SCALE:  

FILE NO.  

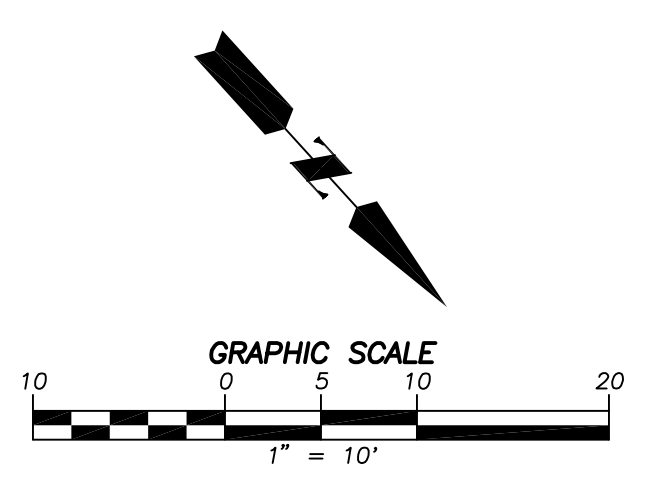
SHEET **6** OF **8**



- LEGEND**
-  REMOVE AND DISPOSE EXISTING PCC PAVEMENT  
REMOVE AND DISPOSE EXISTING CONCRETE RIBBON GUTTER
  -  REMOVE AND DISPOSE EXISTING PCC CURB RAMP
  -  REMOVE AND DISPOSE EXISTING GROUTED RIPRAP,  
CONCRETE MATERIAL, ROCK, UNGROUTED RIPRAP  
AND TRASH MATERIALS
  -  LIMITS OF PROPOSED GRADING IMPROVEMENTS  
AND WORK AREA

**CONSTRUCTION NOTES**

- 20 REMOVE AND DISPOSE EXISTING CURB.
- 21 REMOVE AND DISPOSE EXISTING RIPRAP.
- 22 REMOVE AND DISPOSE INTERFERING PORTION OF EXISTING 48" SD PIPE.
- 23 REMOVE AND DISPOSE EXISTING HEADWALL.
- 24 REMOVE AND DISPOSE EXISTING 44" DIAMETER GRATE INLET.
- 25 PROTECT IN PLACE.
- 26 RELOCATE EXISTING SYMBOL SIGN.
- 27 REMOVE EXISTING TREES TO FACILITATE CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- 28 REMOVE AND DISPOSE EXISTING 6" THICK PCC PAVEMENT.
- 29 REMOVE AND DISPOSE EXISTING PCC CURB RAMP.
- 30 REMOVE EXISTING VEGETATION TO FACILITATE CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- 31 REMOVE AND SALVAGE EXISTING POST.
- 32 PROTECT EXISTING FENCE IN PLACE.



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CEZAR V. AGUILAR  
41679  
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STATE OF CALIFORNIA

