

SOUTHERN SANDOVAL COUNTY  
ARROYO FLOOD CONTROL AUTHORITY  
RAINBOW POND  
AND  
DOWNSTREAM CHANNEL  
WATER TRUST BOARD PROJECT NO. 3560-WTB 16

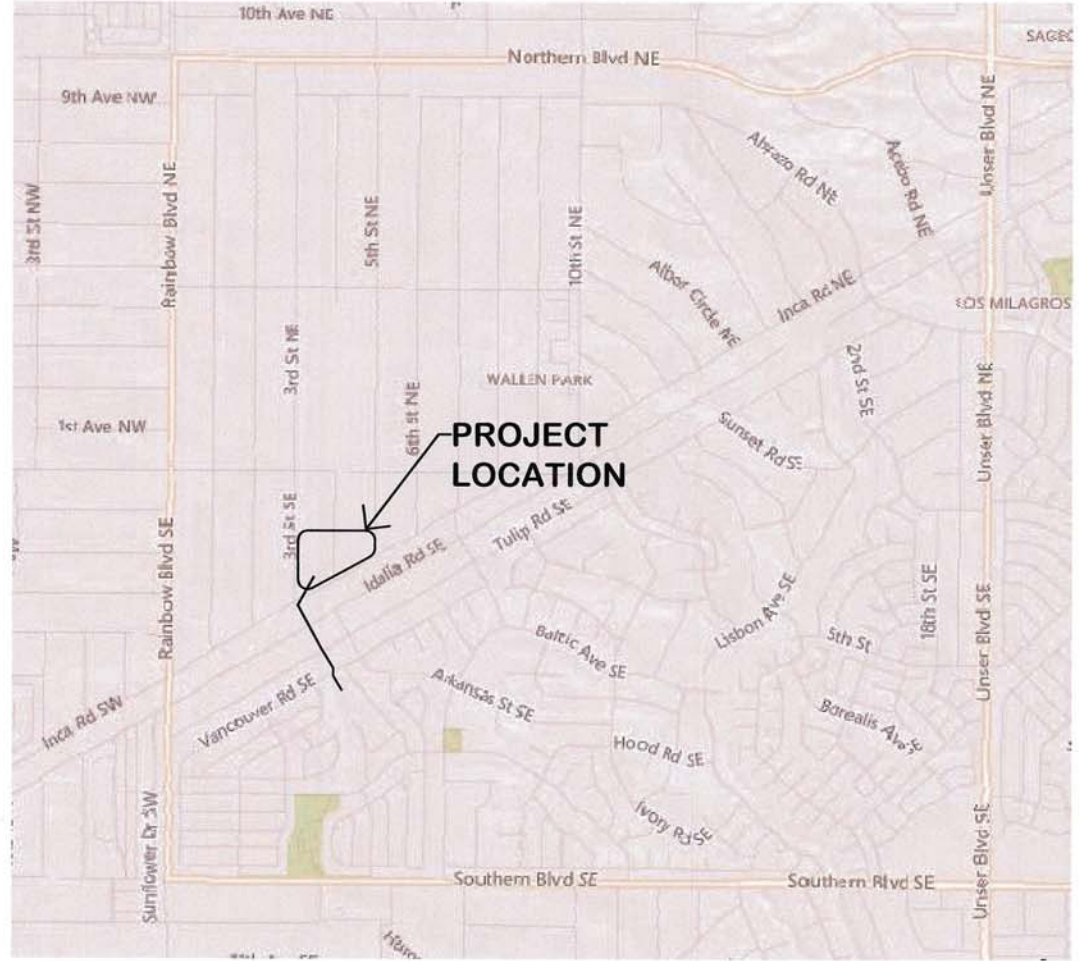


**Southern Sandoval  
County  
Arroyo Flood Control  
Authority**  
1041 Commercial Dr. S.E.  
Rio Rancho, New Mexico 87124  
505-892-RAIN (7246)  
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www.sscsfca.com



ANDRES SANCHEZ  
NEW MEXICO  
Professional Engineer  
4-4-18

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VICINITY MAP

| RAINBOW POND FACILITY DATA                                     |                   |
|----------------------------------------------------------------|-------------------|
| DESIGN STORM                                                   | 100-YEAR, 24-HOUR |
| PEAK INFLOW, CFS                                               | 1,071             |
| PEAK OUTFLOW, CFS                                              | 193               |
| INFLOW VOLUME, AC-FT                                           | 78.5              |
| PEAK STORAGE VOLUME, AC-FT                                     | 48.6              |
| POND INVERT ELEVATION, FT                                      | 5670.57           |
| PEAK WATER SURFACE ELEVATION, FT                               | 5678.7            |
| EMERGENCY SPILLWAY ELEVATION, FT                               | 5678.8            |
| TOP OF POND EMBANKMENT, FT                                     | 5680.5            |
| DOWNSTREAM TOE ELEVATION (AT PRINCIPAL SPILLWAY ALIGNMENT), FT | 5675              |
| TOP WIDTH OF EMERGENCY SPILLWAY, FT                            | 100               |
| TOP WIDTH OF EMBANKMENT, FT                                    | TYP. 12           |
| UPSTREAM EMBANKMENT SLOPE (H:V)                                | 6:1               |
| UPSTREAM EMBANKMENT SLOPE (H:V)                                | 6:1               |
| OVERALL POND AREA, AC                                          | 11                |

RAINBOW POND AND DOWNSTREAM CHANNEL  
COVER SHEET

APPROVALS

SSCAFCA:  EXECUTIVE ENGINEER DATE: 4-5-18

CITY OF RIO RANCHO:  DEVELOPMENT SERVICES DEPARTMENT DATE: 4/5/18

| REVISIONS & CHANGE NOTICES |             |      |
|----------------------------|-------------|------|
| MARK                       | DESCRIPTION | DATE |
|                            |             |      |
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PROJECT NO: RA\_P0001  
DESIGNED BY: AES  
DRAWN BY: KLF  
CHECKED BY: DDG  
DATE: 4/3/2018

1  
SHEET 1 OF 28

Wednesday, April 04, 2018 10:18:35 AM - Keith Forrester  
C:\SSCAFCA\Projects\Rainbow Pond\Drawings\RA\_P0001\RA\_P0001.dwg

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH 1) THE PROJECT CONSTRUCTION PLANS, 2) THE PROJECT SPECIFICATIONS, AND 3) NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, APWA NM CHAPTER, LATEST EDITION, IN THAT ORDER OF PRECEDENCE AT THE TIME OF CONSTRUCTION BID.
2. THE CONTRACTOR AGREES THAT HE / SHE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
3. NO MODIFICATIONS TO THESE PLANS SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER, ENGINEER AND ALL APPROVAL SIGNATORIES. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION METHODS OR TECHNIQUES OR FOR THE PROSECUTION OF THE WORK AS SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR OTHER PERSONS PERFORMING ANY WORK, AS SHOWN IN THE PROJECT CONTRACT DOCUMENTS.
4. UNLESS OTHERWISE PROVIDED AS PART OF THE CONSTRUCTION PLANS, A COMPLETE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY THE CONTRACTOR WHEN ANY PORTION OF THE WORK IMPACTS THE TRAVELING PUBLIC, EITHER VEHICULAR OR PEDESTRIAN. ALL CONSTRUCTION SIGNING, BARRICADING AND CHANNELIZATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) LATEST EDITION. THE PLAN SHALL BE SUBMITTED TO THE CITY OF RIO RANCHO DEVELOPMENT SERVICES DEPARTMENT ENGINEERING SECTION FOR APPROVAL AT LEAST 7 DAYS PRIOR TO THE DESIRED START OF CONSTRUCTION. THE CONTRACTOR SHALL NOT IMPLEMENT THE TRAFFIC CONTROL PLAN UNTIL APPROVAL OF THE PLAN HAS BEEN RECEIVED.
5. THE CONTRACTOR SHALL DESIGNATE AT LEAST ONE EMERGENCY CONTACT PERSON, AND SHALL PROVIDE TELEPHONE NUMBERS WHERE THIS PERSON CAN BE CONTACTED AT ANY TIME. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER / ENGINEER (SSCAFCa), THE CITY OF RIO RANCHO DEPARTMENT OF PUBLIC SAFETY (505-481-5800) AND THE CITY OF RIO RANCHO DEVELOPMENT SERVICES DEPARTMENT (505-481-5005)
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL JURISDICTIONAL AUTHORITIES PRIOR TO START OF CONSTRUCTION.
7. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION.
8. EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE WORK SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS MUST BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.
9. THE CONTRACTOR SHALL ONLY UTILIZE THE DESIGNATED STAGING AREAS FOR STORAGE OF ALL EQUIPMENT AND MATERIALS. THE OWNER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR THE CONTRACTOR'S EQUIPMENT AND MATERIAL IN THE STAGING AREA. SECURITY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IF NO STAGING AREA IS DESIGNATED ON THESE PLANS, AN OFF-SITE STAGING AREA SHALL BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE OR THE CONTRACTOR MAY NEGOTIATE WITH THE OWNER TO USE AN ON-SITE AREA.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING, IN ADVANCE OF HIS / HER CONSTRUCTION OPERATIONS, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC., ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION, ANY COSTS ASSOCIATED WITH THIS EFFORT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS ON THE CONSTRUCTION DOCUMENTS, ARE SHOWN APPROXIMATE AND IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION PROVIDED BY VARIOUS OWNERS OF THE FACILITIES, AND SUPPLEMENTED BY VISUAL SURFACE INFORMATION WHERE APPROPRIATE. ACCURACY, LOCATION, AND COMPLETENESS OF THIS INFORMATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE VERIFIED, BY ANY MEANS NECESSARY, PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE OWNER / ENGINEER (SSCAFCa) AT 505-892-7246 IMMEDIATELY.
12. IT IS MANDATORY THAT A PRE-CONSTRUCTION MEETING BE HELD PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE OWNER / ENGINEER (SSCAFCa) AT 505-892-7246 TO DETERMINE THE TIME AND LOCATION OF THE PRE-CONSTRUCTION MEETING.
13. AT THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SCHEDULE TO THE OWNER / ENGINEER (SSCAFCa).
14. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE OWNER / ENGINEER (SSCAFCa) AND/OR ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND TAKE WHATEVER MEASURES ARE NECESSARY TO ENSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES.
16. THE CONTRACTOR SHALL CONTACT NEW MEXICO ONE CALL AT 811 OR 1-800-321-2637, FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION FOR UTILITY SPOTS IN ACCORDANCE WITH APPLICABLE STATE LAW.
17. CONTRACTOR WILL NOTIFY THE OWNER / ENGINEER (SSCAFCa) AT 505-892-7246 A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
18. THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE CONSTRUCTION LIMITS AND/OR PUBLIC RIGHTS-OF-WAY TO PRESERVE EXISTING VEGETATION, LANDSCAPING, AND PRIVATE PROPERTY. APPROVAL OF THESE PLANS DOES NOT GIVE OR IMPLY ANY PERMISSION TO TRESPASS OR WORK ON PRIVATE PROPERTY. PERMISSION MUST BE GRANTED IN WRITING BY THE OWNER OF THAT PROPERTY.
19. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO KEEP THE JOB SITE FREE FROM TRASH ON A DAILY BASIS, AND ALL MATERIALS WILL BE NEATLY ORGANIZED. TRASH AND/OR NON-USUED MATERIALS SHALL NOT BE BURIED ON-SITE.
20. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES SO AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.

GENERAL NOTES (CONTINUED)

21. CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING UTILIZING APPROVED CONSTRUCTION PLANS. THE APPROPRIATE RIGHT-OF-WAY MAPS, RECORDED PLATS, AND CITY OF RIO RANCHO STANDARD DETAILS, EACH REVISION TO THE PLANS SHALL BE RECORDED IN THE PLAN REVISION BLOCK. PLANS SHALL INCLUDE LOCATION MAP WITH LEGAL DESCRIPTION AND LOCATION GRID.
22. THE CONTRACTOR SHALL MAINTAIN AN UP TO DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THE FINAL AS-BUILT PLANS, REFLECTING ANY AND ALL CHANGES TO THE ORIGINAL PLAN, SHALL BE SUBMITTED TO THE OWNER / ENGINEER (SSCAFCa) PRIOR TO FINAL PAYMENT.
23. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION ACTIVITIES, PERMITTING, AND SUBMITTALS ARE IN ACCORDANCE WITH THE SSCaFCa / CITY OF RIO RANCHO DEVELOPMENT PROCESS MANUAL (DPM) AND LOCAL ORDINANCES.
24. NO WORK SHALL BE PERFORMED IN A FEMA FLOODPLAIN WITHOUT WRITTEN AUTHORIZATION FROM THE LOCAL FLOODPLAIN MANAGER.
25. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF HIS WORK FROM STORMWATER FLOWS AS OUTLINED IN THE SUPPLEMENTAL TECHNICAL SPECIFICATIONS PROVIDED IN THE CONTRACT DOCUMENTS.
26. UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE A MINIMUM OF 3,500 PSI.
27. IF APPLICABLE, THE CONTRACTOR SHALL COMPLY WITH ALL CONSTRUCTION RELATED REQUIREMENTS OF THE PROJECT'S CORP OF ENGINEERS 404 PERMIT. COPIES OF THE PERMIT TERMS MAY BE OBTAINED FROM THE OWNER.
- EROSION CONTROL / ENVIRONMENTAL PROTECTION / STORMWATER POLLUTION PREVENTION PLAN
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL NECESSARY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OBTAINING AN NPDES PERMIT PRIOR TO CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, AND FILLING OUT THE NOTICE OF TERMINATION (NOT) APPLICATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE IMPLEMENTATION OF AND INSPECTION REPORTS FOR THE SWPPP.
2. THE CONTRACTOR SHALL SUBMIT THE SWPPP WITH THE PROPOSED CONSTRUCTION STAGING AREA AND TEMPORARY SANITARY FACILITIES CLEARLY SHOWN, ANY CHECK DAMS, SILT FENCES, OR OTHER BEST MANAGEMENT PRACTICES (BMPs) THAT ARE REQUIRED IN THE APPROVED SWPPP SHALL BE INCLUDED IN AND ARE INCIDENTAL TO THE SWPPP BID AMOUNT.
3. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED SWPPP ON-SITE AT ALL TIMES AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN AND SHALL PROVIDE AN ADDITIONAL FULLY EXECUTED COPY TO THE OWNER.
4. THE CONTRACTOR SHALL EITHER PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR INSTALL BMPs IDENTIFIED IN THE APPROVED SWPPP TO PREVENT DISCHARGE OF EXCAVATED MATERIAL WITHIN THE PUBLIC RIGHT-OF-WAY DURING A RAIN OR WIND EVENT.
5. THE CONTRACTOR SHALL IMPLEMENT THE APPROVED SWPPP IF APPLICABLE, AND ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
6. THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING BMPs IDENTIFIED IN THE APPROVED SWPPP IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS AS SPECIFIED IN THE SWPPPs.
7. CONSTRUCTION AREAS SHALL BE WATERED FOR DUST CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SUPPLYING WATER AS REQUIRED. WATERING, AS REQUIRED FOR CONSTRUCTION AND DUST CONTROL, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT SHALL BE MADE THEREFOR.
8. ANY AREAS DISTURBED BY CONSTRUCTION AND NOT COVERED BY AN IMPERVIOUS SURFACE SHALL BE REVEGETATED WITH NATIVE GRASS SEEDING, WHEN CONSTRUCTION ACTIVITIES CEASE AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME WITHIN 14 DAYS, STABILIZATION MEASURES MUST BE INITIATED.
9. ALL WASTE PRODUCTS FROM THE CONSTRUCTION SITE, INCLUDING ITEMS DESIGNATED FOR REMOVAL, CONSTRUCTION WASTE, CONSTRUCTION EQUIPMENT WASTE PRODUCTS (OIL, GAS, TIRES, ETC.) GARBAGE, GRUBBING, EXCESS CUT MATERIAL, VEGETATIVE DEBRIS, ETC. SHALL BE APPROPRIATELY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMITS REQUIRED TO HAUL OR DISPOSE OF WASTE PRODUCTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE WASTE DISPOSAL SITE COMPLIES WITH GOVERNMENT REGULATIONS REGARDING THE ENVIRONMENT, ENDANGERED SPECIES, AND ARCHAEOLOGICAL RESOURCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP AND REPORTING OF SPILLS OF HAZARDOUS MATERIALS ASSOCIATED WITH THE CONSTRUCTION SITE. HAZARDOUS MATERIALS INCLUDE GASOLINE, DIESEL FUEL, MOTOR OIL, SOLVENTS, CHEMICALS, PAINTS, ETC. WHICH MAY BE A THREAT TO THE ENVIRONMENT. THE CONTRACTOR SHALL REPORT THE DISCOVERY OF PAST OR PRESENT SPILLS TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM AT 505-827-4523.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING SURFACE AND UNDERGROUND WATER, CONTACT WITH SURFACE WATER BY CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL BE MINIMIZED. EQUIPMENT MAINTENANCE AND REFUELING OPERATIONS SHALL BE PERFORMED IN AN ENVIRONMENTALLY SAFE MANNER IN COMPLIANCE WITH GOVERNMENT REGULATIONS.
12. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS CONCERNING CONSTRUCTION NOISE AND HOURS OF OPERATION.
13. WHERE STORM INLETS ARE SUSCEPTIBLE TO INFLOW OF SILT OR DEBRIS FROM CONSTRUCTION ACTIVITIES, PROTECTION SHALL BE PROVIDED ON THEIR UPSTREAM SIDE UTILIZING BMPs IDENTIFIED IN THE APPROVED SWPPP.

SOILS

1. UNLESS OTHERWISE SPECIFIED SUBGRADE SOILS AND STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO THE FOLLOWING PERCENTAGES OF THE ASTM D-1557 MAXIMUM DENSITY.
- | MATERIALS                                                |             |
|----------------------------------------------------------|-------------|
|                                                          | PERCENT (%) |
| STRUCTURAL FILL IN THE BUILDING AREA                     | 95          |
| SUB BASE FOR SLAB SUPPORT                                | 95          |
| MISCELLANEOUS BACKFILL BELOW STRUCTURAL FILL OR ROAD     | 95          |
| MISCELLANEOUS BACKFILL BELOW UNPAVED, NON-BUILDING AREAS | 90          |
| ROAD SUB GRADE                                           | 95          |
| SIDEWALK / TRAIL SUB GRADE                               | 95          |
| CURB AND GUTTER SUBGRADE                                 | 95          |
2. GEOTECHNICAL REPORT (NV5, 10/28/2016) SHALL GOVERN CONSTRUCTION OF THE POND EMBANKMENT AND OTHER PROJECT ELEMENTS, UNLESS OTHERWISE NOTED OR APPROVED BY A GEOTECHNICAL ENGINEER.

ABBREVIATIONS

|         |                                |
|---------|--------------------------------|
| AP      | ANALYSIS POINT                 |
| @       | AT                             |
| BC      | BEGIN CURVE                    |
| BCR     | BEGIN CURB RETURN              |
| BK      | BOOK                           |
| BLDG    | BUILDING                       |
| BM      | BENCH MARK                     |
| BOA     | BEGINNING OF ALIGNMENT         |
| BOP     | BEGINNING OF PROJECT           |
| BVC     | BEGIN VERTICAL CURVE           |
| BW      | BASE OF WALL                   |
| CATV    | CABLE TV LINE                  |
| CB      | CATCH BASIN                    |
| CF      | CURB FACE                      |
| CG      | CURB AND GUTTER                |
| CLF     | CHAIN LINK FENCE               |
| CL      | CENTERLINE                     |
| CMP     | CORRUGATED METAL PIPE          |
| CO      | CLEAN OUT                      |
| CONC    | CONCRETE                       |
| CORR    | CITY OF RIO RANCHO             |
| CY      | CUBIC YARDS                    |
| DUE     | DRAINAGE UTILITY EASEMENT      |
| DI      | DROP INLET                     |
| DIA     | DIAMETER                       |
| Δ       | DELTA                          |
| EA      | EACH                           |
| EC      | END CURVE                      |
| ECR     | END CURB RETURN                |
| ELEV    | ELEVATION                      |
| EOA     | END OF ALIGNMENT               |
| EOP     | END OF PROJECT                 |
| EP      | EDGE OF PAVEMENT               |
| ESMT    | EASEMENT                       |
| EST     | ESTIMATE                       |
| EVC     | END VERTICAL CURVE             |
| EW      | EACH WAY                       |
| EXIST   | EXISTING                       |
| FF      | FINISH FLOOR                   |
| FG      | FINISH GRADE                   |
| FH      | FIRE HYDRANT                   |
| FL      | FLOW LINE                      |
| FOC     | FACE OF CURB                   |
| FP      | FINISHED PAD                   |
| G       | GAS                            |
| GM      | GAS METER                      |
| GV      | GATE VALVE                     |
| HORIZ   | HORIZONTAL                     |
| INT     | INTERSECTION                   |
| INV     | INVERT                         |
| INV EL  | INVERT ELEVATION               |
| LF      | LINEAR FEET                    |
| LP      | LIGHT POLE                     |
| LT      | LEFT                           |
| MH      | MANHOLE                        |
| MID     | MID-POINT                      |
| NG      | NATURAL GROUND                 |
| OC      | ON CENTER                      |
| OHE     | OVER HEAD ELECTRIC             |
| PB      | PULL BOX                       |
| PC      | POINT OF CURVATURE             |
| PCC     | POINT OF COMPOUND CURVATURE    |
| PG      | PAGE                           |
| PGL     | PROFILE GRADE LINE             |
| PI      | POINT OF INTERSECTION          |
| ℙ       | PROPERTY LINE                  |
| PRC     | POINT OF REVERSE CURVATURE     |
| PT      | POINT OF TANGENCY              |
| PUE     | PUBLIC UTILITY EASEMENT        |
| PVC     | POLYVINYL CHLORIDE PIPE        |
| PVMT    | PAVEMENT                       |
| QTY     | QUANTITY                       |
| RAD     | RADIUS                         |
| RCP     | REINFORCED CONCRETE PIPE       |
| RD      | ROOF DRAIN                     |
| REF     | REFERENCE                      |
| RP      | RADIUS POINT                   |
| RT      | RIGHT                          |
| R/W ROW | RIGHT-OF-WAY                   |
| S       | SLOPE                          |
| SAS SS  | SANITARY SEWER LINE            |
| SD      | STORM DRAIN                    |
| SF      | SQUARE FEET                    |
| STA     | STATION                        |
| STD     | STANDARD                       |
| SW      | SIDEWALK                       |
| SY      | SQUARE YARDS                   |
| T       | TANGENT                        |
| TA      | TOP OF ASPHALT                 |
| TAC     | TOP OF ASPHALT CURB            |
| TBC     | TOP BACK OF CURB               |
| TC      | TOP OF CONCRETE                |
| TEL     | TELEPHONE LINE, RISER OR BOX   |
| TP      | TOP OF PIPE                    |
| TRANS   | TRANSVERSE                     |
| TW      | TOP OF WALL                    |
| TYP     | TYPICAL                        |
| UE      | UNDERGROUND ELECTRICAL LINE    |
| UT      | UNDERGROUND TELEPHONE LINE     |
| VC      | VERTICAL CURVE                 |
| VERT    | VERTICAL                       |
| VPI     | VERTICAL POINT OF INTERSECTION |
| W       | WATER LINE                     |
| WM      | WATER METER                    |
| WQ      | WATER QUALITY                  |
| WSEL    | WATER SURFACE ELEVATION        |
| WV      | WATER VALVE                    |



