

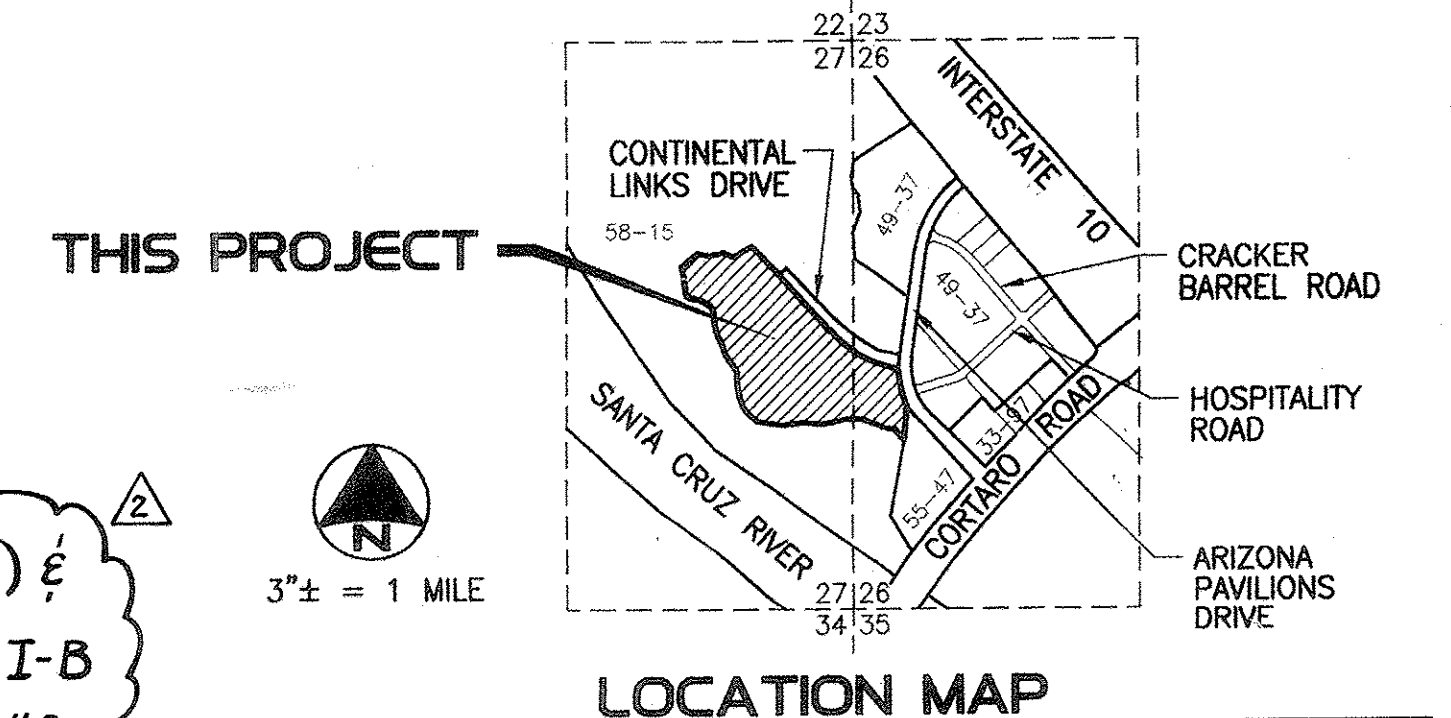
**GENERAL PAVING NOTES**

- ALL CONSTRUCTION & TEST METHODS SHALL BE IN CONFORMANCE AS FOLLOWS:
  - FOR PAVING AND RELATED IMPROVEMENTS: THE STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC IMPROVEMENTS (PC/COT) LATEST EDITION, 1994, EXCEPT AS MODIFIED HEREBY.
  - FOR SEWER AND RELATED IMPROVEMENTS: THE STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC IMPROVEMENTS (PC/COT) LATEST EDITION, 2003, EXCEPT AS MODIFIED HEREBY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CALCULATE HIS OWN EARTHWORK QUANTITIES AND SUBMIT HIS BID BASED THEREON.
- THE CONTRACTOR SHALL VERIFY IN THE FIELD THE HORIZONTAL LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. CALL BLUE STAKE (1-800-782-5348) A MINIMUM OF TWO (2) FULL WORKING DAYS PRIOR TO COMMENCEMENT OF WORK TO FIELD LOCATE EXISTING UTILITIES. SATURDAYS AND SUNDAYS ARE NOT CONSIDERED TO BE WORKING DAYS.
- THE CONTRACTOR SHALL GIVE FORTY-EIGHT (48) HOURS NOTICE WHEN HE SHALL REQUIRE THE SERVICES OF THE ENGINEER OR ANY OTHER PERSON PROPERLY AUTHORIZED FOR SUCH PURPOSE FOR LAYING OUT ANY PORTION OF THE WORK. HE SHALL ALSO DIG ALL STAKE HOLES NECESSARY TO GIVE LINE AND LEVELS AND SHALL PROVIDE ASSISTANCE CALLED FOR BY THE ENGINEER OR HIS ASSISTANTS UPON ANY PART OF THE WORK WHENEVER SO REQUIRED.
- THE CONTRACTOR SHALL PRESERVE ALL STAKES SET FOR THE LINES, LEVELS OR MEASUREMENTS OF THE WORK IN THEIR PROPER PLACES UNTIL AUTHORIZED TO REMOVE THEM BY THE ENGINEER OR HIS DULY AUTHORIZED REPRESENTATIVE. ANY EXPENSE INCURRED IN REPLACING ANY STAKES WHICH THE CONTRACTOR OR HIS SUBORDINATES MAY HAVE FAILED TO PRESERVE SHALL BE CHARGED TO THE CONTRACTOR.
- BUILDING SITES SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF FINISHED BUILDING PAD ELEVATIONS AS STAKED BY THE SURVEYOR. STREETS AND PARKING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF FINISHED SUBGRADE ELEVATIONS AS STAKED BY THE SURVEYOR.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, HAUL AND APPLY ALL WATER REQUIRED FOR COMPACTION AND FOR THE CONTROL OF DUST FROM CONSTRUCTION ACTIVITY. THE COST THEREOF IS TO BE INCLUDED IN HIS BID. NO SEPARATE PAYMENT WILL BE MADE FOR WATER.
- ALL ORGANIC MATERIAL SHALL BE REMOVED WITHIN THE CLEARING LIMITS FOR NECESSARY GRADING PER THE RECOMMENDATIONS IN PROJECT'S GEOTECHNICAL REPORT AND LAWFULLY DISPOSED OF PRIOR TO GRADING.
- ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF A GEOTECHNICAL EVALUATION PREPARED BY TERRACON CONSULTANTS, JOB NO. 63045225, DATED DECEMBER 8, 2004 AND AMENDED JUNE 1, 2005, JUNE 6, 2005, JULY 21, 2005, JULY 27, 2005 AND OCTOBER 19, 2005. EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS CONTAINED IN SAID REPORT.
- THE SOILS ENGINEER SHALL OBSERVE, INSPECT AND TEST ALL EARTHWORK OPERATIONS, INCLUDING BUT NOT LIMITED TO: CLEARING, SUBGRADE PREPARATION, STRUCTURAL AND TRENCH EXCAVATION AND BACKFILL, TOGETHER WITH PLACEMENT AND COMPACTION OF FILL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE, MAINTENANCE, REPAIR OR REPLACEMENT OF EXISTING IMPROVEMENTS IN THE WORK AREA WHICH HAVE BEEN REMOVED OR DAMAGED DURING THE COURSE OF CONSTRUCTION. ALL REPAIR, REPLACEMENT, OR CLEANUP SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER AND/OR OWNER AT NO EXPENSE TO THE ENGINEER AND/OR OWNER.
- OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER A MINIMUM OF 48 HOURS BEFORE THAT PORTION OF THE PROJECT IN QUESTION IS TO BE CONSTRUCTED. IF THE ENGINEER IS NOT NOTIFIED ACCORDINGLY, ANY DISCREPANCIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR SURVEYOR.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY ALL GOVERNMENTAL AGENCIES. NO WORK, AS DELINEATED ON THESE PLANS, SHALL BE STARTED UNTIL THE CONTRACTOR HAS OBTAINED ALL THE NECESSARY PERMITS FROM ALL AFFECTED AGENCIES.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
- AN ACCEPTED COPY OF THIS PLAN SHALL BE KEPT IN AN EASILY ACCESSIBLE LOCATION ON THE SITE AT ALL TIMES DURING CONSTRUCTION.
- IF UNANTICIPATED CONDITIONS ARE ENCOUNTERED DURING THE COURSE OF THE CONSTRUCTION AND ARE BEYOND THE SCOPE OF THE DESIGN, THE ENGINEER SHALL SUBMIT THE NECESSARY REVISED OR SUPPLEMENTAL IMPROVEMENT PLANS FOR REVIEW AND APPROVAL BY THE MARANA TOWN ENGINEER.
- UPON COMMENCEMENT OF WORK, TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK IS COMPLETED. ALL WARNING SIGNS, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ADOPTED BY THE STATE OF ARIZONA PURSUANT TO A.R.S. 28-650.
- BASIS OF BEARINGS FOR THIS SUBDIVISION IS THE NORTH LINE OF LOT 9 OF THE PEPPERTREE RANCH BUSINESS PARK, AS RECORDED IN BOOK 33, PAGE 97, MAPS AND PLATS. SAID BEARING BEING: N 36°10'52" W.
- BASIS OF ELEVATION FOR THIS SUBDIVISION IS AN "X" ON THE SOUTHEAST CORNER OF A CONCRETE IRRIGATION BOX LOCATED AT THE SANTA CRUZ RIVER EAST OF TWIN PEAKS ROAD. SAID ELEVATION BEING 2111.33. (NGV29 DATUM).
- ALL REVISIONS TO THE ACCEPTED PLANS AND SPECIFICATIONS SHALL BE APPROVED BY THE MARANA TOWN ENGINEER PRIOR TO CONSTRUCTION.
- ALL CONCRETE SHALL BE CLASS B, 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE SPECIFIED AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1006, S.S.F.P.I. (PC/COT).
- A QUALIFIED REGISTERED ENGINEER OR LAND SURVEYOR MUST CERTIFY THAT THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS PRIOR TO REQUEST FOR FINAL INSPECTION/CERTIFICATE OF OCCUPANCY OR THE RELEASE OF ASSURANCES.
- THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THESE IMPROVEMENT PLANS IS BASED UPON A BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY AMERSON SURVEYING, SEALED APRIL 28, 2005.
- THE DESIGN SPEED FOR INTERIOR STREETS IS 25 MPH. THE DESIGN VEHICLE IS WB-40.
- AGGREGATE BASE COURSE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 303 OF S.S.F.P.I. (PC/COT)

- ASPHALTIC CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 406, MIX No. 2 OF S.S.P.I. (PC/COT)
- THE PAVING CONTRACTOR SHALL ADJUST BOTH EXISTING AND NEW WATER VALVES, FRAMES AND COVERS, TELEPHONE AND ELECTRIC MANHOLE RINGS AND COVERS TO THE NEW FINISHED GRADE.
- ALL SIGNING AND MARKING SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- PERMANENT TRAFFIC CONTROL SIGNING/PAVEMENT MARKINGS SHALL BE INSTALLED/APPLIED BY AND PAID FOR BY THE DEVELOPER.
- ALL DISTURBED SURVEY MONUMENTS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. A REGISTERED LAND SURVEYOR, LICENSED IN ARIZONA, AND PROVIDED BY THE CONTRACTOR, SHALL STAMP SAID MONUMENTS PRIOR TO THEIR ACCEPTANCE BY THE PROJECT ENGINEER.
- ALL WORK SHALL CONFORM TO STANDARDS FOR GRADING AND RELATED SITE WORK, TITLE 19 OF THE TOWN OF MARANA LAND DEVELOPMENT CODE.
- ARS SEC. 41-844 & ARS SEC. 41-865 REQUIRE THAT THE ARIZONA STATE MUSEUM BE NOTIFIED IN THE EVENT HUMAN REMAINS OR FUNERARY OBJECTS ARE DISCOVERED DURING GROUND-DISTURBING ACTIVITIES OR CONSTRUCTION.

# PUBLIC PAVING AND PUBLIC SEWER PLANS

FOR  
**THE PINES, PHASE I, PHASE I-A (LOTS 1-17, 49-94) & LOTS 1-129 & COMMON AREAS "A" & "B" PHASE I-B**  
**ALL STREETS ARE PUBLIC**  
**PRV-05-066**



A PORTION OF THE W 1/2 OF SECTION 26 AND A PORTION OF THE E 1/2 OF SECTION 27, T-12-S, R-12-E, G.&S.R.M., TOWN OF MARANA, PIMA CO., ARIZONA

**GENERAL SEWER NOTES**

- PCWMD STD. DTL. WWM106 APPLIES TO THIS PROJECT (REVISED 07/02).
- ALL DESIGN STANDARDS, MATERIALS AND WORKMANSHIP FOR PUBLIC SANITARY SEWERS ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT'S (PCWMD) MANUAL OF ENGINEERING STANDARDS AND PROCEDURES, AND THE PIMA COUNTY/CITY OF TUCSON STANDARD DETAILS AND SPECIFICATIONS FOR PUBLIC IMPROVEMENTS. SAID MANUALS ARE ON FILE AT PIMA COUNTY WASTEWATER MANAGEMENT OFFICES AT 201 N. STONE AVENUE, 8TH FLOOR.
- NO MANHOLE SHALL BE LOCATED CLOSER THAN 5 FEET TO A SURVEY MONUMENT.
- THE CONTRACTOR SHALL INSTALL ALL FRAMES AND COVERS FOR MANHOLES TO THE ELEVATIONS STAKED BY THE ENGINEER.
- THE PAVING CONTRACTOR SHALL ADJUST MANHOLE FRAMES AND COVERS TO FINAL PAVEMENT SURFACE GRADE.
- IMMEDIATELY REPORT ANY RELEASE OF SEWAGE, AND/OR ANY DAMAGE TO, OR THE DROPPING OF DEBRIS INTO, THE PUBLIC SANITARY SEWAGE CONVEYANCE SYSTEM TO EITHER PCWMD FIELD ENGINEERS (740-2651) OR PCWMD FIELD OPERATIONS (326-4333). ON WEEKENDS, HOLIDAYS OR BETWEEN 5:00 PM AND 8:00 AM IMMEDIATELY CALL PIMA COUNTY SHERIFF'S COMMUNICATION CENTER AT 295-4595 OR 791-4900 AND REQUEST A PCWMD REPRESENTATIVE TO BE DISPATCHED TO THE SITE. TAKE IMMEDIATE ACTION TO PREVENT OR CONTAIN THE SANITARY SEWAGE OVERFLOW (SSO) FROM THE SEWER SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR THE SYSTEM, FOR ALL EXPENSES TO MITIGATE THE RELEASE AND TO DISINFECT THE RELEASE AREAS, AND FOR ANY REGULATORY PENALTIES LEVIED ON PCWMD BECAUSE THE SSO ENTERED A NATURAL OR CONSTRUCTED STORM WATER DRAINAGE SYSTEM. THE CONTRACTOR SHALL REPAIR ALL DAMAGE AS DIRECTED AND APPROVED BY PCWMD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING CARELESSLY DESTROYED LOT PINS. REPLACEMENT SHALL BE BY A REGISTERED LAND SURVEYOR.
- FILL OVER SEWER SHALL BE PLACED TO 95 PERCENT MAXIMUM DENSITY IN STREETS AND TO 90 PERCENT MAXIMUM DENSITY IN ALL OTHER AREAS. ALL FILLING SHALL BE DONE PRIOR TO SEWER CONSTRUCTION.
- BEDDING SHALL BE IN ACCORDANCE WITH STANDARD DETAILS 104 AND 105 OR AS SHOWN ON PLANS. SHOULD GROUND WATER OR OTHER UNANTICIPATED SOIL CONDITIONS BE ENCOUNTERED, THE BEDDING SHALL BE MODIFIED AS DIRECTED BY THE ENGINEER.
- THIS SET OF SEWER PLANS SHALL BE PIMA COUNTY DEPARTMENT OF WASTEWATER MANAGEMENT PLAN NO. G-2005-187.
- ALL HOUSE CONNECTION SEWER STUBOUTS SHALL HAVE A MINIMUM SLOPE OF 1 PERCENT AND A MINIMUM COVER OF 4 FEET IN THE AREA BETWEEN THE MAIN LINE SEWER AND PROPERTY LINE. IF COVER IS LESS THAN 4 FEET, THE HCS STUBOUT SHALL BE DUCTILE IRON. ALL HCS STUBOUTS SHALL BE MARKED AT PROPERTY LINE WITH #9 WIRE ANCHORED WITH A BRICK.
- HCS LOCATION SHALL BE MARKED WITH AN "HCS" ON TOP OF STREET CURBS.
- HCS LOCATIONS ARE AT THE CENTER OF LOT UNLESS OTHERWISE NOTED.
- HCS WILL BE LOCATED BY THE ENGINEER AS STATIONED ON THE PLANS. BACKWATER VALVES TO BE INSTALLED IN HCS WHEN THE FINISH FLOOR ELEVATION IS ONE FOOT OR LESS ABOVE THE NEAREST UPSTREAM MANHOLE. SEE HCS BACKWATER VALVE LIST BELOW.
- SEWER CONSTRUCTION SHALL NOT COMMENCE UNTIL (a) PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY (PCEQ) HAS ISSUED A CERTIFICATE OF APPROVAL TO CONSTRUCT FOR THIS PROJECT AND (b) CONTRACTOR HAS OBTAINED A PUBLIC SEWER CONSTRUCTION PERMIT FROM PIMA COUNTY DEVELOPMENT REVIEW (740-6832) AT LEAST 3 FULL DAYS PRIOR TO THE START OF SEWER CONSTRUCTION.
- AS BUILT PLANS SHALL BE REQUIRED WHEN CONSTRUCTION IS COMPLETE. SUBMIT THREE BLACK LINE COPIES AND AN ELECTRONIC VERSION TO THE PCWMD OR PCDOT INSPECTOR. CONTACT PCWMD, MAPS AND RECORDS, 740-6646, FOR ACCEPTABLE ELECTRONIC FORMATS.
- WHENEVER CONNECTING TO A LIVE SEWER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO (a) IDENTIFY AND INCLUDE ALL FLOW MANAGEMENT COSTS IN THE SEWER CONSTRUCTION BID SUBMITTED WITH THE PUBLIC SEWER PERMIT APPLICATION, AND (b) PROVIDE A FLOW MANAGEMENT PLAN AT THE PRE-CONSTRUCTION MEETING WITH WASTEWATER FIELD ENGINEERING PRIOR TO BEGINNING SEWER CONSTRUCTION. REFER TO DETAIL WWM A-5 FOR FLOW MANAGEMENT PLAN REQUIREMENTS. CALL PIMA COUNTY WASTEWATER FIELD ENGINEERING AT 740-2651 FOR ALL QUESTIONS REGARDING THE PREPARATION OF FLOW MANAGEMENT PLANS.
- SEE DUCTILE IRON AND STEEL PIPE COATING SPECIFICATIONS AND MANHOLE BENCH, CHANNEL AND COVER COATING SPECIFICATIONS ON SHEET 16.

19. ACCORDING TO THE REVISED "BLUE STAKE LAW" (A.R.S. 40-360.21 THROUGH 40-360.32), THIS PROJECT IS SUBJECT TO NEW PRIVATE SEWER LATERAL DESIGN AND CONSTRUCTION REQUIREMENTS PER PIMA COUNTY WASTEWATER MANAGEMENT DIRECTIVE ENG2005-01 AND REVISED DETAIL WWM401. SEE [WWW.PIMA.GOV/WWM/STDDET/INDEX.HTM](http://WWW.PIMA.GOV/WWM/STDDET/INDEX.HTM).

**HCS BACKWATER VALVES**  
 LOTS: 21, 35, 44, 73, 77

**NOTE:**  
 PHASING IS FOR PAVING AND SEWER ONLY.  
 ALL STORM DRAIN IMPROVEMENTS ARE TO BE CONSTRUCTED AS PART OF PHASE I-A.

PHASE	SHEET NO.'S
I-A	3-5, 12, 14, 15
I-B	11
I-A & I-B	1, 2, 6-10, 13, 16-18

*Valerie Yant*  
 TOWN OF MARANA PLANNING DEPARTMENT AICP 9-7-06 DATE  
*Paula Meade*  
 PE 9/6/06 DATE  
 CASTRO ENGINEERING CONTRACTING ENGINEER FOR TOWN OF MARANA

**UTILITY STATEMENT**  
 EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES HAVE BEEN DELINEATED ON THESE PLANS BASED UPON FIELD SURVEY INFORMATION (PERFORMED BY OTHERS) AS WELL AS FROM BLUE STAKE MARKINGS AND UTILITY BASE MAPS (AS MADE AVAILABLE) AND THEREFORE THE ENGINEER MAKES NO GUARANTEE OF THE ACCURACY OR COMPLETENESS OF THE UTILITY OR OF THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY OR UNDERGROUND STRUCTURES SHOWN. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEANS NECESSARY TO PROTECT ANY UTILITY. THE CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THESE DRAWINGS.

**SHEET INDEX**

SHEET 1	COVER SHEET
SHEET 2	INDEX SHEET
SHEETS 3-12	PLAN & PROFILE SHEETS
SHEETS 13-16	DETAIL & NOTE SHEETS
SHEETS 17-18	SIGNING & STRIPING PLAN

**ACCEPTED**

*Valerie Yant* P.E. 3-15-06 DATE  
 TOWN OF MARANA SUBDIVISION ENGINEER

*Subhash C. Raval* P.E. 3/14/06 DATE  
 CONTRACTING ENGINEER FOR TOWN OF MARANA

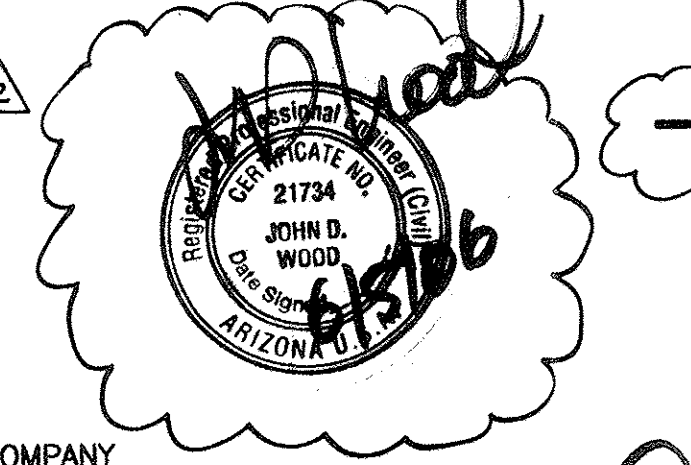
*Subhash C. Raval* 3/2/06 DATE  
 PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT

*Valerie Yant* AICP 3-15-06 DATE  
 TOWN OF MARANA PLANNING DIRECTOR

TP	EXIST. TELEPHONE PEDESTAL	□	NEW SURVEY MONUMENT PER TOWN OF MARANA STD. DTL. NO. M-103-B
WM	EXIST. WATER METER	○	SET 1/2" IRON PIN RLS 22245 OR OTHER MONUMENTATION AS NOTED
T	EXIST. TRANSFORMER	△	FD SURVEY MONUMENT AS NOTED
TM	EXIST. TELEPHONE MANHOLE	—	PROPERTY LINE
FD	EXIST. FIRE HYDRANT	15	NEW LOT NUMBER
UGG	EXIST. UNDERGROUND GAS LINE	---	EXIST. R.O.W.
UE	EXIST. UNDERGROUND ELECTRIC LINE	---	EXIST. EDGE OF PAVEMENT
UT	EXIST. UNDERGROUND TELEPHONE LINE	---	EASEMENT LINE
WV	EXIST. WATERMAIN AND VALVE	---	EXISTING SEWER LINE & MANHOLE (18", G-81-006)
SW	EXIST. SEWER LINE AND MANHOLE (18", G-81-006)	---	NEW SEWER LINE & MANHOLE
FSM	EXIST. SANITARY SEWER FORCE MAIN (12", G-85-027) (APPROXIMATE LOCATION)	---	NEW 4" SEWER HCS
FG	FINISHED GRADE	---	EXISTING WATER LINE AND VALVE
G	GUTTER GRADE	---	NEW WATER LINE & VALVE
TC	TOP OF CURB	---	NEW 6" FIRE HYDRANT
FP	FINISHED PAVEMENT	---	SHEET INDEX NUMBER
1	KEYNOTE NUMBER (SEE SHEET NO. 13 FOR MASTER LIST)	---	LINE NO. (SEE TABLE SHT. NO. 13)
4	EASEMENT NOTE (SEE SHEET NO. 13 FOR MASTER LIST)	---	CURVE NO. (SEE TABLE SHT. NO. 13)
---	INDICATES DIMENSION CONTINUES TO ADJACENT SHEET	---	EXIST. GRADE
---	STORM DRAIN CATCH BASIN	---	NEW FINISH GRADE
---	STORM DRAIN PIPING (PLAN VIEW)	---	FLOW DIRECTION
---	STORM DRAIN (PROFILE VIEW)	---	VERTICAL GRADE BREAK HIGH POINT (HP)/LOW POINT (LP) GRADE BREAK (GB)
CB	STORM DRAIN CATCH BASIN NO. (SEE SHT. NO. 15 FOR MASTER LIST)	---	DETAIL/SECTION NUMBER SHEET NUMBER WHERE DETAIL/SECTION IS FOUND
P	STORM DRAIN PIPE NO. (SEE SHT. NO. 15 FOR MASTER LIST)	---	BACKWATER VALVE
JS	STORM DRAIN JUNCTION STRUCTURE NO. (SEE SHT. NO. 15 FOR MASTER LIST)	---	DRAINAGE CONCENTRATION POINT (SEE POST DEVELOPED 100-YR PEAK DISCHARGE TABLE ON SHEET 13)
MH	STORM DRAIN MANHOLE NO. (SEE SHT. NO. 15 FOR MASTER LIST)	---	NEW PAVEMENT
---	---	---	NEW CONCRETE SIDEWALK
---	---	---	NEW ROLL CURB & GUTTER
---	---	---	NEW WHEEL CHAIR RAMP
---	---	---	PHASE LINE

**DEVELOPER**  
 STANDARD PACIFIC HOMES  
 4578 N. 1ST AVENUE, SUITE 160  
 TUCSON, ARIZONA 85718  
 ATTENTION: PAULA MEADE  
 (520) 615-8900

**OWNER**  
 FIRST AMERICAN TITLE INSURANCE COMPANY  
 TRUST NOS. 4737 & 4738  
 1880 E. RIVER ROAD, SUITE 120  
 TUCSON, AZ 85718  
 ATTN: JANICE SAUNDERS  
 (520) 615-4231



PRV-05-066 ENG0511-015

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 4582 N. 1st Ave., Suite 120 • Tucson, Arizona 85718  
 (520) 795-7255 • Fax (520) 795-6747

**PUBLIC PAVING & PUBLIC SEWER PLAN**  
 FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
**LOTS 1-129 & COMMON AREAS "A" & "B"**

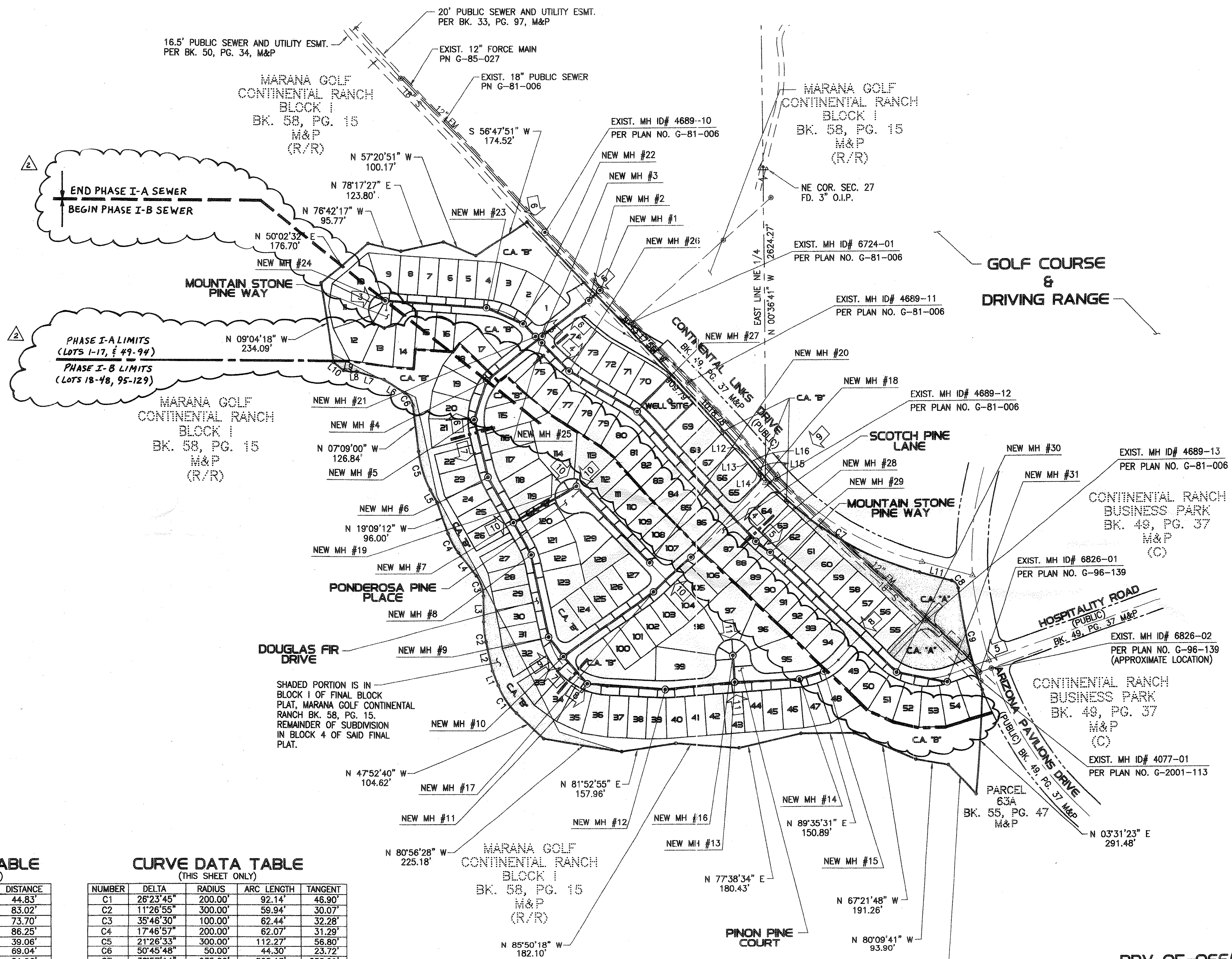
DESIGNED: E.P.D.	DRAWN: D.S.S.	CHECKED: J.D.W.	SHEET 1 OF 18
DATE: 02/07/2006	PROJECT NO.: 104023-03-0600	SCALE: AS SHOWN	
PLAN REVISIONS	DATE		
REV. WATER/SEWER CROSSING, ADD D.I.P. SEWER	4/26/06		
PAV & SWR PHASING	6/5/06		

Two working days before you dig. CALL FOR THE BLUE STAKES  
**1-800-782-5348**  
 Blue Stake Center

REVISION # 5/2/06 ACCEPTED BY: *Subhash C. Raval* 1/28/06 DATE  
 PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT P.E. 9-7-06 DATE  
 TOWN OF MARANA SUBDIVISION ENGINEER

The Pines Paving/Sewer 3592.11751





END PHASE I-A SEWER  
BEGIN PHASE I-B SEWER

PHASE I-A LIMITS  
(LOTS 1-17, 49-94)  
PHASE I-B LIMITS  
(LOTS 18-48, 95-129)

SHADED PORTION IS IN  
BLOCK 1 OF FINAL BLOCK  
PLAT, MARANA GOLF CONTINENTAL  
RANCH BK. 58, PG. 15.  
REMAINDER OF SUBDIVISION  
IN BLOCK 4 OF SAID FINAL  
PLAT.

