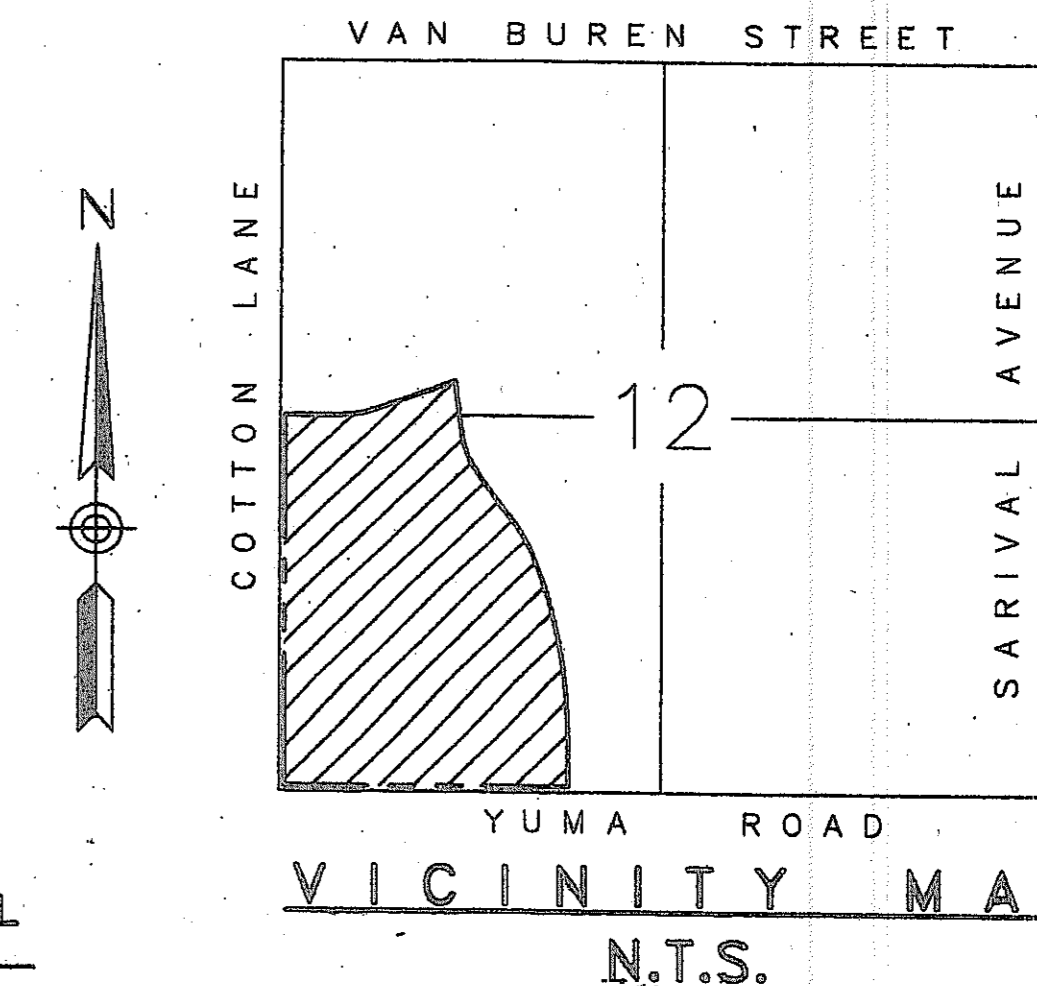


THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

ONSITE UTILITIES PLANS (PUBLIC & PRIVATE) FOR CANYON TRAILS TOWNE CENTER N.E.C. OF COTTON LANE AND YUMA ROAD GOODYEAR, ARIZONA

A PORTION OF THE WEST HALF OF
SECTION 12, TOWNSHIP 1 NORTH, RANGE 2 WEST OF THE GILA AND SALT RIVER BASE AND
MERIDIAN, CITY OF GOODYEAR, MARICOPA COUNTY, ARIZONA.



AS-BUILT APPROVAL
DATE: 10-30-08
INSPECTOR: *[Signature]*
PLAN REVIEWER: *[Signature]* FOR B. NELSON
CITY OF GOODYEAR ENGINEERING

CERTIFICATION:
I HEREBY CERTIFY THAT THIS DESIGN IS BASED ON ACCURATE FIELD DATA WHICH HAS BEEN CHECKED IN THE FIELD PRIOR TO SUBMISSION FOR CITY APPROVAL.

REGISTERED ENGINEER/SURVEYOR DATE: 6/29/07
AS-BUILT CERTIFICATION:
I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION SHOWN HEREON WAS OBTAIN UNDER MY SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.
REGISTERED CIVIL ENGINEER DATE: 8/4/08
REGISTRATION NUMBER: 19095

REVISED BY: FIELD ENGINEERING DATE:

APPROVALS:
T.S. Chitt 072959, 072960
MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT DATE: 7/20/07

AMENDMENT APPROVAL BY: *[Signature]* 11/30/07
PLANS EXAMINER DATE
SHEETS W-13, W-14, W-28
AMENDMENT APPROVAL BY: *[Signature]* 1/22/2008
PLANS EXAMINER DATE
SHEETS C1.3, W-2, W-4, W-5, W-8, W-8, W-11, W-14

LEGAL DESCRIPTION (per Title Report)
THAT PART OF THE WEST HALF OF SECTION 12, TOWNSHIP 1 NORTH, RANGE 2 WEST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE IRON BAR MARKING THE SOUTHWEST CORNER OF SAID SECTION 12;
THENCE NORTH 00°19'20" EAST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 12, A DISTANCE OF 2845.41 FEET TO A BRASS CAP IN A HANDHOLE MARKING THE WEST QUARTER CORNER OF SAID SECTION 12;
THENCE SOUTH 88°45'31" EAST ALONG THE EAST-WEST MIDSECTION LINE OF SAID SECTION 12, A DISTANCE OF 432.70 FEET TO THE BEGINNING OF A TANGENT CURVE OF 800.00 FEET RADIUS, CONCAVE NORTHWESTERLY;
THENCE NORTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 18°52'08", A DISTANCE OF 263.45 FEET;
THENCE NORTH 71°22'23" EAST, A DISTANCE OF 582.15 FEET TO THE BEGINNING OF A TANGENT CURVE OF 800.00 FEET RADIUS, CONCAVE SOUTHEASTERLY;
THENCE NORTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 01°57'22", A DISTANCE OF 20.49 FEET;
THENCE SOUTH 07°24'18" EAST, A DISTANCE OF 383.88 FEET TO THE BEGINNING OF A TANGENT CURVE OF 700.00 FEET RADIUS, CONCAVE NORTHEASTERLY;
THENCE SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 27°46'50", A DISTANCE OF 339.40 FEET;
THENCE SOUTH 35°11'08" EAST, A DISTANCE OF 437.09 FEET TO THE BEGINNING OF A TANGENT CURVE OF 1000.00 FEET RADIUS, CONCAVE SOUTHWESTERLY;
THENCE SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 14°07'24", A DISTANCE OF 246.50 FEET TO THE BEGINNING OF A TANGENT COMPOUND CURVE OF 3800.00 FEET RADIUS, CONCAVE SOUTHWESTERLY;
THENCE SOUTHEASTERLY ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 21°18'35", A DISTANCE OF 1336.93 FEET;
THENCE SOUTH 00°14'53" WEST, A DISTANCE OF 319.59 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 12;
THENCE NORTH 89°45'07" WEST ALONG SAID SOUTH LINE, A DISTANCE OF 2025.00 FEET TO THE TRUE POINT OF BEGINNING.

OWNER/DEVELOPER:
VESTAR DEVELOPMENT COMPANY
2425 EAST CAMELBACK ROAD
SUITE 750
PHOENIX, AZ 85016
PH: (602) 866-0900
FAX: (602) 955-2298
CONTACT: JACK VAN KLEUNEN

ARCHITECT:
KURT D. REED ASSOCIATES, INC.
7400 E. McDONALD DRIVE, SUITE 101
SCOTTSDALE, ARIZONA 85250
PHONE: (480) 941-1440
FAX: (480) 948-1055
CONTACT: PATRICIA FLOWER

ENGINEER:
OPTIMUS CIVIL DESIGN GROUP, L.L.C.
2323 E. MAGNOLIA STREET, SUITE 107
PHOENIX, ARIZONA 85034
PH: (602) 286-9300
FAX: (602) 286-9400
CONTACT: ADAM RAUSCHER, P.E.

BENCHMARK:
MCHD BOMH AT COTTON LANE AND W. VAN BUREN ST.
ELEVATION = 991.50
PER CANYON TRAILS DATUM
(THIS BENCHMARK HAS RECENTLY BEEN DESTROYED DUE TO RECENT CONSTRUCTION.)

TEMPORARY BENCHMARK:
SET CHISELED "X" ON THE SOUTHWEST CORNER OF THE WEST END OF SIDEWALK, NORTH SIDE OF W. CANYON TRAILS BLVD., WEST OF 169TH DRIVE.
ELEVATION = 980.27
PER CANYON TRAILS DATUM

BENCHMARK EQUATION:
CANYON TRAILS DATUM 991.50 MINUS 2.10 =
CITY OF GOODYEAR DATUM 989.40

BASIS OF BEARINGS:
BEING THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 12, T. 1 N., R. 2 W., G. & S. R. B. & M., MARICOPA COUNTY, ARIZONA (AKA THE CENTERLINE OF COTTON LANE)
SAID LINE BEARS: N. 00°18'20" E.
AS SHOWN ON THE MAP OF DEDICATION OF "COTTON LANE AND CANYON TRAILS BOULEVARD INFRASTRUCTURE" RECORDED IN BOOK 750 OF MAPS, PAGE 35, MARICOPA COUNTY RECORDS.

ESTIMATED ON-SITE EARTHWORK QUANTITIES:
CUT 98,000 CY (RAW DATA ONLY)
FILL 124,373 CY

UTILITY SYSTEM OWNERSHIP:
WATER CITY OF GOODYEAR
SEWER CITY OF GOODYEAR
GAS SOUTHWEST GAS
ELECTRIC AFS
CABLE + TELEVISION COX CABLE
TELEPHONE QWEST

SHEET INDEX

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21	W-4	ONSITE PUBLIC AND PRIVATE WATER PLAN
22	W-5	ONSITE PUBLIC AND PRIVATE WATER PLAN
23	W-6	ONSITE PUBLIC AND PRIVATE WATER PLAN
24	W-7	ONSITE PUBLIC AND PRIVATE WATER PLAN
25	W-8	ONSITE PUBLIC AND PRIVATE WATER PLAN
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MATERIALS LIST-ONSITE QUANTITIES

ONSITE PRIVATE SEWER

4,056 LF.	8" PVC SDR-35
214 LF.	8" MECHANICAL JOINT D.I.P. SEWER
3,097 LF.	6" PVC SDR-35
20 EA.	MANHOLE
13 EA.	CLEANOUT
51 EA.	SEWER BUILDING CONNECTION

ONSITE PUBLIC/PRIVATE WATER

5,130 LF.	12" DIAMETER D.I.P. WATERLINE (CLASS 150 MIN.)
9,310 LF.	8" DIAMETER D.I.P. WATERLINE (CLASS 150 MIN.)
3,855 LF.	6" DIAMETER D.I.P. WATERLINE (CLASS 150 MIN.)
5,840 LF.	SERVICES LINES
47 EA.	FIRE HYDRANTS

NOTE: ALL QUANTITIES ARE ESTIMATES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING THEIR OWN QUANTITIES FOR BIDDING.

AS-BUILT SURVEYOR:
OPTIMUS SURVEY SERVICES
4650 E. COTTON CENTER BLVD., SUITE 140
PHOENIX, ARIZONA 85040
PHONE: (602) 286-9300 FAX: (602) 286-9400
PETER H. ROSSI, RLS
REGISTRATION NO.: 26931

"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
REGISTERED LAND SURVEYOR DATE: 7/10/08
#26931
PETER H. ROSSI
Expires 02/21/2011

LEGEND

EXISTING CACTUS	EXISTING BACKFLOW PREVENTER	INDICATES BOUNDARY CORNER, SET 1/2" REBAR
EXISTING CATCH BASIN	EXISTING WATER METER	INDICATES FOUND BRASS CAP IN HAND HOLE
EXISTING STORM DRAIN MANHOLE	EXISTING WATER VALVE	INDICATES FOUND MONUMENT
EXISTING FIRE HYDRANT	EXISTING ELECTRIC LINE	EASEMENT LINE
EXISTING GAS VALVE	EXISTING GAS LINE	MONUMENT LINE
EXISTING IRRIGATION BOX	EXISTING STORM DRAIN	BOUNDARY LINE
EXISTING IRRIGATION VALVE	EXISTING SEWER MAIN	PROPOSED SEWER LINE
EXISTING LIGHT POLE W/SINGLE ARM	EXISTING TELEPHONE LINE	PROPOSED FIRE SERVICE LINE
EXISTING PALM TREE	EXISTING WATER MAIN	PROPOSED WATER SERVICE LINE
EXISTING SIGN	EXISTING SPOT ELEVATION	PROPOSED WATER VALVE
EXISTING SANITARY SEWER MANHOLE	PROPOSED WALL FLOWLINE ELEVATION	PROPOSED FIRE HYDRANT
EXISTING TRANSFORMER	TOP OF CURB ELEVATION	PROPOSED MANHOLE
EXISTING VEGETATION		PROPOSED CLEANOUT

2007-108-C3-001

CITY OF GOODYEAR

REVIEW AND RECOMMENDED APPROVAL BY:

FIRE DEPT.	JVP	GRADING & DRAINAGE	
LANDSCAPING & PLANNING		WATER & SEWER	JVP
TRAFFIC		PAVING	

APPROVED BY: *[Signature]* 9/19/07
PLANS EXAMINER DATE

CANYON TRAILS TOWNE CENTER COVER SHEET

PREPARED FOR VESTAR DEVELOPMENT COMPANY 2425 E. CAMELBACK RD., ST # 750 PHOENIX, AZ 85016

DATE: 11/2/07

REVISION NO. Δ INTERLINE REVISION

DESIGNED: AJR
DRAWN: AZ/JS/C3
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO: C-11
1 of 38

FILE # 07-1152

CITY OF GOODYEAR

GENERAL NOTES FOR CONSTRUCTION:

- A. ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST M.A.G. STANDARD DETAILS AND SPECIFICATIONS AND THE CITY'S SUPPLEMENTAL DETAILS AND SPECIFICATIONS.
- B. THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE.
- C. THE CITY DOES NOT WARRANT ANY QUANTITIES SHOWN ON THESE PLANS.
- D. THE CITY APPROVAL IS FOR GENERAL LAYOUT IN THE RIGHT-OF-WAY ONLY. THIS APPROVAL IS VALID FOR A PERIOD OF ONE YEAR. CONSTRUCTION PERMITS SHALL BE OBTAINED DURING THIS PERIOD OR THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND APPROVAL.
- E. AN APPROVED SET OF PLANS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
- F. THE CITY SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CONSTRUCTION WORK AND INSPECTIONS AT (623) 882-7979. CONSTRUCTION WORK CONCEALED WITHOUT INSPECTION BY THE CITY SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
- G. RIGHT-OF-WAY IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL "AS-BUILT" PLANS HAVE BEEN SUBMITTED AND APPROVED BY THE CITY. (SEE AS-BUILT REQUIREMENTS.)
- H. THE DEVELOPER IS RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ALL OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY PRIOR TO STARTING NEW CONSTRUCTION.
- I. THE DEVELOPER IS RESPONSIBLE FOR ARRANGING THE RELOCATION AND ASSOCIATED COSTS OF ALL UTILITIES. A UTILITY RELOCATION SCHEDULE SHALL BE SUBMITTED PRIOR TO THE ISSUANCE OF PERMITS.
- J. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING OR DEDICATING ALL REQUIRED RIGHTS-OF-WAY AND EASEMENTS TO THE CITY PRIOR TO ISSUANCE OF PERMITS.
- K. THE CONTRACTOR SHALL CONTACT BLUE STAKE (602) 263-1100 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- L. THE CONTRACTOR SHALL BARRICADE CONSTRUCTION SITES AT ALL TIMES PER THE CITY OF PHOENIX TRAFFIC BARRICADE MANUAL. WHEN REQUIRED BY THE CITY, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL IN ADVANCE OF CONSTRUCTION.
- M. THE CONTRACTOR MAY REQUEST A FIRE HYDRANT METER FOR CONSTRUCTION WATER FROM THE FINANCE DEPARTMENT. THIS METER SHALL BE ORDERED TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE UNLAWFUL REMOVAL OF WATER FROM A FIRE HYDRANT IS A VIOLATION OF THE MUNICIPAL CODE, PUNISHABLE BY FINE AND/OR IMPRISONMENT. (POTABLE WATER IS NOT AVAILABLE FOR CONSTRUCTION PURPOSES)
- N. PRIVATE ONSITE WATER AND SEWER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE, N.F.P.A., AND THE UNIFORM FIRE CODE AS ADOPTED BY THE CITY.

CITY OF GOODYEAR

GENERAL NOTES FOR WATER MAIN CONSTRUCTION:

- A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT M.A.G. SPECIFICATIONS AND STANDARD DETAILS.
- B. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- C. CITY OF GOODYEAR INSPECTORS SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION, AND EACH INSPECTION REQUESTED AT (623) 882-7979.
- D. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER, AND ANY WORK/MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- E. CONTRACTOR SHALL EXPOSE ANY LINES BEING TIED INTO TO VERIFY LOCATION.
- F. CONTRACTOR SHALL HAVE ALL EXISTING UNDERGROUND UTILITIES LOCATED BY BLUESTAKE (602-263-1100) AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO CONSTRUCTION.
- G. CITY OF GOODYEAR IS NOT LIABLE FOR DELAYS NOR DAMAGES TO UTILITIES RELATED TO THIS CONSTRUCTION; NEITHER WILL THE CITY PARTICIPATE IN THE COST OF UTILITY CONSTRUCTION NOR RELOCATION.
- H. AS-BUILT DRAWINGS (ONE SET MYLARS AND TWO SETS OF PRINTS), CERTIFIED BY THE SUBDIVIDER'S ENGINEER, SHALL BE SUBMITTED TO AND ACCEPTED BY THE CITY ENGINEER BEFORE FINAL ACCEPTANCE OF THE WORK.
- I. BACKFILLING SHALL NOT BE DONE UNTIL LINES ARE INSPECTED AND APPROVED BY THE CITY ENGINEER.
- J. VALVES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACCORDING TO M.A.G. AND C.O.G. SUPPLEMENTS. APPROVED VALVES LIST IS AVAILABLE AT THE WATER RESOURCES DEPARTMENT.
- K. BACKFLOW PREVENTOR SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACCORDING TO M.A.G. AND C.O.G. SUPPLEMENTS. APPROVED VALVES LIST IS AVAILABLE AT THE WATER RESOURCES DEPARTMENT.
- L. FIRE HYDRANTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, AND SHALL BE PAINTED CHROME YELLOW AFTER INSTALLATION. APPROVED FIRE HYDRANT LIST IS AVAILABLE AT THE PUBLIC WORKS DEPARTMENT.
- M. ALL SERVICE LINES SHALL BE TYPE "K" COPPER PIPE OR TUBING. THE MINIMUM SIZE SERVICE SHALL BE ONE INCH. SERVICE LINES SHALL BE CONTINUOUS UNDER PAVEMENT WITHOUT A CONNECTION OR EXTENSION.
- N. ALL TAPS SHALL USE BRONZE DOUBLE STRAP SERVICE SADDLE.
- O. DEVELOPER IS TO INSTALL ALL TAPS AND METER BOXES. THE TAP SHALL TERMINATE WITH AN ANGLE METER VALVE WITHIN THE BOX SET 6 INCHES BEHIND THE SIDEWALK AND 8 INCHES BELOW THE BACK OF THE SIDEWALK. THE METER BOX SHALL BE SET FLUSH TO THE GROUND AT THE BACK OF THE SIDEWALK AND AT THE PROPERTY LINE WHERE SIDEWALKS DO NOT EXIST.
- P. METERS SHALL BE FURNISHED AND INSTALLED BY UTILITY AGENCY. ALL METERS SHALL BE SENSUS TOUCH READ MODEL.
- Q. PAVEMENT REPLACEMENTS SHALL BE MADE TO M.A.G. STANDARD DETAILS.
- R. ALL WATER SERVICE CONNECTIONS SHALL BE EXTENDED A SUFFICIENT DISTANCE ACROSS RIGHT-OF-WAY TO CLEAR ALL FACILITIES TO BE INSTALLED IN PUBLIC UTILITY EASEMENTS PARALLELING STREET RIGHT-OF-WAY.

CITY OF GOODYEAR

GENERAL NOTES FOR SEWER MAIN CONSTRUCTION:

- A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT M.A.G. SPECIFICATIONS AND STANDARD DETAILS.
- B. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- C. CITY OF GOODYEAR INSPECTORS SHALL BE NOTIFIED AT (623) 882-7979, 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION AND EACH INSPECTION REQUESTED.
- D. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER, AND ANY WORK/MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- E. CONTRACTOR WILL EXPOSE ANY LINES BEING TIED INTO TO VERIFY LOCATION.
- F. CONTRACTOR SHALL HAVE ALL EXISTING UNDERGROUND UTILITIES LOCATED BY BLUESTAKE (602-263-1100) AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO CONSTRUCTION.
- G. CITY OF GOODYEAR IS NOT LIABLE FOR DELAYS NOR DAMAGES TO UTILITIES RELATED TO THIS CONSTRUCTION; NEITHER WILL THE CITY PARTICIPATE IN THE COST OF UTILITY CONSTRUCTION NOR RELOCATION.
- H. AS-BUILT DRAWINGS (ONE SET MYLARS AND TWO SETS OF PRINTS), CERTIFIED BY THE SUBDIVIDER'S ENGINEER, SHALL BE SUBMITTED TO AND ACCEPTED BY THE CITY ENGINEER BEFORE FINAL ACCEPTANCE OF THE WORK.
- I. BACKFILLING SHALL NOT BE DONE UNTIL LINES ARE INSPECTED AND APPROVED BY THE CITY ENGINEER.
- J. PAVEMENT REPLACEMENTS SHALL BE MADE TO M.A.G. STANDARD DETAILS.

CITY OF GOODYEAR

GENERAL NOTES FOR SEWER MAIN CONSTRUCTION CONTINUED:

- K. PVC SEWER PIPE MAY BE USED AS AN ALTERNATIVE FOR VITRIFIED CLAY SEWER PIPE IN ACCORDANCE WITH M.A.G. SPECIFICATION SECTION 745 FOR SIZES THROUGH 15-INCH WITH THE FOLLOWING ADDITION: 745.8 INSTALLATION AND TESTING: INSTALLATION MUST ALSO COMPLY WITH STANDARD SPECIFICATION (ASTM D 2321). SHORT TERM DEFLECTION TESTING SHALL BE PERFORMED ON THE TOTAL FOOTAGE, AFTER COMPLETE BACKFILL AND COMPACTION, BUT PRIOR TO THE INSTALLATION OF FINISH SURFACE MATERIAL. ADDITIONAL TESTING MAY BE REQUIRED. A SHORT TERM DEFLECTION IN EXCESS OF 5 PERCENT SHALL BE CONSIDERED UNSERVICEABLE AND SHALL BE REPAIRED OR REPLACED AND RETESTED.
- L. A VISUAL INSPECTION OF THE INTERIOR OF THE SEWER LINE USING A TELEVISION CAMERA WILL BE PERFORMED ON THE TOTAL FOOTAGE OF ALL SEWER LINES, AFTER COMPLETE BACKFILL AND COMPACTION, BUT PRIOR TO THE INSTALLATION OF FINISH SURFACE MATERIAL. ANY PORTION CONSIDERED UNSERVICEABLE BY THE CITY SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE CITY AND RETESTED. A VCR TAPE OF THE SEWER LINE AND REPORT OF OBSERVATIONS SHALL BE PROVIDED TO THE CITY FOR INSPECTION AND PERMANENT RECORD. ALL EXPENSES FOR VISUAL INSPECTION USING TELEVISION CAMERA IS THE RESPONSIBILITY OF THE CONTRACTOR.
- M. ALL MANHOLE RINGS AND LIDS TO BE CAST IRON, LIDS TO BE IMPRINTED "CITY OF GOODYEAR SANITARY SEWER".
- N. ALL TAPS SHALL BE WYE TYPE.
- O. SEWER TAPS SHALL BE MINIMUM 4.5' DEEP AT PROPERTY LINE.
- P. ALL SEWER SERVICE CONNECTIONS SHALL BE EXTENDED A SUFFICIENT DISTANCE ACROSS RIGHT-OF-WAY TO CLEAR ALL FACILITIES TO BE INSTALLED IN PUBLIC UTILITY EASEMENTS PARALLELING THE RIGHT-OF-WAY.

OPTIMUS CIVIL DESIGN GROUP SPECIFIC NOTES:

- 1. ANY QUESTIONS REGARDING THE INTERPRETATION OF THESE PLANS SHALL BE PRESENTED TO OPTIMUS. ANY ALTERATION OR VARIANCE FROM THESE PLANS MUST BE APPROVED BY OPTIMUS AND THE APPLICABLE AGENCY(S) PRIOR TO CONSTRUCTION. ANYONE WHO INTERPRETS, ALTERS OR CHANGES THESE DRAWINGS WITHOUT PRIOR APPROVAL SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.
- 2. THE QUANTITIES SHOWN ARE FOR INFORMATION AND/OR PERMITTING PURPOSES ONLY AND SHOULD NOT BE RELIED UPON. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE ITS OWN QUANTITIES FOR BIDDING AND IS ADVISED THAT GRADES WILL NOT BE ADJUSTED TO BALANCE THE SITE (ANY IMPORT/EXPORT IS THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE AGREED TO BY THE OWNER). FURTHER, NO CLAIMS SHALL BE MADE AGAINST THE ENGINEER FOR ANY EXCESS OR DEFICIENCY IN THE QUANTITIES, ACTUAL OR RELATIVE. SOIL SHRINK/SWELL, PIPE VOLUME, AND SHADING MATERIALS WERE NOT CONSIDERED WHEN CALCULATING QUANTITIES.
- 3. DUE TO VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF OPTIMUS, OPTIMUS MAKES NO REPRESENTATION OR GUARANTEE THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE.
- 4. PRIOR TO BIDDING OR CONSTRUCTING ANY IMPROVEMENTS SET FORTH HEREIN, THE CONTRACTOR SHALL THOROUGHLY SATISFY ITSELF AS TO THE ACTUAL SITE CONDITIONS, CURRENT APPLICABLE CODES WHICH MAY MODIFY OR SUPERCEDE THE CONTENT OF THESE DRAWINGS, I.E., ADA COMPLIANCE, AND ANY SPECIAL REQUIREMENTS OF THE WORK.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE BENCHMARK AND COMPARE THE SITE CONDITIONS WITH THE PLANS, AND THEN TO NOTIFY OPTIMUS OF ANY DISCREPANCIES. SHOULD ANY BENCHMARK, GRADE OR DESIGN INDICATED ON THE PLANS BE SUSPECT, OPTIMUS SHALL BE NOTIFIED AT LEAST TWENTY-FOUR (24) HOURS BEFORE CONSTRUCTION IS SCHEDULED TO BEGIN IN THE AFFECTED AREA. IF OPTIMUS IS NOT NOTIFIED AS SET FORTH HEREIN, ANY DISCREPANCIES SHALL BE DEEMED TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 6. CONTRACTOR SHALL BE RESPONSIBLE TO ENGAGE A REGISTERED LAND SURVEYOR TO PROVIDE ALL NECESSARY FIELD LAYOUT, STAKING AND FINAL AS-BUILTS FOR THIS PROJECT. IMMEDIATELY UPON COMPLETION OF EACH CATEGORY OF IMPROVEMENTS, I.E., WATER AND SEWER, CONTRACTOR SHALL DELIVER TO OPTIMUS A COMPLETE SET OF CITY APPROVED PLANS WITH NOTES THAT CLEARLY AND ADEQUATELY INDICATE THE AS-BUILT CONDITIONS, TOGETHER WITH THE CONTRACTOR'S LAND SURVEYOR'S CERTIFICATION OF THE ACCURACY OF SAID AS-BUILT NOTES. DEPENDING UPON THE RESPECTIVE GOVERNING AGENCY'S REQUIREMENTS, THE LAND SURVEYOR'S CERTIFICATION SHALL TAKE THE FORM OF A VALID STAMP ON THE COVER SHEET OF THE AS-BUILT PLAN SET AND/OR A SEPARATE STAMPED CERTIFICATION LETTER. CONTRACTOR SHALL BE REQUIRED TO CORRECT AND REVISE DEFICIENT AS-BUILTS UNTIL SAID AS-BUILTS ARE ACCEPTABLE TO OPTIMUS AND THE GOVERNING AGENCY(S).
- 7. OPTIMUS SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 8. OPTIMUS HAS NOT PHYSICALLY LOCATED ANY EXISTING UNDERGROUND UTILITIES, AND HAS RELIED UPON AVAILABLE FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. OPTIMUS MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. FURTHER, OPTIMUS DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH IT DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.
- 9. OPTIMUS SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC., OR FOR ASSOCIATED LAND EXCHANGES AND EASEMENT PREPARATION/EXECUTION.
- 10. UNLESS OTHERWISE NOTED, THE DEPTH OF COVER ON UNDERGROUND IMPROVEMENTS IS DESIGNED BASED UPON FINAL GRADE.
- 11. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL UNDERGROUND PIPES AND IMPROVEMENTS FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION.

OPTIMUS CIVIL DESIGN GROUP SPECIFIC NOTES CONTINUED:


- 12. OPTIMUS MUST CERTIFY THE COMPLETION OF ALL ON AND OFFSITE (PUBLIC AND PRIVATE) WATER AND SEWER IMPROVEMENTS. IN ORDER FOR OPTIMUS TO CERTIFY THE COMPLETION OF SAID IMPROVEMENTS TO THE RESPECTIVE GOVERNING AGENCIES, THE CONTRACTOR SHALL PROVIDE OPTIMUS WITH AT LEAST TWENTY-FOUR (24) HOURS NOTICE PRIOR TO BACKFILL AND/OR SHADING OF OPEN TRENCHES SO THAT OPTIMUS MAY OBSERVE THE WATER AND SEWER IMPROVEMENTS. ALTHOUGH OPTIMUS WILL OBSERVE SELECTED IMPROVEMENTS, DOCUMENTATION OF AS-BUILT CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ITS SURVEYOR. CONTRACTOR'S FAILURE TO NOTIFY OPTIMUS OF ITS BACKFILL/SHADING SCHEDULE OR TO CLEARLY AND ADEQUATELY DOCUMENT AS-BUILT CONDITIONS MAY RESULT IN CONTRACTOR'S NEED TO UNCOVER (AND THEN BACKFILL AND RECOMPACT) THE WATER AND SEWER IMPROVEMENTS AT CONTRACTOR'S SOLE EXPENSE.
- 13. PRIOR TO CONSTRUCTING ANY RAMPS, SIDEWALKS AND PAVEMENT IMPROVEMENTS SHOWN ON THE PLANS, THE CONTRACTOR SHALL HAVE ITS REGISTERED LAND SURVEYOR CERTIFY THAT THE PROPOSED IMPROVEMENTS MEET CURRENT APPLICABLE CODES, I.E., ADA COMPLIANCE. IMPROVEMENTS THAT DO NOT MEET THESE REQUIREMENTS SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S SOLE EXPENSE.
- 14. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD ANY OF THE AFOREMENTIONED ITEMS DIFFER FROM THAT SHOWN ON THESE PLANS, OR SHOULD THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS CREATE A SITUATION THAT IS NOT ACCEPTABLE BY INDUSTRY STANDARDS, THE CONTRACTOR SHALL NOTIFY OPTIMUS AND REQUEST CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THIS PROCEDURE IS NOT FOLLOWED.
- 15. CONTRACTOR IS RESPONSIBLE FOR OVER-EXCAVATING LANDSCAPE AREAS TO ALLOW FOR PLANTING AND UTILITY TRENCHING SPOILS AND FOR THE FINAL LANDSCAPE TREATMENT, I.E., DECOMPOSED GRANITE OR TURF. THE CONTRACTOR'S LAND SURVEYOR SHALL CERTIFY ALL RETENTION BASINS FOLLOWING INSTALLATION OF THE IRRIGATION SYSTEM, GROUND COVER AND LANDSCAPING.
- 16. IF PAD CERTIFICATIONS ARE PERFORMED, IT IS UNDERSTOOD THAT THE CERTIFICATION PROVIDES ONLY A REPRESENTATIVE ELEVATION OF THE AVERAGE GRADE OF EACH LOT, BUILDINGS OR UNIT PAD, AND SHALL NOT BE CONSTRUED TO INCLUDE YARD AND STREET SUB-GRADE CERTIFICATION OR CERTIFICATION THAT THE ENTIRE PAD IS LEVEL, THAT IT WAS CONSTRUCTED IN THE DESIGNED LOCATION OR WAS GRADED OR COMPACTED TO THE CROSS-SECTION SET FORTH ON THE PLANS OR AS DESIGNATED IN THE SOILS REPORT.
- 17. THIS SET OF PLANS MAY HAVE BEEN PREPARED IN CONJUNCTION WITH SITE ARCHITECTURAL PLANS. IF SO, CONTRACTOR SHOULD CROSS REFERENCE THE SITE ARCHITECTURAL PLANS FOR ADDITIONAL RELEVANT INFORMATION NOT INCLUDED HEREIN. DISCREPANCIES BETWEEN THESE PLANS AND THE SITE ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF OPTIMUS AND THE ARCHITECT.
- 18. CONTRACTOR SHALL NOT MAKE ANY CLAIMS AGAINST THE OWNER OR OPTIMUS REGARDING ALLEGED INACCURACY OF CONSTRUCTION STAKES SET BY EITHER THEIR OR THE OWNER'S SURVEYOR UNLESS ALL SURVEY STAKES ARE MAINTAINED INTACT AND CAN BE VERIFIED AS TO THEIR ORIGIN. IF, IN THE OPINION OF THE ENGINEER, THE STAKES WERE NOT MAINTAINED INTACT AND CANNOT BE VERIFIED AS TO THEIR ORIGIN, ANY REMEDIAL WORK REQUIRED TO CORRECT THE PROBLEM SHALL BE PERFORMED AT THE SOLE EXPENSE OF THE RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY STAKING WITH THE DESIGN PLANS AND NOTIFY SURVEYOR AND OPTIMUS OF DISCREPANCIES PRIOR TO CONSTRUCTION.
- 19. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO PURSUE ANY NEGOTIATIONS, OBTAIN ANY AGREEMENTS AND/OR PERMITS, ETC., FROM ALL PRIVATE OWNERS AND GOVERNMENTAL AGENCIES CONTROLLING PROPERTIES AND RIGHTS-OF-WAY THAT ARE AFFECTED BY ANY OF THE PROPOSED IMPROVEMENTS WITHIN THESE PLANS.
- 20. CONTRACTOR TO VERIFY THE FINAL PAD ELEVATION BASED OFF OF THE SLAB AND STONE THICKNESS AS SHOWN ON THE BUILDING DRAWINGS. THE FINAL PAD ELEVATION IS TO BE CALCULATED AND CERTIFIED USING THE FINISH FLOOR SHOWN ON THE PLAN SET.
- 21. ALL MATERIALS OF THE POTABLE WATER SYSTEM SHALL CONFORM TO THE NATIONAL SANITATION FOUNDATION STANDARD 60 & 61.

*SOILS REPORT PREPARED BY SPEEDIE AND ASSOCIATES ON AUGUST 23TH, 2006

DATE: _____ NO. _____ REVISION _____

CANYON TRAILS TOWNE CENTER NOTES SHEET

PREPARED FOR VESTAR DEVELOPMENT COMPANY 2425 E. CAMELBACK RD. ST.# 750 PHOENIX, AZ 85016



OPTIMUS CIVIL DESIGN GROUP
2033 E. MACDONALD STREET
PHOENIX, AZ 85034
PH: (602) 264-9900 FAX: (602) 264-9400

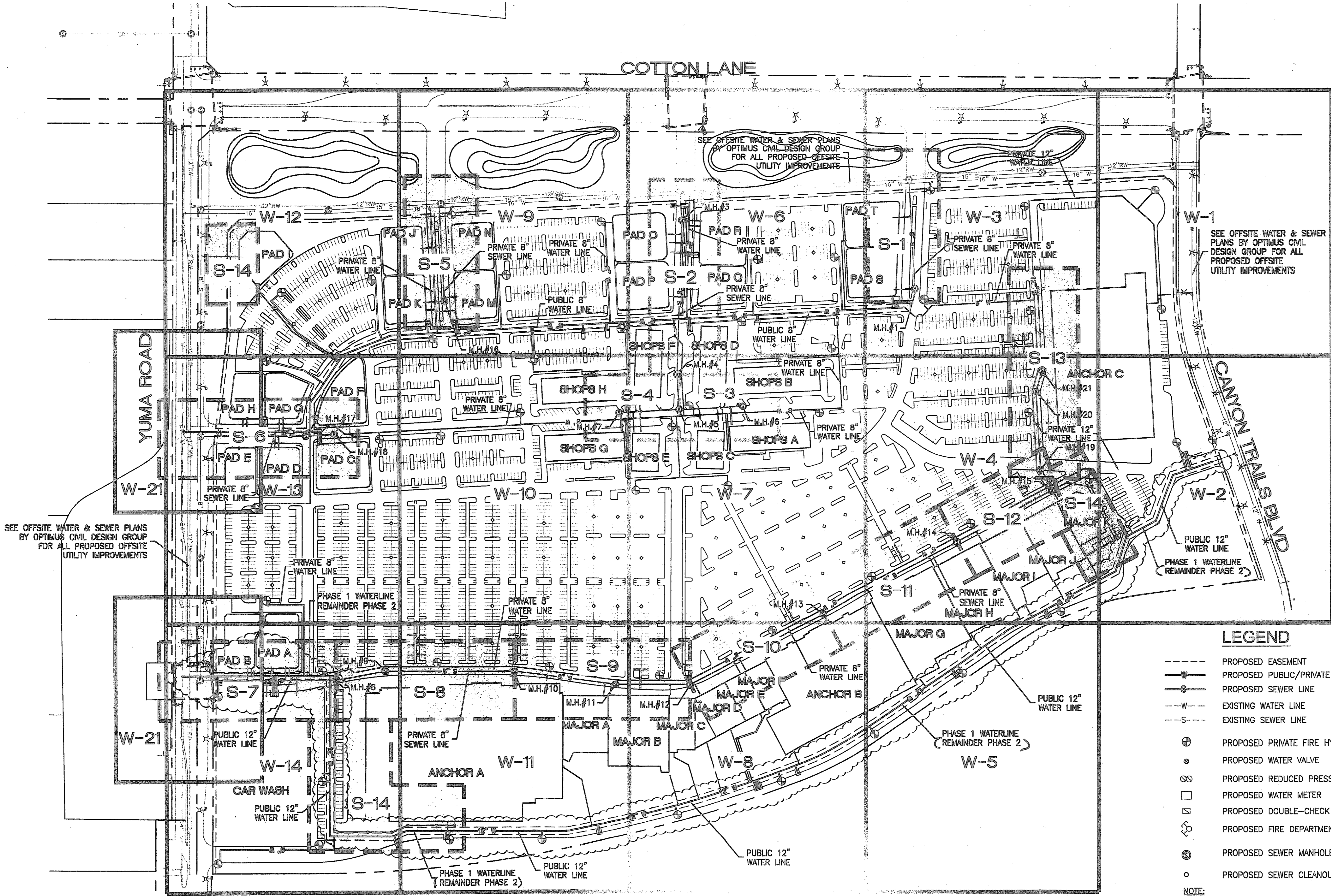
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DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO. C1.2

2007-108-C3-002

2 OF 38

THE # 07-1192

USE OF THE INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED IS PROHIBITED UNLESS EXPRESSLY PERMITTED IN WRITING BY OPTIMUS CIVIL DESIGN GROUP. OPTIMUS CIVIL DESIGN GROUP SHALL HAVE NO LIABILITY TO ANY USER OF THIS INFORMATION UNLESS EXPRESSLY ADVISED.



SEE OFFSITE WATER & SEWER PLANS BY OPTIMUS CIVIL DESIGN GROUP FOR ALL PROPOSED OFFSITE UTILITY IMPROVEMENTS

SEE OFFSITE WATER & SEWER PLANS BY OPTIMUS CIVIL DESIGN GROUP FOR ALL PROPOSED OFFSITE UTILITY IMPROVEMENTS

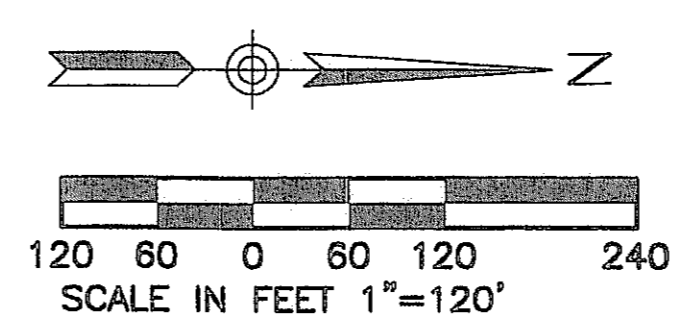
SEE OFFSITE WATER & SEWER PLANS BY OPTIMUS CIVIL DESIGN GROUP FOR ALL PROPOSED OFFSITE UTILITY IMPROVEMENTS

LEGEND

- - - - - PROPOSED EASEMENT
- W — PROPOSED PUBLIC/PRIVATE WATER LINE
- S — PROPOSED SEWER LINE
- - - - - EXISTING WATER LINE
- - - - - EXISTING SEWER LINE
- ⊕ PROPOSED PRIVATE FIRE HYDRANT
- ⊙ PROPOSED WATER VALVE
- ∞ PROPOSED REDUCED PRESSURE BACKFLOW PREVENTOR
- PROPOSED WATER METER
- ⊠ PROPOSED DOUBLE-CHECK DETECTOR VALVE
- ⊕ PROPOSED FIRE DEPARTMENT CONNECTION
- ⊙ PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT

NOTE:
ALL ONSITE FIRE HYDRANTS ARE PRIVATE

WATER & SEWER KEY MAP



KEY MAP LEGEND

- W-# WATER SHEET CUTS
- S-# SEWER SHEET CUTS

2007-108-C3-003

CANYON TRAILS TOWNE CENTER KEY MAP

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



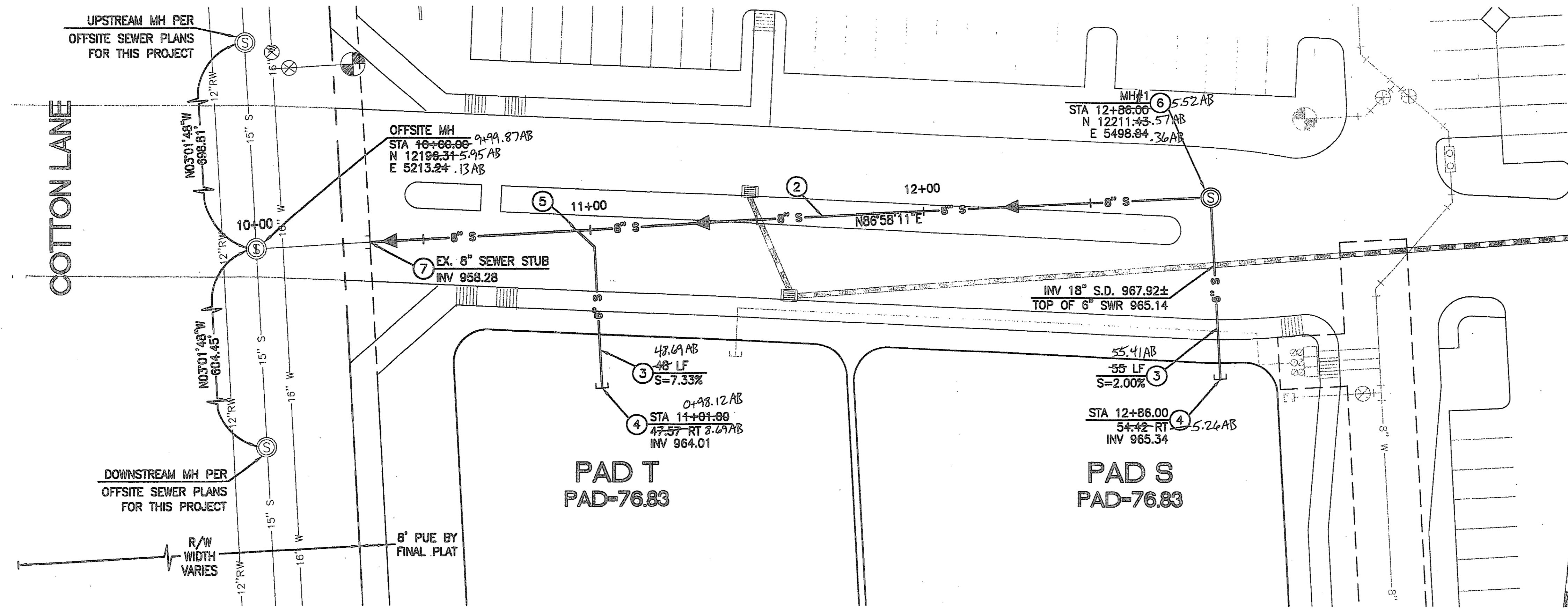
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JOB NO.: 031039

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C13
3 of 38

THE # 07-1192

USE OF THE INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIED PURPOSE FOR WHICH IT WAS INTENDED AND FOR OTHER THAN THE CLIENT FOR WHOM IT WAS PREPARED IS FORBIDDEN UNLESS EXPRESSLY PERMITTED IN WRITING BY OPTIMUS CIVIL DESIGN GROUP. OPTIMUS CIVIL DESIGN GROUP SHALL HAVE NO LIABILITY TO ANY USER OF THIS INFORMATION WITHOUT THEIR WRITTEN CONSENT.