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RAINBOW POND AND DOWNSTREAM CHANNEL

GENERAL NOTES & ABBREVIATIONS

| REVISIONS & CHANGE NOTICES |             |
|----------------------------|-------------|
| MARK                       | DESCRIPTION |
|                            | DATE        |
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PROJECT NO: RA\_P0001  
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DRAWN BY: KLF  
CHECKED BY: DDG  
DATE: 4/3/2018

2

SHEET 2 OF 28



Southern Sandoval  
County  
Arroyo Flood Control  
Authority

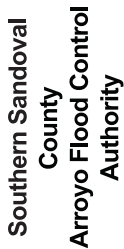
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| Point Table |           |            |            |
|-------------|-----------|------------|------------|
| Point #     | Elevation | Northing   | Eastng     |
| 12          | 5682.97   | 1547596.67 | 1496666.56 |
| 1007        | 5649.42   | 1545335.76 | 1497369.68 |
| 1008        | 5657.72   | 1545312.75 | 1498701.34 |
| 1009        | 5671.61   | 1547146.36 | 1497299.11 |
| 1010        | 5675.50   | 1547212.00 | 1498555.52 |
| 1011        | 5686.71   | 1549077.01 | 1497328.79 |
| 1012        | 5683.90   | 1549097.10 | 1498709.64 |



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- NOTES
1. SURVEY CONTROL USED FOR THIS PROJECT WAS ESTABLISHED BY COBB, FENDLEY & ASSOCIATES. SURVEY CONTROL INFORMATION PROVIDED TO WHPACIFIC BY SSCAFCA.
  2. BASIS OF BEARINGS, BEARINGS ARE NAD83(2011) NEW MEXICO CENTRAL ZONE STATE PLANE GRID BEARINGS.
  3. THE COORDINATES SHOWN ON THE DRAWING ARE MODIFIED (SURFACE) NAD83 SPC NM(C) COORDINATES AND WERE DERIVED BY SCALING STATE PLANE GRID COORDINATES BY A PROJECT COMBINED GRID TO GROUND SCALE FACTOR OF 1.000346485 AROUND AN ORIGIN OF 0,0.
  4. THE VERTICAL BENCHMARK FOR THE PROJECT IS CONTROL POINT 12, A 3/4 INCH REBAR WITH YELLOW PLASTIC CAP STAMPED "COBBFENDLEY CONTROL POINT". ELEVATION: 5682.97 FEET. DATUM: NAVD88. CONTROL POINT AND ELEVATION ESTABLISHED BY COBB, FENDLEY & ASSOCIATES.
  5. ALL DISTANCES IN THIS DRAWING ARE GROUND DISTANCES. ALL DISTANCES, ELEVATIONS AND COORDINATES ARE EXPRESSED IN US SURVEY FEET.
  6. THE EQUIPMENT UTILIZED FOR THIS SURVEY ARE AS FOLLOWS; TRIMBLE TSC3 DATA COLLECTORS (2x), TRIMBLE R8 MODEL 4 RECEIVERS, TRIMBLE S6 ROBOTIC TOTAL STATION (2x) AND A TRIMBLE TDL 450H RADIO UNIT.
  7. FIELD SURVEY WAS PERFORMED: JANUARY 6, 7 & 11 2016.

1010  
+5675.50  
HV-4 RPC SET

1009  
+5671.61  
HV-3 RPC SET

|                                  |                                                                                                                     |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Flight Date:<br>January 12, 2016 | Legend<br>$\Phi$ + AERIAL PHOTO<br>N 80000 GRID TILES<br>+ GRID TILES<br>X SPOT ELEVATIONS<br><small>2000.5</small> |
| ATM #NM1215-044                  |                                                                                                                     |
| Map Scale 1"=50'                 |                                                                                                                     |
| Plot Scale 1"=100'               |                                                                                                                     |

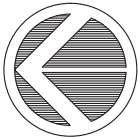
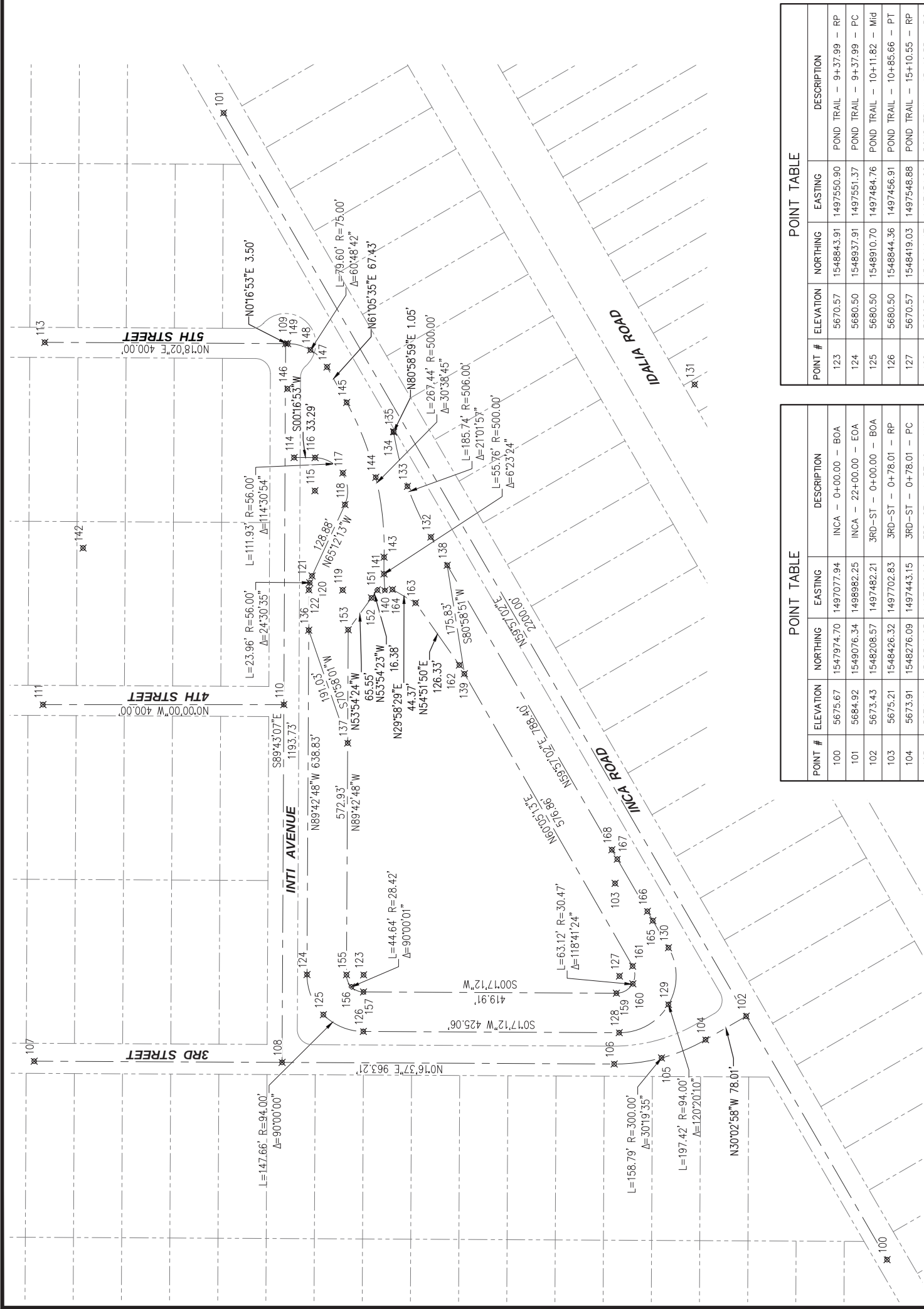
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|--------|----------------|--|----------------|--|-----------------|--|--------------------|--|---------------|--|---------------|--|--------------------|--|-------------------------|--|----------------------|--|-----------------|
|        | CACTUS         |  | SIGNS          |  | FIRE HYDRANT    |  | TRAFFIC SIGNAL     |  | MINE          |  | BUILDING      |  | TRAFFIC LANE PAINT |  | CONCRETE                |  | INDEX CONTOUR / TEXT |  | VEGETATION LINE |
|        | PALM TREE      |  | BILLBOARD      |  | METER / UTILITY |  | PEDESTRIAN SIGNAL  |  | BIKE LANE     |  | SWIMMING POOL |  | RAILROAD           |  | INTER CONTOUR           |  | GOLF FAIRWAY         |  |                 |
|        | SINGLE TREE    |  | OVERHEAD SIGNS |  | MANHOLE         |  | STREET LIGHT       |  | HANDICAP      |  | BRIDGE        |  | ROAD / PAVEMENT    |  | INDEX DEPRESSION / TEXT |  | GOLF GREEN / TEE     |  |                 |
|        | FLAG           |  | STREET SIGN    |  | VALVE           |  | TV DISH            |  | EXIT SIGN     |  | CANOPY        |  | DIRT ROAD / TRAIL  |  | RETAINING WALL          |  | GOLF SANDTRAP        |  |                 |
|        | GATE           |  | POST / BOLLARD |  | CATCH BASIN     |  | TRAFFIC POLE       |  | TRAFFIC PAINT |  | ROCKS         |  | CURB / GUTTER      |  | WATER                   |  | FIELD                |  |                 |
|        | SPOT ELEVATION |  |                |  |                 |  | DIRECTIONAL ARROWS |  | TRAFFIC PAINT |  | GUARDS RAIL   |  | INCH / WATER       |  | GRASS                   |  |                      |  |                 |

PROJECT NO: RA\_P0001  
DESIGNED BY: AES  
DRAWN BY: KLF  
CHECKED BY: DDG

4

SHEET 4 OF 28







**Southern Sandoval  
County  
Arroyo Flood Control  
Authority**

1041 Commercial Dr. S.E.  
Rio Rancho, New Mexico 87124  
505-892-RAIN (7246)  
505-892-7241 (Fax)  
www.sscatca.com



**ANDRES SANCHEZ**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF NEW MEXICO  
LICENSE NO. 44-1812

**RAINBOW POND AND DOWNSTREAM  
CHANNEL**

**COORDINATE CONTROL PLANS  
ROADS, POND & TRAIL**

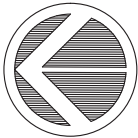
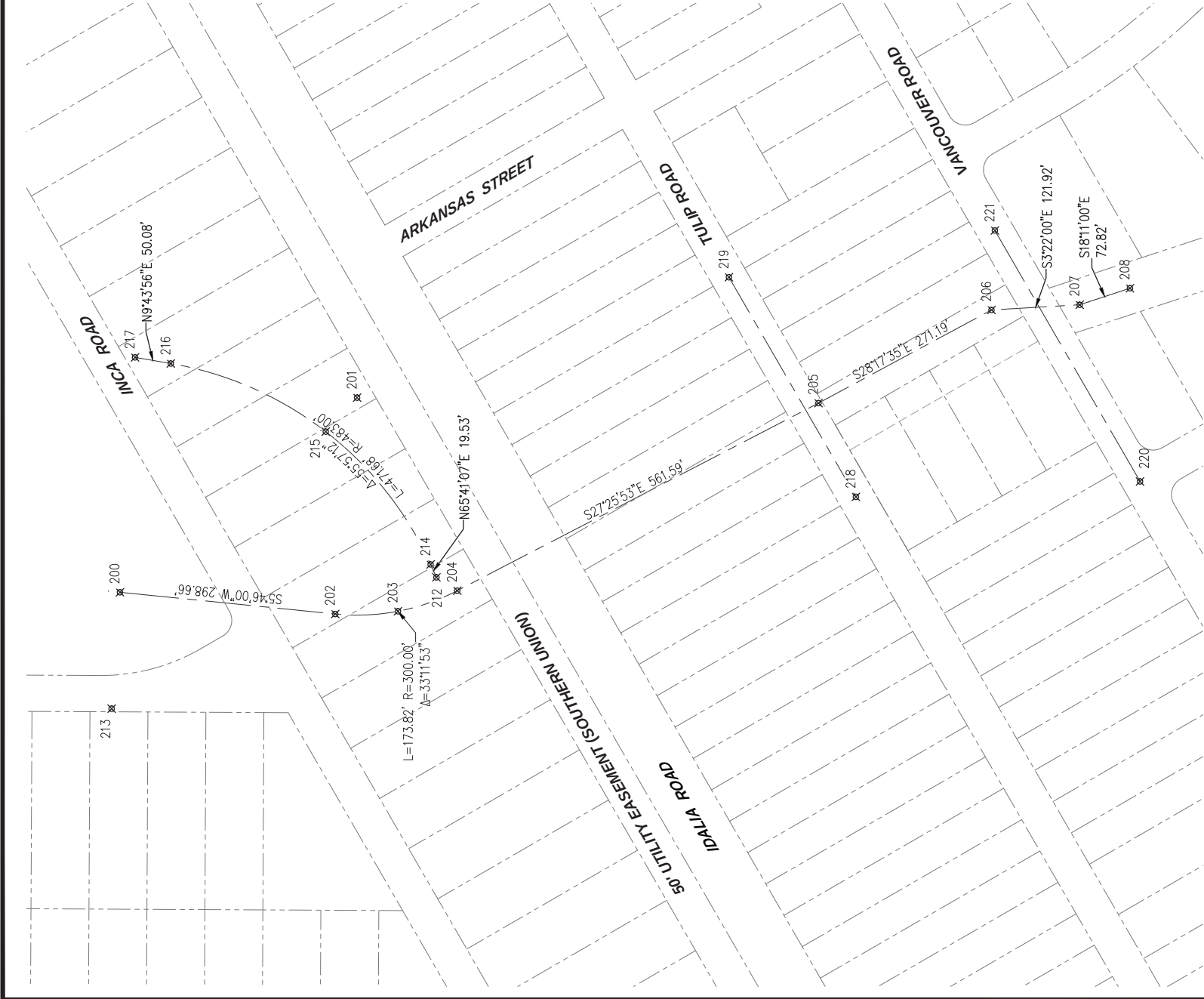
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 3/29/2018

| POINT TABLE |           |            |            |
|-------------|-----------|------------|------------|
| POINT #     | ELEVATION | NORTHING   | EASTING    |
| 100         | 5675.67   | 1547974.70 | 1497077.94 |
| 101         | 5684.92   | 1549076.34 | 1498982.25 |
| 102         | 5673.43   | 1548208.57 | 1497482.21 |
| 103         | 5675.21   | 1548426.32 | 1497702.83 |
| 104         | 5673.91   | 1548276.09 | 1497443.15 |
| 105         | 5674.40   | 1548349.25 | 1497412.90 |
| 106         | 5675.21   | 1548427.77 | 1497402.83 |
| 107         | 5692.20   | 1549390.97 | 1497407.49 |
| 108         | 5683.49   | 1548979.28 | 1497405.50 |
| 109         | 5681.57   | 1548973.42 | 1498599.22 |
| 110         | 5680.60   | 1548976.36 | 1497999.67 |
| 111         | 5683.00   | 1549376.36 | 1497999.67 |
| 113         | 5685.00   | 1549373.41 | 1498601.32 |
| 114         | 5682.03   | 1548959.35 | 1498410.05 |
| 115         | 5685.00   | 1548924.78 | 1498354.88 |
| 116         | 5682.34   | 1548924.51 | 1498409.88 |
| 117         | 5681.80   | 1548878.37 | 1498384.40 |
| 118         | 5681.26   | 1548874.85 | 1498331.81 |
| 119         | 5678.29   | 1548787.71 | 1498189.92 |
| 120         | 5680.74   | 1548929.55 | 1498213.40 |
| 121         | 5680.62   | 1548933.38 | 1498202.08 |
| 122         | 5680.50   | 1548934.71 | 1498190.20 |

| POINT TABLE |           |            |            |
|-------------|-----------|------------|------------|
| POINT #     | ELEVATION | NORTHING   | EASTING    |
| 123         | 5670.57   | 1548843.91 | 1497550.90 |
| 124         | 5680.50   | 1548937.91 | 1497551.37 |
| 125         | 5680.50   | 1548910.70 | 1497484.76 |
| 126         | 5680.50   | 1548844.36 | 1497456.91 |
| 127         | 5670.57   | 1548419.03 | 1497548.88 |
| 128         | 5680.50   | 1548419.47 | 1497454.88 |
| 129         | 5680.50   | 1548337.71 | 1497501.72 |
| 130         | 5680.50   | 1548337.66 | 1497595.95 |
| 131         | 0.00      | 1548294.24 | 1498531.39 |
| 132         | 5680.50   | 1548732.23 | 1498787.01 |
| 133         | 5680.14   | 1548771.12 | 1498362.20 |
| 134         | 5679.40   | 1548793.99 | 1498452.06 |
| 135         | 5679.40   | 1548794.20 | 1498453.39 |
| 136         | 5680.50   | 1548935.05 | 1498123.27 |
| 137         | 5670.57   | 1548870.40 | 1497935.89 |
| 138         | 5680.50   | 1548705.09 | 1498231.09 |
| 139         | 5670.57   | 1548676.52 | 1498050.94 |
| 140         | 5670.57   | 1548808.56 | 1498188.85 |
| 141         | 5671.22   | 1548910.04 | 1498216.68 |
| 142         | 5671.86   | 1549309.74 | 1498259.74 |
| 143         | 5671.86   | 1548809.98 | 1498244.56 |
| 144         | 5674.97   | 1548823.73 | 1498377.17 |

| POINT TABLE |           |            |            |
|-------------|-----------|------------|------------|
| POINT #     | ELEVATION | NORTHING   | EASTING    |
| 145         | 5678.07   | 1548872.04 | 1498501.43 |
| 146         | 5679.64   | 1548970.29 | 1498524.20 |
| 147         | 5679.64   | 1548904.63 | 1498560.46 |
| 148         | 5680.56   | 1548932.01 | 1498588.70 |
| 149         | 5681.49   | 1548969.92 | 1498599.20 |
| 151         | 5670.72   | 1548821.20 | 1498190.17 |
| 152         | 5670.57   | 1548830.85 | 1498176.93 |
| 153         | 5670.57   | 1548869.46 | 1498123.97 |
| 155         | 5670.57   | 1548872.33 | 1497551.05 |
| 156         | 5670.57   | 1548864.11 | 1497530.91 |
| 157         | 5670.57   | 1548844.05 | 1497522.48 |
| 159         | 5670.57   | 1548424.15 | 1497520.38 |
| 160         | 5670.57   | 1548396.85 | 1497536.02 |
| 161         | 5670.57   | 1548397.19 | 1497565.35 |
| 162         | 5670.57   | 1548684.86 | 1498065.36 |
| 163         | 5670.57   | 1548757.57 | 1498168.67 |
| 164         | 5670.72   | 1548796.00 | 1498190.84 |
| 165         | 5680.50   | 1548363.63 | 1497640.84 |
| 166         | 5678.80   | 1548372.65 | 1497656.43 |
| 167         | 5678.80   | 1548422.64 | 1497743.03 |
| 168         | 5680.50   | 1548431.65 | 1497758.62 |



**Southern Sandoval  
County  
Arroyo Flood Control  
Authority**  
1041 Commercial Dr. S.E.  
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505-892-7241 (Fax)  
www.sscatca.com



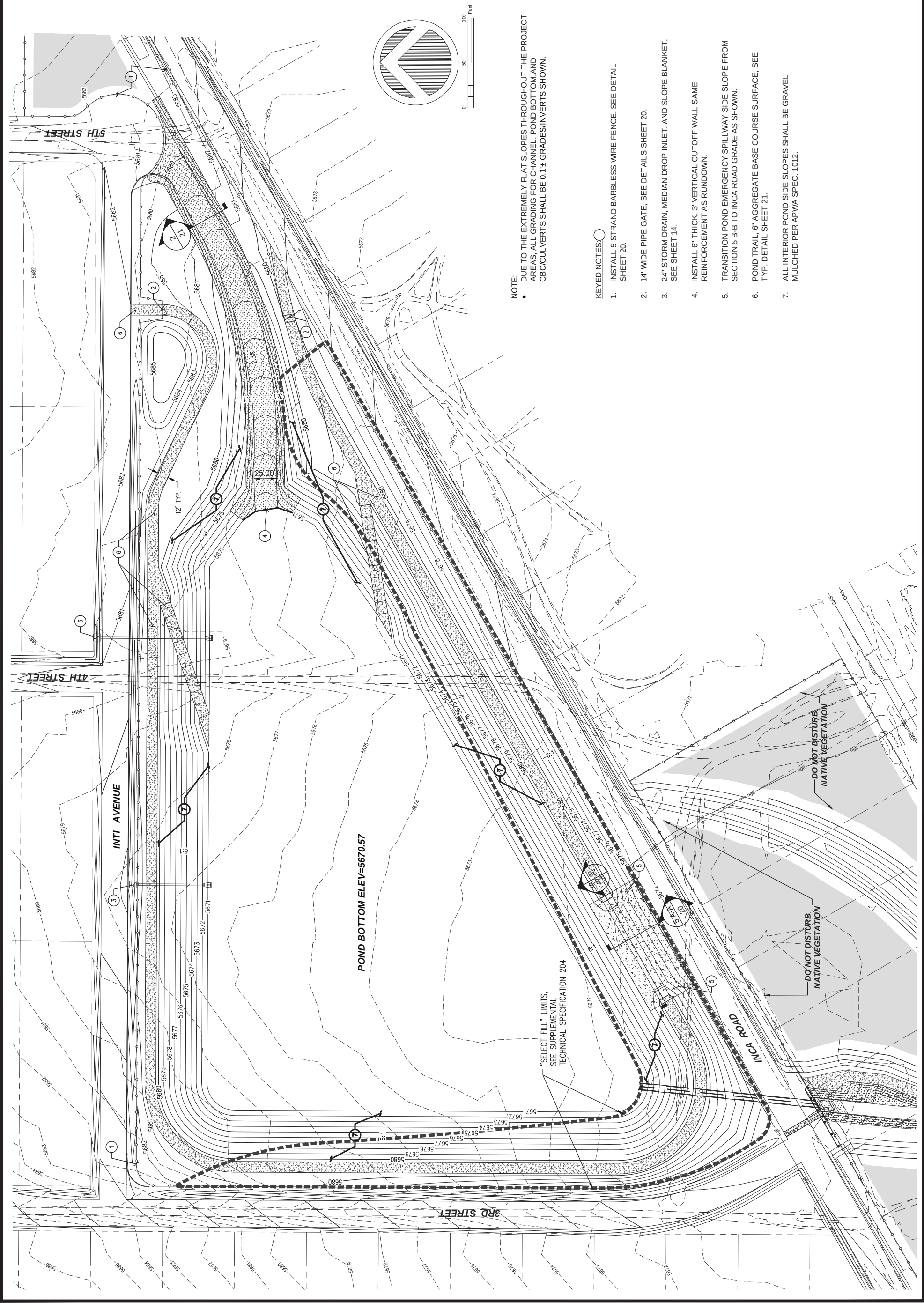
RAINBOW POND AND DOWNSTREAM  
CHANNEL

COORDINATE CONTROL PLANS  
CONCRETE BOX CULVERT & CHANNEL  
ALIGNMENT

| MARK | REVISIONS &<br>CHANGE NOTICES |      |
|------|-------------------------------|------|
|      | DESCRIPTION                   | DATE |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 3/29/2018

| POINT TABLE |           |            |            |                           |
|-------------|-----------|------------|------------|---------------------------|
| POINT #     | ELEVATION | NORTHING   | EASTING    | DESCRIPTION               |
| 200         | 5670.57   | 1548402.93 | 1497547.25 | CHANNEL — 0+00.00 — BOA   |
| 201         | 5669.57   | 1548075.65 | 1497815.73 | CHANNEL — 2+98.66 — RP    |
| 202         | 5669.57   | 1548105.79 | 1497517.25 | CHANNEL — 2+98.66 — PC    |
| 203         | 5669.26   | 1548019.27 | 1497521.07 | CHANNEL — 3+85.57 — Mid   |
| 204         | 5668.94   | 1547937.44 | 1497549.46 | CHANNEL — 4+72.48 — PT    |
| 205         | 5665.01   | 1547438.99 | 1497808.18 | CHANNEL — 10+34.07 — PI   |
| 206         | 5661.30   | 1547200.20 | 1497936.71 | CHANNEL — 13+05.26 — PI   |
| 207         | 5660.48   | 1547078.50 | 1497943.87 | CHANNEL — 14+14.18 — PI   |
| 208         | 5658.49   | 1547009.18 | 1497966.64 | CHANNEL — 15+00.00 — EOA  |
| 212         | 5673.00   | 1547966.18 | 1497567.85 | BERM — 0+00.00 — BOA      |
| 213         | 5674.89   | 1548414.38 | 1497386.77 | BERM — 0+19.53 — RP       |
| 214         | 5673.14   | 1547974.22 | 1497585.65 | BERM — 0+19.53 — PC       |
| 215         | 5674.47   | 1548118.95 | 1497768.89 | BERM — 2+55.37 — Mid      |
| 216         | 5673.11   | 1548332.73 | 1497862.82 | BERM — 4+91.21 — PT       |
| 217         | 5672.74   | 1548382.09 | 1497871.29 | BERM — 5+41.29 — EOA      |
| 218         | 5670.26   | 1547387.31 | 1497678.88 | TULIP — 0+00.00 — BOA     |
| 219         | 5670.57   | 1547562.57 | 1497981.83 | TULIP — 3+50.00 — EOA     |
| 220         | 5667.38   | 1546995.24 | 1497700.11 | VANCOUVER — 0+00.00 — BOA |
| 221         | 5665.68   | 1547195.54 | 1498046.34 | VANCOUVER — 4+00.00 — EOA |