PHASE I-A & I-B

LINE DATA TABLE  
(THIS SHEET ONLY)

NUMBER	BEARING	DISTANCE
L1	N 21°28'55" W	44.83'
L2	N 12°36'34" W	83.02'
L3	N 01°09'39" W	73.70'
L4	N 36°56'09" W	86.25'
L5	N 28°35'33" W	39.06'
L6	N 57°54'48" W	69.04'
L7	N 73°53'11" W	81.96'
L8	S 86°43'38" W	15.86'
L9	N 79°27'23" W	22.12'
L10	N 50°59'34" W	36.71'
L11	N 74°15'10" W	95.10'
L12	S 89°43'07" W	13.68'
L13	S 43°17'56" E	68.38'
L14	N 89°43'07" E	2.82'
L15	N 00°36'41" W	11.71'
L16	S 43°17'56" E	56.62'

CURVE DATA TABLE  
(THIS SHEET ONLY)

NUMBER	DELTA	RADIUS	ARC LENGTH	TANGENT
C1	26°23'45"	200.00'	92.14'	46.90'
C2	11°26'55"	300.00'	59.94'	30.07'
C3	35°46'30"	100.00'	62.44'	32.28'
C4	17°46'57"	200.00'	62.07'	31.29'
C5	21°26'33"	300.00'	112.27'	56.80'
C6	50°45'48"	50.00'	44.30'	23.72'
C7	30°57'14"	935.00'	505.13'	258.89'
C8	69°06'41"	25.00'	30.16'	17.22'
C9	16°45'57"	1026.03'	300.24'	151.20'

PROJECT LAYOUT  
SCALE: 1"=150'

Two working days before you dig,  
CALL FOR THE BLUE STAKES  
**1-800-782-5348**  
Blue Stake Center

PRV-05-066 (ENG011-015) G-2005-187

21734  
JOHN D.  
WOOD  
ARIZONA P.E. No. 21734

**Presidio** Civil • Land Development • Water Resources  
4582 N. 1st Ave., Suite 120 • Tucson, Arizona 85718  
(520) 795-7255 • Fax (520) 795-6747

**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
2	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	2
			DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	AS SHOWN	18

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Two working days before you dig,  
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Blue Stake Center

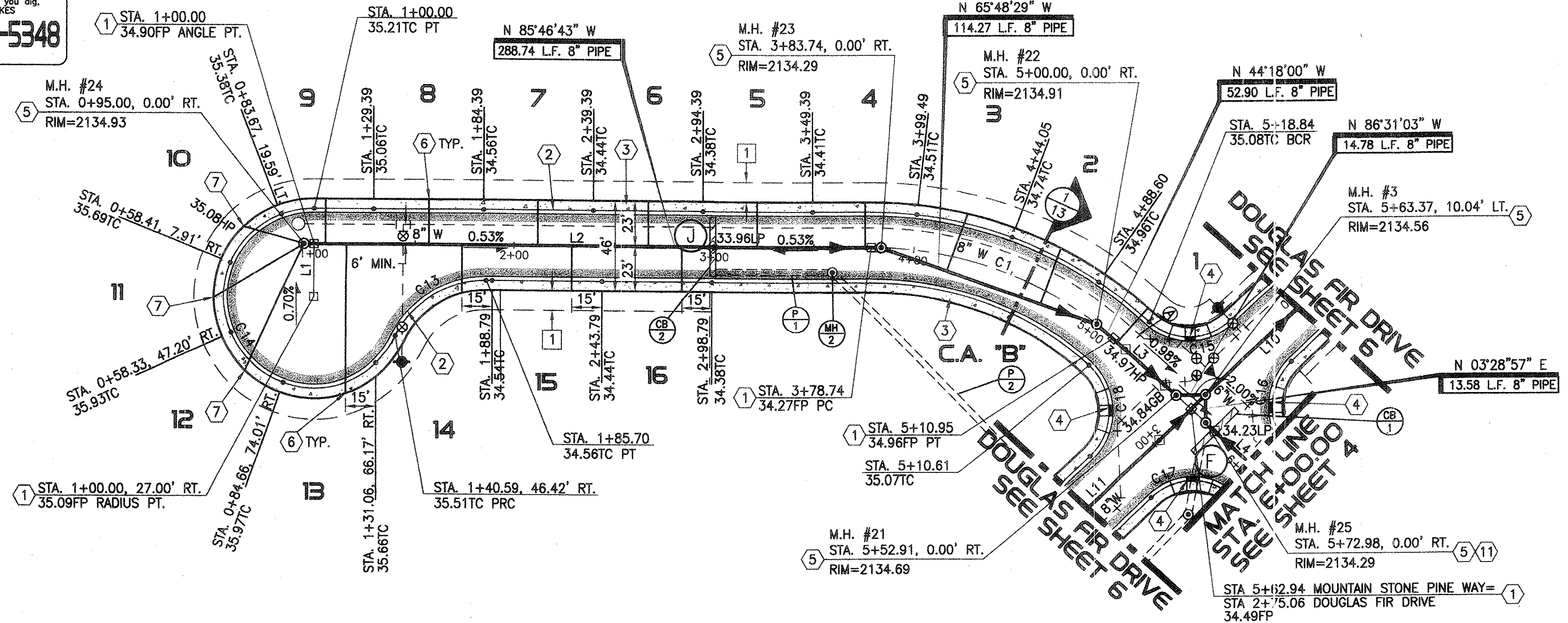
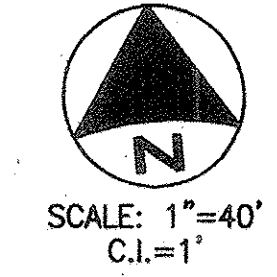
**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD.  
UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2 CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3 CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4 CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5 CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6 CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - 7 CONSTRUCT 4" SEWER HOUSE CONNECTION INTO TERMINUS MANHOLE PER PC/COT STD. DTL. NO. WWM 402.
  - 11 INSTALL 24" WATERPROOF MANHOLE FRAME AND COVER PER PC/COT STD. DTL. NO. WWM 213.2.

- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.

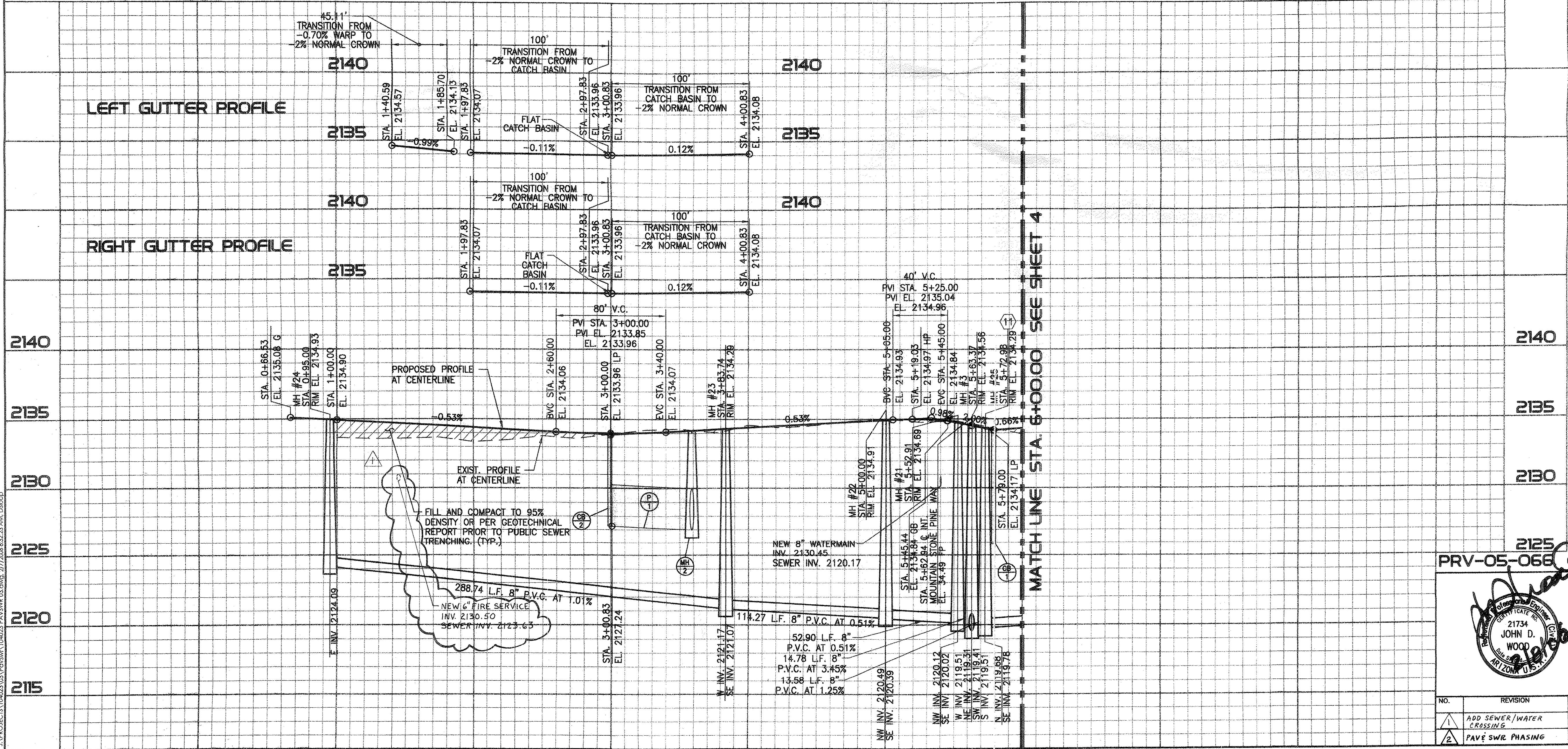
**STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)

- P1 STA. 3+00.83, 12.70' RT. TO STA. 3+59.10, 12.71' RT. INSTALL 58.27 L.F. 36" HDPE, INV. UPSTREAM=2127.24, INV. DOWNSTREAM=2126.95.
- P2 STA. 3+59.10, 12.71' RT., MOUNTAIN STONE PINE WAY TO STA. 3+52.44, 38.71' LT., DOUGLAS FIR DRIVE. INSTALL 211.27 L.F. 36" HDPE, INV. UPSTREAM=2126.95, INV. DOWNSTREAM=2125.89.
- CB1 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 5+79.00, 0.00' RT., MOUNTAIN STONE PINE WAY AND PER DTL. 2 ON SHT. 14. (SEE SHEET 12)
- CB2 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 2+99.33, 0.00' RT., MOUNTAIN STONE PINE WAY AND PER DTL. 2 ON SHT. 14.
- MH2 STA. 1+00.00 STORM DRAIN NO. 1. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE PER PC/COT STD. DTL'S. NO. 300, 302, 303 & 304, NE INV. 2126.95 (36"), SE INV. 2126.85 (36").



**MOUNTAIN STONE PINE WAY**

0+00      1+00      2+00      3+00      4+00      5+00      6+00



PHASE I-A

2125  
PRV-05-066 ENG0511-015 G-2005-187

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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH.I-A & PH.I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	ADD SEWER/WATER CROSSING	4/26/06	E.P.D.	D.S.S.	J.D.W.	3
2	PAVE SWR PHASING	6/05/06				18

DATE: 02/07/2006 PROJECT NO.: 104023-03-0800 SCALE: HORIZ. 1"=40' VERT. 1"=4'



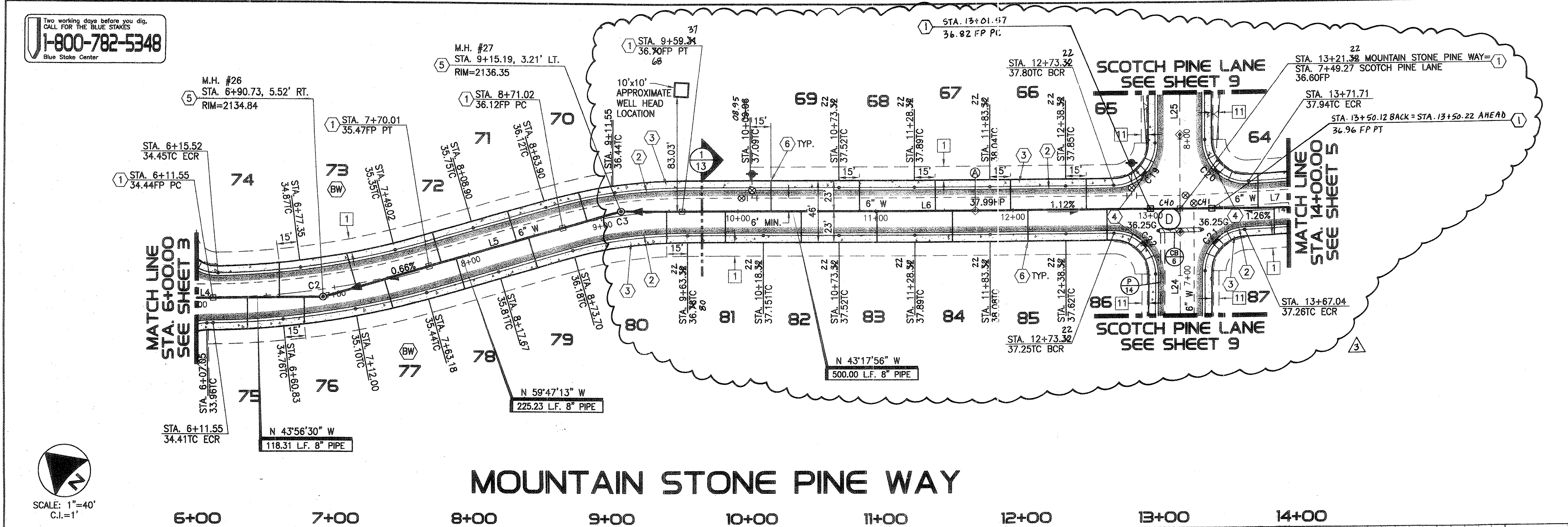
Two working days before you dig,  
CALL FOR THE BLUE STAKES  
**1-800-782-5348**  
Blue Stake Center

**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD, UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2. CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYP. C).
  - 3. CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4. CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5. CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6. CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.

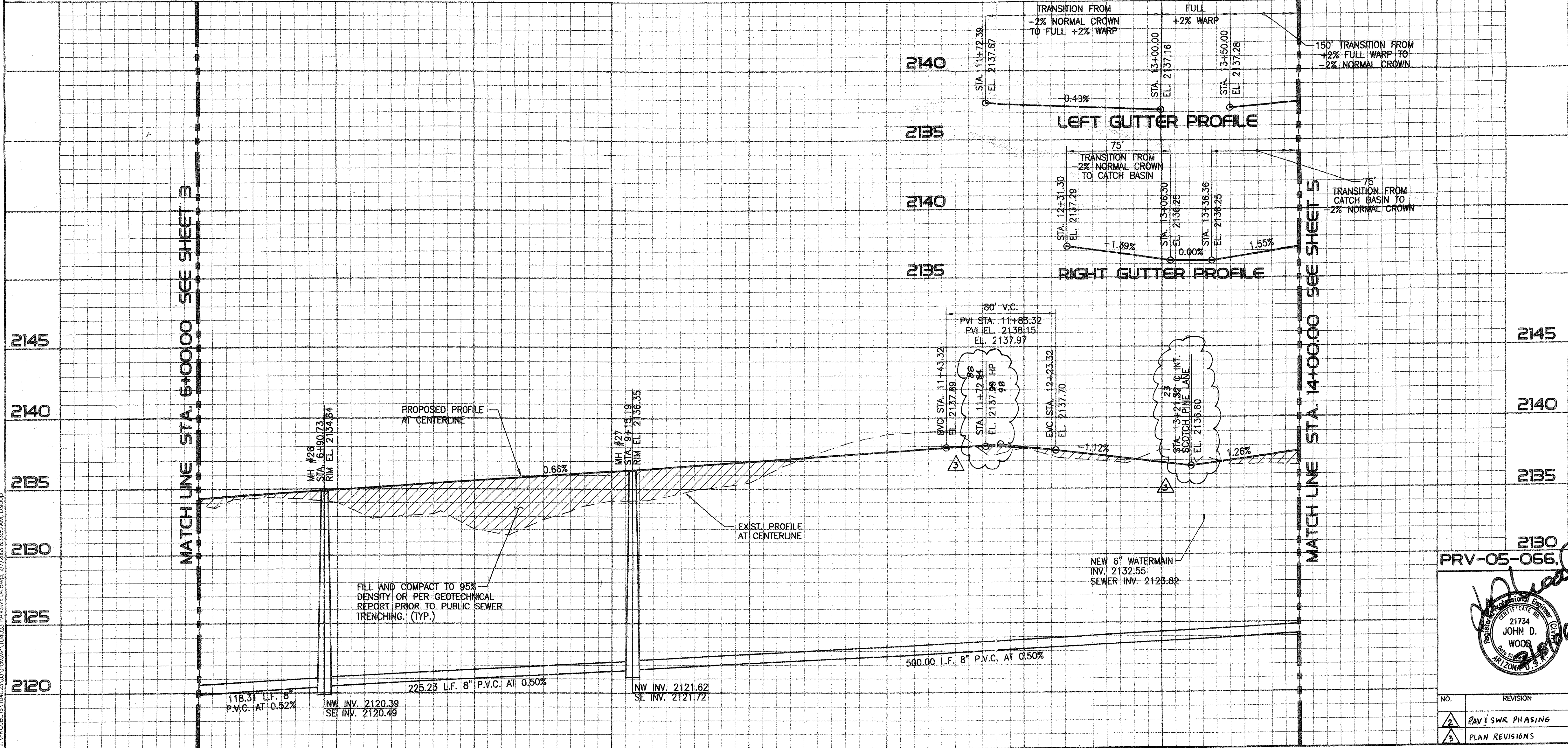
- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 11. 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

- STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)
- 6B. CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 7+33.27, 0.00' RT., SCOTCH PINE LANE AND PER DTL. 2 ON SHT. 14. (SEE SHEET 9)
  - F. STA. 6+55.13, 12.66' LT. TO STA. 7+31.44, 12.66' LT. INSTALL 76.31' L.F. 36" RCP, INV. UPSTREAM=2130.56, INV. DOWNSTREAM=2130.18. (SEE SHEET 9)



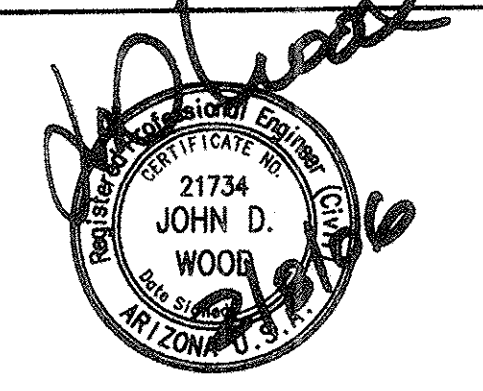
**MOUNTAIN STONE PINE WAY**

6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00



PHASE I-A

PRV-05-066, ENG0511-015 G-2005-187



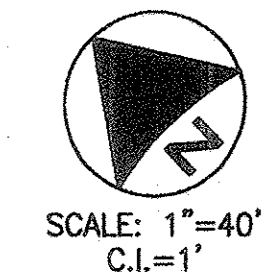
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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
LOTS 1-29 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	4
2	PLAN REVISIONS	6/05/06	02/07/2006	104023-03-0600	SCALE: HORIZ. 1"=40' VERT. 1"=4'	OF 18



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Blue Stake Center

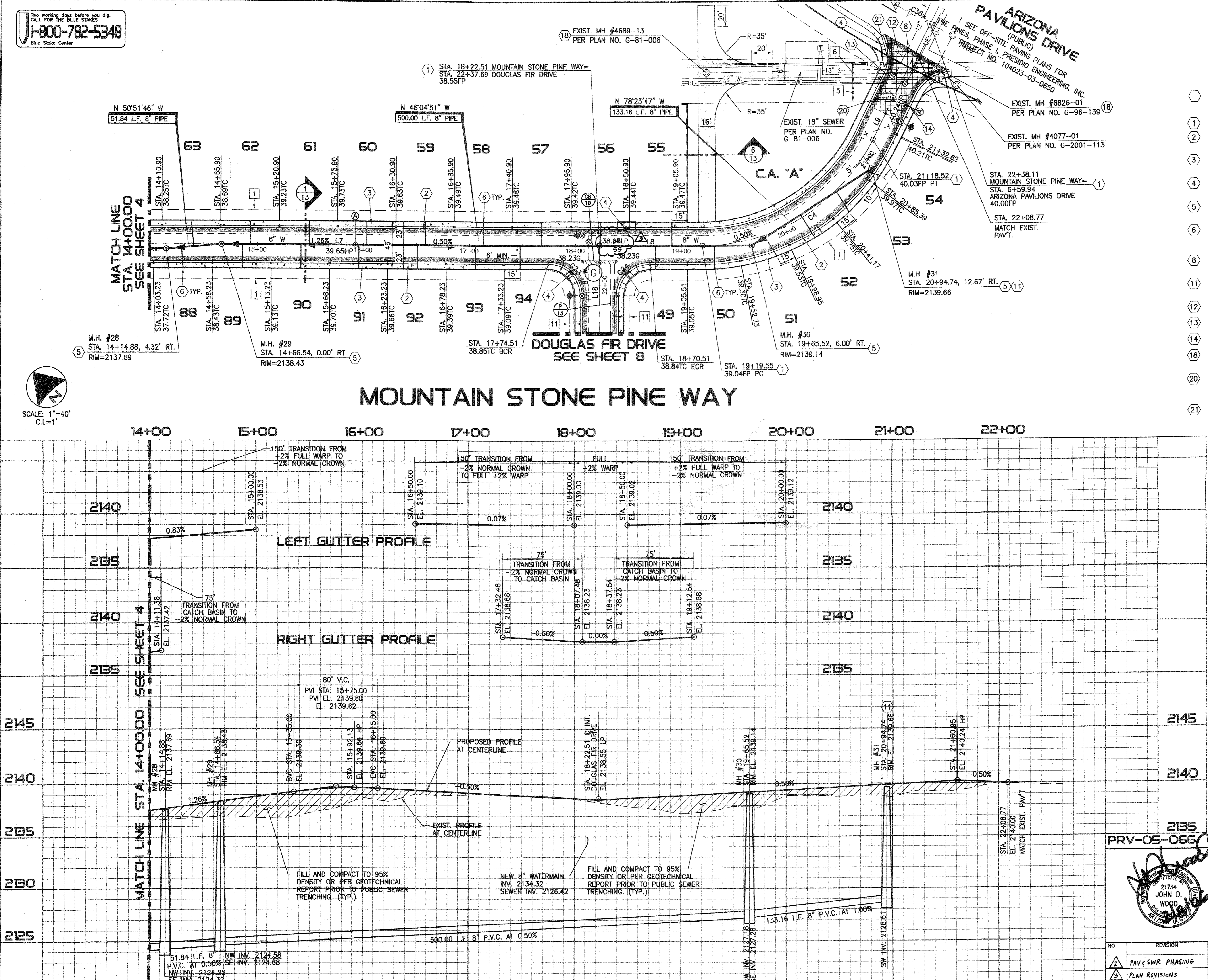


**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD. UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2 CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3 CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4 CONSTRUCT TYPE 2 CURB RAMP PER MARAMA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5 CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6 CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - 8 SAWCUT (2' TYP.), TRIM, TACK AND JOIN TO MATCH NEW PAVEMENT TO EXISTING PAVEMENT.
  - 11 INSTALL 24" WATERPROOF MANHOLE FRAME AND COVER PER PC/COT STD. DTL. NO. WWM 213.2.
  - 12 REMOVE AND REPLACE 270 S.Y. EXIST. PAVEMENT.
  - 13 REMOVE 73 L.F. EXIST. VERTICAL CURB AND GUTTER.
  - 14 REMOVE 47 L.F. EXIST. VERTICAL CURB AND GUTTER.
  - 18 ADJUST RIM OF EXIST. MANHOLE TO MATCH FINISHED PAVEMENT GRADE PER PC/COT STD. DTL. WWM 305.
  - 20 ADJUST RIM OF EXIST. TELEPHONE MANHOLE VAULT TO MATCH FINISHED PAVEMENT GRADE. CONTRACTOR TO COORDINATE WITH QWEST.
  - 21 ADJUST EXIST. WATER VALVE, B&C TO MATCH FINISHED PAVEMENT GRADE. CONTRACTOR TO COORDINATE WITH TUCSON WATER.

- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 5 16.5' PUBLIC SEWER & UTILITY EASEMENT PER BK. 50, PG. 34, M&P.
  - 6 20' SEWER & UTILITY EASEMENT PER BK. 33, PG. 97, M&P.
  - 11 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

- STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)
- 10 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 22+21.69, 0.00' RT., DOUGLAS FIR DRIVE AND PER DTL. 2 ON SHT. 14. (SEE SHEET 8)
  - 13 STA. 21+66.86, 12.45' RT. TO STA. 22+20.19, 12.45' RT. INSTALL 53.33 L.F. 42" RCP. INV. UPSTREAM=2131.48, INV. DOWNSTREAM=2131.22. (SEE SHEET 8)



PRV-05-066 ENG0511-015 G-2005-187

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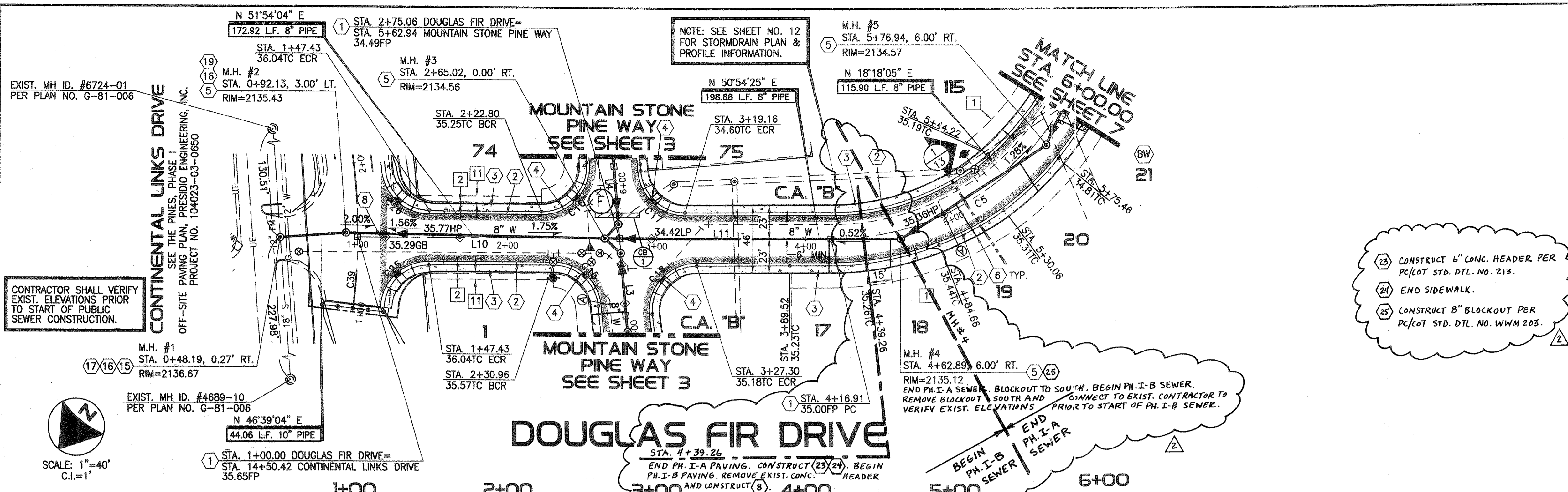
**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
2	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	5
3	PLAN REVISIONS	6/05/06	DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	HORIZ. 1"=40' VERT. 1"=4'	18



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Blue Stake Center

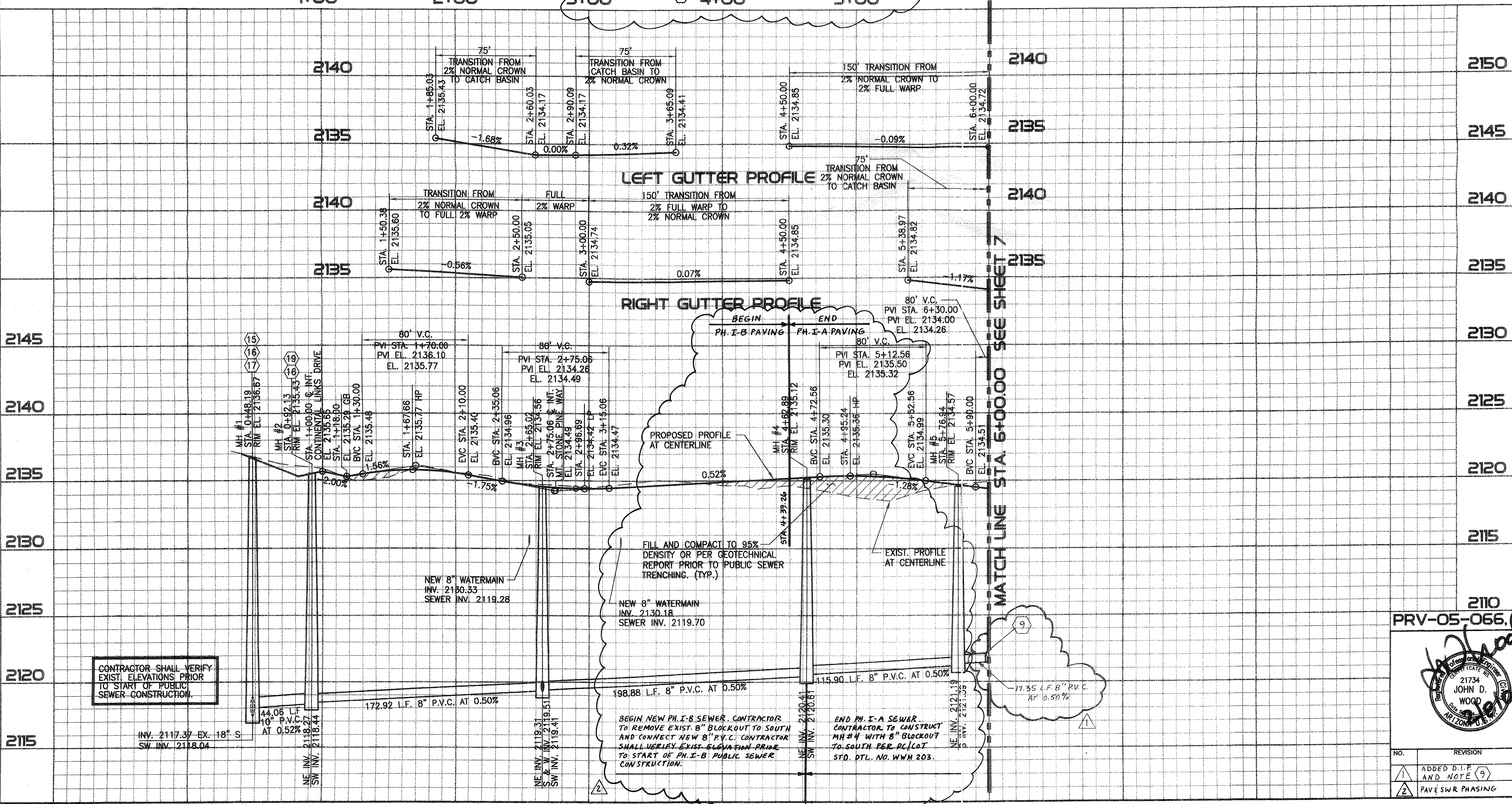
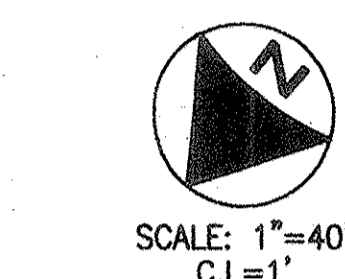
**NOTES**  
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23 CONSTRUCT 6" CONC. HEADER PER PC/COT STD. DTL. NO. 213.  
24 END SIDEWALK.  
25 CONSTRUCT 8" BLOCKOUT PER PC/COT STD. DTL. NO. WWM 203.

BEGIN PH. I-B SEWER  
END PH. I-A SEWER  
REMOVE BLOCKOUT TO SOUTH AND CONNECT TO EXIST. CONTRACTOR TO VERIFY EXIST. ELEVATIONS PRIOR TO START OF PH. I-B SEWER.

CONTRACTOR SHALL VERIFY EXIST. ELEVATIONS PRIOR TO START OF PUBLIC SEWER CONSTRUCTION.



- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2 CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3 CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4 CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5 CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6 CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - 8 SAWCUT (2' TYP.), TRIM, TACK AND JOIN TO MATCH NEW PAVEMENT TO EXISTING PAVEMENT.
  - 15 CONSTRUCT NEW MANHOLE OVER EXISTING SEWER PER PC/COT STD. DTL. NO. WWM 303.
  - 16 INSTALL MANHOLE BENCH, CHANNEL AND COVER COATING SPECIFICATIONS ON SHT. 16.
  - 17 INSTALL BACKWATER VALVE PER DTL. 1 ON SHT. 16.
  - 19 INSTALL TEMPORARY PLUG AT OUTLET. PLUG TO BE REMOVED AFTER ADEQ APPROVAL OF CONSTRUCTION AND POST PAVING INSPECTION.
- 9 COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WWM 103.

- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 2 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.
  - 11 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

**STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)

CB 1 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 5+79.00, 0.00' RT., MOUNTAIN STONE PINE WAY AND PER DTL. 2 ON SHT. 14. (SEE SHEET 12).

PHASE I-A & I-B

PRV-05-066, (ENG0511-015) G-2005-187

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**PUBLIC PAVING & PUBLIC SEWER PLAN FOR THE PINES, PHASE I, PH. I-A & PH. I-B LOTS 1-129 & COMMON AREAS "A" & "B"**

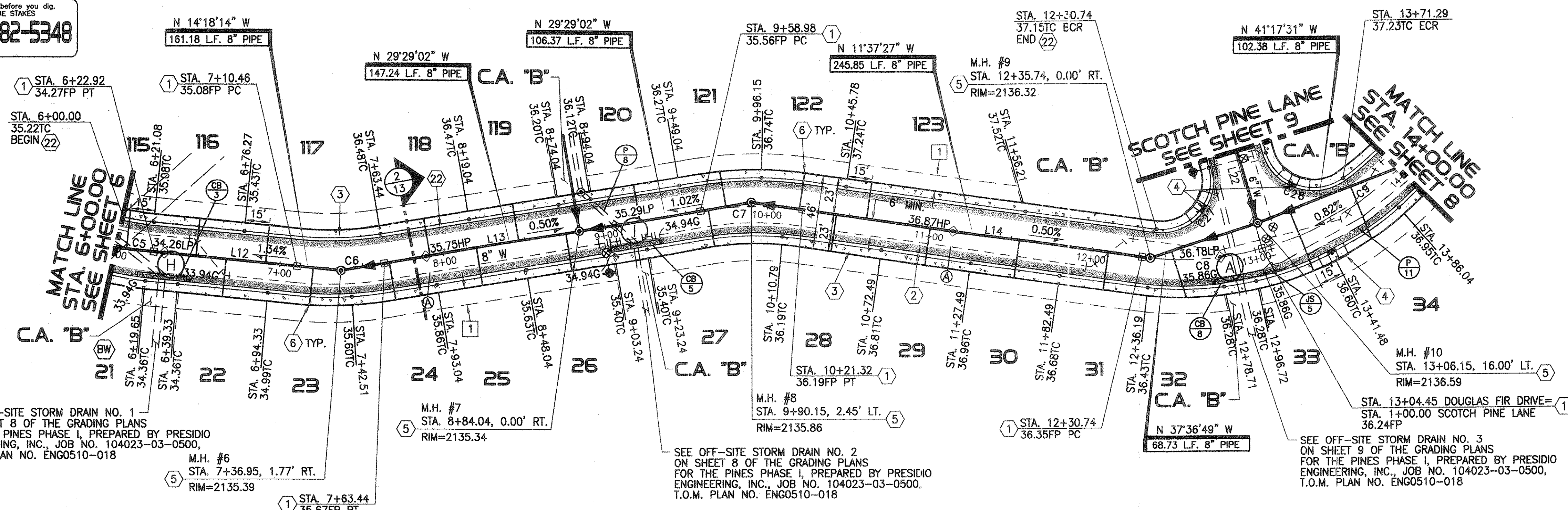
NO. REVISION DATE DESIGNED: E.P.D. DRAWN: D.S.S. CHECKED: J.D.W. SHEET 6 OF 18  
ADDED D.I.P. AND NOTE (9) 1/26/06 DATE: 02/07/2006 PROJECT NO.: 104023-03-0800 SCALE: HORIZ. 1"=40' VERT. 1"=4'  
PAV & SWR PHASING 6/05/06

21734 JOHN D. WOOD  
2/16/06

J:\PROJECTS\104023\03\_Paving\Drawings\2172006\6-01-03.dwg  
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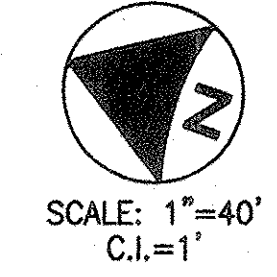


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Blue Stake Center



# DOUGLAS FIR DRIVE

6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00



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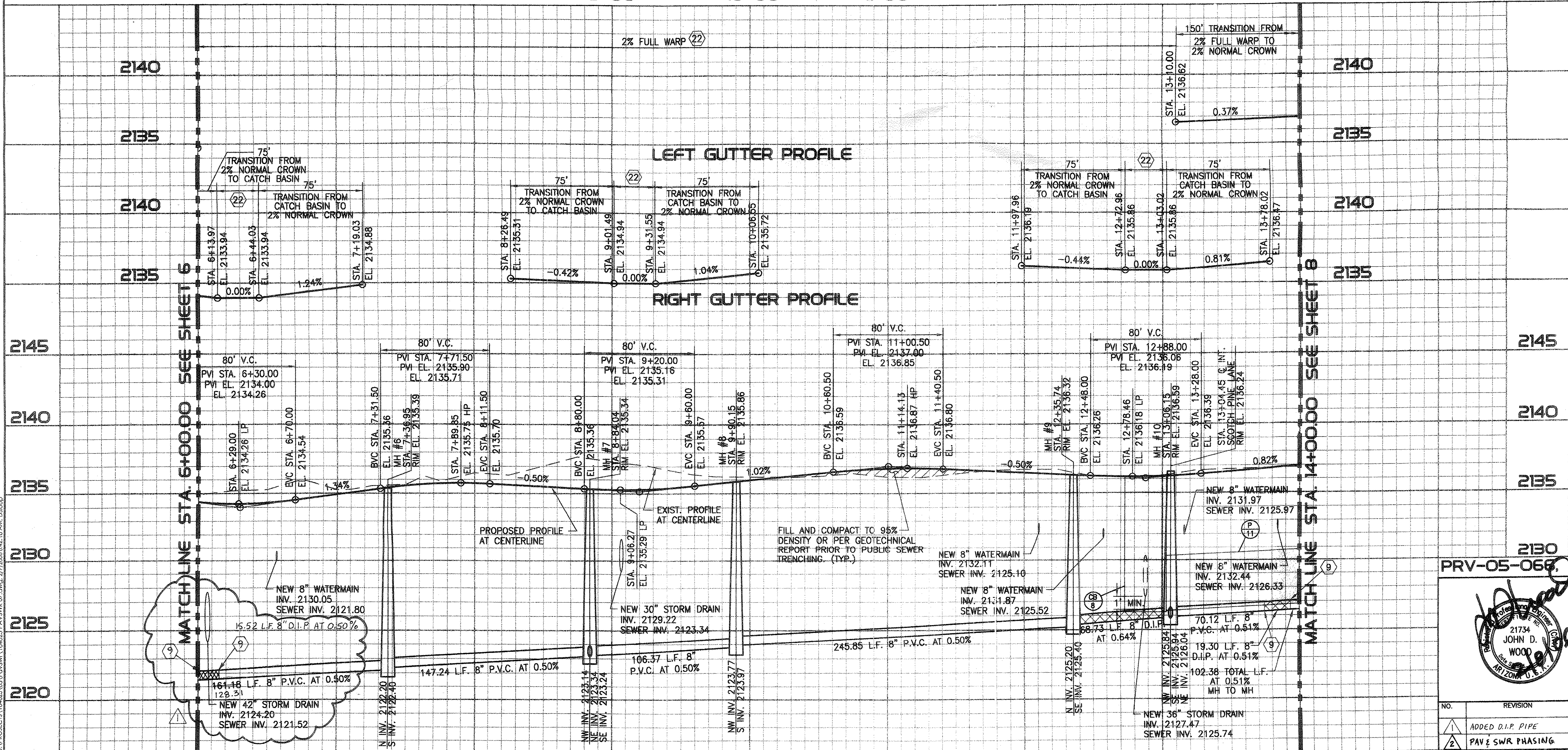
- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WMM 208.
  - CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WMM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WMM 103.
  - CONSTRUCT ROLL CURB AND GUTTER PER MAG. STD. DTL. NO. 220 (TYPE D).

- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.

**STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)

- CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 6+29.33, 15.91' RT., DOUGLAS FIR DRIVE, AND PER DTL. 2 ON SHT. 14.
- CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 9+16.52, 16.00' RT., DOUGLAS FIR DRIVE, AND PER DTL. 2 ON SHT. 14. (SEE SHEET 10).
- CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 AND PER DTL. 1 ON SHT. 14 AND PER DTL. 1 ON SHT. 15.
- STA. 8+89.04, 23.42' LT. DOUGLAS FIR DRIVE TO STA. 9+16.84, 13.00' RT. DOUGLAS FIR DRIVE. INSTALL 45.82 L.F. 30" HDPE, INV. UPSTREAM=2129.37, INV. DOWNSTREAM=2129.14. (SEE SHEET 10).
- STA. 13+07.67, 12.78' RT. TO STA. 18+23.32, 12.20' RT. INSTALL 526.39 L.F. 48" HDPE, INV. UPSTREAM=2128.97, INV. DOWNSTREAM=2126.34.
- CONSTRUCT ADAPTER TO CONNECT 48" HDPE PIPE TO TYPE 4 CATCH BASIN PER DTL. 1 ON SHT. 14.

PHASE I-A & I-B



21734 JOHN D. WOOD  
PHYSICIAN  
ARIZONA, U.S.A.

PRV-05-066, ENG0511-015 G-2005-187

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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & I-B**  
LOTS 1-29 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	ADDED D.I.P. PIPE	4/26/06	E.P.D.	D.S.S.	J.D.W.	7
2	PAV & SWR PHASING	6/05/06	DATE:	PROJECT NO.:	SCALE:	18
			02/07/2006	104023-03-0600	HORIZ. 1"=40' VERT. 1"=4'	

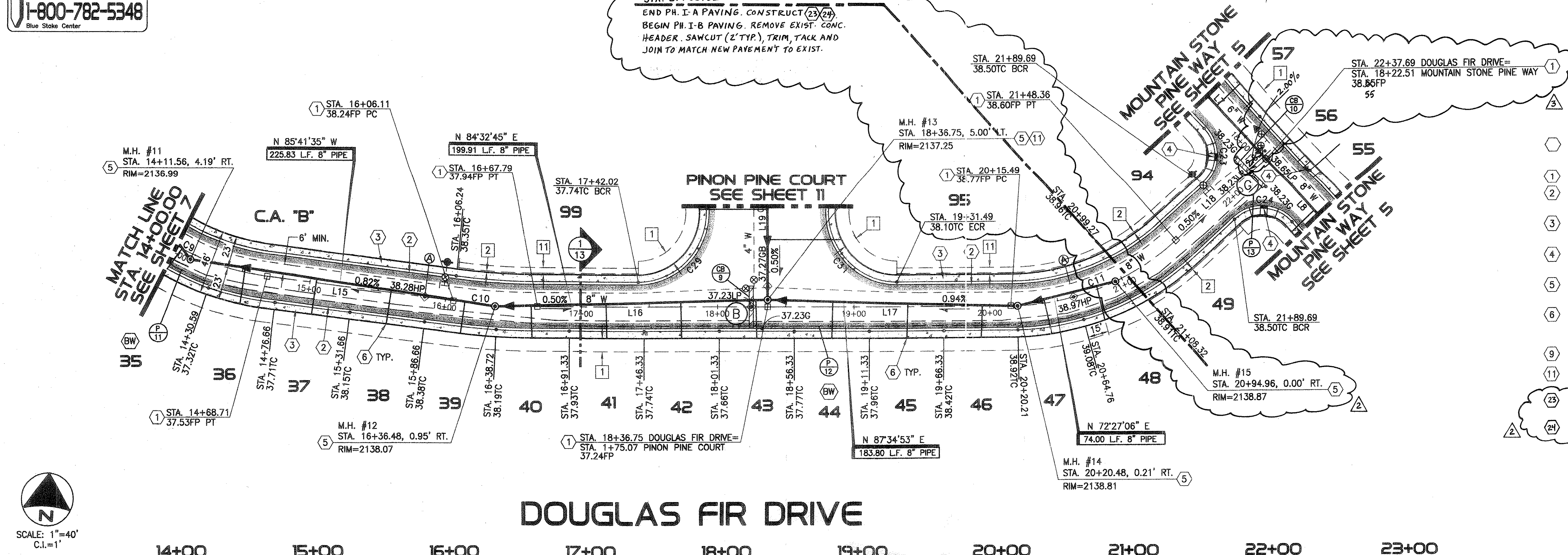
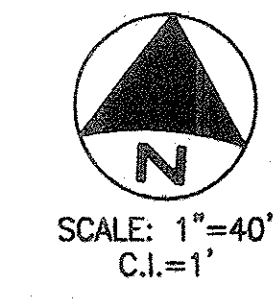


**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD. UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2. CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3. CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4. CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5. CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6. CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - 9. COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WWM 103.
  - 11. INSTALL 24" WATERPROOF MANHOLE FRAME AND COVER PER PC/COT STD. DTL. NO. WWM 213.2.
  - 23. CONSTRUCT 6" CONC. HEADER PER PC/COT STD. DTL. NO. 215.
  - 24. END SIDEWALK.

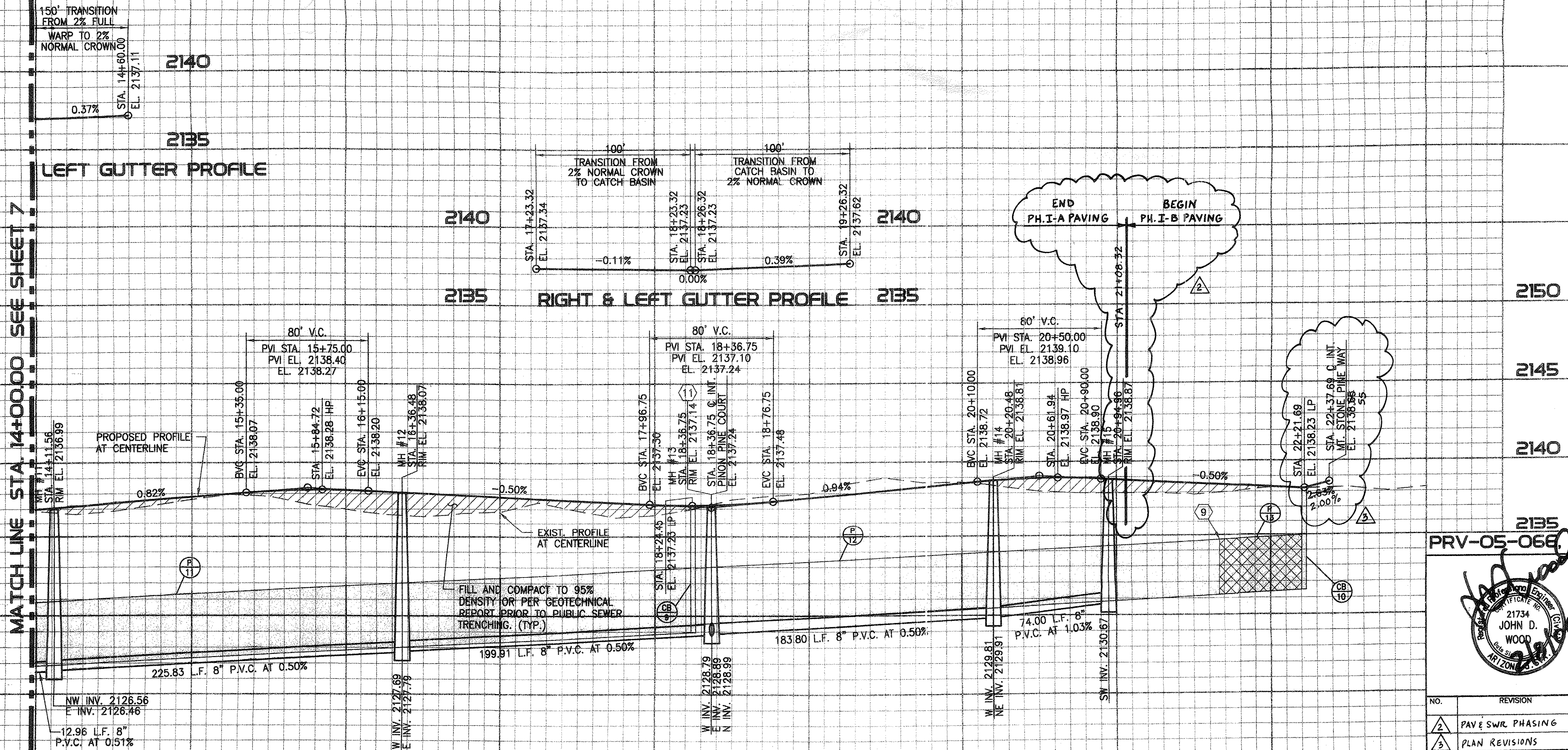
- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 2. 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.
  - 11. 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

- STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)
- 9. CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 18+24.82, 0.00' RT., DOUGLAS FIR DRIVE AND PER DTL. 2 ON SHT. 14.
  - 10. CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 AND PER DTL. 2 ON SHT. 14.
  - 11. STA. 13+07.67, 12.78' RT. TO STA. 18+23.32, 12.20' RT. INSTALL 526.39 L.F. 48" HDPE, INV. UPSTREAM=2128.97, INV. DOWNSTREAM=2126.34.
  - 12. STA. 18+26.32, 12.45' RT. TO STA. 21+26.86, 12.45' RT. INSTALL 349.34 L.F. 42" HDPE, INV. UPSTREAM=2131.22, INV. DOWNSTREAM=2129.47.
  - 13. STA. 21+66.86, 12.45' RT. TO STA. 22+20.19, 12.45' RT. INSTALL 53.33 L.F. 42" RCP, INV. UPSTREAM=2131.48, INV. DOWNSTREAM=2131.22.



**DOUGLAS FIR DRIVE**

14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00



PRV-05-066 ENG0511-015 G-2005-187

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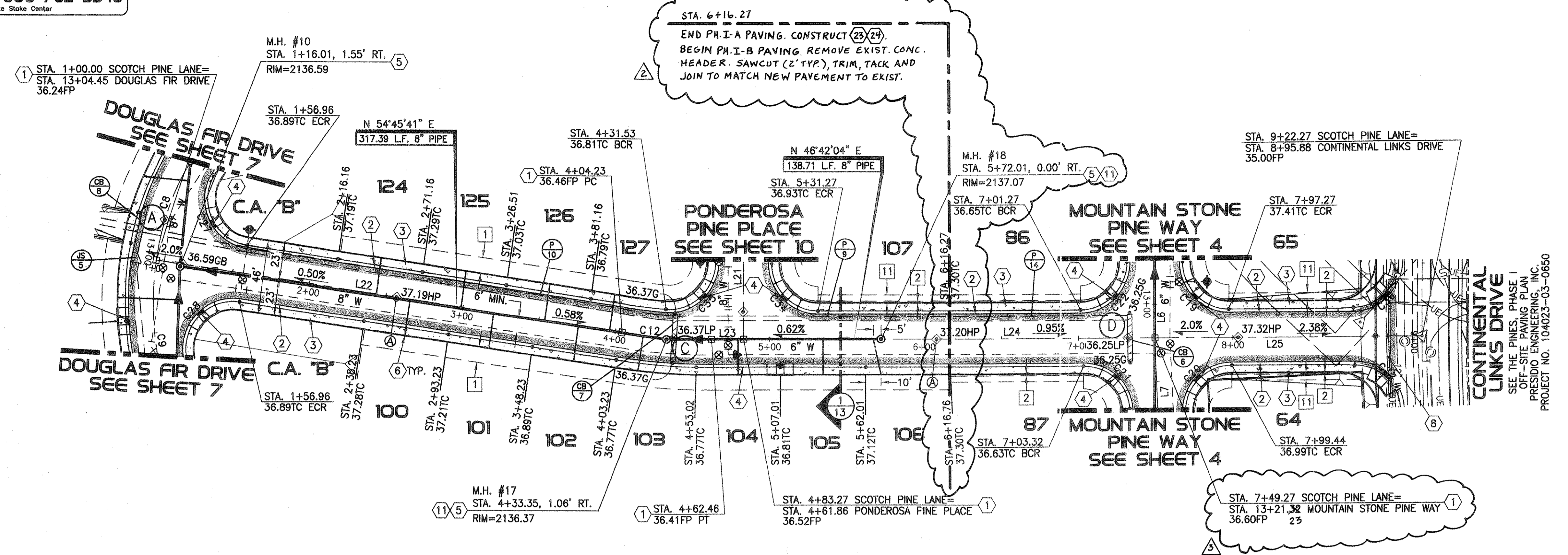
**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	8
2	PLAN REVISIONS	6/05/06	DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	HORIZ. 1"=40' VERT. 1"=4'	18

21734 JOHN D. WOOD  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF ARIZONA



**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD.  
UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

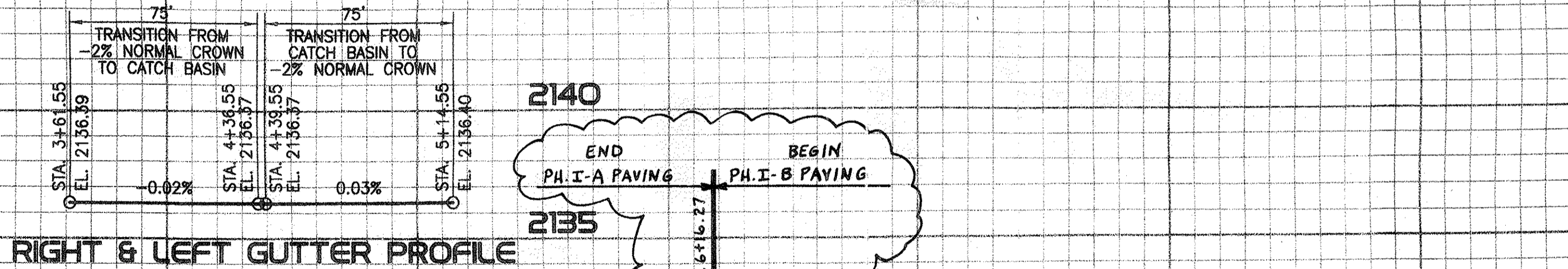


- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2 CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3 CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4 CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5 CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6 CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - 8 SAWCUT (2' TYP.), TRIM, TACK AND JOIN TO MATCH NEW PAVEMENT TO EXISTING PAVEMENT.
  - 9 COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WWM 103.
  - 11 INSTALL 24" WATERPROOF MANHOLE FRAME AND COVER PER PC/COT STD. DTL. NO. WWM 213.2.
  - 23 CONSTRUCT 6" CONC. HEADER PER PC/COT STD. DTL. NO. Z13.
  - 24 END SIDEWALK.