NO.	REVISION	DATE
1	PHASING OF WATER PLAN (1&2)	01/04/08



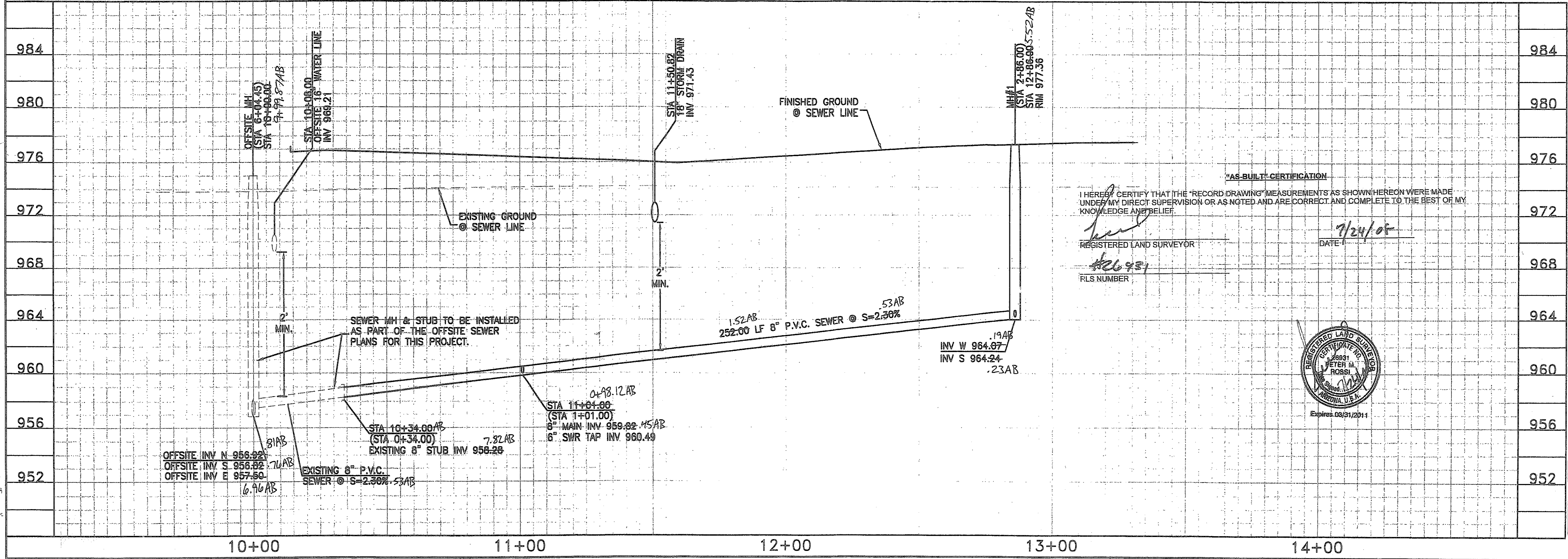
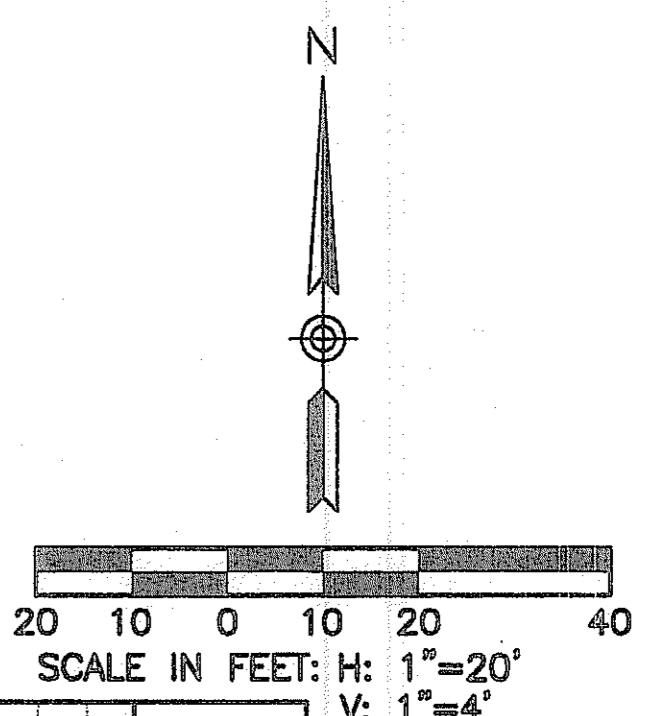
CONSTRUCTION NOTES

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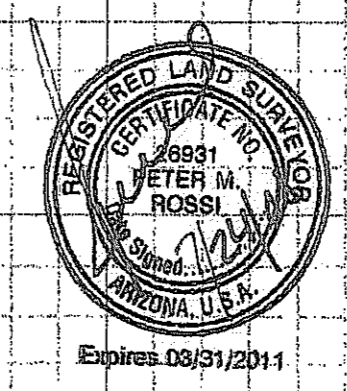
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STATION NOTE:
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DEEP SEWER NOTE:
CLASS "B" BEDDING REQUIRED ON ALL PIPES DEEPER THAN 10". SEE DETAIL ON SHEET S-14



"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
[Signature]
REGISTERED LAND SURVEYOR
DATE: 7/24/05
FLS NUMBER: #26931

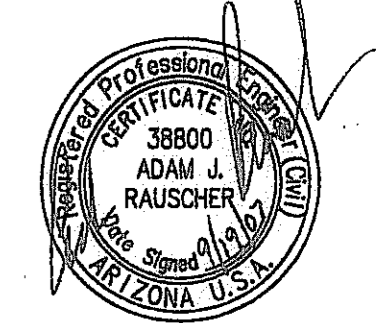


2007-108-C3-004

TO RECORD DATE BEFORE YOU BE CALL FOR THE BLUE STAMPED 1-800-782-5348 BLUE STATE CENTER CALL COLLECT

**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

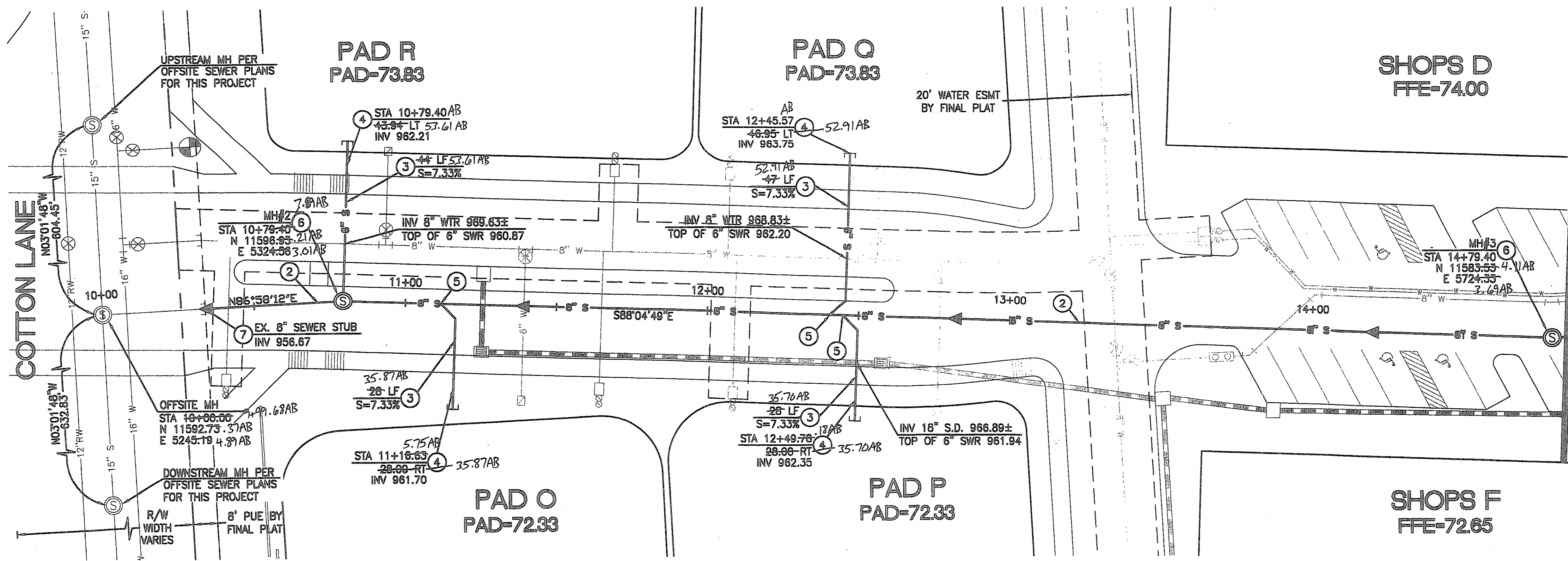
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



**OPTIMUS
CIVIL DESIGN GROUP**
2320 E. WASHINGTON STREET
PHOENIX, AZ 85034
PH: (602) 264-9300 FAX: (602) 356-9400

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

S-1



CONSTRUCTION NOTES

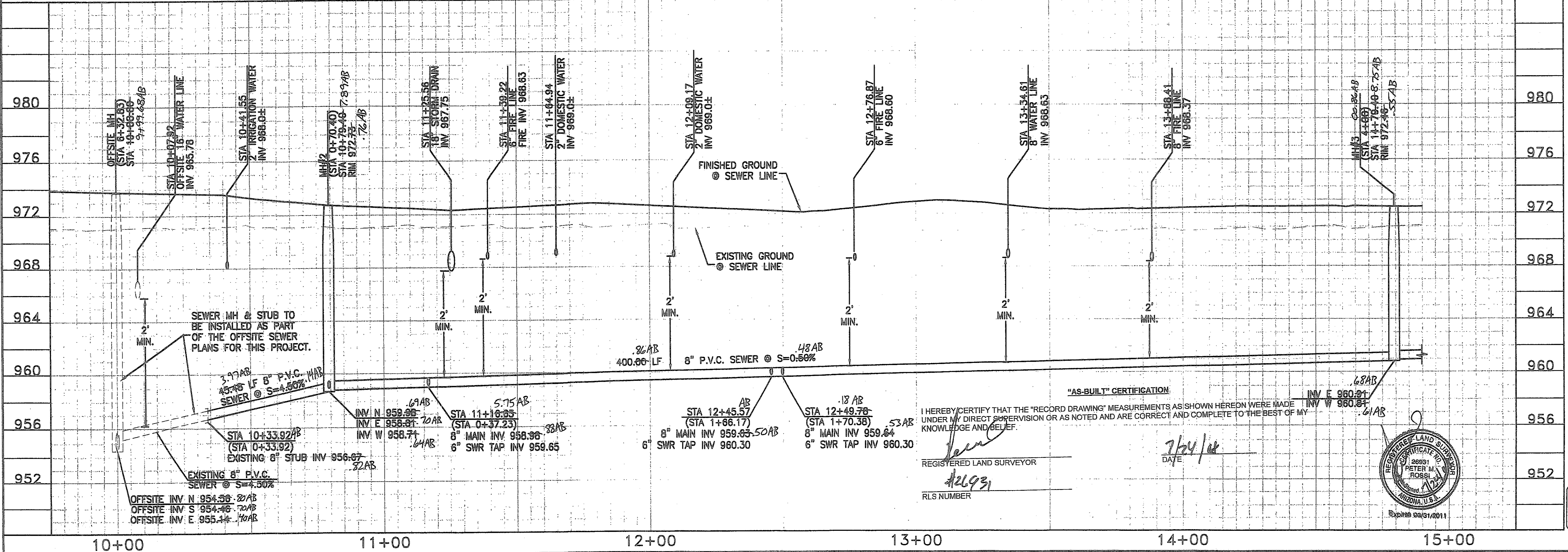
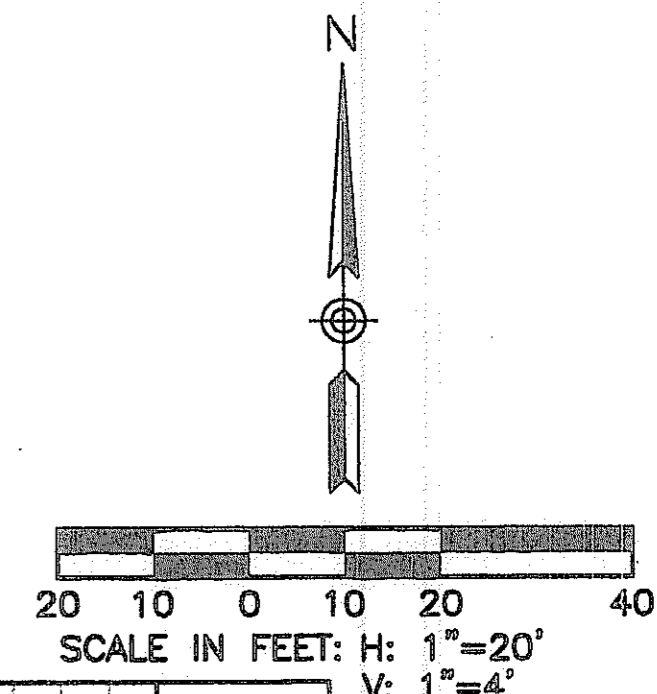
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MATCH LINE STA 14+79.40 SEE SHEET S-3

PER ARS 40-380-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

STATION NOTE:
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DEEP SEWER NOTE:
CLASS "B" BEDDING REQUIRED ON ALL PIPES DEEPER THAN 10'. SEE DETAIL ON SHEET S-14



2007-108-C3-005

1-800-782-5348
BLUE STAR CENTER
CALL COLLECT

**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

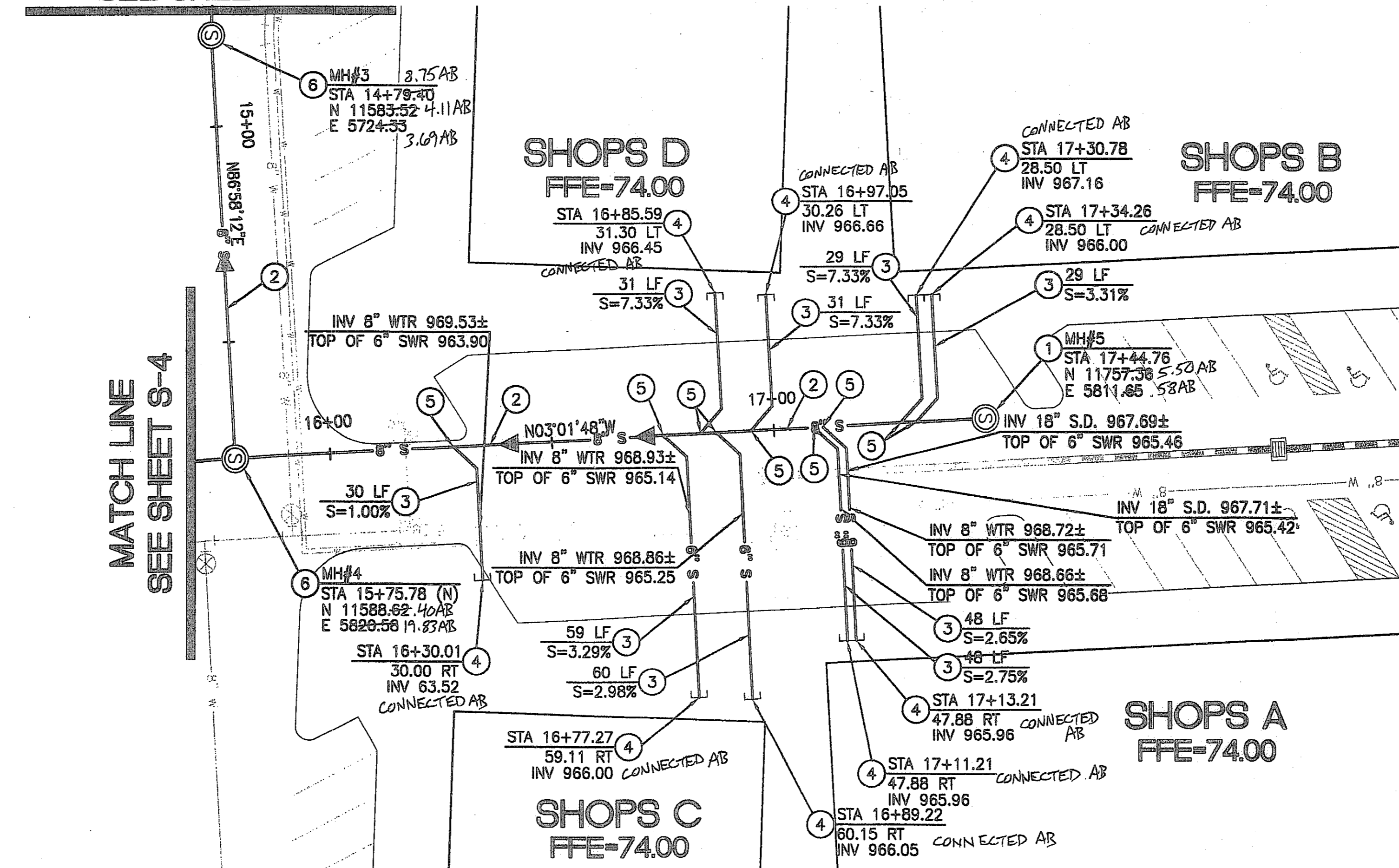
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST # 750
PHOENIX, AZ 85016



DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

S-2

MATCH LINE STA 14+79.40
SEE SHEET S-2



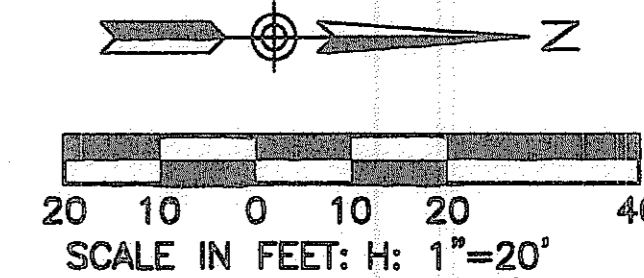
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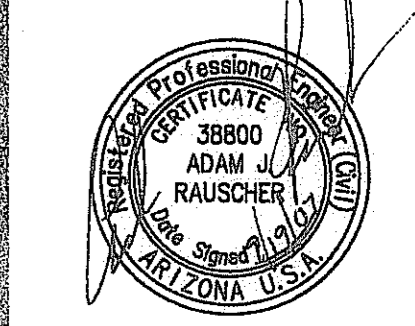
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CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016

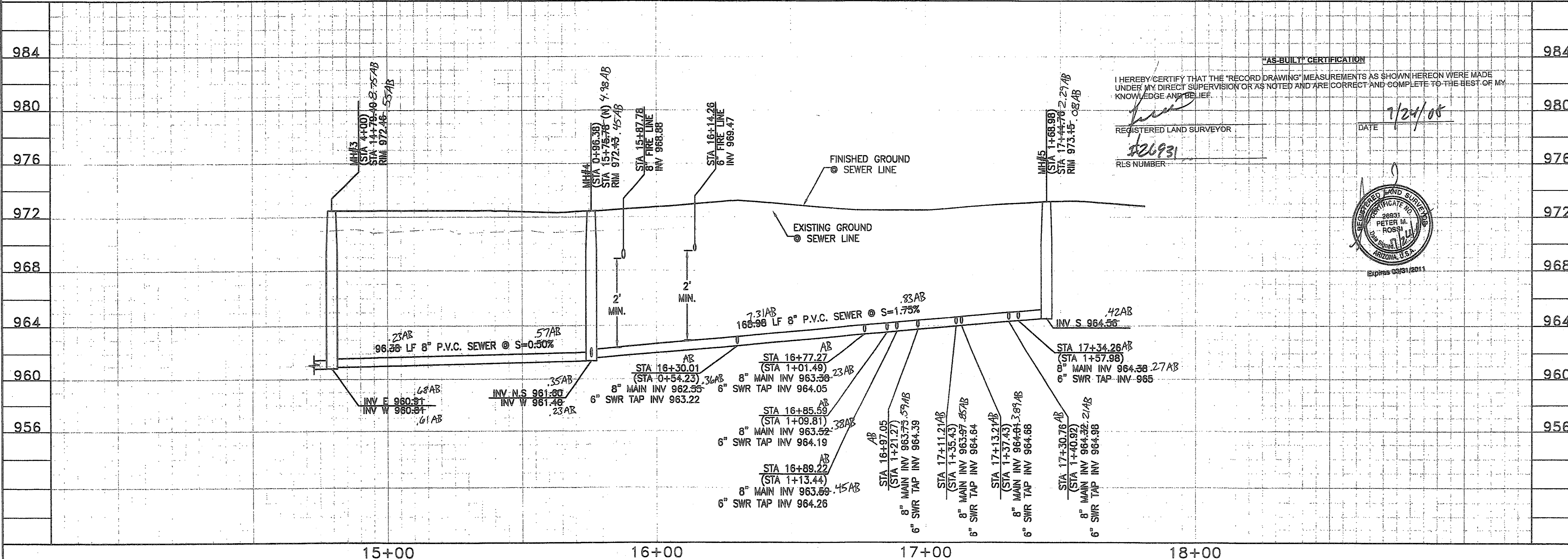


DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

2007-108-C3-006

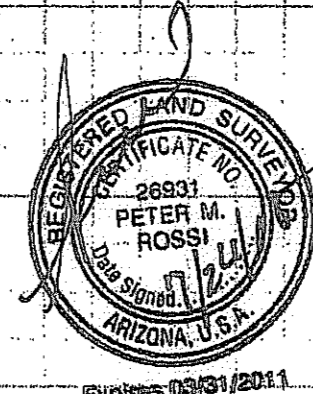


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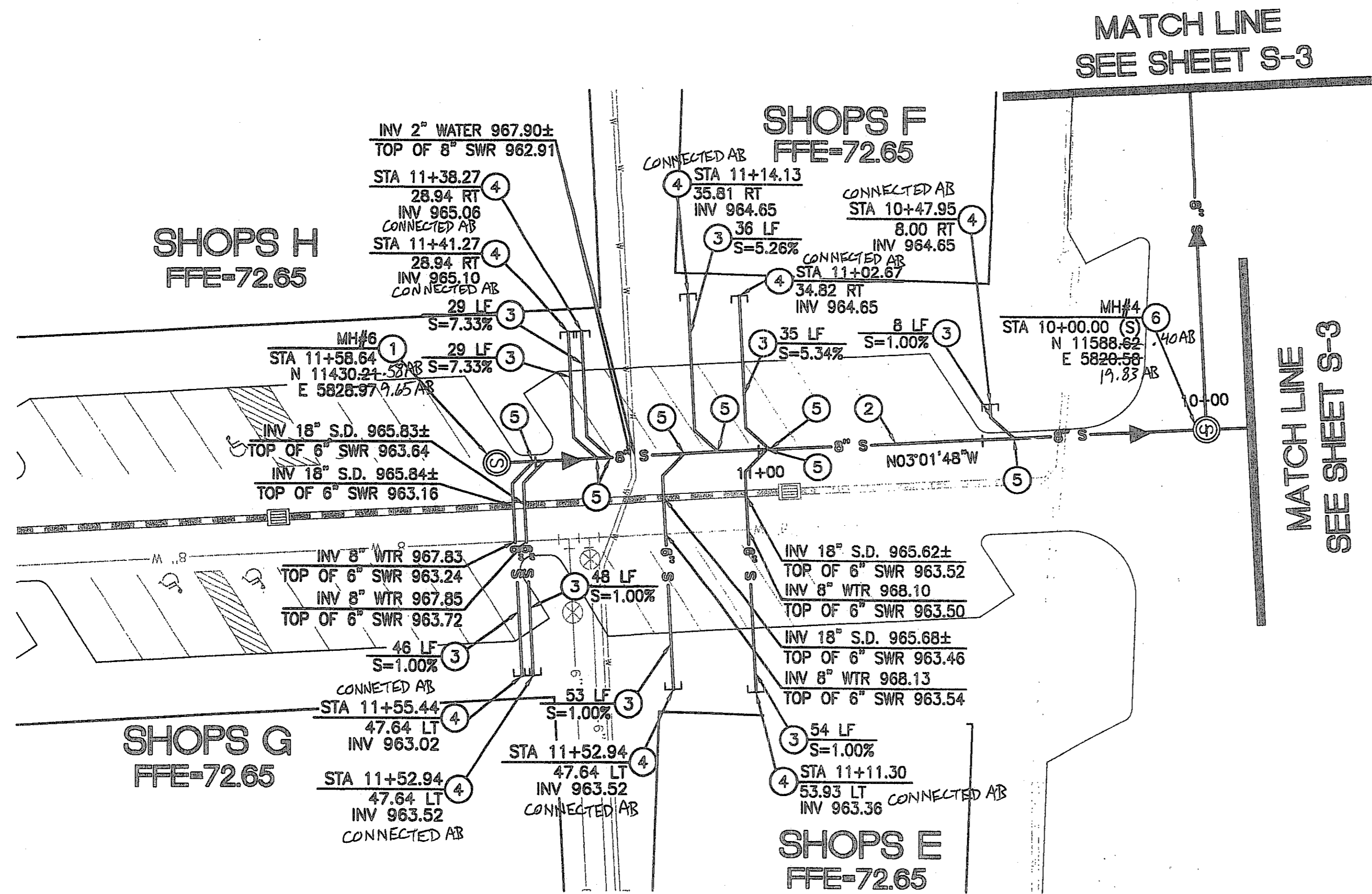


"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
#26893
RLS NUMBER



SCALE
1"=20' HORIZ.
1"=4' VERT.



CONSTRUCTION NOTES

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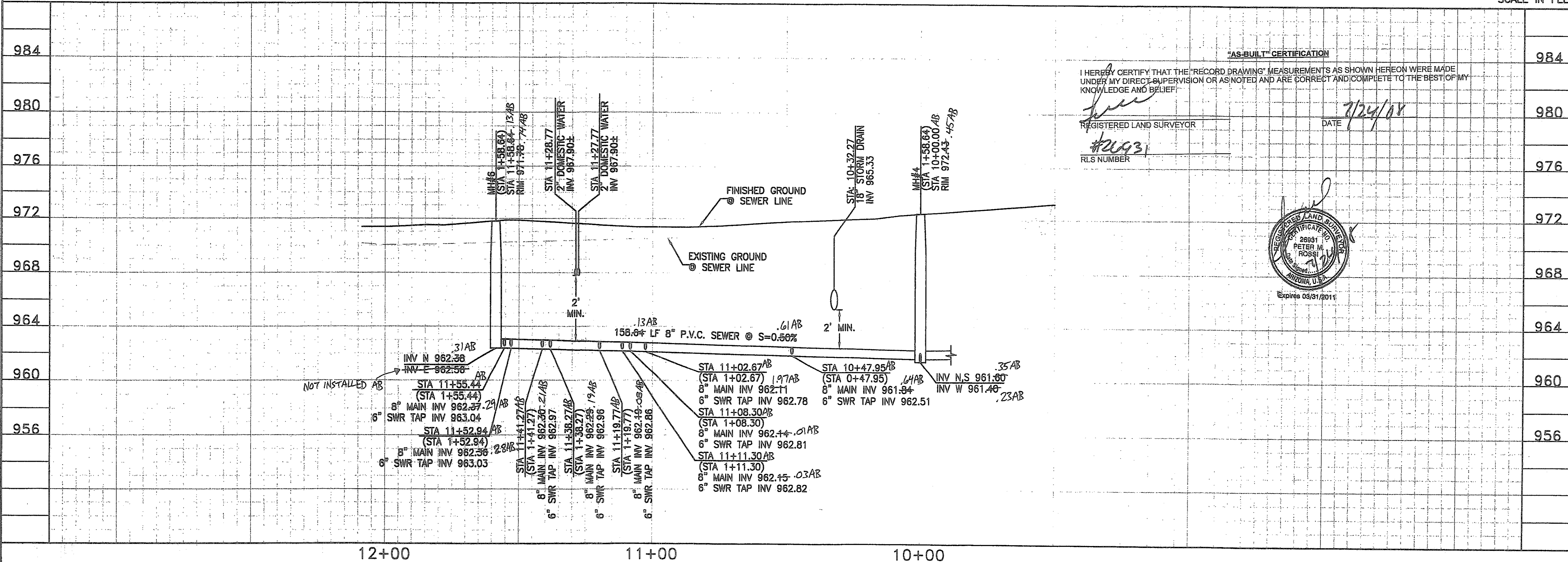
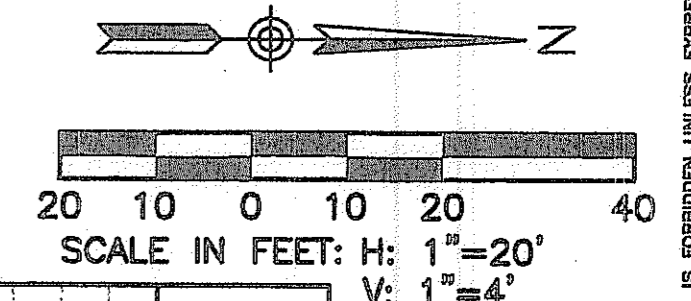
NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
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 PREPARED FOR
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 PHOENIX, AZ 85016

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DEEP SEWER NOTE:
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SEE DETAIL ON SHEET S-14

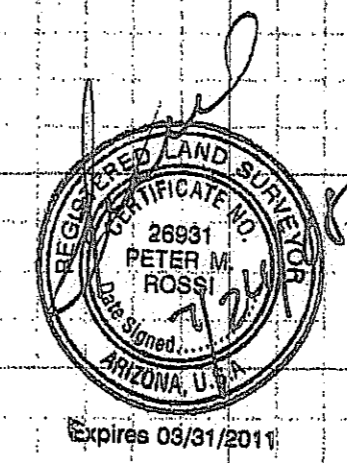


"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR: *[Signature]* DATE: 7/24/08

#20931 RLS NUMBER



984
980
976
972
968
964
960
956

SCALE
HORIZ. 1"=20'
VERT. 1"=4'

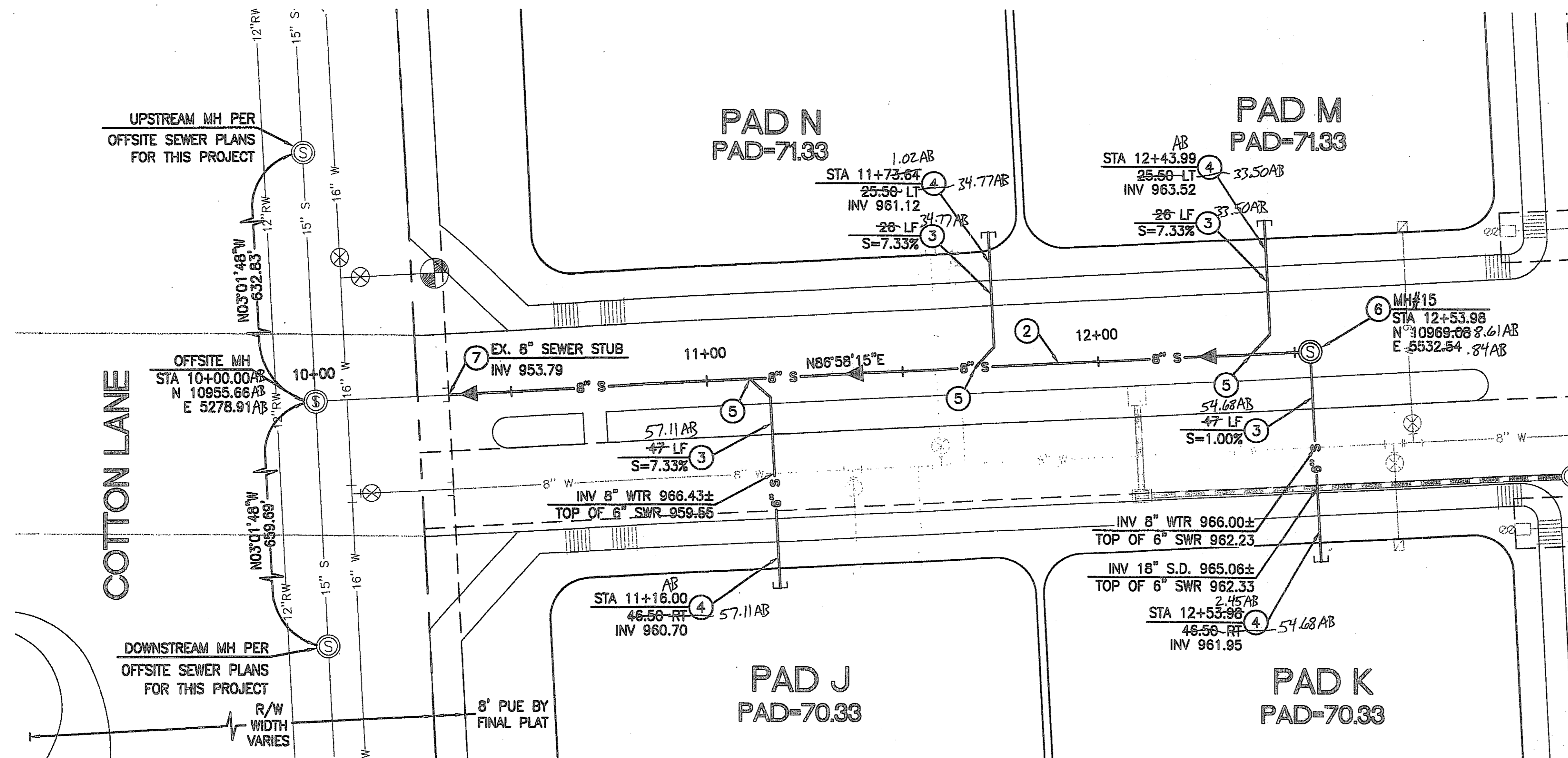


OPTIMUS
 CIVIL DESIGN GROUP
 2328 E. MAGNOLIA STREET
 SUITE 107
 PHOENIX, AZ 85032
 PH: (602) 266-9200

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039
 DRAWING NO:

S-4
 7 OF 38

HIE #07-1192

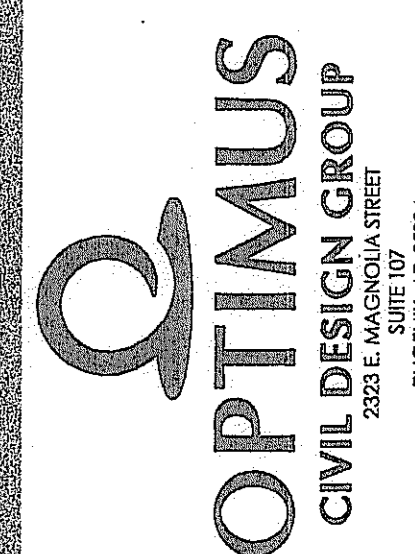


CONSTRUCTION NOTES

1. INSTALL 4' DIAMETER CONCRETE MANHOLE WITH 24" FRAME AND COVER PER MAG STD. DTL. 420-1, 420-2, AND 422.
2. INSTALL 8" SDR-35 P.V.C. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
3. INSTALL 6" SDR-35 P.V.C. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
4. INSTALL SEWER PLUG PER MAG STD. DTL. 427.
5. INSTALL 6" SDR-35 P.V.C. SEWER BUILDING CONNECTION PER MAG STD. DTL. 440-1, TYPE "A"
6. INSTALL 5' DIAMETER CONCRETE MANHOLE WITH 30" FRAME AND COVER PER MAG STD. DTL. 420-1, 420-2, AND 422.
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8. INSTALL SEWER CLEANOUT PER MAG STD. DTL. 441.
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**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



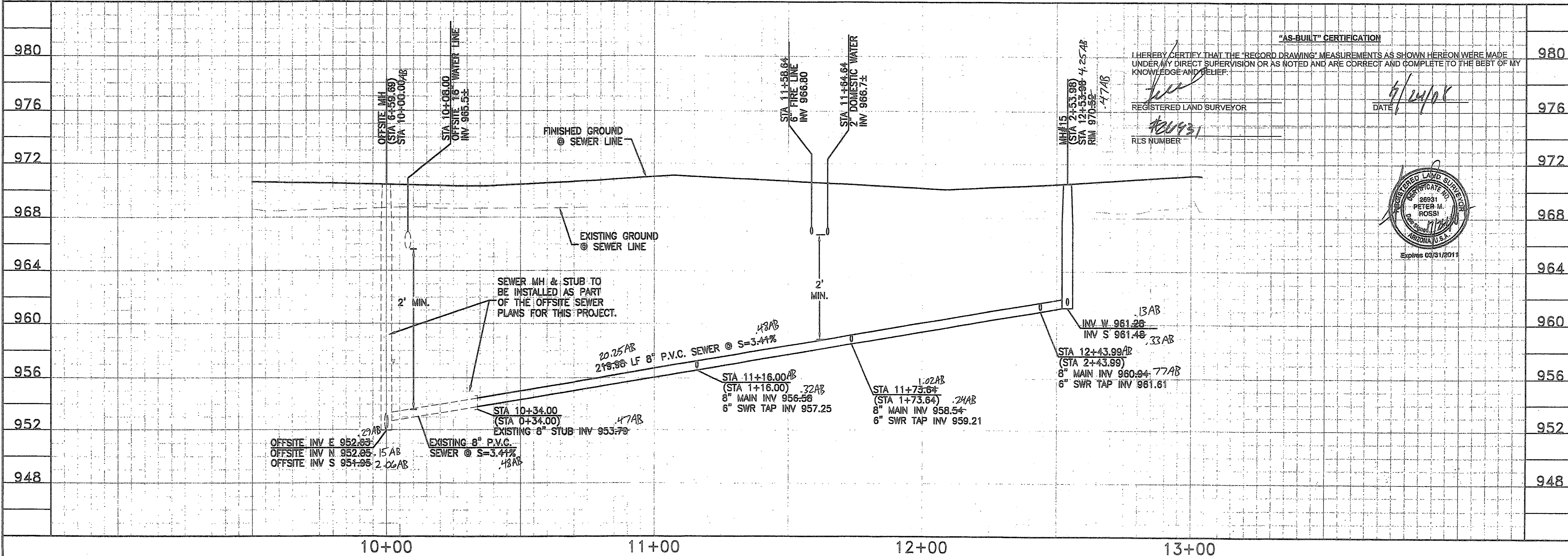
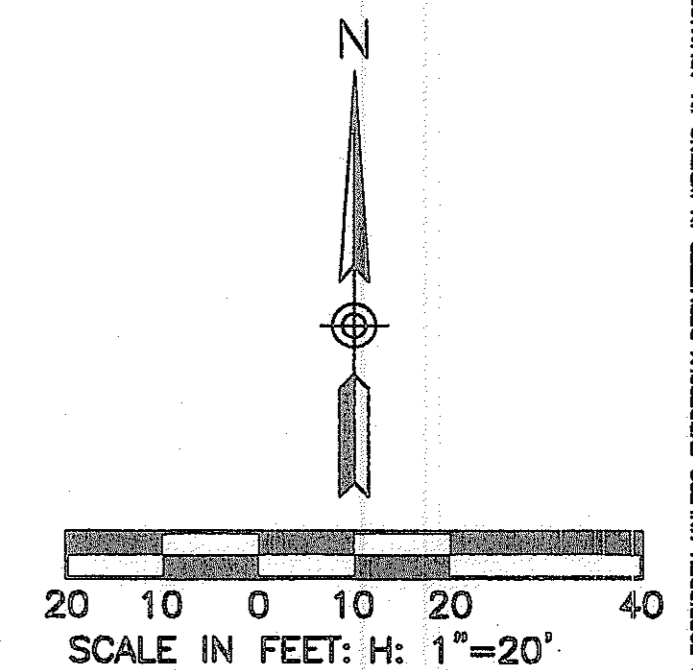
DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

DRAWING NO
S-5
8 OF 36

PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

STATION NOTE:
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DEEP SEWER NOTE:
CLASS 'B' BEDDING REQUIRED ON ALL PIPES DEEPER THAN 10'.
SEE DETAIL ON SHEET S-14

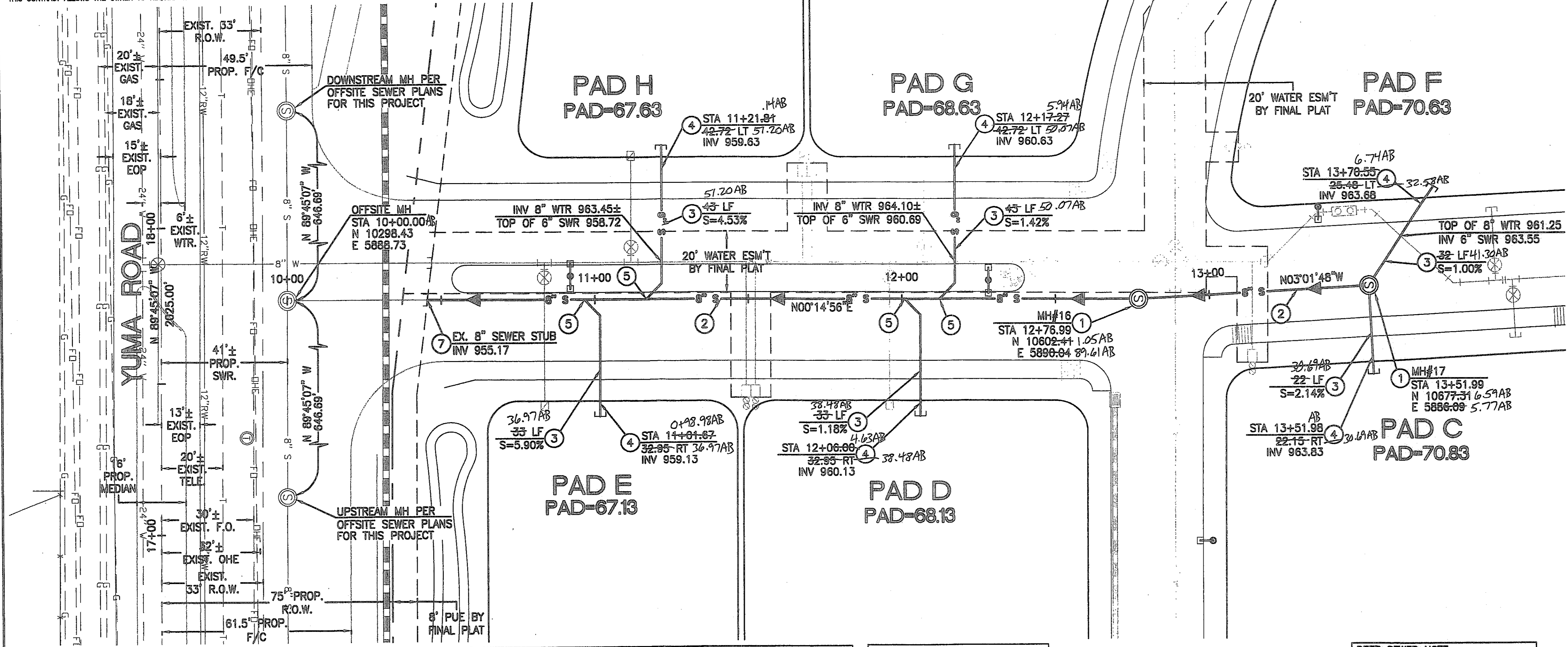


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REGISTERED LAND SURVEYOR
DATE: 4/24/07
RLS NUMBER: 26681



2007-108-C3-008
THE OFFICE DAYS BEFORE YOU OR CALL FOR THE BLUE STAPLES
1-800-782-5349
BLUE STAPLE CENTER
CALL COLLECT

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

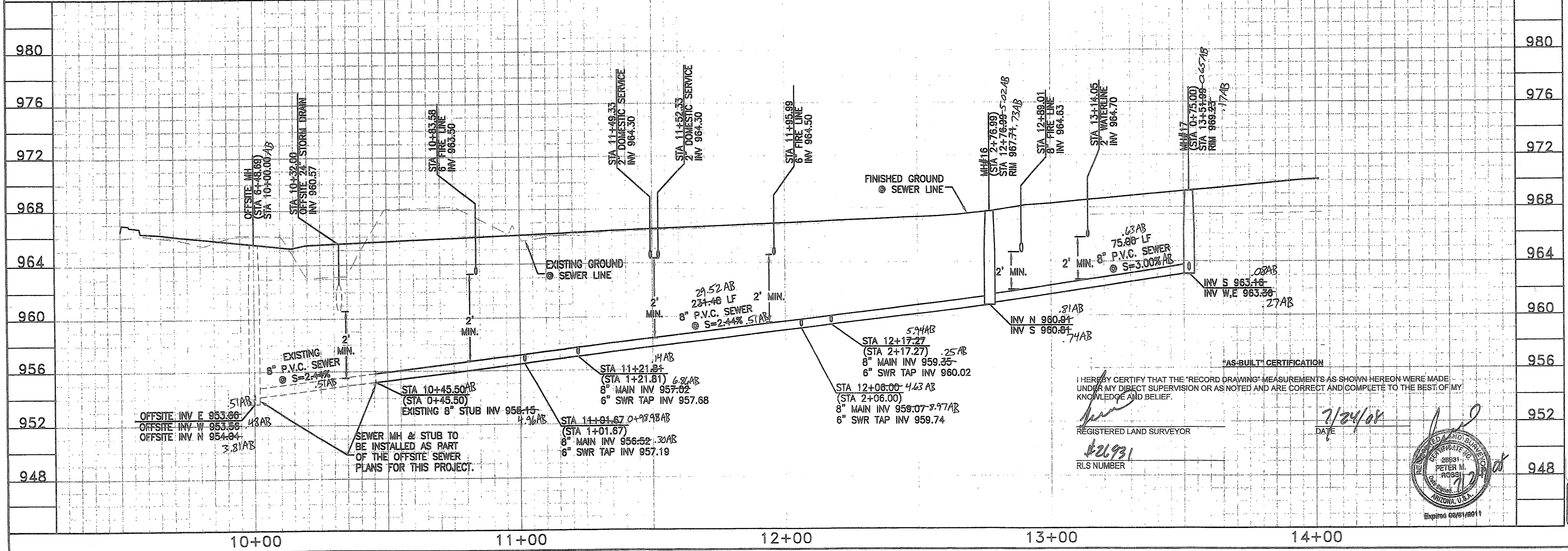
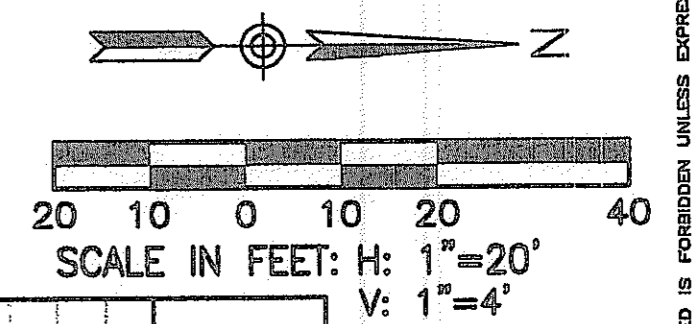


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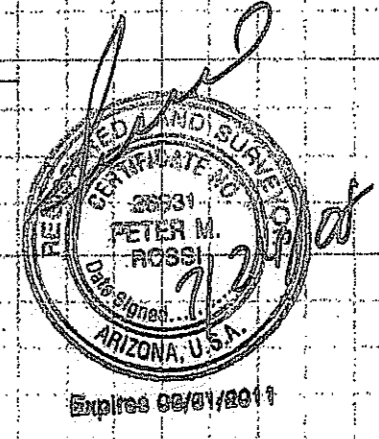
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REGISTERED LAND SURVEYOR
#26931
PETER N. RAUSCHER
PHOENIX, ARIZONA

DATE: 7/24/08



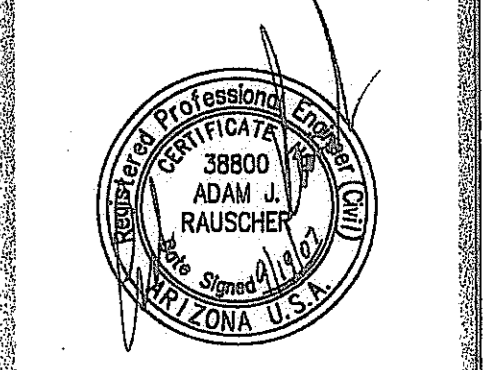
2007-108-C3-009

1-800-782-5348
BLUE STAR CENTER
CALL COLLECT

NO.	REVISION	DATE

**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



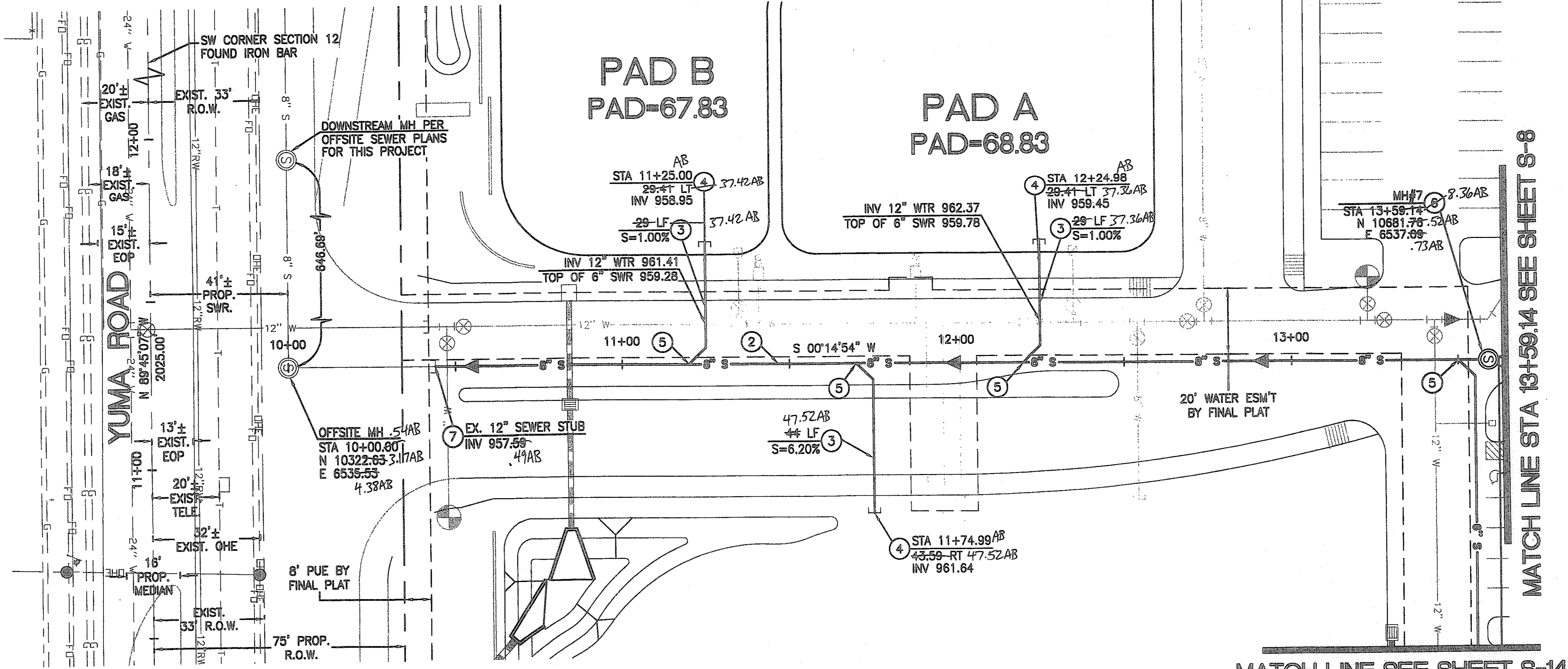
**OPTIMUS
CIVIL DESIGN GROUP**

2200 E. BUCKLEBERRY STREET
PHOENIX, AZ 85024
PH: (602) 998-8600

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

S-6
9 OF 38
FILE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEINEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.