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www.sscatca.com



RAINBOW POND AND DOWNSTREAM  
CHANNEL

RAINBOW POND  
GRADING PLAN

| REVISIONS &<br>CHANGE NOTICES |             |
|-------------------------------|-------------|
| MARK                          | DESCRIPTION |
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PROJECT NO: RA\_P0001

DESIGNED BY: AES

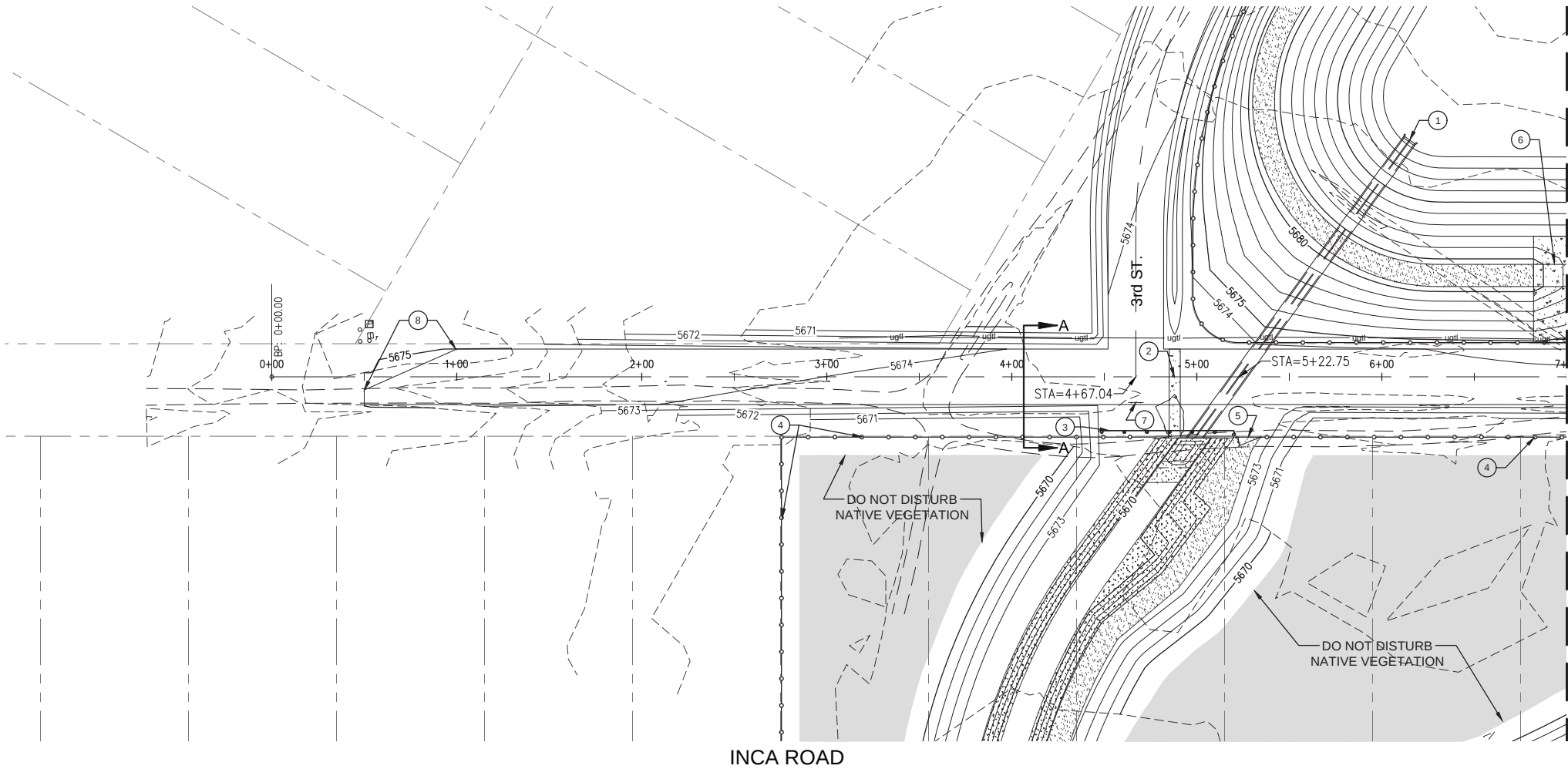
DRAWN BY: KLF

CHECKED BY: DDG

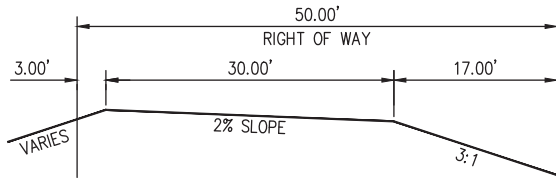
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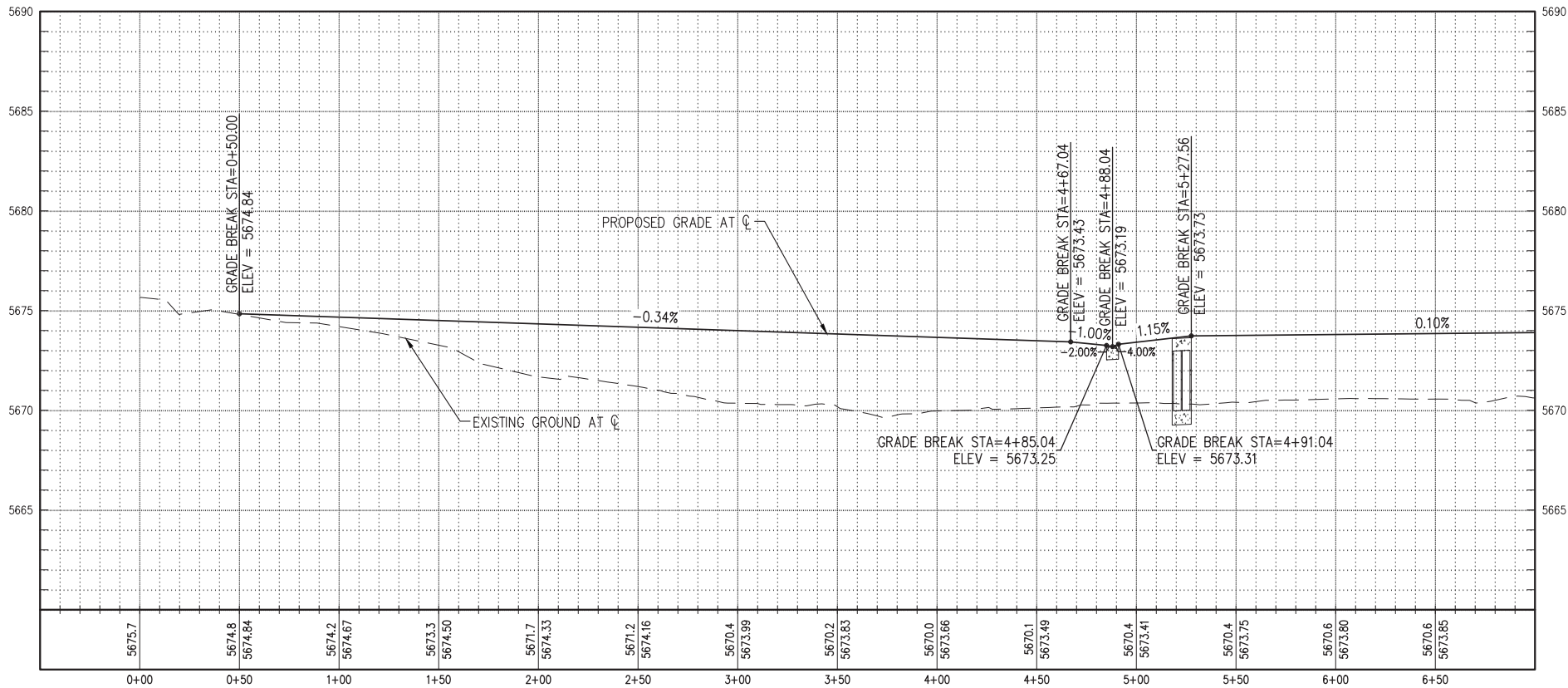
SHEET 8 OF 28



INCA ROAD



TYPICAL SECTION A-A  
INCA ROAD  
STA. 0+50 TO 4+50  
STA. 5+60 TO 9+00



NOTE:  
• DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.

KEYED NOTES:

1. 2-CELL 3'X3' CBC, SEE SHEET 17.
2. STA. 4+88.04 INSTALL 47 LF VALLEY GUTTER PER CORR STD. DWG. VG-01.
3. STA. 4+34.44, 29.11' RT. TO STA. 5+20.32, 32.61' RT., INSTALL SINGLE FACE W-BEAM GUARDRAIL NMDOT ITEM 606001 WITH W-BEAM END ANCHOR NMDOT ITEM 606053.
4. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
5. INSTALL 14' WIDE PIPE GATE, SEE DETAILS SHEET 20.
6. POND EMERGENCY SPILLWAY, SEE DETAILS SHEET 20.
7. STA. 4+67.04, 14' RT. INSTALL BARRICADE PER CORR STD. DWG. TCSS-01 W1-7.
8. TRANSITION FROM EXISTING ROADWAY WIDTH OF 8± AT STA. 0+50, TO PROPOSED 30' ROADWAY WIDTH AT STA. 1+00.



**Southern Sandoval  
County  
Arroyo Flood Control  
Authority**

1041 Commercial Dr. S.E.  
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[www.sscatca.com](http://www.sscatca.com)



RAINBOW POND AND DOWNSTREAM  
CHANNEL

INCA ROAD PLAN & PROFILE  
STA 0+00 TO 7+00

REVISIONS &  
CHANGE NOTICES

| MARK | DESCRIPTION | DATE |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 3/30/2018



1041 Commercial Dr. S.E.  
Rio Rancho, New Mexico 87124  
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## RAINBOW POND AND DOWNSTREAM CHANNEL

INCA ROAD PLAN & PROFILE  
STA 7+00 TO 15+00

[illegible]

PROJECT NO: RA\_P0001

DESIGNED BY: JB

DRAWN BY: KLF

CHECKED BY: AES

DATE: 3/30/2018

10

SHEET 10 OF 28

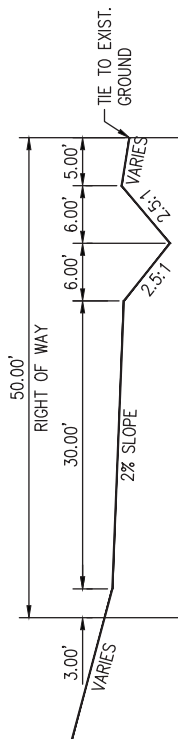


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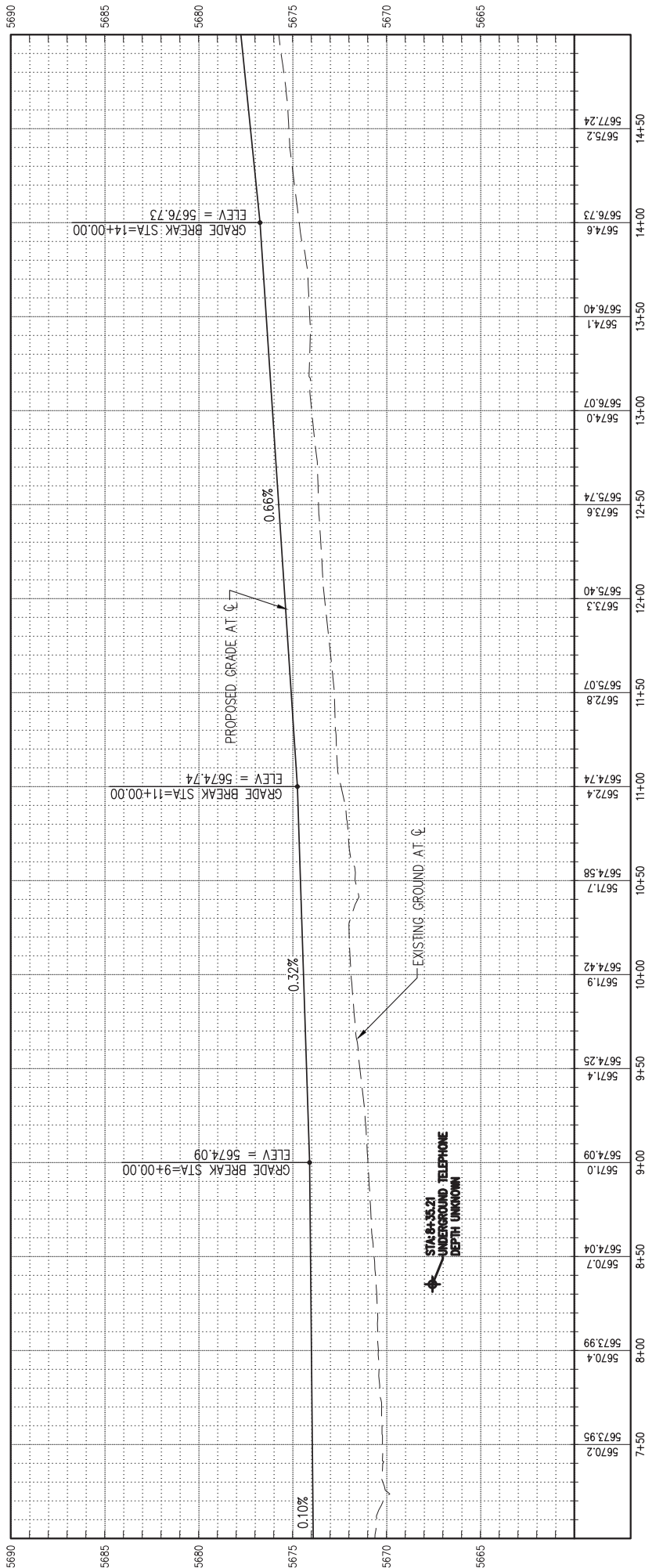
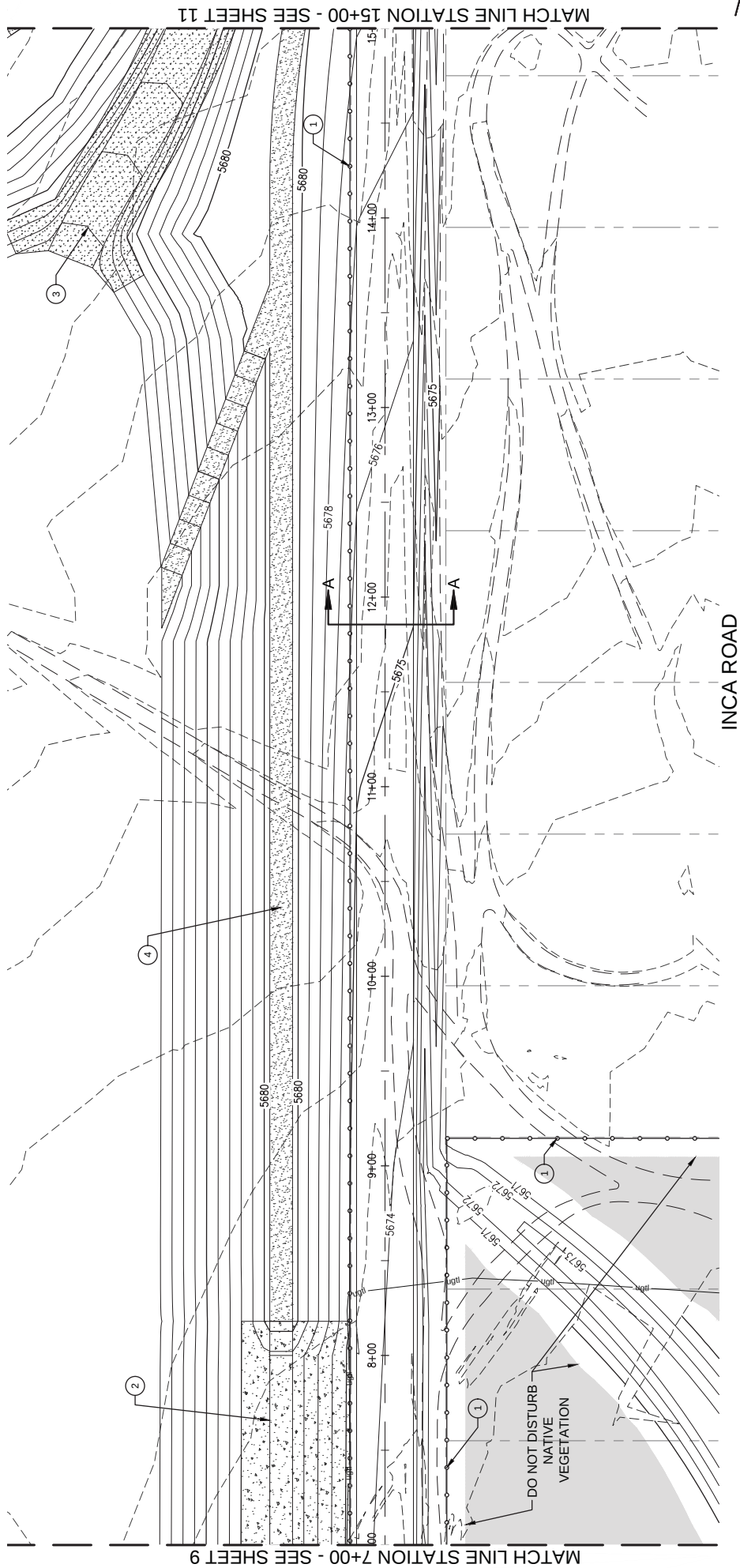
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1'± GRADES/INVERTS SHOWN.

KEYED NOTES: ○

1. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
2. POND EMERGENCY SPILLWAY, SEE DETAILS SHEET 20.
3. POND RUNDOWN, SEE DETAILS SHEET 21.
4. POND TRAIL, 6" AGGREGATE BASE COURSE SURFACE, SEE TYP. DETAIL SHEET 21.