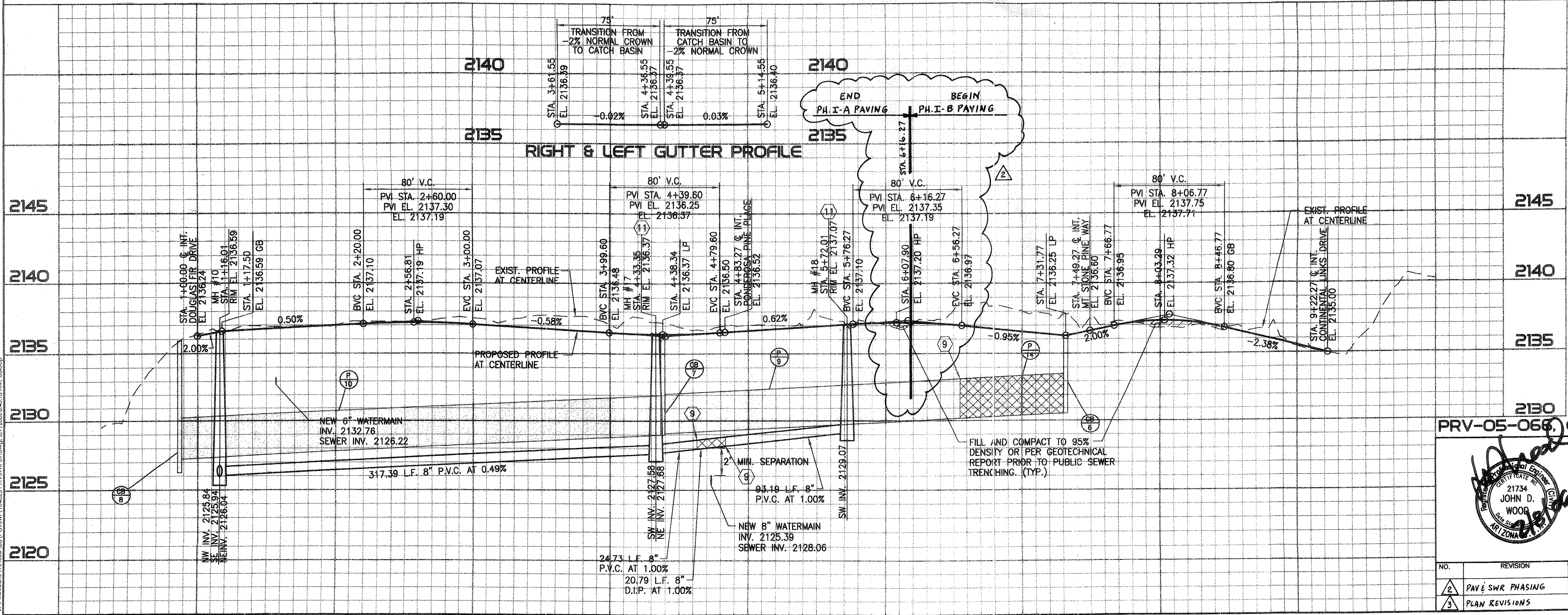
- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 2 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.
  - 11 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

**SCOTCH PINE LANE**

1+00      2+00      3+00      4+00      5+00      6+00      7+00      8+00      9+00      10+00



- STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)
- 6B CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 7+33.27, 0.00' RT., SCOTCH PINE LANE AND PER DTL. 2 ON SHT. 14.
  - 7B CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 4+38.34, 0.00' RT., SCOTCH PINE LANE AND PER DTL. 2 ON SHT. 14.
  - 8B CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 12+88.08, 0.00' RT., DOUGLAS FIR DRIVE, AND PER DTL. 1 ON SHT. 14 AND PER DTL. 1 ON SHT. 15.
  - 9 STA. 4+39.89, 12.69' LT. TO STA. 6+55.13, 12.66' LT. INSTALL 218.62 L.F. 36" HDPE, INV. UPSTREAM=2130.18, INV. DOWNSTREAM=2129.09.
  - 10 STA. 0+88.60, 17.55' LT. SCOTCH PINE LANE TO STA. 4+36.76, 12.69' LT. INSTALL 349.74 L.F. 36" HDPE, INV. UPSTREAM=2128.99, INV. DOWNSTREAM=2127.24.
  - 11 STA. 6+55.13, 12.66' LT. TO STA. 7+31.44, 12.66' LT. INSTALL 76.31 L.F. 36" RCP, INV. UPSTREAM=2130.56, INV. DOWNSTREAM=2130.18.
  - 12B CONSTRUCT ADAPTER TO CONNECT 48" HDPE PIPE TO TYPE 4 CATCH BASIN PER DTL. 1 ON SHT. 14.



PRV-05-066, ENGOS11-015, G-2005-187

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(520) 796-7256 • Fax (520) 796-6747

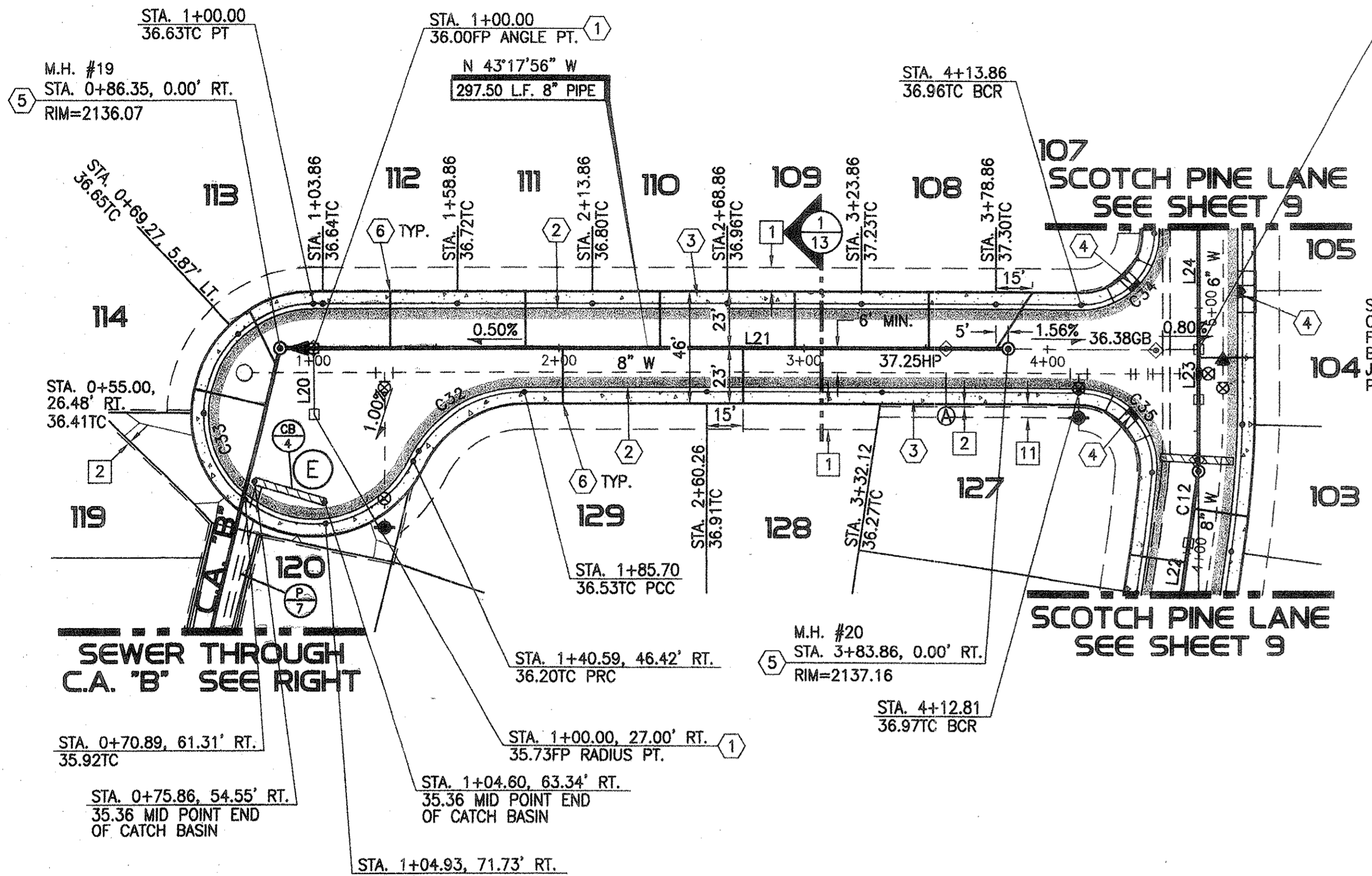
**PUBLIC PAVING & PUBLIC SEWER PLAN FOR THE PINES, PHASE I, PH. I-A & PH. I-B LOTS 1-29 & COMMON AREAS 'A' & 'B'**

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
2	PAVE SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	9 OF 18
3	PLAN REVISIONS	6/05/06	02/07/2006	104023-03-0600	SCALE: HORIZ. 1"=40' VERT. 1"=4'	

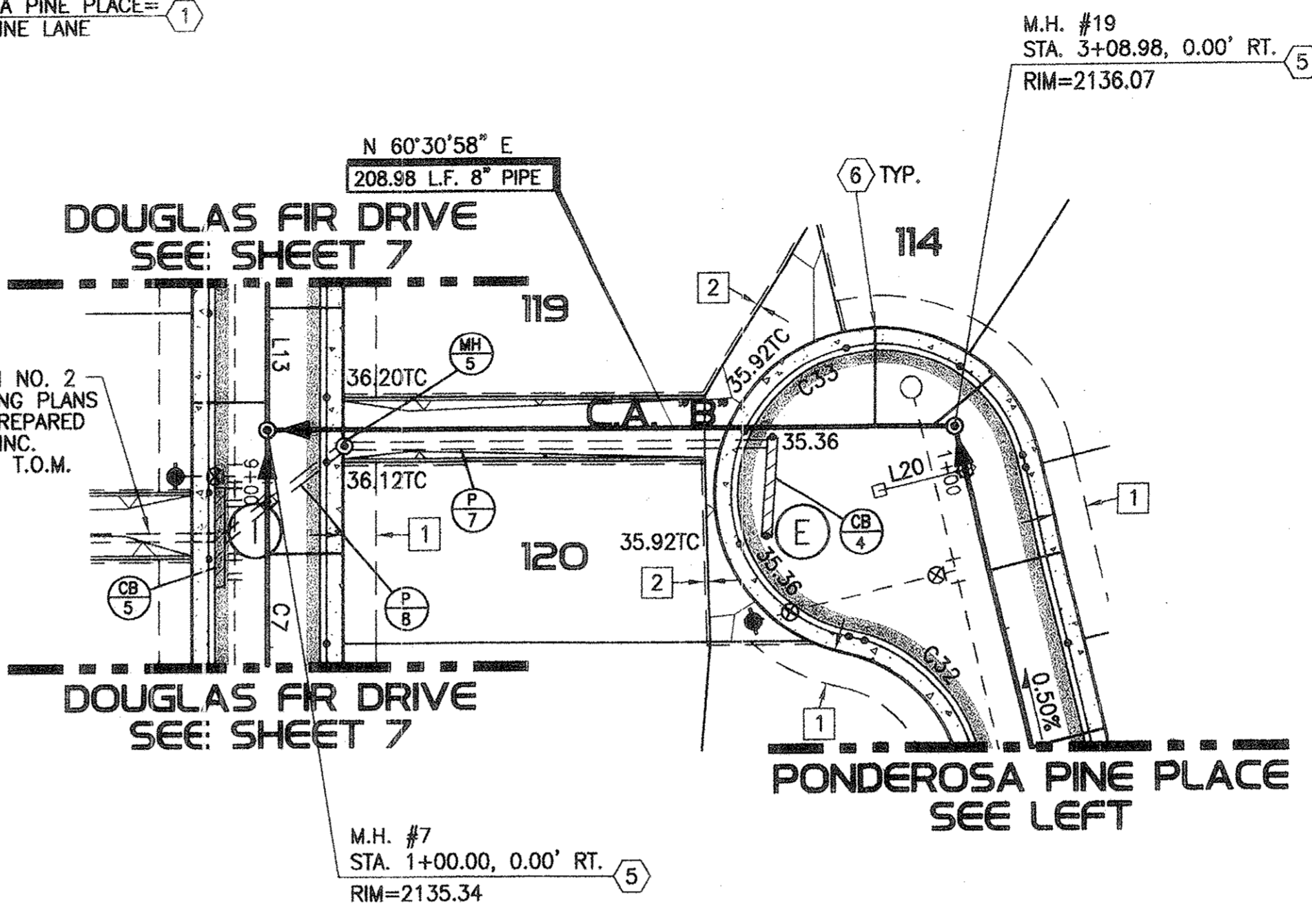
PROJECT: 104023-03-0600, PAVING PLAN, 07/2006, 8:45 AM, CDR: J.P.



**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD.  
UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

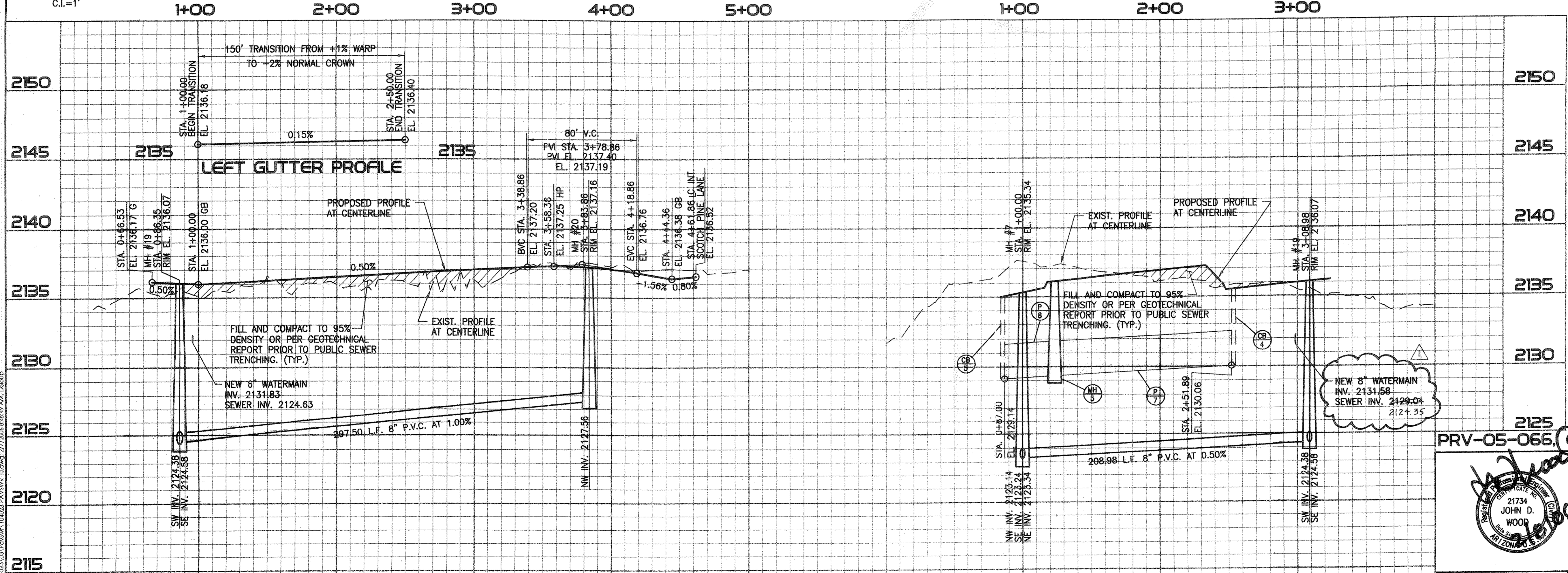
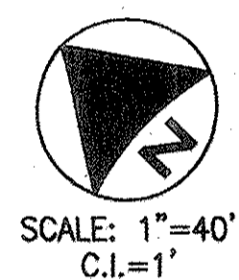


SEE OFF-SITE STORM DRAIN NO. 2  
ON SHEET 8 OF THE GRADING PLANS  
FOR THE PINES PHASE I, PREPARED  
BY PRESIDIO ENGINEERING, INC.  
JOB NO. 104023-03-0500, T.O.M.  
PLAN NO. ENG0510-018



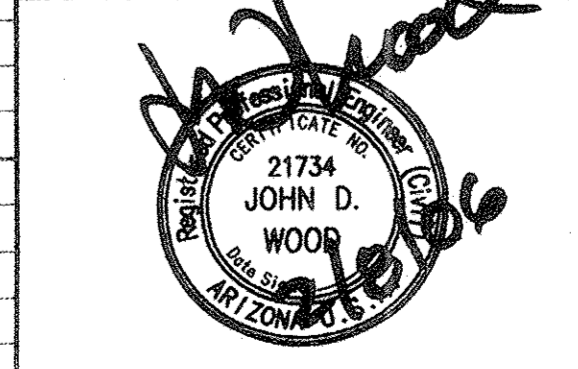
**PONDEROSA PINE PLACE**

**SEWER & STORM DRAIN THROUGH C.A. "B"**



- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - 2. CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - 3. CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - 4. CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - 5. CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - 6. CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- 1. 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - 2. 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.
  - 11. 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.
- STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)
- CB 4. CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 0+90.39, 58.98' RT. PONDEROSA PINE PLACE AND PER DTL. 2 ON SHT. 14.
  - CB 5. CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 9+16.52, 16.00' RT., DOUGLAS FIR DRIVE, AND PER DTL. 2 ON SHT. 14.
  - P 7. STA. 1+23.42, 5.00' RT., SEWER THROUGH C.A. "B" TO STA. 2+51.89, 5.00' RT., SEWER THROUGH C.A. "B". INSTALL 131.48 L.F. 30" HDPE, INV. UPSTREAM=2130.06, INV. DOWNSTREAM=2129.42.
  - P 8. STA. 8+89.04, 23.42' LT. DOUGLAS FIR DRIVE TO STA. 9+16.84, 13.00' RT. DOUGLAS FIR DRIVE. INSTALL 45.82 L.F. 30" HDPE, INV. UPSTREAM=2129.32, INV. DOWNSTREAM=2129.14.
  - MH 5. STA. 1+23.42 STORM DRAIN THROUGH C.A. "B". CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NE INV. 2129.42 (30'), SW INV. 2129.32 (30').

2125  
PRV-05-066, ENG0511-015  
G-2005-187



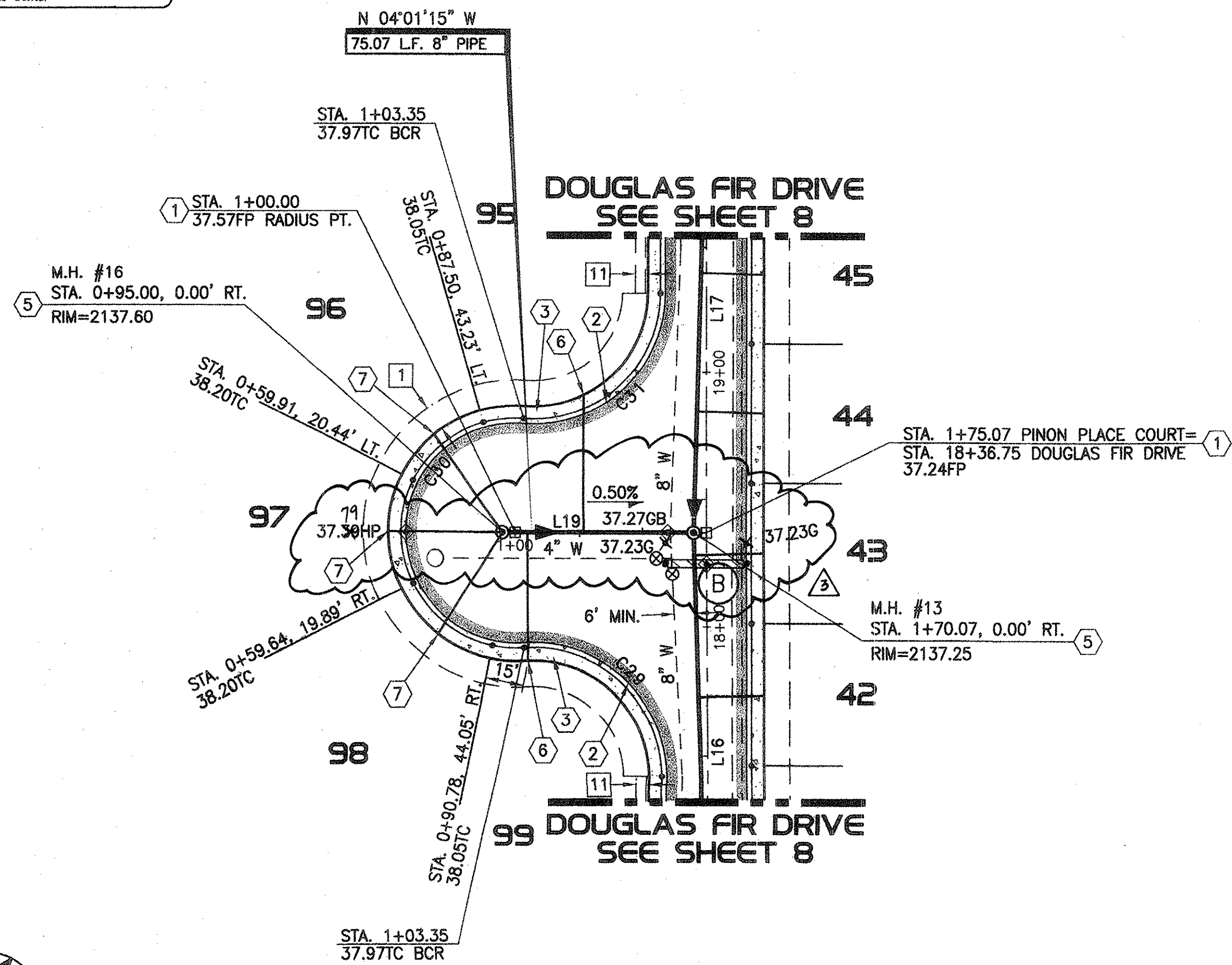
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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH. I-A & PH. I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

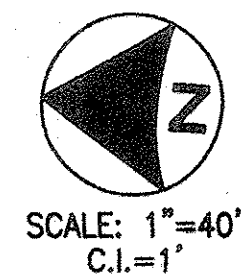
NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	REV. SEWER INV.	4/26/06	E.P.D.	D.S.S.	J.D.W.	10
2	PAV & SWR PHASING	6/05/06	02/07/2006	104023-03-0600	SCALE: HORIZ. 1"=40' VERT. 1"=4'	OF 18



**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD.  
UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

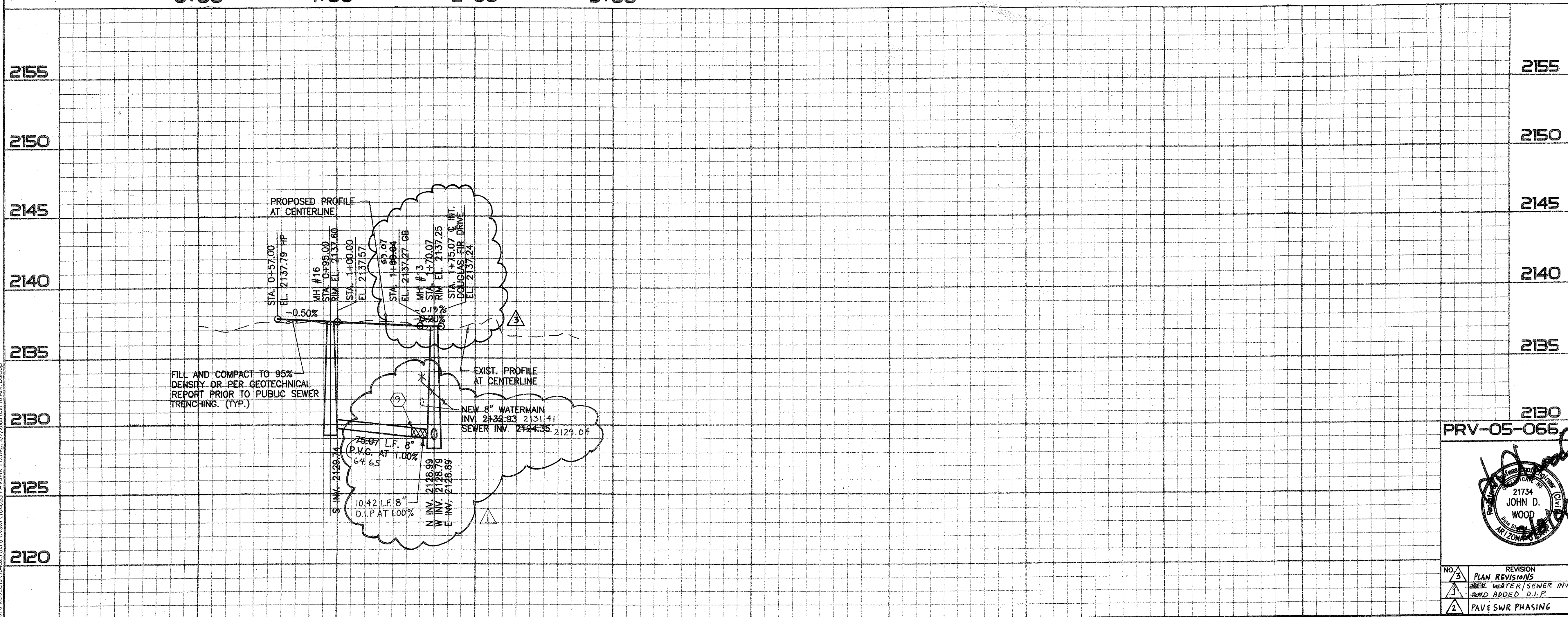


**PINON PINE COURT**



0+00      1+00      2+00      3+00

- CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 13)
- ① INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
  - ② CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
  - ③ CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
  - ④ CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
  - ⑤ CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WWM 208.
  - ⑥ CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WWM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
  - ⑦ CONSTRUCT 4" SEWER HOUSE CONNECTION INTO TERMINUS MANHOLE PER PC/COT STD. DTL. NO. WWM 402.
  - ⑧ COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WWM103.
- EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)
- ① 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
  - ⑪ 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.