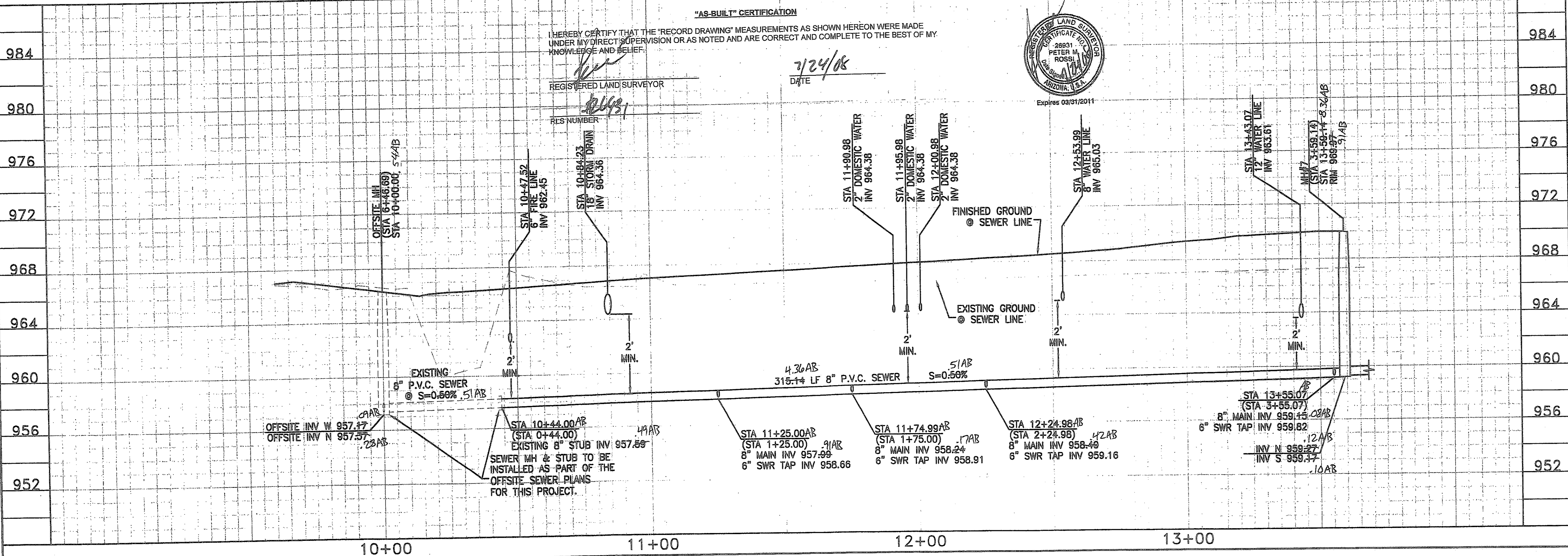
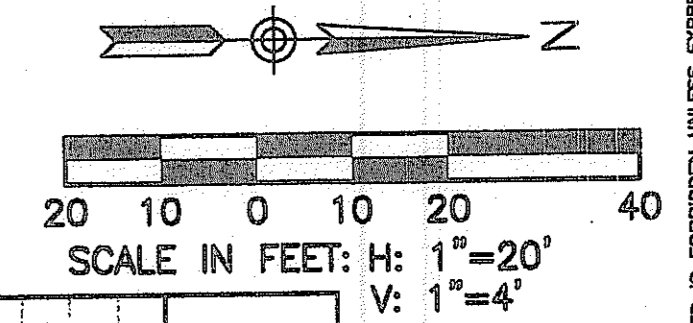
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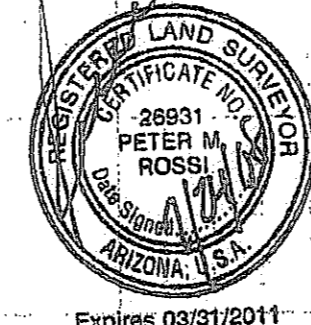
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REGISTERED LAND SURVEYOR
DATE: 7/24/08
R/S NUMBER: 26691

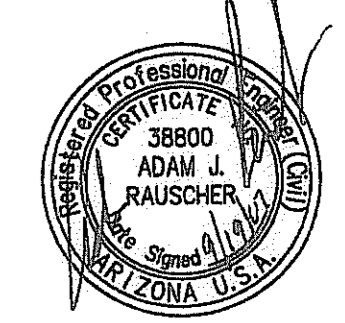


2007-108-C3-010

DO NOT REMOVE DATE BEFORE YOU OR CALL FOR THE BLUE STAMP
1-800-782-5348
BLUE STAMP CENTER
CALL COLLECT

CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



OPTIMUS
CIVIL DESIGN GROUP
2323 E. MARGUOLA STREET
PHOENIX, AZ 85024
PH: (602) 266-7300 FAX: (602) 266-7400

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

S-7

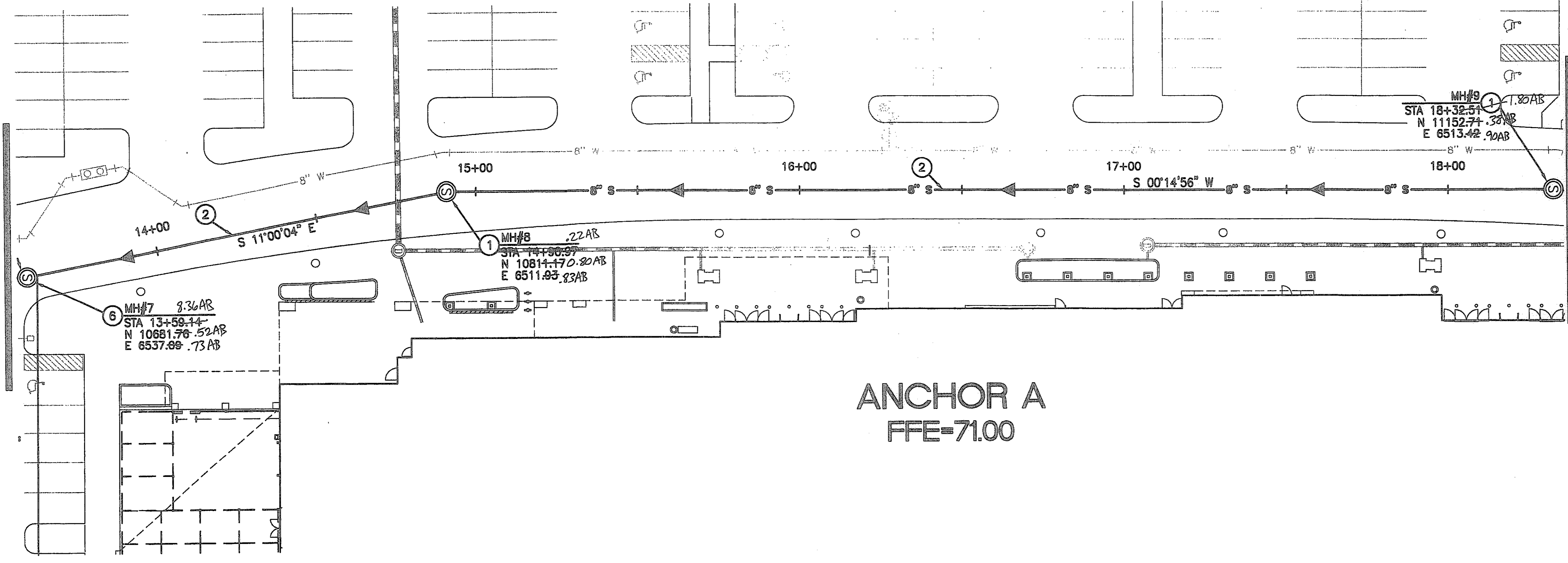
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MATCH LINE STA 13+59.14 SEE SHEET S-7

MATCH LINE STA 18+32.51 SEE SHEET S-9

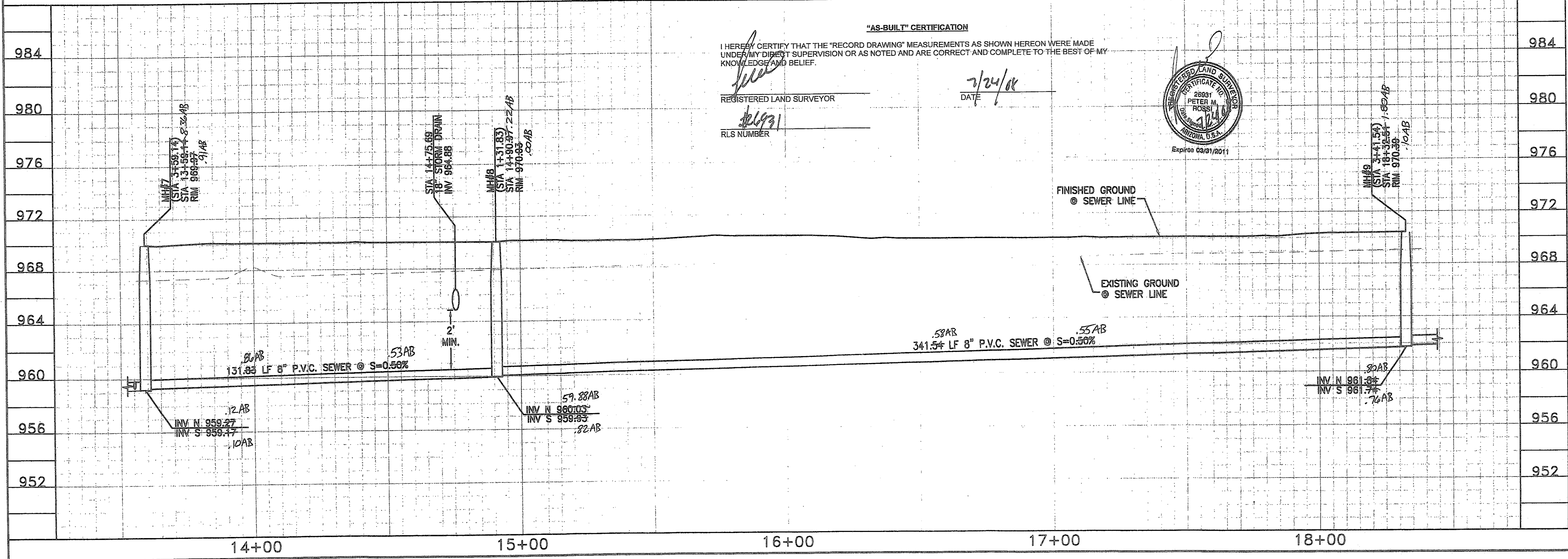
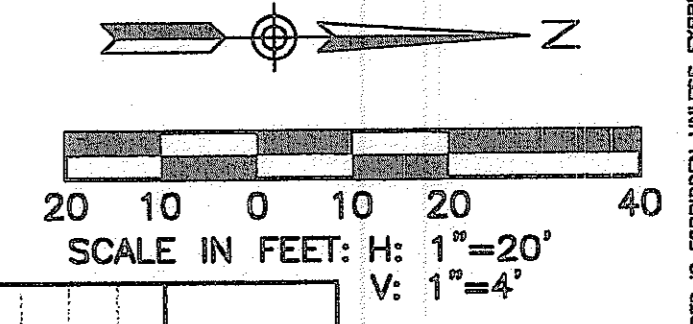


ANCHOR A
FFE=71.00

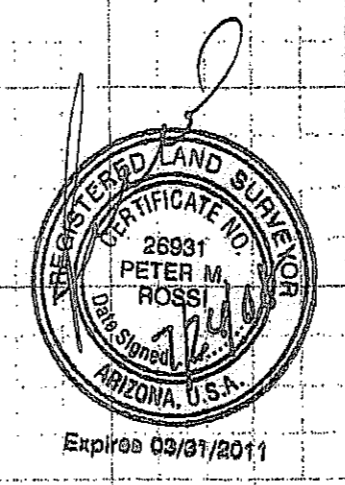
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REGISTERED LAND SURVEYOR
DATE: 7/24/08
RLS NUMBER: 26691



NO.	REVISION	DATE

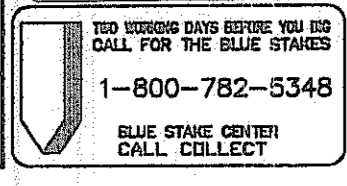
CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



OPTIMUS
CIVIL DESIGN GROUP
2023 E. MACDONALD STREET
PHOENIX, AZ 85034
PH: (602) 284-9300 FAX: (602) 284-9400

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

2007-108-C3-011

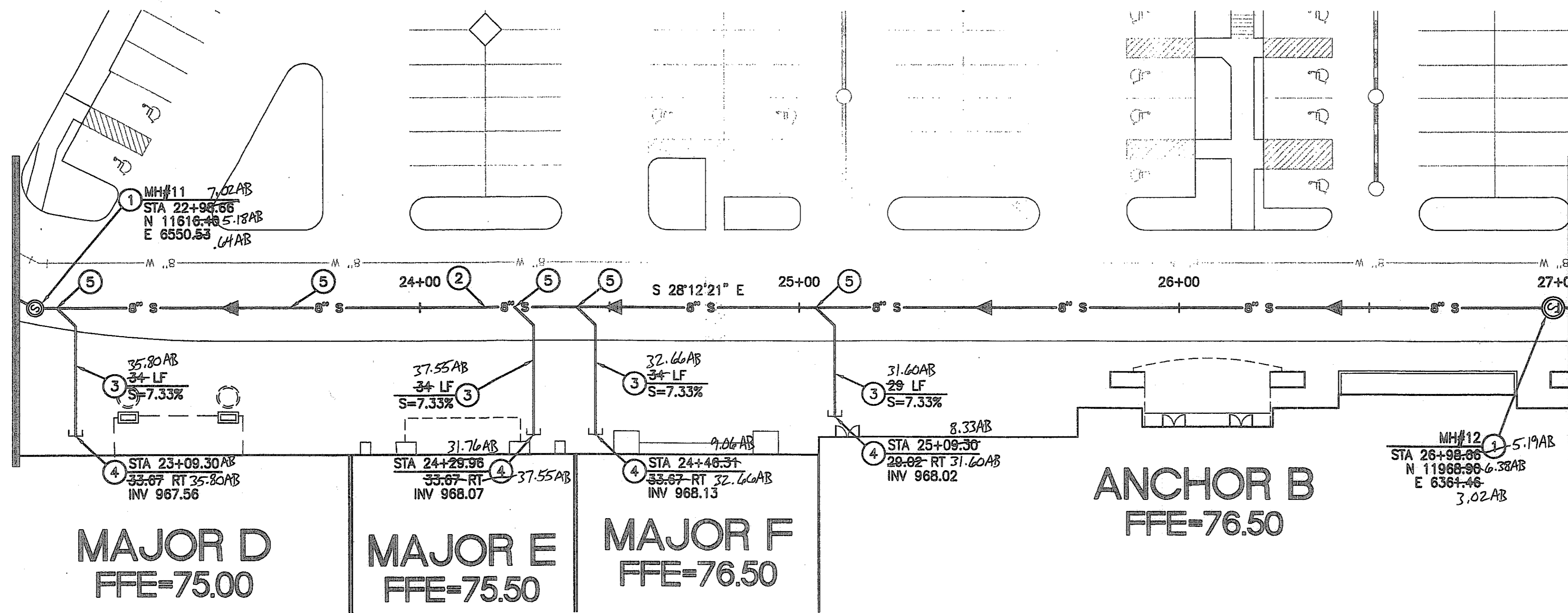


S-8

11 of 30

FILE # 07-1192

MATCH LINE STA 22+98.66 SEE SHEET S-9



MATCH LINE STA 26+98.66 SEE SHEET S-11

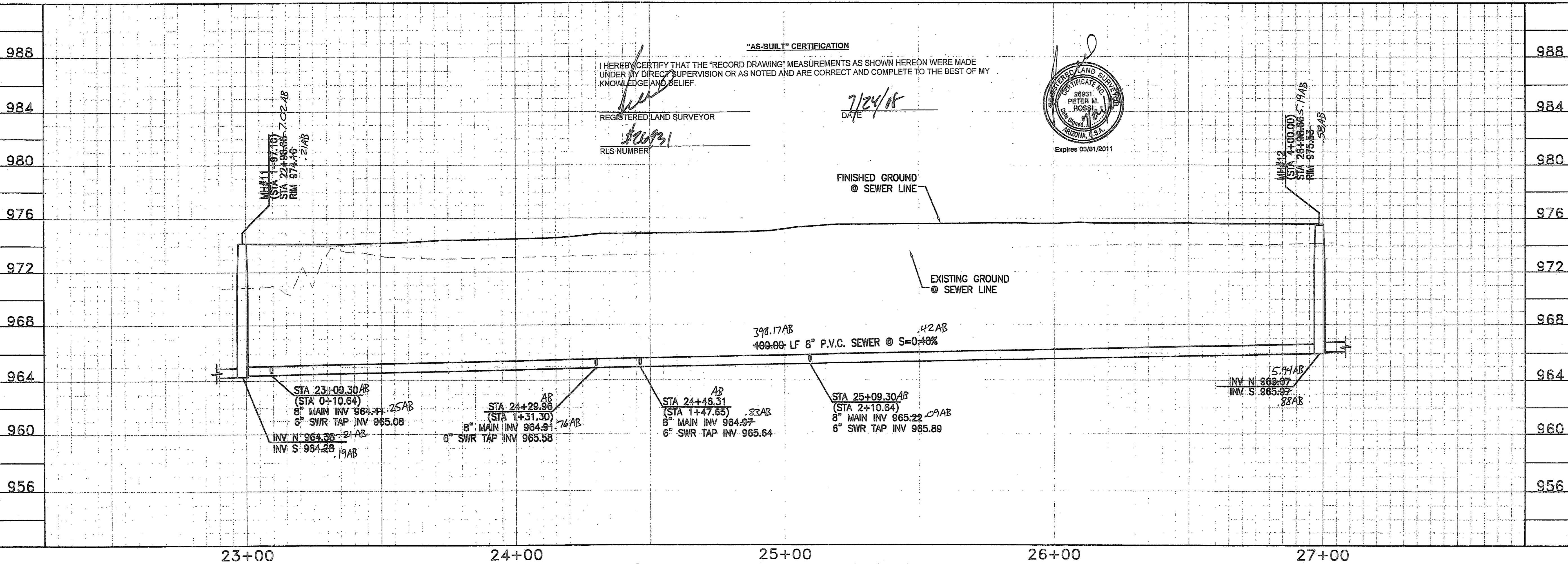
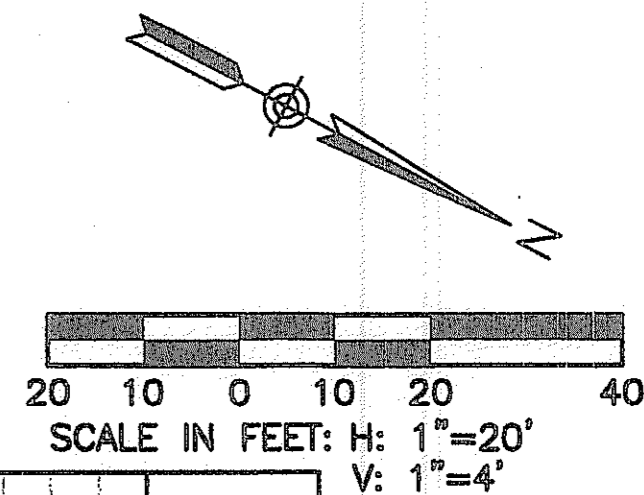
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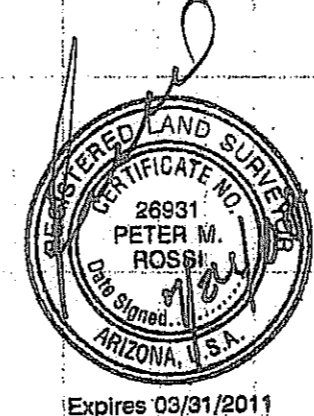
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REGISTERED LAND SURVEYOR: [Signature]
DATE: 7/24/18
RLS NUMBER: [Signature]



**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

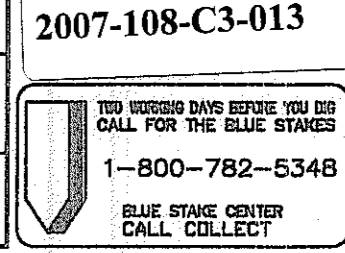
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



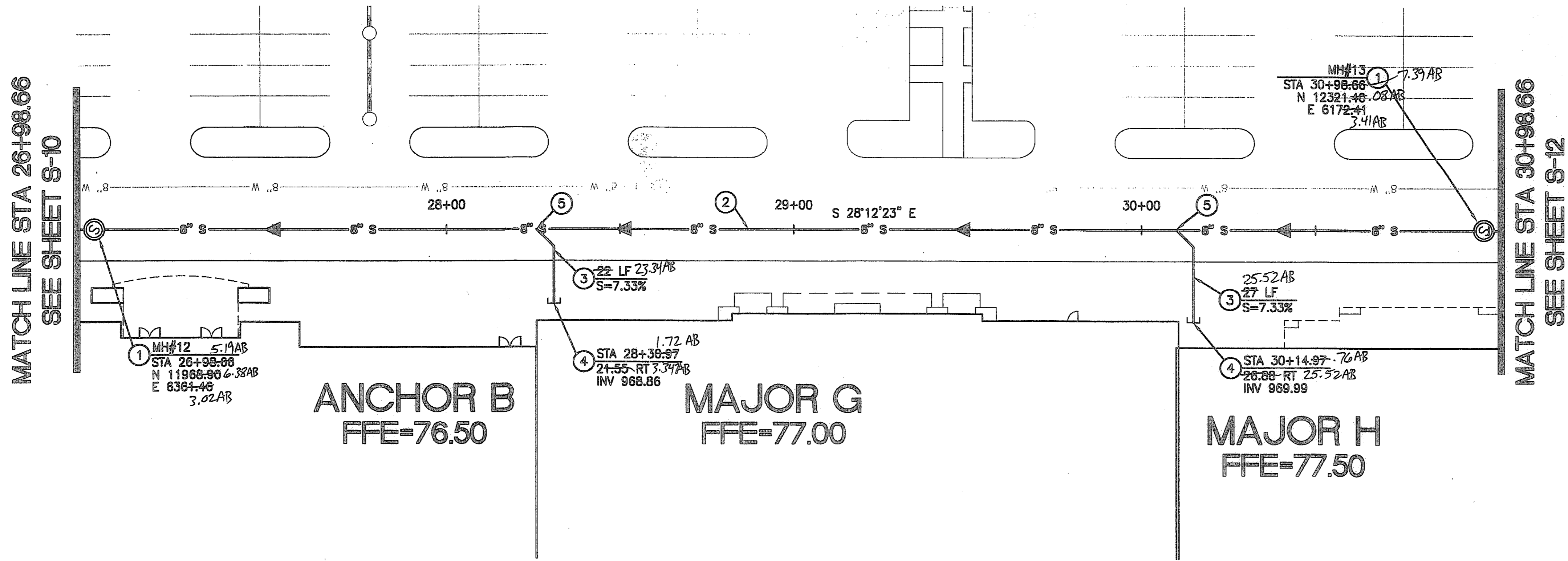
OPTIMUS
CIVIL DESIGN GROUP
2329 E. MAGNOLIA STREET
PHOENIX, AZ 85034
PH: (602) 284-9200

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

S-10
13 OF 30
FILE # 07-1192



USE OF THIS INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS INTENDED AND FOR OTHER THAN THE CLIENT FOR WHOM IT WAS PREPARED IS FORBIDDEN UNLESS EXPRESSLY PERMITTED IN WRITING BY OPTIMUS CIVIL DESIGN GROUP. OPTIMUS CIVIL DESIGN GROUP SHALL HAVE NO LIABILITY TO ANY USER OF THIS INFORMATION WITHOUT THEIR WRITTEN CONSENT.



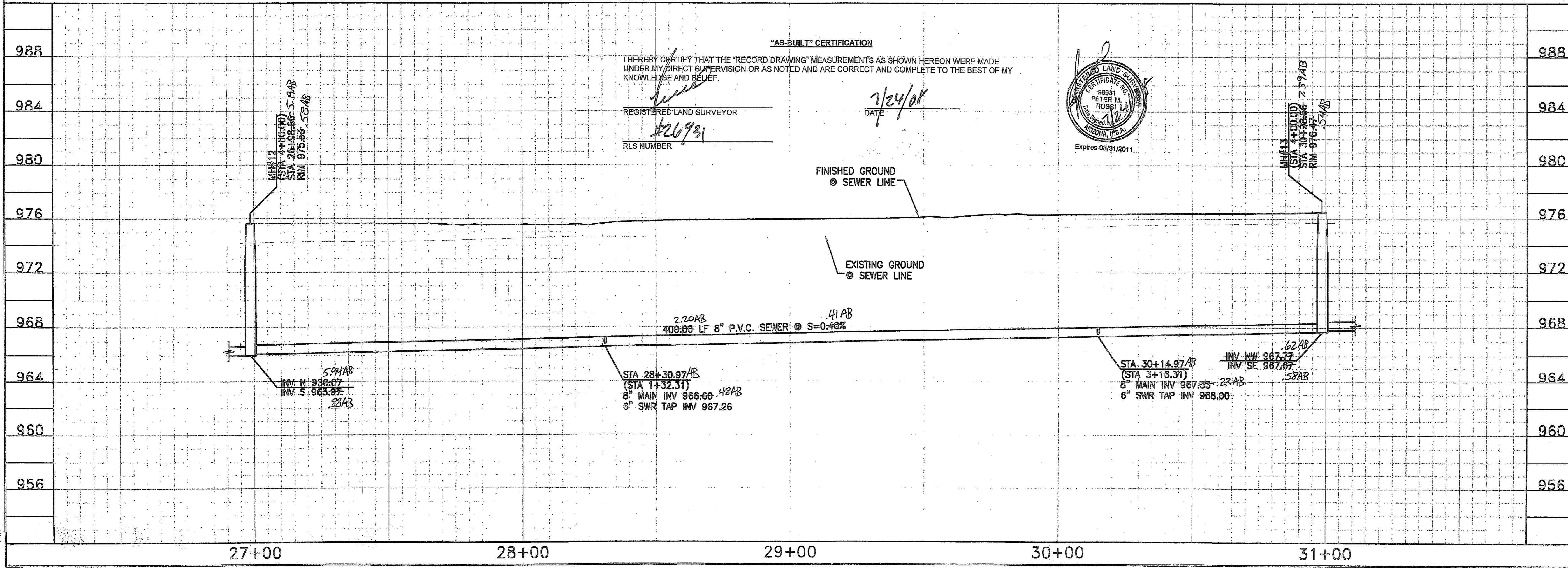
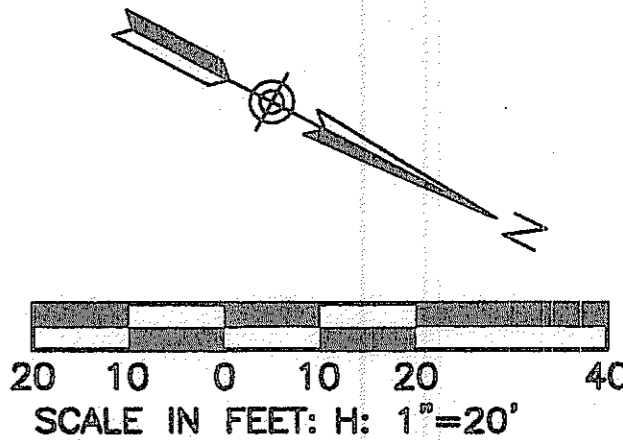
CONSTRUCTION NOTES

- 1 INSTALL 4" DIAMETER CONCRETE MANHOLE WITH 24" FRAME AND COVER PER MAG STD. DTLS. 420-1, 420-2, AND 422.
- 2 INSTALL 8" SDR-35 P.V.C. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 3 INSTALL 6" SDR-35 P.V.C. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 4 INSTALL SEWER PLUG PER MAG STD. DTL 427.
- 5 INSTALL 6" SDR-35 P.V.C. SEWER BUILDING CONNECTION PER MAG STD. DTL 440-1, TYPE "A"
- 6 INSTALL 5" DIAMETER CONCRETE MANHOLE WITH 30" FRAME AND COVER PER MAG STD. DTLS. 420-1, 420-2, AND 422.
- 7 CONNECT TO EXISTING SEWER STUB, SIZE AS NOTED, ON OFFSITE SEWER PLANS FOR THIS PROJECT. CAP END OF SEWER IF OFFSITE SEWER HAS NOT BEEN INSTALLED AT TIME OF CONSTRUCTION. CONTRACTOR TO FIELD LOCATE EXISTING STUB PRIOR TO TRENCHING AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 8 INSTALL SEWER CLEANOUT PER MAG STD. DTL 441.
- 9 INSTALL 8" CLASS 200 MIN. MECHANICAL JOINT D.I.P. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 10 INSTALL 6" CLASS 200 MIN. MECHANICAL JOINT D.I.P. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 11 INSTALL 6" D.I.P. SEWER BUILDING CONNECTION PER MAG STD. DTL 440-1, TYPE "A"

PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

STATION NOTE:
ALL STATIONS SHOWN IN PARENTHESIS ARE REFERENCED FROM THE DOWNSTREAM MANHOLE.

DEEP SEWER NOTE:
CLASS "B" BEDDING REQUIRED ON ALL PIPES DEEPER THAN 10".
SEE DETAIL ON SHEET S-14



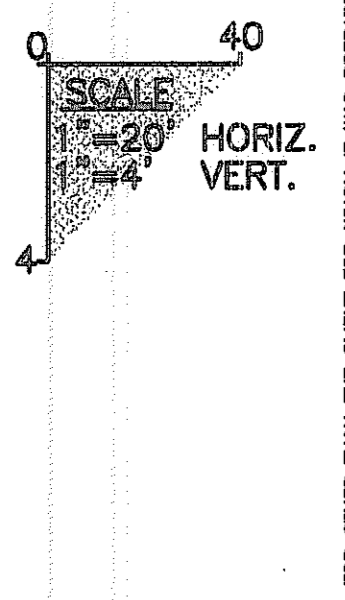
"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR

DATE: 7/24/08

RLS NUMBER: #26931



**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST.# 750
PHOENIX, AZ 85016

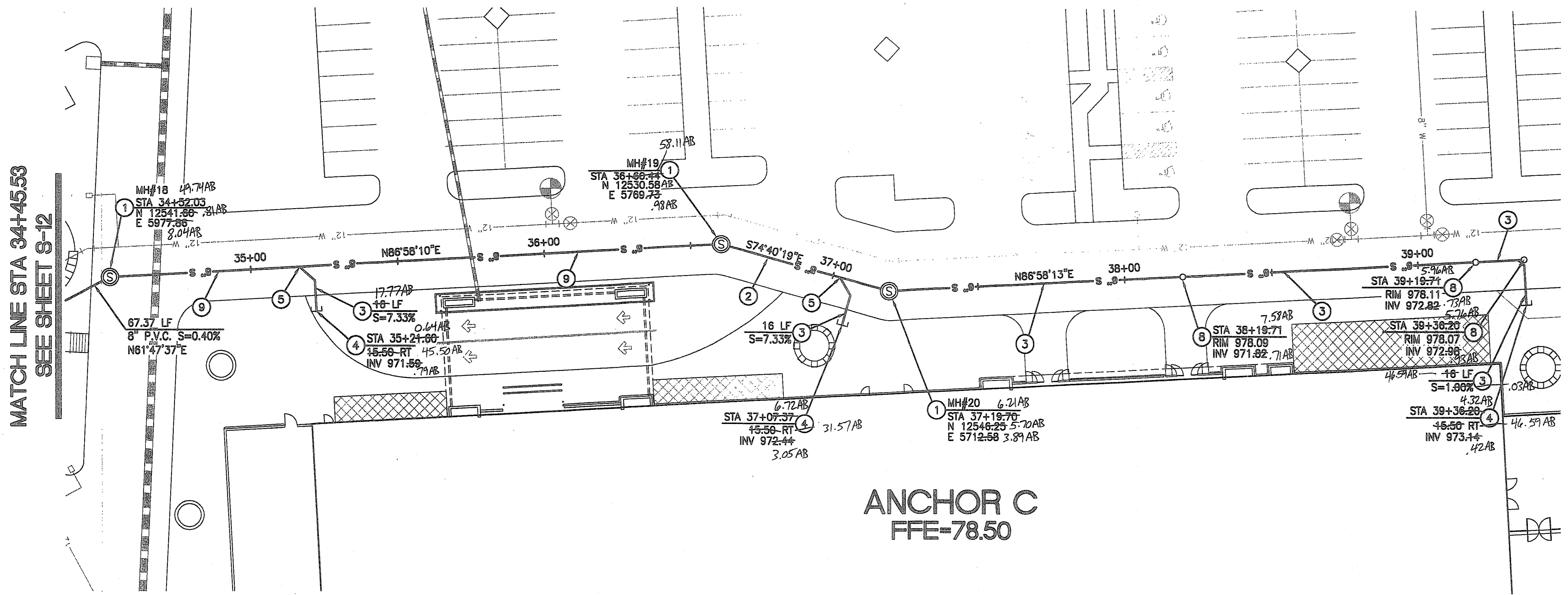


DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

2007-108-C3-014



S-11



MATCH LINE STA 34+45.53
SEE SHEET S-12

**ANCHOR C
FFE-78.50**

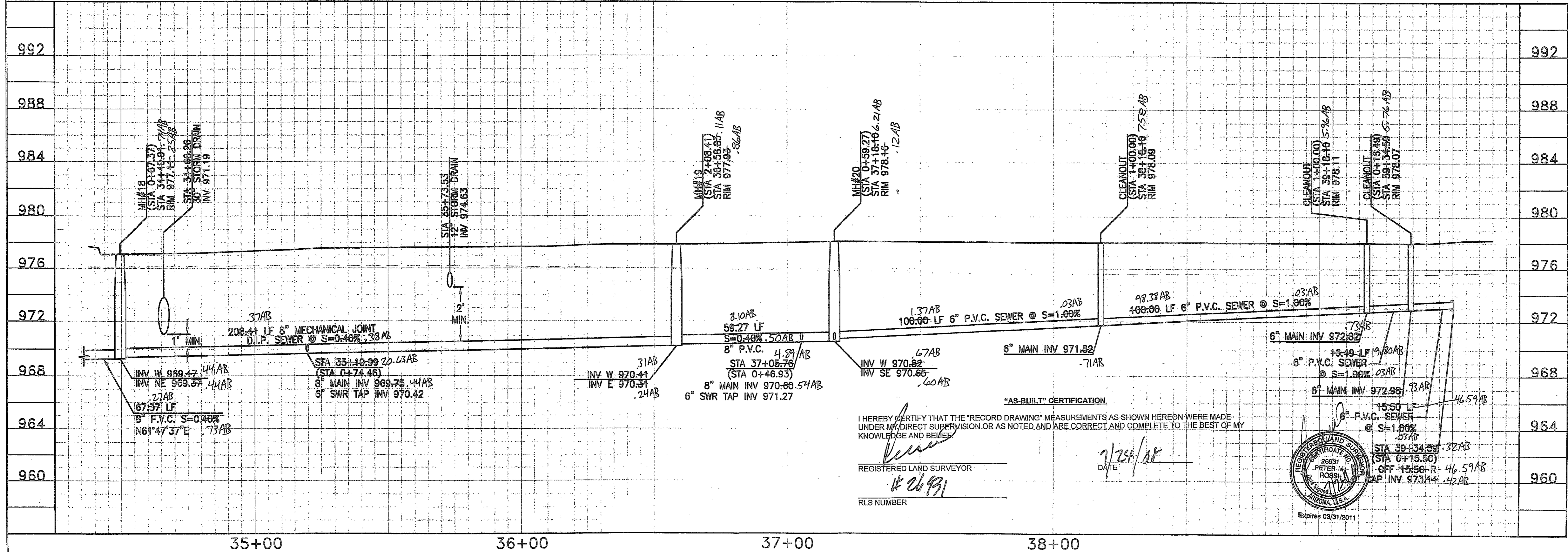
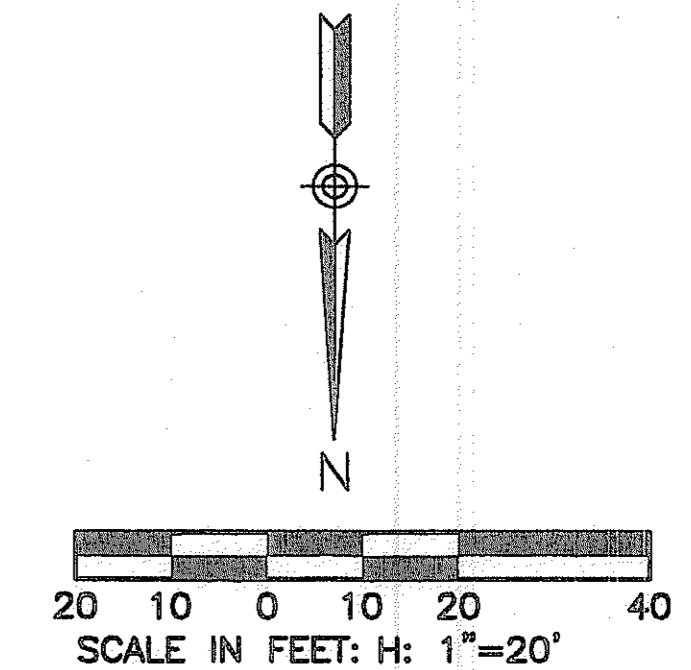
PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

STATION NOTE:
ALL STATIONS SHOWN IN PARENTHESIS ARE REFERENCED FROM THE DOWNSTREAM MANHOLE.

DEEP SEWER NOTE:
CLASS 'B' BEDDING REQUIRED ON ALL PIPES DEEPER THAN 10'.
SEE DETAIL ON SHEET S-14

CONSTRUCTION NOTES

- 1 INSTALL 4" DIAMETER CONCRETE MANHOLE WITH 24" FRAME AND COVER PER MAG STD. DTLS. 420-1, 420-2, AND 422.
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- 3 INSTALL 6" SDR-35 P.V.C. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 4 INSTALL SEWER PLUG PER MAG STD. DTL. 427.
- 5 INSTALL 6" SDR-35 P.V.C. SEWER BUILDING CONNECTION PER MAG STD. DTL. 440-1, TYPE "A"
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- 7 CONNECT TO EXISTING SEWER STUB, SIZE AS NOTED, ON OFFSITE SEWER PLANS FOR THIS PROJECT. CAP END OF SEWER IF OFFSITE SEWER HAS NOT BEEN INSTALLED AT TIME OF CONSTRUCTION. CONTRACTOR TO FIELD LOCATE EXISTING STUB PRIOR TO TRENCHING AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
- 8 INSTALL SEWER CLEANOUT PER MAG STD. DTL. 441.
- 9 INSTALL 6" CLASS 200 MIN. MECHANICAL JOINT D.I.P. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 10 INSTALL 6" CLASS 200 MIN. MECHANICAL JOINT D.I.P. SEWER LINE. SEE PROFILE FOR LENGTH AND SLOPE.
- 11 INSTALL 6" D.I.P. SEWER BUILDING CONNECTION PER MAG STD. DTL. 440-1, TYPE "A"

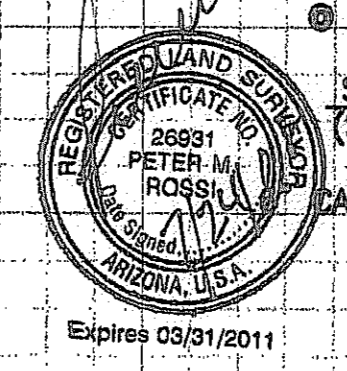


"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED, AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
#26491

DATE: 7/24/08

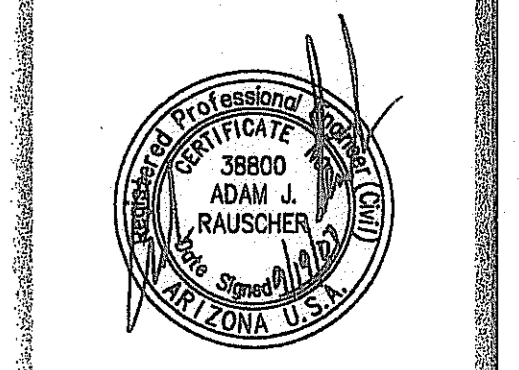


2007-108-C3-016

DO NOT REMOVE AND IF YOU DO CALL FOR THE BLUE STAMPED 1-800-782-5348 BLUE STAMP CENTER CALL COLLECT

NO.	REVISION	DATE

**CANYON TRAILS TOWNE CENTER
ONSITE PRIVATE SEWER PLAN**
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016



**OPTIMUS
CIVIL DESIGN GROUP**

2332 E. MAGNOLIA STREET
PHOENIX, AZ 85034
PH: (602) 288-9300 FAX: (602) 288-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039
 DRAWING NO.

S-13

16 of 38

FILE # 07-1192

PRIVATE & PUBLIC FIRE AND WATER NOTES

- 1 INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
- 2 INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
- 3 INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
- 4 RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
- 5 INSTALL TEE. SIZE AS NOTED.
- 6 INSTALL BEND. SIZE AND ANGLE AS NOTED.
- 7 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 8 INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
- 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
- 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357.
- 11 INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL. G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357.
- 12 INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
- 13 INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
- 14 FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION, SEE OFFSITE WATERLINE PLANS (PLANS FOR THIS PROJECT UNDER SEPARATE CONTRACT).
- 15 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 16 INSTALL TAPPED CAP WITH 2" I.P. CURB STOP, NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
- 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P. IF APPLICABLE - CLASS 200 MINIMUM.
- 18 INSTALL 12" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
- 19 INSTALL REDUCER. SIZE AS NOTED.
- 20 INSTALL CROSS. SIZE AS NOTED.
- 21 CONSTRUCT CONCRETE ENCASEMENT PER M.A.G. STD. DTL. 401-4 & 404-2.
- 22 DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2' MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
- 23 DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
- 24 MAINTAIN 2' MIN. SEPARATION OR PROVIDE EXTRA PROTECTION PER M.A.G. STD. DTL. 404.
- 25 INSTALL AIR RELEASE VALVE PER C.O.G. STD. DTL. G-3328.

NOTES:
 WATERLINES 6" AND SMALLER SHALL HAVE A MINIMUM OF 36" OF COVER. WATERLINES 12" AND LARGER SHALL HAVE A MINIMUM OF 48" OF COVER.
 DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.
 ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER.

PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

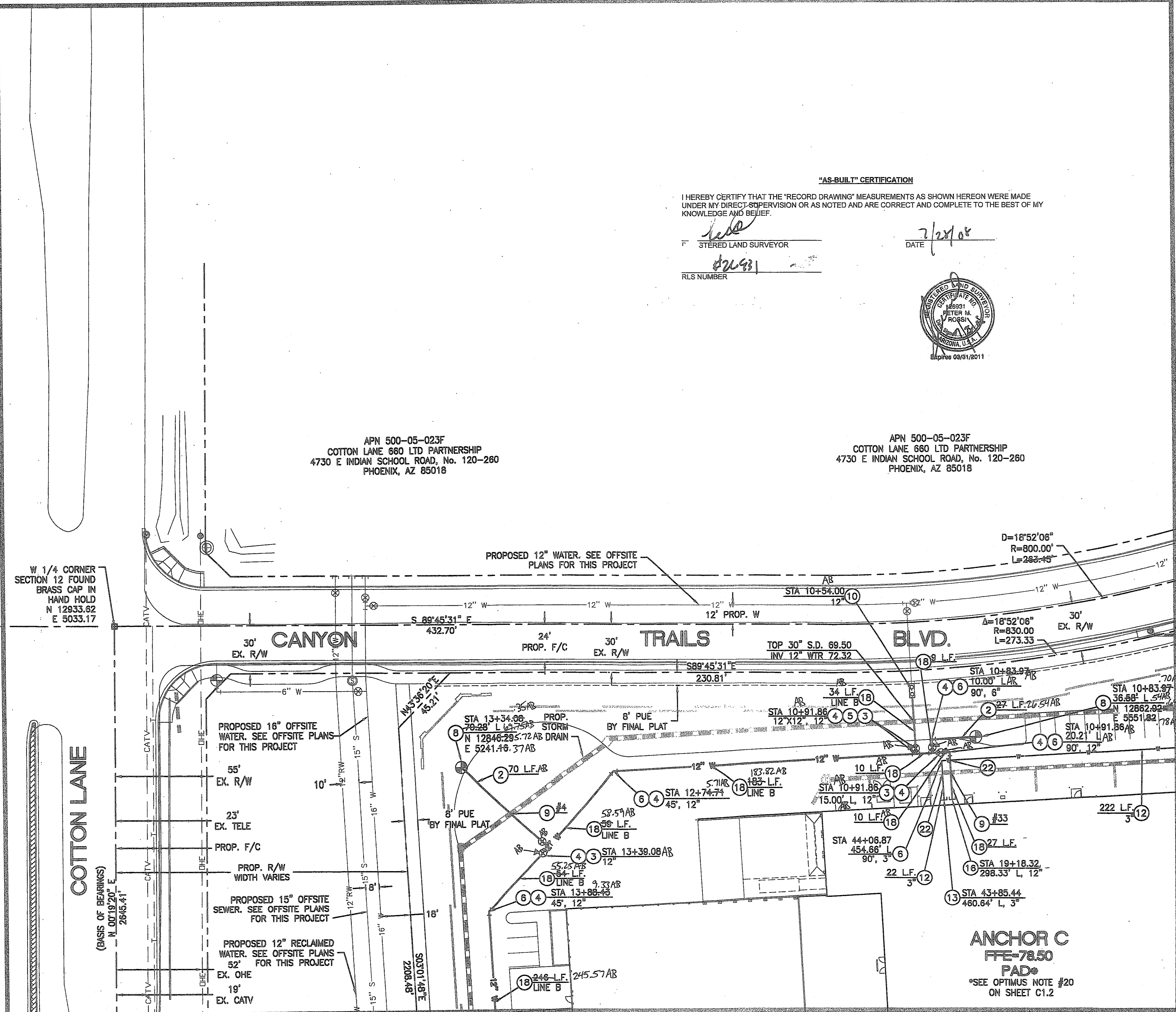
"AS-BUILT" CERTIFICATION
 I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

STEREOD LAND SURVEYOR
 DATE 7/21/08
 RLS NUMBER 426431



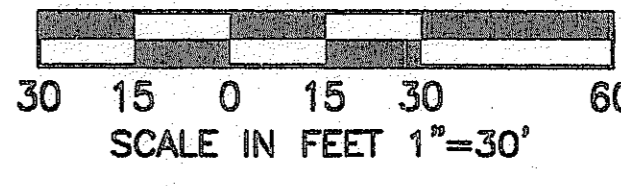
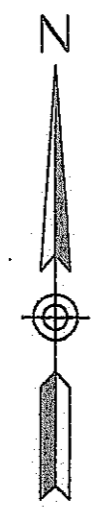
APN 500-05-023F
 COTTON LANE 660 LTD PARTNERSHIP
 4730 E INDIAN SCHOOL ROAD, No. 120-260
 PHOENIX, AZ 85018

APN 500-05-023F
 COTTON LANE 660 LTD PARTNERSHIP
 4730 E INDIAN SCHOOL ROAD, No. 120-260
 PHOENIX, AZ 85018



MATCHLINE SEE SHEET W-2

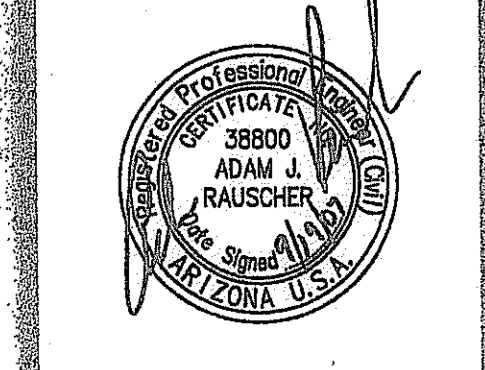
MATCHLINE SEE SHEET W-3



2007-108-C3-018



CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESPAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD., ST# 750
 PHOENIX, AZ 85016



OPTIMUS
 CIVIL DESIGN GROUP
 2023 E MAGNOLIA STREET
 SUITE 100
 PHOENIX, AZ 85034
 PH: (602) 264-9300 FAX: (602) 264-9700

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039
 DRAWING NO.

W-1
 18 OF 38

FILE # 07-1192

"AS-BUILT" CERTIFICATION

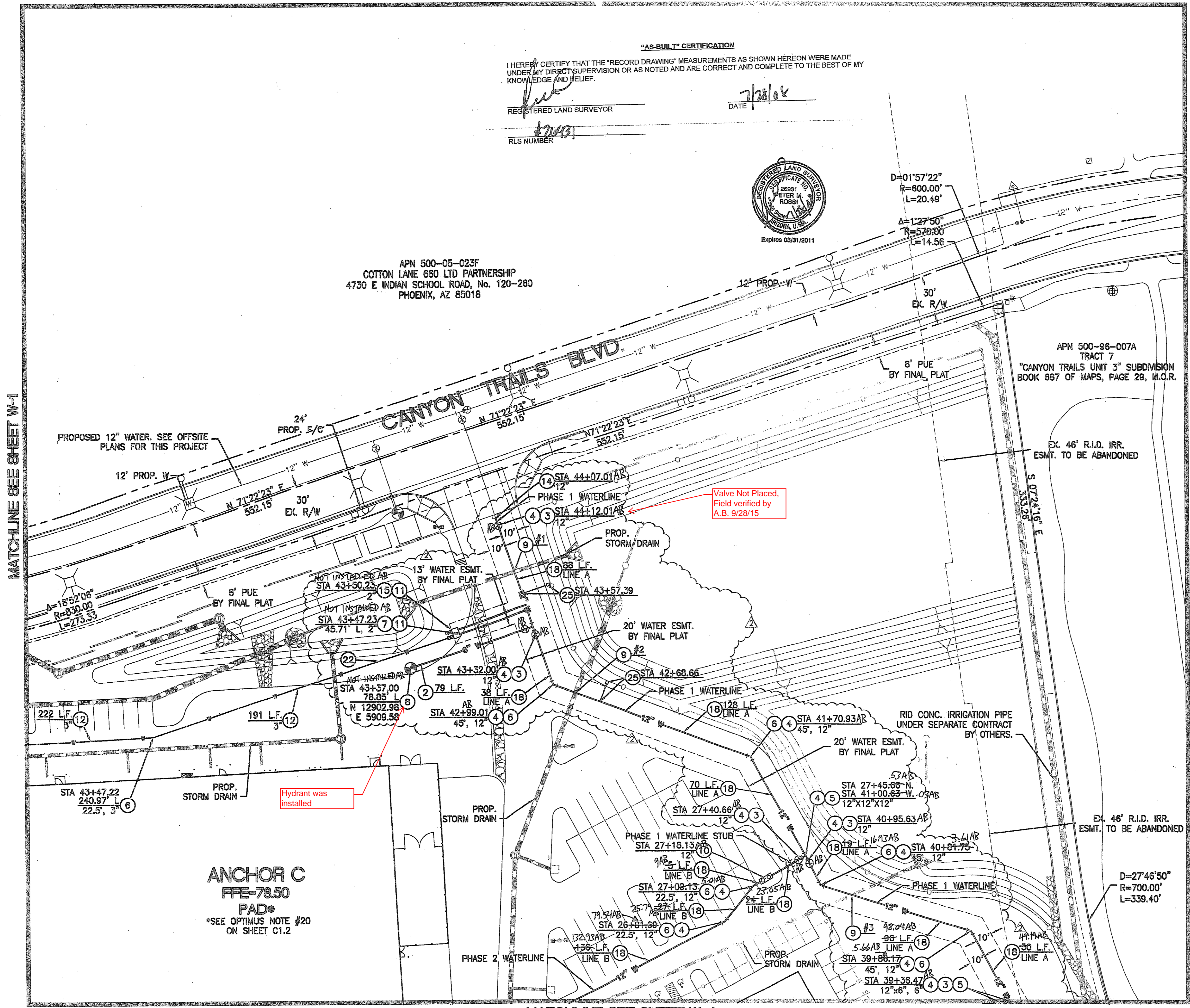
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REGISTERED LAND SURVEYOR
 DATE 7/28/04
 RLS NUMBER 171431



APN 500-05-023F
 COTTON LANE 660 LTD PARTNERSHIP
 4730 E INDIAN SCHOOL ROAD, No. 120-260
 PHOENIX, AZ 85018

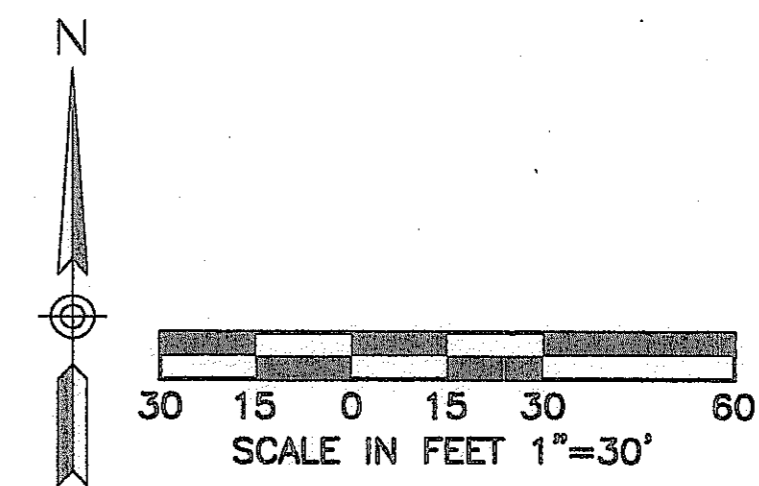
APN 500-96-007A
 TRACT 7
 "CANYON TRAILS UNIT 3" SUBDIVISION
 BOOK 687 OF MAPS, PAGE 29, M.C.R.