TYPICAL SECTION A-A  
INCA ROAD  
STA. 9+00 TO 20+00





**Southern Sandoval County**  
**Arroyo Flood Control Authority**  
1041 Commercial Dr. S.E.  
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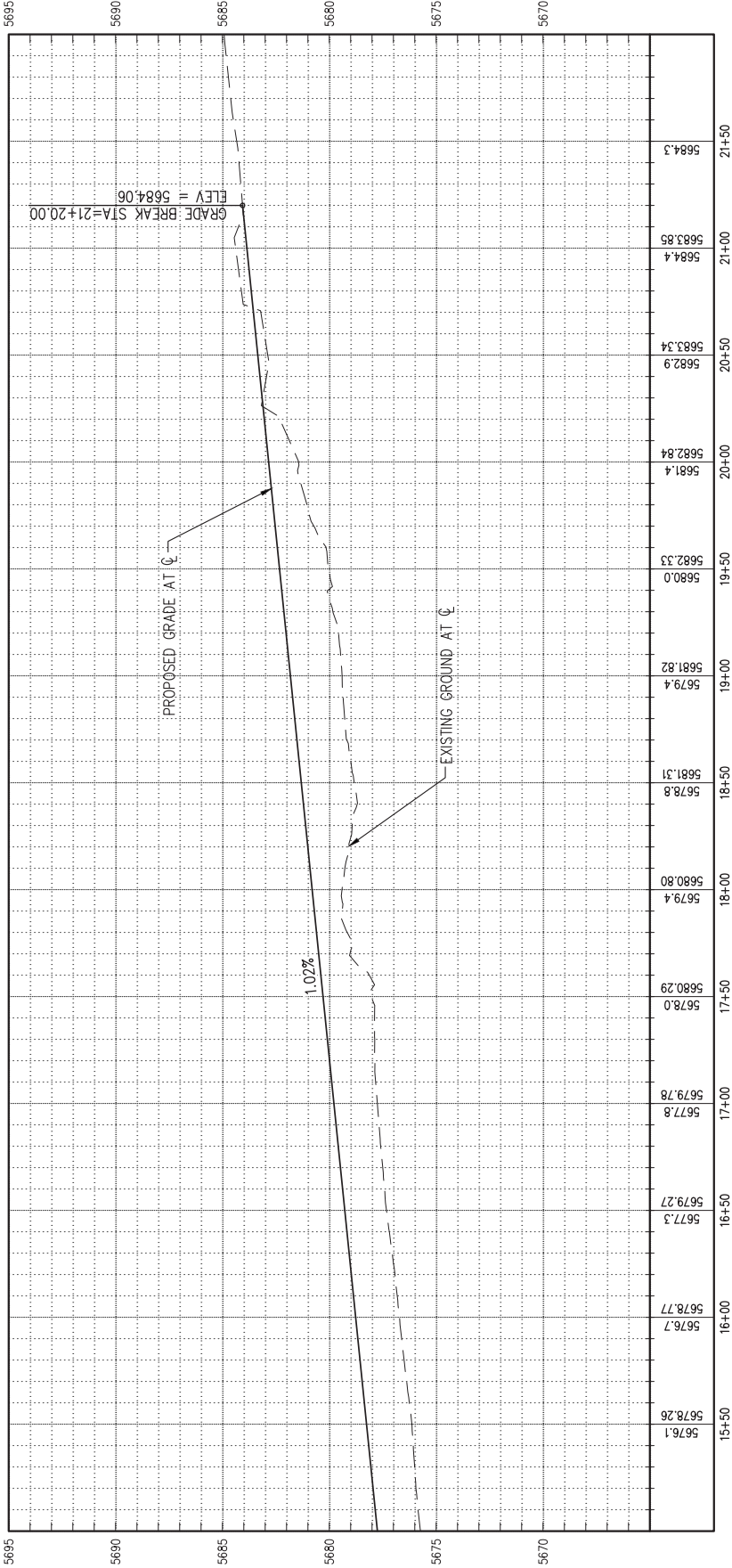
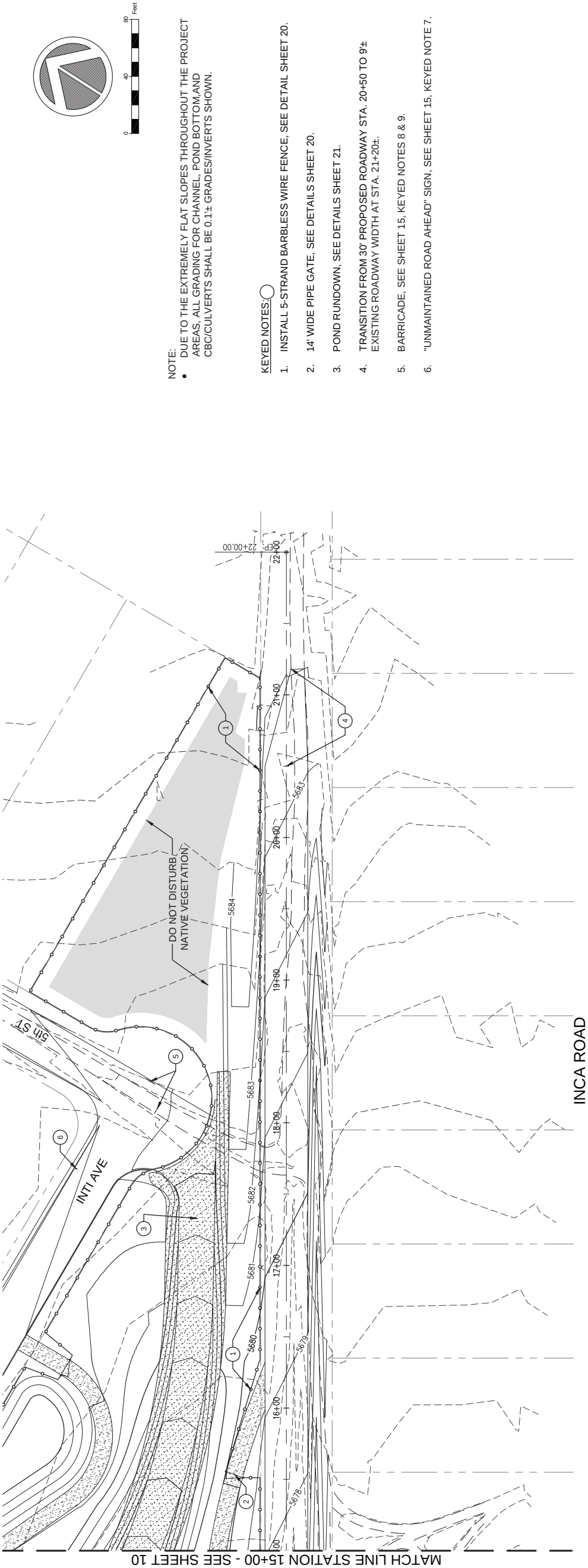


RAINBOW POND AND DOWNSTREAM CHANNEL

INCA ROAD PLAN & PROFILE  
STA 15+00 TO 22+00

| MARK | REVISIONS & CHANGE NOTICES |      |
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|      | DESCRIPTION                | DATE |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 3/30/2018



- NOTE:
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.
- KEYED NOTES:
- INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
  - 14" WIDE PIPE GATE, SEE DETAILS SHEET 20.
  - POND RUNDOWN, SEE DETAILS SHEET 21.
  - TRANSITION FROM 30' PROPOSED ROADWAY STA. 20+50 TO 9± EXISTING ROADWAY WIDTH AT STA. 21+20±.
  - BARRICADE, SEE SHEET 15, KEYED NOTES 8 & 9.
  - "UNMAINTAINED ROAD AHEAD" SIGN, SEE SHEET 15, KEYED NOTE 7.



**Southern Sandoval County**  
**Arroyo Flood Control Authority**  
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www.sscatca.com



RAINBOW POND AND DOWNSTREAM CHANNEL

3RD STREET PLAN & PROFILE  
STA 0+00 TO 7+00

| REVISIONS & CHANGE NOTICES |             |
|----------------------------|-------------|
| MARK                       | DESCRIPTION |
| DATE                       |             |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/4/2018

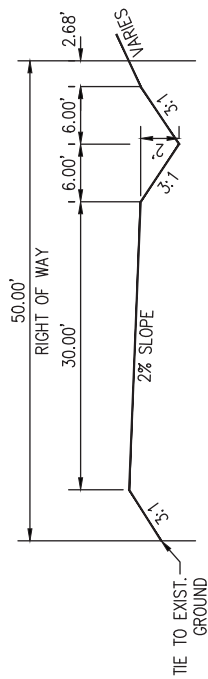


NOTE:

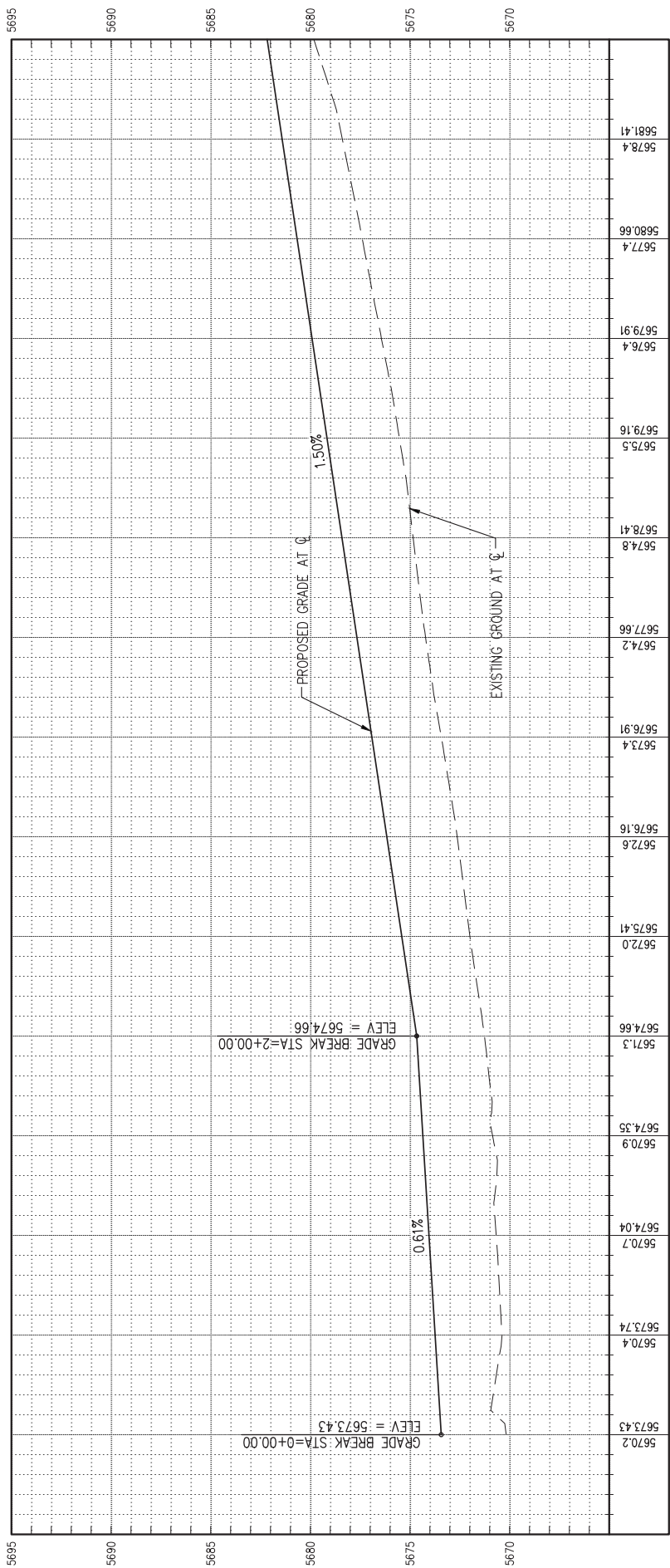
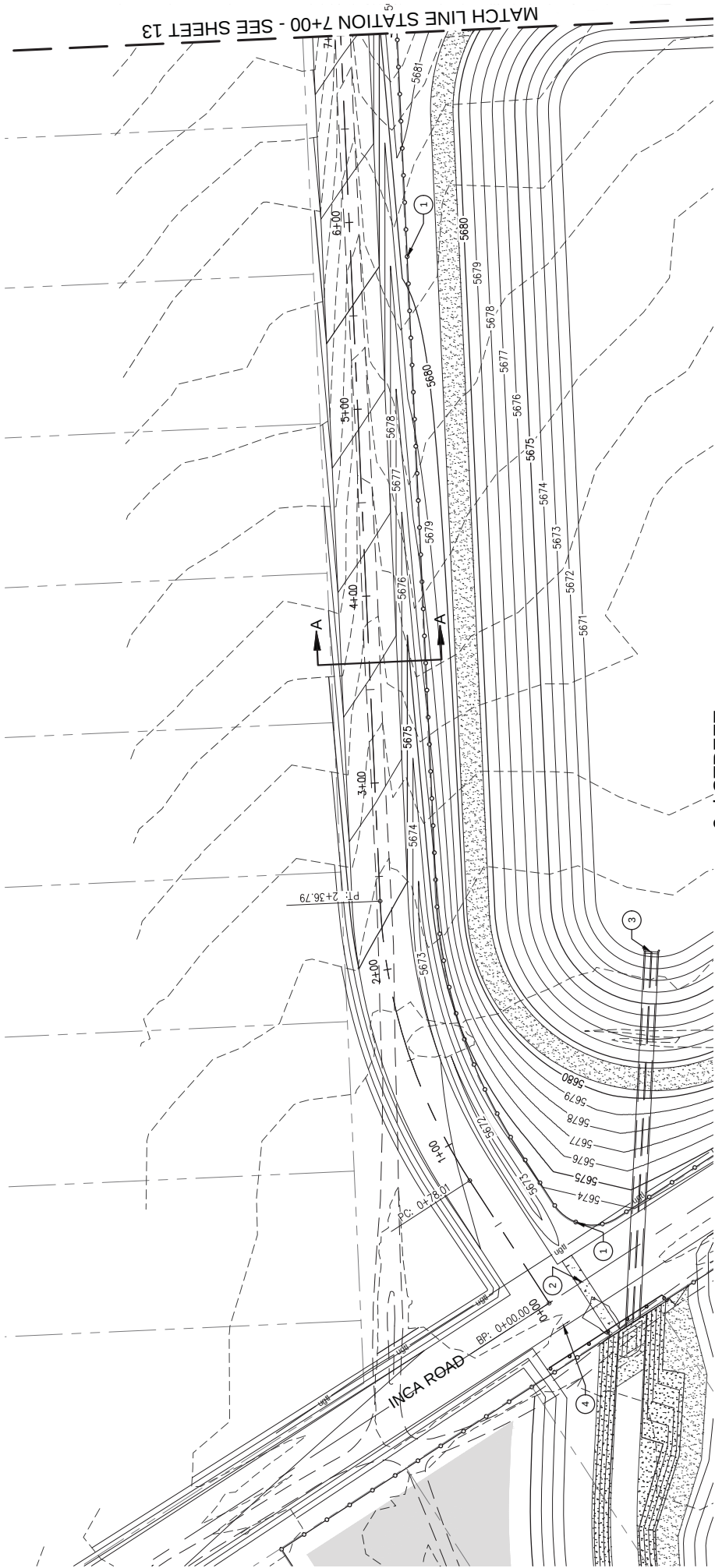
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.

KEYED NOTES:

1. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
2. VALLEY GUTTER, SEE SHEET 9.
3. 2-CELL 3'X3' OBC, SEE SHEET 17.
4. BARRICADE, SEE SHEET 9.



TYPICAL SECTION A-A  
3rd STREET  
STA. 2+36.79 TO 7+50  
STA. 8+09.31 TO 9+00





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## RAINBOW POND AND DOWNSTREAM CHANNEL

3RD STREET PLAN & PROFILE  
STA 7+00 TO 12+00

[illegible]

PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/4/2018

13

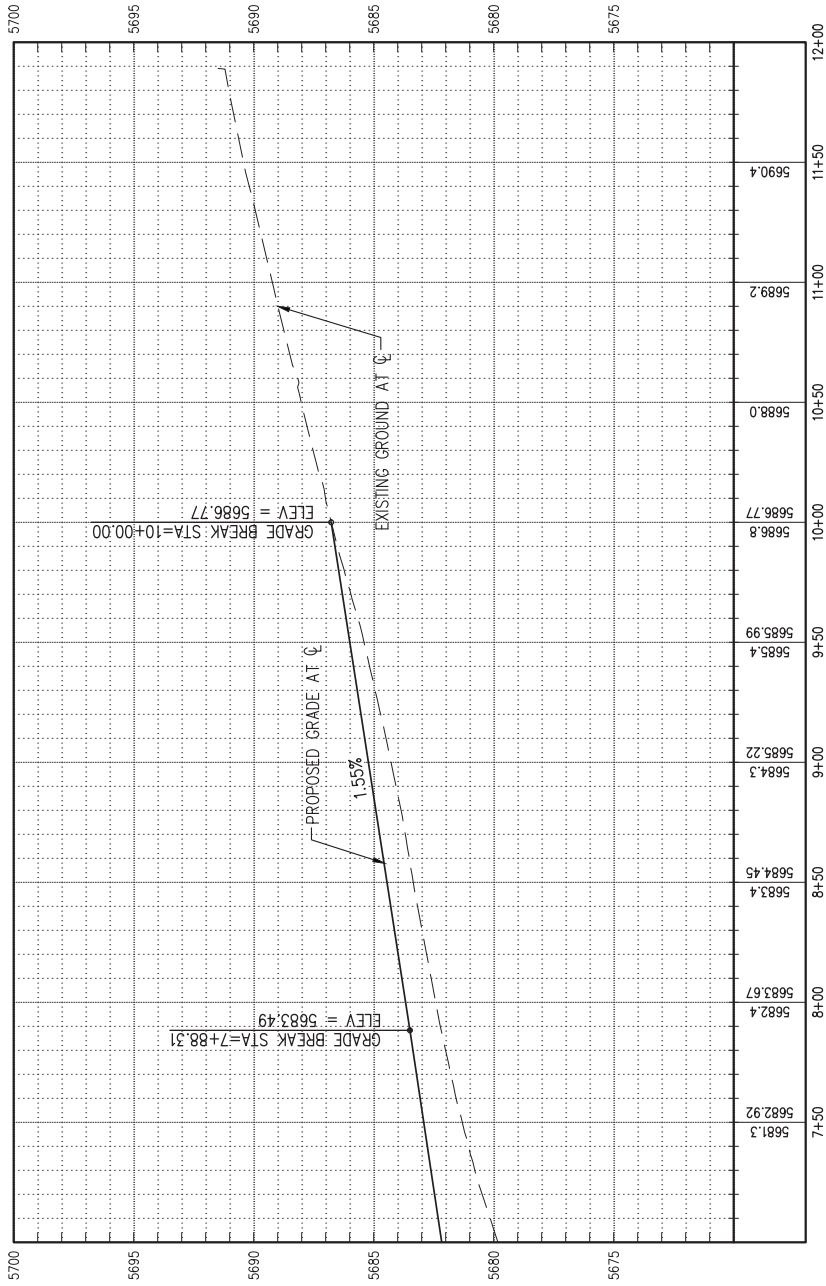
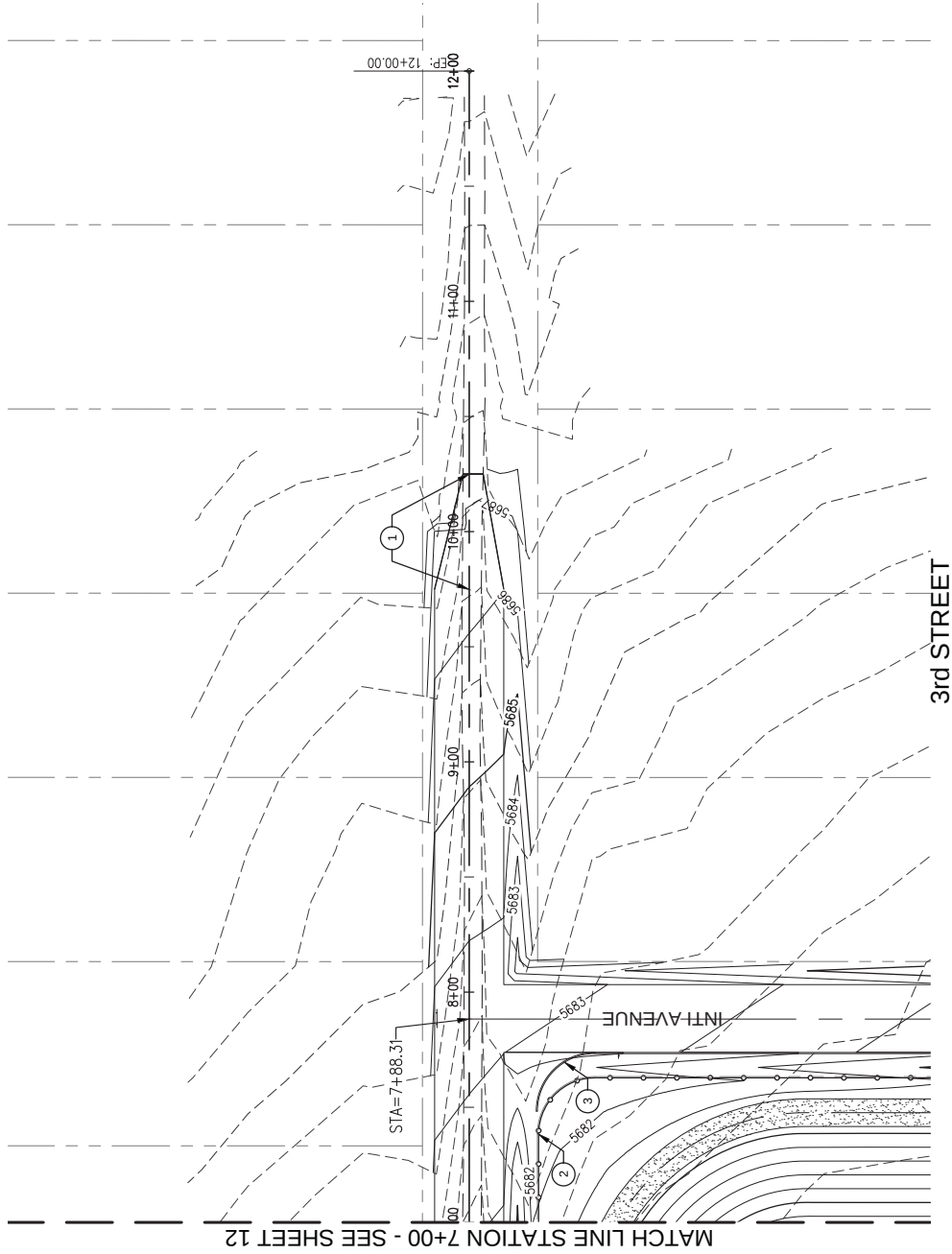
SHEET 13 OF 28



- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1% GRADES/INVERTS SHOWN.

○

1. TRANSITION FROM PROPOSED 30' ROADWAY WIDTH AT STA. 9+75 TO EXISTING ROADWAY 9± WIDTH AT STA. 10+25.
2. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
3. HEADER CURB, SEE SHEET 14.





**Southern Sandoval  
County  
Arroyo Flood Control  
Authority**

1041 Commercial Dr. S.E.  
Rio Rancho, New Mexico 87124  
505-892-RAIN (7246)  
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www.sscatca.com



RAINBOW POND AND DOWNSTREAM  
CHANNEL

INTI AVENUE PLAN & PROFILE  
STA 0+00 TO 7+00

| MARK | REVISIONS &<br>CHANGE NOTICES |  | DATE |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/3/2018

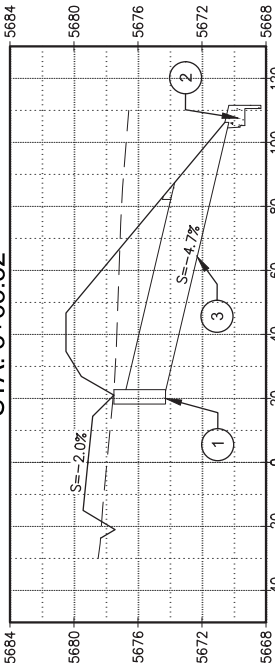


NOTE:  
• DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.