PHASE I-B

PRV-05-066 ENG0511-015      G-2005-187

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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH-I-A & PH-I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

DESIGNED: E.P.D.      DRAWN: D.S.S.      CHECKED: J.D.W.      SHEET 11 OF 18  
DATE: 02/07/2006      PROJECT NO.: 104023-03-0800      SCALE: HORIZ. 1"=40' VERT. 1"=4'

NO. 3 PLAN REVISIONS      DATE: 6/05/06  
NEW WATER/SEWER INV.      DATE: 4/26/06  
ADD ADDED D.I.P.      DATE: 6/05/06  
PAVE SWR PHASING      DATE: 6/05/06

J:\PROJECTS\104023-03-0800\104023-03-0800\_PAVSWR\_11.dwg 2/7/2006 8:50:10 AM DSK/DP

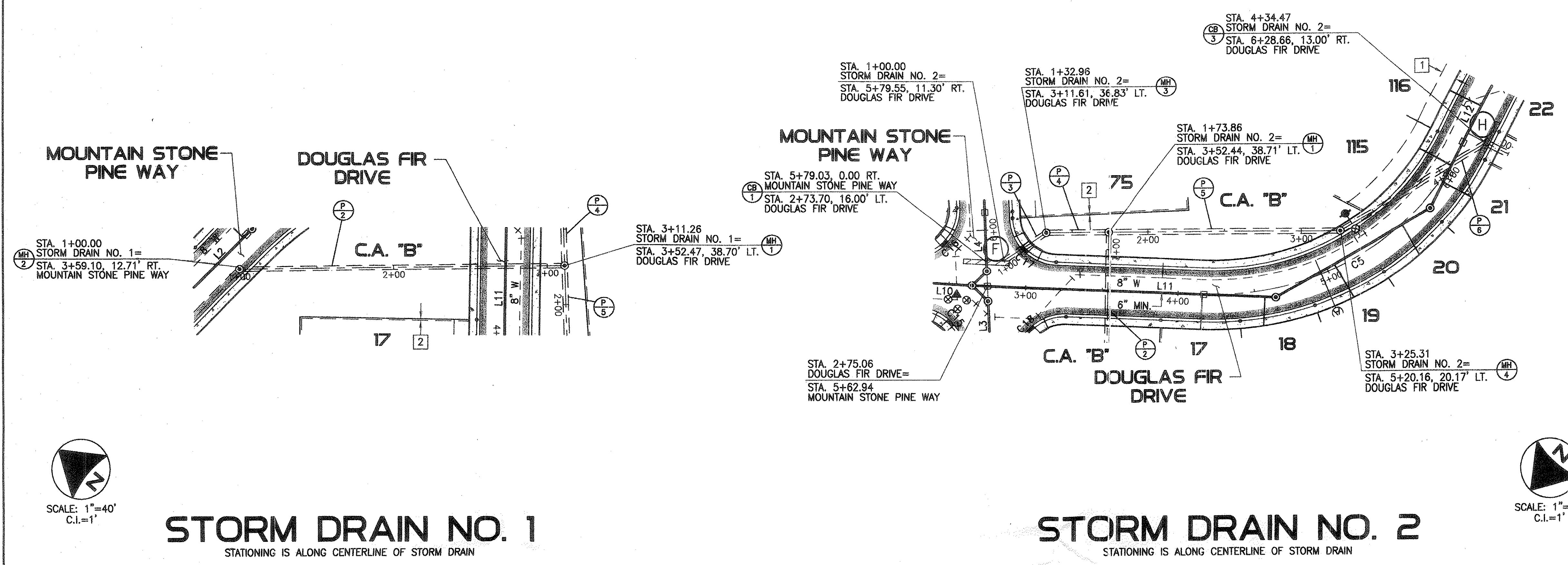


**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD, UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

**EASEMENT NOTES**  
(SEE MASTER LIST ON SHEET 13)  
1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.  
2 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.

**STORM DRAIN CONSTRUCTION NOTES**  
(SEE MASTER LIST ON SHEET 15)

- (P 2) STA. 3+59.10, 12.71' RT., MOUNTAIN STONE PINE WAY TO STA. 3+52.44, 38.71' LT., DOUGLAS FIR DRIVE. INSTALL 211.27 L.F. 36" HDPE, INV. UPSTREAM=2126.85, INV. DOWNSTREAM=2125.89.
- (P 3) STA. 1+00.00 TO STA. 1+32.96. INSTALL 32.96 L.F. 42" HDPE, INV. UPSTREAM=2125.95, INV. DOWNSTREAM=2125.79.
- (P 4) STA. 1+32.96 TO STA. 1+73.86. INSTALL 40.88 L.F. 42" HDPE, INV. UPSTREAM=2125.69, INV. DOWNSTREAM=2125.49.
- (P 5) STA. 1+73.86 TO STA. 3+25.31. INSTALL 151.48 L.F. 48" HDPE, INV. UPSTREAM=2125.39, INV. DOWNSTREAM=2124.68.
- (P 6) STA. 3+25.31 TO STA. 4+34.47. INSTALL 58.27 L.F. 48" HDPE, INV. UPSTREAM=2124.58, INV. DOWNSTREAM=2124.08.
- (CB 1) CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 5+79.00, 0.00' RT., MOUNTAIN STONE PINE WAY AND PER DTL. 2 ON SHT. 14.
- (CB 3) CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 6+29.33, 15.91' RT., DOUGLAS FIR DRIVE.
- (MH 1) STA. 3+11.26 STORM DRAIN NO. 1. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NW INV. 2125.89 (36"), NE INV. 2125.49 (42"), SW INV. 2125.39 (42").
- (MH 2) STA. 1+00.00 STORM DRAIN NO. 1. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, S INV. 2125.79 (42"), SE INV. 2126.85 (36").
- (MH 3) STA. 1+32.96 STORM DRAIN NO. 2. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NE INV. 2126.95 (36"), SW INV. 2125.69 (42").
- (MH 4) STA. 3+25.31 STORM DRAIN NO. 2. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, SW INV. 2124.88 (42"), S INV. 2124.58 (42").

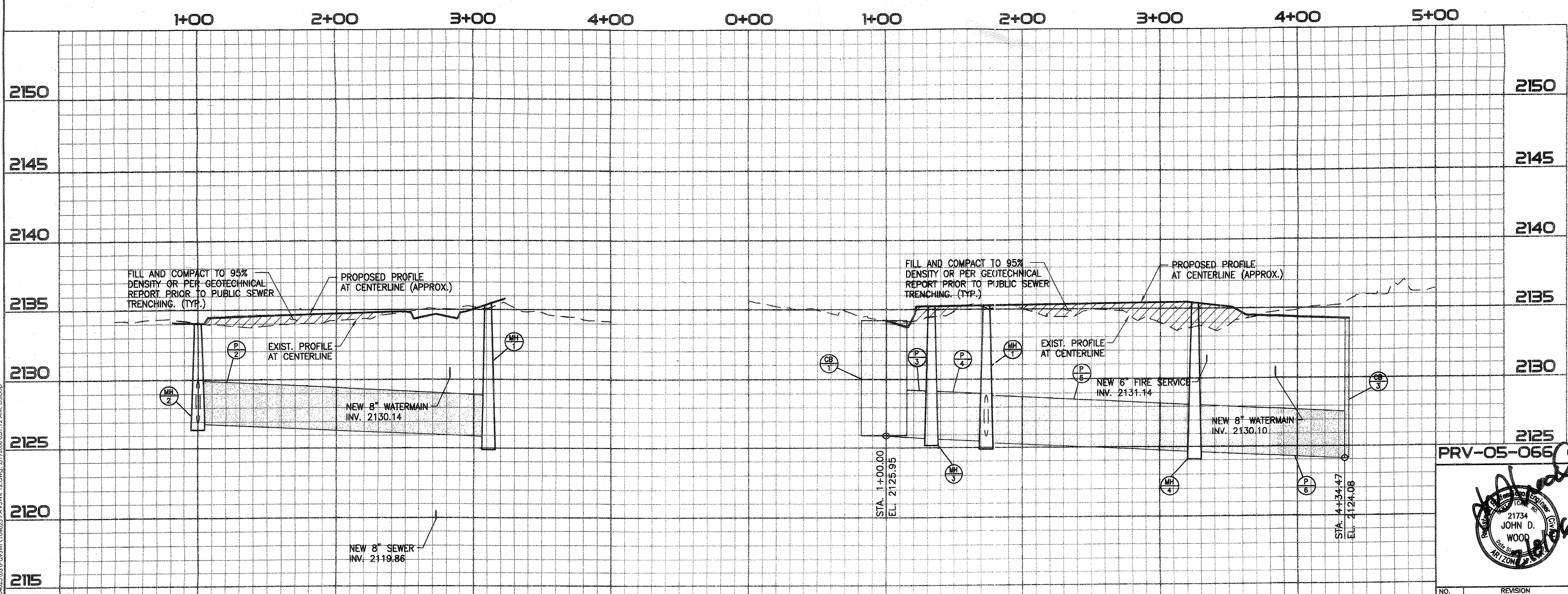


SCALE: 1"=40'  
C.I.=1'

SCALE: 1"=40'  
C.I.=1'

**STORM DRAIN NO. 1**  
STATIONING IS ALONG CENTERLINE OF STORM DRAIN

**STORM DRAIN NO. 2**  
STATIONING IS ALONG CENTERLINE OF STORM DRAIN



PHASE I-A

PRV-05-066 ENGOSII-015 G-2005-187

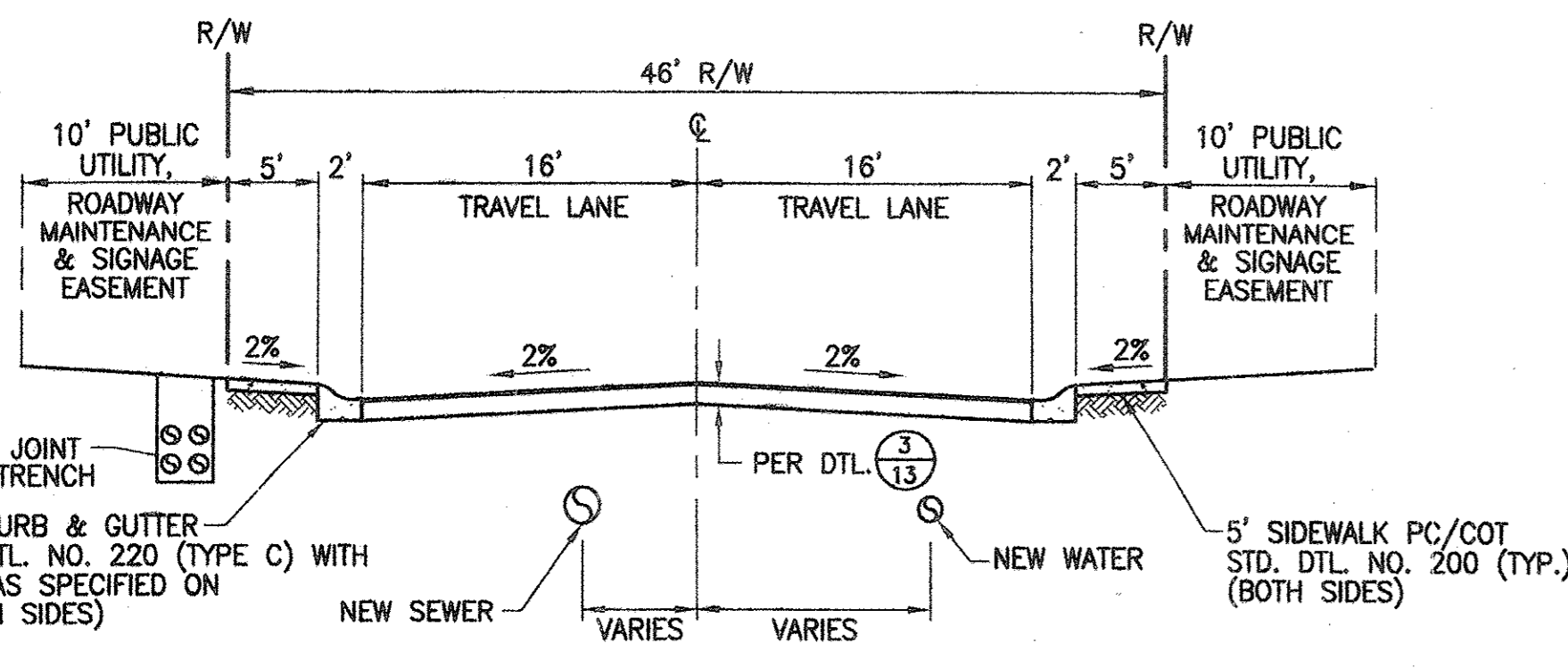
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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH I-A & PH I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	PAVE SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	12
			DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	HORIZ. 1"=40' VERT. 1"=4'	18

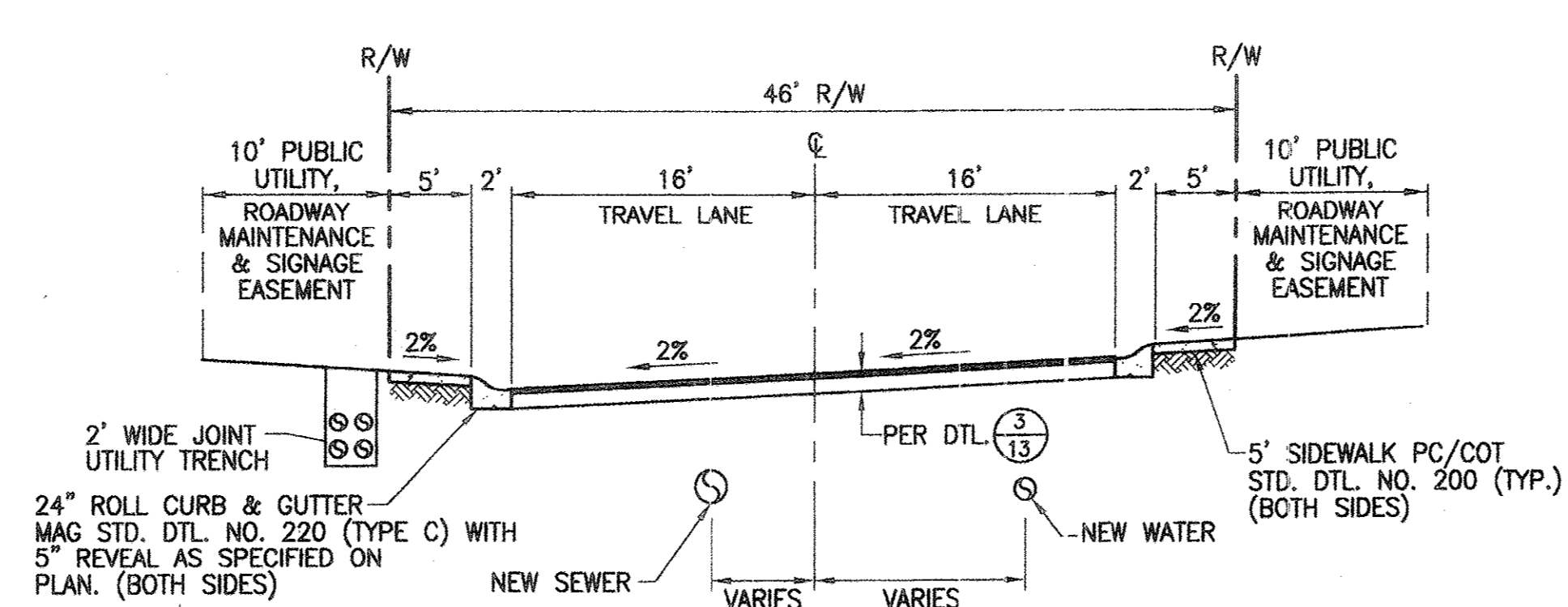
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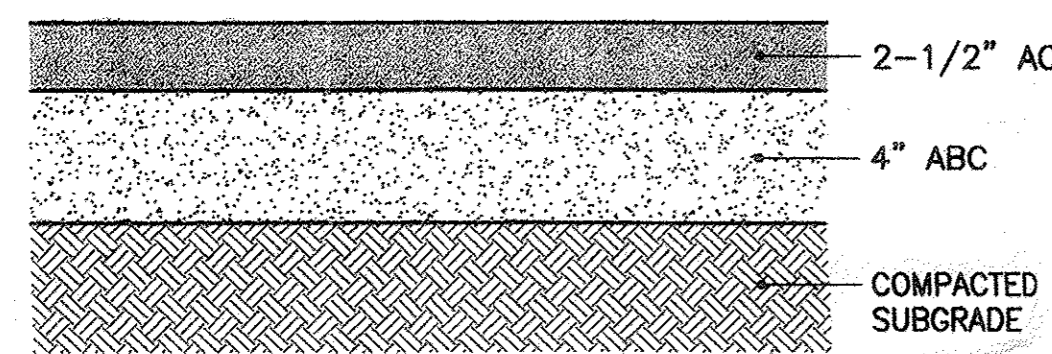
NOTE: SEE PLAN VIEW FOR HORIZONTAL LOCATION OF UTILITIES

1  
13 TYP. INTERIOR STREET CROSS SECTION N.T.S.

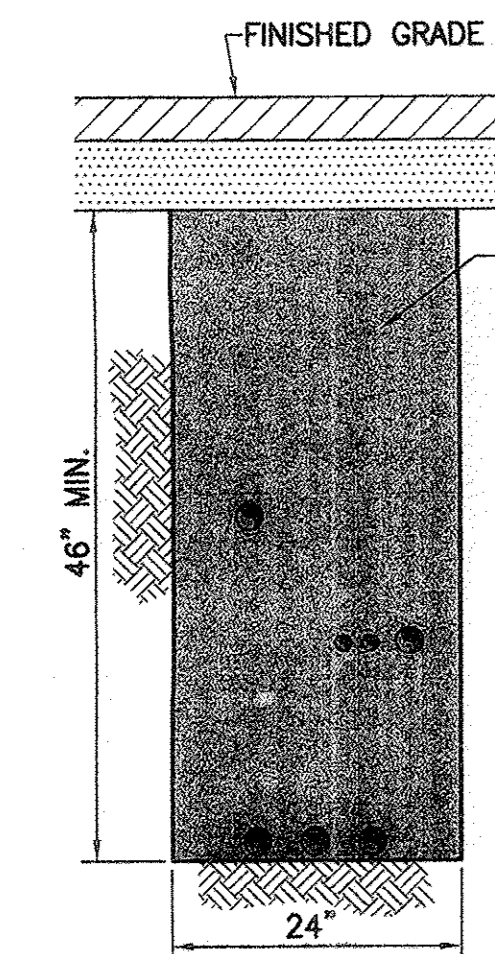


NOTE: SEE PLAN VIEW FOR HORIZONTAL LOCATION OF UTILITIES

2  
13 TYP. WARPED INTERIOR STREET CROSS SECTION N.T.S.



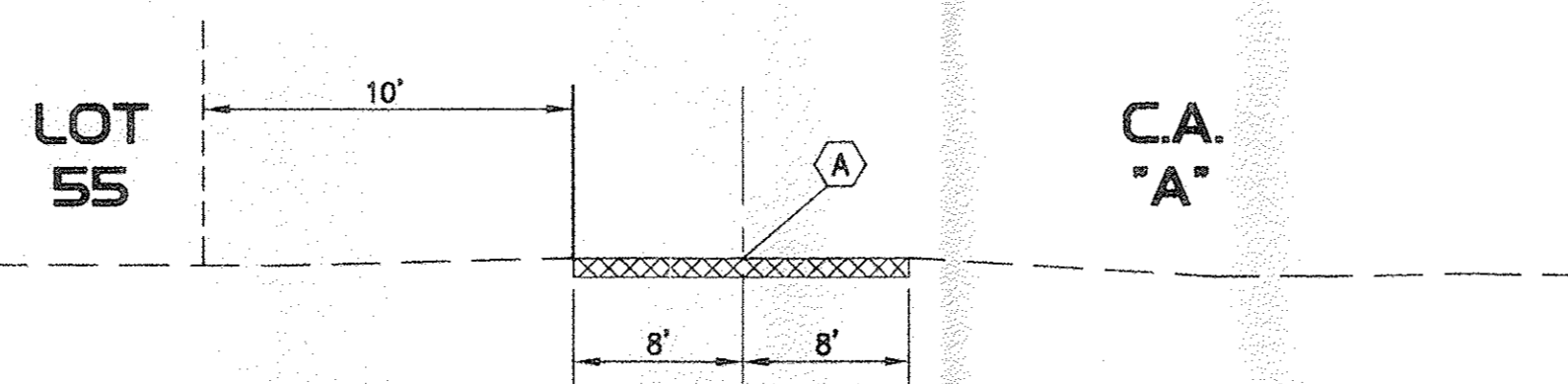
3  
13 TYPICAL ASPHALT PAVEMENT SECTION N.T.S.



NOTE: CONTRACTOR TO COORDINATE W/ UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS OF UTILITIES.  
GAS: SOUTHWEST GAS CORP. TONI SUTHERLAND (520) 247-0731  
ELECTRIC: TUCSON ELECTRIC POWER CO. FRANK KILPATRICK (520) 918-8227  
TELEPHONE: QWEST TONY PRO (520) 292-8191  
CABLE: COX COMMUNICATIONS ALAN PHILLIPS (520) 360-9305

5  
13 TYPICAL JOINT UTILITY TRENCH DETAIL N.T.S.

4  
13 NOT USED



A CONSTRUCT 6" LIME TREATED ABC SURFACE OR ACCEPTABLE EQUIVALENT TO MATCH EXISTING GRADE. SEE STD. DTL. NO. WMM 111.

6  
13 TYPICAL CROSS SECTION OF SEWER ACCESS ROAD N.T.S.

CURVE DATA TABLE

NUMBER	DELTA	RADIUS	ARC LENGTH	TANGENT
C1	41°51'02"	181.00'	132.21'	69.21'
C2	15°50'42"	573.00'	158.46'	79.74'
C3	16°29'17"	307.00'	88.35'	44.48'
C4	62°59'07"	181.00'	198.97'	110.88'
C5	65°12'39"	181.00'	206.00'	115.78'
C6	15°10'48"	200.00'	52.99'	26.65'
C7	17°51'35"	200.00'	62.34'	31.43'
C8	23°20'04"	181.00'	73.71'	37.38'
C9	51°59'39"	181.00'	164.25'	88.27'
C10	07°04'05"	500.00'	61.68'	30.88'
C11	42°03'36"	181.00'	132.87'	69.59'
C12	08°20'25"	400.00'	58.23'	29.16'
C13	64°25'56"	52.00'	58.48'	32.77'
C14	244°25'56"	43.00'	183.44'	---
C15	85°09'05"	32.00'	47.56'	29.40'
C16	95°14'45"	32.00'	53.20'	35.07'
C17	85°09'05"	32.00'	47.56'	29.40'
C18	94°57'15"	32.00'	53.03'	34.89'
C19	90°00'00"	32.00'	50.27'	32.00'
C20	92°46'55"	32.00'	51.82'	33.59'
C21	87°13'05"	32.00'	48.71'	30.48'
C22	90°00'00"	32.00'	50.27'	32.00'
C23	90°00'00"	32.00'	50.27'	32.00'
C24	90°00'00"	32.00'	50.27'	32.00'
C25	83°52'36"	32.00'	46.85'	28.75'
C26	83°52'36"	32.00'	46.85'	28.75'
C27	111°09'20"	32.00'	62.08'	46.70'
C28	111°09'20"	32.00'	62.08'	46.70'
C29	94°16'08"	52.00'	85.56'	56.03'
C30	188°32'17"	43.00'	141.50'	---
C31	94°16'08"	52.00'	85.56'	56.03'
C32	64°25'56"	52.00'	58.48'	32.77'
C33	244°27'25"	43.00'	183.46'	---
C34	90°00'00"	32.00'	50.27'	32.00'
C35	94°25'48"	32.00'	52.74'	34.57'
C36	90°00'00"	32.00'	50.27'	32.00'
C37	87°07'08"	32.00'	48.66'	30.43'
C38	14°33'33"	981.03'	249.29'	125.32'
C39	07°13'19"	400.00'	50.42'	25.24'
C40	01°07'35"	1000.00'	79.64'	9.83'
C41	01°39'20"	1000.00'	28.89'	14.45'

LINE DATA TABLE

NUMBER	BEARING	DISTANCE
L1	N 04°12'28" E	27.00'
L2	S 85°47'32" E	278.74'
L3	S 43°56'30" E	52.00'
L4	S 43°56'30" E	48.61'
L5	S 59°47'13" E	101.01'
L6	S 43°19'46" E	361.91'
L7	S 46°01'59" E	501.18'
L8	S 46°04'51" E	97.04'
L9	N 70°56'02" E	119.59'
L10	N 50°54'25" E	175.06'
L11	N 50°54'25" E	141.85'
L12	S 14°18'14" E	87.54'
L13	S 29°29'02" E	195.53'
L14	S 11°37'27" E	209.42'
L15	S 86°57'10" E	137.40'
L16	N 85°58'45" E	168.97'
L17	N 85°58'45" E	178.73'
L18	N 43°55'09" E	89.34'
L19	S 04°01'15" E	75.07'
L20	N 46°42'04" E	27.00'
L21	S 43°17'56" E	361.86'
L22	N 55°02'29" E	304.23'
L23	N 46°42'04" E	20.81'
L24	N 46°42'04" E	266.19'
L25	N 46°42'04" E	172.81'

- 23 CONSTRUCT 6" HEADER PER PC/COT STD. DTL. NO. 215.
- 24 END SIDEWALK.
- 25 CONSTRUCT 8" BLOCKOUT PER PC/COT STD. DTL. NO. WMM 203.

100-YEAR PEAK DISCHARGES

CONC. PT.	D.A. (AC.)	Q <sub>100</sub> (cfs)
A	3.09	22.5
B	3.26	23.8
C	1.94	14.2
D	2.32	16.9
E	2.18	15.9
F	5.44	40.0
G	3.91	28.5
H	1.95	14.2
I	1.82	13.3
J	2.92	21.3
CP.1	2.93	15.5
CP.2	6.65	36.7

EASEMENT NOTES (MASTER LIST)

- 1 10' PUBLIC UTILITY EASEMENT AND PRIVATE SLOPE EASEMENT PER FINAL PLAT.
- 2 1' PRIVATE NO VEHICULAR ACCESS EASEMENT BY FINAL PLAT.
- 3 NOT USED.
- 4 NOT USED.
- 5 16.5' PUBLIC SEWER & UTILITY EASEMENT PER BK. 50, PG. 34, M&P.
- 6 20' SEWER & UTILITY EASEMENT PER BK. 33, PG. 97, M&P.
- 7 NOT USED.
- 8 NOT USED.
- 9 NOT USED.
- 10 NOT USED.
- 11 5' PUBLIC MAINTENANCE AND SIGNAGE EASEMENT BY FINAL PLAT.

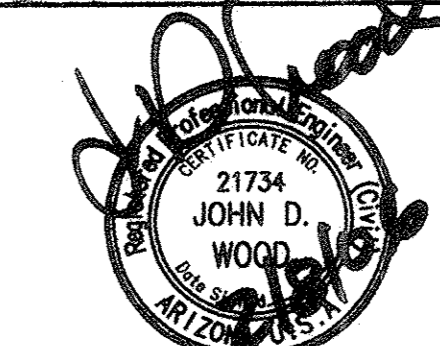
CONSTRUCTION NOTES (MASTER LIST)

- 1 INSTALL SURVEY MONUMENT PER PC/COT STD. DTL. NO. 103.
- 2 CONSTRUCT ROLL CURB & GUTTER PER MAG. STD. DTL. NO. 220 (TYPE C).
- 3 CONSTRUCT 5' CONCRETE SIDEWALK PER PC/COT STD. DTL. NO. 200.
- 4 CONSTRUCT TYPE 2 CURB RAMP PER MARANA DEVELOPMENT SERVICES STD. DTL. NO. 600-2.
- 5 CONSTRUCT 4 FT. DIA. MANHOLE PER PC/COT STD. DTL. NO. WMM 208.
- 6 CONSTRUCT 4" DIA. SEWER HOUSE CONNECTION PER PC/COT STD. DTL. NO. WMM 401. H.C.S. ARE CENTERED BETWEEN LOT LINES UNLESS OTHERWISE NOTED.
- 7 CONSTRUCT 4" SEWER HOUSE CONNECTION INTO TERMINUS MANHOLE PER PC/COT STD. DTL. NO. WMM 402.
- 8 SAWCUT (2' TYP.), TRIM, TACK AND JOIN TO MATCH NEW PAVEMENT TO EXISTING PAVEMENT.
- 9 COUPLE UNLIKE PIPE PER PC/COT STD. DTL. WMM 103.
- 10 CONSTRUCT STORMDRAIN MANHOLE, FRAME & COVER PER PC/COT STD. DTL'S. NO. 302, 303 & 304.
- 11 INSTALL 24" WATERPROOF MANHOLE FRAME AND COVER PER PC/COT STD. DTL. NO. WMM 213.2.
- 12 REMOVE AND REPLACE 270 S.Y. EXIST. PAVEMENT.
- 13 REMOVE 73 L.F. EXIST. VERTICAL CURB AND GUTTER.
- 14 REMOVE 47 L.F. EXIST. VERTICAL CURB AND GUTTER.
- 15 CONSTRUCT NEW MANHOLE OVER EXISTING SEWER PER PC/COT STD. DTL. NO. WMM 303.
- 16 INSTALL MANHOLE BENCH, CHANNEL AND COVER COATING SPECIFICATIONS ON SHT. 16.
- 17 INSTALL BACKWATER VALVE PER DTL. 1 ON SHT. 16.
- 18 ADJUST RIM OF EXIST. MANHOLE TO MATCH FINISHED PAVEMENT GRADE PER PC/COT STD. DTL. WMM 305.
- 19 INSTALL TEMPORARY PLUG AT OUTLET. PLUG TO BE REMOVED AFTER ADEQ APPROVAL OF CONSTRUCTION AND POST PAVING INSPECTION.
- 20 ADJUST RIM OF EXIST. TELEPHONE MANHOLE VAULT TO MATCH FINISHED PAVEMENT GRADE. CONTRACTOR TO COORDINATE WITH QWEST.
- 21 ADJUST EXIST. WATER VALVE, B&C TO MATCH FINISHED PAVEMENT GRADE. CONTRACTOR TO COORDINATE WITH TUCSON WATER.
- 22 CONSTRUCT ROLL CURB AND GUTTER PER MAG. STD. DTL. NO. 220 (TYPE D).