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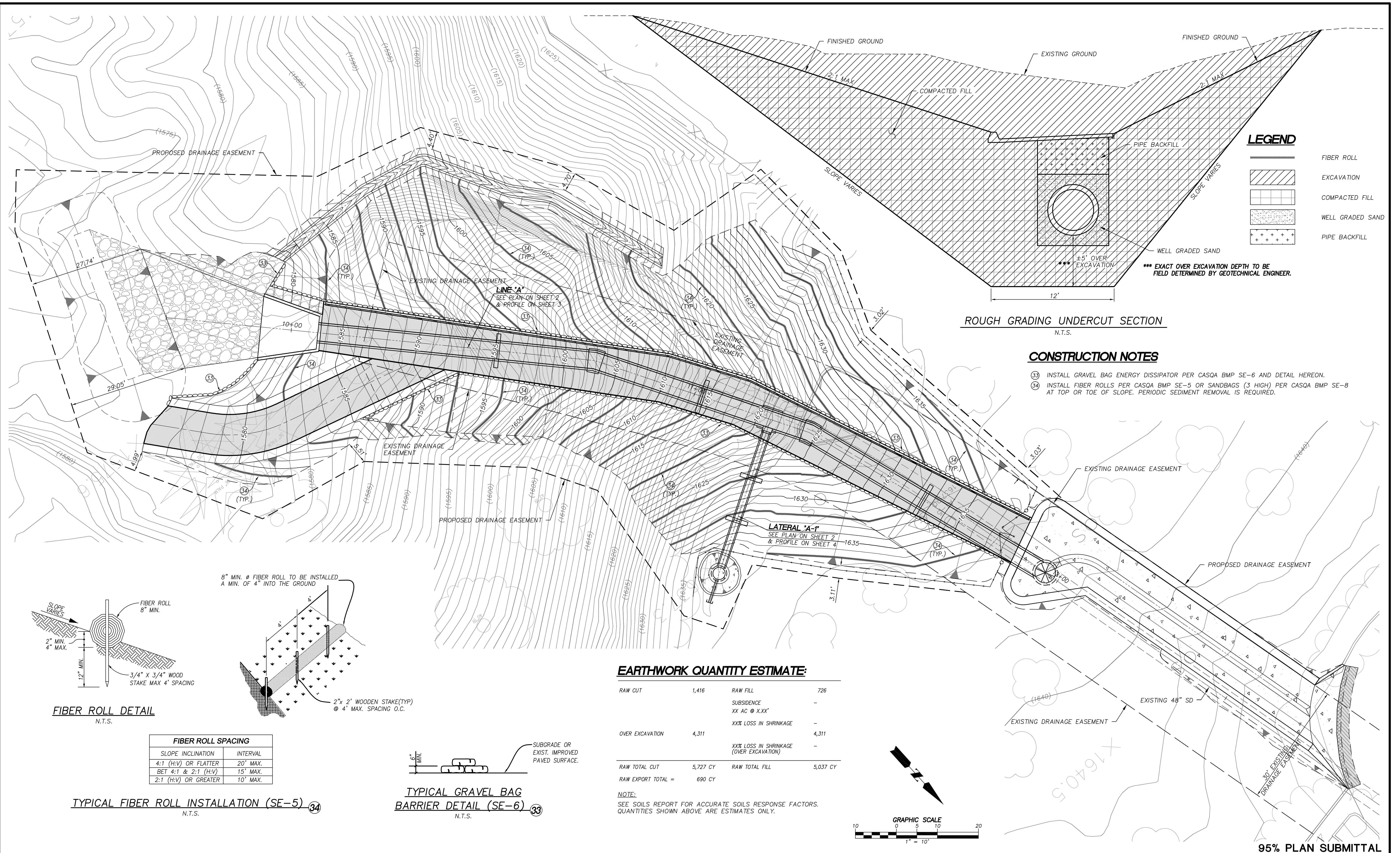
REVISIONS	

CITY OF HIGHLAND

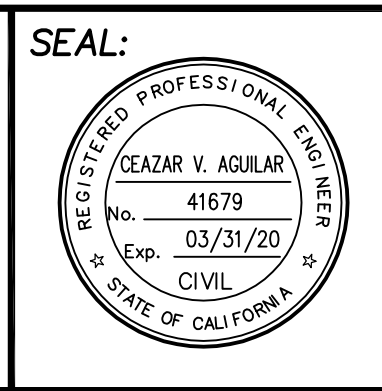
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CARLOS ZAMANO RCE	DATE	ERNEST WONG, CITY ENGINEER RCE 37413, EXP. 6/30/20

STORM DRAIN IMPROVEMENT PLANS  
**BLED SOE CREEK  
STORM DRAIN (LINE 'A') AND  
SLOPE REPAIR  
REMOVAL AND DEMOLITION PLAN**

SCALE:  
FILE NO.  
SHEET 7 OF 8



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**REVISIONS**


**CITY OF HIGHLAND**

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RECOMMENDED BY: APPROVED BY:  
CARLOS ZAMANO DATE ERNEST WONG, CITY ENGINEER DATE  
RCE EXP. 6/30/20 RCE 37413, EXP. 6/30/20

**STORM DRAIN IMPROVEMENT PLANS** W.O.  
**BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR ROUGH GRADING AND EROSION CONTROL PLAN**  
SCALE:  
FILE NO.  
SHEET **8** OF **8**