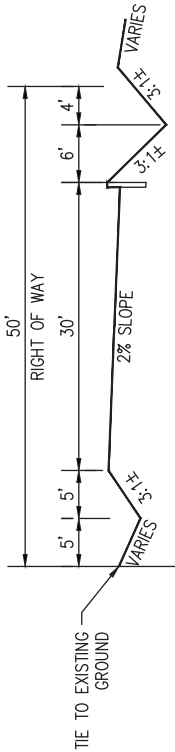
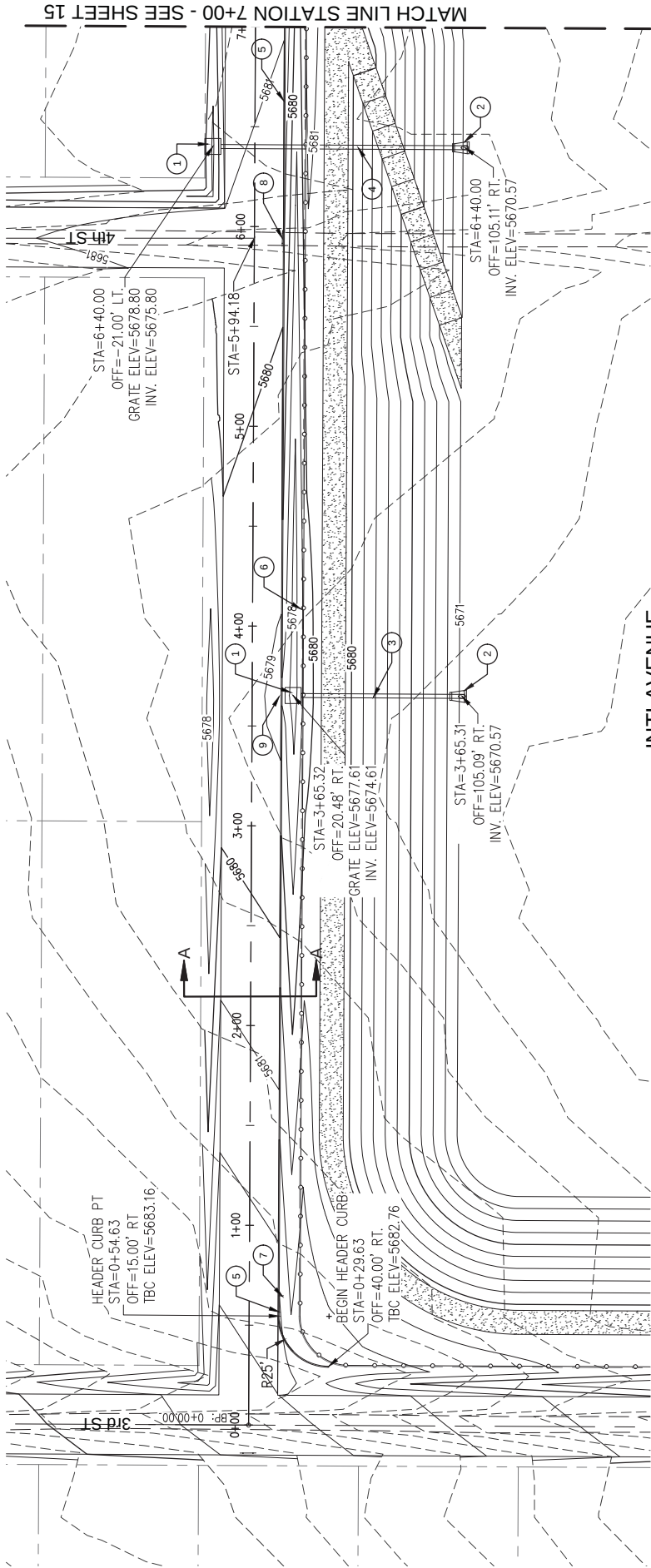
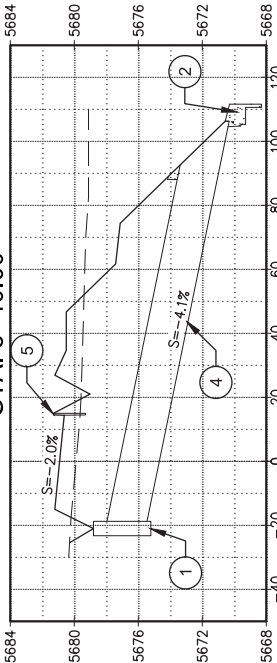
KEYED NOTES:○

1. MEDIAN DROP INLET, TYPE 1, URBAN USE GRATE, PER NMDOT STD. DWG. 623-02-1/1.
2. INSTALL CONCRETE BLANKET MITERED TO SLOPE PER NMDOT STD. DWG. 511-11A-1&2/2.
3. INSTALL 85 LF 24" RCP.
4. INSTALL 126 LF 24" RCP.
5. INSTALL 8" HEADER CURB, SEE DETAIL SHEET 21.
6. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
7. STA. 0+65.00 16' RT. INSTALL " UNMAINTAINED ROAD AHEAD" SIGN, SEE DETAIL SHEET 20.
8. STA. 5+94.18 14' RT. INSTALL BARRICADE PER CORR STD. DWG. TCSS-01 W1-7.
9. INSTALL 8" HEADER CURB TRANSITION WITH 6' OPENING CENTERED ON STA. 3+65.32 15' RT. SEE DETAIL SHEET 21.

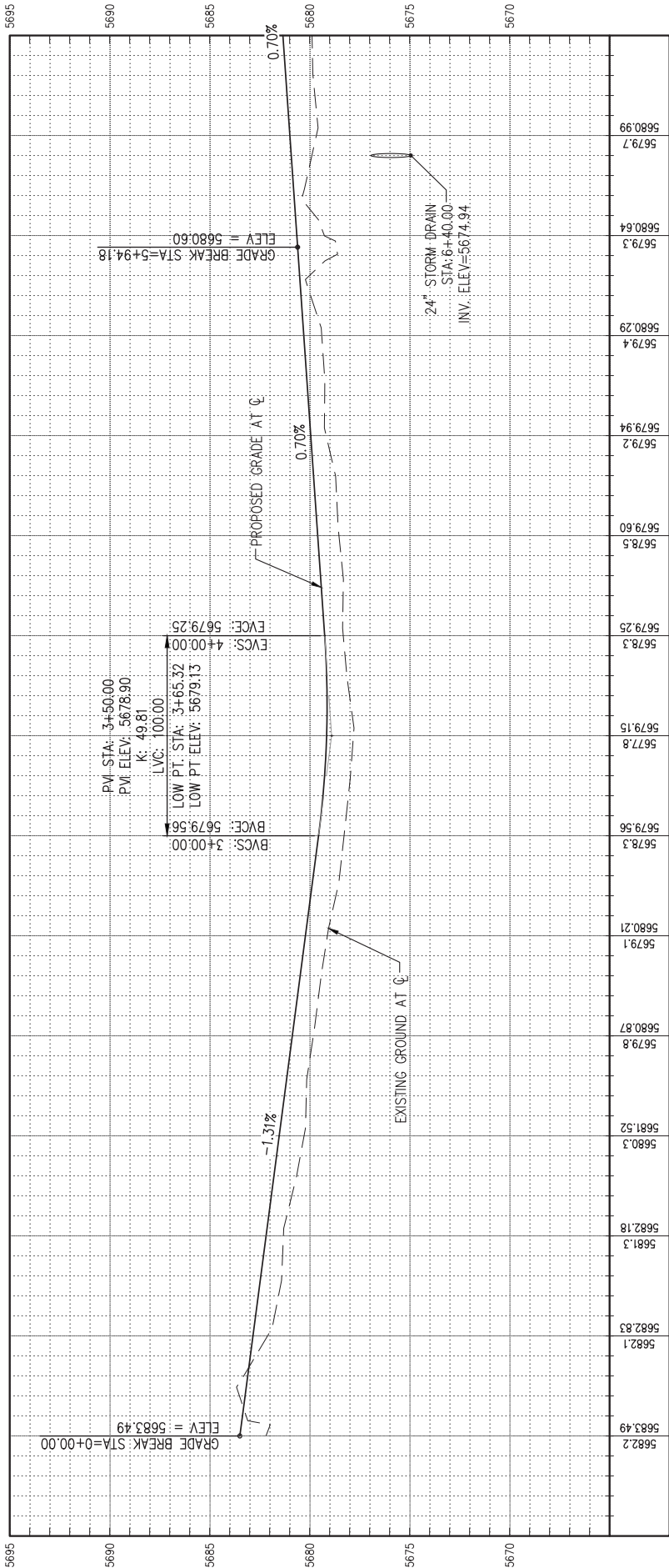
STA. 3+65.32



STA. 6+40.00



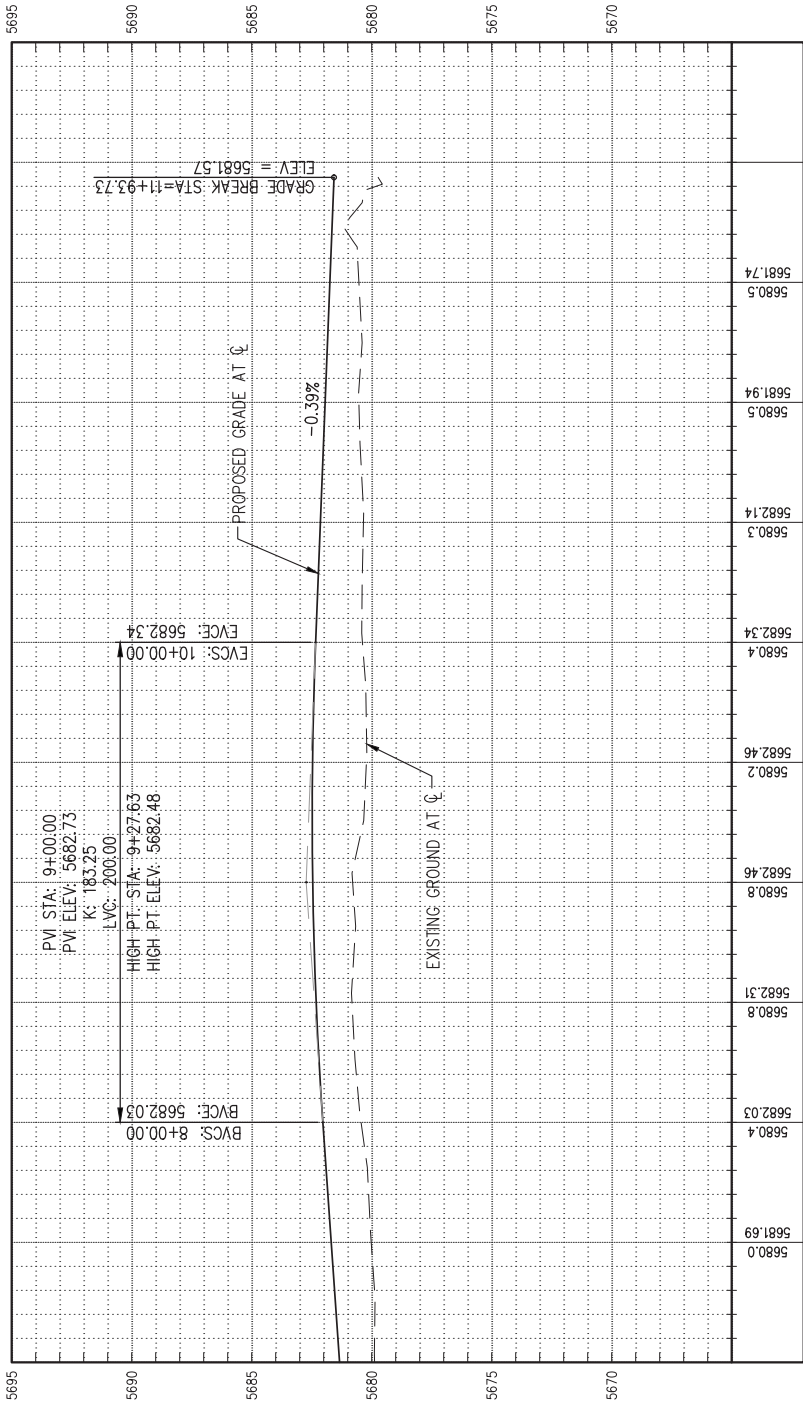
TYPICAL SECTION A-A  
INTI AVENUE  
STA. 0+65 TO 5+79.18  
STA. 6+09.18 TO 10+00





• DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1% GRADES/INVERTS SHOWN.

1. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
2. INSTALL 14" WIDE PIPE GATE, SEE DETAIL SHEET 20.
3. INSTALL 8" HEADER CURB, SEE DETAIL SHEET 21.
4. INSTALL 8" HEADER CURB TRANSITION WITH 14' OPENING CENTERED ON STA. 10+04.63 15' RT., SEE DETAIL SHEET 21.
5. POND RUNDOWN THICKENED EDGE, SEE DETAILS SHEET 21.
6. POND RUNDOWN, SEE DETAILS SHEET 21.
7. STA. 11+28.96 14' LT. INSTALL " UNMAINTAINED ROAD AHEAD" SIGN, SEE DETAIL SHEET 20.
8. STA. 11+93.73 14' RT. INSTALL BARRICADE PER CORR STD. DWG. TCSS-01 W1-6R.
9. BARRICADE, SEE SHEET 16.
10. INSTALL 6" THICK, 3' VERTICAL CUTOFF WALL SAME REINFORCEMENT AS RUNDOWN.
11. END HEADER CURB AT STA. 11+53.74, 31.36' RT., TBC ELEV. 5681.34. TRANSITION TO POND RUNDOWN.
12. POND TRAIL, 6" AGGREGATE BASE COURSE SURFACE, SEE TYP. DETAIL SHEET 21.



**Southern Sandoval  
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[www.sascafa.com](http://www.sascafa.com)



## RAINBOW POND AND DOWNSTREAM CHANNEL

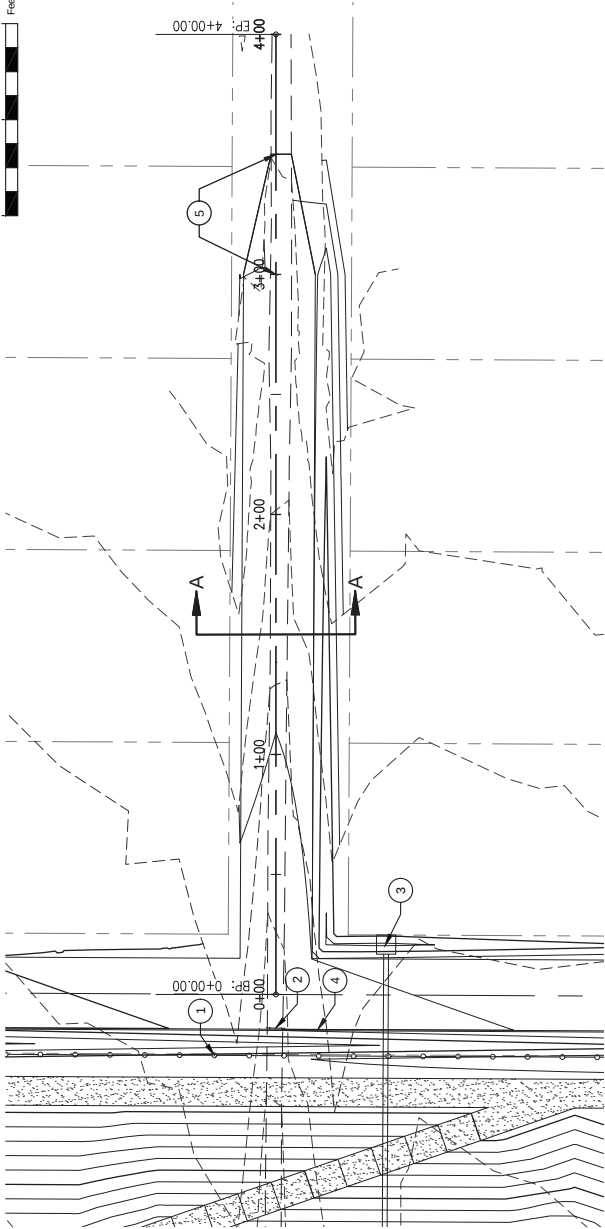
INTI AVENUE PLAN & PROFILE  
STA 7+00 TO 11+93.73

[illegible]

PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/4/2018

NOTE:

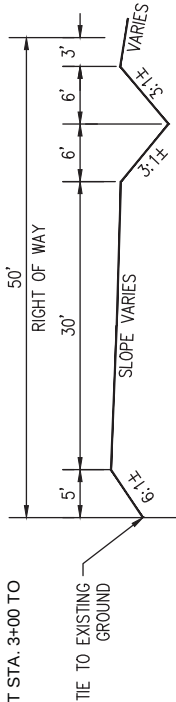
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.



#### 4th STREET

##### KEYED NOTES:

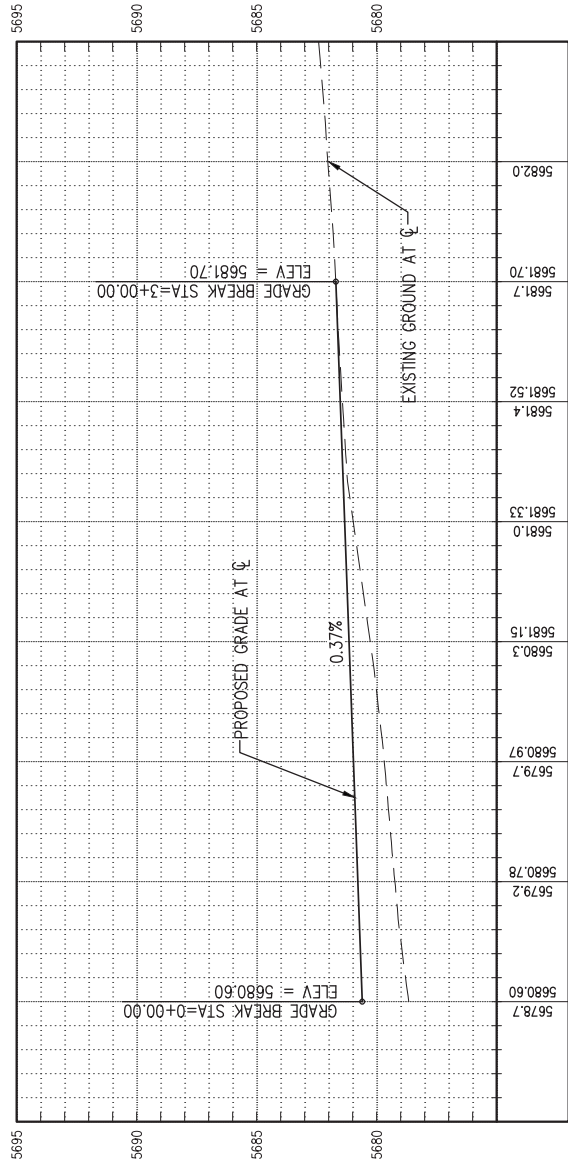
1. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
2. BARRICADE, SEE SHEET 14.
3. MEDIAN DROP INLET, SEE SHEET 14.
4. 8" HEADER CURB, SEE SHEET 14.
5. TRANSITION FROM 30' PROPOSED ROADWAY WIDTH AT STA. 3+00 TO EXISTING ROADWAY OF 8.5± AT STA. 3+50.



#### TYPICAL SECTION A-A

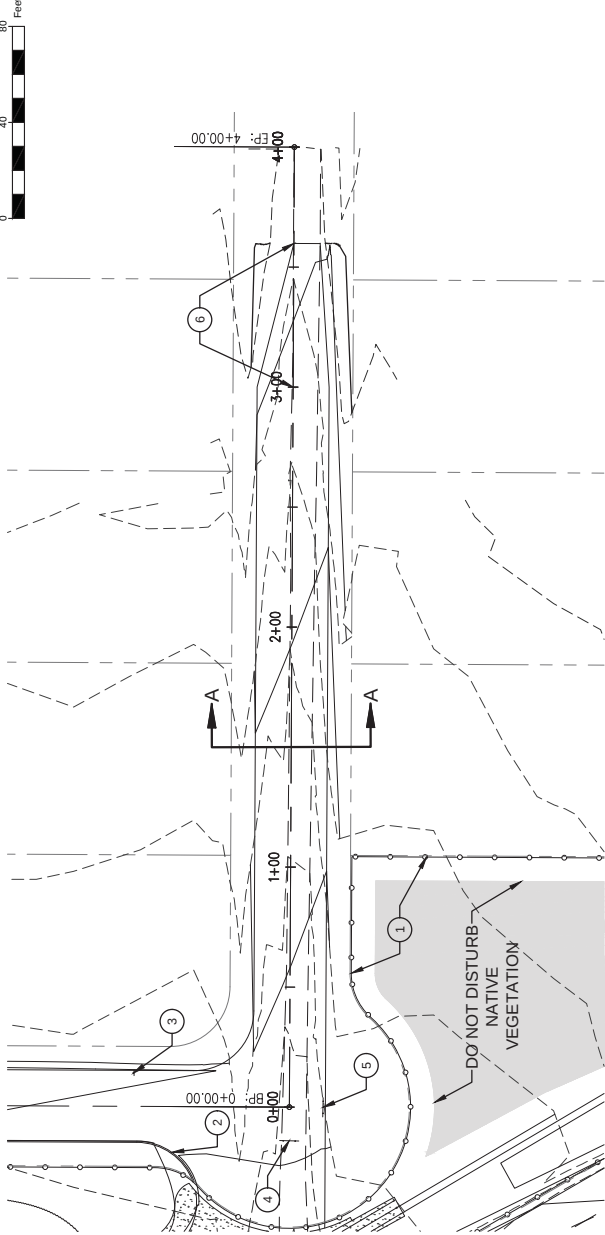
##### 4th STREET

STA. 0+25 TO 3+00



NOTE:

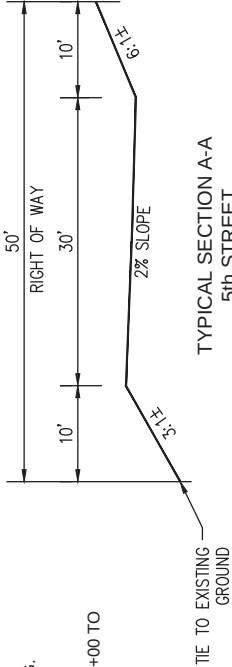
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.