PRIVATE & PUBLIC FIRE AND WATER NOTES

- 1 INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
- 2 INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
- 3 INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
- 4 RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
- 5 INSTALL TEE. SIZE AS NOTED.
- 6 INSTALL BEND. SIZE AND ANGLE AS NOTED.
- 7 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 8 INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
- 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15, 16 & 17 OF THIS PLAN SET.
- 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357.
- 11 INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL. G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357.
- 12 INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
- 13 INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
- 14 FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. SEE SHEET W-21 (SHEET 3B) IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION.
- 15 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 16 INSTALL TAPPED CAP WITH 2" I.P. CURB STOP, NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
- 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P., IF APPLICABLE - CLASS 200 MINIMUM.
- 18 INSTALL 12" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
- 19 INSTALL REDUCER. SIZE AS NOTED.
- 20 INSTALL CROSS. SIZE AS NOTED.
- 21 CONSTRUCT CONCRETE ENCASUREMENT PER M.A.G. STD. DTL. 401-4 & 404-2.
- 22 DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2" MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
- 23 DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
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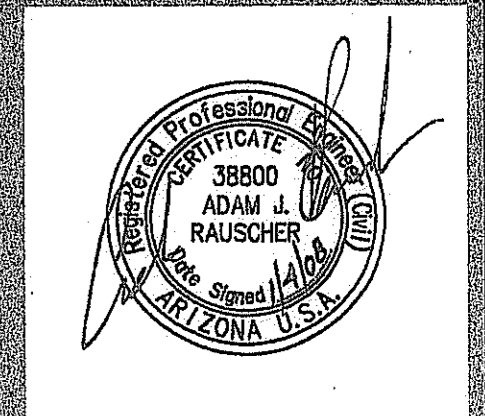


2007-108-C3-019

1-800-782-5348
 BLUE STAKE CENTER
 CALL COLLECT

NO.	REVISION	DATE
1	PHASING OF WATER PLAN (1&2)	01/04/08

CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESSTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD., ST# 750
 PHOENIX, AZ 85016



OPTIMUS
 CIVIL DESIGN GROUP
 2525 E. WILLOW STREET
 PHOENIX, AZ 85034
 PH: (602) 286-9500 FAX: (602) 286-9540

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-2
 19 OF 38
 HIE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

PRIVATE & PUBLIC FIRE AND WATER NOTES

- 1 INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
- 2 INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
- 3 INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
- 4 RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
- 5 INSTALL TEE. SIZE AS NOTED.
- 6 INSTALL BEND. SIZE AND ANGLE AS NOTED.
- 7 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 8 INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
- 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
- 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357
- 11 INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL. G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357
- 12 INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
- 13 INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
- 14 FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. SEE SHEET W-21 (SHEET 38) IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION.
- 15 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 16 INSTALL TAPPED CAP WITH 2" I.P. CURB STOP. NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
- 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P. IF APPLICABLE - CLASS 200 MINIMUM.
- 18 INSTALL 12" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
- 19 INSTALL REDUCER. SIZE AS NOTED.
- 20 INSTALL CROSS. SIZE AS NOTED.
- 21 CONSTRUCT CONCRETE ENCASEMENT PER M.A.G. STD. DTL. 401-4 & 404-2.
- 22 DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2" MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
- 23 DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
- 24 MAINTAIN 2" MIN. SEPARATION OR PROVIDE EXTRA PROTECTION PER M.A.G. STD. DTL. 404.
- 25 INSTALL AIR RELEASE VALVE PER C.O.G. STD. DTL. G-3328.

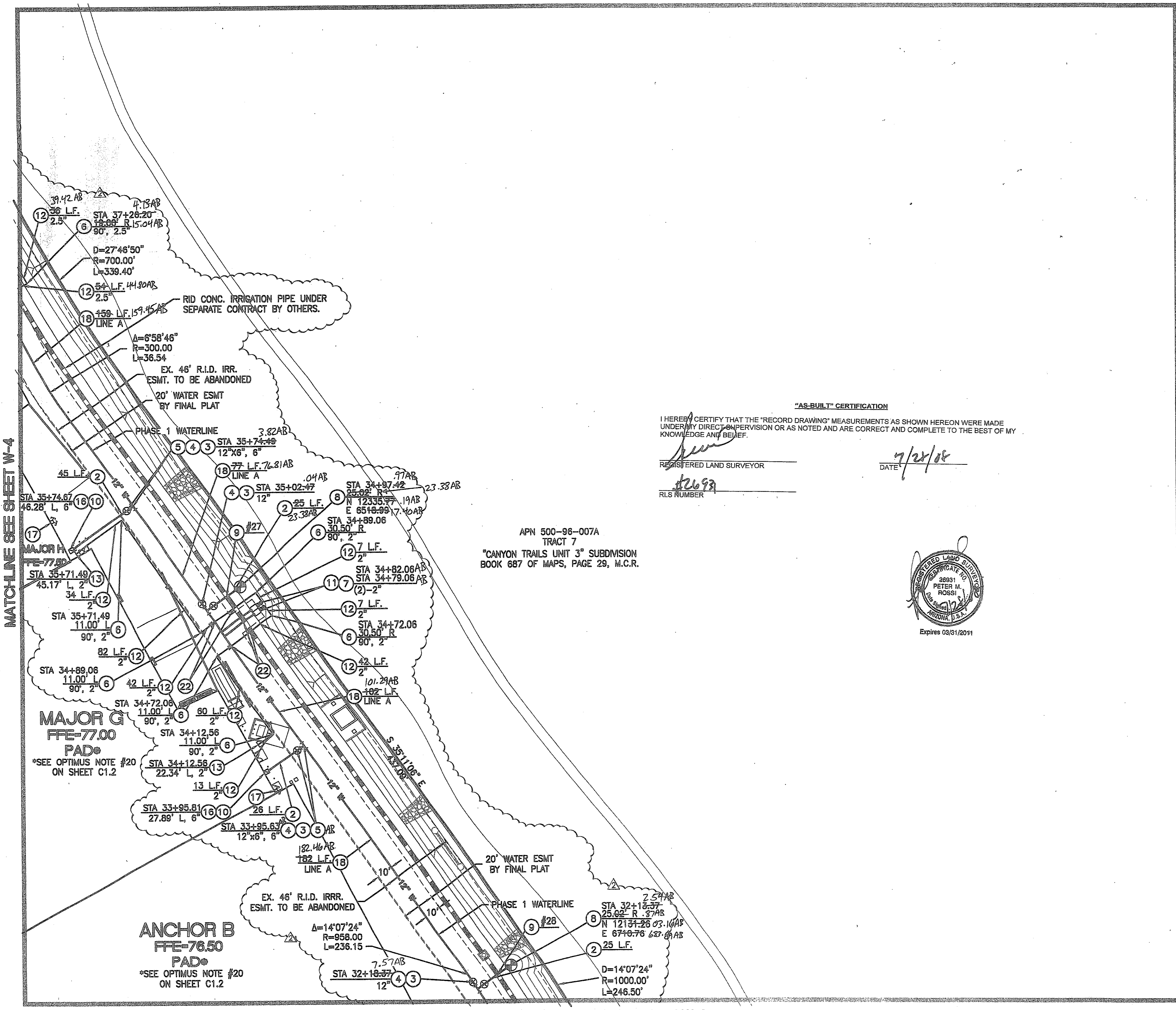
NOTES:
 WATERLINES 8" AND SMALLER SHALL HAVE A MINIMUM OF 36" OF COVER. WATERLINES 12" AND LARGER SHALL HAVE A MINIMUM OF 48" OF COVER.
 DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.
 ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER.

PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8' O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

"AS-BUILT" CERTIFICATION
 I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
 REGISTERED LAND SURVEYOR
 DATE: 7/28/08
 RLS NUMBER: 22693

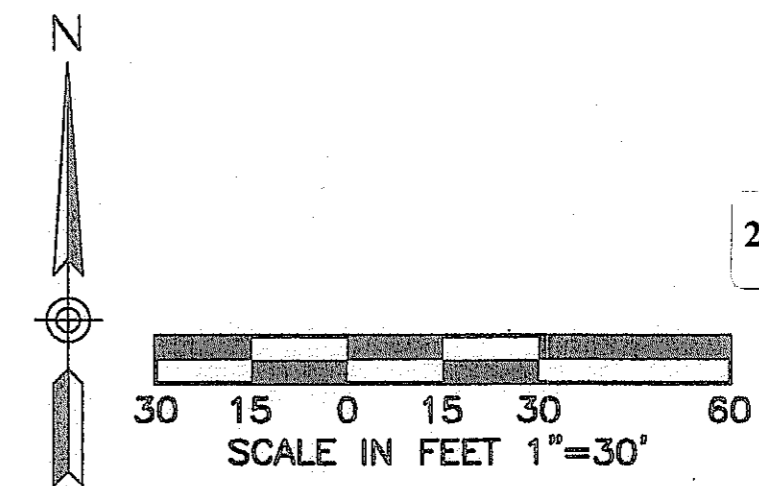


APN 500-98-007A
 TRACT 7
 "CANYON TRAILS UNIT 3" SUBDIVISION
 BOOK 687 OF MAPS, PAGE 29, M.C.R.



MATCHLINE SEE SHEET W-4

MATCHLINE SEE SHEET W-8

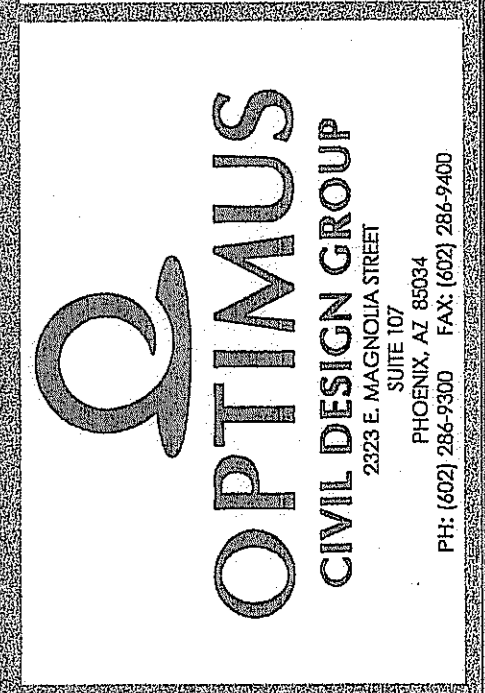


2007-108-C3-022



NO.	REVISION	DATE
A	PHASING OF WATER PLAN (1&2)	01/04/08

CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016



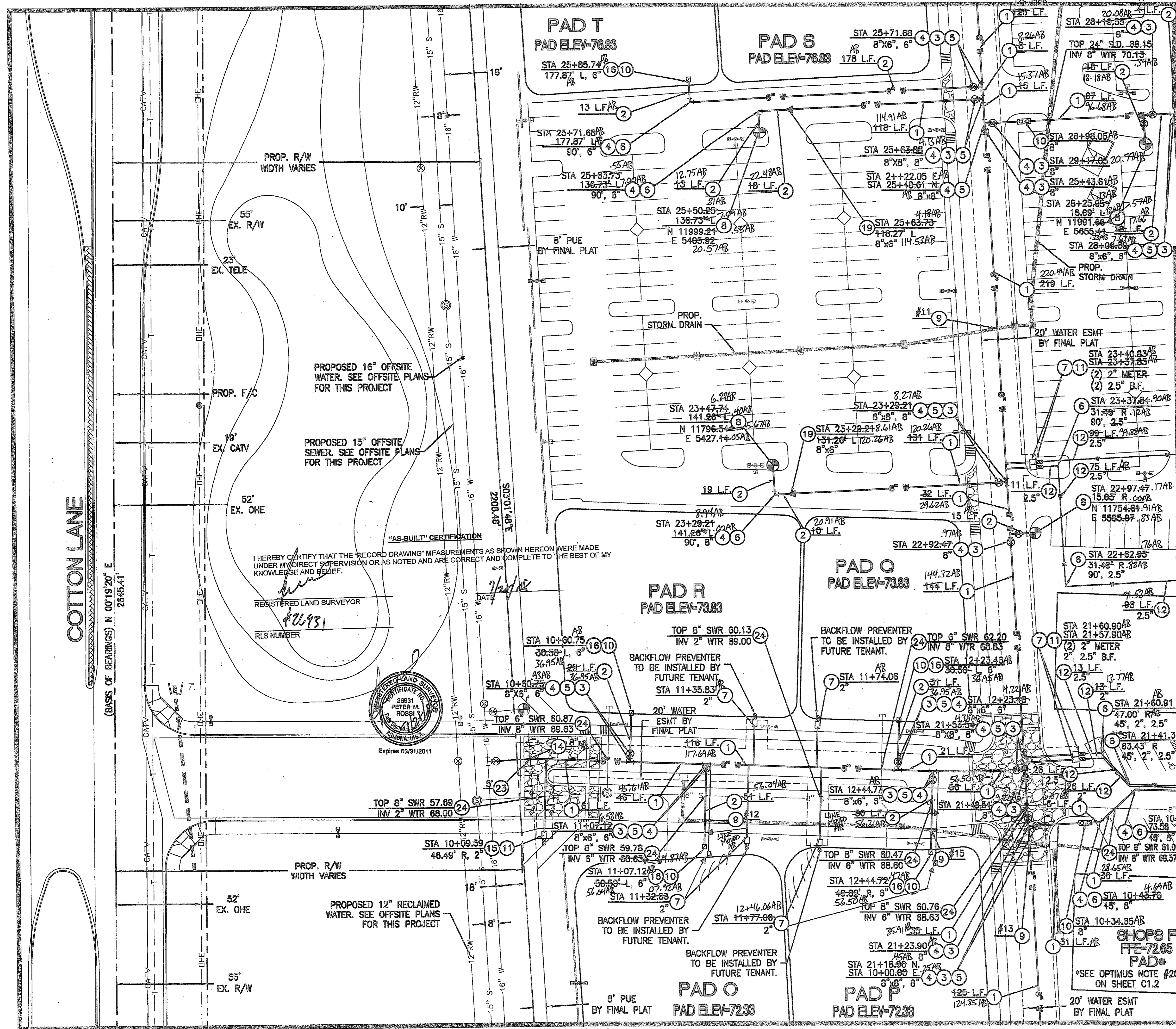
DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-5
 22 of 38

HIE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEINEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

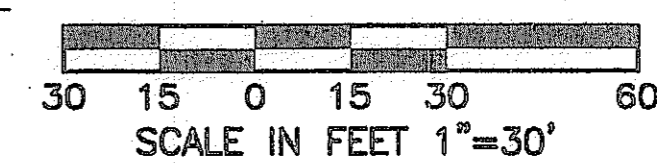
MATCHLINE SEE SHEET W-3



PRIVATE & PUBLIC FIRE AND WATER NOTES

1. INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
 2. INSTALL 8" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
 3. INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
 4. RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
 5. INSTALL TEE. SIZE AS NOTED.
 6. INSTALL BEND. SIZE AND ANGLE AS NOTED.
 7. INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
 8. INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
 9. CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15, 16 & 17 OF THIS PLAN SET.
 10. INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357.
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 13. INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
 14. FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION, SEE OFFSITE WATERLINE PLANS (PLANS FOR THIS PROJECT UNDER SEPARATE CONTRACT).
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- NOTES:
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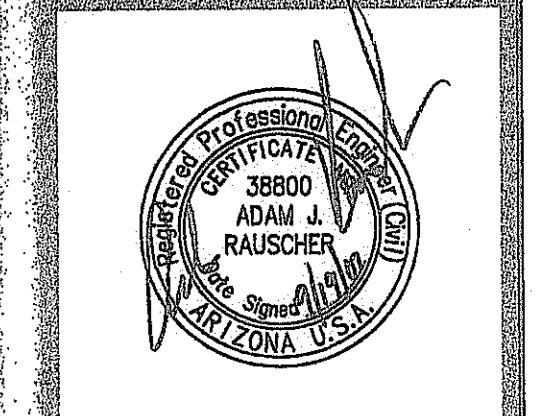


2007-108-C3-023

DO NOT REMOVE DATE BEFORE YOU USE FOR THE BLUE STAMP
 1-800-782-5348
 BLUE STAMP CENTER
 CALL COLLECT

NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
 ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016



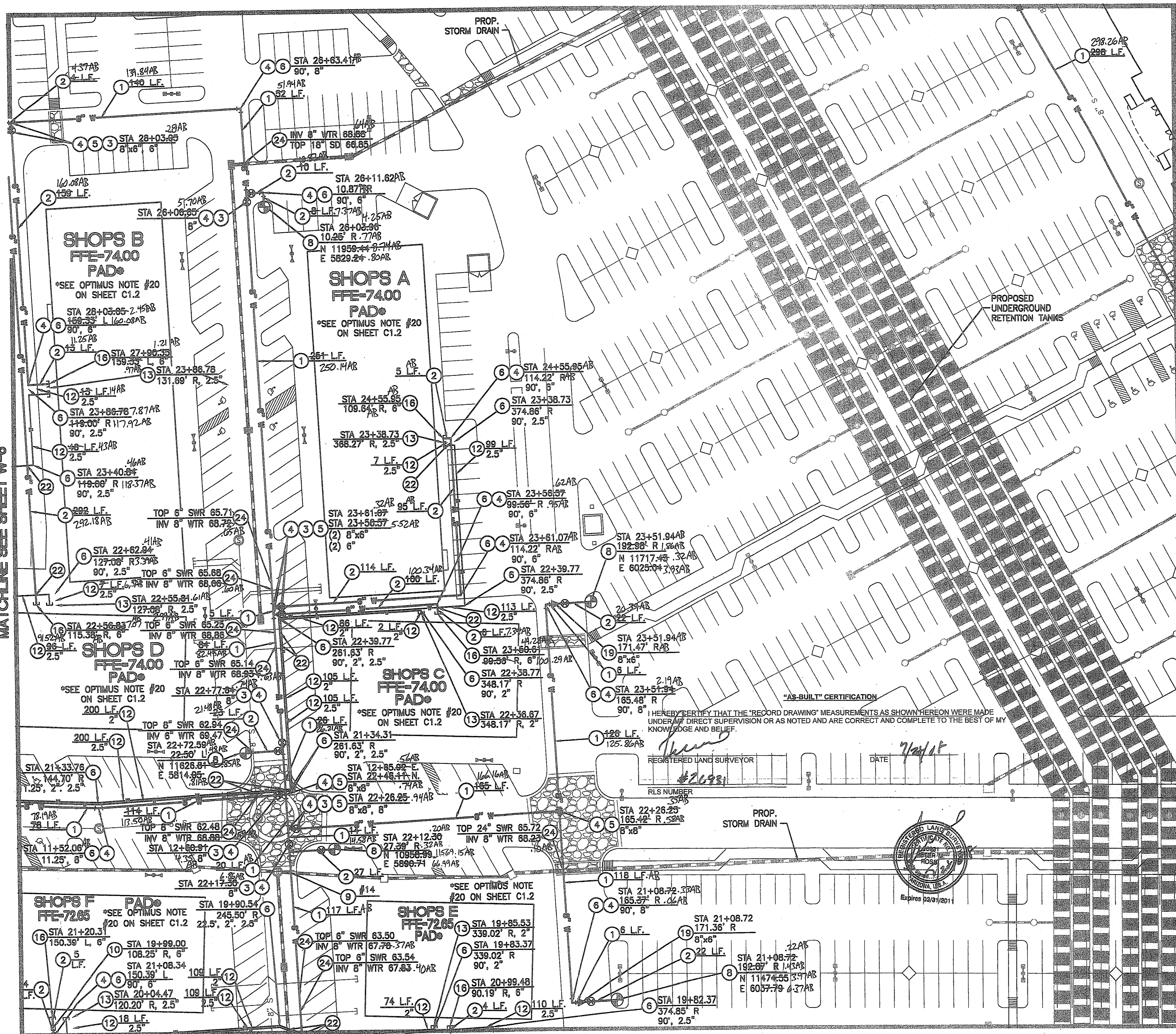
OPTIMUS
 CIVIL DESIGN GROUP
 2025 E. WILLOW AVENUE
 PHOENIX, AZ 85024
 PH: (602) 256-9350 FAX: (602) 256-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-6
 23 OF 36
 SHEET # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEINEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

MATCHLINE SEE SHEET W-4

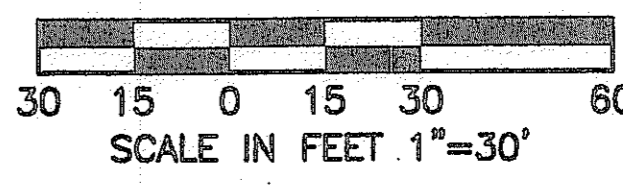
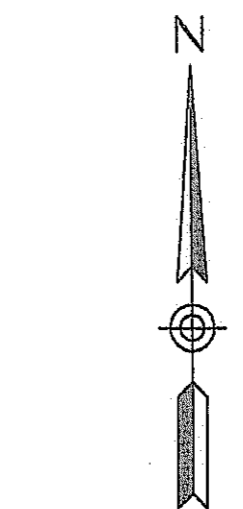


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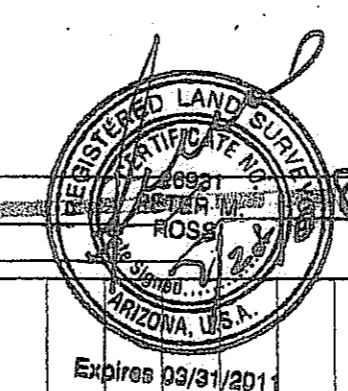
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2007-108-C3-024
 1-800-782-5348
 BLUE STAMP CENTER
 CALL COLLECT

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
 REGISTERED LAND SURVEYOR
 #26931
 DATE 7/21/15



MATCHLINE SEE SHEET W-6

MATCHLINE SEE SHEET W-8

MATCHLINE SEE SHEET W-10

NO.	REVISION	DATE

**CANYON TRAILS TOWNE CENTER
 ON-SITE PUBLIC AND PRIVATE WATER PLAN**

PREPARED FOR
VESSTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016

OPTIMUS CIVIL DESIGN GROUP
 2308 E. MAGNOLIA STREET
 PHOENIX, AZ 85034
 PH: (602) 266-9000 FAX: (602) 266-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039
 DRAWING NO: **W-7**
 24 OF 38

HIE # 07-1192

MATCHLINE SEE SHEET W-5

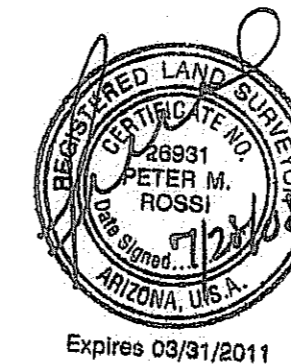
"AS-BUILT" CERTIFICATION

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REGISTERED LAND SURVEYOR

#26931
R/S NUMBER

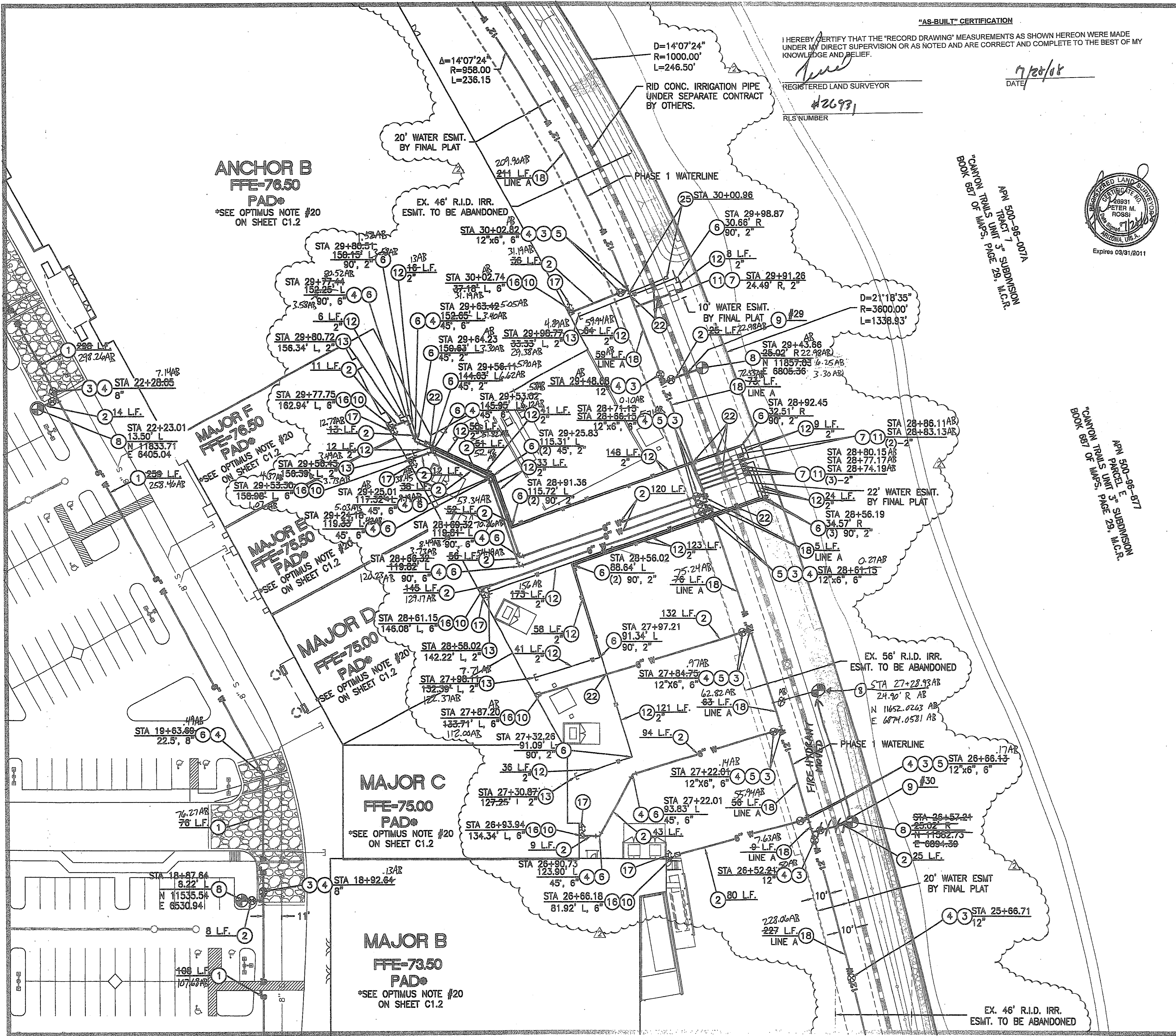
DATE 7/20/08



BOOK SET OF MAPS, PHASE 29, M.C.R. APN 500-96-001A TRACT 7 SUBDIVISION

BOOK SET OF MAPS, PHASE 29, M.C.R. APN 500-96-017 TRACT 7 SUBDIVISION

MATCHLINE SEE SHEET W-7



MATCHLINE SEE SHEET W-11

PRIVATE & PUBLIC FIRE AND WATER NOTES

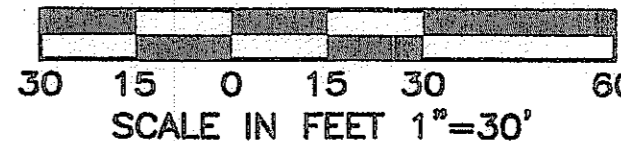
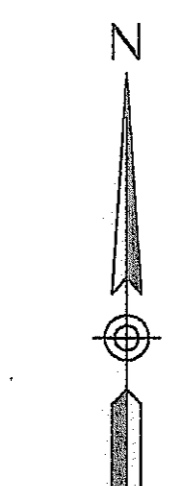
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WATERLINES 12" AND LARGER SHALL HAVE A MINIMUM OF 48" OF COVER

DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.

ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER.

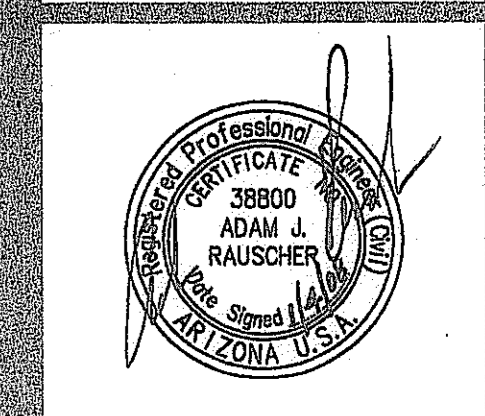
PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8' O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.



2007-108-C3-025
1-800-782-5348
BLUE STAKE CENTER
CALL COLLECT

NO.	REVISION	DATE
1	PHASING OF WATER PLAN (1&2)	01/04/08

CANYON TRAILS TOWNE CENTER
ON-SITE PUBLIC AND PRIVATE WATER PLAN
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST.# 750
PHOENIX, AZ 85016

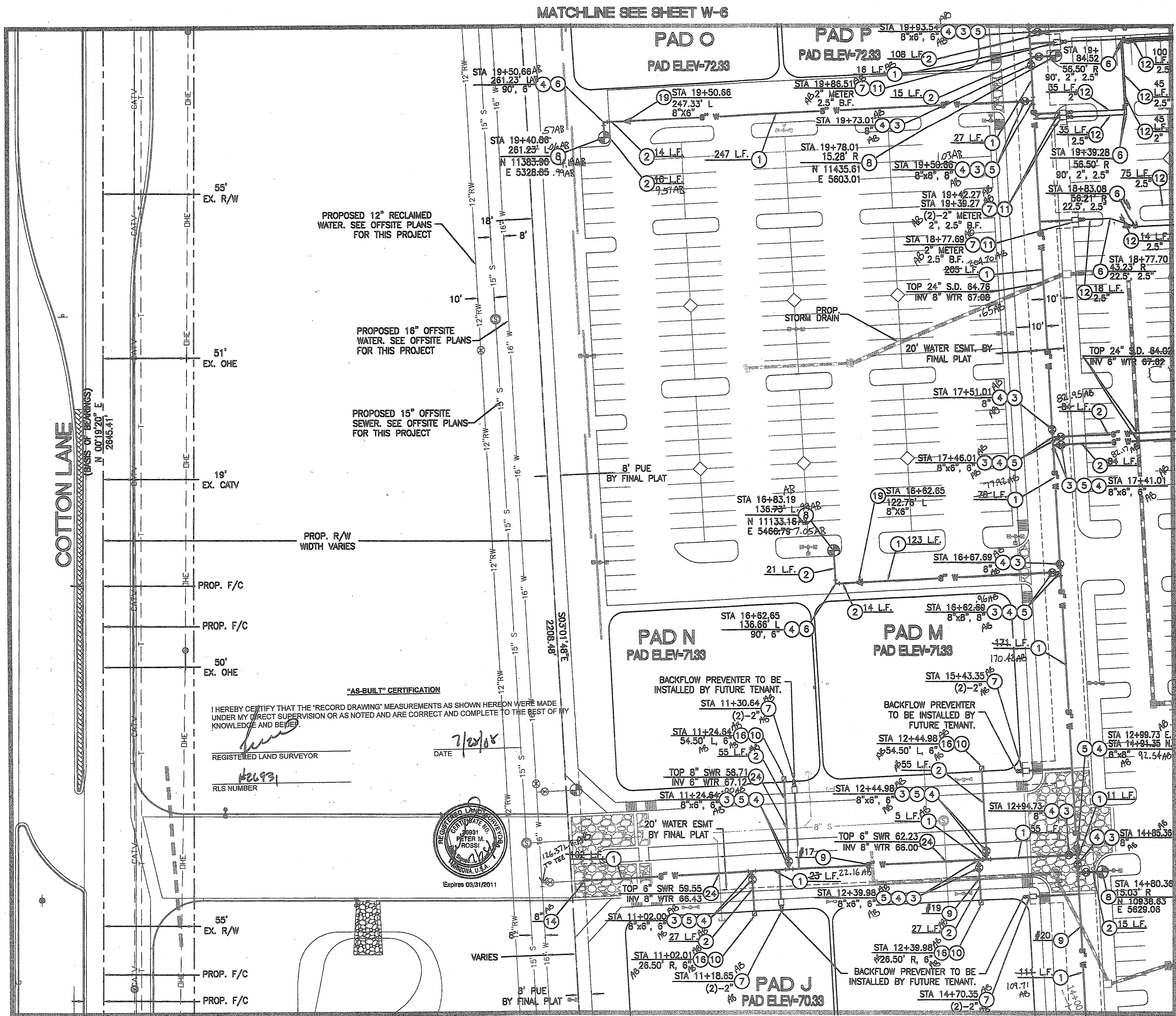


OPTIMUS
CIVIL DESIGN GROUP
2302 E. MAGNOLIA STREET
SUITE 107
PHOENIX, AZ 85016
PH: (602) 284-9300

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO.

W-8
25 OF 38
FILE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEINEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.



PRIVATE & PUBLIC FIRE AND WATER NOTES

1. INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
2. INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
3. INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL G-3321. SIZE AS NOTED.
4. RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
5. INSTALL TEE. SIZE AS NOTED.
6. INSTALL BEND. SIZE AND ANGLE AS NOTED.
7. INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
8. INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL G-3321.
9. CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
10. INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357
11. INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357
12. INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
13. INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
14. FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION, SEE OFFSITE WATERLINE PLANS (PLANS FOR THIS PROJECT UNDER SEPARATE CONTRACT).
15. INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
16. INSTALL TAPPED CAP WITH 2" I.P. CURB STOP, NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
17. PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P., IF APPLICABLE - CLASS 200 MINIMUM.
18. INSTALL 12" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
19. INSTALL REDUCER. SIZE AS NOTED.
20. INSTALL CROSS. SIZE AS NOTED.
21. CONSTRUCT CONCRETE ENCASEMENT PER M.A.G. STD. DTL 401-4 & 404-2.
22. DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2" MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
23. DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
24. MAINTAIN 2" MIN. SEPARATION OR PROVIDE EXTRA PROTECTION PER M.A.G. STD. DTL 404.
25. INSTALL AIR RELEASE VALVE PER C.O.G. STD. DTL G-3328.

NOTES:
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2007-108-C3-026

1-800-782-5348

BLUE STAKE CENTER CALL COLLECT

SCALE IN FEET 1"=30'

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO: W-9
26 OF 38

CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN

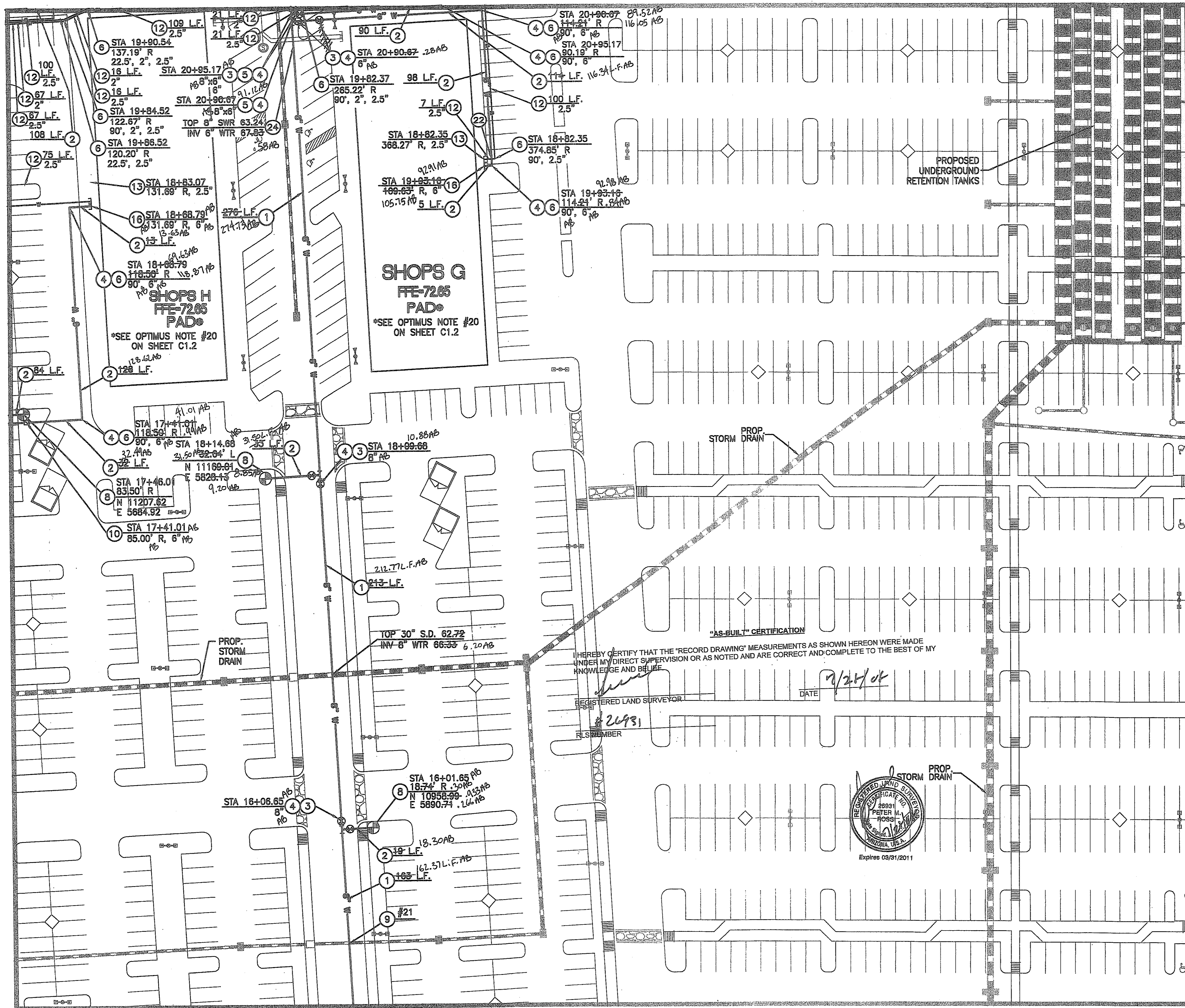
PREPARED FOR:
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016

OPTIMUS CIVIL DESIGN GROUP
2023 E. MACDONALD STREET
SUITE 107
PHOENIX, AZ 85032
TEL: (602) 264-2920
FAX: (602) 264-2920

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039
DRAWING NO: W-9
26 OF 38

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MATCHLINE SEE SHEET W-7



HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR

DATE

9/21/04

26931
REMEMBER



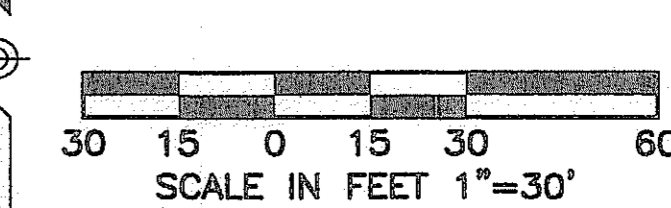
Expires 09/31/2011

PRIVATE & PUBLIC FIRE AND WATER NOTES

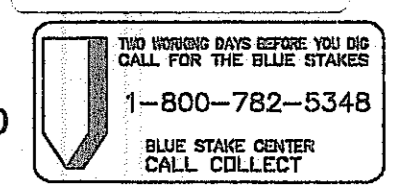
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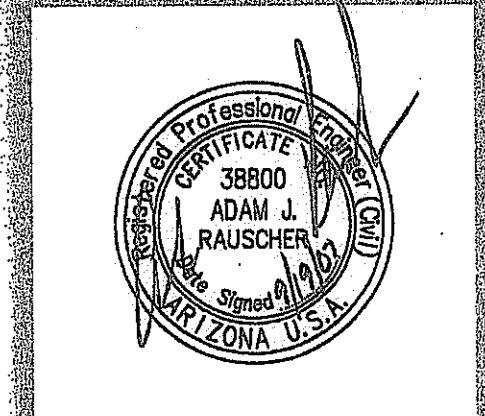


2007-108-C3-027



NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
ON-SITE PUBLIC AND PRIVATE WATER PLAN
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST # 750
PHOENIX, AZ 85016



OPTIMUS
CIVIL DESIGN GROUP
2525 E. SUITE 107
PHOENIX, AZ 85034
TEL: (602) 952-5500 FAX: (602) 952-6000

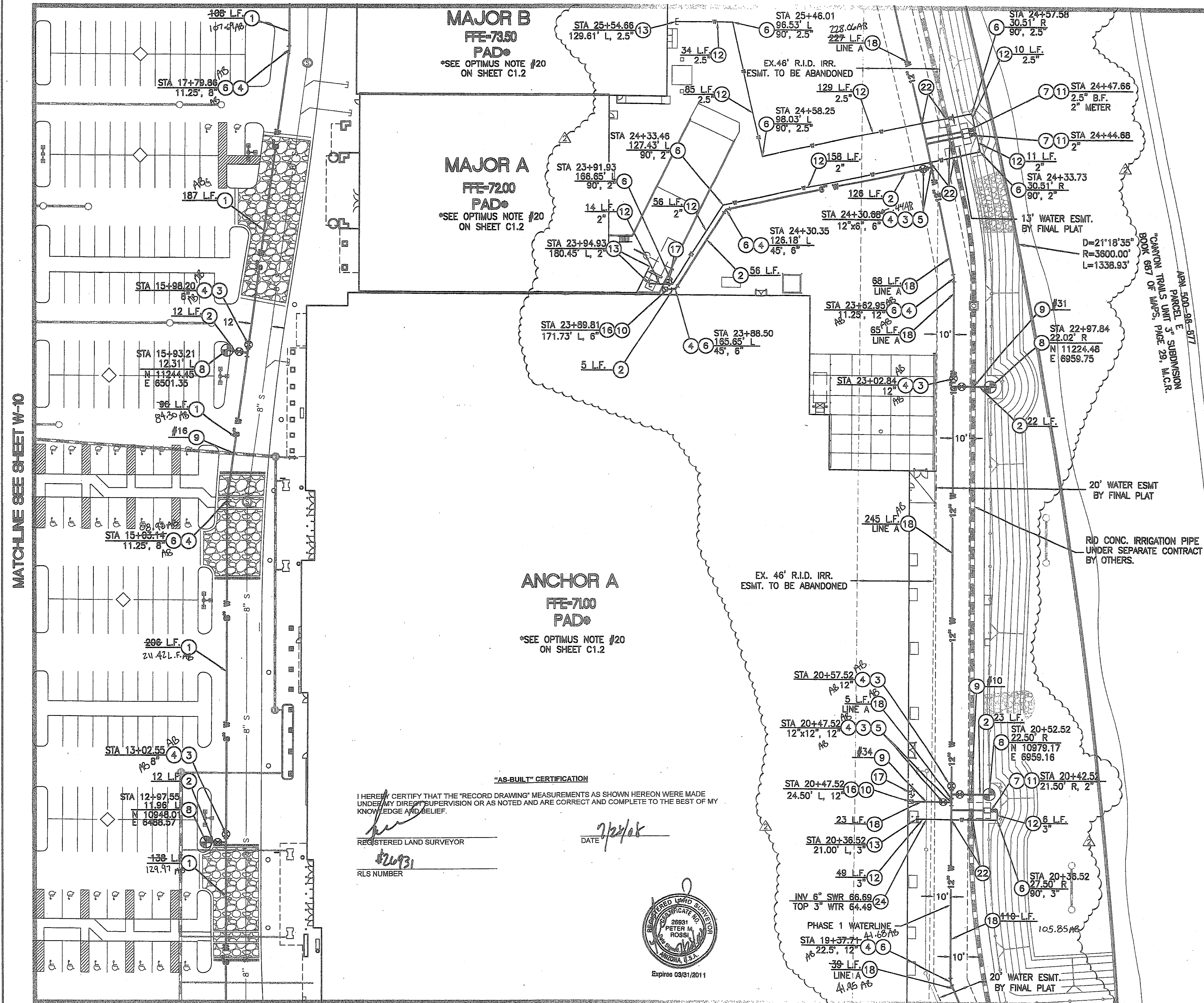
DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

DRAWING NO
W-10
27 OF 30

HIE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

MATCHLINE SEE SHEET W-8



MATCHLINE SEE SHEET W-10

ANCHOR A
FFE-7100
PAD
*SEE OPTIMUS NOTE #20
ON SHEET C1.2

"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR

26931
R.L.S. NUMBER

DATE

7/24/08



Expires 03/31/2011

MATCHLINE SEE SHEET W-14

PRIVATE & PUBLIC FIRE AND WATER NOTES

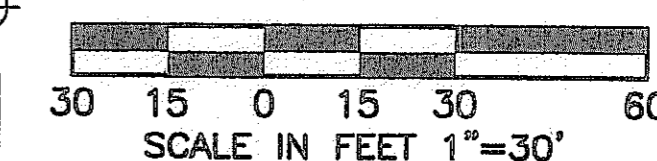
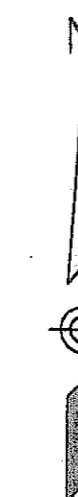
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- 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
- 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357
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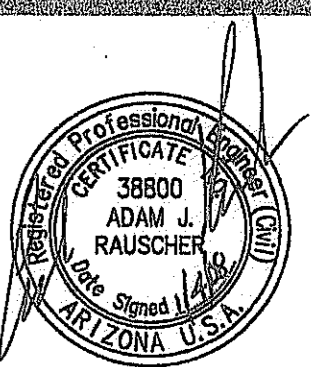


2007-108-C3-028

NO WORKING DAYS BEFORE YOU CALL FOR THE BLUE STAKES
1-800-782-5348
BLUE STAKE CENTER
CALL COLLECT

CANYON TRAILS TOWNE CENTER
ON-SITE PUBLIC AND PRIVATE WATER PLAN

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD., ST.# 750
 PHOENIX, AZ 85016



OPTIMUS
CIVIL DESIGN GROUP
 2328 E. MAGNOLIA STREET
 PHOENIX, AZ 85034
 PH: (602) 296-9300 FAX: (602) 296-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO

W-11

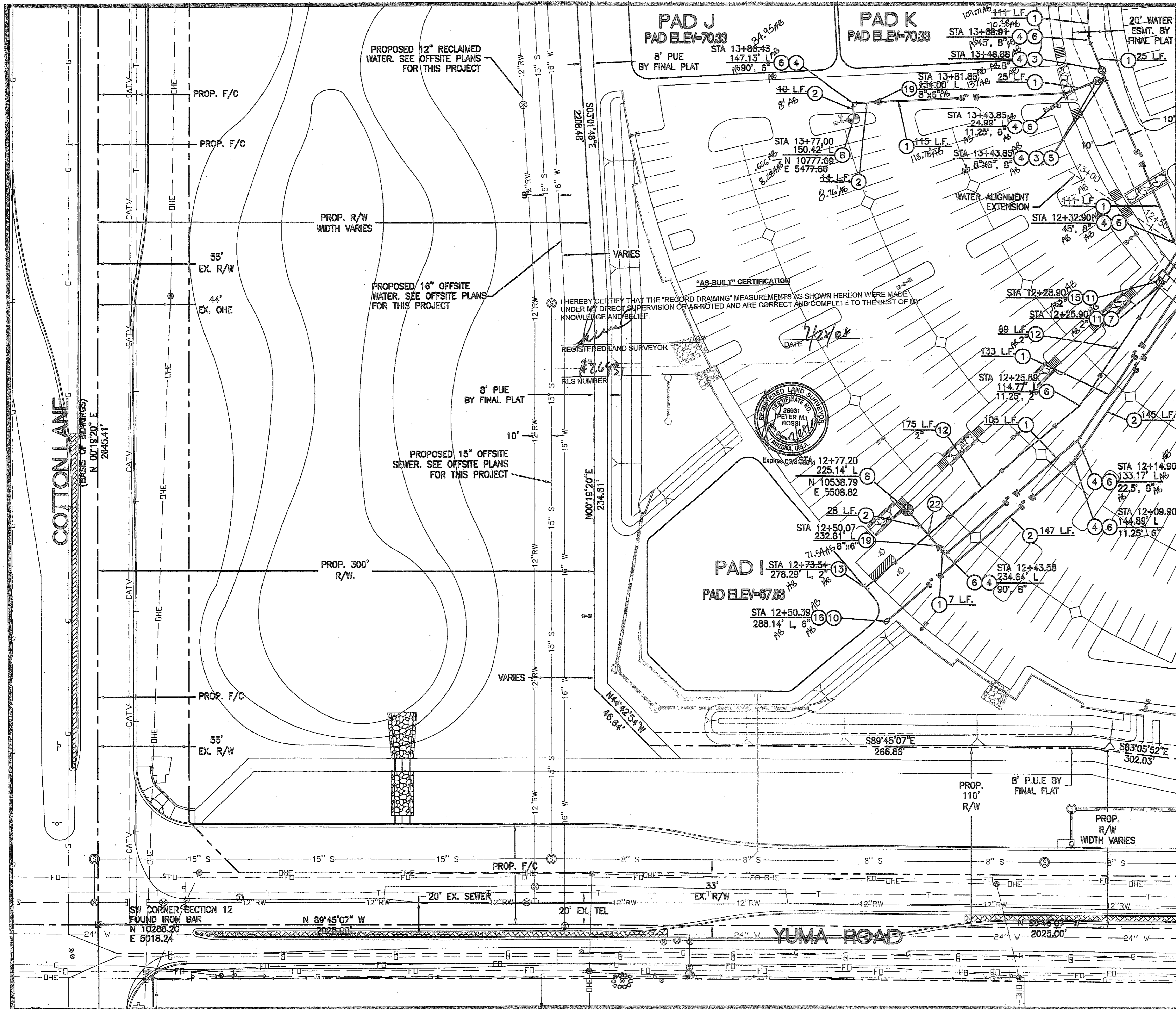
28 of 38

NO.	REVISION	PHASING OF WATER PLAN (1&2)	DATE
1	A		01/04/08

USE OF THE INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED IS FORBIDDEN UNLESS EXPRESSLY PERMITTED IN WRITING IN ADVANCE BY OPTIMUS CIVIL DESIGN GROUP. OPTIMUS CIVIL DESIGN GROUP SHALL HAVE NO LIABILITY TO ANY USER OF THIS INFORMATION WITHOUT THEIR WRITTEN CONSENT.