PHASE I-A & I-B

PRV-05-066 ENG0511-015

G-2005-187



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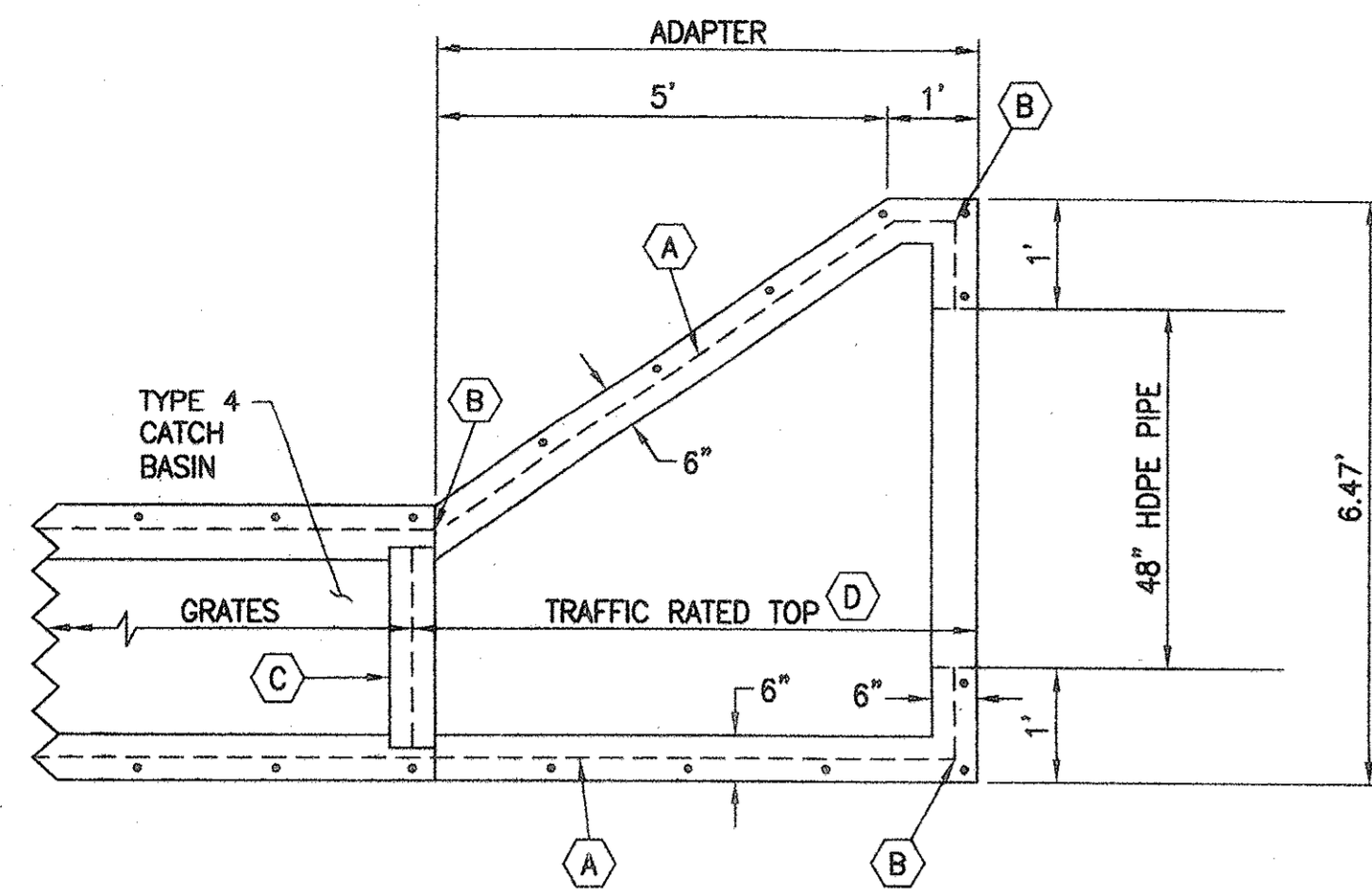
PUBLIC PAVING & PUBLIC SEWER PLAN FOR THE PINES, PHASE I, PH. I-A & PH. I-B LOTS 1-29 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
2	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	13
3	PLAN REVISIONS	6/05/06				OF 18

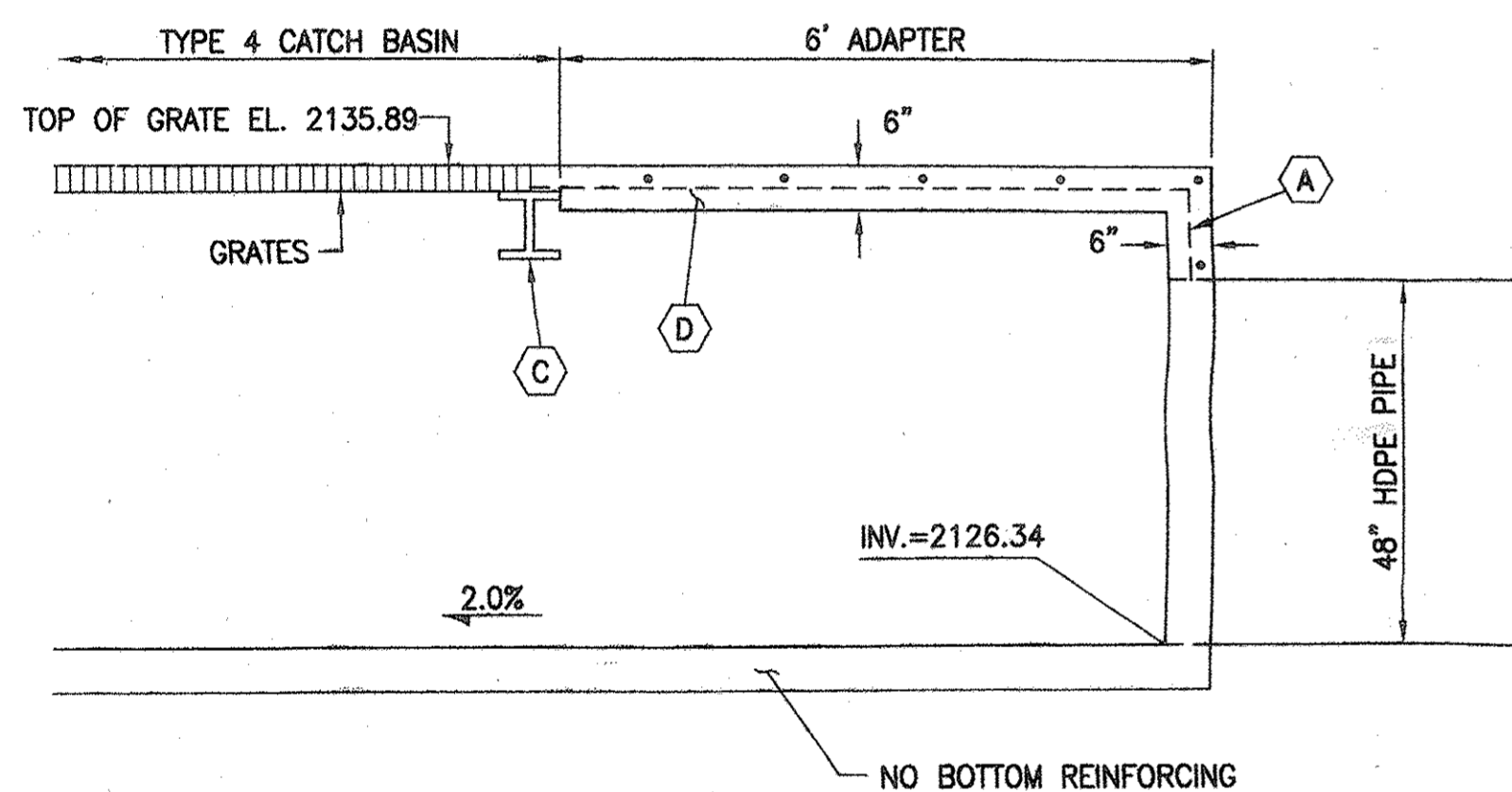
PROJECT NO.: 104023-03-0800  
SCALE: HORIZ. 1"=40'  
VERT. 1"=4'

PROJECT: 104023-03-0800 PAVING & SEWER 13.dwg 2/7/2006 8:53:07 AM DBC/CL





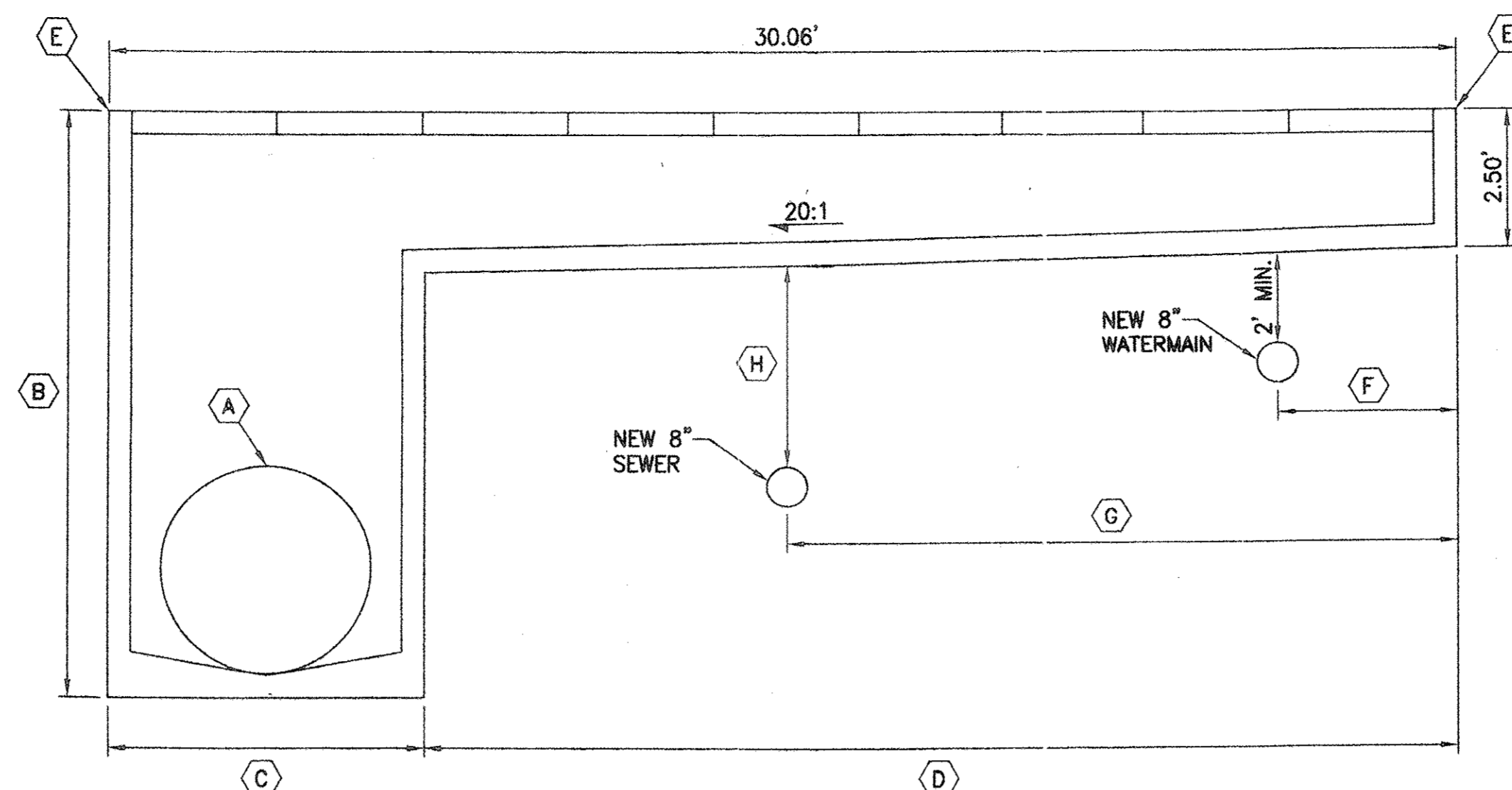
**PLAN VIEW**  
N.T.S.



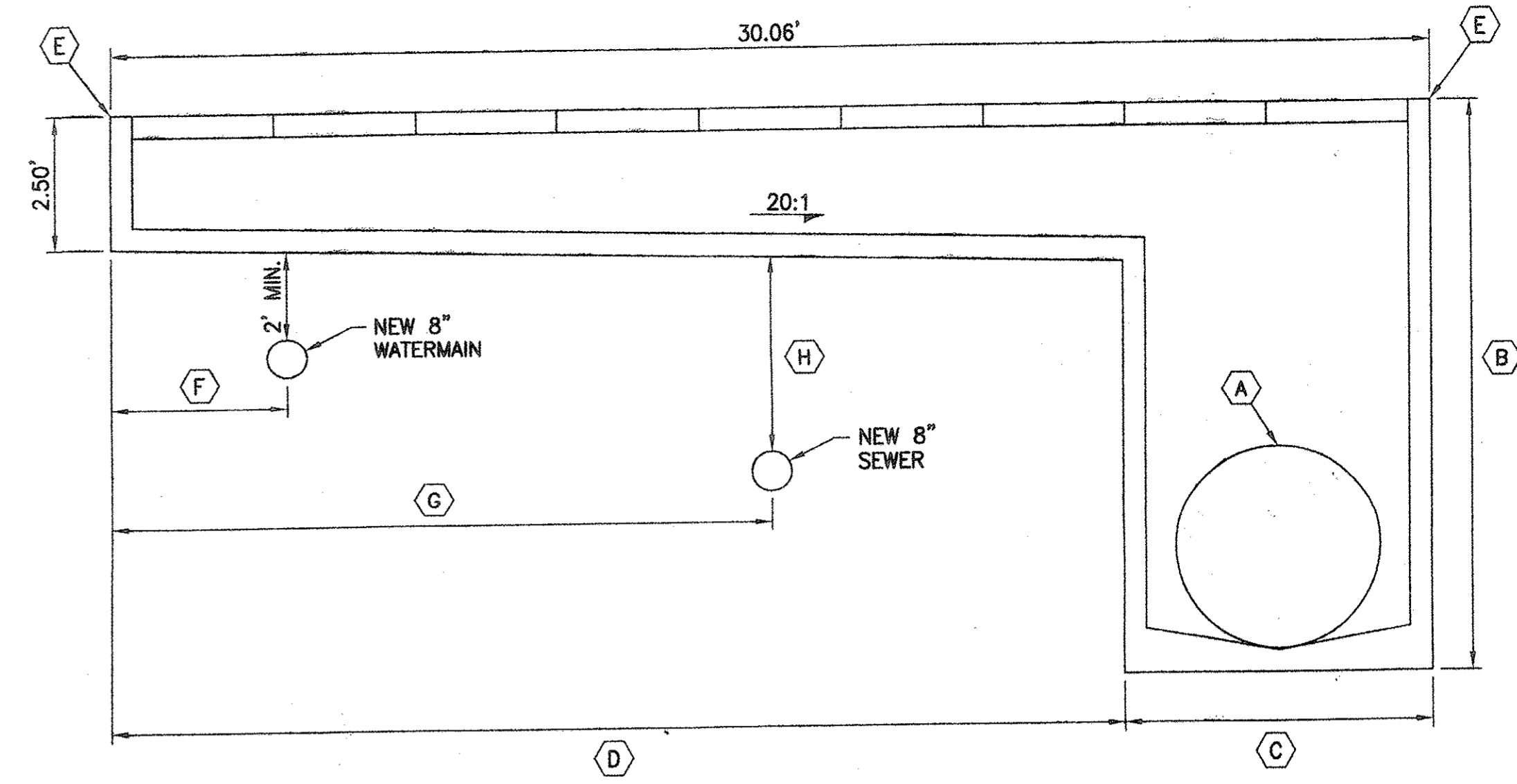
**PROFILE VIEW**  
N.T.S.

- A #4 REBAR 1'-6" CENTER TO CENTER HORIZONTAL AND VERTICAL, 1-1/2" CLEAR TO INSIDE OF WALL.
- B BEND HORIZONTAL REBAR.
- C I-BEAM GRATE SUPPORT, W5x18.5 OR W5x19.
- D TRAFFIC RATED TOP, 6" THICK CLASS "B" 3000 PSI CONCRETE WITH #4 BARS, 6" CENTER TO CENTER LENGTH AND WIDTH WITH 1-1/2" CLEARANCE FROM THE BOTTOM SURFACE. TRAFFIC RATED TOP TO BE SLOPED TO CONFORM TO STREET CROSS SECTION.

1  
14 **DETAIL OF ADAPTER TO CONNECT 48" HDPE PIPE TO TYPE 4 CATCH BASIN NO. 8** N.T.S.



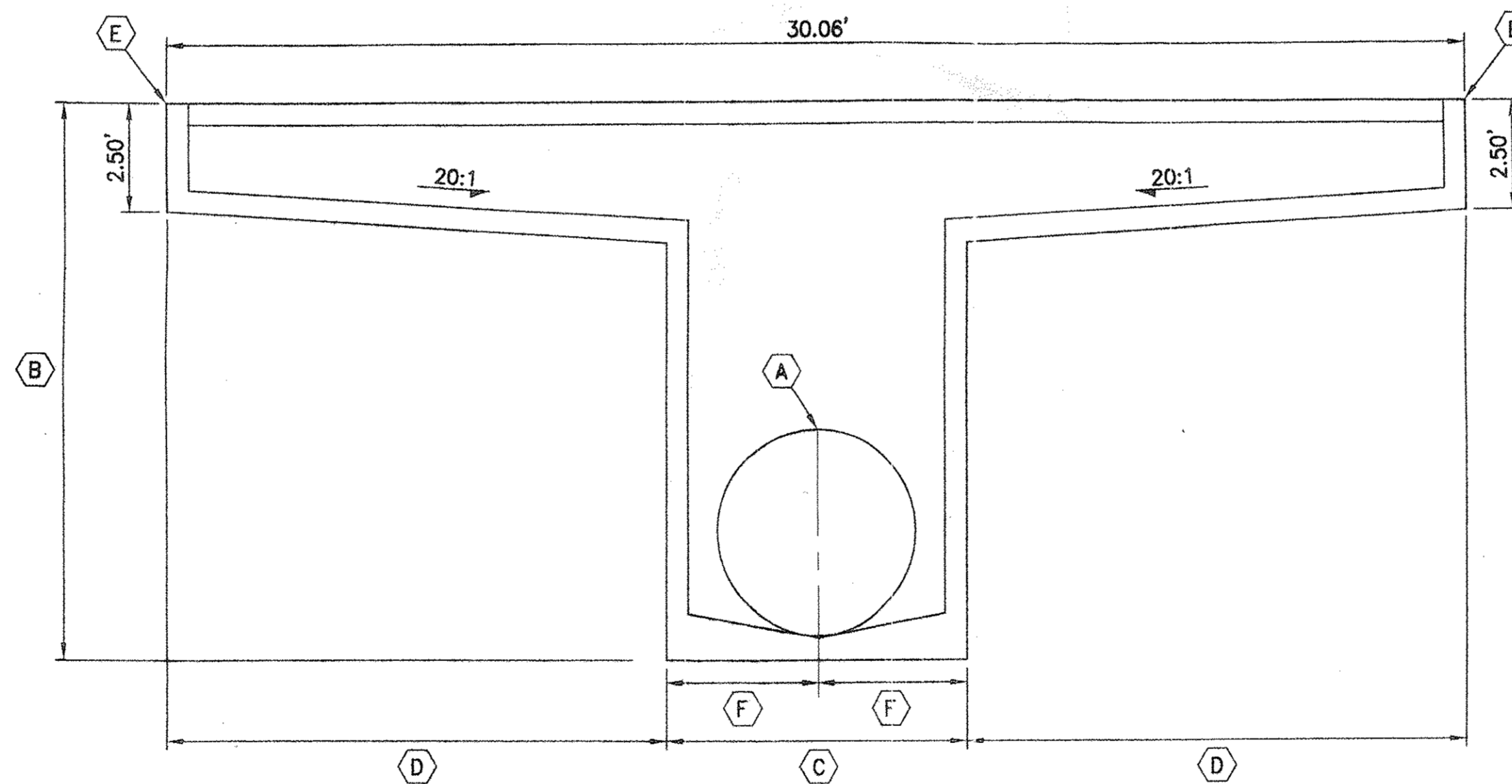
**PROFILE VIEW, SUMP LEFT**  
N.T.S.



**PROFILE VIEW, SUMP RIGHT**  
N.T.S.

**HORIZONTAL & VERTICAL CONTROL TABLE**

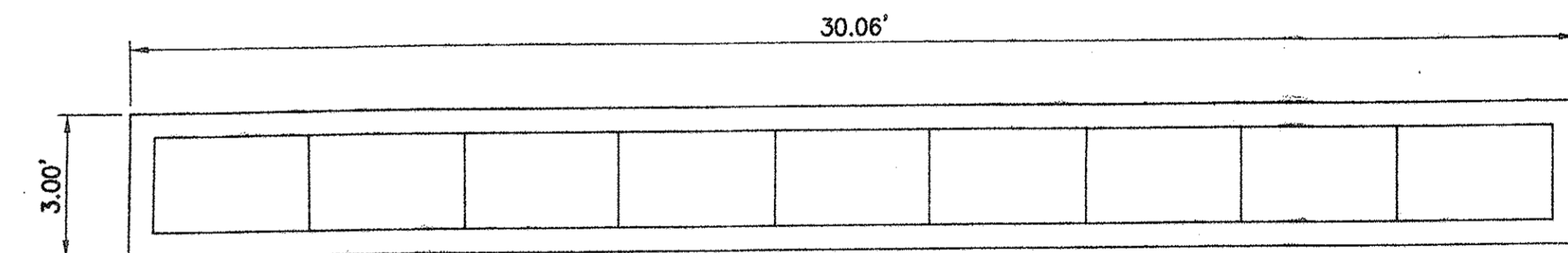
CATCH BASIN NO.	LOCATION	A			B	C	D	E TOP OF CATCH BASIN	F	G	H
		HDPE SIZE	INV. IN	INV. OUT							
2	STA. 2+99.33 MOUNTAIN STONE PINI WAY	36"	---	2127.24	6.22'	5.48'	24.58'	2133.96	5.03'	15.08'	8.03'
1	STA. 5+79.00 MOUNTAIN STONE PINI WAY	42"	---	2125.85	7.88'	5.98'	24.08'	2134.23	N/A	15.03'	10.53'
6	STA. 7+33.27 SCOTCH PINE LANE	36"	---	2130.56	5.19'	5.50'	24.56'	2136.25	5.03'	N/A	N/A
7	STA. 4+38.34 SCOTCH PINE LANE	36"	2129.09	2128.99	6.88'	5.48'	24.58'	2136.37	5.03'	14.30'	4.81'
4	STA. 0+90.39, 58.98' RT. PONDEROSA PINE PLACE	30"	---	2130.03	4.83'	4.93'	25.13'	2135.36	N/A	N/A	N/A
9	STA. 18+24.82 DOUGLAS FIR DRIVE	42" & 48"	2129.47 (42")	2128.97 (48")	7.76'	6.47'	23.59'	2137.23	1.53'	10.33'	4.79'
10	STA. 22+21.69 DOUGLAS FIR DRIVE	42"	---	2131.48	6.25'	6.08'	23.98'	2138.23	5.03'	N/A	N/A



**PROFILE VIEW, SUMP CENTER**  
N.T.S.

CATCH BASIN NO.	LOCATION	A			B	C	D	E TOP OF CATCH BASIN	F
		HDPE SIZE	INV. IN	INV. OUT					
3	STA. 6+29.33, 15.91' RT. DOUGLAS FIR DRIVE	42" & 48"	2124.08 (42")	2123.58 (48")	9.92'	6.80'	11.63'	2134.00	3.40'
5	STA. 9+16.52, 18.00' RT. DOUGLAS FIR DRIVE	30"	2129.14	2129.04	5.49'	4.93'	12.57'	2135.03	2.47'

2  
14 **DIMENSION DETAIL FOR CATCH BASIN TYPE 4 PER PC/COT STD. DTL. NO. 309 MODIFIED FOR 9-EF-1 GRATES** 1"=30'



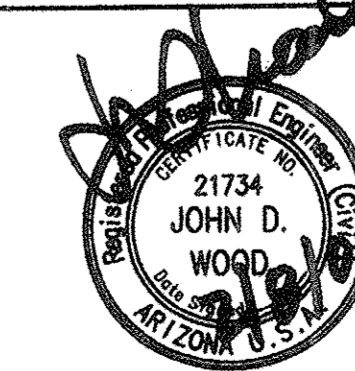
NOTE: ALL CATCH BASINS ARE TO BE FLAT ACROSS THE TOP.

**PLAN VIEW**  
N.T.S.

PHASE I-A

PRV-05-066 ENGOS11-015

G-2005-187

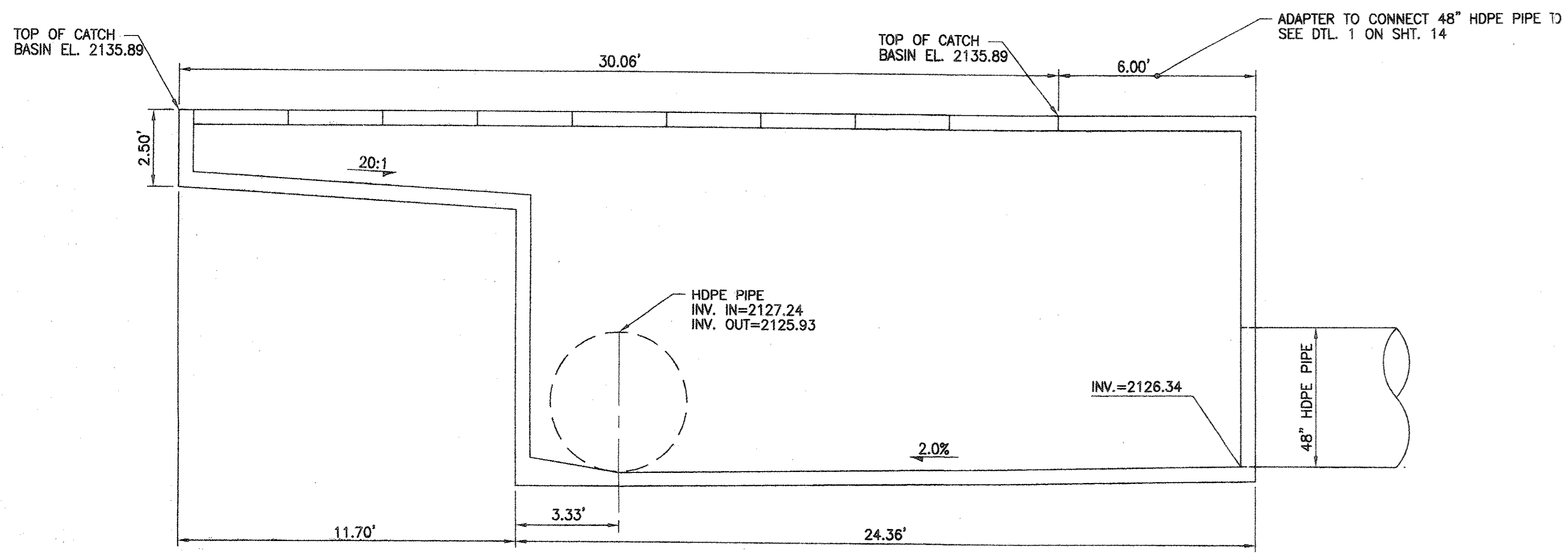


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**PUBLIC PAVING & PUBLIC SEWER PLAN FOR THE PINES, PHASE I, PH. I-A & PH. I-B LOTS 1-129 & COMMON AREAS "A" & "B"**

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
2	PHASE SWR PHASING	4/05/06	E.P.D.	D.S.S.	J.D.W.	14
			DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	HORIZ. 1"=40' VERT. 1"=4'	18





1  
15 PROFILE VIEW OF CATCH BASIN NO. 8 AND ADAPTER AT INTERSECTION OF DOUGLAS FIR DRIVE AND SCOTCH PINE LANE N.T.S.