#### 5th STREET

##### KEYED NOTES:

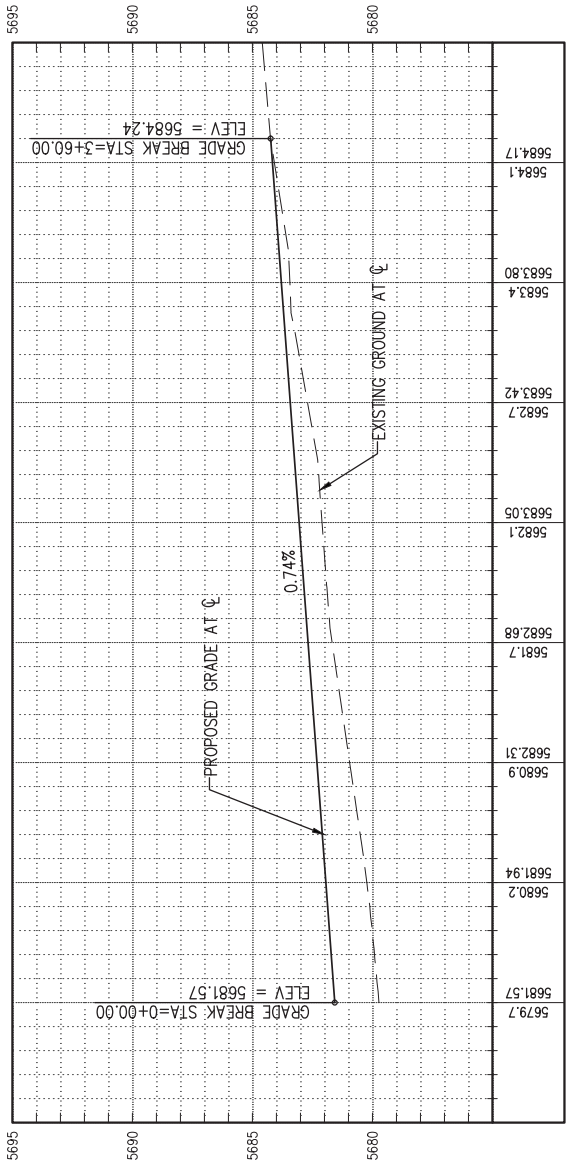
1. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
2. 8" HEADER CURB, SEE SHEET 15.
3. "UNMAINTAINED ROAD AHEAD" SIGN, SEE SHEET 15.
4. BARRICADE, SEE SHEET 15.
5. STA. 0+00.00 14' RT. INSTALL BARRICADE PER CORR STD. DWG. TCSS-01 W1-6L.
6. TRANSITION FROM 30' PROPOSED ROADWAY WIDTH AT STA. 3+00 TO EXISTING ROADWAY WIDTH OF 10± AT STA. 3+60.



#### TYPICAL SECTION A-A

##### 5th STREET

STA. 0+25 TO 3+00



RAINBOW POND AND DOWNSTREAM CHANNEL

4TH & 5TH STREET PLAN & PROFILE  
STA 0+00 TO 4+00

| REVISIONS & CHANGE NOTICES |             |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/4/2018



**Southern SANDOVAL County**  
**Arroyo Flood Control Authority**  
1041 Commercial Dr. S.E.  
Rio Rancho, New Mexico 87124  
505-892-RAIN (7246)  
505-892-7241 (Fax)  
www.sscatca.com

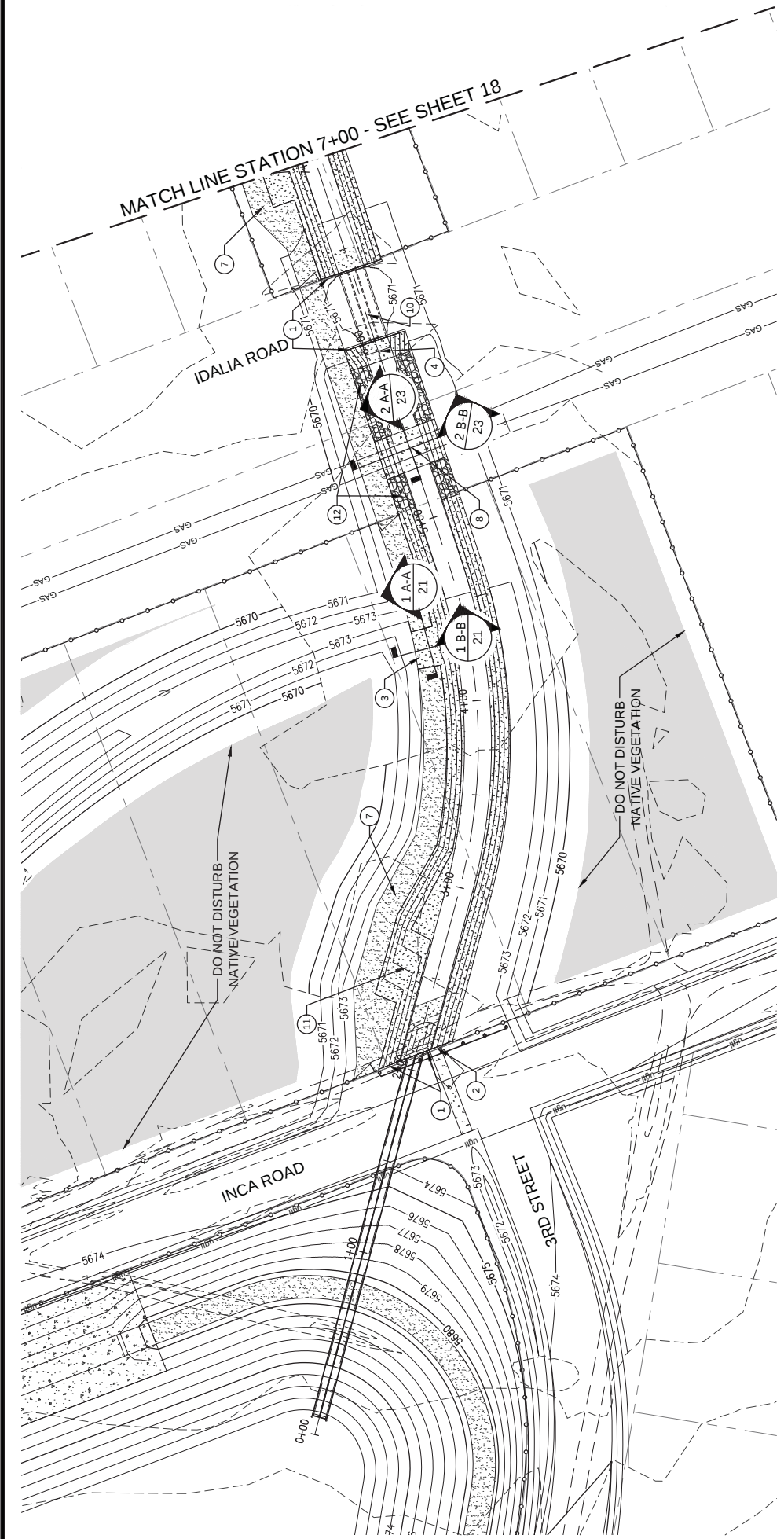
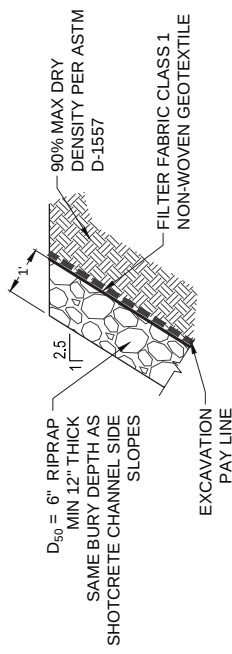


RAINBOW POND AND DOWNSTREAM CHANNEL  
CHANNEL ALIGNMENT PLAN & PROFILE  
STA 0+00 TO 7+00

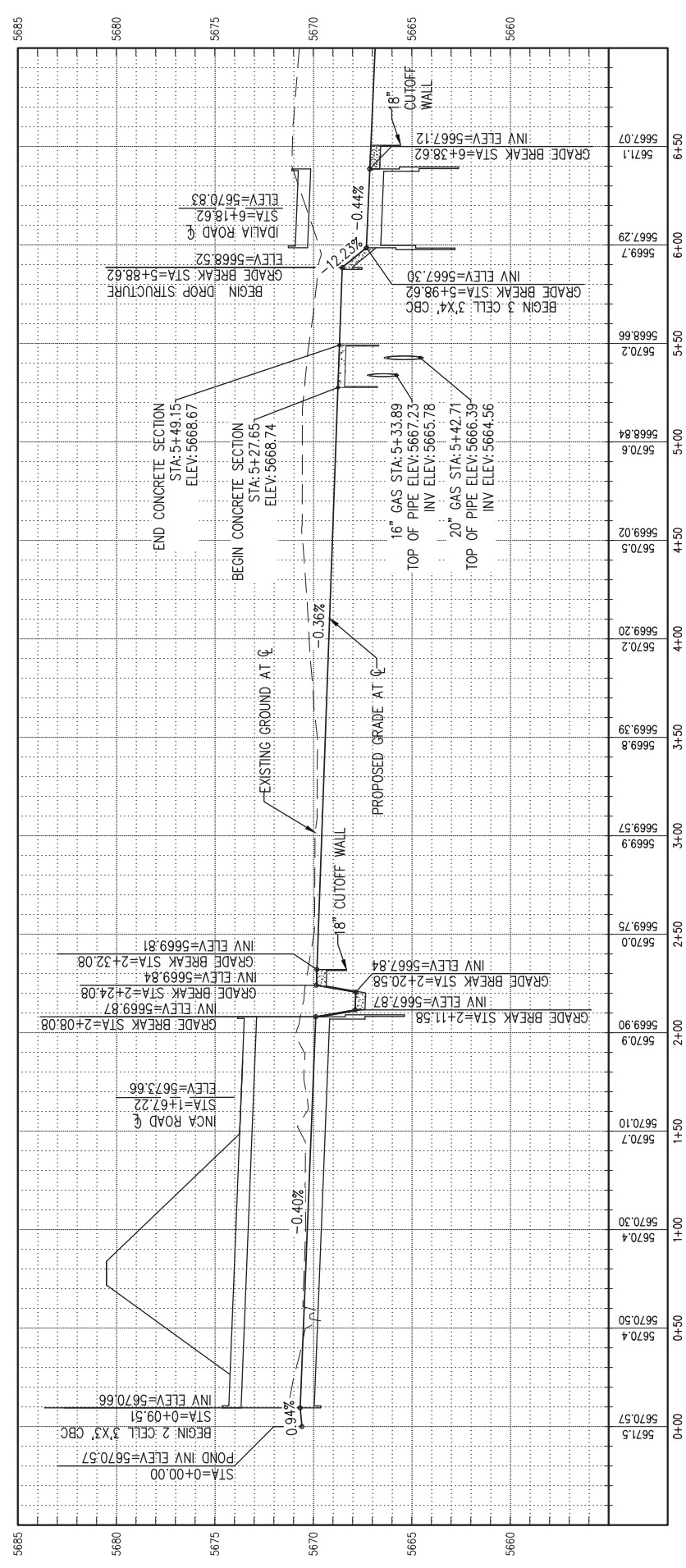
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/5/2018

- 
- NOTE:  
• DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.
- KEYED NOTES:
- BUILD HEADWALL PER NMDOT STD. DWG. 511-80-1.2 & 3/3, H=5', 1" BETWEEN TOEWALL & COMPACTED SOIL. HEADWALL REINFORCEMENT SHALL TIE TO CBC REINFORCEMENT.
  - MATCH HEADWALL ELEVATION TO VALLEY GUTTER INVERT ELEVATION, WHERE VALLEY GUTTER INTERSECTS HEADWALL ONLY.
  - OVERFLOW WEIR, SEE DETAIL SHEET 21.
  - BUILD DROP STRUCTURE, REINFORCEMENT TIED TO CBC AND HEADWALL. SEE DETAIL SHEET 20.
  - INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
  - INSTALL 14" WIDE PIPE GATE, SEE DETAILS SHEET 20.
  - MAINTENANCE ROAD, 6" AGGREGATE BASE COURSE SURFACE, SEE DETAIL SHEET 21.
  - STA. 5+27.65 TO 5+49.15 INSTALL 4" CONCRETE SLOPE PAVEMENT SECTION. SEE DETAIL SHEET 23.
  - STA. 0+09.51 TO 2+08.08 INSTALL 2-CELL 3'X3' CBC PER NMDOT STD. DWG. 511-62-1 & 2/2, TIE REINFORCEMENT TO HEADWALL REINFORCEMENT.
  - STA. 5+98.62 TO 6+38.62 INSTALL 3-CELL 3'X4' CBC PER NMDOT STD. DWG. 511-64-1.2 & 3/3, TIE REINFORCEMENT TO HEADWALL REINFORCEMENT.
  - SHOTCRETE ACCESS RAMP, SEE DETAIL SHEET 23.
  - INSTALL D<sub>90</sub> = 6" RIPRAP SIDE SLOPES, STA. 5+07.52 TO 5+27.65 AND STA. 5+49.15 TO 5+88.62, SEE DETAIL BELOW.



DOWNSTREAM CHANNEL





**Arroyo Flood Control  
Authority**

ALIGNMENT PLAN & PROFILE  
STA 7+00 TO 15+00

PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/5/2018

18

- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1% GRADES/INVERTS SHOWN.

1. BUILD HEADWALL PER NMDOT STD. DWG. 511-80-1.2 & 3/3, H=5', 1' BETWEEN TOEWALL & COMPACTED SOIL, HEADWALL REINFORCEMENT SHALL TIE TO CBC REINFORCEMENT.

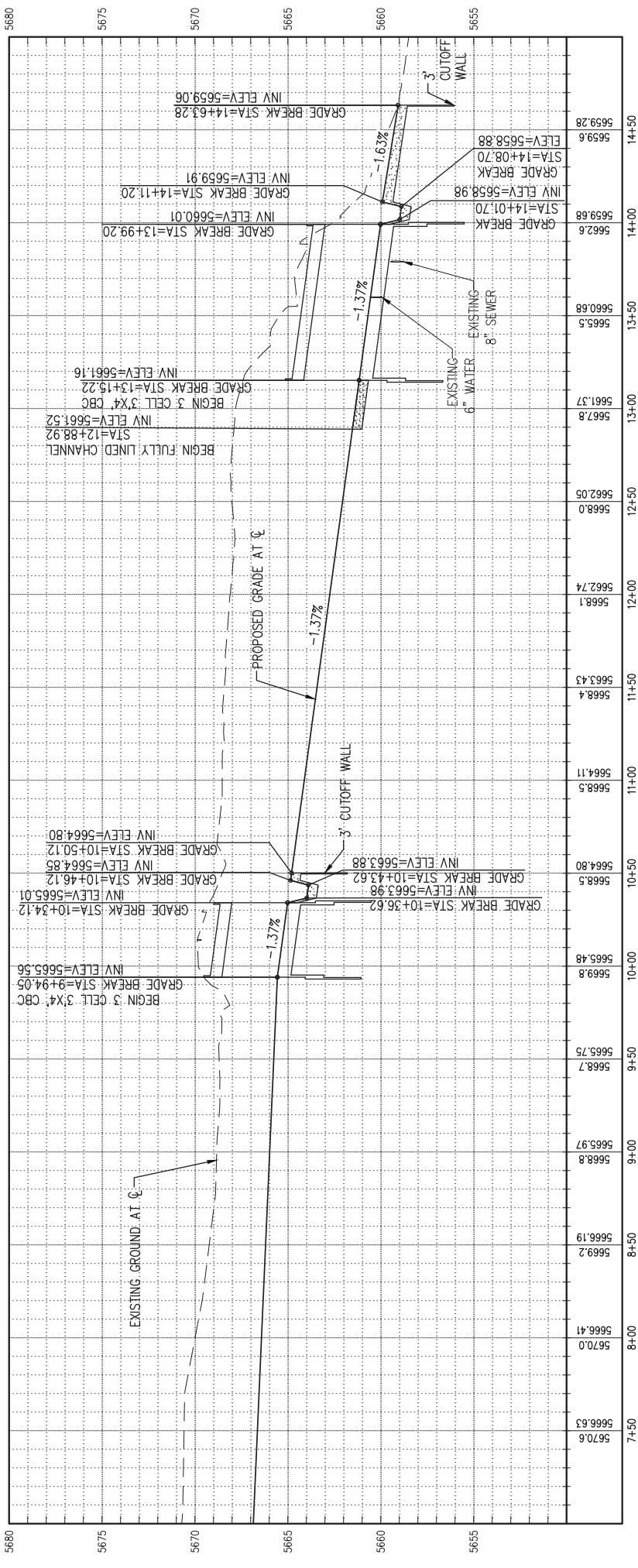
3. SEE SHEET 19 FOR TULIP ROAD AND VANCOUVER ROAD REMOVALS AND IMPROVEMENTS.

5. INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.

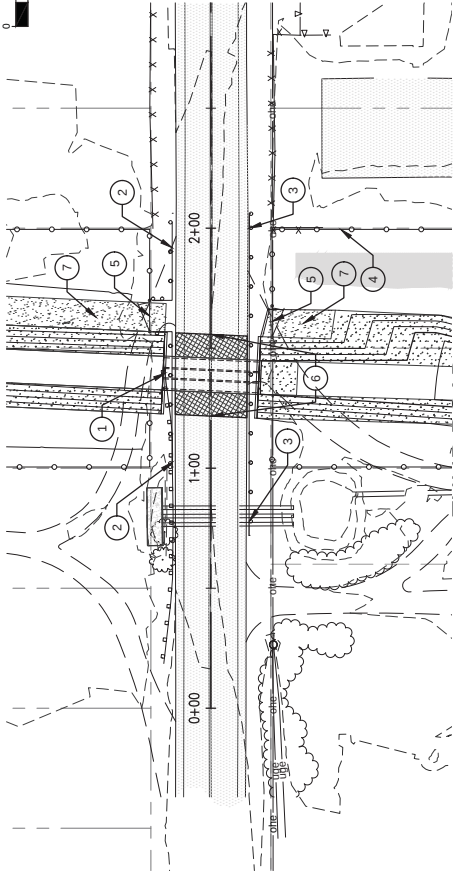
7. SHOTCRETE ACCESS RAMP, SEE DETAIL SHEET 23.

9. FOR BLOW-UP AND DIMENSIONS, SEE DETAILS SHEET 22.

10. STA. 14+63.28 BUILD 6" THICK, 3' VERTICAL CUTOFF WALL USE SAME REINFORCEMENT AS TYPICAL SHOTCRETE SECTION.



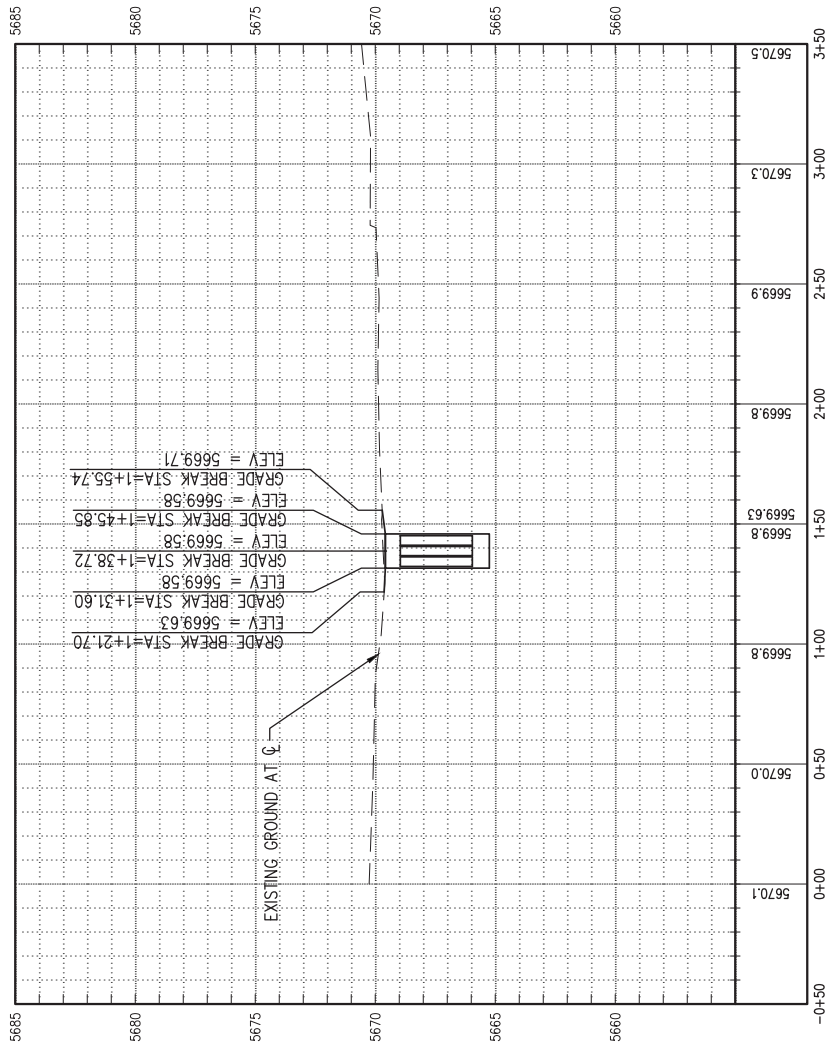
- NOTE:
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.



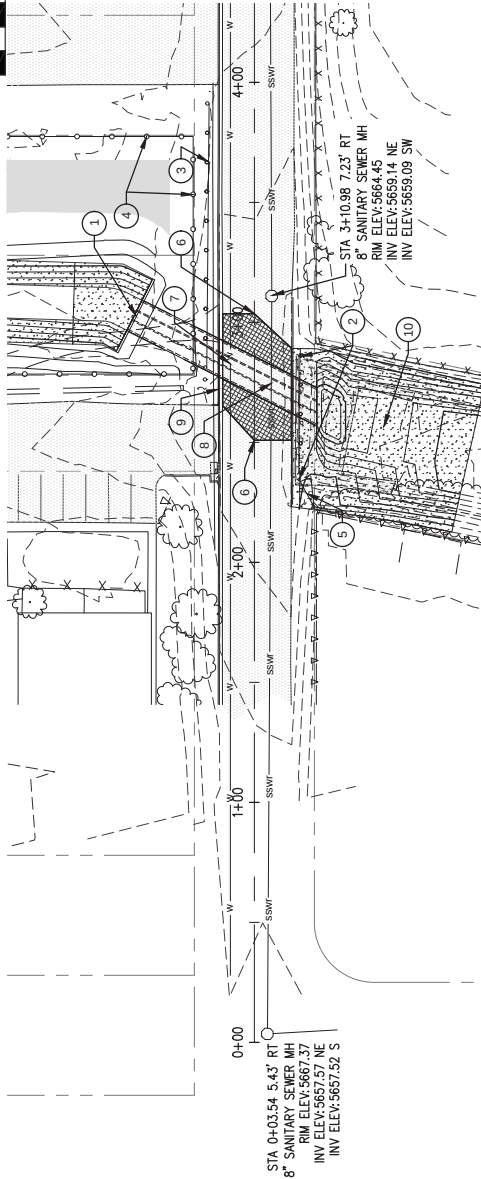
### TULIP ROAD

#### KEYED NOTES:

- 3-CELL 3'X4' CBC, SEE SHEET 18.
- STA. 1+00 TO 1+44 16' LT. REMOVE APPROXIMATELY 44 LF GUARDRAIL AND INSTALL SINGLE FACE W-BEAM GUARDRAIL NMDOT ITEM 606001 WITH W-BEAM END ANCHOR NMDOT ITEM 606053 FROM STA. 1+00± TO STA. 1+57 AND FROM STA. 1+71 TO 2+06. THE NEW GUARDRAIL TO EXISTING GUARDRAIL.
- STA. 0+72 TO 2+06, 16' RT. INSTALL SINGLE FACE W-BEAM GUARDRAIL NMDOT ITEM 606001 WITH W-BEAM END ANCHOR NMDOT ITEM 606053.
- INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
- INSTALL 14' WIDE PIPE GATE, SEE DETAILS SHEET 20.
- STA. 1+21.70 TO 1+55.74 SAWCUT AND REMOVE APPROXIMATELY 1021± SF ASPHALT AND REPLACE PER CORR STD. DWG. PS-01 RESIDENTIAL SECTION - OPTION 2.
- MAINTENANCE ROAD, 6" AGGREGATE BASE COURSE SURFACE, SEE DETAIL SHEET 21.