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

MATCHLINE SEE SHEET W-9

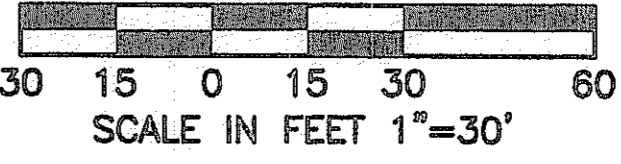
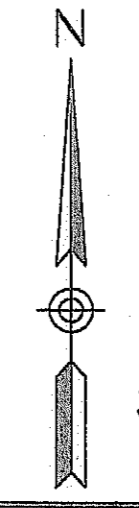


PRIVATE & PUBLIC FIRE AND WATER NOTES

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 - 2 INSTALL 6" @ D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
 - 3 INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. G-391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
 - 4 RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
 - 5 INSTALL TEE. SIZE AS NOTED.
 - 6 INSTALL BEND. SIZE AND ANGLE AS NOTED.
 - 7 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
 - 8 INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
 - 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
 - 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357
 - 11 INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL. G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357
 - 12 INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
 - 13 INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
 - 14 FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION, SEE OFFSITE WATERLINE PLANS (PLANS FOR THIS PROJECT UNDER SEPARATE CONTRACT).
 - 15 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS, SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
 - 16 INSTALL TAPPED CAP WITH 2" I.P. CURB STOP, NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
 - 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P., IF APPLICABLE - CLASS 200 MINIMUM.
 - 18 INSTALL 12" @ D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
 - 19 INSTALL REDUCER. SIZE AS NOTED.
 - 20 INSTALL CROSS. SIZE AS NOTED.
 - 21 CONSTRUCT CONCRETE ENCASEMENT PER M.A.G. STD. DTL. 401-4 & 404-2.
 - 22 DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2" MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
 - 23 DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
 - 24 MAINTAIN 2" MIN. SEPARATION OR PROVIDE EXTRA PROTECTION PER M.A.G. STD. DTL. 404.
 - 25 INSTALL AIR RELEASE VALVE PER C.O.G. STD. DTL. G-3328.
- NOTES:**
 WATERLINES 8" AND SMALLER SHALL HAVE A MINIMUM OF 36" OF COVER. WATERLINES 12" AND LARGER SHALL HAVE A MINIMUM OF 48" OF COVER.
 DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.
 ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER.

MATCHLINE SEE SHEET W-13

PER ARS 40-380-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.

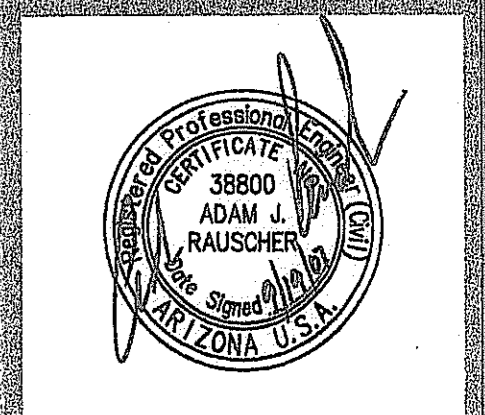


2007-108-C3-029

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF OPTIMUS CIVIL DESIGN GROUP. NO PART OF THESE PLANS OR SPECIFICATIONS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF OPTIMUS CIVIL DESIGN GROUP.

NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD, ST# 750
 PHOENIX, AZ 85016



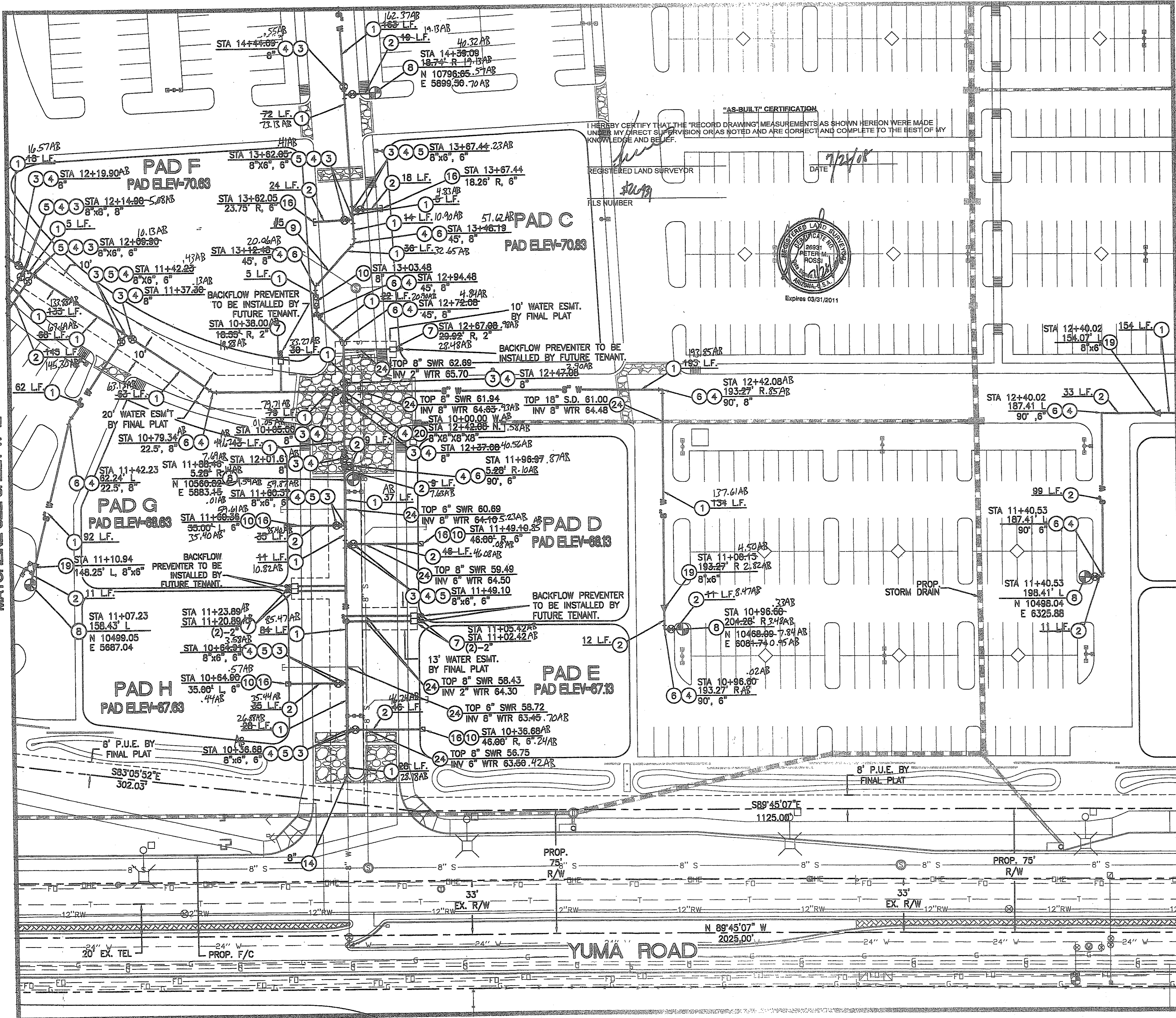
OPTIMUS CIVIL DESIGN GROUP
 2022 E. WILLOW ST
 PHOENIX, AZ 85004
 PH: (602) 266-9300 FAX: (602) 266-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-12
 29 OF 36
 HIE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

MATCHLINE SEE SHEET W-10



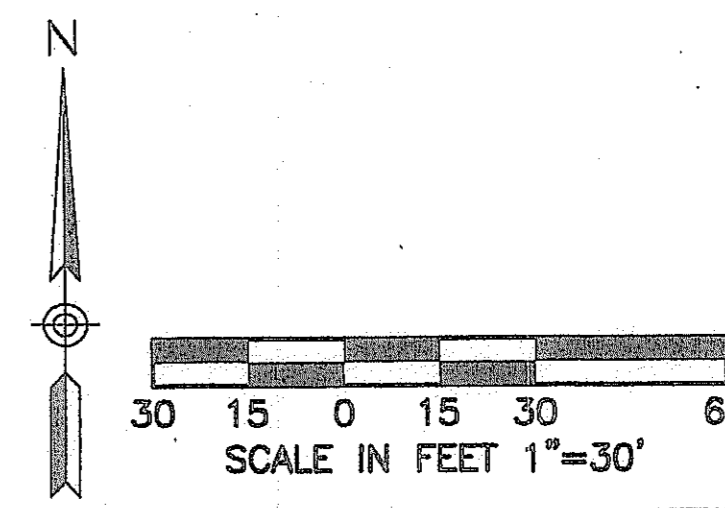
"AS-BUILT" CERTIFICATION
 I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
 REGISTERED LAND SURVEYOR
 DATE 7/24/08
 FLS NUMBER
 EXPIRES 03/31/2011

PRIVATE & PUBLIC FIRE AND WATER NOTES

- 1 INSTALL 8" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED.
- 2 INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
- 3 INSTALL GATE VALVE, BOX & COVER PER M.A.G. STD. DTL. 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321. SIZE AS NOTED.
- 4 RESTRAINT JOINTS SHALL BE USED ON ALL FITTINGS AND DEAD ENDS ON ALL D.I.P. PIPES 4" AND LARGER.
- 5 INSTALL TEE. SIZE AS NOTED.
- 6 INSTALL BEND. SIZE AND ANGLE AS NOTED.
- 7 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR DOMESTIC WATER PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 8 INSTALL FIRE HYDRANT COMPLETE PER C.O.G. STD. DTL. G-3330 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321.
- 9 CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON SHEETS W-15,16&17 OF THIS PLAN SET.
- 10 INSTALL DOUBLE-CHECK DETECTOR VALVE BACKFLOW PREVENTION ASSEMBLY PER C.O.G. STD. DTL. G-3352. CONTRACTOR TO INSTALL GUARD POSTS PER C.O.G. STD. DTL. G-3332 IN ALL INSTANCES IN WHICH THE BACKFLOW PREVENTOR IS NOT WITHIN A PLANTER AREA WITH CAGE PER C.O.G. G-3357
- 11 INSTALL REDUCED PRESSURE BACK-FLOW PREVENTION ASSEMBLY FOR DOMESTIC USE PER C.O.G. STD. DTL. G-3354. SIZE AS NOTED WITH CAGE. PER C.O.G. G-3357
- 12 INSTALL SCHEDULE 80 PVC PRIVATE WATERLINE. SIZE AND LENGTH AS NOTED.
- 13 INSTALL CAP. SIZE AS NOTED. SEE PLUMBING PLANS FOR CONTINUATION.
- 14 FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. SEE SHEET W-21 (SHEET 38) IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION.
- 15 INSTALL WATER SERVICE CONNECTION AND METER BOX FOR IRRIGATION PER C.O.G. STD. DTL. G-3310, MAG 320 AND C.O.G. SPECIFICATIONS. SIZE AS NOTED ON PLANS. WATER METER TO BE INSTALLED BY CITY FORCES AFTER PAYMENT OF APPLICABLE FEES BY DEVELOPER.
- 16 INSTALL TAPPED CAP WITH 2" I.P. CURB STOP, NO FLUSHING PIPE. SIZE AS NOTED. SEE FIRE SPRINKLER PLANS FOR CONTINUATION.
- 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P. IF APPLICABLE - CLASS 200 MINIMUM.
- 18 INSTALL 12" Ø D.I.P. - CLASS 150 WATERLINE. LENGTH AS NOTED. SEE SHEET W-18 THRU W-19 FOR PROFILES.
- 19 INSTALL REDUCER. SIZE AS NOTED.
- 20 INSTALL CROSS. SIZE AS NOTED.
- 21 CONSTRUCT CONCRETE ENCASUREMENT PER M.A.G. STD. DTL. 401-4 & 404-2.
- 22 DEFLECT WATER SERVICE LINE AS NECESSARY PER MANUFACTURERS RECOMMENDATIONS TO MAINTAIN 2' MINIMUM CLEARANCE AT UTILITY CROSSING. MAINTAIN 36" OF COVER MINIMUM PER C.O.G. G-3301.
- 23 DEFLECT WATER LINE BY PULLING JOINTS PER MANUFACTURERS RECOMMENDATIONS. ANGLE AS NOTED.
- 24 MAINTAIN 2' MIN. SEPARATION OR PROVIDE EXTRA PROTECTION PER M.A.G. STD. DTL. 404.
- 25 INSTALL AIR RELEASE VALVE PER C.O.G. STD. DTL. G-3328.

NOTES:
 WATERLINES 8" AND SMALLER SHALL HAVE A MINIMUM OF 36" OF COVER. WATERLINES 12" AND LARGER SHALL HAVE A MINIMUM OF 48" OF COVER.
 DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.
 ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER.

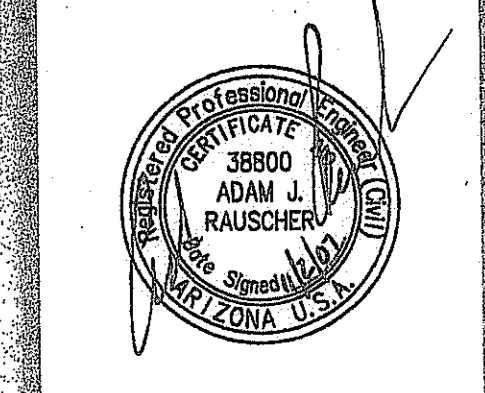
PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8' O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.



2007-108-C3-030
 1-800-782-5348
 BLUE STATE CENTER
 CALL COLLECT

NO.	REVISION	DATE
1	WATERLINE REVISION	11/02/07

CANYON TRAILS TOWNE CENTER
ONSITE PUBLIC AND PRIVATE WATER PLAN
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST # 750
 PHOENIX, AZ 85016



OPTIMUS
 CIVIL DESIGN GROUP
 2425 E. CAMELBACK STREET
 SUITE 107
 PHOENIX, AZ 85016
 PH: (602) 264-9200 FAX: (602) 264-9400

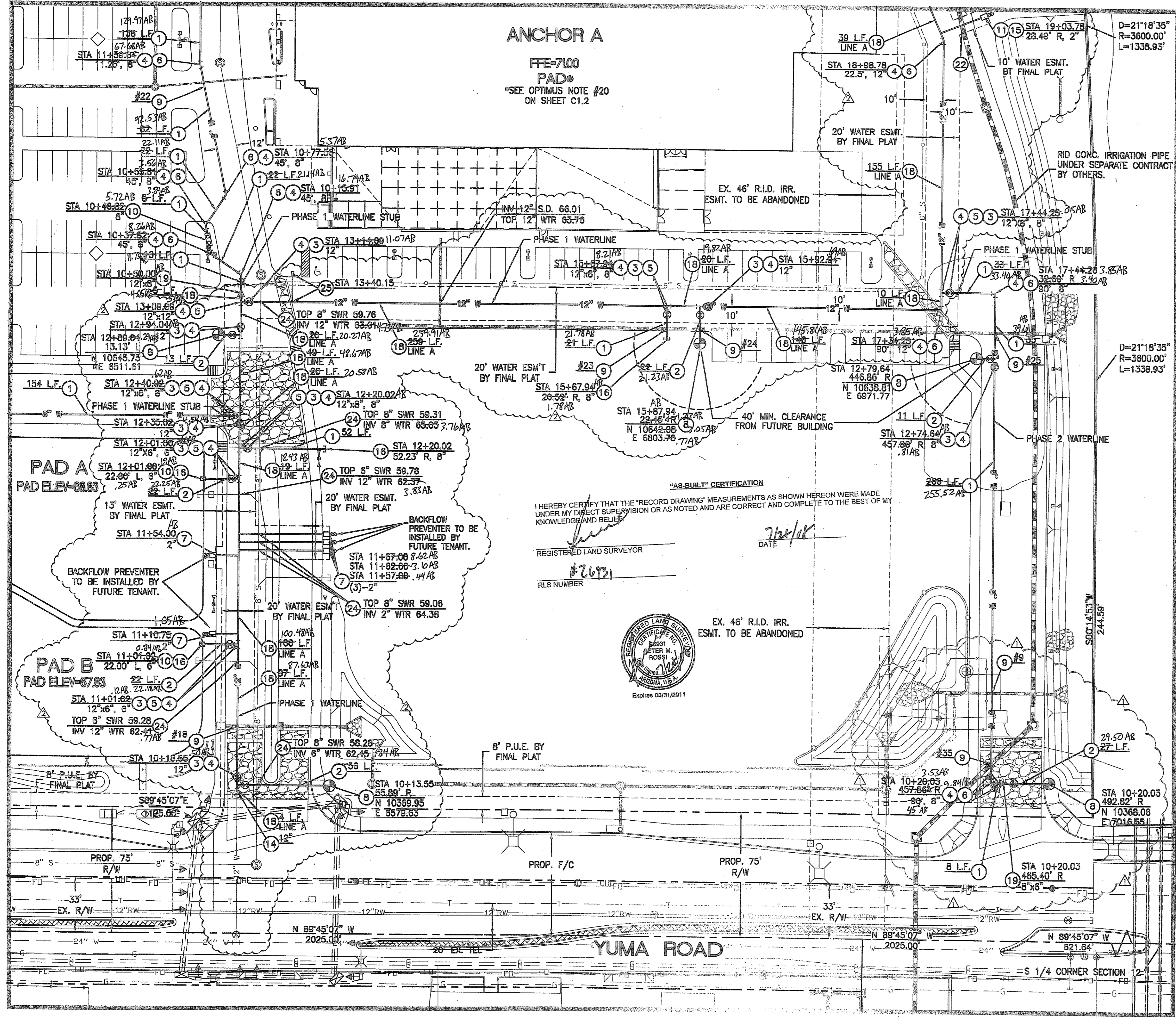
DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-13
 30 OF 38
 HIE # 07-1192

MATCHLINE SEE SHEET W-11

ANCHOR A

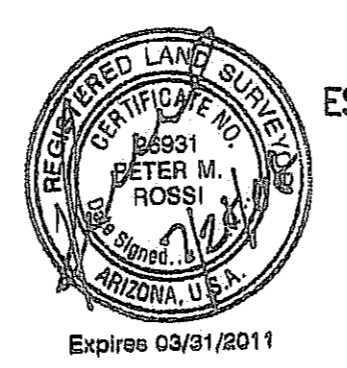
FFE-7100 PAD
*SEE OPTIMUS NOTE #20 ON SHEET C1.2



I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
#26791
R/S NUMBER

DATE: 7/24/18

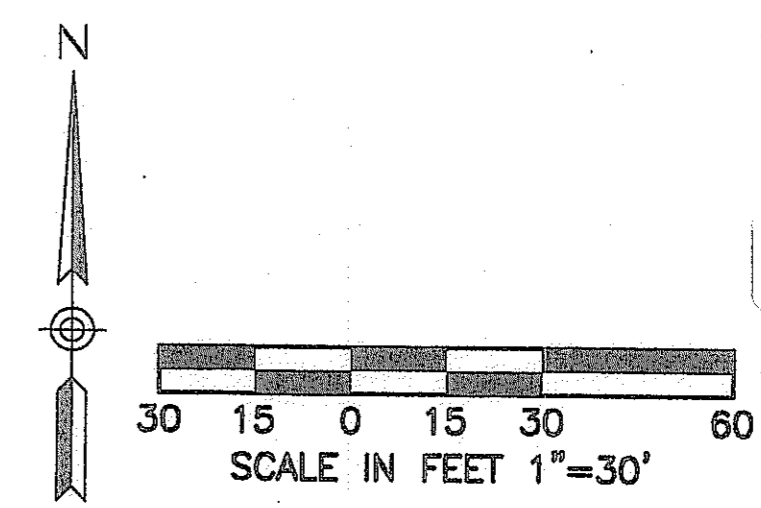


PRIVATE & PUBLIC FIRE AND WATER NOTES

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- 2 INSTALL 6" Ø D.I.P. - CLASS 150 FIRELINE. LENGTH AS NOTED.
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- 17 PROPOSED FIRE DEPT. CONNECTION. SEE MECHANICAL/FIRE SPRINKLER PLANS FOR DETAILS. ALL FIRE LINES FROM BUILDING TO REMOTE F.D.C. SHALL BE D.I.P., IF APPLICABLE - CLASS 200 MINIMUM.
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- 20 INSTALL CROSS. SIZE AS NOTED.
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PER ARS 40-360-22, ALL BURIED NONMETALLIC PRIVATE COMMUNICATION CABLE, NONMETALLIC PRIVATE WATER LINES, NONMETALLIC PRIVATE SEWER LINES, NONMETALLIC PRIVATE GAS LINES AND NONMETALLIC PRIVATE LANDSCAPE SPRINKLER LINES GREATER THAN 2" IN DIAMETER (THE GREATER THAN 2" QUALIFICATION APPLIES TO LANDSCAPE SPRINKLER LINES ONLY) SHALL HAVE AN #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO IT AT 8" O.C. AND SHALL HAVE 12" OF TRACER WIRE ACCESSIBLE ABOVE GRADE AT THE TERMINATION WHERE THAT TERMINATION IS ABOVE GRADE AND BE SECURELY ATTACHED AT THAT POINT.



2007-108-C3-031

THESE NOTES ARE FOR YOUR INFORMATION ONLY. CALL FOR THE BLUE STAKES.
1-800-782-5348
BLUE STAKE CENTER
CALL COLLECT

**CANYON TRAILS TOWNE CENTER
ON-SITE PUBLIC AND PRIVATE WATER PLAN**



OPTIMUS CIVIL DESIGN GROUP
2308 E. MAGNOLIA STREET
PHOENIX, AZ 85034
PH: (602) 286-9300 FAX: (602) 286-9400

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

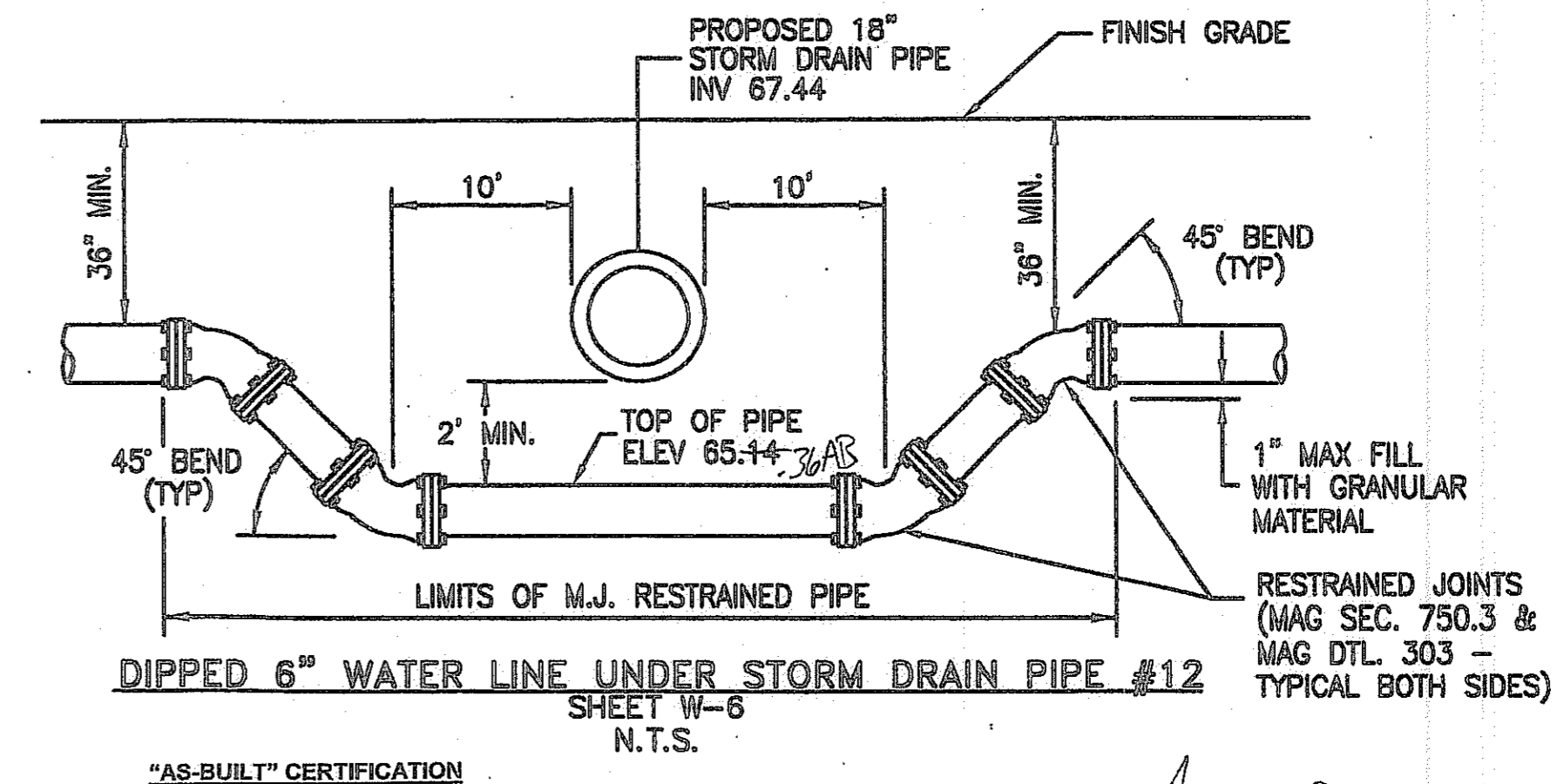
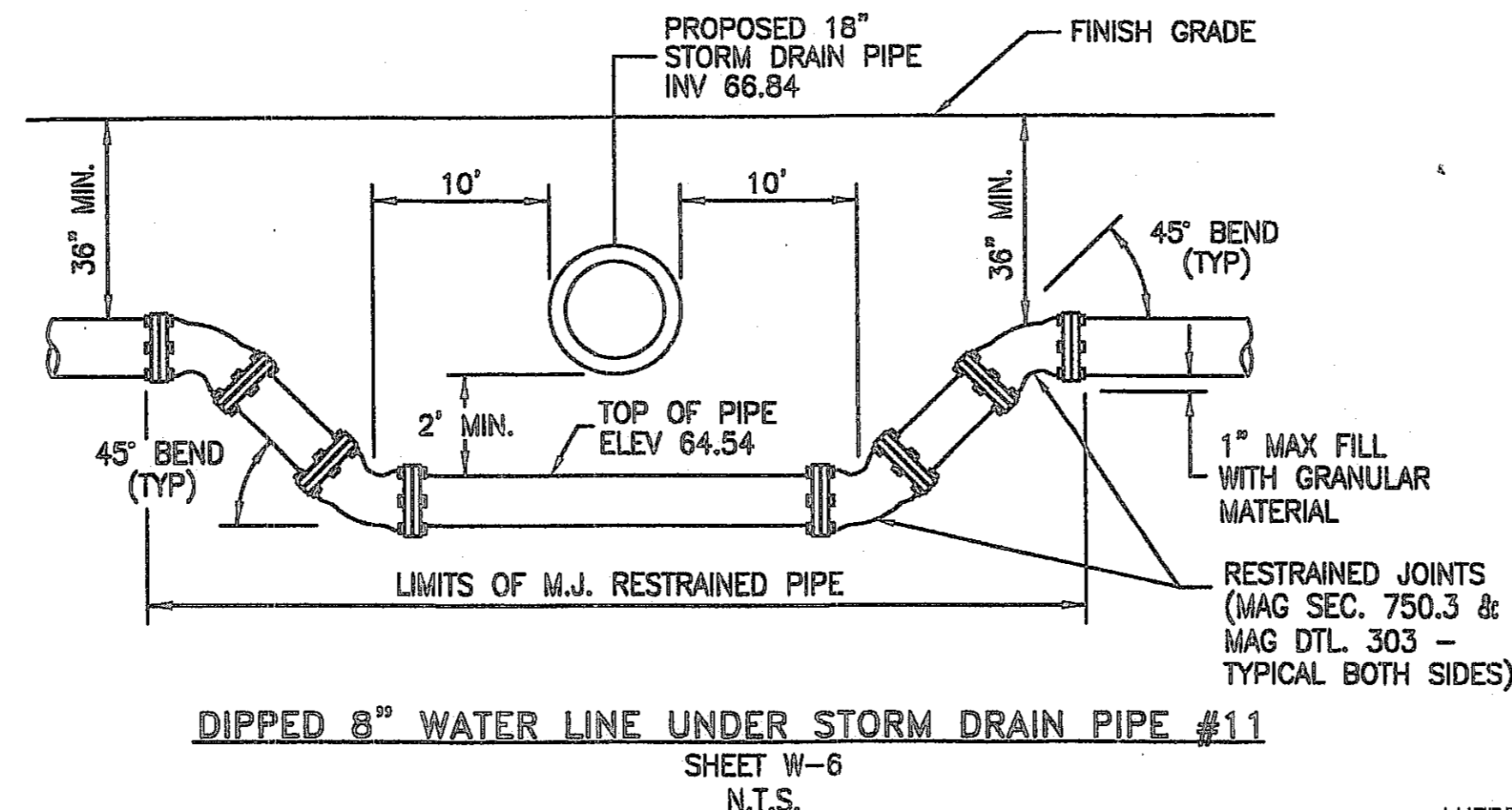
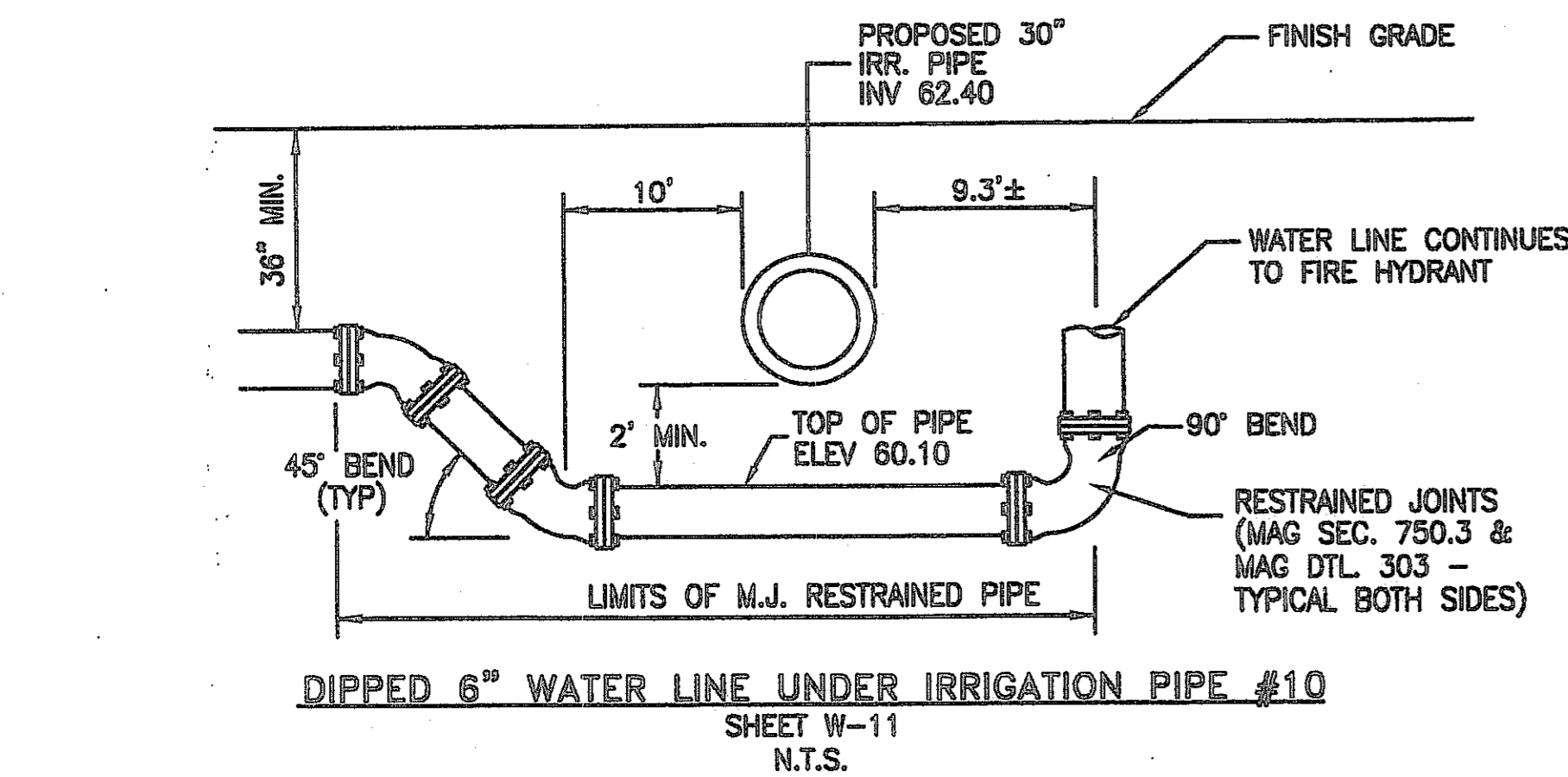
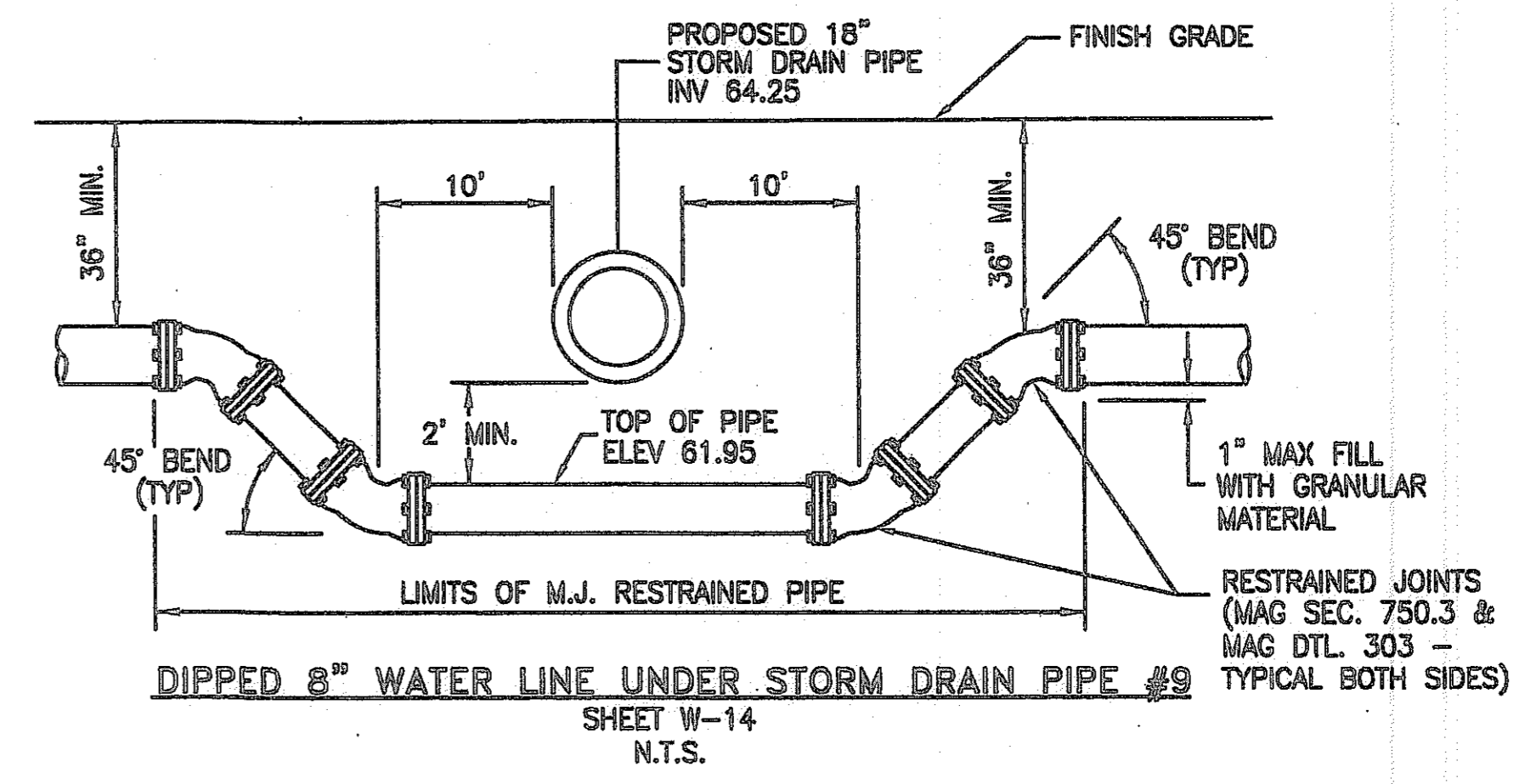
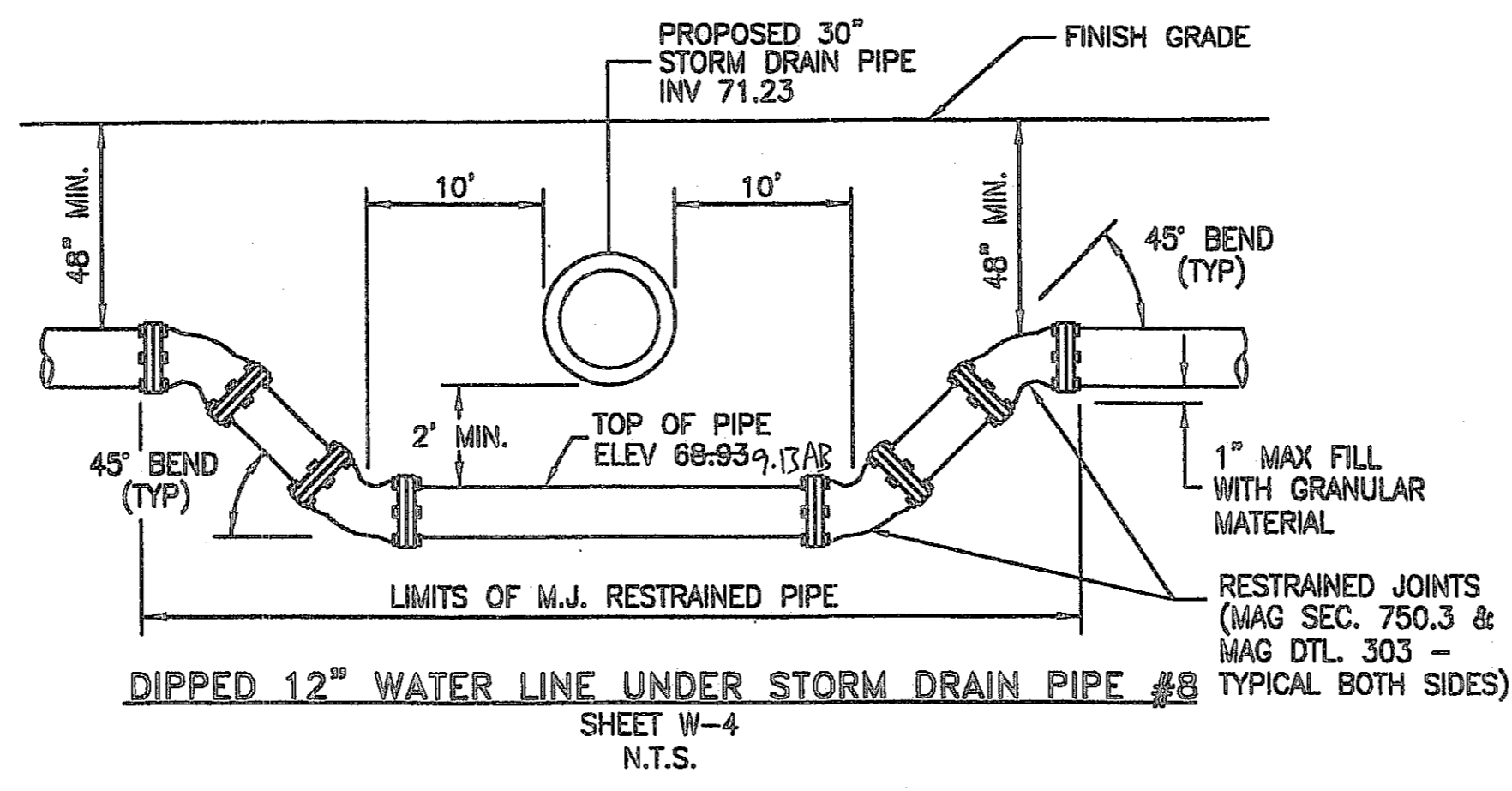
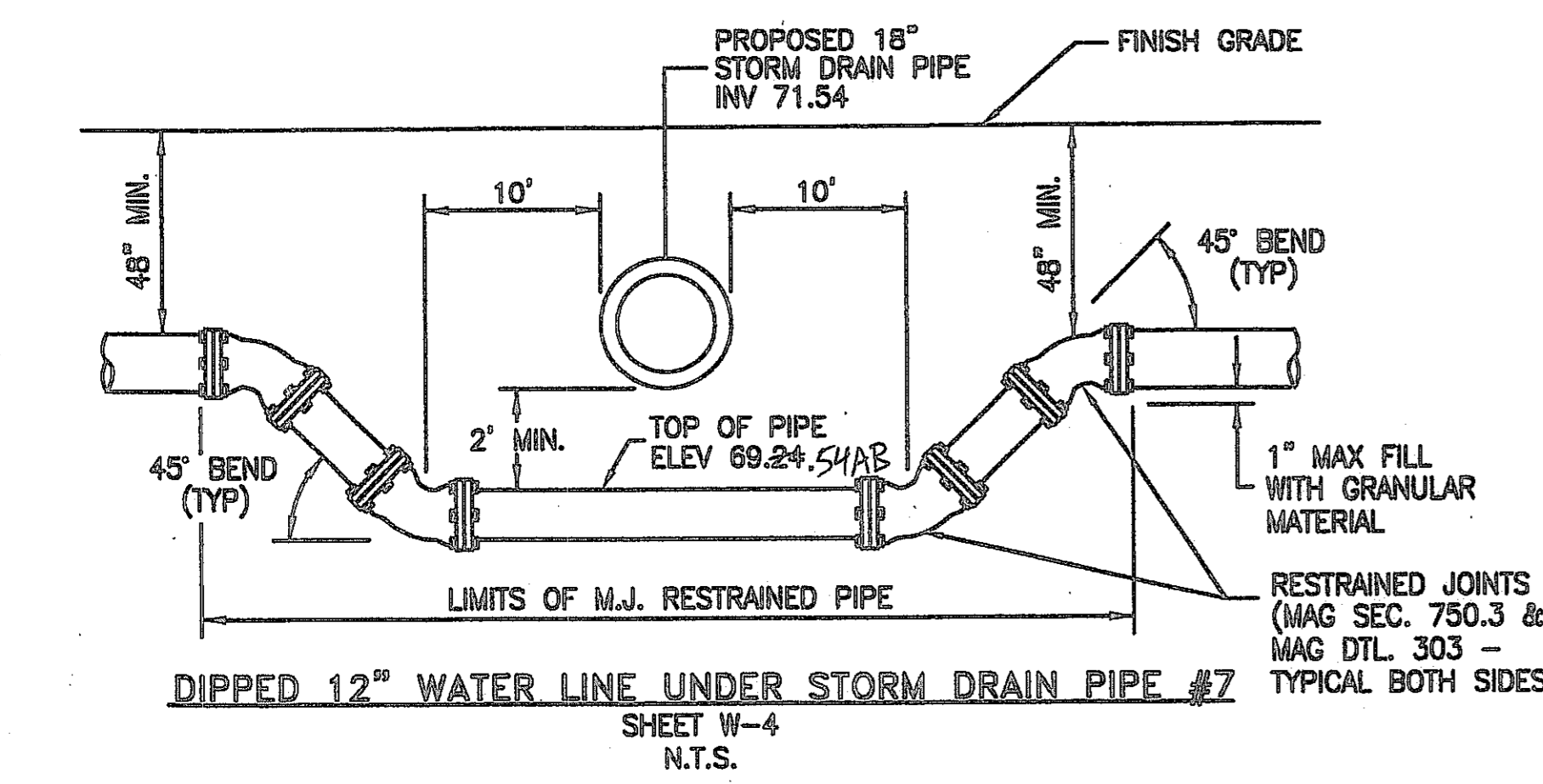
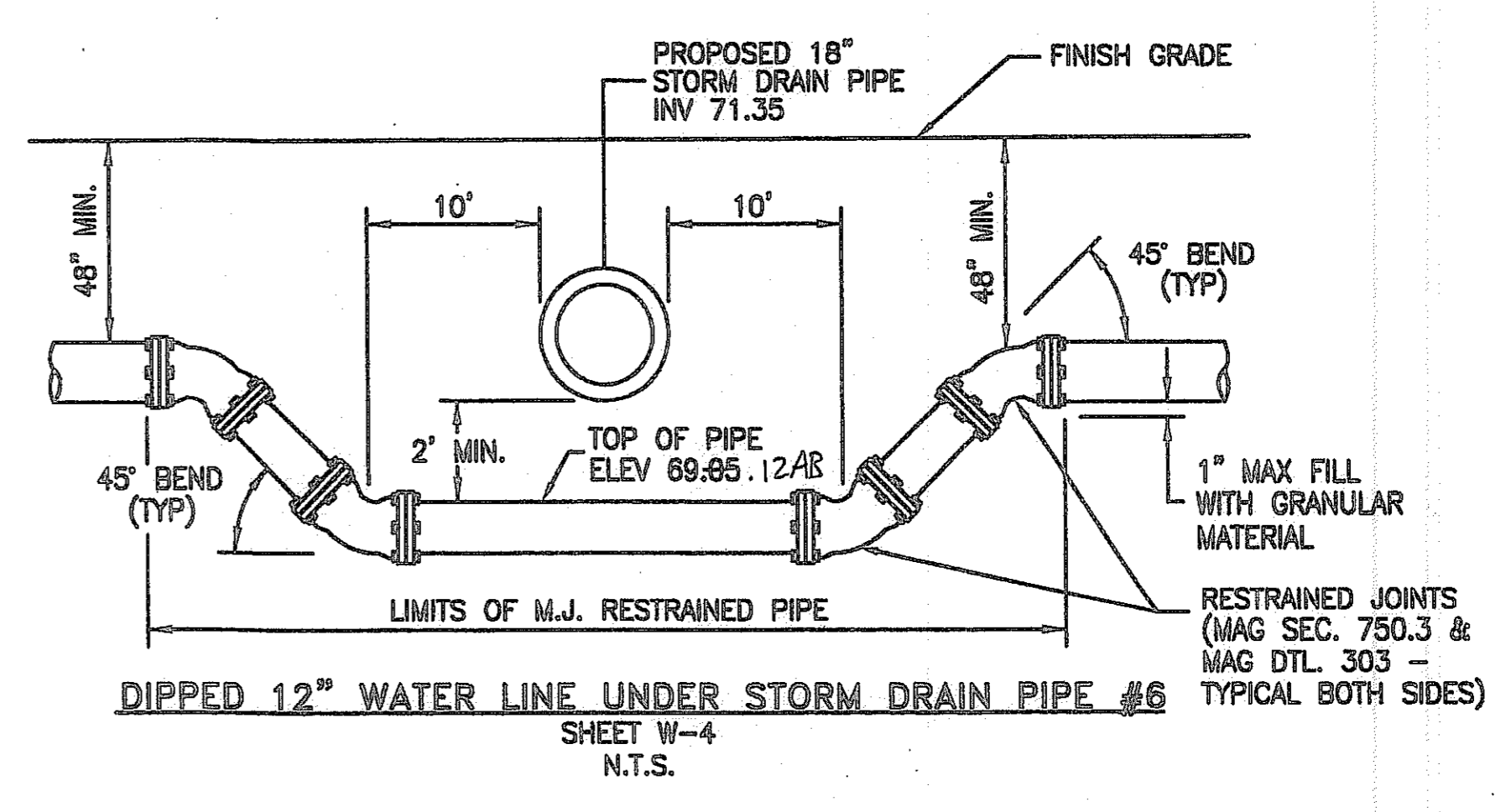
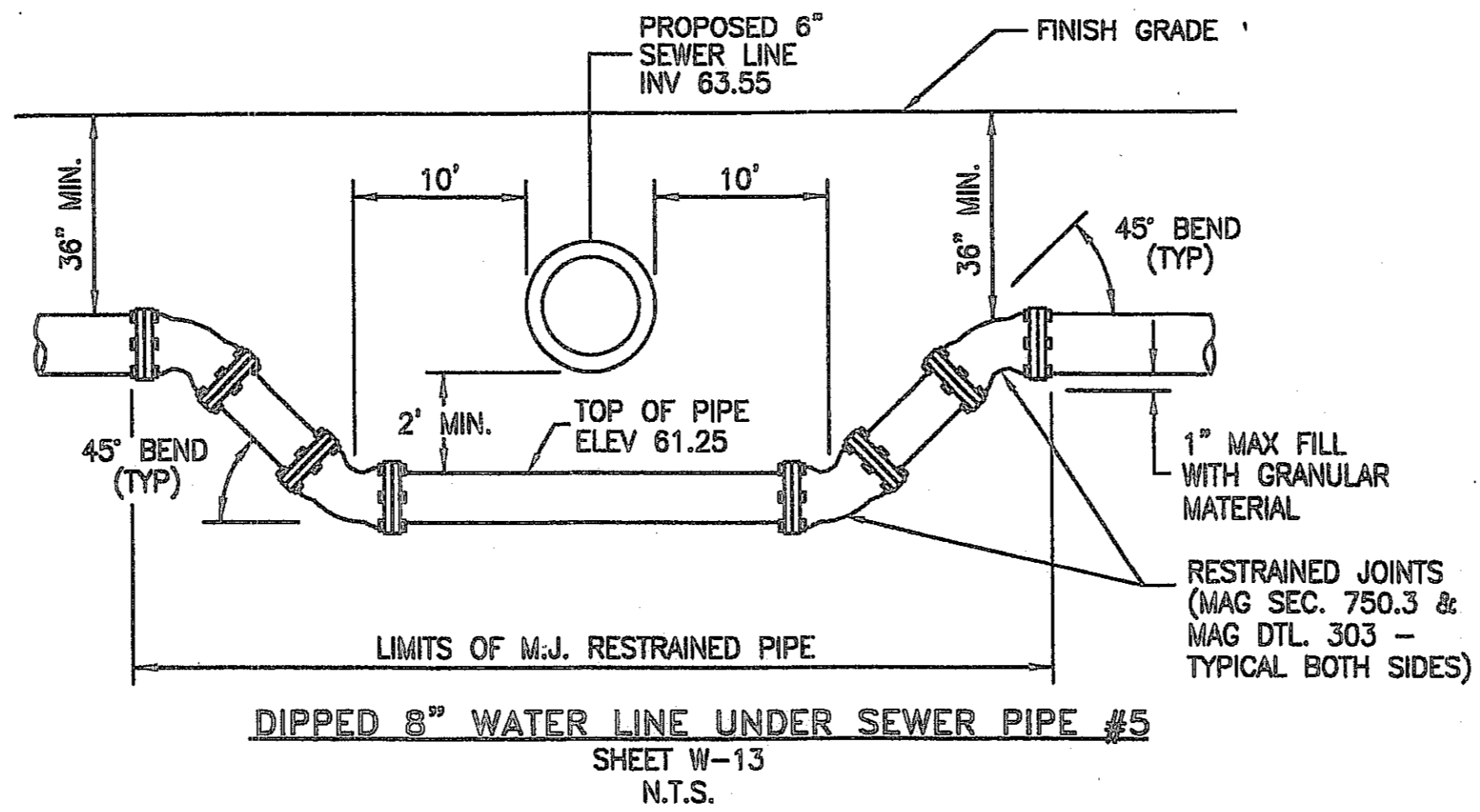
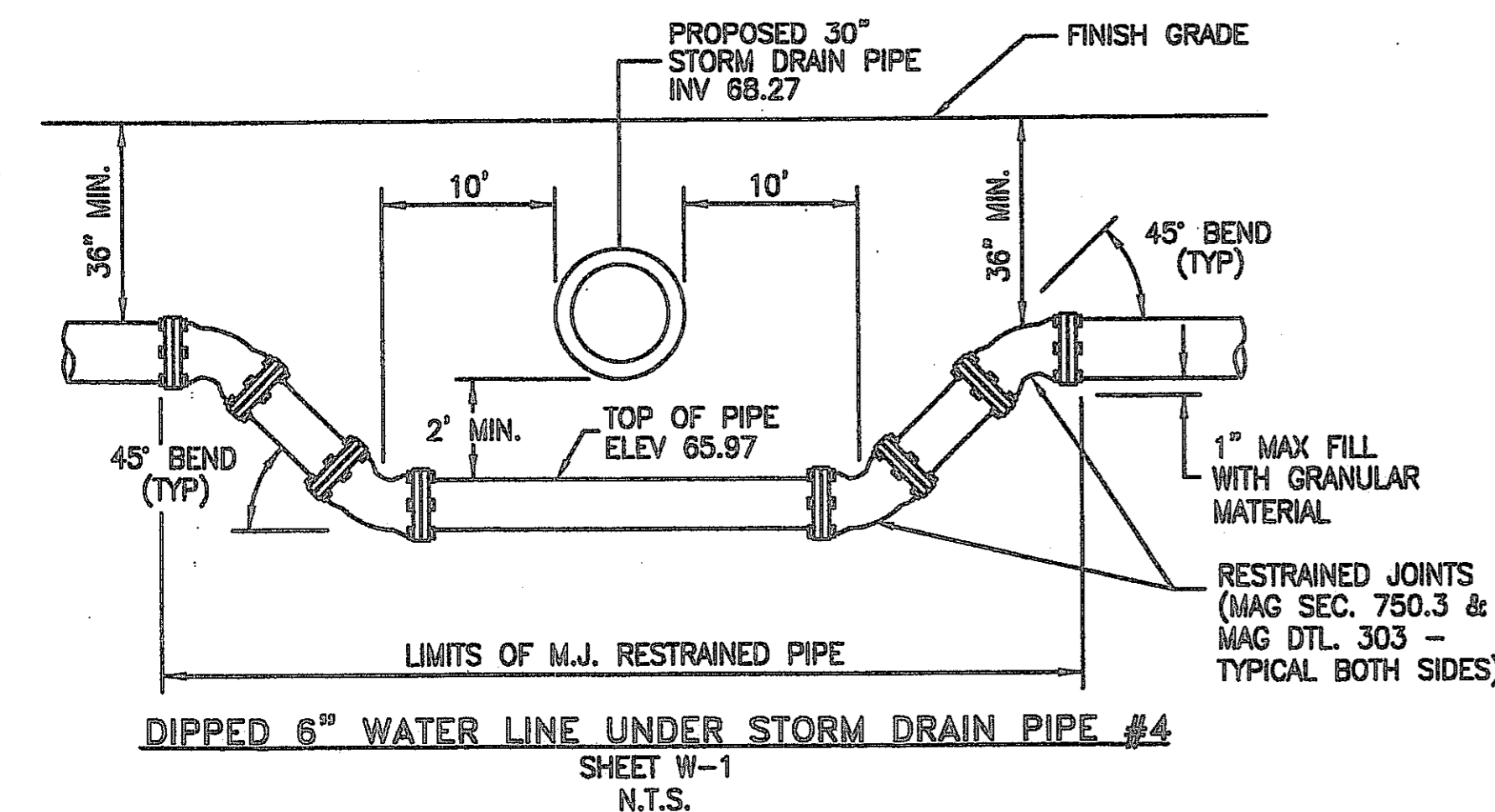
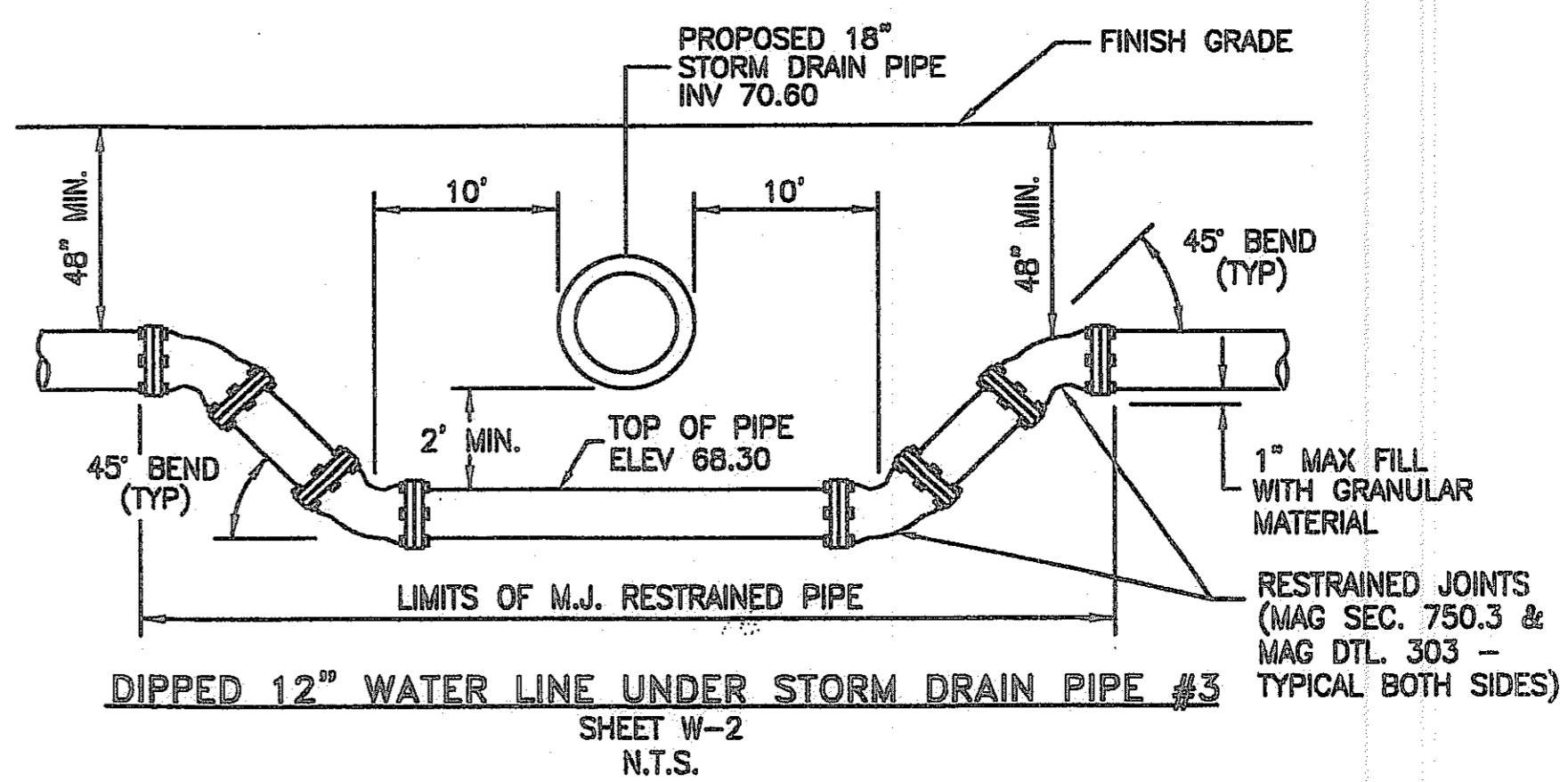
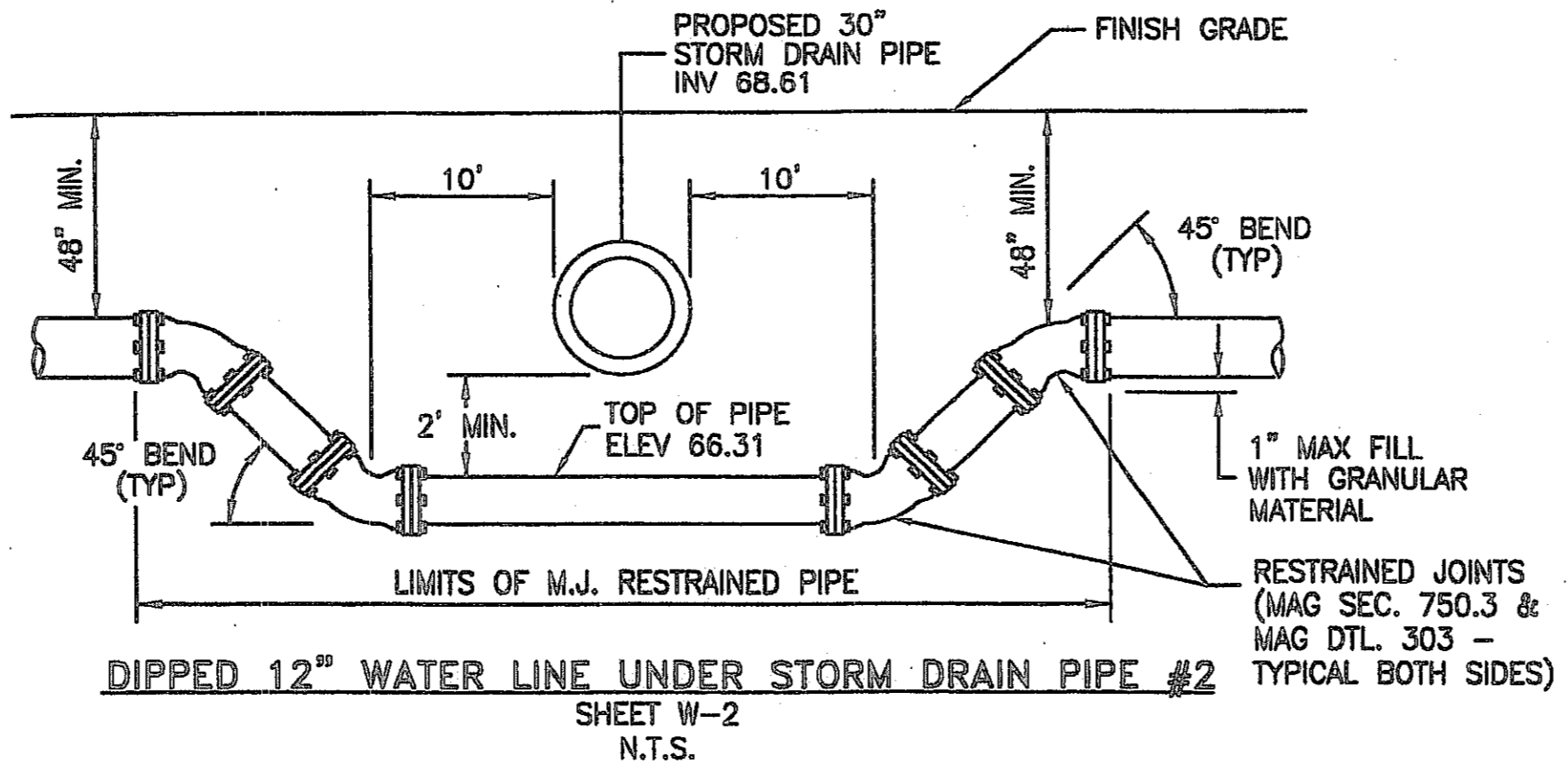
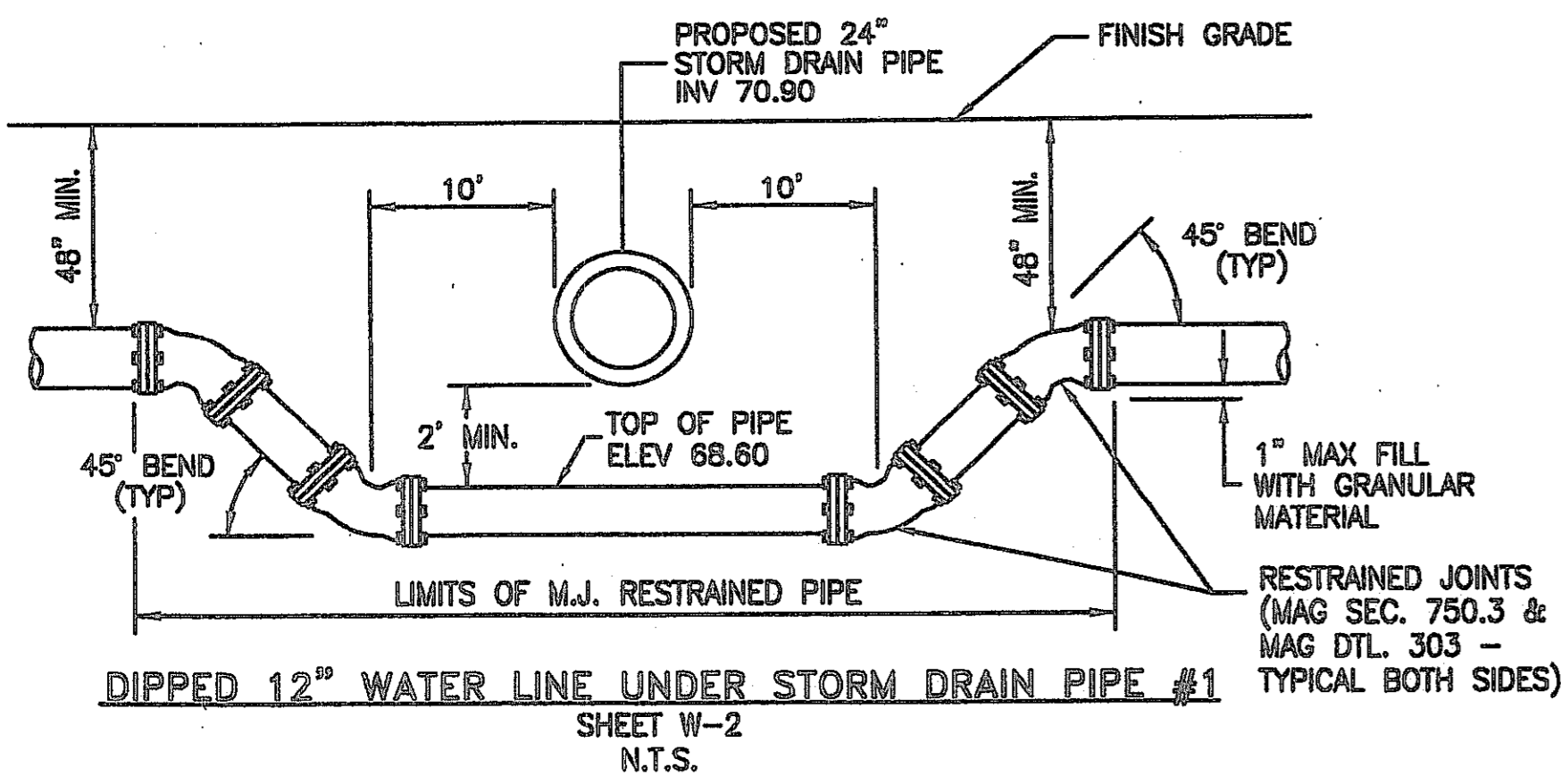
DRAWING NO
W-14
31 OF 38