**STORM DRAIN PIPE NOTES**  
(MASTER LIST)

- P 1 STA. 3+00.83, 12.70' RT. TO STA. 3+59.10, 12.71' RT. INSTALL 58.27 L.F. 36" HDPE, INV. UPSTREAM=2127.24, INV. DOWNSTREAM=2126.95.
- P 2 STA. 3+59.10, 12.71' RT., MOUNTAIN STONE PINE WAY TO STA. 3+52.44, 38.71' LT., DOUGLAS FIR DRIVE. INSTALL 211.27 L.F. 36" HDPE, INV. UPSTREAM=2126.85, INV. DOWNSTREAM=2125.89.
- P 3 STA. 1+00.00 TO STA. 1+32.96, INSTALL 32.96 L.F. 42" HDPE, INV. UPSTREAM=2125.95, INV. DOWNSTREAM=2125.79.
- P 4 STA. 1+32.96 TO STA. 1+73.86, INSTALL 40.88 L.F. 42" HDPE, INV. UPSTREAM=2125.69, INV. DOWNSTREAM=2125.49.
- P 5 STA. 1+73.86 TO STA. 3+25.31, INSTALL 151.48 L.F. 48" HDPE, INV. UPSTREAM=2125.39, INV. DOWNSTREAM=2124.68.
- P 6 STA. 3+25.31 TO STA. 4+34.47, INSTALL 58.27 L.F. 48" HDPE, INV. UPSTREAM=2124.58, INV. DOWNSTREAM=2124.08.
- P 7 STA. 1+23.42, 5.00' RT., SEWER THROUGH C.A. "B" TO STA. 2+51.89, 5.00' RT., SEWER THROUGH C.A. "B". INSTALL 131.48 L.F. 30" HDPE, INV. UPSTREAM=2130.06, INV. DOWNSTREAM=2129.42.
- P 8 STA. 8+89.04, 23.42' LT. DOUGLAS FIR DRIVE TO STA. 9+16.84, 13.00' RT. DOUGLAS FIR DRIVE. INSTALL 45.82 L.F. 30" HDPE, INV. UPSTREAM=2129.32, INV. DOWNSTREAM=2129.14. (SEE SHEET 10)
- P 9 STA. 4+39.89, 12.69' LT. TO STA. 6+55.13, 12.66' LT. INSTALL 218.62 L.F. 36" HDPE, INV. UPSTREAM=2130.18, INV. DOWNSTREAM=2129.09.
- P 10 STA. 0+88.60, 17.55' LT. SCOTCH PINE LANE TO STA. 4+36.76, 12.69' LT. INSTALL 349.74 L.F. 36" HDPE, INV. UPSTREAM=2128.99, INV. DOWNSTREAM=2127.24.
- P 11 STA. 13+07.67, 12.78' RT. TO STA. 18+23.32, 12.20' RT. INSTALL 526.39 L.F. 48" HDPE, INV. UPSTREAM=2128.97, INV. DOWNSTREAM=2126.34.
- P 12 STA. 18+26.32, 12.45' RT. TO STA. 21+26.86, 12.45' RT. INSTALL 349.34 L.F. 42" HDPE, INV. UPSTREAM=2131.22, INV. DOWNSTREAM=2129.47.
- P 13 STA. 21+66.86, 12.45' RT. TO STA. 22+20.19, 12.45' RT. INSTALL 53.33 L.F. 42" RCP, INV. UPSTREAM=2131.48, INV. DOWNSTREAM=2131.22. (SEE SHEET 8)
- P 14 STA. 6+55.13, 12.66' LT. TO STA. 7+31.44, 12.66' LT. INSTALL 76.31 L.F. 36" RCP, INV. UPSTREAM=2130.56, INV. DOWNSTREAM=2130.18. (SEE SHEET 9)

**STORM DRAIN MANHOLE NOTES**  
(MASTER LIST)

- MH 1 STA. 3+11.26 STORM DRAIN NO. 1. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NW INV. 2125.89 (36"), NE INV. 2125.49 (42"), SW INV. 2125.39 (42").
- MH 2 STA. 1+00.00 STORM DRAIN NO. 1. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NE INV. 2126.95 (36"), SE INV. 2126.85 (36").
- MH 3 STA. 1+32.96 STORM DRAIN NO. 2. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, S INV. 2125.79 (42"), SW INV. 2125.69 (42").
- MH 4 STA. 3+25.31 STORM DRAIN NO. 2. CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, S INV. 2124.68 (42"), S INV. 2124.58 (42").
- MH 5 STA. 1+23.42 STORM DRAIN THROUGH C.A. "B". CONSTRUCT 4 FT. DIA. STORM DRAIN MANHOLE, PER PC/COT STD. DTL'S. NO. 300, 302, 303 AND 304, NE INV. 2129.42 (30"), SW INV. 2129.32 (30").

**STORM DRAIN CATCH BASIN NOTES**  
(MASTER LIST)

- CB 1 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 5+79.00, 0.00' RT., MOUNTAIN STONE PINE WAY AND PER DTL. 2 ON SHT. 14. (SEE SHEET 12)
- CB 2 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 2+99.33, 0.00' RT., MOUNTAIN STONE PINE WAY. AND PER DTL. 2 ON SHT. 14.
- CB 3 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 6+29.33, 15.91' RT., DOUGLAS FIR DRIVE, AND PER DTL. 2 ON SHT. 14.
- CB 4 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 0+90.39, 58.98' RT. PONDEROSA PINE PLACE. AND PER DTL. 2 ON SHT. 14.
- CB 5 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 9+16.52, 16.00' RT., DOUGLAS FIR DRIVE, AND PER DTL. 2 ON SHT. 14. (SEE SHEET 10)
- CB 6 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 7+33.27, 0.00' RT., SCOTCH PINE LANE. AND PER DTL. 2 ON SHT. 14. (SEE SHEET 9)
- CB 7 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 4+38.34, 0.00' RT., SCOTCH PINE LANE. AND PER DTL. 2 ON SHT. 14.
- CB 8 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 12+88.08, 0.00' RT., DOUGLAS FIR DRIVE, AND PER DTL. 1 ON SHT. 14 AND PER DTL. 1 ON SHT. 15.
- CB 9 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 18+24.82, 0.00' RT., DOUGLAS FIR DRIVE. AND PER DTL. 2 ON SHT. 14.
- CB 10 CONSTRUCT 30.06' X 3.0' TYPE 4 CATCH BASIN MODIFIED FOR 9-TYPE EF-1 GRATES PER PC/COT STD. DTL'S. NO. 309 & 311 CENTERED ON STA. 22+21.69, 0.00' RT., DOUGLAS FIR DRIVE. AND PER DTL. 2 ON SHT. 14. (SEE SHEET 8)

**STORM DRAIN JUNCTION STRUCTURE NOTES**  
(MASTER LIST)

- JS 1 NOT USED.
- JS 2 NOT USED.
- JS 3 NOT USED.
- JS 4 NOT USED.
- JS 5 CONSTRUCT ADAPTER TO CONNECT 48" HDPE PIPE TO TYPE 4 CATCH BASIN PER DTL. 1 ON SHT. 14.

PHASE I-A

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**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH I-A & PH I-B**  
LOTS 1-129 & COMMON AREAS "A" & "B"

NO. REVISION DATE DESIGNED: E.P.D. D.S.S. CHECKED: J.D.W. SHEET 15 OF 18  
DATE: 02/07/2006 PROJECT NO.: 104023-03-0600 SCALE: HORIZ. 1"=40' VERT. 1"=4'

I:\PROJECTS\104023-03-0600\104023\_PAVSWR\_15.dwg, 2/7/2006 8:55:53 AM, EDR007



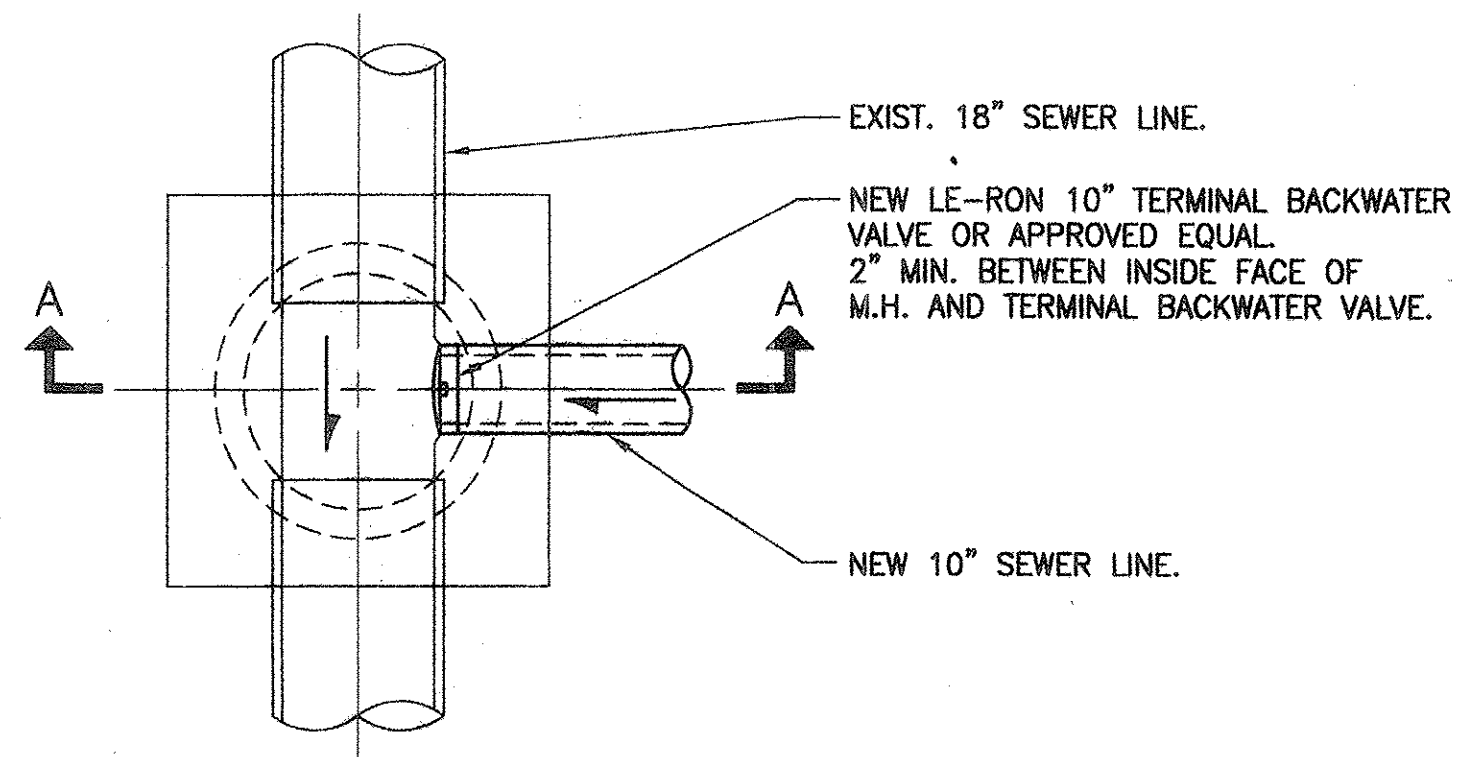
**DUCTILE IRON AND STEEL PIPE COATING SPECIFICATIONS:**

- THE CONTRACTOR SHALL SUPPLY A CERTIFICATION(S) FROM THE PIPE MANUFACTURER/LINER THAT STATES THAT THE PIPE AND THE LINING MEET THE CURRENT STANDARDS AND SPECIFICATIONS OF THE PIMA COUNTY WASTEWATER MANAGEMENT DEPARTMENT. THIS CERTIFICATION SHALL THEN GO ON TO STATE SPECIFICALLY THE FOLLOWING THINGS:
  - ALL DUCTILE IRON PIPE AND FITTINGS HAVE A SP-2000W, A POLYETHYLENE (PE), A COMBINATION OF POLYETHYLENE (PE) AND FUSION BONDED EPOXY (FBE) OR APPROVED EQUAL INTERIOR LINING OF 40 MILS (35 MILS MINIMUM) IN THE BARREL AREA, 10 MILS MINIMUM IN THE BELL AREA AND 10 MILS MINIMUM ON THE EXTERIOR OF THE SPIGOT END.
  - EACH PIECE OF PIPE AND EACH FITTING HAVE BEEN CHECKED FOR HOLIDAYS UTILIZING A TESTING VOLTAGE OF 7500 VOLTS WITH A DRY CONDUCTIVE PROBE IN THE BARREL AREA AND A TESTING VOLTAGE OF 67 1/2 VOLTS WITH A WET SPONGE IN BOTH THE BELL AREA AND THE EXTERIOR OF THE SPIGOT END AND THERE ARE NONE.
  - THE SP-2000W, PE OR PE/FBE LINING EXTENDS FROM THE BOTTOM OF THE GASKET SOCKET IN THE BELL TO A POINT ON THE EXTERIOR OF THE SPIGOT END OF THE PIPE WHERE THE NEXT PIPE GASKET WOULD OVERLAP THE LINING.
  - ALL SP-2000W, PE OR PE/FBE USED MEETS THE CURRENT SPECIFICATIONS SET BY PIMA COUNTY WASTEWATER MANAGEMENT FOR THIS MATERIAL.
  - THE MAXIMUM DRY FILM THICKNESS IN THE GASKET SEAT AREA AND ON THE EXTERIOR OF THE SPIGOT END IS 15 MILS.
- IF THE CONTRACTOR MAKES A FIELD CUT OF SP-2000W, PE OR PE/FBE LINED PIPE, HE SHALL PROPERLY PREPARE THE SURFACE OF THE PIPE TO RECEIVE A PROTECTIVE COATING OVER THE END OF THE PIPE WHICH SHALL CONSIST OF SP-2000W OR APPROVED EQUAL. THE INTERIOR SURFACE THAT IS BEING OVERLAPPED SHALL BE ROUGHED UP TO PRODUCE A 3 TO 5 MIL PROFILE OVER IT AND CLEANED IN ACCORDANCE WITH THE COATING MANUFACTURER'S INSTRUCTIONS. THE EXTERIOR SURFACE SHALL BE SANDED AND CLEANED IN ACCORDANCE WITH THE COATING MANUFACTURER'S INSTRUCTIONS. THE END RESULT OF THIS PROCESS IS TO SECURE PROPER ADHESION FOR THE NEW SP-2000W OR APPROVED EQUAL COATING. THE COATING SHALL THEN BE APPLIED AND ALLOWED TO PROPERLY DRY BEFORE PIPE ASSEMBLY. IN ALL CASES, AS A MINIMUM, A 10 MIL COATING OF SP-2000W OR APPROVED EQUAL SHALL BE APPLIED TO THE PIPE END AND SHALL OVERLAP THE ORIGINAL SP-2000W, PE OR PE/FBE LINING BY A MINIMUM OF FOUR INCHES AND EXTEND AROUND THE END OF THE PIPE AND ALONG THE OUTSIDE OF THE PIPE A MINIMUM OF TEN INCHES. THE MAXIMUM DRY FILM THICKNESS IN THE GASKET SEAT AREA AND ON THE EXTERIOR OF THE SPIGOT END IS 15 MILS. THE SP-2000W, PE, PE/FBE OR APPROVED EQUAL USED SHALL MEET THE CURRENT SPECIFICATIONS OF PIMA COUNTY WASTEWATER MANAGEMENT.
- THE FOLLOWING INFORMATION AS A MINIMUM WILL BE SHOWN ON THE EXTERIOR OF EACH PIECE OF DUCTILE IRON PIPE:
  - NAME OF LINING APPLICATOR
  - NAME OF LINING
  - THICKNESS OF LINING
  - DATE OF LINING APPLICATION
  - CLASS OF DUCTILE IRON PIPE
  - NAME OF DUCTILE IRON PIPE MANUFACTURER
  - DATE OF DUCTILE IRON PIPE MANUFACTURE
- ALL DUCTILE IRON PIPE THAT IS SUPPLIED SHALL NOT HAVE ANY EXTERIOR COATING UNLESS CALLED FOR ON THE CONSTRUCTION PLANS, THE CONSTRUCTION SPECIFICATIONS OR AS CALLED FOR IN THE NOTES LISTED ABOVE (SUCH AS ON THE EXTERIOR 10 INCHES OF THE SPIGOT END OF THE PIPE).

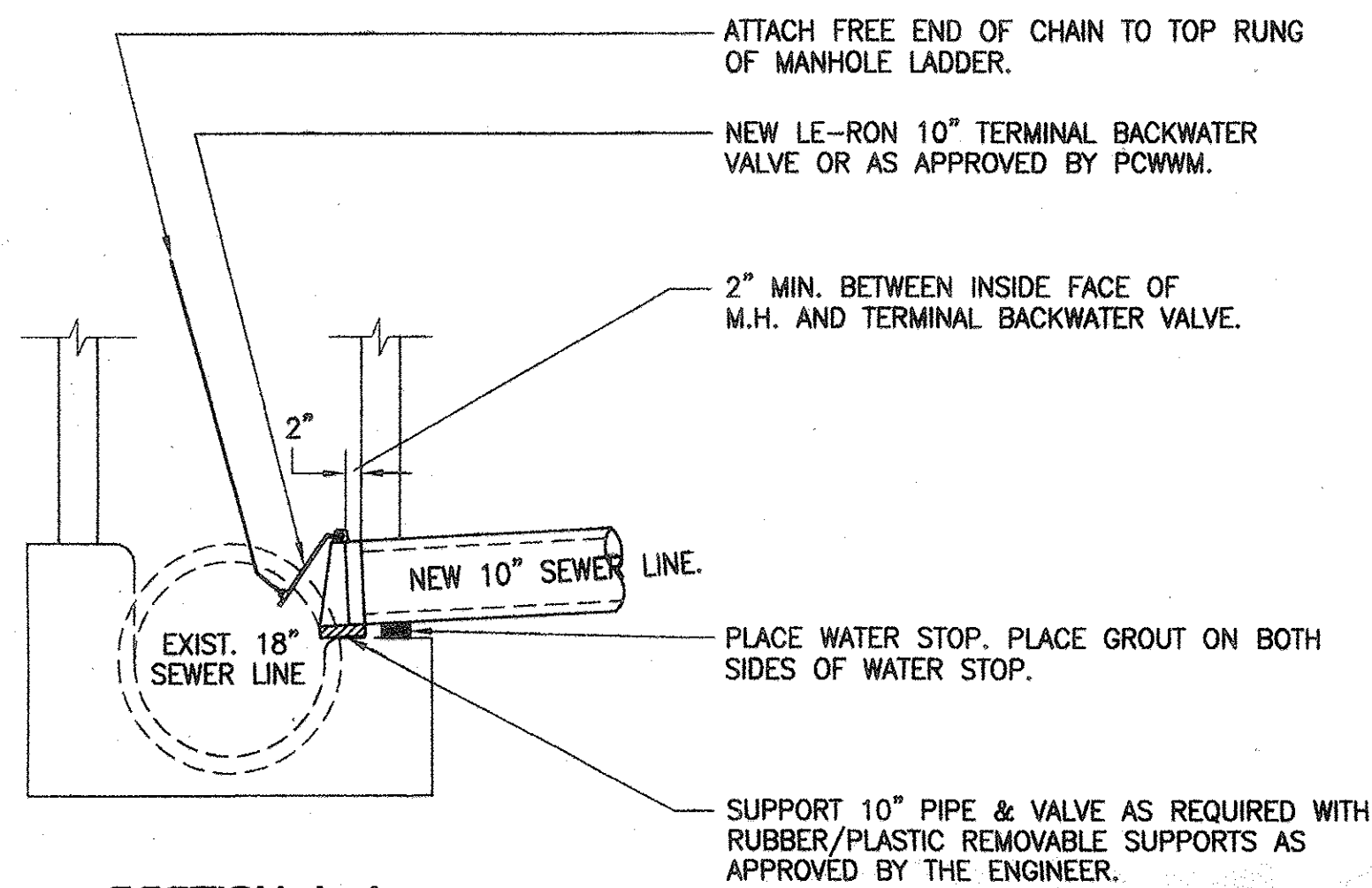
**MANHOLE BENCH, CHANNEL & COVER COATING SPECIFICATIONS:**

(ASSUMING THAT PVC LINING WILL BE USED ON THE MANHOLE WALLS)

- ALL EXPOSED METAL ON THE EXISTING MANHOLES (EXCEPT THE TOP OF THE MANHOLE COVER) SHALL RECEIVE AN SSPC-SP5 WHITE METAL BLAST CLEANING AND THE FOLLOWING COATINGS:
  - ONE OR MORE COATS OF SUPERIOR ENVIRONMENTAL PRODUCTS SP2000R, ENVIRO-COTE 120, SEWER SHIELD 101A OR OTHER APPROVED COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE TOTAL DRY FILM COATING THICKNESS SHALL BE 16 TO 20 MILS IN DRY FILM THICKNESS. THE COLOR OF THE FINAL COAT SHALL BE CHARCOAL GRAY, WHITE OR OTHER APPROVED COLOR. AFTER ALL COATS HAVE BEEN APPLIED, THE AREA WHERE THE SP2000R, ENVIRO-COTE 120, SEWER SHIELD 101A OR OTHER APPROVED COATING WAS APPLIED SHALL BE CHECKED FOR HOLIDAYS UTILIZING A TESTING VOLTAGE OF 67 1/2 VOLTS WITH A WET SPONGE AND A CERTIFICATION ISSUED STATING THAT THERE ARE NONE.
- THE SP2000R, ENVIRO-COTE 120, SEWER SHIELD 101A, SEWER SHIELD 100, SEWER SHIELD 101S, SL100 OR OTHER APPROVED COATINGS SHALL BE APPLIED BY A COATING APPLICATOR WHO SPECIALIZES IN APPLYING COATINGS AND IS QUALIFIED TO APPLY THE NOTED COATING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
  - THE COATING APPLICATOR MUST HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN APPLYING EITHER THE SPECIFIED COATING OR AN EQUIVALENT COATING. THEY SHALL SUBMIT A SUCCESSFUL PERFORMANCE HISTORY FOR THE APPLICATION OF EITHER THE SPECIFIED COATING OR A SIMILAR COATING IN THE WASTEWATER INDUSTRY OR EQUIVALENT FOR THE PREVIOUS FIVE (5) YEARS.
  - THE COATING APPLICATOR SHALL BE AN ARIZONA LICENSED CONTRACTOR WITH AN AE LICENSE OR EQUIVALENT.
  - THE COATING APPLICATOR SHALL SUBMIT A MANUFACTURER'S CERTIFICATION TO APPLY THE COATING SPECIFIED HEREIN.
  - THE COATING APPLICATOR SHALL SUBMIT THREE (3) REFERENCES RELATING TO THE QUALITY OF WORKMANSHIP PERFORMED ON OTHER PROJECTS USING THE SAME COATING BEING PROPOSED OR AN EQUIVALENT COATING.
  - THE COATING APPLICATOR SHALL SUPPLY A FIVE YEAR BOND, PAYABLE TO PIMA COUNTY WASTEWATER MANAGEMENT (PCWWM), FOR THE COATING THAT IS APPROVED BY PCWWM AND IS APPLIED TO ANY PART OF THE MANHOLE EXCEPT FOR THE MANHOLE COVER AND FRAME. NO BOND OR WARRANTY WILL BE REQUIRED FOR THE COATING THAT IS TO BE APPLIED TO THE MANHOLE FRAME AND COVER. THE 5 YEAR BOND SHALL COVER BOTH THE MATERIAL COSTS AND THE LABOR COSTS ASSOCIATED WITH INSTALLING THE APPROVED COATING. THE BOND SHALL ALSO BE UNCONDITIONAL IN NATURE COVERING ANY TYPE OF FAILURE IN THE COATING AND AGREEING TO REPAIR OR REPLACE IT AT NO COST TO PCWWM AT ANY POINT DURING THIS FIVE YEAR PERIOD. THE COATING APPLICATOR SHALL ALSO SUPPLY A WARRANTY FROM THE COATING MANUFACTURER ADDRESSED TO THE BONDING COMPANY AND PCWWM. THIS WARRANTY SHALL STATE, AT A MINIMUM, THAT IF THE COATING IS APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, THAT THE COATING WILL NOT FAIL FOR A PERIOD OF FIVE YEARS WHILE THE COATING IS IMMERSSED IN EITHER AN ACIDIC OR AN ALKALINE SOLUTION THAT IS MAINTAINED AT A TEMPERATURE OF 85°F. THE ACIDIC SOLUTION IS A 10% BY WEIGHT CONCENTRATION OF SULFURIC ACID AND THE ALKALINE SOLUTION IS A 25% BY WEIGHT CONCENTRATION OF SODIUM HYDROXIDE. THE DEFINITION OF A COATING FAILURE IS THAT BLISTERING, CRACKING, EMBRITTELEMENT OR SOFTENING OF THE COATING IS STARTING TO OCCUR.
- THE JOINT BETWEEN THE MANHOLE FRAME AND THE MANHOLE WALLS AND THE JOINT BETWEEN THE MANHOLE WALLS AND THE BENCH SHALL BE CAULKED USING SUPERIOR ENVIRONMENTAL PRODUCTS ER-1500R, SEWER SHIELD CAULK, OR OTHER APPROVED CAULKING MATERIAL. ALL APPLICATIONS SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- ALL MANHOLE STEPS SHALL BE CAULKED TO SEAL THE CRACK THAT EXISTS BETWEEN THE MANHOLE STEP AND THE MANHOLE WALL. THE CAULKING SHALL BE APPROVED BY PIMA COUNTY WASTEWATER MANAGEMENT PRIOR TO BEING USED BY THE CONTRACTOR.
- ALL WET ABRASIVE BLASTING, ALL DRY ABRASIVE BRUSH-OFF BLASTING AND ALL DRY ABRASIVE BLASTING OF METAL PARTS THAT WILL BE USED ON THIS CONSTRUCTION PROJECT WILL BE DONE IN THE PRESENCE OF A PIMA COUNTY WASTEWATER MANAGEMENT INSPECTOR. ALL DRY ABRASIVE BLASTING SHALL BE DONE WITH ONLY COPPER SLAG.
- ALL NEW MANHOLE CHANNELS AND BENCH AREAS THAT HAVE BEEN CONSTRUCTED OVER A NEW OR EXISTING SEWER LINE SHALL BE CLEANED AND REHABILITATED TO RESIST CORROSION. THIS SHALL BE ACCOMPLISHED BY COATING THE MANHOLE CHANNELS AND MANHOLE BENCH AREAS WITH A 3/16 OF AN INCH MINIMUM DRY FILM THICKNESS COATING OF SEWER SHIELD 100, SEWER SHIELD 101A, SEWER SHIELD 101S, SL100 OR OTHER APPROVED COATING AFTER ENVIRONMENTAL COATINGS C-120 OR OTHER APPROVED UNDERLAYMENT, CONTAINING CALCIUM ALUMINATE, HAS BEEN USED TO FILL ALL CRACKS OR VOIDS AND TO PROVIDE A SMOOTH CONCRETE SURFACE. SEWER SHIELD 100, SEWER SHIELD 101A, SEWER SHIELD 101S, SL100 ENVIRONMENTAL COATINGS C-1200 OR OTHER APPROVED COATINGS AND UNDERLAYMENTS ARE TO BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS USING A TROWEL. THE FINAL COATING THAT WILL BE APPLIED TO THE BENCH SHALL NOT BE BACKROLLED TO RETAIN THE ROUGHER SURFACE. THE TROWEL MARKS AND OTHER MINOR SURFACE IRREGULARITIES SHALL BE REMOVED (EXCEPT FOR THE BENCH AREA) BY USING A SHORT NAP MOHAIR PAINT ROLLER. THE SHORT NAP MOHAIR ROLLER SHOULD BE DAMPENED WITH WATER AND THE EXCESS WATER SHAKEN OFF PRIOR TO USE. AFTER THE SEWER SHIELD 100, SEWER SHIELD 101A, SEWER SHIELD 101S, SL100 OR OTHER APPROVED COATING HAS BEEN APPLIED ON ALL SPECIFIED AREAS, ALL AREAS SHALL BE CHECKED FOR HOLIDAYS UTILIZING A MINIMUM TESTING VOLTAGE OF 17,000 VOLTS WITH A DRY CONDUCTIVE PROBE AND A CERTIFICATION ISSUED STATING THAT THERE ARE NONE. HOWEVER, ALL
  - CONCRETE SURFACES THAT HAVE BEEN CURED WITH CONVENTIONAL CURING COMPOUNDS OR COULD BE CONTAMINATED WITH FORM OILS, GREASE, OR OTHER SUBSTANCES MUST BE SCARIFIED (AND IF NEEDED, CHEMICALLY CLEANED) TO REMOVE THE CONTAMINANTS PRIOR TO BEGINNING THE SPECIFIED SURFACE PREPARATION. ALL NEW CONCRETE IN THE MANHOLE BENCH AREA AND CHANNEL SHALL RECEIVE A DRY ABRASIVE BRUSH-OFF BLASTING USING A MINIMUM PRESSURE OF 90 P.S.I. TO LIGHTLY ABRASE THE SURFACE AND OPEN UP SUBSURFACE HOLES AND VOIDS AND ETCH THE SURFACE SUFFICIENTLY (TO APPROXIMATELY A 60 GRIT SANDPAPER TEXTURE) TO ALLOW THE COATING TO BOND SATISFACTORILY. FINALLY, SPRAY APPLICATION OF COATINGS WILL ALSO BE ALLOWED IF THE SPRAY EQUIPMENT BEING PROPOSED COMPLIES WITH THE COATING MANUFACTURER'S RECOMMENDATIONS.
  - THE PVC T-RIB LINING OR OTHER APPROVED LINING SHALL BE INSTALLED BY A LINING INSTALLER WHO SPECIALIZES IN INSTALLING LININGS AND IS QUALIFIED TO INSTALL THE NOTED LINING IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
    - THE LINING INSTALLER MUST HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN INSTALLING EITHER THE SPECIFIED LINING OR AN EQUIVALENT LINING. THEY SHALL SUBMIT A SUCCESSFUL PERFORMANCE HISTORY FOR THE INSTALLATION OF EITHER THE SPECIFIED LINING OR A SIMILAR LINING IN THE WASTEWATER INDUSTRY OR EQUIVALENT FOR THE PREVIOUS FIVE (5) YEARS.
    - THE LINING INSTALLER SHALL BE AN ARIZONA LICENSED CONTRACTOR WITH AN AE LICENSE OR EQUIVALENT.
    - THE LINING INSTALLER SHALL SUBMIT A MANUFACTURER'S CERTIFICATION TO INSTALL THE LINING SPECIFIED HEREIN.
    - THE LINING INSTALLER SHALL SUBMIT THREE (3) REFERENCES RELATING TO THE QUALITY OF WORKMANSHIP PERFORMED ON OTHER PROJECTS USING THE SAME LINING BEING PROPOSED OR AN EQUIVALENT LINING.
    - THE LINING INSTALLER SHALL SUPPLY A FIVE YEAR BOND, PAYABLE TO PIMA COUNTY WASTEWATER MANAGEMENT (PCWWM), FOR THE LINING THAT IS APPROVED BY PCWWM. THIS BOND SHALL COVER BOTH THE MATERIAL COSTS AND THE LABOR COSTS ASSOCIATED WITH INSTALLING THE APPROVED LINING. THE BOND SHALL ALSO BE UNCONDITIONAL IN NATURE COVERING ANY TYPE OF FAILURE IN THE LINING AND AGREEING TO REPAIR OR REPLACE IT AT NO COST TO PCWWM AT ANY POINT DURING THIS FIVE YEAR PERIOD. THE DEFINITION OF A LINING FAILURE IS THAT DISBONDMENT OF WELD STRIPS, DISBONDMENT OF PATCHES, BLISTERING, CRACKING, EMBRITTELEMENT, SIGNIFICANT COLOR CHANGE OR SOFTENING OF THE LINING IS STARTING TO OCCUR.
  - ALL NEW MANHOLES OR EXTENSIONS TO MANHOLES WITH EXISTING PVC T-RIB LINING SHALL HAVE PVC T-RIB LINING OR APPROVED EQUAL INSTALLED ON THE NEW MANHOLE'S WALLS OR THE EXTENSION'S WALLS. FOR THE PURPOSE OF THIS NOTE, A DIVERSION STRUCTURE WILL BE CONSIDERED A MANHOLE.
  - AN EPOXY PRIMER/SEALER COAT SHALL BE APPLIED TO ALL NEW AND SOME EXISTING CONCRETE SURFACES BEFORE ANY OTHER COATING IS APPLIED. THE EXISTING CONCRETE SURFACES THAT SHALL RECEIVE THE EPOXY PRIMER/SEALER ARE THOSE WHICH HAVE A DIFFERENCE IN TEMPERATURE OF 15 DEGREES FAHRENHEIT OR MORE BETWEEN THE CONCRETE SURFACE AT THE TOP OF THE MANHOLE AND THE CONCRETE SURFACE AT THE BOTTOM OF THE MANHOLE. THE EPOXY PRIMER/SEALER SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - ALL EXISTING MANHOLES THAT MUST BE EXTENDED AND DO NOT HAVE EXISTING PVC T-RIB LINING SHALL HAVE ONE OF THE PREVIOUSLY SPECIFIED COATINGS APPLIED TO BOTH THE CONCRETE AND THE STEEL SURFACES. THE EXISTING CONCRETE SURFACE SHALL RECEIVE THE FOLLOWING SURFACE PREPARATION BEFORE A COATING IS APPLIED: ALL EXISTING CONCRETE SURFACES ON WALLS, ON THE MANHOLE BENCH AREA AND IN THE CHANNEL SHALL FIRST RECEIVE A WET ABRASIVE BLASTING USING A MINIMUM WATER PRESSURE OF 5,000 P.S.I. UNTIL ALL LOOSE AND DETERIORATED CONCRETE HAS BEEN REMOVED. WHEN THE WET ABRASIVE BLASTING HAS BEEN COMPLETED, ALL CONCRETE SURFACES IN THE AREA WHERE THIS BLASTING HAS OCCURRED SHALL BE FLUSHED WITH WATER AT A MINIMUM WATER PRESSURE OF 5,000 P.S.I. TO REMOVE ANY RESIDUAL SAND FROM THE ABRASIVE BLASTING OPERATION. IN ADDITION, ONLY SILICA SAND AND WATER MAY BE USED IN THE WET ABRASIVE BRUSH-OFF BLASTING. NEXT, A DRY ABRASIVE BLASTING USING ONLY COPPER SLAG AT A MINIMUM PRESSURE OF 90 P.S.I. SHALL BE DONE TO REMOVE ANY REMAINING DETERIORATED CONCRETE.
  - THE SP2000R, ENVIRO-COTE 120, SEWER SHIELD 100, SEWER SHIELD 101A, SEWER SHIELD 101S AND SL 100 ARE ALL HYBRID NOVALAC EPOXY COATINGS. THE ER-1500R AND SEWER SHIELD CAULK ARE BOTH NOVALAC EPOXY BASED CAULKING MATERIALS.