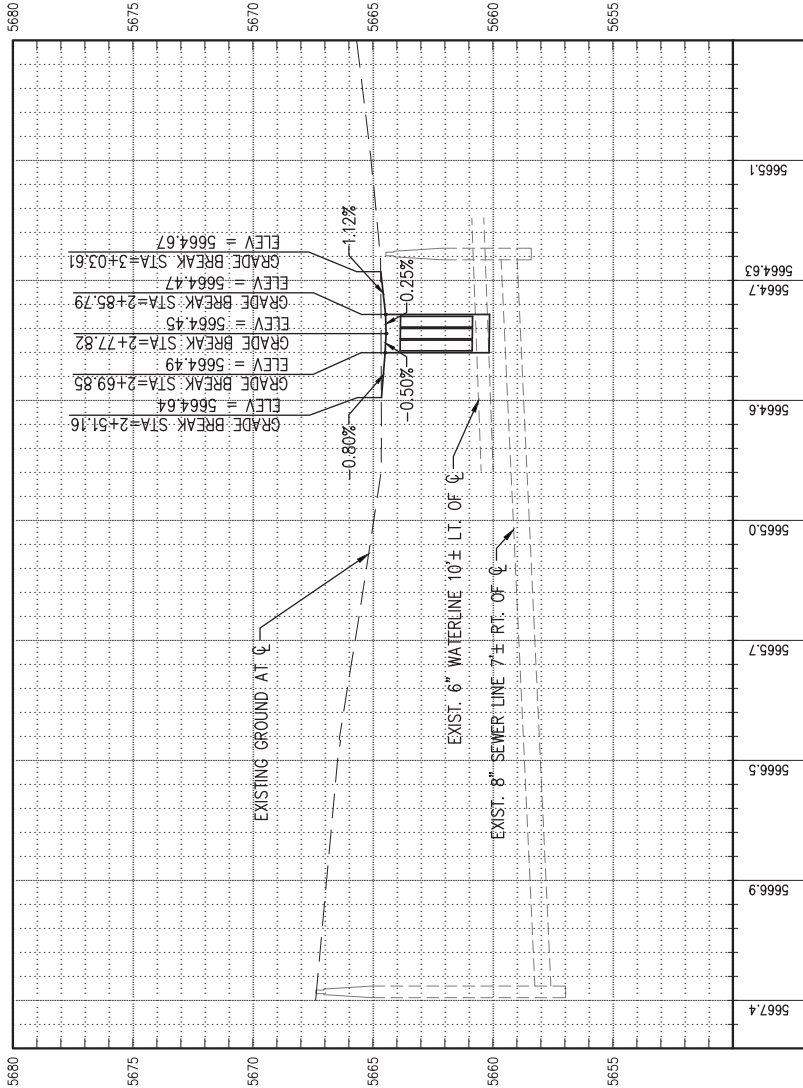
- NOTE:
- DUE TO THE EXTREMELY FLAT SLOPES THROUGHOUT THE PROJECT AREAS, ALL GRADING FOR CHANNEL, POND BOTTOM, AND CBC/CULVERTS SHALL BE 0.1± GRADES/INVERTS SHOWN.



### VANCOUVER ROAD

#### KEYED NOTES:

- 3-CELL 3'X4' CBC, SEE SHEET 18.
- STA. 2+25 TO 2+89 19' RT. REMOVE APPROXIMATELY 64 LF GUARDRAIL AND INSTALL SINGLE FACE W-BEAM GUARDRAIL NMDOT ITEM 606001 W/ W-BEAM END ANCHOR NMDOT ITEM 606053 FROM STA. 2+35 TO 2+89.
- STA. 2+76 TO 3+96 19' LT. INSTALL SINGLE FACE W-BEAM GUARDRAIL NMDOT ITEM 606001 W/ W-BEAM END ANCHOR NMDOT ITEM 606053.
- INSTALL 5-STRAND BARBLESS WIRE FENCE, SEE DETAIL SHEET 20.
- INSTALL 14' WIDE PIPE GATE, SEE DETAILS SHEET 20.
- STA. 2+50.86 TO 3+03.61 SAW CUT AND REMOVE APPROXIMATELY 1305± SF ASPHALT AND REPLACE PER CORR STD. DWG. PS-01 RESIDENTIAL SECTION - OP. 2.
- RELOCATE WATERLINE UNDER PROPOSED CBC, SEE DETAIL SHEET 22.
- STA. 2+62 TO 2+86 ENCASE 24 LF 8" SEWER LINE PER CORR STD. DWG. S-5.
- STA. 2+66 TO 3+04 15' LT. REMOVE AND REPLACE 38 LF CURB AND GUTTER PER CORR STD. DWG. CG-01.
- FOR BLOW-UP AND DIMENSIONS, SEE DETAILS SHEET 22.



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**RAINBOW POND AND DOWNSTREAM  
CHANNEL**  
**TULIP & VANCOUVER ROAD  
PLAN & PROFILE  
STA 0+00 4+00**

| MARK | REVISIONS &<br>CHANGE NOTICES |  | DATE |
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PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/4/2018





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County  
Arroyo Flood Control  
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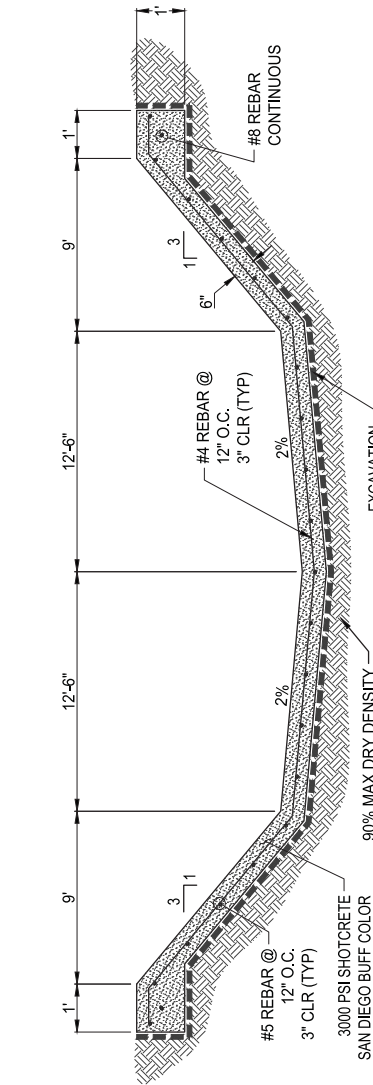


RAINBOW POND AND DOWNSTREAM

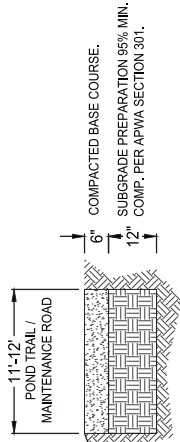
DETAILS

| MARK | REVISIONS & CHANGE NOTICES |  | DATE |
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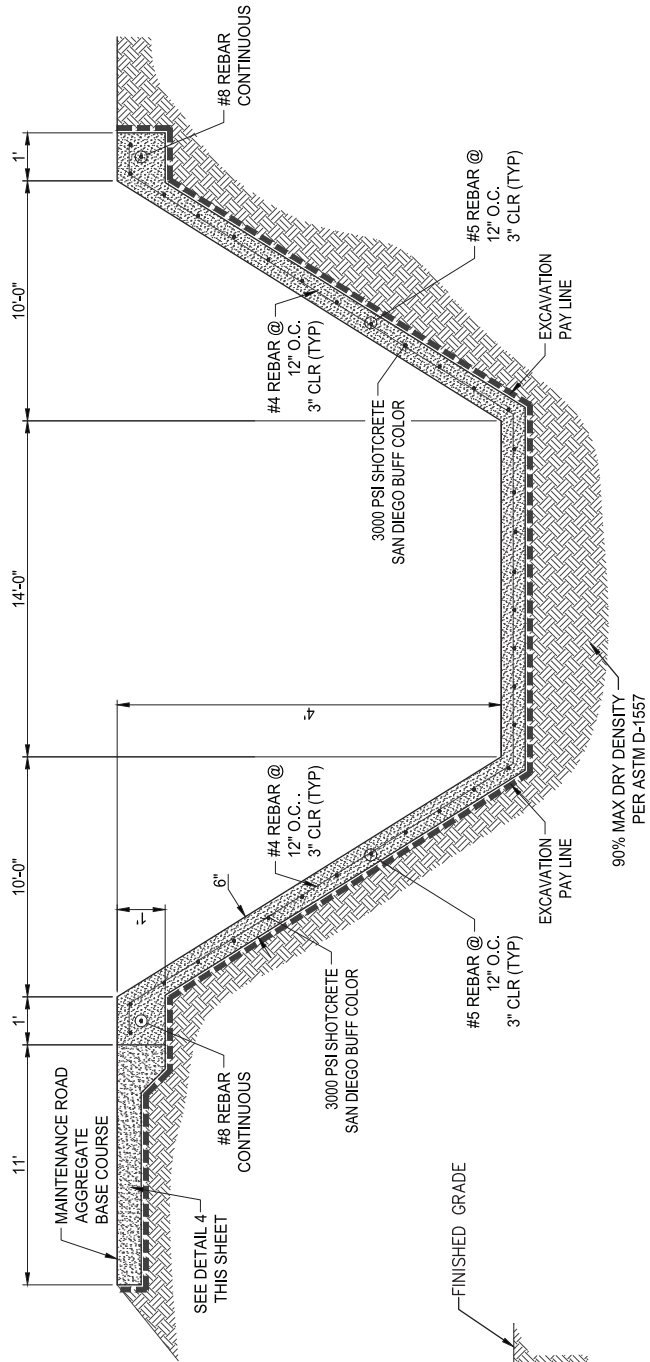
PROJECT NO: RA\_P0001  
DESIGNED BY: AES  
DRAWN BY: KLF  
CHECKED BY: DDG  
DATE: 4/4/2018



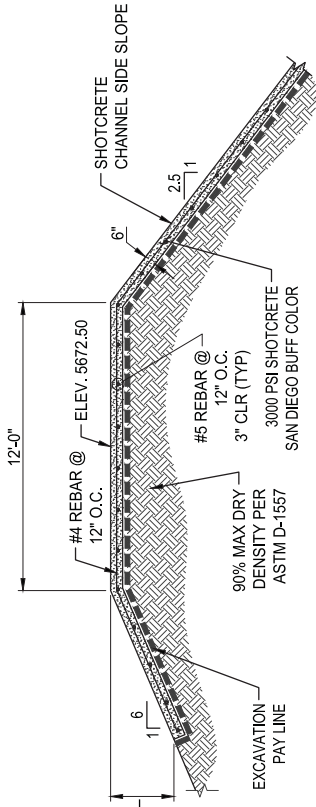
2 POND RUNDOWN TYPICAL SECTION DETAIL  
Scale: NTS



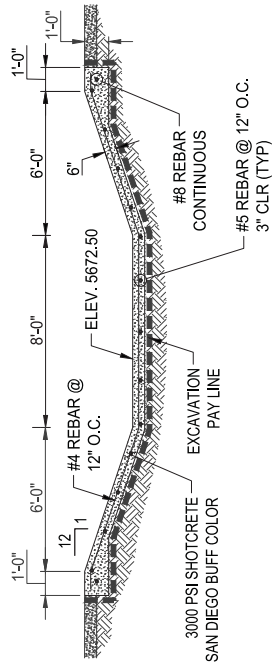
4 POND TRAIL / MAINTENANCE ROAD,  
6" AGGREGATE BASE COURSE  
Scale: NTS



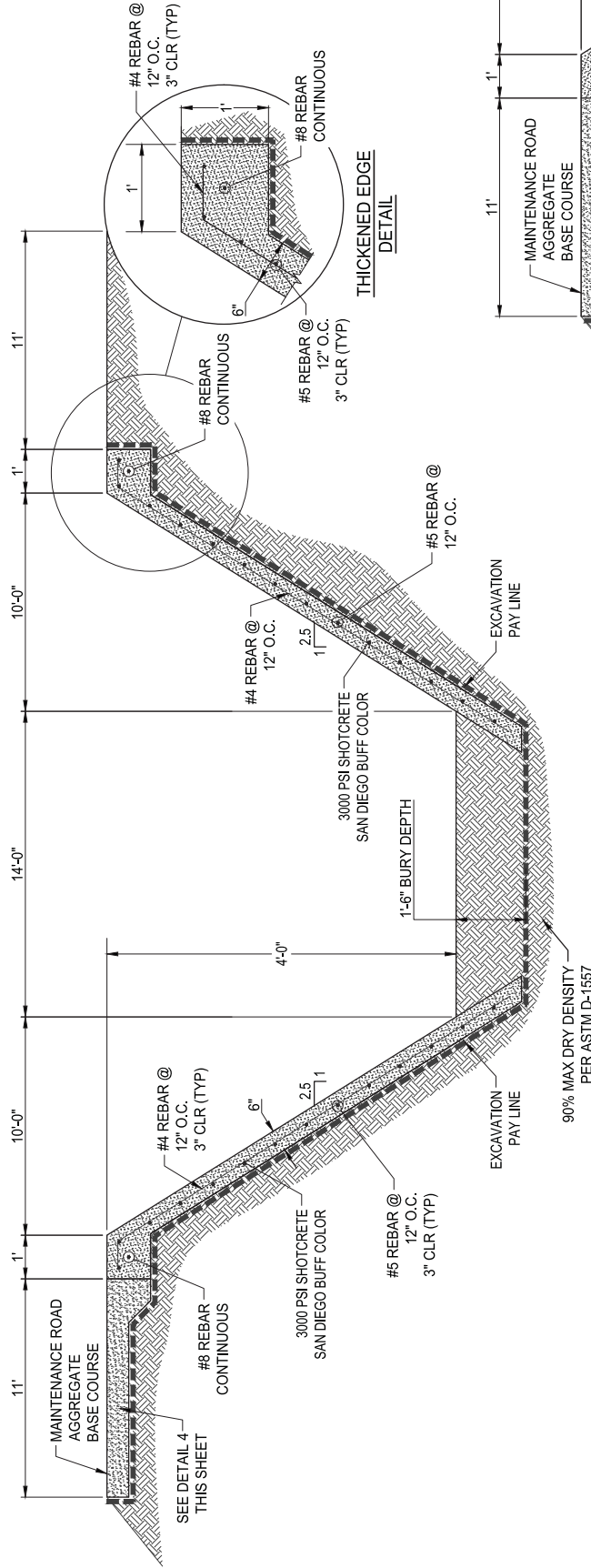
7 FULLY-LINED CHANNEL TYPICAL SECTION DETAIL  
Scale: NTS



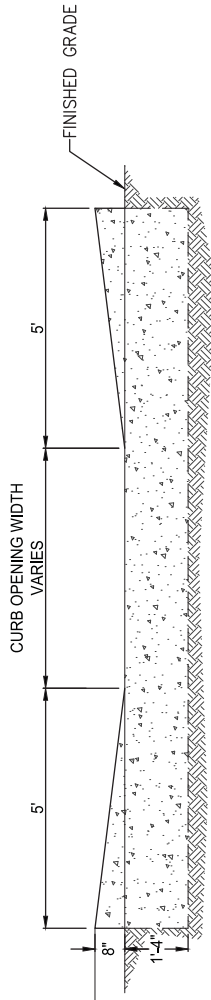
1 OVERFLOW WEIR DETAIL  
Scale: NTS



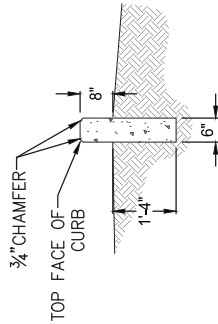
SECTION A-A



3 SHOTCRETE CHANNEL TYPICAL SECTION DETAIL  
Scale: NTS

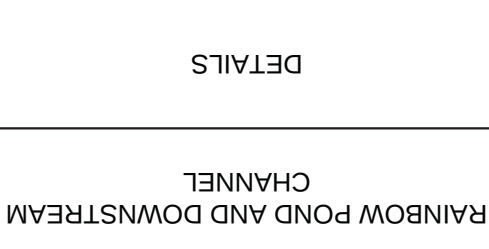


6 HEADER CURB TRANSITION DETAIL  
Scale: NTS



5 HEADER CURB DETAIL  
Scale: NTS

NOTE:  
MAINTENANCE ROAD BETWEEN TULIP ROAD AND VANCOUVER ROAD ONLY  
WHERE SHOWN ON SHEET 18, FROM TULIP TO ACCESS RAMP ONLY.

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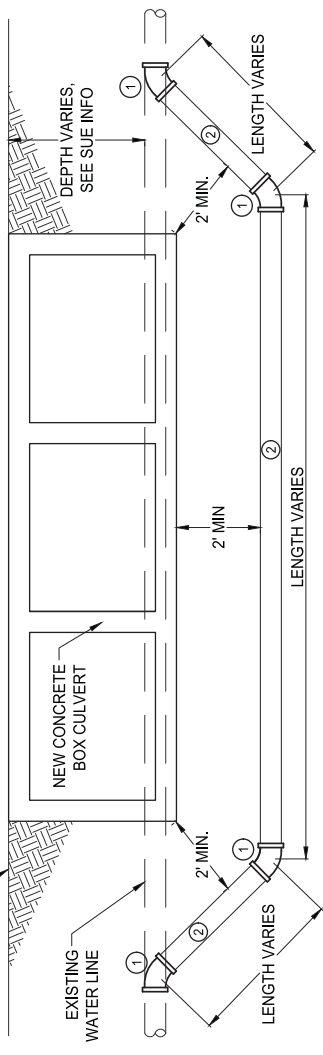
PROJECT NO: RA\_P0001  
DESIGNED BY: AES  
DRAWN BY: KLF  
CHECKED BY: DDG  
DATE: 4/5/2018

22



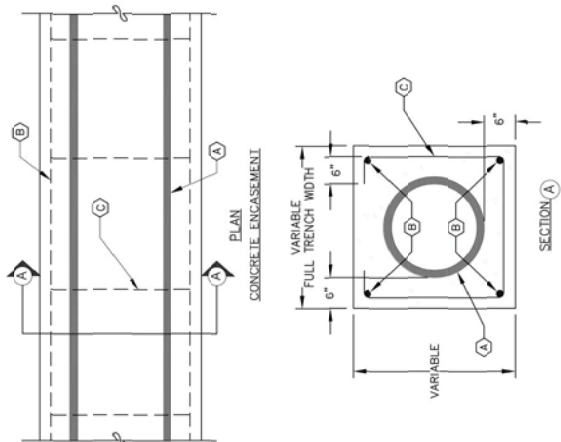
## CONSTRUCTION NOTES

1. INSTALL 45 DEG. ELL. FULLY RESTRAINED, SIZE PER EXISTING PIPE.
2. INSTALL PIPE TO PROVIDE CLEARANCE AS SHOWN. ALL PIPES AND FITTINGS SHALL MEET OR EXCEED PRESSURE RATING OF EXISTING PIPE. INSTALLATION OF ALL PIPES & FITTINGS SHALL COMPLY WITH ALL APPLICABLE REGULATIONS (I.E. BEDDING, COMPACTION, TESTING, ETC).



3 TYPICAL WATERLINE ADJUSTMENT DETAIL

| Point Table |           |            |            |             |
|-------------|-----------|------------|------------|-------------|
| Point #     | Elevation | Northing   | Easting    | Description |
| 1           | 5664.54   | 1547139.54 | 1497923.13 | MATCH PVMIT |
| 2           | 5664.39   | 1547158.72 | 1497956.28 | MATCH PVMIT |
| 3           | 5664.65   | 1547120.86 | 1497917.24 | MATCH PVMIT |
| 4           | 5664.57   | 1547147.27 | 1497962.91 | MATCH PVMIT |
| 5           | 5664.27   | 1547107.44 | 1497925.01 | MATCH PVMIT |
| 6           | 5664.30   | 1547126.54 | 1497958.20 | MATCH PVMIT |

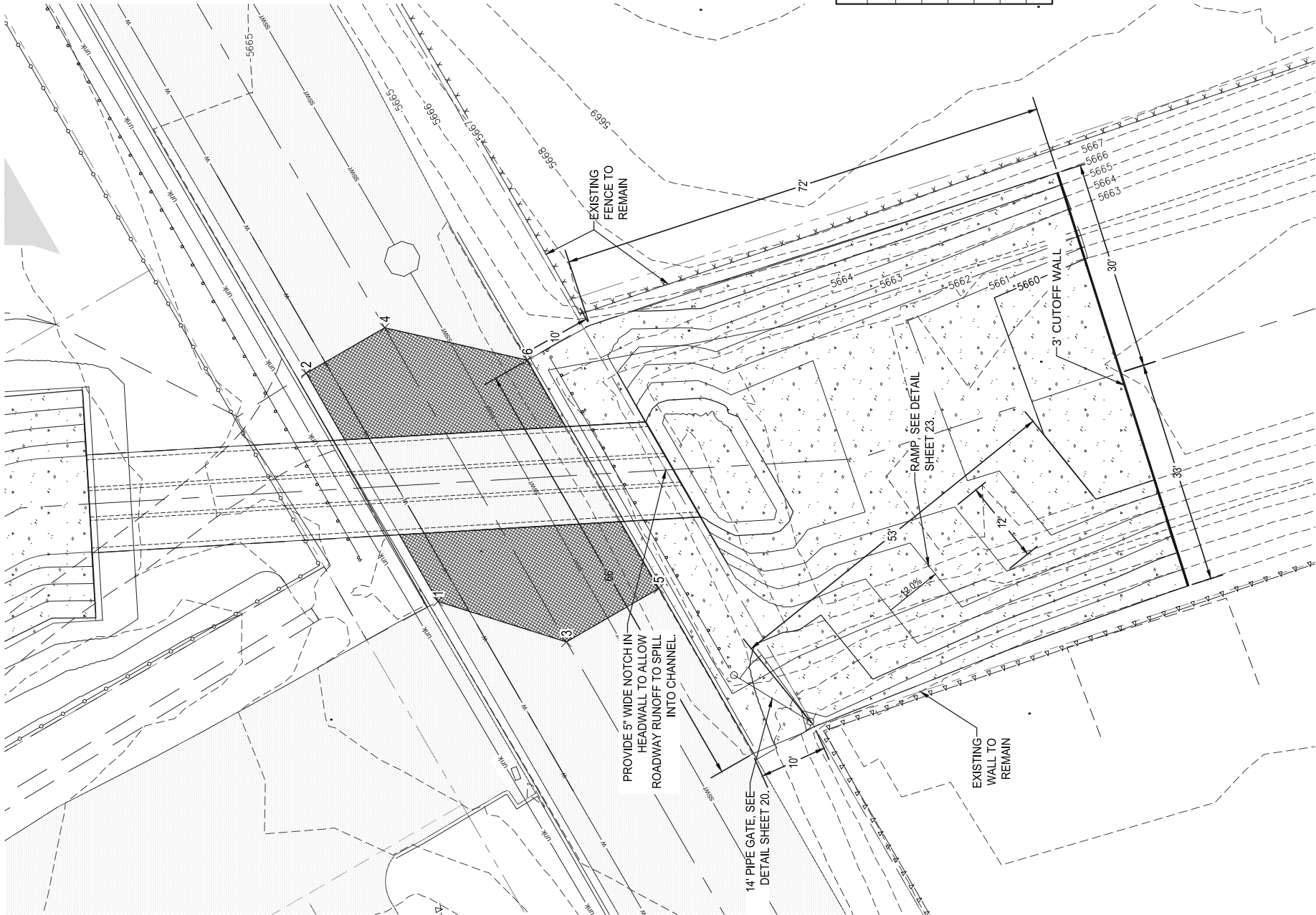


GENERAL NOTES:

1. WHERE A WATER LINE PASSES BENEATH, OR LESS THAN 18" ABOVE AN EXISTING SANITARY SEWER LINE OR RECYCLED WATER LINE, THE WATER LINE SHALL BE ENCASED IN CONCRETE, 6" THICK MEASURED FROM THE OUTSIDE WALL OF THE PIPE. AS DETAILED, FOR AT LEAST 10' ON EACH SIDE OF THE WATER LINE, OR THE SANITARY SEWER LINE OR RECYCLED WATER LINE SHALL BE AMERICAN WATER WORKS ASSOCIATION C-900 OR C-905 POLYVINYL CHLORIDE PIPE WITH PRESSURE-TYPE JOINTS FOR AT LEAST 10' ON EACH SIDE OF THE WATER LINE. THIS SHALL ALSO APPLY WHERE A PARALLEL WATER LINE IS LESS THAN 10' HORIZONTALLY AND LESS THAN 18" ABOVE THE SANITARY SEWER LINE OR RECYCLED WATER LINE.