NO.	REVISION	DATE
1	WATERLINE REVISION	11/02/07
2	PHASING OF WATER PLAN (1&2)	01/04/08

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD., ST# 750
PHOENIX, AZ 85016

HTE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.



VERTICAL REALIGNMENT NOTES:

1. THIS DETAIL PROVIDES SEPARATION & COVER REQUIREMENTS ONLY
2. RESTRAINED JOINTS SHALL BE USED ON ALL BENDS AND FOR THE APPROPRIATE LENGTH OF PIPE PER THE MANUFACTURERS SPECIFICATION.
3. THIS SHEET IS TO BE USED FOR UTILITY CROSSING ELEVATION INFORMATION ONLY.
4. CONTRACTOR TO INSTALL 2" VERTICAL SERVICE SADDLE AND 2" COPPER BLOWOFF LINE AT THE TRAPPED HIGH POINTS OF ALL VERTICAL REALIGNMENTS FOR ALL WATER LINES 12" AND LARGER. ROUTE 2" LINE TO CLOSEST LANDSCAPE ISLAND, AND CAP END WITH 2" CORP STOP. COVER CORP STOP WITH WATER METER BOX PER M.A.G. STD. DTL. 311.

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

[Signature]
 REGISTERED LAND SURVEYOR
 #26981
 RLS NUMBER

DATE: 7/28/08



2007-108-C3-032

NO HIDDEN DASHES BEFORE YOU DO CALL FOR THE BLUE STAKES
 1-800-782-5348
 BLUE STAKE CENTER
 CALL COLLECT

NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
WATERLINE CROSSING DETAILS

PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD., ST # 750
 PHOENIX, AZ 85016

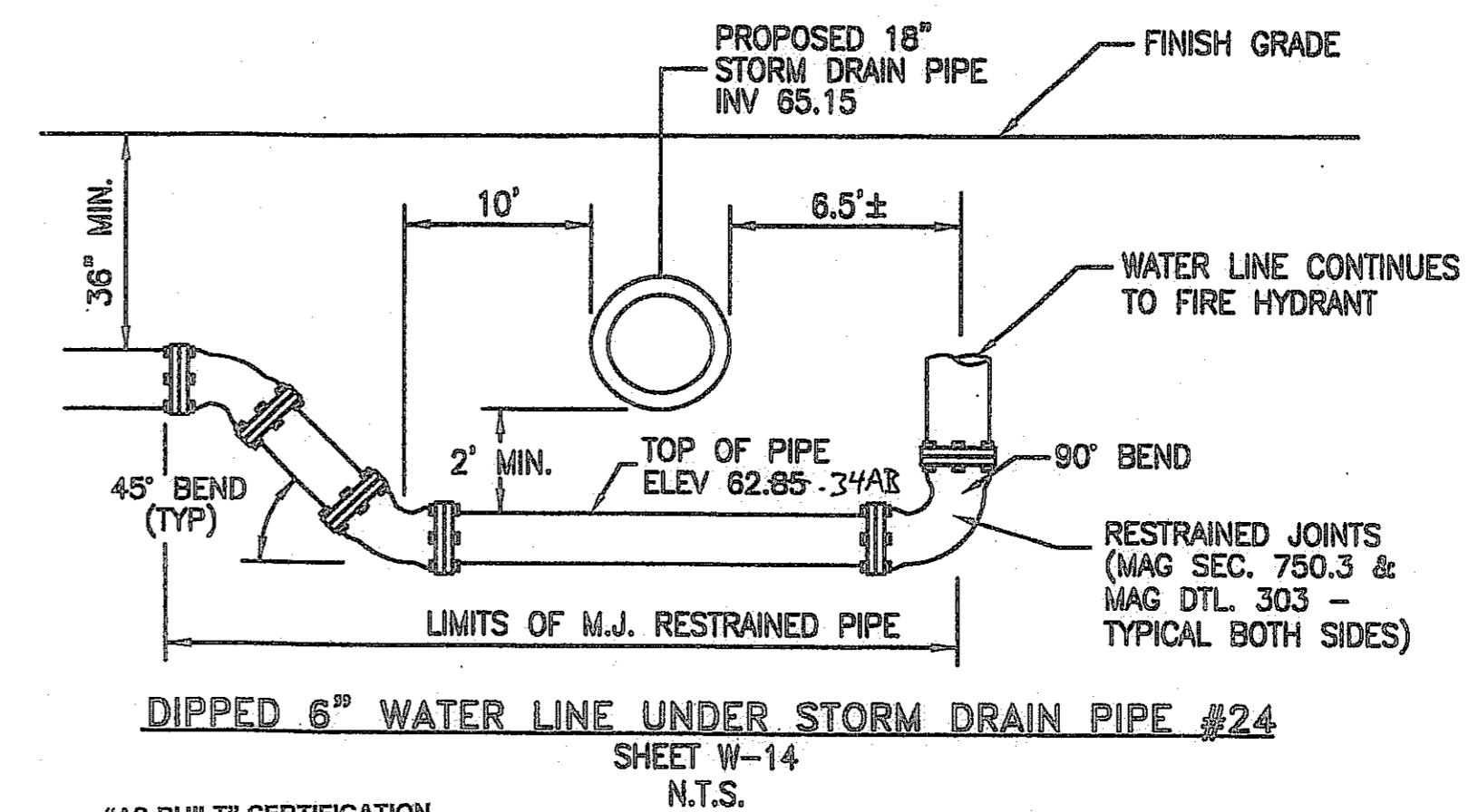
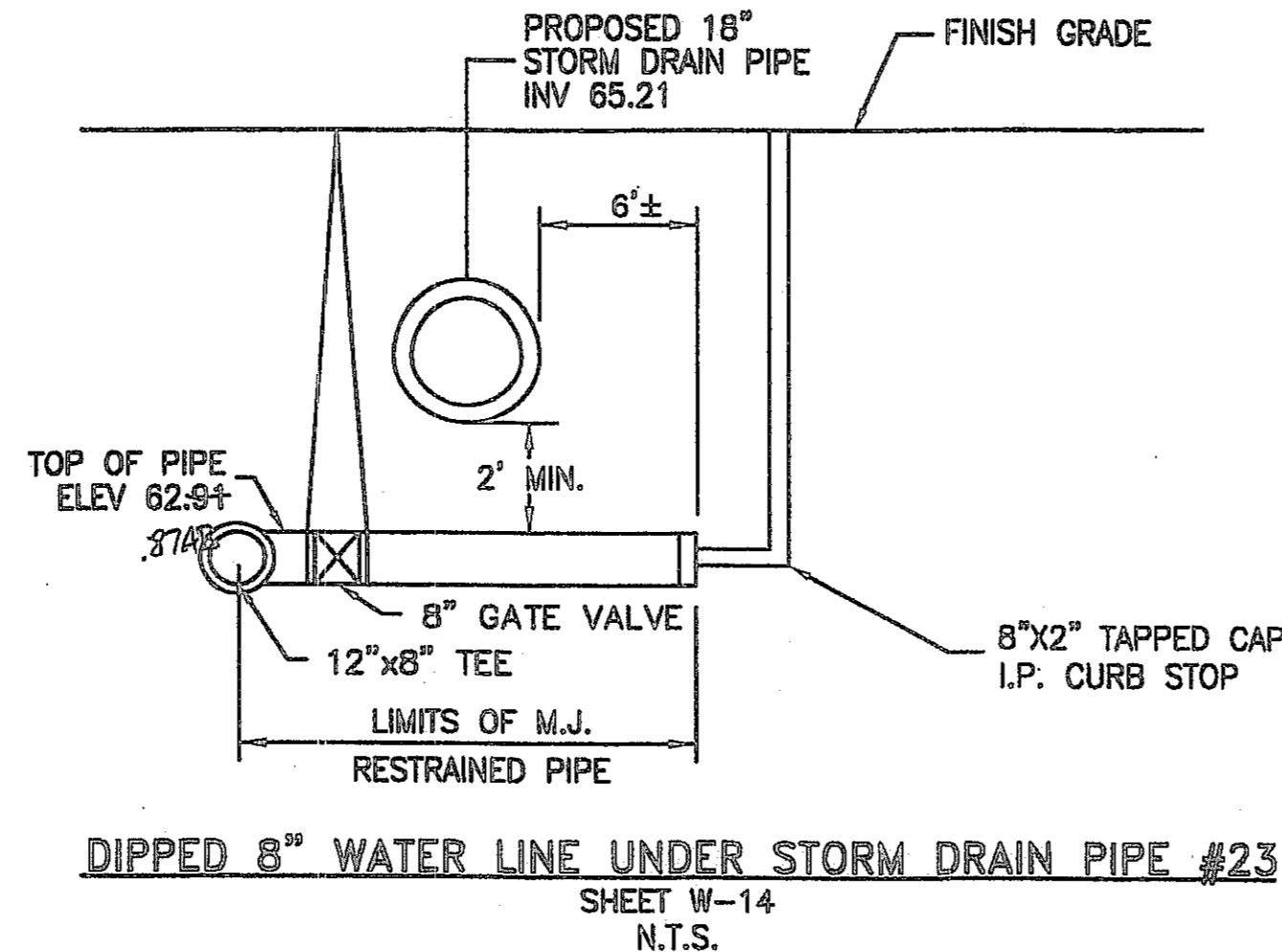
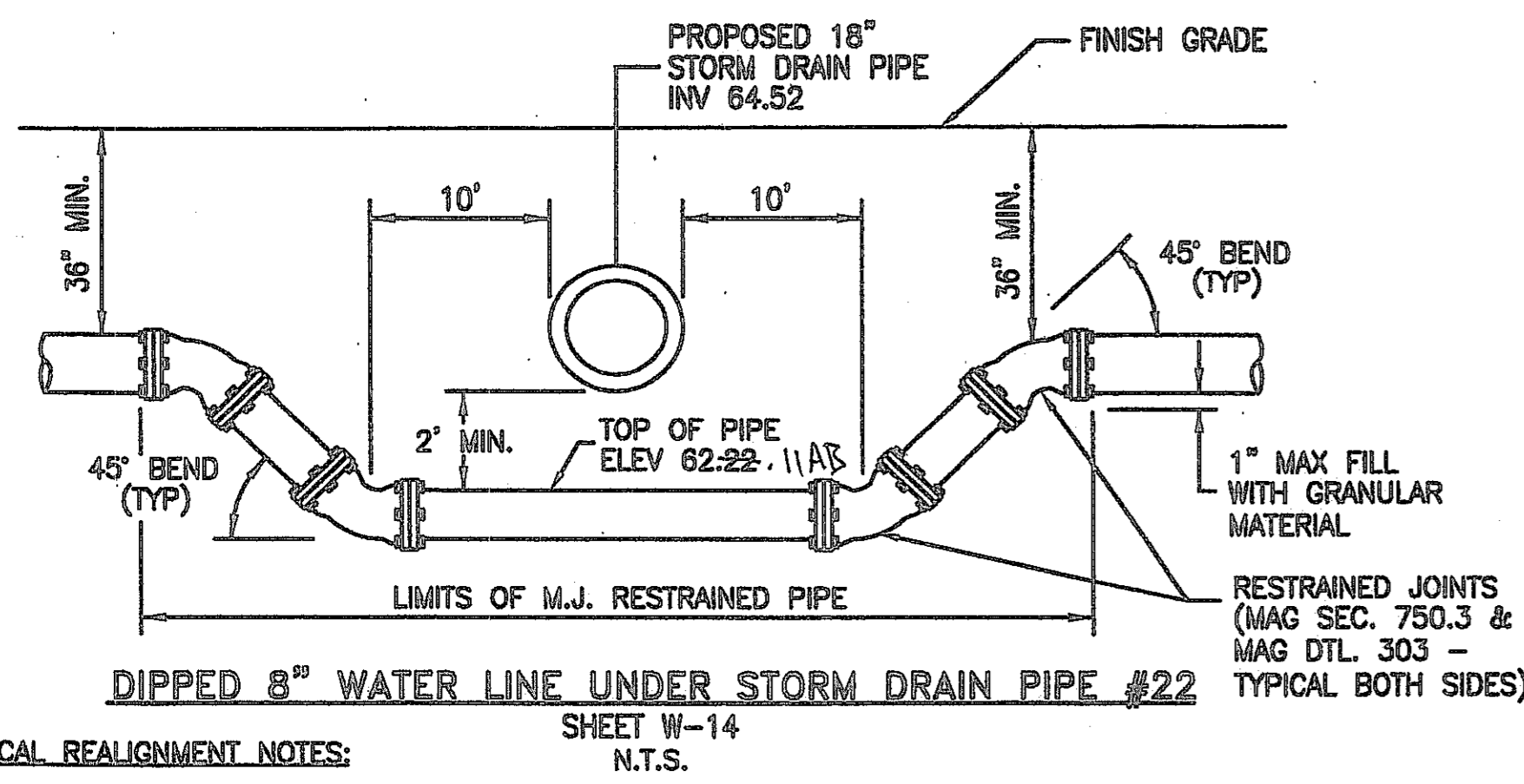
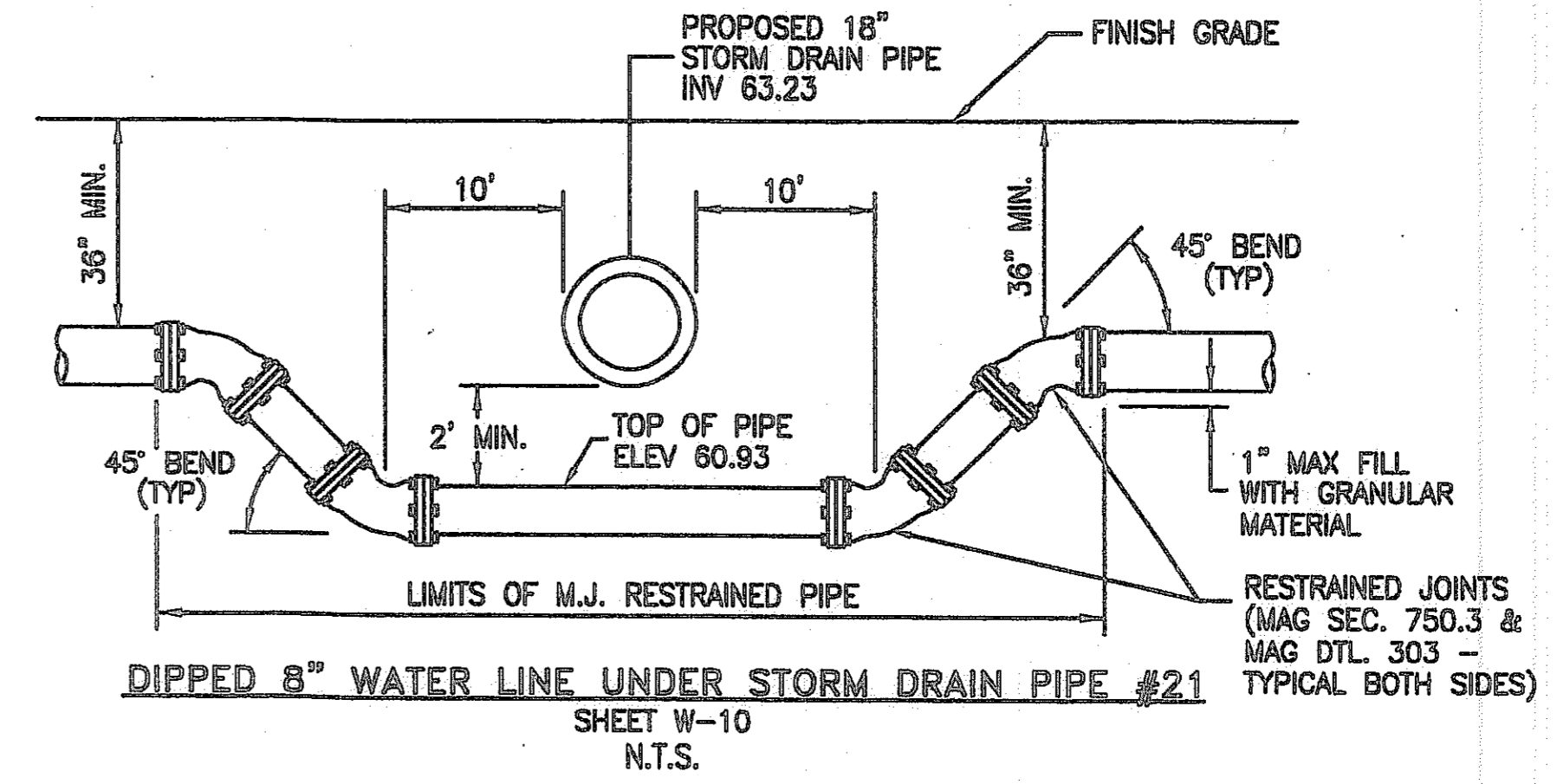
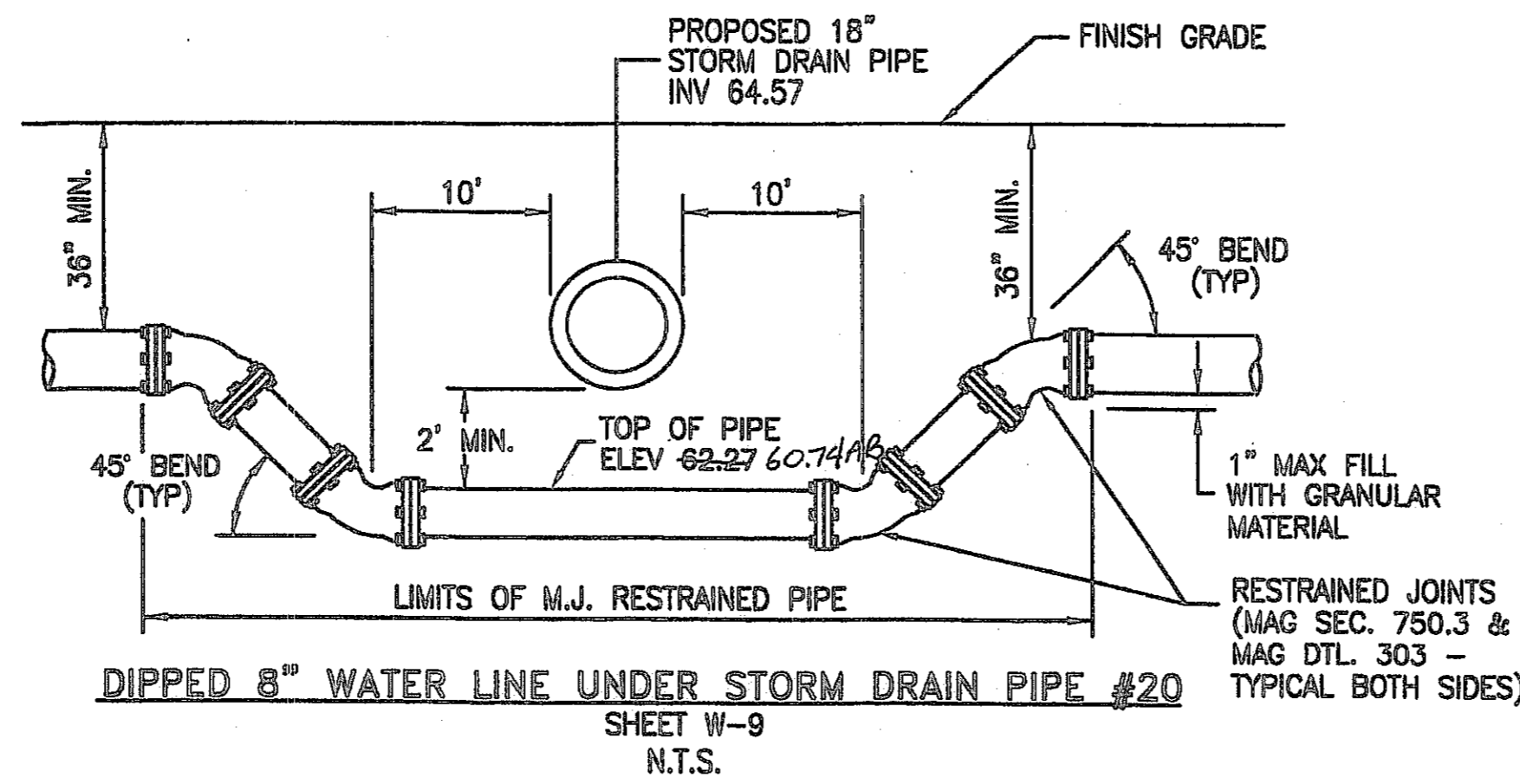
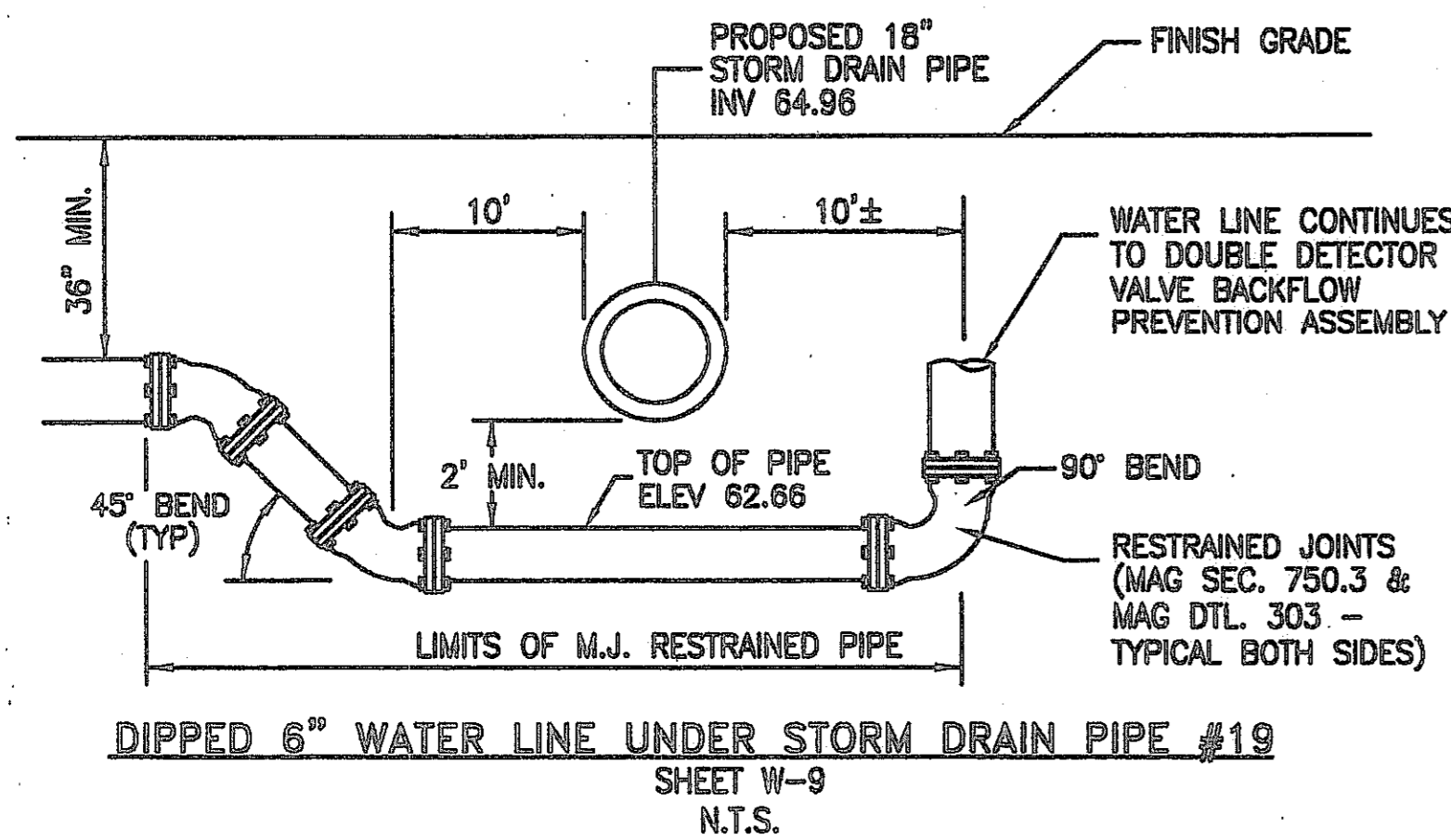
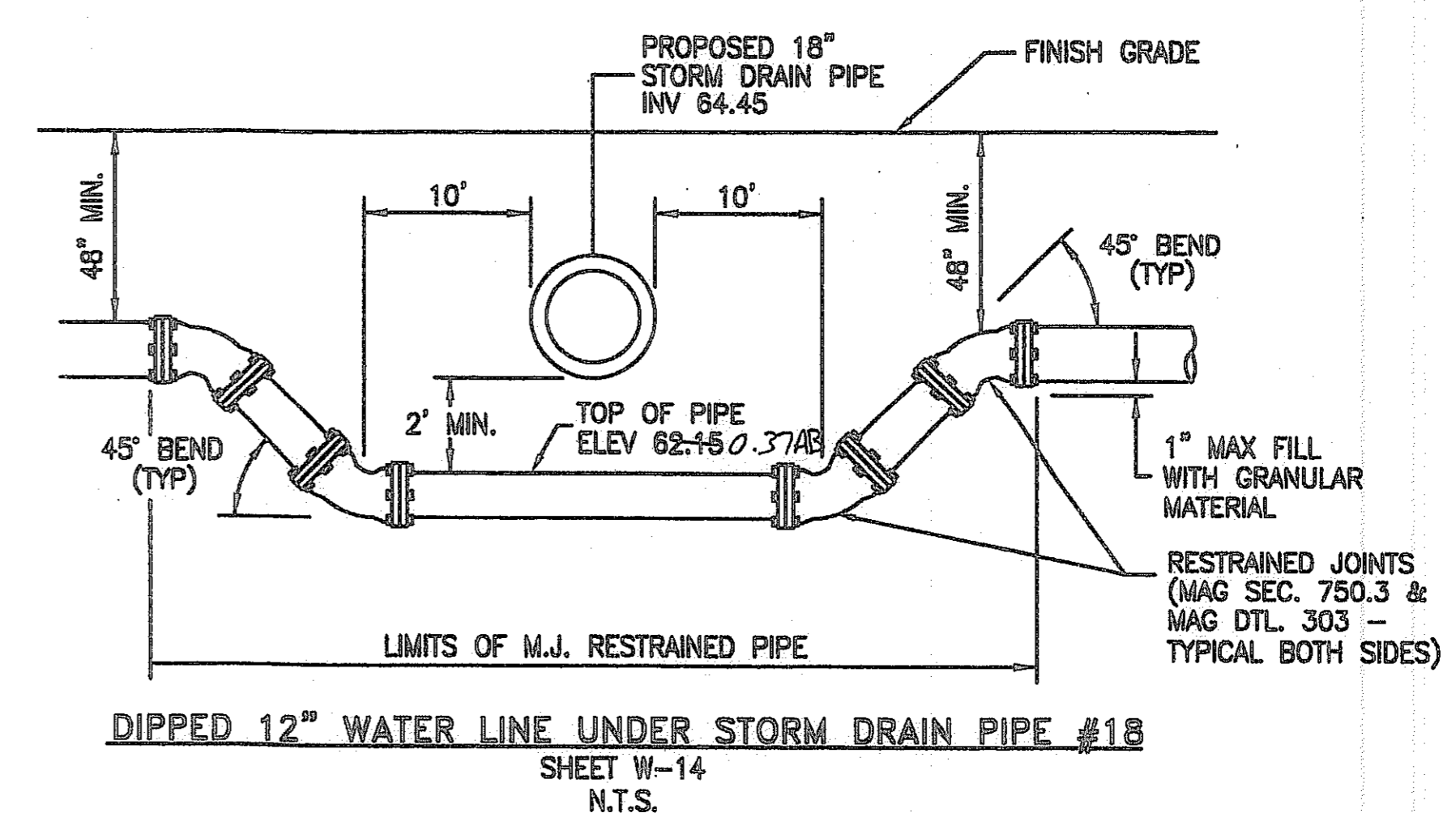
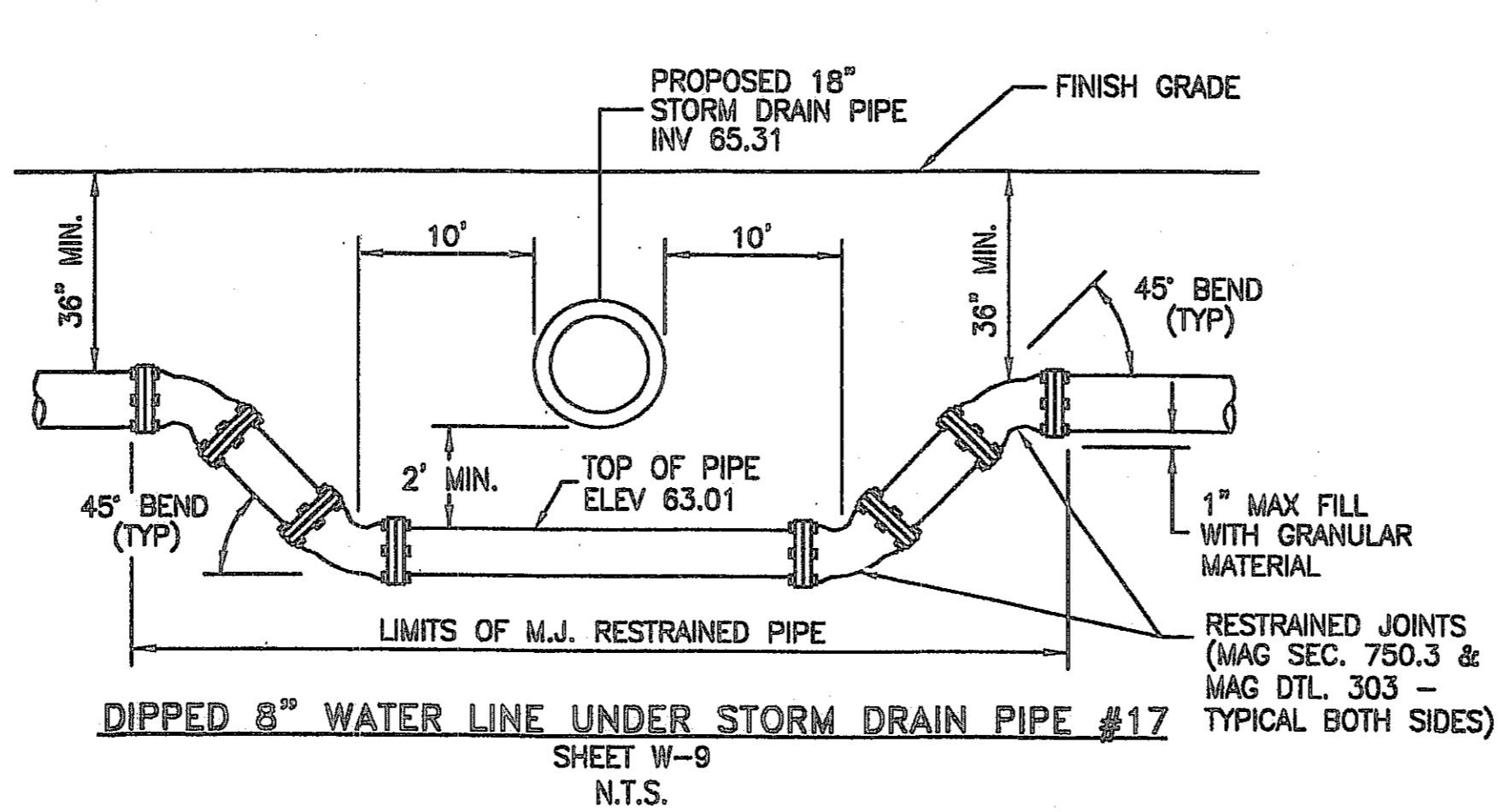
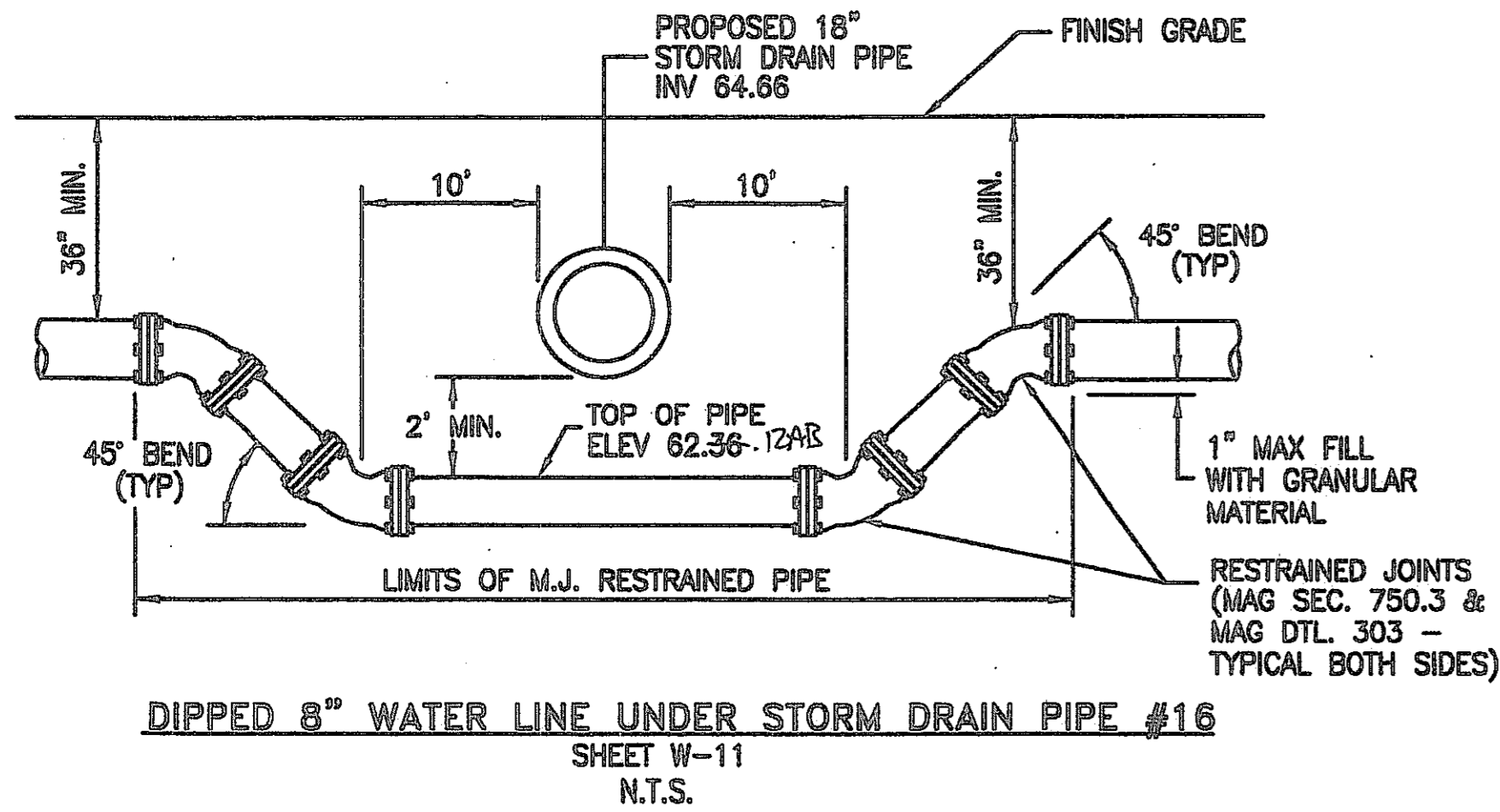
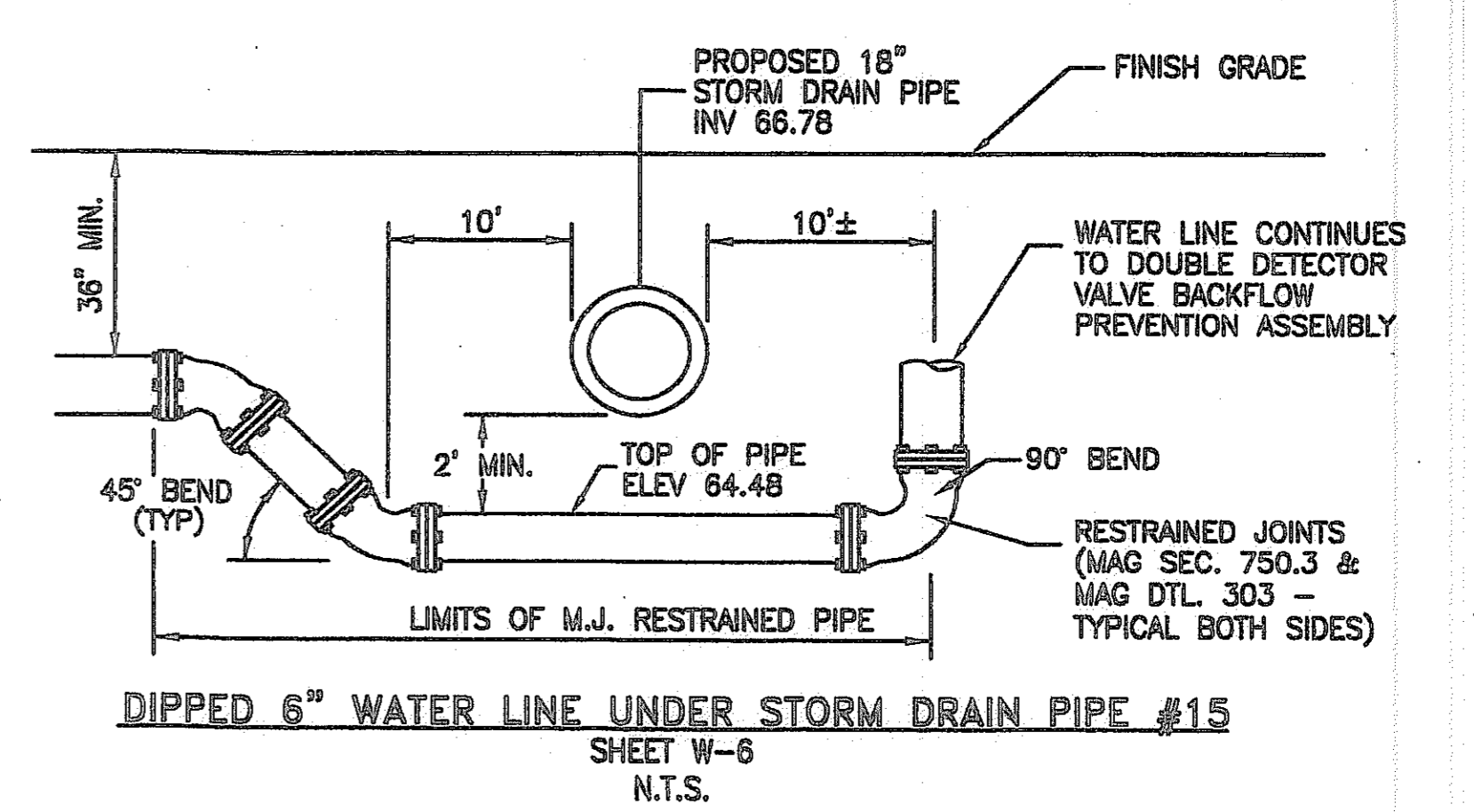
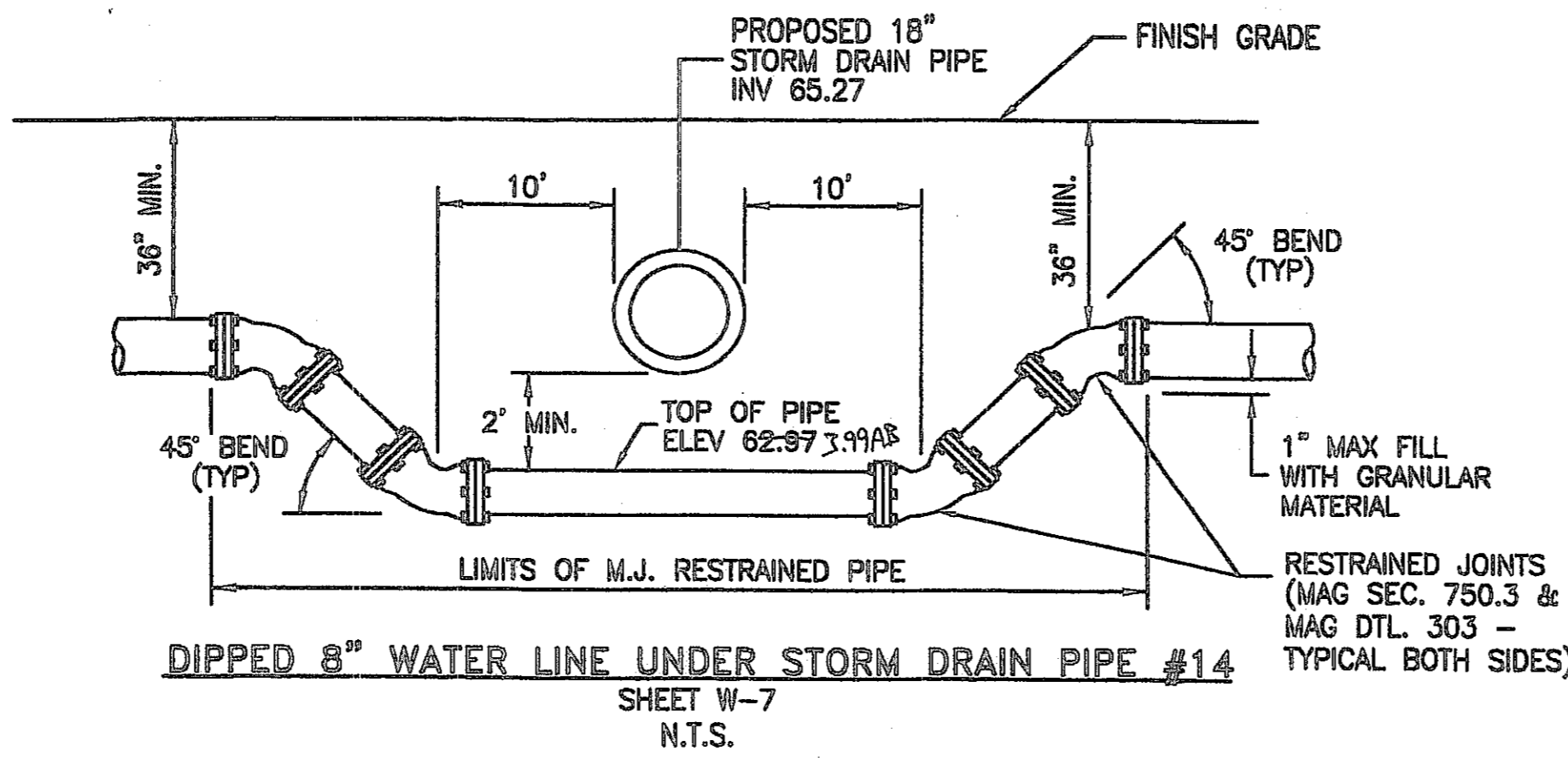
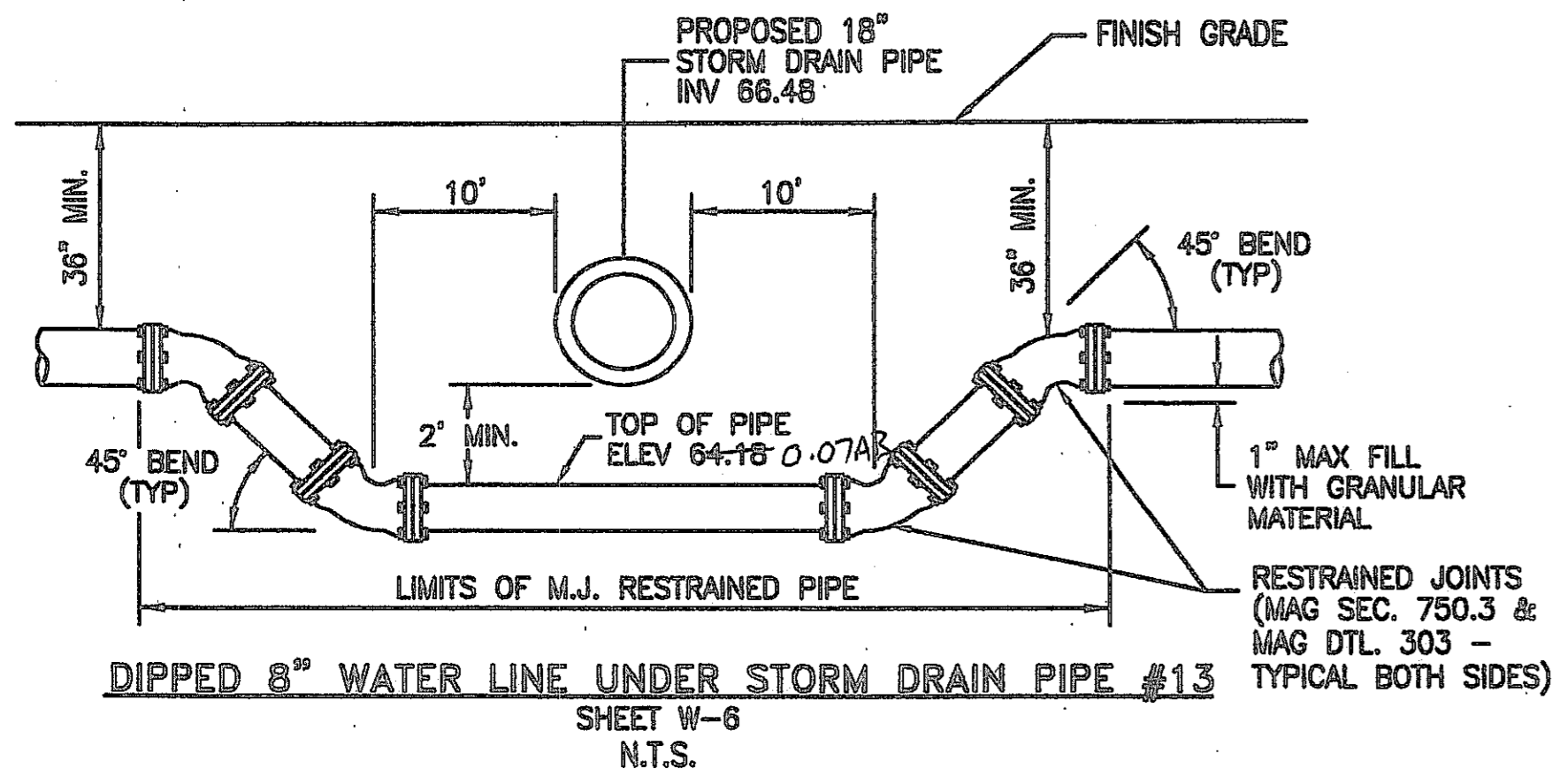