PLAN VIEW



SECTION A-A

**BACKWATER VALVE CONNECTION**  
N.T.S.

PROJECT: 104023-03 PAV SWR PHASING 2/7/2006 8:56:53 AM D:\b\p

PHASE I-A & I-B

PRV-05-066 ENG0511-015 G-2005-187

**Presidio** Civil • Land Development • Water Resources  
4582 N. 1st Ave., Suite 120 • Tucson, Arizona 85718  
(520) 795-7255 • Fax (520) 795-6747

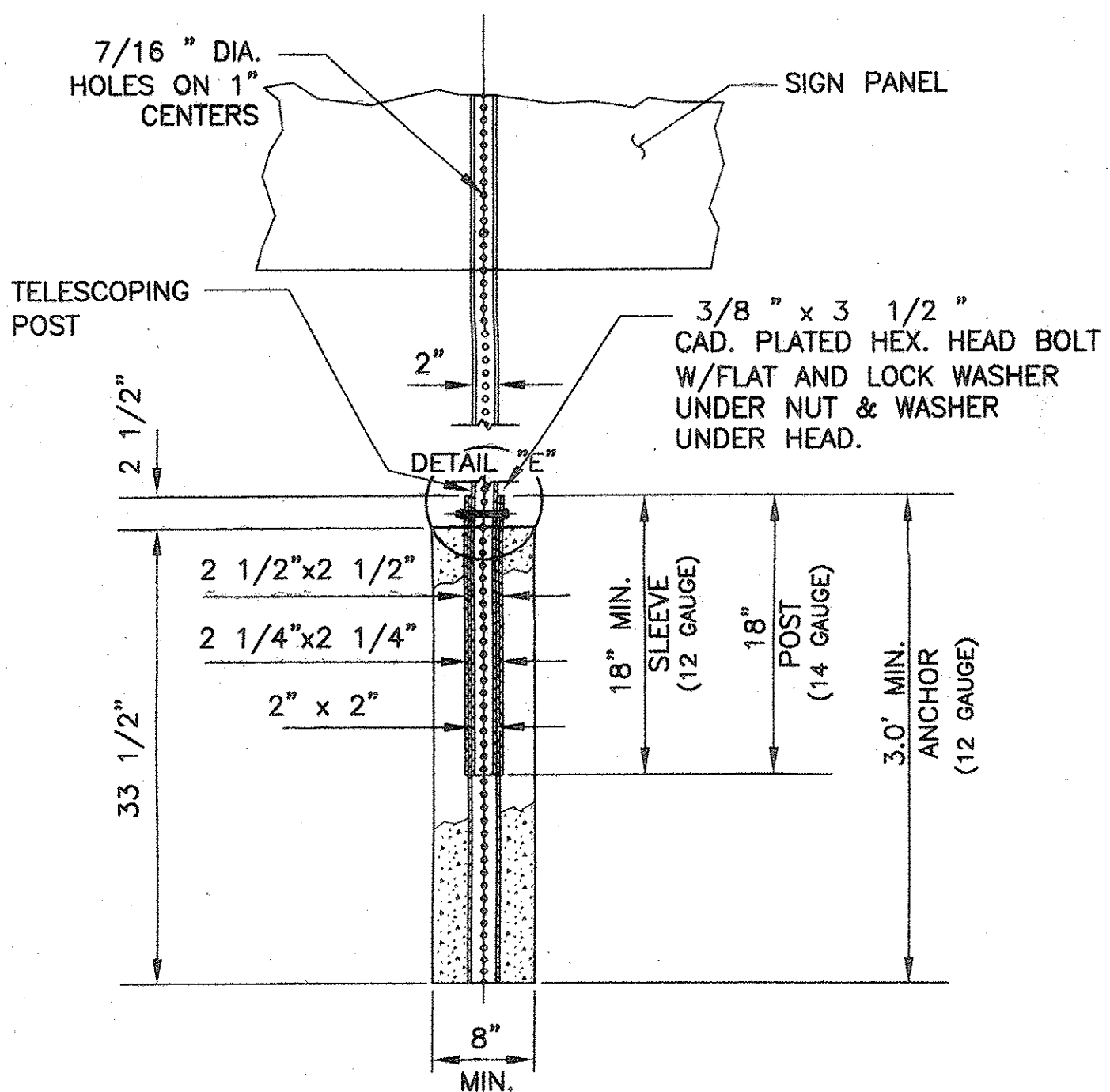
**PUBLIC PAVING & PUBLIC SEWER PLAN**  
FOR  
**THE PINES, PHASE I, PH-I-A & PH-I-B**  
LOTS 1-29 & COMMON AREAS "A" & "B"

NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	16
			DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0600	AS SHOWN	18



**STRIPING AND SIGNING NOTES**

- ① STA. 1+39.60, 25.77' LT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ② STA. 1+31.92, 12" SOLID WHITE STOP BAR PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ③ STA. 2+30.96, 8.00' RT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ④ STA. 1+24.39, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑤ STA. 5+30.09, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑥ STA. 8+98.04, 8.00' RT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑦ STA. 15+98.11, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑧ STA. 21+89.69, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑨ STA. 1+56.96, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑩ STA. 4+12.81, 8.00' RT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑪ STA. 0+95.86, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑫ STA. 10+10.32, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑬ STA. 12+73.32, 8.00' LT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑭ STA. 8+89.70, 12" SOLID WHITE STOP BAR PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑮ STA. 8+81.86, 25.93' RT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑯ STA. 21+86.87, 26.84' RT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑰ STA. 21+95.81, 18" SOLID WHITE STOP BAR PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑱ STA. 21+68.23, 8.00' RT., INSTALL BLUE RAISED PAVEMENT MARKER (RPM)
- ⑲ STA. 1+91.71, 24.00' RT., INSTALL 24"x30" SPEED LIMIT SIGN, R2-1 (25 MPH) PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑳ STA. 8+32.27, 24.00' LT., INSTALL 24"x30" SPEED LIMIT SIGN, R2-1 (25 MPH) PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉑ STA. 20+18.52, 24.00' LT., INSTALL 24"x30" SPEED LIMIT SIGN, R2-1 (25 MPH) PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉒ STA. 6+06.60, 25.60' LT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉓ STA. 5+18.99, 24.48' RT., INSTALL 30"x30" STOP SIGN, R1-1, STREET SIGNS, D3-1, AND NO OUTLET SIGN, W14-2g PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉔ STA. 13+63.87, 25.32' LT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉕ STA. 12+80.42, 25.07' RT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉖ STA. 4+20.37, 25.22' RT., INSTALL 30"x30" STOP SIGN, R1-1, STREET SIGNS, D3-1, AND NO OUTLET SIGN, W14-2g PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉗ STA. 1+47.93, 25.67' LT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ㉘ STA. 21+96.68, 25.04' RT., INSTALL 30"x30" STOP SIGN, R1-1 AND STREET SIGNS, D3-1 PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

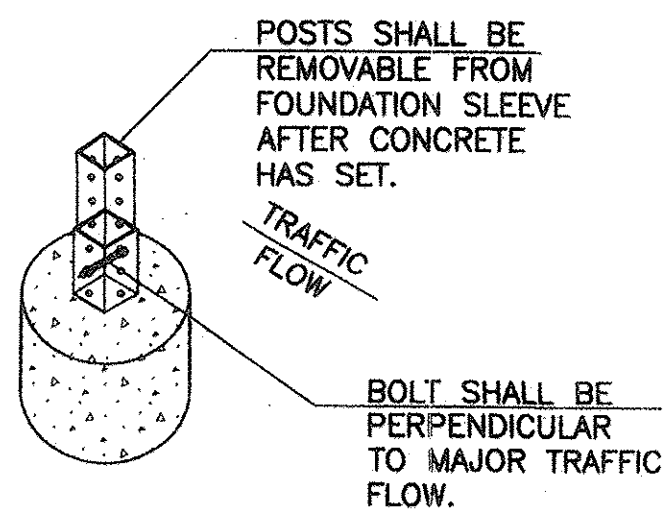


NOTE: For Estimating Purposes, Concrete Quantity per Post is 0.04 Cubic Yards

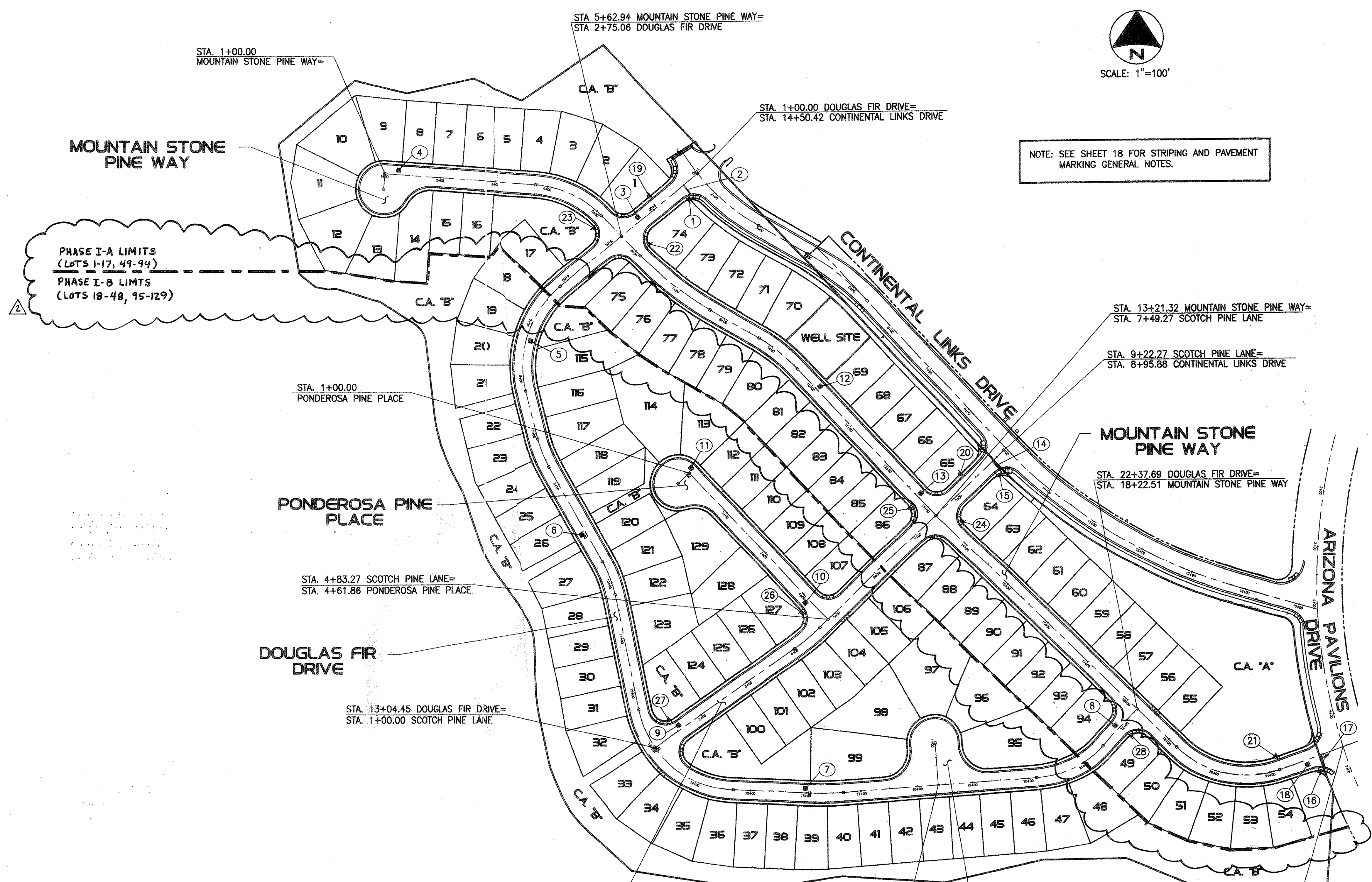
**SIGN POST FOUNDATION DETAIL**

TOWN OF MARANA STD. DTL. NO. F-1. N.T.S.

NOTE: ALL SIGNS ARE TO BE INSTALLED ON POSTS CONFORMING TO THE TOWN OF MARANA STD. DTL. NO. F-1.



DETAIL "E"



**STRIPING AND SIGNING PLAN**

PRV-05-066 ENG0511-015

G-2005-187

		<b>Presidio</b> Civil • Land Development • Water Resources 4582 N. 1st Ave., Suite 120 • Tucson, Arizona 85718 (520) 795-7255 • Fax (520) 795-6747				
<b>PUBLIC PAVING &amp; PUBLIC SEWER PLAN</b> FOR <b>THE PINES, PHASE I, PHASE I-A &amp; I-B</b> LOTS 1-129 & COMMON AREAS "A" & "B"						
NO.	REVISION	DATE	DESIGNED:	DRAWN:	CHECKED:	SHEET
1	PAV & SWR PHASING	6/05/06	E.P.D.	D.S.S.	J.D.W.	17
			DATE:	PROJECT NO.:	SCALE:	OF
			02/07/2006	104023-03-0800	AS SHOWN	18



**TOWN OF MARANA  
GENERAL NOTES FOR SIGNING PLANS**

1. ALL SIGNS SHALL BE IN COMPLIANCE WITH THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2002 EDITION OF THE PIMA COUNTY AND CITY OF TUCSON TRAFFIC SIGNING DESIGN MANUAL, THE 1994 EDITION PIMA COUNTY/CITY OF TUCSON STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, THESE PLANS, AND THE SPECIAL PROVISIONS.
2. SIGNS MAY BE MODIFIED AND LOCATIONS ADJUSTED TO FIT CONDITIONS AS DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.
3. POST LENGTHS INDICATED ON SIGN SUMMARY SHEETS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL POST LENGTHS.
4. ALL NEW AND EXISTING SIGNS SHALL BE INSTALLED ON PERFORATED POST (SQUARE TUBE), AND SHALL BE INSTALLED IN A CONCRETE FOUNDATION (PER MARANA DETAIL NO. F-1) UNLESS OTHERWISE DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.
- 5 (a). ALL SIGN STATION LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL SIGN LOCATIONS WITH THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE PRIOR TO THE INSTALLATION OF ALL SIGNS.  
(b). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH BLUE STAKE AND FOR INSTALLING ALL TRAFFIC SIGNS IN THE FIELD.
6. ALL WARNING AND REGULATORY SIGNS SHALL BE TYPE III (HIGH INTENSITY) SHEETING, UNLESS OTHERWISE DETERMINED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE. STREET NAME SIGNS (D3) SHALL BE FABRICATED USING TYPE III (HIGH INTENSITY) SHEETING AND ADVANCE STREET NAME SIGNS (TE8) SHALL BE FABRICATED USING TYPE III SHEETING. NO PARKING SIGNS SHALL BE TYPE II SHEETING. ALL SCHOOL ZONE SIGNS SHALL BE FLUORESCENT YELLOW-GREEN, DIAMOND GRADE SHEETING, ALL OVERHEAD SIGNS SHALL BE DIAMOND GRADE SHEETING.
7. ALL NEW SIGNS SHALL HAVE AN ALUMINUM BACKING, UNLESS OTHERWISE SPECIFIED.
8. ALL EXISTING SIGNS TO BE REMOVED AS PART OF THIS PROJECT ARE TO BE DELIVERED TO THE TOWN OF MARANA OPERATIONS CENTER AT 5100 W. INA ROAD (382-2500). THE CONTRACTOR IS RESPONSIBLE FOR UNLOADING THE SALVAGED MATERIAL. ANY SALVAGED SIGN THAT IS TO BE REUSED SHALL BE TEMPORARILY STORED IN A SAFE LOCATION UNTIL REINSTALLATION.
9. REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 202-3.06 OF THE 1994 PC/COT STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
10. THE DESIGN SPEED FOR ALL RESIDENTIAL ROAD(S) IS 25 MPH. THE POSTED SPEED LIMIT FOR ALL RESIDENTIAL ROAD(S) IS 25 MPH. SIGN PLACEMENT SHALL BE BASED ON THE POSTED SPEED LIMIT.
11. FINAL INSPECTION/ACCEPTANCE OF SIGNING SHALL BE PERFORMED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.

**NOTES**  
1. ALL STATIONING IS ALONG CENTERLINE OF ROAD. UNLESS OTHERWISE NOTED.  
2. SEE SHEET 13 FOR LINE AND CURVE DATA TABLES.

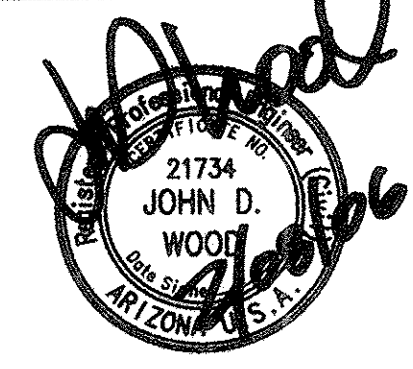
**TOWN OF MARANA  
GENERAL NOTES FOR PAVEMENT MARKING PLANS**

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE 1994 EDITION PIMA COUNTY/CITY OF TUCSON STANDARDS AND SPECIFICATIONS.
2. THE PERMANENT PAVEMENT MARKINGS MAY BE MODIFIED AS DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.
3. THE DESIGN SPEED FOR ALL RESIDENTIAL ROADS IS: 25 MPH. THE DESIGN VEHICLE IS: WB-40. THE POSTED SPEED LIMIT FOR ALL RESIDENTIAL ROADS IS: 25 MPH.
4. ALL LANE DIMENSIONS ARE FROM CENTER OF LANE LINE, CENTER OF DOUBLE LANE LINE, FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
5. THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS, DETAILS, AND STANDARDS WHEN INSTALLING PAVEMENT STRIPING, MARKINGS AND MARKERS.
6. THE FINAL LONGITUDINAL STRIPING SHALL BE 80 MIL (0.060") THICK HOT SPRAYED THERMOPLASTIC REFLECTORIZED STRIPING PLACED OVER THE TEMPORARY STRIPING WITHIN 14 TO 30 CALENDAR DAYS AFTER COMPLETION OF THE FINAL PAVEMENT SURFACE OR AS DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE. ALL OTHER MARKINGS SHALL BE APPLIED AT THE SAME TIME. (THE TEMPORARY STRIPING SHALL BE PAINT AND SHALL BE INSTALLED WITHIN 72 HOURS FOLLOWING COMPLETION OF THE FINAL PAVEMENT SURFACE OR AS DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.)
7. ALL FINAL TRANSVERSE MARKINGS SHALL BE HOT SPRAYED 90 MIL THERMOPLASTIC STRIPING (0.090"). ALL PAVEMENT ARROWS AND LEGENDS SHALL BE HOT SPRAYED 90 MIL THERMOPLASTIC PAVEMENT MARKING (0.090"). EXTRUDED THERMOPLASTIC OR PREFORMED APPLICATIONS MAY BE USED IF APPROVED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF PAVEMENT MARKINGS ON FINAL SURFACE COURSE FOLLOWING CONTROL POINTS THAT HAVE BEEN SET TO MORE THAN 50 FEET APART ALONG THE LINES TO BE STRIPED. THE LAYOUT AND INSPECTION OF ALL PAVEMENT MARKINGS SHALL BE APPROVED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE PRIOR TO THE APPLICATION OF MATERIALS.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE FINAL SURFACE COURSE IS PLACED SO THAT THE STRIPING IS OFFSET ONE FOOT CLEAR OF THE CONSTRUCTION JOINT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
10. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE TO THE SATISFACTION OF THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE BY SWEEPING AND AIR-JET BLOWING IMMEDIATELY PRIOR TO THE PLACEMENT OF ALL PAVEMENT MARKINGS. THE TEMPERATURE SHALL NOT BE LESS THAN 50 DEGREES F. FOR THE PLACEMENT OF HOT SPRAY THERMOPLASTIC STRIPING, AND 40 DEGREES F. FOR THE PLACEMENT OF RPMs.
11. ALL RAISED PAVEMENT MARKERS (RPMs) SHALL BE INSTALLED SO THAT THE REFLECTIVE FACE OF EACH MARKER IS FACING THE DIRECTION OF TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW. TYPE C PAVEMENT MARKERS (RPMs) SHALL BE INSTALLED SO THAT THE CLEAR REFLECTIVE FACE OF EACH MARKER IS FACING THE APPROACHING TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.
12. AT INTERSECTION APPROACHES ON ROADWAYS WITH MEDIANS, TYPE C RPMs SHALL BE PLACED AS PER PCDOT/TDOT STANDARDS OR AS DIRECTED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.
13. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 701 OF THE PC/COT STANDARD SPECIFICATIONS. PAINTING OVER EXISTING STRIPING DOES NOT CONSTITUTE APPROVED STRIPING OBLITERATION.
14. THE ENGINEER OF RECORD SHALL BE REQUIRED TO PRODUCE AS-BUILT STRIPING PLANS, USING INFORMATION BY THE CONTRACTOR, WITHIN 90 DAYS OF STRIPING COMPLETION.
15. BLUE RAISED PAVEMENT MARKERS SHALL BE PLACED ADJACENT TO FIRE HYDRANTS AS SHOWN ON SHEET 7-1 OF THE PC/COT PAVEMENT MARKING DESIGN MANUAL.
16. FOR ALL CONSTRUCTION, ALL PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED AND SHALL BE PAID FOR BY THE PROJECT OWNER/DEVELOPER.
17. FINAL INSPECTION/ACCEPTANCE OF PAVEMENT MARKINGS SHALL BE PERFORMED BY THE JURISDICTION TRAFFIC ENGINEER OR DESIGNEE.

PHASE I-A & I-B

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	<b>Presidio</b> Civil • Land Development • Water Resources 4582 N. 1st Ave., Suite 120 • Tucson, Arizona 85718 (520) 795-7255 • Fax (520) 795-8747					
	<b>PUBLIC PAVING &amp; PUBLIC SEWER PLAN</b> FOR <b>THE PINES, PHASE I, PH.I.A &amp; PH.I-B</b> LOTS 1-129 & COMMON AREAS "A" & "B"					
NO. <b>Δ</b>	REVISION <b>PAV &amp; SWR PHASING</b>	DATE <b>6/05/06</b>	DESIGNED: <b>E.P.D.</b>	DRAWN: <b>D.S.S.</b>	CHECKED: <b>J.D.W.</b>	SHEET <b>18</b>
			DATE: <b>02/07/2006</b>	PROJECT NO.: <b>104023-03-0800</b>	SCALE: <b>AS SHOWN</b>	OF <b>18</b>