KEYNOTES: 

- (A) SANITARY SEWER LINE AS SHOWN ON PLANS
- (B) 4-NUMBER 4 BARS, CONTINUOUS WITH MINIMUM 3" CLEARANCE TO OUTSIDE EDGE OF CONCRETE.
- (C) STIRRUPS WITH NUMBER 4 BARS, AT 36" ON CENTER WITH MINIMUM 3" CLEARANCE TO OUTSIDE EDGE OF CONCRETE.



1 DOWNSTREAM CHANNEL OUTFALL DETAIL





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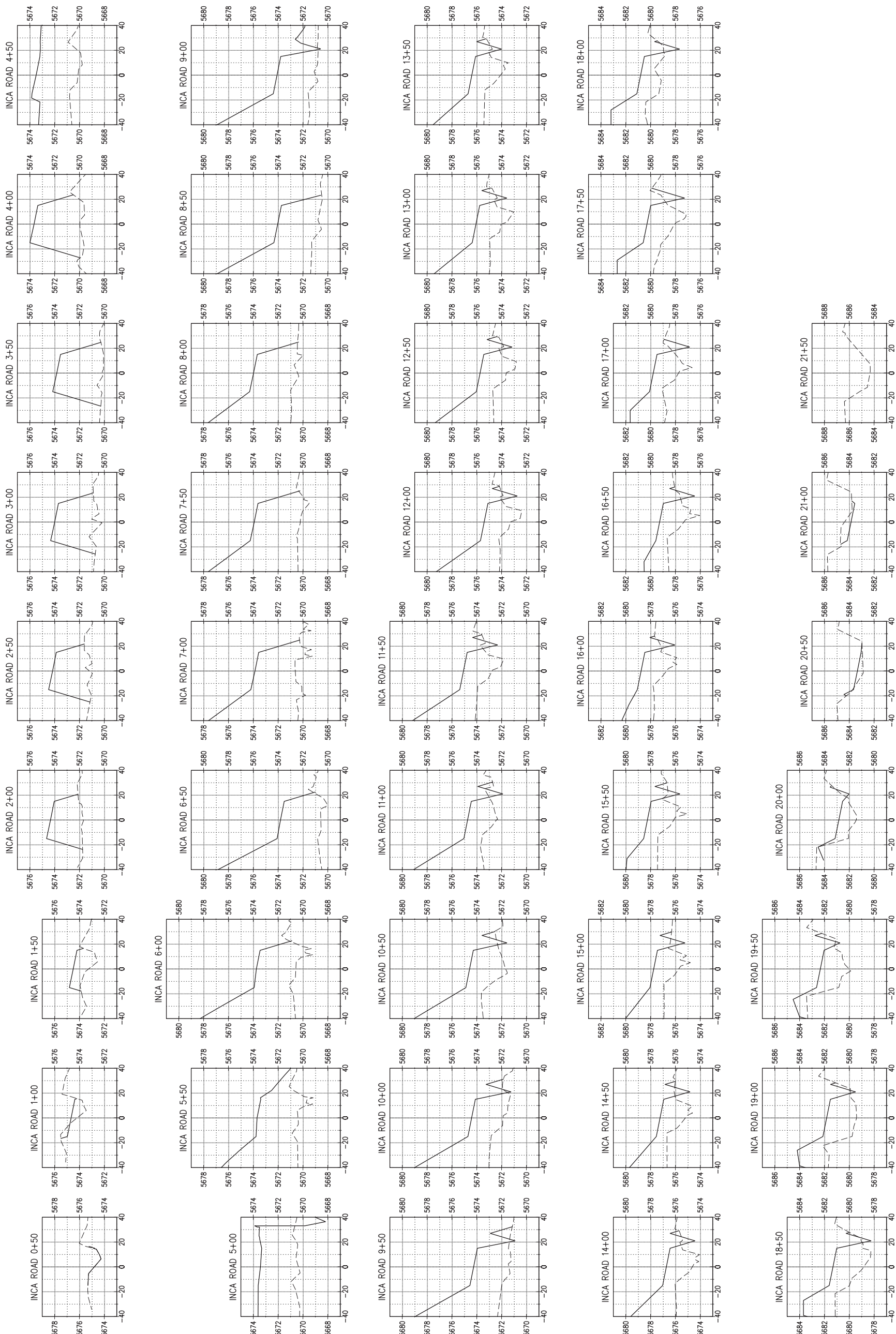


RAINBOW POND AND DOWNSTREAM CHANNEL

INCA ROAD CROSS SECTIONS

| MARK | REVISIONS &<br>CHANGE NOTICES |  | DATE |
|------|-------------------------------|--|------|
|      | DESCRIPTION                   |  |      |
|      |                               |  |      |
|      |                               |  |      |
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|      |                               |  |      |

PROJECT NO: RA\_P0001  
DESIGNED BY: JB  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/3/2018





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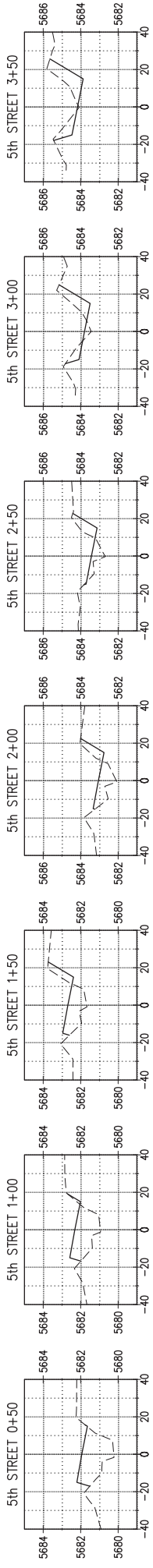
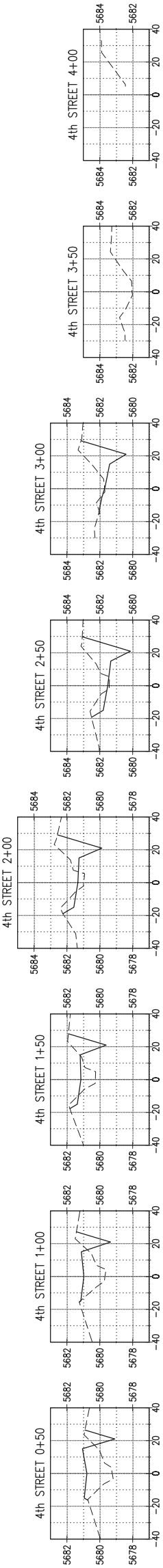
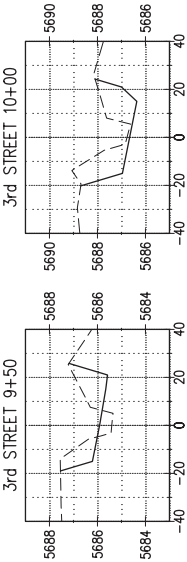
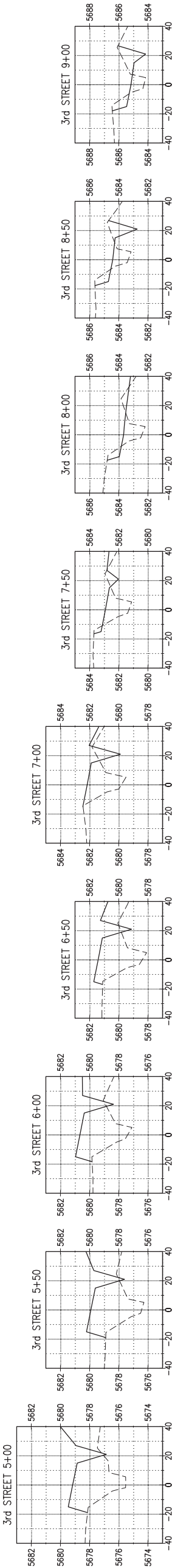
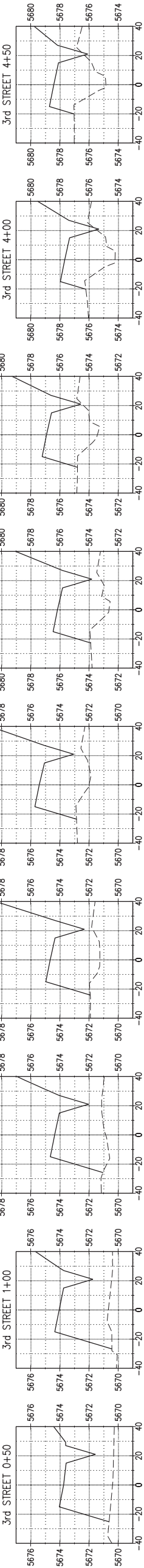


RAINBOW POND AND DOWNSTREAM  
CHANNEL

3RD, 4TH & 5TH STREET CROSS  
SECTIONS

| REVISIONS &<br>CHANGE NOTICES |             |
|-------------------------------|-------------|
| MARK                          | DESCRIPTION |
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PROJECT NO: RA\_P0001  
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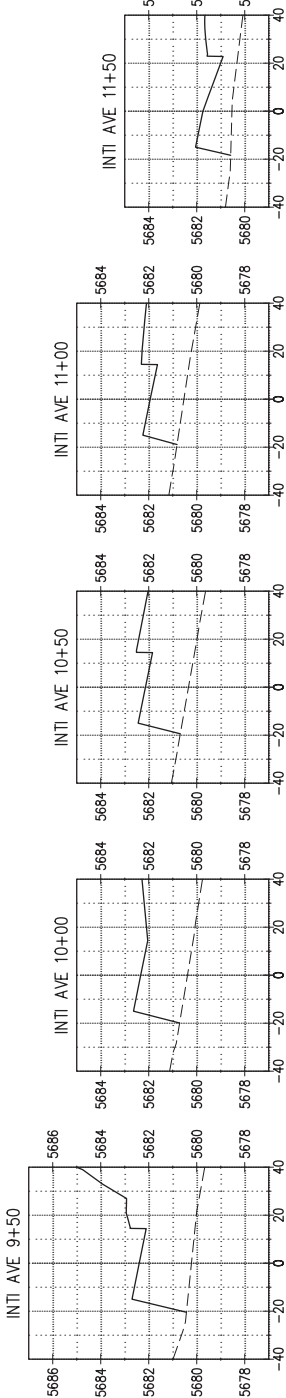
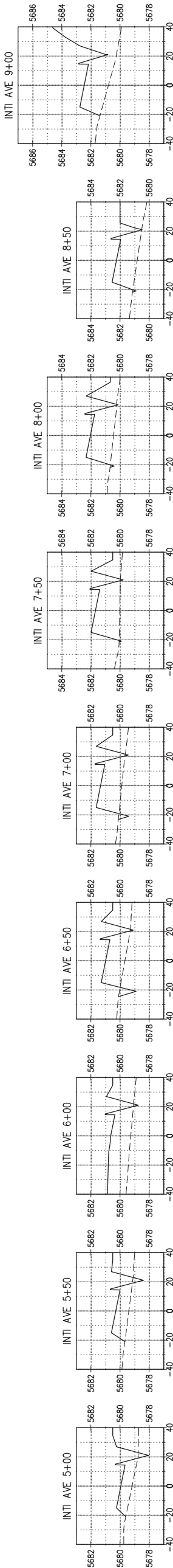
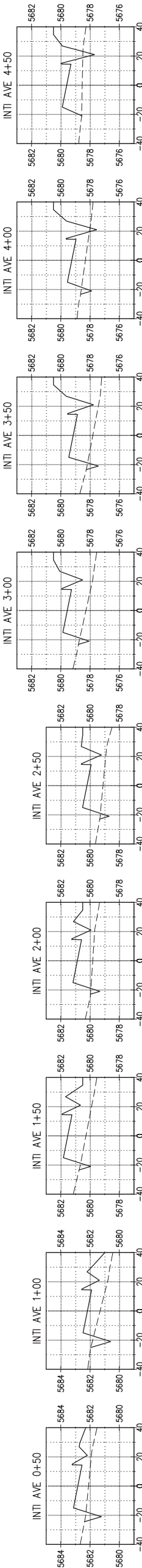


RAINBOW POND AND DOWNSTREAM CHANNEL

INTI AVENUE CROSS SECTIONS

| REVISIONS & CHANGE NOTICES |             |      |
|----------------------------|-------------|------|
| MARK                       | DESCRIPTION | DATE |
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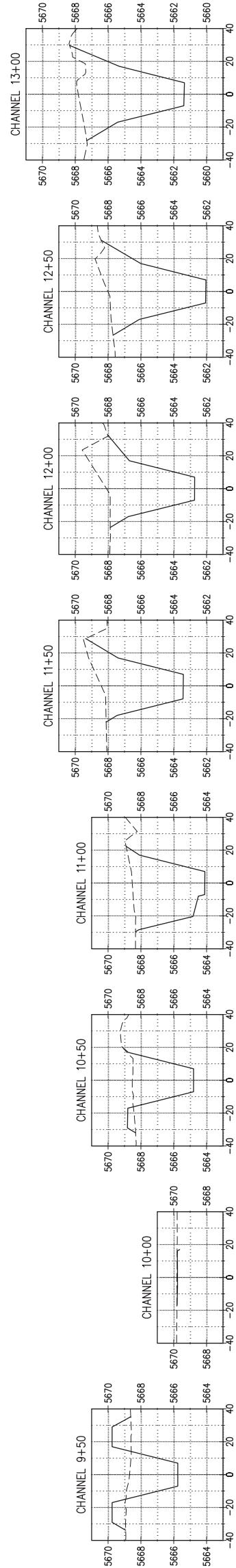
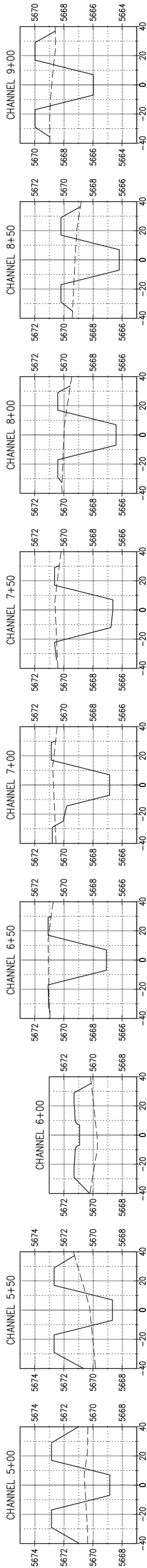
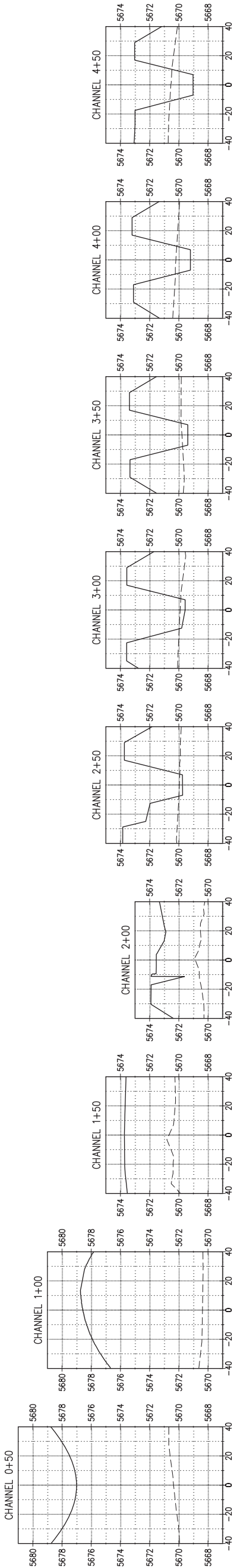


RAINBOW POND AND DOWNSTREAM  
CHANNEL

CHANNEL CROSS SECTIONS

| REVISIONS &<br>CHANGE NOTICES |             |      |
|-------------------------------|-------------|------|
| MARK                          | DESCRIPTION | DATE |
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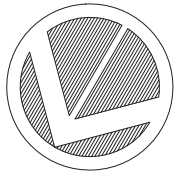


RAINBOW POND AND DOWNSTREAM CHANNEL

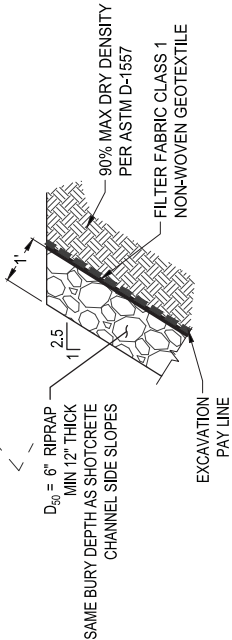
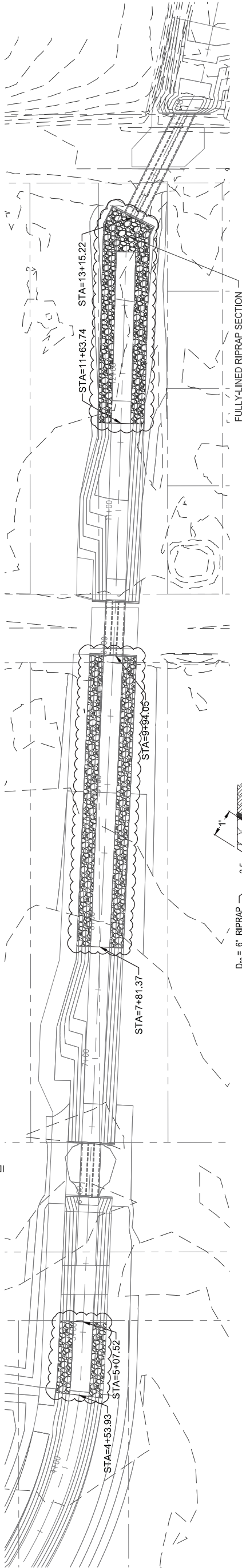
BID ALTERNATES

| MARK | REVISIONS & CHANGE NOTICES |  | DATE |
|------|----------------------------|--|------|
|      | DESCRIPTION                |  |      |
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PROJECT NO: RA\_P0001  
DESIGNED BY: AES  
DRAWN BY: KLF  
CHECKED BY: AES  
DATE: 4/5/2018

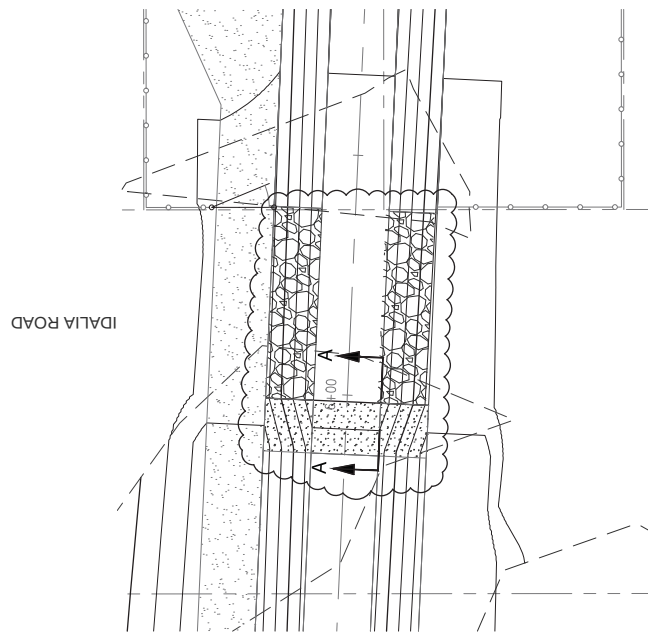


IDALIA ROAD

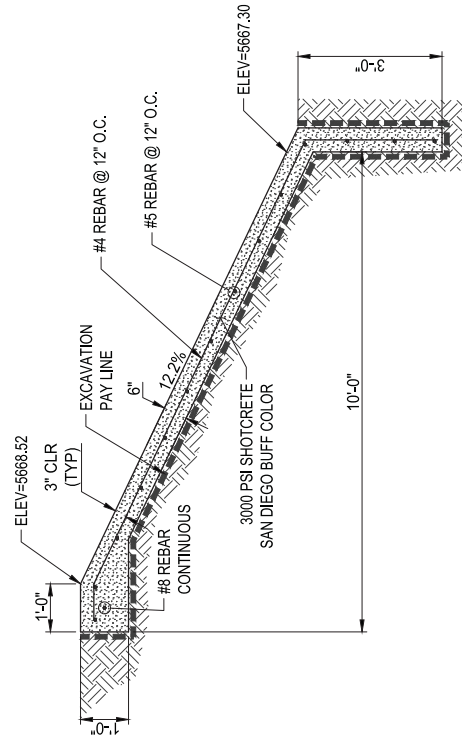


BID ALTERNATIVE #1  
DUMPED RIPRAP CHANNEL SIDE SLOPES

IDALIA ROAD



BID ALTERNATIVE #2  
IDALIA ROAD RPCC BOX CULVERT AND APRON REMOVED  
SHOTCRETE CHANNEL SIDE SLOPES



BID ALTERNATIVE #3  
IDALIA ROAD RPCC BOX CULVERT AND APRON REMOVED  
DUMPED RIPRAP CHANNEL SIDE SLOPES

A-A DROP STRUCTURE DETAIL  
Scale: NTS