OPTIMUS
 CIVIL DESIGN GROUP
 2023 E. MAGNOLIA STREET
 PHOENIX, AZ 85034
 PH: (602) 264-9300 FAX: (602) 264-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-15
 32 of 38

FILE # 07-1192



VERTICAL REALIGNMENT NOTES:

1. THIS DETAIL PROVIDES SEPARATION & COVER REQUIREMENTS ONLY
2. RESTRAINED JOINTS SHALL BE USED ON ALL BENDS AND FOR THE APPROPRIATE LENGTH OF PIPE PER THE MANUFACTURERS SPECIFICATION.
3. THIS SHEET IS TO BE USED FOR UTILITY CROSSING ELEVATION INFORMATION ONLY.
4. CONTRACTOR TO INSTALL 2" VERTICAL SERVICE SADDLE AND 2" COPPER BLOWOFF LINE AT THE TRAPPED HIGH POINTS OF ALL VERTICAL REALIGNMENTS FOR ALL WATER LINES 12" AND LARGER. ROUTE 2" LINE TO CLOSEST LANDSCAPE ISLAND, AND CAP END WITH 2" CORP STOP. COVER CORP STOP WITH WATER METER BOX PER M.A.G. STD. DTL. 311.

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
 PETER M. ROSS
 #26931
 RLS NUMBER

DATE 7/28/08



2007-108-C3-033

1-800-782-5348
 BLUE STATE CENTER
 CALL COLLECT

CANYON TRAILS TOWNE CENTER
WATERLINE CROSSING DETAILS
 PREPARED FOR
 VESJAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016

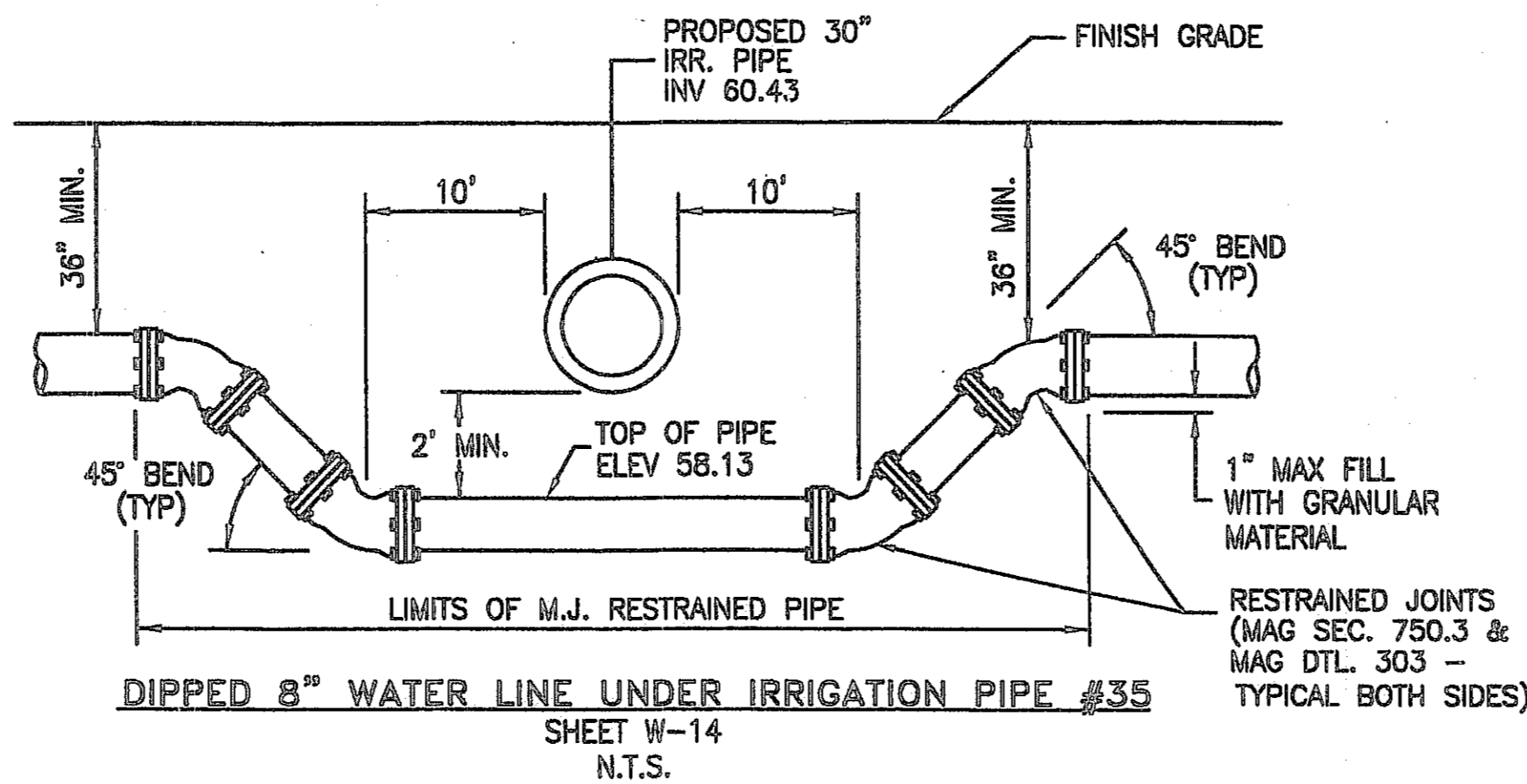
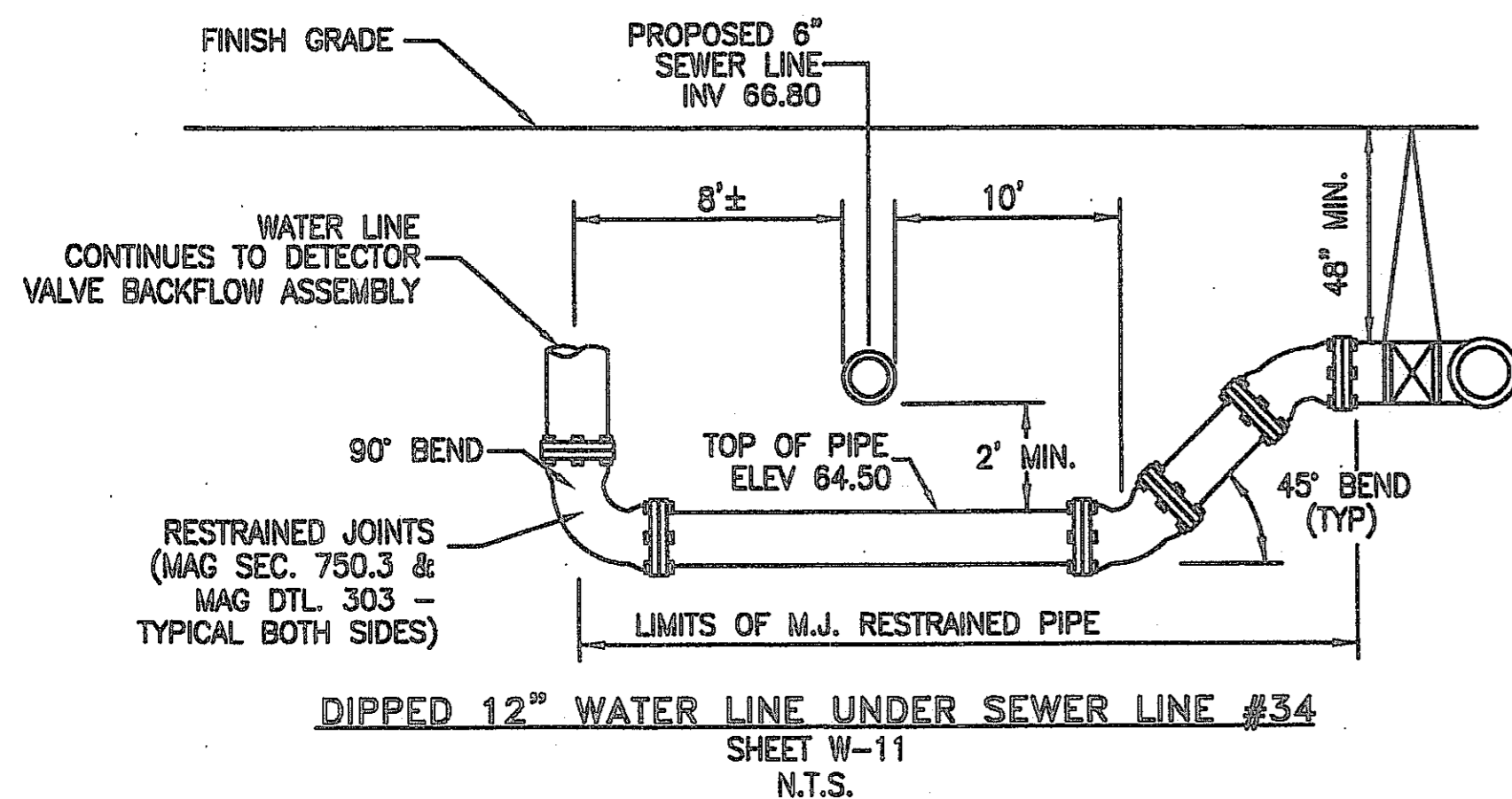
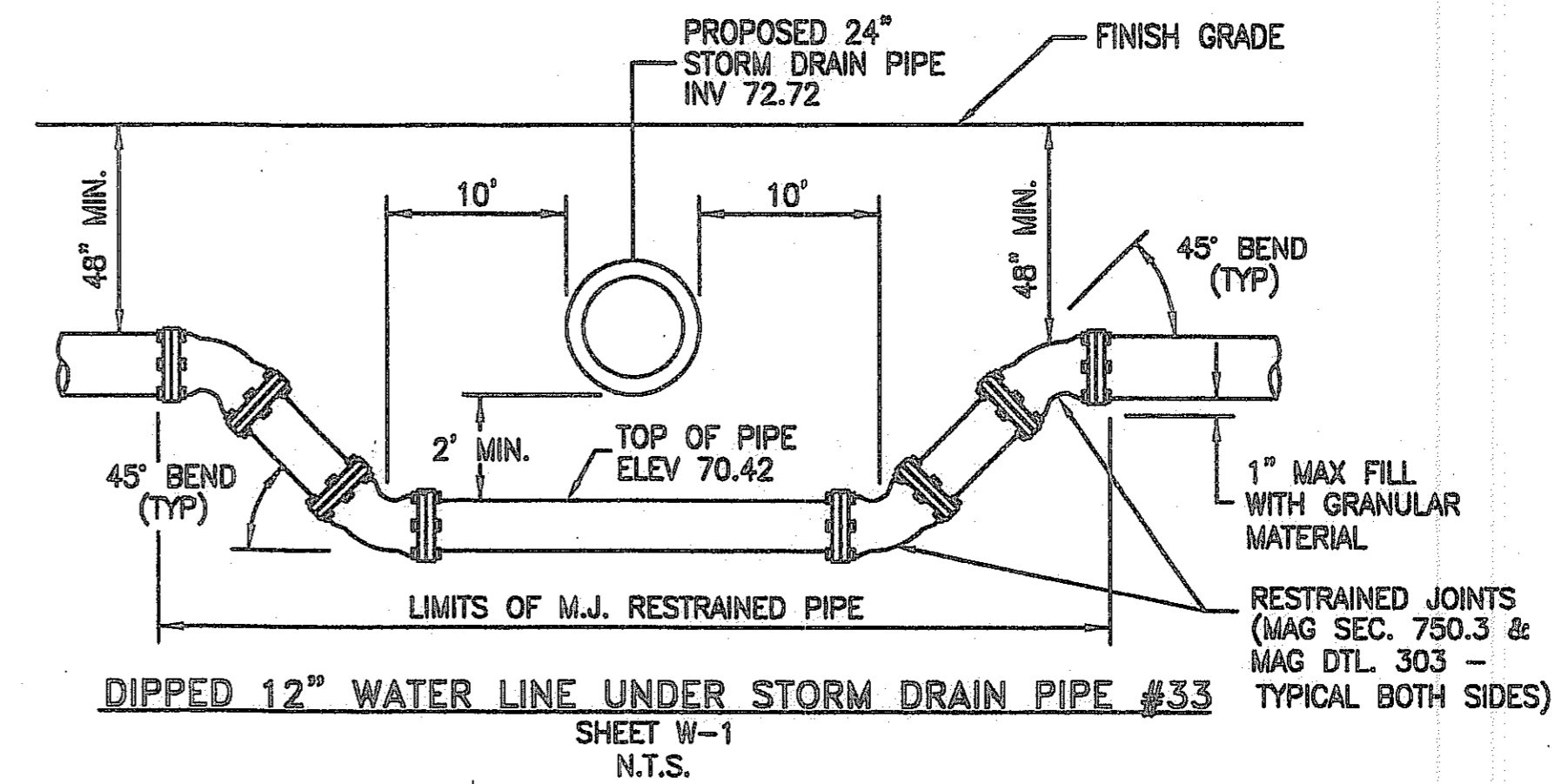
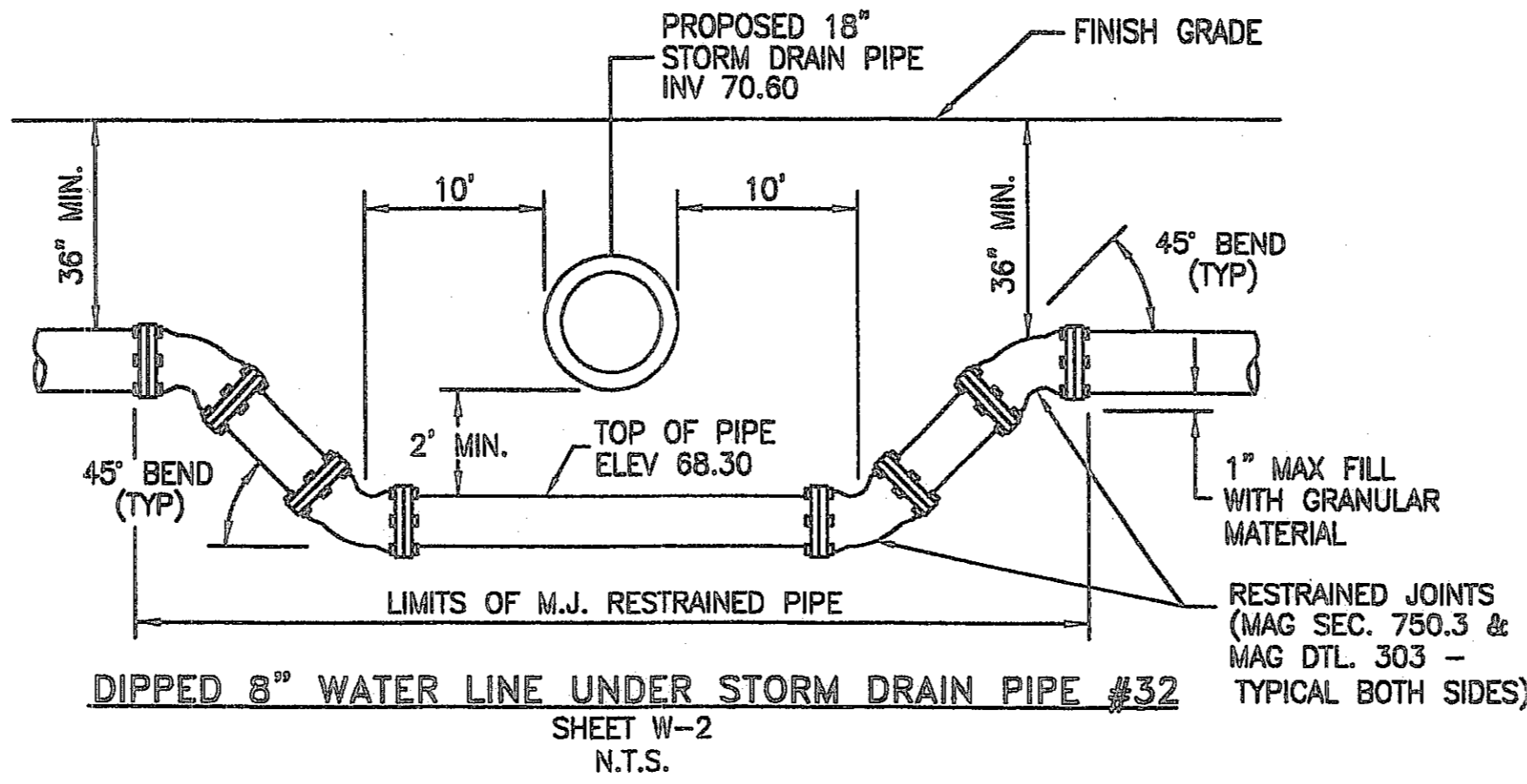
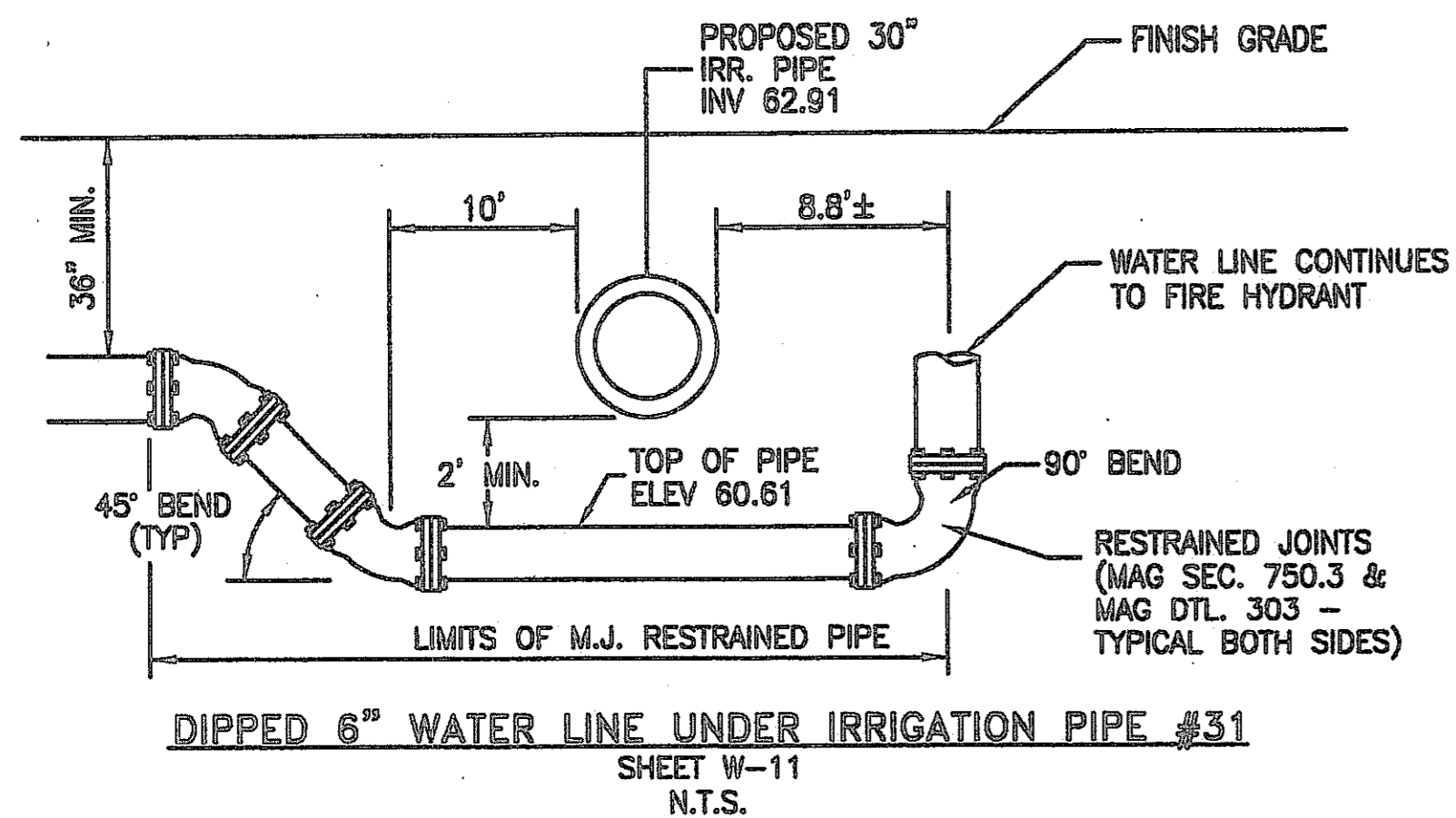
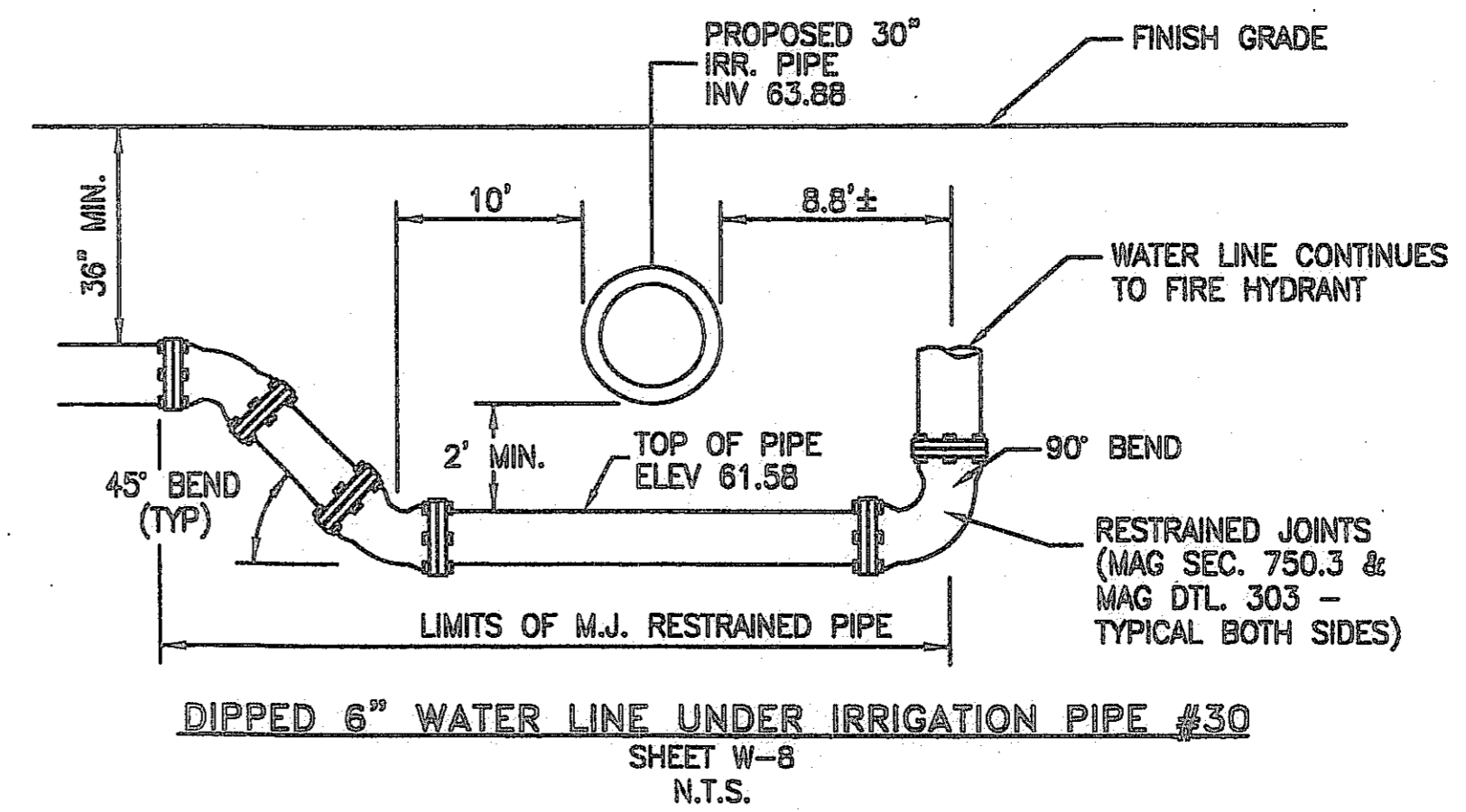
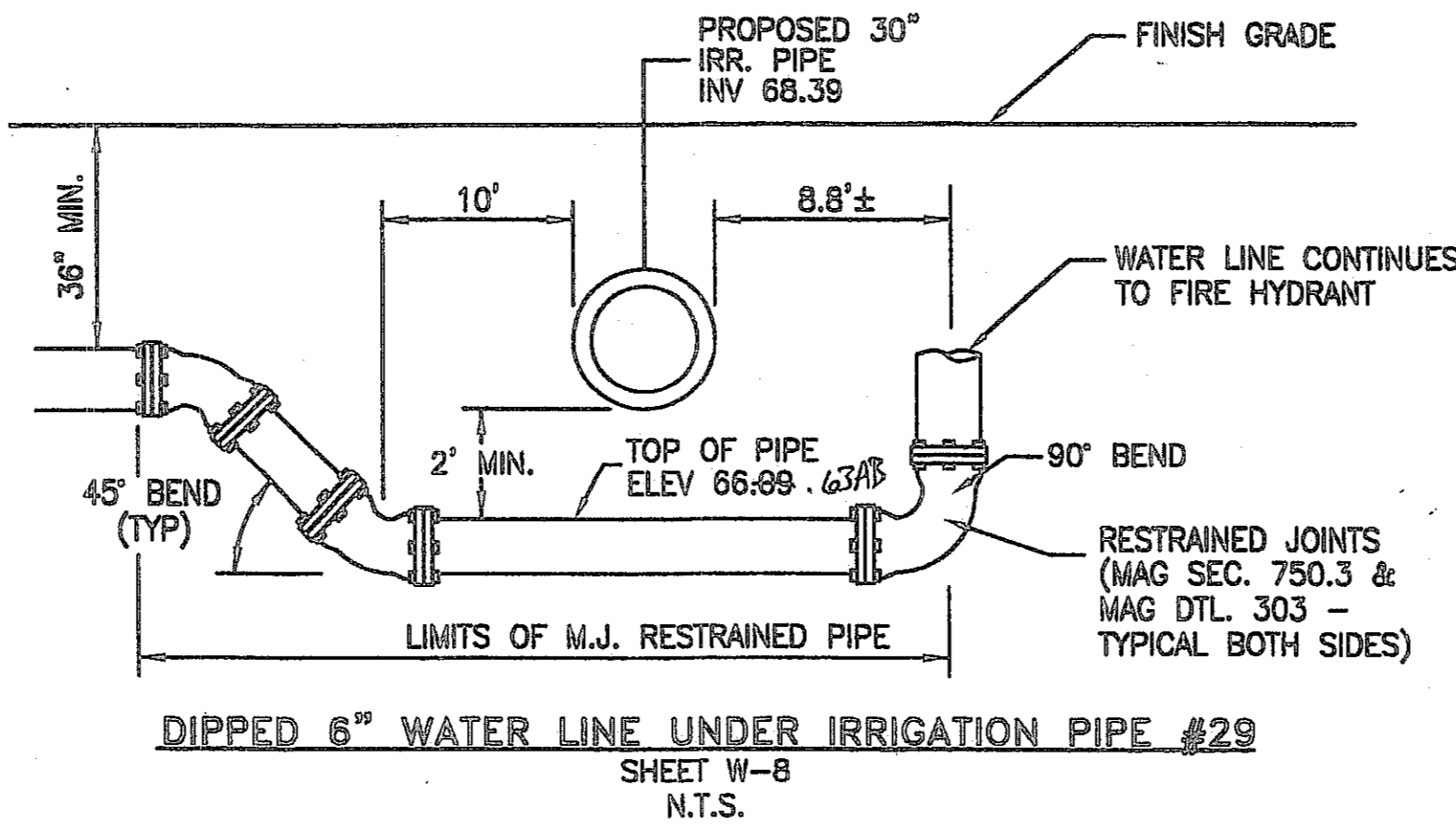
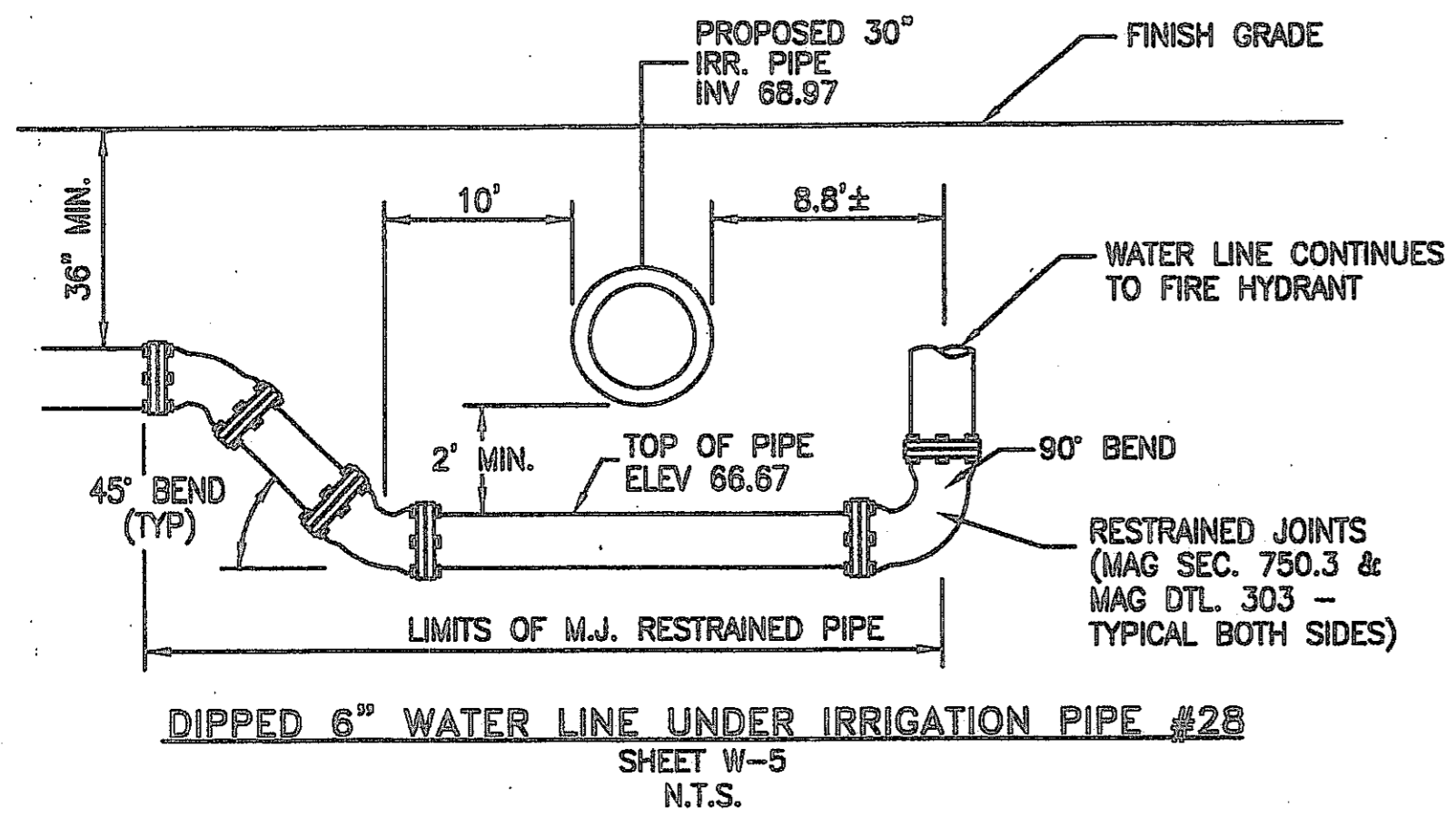
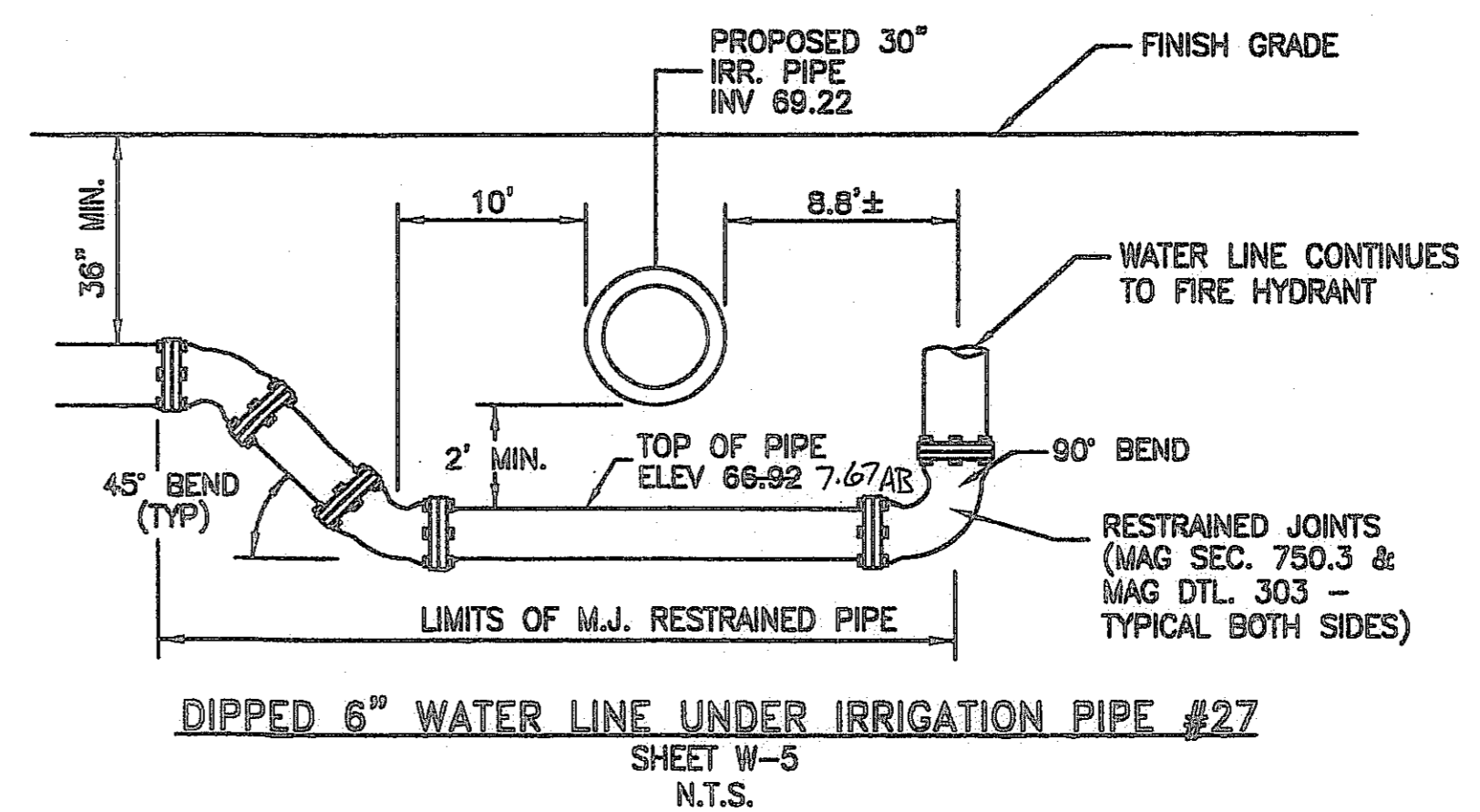
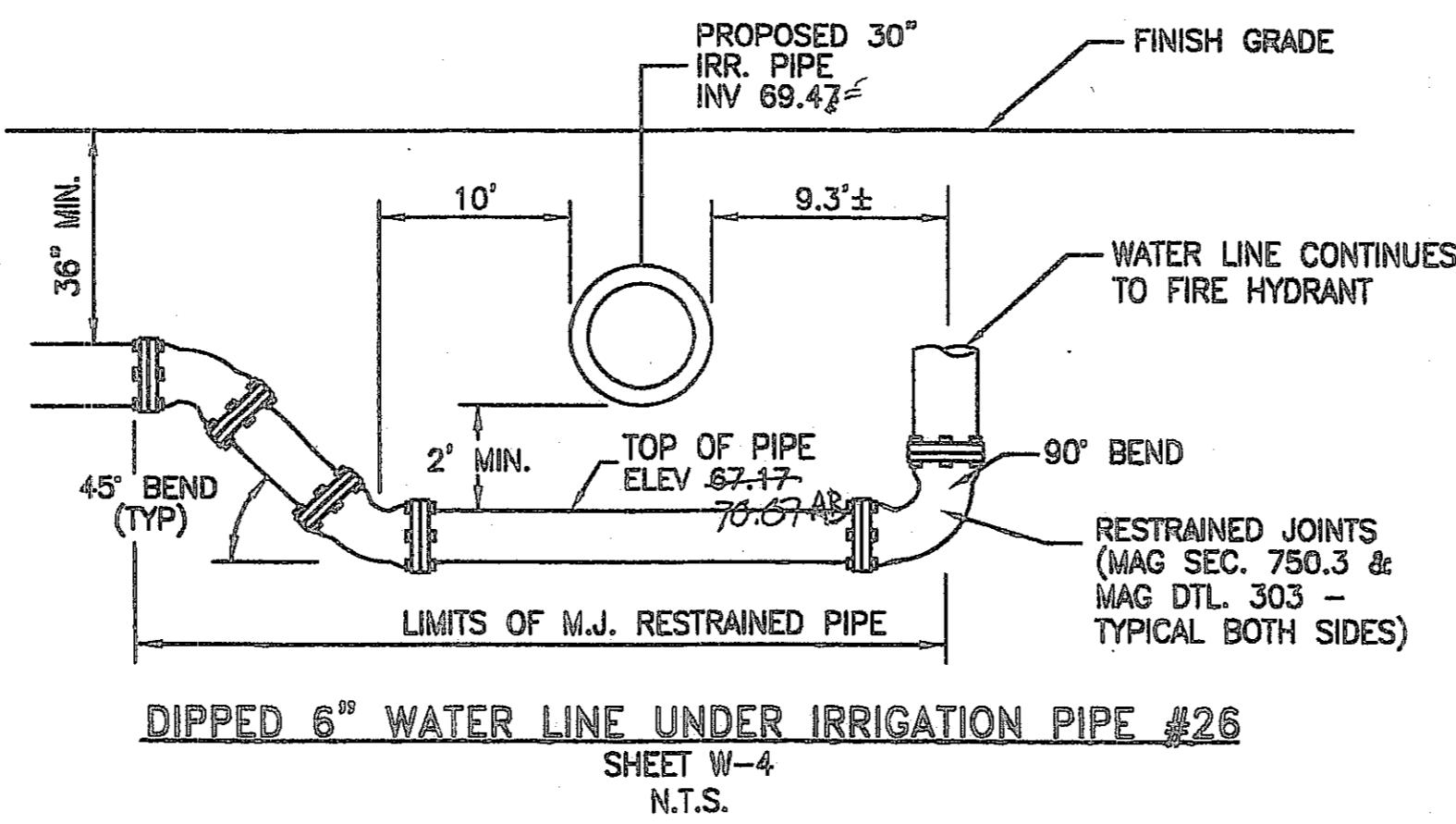
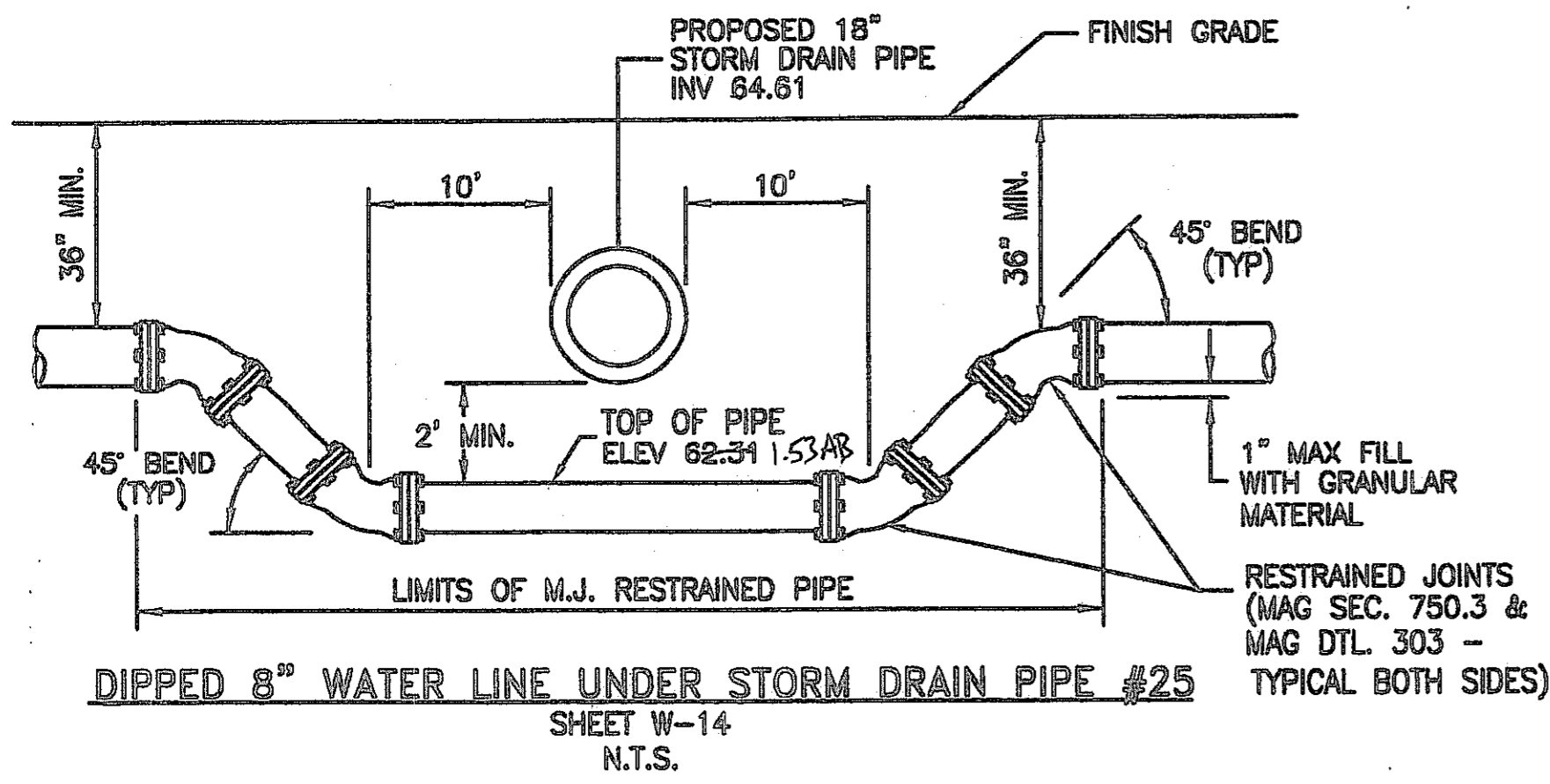


OPTIMUS
 CIVIL DESIGN GROUP
 2025 E. MARICOPA STREET
 PHOENIX, AZ 85034
 PH: (602) 266-9500 FAX: (602) 266-9400

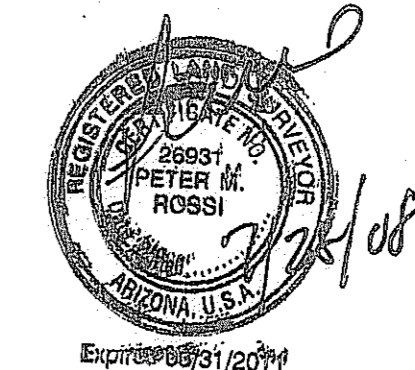
DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-16
 33 OF 38

HIE #07-1192



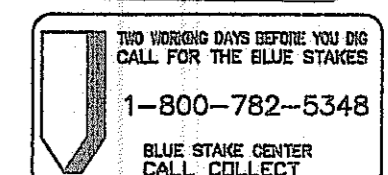
"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
REGISTERED LAND SURVEYOR
DATE 7/25/08
20921
RLS NUMBER



VERTICAL REALIGNMENT NOTES:

1. THIS DETAIL PROVIDES SEPARATION & COVER REQUIREMENTS ONLY
2. RESTRAINED JOINTS SHALL BE USED ON ALL BENDS AND FOR THE APPROPRIATE LENGTH OF PIPE PER THE MANUFACTURERS SPECIFICATION.
3. THIS SHEET IS TO BE USED FOR UTILITY CROSSING ELEVATION INFORMATION ONLY.
4. CONTRACTOR TO INSTALL 2" VERTICAL SERVICE SADDLE AND 2" COPPER BLOWOFF LINE AT THE TRAPPED HIGH POINTS OF ALL VERTICAL REALIGNMENTS FOR ALL WATER LINES 12" AND LARGER. ROUTE 2" LINE TO CLOSEST LANDSCAPE ISLAND, AND CAP END WITH 2" CORP STOP. COVER CORP STOP WITH WATER METER BOX PER M.A.G. STD. DTL. 311.

2007-108-C3-034



CANYON TRAILS TOWNE CENTER
WATERLINE CROSSING DETAILS
PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST# 750
PHOENIX, AZ 85016



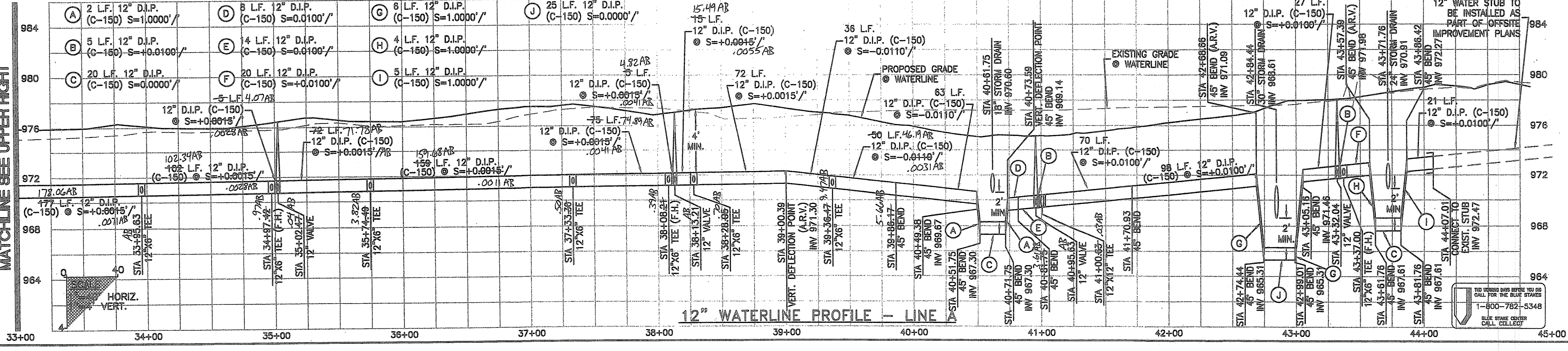
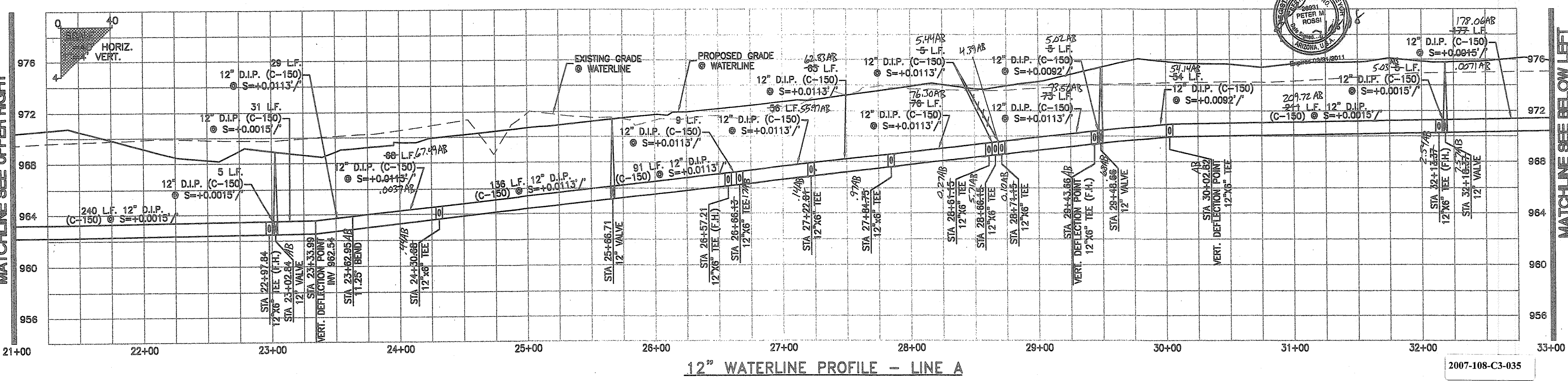
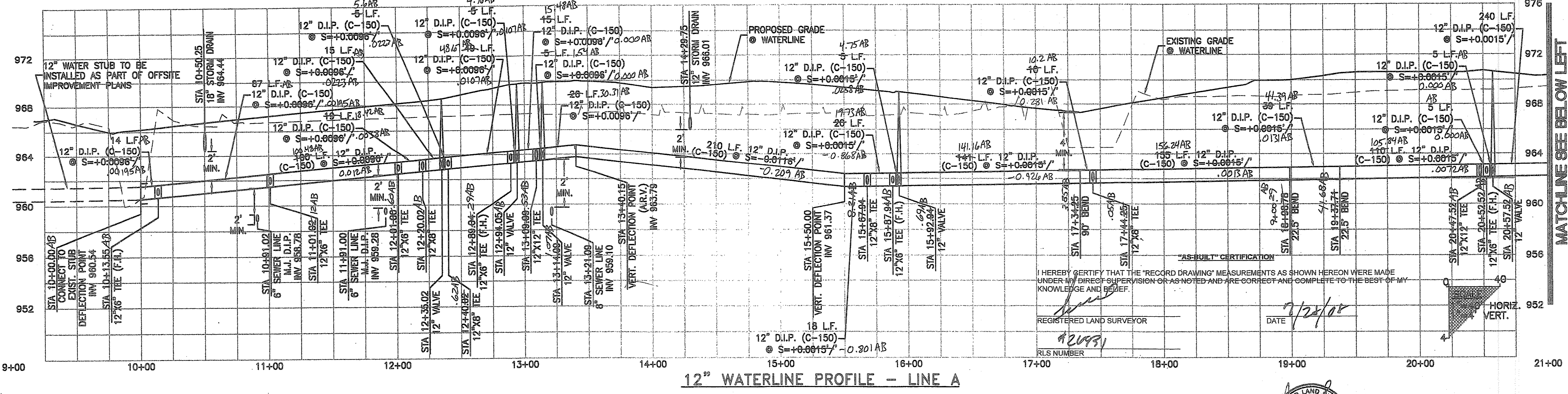
OPTIMUS
CIVIL DESIGN GROUP
2228 E. MAGNOLIA STREET
PHOENIX, AZ 85034
PH: (602) 296-6300
FAX: (602) 296-6300

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

DRAWING NO
W-17
34 OF 38

FILE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.



NO.	REVISION	DATE

CANYON TRAILS TOWNE CENTER
12" WATERLINE PROFILES
 PREPARED FOR
 VESTAR DEVELOPMENT COMPANY
 2425 E. CAMELBACK RD. ST# 750
 PHOENIX, AZ 85016

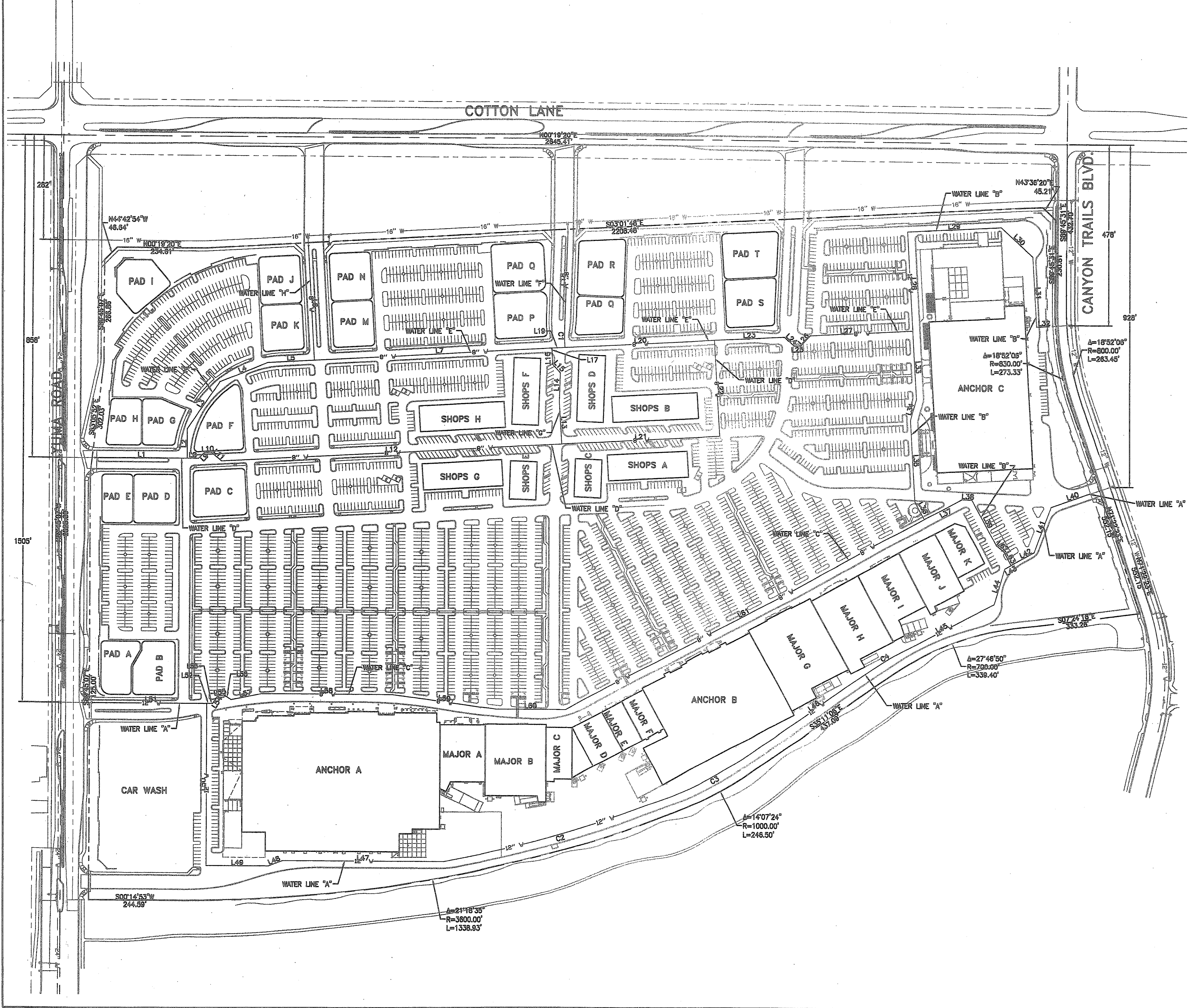


OPTIMUS
 CIVIL DESIGN GROUP
 2823 E. MAGNOLIA STREET
 PHOENIX, AZ 85034
 PH: (602) 986-9300 FAX: (602) 986-9400

DESIGNED: AJR
 DRAWN: AZ/JS/DB
 CHECKED: EDS, AJR
 DATE: 04/16/07
 JOB NO.: 031039

DRAWING NO
W-18
 35 OF 38
 FILE # 07-1192

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEUNEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

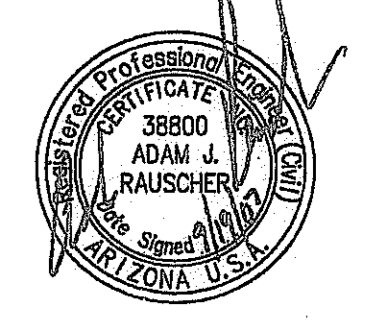


LINE	ANGLE	DISTANCE
L1	S 0°14'56" W	242.08'
L2	N 89°45'04" W	79.34'
L3	S 56°00'04" E	153.56'
L4	S 22°15'04" E	136.01'
L5	N 3°01'48" W	122.44'
L6	N 86°58'12" E	299.73'
L7	S 3°01'48" E	627.54'
L8	S 0°14'56" W	30.00'
L9	N 44°45'04" W	22.40'
L10	S 3°01'48" E	18.00'
L11	N 41°58'12" E	35.71'
L12	S 3°01'48" E	897.92'
L13	N 86°58'12" E	113.86'
L14	S 88°04'48" E	78.48'
L15	N 46°55'11" E	29.81'
L16	N 86°57'56" W	32.84'
L17	S 88°57'56" W	10.94'
L18	S 88°04'48" E	244.04'
L19	N 3°01'48" W	34.84'
L20	S 3°01'48" E	365.08'
L21	N 3°01'48" W	417.30'
L22	N 86°58'16" E	258.64'
L23	S 3°01'48" E	184.59'
L24	N 41°58'12" E	34.32'
L25	N 3°01'48" W	18.00'
L26	S 48°01'48" E	35.36'
L27	S 3°01'48" E	270.83'
L28	N 86°58'12" E	259.50'
L29	N 3°01'48" W	246.42'
L30	S 41°58'12" W	113.72'
L31	S 86°58'09" W	182.85'
L32	N 3°01'51" W	41.88'
L33	S 86°58'12" W	182.52'
L34	N 74°40'18" W	59.27'
L35	S 86°58'12" W	217.15'
L36	N 61°47'37" E	53.18'
L37	N 28°12'23" W	112.74'
L38	N 2°29'28" E	26.35'
L39	S 61°47'37" W	136.13'
L40	N 18°37'34" W	107.89'
L41	S 68°38'05" E	128.09'
L42	N 28°12'24" W	70.30'
L43	S 28°12'24" E	18.88'
L44	S 73°12'24" E	95.57'
L45	N 28°12'23" W	303.14'
L46	N 35°11'10" W	418.66'
L47	N 0°14'56" E	425.24'
L48	N 22°15'04" W	38.93'
L49	N 0°14'56" E	164.53'
L50	S 88°45'04" E	425.16'
L51	N 0°14'56" E	295.55'
L52	S 0°14'57" W	10.00'
L53	N 0°14'57" E	5.91'
L54	N 56°24'46" W	21.91'
L55	N 10°49'48" W	18.00'
L56	S 33°59'58" W	21.75'
L57	S 11°00'04" E	82.07'
L58	S 0°14'56" W	343.81'
L59	N 7°44'33" E	276.72'
L60	S 0°14'56" W	183.82'
L61	S 28°12'23" E	1072.98'
L62	N 39°17'37" E	27.44'
L63	N 61°47'37" E	36.53'

CURVE	DELTA	RADIUS	ARC LENGTH
C1	4°57'13"	600.00'	51.87'
C2	10°07'27"	3558.00'	628.70'
C3	14°07'24"	958.00'	238.15'
C4	6°58'46"	300.00'	36.54'

CANYON TRAILS TOWNE CENTER
ON-SITE WATER MAIN LAYOUT PLAN

PREPARED FOR
VESTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST.# 750
PHOENIX, AZ 85016



DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

2007-108-C3-037

TO BE USED ONLY BY THE USER. IF YOU ARE NOT THE USER, PLEASE DO NOT CALL FOR THE BLUE STAKES.
1-800-782-5348
BLUE STAKE CENTER
CALL COLLECT

DRAWING NO
W-20

THIS CONTRACT ALLOWS THE OWNER TO REQUIRE THE SUBMISSION OF BILLINGS OR ESTIMATES IN BILLING CYCLES OTHER THAN THIRTY DAYS. A WRITTEN DESCRIPTION OF SUCH OTHER BILLING CYCLE APPLICABLE TO THE PROJECT IS AVAILABLE FROM THE OWNER OR OWNERS DESIGNATED AGENT AT 2425 E. CAMELBACK ROAD #750, PHOENIX, AZ. ATTN: JACK VAN KLEINEN AND THE OWNER OR ITS AGENT SHALL PROVIDE THIS WRITTEN DESCRIPTION ON REQUEST.

PRIVATE & PUBLIC FIRE AND WATER NOTES

- FIELD LOCATE EXISTING 24" WATERLINE AND INSTALL TAPPING SLEEVE, VALVE BOX, AND COVER PER M.A.G. STD. DTL. 340 & 391-1 WITH DEBRIS CAP PER C.O.G. STD. DTL. G-3321, SIZE AS NOTED.
- INSTALL 12" Ø D.I.P. - CLASS 350 WATERLINE. LENGTH AS NOTED.
- INSTALL 8" Ø D.I.P. - CLASS 350 WATERLINE. LENGTH AS NOTED.
- FIELD LOCATE AND CONNECT TO EXISTING WATERLINE STUB OR CAP END OF PIPE. IF STUB IS NOT IN PLACE AT TIME OF CONSTRUCTION, SEE W-13 AND W-14 (SHEETS 13 AND 14).
- CONSTRUCT VERTICAL REALIGNMENT OF WATER MAIN PER C.O.G. STD. DTL. G-3301. SEE CROSS-SECTIONS ON THIS PLAN SET.

▲ ADDED ENTIRE SHEET

"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY DIRECT SUPERVISION OR AS NOTED AND ARE CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

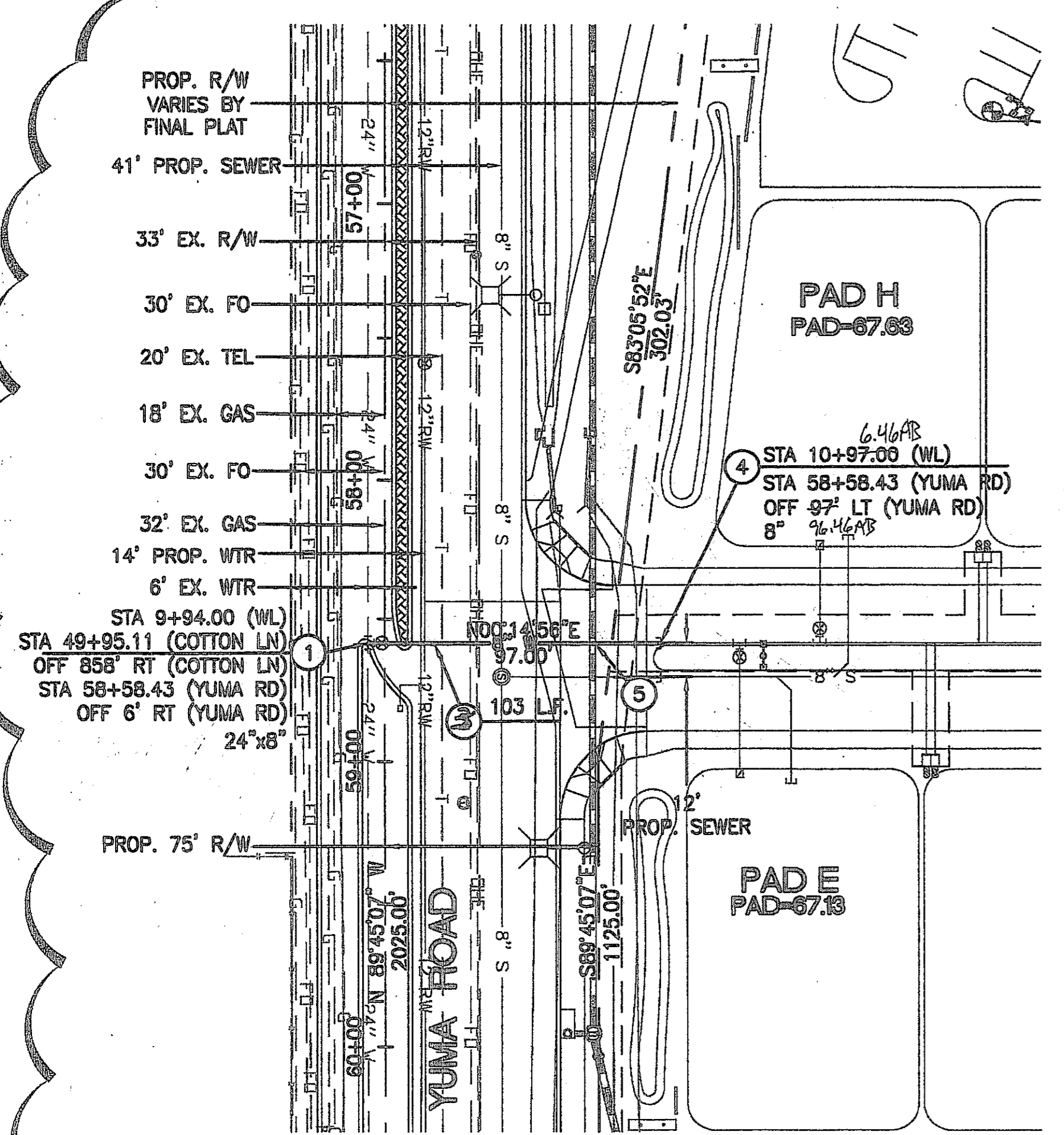
REGISTERED LAND SURVEYOR

RLS NUMBER

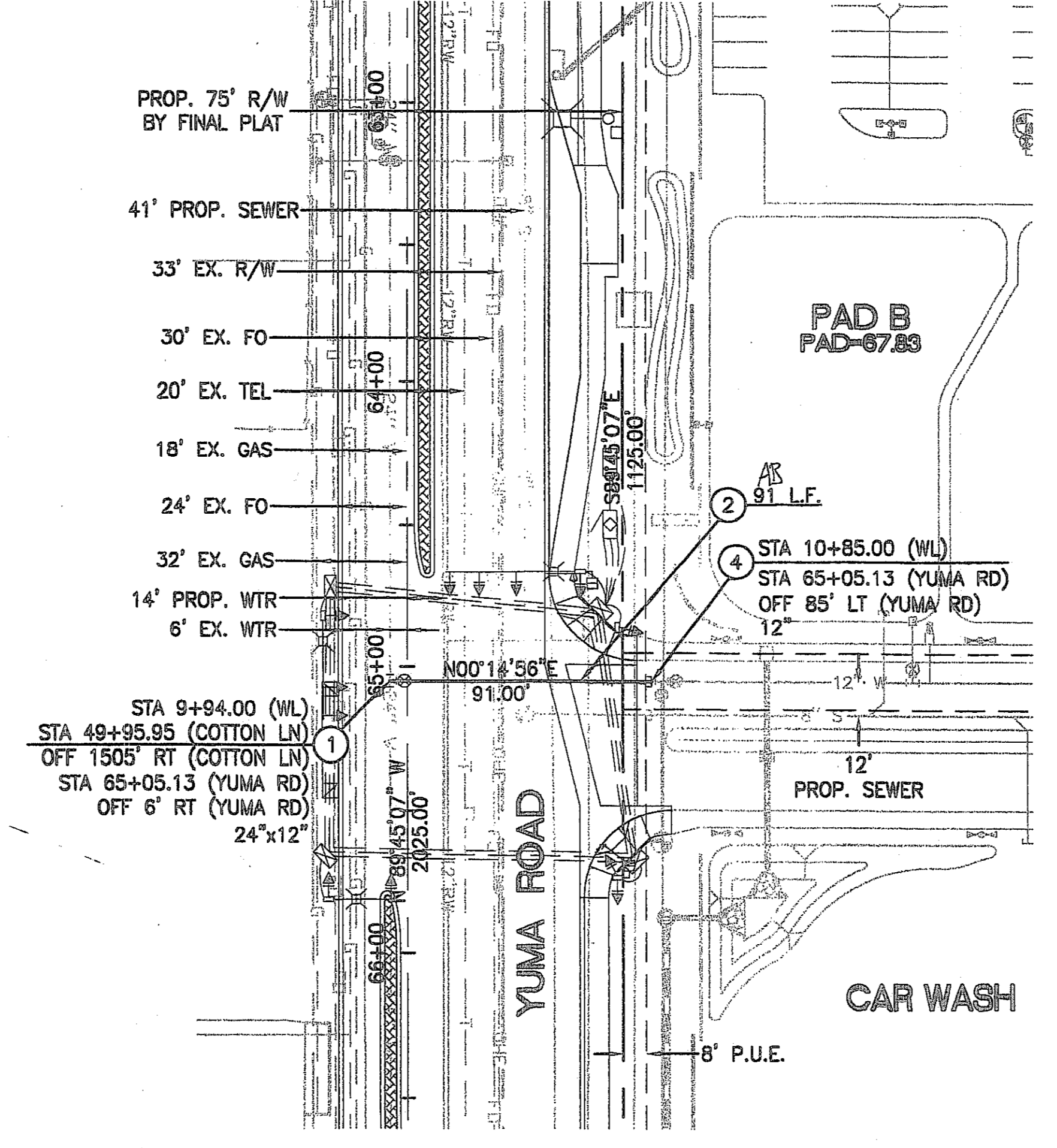


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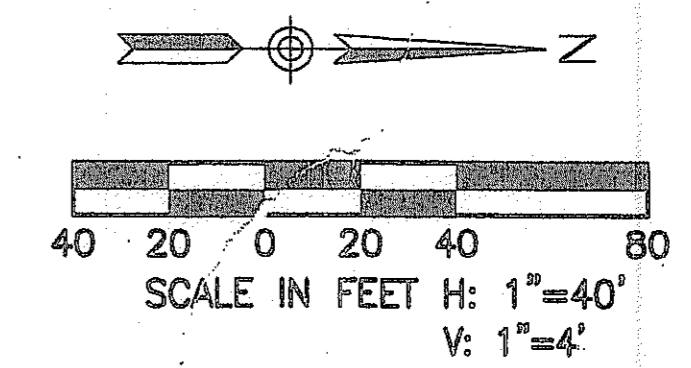
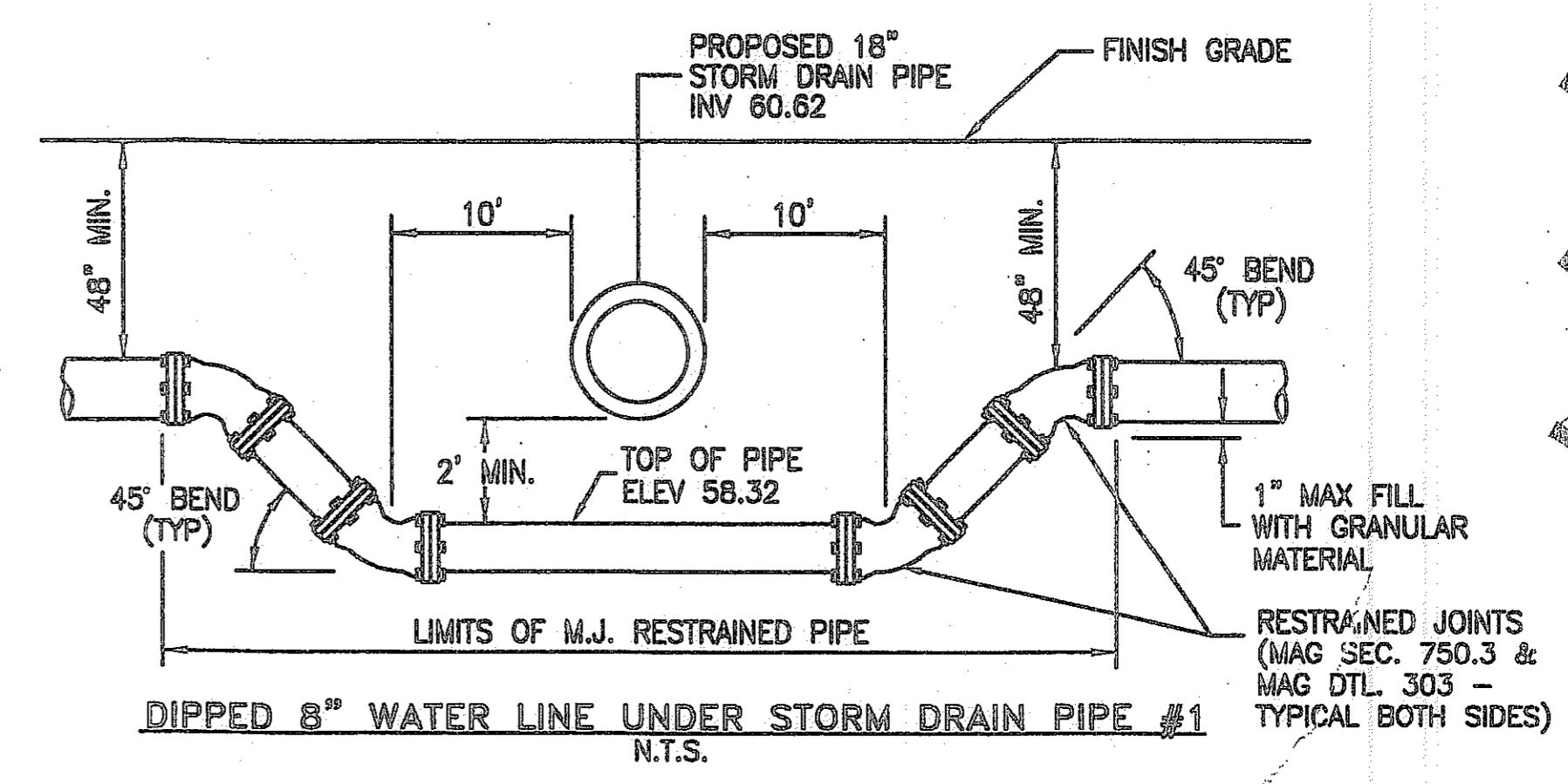
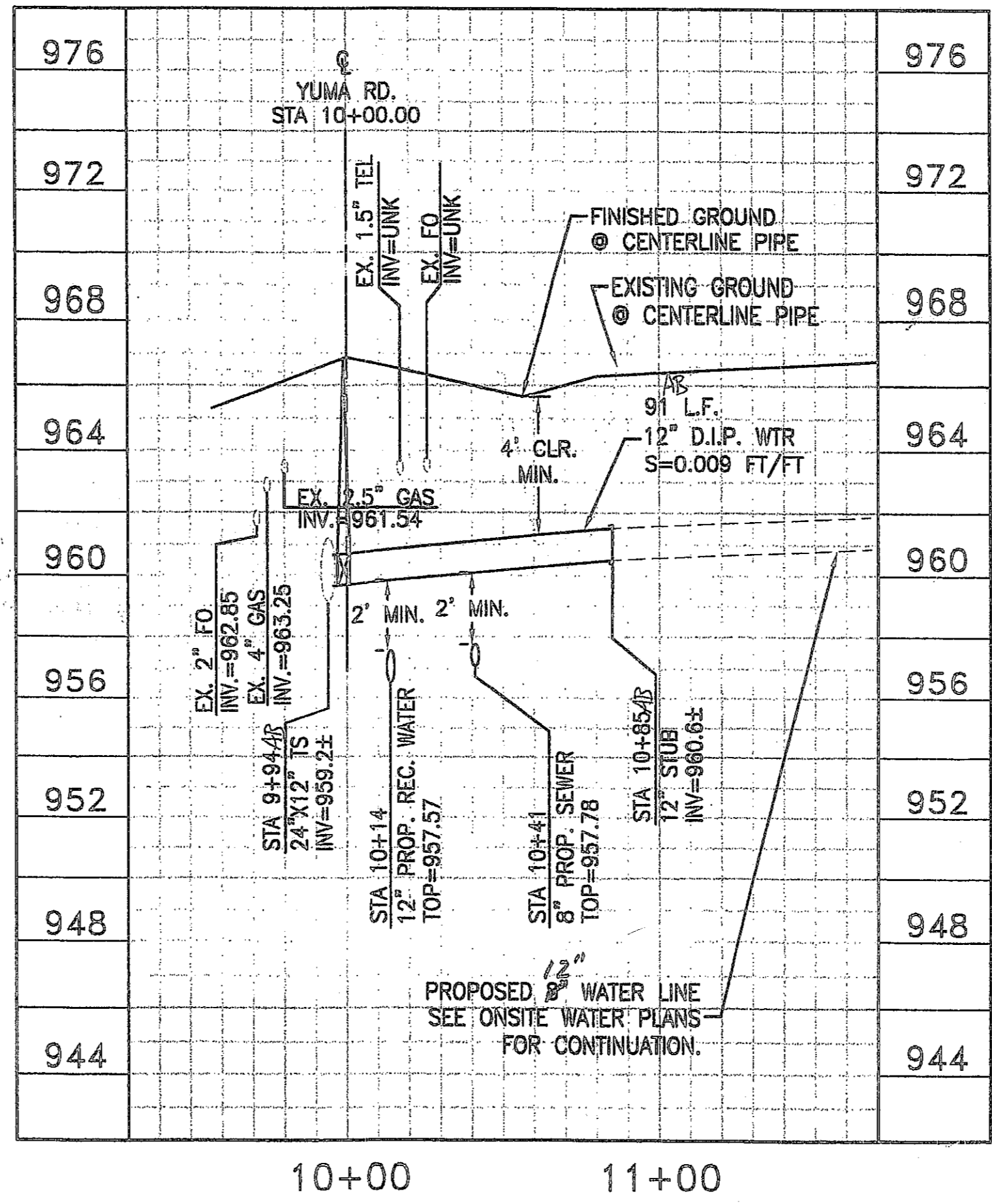
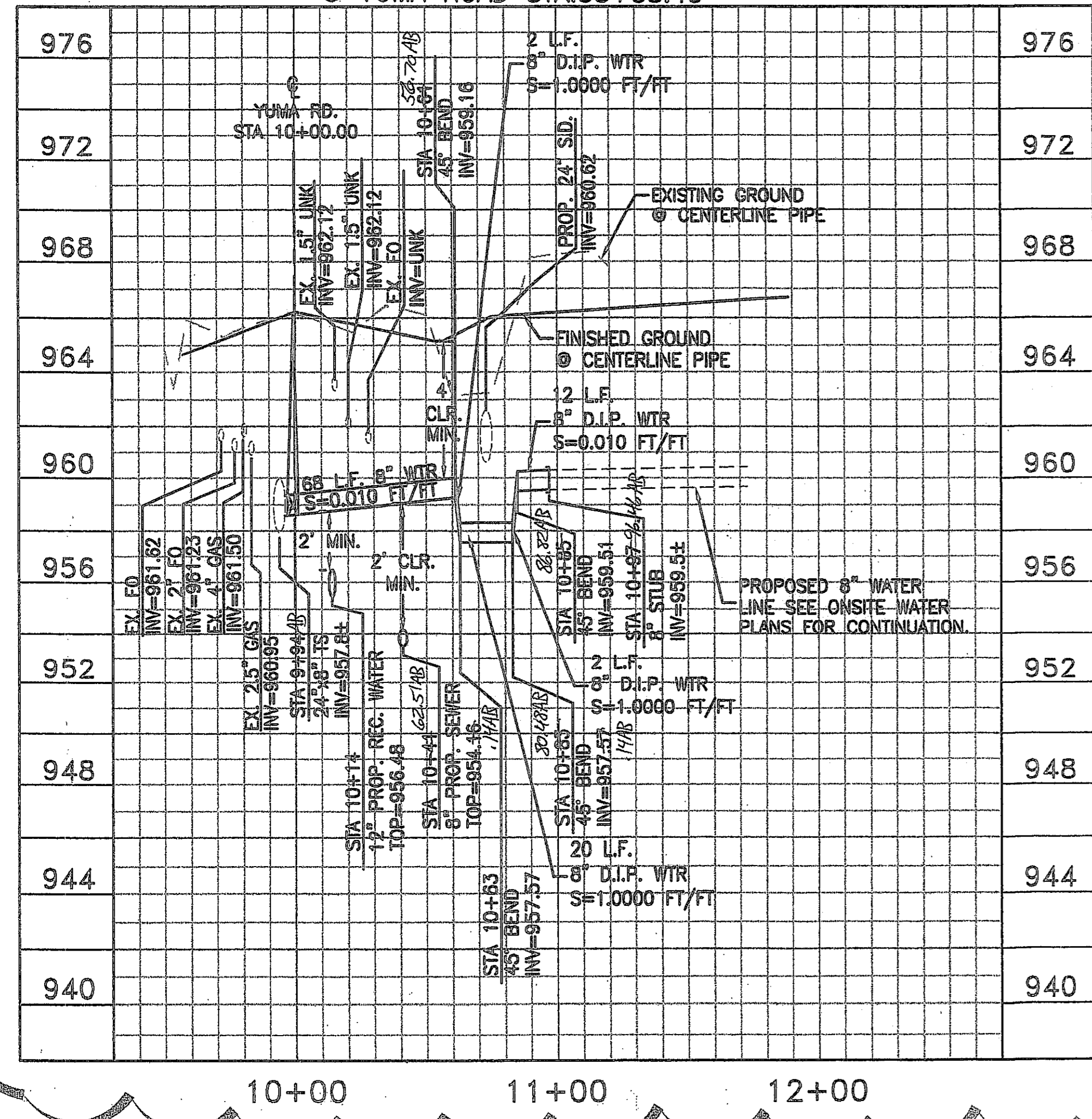
- ALL WATERLINES LESS THAN 12" SHALL HAVE A MINIMUM OF 36" OF COVER. PIPES 12" AND LARGER OR LOCATED IN MAJOR COLLECTOR OR ARTERIAL STREETS REQUIRE A MINIMUM OF 48" COVER.
- DEFLECT WATER SERVICES AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES PER C.O.G. AND M.A.G. AT ALL UTILITY CROSSINGS.
- ALL CHANGES IN DIRECTION IN WATER PIPES 6" AND LARGER SHALL BE MARKED WITH AN ELECTRONIC MARKER. ELECTRONIC MARKERS SHALL BE A SELF-LEVELING TYPE AND OPERATE ON A FREQUENCY OF 145.7 kHz UP TO A DEPTH OF 4 FEET.
- RESTRAINED JOINTS SHALL BE USED ON ALL BENDS PER M.A.G. STDS. 301-303.



PRIVATE ENTRANCE
© YUMA ROAD STA:58+58.43



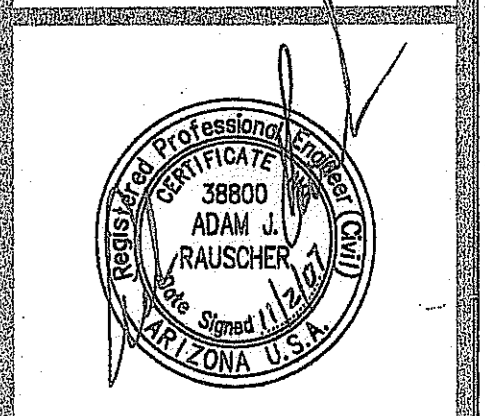
PRIVATE ENTRANCE
© YUMA ROAD STA:65+05.13



NO.	REVISION	DATE
1	WATERLINE REVISIONS	11/02/07

CANYON TRAILS TOWNE CENTER
ONSITE PLAN AND PROFILE SHEET

PREPARED FOR
VESSTAR DEVELOPMENT COMPANY
2425 E. CAMELBACK RD. ST # 750
PHOENIX, AZ 85016



OPTIMUS CIVIL DESIGN GROUP
2425 E. CAMELBACK STREET
SUITE 107
PHOENIX, AZ 85016
TEL: (602) 249-9329 FAX: (602) 249-9400

DESIGNED: AJR
DRAWN: AZ/JS/DB
CHECKED: EDS, AJR
DATE: 04/16/07
JOB NO.: 031039

DRAWING NO
W-21
38 OF 38

2007-108-C3-038

1-800-782-5348
BLUE BRIDGE CENTER
CALL COLLECT

HTE # 07-1192